Instruction Manual

The VW 1200.

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The VW 1200.

August 1974 Edition

VOLKSWAGENWERK AKTIENGESELLSCHAFT · WOLFSBURG

Contents

This manual tells you how to drive and how to look after the VW 1200 with a number of optional extras, some of which may be part of the L'equipment.

The Volkswagen factory is working continuously on the development of all VW 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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The following important publications are supplied with your new Volkswagen:

The Instruction Manual and the Service Record

You should read the **Instruction Manual** before using the vehicle so that you get to know your car quickly and can start the first trip with complete confidence. After reading this booklet you will know how to drive and look after your Volkswagen properly.

The Service Record explains the Volkswagen Diagnosis and Maintenance System and contains, amongst other things, the terms of warranty. Your VW workshop stamps the record to confirm that all specified diagnoses, maintenance and other services have been carried out. Always have the Service Record with you when you take your car to a VW workshop – it is the key to efficient VW service.

A word about the warranty conditions: It is in your interest to have your vehicle maintained as laid down in the Service Record. Proper treatment and complete proof that all specified maintenance work has been carried out by an authorized VW workshop are stipulations for the upholding of any warranty claims for damage to parts which are subject to care and maintenance.

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(Well worth reading before or after studying the rest of the manual).

For years now our engineers have been leading the field in the development of safe automobiles.

Your Volkswagen is the product of this experience:
Your vehicle is equipped with all the safety features of design and trim which are necessary and which we consider practical. All for your safety, your protection and, in addition, to reduce the danger to other road users if the worst comes to the worst.

Active safety

(Design measures which help to prevent accidents)

- Independent suspension at front and rear = uniform roadholding.
- Good weight distribution due to front luggage compartment, no sagging at rear, headlamp settings always right even when vehicle is fully loaded.
- Dual circuit brake system.
- Large, brilliant tail and turn signal lights.

As an interested reader you will soon realize, without knowing a great deal about technical matters, that numerous details of your vehicle are designed in such an elaborate way to offer you the highest possible degree of active and passive safety.

Here are just a few of these safety features:

Passive safety

(Design measures to minimize the effects of accidents)

- Safety cell passenger compartment, front and rear ends designed to absorb impact energy.
- Large, soft control knobs in front of driver and passenger, clearly marked with symbols.
- Safety steering column.
- Firmly fixed individual front seats, backrest and seats fully adjustable. Backrests locked to prevent folding forward.
- Padded sun visors.
- Large outside driving mirror, hinged to yield on impact. Inside mirror falls out on impact.
- Recessed door inner controls, inner locking knobs.
- Side protection plates in form of running boards.
- Rounded door outer handles with built-in impact proof press buttons.
- Rotary latch, anti-burst door locks.

You will agree that your Volkswagen has a lot of built-in safety.

Seat belts

Belt anchorages for front seats:

Upper outer point (a) –
at top of lock pillar

Lower outer point (b) –
at bottom of lock pillar

Lower inner point (c) –
on frame tunnel in rear footwell

The front seats can be fitted with inertia reel three-point belts or normal three-point belts. The rear seats can also be fitted with belts.

Service installation of seat belts should preferably be done by a VW workshop.

On the VW 1200 the tapped holes marked with circles in the illustrations are covered by the headlining. These holes must be uncovered when installing belts.

The plastic plugs in the holes in the lower part of the body must not be used to secure the belts.

Belt anchorages for rear seats:

Upper outer point (d) –
on roof member behind rear side window

Lower outer point (e) –
on floor under rear seat

Lower inner point (f) –
in center of floor under seat

Instructions on the use of seat belts and headrests.

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

Persons less than 4 ft. 6 in. tall should not wear three-point or shoulder belts - this could increase the danger of injury in an accident. Children should always be carried on the rear seat; small children with a special child's belt or seat and larger children secured with a lap belt.

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

- When putting on the belt, always ensure that the buckle engages properly in the lock in the centre of the vehicle (pull to test) and that the belt is not twisted.
- The adjustment of the belt length is very important.

  The lap belt must always fit tightly even on the inertia reel belt.
  The shoulder part of the static three-point belt must be so tight that a hand can only just be pushed between belt and chest.
  When the seat is moved the belt adjustment must be checked and altered as necessary.
  The inertia reel type belt adjusts itself automatically.
  Seat belts are no longer fully effective when the backrests are inclined too far to the rear.
- Belts which are not in use should 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. With inertia reel belts, the buckle fitting must be lifted towards the door pillar so that the retractor can roll the belt up properly.
- Do not let the rear seat belts slip down between seat cushion and backrest because belts which cannot be seen readily will not be used by the rear seat occupants.

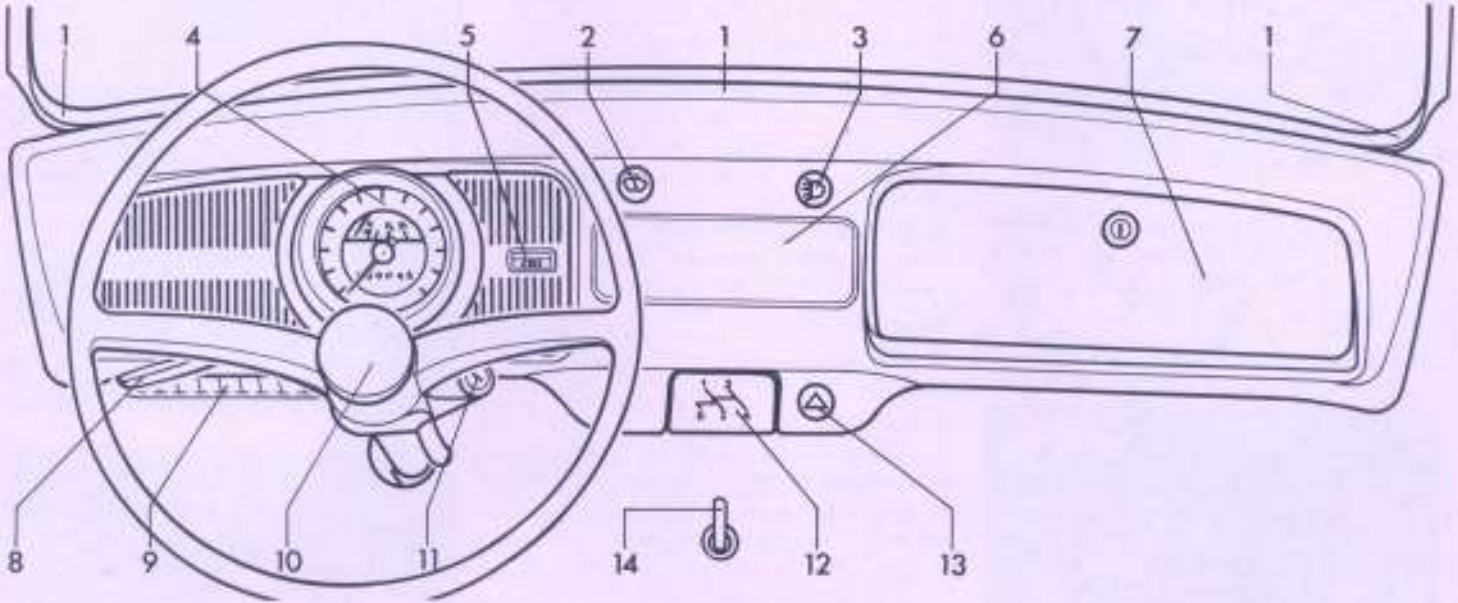
Keep the belts clean! Inertia reel belts may not retract properly if very dirty. Dirty belts can be cleaned by washing with a mild soap solution without taking the belts out of the vehicle. Inertia reel belts should be completely dry before they are allowed to roll up. Do not have the belts cleaned chemically 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.

Vehicles with adjustable headrests
The headrests are properly set when the upper edge of headrest is at about eye level and when the head touches the headrest when inclined slightly to the rear.

Instrument panel

1 – Defroster vents
2 – Wiper/washer knob
3 – Lighting switch
4 – Speedometer and fuel gauge
5 – Warning lamp for dual circuit brakes and handbrake
6 – Cover plate for radio aperture
7 – Glove box
8 – Turn signal and dip switch
9 – Fuse box and switch for heated rear window
10 – Horn button
11 – Steering lock/starter switch
12 – Ashtray
13 – Emergency light switch
14 – Fuel tap (certain models only)



Keys

Only one key is required to open the doors, start the engine and lock the engine compartment lid if it has a lock.

If the glove box lid is lockable, an extra key is provided.

Doors

Operating from outside
To open door: Press trigger (1).

To lock and unlock door with key:
Turn key clockwise or anti-clockwise (2).
The key can only be withdrawn in the centre position.

To lock door without key:
Press locking knob (3) down and depress trigger (1) when closing door.

Operating from inside
To open door: Pull release lever (4).

Windows

To open and close door window: Turn the crank (5).

Vent wings (6)

To open: Turn knob until locking lug points forward and then swing the fastener to the front.

To close: Pivot until frame is pressing against seal at the front then swing fastener to the rear.

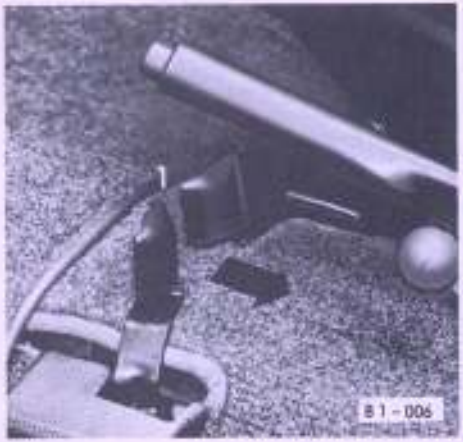
It is a good idea to note the numbers of the keys. If you should lose a key, you can then obtain a replacement from your VW Dealer by quoting the number.

If the door closes on its own, the locking knob springs up: this prevents you from being locked out with the key inside.

In order to ensure that the doors can be opened from outside in an emergency, do not press the locking knobs down when vehicle is in motion.

When the locking knobs are depressed, the doors cannot be opened from inside or outside.

Before closing a door, open a vent wing so that the air inside the body can escape.



Front seats

To move seat to or fro

Pull lever (1) on the tunnel to the rear and slide seat to desired position.

To adjust backrest rake

Lift lever (2) on outer side of seat frame, push backrest to desired angle by moving upper part of body and release lever.

After adjusting the seat, engage lever properly so that the seat cannot move while you are driving.

To adjust backrest on vehicles with reclining seats

Lift lever (2) and push backrest to the position desired.

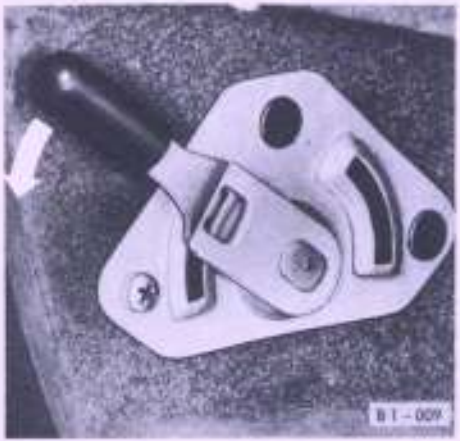
Release the lever.

To lift backrest again, just move lever (2).

Seat belts are no longer fully effective if the backrests are inclined too far to the rear.

Backrest lock

Lift knob (3) and fold backrest forward.



Luggage compartments

Front luggage compartment

To unlock – Pull lever in glove box down.
The lid springs up slightly under spring pressure.

To open hood – Press in the button on the hood and lift the hood.
The hood is spring-loaded so that it stays up.

To close hood – Press hood down firmly until you hear a click.

