Volkswagen Owner's Manual: Operation and Maintenance

Type 2

Owner:

Last name	First name	Initial

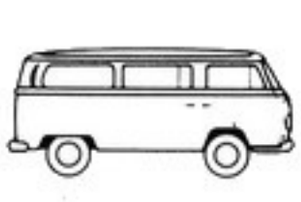
Street

Town	State	Zip code

Area code	Tel. No.

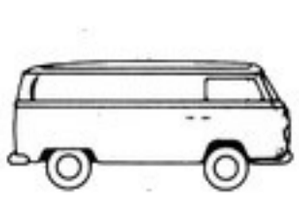
Volkswagen Owner's Manual: Operation and Maintenance

1972 Models



Volkswagen Station Wagon and Kombi

Volkswagen Campmobile



Volkswagen Delivery Van

VOLKSWAGENWERK AKTIENGESELLSCHAFT

532.003.23

Printed in Germany 8. 71

The VOLKSWAGEN OWNER'S MANUAL consists of two major parts: operation description and Diagnosis & Maintenance record.

The first part acquaints you with your Volkswagen Warranty and the operation of your car. It also gives you information on fuel, oil, lubrication, plus technical data.

The second part deals with the maintenance of your Volkswagen. It explains what the VOLKSWAGEN DIAGNOSIS and MAINTENANCE is all about, and how to keep your Volkswagen in top driving condition.

Always have your Volkswagen Owner's Manual with you when you take your car to an Authorized Volkswagen Dealer for service . . . it provides your Service Adviser with the information he needs and enables him to make the necessary entries for you.

Please read this manual before you drive your new Volkswagen. Acquaint yourself with its features, and know how to operate it more safely . . . because the more you know about it, the more you will enjoy driving your Volkswagen.

Pictures and text in this manual are based on the 1972 Volkswagen Station Wagon. Where the controls, equipment and technical data of the commercial models differ considerably, we will point this out in the text.

It has always been Volkswagen's policy to continuously make technical improvements; therefore, the right is reserved to make changes at any time during the model year without notice.

Contents

Volkswagen offers a quality product. Maintain this quality by having your Volkswagen serviced regularly. A service schedule that we recommend is explained in the section Volkswagen Diagnosis and Maintenance.

Should you have occasion to make use of your Volkswagen Warranty, it is always helpful to have the related service receipts handy.

WARRANTY VOUCHER

for the new VW automobile

Type: _____

Chassis No. _____

Engine No. _____

In accordance with the **terms of warranty** printed overleaf.

(Stamp of Selling VW Dealer)

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

viz. on _____
(To be filled in by selling VW Dealer)

and covers a period of 24 months or the period before the vehicle has been driven 24,000 miles, whichever event shall first occur. Should any warranty claim arise, you are requested to present this voucher to your VW Dealer.

VOLKSWAGEN OF AMERICA, INC.

Air Conditioner Installation

(Stamp of Installing VW Dealer)

Date

At Mileage

Make, Model

Auxiliary Heater Installation

(Stamp of Installing VW Dealer)

Date

At Mileage

Make, Model

Speedometer Replacement

(Stamp of Replacing VW Dealer)

Date

At Mileage

Make, Model

No express warranties, as to Volkswagen vehicles sold in the United States are made either by Volkswagen of America, Inc. ("VWoA"), or by the manufacturer, the distributor or the selling dealer, except the following warranty by Volkswagen of America, Inc.

Warranty for New Volkswagen Vehicles

This warranty is issued by Volkswagen of America, Inc. ("VWoA"), the authorized United States importer of Volkswagen vehicles.

Free repair or replacement in the United States and Canada of defective parts for 24 months or 24,000 miles

1. VWoA warrants that every Volkswagen vehicle imported by VWoA and sold as a new vehicle to a retail customer by an authorized United States Volkswagen dealer will be free from defects in material and workmanship under normal use and service for 24 months after the date of delivery of the vehicle to the original retail customer or until the vehicle has been driven 24,000 miles, whichever comes first. This warranty is limited, however, to the following: If any part of the vehicle becomes defective under normal use and service and the vehicle is brought during this period to the workshop of any authorized Volkswagen dealer in the continental United States, Hawaii or Canada, the dealer will, without charge, either repair the defective part or replace it with a new or factory reconditioned part.

Maintenance required to keep warranty in effect

2. In order to keep this warranty in effect, the owner must have the vehicle maintained and serviced as prescribed in the Volkswagen Maintenance Schedule.

Items not covered by warranty

3. VWoA's warranty does not cover:
(i) Defects, damage or deterioration due to normal use, wear and tear or exposure; (ii) normal maintenance services, such as fuel system cleaning and wheel, brake or clutch adjustments; (iii) the replacement of service items, as, for instance, spark plugs, ignition points, wiper blades or brake linings; (iv) deterioration of upholstery, soft trim and appearance items; (v) damage or defects due to misuse, alteration, negligence or accident; (vi) damage or defects due to the repair of the vehicle by someone other than an authorized Volkswagen dealer or the installation

of parts other than genuine Volkswagen parts; (vii) damage or defects due to the use of the vehicle in competitive events, including rallies and races; (viii) and loss of time, inconvenience, loss of use of the vehicle or other consequential damage.

Warranty outside the United States and Canada

4. If the vehicle is brought to an authorized Volkswagen workshop outside the continental United States, Hawaii or Canada, VWoA's warranty will not be applicable and defective parts will be repaired or replaced free of charge with new or factory reconditioned parts only within the terms and limitations of the warranty for new Volkswagen vehicles in effect in the country where such authorized Volkswagen workshop is located.

No other warranties made

5. This warranty is in lieu of all other express warranties of VWoA, the manufacturer, the distributor and the selling dealer. Neither VWoA nor the manufacturer assumes, or authorizes any person to assume, on its behalf, any other obligation or liability.

Let us explain the warranty . . .

Volkswagen of America, Inc. is proud of the quality of the automobiles it imports. It warrants new vehicles for a period of 2 years or 24,000 miles from the date of purchase, whichever comes first. In general, the complete vehicle including battery and tires is covered under the provisions of the Volkswagen New Vehicle Warranty. It will be honored by any Authorized Volkswagen Dealer in all 50 States, the District of Columbia and Canada.

This warranty is transferable if the ownership of the vehicle changes within the above period.

In order to keep the warranty in force, you, as the owner of the vehicle, have certain responsibilities. It is important that the vehicle be maintained properly. To facilitate record keeping, this booklet provides space for listing diagnosis, maintenance, and oil change services as they are performed.

Diagnosis and maintenance services should be performed by Authorized Volkswagen dealers. They have Volkswagen-trained mechanics and special tools to provide fast, efficient service in accordance with Volkswagen quality standards.

The terms of your warranty require you to keep a maintenance record of your vehicle. Provided that maintenance or oil change services were performed in accordance with Volkswagen specifications, dated bills of other than Authorized Volkswagen dealers will be accepted as proof that these services were performed when required.

Not all repairs, adjustments and replacements, however, are the result of defects in material or workmanship. There are other circumstances beyond the control of the manufacturer that might make a workshop visit necessary. These depend mainly on where you drive and how you drive. They would include weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage.

For example, you are required to pay for the following:

Maintenance services and oil changes.

Diagnosis services — except those diagnosis services for which a free coupon is presented at specified mileage intervals.

Wheel alignment and wheel balancing. The frequency of these service depends on driving conditions such as rapid starts and stops, tire skidding, hitting pot holes and curbs, etc.

Mechanical adjustments — including brakes, clutch, door locks — are required as a matter of normal operation of a motor vehicle. This protects you against early or expensive replacements.

Brakes and clutch linings are directly affected by driving habits and use. The replacement of brake linings, brake pads, clutch linings and shock absorbers, and the reconditioning of brake drums and brake discs should be performed whenever necessary.

Spark plugs and ignition points are subject to wear. Periodic replacements ensure you of maximum engine performance and gasoline economy.

Wiper blades will have a varied life expectancy, depending on climatic conditions and extent of use. You are the best judge of when they should be replaced.

Light bulbs and fuses are service items.

Paint, chrome, trim and other appearance items are affected by normal wear and exposure. Proper care of these items can add to their appearance and durability. (Imperfections are normally apparent during New Vehicle Pre-Delivery Inspection. For your protection, please report any imperfection to your dealer immediately.)

Tires and battery are subject to wear. If there is a defect, you pay only for the amount of use you obtained. An adjustment for tires is based on the remaining tread depth. Battery adjustment is according to time used, based on 24 months of service. This is known as the pro-rata method of adjustment.

Volkswagen replacement parts and factory-approved accessories are identified by these trademarks.

All meet the same exacting quality control standards as the original equipment on the car, and comply with all applicable Government safety regulations.

They are guaranteed to be free from defects in material or workmanship for a period of 6 months or 6,000 miles, whichever comes first.

All Volkswagen parts and accessories are available at your Authorized Volkswagen Dealer.

Also, ask him about rebuilt parts under the Volkswagen Exchange Service . . . they cost less than new parts but carry the same warranty.

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Dear VW Owner:

A lot has gone into the manufacture of your Volkswagen. Including advanced engineering techniques, rigid quality control and demanding inspections. The engineering and safety features that have gone into your VW will be enhanced by . . . you,

The safe driver — who knows his vehicle and all the controls,
— who maintains his vehicle properly,
— who uses his driving skills wisely.

Because safe driving is important to you, we urge you to read this manual carefully, to maintain your VW properly and to follow the check list shown below whenever you use your VW.

Before getting behind the wheel:

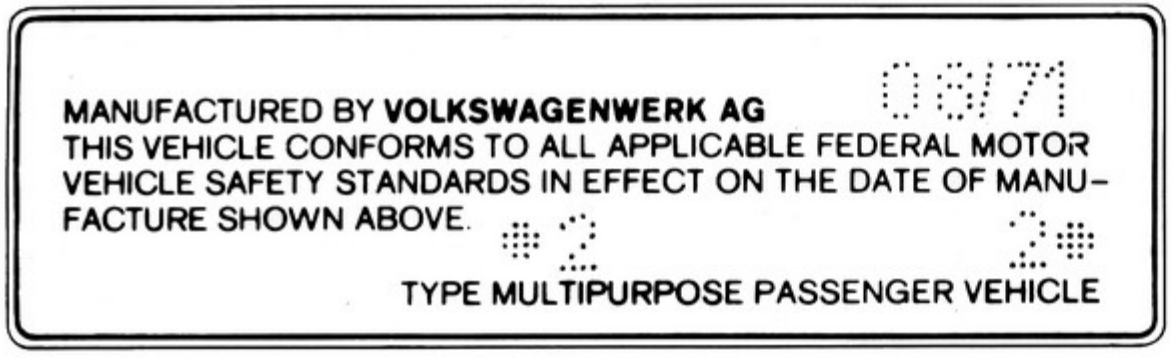
1 - Make sure that the tires are inflated correctly.
2 - Watch the tread depth indicator on the tires. Look for bruises and wear.
3 - See that all windows are clean and unobstructed.
4 - Check that headlight and tail light lenses are clean.
5 - Check that all lights are functioning properly.
6 - Check turn signal lamps and indicator light (ignition on).

In the driver's seat:

1 - Position seat properly for easy reach of controls.
2 - Adjust inside and outside mirrors for unobstructed rear view.
3 - Fasten safety belts.
4 - Check brake warning light (ignition on).
5 - Check brake operation.
6 - Make sure that all doors are closed securely and locked.

And when you are on the highway:

1 - Always drive defensively. Expect the unexpected.
2 - Use signals to indicate turns and lane changes.
3 - Turn on headlights at dusk.
4 - Follow at a safe distance. A good rule of thumb is to allow a minimum of one car length for each 10 mph of speed.
5 - Reduce speed during night hours and inclement weather.
6 - Observe speed limits and obey highway signs.
7 - When tired, get off the highway, stop and take a rest.
8 - When stopped or parked, always set the parking brake.
9 - When stalled or stopped for repairs, move the car well off the road. Set the emergency flasher and use road flares or other warning devices to warn other motorists.



This sticker is your assurance that your 1972 Volkswagen complies with all U.S. Federal Motor Vehicle Safety Standards which were in effect at the time the vehicle was manufactured. You can find this sticker on the left doorjamb.

The sticker also shows the month and year of production as well as the chassis number of your car (perforation).

Vehicle Identification

The Identification Plate

is the "birth certificate" of your Volkswagen. It is located behind the front passenger seat.

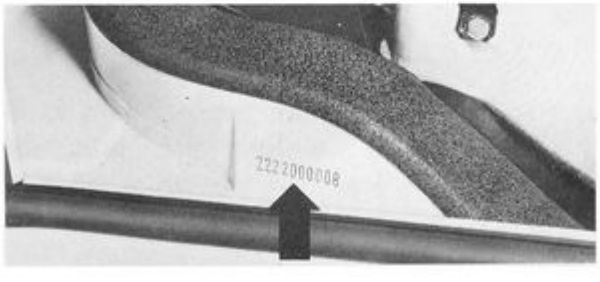
The plate shows such information as manufacturer's name, place of origin, model, weights and "Fahrgest.-Nr.", which is the chassis number of your car.

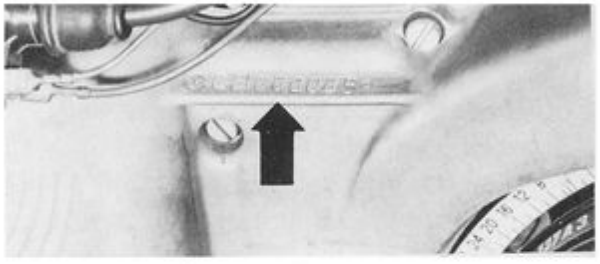
The sticker behind the driver's seat shows the color code.

The Chassis Number

is also located on the instrument panel on the driver's side so that it is visible from the outside through the windshield. This is for your protection . . . to aid in the apprehension of car thieves and the recovery of stolen vehicles.

The chassis number is also stamped on the left-hand engine cover plate.



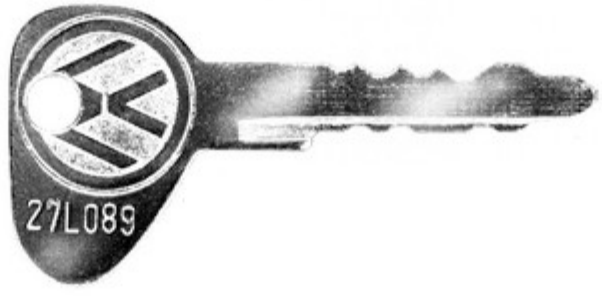


The Engine Number

is stamped on the crankcase below the breather (not visible).

And also near the ignition coil (arrow).

Key



DO NOT INVITE CAR THEFT

by leaving your car unattended with the key in the ignition lock. Take the key with you and lock the doors.

A buzzer will remind you when you open the driver's door and the key is still in the ignition lock.

The same key is used for the ignition/ steering lock, the doors and the rear luggage compartment lid.

It is a good idea to keep a record of your key number in your wallet together with your license. If you should lose a key, your Authorized VW Dealer will thus be able to quickly secure a replacement key for you.

Doors

Since your Volkswagen is almost air tight it will be easier to close the door if you, open a window slightly.

Always drive with locked doors to prevent inadvertent opening of the door from the inside, especially with small children in the car.

To lock and unlock front doors from the outside

You can lock and unlock your car with a key, of course. But you can also lock it without a key.

Inside door handle

First push in the inside locking lever in the inside door handle. Then depress the plunger in the outside door handle as you close the door.

If the door, with the locking lever depressed, closes by itself, the locking device will disengage automatically. We provided this additional safety feature so you won't be locked out if the door should slam shut while the key is still inside the car.

To lock and unlock front doors from the inside —

depress or pull out the locking device in the inside door handle.

The sliding door

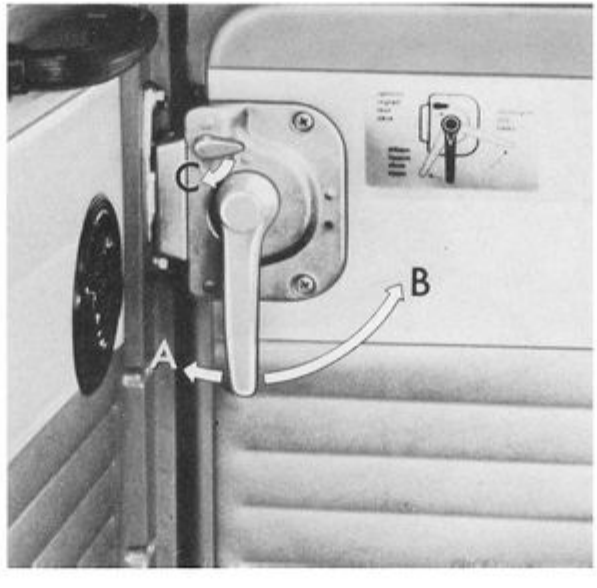
Always drive with a securely locked sliding door.

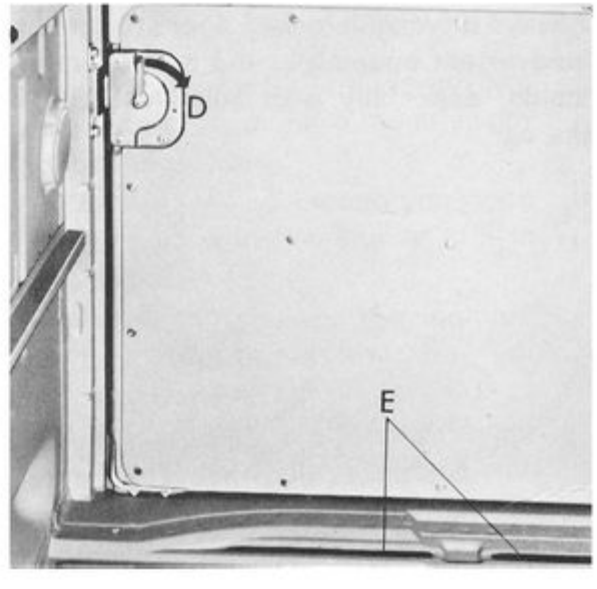
To open the sliding door from the outside, press the handle down and slide the door to the rear. The door is held in the fully open position by a catch.

To open the sliding door from the inside, move the door handle forward — A — and slide the door open.

To close the door from the outside, press the handle down first to release the catch. With the handle in its normal position, slide the door forward until it latches. Then pull the handle up firmly until the sliding door is flush with the rear panel.

You can lock the sliding door from the outside with the key. A sliding door that has been locked from the outside can only be opened with the key from the outside.





To close the door from the inside, move the handle forward first to release the catch. With the handle in its normal position, slide the door forward to slam it shut. Then pull the handle up — B — to make sure the door is securely closed.

To lock the sliding door from the inside, depress the small lever to position — C —. A sliding door that has been locked from the inside can only be unlocked from the inside.

Windows

On the VW Delivery Van with a full partition between the driver's cab and the cargo compartment, **open the sliding door from the inside** by pulling the inside handle to the rear — D —.

To lock the cargo compartment from the inside, move the locking knob to the right.

In the VW Kombi and VW Delivery Van, embossed lines — E — on the cargo compartment floor mark the limit up to which cargo can be loaded without obstructing the operation of the sliding door.

The rear luggage compartment is easily accessible through the lid at the rear of the vehicle. You lock and unlock it with the key.

To open the lid, depress the lock and raise the lid until it is held in the fully open position by springs. Do not let the lid fly open on its own.

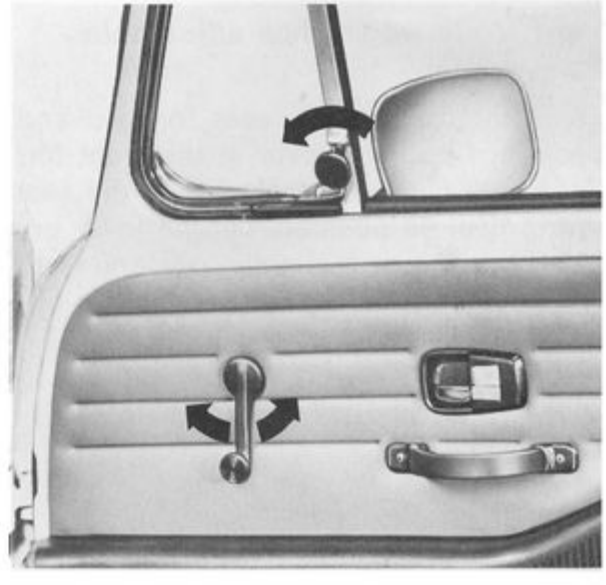
To close the lid, swing it down firmly. Always make sure it is properly closed and locked.

Do not drive with the rear luggage compartment lid open to preclude the possibility of exhaust fumes entering the car.

We have made the windshield and windows large for clear, unobstructed visibility.

We recommend you do not put decals or other signs on the windows of your car that interfere with the driver's vision.

You can lower and raise the windows in the front doors by means of winders. We cushioned the knobs for your safety.



Vent windows
(VW Station Wagen only)

To open the vent windows, turn knob into driving direction, move locking lever forward and push out window.

Seats

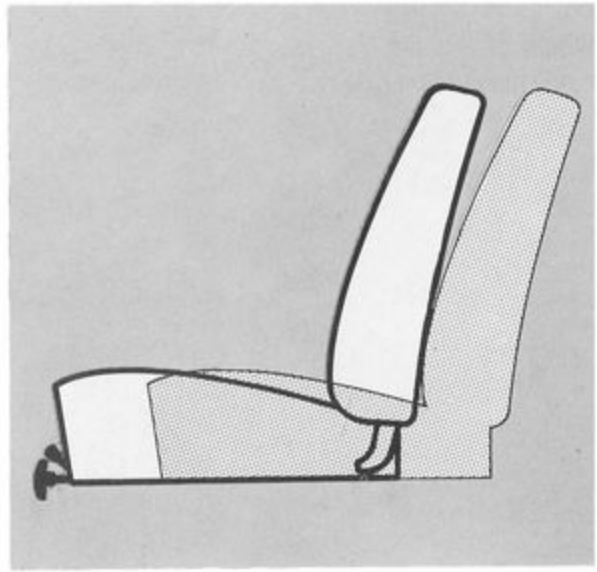
We recommend you do not adjust the driver's seat while driving. Your seat may suddenly jerk forward or backward, which could result in loss of control.

