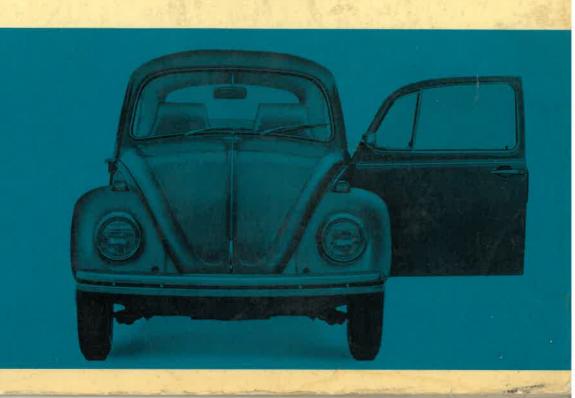
Owner's Manual





Volkswagen Owner's Manual

1968 Models

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VOLKSWAGENWERKAG · WOLFSBURG

It is advisable

to read this Owner's manual carefully. You will then get to know your new car quickly and will be able to start off on your first trip with complete confidence.

As you will notice your Volkswagen has many features designed with your safety in mind.

The first part of this manual deals with the operation of your Volkswagen. Everything about winter driving, tips on care of the vehicle and numerous points on carrying outsmall repairs and adjustments are given in the second half. It further contains information on lubrication and maintenance, and some interesting technical data.

At the front of the book is the warranty voucher and the terms of warranty, and at the back, a punchcard for the free-of-charge maintenance service and a maintenance schedule. An easy-to-use maintenance record provides a stamping field, so you can tell at a glance when a maintenance service is due. The stamps in the squares show that the oil changes and maintenance services have been carried out regularly.

Only one key

is required to open the doors and start the engine. Be sure the key number is recorded in the front of the manual. If you should lose the key, you can obtain a replacement from your Authorized Volkswagen Dealer.



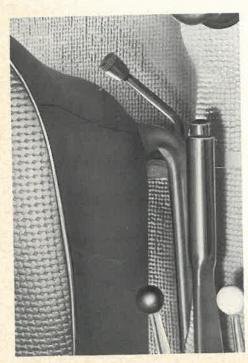
Sit down and make yourself comfortable . . .

When driving, you must be comfortable. That is why the Volkswagen has separate front seats which are built so that you can alter seat position and backrest rake to suit your requirements. This is quite simple — just lift the lever at the front right-hand side of the seat and slide the seat forward or backward. After adjusting, be sure the seat is securely locked in position.

The runners are slightly inclined so that the seat is raised as it goes forward.

The backrest rake can also be set to various, angles. Try them out until you find the angle which suits you best.

The backrests have safety catches that prevent them from tilting forward when the brakes are applied very hard. The catches can be released by pulling the knob in the side of the backrest up.





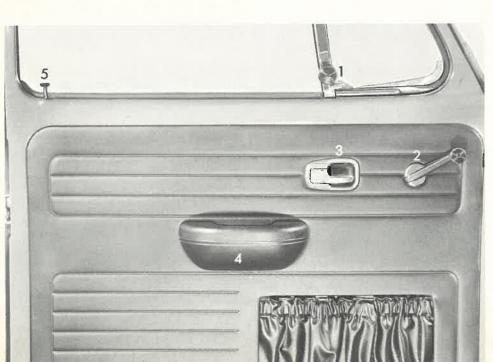


The doors . . .

can be closed more easily if a window is opened slightly.

1 - Vent wing fastener

To open the vent wing, turn knob of vent wing fastener until locking catch points in driving direction and push knob of vent wing fastener forward.





- 2 Window crank
- 3 Inside door handle
- 4 Armrest and door closing grip
- 5 Locking knob

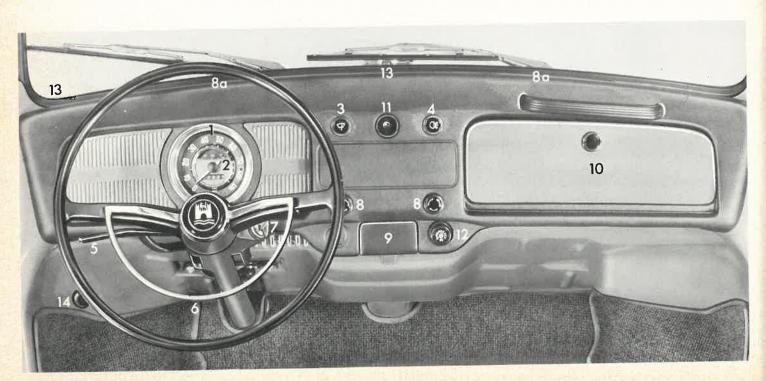
The doors cannot be opened from inside or outside unless the locking knobs are raised.

When leaving the vehicle, just press the locking knob down and pull the trigger in the outer handle as you close the door. The vehicle is then locked.

If the door closes by itself after the locking knob has been depressed, it will not lock because the locking knob will spring up automatically. This is an additional safety measure to prevent you from being locked out if the door should slam shut while the key is still inside the vehicle.

In front of you - the instrument panel . . .

Even if it is not your first Volkswagen, just have a quick look at the dash and try out the various knobs and levers with the ignition switch on:



1 - Speedometer

The following warning lights are in the speedometer dial:

green – oil pressure red – generator and cooling blue – headlight high beam green arrows – turn signals

2 - Fuel gauge

The fuel gauge is located in the speedometer dial. When the needle is on line "R", there is about 1 gallon of fuel left in the tank – time to refuel at the next opportunity.

3 – Windshield wipers and windshield washer system

The two-speed wipers are controlled by turning the switch. They park automatically when switched off. The button in the switch knob controls the windshield washer.

4 - Light switch

Pull the knob out to the first stop to switch on the parking, license plate and tail lights. Pulling the knob out to the next stop, switches the headlights on.

The instrument lights are switched on and the brightness controlled by turning the lighting switch.

5 - Turn signal switch

Lever up — right turn signal Lever down — left turn signal

The turn signals are cancelled automatically after taking the corner.



Pull dimmer switch toward steering wheel to raise or lower headlight beams. A blue warning light in the speedometer dial shows when the headlight high beams are switched on.

6 - Horn ring

7 - Ignition switch

8 - Fresh air ventilation

The volume of fresh air coming from the vents – 8a – on top of the instrument panel can be controlled by turning knobs to the left or right.

Turn knobs to the right – increasing air flow
Turn knobs to the left – decreasing air flow

9 - Ashtray

To remove ashtray, press leaf spring down and pull ashtray out.

10 - Glove compartment

To open, turn knob to the left.
On the Convertible the glove compartment can be locked.

11 – Warning light for dual circuit brakes

See explanation page 15.

12 - Emergency blinker switch

If the vehicle is disabled or parked under emergency conditions, pull the switch to make all four turn signals blink at once. A warning light in the switch knob blinks when the system is turned on.

13 - Defroster vents

14 - Release for front hood

On the Convertible this release is located in the glove compartment so that luggage and spare wheel can be locked when the top is open.

Above the windshield . . .

15 - Sun visors

You can pull the visors out of the center mounting and swing them toward the door windows to prevent glare from the sides.

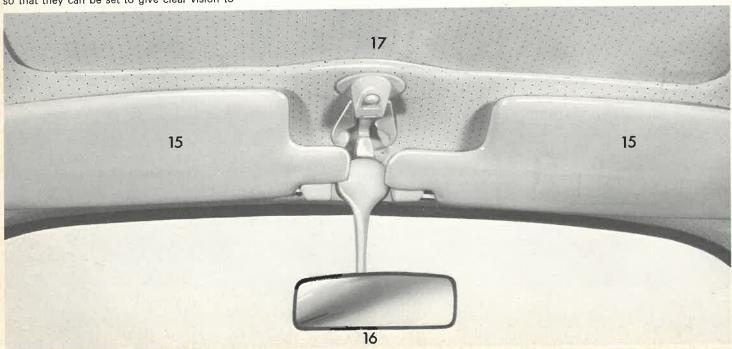
16 - Rear view mirrors

Inner and outer mirrors are ball joint mounted so that they can be set to give clear vision to the rear at all times. The inside rear view mirror is rimmed with plastic for safety and designed to detach under impact. The outside mirror is hinged to fold flat upon contacting anything.

On the Convertible, the height of the mirror can be altered by turning it 180° so that you can see to the rear properly when the top is open.

17 – Sliding roof (optional equipment)

For safety reasons, the sliding roof crank should always be in the recess. When closing the roof turn the crank as far as it will go, then turn it back slightly until it can be folded into the recess.



In the footwell and between front seats . . .

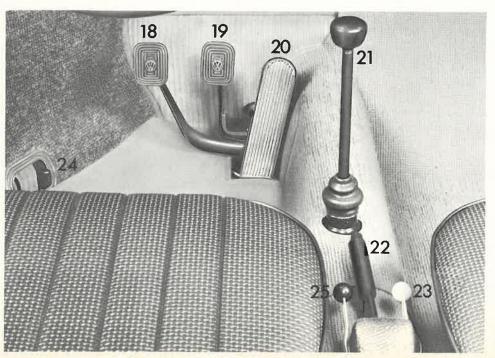
- 18 Clutch pedal
- 19 Brake pedal
- 20 Accelerator pedal
- 21 Gearshift lever

22 - Handbrake

To release the handbrake, pull the lever up slightly first and press the locking knob.

23 - Heating control lever

Lever up — heat on Lever down — heat off



The heating will be more effective if you open one of the vent wings slightly because the fan can then force the warm air into the body interior more easily.

24 - Heater control slides in front footwell

The flow of warm air into the front footwell can be controlled separately on each side by means of slides over the outlets.

25 - Control lever for heating in rear footwell

This lever controls the flow of warm air into the rear footwell when the heating is on.

Lever up — rear seat heat on Lever down — rear seat heat off

At low temperatures it is advisable to leave the rear outlets closed when first moving off. This increases the flow of air to the windshield to prevent steaming up when humidity is high. As soon as the windshield is clear, the rear footwell outlets should be opened so that the interior of the body heats up as quickly and uniformly as possible.

Behind you ...

