

VOLKSWAGEN 1500S

Instruction Manual

1961 to 1965



Instruction Manual

VOLKSWAGEN 1500

up to Chassis No. 0221974 (July 1963)

VOLKSWAGEN 1500S

up to Chassis No. 315220883 (July 1965)



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Identification plate, Chassis and Engine Number. The model designation and the chassis and engine numbers are entered in the vehicle documents. The police or Traffic Department attach much importance to these details.

The **identification plate** is found under the front hood beside the hood lock.

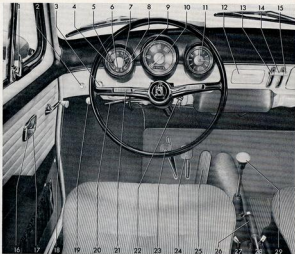


The **chassis number** is found on the frame tunnel under the rear seat.



The **engine number** is on top of crankcase near the joint.

- 1 - Vent wing handle
- 2 - Switch for windshield wipers and washer system
- 3 - Switch for lights and instrument lighting
- 4 - Warning light — Green — Parking lights
- 5 - Warning light — Green — Turn indicators
- 6 - Warning light — Blue — Headlight high beam
- 7 - Warning light — Red — Generator
- 8 - Warning light — Green — Oil pressure
- 9 - Fuel gauge
- 10 - Speedometer
- 11 - Clock
- 12 - Ash tray
- 13 - Fresh air ventilation lever — Windshield, left
- 14 - Fresh air ventilation — Foot level
- 15 - Fresh air ventilation lever — Windshield, right
- 16 - Inner door handle
- 17 - Locking lever
- 18 - Window winder
- 19 - Front hood control knob
- 20 - Turn indicator switch
- 21 - Horn lever
- 22 - Steering ignition lock
- 23 - Clutch pedal
- 24 - Brake pedal
- 25 - Accelerator pedal
- 26 - Hand brake lever
- 27 - Heating control lever
- 28 - Control lever for heating in rear foot well
- 29 - Gear lever



Heating control knob on vehicles up to Chassis No. 9 221 934.



Switches for windshield wipers, washer system and lighting on vehicles up to Chassis No. 9 423 139.

Operating Instructions

Before driving off acquaint yourself with the VW 1500. You have been given a separate key for the door locks and the steering ignition lock. You should take note of the key numbers so that you can get a replacement if you should lose a key.



Both doors can be unlocked from the outside. A quarter of a turn with the key and the door can be opened by means of the press button under the door handle.



Both doors can be locked from the outside. It is, however, more convenient to push in the lever above the inner door handle as you get out and then depress the button below the outer door handle as you close the door. If the door closes unintentionally after the inner lever has been depressed it will not lock and thus the danger of getting locked out is reduced to a minimum.





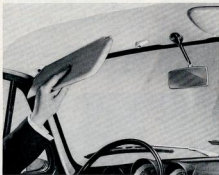
The front seats. The seats can be adjusted individually whilst driving by merely pulling up the lever under each seat.

The rake of the front seat backs can be adjusted to eight different positions by turning a knob.

When the doors are closed, a special locking device secures the seat backs and prevents them from tilting forward. To remove the front seats on vehicles from Chassis No. 0187000, press down the leaf spring on the inner runner. This spring prevents the seat from sliding out to the front unintentionally.



The rear view mirrors are adjustable and should be set to give clear vision to the rear at all times without having to alter ones position.



The sun visors can be swivelled towards the door windows to offer protection against the sun from the side.

The windshield wipers park automatically when switched off and the speed can be regulated.

The windshield washer system is pneumatically operated so that by just pressing the button or the knob in the wiper switch once you can spray water on to the windshield until the wipers have cleaned the glass properly.

The water container is located in the spare wheel compartment under the front hood. Do not forget to fill the container from time to time. As the air pressure in the container escapes when the cap is removed, it is advisable to refill the container at a filling

station. The container can be filled until it overflows. The pipe in the container neck ensures that there is always sufficient air to operate the washer. The correct air pressure is 2.5 kg./cm² (36 psi.).

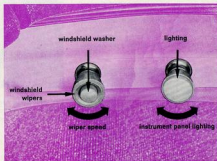
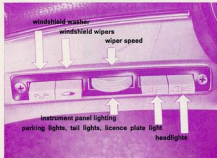
The addition of 25% pure spirit to the water in winter will protect it from freezing down to a temperature of approximately -12° C (10° F). An odorless anti-freeze solution can be used instead of methylated spirits. The correct mixing proportions are given by the manufacturers.

The wiper blades should be removed occasionally and thoroughly cleaned with a hard brush and methylated spirits or a strong detergent solution. Particularly during long

dry periods they tend to become clogged with tar splashes, oil and insects. The blades should be replaced once a year.

The lights are switched on with the two press buttons on the right or the right hand pull switch on the instrument panel. When the parking lights are switched on, a green warning lamp in the fuel gauge dial lights up. The dimmer switch is located in the lever of the turn indicator switch on the steering column.

The instrument lighting can be varied in brightness.



The interior light is situated above the left door. The switch is operated by pushing in the light by hand as follows:

Light in central position

Interior light comes on when a door is opened

Light pressed in on right

Interior light switched on, with doors closed

Light pressed in on left

Interior light switched off, with doors open

Turn indicator lever. You can operate the turn indicator lever with your fingers without taking your hands off the steering wheel. Together with the button situated in it, the indicator lever has four functions:

With the ignition switched on, the indicators are operated as follows:

Lever upwards - right indicator
Lever downwards - left indicator

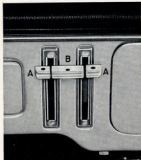
Two warning lights in the fuel gauge flash whilst the indicators are in operation. The indicators are self-cancelling.

With the lever in the same positions and the ignition switched off, the left or right parking lamps are illuminated. The parking lamps are positioned on the sides of the front fenders.

When the headlights are switched on, the button in the indicator lever serves as a dimmer switch. A blue high beam warning light is situated in the fuel gauge.

The button in the indicator lever operates the headlamp flasher when the headlights are switched off or when the parking lights are on. If the button is kept depressed, the high beam comes on when the lights are switched off, and the low beam when the parking lights are on.





