

PORSCHE

928 S

Owner's Manual · Model '84



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NOTE TO OWNERS

In Canada, this manual is also available in French. To obtain a copy contact your dealer or write to:

NOTE AUX PROPRIETAIRES

Au Canada on peut se procurer un exemplaire de ce Manuel en français auprès concessionnaire ou du:

Volkswagen Canada **Inc.**
Porsche Customer Assistance/
Assistance à la Clientele Porsche
1940 Eglinton Ave. East
Scarborough
Ontario M1L2M2

Your car may have all or some of the components described in this manual. Should you find explanations of a feature or equipment not installed in your car, your Porsche dealer will be glad to assist you. Also check with your dealer on other available options or equipment.

Text, illustrations and specifications in this manual are based on the information available at the time of printing.

It has always been Porsche's policy to continuously improve its products. Porsche, therefore, reserves the right to make changes in design and specifications, and to make additions or improvements in its product, without incurring any obligation to install them on products previously manufactured.

Judging by the car you have chosen, you are a motorist of a special breed, and you are probably no novice when it comes to automobiles.

Your **Owner's Manual** contains a host of useful information. Please read this manual before you drive your new Porsche. Acquaint yourself with your car's features and know how to operate your Porsche more safely. The better you know your Porsche, the more pleasure you will experience driving your new car.

Your Warranty and Maintenance booklet explains how you can keep your Porsche in top driving condition by having it serviced regularly.

It also contains detailed information about the warranties covering your Porsche. These warranties are:

"Warranty for new Porsche vehicles", "Warranty against corrosion for new Porsche vehicles", "Warranty for new Porsche vehicle emission control system", "Emissions performance warranty" (USA only), and **"California emission control system warranty"** (California USA only).

Always carry your **Warranty & Maintenance booklet** with you when you take your Porsche to an authorized dealer for service. It provides your Service Adviser with the information he needs and enables him to record each service.

If you sell your Porsche the Owner's Manual and the Warranty & Maintenance record should be left in the vehicle to make all operating safety and maintenance information available to the next owner.