26 - Throwout windows

Optional rear opening throwout windows increase the ventilation of your Volkswagen. To open, loosen locking knob, pull knob to the front and outward.



27 - Rear luggage compartment

The rear luggage compartment is readily accessible if you fold the rear backrest down. To do this, simply pull the strap on the left hand side of the back rest releasing the safety catch. After folding back again, the back rest is automatically locked in place.

If you wish to carry extra large pieces of luggage in the sedan, you can strap the rear backrest down by hooking the hold down strap to the seat support and so increase the size of the rear luggage compartment.

28 - Interior light

Switch positions:

Up – Light on only when doors are open

Center - Light off

Down - Light on

On the Convertible the interior light is fitted in the mirror bracket between the two sun visors. The switch positions are:

Right - Light on

Center - Light off

Left - Light on only when

doors are open

29 - Assist straps and coat hooks

30 - Ashtray

To remove ashtray, press it down lightly and lift out. To put it back, insert the ashtray at the top first, then push it in.



Seat Belts

Each seat in your Volkswagen is equipped with a lap-type safety belt.

The front seats

of your Volkswagen are provided with lap-type, retractable safety belts. When not in use, the belts retract into plastic housings which are attached to the side members of the car in line



with the lock pillars. When in use, the belts are extended and the buckles engage a chrome-plated stirrup mounted on the center tunnel.

Operation: After sitting down and making yourself comfortable, pull the belt out of the housing and pass it across your lap to the center of the car. A light push of the center of the buckle against the stirrup will make the buckle engage with a click. If you have pulled out too much of the belt, the automatic retracting mechanism in the housing will take up the slack until the belt contacts your body. It should fit snugly across the pelvic area. Be sure the belt is not twisted. Do not strap in more than one person with each seat belt.

To release the belt, grasp the buckle and pull upward. This opening direction is shown by an arrow. While you can disengage the buckle from the stirrup and just let the buckle go, allowing the retracting mechanism to roll the belt up automatically, we recommend that the belt be allowed to retract slowly into the housing to minimize wear on the mechanism.

The plastic housing can be swivelled upward and clipped to the lock pillar for easy entrance to the rear seat.

The rear seats

are also equipped with lap belts. The buckle is attached to the half of the belt on the inboard side of the seat, the connector to the outboard half.

Operation: After sitting down and making yourself comfortable, pull the two sections of the belt across in front of you until the buckle

and connector meet. Insert the connector into the slot in the front of the buckle and push together until the flanges of connector stop against the buckle. A positive snap will be noted when connector is properly engaged.

The belt should fit snugly across the pelvic area. Be sure the belt is not twisted. To tighten seat belt, pull the loose end of the webbing away from the buckle and move the slide on the free end of the webbing down the inboard belt until all the slack is taken up. To lengthen the seat belt, turn the buckle at a right angle to its webbing and pull on the inboard half of the belt.

To release the belt, lift the free edge of the front of the buckle and pull connector out of buckle.

Each seat

is also equipped with a third mounting point to facilitate subsequent installation of combination shoulder/lap belts.

Cleaning: To keep belts clean, wash belts with mild detergent without removing from vehicle. Dry belts in the shade before allowing to retract. Do not bleach or dye the belts or use any other material to clean the belts because some of these agents can weaken the webbing.

Check belts, buckles, retracters, and stirrup periodically to make sure they function correctly and that the webbing has not been damaged.

In the front luggage compartment

Whether you are taking a lot of luggage with you or not, load the front luggage compartment first, using the heaviest pieces of luggage if possible. The correct distribution of load means the best road holding, so take advantage of the possibilities offered by the Volkswagen with its two luggage compartments.

The front hood is opened by pulling the knob at the left underneath the instrument panel. On the convertible the release is located in the glove compartment. The front hood opens partially and can be opened fully by pressing the knob in the hood handle. To close the front hood, just press it down firmly until you hear a click.



31 - Tools

In the tool bag you will find:

- 1 fan belt
- 1 hub cap remover
- 1 pair of combination pliers
- 1 screwdriver with reversible blade for slotted and Phillips screws
- 1 open-end wrench 8 mm/13 mm
- 1 socket for plugs, fan pulley and wheel bolts
- 1 socket wrench 13 mm
- 1 bar for socket wrenches (also used to operate the jack)

32 - Jack

Operation of the jack is described together with wheel changing on page 26.

33 - Spare wheel

It also serves as an air supply for the windshield washer container, therefore, the spare tire pressure should occasionally be checked and inflated to 35 p.s.i. The air flow from the spare tire to the washer container will be interrupted if the tire pressure ever falls below 25 p.s.i. This is done automatically by means of the filler cap valve. As a result, the spare tire will always have the required pressure should it be needed.

34 – Container for windshield washer

As soon as the filler cap of the container is opened, the air supply from the spare tire to the windshield washer container is interrupted by means of a valve in the filler cap. The washer container can be filled completely with washer fluid. It is advisable to add a cleaning solution, such as Volkswagen's Windshield Washer Anti-Freeze and Solvent, to the water as clear water alone is usually not adequate to ensure that the windshield is cleaned quickly and properly.

Follow the directions on the container for the amount to be used...

After filling container ensure that the filler cap is always screwed on tightly.

35 - Brake fluid reservoir

The brake fluid level should always be above the protruding edge near the top of the container. If the brake fluid level ever falls below this edge, the complete brake system should be thoroughly examined by your Authorized VW Dealer.

Brake fluid is water absorbent and should, therefore, be renewed every 5 years by an Authorized VW Dealer.

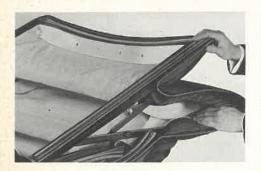
Now you know your vehicle fairly well.

Further hints on what to do before driving off and when
on the move are given on pages 15 to 18.

If you are a Convertible owner you should read the following page first.

When the sun is shining . . .

you can open the Convertible top without effort, but only open it when it is dry and clean because sharp particles of dirt will damage the material.



First release the levers at the front above the door windows and move the top back. Now pull the top material out of the top linkage to the rear. Push the headlining inward so that it



does not get jammed between the linkage and lay the locking catches to the rear.

Before putting on the protective boot and securing it with the press buttons, press the



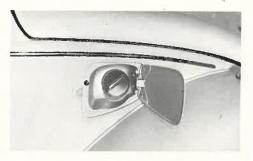
top down lightly on both sides until the small catches engage. Please make sure that the top is completely covered by the boot as otherwise there will be friction marks.

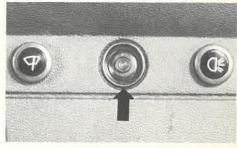
When it rains . . .

you will want to close the top again as quickly as possible. Take the protective boot off, press the top down lightly so that the catches can be unhooked and pull the top forward. Now pull it down on to the windshield frame with the aid of the levers until the guide pins engage in the windshield frame. Then guide the hooks of the locks into the holes in the windshield frame and set the levers.

Before moving off, check . . .

the fuel, the brakes, the lights and, at regular intervals, the oil level in the engine and the tire inflation pressures.





The fuel in the tank, when full, is sufficient for 250–280 miles. The filler neck is located above the right front fender.

The choice of fuel is left entirely to you. The Volkswagen will run satisfactorily on all gasolines which fulfill the octane requirements of the engine: (91 octane – Regular).

If regular fuels with adequate anti-knock qualities are not available, premium fuels should be used or mixed with the regular fuel.

function independently. An indicator lamp on the instrument panel controls the brake systems. Should the indicator lamp light up while applying the brakes, see your Authorized VW Dealer as soon as possible because one of the two brake systems may have failed. The brakes will still operate, however, a longer distance is required to bring the vehicle to a halt.

Push indicator lamp after switching the ignition. If the lamp does not light up, the bulb should be replaced.

The brakes should be checked before driving off. Your Volkswagen is equipped with a dual brake system. Both systems, front and rear, can

Please bear in mind that brakes are subject to wear. An increase in pedal travel will indicate this wear. Depending on individual operating conditions, the brakes may have to be adjusted between specified maintenance intervals.

The lights include headlights, taillights, license plate light, turn signals, back-up and brake lights.

The turn signals and brake lights must be checked with the ignition on. If a turn signal is defective, the warning lamp in the speedometer dial flashes much faster than usual. The brake lights only work when the brake pedal is depressed, the back-up lights only when reverse gear is engaged.

The oil level should be between the two marks on the dipstick and must never be below the lower mark. Wipe the dipstick clean before checking.

The vehicle must be on a level surface when the oil level is checked so the dipstick reading will be accurate. Do not check the oil immediately after stopping the engine. Wait at least 5 minutes to give the oil in the engine time to drain down into the bottom of the crankcase.



To top up the oil level, a well known brand of oil should be selected. Although it is advisable to stick to one brand of oil, using a different brand to replenish the oil will not harm the engine. Details about the proper oil viscosities are given on page 38.

Tire pressures

	Front	Rear
with 1 to 2 occupants	16 psi	24 psi
fully loaded	17 psi	26 psi

For long, high-speed trips, the tire pressures should be increased by 3 psi at front and rear.

If you operate your Volkswagen with tire pressures different from those suggested by the manufacturer, the handling characteristics may be impaired. This can also lead to excessive tire wear.

Adherence to the suggested tire pressures will assure you of the best handling characteristics and roadability.

Two more important points:

- 1 If the vehicle is used mostly in very dusty conditions, the oil bath air cleaner must be checked frequently, even daily if necessary. How this is done is described on page 42.
- 2 Do not drive your car with a disconnected battery. This may lead to damage to the electronic components of the electrical equipment.

Starting the engine



Before turning the ignition key, make sure that the gearshift lever is in neutral.

At temperatures above freezing point or when the engine is still warm, depress the accelerator pedal slowly while operating the starter. When the engine is very warm, depress pedal fully but do not "pump" it.

At temperatures below freezing point of when engine is cold, depress the accelerator pedal tully once and then release it so that the automatic choke can work. Then switch ignition on and start immediately. When the weather is very cold, the engine may turn over slowly during starting. In this case depress the clutch while cranking; if it turns over faster, hold the clutch down until the engine starts. When starting without depressing the clutch, be sure the handbrake is on and the gearshift in neutral.