Fresh air ventilation. The fresh air ventilation can be regulated by the three levers on the instrument panel. The two outer levers — A — operate the ventilation for each side of the car individually through two vents on the lower edge of the windshield. The center lever — B — regulates the ventilation at foot level. The amount of fresh air entering will increase the further the levers are pushed down. When all three levers are in the upper position, the ventilation is closed.



Further ventilation is provided by the vent wings in the door and the hinged quarter windows.

The warm and fresh air must be cleared to ensure correct vehicle ventilation. Even in cool weather a vent wing or hinged window should be slightly opened. The windows will then remain clear.



The sliding roof is operated by a crank which is situated in a recess between the sun visors.

After pulling down the handle, the roof can be opened or closed as required. It will remain fixed in any position.

To close the sliding roof, crank it fully forward to the stop. Then turn the handle back a little and fold it into the recess.



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



The ash tray in the instrument panel can be removed by depressing the spring.

When removing the rear ash trays, lift them out of the bottom of the housing first and when inserting, engage them in the spring first and then press into the housing.



The luggage compartments are theft-proof when the car is locked. The knob for the front hood is situated under the instrument panel on the left. The hood is released when the knob is pulled and is opened by pressing up the catch beside the lock.

When closing the hood, ensure that the lock engages firmly. Never attempt to close the hood by pressing at the side, always press it near the lock.



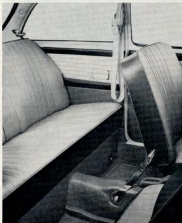
The rear hood is opened by pulling the lever in the left-hand lock pillar.

The light in the rear luggage compartment operates only when the lights are on and goes out when the hood is closed.



The engine compartment is accessible from the rear luggage compartment. Release the buttons and roll back the lining. Turn the handles on the engine compartment lid to the left, raise the lid and secure it by pressing it against the spring on the upper edge of the luggage compartment. If you want the luggage compartment light to illuminate the engine, remove the engine compartment lid.

Turn the handles to the right to lock the engine compartment lid and secure them by pressing them down fully.



Safety belts can be obtained from every VW Dealer. The belts for the driver and front passenger are attached to the lock pillar and the frame tunnel. You will find the mountings for the rear seat passenger belts to the left and right of the rear seat back rest and under the back rest above the frame tunnel.



Squareback Sedan

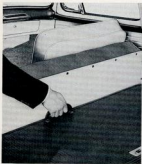
Apart from the front luggage compartment there is also a large load compartment which is accessible through the rear door.

The rear door is opened by the knob under the licence plate. Lift the door by the recess under the knob. It is held in the fully open position by spring tension.

To close it you merely have to let it fall gently until it engages in the lock. It is locked by the same key which you use for the two doors.



The loading surface can be increased by more than half its size by tipping the rear seat forward. To do this, raise the seat cushion and tip the backrest forward with the handle.



When the seat has been tipped forward, the seat cushion and backrest are held by two retaining pins. In the normal position a retaining device automatically prevents the backrest from tilting forward.



The load compartment lighting. An additional interior light for the load compartment is situated on the roof member above the rear door.

Please check

the brakes, lighting and amount of fuel before every trip. The oil level and the tire pressures should also be checked at regular intervals.



The fuel tank capacity of 40 liters (10.6 US gall.; 8.8 Imp. gall.) is sufficient for 450 km (280 miles). When the ignition is switched on, the fuel gauge in the instrument panel will show you how much fuel you actually have. When the needle registers "R" (reserve) it is time to fill up at the next opportunity. The remaining 5 liters (1.3 US gall.; 1.1 Imp. gall.) in the tank will last for about 55 km (34 miles).

The Volkswagen 1500 with the 54 bhp engine can be operated satisfactorily on all normal commercial fuels which fulfil the octane requirements of the engine (90 ON). If regular fuels with adequate anti-knock properties are not available, premium fuels should be used or mixed with the regular fuel.

The Volkswagen 1500 S (66 bhp engine) must only be run on premium fuel with an octane rating of at least 95. *)

*) Premium fuels with this rating are not available in all countries. In cases of doubt, please consult your VW agent.

The choice of the brand of fuel is left to you. All good brands of fuel are distinguished by their consistent composition, adequate anti-knock properties and freedom from harmful ingredients. The fuel tank filler is under the front hood which is opened by the knob under the instrument panel.

The brakes must be checked before starting out on a trip as the safety of your car depends mainly on them. When the car is in motion, depress the brake pedal a few times to make sure that the brakes are working efficiently.

The stop and turn indicator lights are an essential part of the lighting system. The ignition has to be switched on if you wish to check them.

If a turn indicator bulb is defective, the warning lights in the fuel gauge will come on and go out again. Moreover, the other indicator on the same side of the car will flash considerably quicker.

The stop lights only operate when the foot brake is applied.



The oil level should only be checked when the engine is not running. It must always be between the two marks on the dipstick and must never fall below the lower mark. Wipe the dipstick with a clean rag before checking the oil level.

If possible, always use the same brand of HD oil.

The viscosity grades of the different oils are shown by the designations SAE 30, SAE 10 W and so on. The viscosity of a lubricant is an indication of its resistance to flow at a given temperature. The lubricant chart on page shows you which oil to select to suit the existing temperature.

In some countries the engine oils are classified according to the API system (API = American Petroleum Institute). With this system, the HD oils suitable for the VW engine are referred to as "For Service MS".

No additives of any kind should be mixed with HD oils.



Tires. Correct tire pressures are essential for ensuring the excellent road-holding properties of your car. The pressures should be as follows:

Sedan

two occupants: front 1.1 kg/cm² (16 psi.)
rear 1.7 kg/cm² (24 psi.)

fully loaded: front 1.2 kg/cm² (17 psi.)
rear 1.8 kg/cm² (26 psi.)

Squareback Sedan — 375 kg (826 lbs.) —

with half payload: front 1.2 kg/cm² (17 psi.)
rear 1.8 kg/cm² (26 psi.)

with full payload: front 1.2 kg/cm² (17 psi.)
rear 2.6 kg/cm² (37 psi.)