A tip when stowing luggage:

Whether you have a lot of luggage with you or not, always put the heaviest pieces of luggage in the front compartment first before using the space behind the rear seat.

- Good weight distribution means good handling.

Roof rack

An additional 50 kg of luggage can be carried on a roof rack when necessary.

- The roof rack must have supports which are supported in the rain channel.
  The racks offered in the VW accessory programme are of this type.
- The load on the rack must be distributed evenly.

Rear luggage compartment

Rear seat backrest

To release – Pull the loop at the side of the seat

To lock – Just push backrest to the rear and lock will engage automatically.

The rear luggage compartment is more easily accessible when the backrest is hinged forward.

On some models the backrest is held by a rubber loop on the right side.

On vehicles with luggage compartment cover:

Luggage compartment cover

To close – Release backrest lock and pull backrest forward slightly and at the same time lift the cover with one hand as far as it will go. Then push backrest slowly to the rear.

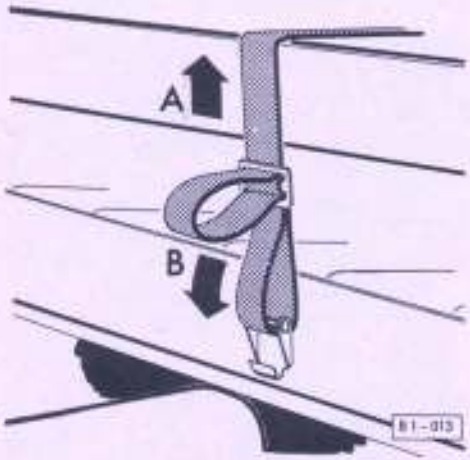
To open – Release backrest lock and pull backrest forward until cover drops down of its accord.

Luggage in the rear compartment is concealed when the cover is closed.

Caution

Do not stack luggage too high in the rear compartment, otherwise:

- suitcases etc. will be thrown forward when brakes are applied sharply,
- the heater element in the rear window can get damaged,
- the view to the rear is obstructed.



Enlarging rear luggage compartment

To secure backrest with strap

Hinge backrest forward and hook the strap under the seat support.

To release strap:

Press backrest down slightly to relieve tension on strap and detach the hook.

To adjust strap:

First pull strap forward out of the buckle a little way, then pull strap up or down through the buckle:

Pulling strap up (A) — Shortens strap
Pulling strap down (B) — Lengthens strap

The strap can only be adjusted when it is unhooked.

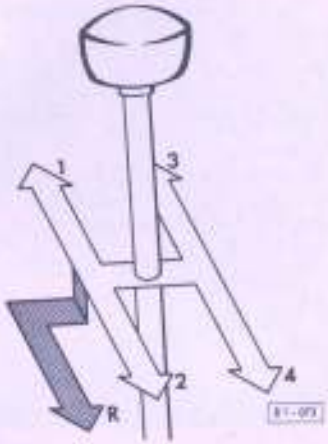
The strap length is correct if the hook can be attached easily when backrest is pressed down. The strap should then be under a slight tension.

The rear luggage compartment can be enlarged by folding the backrest forward.

Caution

Stow luggage so that it cannot be thrown forward when brakes are applied sharply.

When the seat is taken out and the backrest hinged forward, ensure that the webbing of the inertia reel belts for the front seats does not get trapped.

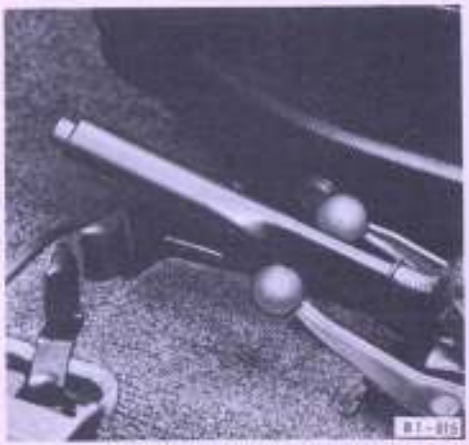


Gear lever

Shift into reverse gear only when the vehicle is standing still. To engage reverse, press lever down firmly, move it to the left and pull it back to the stop.

The shift pattern for the selector automatic is shown on page 63.

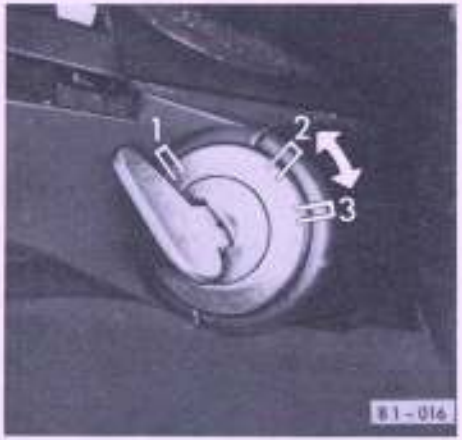
The back-up lights come on when reverse gear ist engaged.



Handbrake lever

To release the handbrake pull lever up slightly first, press the locking knob in and move lever down fully.

On vehicles with a brake warning lamp:
The lamp in the instrument panel which comes on when the ignition is switched on should go out when the handbrake is released (see page 24).



Steering lock/starter switch

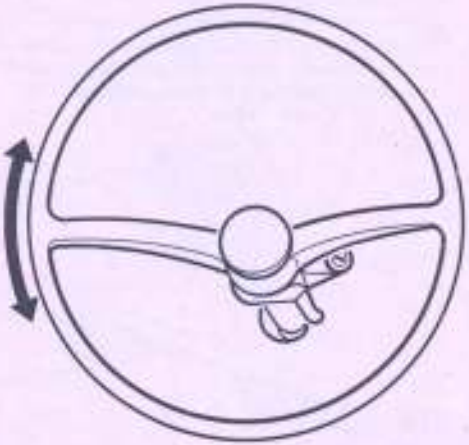
Key positions:

1 – Ignition off, steering locked
2 – Ignition on, warning lamps light up (see page 24).
3 – Starting (see page 23)

The key can only be withdrawn from the lock at position 1.

If the key is difficult to turn in the lock or cann be turned to position 2 at all, the steering whee must be turned to and fro slightly to release the locking pin.

When key is at position 3 the headlights, wipers and heated rear window are switched off automatically.



Engaging steering lock

- Remove key (position 1)
- Turn steering wheel, until the locking pin engages with a click.

Caution:

Withdraw key only when vehicle is stationary.

Speedometer

Warning lamps with symbols:

a – Heated rear window	green
b – Generator and engine cooling	red
c – Turn signals	green
d – Oil pressure	red
e – High beam	blue

On vehicles with fuel gauge

The fuel gauge only works when the ignition is on.
When the needle gets to the beginning of the reserve zone "R" there are about 5 litres of fuel left in the tank.

Fuel tap

Lever positions:

1 – **Normal**
If engine starts to stutter due to shortage of fuel, turn lever to position 2.

2 – **Reserve** (about 5 litres)
When tank has been filled, move lever back to position 1.

3 – **Off**

When the ignition is switched on, the warning lamps for the oil pressure, generator and brake system (if a lamp is fitted) light up and they go out when the engine is started.

On vehicles with a brake system warning lamp, this lamp should go out when the handbrake is released.

These warning lamps should not normally light up when vehicle is in motion (see page 24).

Permissible speed ranges for each gear:

	1.2 litre engine	1.3 litre engine
1st gear (km/h)	0– 25	0– 25
2nd gear (km/h)	15– 45	20– 50
3rd gear (km/h)	30– 80	35– 85
4th gear (km/h)	45–115	50–125

	1.6 litre engine	
1st gear (km/h)	0– 30	
2nd gear (km/h)	20– 60	
3rd gear (km/h)	35– 95	
4th gear (km/h)	50–130	

Economic speed ranges:

	1.2 litre engine	1.3 and 1.6 litre engines
2nd gear (km/h)	15–40	20– 45
3rd gear (km/h)	35–65	35– 70
4th gear (km/h)	45–90	50–100

(see also page 26)

Lighting switch

External lights
Move knob to:
1st stop — Parking lights
2nd stop — Driving lights

When the engine is being started and when the ignition is switched off, the headlights go out automatically.

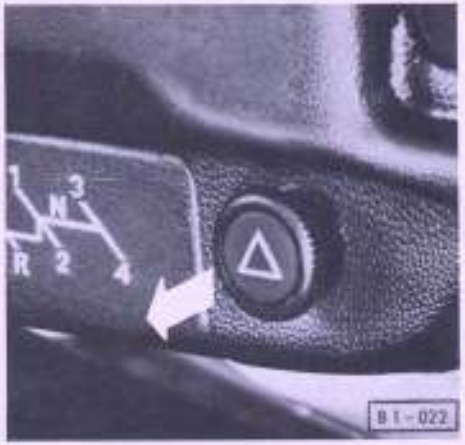
On vehicles with variable instrument lights

To regulate brightness — Turn knob

On vehicles with heated rear window

The window is switched on and off with a rocker switch under instrument panel on the left. When switched on, a green warning lamp in the speedometer lights up (see page 15).

As soon as window is clear, switch element off to reduce current consumption.
When engine is being started and when ignition is switched off, the rear window is also switched off automatically.



Emergency light switch

To switch system on — Pull switch out.
Warning lamp in knob comes on as well.

The four turn signals flash simultaneously.

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

Turn signal and dip switch

Lever up — right turn signals (R)
Lever down — left turn signals (L)
Lever in centre — turn signals off (O)

To signal a lane change

Move lever up or down until resistance is felt and hold in this position – the warning lamp must blink.

When released, the lever springs back to the central position automatically.

Headlight dipper and flasher

Lift lever towards steering wheel (A)
With lighting switch at:
0 or 1: Headlights flash
2 : Headlight main or dipped beams

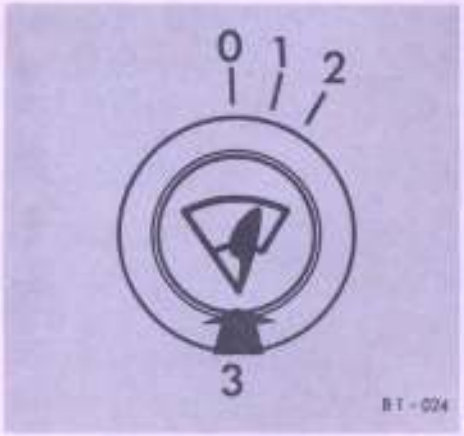
The turn signals only work when the ignition is on.

The turn signals are cancelled automatically after taking a corner.

When turn signal switch is operated the warning lamp (c) in speedo flashes (see page 15).

When the headlight main beams are on, the blue warning lamp in speedo lights up.

The headlight flasher is independent of the ignition.



Windscreen wipers

Turn switch to right — Wipers on
Turn switch to left — Wipers off

On vehicles with two-speed wipers:
1st stop — Wipers slow
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.

When engine is being started and when ignition is switched off, the wipers are switched off automatically.

Filling container, see page 30.

Windscreen washer

Press symbol in knob (3) – Washer operates

Water sprays as long as symbol is pressed.

Ashtrays

Ashtray in instrument panel

To empty – Press leaf spring down and pull ashtray out of guides

On vehicles with an ashtray in rear

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

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

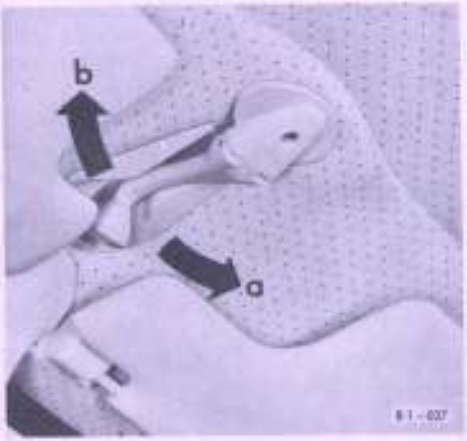
On vehicles with glove box lid

To open – Turn knob anti-clockwise

To close – Press lid to until catch engages

If lid has lock:

To lock or unlock – Turn key anti-clockwise or clockwise



On vehicles with sliding roof

To open

Fold crank down and turn it anti-clockwise (a).