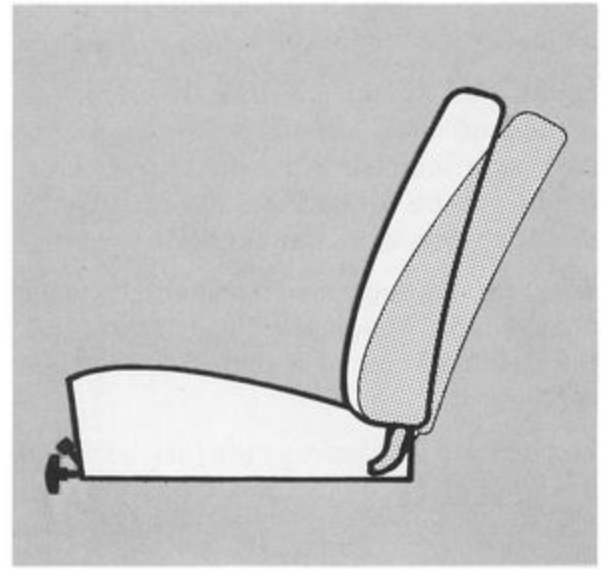
Your Volkswagen has adjustable front seats

To move the driver's seat forward and backward pull the lever at the front left hand side of the seat. Now slide the seat to the desired position. Let the lever go, and move the seat slightly back and forth to make sure it is securely engaged.

Removing and installing driver's seat

With the adjustment lever raised, slide the seat all the way forward until the runner touches the leaf spring stop. Stand outside the car, pull the leaf spring stop with the right hand and, with the adjusting lever raised, slide the seat fully off the tracks. Lift out.





To reinstall the driver's seat, stand outside the vehicle and position the seat in front of the tracks. Hook the inboard seat runners on its track first. Then insert the outer runner by pulling the seat slightly toward you. With the adjustment lever raised, slide the seat back on the tracks.

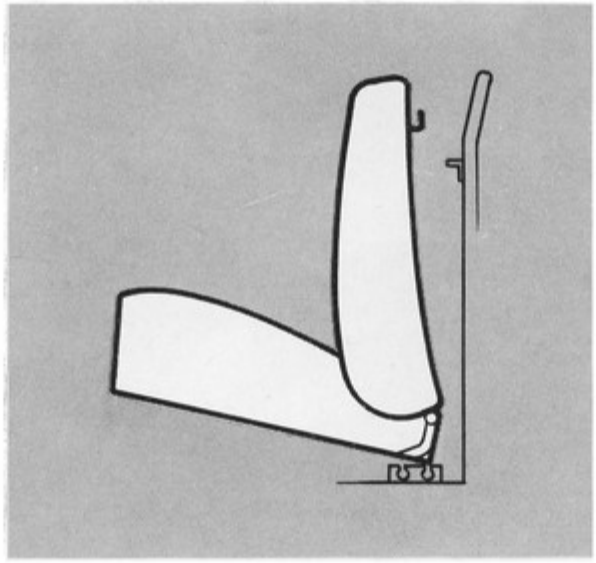
The backrest is secured and cannot tilt forward accidentally. It can be adjusted to different angles by turning the hand wheel at the front of the seat.

The front passenger seat can be adjusted to two different positions. Lift the seat cushion at the front edge and move the seat into the second notch.

Keep the backrest hooked into the backrest on the partition when adjusting the seat position.

Removing and installing the front passenger seat

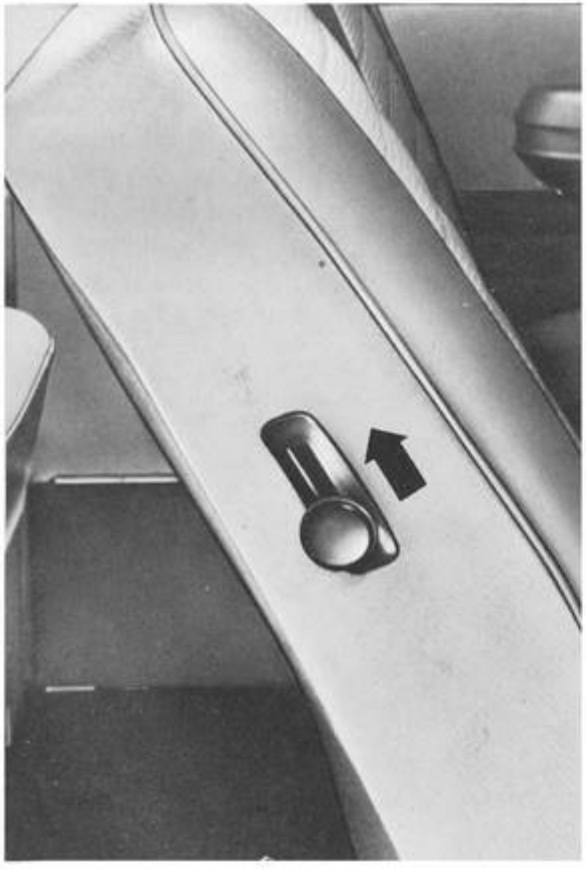
Lift it at the front edge first; then remove.



When putting the seat back in again, hold the seat with the seat cushion tilted toward the backrest, slide the hook on the rear side of the backrest into the bracket on the partition. Insert the seat cushion in the desired notch, and fold the seat cushion down. Always check to be sure the backrest is securely attached to the partition.

Passenger compartment

In the 9-seater version, the backrest of the first seat in the middle row can be tilted forward and out of the way for easy access to the rear bench. To disengage the lock of the backrest, pull up the lever on the side of the backrest.



Removing and installing seats in the rear passenger compartment

All seats in the rear passenger compartment can be taken out. First remove the side and front trimming from the seat frames.

Then unscrew the nuts and take off the mounting supports. Remove seats and mounting plates. Take out bolts by turning them.

When reinstalling the seats use all bolts, mounting supports and nuts. Be sure to tighten the nuts firmly.

Safety belts

A safety belt is provided for each seating position in your Volkswagen. For your protection, **fasten your safety belt before driving off and wear it at all times while the car is in motion.**

Store safety belts of unoccupied seats properly. This reduces the possibility of their becoming a striking object in case of a sudden stop.

Safety belts for front seats

The **front seats** are equipped with **combination lap/shoulder belts.** For easy storage a hook is provided on the door post.

In models with a three-passenger front seat, the middle seating position is equipped with a lap belt. See next page on how to use a lap belt.

A shoulder belt should not be worn by a person less than 4' 7" in height because it would not be in its most protective position, and therefore may increase the possibility of injury in a collision.

To fasten your **combination lap/shoulder** belt, grasp the belt tongue, take it off the hook on the door post and pull the belt across your chest and lap.

Insert the belt into the anchor housing on the inboard side of the seat and press until it is **securely locked.**

Belts should not be worn loose or twisted. They should fit snugly across your body. The lap belt section should be completely unrolled from the retractor.

Do not strap in more than one person in each belt.

To adjust the length of the belts, press in the release on the buckle (arrow) as you pull the respective belt section in the desired direction. With this release it is also possible to adjust the belt length with the buckle already engaged in the anchor housing. Take up any slack of the loose belt by moving the slide on the belt.

To release the belt, pull the lever with the white top on the anchor housing upward.

When not in use the belt should be hung on the hook provided for this purpose on the door post.

Safety belts for rear seats

The rear seats are equipped with adjustable lap belts.

Pull the longer section across your lap and insert the tongue in the inboard buckle. Press until you hear a click to be sure the belt is locked securely.

The belt should not be worn loose or twisted.

To **release** the belt, pull the lever (white top) on the buckle.

To **lengthen** or **shorten** the rear belt, hold the belt tongue at a right angle to the belt and pull the respective belt section in the desired direction. Take up any slack of the loose belt end by moving the slide on the belt.

The belts should always be kept on top of the seat for ready use. Do not permit them to get caught under the seat.

Keep safety belts clean. If cleaning is necessary, wash them with a mild soap solution, without removing them from the car.

Do not bleach or dye safety belts. Do not use any other cleaning agents. They may weaken the webbing.

Check buckles and retractors for proper function. Check belt webbing and bindings for damage.

In any authorized VW dealer's service department, you get VW Specialists who know VW's intimately.

A VW Specialist works on VW's. Period.

Every so often he takes time off and gets a refresher course at one of our VW training centers.

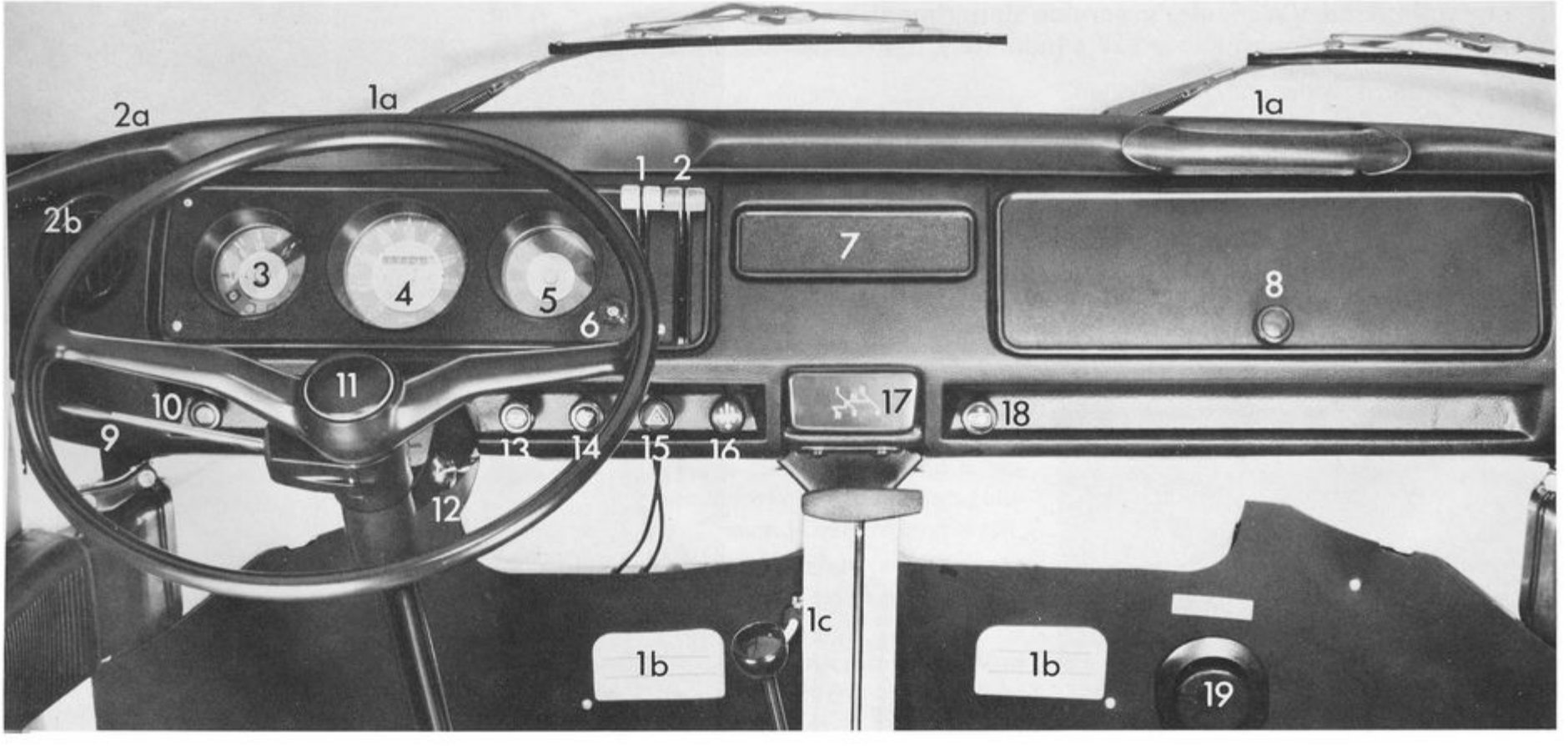
So he learns to fix Volkswagens before he starts working on your car. Rather than while he is working on your car.

We think it is better that way.

Instrument panel

The padded instrument panel and the steering wheel are attractively styled for maximum safety and driving ease.

The various controls, gauges and warning lights are conveniently arranged and marked with readily recognizable symbols.



1 - Heater control levers
  1 a - Vents for heating and defrosting (one for each side)
  1 b - Warm air outlets for front leg area (one for each side)
  1 c - Lever for warm air distribution in front leg area
2 - Fresh air control levers
  2 a - Vents for fresh air ventilation below the windshield (one for each side)
  2 b - Vents for fresh air ventilation on the dashboard (one for each side)
3 - Fuel gauge and warning lights
4 - Speedometer
5 - For installation of optional equipment: electric clock
6 - Brake warning light
7 - Plate over radio aperture
8 - Glove compartment
9 - Turn signal and headlight dimmer switch lever
10 - Headlight switch
11 - Horn button
12 - Ignition/steering lock
13 - Interior light switch for rear
14 - Windshield wipers and washer
15 - Emergency flasher
16 - Control knob for Auxiliary Heater (optional equipment)
17 - Ashtray
18 - Rear window defogger switch
19 - Container for windshield washer fluid

Ignition/steering lock

The steering is equipped with an anti-theft ignition lock.

Fasten safety belts.
Make sure the gearshift lever is in Neutral before turning the ignition key.

1 - Ignition off/steering locked.
Insert the key. If it is difficult to turn the key, gently move the steering wheel until the key turns freely.

2 - Ignition on/steering free (for towing).

3 - Starter engages.
The key returns to position 2 as soon as it is released. Never operate the starter longer than a few seconds. If the engine should fail to start, turn the key back to position 1, and repeat the starting procedure. More on starting on page 37.

To remove the key and to lock the steering, turn the key back to position 1 and pull it out. Turn the steering wheel until it locks.

The steering column will lock when you remove the key. Therefore DO NOT REMOVE the key while you are driving or as the car is rolling to a stop.

If you leave the key in the ignition/steering lock, the buzzer will sound when the driver's door is opened. This is your reminder to remove the key.

Fuel gauge

The fuel gauge only works with the ignition on.

When the needle is on "R", there is a reserve of about 1 gallon of fuel left in the tank . . . time to refuel at the next gas station.

Indicator or warning lights

The following indicator or warning lights are in the fuel gauge dial:

a - green — turn signals

b - red — alternator

c - blue — high beam

d - green — parking light

e - red — OIL — oil pressure

The red warning lights for **alternator** and **oil pressure** will light up in the fuel gauge dial when the ignition is turned on. They should go out after you have started the engine.

b - Alternator warning light

If this light comes on when you are driving, the alternator has stopped charging. 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.

Whenever stalled or stopped for repair, move the car well off the road. Turn on the emergency flasher and mark the car with road flares or other warning devices. Before working on any part in the engine compartment, wait until the engine has sufficiently cooled down.

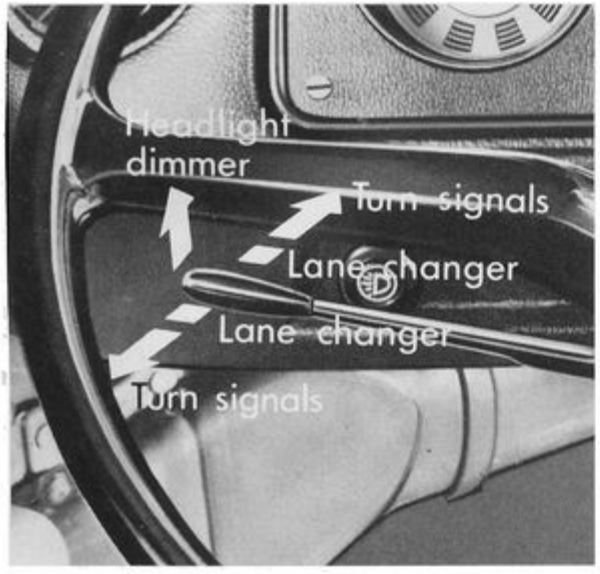
e - Oil pressure warning light OIL

STOP AT ONCE . . .

if the oil pressure warning light comes on while you are driving.

Check the oil level to make sure you have enough oil. If the cause is somewhere else, do not drive on but contact your nearest Authorized VW Dealer.

An occasional flickering of the oil pressure warning light when the engine is idling after a long high-speed trip is no cause for concern if the light goes out upon acceleration.



The turn signal and headlight dimmer switch lever is located on the left just behind the steering wheel. It only works with the ignition on.

Turn signals

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

The green turn signal indicator light comes on in the fuel gauge dial when you operate the lever.

The turn signals are cancelled automatically when you have completed a turn (like driving around a corner), and the steering wheel returns to the straight-ahead position.

Lane changer

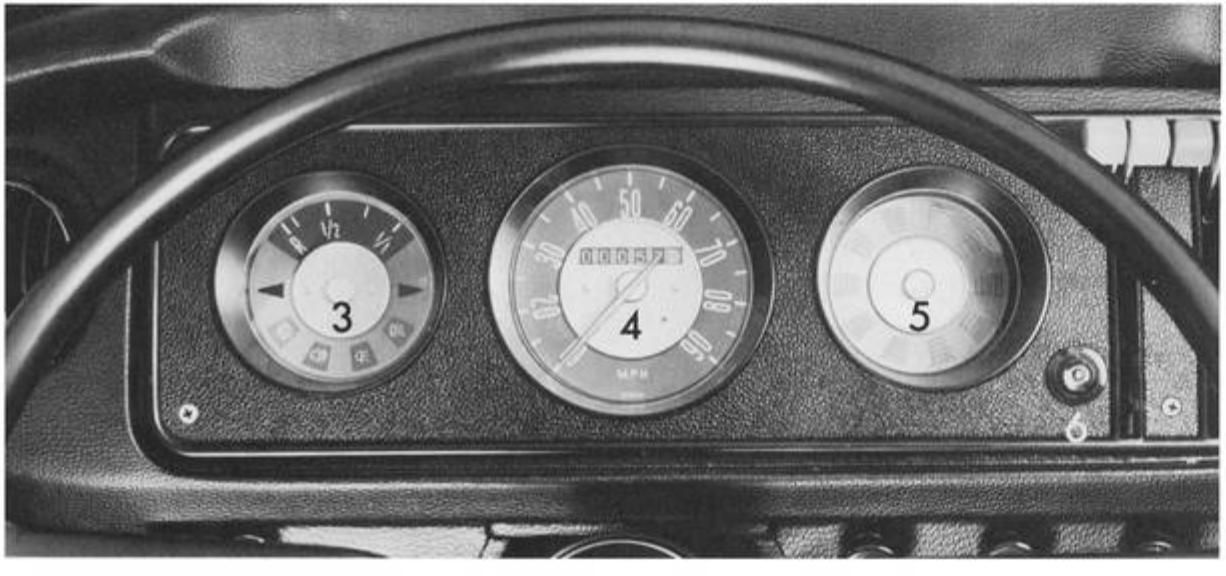
If you are just changing lanes on an expressway, slightly lift or depress the lever. When you release your hold on the lever, it will return to the OFF position.
If a turn signal is defective, the control light flashes at about twice the normal frequency. Have your Authorized VW Dealer check and repair it for you.

Headlight dimmer

Dim the headlights by pulling the lever toward the steering wheel. The blue indicator light will light up in the fuel gauge dial when the high beams are on.

4 - Speedometer dial

The speedometer indicates the speed; the odometer records the miles driven. The last digit in red indicates 1/10 of a mile.



5 - This dial can be used for installation of **an electric clock,** which is optional equipment. To set the clock, depress the knob in the center and turn.

6 - Brake warning light (B)

Your Volkswagen is equipped with a dual circuit brake system. Both circuits, one for the front brakes and one for the rear brakes, can function independently.

If the brake warning light lights up when you apply the brakes while driving, one of the two brake circuits may have failed. The other brake circuit will still operate, but a longer distance and greater pedal pressure are required to bring the car to a halt.

Pull off the road and stop

Try out the effectiveness of the brakes by carefully starting and stopping on the road shoulder.

If you judge that the brakes operate safely enough to take you to the nearest dealer, proceed cautiously and at low speed. If you do not feel safe to continue, have your car towed to the nearest dealer for repair.

Proper functioning of brake warning light

The brake warning light will light up when the ignition is turned on. It will go out after the engine has been started. This is your assurance that the brake warning system functions properly. If the brake warning light does not light up when turning on the ignition, or if it does not go out after starting, there may be a defect in the electrical system. If this is the case, contact your Authorized VW Dealer.

10 - Headlight switch

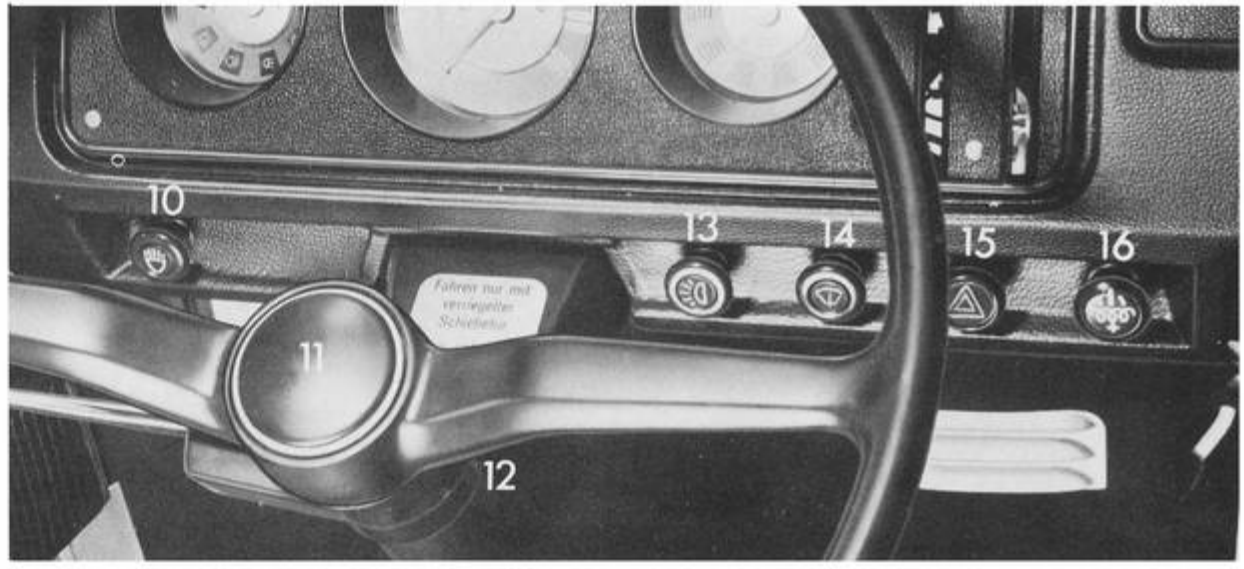
Pull the knob to the first stop to turn on the parking lights, the side marker lights, the license plate, tail and instrument lights. The green indicator light will light up on the lower right hand side of the fuel gauge dial.