As soon as the engine starts, release the ignition key so that the starter is switched off. Do not try to warm the engine up by letting it idle with the vehicle stationary — drive off immediately.

Do not race the engine while it is still cold.

If the engine does not start the first time or stalls at any time, the ignition will have to be switched off and then on again because the non-repeat lock in the switch prevents the starter from being operated when the engine is running and thus being damaged.

The warning lights in the speedometer which come on when the ignition is switched on, go out when the engine starts. Stop at once if one of these lights comes on when driving:

Red warning light for generator and cooling

Check the belt that drives the generator. If this belt breaks, the engine cooling fan also stops working. The proper way to fit a new belt is described on page 27.

If the generator stops charging for any other reason, you can drive on but try to get the vehicle to an Authorized Volkswagen Dealer as soon as possible because the battery will soon run down.

Green warning light for oil pressure

If this warning light comes on when driving the flow of lubrication oil in the engine may be interrupted. Check the oil level first. Should the cause of the trouble be elsewhere, contact your nearest Authorized Volkswagen Dealer.

Be careful when running the engine in confined spaces. Ensure that there is ample ventilation so that the poisonous exhaust gases can escape.

... it runs . . . and runs . . . and runs

You can drive your Volkswagen at full speed from the first day. There are, however, certain permissible speed ranges for the various gears:

1st gear:

0-15 mph

2nd gear:

10-35 mph

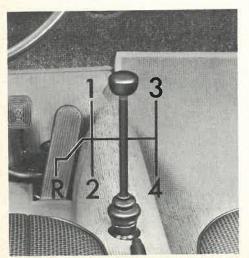
3rd gear:

18-55 mph

4th gear:

30 mph and up

When a particular traffic situation makes it essential to move rapidly, you can accelerate up to 37 mph in 2nd gear and up to 58 mph



in 3rd gear for brief periods only. Bear in mind, however, that full throttle acceleration raises fuel consumption considerably. It is more economical to drive smoothly and keep the top speed fairly constant. Very fast, racy-sporty driving, alternating between full throttle and hard braking will mean more frequent visits to a gas station and increased tire and brake lining wear.

You can drive very economically between:

10 and 22 mph in 2nd gear

18 and 34 mph in 3rd gear

30 and 60 mph in 4th gear

Just a few words about the clutch while we are on the subject of driving. The clutch is a very hard-worked part of the vehicle. A good driver slips the clutch as little as possible when taking off and changing gears. He always depresses the clutch fully when shifting, he changes down into the appropriate gear in city traffic instead of slipping the clutch, and never uses the clutch pedal as a "rest" for his left foot.

Shift into reverse gear only when the vehicle is standing still. Reverse gear is fitted with a lock so that it cannot be engaged unintentionally. To engage reverse, press the lever down, move it over to the left and pull it back to the stop.

Volkswagen automobiles have excellent brakes which can stop the vehicles in the shortest possible distance. But do not forget that the

braking distance increases very rapidly as the speed increases. At 60 mph for example, it is four times longer than at 30 mph. Apply the brakes in time, but do not use too much force — locked wheels increase the braking distance.

Water reduces the tire adhesion and the coefficient of friction of the brake linings, but we cannot do anything about this. You can, however, take care when driving and remain at a safe distance behind the preceding vehicle, particularly when roads are wet and slippery.

Always set the handbrake after parking your car. On steep hills turn the front wheels toward the curb.

That just about covers the operation of the car and how to drive it properly. The following pages deal with the tips for winter driving, breakdowns and all there is worth knowing about the lubrication and maintenance of the vehicle.

When it snows and freezes . . .

Your car has two features which you will appreciate in the winter: Air cooling and heating. You can leave your car out in the bitter cold without fear — the aircooled engine will always start readily and supply warm air for the interior of the body.

Do not, under any circumstances, try to influence the heating of the vehicle by covering up the slots below the rear window. These slots must always be clear so that air can flow into the carburetor and to the engine cooling fan. **Tires** with badly worn treads are very dangerous, particularly in the winter, so ensure that they are replaced in time.

M+S tires with special heavy treads give good traction in snow and slush. They can be fitted to all four wheels but never use them on the front wheels only.

Better still are M+S tires with spikes which increase the safety margin even on hard snow and ice. These tires should always be fitted on all four wheels. Check your state laws before using spiked tires.

If M+S tires are mounted, they should have the same ply rating as tires of the original equipment.

The specific characteristics of winter tires can be improved by raising the tire pressures to 3 psi (0.2 kg/cm²) above the normal operating pressure for the tire concerned. This inflation pressure than covers the recommended pressure increase of 3 psi for fast highway driving.

M+S tires with spikes should be run at moderate speeds when new in order to give the spikes time to settle.

In general, winter tires only have real advantages when conditions on the road are really wintry. For safety reasons, it is not advisable to drive a vehicle fitted with any type of winter tire at top speed. You cannot expect a winter tire to have the same degree of adhesion on dry, wet or snow-free roads as a normal tire. In addition, under these conditions, M+S tires wear rapidly, particularly at high speeds.

Snow chains can be fitted to regular and winter tires on the rear wheels only. Only thin chains which do not protrude from the tire tread and inner side wall more than ½ inch including tensioner, are suitable. When driving over long stretches of road which are free of snow, the chains should be removed because they serve no useful purpose and merely damage the tires and wear out quickly.

Engine oil of SAE 30 grade will tend to thicken at temperatures around freezing point and may cause difficult starting. As soon as winter temperatures are expected, change to a thinner grade of engine oil. Details of the various oils to be used are given on page 38. If you drive mostly short distances and in city traffic, especially in the winter, we recommend that you have the engine oil changed at shorter intervals, say every 1500 miles. At other times, these additional changes are unnecessary and uneconomical.

In countries with arctic climates and temperatures below about —13° F, the engine oil should be changed every 750 miles.

Transmission oil of SAE 90 grade can generally be used all year round. Only in countries with arctic climates is it necessary to use the thinner SAE 80 transmission oil. When the temperature is below —13° F for long periods, it is advisable to use ATF oil in the transmission. The vehicle must only be run with this oil during the cold period. As soon as the temperature rises to near freezing point, this oil must be replaced by SAE 80 or SAE 90 transmission oil.

The battery not only tends to drop in capacity as the temperature drops, it also has to work much harder in the cold weather. Current consumption is higher when starting and the lights are on longer. A really cold battery which may not be fully charged has only a fraction of the capacity that a battery at normal temperature has, and this might not be enough to start a cold engine. If the car is only driven short distances and in city traffic, the battery may have to be charged from an external source from time to time. For more details see page 33.

The spark plugs should not have excessively large gaps especially in the winter. The gap is normally .028 in., but when the weather is very cold, the gap can be temporarily reduced to .016-.020 in. to facilitate starting.

Door locks can freeze in winter if water gets into the lock when washing the vehicle, so do not aim the water jet directly at the locks. It is a good idea to cover the keyholes beforehand. A frozen lock can be opened by warming the key well before inserting it. An anti-freeze solution or glycerine should then be squirted into the lock cylinder as soon as possible.

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

Ice on windows can be removed quickly by using Volkswagen's Spray De-Icer – Part No. ZVW 241113.

A clean smart car looks better

We have provided your vehicle with enamel which is not only extremely durable and has a very high gloss, but which also has a long service life. This has been achieved by special chemical treatment of the body metal and the use of a four layer synthetic resin paint technique.

But even the finest paint requires a certain amount of care. This is easy to appreciate if you consider for a moment the influences to which the paint is exposed. Sunlight, rain, industrial fumes, soot, dirt and dust are constantly attacking the paintwork.

In the winter all parts of the vehicle are subjected to even more severe climatic conditions and the effect of aggressive salt solutions. It is advisable to clean and wax the vehicle more frequently in this period.

Every Authorized Volkswagen Dealer stocks car cleaning materials. These materials have been tested by us and found to give the best results. The order numbers of these materials are given on page 23.

Never wash, wax or polish the car in the sunshine. Before waxing and polishing, the vehicle must be washed and dried thoroughly.

Wash the new vehicle frequently with clear water particularly in the first two or three months as this will help to harden the paintwork. Use a soft sponge or hose brush for the body, a long handled brush for the wheels and plenty of water. Spray the body panel and wheels with a fine soft spray first to loosen the dirt, then start at the top and wash downward. Rinse the sponge out frequently to avoid scratching the paint.

Later on, the vehicle should always be washed when it is dirty. The longer the dirt is left on the paint the greater is the risk of it damaging the glossy finish. The dirt particles can have a chemical effect on the paint surface or they can cause scratches if rubbed into the paint. If the dirt cannot be removed with clear water, a suitable shampoo can be added to the water. Afterward, rinse all traces of the shampoo off with clear water and then wipe the vehicle dry to avoid water spots.

Close fresh air ventilation system before washing the car.

Waxing should be carried out for the first time after about 8 to 10 weeks. Waxing is a means of putting back into the paint certain substances which keep it flexible and are lost in the course of time due to weathering and washing, particularly when you use a detergent. The wax coating seals the pores of the paint and makes it water-repellent.

The paint should be re-waxed when water remains in large patches on the surface and does not form beads and roll off. Regular waxing will ensure that the paint retains its original high gloss for a long time.

Another way of waxing the paint is to use a wash-and-wax-solution. This is easier than waxing in the normal way. Just wash the vehicle first then put the wash-and-wax-solution in a bucket of water and apply it to the paintwork. All that remains is to wipe the paint until it is dry. This type of wax will only protect the paint adequately if it is used every time the vehicle is washed and the interval between washes is not more than two or three weeks.

Polishing should only be done when the paint has lost its gloss due to weathering or lack of proper care and the gloss can no longer be restored by waxing in the normal way. After treatment with polish, wax the paint thoroughly to retain the gloss which has been obtained.

Tar spots tend to penetrate into the paint in a very short time. They should be removed as soon as possible, preferably with a tar remover. Afterward, the area concerned should be washed with a solution of shampoo and water and rinsed well to remove all traces of tar remover.