To close

Turn crank clockwise (b) as far as it will go and then turn it back slightly until it can be folded into the recess.

For safety reasons, the crank should always be in the recess.

On vehicles with swivelling sun visor

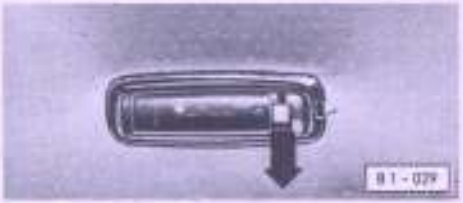
The sun visor can be lifted out of the bracket near the mirror and swung towards the side window.

Vehicles with anti-dazzle interior mirror

Press lever forward – normal position
Pull lever to rear – anti-dazzle position

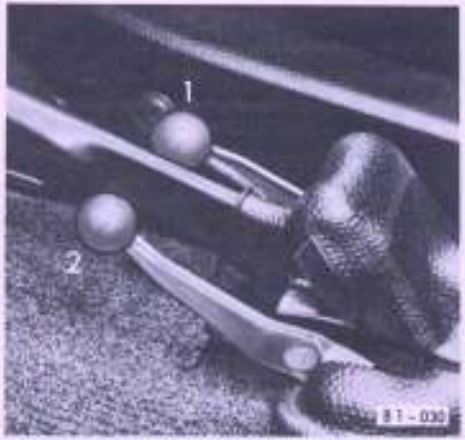
The interior mirror springs out of the mounting on impact.

It can be installed again by pressing it in firmly.



Interior light

Press knob down to switch on.



Heating

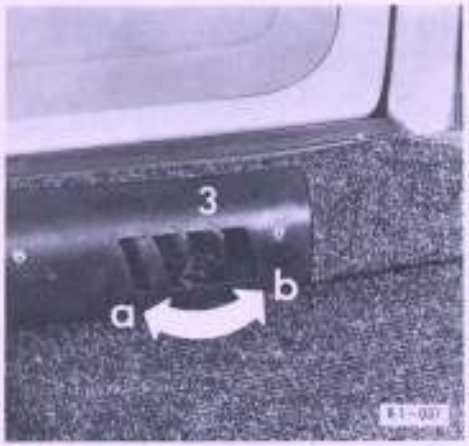
1 – **Heating lever**
Lever up – Heating on
Lever down – Heating off

2 – **Lever for warm air vents in rear footwell**
Lever up – Footwell vents open
Lever down – Footwell vents closed

When heating is on, warm air flows always from the fixed vents on the left, centre and right below the windshield. (see instrument panel, page 7, item 1).

With the levers 2 and 3, warm air can be switched on and off for the rear and front footwells. The amount of warm air flowing to the windscreen jets is then reduced.

On the 1200 L the stale air can escape through slots behind the rear side windows. This through-flow system only works when the heating is on.



3 – **Lever for warm air vents in front footwell**
(in side members in front of front seats)

Lever to rear (a) – Vents closed
Lever forward (b) – Vents open

To defrost windshield quickly

- Pull lever (1) up
- Push lever (2) down
- Levers (3) for front footwell vents forward

When the windshield is clear, open the footwell vents so that the body heats up uniformly.

Starting the engine

With manual gearbox:

- Make sure gear lever is in neutral.

With selector automatic:

- Selector lever at "N".

At temperatures above freezing point (1)

- Depress accelerator pedal slowly while operating the starter.

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.
- Switch ignition on and start engine **immediately.**

When engine is warm (3)

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

Note:

- As soon as engine starts, release the ignition key so that starter is switched off.
- Do not try to warm the engine up by letting it idle — drive off **straightaway** but do not over-rev the engine while it is still cold.

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

Starter non-repeat lock

Before starter operation can be repeated, the ignition must be switched off. A non-repeat lock in the ignition switch prevents the starter from being operated and possibly damaged when the engine is running.

Warning lamps

The warning lamps which come on when ignition is switched on should go out when the engine is started. The warning lamp for the handbrake, however, goes out only after the handbrake is released.

If the generator warning lamp comes on when driving:

- Stop at once and check V belt or fuse No. 12 in fuse box.
- If belt has broken the engine cooling is no longer working: Do not drive on until a new belt has been fitted. Details of belt size and tension are given on page 67.
- If the generator has stopped charging for any other reason, take car to the next VW workshop because the battery will soon be run down.
- If the fuse is blown, the turn signals are out of action. Fit a new fuse. If the fuse blows again, do not drive on, get workshop assistance.

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

- Stop at once – Check oil level (see page 31).
- If cause of trouble is not apparent, get expert assistance immediately.

Occasional flickering of the warning lamp when engine is idling after a long spell of fast driving does not indicate trouble as long as lamp goes out when engine speed increases.

If the brake warning lamp comes on when the brake pedal is depressed:

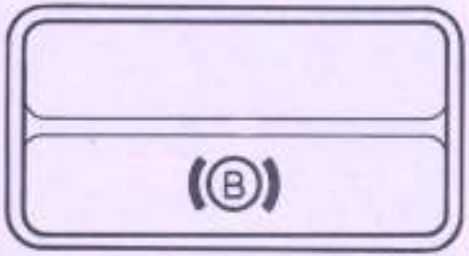
- One of the two hydraulic brake circuits may have failed.

  Drive carefully to the nearest VW workshop. **Caution:** The pedal will require more pressure and the stopping distances will be longer.

To check operation of warning lamp:

- Switch ignition on – Lamp should light up.
- Start engine – Lamp should go out straight away or when handbrake is released.

If the lamp does not come on when ignition is switched on or go out when the engine has been started and the handbrake released, there is a fault in the electrical system. See your VW dealer.



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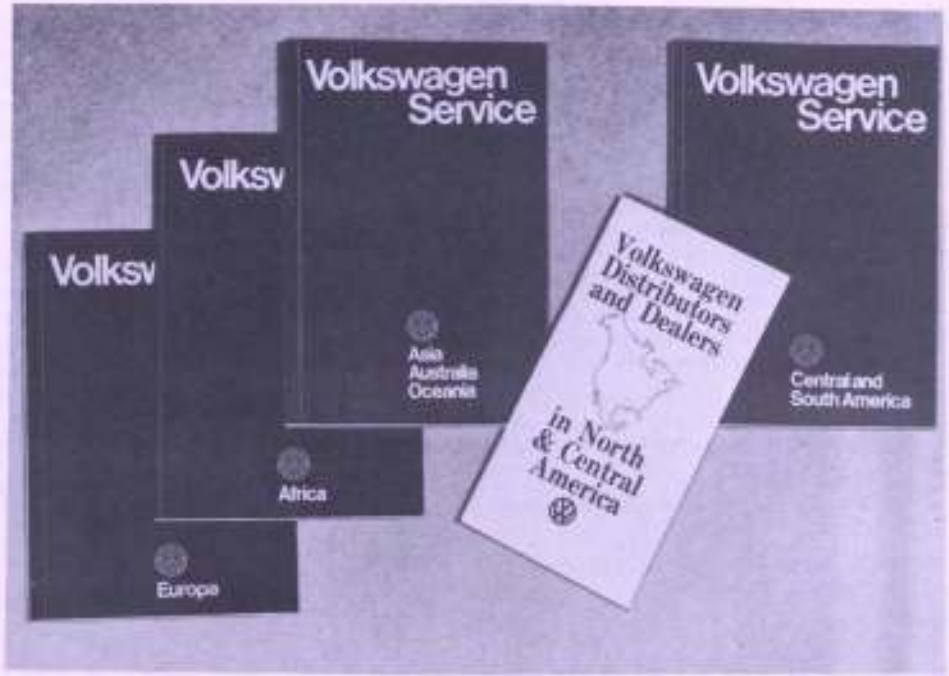
There are two good things about
VW all over the world.
The Volkswagen.
And the Volkswagen Service.



You will find VW specialists everywhere. Not just within a radius of a few thousand miles but in 140 different countries.

You can rest assured that you will find VW Service everywhere – as reasonably priced and reliable as at home. We know, because we supply all VW concerns with everything they require. From the smallest replacement part to the largest special tool.

We don't just wish you pleasant motoring – we do something to keep it that way.

Driving rules "which are well worth reading"

Engine

- Why is it advisable to drive at varying speeds at first with the new engine and not drive continuously at full speed?

  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 600 miles or so.

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

General rules:

- Never race the engine when it is cold – neither in neutral nor in the gears.
- Driving with too low an engine speed is just as bad as tearing away regardlessly.
- Do not depress accelerator on hills and let engine labour, change down in good time.

Clutch

- Slip clutch as little as possible when moving off and changing gear.
- Always declutch fully when changing gear.
- Change down when driving in columns of vehicles or turning corners instead of slipping clutch.
- Never use clutch pedal as a footrest when driving.

Gearbox

- Take your hand off the gear lever after changing gear: The pressure of the hand is transmitted to the selector forks in the gearbox and can cause the forks to wear prematurely.
- Engage reverse gear only when vehicle is standing still.

Brakes

The braking distance increases very rapidly as the speed increases. At 100 km/h, for example, it is four times longer than at 50 km/h.

- Just after moving off, before speed has increased too much, have a good look in the mirror and then depress the brake pedal to see if the brakes are working properly.
- Apply brakes in good time whenever possible but do not use too much pressure because locked wheels increase the braking distance.
- After driving through water, driving in heavy rain or washing the car, the braking force – particularly with disc brakes – can be retarded slightly: The pads must be dried first by applying the brakes.

- 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.
- Brake linings also have to bed themselves in and do not, therefore, have the optimal braking effect at first. To compensate for this, be prepared to use higher pedal pressures during the first 200 kilometers. This also applies later on when new linings have been fitted.
- 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 VW workshop in between the normal visits to the workshop.
- 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 dual brake circuit 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 VW workshop but be prepared to use more pressure on the pedal and allow for longer braking distances on the way.

Tyres

- New tyres do not give maximum adhesion at first and should therefore be "run-in" at medium speeds for about 100 km. This has a beneficial influence on the service life of the tyre.
- When wheels are locked by hard braking, the tread surface wears unevenly and this can affect the balance of the wheels.

Driving economically

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 other words, economical vehicle operation depends to a large extent on your personal style of driving.

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 columns 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. At a reasonable speed on a motorway it is possible to obtain consumption figures which are below the specifications. The consumption according to DIN 70030 is given in "Technical Data".

Every engine has a favourable consumption figure in the medium speed range. In technical terms this is the range in which the engine developes its best pulling power, also known as torque. The speed ranges in which the consumption is at its lowest are given on page 15.

Driving in winter

Volkswagens are well known for their good winter performance. If you wish to make full use of the winter driving characteristics offered by the vehicle design, note the following points.

Winter tyres

- 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.
- 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.
- Winter tyres should be inflated to 0.2 bar (3 psi) above the pressures for normal tyres.

Snow chains

- Snow chains can be fitted on the driving wheels.
- Only thin chains which do not stand clear of the tread more than 15 mm, including tensioner, should be used.
- When driving over long stretches of road which are free of snow, the chains should be removed. On dry roads the chains wear very quickly and can damage the tires as well.

Engine oil

- Change to a thinner oil in good time (for viscosity classes see section on lubricants).
- If you only drive short distances and in city traffic the oil should be changed every 2500 km. If you only drive a few hundred miles a month under these conditions the oil should be changed every 6 to 8 weeks.