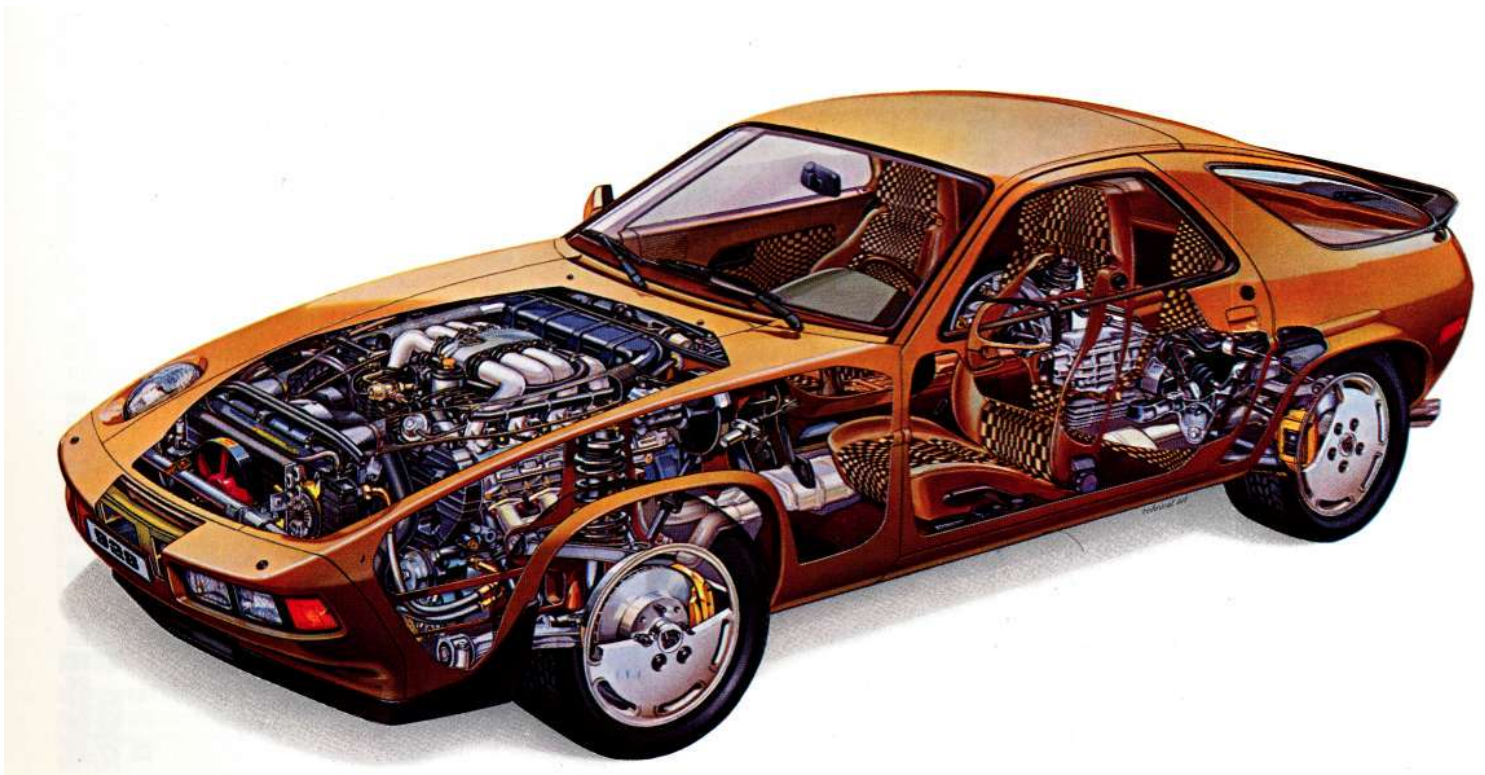
If you change your address or if you bought this Porsche used be sure to send in a "Notice of Address Change"/"Notice of Used Car Purchase" post card. This card can be found in the Warranty & Maintenance booklet or obtained from your Porsche dealer.

It is in your own interest that we can contact you, should the need arise.

For your own protection and longer service life of your car, please heed all operating instructions and special warnings. Ignoring them could result in serious mechanical failure or even physical injury.

We wish you many miles of safe and pleasurable driving in your

PORSCHE



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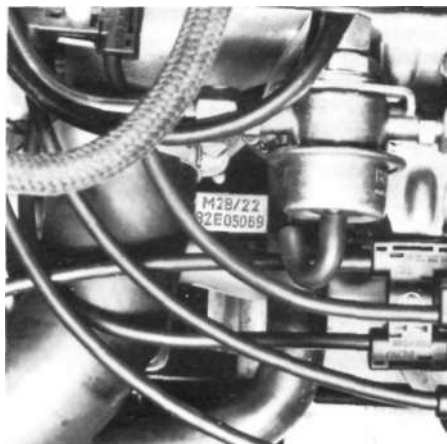
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Location of Vehicle Identification Number, Paint and Engine Number

When ordering spare parts or submitting inquiries, always quote vehicle identification and engine number to assure correct and prompt service.

Vehicle identification number

In accordance with Federal Safety Regulations, the vehicle identification number of your car is located on the left windshield post and can be seen from the outside.

Engine number

The engine number is stamped on the front reinforcing rib in the top half of the crankcase.

Paint number

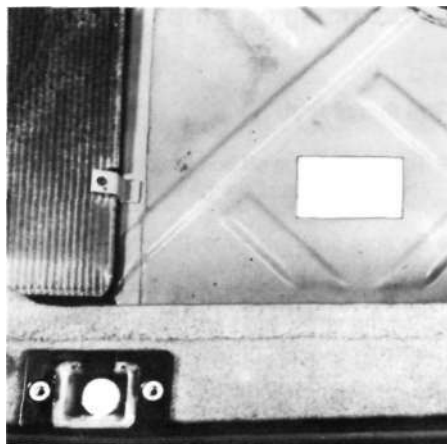
The paint number is on the doorjamb on the driver's side.