Insects tend to stick on the front of the vehicle and on the windshield in the summertime. These should also be washed off the paint as soon as possible. When really dried on, the insects can be removed with an insect remover. Afterward, the paintwork should be washed, rinsed and wiped dry with a chamois.

Parking under trees. Vehicles which are parked under certain trees in the 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 afterward.

Chrome parts should be treated with a chrome cleaner or polish. To give lasting protection in the winter, the chrome parts can be coated with Volkswagen's Chrome Cleaner and Protection.

The windows can be cleaned with a sponge and clear water. Always use a clean chamois to dry the windows. This chamois must not be used on the paintwork in any circumstances as most paint cleaners and polishes contain ingredients which will cause unpleasant streaks to appear on the windshield when it rains, even if only the smallest trace is present. These streaks can only be removed with a good windshield cleaner. Do not forget to clean the wiper blades.

The windshield wiper blades should be taken off from time to time and cleaned with a hard brush and alcohol or a strong detergent solution. During long dry periods particularly they tend to get clogged with tar splashes, oil and insects. New blades should be fitted once a year.

The Convertible top does not require any special care. It is important however, to clean the plastic material regularly. When very dirty, the top can be cleaned with a soap powder solution or Volkswagen's All Purpose Cleaner. A hard brush will help to remove dirt from the grained surface of the material but care must be taken at the edges to avoid scratching the paint with the bristles. After washing the top, the complete vehicle must be rinsed thoroughly with clear water.

Spots in the top material must never be removed with paint thinner, chlorine-based spot removers or similar solutions, as this will damage the material. Stubborn spots can be removed by wiping with a cloth moistened with benzine and then rinsing well with a lukewarm soap solution.

The pivot points of the top linkage should be cleaned occassionally and a few drops of oil applied. Afterward the joints should be wiped dry to ensure that oil does not drip on to the top material.

Noises caused by friction between the window frames of the Convertible and the rubber weatherstrips can be eliminated by rubbing in some talcum powder or silicone spray.

Car care materials for the Volkswagen

Since beauty is "skin-deep", your Volkswagen has been given a pretty deep skin. Four layers, as a matter of fact. (Each coat of enamel sprayed on, sanded and baked individually). The items listed below will help you preserve the built-in beauty of your Volkswagen. Compounded especially for use on your VW, they are available at your local Authorized Volkswagen Dealer. Detailed instructions on how to use the various products are imprinted on the individual containers.

Application	Volkswagen Product				
Car Washing, Convertible Top Cleaning, Upholstery Cleaning, Whitewall Tire Cleaning	All Purpose Cleaner – ZVW 243101				
Paint Polishing and Paint Waxing	Combination Car Cleaner and Wax - ZVW 241109				
Paint Polishing	Paint Polish — 000 096 001				
Paint Waxing	Paint Preservative - 000 096 011				
Care and Cleaning of Chrome Parts	Chrome Cleaner and Protection – 000 096 061				
Windshield Cleaning	Windshield Washer Anti-Freeze & Solvent ZVW 241 101				
Paint Touch up	Touch up Paint, all colors				

The cloth upholstery should be cleaned with a vacuum cleaner or a fairly hard brush. Spots can usually be removed with a lukewarm soap solution. Grease and oil spots can be treated with spot remover. Do not pour the liquid on to the material as this will cause marks. Dampen a clean, plain cloth with the cleaner and remove the spot by rubbing with a circular movement and working inwards.

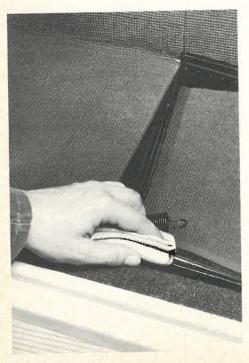
The leatherette parts of the headlining, side trim panels and seats can be cleaned best with a soft cloth or brush. When very dirty use Volkswagen's All Purpose Cleaner. Use only a dry foam cleaner on the leatherette of the seats and backrests because the material used for these parts is air-permeable and liquid cleaners would penetrate into the textile backing.

Grease or paint spots should be wiped off before they dry when possible. Once dry, they can be removed by rubbing carefully with a cloth moistened with benzine or alcohol. Shoe polish marks can be removed with turpentine but be careful because this will damage the dust repellent surface of the leatherette if allowed to work on it too long. After cleaning, rub the material dry with a soft cloth. So-called preservatives are not suitable for leatherette because they do not soak into the material and merely collect dust and make clothing dirty.

Airing the body. If the vehicle is left in the garage for long periods, the garage and car doors must be opened from time to time to prevent the formation of mold and damp stains inside the vehicle.

The front seats. If the front seats become hard to slide, the runners should be lubed lightly at top and bottom after being cleaned with a cloth. The seats can be removed to do this by pushing them forward out of the runners. When putting the seat back, do not forget to hook the spring in again.

Door and window weatherstrips must be undamaged and supple to ensure that they seal properly. To retain the original flexibility of the rubber, coat the weatherstrips with talcum powder or silicone spray occasionally.



The tires. In addition to checking pressures regularly and driving carefully, the following points should be remembered in connection with tires:

- 1 Check tires for damage occasionally and remove imbedded material.
- 2 Keep oil and gasoline away from the tires.
- 3 Try not to expose tires to strong sunshine for long periods.
- 4 Replace missing valve dust caps as soon as possible.

Tires should be replaced when the tread depth is only $^{1}/_{16}$ in. all round and on full tread width because this is the absolute limit for safe usage. We advise you however not to let the tires wear down to this extent as tires with treads in this condition cannot grip the road surface properly when driving at high speeds on wet roads. If you notice that the tires are wearing unevenly, get advice from your Authorized VW Dealer.

Just in case . . .

you have to carry out a repair yourself we have included some information on the next few pages which should help you.

All other repairs should always be performed by an Authorized Volkswagen Dealer. The Volkswagen service organization offers you a wide spread network of authorized dealers staffed by skilled mechanics and equipped with all the special tools and appliances required. Whenever you see the familiar VW sign on the roadside, you can be sure of expert advice and quick, efficient assistance.



Wheel changing

Before taking out the spare wheel, disconnect the hose leading to the valve of the spare wheel. Lift wheel so that you have better access to the wedges holding the washer container. After removing the wedges, the washer container can be taken off.

Apply the hand brake.

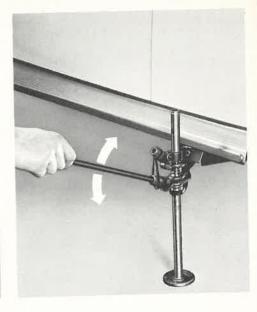
Remove hub cap with puller and jack bar by hooking the puller into the holes in the edge of the cap and levering against the wheel rim with the jack bar.

Loosen all wheel bolts about one turn with socket wrench and bar.









Insert jack into socket and push the jack tube down until it touches the ground.

Place bar in upper link of jack and raise vehicle. Unscrew wheel bolts and take wheel off.

Place spare wheel against drum and raise or lower vehicle until the holes in the wheel are roughly in line with the threaded holes.

Insert one bolt and tighten it until the wheel can be swung around to align the other holes.

Insert remaining bolts.

Tighten bolts until the wheel, centered by the spherical shape of the bolt heads, contacts evenly all round.

Insert bar in lower link of jack and lower the vehicle by pumping handle up and down.

Tighten the wheel bolts diagonally.

install hub cap with a blow of the hand.

Adjusting or replacing the fan belt

The fan belt tension is correct when the belt can be pressed inward about .6 in. at the center. The belt must not be too tight or too slack. A new belt may stretch slightly at first so it should be checked after about 600 miles and the tension corrected if necessary.

To adjust the belt, remove the rear part of the pulley on the generator. When loosening and tightening the nut, place a screwdriver in the slot in the front half of pulley and support the screwdriver against the upper screw in the

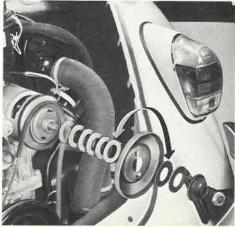
generator housing. To fit a new belt, the cover plate for the crankshaft pulley must also be removed after taking out the three screws.

The belt is tensioned by varying the number of washers between the pulley halves. Taking washers out increases the tension, putting them in decreases it.

Hint:

Although the life expectancy of the fan belt of your VW is very high, you should always carry a replacement belt in the car.





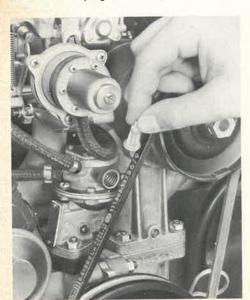
Cleaning fuel pump filter

Remove plug and take filter out.

Reinstall plug immediately to prevent fuel leakage.

Wash filter in clean benzine and blow it out.

When installing the filter, ensure that the washer for the plug is located properly.



Removing and installing spark plugs

Pull connector off.

Screw plug out with socket wrench and bar.

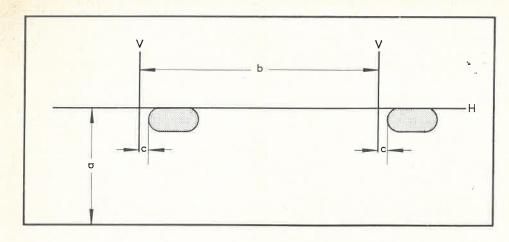
Dirty plugs should be cleaned with a sand blaster but in an emergency, the carbon can be removed with a chip of wood. Do not use a wire brush. The plugs should also be clean and dry on the outside as well in order to avoid shorting and tracking. The gap can be set by bending the outside electrode. The gap should normally be .028 in., but when the weather is very cold it can be reduced to .016–.020 in. temporarily to facilitate starting.

Take care not to crossthread the plugs when inserting them, and tighten them firmly, but not overtight.

New plugs should be fitted every 12,000 miles.







- a = Height of headlamp center from floor
- b = Distance between headlamps (39.5 in.)
- c = 2 ir

Headlight adjustment

It is best to check the headlight alignment with a regulation screen or aiming device. If none is available, proceed as follows:

Adjust tires to correct pressures and park vehicle on level surface squarely facing a wall or screen 25 feet in front of the headlights. The driver's seat must be loaded with one person or a weight of 154 lbs.