Pull the knob to the second stop to turn on the headlights. The headlights only work with the ignition on.

To preserve the battery, the headlights will go out automatically when the ignition is turned off or when the engine is started.

Instrument illumination

Adjust the brightness of the instrument lights by turning the headlight switch knob.



13 - Interior light switch for rear passenger compartment

Pull out the knob to turn on the light in the rear of the passenger compartment. Make sure the lever in the light is in the ON position, i. e. lever toward the front. Lever toward the rear is the OFF position.

14 - Windshield wipers and washer

The switch for the two-speed windshield wipers and washer is combined. With the ignition on, turn the knob to operate the wiper blades. Press the center of the knob to operate the windshield washer.

To give you full battery power while starting the engine, operating windshield wipers will stop automatically at this moment.

15 - Emergency flasher switch

If your car is disabled or parked under emergency conditions, pull the switch to make all four turn signals flash simultaneously. The warning light in the switch knob flashes, too.

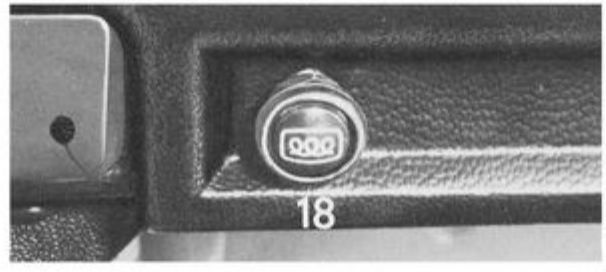
Move the car well off the roadway when stalled or stopped for repairs.

18 - Rear window defogger

Turn ignition on first.

Pull out the knob to activate the rear window defogger.

The green control lamp in the knob will light up to remind you that the defogger is switched on.



To give you full battery power while starting the engine, operating rear window defogger will turn off automatically at this moment.

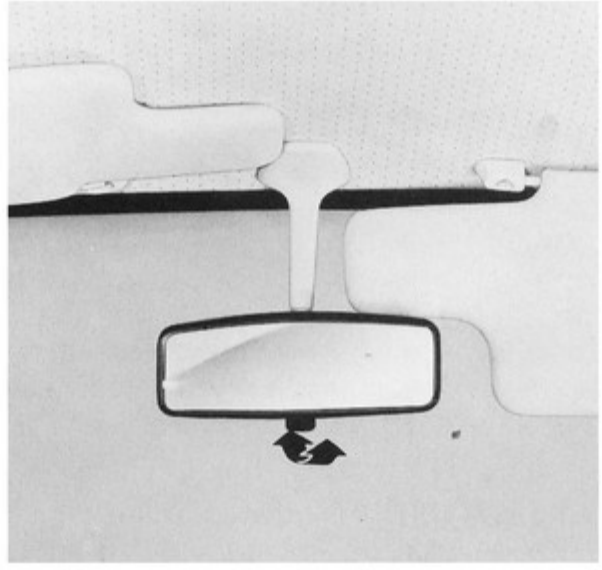
The rear window defogger will help to keep the inside of the rear window clear of condensation and frost in the winter.

Be careful when removing objects from the luggage compartment behind the rear seat. Sharp edges may damage the defogger in the rear window.

After the rear window has been cleared, switch the rear window defogger off to avoid an unnecessary drain on the battery.

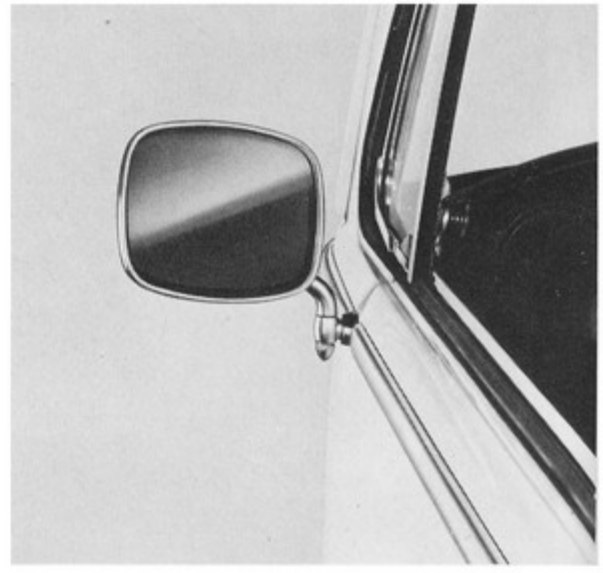
Rear view mirrors

Adjust the outside and inside mirrors before driving off. It is important for safe driving that you have good vision to the rear.



Inside day-night mirror

You can move the day-night mirror from clear daylight visibility to non-glare visibility at night by adjusting the lever upward or downward at the bottom of the mirror.



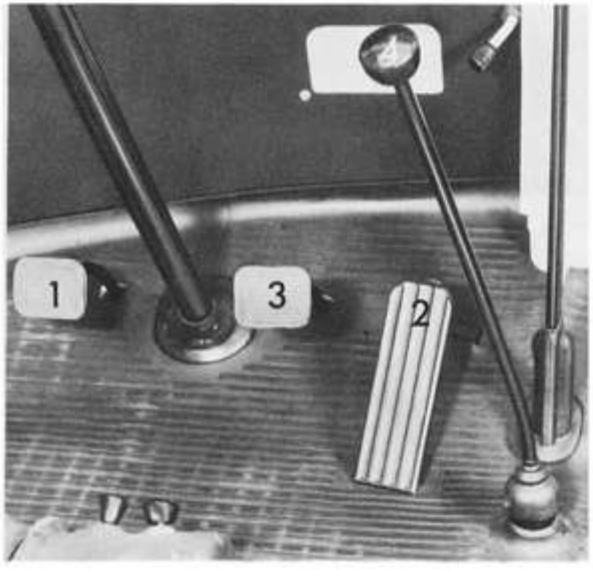
Outside mirror

The outside mirror is hinged and folds flat against the car when struck from either direction.

Controls for Manual Transmission

1 - Clutch pedal

Always depress the clutch pedal fully when changing gears. Do not hold the car on a steep hill with the clutch pedal partially depressed. This may cause premature wear or damage.



2 - Accelerator pedal

For good fuel economy we recommend smooth and even acceleration. Very fast, racy driving, alternating between full throttle and hard braking, raises the fuel consumption considerably. Also, tires and brake linings wear faster. It is more economical to drive smoothly and at a fairly constant speed.

You can drive most economically between:
10 and 23 mph in 2nd gear
15 and 35 mph in 3rd gear
30 and 50 mph in 4th gear

3 - Brake pedal

Make it a habit to check the operation of your brakes. You will remember from page 31 that the brake warning light will alert you if one brake circuit may have failed.

Make sure that the movement of the brake pedal is not obstructed by a floor mat, or any other object.

Volkswagen automobiles have excellent brakes, but they are still subject to wear... depending on how the brakes are used. If you find that the brake pedal travel has increased, have the brakes adjusted; if necessary, between the specified maintenance intervals.

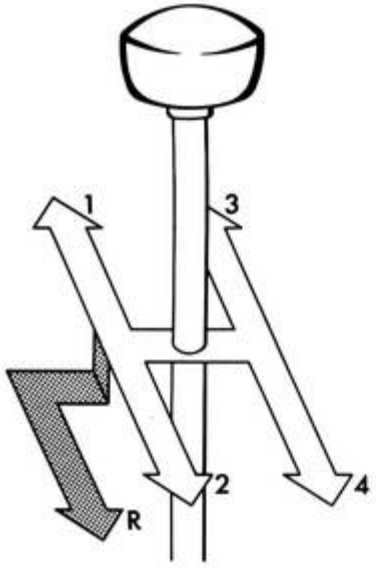
Keep in mind that the braking distance increases very rapidly as the speed increases. At 60 mph, for example, it is not twice but four times longer than at 30 mph. Tire traction is also less effective when the roads are wet and slippery. Therefore, always maintain safe distance.

Driving through deep water may reduce tire traction. Moisture on the brakes may also affect braking efficiency. Cautiously apply the brakes for a test. If you notice a lag in the braking action, the brakes may be wet. They will dry after you have applied the brakes a few times, but do it very cautiously.

Brake linings may not have the highest possible braking efficiency when new. Therefore allow for longer braking distance during the initial 100 to 150 miles. This also applies when brake shoes are renewed.

4 - Gearshift lever

Your Volkswagen has a fully synchronized transmission. The four forward gears and a reverse gear are arranged as illustrated. The shift pattern is also shown on the face of your ashtray in the dashboard.



Resting your hand on the shift lever knob while driving will cause premature wear to the transmission.

Speed ranges

You can drive your Volkswagen at full speed from the first day. You do not have a break-in schedule.

There are, however, certain recommended speed ranges for the various gears:

1st gear	0—15 mph
2nd gear	10—32 mph
3rd gear	15—52 mph
4th gear	from 30 mph up

If you have a traffic situation where it is necessary to accelerate in 2nd and 3rd gear above the recommended speed ranges, you may do so for a brief period only. A governor is installed on the engine to prevent damage from excessive engine speed (revolutions per minute).

Reverse

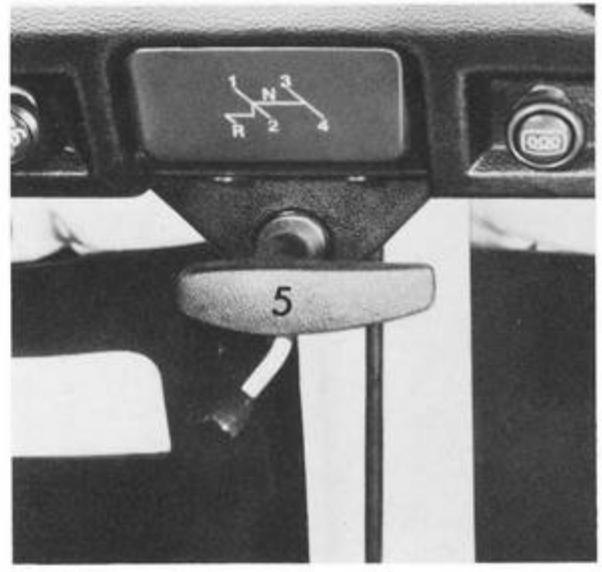
Only shift into Reverse when the car is not moving. To engage the reverse gear, press the lever down, move it to the left and pull back.

The back-up lights go on automatically when you engage the reverse gear (with the ignition on).

5 - Parking brake

To set the parking brake, pull out the handle. To release the parking brake, first slightly pull the handle as you turn it to the right. Then push it all the way in. **Be sure the parking brake is fully released.** A partially engaged parking brake promotes wear of the brake lining.

Do not remove the key from the steering lock while the car is rolling to a stop. The steering column is locked as soon as you remove the key. Take out the key only after the car is parked.



Always set the parking brake when parking your car. On steep hils also turn the wheels toward the curb.

Starting hints

Fasten safety belts!

Never start or let the engine run in an enclosed unventilated area. Exhaust fumes from the engine contain carbon monoxide which is colorless and odorless. Carbon monoxide, however, is a very harmful gas, and can be fatal when inhaled.

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

As soon as the engine starts, release the ignition key.

If the engine does not start the first time or stalls, turn the ignition key all the way to the left and restart.

Operate the starter for a few seconds only.

Summer starting

Operate the starter while slowly depressing the accelerator pedal.

Winter starting

First depress the accelerator pedal fully and release slowly to activate the automatic choke. Then start the engine.

Depress the clutch pedal when starting so that the starter only has to crank the engine.

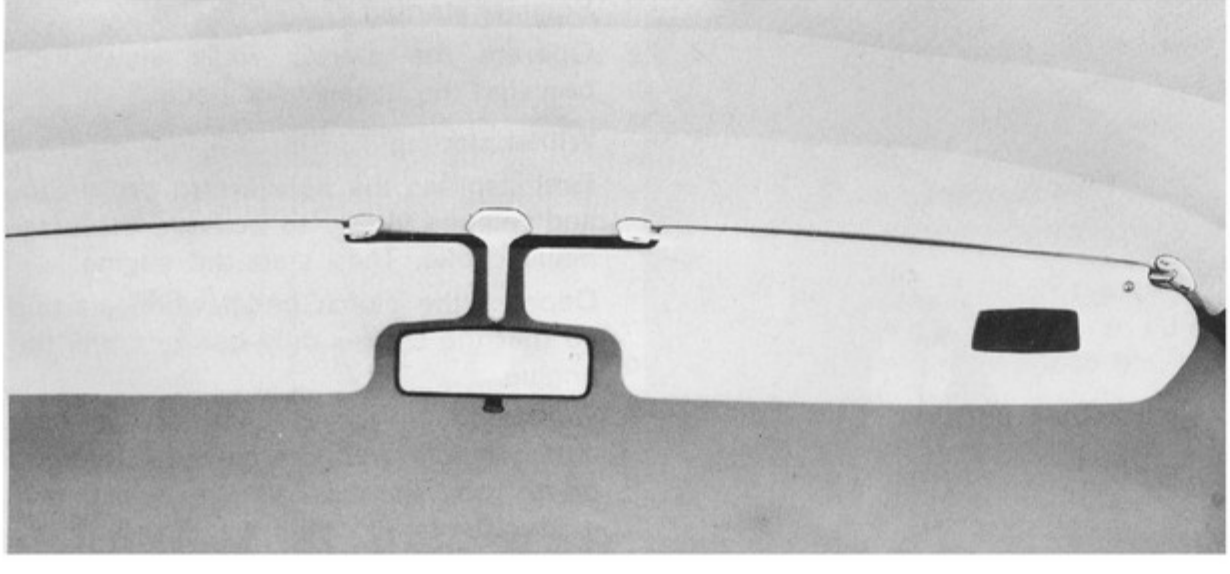
Do not try to warm up the engine by letting it idle with the car stationary . . . drive off immediately and maintain moderate speed until the engine is warm.

Starting the engine at operating temperature

Before operating the starter, depress the accelerator pedal fully . . . **do not release it.** How start.

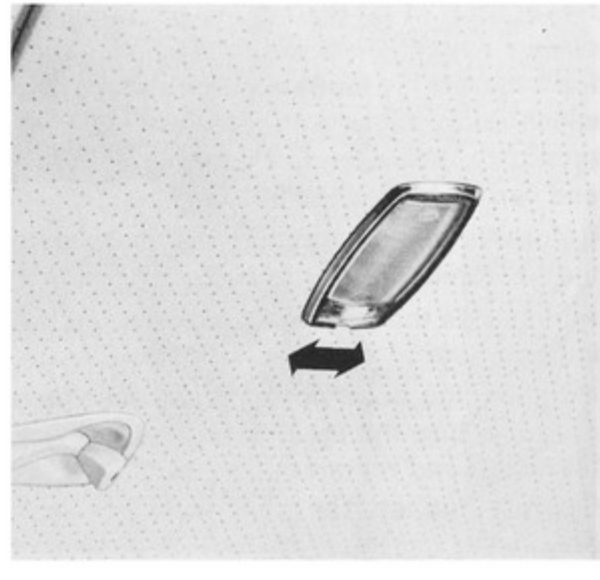
Sun visors

You can move the driver's sun visor toward the side by lifting it out of its center mounting.



A vanity mirror is on the back of the sun visor on the passenger's side.

Front interior light



Front interior light

The switch positions are:

Front — ON (with doors open)
Center — OFF
Rear — ON (with doors closed)

Coat hooks/Assist handles

For your convenience, there are altogether 5 coat hooks on the door posts.

Hang clothes in such a way that they do not impair the driver's vision.

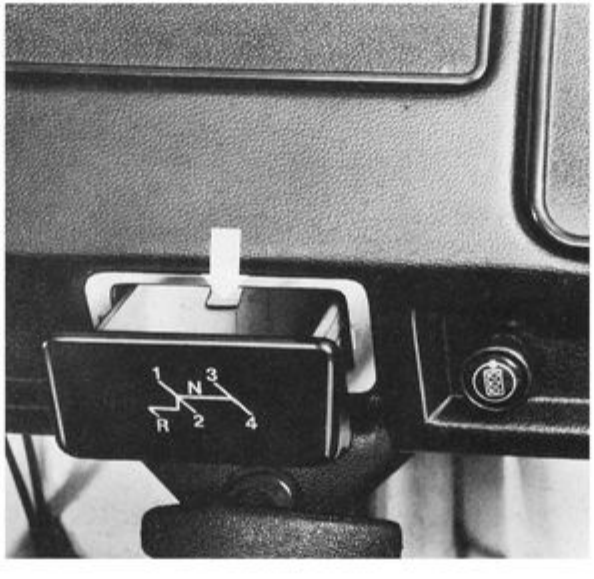
For easier entrance and exit of passengers, we provided 5 assist handles:

1 on the dashboard for the front passenger seat, and

4 in the rear passenger compartment.

Ashtrays

You will find one ashtray in the front on the instrument panel and two in the rear passenger compartment.



Front Ashtray

Pull to open it. You can remove the ashtray by depressing the leaf spring and pulling the tray out.

To put it back in, depress the leaf spring, insert the tray in the guide rails and push in with the heel of your hand.

Ashtrays in the rear passenger compartment

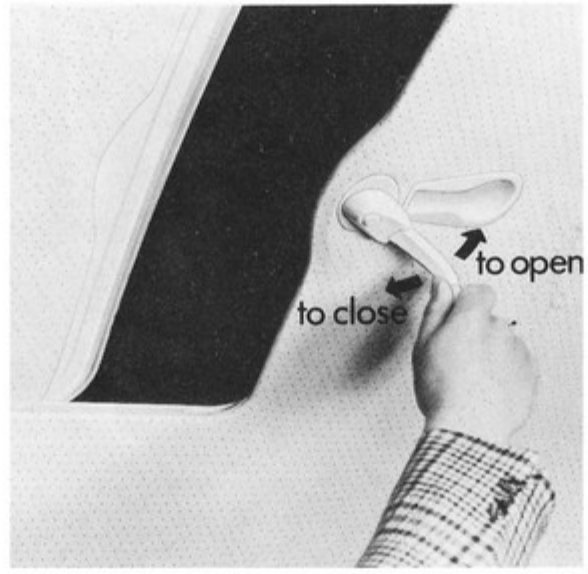
To empty the ashtray, open it first, depress the leaf spring and pull the tray out.

To put the tray back in again, insert the lower edge first, depress the leaf spring and push the tray in.

Sliding roof
(optional equipment)

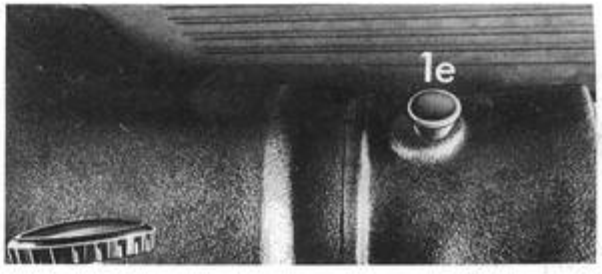
To open the sliding roof, pull the handle out and turn it counterclockwise; to close the sliding roof, turn the handle clockwise. You can lock the sliding roof in an open position by folding the handle into its recess.

For safety reasons, make sure the handle is always recessed as shown in the right illustration.



Heater/defroster (1)

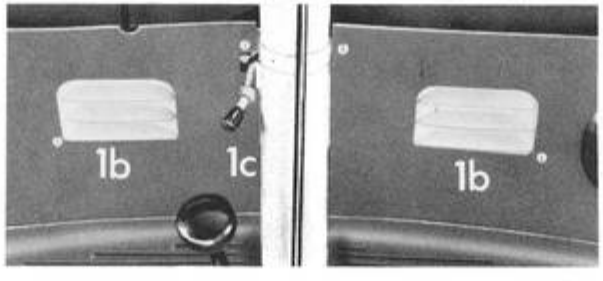
A fresh air heater/defroster is standard equipment on your Volkswagen. With the two red levers you can adjust the flow of warm air separately for each side.



The left red lever also activates an electric fan in the engine compartment. The fan increases the flow of warm air when driving at low speeds and also supplies warm air when the car is standing still.

Lever up — heat off
Lever down — heat on fully

By setting the levers at any intermediate position, you can select the degree of heat that is most comfortable for you. After a reasonable warm-up time, which also depends on the speed of the car, warm air will enter the vehicle through the two warm air vents — 1 a — at the lower edge of the windshield and the two heat outlets in the front leg area.



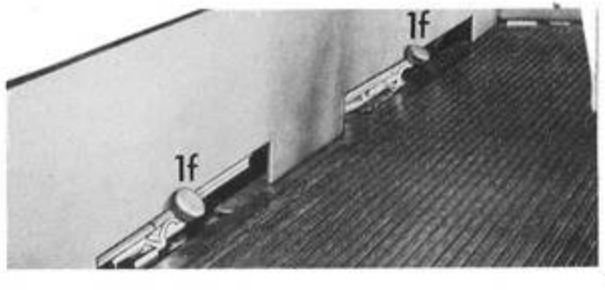
Heat outlets for the front leg area

There is a heat outlet (1 b) for each side of the leg area. The outlets are located underneath the dashboard. You can control the flow of warm air from these outlets to the front leg area with the lever (1 c) in the center of the front panel.

Lever down — No heat in front leg area.
Lever up — Heat in front leg area.

Heat outlets in the rear passenger compartment

The warm air outlets — 1 d — for the **center seats** are on the floor in front of the seats. To open the outlets, pull out the knob — 1 e — at the front right-hand side of the driver's seat.



The two warm air outlets for the **rear seats** are at the bottom of the seats. To open the outlets, move the levers — 1 f — in the outlets inboard.

Hints for defogging and defrosting

Defogging and defrosting of your windshield will be more effective if you direct the total air flow toward the front.