  In areas with arctic climates and temperatures below about –25° C the engine oil should be changed every 1250 km.

Gearbox oil (Manual gearbox)

- The SAE 80 or SAE 80/90 hypoid gearbox oil to Mil-L 2105 (A) specifications is used all the year round.
- In areas with arctic temperatures (lower than −25° C), ATF (Automatic transmission fluid) can be used in the manual gearbox. When the temperature rises it is essential to have the ATF replaced by SAE 80 or SAE 80/90 oil.

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 the workshop frequently and charged if necessary. (Instructions on quick charging are given under "Battery care").

Spark plugs

- The electrode gap should not be too large in the winter. The correct gap is 0.6 mm.

Handbrake

- If brake linings are wet they can freeze to the drums, so:

  Do not leave handbrake on when parking if temperatures are below freezing point. Engage 1st or reverse gear instead. When parking on gradients, turn wheels towards kerb as well.

Windshield washer

- We recommend the use of our "Window Cleaner" as an anti-freeze agent for the washer container (see "Maintaining value by proper care"). One part "Window Cleaner" and three parts water will stop the water freezing down to about −15° C.

Door locks

- Door locks can freeze up in winter if water gets into the lock so do not aim the water jet directly at the lock when washing the car.
  Or better still: Cover the keyhole beforehand.
- A frozen lock can be thawed out with our "Lock Defreezer" even at very low temperatures. This solution contains a preservative agent so that it does not damage the lock cylinder even when used often. It does not damage the paintwork either.

  Door lock defreezer (50 ml plastic bottle) . . . . . 000 096 106 A

Iced up windows

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

Defroster spray (250 ml) 000 096 109

Ice on the inside of the windows can be prevented by rubbing the glass with a defroster cloth when there is a danger of frost.

Defroster cloth 000 096 110

It is a good idea to carry a shovel or short-handled spade in the car in the winter, in case you get stuck, a small hand brush to sweep snow off and a plastic scraper for the windshield, headlamps and mirror.

Towing trailers

Towing a trailer places a considerable strain on the body, gearbox, clutch and brakes of your Volkswagen. To prevent damage and in the interests of road safety, please note the following points:

- The maximum trailer weights must not be exceeded. The permissible weights are given in the Technical Data section.
- For the VW 1200 with manual gearbox the factory issues a special permit to tow a heavier trailer in the case of mobile shops, caravans, or sports trailers with brakes.
- The towing bracket must be installed in accordance with the instructions from the VW factory or the fitting instructions from the manufacturer. Check whether local regulations require the fitting of a towing bracket to be recorded in the vehicle documents.
- A special warning lamp for the trailer turn signals must be fitted in the driver's field of vision.
- In the 7-pin trailer socket on the vehicle, one pin (terminal 54 g) is usually not connected up. When additional equipment is to be fitted in the trailer, this terminal must be connected to the vehicle electrical system.
- The weight of the trailer drawbar on the ball of the towing bracket must be between 25 and 50 kg. The permissible rear axle load must not be exceeded due to the nose weight of the trailer. See further details in „Technical Data".
- If a fully loaded trailer is to be towed continuously it is advisable to use heavy duty rear axle springing and shock absorbers. This detracts from the ride comfort and handling when the vehicle is used on its own.
- A second outside mirror is essential in most cases. If the trailer is wider than the vehicle, both outside mirrors should be on extending telescopic arms so that a good view to the rear is always obtained.
- The tyres on vehicle and trailer should always have good treads. When the towing vehicle is fitted with studded tyres, the trailer should also have studded tyres.
  In accordance with the heavier loads, the tyres should be inflated to the highest permissible pressures.
- The hill climbing figures given in the Technical Data section are for the vehicle without trailer. According to the weight of the trailer these figures will be entirely different when pulling a trailer.
- Towing a trailer will naturally mean a higher fuel consumption. The increased weight and the considerably higher rolling and air resistance of the car and trailer require more power from the engine and more power means more fuel.
- When moving off, do not rev. engine more than necessary and do not slip clutch too long.
- Change down in good time when going up or down hills.
- Use brakes in good time and as gently as possible. To prevent the trailer wheels from locking when trailer has over-run brakes, apply brakes gently at first and then brake rapidly.
- Always drive at a moderate speed. In many countries there are restrictions on speeds when towing trailers.

Refueling

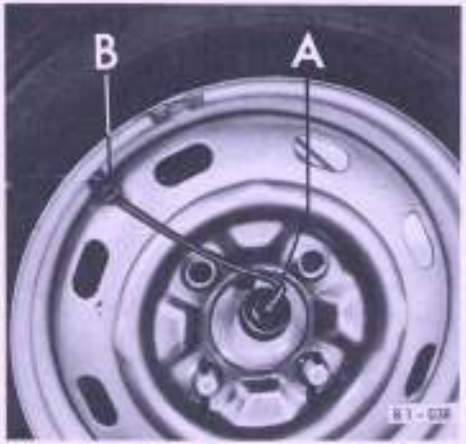
- Open the flap and screw the tank filler cap off anti-clockwise.
- After refueling, screw the filler cap on clockwise until it clicks and close the flap.

Fuel: Branded fuels
Minimum octane rating: 1.2 litre engine: 87 RON
1.3 and 1.6 litre engines: 91 RON } Regular

If regular fuel with adequate anti-knock properties is not available use premium fuel or a mixture.

Fuel capacity

Fuel gauge, see page 15.
The tank capacity is approx. 40 liters of which about 5 liters is reserve.
The tank has an additional expansion volume, which must not be filled when refueling.
The tank is full, when the automatic filler nozzle switches off the first time.



Windshield washer container

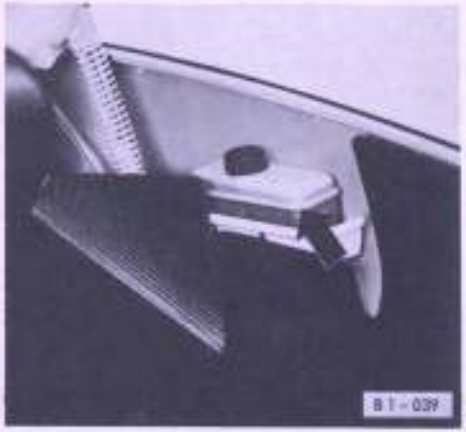
- Unscrew cap (A), fill container with water (capacity about 1.7 liters) and screw cap back on firmly.

A window cleaning fluid should be added to the water to ensure that the windshield is properly cleaned. If enough of this fluid is put in it also acts as an anti-freeze.

The spare wheel supplies the air pressure for the windshield washer. The spare wheel remains usable at all times because a special valve cuts off the air flow to the washer when the pressure drops to 2 kg/cm^2.

If the washer stops working or the water jet is too weak, the valve may have worked.
Check and inflate to correct pressure if necessary.

- Remove valve cap (B), inflate spare wheel to 3 kg/cm^2 and screw cap on again tightly.



Brake fluid reservoir

The fluid should always be level with the ridge round the reservoir. If the level drops noticeably below the joint when the vehicle has been in use for some time – see your VW workshop.

Caution: The brake fluid is hygroscopic and must be changed every two years. In order to ensure that this is done properly, see your VW Dealer.

Use only fresh (unused) brake fluid to US FMVSS 116 DOT 3 specifications when topping up the system. VW brake fluid fulfils these specifications and is available at all VW dealerships.

Caution

Brake fluid is corrosive and will damage the paintwork.

Engine oil level

- Place vehicle on a level surface.
- Switch engine off and wait at least 5 minutes to give the oil time to drain down to the bottom of the crankcase.
- Pull dipstick out and wipe it with a clean cloth.
- Push dipstick in fully again, pull it out and check the level.

The oil level must be between the two marks on the dipstick and must never be below the lower mark. Add engine oil if necessary (see page 41).

Difference in amount of oil between the upper and lower marks is **1.25 liters.**

Wheels and tyres

Wheels and tyres are important design features. The wheels and tyres approved by the VW factory 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 VW dealer.

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

Here are a few general notes on tyres:

New tyres

- New tyres can be "run in". (See also the paragraph "Tyres" in the section "Driving rules").

Tyre pressures

- The tyre pressures are given in the Technical Data part and also on a sticker on the inside of the glove compartment lid.
- 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 for damage from time to time and remove any foreign bodies embedded in treads.
- Keep oil and gasoline off the tyres. Try to avoid exposing tyres to intense sunlight for long periods.
- Replace missing dust caps as soon as possible.

Tubeless tyres

- All tyres fitted at the factory are tubeless.
- Tubeless tyres may only be fitted to the standard hump type safety rims.

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.
- 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.

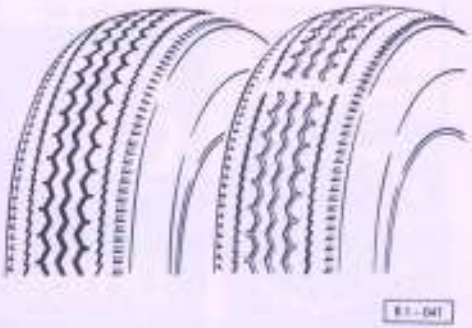
Tyre wear

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.

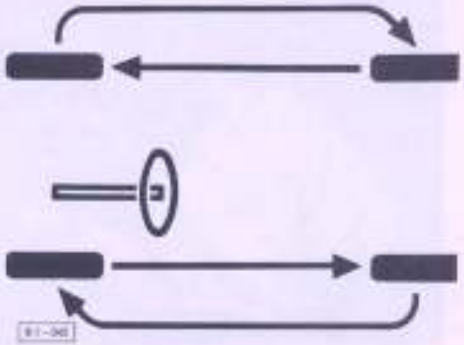
Wear indicators

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. There may be from 4 to 6 bars according to make of 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.



Uneven tyre wear is not always due to some vehicle condition such as incorrect wheel alignment, etc. It is often the result of a particular style of driving, for example very fast cornering. If the tyre pressures are neglected for a long time this can also cause abnormal wear. To avoid having to replace the tyres earlier than necessary in such cases it is advisable to change the tyres round as shown below – without altering the direction of rotation. Afterwards the inflation pressures must be corrected.



Balancing the wheels

- All wheels are balanced at the factory but as they tend to get out of balance after being in use for some time due to natural tyre wear, the wheels should be balanced again every 10 000 km.
- The wheels should always be balanced again when a tyre has been repaired and also when a tyre has lost pressure due to a faulty valve.

Radial ply tyres

Customers who have radial tyres fitted appreciate the good points of this type of tyre such as long life, anti-skid properties, good cornering abilities and lower roll resistance.
They are also prepared to accept the fact that these tyres feel harder when driving slowly.

They go to "school" with VW. So that you feel as safe with your VW all over the world as you do at home.

Every year 50 000 specialists are trained in VW service schools. Mechanics, foremen, service advisers from every corner of the world. In small groups of 8–10 they get to know the most modern procedures.

Through continual training "on the job" they widen their knowledge and keep it up-to-date.

Results of this training: Qualified personnel, high quality repairs, short repair times.

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 the approved VW 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 the instructions from the factory.

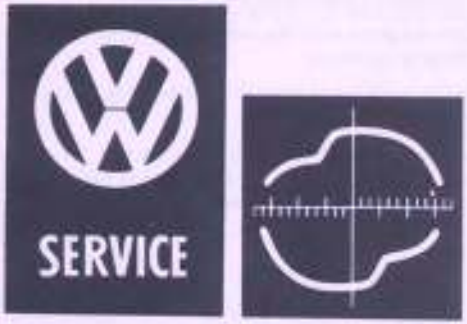
Present day safety regulations and environmental protection place very strict limits on the amount of repairs and adjustments which even a technically skilled and experienced handyman can undertake on the engine and running gear.