Measure height (a) of center of headlights from ground and draw a horizontal line (H) on screen at this height the full width of the vehicle.

Opposite the center of each headlight, draw vertical lines (V) intersecting the horizontal. These lines should be 39.5 in. apart. Drawing

a vertical line for the center of the vehicle might help aligning vehicle with screen.

Loosen the screw in the center below the headlight and take the trim ring off.

Aim the headlights individually by turning the two aiming screws with low beams switched on. Cover up the second headlight.

The headlights are correctly aimed when the top edge of the high intensity zone is on the horizontal line H and the left edge is 2 in. to the right of the vertical line V.

Check with your State Bureau of Motor Vehicles for variations from these dimensions.

A - Lateral aim

B - Vertical aim







Bulb replacement

Sealed-Beam

A double filament, type 2, seven inch sealedbeam unit of domestic manufacture is used in your Volkswagen. Should it become necessary to replace the unit, loosen screw in the center below the headlight and take the trim ring off. Remove three screws in sealed-beam retain-

ing ring and take ring off.

Take sealed-beam unit out of support ring and pull cable connector off.

When installing new sealed-beam units, ensure that the three glass lugs engage properly in the support ring.

Check headlight settings.

Front turn signal and parking light bulb

Remove Phillips screw.

Take housing and lens off.

Press bulb into holder lightly, turn and take out.

Install new bulb.

When inserting the bulb, the lower retaining pin should face to the rear of the vehicle. When fitting housing, ensure that gasket is located properly.





Rear turn signal, stop and tail light, back-up light, bulbs

Unscrew three Phillips screws so that the lens can be taken off.

Bulb positions:

Top - turn signal

Center - stop and tail

Bottom - back-up light

Press bulb lightly into holder, turn and take out.

Install new bulb.

Tighten lens securing screws evenly but do not overtighten.

License plate light bulb

Open rear hood.

Remove screws on each side of lens and take off lens with bulb holder.

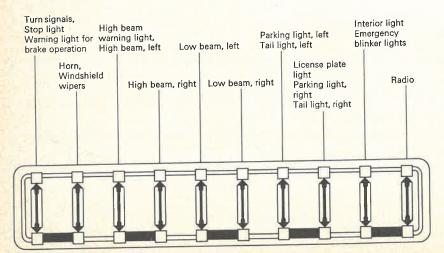
Pull bulb holder out of lens.

Press bulb lightly into holder, turn and take out. Install new bulb.

When installing, ensure that the cable grommet fits properly.

Bulb Chart		U.S. Replace- ment bulbs	VW Part Number
		6012	111 941 261 A
Headlights		1034	N 177382
Front park/turn, tail/stop	8.55	4.070	N 177322
Rear turn signal			N 177192
License	31.0	8 09	
Back-up lights	0.00	1073	N 177332
Dack-up lights		_	N 177222
Speedometer, warning lights		15	N 177232
Interior light			N 177512
Warning lights for emergency flasher and brake operation			14 17 751 2

Fuse box



Replacing fuses

The fuse box which has a transparent cover is located under the instrument panel near the steering column.

When a fuse blows, it is not sufficient to merely replace it with a new fuse. The cause of the short circuit or overload must be established. On no account should fuses be patched with tinfoil or wire as this can cause serious damage elsewhere in the system. It is advisable to always carry a few spare 8 ampere fuses in the vehicle.



Checking battery

The ability of the engine to start readily depends to a great extent on the condition of the battery. For this reason the battery should be checked regularly and given a certain amount of attention.

When the rear seat is lifted, the filler plugs can be removed from the battery. The electrolyte level should always be just above the plate tops. If the level is too low, add distilled water.

The electrolyte level drops when the battery is charged due to the dissociation of the water used to dilute the electrolyte and to a lesser extent, to evaporation. How often the battery has to be topped up depends mainly on operating conditions and indirectly on the time of year. When a vehicle is often driven long distances in the daytime with hardly any current being used, the battery will have to be topped up with distilled water much more often than in the case of a vehicle which is operated under different conditions. As a general rule, the battery electrolyte level must be checked more often in the summer than in the winter. VW drivers in hot countries who do a lot of driving are advised to check the battery at least once a week.

Do not put in more distilled water than is necessary because if the level is too high, the electrolyte will overflow when the battery is being charged and cause damage.

The terminals and connections should be kept clean and greased with battery terminal grease. Ensure that the ground connection to the body is free of corrosion and tight.

If you store your vehicle for a prolonged period, it is advisable to take the battery to an Authorized Volkswagen dealer. A battery which is not in constant use will discharge itself in time and this can cause permanent damage to the plates if the battery is not checked about every four weeks and charged as necessary.

Attention

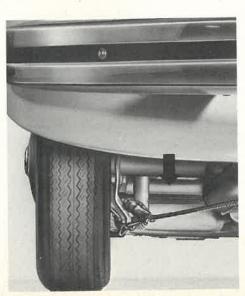
When working on the battery, take care not to short circuit the terminals. This would cause the battery to heat up very quickly which could lead to damage.

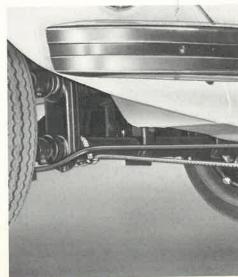


Towing

Just in case you wish to attach a towrope to your vehicle, please note that the bumpers are not suitable for this purpose. If you do not expect the towing effort to be excessive, the rope can be attached at the rear to a lower shock absorber bracket. Otherwise we advise you to use the cross tube which houses the torsion bar for the rear suspension. Neither of these points are very easy to reach but it prevents damage to your vehicle.

At the front, the rope should be attached to the lower axle tube as near to the frame head as possible.





Here is what to do when trouble troubles you

Your Volkswagen should repay you with trouble free driving if it receives regular preventive maintenance.

Should you ever encounter difficulty in starting your engine or have trouble on the road, there are a few simple repairs which you can make to get your VW going again. Locate the problem and probable cause of your trouble in the guide on the following pages and follow the directions on what to do.

If the trouble is serious or you are uncertain as to its origin, be sure to see an Authorized Volkswagen Dealer as soon as possible.

Problem	Probable Cause	/ What To Do
VW will not start: engine will not turn over or turns over too slowly	1. Run down or dead battery 2. Loose connection A. At battery B. At starter C. At connections behind dash board	1. Push to start the vehicle (turn on ignition, put in 3rd gear at a speed of approximately 20 mph., release clutch slowly). Have battery charged and cause of high current consumption checked 2. Make sure that all connections are tight A. Check both cable connections on battery and grounded end of ground strap B. Check connections at solenoid, mounted on starter, under right rear of vehicle C. Check push-on connectors behind dash board
	3. Starter defective	3. Have vehicle started by pushing and take it to nearest Authorized VW Dealer
engine turns over	4. Loose connection in ignition system 5. Loose connection in primary circuit to coil	4. Check for loose connections at coil, distributor and spark plugs 5. Turn on ignition. Remove thin black cable from ignition coil, hold it by insulation and strike it against blower housing or other ground, being careful of gasoline and its fumes. If no spark, electricity does not reach coil from battery. Check push-on connectors behind dash board. If still no spark, see the nearest Authorized VW Dealer.
	If spark at black coil cable, trouble is in ignition system	6. Check in this sequence: A. Turn on ignition, remove distributor cap, and turn engine by fan belt until the ignition points are closed. Open and close ignition points several times with a nonmetal object. A visible and audible spark will appear between the points If this is not the case, the cables on ignition coil and distributor should be checked for tightness. If no spark is visible, see your nearest Authorized VW Dealer.
		B. If spark appears at points, remove high tension wire from center of distributor cap and hold it against a metal part of the engine at a distance of approximately ¼". Switch on ignition and turn over engine or open ignition points as described under A. A strong blue spark must appear. If this is not the case, see your Authorized VW Dealer.

Problem	Probable Cause	What To Do
VW will not start: engine turns over		C. If a spark appears at high tension cable, the distributor cap should be cleaned inside and outside. Reconnect high tension cable. Remove all spark plugs. If plugs are clean and dry, reconnect ignition cables to spark plugs and bring spark plugs in connection with metal (ground). Hold cable with dry piece of cloth to avoid shock. A spark should appear between spark plug electrodes when the engine is turned over. If not, clean and dry ignition cables and spark plug connectors and check that ignition cables are tight in distributor cap and plug connectors. See your Authorized VW Dealer if the above steps did not ensure proper ignition
		 D. Dirty or wet spark plugs should be cleaned and dried. Install new plugs if necessary. Unburned gasoline on plug electrodes points to excessive fuel supply.
W > T = 1	7. If spark is fairly good at plugs, trouble is most likely in fuel system	7. Check fuel system in the following sequence:
	A. Caused by improper starting procedure. If the gas pedal is depressed too often, the accelerator pump in the carburetor injects too much	A. Depress gas pedal completely and operate starter for a prolonged period. If engine does not start, remove and dry spark plugs, turn over engine with plugs removed for approximately 30 seconds. Reinstall plugs and start engine
	gasoline B. Carburetor may be flooded, float or needle valve may be sticking	B. Tap around outside of carburetor with wooden or plastic tool handle. Wait a few minutes and try starting again as described at 7 A.
Engine stalls shortly after starting	8. Poor fuel supply 9. Automatic choke does not open, excessive fuel supply	8. See paragraph 11 through 13 9. Check whether choke valve is in vertical position after ignition has been switched on for 2–5 minutes (depending on outside temperatures). Cover for choke unit must be hot. If choke valve is binding in a closed position open at fast idle cam and, if necessary, retain with wire. See your Authorized VW Dealer
Engine stalls while	10. Defect in ignition system	10. See paragraph 4 through 6
vehicle is driven	11. Fuel supply is exhausted	11. Check whether any gasoline is left in tank
	12. Fuel pump filter may be clogged	12. After removing the screw plug, the fuel filter can be taken out for cleaning
	13. Gasoline may be contaminated by water, dust or dirt	13. See your VW dealer for cleaning of all components of the fuel system
Green warning light comes on while you are driving	14. If green light goes on, the oil pressure is too low	Stop at once and check oil level. Add oil as necessary. If the oil level is sufficient and green light goes on during driving, contact the nearest Authorized VW Dealer before driving on
Red warning light comes on while you are driving	15. If red light goes on, V belt may be torn or generator does not charge	15. If belt drives generator without slipping, switch off all unnecessary electrical equipment (radio, etc.). Drive to nearest VW dealer as otherwise the battery will soon get run down. If belt is broken, replace it before driving on

Proper Iubrication

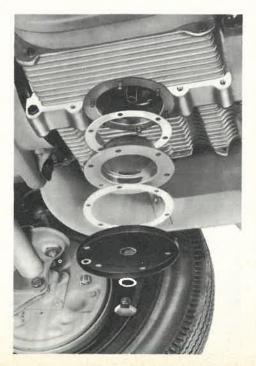
means regular and careful lubrication. Page 52 shows you at which intervals the various points require attention.