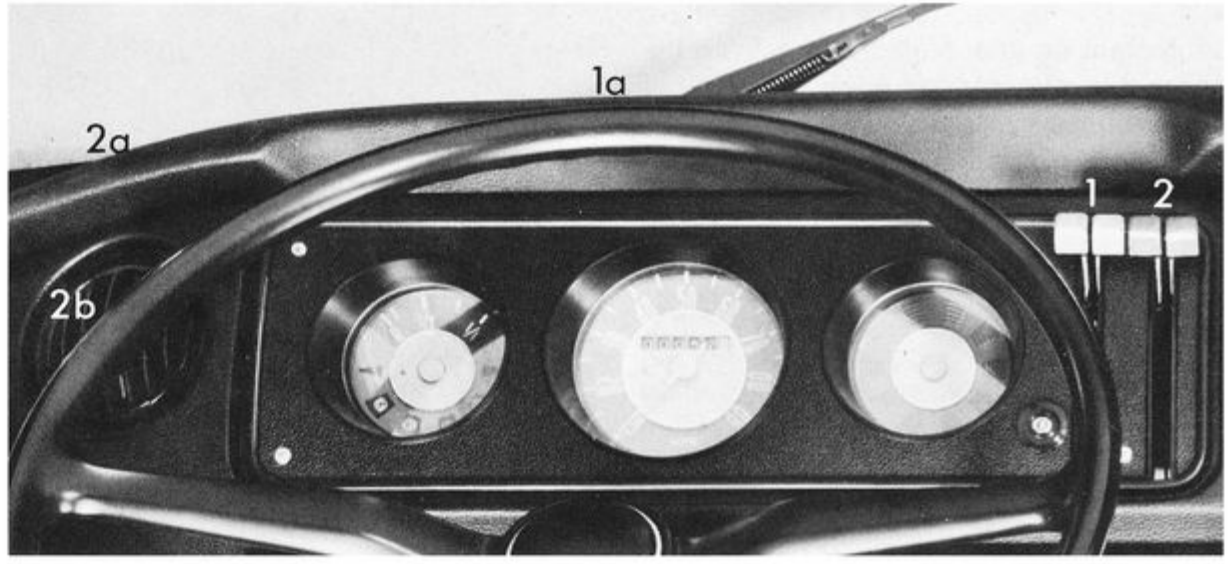
Here is what you do:

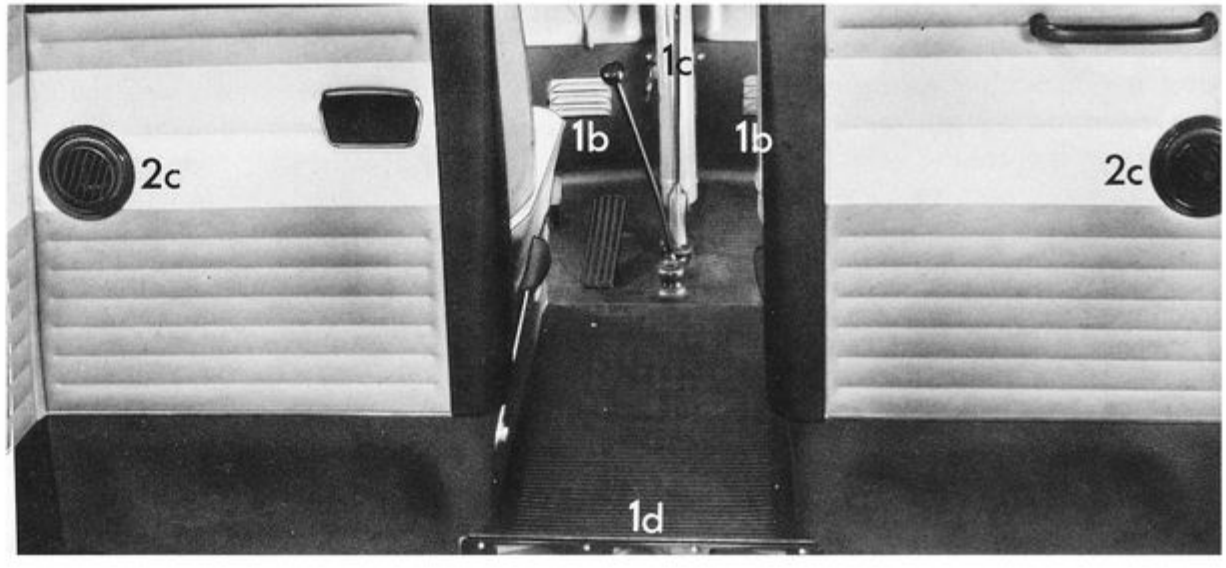
Red levers — 1 — on dashboard all the way down — heater is on

Lever — 1 c — underneath dashboard all the way down — no heat to the front leg area

Heat distribution knob — 1 e — on the right side of drivers's seat pushed in and lever — 1 f — in outlets under rear seats moved outboard — no heat in the rear passenger compartment

Now all air is directed toward the windshield.





Ventilation (2)

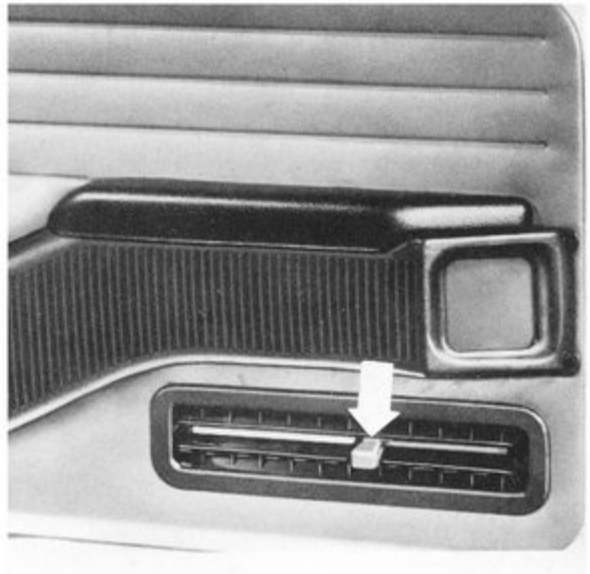
The fresh air circulation system provides a continuous draft-free exchange of air while driving.

With the two blue levers on the dashboard you can regulate the flow of fresh air separately for each side.

Levers up — ventilation off
Levers down — ventilation on

Fresh air enters through two vents — 2 a — below the windshield and two round discharge vents — 2 b — on the sides of the dashboard. You can regulate the flow of fresh air from the round discharge vents in any direction by turning them. You can open and close these vents by adjusting the flap in the vents.

Two additional discharge vents — 2 c — are located on the partition between the driver's cab and the rear passenger compartment. They are individually adjustable and provide fresh air ventilation toward the rear.



Air that enters the interior of the car via the fresh air circulation system is drawn out through openings in the front door frames. The air flow can be regulated by levers in the inside panel of the front doors.

VW Air Conditioner (optional equipment)

Operating Controls

1 - Air volume switch ("AIR")

This switch serves two functions. It turns the air conditioning system on and off and controls the fan speed. The fan positions are:

1st position — HIGH
2nd position — MEDIUM
3rd position — LOW

2 - Air temperature switch ("COLDER")

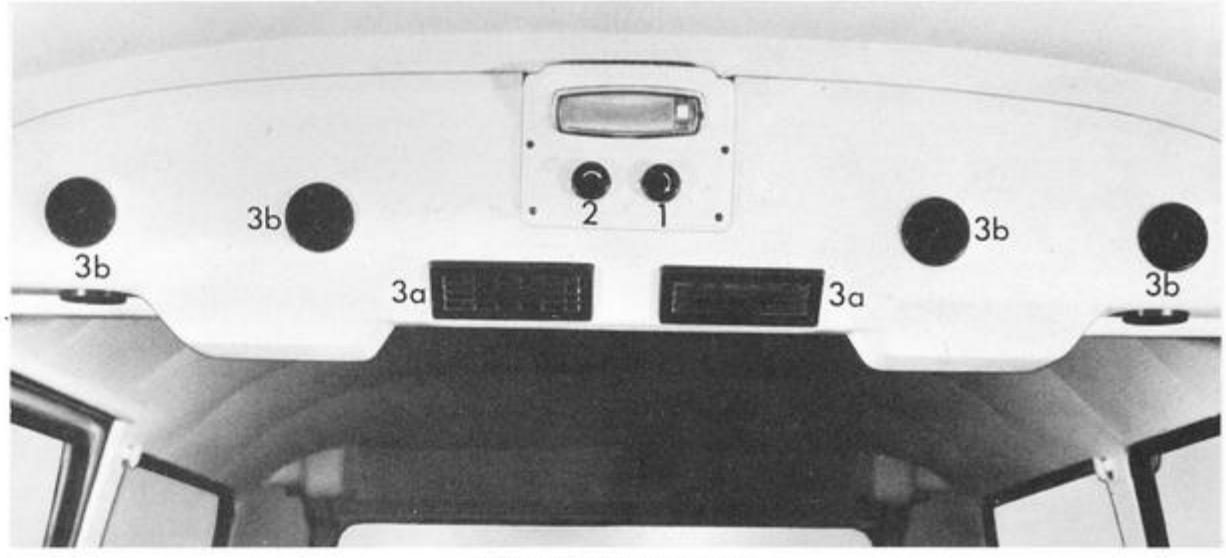
By progressively turning this switch to the right, the desired cooling range can be selected. It is in the coldest position when turned as far as possible to the right.

3 - Air discharge louvers

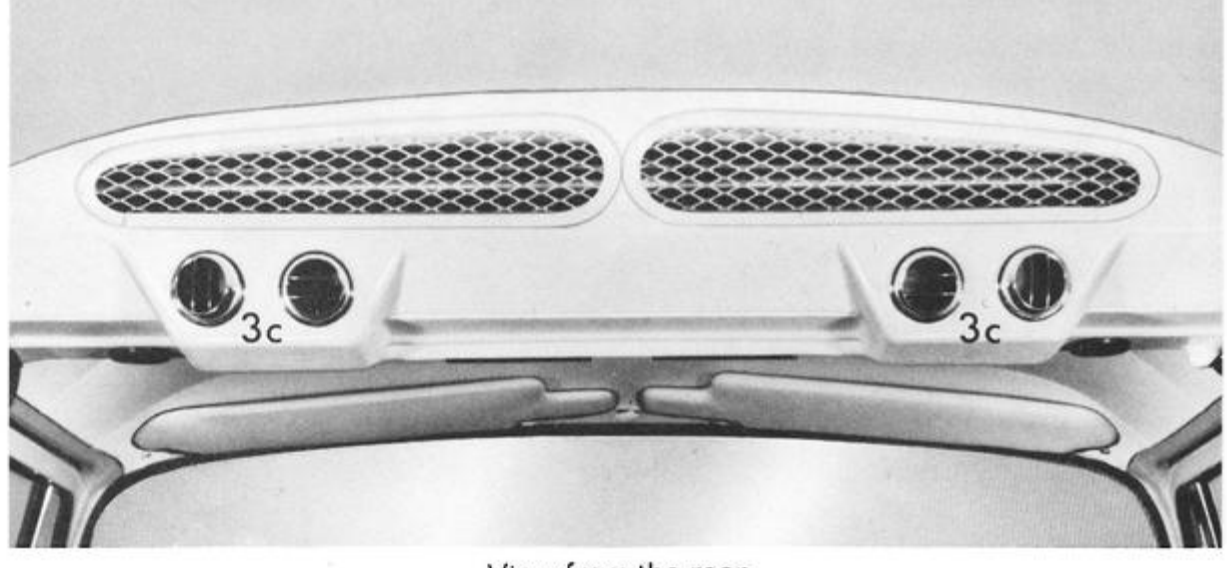
The two rectangular louvers (3a) can be adjusted by moving the vanes up, down or sideways to direct the air flow for the front seats in the desired direction.

The six round louvers (3b) are adjustable by turning them clockwise or counter-clockwise.

The four ball type outlets (3c) can be rotated in their sockets to any position to direct cool air into the passenger compartment as desired.



View from the front



View from the rear

Starting the Air Conditioner

We recommend you do not start the engine with the air conditioner on, as this substantially increases the load on the battery.

With the engine running, windows and fresh air ventilation turned off, turn the air temperature switch to the desired position and select the air volume speed desired. On extremely hot days turn the air volume to full capacity and open a window. Within a few minutes, the hot air will be forced out of the car and the window can be rolled up as cooling starts.

Adjust the air discharge louvers to the desired position.

Stopping the Air Conditioner

Turning the air volume switch to the "OFF" position stops the entire air conditioning system.

When shutting off the engine, the air conditioner should also be turned off and not turned on again until the engine is running. This is to reduce the load on the electrical system and conserve the battery.

Operational hints

For best overall comfort do not aim the air flow directly at a person, but allow the cooling air to circulate throughout the vehicle. Avoid pointing the round ball type outlets towards the ceiling. In this position the cooling air might be drawn back into the unit without cooling the car.

If the volume of cold air suddenly decreases it is likely that the evaporator coil is "icing up". To remedy this turn the air temperature switch to the left and leave in this position until the air volume is back to its original rate.

If the car interior becomes too cold after adjusting the air volume, turn the air temperature switch to the left until the desired comfort level is reached.

If the windows fog over on the **exterior** on warm, humid days, turn the air temperature switch to the left until the windows clear up, or turn the windshield wipers on.

If the windows fog over on the **interior,** they can be quickly cleared by turning on the air conditioner.

During highway driving, set the air temperature switch in approximately the middle position.

Maintenance hints

During the winter season, it is advisable to operate the Air Conditioner for a brief moment every week. This will help to keep the seals and fittings properly lubricated.

After the winter months and before extended summer usage, the air conditioner should be checked and, if necessary, serviced by an Authorized VW Dealer.

The condenser, located underneath the vehicle between the frame side members, should be checked periodically for cleanliness. If clogging in any area exists, wash condenser with water.

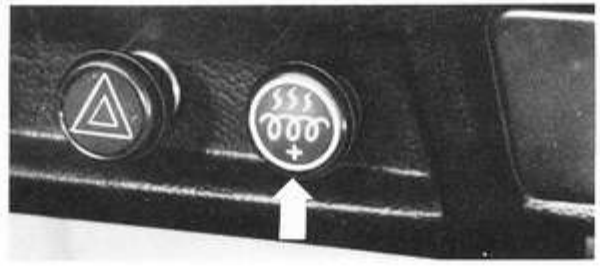
If the condenser is bent, the car should be taken to an Authorized VW Dealer for straightening of the condenser fins.

An air-conditioned Volkswagen should only be raised on a lift that provides adequate clearance to prevent damage to the condenser.

Circuit breaker

An automatic resetting circuit breaker for the current supply of the air conditioning system is located in the engine compartment. It is connected directly to the battery.

VW Auxiliary Heater
(optional equipment)



The Auxiliary Heater must be turned off when filling the tank.

To turn the heater off, turn the heater switch on the dashboard to the left. The control light in the switch then goes out. The blower motor continues to run until the heater has cooled down.

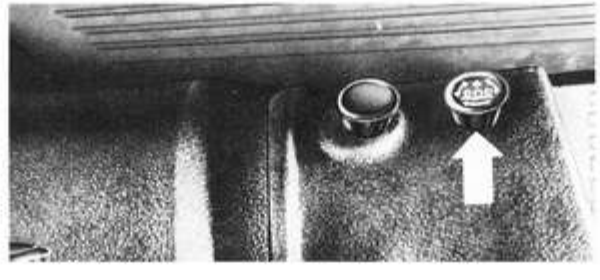
The auxiliary heater can be started without turning on the engine. However, when it is very cold we recommend you start the engine first as the full battery capacity is required for starting the engine under cold climatic conditions.

To turn the heater on, turn the green heater switch on the dashboard slightly to the right.

There is a **timer** in the heater switch, which gives you the possibility to **preheat the vehicle interior** for a set period of time before starting the engine.

Do not start or let the engine or heater run in an enclosed, unventilated area to warm up the car. Exhaust fumes from the engine or gasoline heater contain carbon monoxide, which is colorless and odorless. Carbon monoxide, however, is a very harmful gas, and may be fatal when inhaled.

There is a knob on the front right hand side under the driver's seat. With this knob you regulate the temperature. Pull it out all the way or to an intermediate position to set the desired heat range. A control light in the heater switch on the dashboard will light up as soon as the auxiliary heater starts operating.



To set the timer, turn the heater switch further to the right. The maximum sweep of the timer constitutes about 25 to 30 minutes of heater operation. You can, of course, set the timer at any desired intermediate position.

As soon as the timing cycle is completed, the heater will shut itself off. If you start the engine before the timing cycle is completed, the heater will continue working, and can then be turned off manually, whenever desired.

The heater will stop working whenever the engine stalls or is turned off. Turn the heater off before restarting the engine.

The heater normally requires no special maintenance. It is advisable, however, to have the heater plug and spark plug checked once a year before the cold weather sets in and new plugs installed if necessary. The fuel system should also be checked for cleanliness and the electrical connections for tightness.

During the winter and when driving over very poor roads, mud or snow may tend to accumulate in the exhaust and combustion air intake pipes. Have these pipes checked for blockage from time to time so that the heater can continue to work properly. When the heater is not used for long periods, for instance, during the summer, gum-like deposits from the fuel can settle in the fuel lines. To avoid trouble due to these deposits, it is advisable to operate the heater briefly about once a month when it is not in regular use.

Heat output can be regulated from
4320—16000 BTU/h

Air temperature can be regulated from
104°—275° F

Fuel
Gasoline from fuel tank

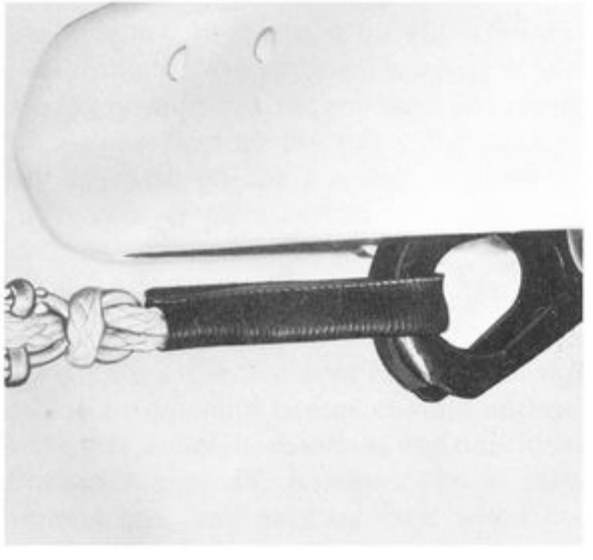
Fuel consumption
0.35—1.1 pints/h (0.3—1.0 Imp. pt./h)

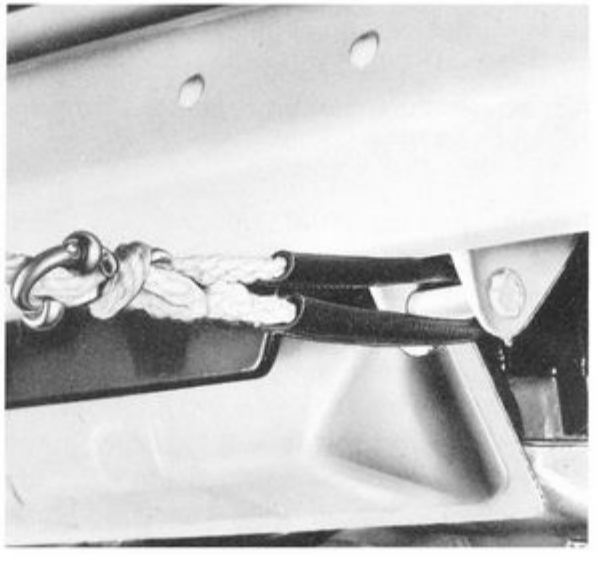
Current consumption
50 watts

Towing and trailer hauling

We provided your Volkswagen with two towing eyes, one at the front and one at the rear. They are for emergency towing over short distances only.

Always observe state laws and municipal ordinances governing towing.





When you tow your VW with the engine not running, the brake booster does not assist the braking force. To get the full braking effect, the driver must apply more force to the brake pedal.

When towing your VW place the gearshift lever in Neutral. Turn on the ignition to be able to operate headlights, indicator lights and stop lights. Be sure to release the parking brake.

Please remember that these towing eyes are not designed for towing by tow trucks. Also, never have your VW towed by the bumper.

The driver of the towing car must be very careful when driving off and shifting to avoid sudden and abrupt pulls. The driver of the car which is being towed must always keep the tow rope taut.

Trailer hauling

It is possible to tow a trailer with your Volkswagen. Always shift to a lower gear when driving up or down steep hills with this extra load. The total weight of a trailer (without brakes) should not exceed 1100 lbs. The trailer tongue load should be 55 to 90 lbs.

Distribute load in the trailer evenly. And remember: the additional trailer weight affects the braking of your car so that a longer distance is needed to bring the car and trailer to a stop. Test the brakes before starting out on a trip with a trailer.

Winter operation

Battery

During the winter months, the battery is subjected to greater use than in the summer months. More current is consumed when starting at very low temperatures. Lights and the rear window defogger are used more often. Besides, the battery tends to decrease in capacity as the temperature drops.

Therefore, it is very important to keep your battery in best possible condition. See also "Battery" on page 62.

Do not expose battery to open flame or electric spark as hydrogen gas generated by the battery is explosive. Do not let battery acid come in contact with skin, eyes, fabric or painted surfaces.

A really cold battery may not be fully charged, and therefore does not have the same capacity as a battery at normal temperature. If you mainly drive short distances or in city traffic, have the battery checked and, if necessary charged between regular inspections.

Emergency equipment

It is good planning to carry emergency equipment in your car. Some of the things you should have are: window scraper, snow brush, container or bag of sand or salt, flares, small shovel, first-aid kit, etc.

Door locks

can freeze in the winter if water gets into them. When washing your car in the winter, do not aim the water jet directly at the locks. It is a good idea to put tape over the keyholes to prevent the water from seeping in. Water in the locks must be removed with compressed air afterwards. Squirt lock de-icer, anti-freeze, or glycerine into the lock cylinders to prevent the locks from freezing.

To open a frozen lock, warm up the key before inserting it. It might also help to warm the lock. Do not use hot water as it will later freeze in the lock.

Windshield washer

Add anti-freeze to the washer fluid, such as Volkswagen's windshield Washer Anti-Freeze and Solvent, to prevent it from freezing. Follow the instructions on the can for the right amount to be used.

Engine oil

To make starting easier during the cold winter months, we suggest you choose a thinner grade motor oil. Turn to page 80 for the recommended oil grades.

If you drive mostly short distances and in city traffic, we recommend you have your engine oil changed at 1500-mile intervals in the winter.

Transmission oil

SAE 90 grade transmission oil can generally be used all year round. Only in areas with a cold climate is it necessary to use the thinner SAE 80 transmission oil during the winter months.

In arctic climate and areas with temperatures consistently below -13° F, use Automatic Transmission Fluid (ATF) for the manual transmission and final drive. When the temperature rises, replace the ATF with SAE 80 or SAE 90 grade transmission oil. See also page 81.

Spark plugs

Make sure the spark plugs are not worn or have a gap larger than .028 inch.

Tires

Your Volkswagen is equipped with tubeless radial ply tires. Size 185 SR 14 reinforced Volkswagen tires conform to all applicable U. S. Federal Motor Vehicle Safety Standards.

For maximum safety, always buy replacement tires that show the same specifications with regard to tire size, load carrying capacity, tread pattern, etc. This also applies to VW-recommended alternate replacement tires.