Safety Compliance Sticker

The Safety Compliance Sticker is your assurance that your Porsche complies with all Federal Motor Vehicle Safety Standards which were in effect at the time the vehicle was manufactured. It is located on the doorsill on the driver's side.

The sticker also shows the month and year of production and the vehicle identification number of your car (perforations) as well as the Gross Vehicle Weight Rating and the Gross Axle Weight Rating.



Vehicle Identification Label

The vehicle identification label is located underneath the luggage compartment floor cover, next to the spare wheel well.

The label contains the following information:

1. Vehicle Identification Number
2. Vehicle Code
3. Engine and Transmission Code
4. Paint and Interior Code
5. Option Codes

A duplicate of the label is in your Warranty and Maintenance brochure.

Dear Porsche-Owner

A lot has gone into the manufacture of your Porsche, including advanced engineering, techniques, rigid quality control and demanding inspections. These engineering and safety features will be enhanced by you...

the safe driver...

who knows his car and all controls,
who maintains his vehicle properly,
who uses his driving skills wisely.

You will find helpful hints in this manual on how to perform most of the checks listed on the following pages. If in doubt, have these checks performed by your Porsche dealer.

Before going on a trip...

First things first

- Turn the engine off before you attempt any checks or repairs on the vehicle.
- Be sure tires are inflated correctly. Check for damage and tire wear.
- See that wheel bolts are properly tightened and not loose or missing.
- Check engine oil level, add if necessary. Make it a habit to have engine oil checked with every fuel filling.
- Check coolant level to assure sufficient engine cooling.
- Be sure you have a well charged battery.
- Check brake fluid level. If too low, have brake system checked.
- Replenish windshield washer fluid.
- Check if engine hood is locked safely.
- Replace worn or cracked wiper blades.
- See that all windows are clear and unobstructed.

- Keep air intake slots and area between engine hood and windshield free of snow and ice, so that the heater and the windshield wipers work properly.
- Check whether all light lenses are clean.
- Be sure all lights are working and headlights are aimed correctly.
- Check under vehicle for leaks.
- Be sure all luggage is stowed securely.

Emergency equipment

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

In the drivers seat...

- Check operation of horn.
- Position seat for easy reach of controls.
- Adjust inside and outside rear view mirrors.
- Use safety belts.
- Check operation of foot and parking brakes.
- Check all warning and indicator lights with ignition on and engine stationary.
- Do **not** leave car idling unattended.
- Lock doors from inside, especially with children in the car.
- To prevent inadvertent opening of doors from inside or outside, drive with locked doors.

On the road...

- Always drive defensively. Expect the unexpected.
- Use signals to indicate turns and lane changes.
- Turn on headlights at dusk.
- Always keep a safe distance from the vehicle in front of you, depending on traffic, road and weather conditions.
- Reduce speed at night and during inclement weather.
- Observe speed limits and obey road signs.
- When tired, get well off the road, stop and take a rest. Turn the engine off. Do not sit in the vehicle with engine idling. See WARNINGS on "Engine Exhaust".
- When stopped or parked, always set the parking brake. Move the selector lever to "P" (Automatic transmission) or move the gearshift lever to reverse or first gear (Manual transmission). On hills also turn the wheels toward the curb.
- When stalled or stopped for repairs, move the vehicle well off the road. Turn on emergency flasher and use other warning devices to alert other motorists. Do not park or operate the vehicle in areas where the hot exhaust system may come in contact with dry grass, brush, fuel spill or other flammable material.
- Make it a habit to have the engine oil checked with every fuel filling.

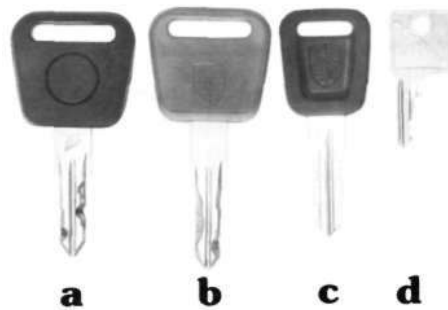
Do not invite car theft!