The Volkswagen factory also makes no exceptions in this respect.

Tinkering with the vital parts of a motor vehicle can endanger the life and health of all road users. Alteration of the factory settings of carburetor, ignition or valves invariably changes the emission values so that they no longer comply with official standards and such alterations are forbidden in most countries today. Please leave these operations to the specialists in our workshops who are waiting to help you all over the world.

If you have your vehicle serviced at a VW dealership you can rest assured that everything possible will be done to maintain the roadworthiness and reliability of the vehicle.

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



Battery care

Engine starting and the satisfactory operation of the electrical system depend to a large extent on the condition of the battery. The battery should therefore be checked and maintained regularly.

The battery is located under the rear seat.

Checking and maintaining the battery

Preparation: Lift rear seat or take it out.

- Battery acid is corrosive and must not get into the eyes or into skin and clothing. The acid will also damage or even destroy painted surfaces, upholstery, trim panels and seat belts so when checking the battery do not put the cell plugs, which are always wet with acid, down just anywhere – place them on top of the battery itself.
- If level is low, add distilled water. To avoid damage caused by overflowing acid, do not top up above the mark.

  How often distilled water should be added depends on the vehicle operating conditions and the season of the year.

  If the vehicle is frequently driven long distances in the daytime with lights and starter being used very rarely, the battery will have to be topped up with distilled water much more often than when these conditions do not apply. In general the battery must be checked more often in the summer than in the winter.

  VW drivers in hot countries who do a lot of motoring are advised to check the acid level at least every 8 days.
- The battery posts and cable terminals must be cleaned and coated with terminal grease.
- The ground strap must make metal to metal contact with the body.

Taking battery out

1. Lift cover over positive terminal
2. Pull diagnosis cable off
3. Detach both battery cables. Remove negative cable (–) first to avoid short circuits.
4. Remove battery securing clamp.
5. When putting battery back in vehicle, always connect the positive cable (+) first. Do not attempt to interchange the cables.

Important notes

- If the vehicle is to be taken off the road for a long time, the battery should be removed and charged about every 4 weeks as otherwise it will discharge itself in time and this will damage it.
- Before quick charging the battery disconnect both terminals.
- A starting boost may only be given with the battery connected and using a special quick charging appliance.
- The engine must not be run with the battery disconnected as this will damage the electrical system.
- Do not short the battery to ground. This causes the battery to get very hot and it can explode. Furthermore, sparks may ignite the gas generated during the charging process. Never use a naked flame near the battery.

Car care

Regular and careful care helps to maintain the value of the vehicle. Every VW workshop carries stocks of Volkswagen car care materials. The part numbers are given below.

Washing

Wash vehicle frequently with clear water, but do not do so in direct sunshine.

Rinse sponge often to avoid scratching the paintwork.

If water alone is not adequate, add a shampoo to the water and apply with a sponge or soft brush.

Then rinse vehicle well and dry with a leather.

Tin of shampoo (300 ml) 000 096 112
Sponge 000 096 151
Leather 000 096 155
Car cloth 000 096 150
Brush (Horsehair) 000 096 157
Brush (Plastic) 000 096 159
Washing gloves 000 096 153
Nylon washing gloves 000 096 160

Waxing

Wax as often as possible. This will prevent dirt from sticking to the paint and industrial grime from penetrating into the paint.

Wax paint after washing and rub until paint shines again or just put wash/wax solution in second lot of water regularly. Wash with this solution and dry with leather.

Tin of wax
(250 ml) 000 096 011
(1000 ml) 000 096 012

Tin of wax/wash solution
(300 ml) 000 096 122

Polishing

Should only be done if paint has lost its shine and gloss cannot be brought back with wax.

After treatment with polish the vehicle must be waxed.

If paint is cleaned with polishing wax it need not be waxed afterwards.

Matt painted parts should not be treated with wax or polish because this will destroy the matt effect. This also applies to plastic trim stripes with a matt finish.

Tin of paint polish
(300 ml) 000 096 001
(1000 ml) 000 096 002

Tube of polishing wax
(210 grams) 000 096 021

Bag of polishing cotton
(200 grams) 000 096 161
(500 grams) 000 096 162

Touching up paint damage

Small marks in the paint such as scratches or stone damage should be touched with Genuine VW Touch-Up Brushes or Spray Cans before the metal starts to rust. A sticker in the front luggage compartment gives the colour designation and number of the original finish.

Removing industrial grime

Treat paint surfaces with industrial grime remover as soon as possible.

The solution must be rinsed off very thoroughly!

Pay particular attention to seams and joints.

Bottle of industrial grime remover
(500 ml) 000 096 091

Removing tar spots

Treat paint surfaces with tar remover as soon as possible. After treatment, rinse traces of remover off with soap powder solution (water and shampoo).

Tin of tar remover
(300 ml) 000 096 052

Removing insects

Dried on insects can be cleaned off paint with insect remover.
Wash surfaces afterwards.

Clean dirty windshields with insect sponge

Tube of insect remover
(80 grams) 000 096 081

Insect sponge 000 096 083

Parking under trees

Vehicles which are parked under certain trees in summer are often found to be covered with sticky spots. These spots can be taken off easily with a shampoo if the treatment is not delayed too long.
It is advisable to wax the paint afterwards.

Care of chromed parts

Before applying chrome cleaner, the parts must be washed and dried. Then clean with chrome polish from tube.

To clean and protect the parts from the weather they can be treated with chrome protector from the tube. This compound contains a preservative.

Liquid chrome protector should be used to prevent corrosion of parts for a long period. Protective film remover is used to remove the film.

Tube of chrome polish
(80 grams) 000 096 061

Tube of chrome protector
(100 ml) 000 096 067

Tin of chrome protective film
(500 ml) 000 096 063

Tin of chrome protective film remover
(500 ml) 000 096 167

We advise the use of spray gun 000 096 064 to apply the chrome protective film and the remover.

Cleaning cloth uphostery

Clean with vacuum cleaner or a medium hard brush.

Spots or marks can be removed with liquid plastic and cloth cleaner: apply by moistening a clean, plain cloth with cleaner and rubbing spot with a circular movement and working inwards.

Plastic and cloth cleaner
(500 ml) 000 096 072

Cleaning leatherette

If not very dirty, clean with soft cloth or brush.

If very dirty, clean air-permeable leatherette with plastic cleaner. Apply with absorbent plain cloth. After cleaning, rub area dry with a soft cloth.

Non-permeable plastic material can be cleaned with plastic cleaning paste.

Plastic cleaning paste with sponge
(200 grams) 000 096 071

Plastic and cloth cleaner
(500 ml) 000 096 072

Cleaning windows

Windows can normally be cleaned with a sponge and warm water and dried with a leather. Do not use this leather for the paintwork because traces of paint cleaner and polish will cause streaks to appear on the windshield.

Insects can be removed with the insect sponge and rubber or oil deposits with glass cleaner.

Remove silicon, grease and oil with "A-Silic": Sprinkle powder on moistened windows, spread it evenly with a sponge, rinse off and rub window dry.

Silicon remover added to the water in the washer system also helps to keep the screen clean.

"A'Silic" powder
(30 grams) 000 096 075
(185 grams) 000 096 076

Silicon remover
(120 ml bottle) 000 096 093

Sachet of window cleaner
(40 grams) 000 096 101

Bottle of window cleaner
(125 ml) 000 096 102
(250 ml) 000 096 104

Insect sponge 000 096 083

Anti-mist cloth 000 096 165

Squeegee 000 096 152

Windshield wiper blades

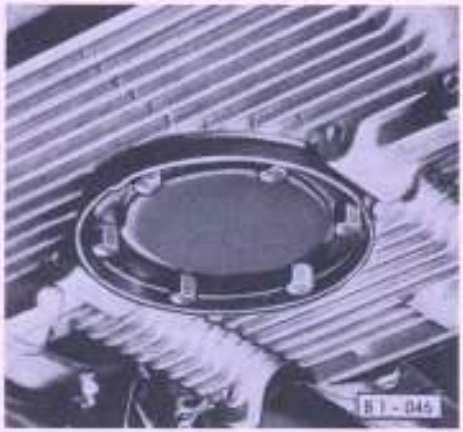
Blades which are clogged with oil and insects should be removed and cleaned with a hard brush and a detergent solution. The blades should be replaced once or twice a year according to condition.

Door and window weatherstrips

To keep weatherstrips flexible and intact and prevent them from freezing on in the winter, rub them occasionally with talcum powder or glycerine.

Airing the body

If the vehicle is left in a closed garage for long periods, the garage and car interior should be aired from time to time to prevent the formation of mould and damp stains inside the vehicle.



Lubrication

The following brief description of the oil changing and lubrication operations is intended to give the interested reader an idea of what is done in the workshop.

With the aid of this manual it is possible to have this work done in some other workshop if the next VW workshop is too far away and the work concerned cannot be postponed.

Engine

The engine oil must be changed at least twice each year

Engine oil does not only deteriorate 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 1000 km, 5000 and then every 5000.

In arduous operating conditions, for example if the vehicle is used frequently in very dusty areas 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 VW dealer.

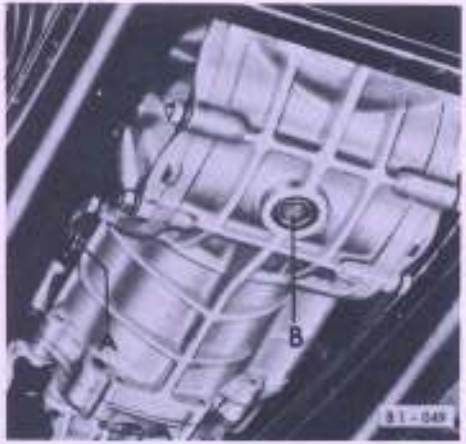
- The old oil should only be drained when warm.
- Clean oil strainer at every oil change.

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.

The illustration shows the engine oil filler opening.

Oil change quantity: 2.5 litres

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 remarks on checking oil level.



Gearbox

The gear train and final drive are in one housing and are lubricated with the same oil. See "Lubricants" page for oil specifications.

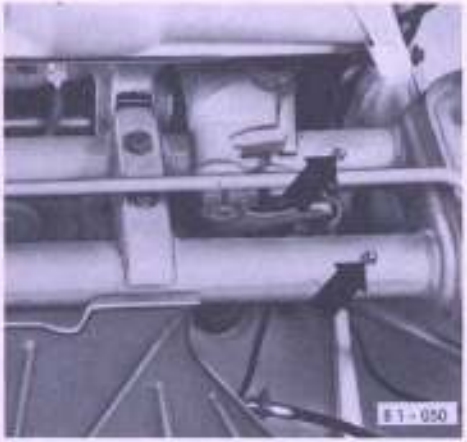
The gearbox oil is normally only changed once – at 1000 kilometers.

The oil should be up to the edge of the filler hole – Plug "A" –.

If the transmission oil has to be changed due to unusual operating conditions (see remarks on "Driving in winter"), note the following:

- Drain old oil only when it is warm. Remove oil drain plug "B".
- Clean the magnetic oil drain plug carefully.
- Put the correct amount of oil in slowly. (plug "A")

  Oil change quantity: 2.5 litres



Front axle

The front axle must be lubricated once a year or at least every 30 000 km.

Use only multi-purpose grease with a lithium base.

The arrows show the location of the grease nipples on the left side of the vehicle. The nipples on the right 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.

Hinges

The door hinges must be lubricated once a year or at least every 10 000 km.

Remove the small plugs with a screwdriver and lubricate with multi-purpose grease as shown.

The check straps are lubricated with SAE 30 engine oil.

Catch surplus oil and grease and wipe hinges clean.