Squareback Sedan — 465 kg (1025 lbs.) —

with half payload: front 1.2 kg/cm² (17 psi.)
rear 1.8 kg/cm² (26 psi.)

with full payload: front 1.2 kg/cm² (17 psi.)
rear 3.0 kg/cm² (43 psi.)

For long, high-speed motorway trips, all tire pressures should be increased by 0.2 kg/cm² (3 psi.) at front and rear.

Starting the engine

The ignition and starter are switched on, one after the other, by means of the steering ignition lock. As starter operation stresses the battery heavily, other big current users, such as the headlights, windshield wiper and radio should not be switched on when starting. Make sure, also, that the gear shift lever is in neutral.

When switching on the ignition, turn the key half a turn from the "Halt" position or a quarter of a turn from the "Garage" position to the right. The red generator warning light and the green oil pressure warning light in the fuel gauge will come on. Operate the starting motor immediately by turning the key further to the right.



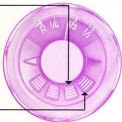
At temperatures above freezing point or when the engine is still warm, depress the accelerator pedal slightly while operating the starter. Depress the accelerator pedal fully only when the engine is very warm.

At temperatures below freezing point and when the engine is cold, depress the accelerator pedal fully and then release it slowly before switching on the ignition so that the automatic starting device can operate. As the engine and transmission oils tend to become thick when cold, you should also declutch when starting so that the starter motor only has to turn the engine.

As soon as the engine starts, release the ignition key so that the starter is switched off. You can move off at once. The automatic starting device regulates the mixture and idling speed to suit the operating temperature. Do not race the engine when it is still cold.

If the engine does not start within the first 10 seconds, pause for about the same length of time to rest the battery before repeating the starter operation. The ignition will have to be switched off first and then on again as a non-repeat lock in the switch prevents the starter from being operated repeatedly when the ignition is on and thus being damaged by the engine when it is running. The starting procedure should not be interrupted if the engine is heard to fire a few times.

The generator warning light goes out when the speed is increased. If it comes on while you are driving, the generator is no longer charging. In this case you can proceed but, if possible, only as far as the next workshop as otherwise the battery will soon get run down.



The warning light for the oil pressure goes out when the engine is started. If this warning light comes on whilst driving, you must stop at once as the chances are that the oil circulation has been interrupted. Check the oil level at once. If the oil level is correct, get in contact with the nearest VW workshop.

Caution

Be careful when starting the engine in the garage. Provide ample ventilation so that the exhaust fumes, which contain carbon-monoxide gas, can escape.

Practical Driving

Gear shifting

Glance occasionally at the speedometer when driving. Do not race or labor the engine in the individual gears. This practice can have a detrimental effect on the life of the engine.

Shift the gears within the permissible speed ranges only:

1st gear
0 to 30 kph (0—18 mph)



2nd gear
10 to 60 kph (6—37 mph)



3rd gear
30 to 90 kph (18—56 mph)



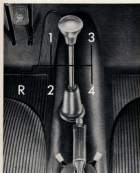
Top gear
from 45 kph (28 mph)



You can drive very economically between: 10 and 35 kph (6 and 21 mph) 30 and 60 kph (18 and 37 mph) 45 and 100 kph (28 and 62 mph)

The top and cruising speed is 125 kph (78 mph) on the VW 1500 and 135 kph (84 mph) on the VW 1500 S.

Engage the reverse gear only when the car is stationary. A locking device prevents unintentional shifting. Depress the gear lever slightly and then move it to the left and to the rear to engage reverse.



Shifting to a lower gear

Shift down to a lower gear in good time when on inclines and also when accelerating from low speeds. The transmission of your car is fully synchronized so please do not hesitate to shift the gears.

Certain speed ranges have to be adhered to when shifting to a lower gear. Shifting down to a lower gear at excessive speeds puts an unnecessary strain on the transmission. On the other hand, very low speeds in too high a gear are also harmful to the engine. Shift down from 4th to 3rd gear approximately between 90 and 45 kph (56 and 28 mph) and from 3rd to 2nd gear between 60 and 30 kph (34 and 18 mph). The 1st gear is only used for moving off, driving at walking pace or on very steep inclines.

When shifting gears, it is absolutely essential to depress the clutch pedal fully. Incomplete declutching makes gear shifting difficult and leads to rapid wear of the synchronizer stop rings.

Brakes

The brake responds to even the slightest foot pressure. Apply the brakes carefully and avoid locking the wheels. Locked wheels will not shorten the braking distance but may cause you to lose control over the vehicle and will affect the tires.

When driving downhill, make use of the braking effect of the engine and shift to that gear which you would use in driving uphill. The ignition must never be switched off when going downhill.

Violent braking can only be justified in an emergency. Nevertheless, it is advisable to check the full braking effect at certain intervals so that you will be familiar with the behaviour of the car and the actual braking distance.

Economical operation is one of the outstanding features of your car. However, getting a few extra miles from each gallon depends on your driving habits:

Make use of the lower speeds ranges of the individual gears. For instance on level roads at a speed of between 45 and 60 kph (28 and 37 mph) use the 4th gear in preference to the 3rd gear.

Accelerate gradually. Under normal driving conditions shift to 2nd gear at 10 kph (8 mph), to 3rd gear between 30 and 35 kph (18 and 21 mph) and to 4th gear between 45 and 60 kph (28 and 37 mph).

Only use the full acceleration and excellent braking effect of your car when it is absolutely necessary.

Do not pump the accelerator pedal unnecessarily when driving or when the vehicle is stationary.

Do not continue to accelerate on inclines when your speed drops, shift in good time to a lower gear. There are, however, no hard and fast rules for this: If, for instance, the speed drops on an incline in 4th gear from 110 kph (68 mph) to 90 kph (55 mph) and lower, it is best to shift to the 3rd gear between 80 and 70 kph (50 and 43 mph). If you are driving at a speed of between 45 and 60 kph (28 and 37 mph) in 4th gear on a level road shift to 3rd gear right at the beginning of the incline.

Reduce your speed in good time before corners and when stopping. Do not coast downhill.

High speeds always result in increased fuel consumption. When accelerating, depress the accelerator pedal slowly and only to such an extent as is necessary to reach the desired speed. On long journeys in particular this method will prove very economical.