Tire pressures

For good car handling and long service life, it is important to maintain recommended tire pressures. Tires which are inflated above or below specifications can cause increased tire wear, increased gas consumption and affect the road holding of the car.

VW-recommended cold tire inflation pressures are listed on a sticker behind the driver's seat.

They are:

	Station Wagon Campmobile	Delivery Van, Kombi
front —	30 psi (2.1 kg/cm²)	30 psi (2.1 kg/cm²)
rear — **with ¾ payload**	34 psi (2.4 kg/cm²)	37 psi (2.6 kg/cm²)
Fully loaded	40 psi (2.8 kg/cm²)	40 psi (2.8 kg/cm²)

Do not exceed the maximum tire inflation pressure listed on the tire label.

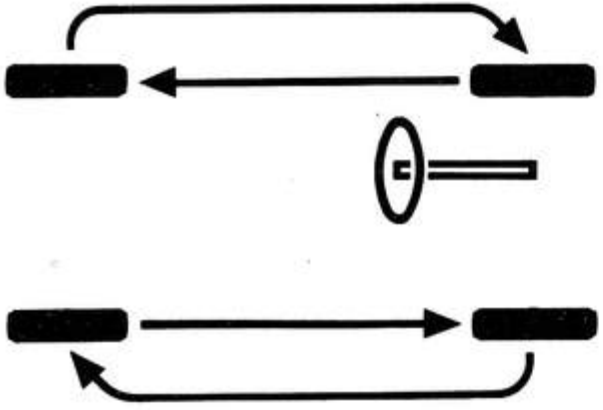
In the interest of safety, check the tire pressure of all tires, including the spare tire, at least once a week, and always before going on a long trip.

Spare tire pressure

The pressure of the spare tire should be 40 psi (2.8 kg/cm²).

Tire rotation

If uneven tire wear should occur, we recommend that the tires be rotated as shown in the sketch below. Afterwards, the tire pressures must be corrected, and the wheel nuts torqued diagonally to 101 ft. lbs.



Wheel balancing

A wheel should always be balanced after a tire repair. Also, since regular use can cause tire imbalance, the wheels should be balanced from time to time. Unbalanced wheels may affect car handling and tire life.

Tire wear

The original equipment tires on your VW have built-in tread wear indicators. They are molded into the bottom of the tread grooves and will appear as approximately ½ inch bands when the tire tread depth becomes 1/16 of an inch. When the indicators appear in two or more adjacent grooves, it is time to replace the tires. We recommend, however, that you do not let the tires wear down to this extent. Worn tires cannot grip the road surface properly, and are even less effective on wet roads.

Do not drive with worn tires or tires showing cuts or bruises as they may lead to sudden deflation.

If you notice that tires are wearing unevenly, consult your Authorized VW Dealer. Uneven wear may not always be due to improper wheel alignment. It can be the result of individual driving habits such as cornering at high speeds if the tire pressure is not checked and adjusted regularly, abnormal tire wear can also occur.

Tire in good condition

Indicator visible — tread worn

Tire replacement

To achieve best all-around car handling, replace all 4 tires at the same time. If this is not possible, replace tires in pairs, either front or rear. Do not combine tires of different design, size or tread pattern.

New tires do not possess maximum traction. They tend to be slippery. Break new tires in by driving at moderate speed for the first 60—100 miles.

Tire care

1 - Frequently check tires for damage. Remove imbedded material.

2 - Keep oil and gasoline away from tires.

3 - Replace worn tires or studs in time.

4 - Replace missing valve dust caps as soon as possible.

Winter tires

Winter tires give good traction in snow or slush.

For a better grip on hard snow or ice, you can use snow tires with studs, but **check with your State Motor Vehicle Bureau** for possible restrictions. Winter tires with studs should be run at moderate speed when new to give the studs time to settle. Winter tires should preferably be mounted on all four wheels. They should also conform to the same load requirements as original equipment tires.

Snow tires do not fullfil their purpose if the tread depth is less than $^{5}/_{32}$" (4 mm).

For safety reasons, it is not advisable to drive with snow tires at top speeds. Snow tires do not have the same degree of traction on dry, wet or snow-free roads as regular tires.

Spare wheel

Location in rear luggage compartment

The spare wheel is stored in the rear luggage compartment. To remove it, take off the cover and loosen the strap. When putting it back in again, be sure the plastic cap is in the shown position and tighten the strap.

Location under front seat bench

In models with a front seat bench, the spare wheel is located under the front passenger's seat. To remove the spare wheel, lift the front edge of the passenger seat to unhook the backrest. Fold the backrest forward, and move the seat approximately 1 inch forward. Reposition the safety belts. Turn the seat toward the door. Take out the spare wheel from the driver's side.

(See page 21 on how to install the front passenger seat.)

Spare tire pressure

Check the tire pressure from time to time and maintain it at a maximum of 40 psi (2.8 kg/cm^2).

Whenever you have to use the spare wheel, adjust the tire pressure as specified on page 50 (see also sticker behind driver's seat).

Jack

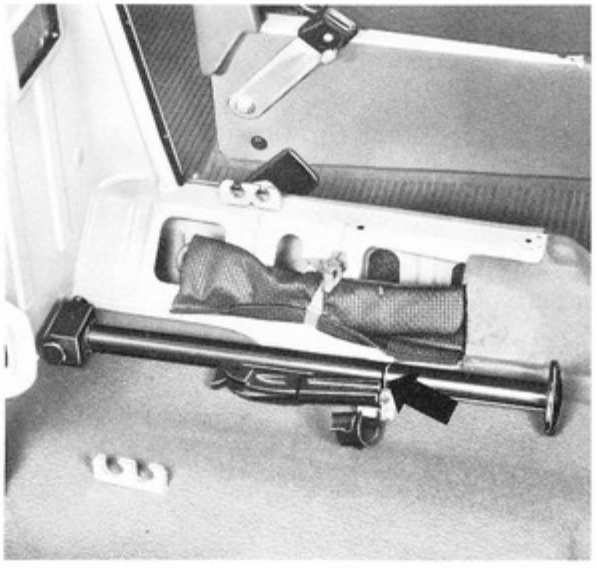
Warning

The jack is only to be used for changing a wheel. Do not use it as a support to work *underneath* the car.

The jack is located under the front passenger seat. See page 21 on how to remove and reinstall the seat.

The jack is held in stowage position with a clamp. To take out the jack, lift the clamp. Before putting the jack back in again, wind it sufficiently down. Tighten the clamp.

Breaker bar and socket wrench that are necessary to operate the jack are in the tool kit.



Changing a wheel

If you have a flat tire, **move off the roadway. Turn on the emergency flasher. In addition, mark the position of your car with flares or other warning devices to alert other motorists.**

Before you change a wheel, be sure **the ground is level and firm, especially** where the **jack ports** are.

Set the parking brake and block the wheels opposite the defective wheel on the other side of the car.

For a more efficient and safe changing of a flat tire, observe the following 10 steps.

Further down, we expand on these steps in greater detail.

Step 1 - Take out tools, jack and spare wheel.

Step 2 - Remove hub cap.

Step 3 - Loosen wheel nuts. **Do not take them off.**

Step 4 - Securely insert the jack in jack port. There are two jack ports on each side of the car body.

Never jack the car up by the bumper or the body.

Step 5 - Jack up car.

Step 6 - Change wheel and handtighten wheel nuts.

Step 7 - Lower car.

Step 8 - Further tighten the wheel nuts.

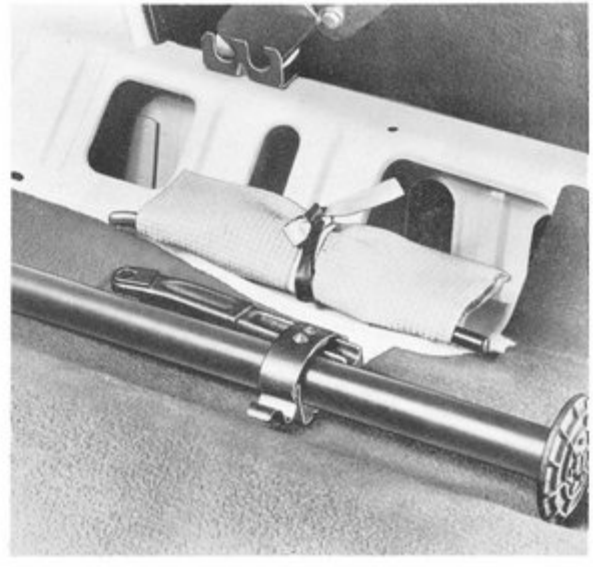
Step 9 - Replace hub cap.

Step 10 - **Important:** Torque adjustment.

Step 1

Take out your tool kit.

Take out the **jack** from under the front passenger seat. Lift the front edge of the seat to unhook the backrest and remove the seat. Lift the clamp that is holding the jack in stowage position.



Step 2

With the wheels still firmly resting on the ground, remove the hub cap of the defective wheel.

Tools with special hub cap puller

Insert the puller in the holes at the rim of the hub cap. Put the breaker bar through the puller, brace one end of the bar on the wheel rim and tug lightly on the other end.

Note

There are two types of tool kits. Your Volkswagen is equipped with either one of these kits.

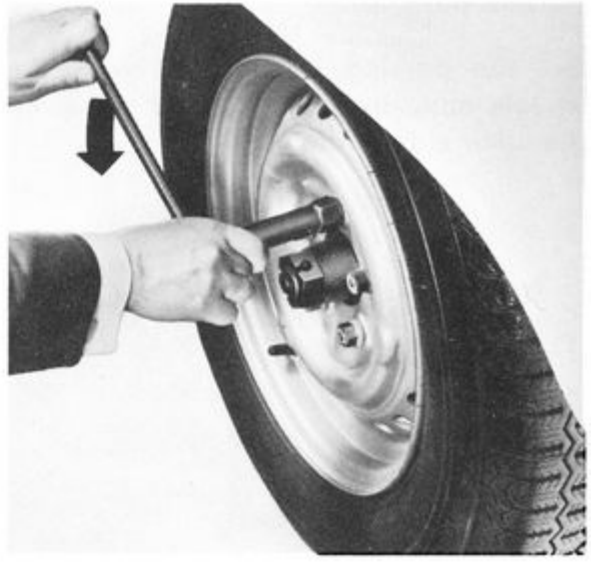
Tools with breaker bar serving as hub cap remover:

Insert the flat end of the breaker bar between hub cap and rim and pry off.

When you place the hub cap inside out you can use it as a holder for your wheel nuts.

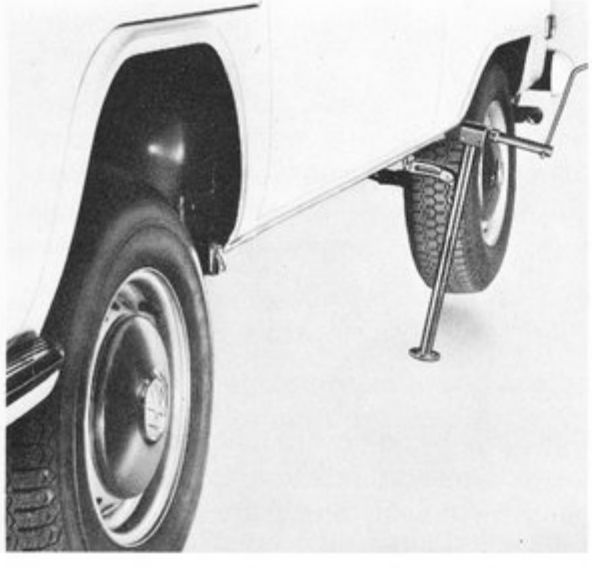
Step 3

Loosen all wheel nuts counterclockwise about one turn with the socket wrench. Insert the breaker bar to make full use of its leverage. **Do not yet remove the nuts.**



Step 4

Securely insert the jack into the jack port closest to the wheel to be changed. There are two jack ports on each side under the car body for front and rear wheel changing. **Never jack the car up by the bumper or body.**



Provide for a firm base for the jack on the ground. If necessary, use a brick, a board, a flat rock, etc. Passengers should not remain in the car when the car is jacked up.

Step 5

Do not raise the car until you are sure the jack is securely engaged.

Raise the vehicle by turning the hex drive clockwise with socket wrench and breaker bar.

Only raise the vehicle as much as is needed to change the wheel.

Step 6

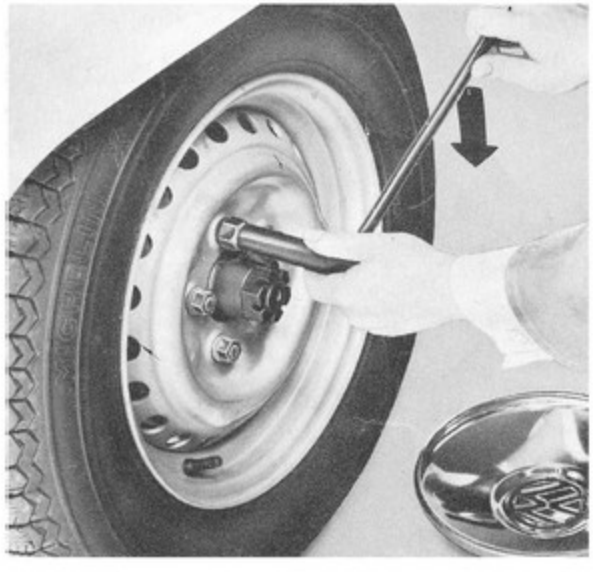
Fully unscrew the wheel nuts and place them into the hub cap. Take the nut at the top off last. Place the spare wheel against the wheel hub and slightly rotate the wheel until a bolt hole in the wheel is in line with a threaded bolt in the wheel hub. Reinstall the nuts and tighten them crosswise by hand before jacking the car down.

Step 7

To lower the vehicle, turn the hex drive counterclockwise with socket wrench and breaker bar.

Step 8

Then go crosswise from one nut to another tightening them firmly with the socket wrench and breaker bar.



Step 9

To install the hub cap, place it around the lower part of the wheel center, and with a firm blow of your hand on the upper part, the hub cap will snap into place. Make sure it is properly seated.

Step 10

Correct tightness of the wheel nuts is important. Tighten nuts diagonally to 101 ft. lbs. Have the nuts checked by your dealer or a service station with a torque wrench.

Also correct the pressure of the tire you have just put on.

See page 54 on how to place the jack back in its stowage position under the front passenger seat, and page 21 on how to reinstall the seat.

The container for the windshield washer fluid

is located on the right under the dashboard. It has a capacity of 2.9 U.S. pints (2.5 Imp. pt.).

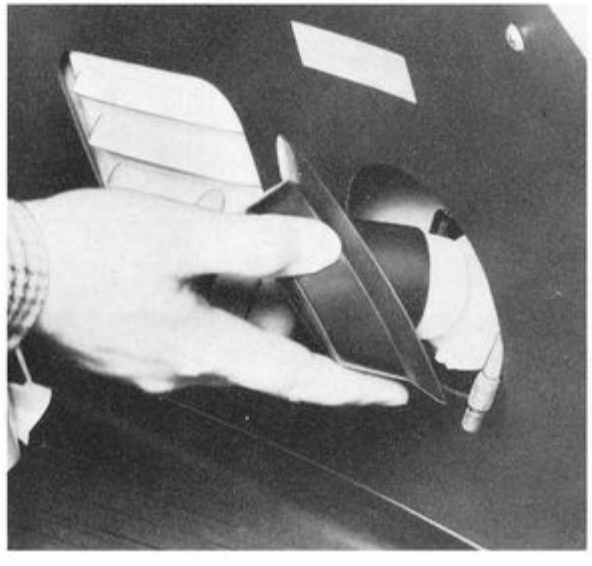
As clear water is usually not adequate for cleaning the windshield, add a cleaning solution to the water such as Volkswagen's Windshield Washer Anti-Freeze & Solvent. It is a concentrate, so follow the directions on the can for the correct amount to be used.

You can use Volkswagen's Windshield Washer Anti-Freeze & Solvent all year round. It helps to keep your windshield clean, and prevents freezing of the washer fluid in the winter.

After filling the windshield washer container, screw the cap on tightly.

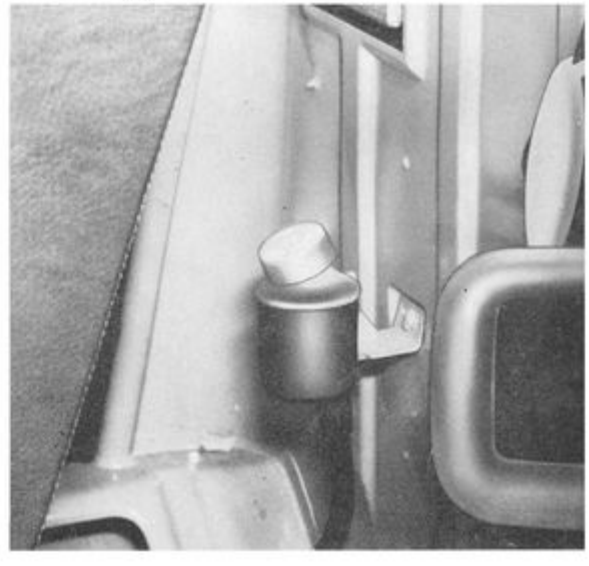
Pressurize the container up to a maximum of 42 psi (3.0 kg/cm²) by attaching the hose from the air pump to the container hose.

Place plastic cover over container cap.



The brake fluid reservoir

is located behind the driver's seat.
To check the brake fluid level slide the seat to the front.
The brake fluid should always be above the seam edge near the top of the reservoir. If it drops below this point, the cause should be corrected by your Authorized Volkswagen Dealer.



Every 2 years, the brake fluid has to be replaced. See "Additional Services Record" on pages 103 and 105.

Only **new, unused** brake fluid that meets the SAE recommendation J 1703 must be used.

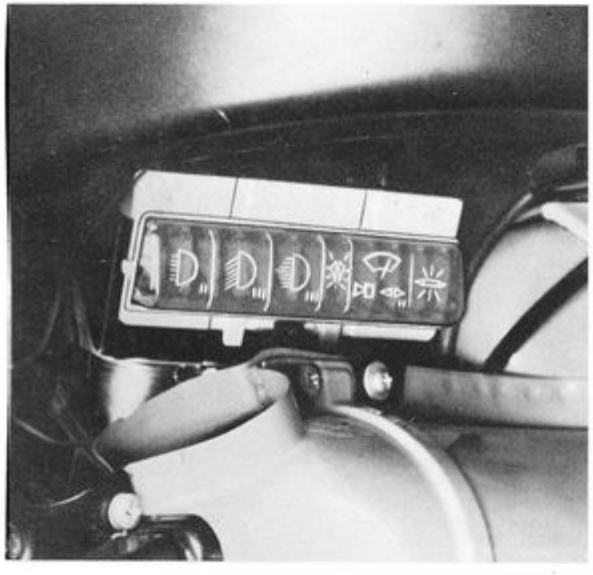
Fuses

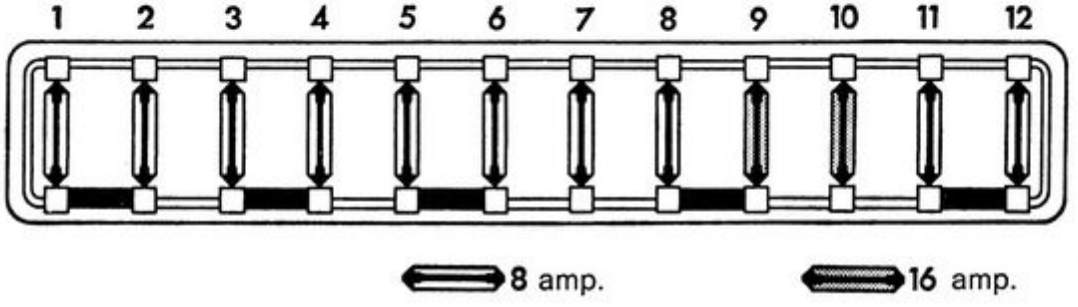
The 12-point fuse box with plug-in arrangement for relays is located on the left under the instrument panel.

The embossed symbols on the transparent cover identify the main fuses.

When a fuse is blown, it is not sufficient to merely replace it. The cause of the short circuit or overload must be found.

On no account should fuses be patched up with tin foil or wire as this may cause serious damage elsewhere in the electrical circuit. It is advisable to always carry a few spare 8 amp. and 16 amp. fuses in your car.





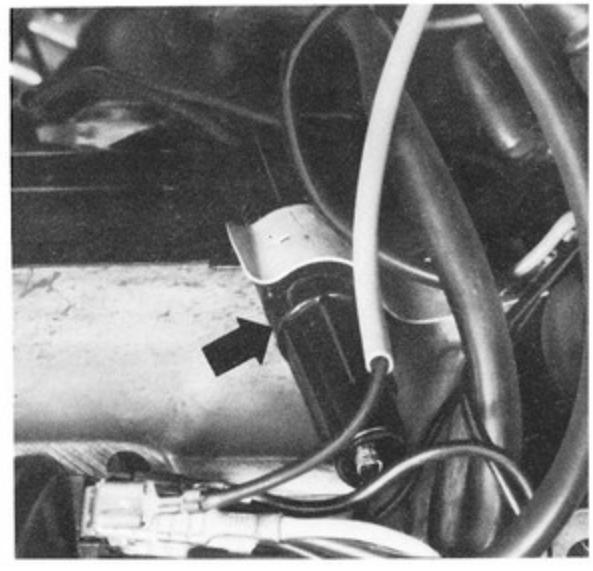
There are ten 8 amp. fuses (white) and two 16 amp. fuses (red). No. 9 and No. 10 are the two 16 amp. fuses.

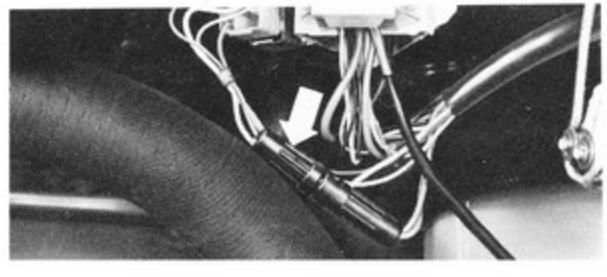
1 Tail light left, side marker light left
2 Parking lights, side marker light right, license plate light, tail light right
3 Low beam right
4 Low beam left
5 High beam right
6 High beam left, high beam indicator light
7 —
8 Emergency flasher, interior light at front
9 Interior light at rear, buzzer alarm, Auxiliary heater *) (switch current)
10 Windshield wipers, rear window defogger, Auxiliary heater *) (switch current)
11 Turn signals, warning lamps for alternator, oil pressure, fuel gauge
12 Horn, stop lights, brake warning light

*) optional equipment

Additional fuses

Electrical equipment	Fuse	Location of fuse holder
Back-up lights	8 amp.	in the engine compartment on a support near the ignition coil (arrow)
Auxiliary heater *)	16 amp.	in the engine compartment near the heater
Warm air blower	16 amp.	in the upper right of the engine compartment near the plug (white arrow)





Battery

The electrical system and the ability of the engine to start readily depends to a great extent on the battery. Therefore, the battery should be checked regularly and kept in good working condition.