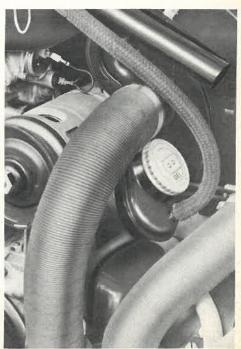
Engine

Regular oil changes are necessary even if the very best brand of oil is used because dirty oil in the engine means increased wear, and reduces service life.

The oil is drained, when warm, by removing the plug in the oil strainer cover plate. Flushing is not necessary but the strainer must be removed and cleaned at every oil change. The gaskets and the copper washers under the cap nuts must always be renewed. The engine is then filled with 5.3 US pints of HD oil (4.4 Imp. pints) – labeled "For Service MS".

Due to the detergent properties of HD oil, the fresh oil will look very dark after the vehicle has been running for only a short time. This need not worry you and under normal operating conditions there is no reason whatever to change the oil at shorter intervals than every 3000 miles. We only recommend more frequent oil changes — every 1500 miles — in the winter if you drive mostly short distances and in city traffic. If you only drive a few hundred miles a month under these conditions, it is advisable to have the oil changed every 6 to 8 weeks. In countries with arctic climates where average temperatures are about —13° F the oil should be changed every 750 miles.





Some more information about oil

Always use a branded HD oil labeled "For Service MS" for the engine of your Volkswagen. The quality of oil produced by reputable firms is so good that the choice of brand is entirely up to you. The Volkswagen engine makes no special demands in respect to oil quality which cannot be met by the well-known and popular brands. It is suggested that you select "your" brand of oil at the first oil change at 600 miles and that you stick to this brand if possible.

The classification of oil into various viscosity grades is shown by the designations SAE 30, SAE 20 W/20 and so on. The viscosity of a lubricant indicates its resistance to flow at a given temperature. The VW engine usually requires only two different viscosity grades which are used, according to season of year, as follows:

SAE 30 In warm seasons and all year round in countries with hot climates.

SAE 20 W/20 In the winter.

SAE 10 W*)

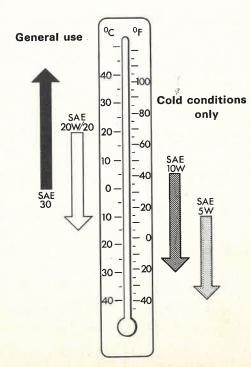
In areas where the average temperature is below 5° F

SAE 5 W*) In countries with arctic climates and temperatures below -13° F

All SAE grades cover a temperature range of about 60°F and the ranges of two neighboring grades overlap by at least 30°F. Brief variations in temperature between seasons can therefore be disregarded. For the same reason, it is also alright to mix oils of different viscosities when oil has to be added between oil changes and the viscosity of the oil in the engine no longer corresponds to the actual temperature.

No additives of any sort should be mixed with HD oil.

Temperature ranges of SAE grades



Avoid driving at high speeds for long periods if using SAE 10 W oil and the outside temperature is above 32° F or if using SAE 5 W oil when the temperature is above 5° F.

Transmission

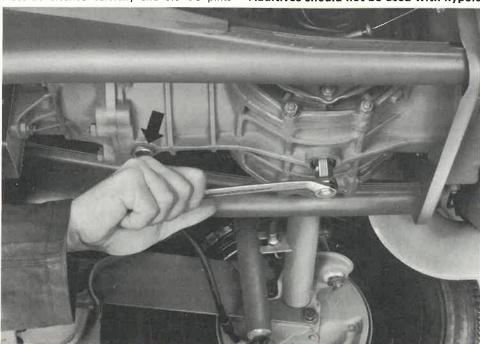
Transmission and differential are combined in one housing and both lubricated with the same hypoid oil. The oil should be up to the edge of the filler hole.

At oil changes, the old oil should be drained when warm. The two magnetic oil drain plugs must be cleaned carefully and 5.3 US pints

of quality SAE 90 hypoid oil put in. Only in countries with arctic climates is it necessary to use the thinner SAE 80 transmission oil.

The oil sometimes runs into the transmission housing very slowly. If one attempts to put the oil in too quickly, it may overflow and give the impression that the housing is full although actually only about 2–3 pints have been put in. It is essential to the service life and silent running of the rear axle that the correct amount of oil is used in the transmission.

Additives should not be used with hypoid oil.

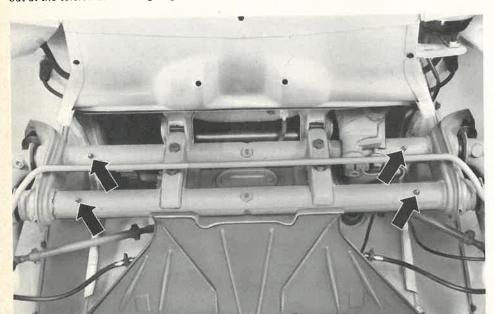




Front axle

The front axle can only be lubricated properly when the axle is free of load, that is with the front end lifted and the wheels hanging free.

There are four nipples on the axle tubes which must be lubricated with a lithium-based multipurpose grease. The nipples and the grease gun nozzle should be cleaned carefully before greasing commences. Place gun on nipples and inject grease until fresh grease starts to come out at the torsion arm sealing rings.



Grease and oil must not be left on tires and brake hoses for long periods. Even small traces should be wiped off immediately.

If the vehicle is driven less than 6000 miles per year, the front axle must be lubricated once a year.

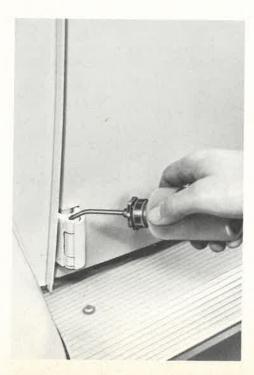
Doors and hoods

The plastic plug on top of the hinge pin closes an oil pocket. Check the oil supply every three months by removing the plug with a screw driver. If necessary, the oil pocket should be refilled with SAE 30 engine oil. Re-insert plug and wipe off excess oil with a piece of cloth.

The door and hood locks and the hood hinges should be lubricated at the same intervals. The door lock should be given a few drops of engine oil through a hole in the edge of the door which is normally sealed with a plug. The hood hinges are also oiled and the hood locks

lightly lubricated. Surplus oil on the hood hinges should be wiped off.

The lock cylinder is treated with graphite as necessary. The key can be dipped into the graphite and then turned in the lock a few times. The friction surfaces of the striker plates should be lubed lightly.





Oil bath air cleaner

A dirty cleaner element not only reduces the engine output, it can also cause premature engine wear. If local conditions are such that the vehicle is often driven on very dusty roads, the cleaner must be checked frequently, even daily if necessary.

The dust present in the air drawn in by the engine is retained by the filter element in the upper part of the air cleaner and washed out when the vehicle is in motion, by the oil in the lower part. In time, this causes a layer of sludge to form at the bottom of the lower part. When there is only $^3/_{16}$ in. of oil above the sludge layer, the lower part must be cleaned and filled with fresh oil.

The cleaner must be removed to do this:

Pull crankcase ventilation hose -A- off the air cleaner.

Loosen clip -B- on hose for preheated intake air and pull hose off connection on air cleaner.

Hold screw -C- for warm air control flap cable with a pair of pliers and loosen hexagon nut.

Loosen screw -D- on outer cable retainer and pull cable out.

Loosen screw in air cleaner support bracket.

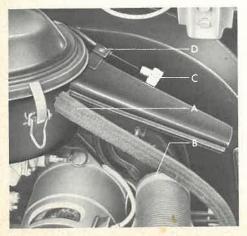
Loosen air cleaner clamp screw and take cleaner off carburetor.

Release the clips and take top part off. The top part must not be laid down with the filter element upward.

Clean bottom part carefully and fill to mark with fresh engine oil. Oil viscosity: SAE 30 all the year. In countries with arctic climates only, SAE 10 W should be used all the year.

Check that the flaps in the two intake pipes on the top part of the cleaner move easily. The top part does not normally need cleaning. Only if the filter element has become so dirty due to delayed cleaning of the bottom part or oil shortage that the air inlet holes on the underside are partly blocked the encrusted dirt should be scraped off with a piece of wood.

When installing the cleaner, ensure that the space between the intake pipes and the fan housing is uniform. Tighten the clamp screw carefully but do not overtighten. To reconnect the cable for the warm air control flap in the right intake pipe of the air cleaner push the outer cable into the retainer and the cable into the clamp screw as far as they will go and secure both properly.









VOLKSWAGEN Approved Accessories Accessoires Agréés Accessori Approvati Accesorios Aprobados Utprovade Tillbehör Acessórios Aprovados Beproefde Accessoires

GENUINE VW PARTS are the proper replacement parts for the Volkswagen. They guarantee accuracy, quality and reliability. Every part of the Volkswagen is available as a Genuine VW Part and all are naturally of the same high quality as the original parts on the vehicle when it leaves the factory. The genuine parts are expertly installed at any Authorized Volkswagen Dealership.