The most advantageous engine operating conditions result from brisk driving and correct gear shifting.

Parking

Parking in limited spaces can be made quite simple:

Stop your car level with the car in front of the space. Turn the steering wheel sharply to the right and reverse slowly into the gap:



When the front bumper of your car is level with the rear bumper of the car ahead of you, turn the steering wheel fully to the left and back up further towards the curb:



Now turn the steering wheel to the right again and pull up a little bit, until both ends of the car are as close to the curb as possible:



When parking on a steep slope, set the handbrake and also engage first or reverse gear. Remove the key at the "Halt" position only when the vehicle is stationary. This locks the steering and protects the vehicle against theft.



Towing

Just in case you wish to attach a towrope to your vehicle one day, please note that the bumpers are not suitable for this purpose. At the rear we recommend that the rope is attached to a lower shock absorber bracket. This point is not very easy to reach but it will at least ensure that your desire to help does not result in damage to your vehicle. At the front, the rope should be attached to the lower axle tube.



Cold Weather Hints

Your car has two features which you will appreciate in the winter: Air cooling and heating. You can leave your car out in the bitter cold without fear. Its air-cooled engine will always be ready to start and supply warm air for the interior of the car.

The warm air heating

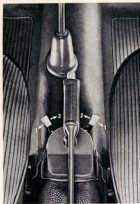
can be fully regulated. The distribution of warm air can be varied to suit the wishes of the occupants by means of controllable outlets at foot level.

Up to Chassis No. 0221974, the heating is controlled with a knob near the gearshift lever:

Turning to left — heating on

Turning to right — heating off

From Chassis No. 0221975, the heating is controlled by means of two small levers between the front seats. The left-hand lever



1 - off

2 - on

turns all the heating on and off and the right-hand lever controls the heating in the rear foot well.

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

If you open a vent wing or a quarter window when the heating is on, the heater output will increase noticeably because the engine fan can then force the warm air into the interior more easily.

Never attempt to influence the cooling and heating of your car in winter by covering the air intake slots in the rear fenders. These slots must always remain open to ensure that fresh air can flow to the fan.

The SAE 30 engine oil will thicken at temperatures below freezing point and result in difficult starting. Change over to the thinner SAE 10 W engine oil at oil changes when temperatures under freezing point are expected.

If you drive mainly short distances and in city traffic in the winter we recommend that you have the oil changed every 2.500 km (1.500 miles). If you only cover a few hundred miles a month under these conditions it is advisable to have the oil changed every 6 to 8 weeks. In the warmer seasons, additional oil changes are unnecessary and uneconomical.

In territories where exceptionally low temperatures prevail (below -25°C / -13°F), SAE 5 W oil should be used instead of SAE 10 W. The oil should then be changed every 1.250 km (750 miles).

The SAE 90 transmission oil can generally be used all the year round. It need only be replaced by the thinner SAE 80 grade in countries with arctic climates.

The battery requires special care in winter because of the increased consumption of current when starting the engine and using the lights at night. Furthermore, its efficiency decreases at low temperatures. If the car is mostly used over short distances or in city traffic, it is advisable to have the battery recharged occasionally. The connections between battery and starting motor must be kept perfectly clean.

The spark plugs should not have an excessively large gap especially in winter. The normal spark plug gap is 0.7 mm (.028"). In extremely cold weather the gap can be reduced to between 0.4 and 0.5 mm (.016" and .020") to facilitate starting.

The brakes are exposed to splash water and condensation which in winter is apt to freeze in the brake drums. Therefore, when parking your car, do not set the handbrake, but shift to first or to reverse gear.

The door locks can freeze up in winter, especially if water gets into the lock cylinders when washing the car. Do not aim the water jet directly at the locks, but instead, cover up the key holes when washing. A frozen lock can be opened by warming the key before insertion and then squirting anti-freeze into the lock cylinder straight away.

Tires with badly worn treads are very dangerous particularly in the winter so ensure that they are replaced in good time.

M+S tires with special heavy treads give good road holding in snow and slush. They can be fitted to all four wheels. M+S tires should however, never be fitted to the front wheels only.

Better still are the M+S ice tires (spiked) which increase the safety margin even on hard snow and ice. Even with these tires, which should always be fitted to all four wheels, you should not allow yourself to be misled into driving faster than you would under the same conditions with normal M+S tires.

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

Clips may have to be fitted to the lower torsion arms when M+S or spiked tires are used in order to prevent the tires from rubbing on the wheel housings on full lock.

Snow chains, in conjunction with normal and winter tires, can only be used on the rear wheels. Only thin chains which do not stand clear of the tire tread and walls more than 15 mm, including tensioner, are suitable. When driving over long stretches of road which are free of snow the chains should be removed. They serve no useful purpose here and merely damage the tires and wear out quickly.

Care of the Car

Clean and smart appearance. To keep your car looking smart and new should be a matter of pride to the driver or owner. It is our object to provide you with paintwork which not only looks good and has a sparkling lustre but is most durable. A chemical treatment protects the body against rust and anchors the synthetic resin enamel to the metal.

Even the best paint work requires regular care. You will realise the importance of this if you consider that the paint is exposed to sunshine, rain, dust and dirt.

Washing

To wash your car you require a soft sponge for the body, a soft brush for the wheels, a sturdy, longhandled brush for the chassis, and plenty of water.

The chassis and lower part of the body should first be flushed with water to soak off the dirt, and afterwards a brush should be used.

Spray the exterior finish of body and wheels evenly with water until dirt is soaked off. Do not allow a powerful jet of water to hit the painted surface. Using plenty of clear water, remove dirt with a sponge. Clean the sponge at short intervals to avoid scratching the paint work.

There are many proved auto soaps and detergents available which greatly facilitate this job. Do not buy just any product, let your VW dealer advise you. It is of utmost importance to rinse the body thoroughly with water to ensure that no traces of the detergent remain on the body. After washing, dry off with a clean chamois to prevent water spots from forming.

Preservation (Waxing) should be carried out at regular intervals of between 6 and 8 weeks. The object of waxing is to restore to the finish certain substances it has lost by exposure to the weather. At the same time a protective water-repellent coat of wax is applied to the body.