Locks

The door and hood locks should be lubricated when they become stiff to operate. The lock cylinders are lubricated with graphite powder by dipping key in the graphite and turning it to and fro in the lock a few times.

The door lock is lubricated by putting a few drops of engine oil through a hole in the end of the door which is normally sealed with a small plug. The friction surfaces of the latches and striker plates should be greased lightly.

The hood locks are also greased lightly.

Lubricants

Engine oil

Tropical areas	in hot season		SAE 40
	in cool season		SAE 30
Areas with a temperate climate	in summer		
	in winter	where temperature is not normally below – 15° C	SAE 20 W–20
		where temperature is normally down to –25° C	SAE 10 W*

When the temperature is continually below –25° C (arctic areas) it is advisable to use SAE 5 W*.

The correct sort of oil is a **good brand of gasoline engine HD oil**, or oils designed "SE" according to the API system. Viscosity grade depends on the ambient temperature. As shown in the table only two viscosity grades are required normally.

As the operating ranges of neighbouring SAE grades overlap, **brief** variations in temperature can be disregarded. For the same reason it is also quite in order to mix oils of different viscosities when oil has to be added and the viscosity of the oil in the engine is no longer correct for the actual temperature.

Transmission oil and ATF (Automatic Transmission Fluid)

	Manual	Selector automatic
	Gearbox and final drive	Converter
Summer and winter (all the year)	SAE 80 or 80/90 Hypoid oil to Mil-L-2105 A**	
In districts with an arctic climate (below –25° C)	ATF with Dexron test mark e. g. B 10 100	

Lubricant additives

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

Grease

Use only multi-purpose grease with a lithium base. The battery terminals and posts are coated with terminal grease.

* Do not drive at high speeds for long periods when using SAE 10 W oil if the outside temperature is above –10° C or if using SAE 5 W when the temperature is above –20° C.

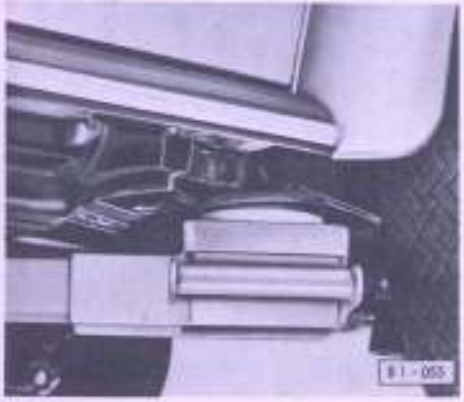
** with 4 % sulphur-phosphor additive

Front: Frame head

Lifting vehicle

a – with a vehicle lift (illustrations)

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



Rear: Cross tube flanges or ends of cross tube

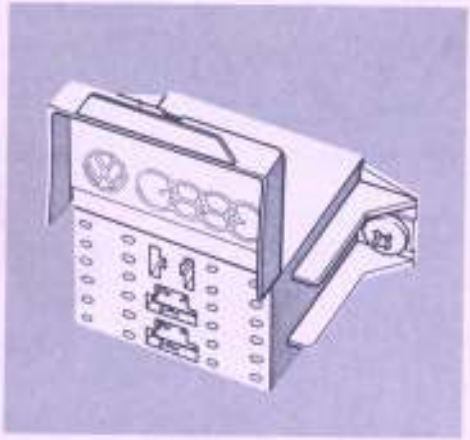
b – with a trolley jack

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

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 transmission as this will cause serious damage.



Test wiring and socket for the Computer Diagnosis

The well known VW Diagnosis and Maintenance System has been supplemented by the VW Computer Diagnosis*. By using modern electronic measuring techniques this system makes it possible to check and evaluate automatically a number of functions and adjustments which are essential to the roadworthiness and operational safety of the vehicle. The results are printed on a test report at the same time. This provides an extremly reliable and rapid check on the vehicle condition.

The key to the computer diagnosis system is the socket shown here which is located in the engine compartment of your Volkswagen. Volkswagens which are prepared for the Computer Diagnosis have a built-in test wiring network which ends in this multi-point socket. During the diagnosis, the cable from the computer electronic system is connected to the vehicle via this socket.

The socket is only to be used for this purpose and the lid must be kept closed at all other times.

* In West Germany and many other European countries.

Everywhere where you see the familiar VW sign at the roadside you can be sure of expert advice and quick efficient assistance.

When your vehicle needs attention, take it to a VW workshop. It will be in good hands.

Just in case you have to deal with a small defect or breakdown yourself one of these days, we have included some information on the next few pages which should help you.

Changing wheels

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 and tools (in front luggage compartment) and jack (under rear seat*) ready for use.

Before the spare wheel can be taken out, the hose for the windscreen washer must be screwed off the tyre valve – arrow 1–.

The washer container must also be taken off the wheel after removing the two small wedges – arrows 2 –.

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

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

If you wish to have non-standard wheels or tyres fitted, read the remarks in the "Wheels and Tyres" section first.

* See section "Removing and installing rear seat"

** On vehicles with sports wheels there is no wheel cap but the bolts have small plastic caps and the centre hole is covered with a trim plate. Caps and plate must be taken off before removing wheel and replaced when spare wheel has been fitted.

Insert jack arm into square hole under the body. 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 base-plate.

Lift the vehicle (a) until the appropriate wheel is off the ground.

Remove wheel bolts and take wheel off.

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

Lower vehicle (b).

The vehicle jack is only for lifting the vehicle. When working under the vehicle, proper supports must be used.

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

The wheel bolts or 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.

The correct torque is 13 mkg.

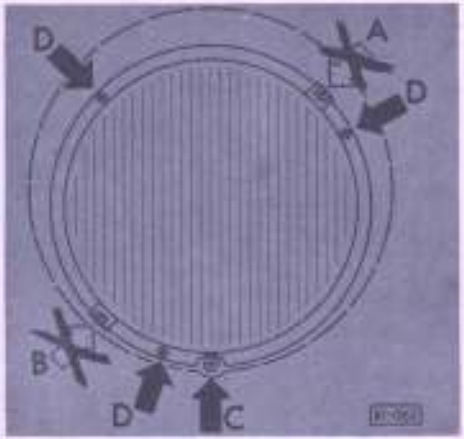
Install wheel cap.

Stow jack, wheel and tools away again.

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

Install washer container on damaged wheel.

Have the damaged tyre repaired as soon as possible because the spare wheel supplies the air pressure for the windshield washer!



Replacing bulbs

Headlight or parking light

- 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.**
- Pull 3 pin connector off and take off parking light and earth wires.
- Take rubber cap off.
- Press retaining ring against reflector, turn it to the left and take it off.
- Fit new headlight or parking light bulb. Do not touch glass of new bulb with bare fingers. The two metal tabs on the bulb flange must engage in the recess in the reflector. The centre terminal lug on the bulb is then upwards.
- Install retaining ring so that the contact tab is on the base of the parking light bulb, then press ring against reflector and turn it fully to the right.
- Install 3-pin connector and press rubber cap on firmly so that it seals all round on reflector and bulb base. Attach parking light and earth wires. Do not interchange wiring. Watch wire colours: Gray – terminal 58, brown – 31.
- Attach support ring and headlight.
- Install trim ring: Start screw first then press ring over the lug at the top and tighten screw.
- Have headlight setting checked at the next opportunity.

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

Halogen headlight bulb or parking light bulb

- Take trim ring off and remove support ring with headlight.
- Pull 3 pin connector off and take off parking light and earth wires.
- Take rubber cap off.

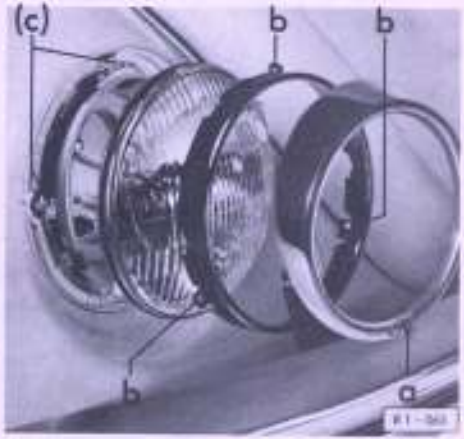
To replace headlight bulb

- Squeeze bulb retaining clip together and swing it clear.
- Fit new bulb.

  Do not touch glass of new bulb with bare fingers. Install bulb so that the centre tab is upwards and the dimmer shield downwards.
- Swing spring clip over bulb base, squeeze ends together and engage in the retaining lugs.
- Install 3 pin connector.

To replace parking light bulb

- Pull bulb holder out of reflector by the tab.
- Turn defective bulb to left slightly and take it out of holder.
- Press new bulb into holder and turn it to the right so that the retaining pins on the bulb base engage.
- Press holder past the spring contact into the reflector.
- Press rubber cap on firmly so that it seals all round on reflector and bulb base. Connect parking light and earth wires. Do not interchange wiring. Watch the wire colours: Gray on the tab on bulb base, brown on the riveted earth tab on the side.
- Install support ring with headlight, install trim ring and secure it.



Sealed-Beam headlight

(Export models only)

Seven inch units with twin filaments are used.

- Remove screw (a) in trim ring and take ring off.
- Remove three short screws (b) in the retaining ring and take ring off.

  Caution! Do not alter the setting of the three long screws (c).
- 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.
- Have alignment checked at first opportunity.

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 between lamp and headlining at front and lever lamp out.
- Take bulb out
- Install new bulb
- Insert retaining lug first and then press lamp in until spring engages.

Bulb chart

(V = volts, W = watts)

	12 volt system		6 volt system		
Bulb for	DIN designation	VW Part No.	DIN designation	VW part No.	Type
Headlight (normal)	A 12 V 45/40 W	N 17 705 3	A 6 V 45/40 W	N 17 705 1	Twin filament ball
Headlight (Halogen)	YD 12 V 60/55 W	N 17 763 2	–	–	Halogen H 4
Parking light	HL 12 V 4 W	N 17 717 2	HL 6 V 4 W	N 17 717 1	Tubular
Turn signal	RL 12 V 21 W	N 17 732 2	RL 6 V 21 W	N 17 732 1	Ball
Brake-tail light	SL 12 V 21/ 5 W	N 17 738 2	SL 6 V 21/ 5 W	N 17 738 1	Twin filament ball
License plate light	G 12 V 10 W	N 17 719 2	G 6 V 10 W	N 17 719 1	Ball
Interior light	K 12 V 10 W	N 17 723 2	K 6 V 10 W	N 17 723 1	Festoon
Back-up lights	RL 12 V 21 W	N 17 732 2	RL 6 V 21 W	N 17 732 1	Ball
Bulbs for vehicles with Sealed-Beam headlights differ as follows:					
Headlight	6012 (US)	111 941 261/A	–	–	Sealed-Beam
Turn signal front with parking light	SL 12 V 21/ 5 W	N 17 738 2	–	–	Twin filament ball
For vehicles with US equipment:					
Headlight	6014 (US)	111 941 261 B/C	–	–	Sealed-Beam
Side marker light fr. (addit.)	HL 12 V 4 W	N 17 717 2	–	–	Ball

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

Adjusting headlights

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

Fuses

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

If any electrical component fails, a fuse may have blown.

The fuses are housed in a box with a transparent plastic lid on the left under the instrument panel.

Changing a fuse

- Take lid off box and turn all fuses until the metal strip is forward.
- A blown fuse can be recognized by the break in the metal strip.
- Take defective fuse out of the clips carefully.
- Insert new fuse of same capacity so that the metal strip is to the front, but do not grip the metal strip or bend the retaining clips.
- The fuse must fit tightly between the clips.

Note

- If the newly inserted fuse blows again after a short time, the electrical system must be checked by a VW workshop to find the cause of the short circuit and rectify it.
- On no account should fuses be patched up with silver paper or something similar because this can cause serious damage elsewhere in the electrical system.
- Always carry a few spare fuses on the vehicle.