VW EXCHANGE PARTS are also replacement parts for your Volkswagen just like the Genuine VW Parts. They are covered by the same Warranty conditions as Genuine VW Parts and are available in every VW Dealership. But there is one difference; The price, VW Exchange Parts are cheaper than Genuine VW Parts but exactly the same in quality. The exchange parts are not new parts, but parts which have been reconditioned in the Volkswagen factory. That is why you have to hand in the old repairable part to get an exchange part.

APPROVED VOLKSWAGEN ACCESSORIES are not just any old accessories. They have either been designed especially for the Volkswagen or selected from the vast range of accessories available and tested for use on the Volkswagen in the Volkswagen factory. The trademark "Approved Accessories" is your guarantee for material quality, good workmanship and reliability.

Approved VW accessories are supplied by your Authorized VW Dealer who will also install them for you if necessary. You can fit many of the accessories yourself.

Genuine Volkswagen parts, new and rebuilt, and approved Volkswagen accessories are covered by a warranty guaranteeing them to be free of defects in material and workmanship for a period of 6 months or 6,000 miles whichever comes first.

Please consult your Authorized Volkswagen Dealer on all questions concerning repairs. He will be pleased to advise you and your vehicle will be in good hands.

Technical data

Engine

Four cylinder, four stroke, horizontally opposed, in rear.
Air cooling by fan, thermostat controlled.
Pressure oil feed with gear-type pump.
Oil cooler.
Mechanical fuel pump.
Downdraft carburetor with automatic choke and accelerator pump.
Oil bath air cleaner with thermostat controlled air pre-heating.
Exhaust emission control system.

Bore				000			91	-		7			3.27 in. (83 mm)
Stroke													2.72 in. (69 mm)
Capacity													91.10 cu. in. (1493 cc)
Compression ratio													7.5:1
Maximum output	SAE			14				64		4	2	Si	53 bhp. at 4200 rpm. 🏢 🚁
Maximum torque													78.1 lb. ft. at 2600 rpm.
Average piston spe	ed .				12	720		141		90	45	Ġ.	1811 ft./min. at 4000 rpm.
Valve clearance wi	th engi	ne	cole	. b			00		26		(*)		intake and exhaust .004 in. (0.10 mm)
Fuel consumption ¹													U.S. — 26.7 miles per gallon
	1												Metric – 8.8 liters per 100 km
													Imp. – 32.1 miles per gallon
Fuel rating					19		œ						91 Octane Regular
Oil consumption													U.S. — 1.7—3.4 pints per 1000 miles
													Metric – 0.5–1.0 liters per 1000 km
													Imp 1.4-2.9 pints per 1000 miles

¹⁾ Measured consumption plus 10%, with half load at a steady ¾ of maximum speed on level road.

Power transmission

Single plate, dry clutch
Baulk synchronized four-speed gearbox and bevel gear differential in one housing
Swing axles
Gear ratios: 1st gear 3.80:1, 2nd gear 2.06:1, 3rd gear 1.26:1, 4th gear 0.89:1, Reverse gear 3.61:1

Differential ratio: 4.125:1

Clutch pedal free play: 4-.8 in. (10-20 mm).

1 - 4th speed gears

2 - 3rd speed gears

3 - 2nd speed gears

4 - Main drive shaft, front

5 - Reverse gear

6 - Main drive shaft, rear

7 - Clutch release bearing

8 - Transmission shift lever

9 - 1st speed gears

10 - Oil drain plugs

11 - Drive pinion

12 - Differential side gear

13 - Differential housing

23 - Oil cooler 24 - Fuel pump

15 - Flywheel

18 - Generator

17 - Fan

16 - Crankshaft

25 - Oil filler and breather

positioner

20 - Intake manifold

21 - Ignition coil

22 - Distributor

19 - Carburetor with throttle

26 - Piston

14 - Differential pinion 27 - Cylinder head

28 - Spark plug 29 - Camshaft

30 - Oil strainer

31 - Camshaft drive gears

32 - Oil pump

33 - Valve

34 - Heat exchanger

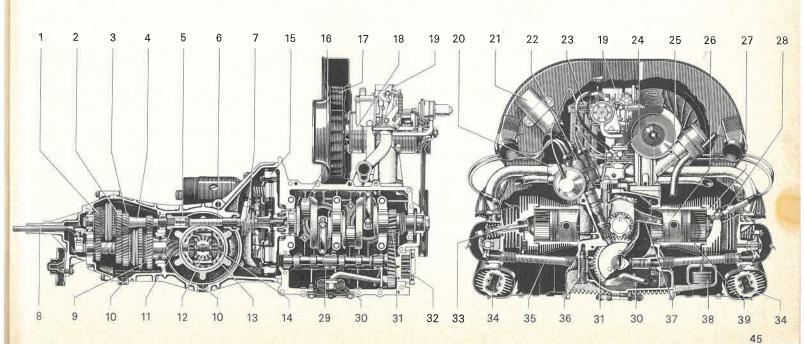
35 - Push rod tube

36 - Oil pressure relief valve

37 - Connecting rod

38 - Thermostat

39 - Cylinder



Chassis

Platform frame with tunnel-shaped center member

Front axle bolted to frame head, engine/transmission unit bolted to frame fork

Independent suspension: twin cranked link arms at front, swing axles with spring plates at rear Torsion bar springing, double-acting telescopic shock absorbers, stabilizer at front, equalizer

spring at rear

Roller steering with maintenance free tie-rods and hydraulic steering damper

Hydraulic dual-circuit foot brakes

Mechanical hand brake effective on rear wheels

94.5 in. (2400 mm) Wheelbase 36 ft. (11 m) Turning circle diameter 51.6 in. (1310 mm) Track at front

.08 to .18 in. (2 to 4.5 mm) unladen Toe-in

30'±15' unladen Camber 53.3 in. (1350 mm) Track at rear

4 J × 15 safety rim wheels Wheels 5.60×15 4 PR tubeless Tires

With 1 or 2 occupants: Tire pressures

front 16 psi (1.1 kg/cm²), rear 24 psi (1.7 kg/cm²)

With 3 or 5 occupants:

front 17 psi (1.2 kg/cm²), rear 26 psi (1.8 kg/cm²)

For long, high speed trips, the pressures should be increased by

3 psi (0.2 kg/cm²) at front and rear.

Electrical system

12 volts Voltage 45 Ah Battery 0.7 bhp Starter

max. 360 watts, early cut in Generator with vacuum spark advance lanition distributor

1 - 4 - 3 - 2Firing order

TDC - engine at operating temperature Basic ignition timing

.016 in. (0.4 mm) Contact breaker gap

Spark plugs	Bosch W Beru 145/ Champion	14	similar val	or plugs with similar values from other manufacturers		
Plug gap	14 mm .028 in. (0	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
r idg gap	,).7 mm)				
	Sedan		Convertibl	e		
Length	158.6 in.	(4030 mm)	158.6 in.	(4030 mm)		
Width	61.0 in.	(1550 mm)	61.0 in.	(1550 mm)		
Height	59.1 in.	(1500 mm)	59.1 in.	(1500 mm)		
Ground clearance	5.9 in.	(150 mm)	5.9 in.	(150 mm)		
Unladen weight (ready for use)	1807 lbs.	(820 kg)	1918 lbs.	(870 kg)		
Permissible load	838 lbs.	(380 kg)	794 lbs.	(360 kg)		
Gross vehicle weight	2645 lbs.	(1200 kg)	2712 lbs.	(1230 kg)		
Permissible front axle load	1080 lbs.	(490 kg)	1102 lbs.	(500 kg)		
Permissible rear axle load	1609 lbs.	(730 kg)	1631 lbs.	(740 kg)		
Permissible trailer weig	hts					
Trailer with brakes Trailer without brakes	1100 lbs. 880 lbs.	(500 kg) (400 kg)				
Fuel tank	10.6 U.S. d	galls (40 liters; 8.8 Imp	(alls)			
Engine	5.3 U.S. pi	nts (2.5 liters; 4.4 lmp	pints)			
Rear axle and transmission	5.3 U.S. pi	nts (2.5 liters)	. μογ			
Brake system		U.S. pints (0.25 liter;	44 lmp, pint	ts)		
Oil bath air cleaner	approx8	U.S. pints (0.4 liter)		/		
Windshield washer	approx. 3.6	U.S. pints (approx. 1.	7 liters; 3 lm	p. pints)		
Maximum and cruising						
speed Acceleration time from	78 mph. (1	25 kph.)				
0-50 mph. (0-80 kph.)	approx. 13	seconds				
Climbing ability		Convertible				
1st gear		5%				
2nd gear	24% 2	3%				
3rd gear		3%				
4th gear	8%	8%				

Dimensions and weights

Capacities

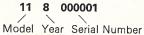
Performance

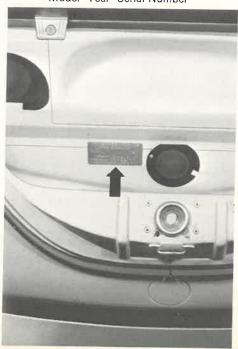


The identification plate is found under the front hood behind the spare tire. The 9 digit number after the words "Fahrgest. Nr." is the chassis number. It describes the model number, model year and serial number of the vehicle as shown in this sample:

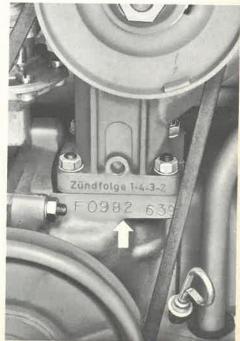
The Chassis Number is also found on the frame tunnel under the rear seat.

The Engine Number is on the generator support flange.









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Lubrication and maintenance

A. The free maintenance service at 600 miles - W 1 - consists of the following *:

Oil Change

- 1 Engine: Change oil, clean oil strainer. Check for leaks.
- 2 Transmission: Change oil, clean magnetic drain plugs. Check for leaks.
- 3 Windshield washer: Check fluid.

Maintenance Service

The Mechanic:

- 1 Check rear axle shaft nuts, tighten if necessary.
- 2 Check V-belt, adjust if necessary.
- 3 Check contact points, lubricate distributor.
- 4 Check and adjust valve clearance.