The "Genuine VW Preservative" (L 190) was specially produced for the Volkswagen and is obtainable from every VW dealer. After washing and drying the car thoroughly, apply the preservative thinly with a soft cloth. Let it dry for approximately 20 minutes and then rub it down with polishing cotton or a soft polishing cloth until iridescent colours can no longer be seen when you look across the polished surface at an angle.

Do not forget to wax car after each detergent washing as the intensive cleansing properties of the chemical detergent will partially dissolve the protective film of wax.

Polishing. You should polish your car only if its appearance has been affected as a result of insufficient care, or if the application of the preservative no longer restores the original lustre. Avoid the use of abrasives or chemically harmful products.

A special polish for the synthetic-resin enamel finish is also available from your Volkswagen dealer under the designation "Genuine VW Polishing Fluid" (L 170). Prior to applying the polish, the car must be washed and dried carefully. The polish should be applied with a soft clean cloth or polishing cotton — use a straight horizontal or vertical motion rather than a circular motion. After rubbing for some time you will notice a slight resistance, which indicates that the ingredients of the polish have settled in the finish and that the solvent has evaporated. Now take clean polishing cotton and rub the body down until the polish is restored.

To prevent the polishing fluid from drying off prematurely, do not apply it on too large an area of the body at a time. A subsequent application of the preservative and your efforts will be rewarded with a long-lasting shine.

Never wash, wax or polish the car in sunlight.

Tar spots. Tar splashes have a tendency to corrode the finish within a short time and should be removed as soon as possible with Genuine VW Preservative.

On the road you usually have nothing at your disposal but fuel. Kerosene or turpentine may also be used. After this, the treated spots should be washed with a mild, luke warm detergent solution, and rinsed, in order to remove traces of the cleansing agent.

Insects are caught, especially in hot weather, on the front of the car and on the windshield. Insects should not be allowed to remain on the paint finish for long and should be removed with water and a sponge. Once baked on they can only be removed with luke warm detergent solution.

Parking under trees. Vehicles which are parked under trees for long periods in summer are often found to be covered with spots. These spots can be removed fairly easily with luke warm detergent solution if the treatment is not delayed too long. It is advisable to apply a coat of preservative afterwards.

Chrome parts should be treated with "Genuine VW Chrome Cleaner Chromlin" when dry. Apply Chromlin thinly and allow to dry for 10 minutes before polishing with a dry cloth.

Cloth upholstery. If a vacuum cleaner is not available, the upholstery should be cleaned thoroughly with a brush or whisk broom. Stains can generally be removed with luke warm soap suds. Grease and oil stains are removed with cleaning paste or cleaning fluid. Do not pour the cleaning fluid directly on the upholstery as otherwise rings will form. Moisten a clean, uncoloured cloth with the fluid and rub with a circular motion, starting outside the spot and working inwards.

Leatherette can best be cleaned with a soft cloth or soft brush. If very dirty, a luke warm soap solution or a dry foam cleaner can be used.

Seats and backrests upholstered entirely with leatherette must only be cleaned with a dry foam cleaner. The wearing surfaces are made of a special leatherette which is permeable to air and liquid cleaners would immediately penetrate into the textile backing.

Grease and paint spots should be wiped off before they dry on. Soaked-in spots can be removed by rubbing carefully with a cloth moistened with benzine or methylated spirits. Spots caused by shoe polish can be removed with turpentine. Use these agents carefully and sparingly as otherwise they tend to dissolve the dust-repellent finish of the leatherette. Solvents such as trichlorethylene or paint thinner must not be used for cleaning. After cleaning, the leatherette should be dried thoroughly with a soft cloth. So-called preservatives are not suitable for leatherette because they do not soak into the material and merely collect dust and soil clothing.

The windows can be cleaned best with a clean sponge and warm water. A glass cleaning solution should only be added to the water in exceptional cases as these solutions tend to affect the paint preservative. Always use a special clean leather to dry the windows. This leather must not be used for the paintwork in any circumstance as most paint cleaners and polishes contain ingredients which will cause unpleasant streaks to appear on the windshield when it rains, even if only the smallest trace is present.

These streaks can only be removed with a good windshield cleaner and a lot of care. Do not forget the the windshield wiper blades.

Door and window weatherstrips. It is important to keep the rubber parts undamaged and supple to ensure perfect sealing. To retain the original flexibility of the rubber, these parts should be coated occasionally with talcum powder.

Airing the interior. If the car is left in your garage for a long period it must be aired regularly. Permit air to circulate freely by opening the doors and lowering the windows to prevent the formation of mould and damp stains.

Care of the Tires and Wheel Changing

Apart from the tire pressures, your driving habits also affect the tire wear considerably. Rapid acceleration, violent braking and cornering result in more excessive tire wear as compared to careful driving.

Avoid overloading the car and protect the tires from intense sunlight, fuel or oil.

The tires should be checked occasionally for foreign matter and damage. The tire tread should never be allowed to wear down to less than 1 mm (.04") in depth which is the absolute minimum required for safe usage. If the tires show signs of uneven wear after a considerable mileage consult your local VW dealer.

For smooth running at high speeds and long tire life, it is important to have the wheels balanced statically and dynamically. As the wheels can get out of balance owing to natural tire wear, they should be balanced every 10,000 km (6,000 miles).

When mounting the tires, the red mark should be positioned at the valve.

Changing Wheels

The spare wheel, jack and tools are found under the front hood which is opened by means of the knob under the instrument panel. The jack is secured by a clip near the spare wheel.

Set the hand brake.

Take off the wheel cap with the removal tool and loosen all five wheel bolts about one turn with the wrench and operating bar.

Insert the jack in the square tube below the sill panel.



Raise vehicle until wheel is clear of ground.

Remove wheel bolts and take off the wheel.

Raise the car until the five holes in the wheel are nearly lined up with the holes in the brake drum.



Insert one wheel bolt and tighten it to such a degree as to allow the wheel to be swung round this point by hand until the remaining holes in the wheel and brake drum coincide. Insert the other wheel bolts.

Tighten the wheel bolts until the wheel, centered by the spherical shape of the screw heads, contacts the brake drum all round.