An unlocked car with the key in the ignition switch invites car theft.

A steering wheel lock and a gong alarm are standard equipment in your Porsche. The gong will sound if you open the driver's door while the key is still in the ignition lock. It is your reminder to pull the key out of the ignition lock and lock the doors.

Always remove the ignition key, especially if children are left unattended in the vehicle. Unsupervised use of any vehicle key may cause serious personal injury.

Do not leave your vehicle unattended with the key in the ignition lock. Take the key and lock the doors.



- a Master key
- b Auxiliary key
- c Rear glove compartment key
- d Key for lockable wheel nuts

Keys

Your Porsche comes with two of each of the following keys:

- a Master key for ignition lock, door locks, luggage compartment lock, fuel filler cap lock and glove compartment lock.
- b Auxiliary key for ignition lock, door locks and luggage compartment lock and fuel filler cap lock.

WARNING

Do not remove the key from the steering lock while you are driving or as the car is rolling to a stop. The steering column is locked when you remove the key, and you will not be able to steer the car.

Because of the symmetrical shape of the key shaft, there is no "wrong" way of inserting the key in the locks.

The new format of the master and auxiliary keys makes unauthorized duplication of the keys virtually impossible. This means, however, that you yourself will not be able to get replacement keys cut, unless ordered from the manufacturer.

For vehicles equipped with lockable wheel nuts, four identical keys, four wheel nuts with lock sleeve, plus a standard wheel nut for the spare wheel, are included. When taking the vehicle to your Porsche dealer or to a workshop for wheel or tire service, remember to leave one key with the service attendant.

In case of loss, duplicate keys cannot be furnished by your Porsche dealer. Do not leave these keys in the vehicle. Keep them in a safe place.

See "Lockable wheel nuts" for details.



Key number

The key number of the ignition key is impressed on a plastic tag which comes with the keys. Detach this tag and keep it in a safe place.

For your protection against theft:

- Record the key numbers and keep them in a safe place, such as your wallet. Do not keep them in the vehicle.
- If you should lose a key, provide your Porsche dealer with the key number to obtain a duplicate key. Tell him whether you need a master or an auxiliary key.

Key light

One master key has a built-in flashlight in the key head. The beam from a small bulb in the key head illuminates the lower part of the key stem.

The flashlight is on as long as the contact button is depressed.

The flashlight is powered by a 1.5 Volt button battery. When the beam begins to fade, replace the battery, because **an old battery may leak and damage your clothes.**



Doors	Activate alarm by locking with S-key. Deactivate alarm by unlocking with S-key. Auxiliary key - lock or unlock when alarm not required (see "Central door locking system").
Luggage compartment	Activate alarm by closing rear lid, then turn S-key counter-clockwise. Deactivate alarm by unlocking rear lid with S-key. Auxiliary key - lock or unlock when alarm not required.
Ignition/steering	Lockable with either key.
Glove compartment	Lockable with S-key only.
Fuel filler cap	Lockable with either key.

Anti-theft alarm

If your Porsche is equipped with an anti-theft alarm system, you will be given a duplicate set of the master S-key illustrated above instead of the "regular" master key. The alarm system can only be activated or deactivated with the S-key.

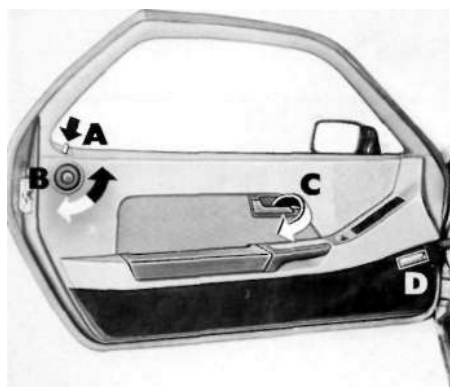
Attempting to open the doors, the rear lid or the engine hood by any other means or turning on the ignition when the alarm system is activated will produce an intermittent high noise for about 30 seconds.