- 5 Check and adjust clutch pedal free-play.
- 6 Check dust seals and proper fit of plug on ball joints. Check dust seals on tie rod ends. Check tie rods, tighten if necessary.
- 7 Check tire pressures. Check wheel bolts, tighten if necessary.
- 8 Check brake system for damage and leaks, check brake fluid level, add if necessary. Adjust foot and hand brakes.
- 9 Check operation of electrical system and headlight adjustment.

The Service Adviser (Quality Control)

During roadtest:

Check efficiency of braking, steering, heating and ventilation systems. Check overall performance.

After roadtest:

Adjust ignition timing with stroboscopic light. Check and adjust idling. Check throttle positioner for correct functioning. Check cylinder head covers for leaks.

* Lubricants and fluids are paid by the customer.

B. An oil change service every 3,000 miles - WS 5 - consists of:

- 1 Engine: Change oil, clean oil strainer.
 Check for leaks.
- 2 Door and hood locks, door hinges: Lubricate.
- 3 Battery: Check, add distilled water if necessary, clean and grease terminals.
- 4 Windshield washer: Check fluid.

C. A lubrication and maintenance service every 6,000 miles -W10consists of:

Lubrication Service:

- 1 Engine: Change Oil, clean oil strainer. Check for leaks.
- 2 Transmission: Check oil level, add if necessary. Check for leaks.
- 3 Front end: Lubricate.
- 4 Door and hood locks, door hinges: Lubricate.
- 5 Carburetor linkage: Oil.
- 6 Air cleaner: Check, clean lower part if necessary and fill with fresh oil.
- 7 Battery: Check, add distilled water if necessary. Clean and grease terminals.
- 8 Windshield washer: Check fluid.

Maintenance Service

The Mechanic:

- 1 Check V-belt, adjust if necessary.
- 2 Clean fuel pump filter.

- 3 Check contact points, replace if necessary, lubricate distributor.
- 4 Check and adjust valve clearance.
- 5 Check spark plugs, check and adjust plug gap. Check compression.
- 6 Check control flap for carburetor preheating.
- 7 Check rubber valve for crankcase ventilation, replace if necessary. Check exhaust system for damage.
- 8 Check and adjust clutch pedal free-play.
- 9 Check dust seals and proper fit of plug on ball joints. Check dust seals on tie rod ends. Check tie rods, tighten if necessary.
- 10 Check axial play of lower ball joints.
- 11 Check front wheel camber and toe-in.
- 12 Steering gear: Check and adjust play between roller and worm.
- 13 Check tires for wear and damage, check tire pressures.
- 14 Check brake system for damage and leaks, check brake fluid level, add if necessary. Adjust foot and hand brakes. Check switch and warning light for brake operation.

- 15 Check thickness of brake linings.
- 16 Check operation of electrical system and headlight adjustment.
- 17 Check wiper blades and replace if necessary.

The Service Adviser (Quality Control)

During roadtest:

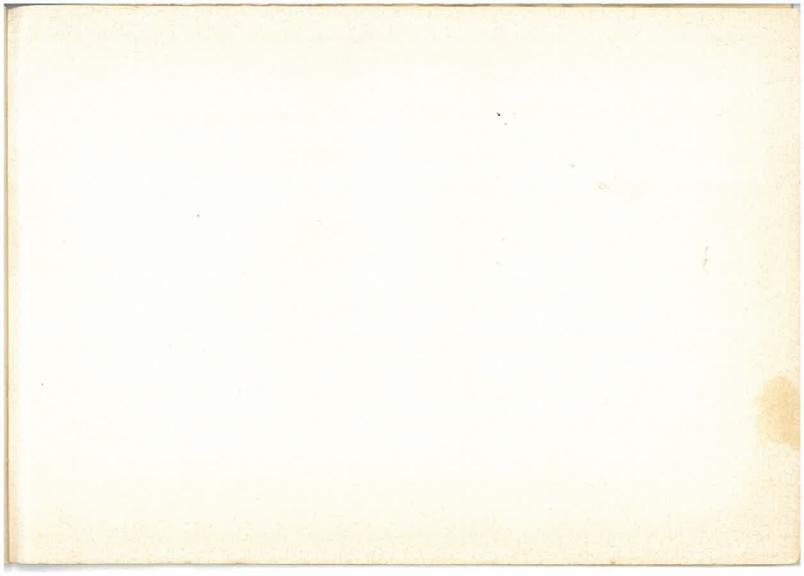
Check efficiency of braking, steering, heating and ventilation systems. Check overall performance.

After roadtest:

Adjust ignition timing with stroboscopic light. Check and adjust idling. Check throttle positioner for correct functioning. Check cylinder head covers for leaks.

D. In addition, every 30,000 miles the transmission oil is changed -W 10- and the front wheel bearings repacked -W 50-.





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On presentation of this Service Card, any authorized VW workshop at home or abroad guarantees to carry out the operations listed in the lubrication and maintenance chart of the Instruction Manual according to factory specifications.

This Service Card contains a voucher for the free-of-charge lubrication and maintenance service at 1,000 km (600 miles). Spare parts, oils and cleaning solutions used during a lubrication and maintenance service are billed separately.

Foreign countries have their own charges for lubrication and maintenance services. Good quality work is possible only if the vehicle is clean, so it may be necessary to wash dirty vehicles before carrying out a lubrication and maintenance service. In such cases washing is billed separately.

The details are subject to alteration without notice.

SERVICE CARD 1

Owner's name:	24+	Darr	el E	ALD	RICH
Address:	HHC	1st	BN 7	74 IN	F. 3rd Di
	Abg.	0535	2292) 	
	9				Chassis No.

Telephone No.:	

Warranty Voucher

for the new VW automobile

Type / Model

Chassis No.

Engine No.

in accordance with the terms of warranty printed overleaf.

The warranty commences at the date the VW automobile is delivered to the original purchaser,

viz. on 30. 4 per (1968 (To foe filled in by Selling VW Dealer)

and covers a period of 6 months or the period before the vehicle has been driven 10,000 km (6,000 miles), whichever event shall first occur. Should any warranty claim arise, you are requested to submit this voucher to your VW Dealer.

VOLKSWAGENWERK AKTIENGESELLSCHAFT

Auto-Dunker GmbH vw-Großhändler Aschaffenburg (Stamp of Selling VW Dealer)

Warranty of Volkswagenwerk Aktiengesellschaft for New Volkswagen Automobiles and Genuine Volkswagen Parts

This warranty applies to automotive vehicles of Volkswagenwerk Aktiengesellschaft (VW) of all models and types, as well as parts for such automotive vehicles (including exchange units), to the extent that such automotive vehicles and parts are supplied by VW (VW Products). This warranty covers parts manufactured by VW itself, as well as such parts which VW acquires from other manufacturers and either installs or supplies as parts.

- Warranty claims can be made only through an authorized VW dealer or authorized VW repair shop. They must be made forthwith upon ascertainment of the defects. The repairs must be performed in the repair shop of an authorized VW dealer or in an authorized VW repair shop.
- 2. VW warrants VW Products to be free of defects in material and workmanship according to current industrial standards. The warranty becomes effective at the time of delivery of the VW Product by the authorized VW dealer, or the authorized VW repair shop, to the customer. The warranty expires six months thereafter or when the VW Product has been driven or used over a distance of six thousand miles (ten thousand kilometers), whichever event shall first occur. As to

VW vehicles assembled outside of Germany, the warranty of VW is limited to those components which are supplied by VW.

3. The obligation under this warranty is limited, at the election of VW, to the replacement or repair of such parts as shall be acknowledged by VW to be defective in material or workmanship. At the request of VW, parts to be replaced must be exhibited or shipped from the office where the claim is made through the proper distributor or Exclusive Importer to VW or its designee. All parts which shall have been replaced shall become the property of VW.

No charge will be made to the customer with respect to the removal or installation of parts or with respect to freight incurred pursuant to this warranty.

4. This warranty is expressly in lieu of all other express or implied warranties, obligations or liabilities of VW and of the selling dealer, whether for direct or consequential damage or otherwise, including obligations for breach of express or implied conditions and including, but not by way of limitation, express or implied warranties of

merchantability or fitness for any particular purpose.

- There shall be no right of rescission or to a reduction of the purchase price unless VW should not be in a position to cure the defect.
- 6. The warranty is fully discharged:
 - a) If the VW Product has been interfered with by unauthorized persons in any manner not approved by VW;
 - b) If parts have been installed the use of which has not been approved by VW; and if in the sole judgment of VW the damage is causally related to the interference in case (a) or to the installation of unapproved parts in case (b). The warranty will also be fully discharged if the customer has not complied with the instructions (Instruction Manual) of VW for the operation of the VW Product.
- Normal wear and tear is excepted from the warranty. The same applies to damage brought about by negligent or improper handling, including, but not by way of limitation, damage due to storage or corrosion.

Every VW workshop is interested in keeping your Volkswagen reliable and roadworthy so please have the 5000 km (3000 mile) lubrication services carried out regularly by your VW specialist. If you drive hard or mainly in city traffic, it is advisable to ask him to check the brake adjustment at the same time.

						Type 1 and 2	Type 3
ach it here.	Delivery Inspection	WS 5	Lubrica	ntion Service	at 5,000, 15,000, 25,000 km (3,000, 9,000, 15,000 miles) and so on		
p. Please att	001 000 Auto-Distanto 6mbH VW-Großhändler Aschaffenburg on 24, 448 at km/miles	W 10		ntion and nance Service	at 10,000, 20,000, 30,000 km (6,000, 12,000, 18,000 miles) and so on		
You can obtain a continuation card valid for a further 50,000 km (30,000 miles) from your VW workshop. Please attach it here.		W 50 Cleaning front wheel bearings			only at 50,000, 100,000 km (30,000, 60,000 miles) and so on		
m y	1000 km 600 miles	5000 km 3	000 miles	10000 km 6000 miles	15000 km 9000 miles	20000 km 12000 miles	25000 km 15000 miles
000 miles) fro	W1 Lubrication and Maintenance (free-of- charge (Stamp) on 6 5 6 6	WS 5 Lul	brication	W 10 Lubrication and Maintenance	WS 5 Lubrication	W 10 Lubrication and Maintenance	WS 5 Lubrication
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556.208.20 - Printed in Germany

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