Fully lower the vehicle.

Tighten all bolts evenly.

Install wheel cap with a sharp blow with the hand.

Jack operation

Up to Chassis No.
0 483 592



A — Lifting link B — To lower

Variant only
from Chassis No. 0 221 975
to Chassis No. 0 483 592



A — Raise and lower by turning with socket and bar

From Chassis No.
315 000 001



A — Lifting link B — Lowering link

Bulbs and fuses



Headlight bulb replacement

Loosen the Phillips screw at the bottom of the headlight rim and take out the lens and reflector unit.

Turn the cap to the left and take the holder out of the reflector.

Pull the connector off the bulb base and replace the bulb.

Hold the new bulb with a clean cloth or a paper serviette etc. and not with the bare hand. The lug in the lamp holder must engage in the notch provided in the reflector.

Insert the cap so that the contact strip is located on the base of the parking light bulb.

Have headlight adjustment checked.



Front turn indicator bulb replacement

Remove two Phillips screws.

Remove lens and replace the bulb.

When installing, make sure that the seal is correctly seated.



Stop, turn indicator or tail light bulb replacement

Remove two Phillips screws.

Take off lens.

Replace bulb.

Position of bulbs:

Upper — Turn indicator bulb

Center — Tail light bulb

Lower — Stop light bulb

When installing the lens, make sure that the seal is correctly seated. Do not overtighten the screws.



Parking lamp bulb replacement

Remove Phillips screw.

Remove lens and replace bulb.

When installing, engage the lens in the rear of the lamp base first.



Licence plate light bulb replacement

Open rear luggage compartment lid.

Remove both Phillips screws and take off lens with bulb holder.

Pull off bulb holder from lens.

Replace bulb.

When installing, make sure that the cable grommet is correctly seated.

Bulb chart

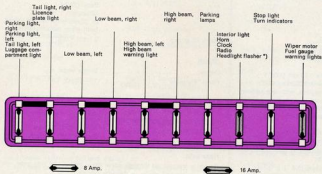
V = Volt, W = Watt

Bulb for	Designation according to German Standard DIN 72 601	Part Number
Headlights	A 6 V 45/40 W	N 17 705 1
Parking lights and parking lamps	HL 6 V 4 W	N 17 717 1
Turn indicators, front and rear and stop light ..	R 6 V 18 W	N 17 731 1
Tail lights	G 6 V 5 W	N 17 718 1
Licence plate light	G 6 V 10 W	N 17 719 1
Speedometer, clock, fuel gauge, warning lights	J 6 V 1.2 W	N 17 722 1
Interior and luggage compartment lights	K 6 V 10 W	N 17 723 1

Replacing Fuses

The fuse box is located to the left under the instrument panel. When a fuse has blown, it is not sufficient merely to replace it by a new one. Inspect the electrical system for evidence of short circuits or other faults.

Under no circumstances use fuses which have been patched with tin foil or wire as they would be liable to cause severe damage elsewhere in the electrical system. We suggest that you always carry a few fuses, i. e. 16 Amp. fuses for the wiper motor and 8 Amp. fuses for all the other electrical fittings.



*) from Chassis No. 0423140

Technical Data

Engine

Design	4 cylinder, 4 stroke in rear of car
Arrangement of cylinders	Two pairs, horizontally opposed
Bore	83 mm (3.27")
Stroke	69 mm (2.72")
Capacity	1493 c.c. (91.10 cu. ins.)
Compression ratio	
- 54 bhp engine up to Engine No. 0065 745	7.2:1
- 54 bhp engine from Engine No. 0065 746	7.8:1
- 66 bhp engine	8.5:1
Valves	Overhead
Valve clearance with engine cold	intake 0.20 mm (.008") exhaust 0.30 mm (.012") on engines with appropriate sticker; intake 0.10 mm (.004") exhaust 0.10 mm (.004")
Maximum output (SAE)	
VW 1500	54 bhp at 4000 rpm
VW 1500 S	66 bhp at 4800 rpm
Lubrication	Force feed by gear pump. Oil cooler
Oil capacity	2.5 liters (5.3 U.S. pints; 4.4 Imp. pints)
Fuel delivery	Mechanical fuel pump
Carburetors - 54 bhp engine	1 side draft SOLEX 32 PHN
- 66 bhp engine	2 down draft SOLEX 32 POSIT

Cooling	Air cooling by fan mounted on crankshaft
Battery	6 Volt, 77 Amp.
Starting motor	6 Volt, 0.6 bhp.
Generator	6 Volt, 200 Watt at 2600 rpm. with regulator
Firing order	1 - 4 - 3 - 2
Ignition timing	10° before TDC — or, if pink-ing occurs due to use of low octane fuel 7.5° before TDC
Breaker point gap	0.4 mm (.016")
Spark plugs	14 mm thread Boech W 175 T 1 Beru 175/14 Champion L 87 y. or plugs with similar values from other manufacturers
Spark plug gap	0.7 mm (.028")

Clutch

Design	Single plate, dry
Pedal free-play	10—20 mm (.4"—.8")

Transmission

4 forward speeds, 1 reverse				
All forward gears synchronized and silent.				
Gear ratios	First	3.80:1	Third	1.32:1
	Second	2.06:1	Fourth	0.89:1
			Reverse	3.88:1

Rear axle

Power is transmitted through spiral drive pinion and ring gear, via two swinging half shafts to the rear wheels.	
Ratio	4.125:1
Oil capacity of transmission	3.0 liters (6.3 U.S. pints; 5.3 Imp. pints)