The battery is located in the engine compartment on the right hand side and should be taken out for checking and maintenance purposes.

To **remove** the battery, first disconnect the battery ground strap and then the terminal from the positive post. Remove the front clamp. **Be sure the battery filler caps are in place** before taking the battery out.

Do not expose the battery to an open flame or electric spark. Hydrogen gas generated by the battery is explosive. Do not let battery acid come in contact with skin, eyes, fabric, or painted surfaces. Keep the battery out of reach of children.

Each filler plug has to be unscrewed to check the fluid level in each cell. If it is **below** the indicator, top it up with distilled water. **Only fill up to indicator.**

How often the battery has to be topped up depends mainly on operating conditions and on the time of year. As a general rule, the battery electrolyte level must be checked more often in the summer than in the winter, and more often when driving long distances.

Before **reinstalling** the battery, clean all terminals and connections. Remove corrosion. Put the battery in its stowage position and tighten the clamp firmly. Reconnect the positive cable first, and then the ground strap. Grease the terminals and battery post well with silicon spray or petroleum jelly. Keep the ground connection free of corrosion and tight.

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

Before having a quick-charge performed on a battery installed in a car, **disconnect both terminals to avoid serious damage to the electronic components of the electrical equipment.**

If you have not used your car for an extended period of time, have the battery recharged.

Fuel supply

The engine requires "Regular" gasoline with a minimum octane rating of 91 (RON). In the interest of cleaner air, the VW-engin is designed to run also on low-lead or lead-free gasoline. If regular fuels with adequate anti-knock qualities are not available, premium fuels should be used or mixed with the regular fuel.

When traveling outside the United States or Canada, regular gasolines may have a considerably lower octane rating. Therefore, make sure the gasoline that you are using does not have an octane rating lower than 91.

Never start or let the engine run in an enclosed unventilated area. Exhaust fumes from the engine contain carbon monoxide which is colorless and odorless. Carbon monoxide, however, is a very harmful gas, and can be fatal when inhaled.

The Auxiliary Heater (optional equipment) must be turned off when filling the tank.

The flap for the filler neck is located above the right rear wheel.

The fuel tank has a capacity of 15.9 US gallons (60 liters or 13.2 Imp. gal.).

Cleaning your VW

The paint on your VW is very durable, and so is the upholstery. But a car can get a lot of abuse from industrial fumes and corrosive road salt to half-eaten lollipops and muddy dog feet.

A well-cared-for VW can look like new 10 years later. It all depends on the owner and the amount of care he is willing to

Here are a few hints on how to keep your VW looking young and beautiful. We have also compiled a list of cleaning products. They are available at any VW dealer.

Whenever using VW-recommended products or other cleaning agents, **follow the directions on the containers. Be aware of warning or caution labels.**

Application	Volkswagen Product
Car wash and liquid wax	Car Wash and Wax — ZVW 243 201
Paint preservative	Paint Preservative and Wax — 000 096 011
Paint waxing	Classic Car Wax — ZVW 246 101
Paint polishing and paint waxing	Combination Car Cleaner and Wax — ZVW 241 109
Paint polishing, remove paint oxidation	Paint Polish — 000 096 001
Preservation of chrome parts	Chrome Preservative — 000 096 067
Paint touch-up	Touch-Up Paint (all colors)
Upholstery cleaning,	All Purpose Cleaner — ZVW 243 101
Whitewall tire cleaning	
Windshield washer cleaning and anti-freeze	Windshield Washer Anti-Freeze & Solvent — ZVW 241 101

When cleaning upholstery and carpet, never use gasoline, korosine, naphtha, nail polish remover or any other volatile solvents. They may be toxic or flammable and therefore hazardous. Keep all cleaning agents out of reach of children.

Washing your VW

The longer the dirt is left on the paint, the greater the risk of damaging the glossy finish, either by scratching if the dirt is rubbed into the paint, or simply by the chemical effect dirt particles have on the paint surface.

Therefore dirt should be washed off as soon as possible.

NEVER WASH IN DIRECT SUNLIGHT.

Use plenty of water, a car-wash soap, such as VW's Car Wash and Wax, and a soft sponge or hose brush. Begin with spraying water over the dry car to remove all loose dirt before applying the lukewarm soap/water solution.

Use plenty of water to rinse the car off well. Wipe the car dry with a chamois to avoid water spots.

Waxing

Waxing is not really needed when you have washed your car with VW's Car Wash and Wax. If you do not use a car wash liquid with wax, apply Paint Preservative and Wax to preserve the natural shine of the car.

To obtain a long lasting wax finish apply hard wax, such as VW's Classic Car Wax, after eight to ten weeks after buying the car. Wax again when water remains on the surface in large patches instead of forming beads and rolling off.

Polishing

Use a polish such as VW's Paint Polish later in the car's life when the paint appears dull and loses its shine. **Do not polish the new car.**

Always apply wax after polishing.

Cleaning windows

Clean windows with a sponge and warm water. Dry with a chamois.

Weatherstrips

To seal properly, weatherstrips around windows and doors must be pliable. To retain flexibility of the rubber, spray with silicone, available from your VW dealer, or coat with talcum powder.

Windshield wiper blades

Remove the wiper blades periodically and scrub with a hard brush and alcohol or a strong detergent solution.

Chrome care

To protect the car's chrome, apply VW's Chrome Preservative.

Touch-up paint

Your dealer has touch-up paint for minor scratches and stone chips. Scratches should be touched up soon after they occur.

Care of chassis

The underside of the car picks up dirt and salt and should be sprayed with a powerful jet of water.

This is easier to do after the car has been driven in rain.

Removing spots

Do not use gasoline, kerosine, naphtha, nail polish remover or other volatile cleaning fluids. They may be toxic or flammable or hazardous in other ways. Only use spot removing fluids in well ventilated areas. Keep them out of reach of children.

Tar

Do not permit tar to settle on the paint finish. Remove it early with a cloth soaked with a special paint cleaner, such as Paint Preservative and Wax. If you do not have a spot remover, you may substitute with turpentine. After applying a cleaning fluid, always wash with a lukewarm soap/water solution and apply a new wax coat.

Insects

Remove early with a lukewarm soap/water solution or apply insect remover.

Tree sap

Remove with a lukewarm soap/water solution. Do not permit tree sap to harden on the paint surface.

Leatherette and interior trim

Use VW's All Purpose Cleaner or a dry foam cleaner.

Grease or paint spots can be removed by wiping with a cloth soaked with VW's All Purpose Cleaner. Leatherette parts of the headliner and side trim panels can be cleaned with a soft cloth or brush and All Purpose Cleaner.

Bulb chart

	U. S. Replacement bulbs	VW Part No.
Sealed beam (headlights)	6012	ZVP 118 112
Front turn signals/parking lights	1034	ZVP 118 034
Side marker lights	57	ZPP 118 057
Rear turn signals and stop/tail lights	1034	ZVP 118 034
Back-up lights	1073	ZVP 118 073
License plate light	89	ZVP 118 089
Instrument and warning lights	—	N 17 751 2
Interior lights	—	N 17 723 2

Do-it-yourself-hints

Exercise extreme caution when working on any part of the car to prevent accidental injury. Incomplete or improper servicing may also cause problems in the operation of the car. If in doubt about any servicing, have it done by a qualified mechanic or by your Authorized Volkswagen Dealer.

Replacing bulbs

Headlights

Your Volkswagen is equipped with double filament seven inch sealed beam units. Should it become necessary to replace a sealed beam, loosen the screw of the trim ring. Firmly grasp the loose screw (non-removable) and pull the trim ring off.

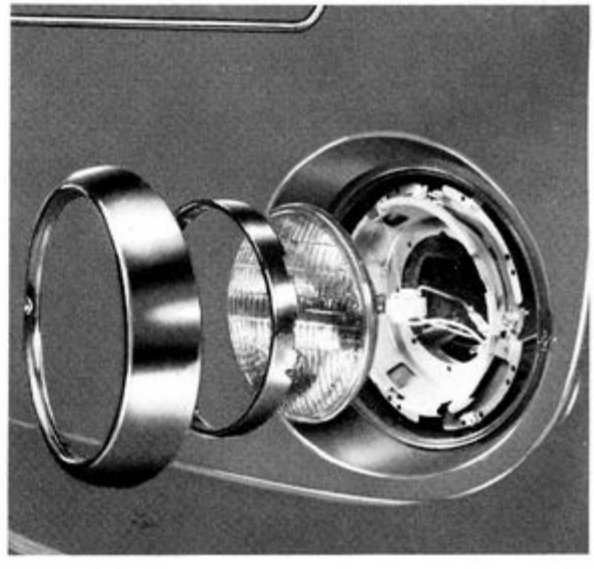
Remove the three short screws in the sealed beam retaining ring and take the ring off.

Do not alter the position of the long headlight adjustment screws.

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

When installing a new sealed beam unit, be sure the three glass lugs engage properly in the support ring. Before installing the trim ring be sure the rubber gasket is in place. Loosely insert the screw for the trim ring and turn for 2 or 3 turns. Position the upper edge of the trim ring over the lug. Press the ring over the lug and tighten the srew.

If no other headlight part as described here was removed or its position changed, it should not be necessary to aim the headlights. If in doubt have the adjustment checked by your dealer.



Front turn signal / parking light bulb

Side marker light bulb

Rear turn signal / stop / tail light bulb or back-up light bulb

The following instructions apply to the replacement of the bulbs for the lights shown above:

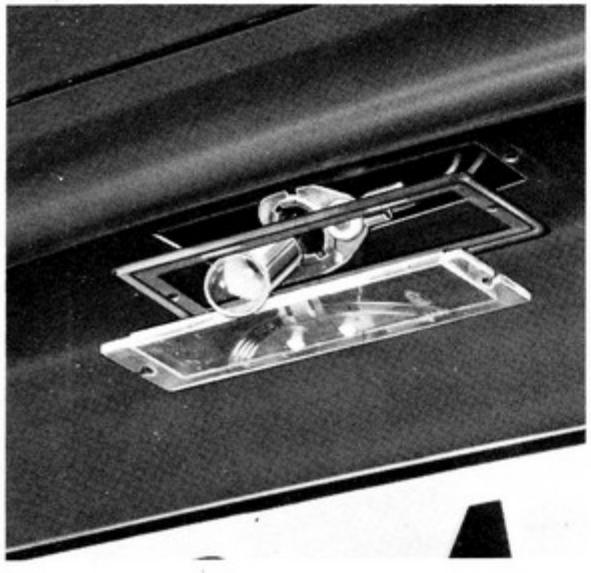
Remove Phillips screws.
Take off lens.
Press bulb lightly into holder, turn it and take it out.
Install new bulb.
Be sure the gasket is properly positioned when reinstalling the lens.
Tighten screws evenly. Do not overtighten as this may crack the lens.

Licence plate light bulb

Open engine compartment lid.

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

Press bulb in lightly, turn and take out.



Install new bulb.

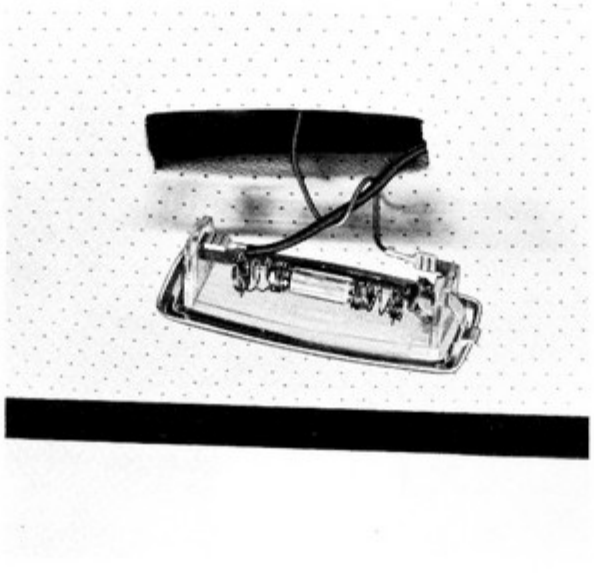
During re-assembly be sure the rubber gasket is properly seated.

Tighten screws evenly.
Do not overtighten as this may crack the lens.

Interior light bulb

Pull interior light out carefully with a screwdriver.

Take bulb out.



Install new bulb.

Insert housing at rear first, then press it in until retaining spring engages.

Spark plugs

The correct spark plug gap is .028 inch. Since the spark plug gap tends to increase in time during normal operation, it is advisable to replace spark plugs every 12,000 miles.

Before working on any part in the engine compartment, turn off the engine and let it cool down sufficiently. If work has to be done with the engine running, exercise extreme caution to prevent neckties, jewelry or long hair from getting caught in the V-belt.

Removing spark plugs

Detach the hoses for the warm air blower from the blower motor and move them to the side.

Lift the end pieces of the air cleaner duct off the carburetors after pulling back the springs. To remove the end pieces of the air cleaner, pull off the hose on top of the left end piece and the two hoses at the bottom of the right end piece.

Pull the end pieces off the main part of the air cleaner.

Grasp the spark plug connector and pull it off. Do not pull the ignition wires as they may separate from the connectors.

Unscrew the spark plugs with a suitable spark plug wrench.

When **removing or installing the plug of cylinder No. 4** (left side closest to the rear of the vehicle), the accelerator linkage must be pushed to full throttle position.

Cleaning spark plugs

Dirty spark plugs should be cleaned with a sand blaster, but if not available, the carbon can be removed with a wood chip. Do not use a wire brush. The plugs should also be clean and dry on the outside to avoid shorting and arcing. **The gap can be set by bending the outside electrode. The gap should be .028 inch.**

Installing spark plugs

Insert them by hand and screw them into the cylinder head as far as they will go. Only then use the spark plug wrench to tighten them firmly. Do not overtighten.

When installing the end pieces of the cleaner duct, be sure the rubber sleeves between cleaner and end pieces, and the rubber seal on the carburetors are located properly.

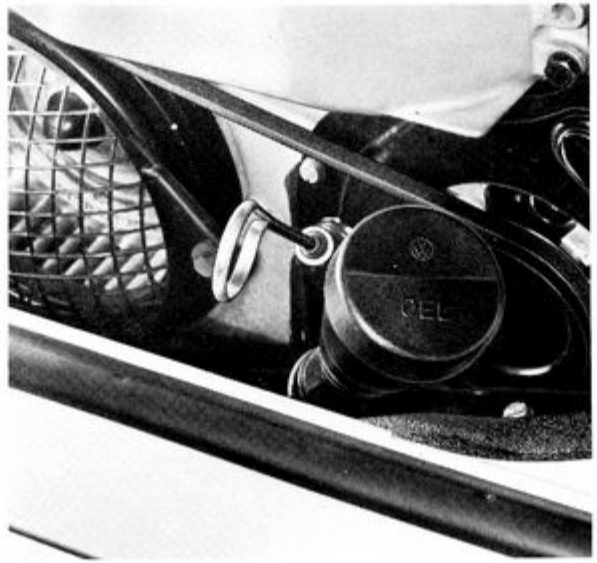
Reconnect all hoses.

Checking the engine oil level

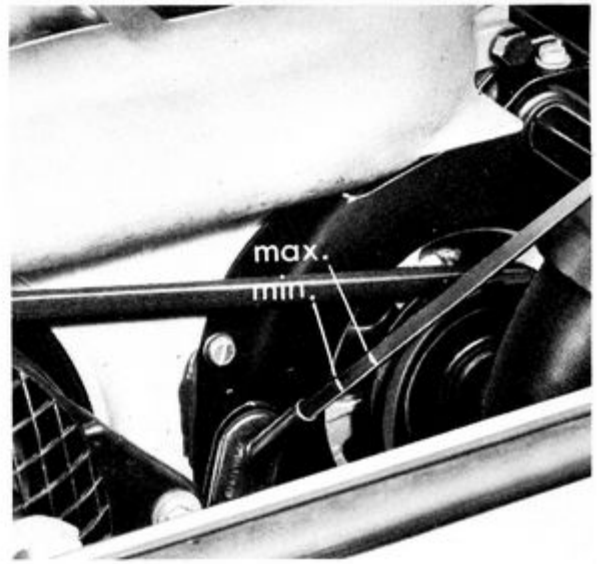
Your VW will usually not need additional oil between the scheduled changes.

Even so, you should check the oil level from time to time. To get a true reading, be certain the car is on level ground. Wait at least 5 minutes after the engine has been stopped; give the oil time to collect in the crankcase.

Before working under the engine hood turn off the engine and let the engine cool down sufficiently. If work has to be done with the engine running, exercise extreme caution to prevent neckties, jewelry or long hair from getting caught in the V-belt.



To check the oil level, take the dipstick out and wipe it clean first. Now, insert and pull it out again. You have enough oil in the engine if the oil level is between the upper and lower marks on the dipstick.



Only add the amount of oil that is needed.

Always select a well-known brand and the recommended grade. Details about the correct oil viscosities are on page 80.

Changing the engine oil

Change the oil in your engine at least every 3,000 miles. This is very important as the lubricating properties of oil diminish gradually during normal operation of the car.

Drain the oil when the engine is still warm. Remove the drain plug — A — first. After the oil is drained, take out the oil strainer by removing the center nut — B — and clean it. The cleaning of the strainer should be done with every oil change. Use new gaskets and copper washers when re-installing the strainer to be sure no oil leak will develop later.

Fill the engine with oil labeled "For Service MS or SD". For the right oil viscosity, see page 80.

Engine oil capacity:

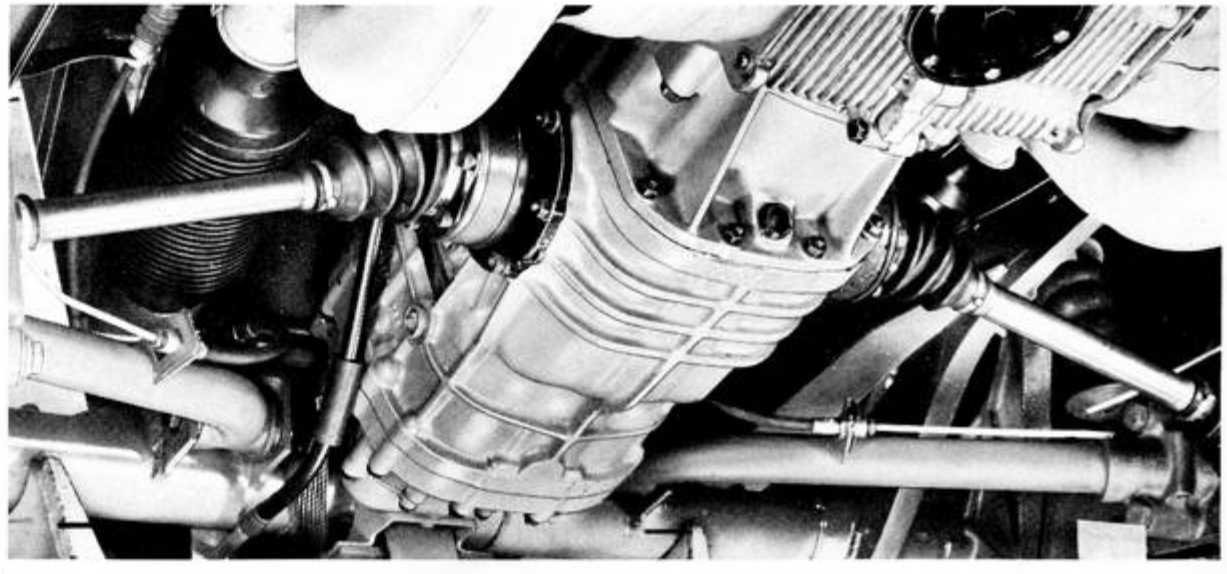
With filter change	3.5 liters 6.125 US pints 5.304 Imp. pints
Without filter change	3.0 liters 5.25 US pints 4.55 Imp. pints

The full flow oil filter should be replaced every 6000 miles.

Transmission

Both transmission and final drive are combined in one housing. The lubricant used is hypoid oil that is changed by your dealer only one time at 600 miles as part of the lubrication service. See page 105.

The transmission is checked for leaks during the maintenance service. Should the need arise to replenish the oil filling, it should only be done with the necessary workshop equipment. Also hypoid oil is generally not marketed in small quantities.



Important

The center nut for the oil strainer should be tightened with a torque wrench. The correct torque is 1.0—1.3 mkg (7—9 ft. lb.).

A special wrench should be used to screw the oil filter off and on.

Because of detergent additives in the oil the fresh oil will look dark after the engine has been running for a short time. This is to be expected, and there is no reason to change the oil at intervals shorter than 3,000 miles.

We recommend more frequent oil changes (every 1,500 miles) if you drive your car only short distances during the winter months. If you drive for only a few hundred miles a month under these conditions, we advise you change the oil every 6 to 8 weeks.

In arctic areas with temperatures generally below −13° F, change the oil every 750 miles.

Air cleaner

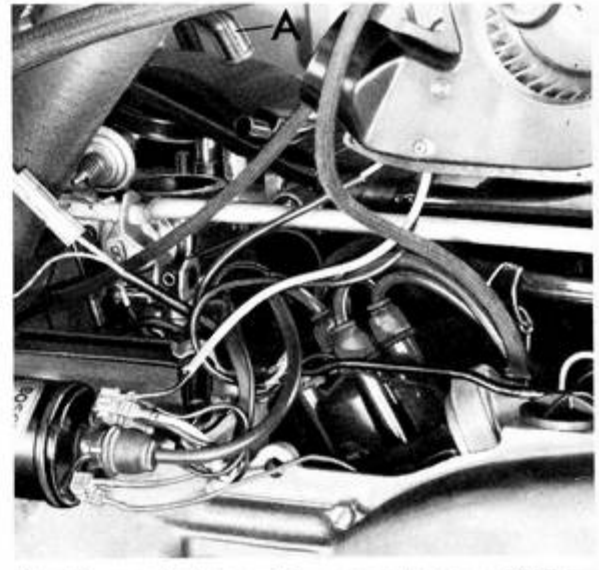
A dirty air cleaner element not only reduces the engine output, it can also cause premature engine wear. If local conditions are such that the vehicle is often driven on very dusty roads, the cleaner must be checked frequently, even daily if necessary.