Keep the S-key in your personal possession at all times. Leave the auxiliary key only with an attendant when the car is being serviced.

Functions for both S-key and auxiliary key are locking operations.

The engine cannot be started while the alarm system is activated.

Keep plastic tag with key number in a safe place. Do not leave it in the vehicle.



Central door locking system

The central door locking system enables you to lock or unlock both doors simultaneously by operating one door lock.

The central door locking system functions only when both doors are fully closed. If one door is "centrally" locked before the other door is fully closed, the "centrally" locked door will unlock automatically.

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

The car is safely locked when locking knob "A" is fully down on both doors. If locking knob "A" is not fully down on one door, open that door again, close it firmly and repeat the locking operation.

On a centrally locked vehicle, the passenger door can also be unlocked and locked from inside by turning locking knob "B". Locking knob "B" is operational only with door fully closed.

With the ignition key in Pos. "1" or "2" both doors can be locked or unlocked by pressing the central locking button in the center console. The button is illuminated when the doors are locked.

With the ignition key in Pos. "0" the central locking system is operational by turning knob "B".

Doors

To **open** doors from **outside**, pull the recessed door handle.

To **open** doors from **inside**, pull recessed handle "C" above armrest.

The armrests have a built-in storage compartment. To open, press knob in hand cutout and tilt armrest outward. To close, tilt compartment toward door panel.

The courtesy light in the lower door panel "D" will come on when a door or the hatchback is opened. The light can also be turned on or off with the switch on the light housing.

Door windows

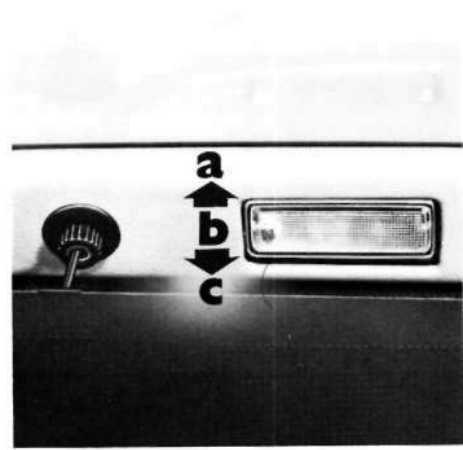
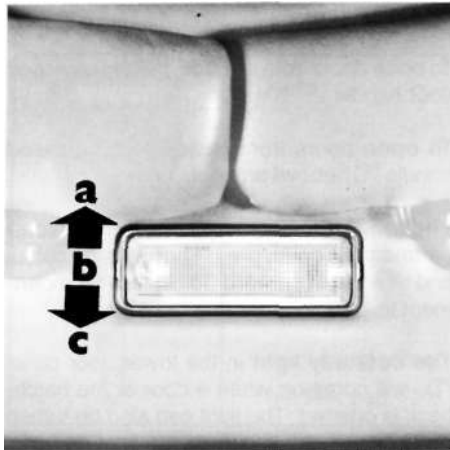
To open or close, depress the rocker switches in the center console in front of the shift lever.

The power windows only work when the ignition is turned on.

WARNING

Do not put anything on or near the windows that may interfere with the driver's vision.

Remove the ignition key to shut off power to the window switches when the vehicle is not attended by a responsible person.



Interior lights

Dome lights

The dome lights have a built-in rocker switch which is operated by tilting the lamp lens as follows:

- a light on continuously
- b light off
- c light on with front doors or hatchback open.

Door courtesy lights

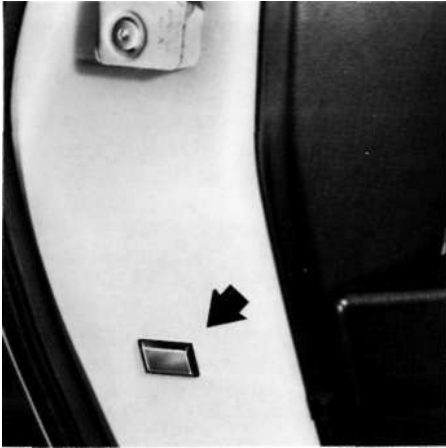
Switch positions for the lower door panel lights are as follows:

- a light on with front doors or hatchback open
- b light off
- c light on continuously.