Chassis

Front suspension	2 torsion bars, stabilizer
Rear suspension	2 torsion bars Squareback Sedan — 460 kg and 465 kg — additional torsion bar
Shock absorbers	Double-acting telescopic shock absorbers at front and rear
Steering	Roller type with divided tie rod, hydraulic steering damper
Turning circle	Approximately 11.1 m (35.5 ft.)
Wheels	Disc wheels with drop center rims 4 1/2 J X 15
Tires	
Sedan and Squareback	
Sedan 375 kg	6.00—15 L, tubeless
Squareback Sedan 460 kg and 465 kg	6.00—15 L 6 PR, tubeless
Inflation pressures	
Sedan	
1 to 2 occupants	Front 1.1 kg/cm ² (16 psi.) Rear 1.7 kg/cm ² (24 psi.)
3 to 5 occupants	Front 1.2 kg/cm ² (17 psi.) Rear 1.8 kg/cm ² (26 psi.)
Squareback Sedan — 375 kg	
with half payload	Front 1.2 kg/cm ² (17 psi.) Rear 1.8 kg/cm ² (26 psi.)
with full payload	Front 1.2 kg/cm ² (17 psi.) Rear 2.6 kg/cm ² (37 psi.)
Squareback Sedan — 460 and 465 kg	
with half payload	Front 1.2 kg/cm ² (17 psi.) Rear 1.8 kg/cm ² (26 psi.)
with full payload	Front 1.2 kg/cm ² (17 psi.) Rear 3.0 kg/cm ² (43 psi.)
Wheelbase	2400 mm (94.5")

Track	Front 1310 mm (51.6") Rear 1346 mm (53.0")
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Toe-in (unladen)	
up to Chassis No. 0 127 587	3 to 5 mm (.12—.2")
from Chassis No. 0 127 588	4 to 6 mm (.16—.24")

Camber (unladen)	
up to Chassis No. 0 127 587	1° 20' ± 20'
from Chassis No. 0 127 588	1° 20' ± 10'

Foot brake	Hydraulic, acting on all wheels
Hand brake	Mechanical, acting on rear wheels

Performance

Maximum and cruising speed

VW 1500	125 kph (78 mph.)
VW 1500 S	135 kph. (84 mph.)

Climbing ability	Sedan ¹	Squareback Sedan ⁴		
		375 kg	465 kg	
	First gear	45.5 %	40.0 %	38.0 %
	Second gear	23.5 %	20.0 %	19.0 %
	Third gear	14.0 %	12.0 %	11.5 %
	Fourth gear	7.5 %	6.5 %	6.0 %

¹ with 2 persons

⁴ half payload

Fuel

The consumption of the VW 1500 according to DIN 70030 is approximately 8.4 liters per 100 km i.e. 28 mpg. U.S., 33.5 mpg. Imp. (Measured consumption plus 10% with half load and at a steady 3/4 of top speed 94 kph./58 mph.).

Fuel rating 90 octane (Res. F 1)

The consumption of the VW 1500 S according to DIN 70030 is approximately 7.8 liters premium fuel per 100 km i.e. 30 mpg. U.S., 36 mpg. Imp. (Measured consumption plus 10% with half load and at a steady 3/4 of top speed 101 kph./63 mph.).

Fuel rating Premium 95 octane (Res. F 1)

Oil consumption	0.5–1.0 liters per 1000 km 1.7–3.4 U.S. pints per 1000 miles 1.4–2.8 Imp. pints per 1000 miles
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Refill requirements

Fuel tank	40 liters (10.6 U.S. galls.; 8.8 Imp. galls.)
Engine	2.5 liters of engine oil (5.3 U.S. pints; 4.4 Imp. pints)
Rear axle and transmission	2.5 liters of hypoid oil (5.3 U.S. pints; 4.4 Imp. pints)
Steering (up to Chassis No. 315 079 950)	0.16 liter hypoid oil (.35 U.S. pints; .28 Imp. pints)
Brakes	0.25 liters of brake fluid (0.53 U.S. pint; 0.44 Imp. pint)

Oil bath air cleaner

54 bhp engine	approx. 0.25 liter engine oil (.53 U.S. pints; .44 Imp. pints)
66 bhp engine	approx. 0.38 liter engine oil (.8 U.S. pints; .67 Imp. pints)

Container for windshield washer

from Chassis No. 315 000 001 ... approx. 2 liters of water

approx. 1 liter

Dimensions

	Sedan	Squareback Sedan
	Length	4225 mm (168.3")
Width	1605 mm (63.2")	1605 mm (63.2")
Height	1475 mm (58.1")	1465 mm (57.7")
Ground clearance	149 mm (5.9")	144 mm (5.8")

Weights in kg (lbs)	Sedan up to Chassis No. 0 066 739	Sedan	Squareback 375 kg	Squareback 460 kg	Sedan	Squareback 375 kg	Squareback 460 kg
		from Chassis No. 0 066 740 up to Chassis No. 0 483 592			from Chassis No. 315 000 001 up to Chassis No. 315 220 883		
Unladen weight	860 (1896) ¹⁾	880 (1940) ¹⁾	985 (2171) ¹⁾	995 (2193) ¹⁾	910 (2006) ¹⁾	1025 (2259) ¹⁾	1025 (2259) ¹⁾
Maximum permissible load	390 (860)	400 (881)	375 (826)	460 (1014)	400 (881)	375 (826)	465 (1025)
Permissible total weight	1250 (2756)	1280 (2821)	1360 (2998)	1455 (3207)	1310 (2888)	1400 (3086)	1490 (3284)
Permissible front axle load	525 (1158)	550 (1212)	525 (1158) ¹⁾	525 (1158) ¹⁾	550 (1212)	550 (1212)	550 (1212)
Permissible rear axle load	725 (1598)	750 (1653)	920 (2028)	975 (2149)	790 (1741)	940 (2072)	1020 (2248)

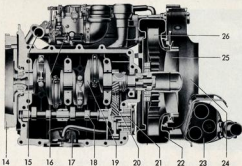
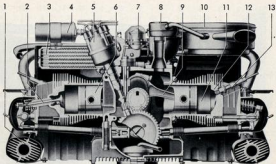
¹⁾ without driver

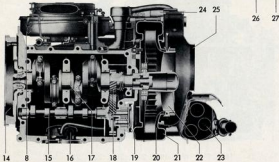
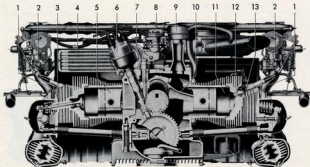
²⁾ including driver