Additional fuses in separate holders

Component	Location
Heated rear window (main current)	under rear seat
Reversing lights	on fan housing in engine compartment
Heater	on heater in front luggage compartment

Replacing fuses in holders

The holder is in two parts. Press two parts together and twist in opposite directions until holder can be opened. Install new fuse of same capacity. Press two parts together lightly and turn until the spring catch engages.

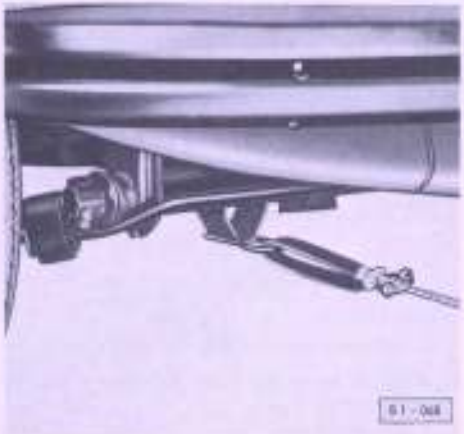
Removing and installing rear seat

To take out: Lift and pull forward slightly, lift right up on **righthand** side and take out at an angle.

To put back: Lift into vehicle at an angle – **left-hand side** down – until seat is behind lock pillars and then press down on the righthand side. Lift front edge slightly, push seat under the backrest, then press the front edge down firmly behind the cross support.

Caution! When removing and installing the seat, take care not to damage the backrest with the retaining hook on seat frame (arrow).

In most cases it is not necessary to take seat right out-it is sufficient just to lift seat at the front.

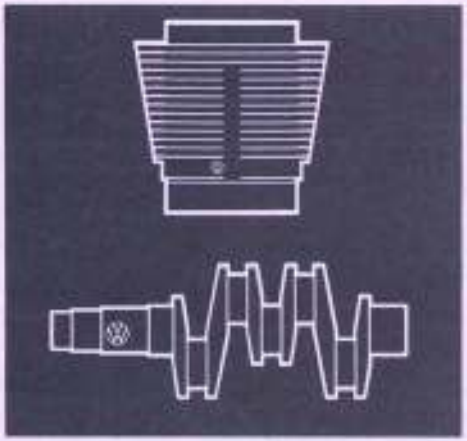


Towing

At rear, a tow rope may only be attached to the hole in the left (left hand drive: right) bumper bracket.
At front, the tow rope has to be attached to the eye on the lower axle tube (illustration).
In order to avoid damage when towing or being towed, note the following points:

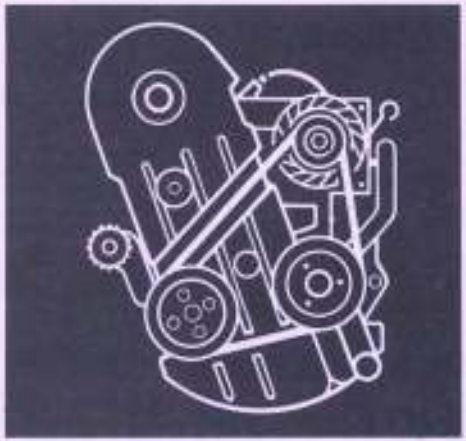
- The towrope must be slightly elastic to reduce jerking on both vehicles. Use only plastic towropes or towropes with spring links.
- The driver of the towing vehicle must use his clutch very carefully when moving off and when changing gear.
- The driver of the vehicle being towed must ensure that the towrope is always taut.
- The ignition must be switched on in the vehicle being towed so that the steering is not locked and the turn signals and brake lights work.

There is nothing better for your VW than Genuine VW parts — as you probably know already



Genuine VW spare parts

for reliable and satisfactory repairs.



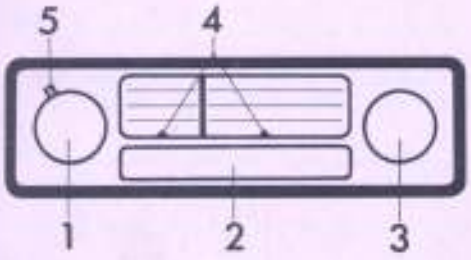
Genuine VW exchange parts

are the same but about 50 % cheaper because the old part is taken back.

Genuine VW accessories

to give that individual touch.

Details of these parts and their prices can be obtained from every VW dealer who will also be pleased to install them in your VW for you.



VW Radios

Operation

1 – Rotary knob: On – off, volume
2 – Press buttons for wavebands:

U = VHF
K = Short wave
M = Medium wave
L = Long wave

On sets with **station press buttons**, each button can be set to a **station:**

- Tune in station exactly with rotary knob (3).
- Pull button out and press it in again. The station can be selected again by just pressing the button.

The button can be set to another station at any time.

3 – Rotary knob for tuning
4 – Station markers
5 – Rotary swtich for tone control

down – bass
up – treble

Additional equipment

Information on connecting additional equipment such as tape recorders, traffic radio decoders, automatic aerials, etc. can be obtained from your VW Dealer.

Care of aerial

From time to time after washing the vehicle the aerial should be wiped dry and coated lightly with chrome grease. When dry and dirty, the aerial gets stiff and then liable to bend when being pushed down.

Fuse in radio connecting cable

Use only a 2 ampere fuse (VW Part No. 111 035 307) in the radio connecting cable.

VHF reception

In built-up areas and in hilly districts the VHF reception can often be of poor quality.

Radio license

If local regulations require it, do not forget to obtain a radio license before using your car radio.

Selector Automatic

The Selector Automatic transmission consists of a normal fully synchronized three-speed gearbox which is connected to the engine via a hydrodynamic torque converter. Between converter and gearbox is a vacuum operated clutch which automatically interrupts the power flow from converter to gearbox when a driving range is being selected.

The clutch pedal has been dispensed with and the brake pedal has a wide plate so that the brakes can also be applied with the left foot. A selector lever in the frame tunnel takes the place of the gear-shift lever.

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. This tendency is stronger, the higher the engine speed is.

- **Do not keep accelerator down when changing a driving range – wait for engine speed to drop to idling.**

- **When vehicle is in motion, touch the selector lever only to change the driving range.**

  Reason: When a range is selected, the power flow between engine and gearbox must be interrupted. This is done by a shift clutch which disengages automatically when the lever is moved in the direction of a driving range. If the lever is touched when the vehicle is in motion and moved accidentally, the clutch disengages immediately. This makes the engine race as the load is taken off and – when the lever is released – puts an excessive strain on the clutch as it is engaged suddenly. The same strain is created when a driving range is selected with accelerator down.

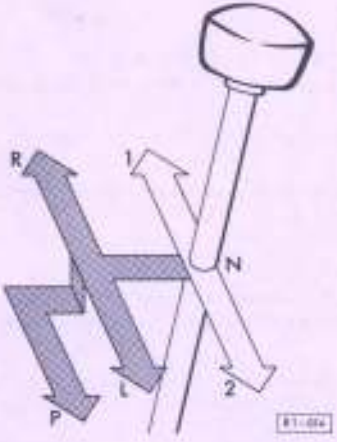
Description

The selector lever has 6 positions:

L –
1 – } Forward driving ranges
2 –

R – Reserve
N – Neutral
P – Park

When in neutral, the lever is always between driving ranges 1 and 2. To select driving ranges L and R, the lever must be pressed to the left first. To engage the parking lock, the lever must first be moved to the left against the spring pressure and pressed down. It is then moved to the left as far as it will go and pulled to the rear.



Lever position "L":

The "low" range covers speeds from 0 to 55 km/h (50 km/h*). It is used for steep gradients with vehicle fully loaded or towing a trailer. It is also used when driving very slowly over difficult terrain. This range is not used very often.

Lever position "1":

This range is for moving off and accelerating and covers speeds from 0 to about 90 km/h (85 km/h*). It is the correct range for dense urban traffic, medium gradients, slow moving columns of vehicles and when maximum acceleration is required for overtaking.

Lever position "2":

This range, which covers speeds from 0 to top speed is for the open road. It can also be used in free flowing town traffic at relatively low speeds without being detrimental to the transmission.

However, where the traffic calls for constant changes in speed or even stopping, starting and accelerating, the lever should be moved to "1" in good time.

* Figures in brackets are for the 1.3 liter engine.

Lever position "R":

This range may only be selected when vehicle is stationary and engine is idling.

Lever position "N":

This is the normal neutral position as on an ordinary gearbox.

Lever position "P":

In position "P" the rear wheels are mechanically blocked. The parking lock should only be engaged when the vehicle is stationary. (See also "Driving instructions – Parking")

Driving instructions

Starting

The engine can only be started when selector lever is at "N". (Other points on starting are as given on page 21)

Moving off

Normally, the lever should be at "1" when moving off. Release lever as soon as range has been selected (see remarks on page 58).

Stopping and moving off again

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 be run at an idling speed and the vehicle held with the brakes.

If the vehicle is not fully loaded, not on a gradient and rapid acceleration is not required, it is quite in order to move off with lever in position "2". Otherwise, it is advisable to move the lever – as with a normal gearbox – to "1" before moving off.

Driving in mountains

For mountain driving, the lever positions should be selected – as with a normal three speed gearbox – to suit the gradient and keep the engine running in the best torque range.

In order to make effective use of engine braking when going downhill, the lower ranges "1" or "L" should be selected as necessary.

Parking

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 when the handbrake is applied.

Hint:

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.

Emergency starting

If the battery is flat, the vehicle can be started by towing:

Selector lever at "L"

Towing speed about 25 km/h (16 mph)

It cannot be started by getting helpful people to push it. The torque converter power flow at a walking pace is not sufficient to turn the engine over.

Towing

With the lever at "N", the vehicle can be towed without speed or mileage restrictions.

Trailer towing

The instruction in "Trailer towing" apply without exception to towing a trailer with an "automatic" vehicle.

The following points should, however, be noted:

- Always move off with lever at "L" and do not move to "1" until a speed of at least 35 km/h (22 mph) has been reached.

  Reason: The fluid in the torque converter can get too hot if the vehicle moves off in too "high" a range and the next range is selected too early because an excessive amount of slip occurs in the converter for a prolonged period.

- For long downhill stretches the "L" driving range should be selected in order to get maximum benefit from engine braking and relieve strain on the brakes. If the gradient is only slight, sufficie braking effort may possibly be obtained in range „1".

Warning lamp in instrument panel

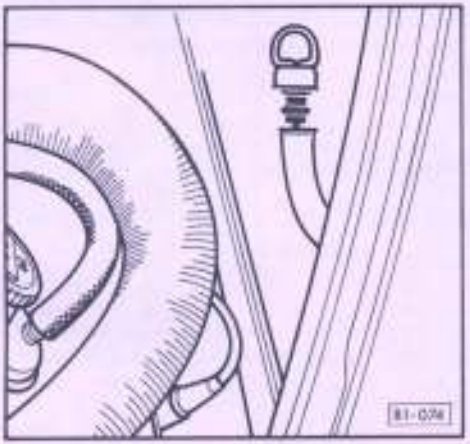
As the converter fluid can overheat due to the additional strain on the transmission caused by trailer towing – particularly if certain driving mistakes are made – vehicles fitted at the factory with a towing bracket are also equipped with a warning lamp* in the instrument panel. This lamp comes on in good time when the fluid heats up excessively so that the driver can take certain measures to prevent the temperature from rising still further.

*** The lamp must also be fitted when a towing bracket is service installed.**
The workshops in the VW Organization have been informed of this.