Luggage compartment light

The luggage compartment light is located on the hatchback. The three switch positions are:

- a light on with front doors or hatchback open
- b light off
- c light on continuously.



Door warning lights

The red spot lights in the rear doorjamb will come on when a door or the rear lid is opened.

Front seats



a backward/forward
b height
c backrest angle

Electrically operated seats

Correct seat positioning is important for safe and comfortable driving. Therefore, the seat and the backrest angles in your Porsche are fully adjustable.

WARNING

Do not adjust seats while the vehicle is in motion. The seat may move unexpectedly which could cause sudden loss of vehicle control or personal injury.

The rocker switches for a smooth three-way seat adjustment are located at the outboard side of the seat.

Note:

Before operating the switches, tilt the safety belt buckle at inboard side of seat out of the way to prevent the buckle from getting squeezed in between seat cushion and backrest, which could damage both buckle and seat cover.

Manual operation

If the electric mechanism fails, the seat can be moved forward or backward by pushing the locking lever under the front of the seat toward outboard side of seat. Slide the seat to the desired position and let the lever go. Move the seat slightly back and forth to make sure it is securely engaged.



Front passenger seat

Seat adjustment

To move the seat forward or backward, pull the locking lever at the front of the seat up. 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.

WARNING

For passenger protection, backrest locks must be engaged at all times while the vehicle is in motion.

Backrest release

The backrest can be folded forward for easy access to the rear seats. To release, press the locking button on the side of the backrest (arrow) and, at the same time, tilt the backrest forward. When the backrest is tilted back, the lock will engage automatically.

Backrest adjustment

Turn handwheel on the outboard side of the seat (arrows), with your body weight taken off the seatback.

WARNING

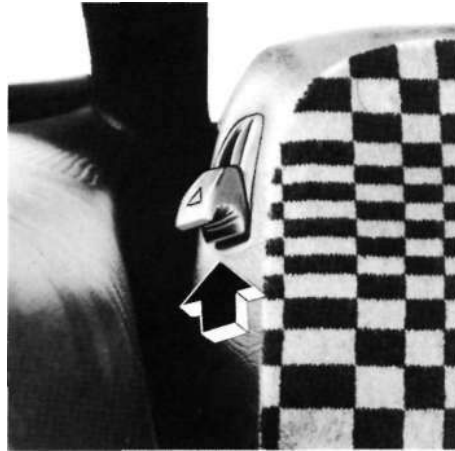
Front seat passengers should not ride in a moving vehicle with the backrest reclined. Safety belts only offer protection when the backrest is upright and the belts are properly positioned on the body. Improperly positioned safety belts can cause serious personal injury in an accident.



Steering wheel adjustment

For maximum legroom and unobstructed view of the instruments, the height of the steering wheel, together with the instrument cluster unit, can be adjusted.

Release locking lever under instrument cluster for desired positioning (arrow), then lock securely.

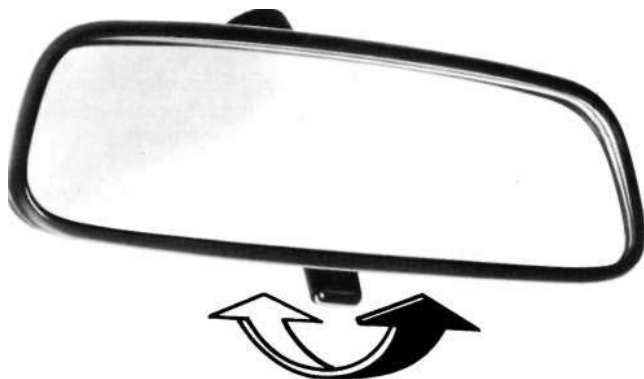


Rear seats-luggage compartment

The backrests of the rear seats can be tilted forward to provide additional luggage space.