³⁾ from Chassis No. 0 221 975 : 550 kg

54 bhp Engine

- 1 - Heat exchanger
- 2 - Valve
- 3 - Oil cooler
- 4 - Ignition coil
- 5 - Ignition distributor
- 6 - Piston
- 7 - Fuel pump
- 8 - Crankcase breather
- 9 - Connecting rod
- 10 - Oil bath air cleaner
- 11 - Cylinder
- 12 - Cylinder head
- 13 - Spark plug
- 14 - Flywheel
- 15 - Intake manifold
- 16 - Carburetor
- 17 - Oil strainer
- 18 - Camshaft
- 19 - Crankshaft
- 20 - Camshaft drive gears
- 21 - Oil pump
- 22 - Fan housing
- 23 - Muffler
- 24 - Cooling air intake housing
- 25 - Crankshaft pulley
- 26 - Fan



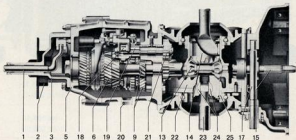
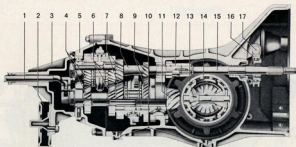


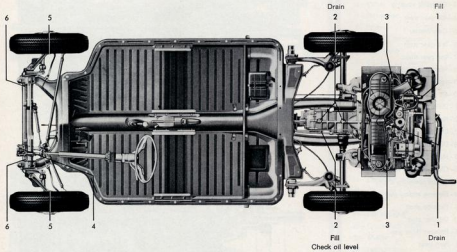
66 bhp Engine

- 1 - Intake pipe
- 2 - Carburetor
- 3 - Valve
- 4 - Oil cooler
- 5 - Piston
- 6 - Ignition distributor
- 7 - Fuel pump
- 8 - Oil bath air cleaner
- 9 - Crankcase breather
- 10 - Connecting rod
- 11 - Cylinder
- 12 - Cylinder head
- 13 - Spark plug
- 14 - Flywheel
- 15 - Camshaft
- 16 - Oil strainer
- 17 - Crankshaft
- 18 - Camshaft drive gears
- 19 - Oil pump
- 20 - Fan
- 21 - Fan housing
- 22 - Crankshaft pulley
- 23 - Muffler
- 24 - Ignition coil
- 25 - Cooling air intake housing
- 26 - Thermostat
- 27 - Heat exchanger

Transmission

- 1 - Transmission shift lever
- 2 - Bonded rubber mounting
- 3 - Gearshift housing
- 4 - 4th gear train
- 5 - Gear carrier
- 6 - 3rd gear train
- 7 - 2nd gear train
- 8 - Main drive shaft, front
- 9 - 1st gear train
- 10 - Oil drain plugs
- 11 - Drive pinion
- 12 - Reverse gear
- 13 - Differential pinion
- 14 - Differential side gear
- 15 - Main drive shaft, rear
- 16 - Clutch release bearing
- 17 - Clutch operating shaft
- 18 - Reverse sliding gear
- 19 - Reverse shaft
- 20 - Oil filler plug
- 21 - Reverse drive gear
- 22 - Ring gear
- 23 - Rear axle shaft
- 24 - Fulcrum plates
- 25 - Differential housing





Lubrication Chart

SAE 10W/40

Lubricants

No.	Lubrication Points	Every
1	Engine: Change oil, clean oil strainer	5,000 km 3,000 miles
2	Transmission: Check oil level	
	Lubricate door and hood locks, door hinges	
3	Lubricate carburetor linkage	
4	Steering gear up to Chassis No. 315 079 950: Check oil level.	
5/6	Front axle up to Chassis No. 0 483 990: Lubricate †)	
6	Front axle from Chassis No. 315 000 001: Lubricate †)	10,000 km 6,000 miles
2	Transmission: Change oil, clean magnetic oil drain plugs	50,000 km 30,000 miles

Lubricant	Lubrication Points	Temperature		Viscosity Grade	
		°C	°F		
Engine oil (Branded HD oil for spark- ignition engines)	Engine Carburetor linkage Oil bath air cleaner Door hinges	above	0	32	SAE 30
		below	0	32	SAE 10 W
		below	-25	-13	SAE 5 W
Hypoid oil	Transmission	SAE 90 all the year †)			
Universal grease	Door and hood locks	cold-resistant water-repellent high pressure grease			
Lithium grease	Front axle Front wheel bearings Breaker arm fiber block in distributor	Multi-purpose grease			

†) Every 2500 km if driven frequently on bad roads
‡) At least once a year

†) SAE 80 all the year in countries with arctic climates

Maintenance Chart

Operation	Every
Check V-belt	5,000 km 3,000 miles
Check air cleaner, clean lower part if necessary ¹⁾	
Clean fuel pump filter	
Check breaker points, lubricate distributor, check contact breaker gap and ignition timing	
Check valve clearance	
Check spark plugs and compression	
Check exhaust system for damage. Check rubber crankcase ventilation valve and pre-heater valve	
Check water drain flaps and cooling air bellow	
Check clutch pedal free-play	

Operation	Every
Check dust seals of ball joints and tie rod ends, security of tie rods and steering damper	5,000 km 3,000 miles
Check axial play of upper torsion arms, camber and toe-in of front wheels	
Check steering gear adjustment	
Check tires for wear and damage, check tire pressures	
Check brake system for damage and leaks. Check brake fluid level and hand and foot brake adjustment	
Check thickness of brake linings	
Check battery, check electrical system and headlight adjustment	50,000 km 30,000 miles
Road test: Check foot and hand brake operation. Check heating, idling adjustment and ventilation	
Clean, grease and adjust front wheel bearings.	

Tools

- 1 - Tool roll
- 1 - Wheel cap puller
- 1 - Pair of combination pliers
- 1 - Screwdriver with reversible blade for Phillips and slotted screws or one 0.5 and one 0.85 screwdriver
- 1 - Open-end wrench, 8 × 12, 8 × 13, or 10 × 13
- 1 - Socket wrench for plugs and wheel bolts with a bar which is also used to operate the jack
- 1 - Open-end wrench, 27 mm (VW 1500 only - used together with socket wrench to remove plugs)
- 1 - Socket wrench for plugs, with bar (VW 1500 S only)
- 1 - Socket wrench, 14 mm (VW 1500 only)
- 1 - Spare wheel, complete
- 1 - Jack



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