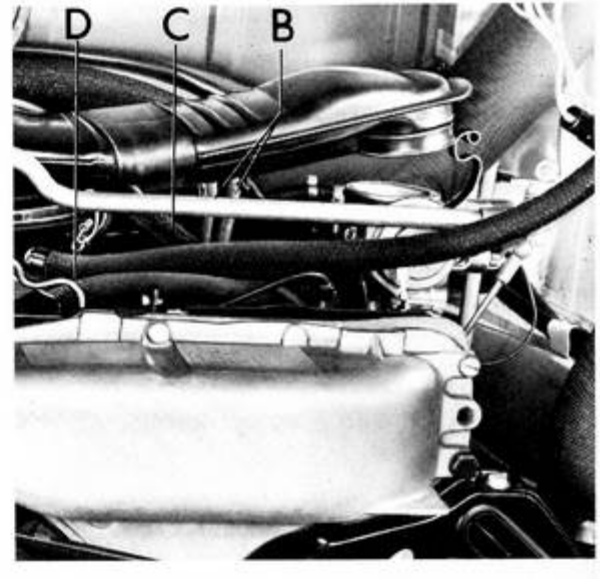
All the dust present in the air drawn in by the engine is retained by the filter element in the upper part of the air cleaner and washed out when the vehicle is in motion by the oil in the lower part. In time, this causes a layer of sludge to form at the bottom of the lower part. When there is only $^{3}/_{16}$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

Release clamps on warm air hoses and pull hoses off blower motor. Pull off the upper cable from the valve for vacuum spark advance, on the left of the blower motor (applies only to vehicles manufactured for use in California).

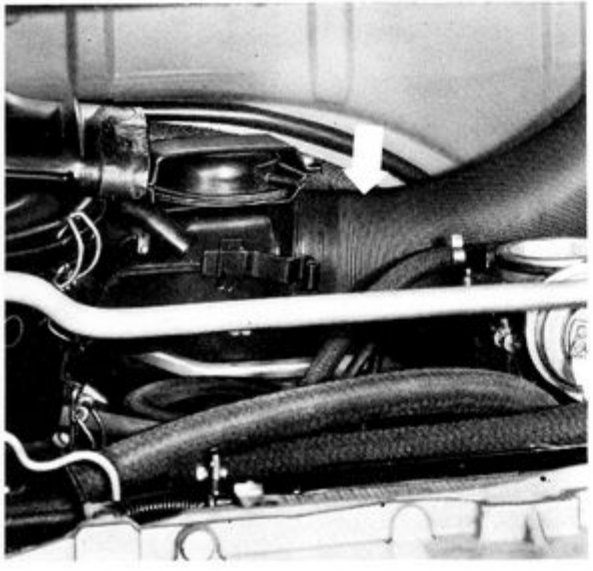
Pull hose — A — off left air cleaner end piece and both hoses — B — off the right end piece.

Pull crankcase breather hose — C — off connection on air cleaner.





Remove hose — D — of activated charcoal filter. Release the two clamps attaching air cleaner to engine, pull back spring clamps holding cleaner duct end pieces on carburetors, take end pieces off separately. Pull hose for intake air off the connection on air cleaner (arrow) after lifting



the spring clamp and then lift air cleaner out in horizontal position.

Loosen three clamps and take top part of cleaner off. The top part must not be laid down with the filter element upwards. Clean lower part of cleaner carefully.

Fill it to mark with fresh engine oil (approx. 0.45 liter, 0.95 US pt. or 0.82 Imp. pt.).

SAE 30 oil should be used normally all the year round.

Use SAE 10 only in countries with arctic climates all year round.

Normally the top part does not need cleaning. If the filter element has become so dirty that the air inlet holes on the underside are partly blocked, the dirt should be scraped off with a piece of wood. When assembling the air cleaner, be sure the embossed marks on upper and lower parts are aligned.

When installing the cleaner, check that the rubber seals on the caburetors and the rubber sleeves between cleaner upper part and end pieces fit properly. Reconnect all hoses.

Lubrication

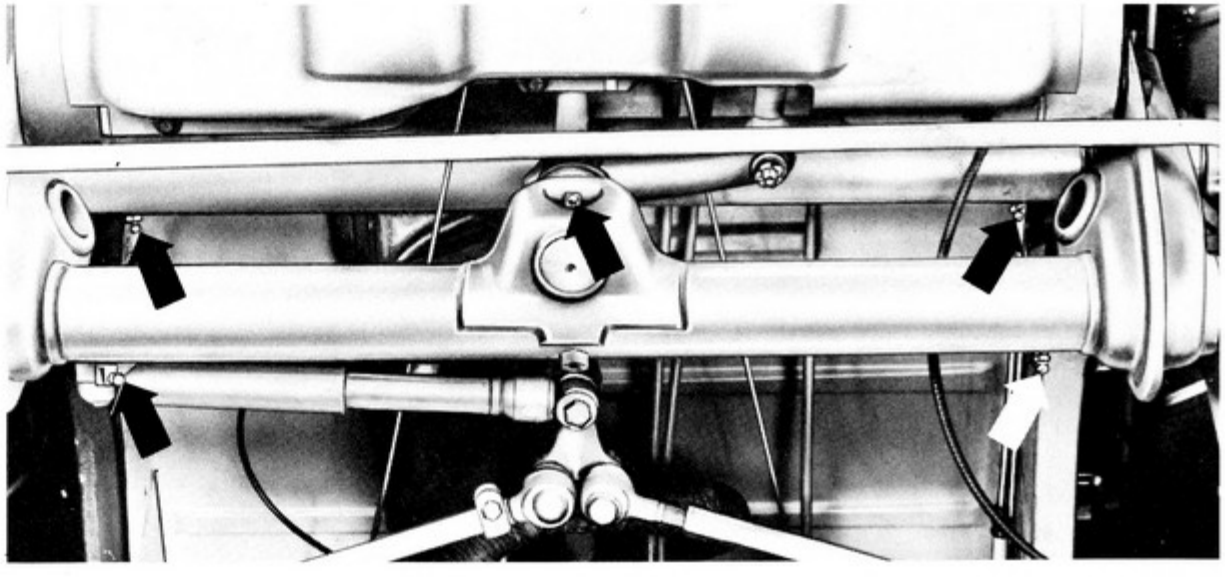
Front axle

Lubricate the front axle once a year or every 18,000 miles.

Lift the front end of the car to take the weight off the front wheels. This is necessary to free the bearings to accept the lubricant. There are 5 grease nipples for the front axle. For their location, see arrows in the illustration.

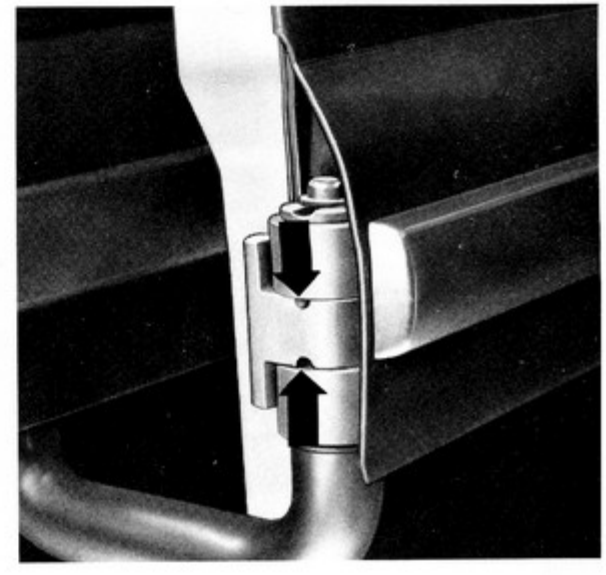
Before forcing grease into the nipples, be sure to wipe them clean with a piece of cloth. Force lithium-based multi-purpose grease into the nipples until fresh grease starts to emerge at the sealing rings.

Wipe off any grease or oil that may have come in contact with tires or brake hoses because grease and oil have an adverse effect on rubber.



Door hinges and locks

Above the door hinge pin is a small oil chamber which is sealed with a plastic plug. At least every six months, the amount of oil in the chamber should be checked after lifting the plug with a screwdriver. The chamber should be filled with SAE 30 engine oil. Press plug in and wipe off excess oil with a cloth.



At the same time, the hinge for the sliding door (see arrows), and the rear door hinges should be oiled.

Lubricate the **door lock cylinders** with graphite. Dip the key into graphite and turn it the lock a few times.

When trouble troubles you

Your Volkswagen should repay you with trouble-free driving if it receives regular 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 the trouble in the guide on the following two pages and follow the directions on WHAT TO DO.

Caution

Exercise extreme caution when working on any part of the car to prevent accidental injury. Incomplete or improper servicing may also cause problems in the operation of the car. If in doubt about any servicing, have it done by a qualified mechanic or by your Authorized VW Dealer.

Note: The adjustment of idling and ignition timing requires special equipment. We suggest that you consult your Authorized Volkswagen Dealer.

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 dashboard 3. Starter defective	1. Charge or replace battery 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 dashboard 3. Ask for assistance
VW will not start: engine turns over	4. Loose connection in ignition system 5. Loose connection in primary circuit to coil 6. No spark at spark plugs	4. Check for loose connections at coil, distributor and spark plugs 5. Check push-on connector at coil (thin black wire). Check tight fit of spark plug connectors. Check ignition wires for tight fit. 6. If sparks appear 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. Sparks 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. Ask for assistance if the above steps did not ensure proper ignition 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

Problem	Probable Cause	What To Do
VW will not start: engine turns over	7. If spark is fairly good at plugs, trouble is most likely in fuel system A. Caused by improper starting procedure. If the gas pedal is depressed too often, the accelerator pumps in the carburetors injects too much gasoline B. Carburetors may be flooded, float or needle valve may be sticking	7. Check fuel system in the following sequence: 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 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 chokes do not open, excessive fuel supply	8. See paragraph 11 through 13 9. Check whether choke valves are in vertical position after ignition has been switched on for 2—5 miutes (depending on outside temperatures). Covers for choke units must be hot. If choke valves are binding in a closed position, open at fast idle cam and if necessary, retain with wire
Engine stalls while vehicle is driven	10. Defect in ignition system 11. Fuel supply is exhausted 12. Gasoline may be contaminated by water, dust or dirt	10. See paragraph 4 through 6 11. Check whether any gasoline is left in tank 12. See your VW dealer for cleaning of all components of the fuel system
Red warning light for oil pressure comes on while you are driving	13. If light goes on, the oil pressure is too low	13. Stop at once and check oil level. Add oil as necessary. If the oil level is sufficient and light goes on during driving, contact the nearest Authorized VW Dealer before driving on
Red warning light for alternator comes on while you are driving	14. If light goes on, V-belt may be torn or alternator does not charge	14. If belt drives alternator without slipping switch off all unnecessary electrical equipment (radio, etc.). Drive to nearest VW dealer as otherwise the battery will soon run down

Engine oil

Always use a name brand oil labeled "For Service MS" or "SD" for the engine of your Volkswagen.

Engine oils are graded according to their viscosity. The proper grade to be used in your engine depends on existing climatic or seasonal conditions.

The following table contains the grading for oils to be used in VW engines:

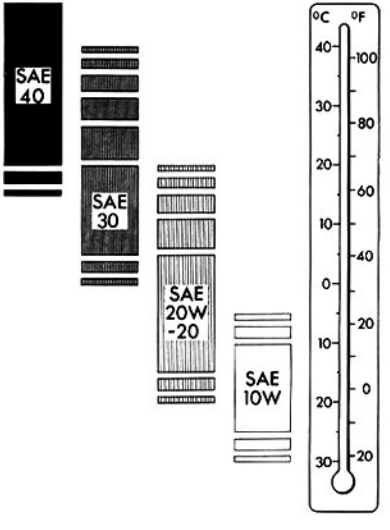
Tropical climate	Hot season		SAE 40
	Cool season		SAE 30
Moderate climate	Summer		
	Winter	At average outside temperature of above 5 °F	SAE 20 W–20
		At average outside temperatures not lower than –13 °F	SAE 10 W *

If outside temperatures are continuously below –13 °F use SAE 5 W *.

* Avoid high speed long distance driving when using SAE 10 W or SAE 5 W if outside temperatures rise above the indicated limits.

As temperature ranges of the different oil grades overlap, **brief** variations in outside temperatures are no cause for alarm. It is also permissible to mix oil of different viscosities if you find it necessary to add oil.

Temperature ranges of SAE grades



Transmission Oil

Transmission and final drive are both lubricated with hypoid oil according to Mil-L-2105-B specifications (additive basis: sulphur-phosphorus):

SAE 90	In general all year round.
SAE 80	In areas with cold climate.
ATF	In areas with arctic climate and temperatures consistently below —13° F. ATF is a special fluid for automatic transmissions, but ATF can also be used in the Manual Transmission under the above mentioned climatic conditions. All ATF's labeled Dexron® and a five-digit number preceded by the letter "B" can be used.

Lubricant additives

No additives should be mixed with fuel or lubricating oils and transmission fluids.

Grease

1. **Multi-purpose grease with lithium base** should be used for the front axle.
2. **Dry stick lubricant** should be used for the hood locks and the sliding surfaces of the striker plates.
3. **Silicon spray or petroleum jelly** should be used for the battery terminals and posts.

Technical data

Engine

Four cylinder, four stroke, horizontally opposed in rear.
Air cooling by fan on crankshaft, thermostatically controlled.
Pressure oil feed with gear-type pump.
Oil cooler, full flow filter and strainer.
Mechanical fuel pump.
Two downdraft carburetors with automatic chokes and accelerator pumps.
Oil bath air cleaner with thermostat-controlled pre-heating.
Exhaust emission control system. Activated charcoal filter in the fuel system.

Bore	3.54 in. (90 mm)
Stroke	2.59 in. (66 mm)
Displacement	102.5 cu. in. (1679 cc)
Compression ratio	7.3:1
Maximum torque SAE	85.3 ft. lb. at 3400 rpm
Valve clearance with engine cold	.006 in. (0.15 mm) intake and exhaust
Fuel rating	91 Octane Regular
Oil consumption	U. S. — 1.7—4.8 pints per 1000 miles Metric — 0.5—1.4 liters per 1000 km Imp. — 1.4—4.0 pints per 1000 miles

Transmission

Single plate, dry clutch.

Clutch pedal, free play: $^3/_4$ in. (10—20 mm)

Baulk synchronized four-speed gearbox and bevel gear differential in one housing. Drive shafts with two constant velocity joints per shaft.

Gear ratios:	1st gear	3.80:1	Reverse	3.80 : 1
	2nd gear	2.06:1	Differential ratio	5.428
	3rd gear	1.26:1		
	4th gear	0.82:1		

Chassis

Unit body, frame plates reinforced with side and cross members, front axle bolted to frame side members, engine/transmission suspended in 4 rubber-metal mountings. Independent wheel suspension: torsion arms with ball joints at front, double jointed axles with trailing arms and diagonal links at rear. Torsion bar springing, telescopic shock absorbers, stabilizer at front.

Ross type steering gear with maintenance-free tie rods and hydraulic steering damper. Hydraulic dual-circuit power assisted foot brakes with brake pressure regulator for rear wheel circuit. Front wheels with disc brakes, rear wheels with drum brakes. Mechanical parking brake effective on rear wheels.

Wheelbase	94.5 in. (2400 mm)
Turning circle diameter	approx. 40 ft. (12.3 m)
Track at front [1])	54.6 in. (1386 mm)
Wheel-toe angle (wheels pressed together)	0 ± .048 in. (0 ± 1.2 mm)
Camber	0° 40′ ± 15′
Track at rear [1])	56.6 in. (1439 mm)
Wheels	$5^1/_2$ J × 14 (Perforated discs with drop center rims
Tires	185 SR 14 reinforced, load capacity 1540 lbs. at 40 psi
Tire pressures	see page 52

[1]) at gross vehicle weight

Electrical system

Voltage	12 Volts
Battery	45 Ah
Starter	0.7 hp
Alternator with regulator	max 55 A
V-belt size	9.0 × 965
Ignition distributor	with combined vacuum and centrifugal spark advance and speed limiter
Firing order	1—4—3—2
Basic ignition timing	5° after TDC, engine at operating temperature at 850 rpm [2])
Contact breaker gap	.016 in. (0.4 mm)
Spark plug	Bosch W 145 T 2 Beru 145/14/3 } or plugs with similar values from other manufacturers
Plug thread	14 mm
Electrode gap	.028 in. (0.7 mm)

[2]) White mark on fan. Set only with stroboscopic light and vacuum hoses attached.

Dimensions and weights

	Station Wagon	Kombi	Camp-mobile	Delivery Van
Length ..... in.	174.0	174.0	174.0	174.0
Width ..... in.	69.5	69.5	69.5	69.5
Height, unladen ..... in.	76.4	76.7	80.0	77.0
Ground clearance ..... in.	7.3	7.3	7.3	7.3
Unladen weight ..... lbs.	3043	2922	3296	2745
Payload ..... lbs.	1918	2150	1665	2327
Gross vehicle weight ..... lbs.	4961	5072	4961	5072
Permissible front axle load .... lbs.	2227	2227	2227	2227
Permissible rear axle load ..... lbs.	2800	2867	2800	2867
Permissible roof and trailer weights:				
Roof weights ..... lbs.	220[1])	220[1])	220	220[1])
Trailer without brakes ..... lbs.	1100	1100	1100	1100

[1]) Applies only to roof rack mounted to rain gutters. Distribute load evenly

Capacities

Fuel tank	15.9 US gallons (13.2 Imp. gallons)
Engine	7.4 US pints (6.3 Imp. pints)
Transmission and final drive	7.4 US pints (6.3 Imp. pints)
Brake system	1.01 US pint (.84 Imp. pint)
Oil bath air cleaner	0.95 US pint (.79 Imp. pint)
Windshield washer	2.9 US pint (2.5 Imp. pint)

Performance

Maximum and cruising speed	78 mph

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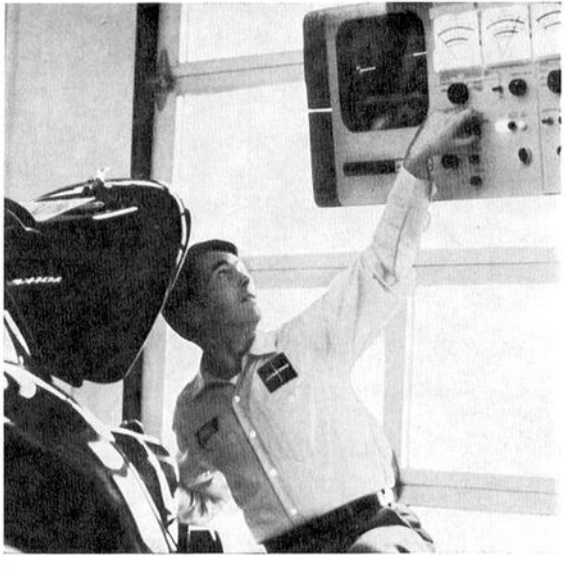

Authorized VW Dealers use a new service system specially developed for the VW.

Lots of service stations say they can repair Volkswagens and a lot of them really can.

But they cannot offer you VW Diagnosis and Maintenance – our new service system.

Instead of giving every VW the same basic maintenance, we now treat each one as an individual.

And we have already prepared your car for our even more advanced diagnosis system of the future. The plug in the engine compartment is a part of this future.

Specially trained diagnosticians will check your VW directly using special testing equipment; that means your car gets just the maintenance it needs. No more, no less.

And you get a test report so you know the exact condition of your VW.

It tells you a lot about the car you drive.

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Volkswagen Diagnosis and Maintenance

has been designed especially for today's Volkswagen and today's driving conditions.

Instead of giving every VW the same basic maintenance, we treat each one as an individual. (Because you are the driver. And you have your own individual driving habits.)

Here is how it works:

When you bring your VW in for service you will see the service adviser as usual. But your car won't go to the mechanic as usual. Instead it will be driven into a special diagnosis stall. One that is equipped with the very latest testing devices, especially designed for Volkswagen.

There, your VW will be tested by a specially trained Diagnostician.

He will check your car from bumper to bumper. He will analyze the engine. Check the wheel alignment, brakes, transmission. The lights, the battery, the tires. And many other items.

All in all, he will make dozens of tests.

And he will fill out a Test Report, like the one shown on the following two pages. You will get a copy of this Test Report. So you will know the condition of your VW.

If your VW is in good shape, you will know it. If any repairs or adjustments are required, you will know what needs to be done now, and what should be taken care of in the near future.

While your VW is at the dealership, your Volkswagen dealer can also perform the essential services, such as oil change, lubrication and other adjustment every VW requires.

The important thing is to bring your VW in for regular, periodic checkups.

So check the mileage chart on pages 95-103. Then keep an eye on your odometer. When your VW is due for service, bring it to your dealer. With VW Diagnosis and Maintenance, he can give your Volkswagen exactly the service it needs.

No more. No less.

Can you think of a better way?

Factory-recommended VW Maintenance.

This Test Report tells you what work, if any, should be performed on your particular vehicle.

In addition, your Volkswagen should have VW Maintenance at specific mileages, as shown below.

This factory-recommended VW Maintenance can be done when your car is in for VW Diagnosis.

And it should be done. Every 6000 miles. To keep your VW running like a VW.

Every 6,000 miles

- Door and hood locks: Lubricate.
- Engine: Change oil and clean oil strainer.
- Front end: Lubricate.
- Air cleaner: Clean, if necessary, and fill lower part with oil.
- Valves: Check and adjust clearance.
- Distributor: Lubricate.
- Transmission and final drive: Check oil level.
- Automatic Stick Shift or vehicles equipped with automatic transmission: Check ATF level.
- Test Drive: Check braking, steering, heating, ventilation system and overall performance.
- Cylinder head covers: Check for leaks.

Every 12,000 miles

The 6,000 Mile Maintenance items are performed, plus the following services:

- Contact points: Replace, adjust dwell and timing with stroboscopic light.
- Spark Plugs: Replace.

Depending upon the model VW you own, there may be additional services required. See your VW Maintenance Record for details.

Keep this Test Report with your VW Maintenance Record. A pocket has been provided in the front cover for this purpose.

Authorized Service

Volkswagen Diagnosis and Maintenance

Test report.

VWoA 42-00-90002 (8-69) Litho in U.S.A.

VW Diagnosis

We have noted the items that need to be adjusted, repaired or replaced, in addition to the factory-recommended maintenance listed in your Volkswagen Maintenance Record. Your Service Adviser will be glad to review the results of our diagnosis with you.