Unsnap the luggage compartment cover from the upright rear seat backrests and the rear cross wall.

To release backrest, pull the lever on side of the backrest up and, at the same time, tilt the backrest forward.



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.

Do not put decals or other signs on the windows that may interfere with the driver's vision.

Inside day-night mirror

You can adjust the day-night mirror from clear daylight visibility to non-glare visibility at night, by moving the lever at the bottom of the mirror forward or rearward.

Heated outside mirrors with remote control

When the rear window defogger/defroster is switched on, the outside mirrors are also heated electrically. The outside mirrors can be adjusted from the inside by remote control when the ignition is turned on. The control switch is located next to the side window vents in the armrest.

The electrically heated outside mirror for the passenger side can be adjusted with the same control switch, by pressing the rocker switch beside the adjuster switch into the appropriate position.

If necessary, the outside mirrors can also be adjusted manually.

Safety belts

WARNING

- For your and your passengers' protection, use safety belts at all times while the vehicle is in motion.
- Safety belts must be properly positioned on the body. Improperly positioned safety belts can cause serious personal injury in case of an accident. Therefore, heed all of the following warnings and instructions.
- A combination lap-shoulder belt should not be worn by a person less than 4' 11" or 1.5 m in height, because it would not be in its most protective position and, therefore, may increase the possibility of injury in an accident.
- Persons smaller than 4' 11" or 1.5 m in height and children who are able to sit upright by themselves should use one of the rear seating positions and the lap belt provided.
- For maximum safety and protection, we recommend that small children travel in the rear seats.
- When driving in foreign countries, remember that some require the wearing of safety belts by law.
- Do not strap in more than one person with each belt.
- For maximum effectiveness, the lap belt should be worn low across the pelvic crest.
- Do not wear shoulder part of belt under your arm or otherwise out of position. This would increase the possibility of serious injury in case of an accident.
- Belts should not be worn twisted.
- Do not wear belts over rigid or breakable objects in or on your clothing, such as eye glasses, pens, keys, etc. as these may cause injury.
- Several layers of heavy clothing may interfere with proper positioning of belts.
- Belts must not rub against sharp objects.
- Keep belt buckles free of any obstruction that may prevent secure locking.
- Make sure that belt of the unoccupied passenger seat is fully wound up on its retractor so that the belt tongue is in its stowed position. This reduces the possibility of the tongue becoming a striking object in case of a sudden stop.
- Belts that have been subjected to excessive stretch forces in an accident must be replaced.
- If belts show damage to webbing, bindings, buckles or retractors, they should be replaced.
- If belts do not work properly, see your authorized Porsche dealer.
- Do not modify or disassemble the safety belts in your vehicle.
- The belts must be kept clean as otherwise the retractors may not work properly (see also "Car care instructions").
- Never bleach or dye safety belts.
- Do not allow safety belts to retract until they are completely dry.



Inertia reel retractor

The combination lap/shoulder belt with inertia reel locking mechanism adjusts automatically to your size and movements as long as the pull on the belt is slow.

Rapid deceleration during hard braking or a collision locks the belt. The belt will also lock when you drive up or down a steep hill or in a sharp curve.

- To fasten, grasp latch and pull belt in continuous slow motion across your chest and lap.
- Insert latch into buckle on inboard side of seat. Push down until it is securely locked with an audible click. Pull belt to check.
- Pull shoulder section to make sure belt fits snugly across the hips.
- Belts should fit snugly across the pelvis and chest. Make sure any slack is wound on the retractor.
- To unfasten belt, push in release button on buckle. Belt will spring out of buckle.
- To release a locked belt, lean back to take the body pressure off the belt.
- To store lap/shoulder belt, allow belt to wind up on retractor as you guide latch to its stowed position on doorpost.