- If the warning lamp comes on in the driving range "2", the range "1" must be selected immediately. If it comes on in range "1" the "L" range must be selected at once.
  The temperature of the fluid usually goes down quickly as the fluid is cooled more intensively by the faster circulation. The lamp will then go out shortly afterwards.
- However, if the warning lamp does not go out when the lever is in position "L", stop the vehicle at the next opportunity. Keep the engine running at an idling speed with selector lever at "N" as this helps to cool the fluid quickly. When the lamp goes out, wait a while before driving on.

Additional fuses

The control valve for the automatic gearshift clutch is wired via an 8 A. fuse which is located in the fuse box (Fuse No. 11). If the driving ranges cannot be selected at any time it may be found that this fuse has blown.



Maintenance and lubrication

The **gearbox and final drive** are combined in one housing and are lubricated with the same hypoid oil as is used with the normal transmission.

The instructions with regard to oil level, oil changing and oil specifications are the same as those for the normal manual transmission. The amount of oil required however is **3.0 liters** not 2.5 liters.

The **torque converter** is filled with Automatic Transmission Fluid. The system is supplied from a special ATF container. There are 3.6 liters of ATF in the circuit.

The filler neck for the container is on the right of the engine compartment. The cap has a dipstick attached to it. The fluid level should always be between the two marks on the dipstick and must never drop below the lower mark. When necessary, the level must be topped up with ATF. See specifications under "Lubricants".

The ATF is not changed.

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 (kilo-watt)	1 bhp = 0.736 kW
Torque	lb. ft.	Nm (Newtonmeter)	1 lb. ft. = 1.36 Nm
Revolutions	rpm	1/min*	new way of writing
Pressures	psi	bar	1 psi = 0.07 bar

* for example 2700/min

Engine

4 cylinder, 4 stroke, horizontally opposed engine at rear · Air cooled by fan · Pressure oil feed by gear type pump, with oil cooler, cleaned by strainer · Mechanical fuel pump · Downdraft carburetor with automatic choke and accelerator pump · Paper type air cleaner (1.2 litre engine: oil bath air cleaner).

Engine data		1.2 litre engine	1.3 litre engine	1.6 litre engine
Bore	mm/in.	77/3.03	77/3.03	85.5/3.36
Stroke	mm/in.	64/2.52	69/2.72	69/2.72
Capacity	cm^3/cu. in.	1192/72.7	1285/78.4	1584/96.6
Compression		7.3	7.5	7.5
Maximum output	kW (bhp)-DIN 70 020	25 (34) at 3800 rpm	32 (44) at 4100 rpm	37 (50) at 4000 rpm
Maximum torque	Nm (lb. ft.) DIN	76 (55) at 1700 rpm	88 (64) at 3000 rpm	108 (78) at 2800 rpm
Fuel consumption	litre/100 km (DIN 70 030)*	7.5	8.8 (9.2**)	9.2 (9.6**)
	mpg Imp./US	37.6/31.3	32/26.7 (30.6/25.5**)	30.6/25.5 (29.4/24.5**)
Fuel rating	RON Res. F 1	87	91	91
Oil consumption	litre/1000 km	max. 1.0	max. 1.0	max. 1.0
	Imp. pints/1000 miles	max. 2.8	max. 2.8	max. 2.8
	US pints/1000 miles	max. 3.4	max. 3.4	max. 3.4

* Extract from DIN 70030: Consumption measured at a constant 3/4 of maximum speed (but not above 110 km/h) on a 10 km long return stretch of level road with no wind. Vehicle with half load. 10 % is added to measured consumption.

** with selector automatic

Power transmission

with manual transmission:

Single plate dry clutch (Clutch pedal free play 10–20 mm). Baulk synchronized four-speed gearbox and final drive in one housing.

with selector automatic:

Hydrodynamic torque converter, baulk synchronized three-speed gearbox and final drive in one housing.

Body and chassis

All-steel body bolted to chassis frame. Centre tube frame with front frame head and frame fork at rear.

Front axle, steering

Front axle beam bolted to frame head · Independent suspension with twin cranked trailing links · Two tranverse torsion bars. Telescopic shock absorbers · Stabilizer · Worm and roller steering.

Rear axle

Independent suspension: Manual transmission with swing axle.
Selector automatic with double-joint axle with trailing and diagonal links.
Springs: Torsion bars · Telescopic shock absorbers.

Brakes

Drum brakes (On request: disc brakes at front).
Footbrake: Hydraulic dual circuit system.
Handbrake: Mechanical effective on rear wheels.

Chassis data

Wheelbase	mm/in.	2400/94.5
Front track	mm/in.	1308/51.5
with disc brakes	mm/in.	1314/51.7
Rear track	mm/in.	1349/53.1
Turning circle	m/ft.	approx. 11/36

Wheels and tyres				
Wheels	Steel, perforated disc, drop centre rims with double hump			
Size	4 1/2 J x 15			
Tyres, tubeless	Cross ply		Radial ply	
	5.60 – 15 4 PR		–	
or	6.00 – 15 L 4 PR		155 SR 15	
Tyre pressures	front	rear	front	rear
with				
1 or 2 occupants bar (psi)	1.1 (16)	1.9 (27)	1.3 (18)	1.9 (27)
3 to 5 occupants bar (psi)	1.3 (18)	1.9 (27)	1.3 (18)	1.9 (27)

These pressures should be increased by 0,2 bar (3 psi):

- When using winter tyres (cross and radial ply)
- For prolonged high-speed driving (cross ply tyres only)

The pressures are for cold tyres.

Electrical system	12 Volt	6 Volt
Battery Ah	36	66
Starter kW (hp)	0.5 (0.7)	0.37 (0.5)
with selector automatic kW (hp)	0.6 (0.8)	–
Generator	AC generator with voltage regulator	DC generator with regulator
Output W	700	315
Spark plugs	VW Part No.	
for normal running	**N 17 801 8** **N 17 802 8** **N 17 803 7**	Bosch W 145 T 1.1 Beru 145/14 Champion L 88 A
for severe loading above 25° C	**N 17 801 1**	Bosch W 175 T 1 Beru 175/14
Plug thread mm		14
Electrode gap mm		0.6

V belts		12 volt system	6 volt system
Designation		11.3 x 912 LA "XDA"	9.1 x 900
VW Part No.		111 903 137 E	111 903 137 D
Belt tension			
New belt	mm	Deflection* 9–11	Deflection* 15
Used belt	mm	Deflection* 11–14	

* With a pressure of about 7.5 kp/16.5 lbs. (firm thumb pressure) in the centre between the two pulleys

Dimensions and weights		
Length	mm/in.	4060/159.8
Width	mm/in.	1550/ 61.0
Height, unladen	mm/in.	1500/ 59.1
Ground clearance	mm/in.	150/ 5.9
Kerb weight	kg/lbs.	760/1675
Permissible load	kg/lbs.	380/ 838
Permissible total weight	kg/lbs.	1140/2513
Permissible front axle load	kg/lbs.	490/1080
Permissible rear axle load	kg/lbs.	710/1565
Permissible roof loads and trailer weights**		
Roof load**	kg/lbs.	50/110
Trailer with brakes	kg/lbs.	650/1433 on gradients up to 16 %
Trailer without brakes	kg/lbs.	400/882
Nose weight	kg/lbs.	25–50/55–110

** Subject to local regulations which may differ

*** Use only racks supported in rain channel. Racks from the VW accessory programme are of this type. Distribute load uniformly

Performance

		Engine			
		1.2 litre	1.3 litre	1.6 litre	
Maximum and cruising speed					
With manual transmission	km/h–mph	115–72	125–78	130–81	
With selector automatic	km/h–mph	–	120–75	125–78	
Hill climbing ability (in %)					
With manual transmission	1st gear	41	40	42	(measured on good roads, with 2 occupants, non-stop climb)
	2nd gear	21	20	22	
	3rd gear	12	11	12	
	4th gear	7	6.5	8	
With selector automatic	Range "L"	–	33	35,5	(measured on good roads, with 2 occupants)
	Range "1"	–	25	29	
	Range "2"	–	18	20.5	

Capacities		Metric	Imp.	US
Fuel tank	about	40 litres	8.8 gal.	10.6 gal.
Engine oil*		2.5 litres	4.4 pts.	2.6 qts.
Manual transmission**		2.5 litres	4.4 pts.	2.6 qts.
Selector automatic (not with 1.2 litre engine):				
Converter**		3.6 litres	6.3 pts.	3.8 qts.
Gearbox and final drive**		3.0 litres	5.3 pts.	3.2 qts.
Oil bath cleaner (1.2 litre engine only)		0.25 litres	0.4 pts.	0.5 pts.
Windshield washer:				
Liquid		1.7 litres	3.0 pts.	1.8 qts.
Air pressure		3 bar	42 psi.	42 psi.

* HD oil for gasoline engines

** Hypoid transmission oil

*** ATF with Dexron test mark

For further details see the "Lubricants" section

The identification plate is underneath the front hood near the spare wheel

The chassis number is stamped on the frame tunnel under the rear seat.

The engine number is on the crankcase flange for the generator support.

Vehicle data quiz

• What sort of fuel does your vehicle require?	Commercial petrol, minimum octane rating: 1.2 litre engine: 87 RON 1.3 and 1.6 litre engines: 91 RON } Regular fuel If regular fuel with adequate anti-knock properties is not available, use premium or a mixture
• What sort of engine oil?	**HD oil* for gasoline engines,** or oils designed "SE" according to the API system (SAE grade (viscosity) according to time of year. See "Lubricants" for further details.
• What is the difference in quantity between the miminum and maximum marks on the dipstick?	**1.25 litres**
• How often should the engine oil be changed?	Every 6 months or at least at 1000, 5000 and then every **5000 km** / at 600, 3000 and then every **3000 miles.** The amount required is 2.5 liters.
• How often should the air filter be cleaned?	The paper element or the oil bath filling should be renewed every 30 000 km / 18 000 miles.
• What sort of oil is used in the manual gearbox and final drive?	**SAE 80 or SAE 80/90** Hypoid oil to MIL-L-2105 (A) specifications (additive basis: Sulphur-phoshor) or in areas with arctic temperatures below – 25° C / – 13° F: ATF
• What is used in the selector automatic?	a – Torque converter: ATF with Dexron test mark, e. g. B 10 100 (all the year) b – Gearbox and final drive: As for manual gearbox
• When is the gearbox and final drive oil changed?	**Only at 1000 km / 600 miles.**
• When is the oil in the selector automatic changed?	a – Torque converter: The ATF does not need changing b – Gearbox and final drive: Only at 1000 km / 600 miles.
• How often is the front axle lubricated?	**Every 30 000 km / 18 000 miles** or at least once a year.

- How much brake fluid should there be in the reservoir?

  The fluid should always be level with the ridge round the container.

- Do you require anti-freeze for your vehicle in the winter?

  Yes, but only in the windshield washer. It will work satisfactorily when it is freezing if sufficient window cleaning fluid is put in the water. Container capacity: see "Technical Data"

- Which spark plugs should be used?

  Bosch W 145 T 1.1, Beru 145/14, Champion L 88 A
  Fit new plugs every 20 000 km / 12 000 miles

- What is the correct V belt tension?

	6 volt system	12 volt system	
Deflection*	15 mm	new belt used belt	9 – 11 mm 11 – 14 mm

  * measured at a pressure of 7,5 kp / 16.5 lbs. (firm thumb pressure) in the centre between the two pulleys

- What is the correct tightening torque for the wheel bolts?

  130 Nm (94 lb.ft.)

- What are the correct tyre pressures?

  The pressures are given on a sticker inside the glove box lid (see also "Technical Data").
  Spare wheel: 3 bar (42 psi)
  These pressures are for cold tyres. Pressures which have increased due to heat from fast driving must not be reduced.

- Where are the fuses to be found?

  Under the instrument panel on the left.
  There are additional separate fuses in holders in engine compartment or under back seat.
  (see section on "Replacing fuses")

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