Engine and Clutch

Fan belt ☐
Distributor contact points ☐
Dwell angle 40° 50° 60° ☐
Ignition timing ☐
Spark plugs Cylinders 1 2 3 4
Compression ☐
Carburetor preheating flaps ☐
Throttle positioner or switch ☐
Crankcase ventilation ☐
Air intake flaps and bellows ☐
Exhaust system ☐
Clutch pedal free play ☐
Automatic stick shift servo rod clearance ☐
Automatic stick shift lever contacts ☐
Engine oil level (disregard if oil is changed) ☐
Engine oil leaks ☐

Rear Axle and Transmission

Axle boots or drive shaft boots ☐
Rear axle, final drive and transmission leaks ☐
Automatic transmission fluid leaks ☐
Shock absorbers left ☐ right ☐

Compression Test

Cyl.	Compression Lbs./Sq. Inch
1	
2	
3	
4	
5	
6	

Front Axle and Steering

Tie rods and tie rod ends ☐
Upper torsion arms end play ☐
King and link pins ☐
Ball joints upper left ☐ upper right ☐ lower left ☐ lower right ☐
Steering damper ☐
Shock absorbers left ☐ right ☐
Steering gear play ☐
Steering gear box leaks ☐
Camber of front wheels + 2 1 0 1 2 − left right ☐
Toe-in/toe out of front wheels − 2 1 0 1 2 + ☐

Wheels, Brakes, Tires

Brake system leaks and damages ☐
Brake pedal stroke ☐
Brake pedal free play ☐
Hand brake adjustment ☐
Brake fluid level ☐
Brake linings or pads front L ☐ R ☐ rear L ☐ R ☐
Tire condition ☐ ☐ ☐ ☐ Spare ☐
(Tire pressures corrected as needed)

Electrical System

Functioning of electrical equipment (headlights adjusted as needed) ☐
Cranking system ☐
Charging system ☐
Wiper blades ☐
Windshield washer ☐
Battery condition (electrolyte level corrected as needed) ☐
Battery voltage 9.6 10 11 12 / 4.6 5 5.5 6 ☐

Test Drive

Foot brake ☐ Hand brake ☐ Clutch ☐ Heating system ☐

Repair Order No.:

Chassis No.:

Customer's Name:

Date:

Diagnostician's Signature:

VW Maintenance & Repair Analysis

Operation No.	▲	** Description	Labor Estimate	Parts Estimate
		Factory-recommended VW Maintenance	$	$
W MA1k		Adjust clutch free play		
W B1k		Adjust brakes		
W E62c		Replace points		
W E70c		Replace plugs	N/C	
W EB36c		Replace wiper blades		

▲ = Urgently required

The above indicated maintenance and repair work is required on your vehicle to obtain the best performance and safe operation. Please indicate with your signature that the nature and importance of each listed item has been explained to you.

Customer's Signature:

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VW Diagnosis and Maintenance Record

The VW Diagnosis and Maintenance Service has been developed to give you maximum economy, dependability, safety and convenience. The Diagnosis and Maintenance Record, which appears on the following pages (pages 95—103) shows you at what mileage you should bring your car to your Authorized Volkswagen Dealer.

Naturally, this may not be the only maintenance your car needs, but you will know what additional maintenance **is** needed when you receive a copy of the VW Diagnosis Test Report. Just hand this Volkswagen Owner's Manual to your Authorized Volkswagen Dealer. He will do the rest.

Remember, from 6,000 miles onward, the VW Diagnosis and Maintenance service should be performed every 6,000 miles. Engine oil should be changed every 3,000 miles.

If your Volkswagen is driven less than 3,000 miles in three months, have the oil changed every three months; if driven less than 18,000 miles in twelve months, have the front end lubricated once a year.

Of course, you can obtain a VW Diagnosis at any time — outside the regular schedule — at your Authorized Volkswagen Dealer. Especially if you drive less than 6,000 miles a year, we recommend you have a VW Diagnosis performed between regular mileage intervals.

Every Authorized Volkswagen Dealer at home or abroad will perform all the operations listed for VW Diagnosis, VW Maintenance, and the additional services (such as oil change, lubrication, brake fluid renewal, repacking of wheel bearings), in accordance with Volkswagen quality service standards.

To get you started, there is a booklet with VW Diagnosis Coupons in the back cover pocket of this manual.

The first of these coupons entitles you to a free maintenance and oil change service. The next four coupons enable you to obtain one free VW Diagnosis each. The remaining coupons serve as a reminder to bring your Volkswagen in for a VW Diagnosis and Maintenance at regular intervals.

The free coupons are not transferrable; they are only valid for **your** Volkswagen. Do not remove them from the coupon booklet which shows the chassis number of your car.

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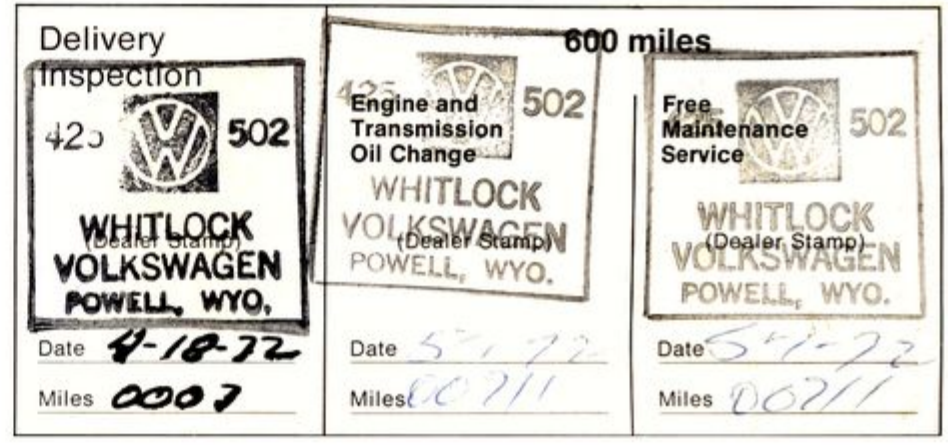
Delivery Inspection
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 4-18-72
Miles 0007
600 miles
Engine and Transmission Oil Change
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 5-1-72
Miles 00711
Free Maintenance Service
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 5-1-72
Miles 00711


3000 miles
Oil Change Service
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 7/6/72
Miles 3134
6000 miles
Free Diagnosis
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 12-1-72
Miles 4064
6000 miles
Maintenance
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Miles 6064
9000 miles
Oil Change Service
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 5/21/73
Miles 10395
12000 miles
Free Diagnosis
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 6/12/73
Miles 11178
12000 miles
Maintenance
425 502
WHITLOCK VOLKSWAGEN POWELL, WYO.
(Dealer Stamp)
Date 6/12/73
Miles 11178

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15000 miles **Oil Change Service** (Dealer Stamp) Date 10/9/73 Miles 15329	**18000 miles** **Free Diagnosis** (Dealer Stamp) Date Miles	**18000 miles** **Maintenance** (Dealer Stamp) Date Miles	**21000 miles** **Oil Change Service** (Dealer Stamp) Date 7/9/74 Miles 21016	**24000 miles** **Free Diagnosis** (Dealer Stamp) Date 8/1/74 Miles 23761	**24000 miles** **Maintenance** (Dealer Stamp) Date 8/1/74 Miles 23761
27000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**30000 miles** **Diagnosis** Oil Change (Dealer Stamp) Date 7-21-75 Miles 3000	**30000 miles** **Maintenance** (Dealer Stamp) Date Miles	**33000 miles** 33392 **Oil Change Service** Oil Changed Filter Changed Greased Tuned & lub (Dealer Stamp) Date 8-6-75 Miles 33392	**36000 miles** **Diagnosis** Oil Change Filter " (Dealer Stamp) Date 9-25-75 Miles 36245.0	**36000 miles** **Maintenance** Oil & Filter (Dealer Stamp) Date 3-12-76 Miles 41586
39000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**42000 miles** **Diagnosis** Oil - Filter Changed. (Dealer Stamp) Date 6-28-76 Miles 45400	**42000 miles** **Maintenance** (Dealer Stamp) Date Miles	**45000 miles** **Oil Change Service** (Dealer Stamp) Date Miles	**48000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**48000 miles** **Maintenance** (Dealer Stamp) Date Miles

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51 000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**54 000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**54 000 miles** **Maintenance** (Dealer Stamp) Date Miles	**57 000 miles** **Oil Change Service** (Dealer Stamp) Date Miles	**60 000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**60 000 miles** **Maintenance** (Dealer Stamp) Date Miles
63 000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**66 000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**66 000 miles** **Maintenance** (Dealer Stamp) Date Miles	**69 000 miles** **Oil Change Service** (Dealer Stamp) Date Miles	**72 000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**72 000 miles** **Maintenance** (Dealer Stamp) Date Miles
75 000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**78 000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**78 000 miles** **Maintenance** (Dealer Stamp Date Miles	**81 000 miles** **Oil Change Service** (Dealer Stamp) Date Miles	**84 000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**84 000 miles** **Maintenance** (Dealer Stamp) Date Miles

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87000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**90000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**90000 miles** **Maintenance** (Dealer Stamp) Date Miles	**93000 miles** **Oil Change Service** (Dealer Stamp) Date Miles	**96000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**96000 miles** **Maintenance** (Dealer Stamp) Date Miles
99000 miles **Oil Change Service** (Dealer Stamp) Date Miles	**100000 miles** **Diagnosis** (Dealer Stamp) Date Miles	**100000 miles** **Maintenance** (Dealer Stamp) Date Miles			

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Additional Services Record

The boxes on this page indicate services that are required in addition to the preceeding Maintenance schedule.

Be sure to have all service items performed — at the recommended mileages or dates — by an Authorized Volkswagen Dealer.

It is the best way to keep your VW running. And running. And running.

30000 miles	60000 miles	90000 miles
Repack front wheel bearings	**Repack front wheel bearings**	**Repack front wheel bearings**
(Dealer Stamp)	(Dealer Stamp)	(Dealer Stamp)
Date _____	Date _____	Date _____
Miles _____	Miles _____	Miles _____

Brake Fluid Renewal

and checking of brake warning light switch

after 2 years of operation	after 4 years of operation	after 6 years of operation
(Dealer Stamp)	(Dealer Stamp)	(Dealer Stamp)
Date _____	Date _____	Date _____
Miles _____	Miles _____	Miles _____

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Oil Change and Maintenance Service 600 Miles

The free maintenance service at 600 miles consists of the following: (Lubricants, fluids and materials such as gaskets are paid by the customer).

Oil Change

1 - Engine: Change oil, clean oil strainer. Replace oil filter cartridge. Check for leaks.
2 - Transmission: Change oil, clean magnetic drain plugs. Check for leaks.

Maintenance Service

1 - V-Belt: Check, adjust if necessary.
2 - Valve clearance: Check and adjust.
3 - Clutch pedal free play: Check and adjust.
4 - Rear axle: Check torque of bolts on constant velocity joints.
5 - Drive shafts: Check boots for leaks.
6 - Front axle: Check tie rod ends and tie rods.
7 - Tires and wheels: Check tire pressures, including spare wheel. Check wheel nuts, torque to factory specifications if necessary.
8 - Brake system: Check for damage and leaks. Check brake fluid level, add if necessary. Adjust foot and parking brakes.
9 - Electrical system: Check operation of all components, adjust headlights if necessary.

During roadtest:

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

After roadtest:

Check and adjust idling. Check cylinder head covers for leaks.

VW Diagnosis and VW Maintenance

Oil Change Service

The engine in the Volkswagen requires little oil. But for long engine life, this oil should be changed every 3,000 miles. An oil change at a VW dealer includes the services shown below:

1 - Engine: Change oil, clean oil strainer, check for leaks.

2 - Battery: Check, add distilled water if necessary. Clean and grease terminals.

3 - Windshield washer: Check fluid.

VW Diagnosis

A physical checkup of your VW is extremely important for determining the amount of additional maintenance your vehicle may need for continuing peak performance.

Listed on the following pages is the VW Diagnosis procedure which applies to your vehicle.

Chances are, if you have regularly maintained your vehicle, it is in good running condition.

The VW Diagnosis Test Report will be given to you so you will know the exact condition of your VW.

It is something you should know.

A VW Diagnosis every 6,000 miles consists of:
(only applicable operations on your vehicle will be performed)

Engine and Clutch:

1 - V-Belt: Check tension and condition.
2 - Ignition system: Check with electronic equipment.
3 - Compression: Check, including remove and install spark plugs.
Note: Replace plugs at 12,000, 24,000, 36,000 miles etc.
4 - Exhaust system: Check for damage.
5 - Clutch: Check pedal free play.
6 - Engine: Check oil level.
7 - Engine: Check for leaks.
8 - Idling: Check and adjust.

Rear axle and transmission:

9 - Drive shaft boots: Check for leaks.
10 - Rear axle, final drive and transmission: Check for leaks.

Front axle and steering:

11 - Front axle: Check dust seals and proper fit of plugs on ball joints, check dust seals on tie rod ends, check tie rods.
12 - Ball joints: Check play.
13 - Steering: Check play.
14 - Steering gear: Check for leaks.
15 - Front wheels: Check camber and toe.

Brakes, wheels, tires:

16 - Brakes: Check brake system for damage and leaks.
17 - Brake pedal: Check free play.
18 - Brake pedal: Check pedal travel.
19 - Parking brake: Check adjustment.
20 - Brake fluid: Check level.
21 - Brake linings or pads: Check thickness.
22 - Tires, including spare wheel: Check for wear and damage, check and correct pressure.
23 - Wheels: Check torque of mounting nuts.

Electrical system:

24 - Cranking system: Check with electronic equipment.
25 - Charging system: Check with electronic equipment.
26 - Check operation of headlights, parking lights, side marker lights, license plate light, interior lights, emergency lights, ignition lock, buzzer alarm, stop lights, back-up lights, turn signal lights, horn, instrument lights, and warning lights for brakes, oil pressure, alternator and rear window defogger.
27 - Headlights: Check and adjust.
28 - Windshield wiper: Check operation and blades.
29 - Windshield washer: Check operation and fluid.
30 - Battery: Check electrolyte level, add distilled water if necessary, check voltage under load.

Test Drive

Test drive if Diagnosis is not followed by maintenance or repair. If maintenance or repair follow the diagnosis, test drive after the job is completed.
Check braking, clutch, steering, heating, ventilation system and overall performance.

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VW Maintenance

After your vehicle receives a VW Diagnosis, your Authorized Volkswagen Dealer can perform the VW Maintenance.

The maintenance which should be performed for every vehicle at specified mileage intervals is shown below.

There may be additional maintenance required which will show up on the VW Diagnosis Test Report.

Your VW Service Manager or Service Adviser will explain the results of the VW Diagnosis in detail.

This will help keep a small maintenance problem from growing into a big maintenance problem.

So that your VW will keep running like a VW.

A VW Maintenance every 6,000 miles consists of:

1 - Engine: Change oil, clean oil strainer. Replace oil filter cartridge.

2 - Air cleaner: Clean and refill lower part with oil.

3 - Valves: Check and adjust clearance.

4 - Door hinges and door checks: Lubricate.
Sliding door mounting points: Lubricate.

5 - Transmission: Check oil level, add if necessary.

6 - Test drive: Check braking, clutch, steering, heating, ventilation system and overall performance.
Cylinder head covers: Check for leaks.

In addition:

Every 12,000 miles

Contact points: Replace, including adjust dwell angle and timing with stroboscopic light.

Every 18,000 miles

Front end: Lubricate.

Every 30,000 miles

Front wheel bearings: Clean and repack.

Every 2 years

1 - Brakes: Replace brake fluid.

2 - Brake warning light switch: Check functioning.

The "National Traffic & Motor Vehicle Safety Act of 1966" requires manufacturers to be in a position to contact vehicle owners if a correction of a product defect becomes necessary.

Please fill in one of the attached postcards if you change your address or purchase a Used Volkswagen.

You need not use this card if you purchased your car through an Authorized Volkswagen Dealer.

Please quote the VW chassis number as it appears on the indentification plate of the vehicle. Its location is shown on page 15. Do not use the abbreviated serial number as shown on the vehicle registration.

Additional cards can be obtained from any Authorized Volkswagen Dealer.

NOTICE OF ADDRESS CHANGE ☐

NOTICE OF USED CAR PURCHASE ☐

please check one of the above boxes

VW Chassis Number

Mo. Day Yr.

Last Name First Name Initial

Number Street

City State Zip Code

Please print and give complete information.

Delivery Inspection

Checklist for _____
(chassis number)

Before Roadtest

Engine
Oil level

Chassis
Wheel nuts
Tire pressures (including spare wheel)
Brake fluid reservoir
Brake lines and hoses
Steering components
Engine and transmission for leaks

Electrical system
Battery
Headlight dimmer switch
Ignition/steering lock
Headlight adjustment
Tail and stop lights
Licence plate light
Instrument lights
Turn signal and parking lights
Emergency flasher lights
Back-up lights
Horn
Windshield wipers and washer
Warning lights
Alternator
Oil pressure
Turn signals
High beam
Brakes
Emergency flasher

During Roadtest

Foot and parking brake
Gear shifting and clutch
Windshield defroster
Speedometer

After Roadtest

Idling adjustment
Operation of seat adjustment
Safety belts
Door locks
Door hinges

Remarks:

Vehicle in perfect condition

(Signature of Service Adviser/Date)

BUSINESS REPLY MAIL
No Postage Stamp Necessary if Mailed in the United States

POSTAGE WILL BE PAID BY

VOLKSWAGEN of AMERICA, Inc.
818 Sylvan Avenue
Englewood Cliffs, N.J. 07632

FIRST CLASS
Permit No. 785
Englewood, N.J.
07631

NOTICE OF ADDRESS CHANGE ☐

NOTICE OF USED CAR PURCHASE ☐

please check one of the above boxes

VW Chassis Number

Mo. Day Yr.

Last Name First Name Initial

Number Street

City State Zip Code

NOTICE OF ADDRESS CHANGE ☐

NOTICE OF USED CAR PURCHASE ☐

please check one of the above boxes

VW Chassis Number

Mo. Day Yr.

Last Name First Name Initial

Number Street

City State Zip Code

Please print and give complete information.

FIRST CLASS
Permit No. 785
Englewood, N. J.
07631

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818 Sylvan Avenue
Englewood Cliffs, N. J. 07632

Index

Owner Relations

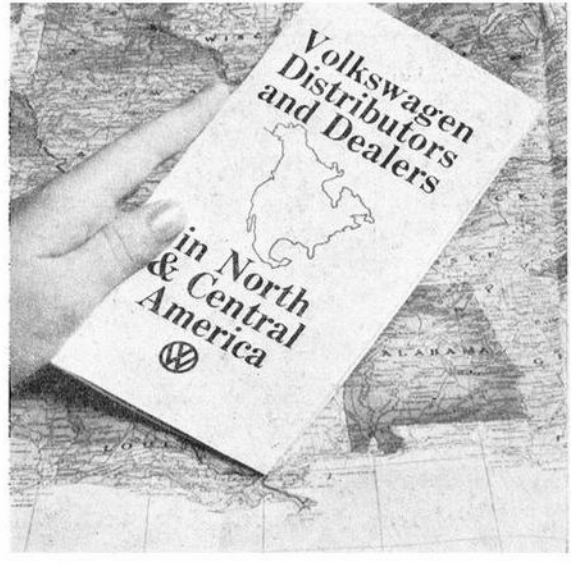
There are more than 1,500 authorized Volkswagen dealers in North and Central America. Their addresses and telephone numbers are listed in a booklet which is available at your VW Dealer.

Any one of these dealers is well equipped to help you with virtually all VW-related matters; and your dealer should be your primary source.

Should there be can occasion where you need further assistance, you may want to contact your area distributor. We show the addresses and telephone numbers of the VW distributors in the U. S. on the next page.

However, remember that ultimately your questions will be resolved in the dealership with dealer personnel and dealer equipment. We therefore suggest you contact your dealer first.

For quick reference, always include chassis number in correspondence.



Addresses of VW Distributors in the US:

Maine
Massachusetts
New Hampshire
Rhode Island
Vermont
Volkswagen Northeastern
Distributor, Inc.
100 Fordham Road
Wilmington, Massachusetts 01887
(617) 658-6700

Illinois
Iowa
Minnesota
North Dakota
South Dakota
Wisconsin
Volkswagen North Central
Distributor, Inc.
3737 Lake Cook Road
Deerfield, Illinois 60015
(312) 272-5500

Kentucky
Ohio
Midvo, Incorporated
5000 Post Road
Dublin, Ohio 43107
(614) 889-2911

Indiana
Michigan
Import Motors Ltd., Inc.
P.O. Box 2008 (2660 28th St., S.E.)
Grand Rapids, Michigan 49501
(616) 949-7788

Florida
Georgia
South Carolina
Volkswagen Southeastern
Distributor, Inc.
155 East 21st Street
Jacksonville, Florida 32203
(904) 355-1684

Delaware
Pennsylvania
Volkswagen Atlantic, Inc.
1001 South Trooper Road
Valley Forge, Pennsylvania 19481
(215) 666-7500

Alabama
Louisiana
Mississippi
Tennessee (West)
International Auto Sales & Service, Inc.
4200 Michoud Boulevard
New Orleans, Louisiana 70129
(504) 254-1500

Connecticut
New York
New Jersey
World-Wide Volkswagen Corporation
Greenbush Road
Orangeburg, New York 10962
(914) 359-5000

Washington, D.C.
Maryland
North Carolina
Tennessee (East)
Virginia
Volkswagen South Atlantic
Distributor, Inc.
9300 George Palmer Highway
Lanham, Maryland 20801
(301) 577-2600

Arizona
California (South)
Nevada (South)
Hawaii
Volkswagen Pacific, Inc.
11300 Playa Street
Culver City, California 90230
(213) 391-6274 (Santa Monica line)
(213) 870-3381 (Los Angeles line)

Alaska
Idaho
Montana
Oregon
Washington
Riviera Motors, Inc.
10350 S.W. 5th Street
Beaverton, Oregon 97005
(503) 646-3111

Arkansas
Missouri
Kansas
Nebraska
Volkswagen Mid-America, Inc.
8825 Page Boulevard
St. Louis, Missouri 63114
(314) 429-2141

Colorado
New Mexiko
Oklahoma
Texas
Wyoming
Volkswagen South Central
Distributor, Inc.
P.O. Box 2207
San Antonio, Texas 78206
(512) 341-8881

California (North)
Nevada (North)
Utah
Reynold C. Johnson Company
7100 Johnson Industrial Drive
Pleasanton, California 94566
(415) 828-6700

Customer Identification Card

This is another feature of Volkswagen Service that adds to your convenience. Just present this booklet whenever you stop for service at your Authorized Volkswagen Dealer. Your Identification Card will quickly furnish the Service Adviser with your name and address and all pertinent vehicle data.