Lap belts for rear seats

The automatic retractor will lock the rear seat lap belt when your passenger has buckled up, and the remaining slack has retracted. The belt can only be pulled out after it is fully retracted.

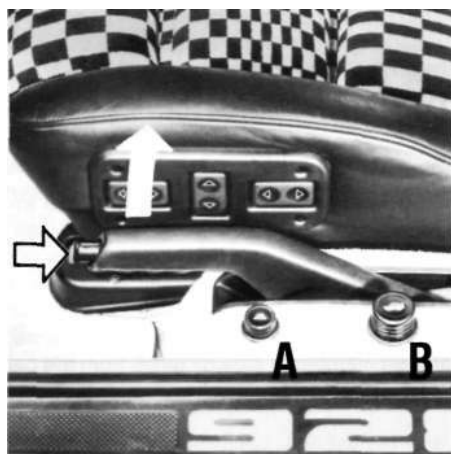
- To fasten lap belt, grasp latch on outboard side of seat and slowly pull across the pelvis. Insert latch into buckle on inboard side of seat and push down until it is securely locked with an audible click. Pull belt to check. To unfasten belt, push in release button on the buckle.
- To store belt, allow belt to wind up as you guide latch to retractor.



Safety belt warning system

An audio-visual warning system is interconnected with the driver's safety belt.

Every time the ignition is turned on, the seat belts warning light will come on for about 6 seconds as a reminder to buckle up. If the driver does not fasten the safety belt, the gong will also come on for the duration of this six second period. The gong will go off as soon as the driver has buckled up.



Parking brake lever (arrow)

Parking brake force is mechanically transferred to the rear wheels by means of cables.

Use the parking brake only after the vehicle has come to a full stop.

To set the parking brake

Press in the release button (arrow) at the end of the lever as you pull the lever up. The parking brake engages as soon as you release the button in the raised lever.

To release the parking brake

Pull the lever slightly up as you depress the release button. Keep the button depressed as you lower the lever.

WARNING

Release the parking brake fully. A partially engaged brake will overheat the rear brakes, reduce their effectiveness and cause excessive wear.

Always set the parking brake when parking your car. Move the selector lever to "P" (Automatic transmission) or move the gear-shift lever to reverse or first gear (Manual transmission). On hills also turn the wheels toward the curb.

The central warning light and the parking brake light will go out after the engine is started and the parking brake is fully released (see "Central warning light system").

Loudspeaker balance control

The volume of the loudspeakers in the door and in the rear of the vehicle can be balanced by turning the loudspeaker balance control knob (A), located next to the parking brake lever.

Hatchback release

With one or both doors open, you can release the hatchback by pulling either button "B" on the left of the driver's seat or the respective button on the right of the passenger's seat. The hatchback will open automatically.

Also see "Hatchback".

Brakes

Brake pedal

WARNING

Functioning of brake system

Your Porsche is equipped with a power assisted hydraulic dual circuit brake system with disc brakes at the front and at the rear. Both circuits function independently.

In the unlikely event of hydraulic failure of one circuit, push the brake pedal down firmly and hold it in that position. A mechanical linkage activates the second circuit, and you will be able to bring the vehicle to a safe stop.

WARNING

Failure of one brake circuit will impair the braking capability resulting in an increased stopping distance.

If one brake circuit has failed, the other will still operate. However, you will notice an increased pedal travel when you step on the brake. Should you encounter such experience, bring your vehicle safely to a full stop.

Avoid driving the vehicle and have it towed to the nearest authorized Porsche dealer.

- **The movement of the brake pedal must never be obstructed by a floor mat or any other object. In case one of the two brake circuits fails, increased pedal travel is required to bring your vehicle to a full stop.**
- **Make sure that the size of your floor mat does not hamper the movements of either brake, clutch or accelerator pedals in any way.**
- **Secure the floor mat against sliding into positions that could interfere with the safe operation of your vehicle.**
- **Do not "ride the brakes" by resting your foot on the pedal when not intending to brake. Overheating and wear of the brakes is the result.**
- **Before descending a steep grade, reduce speed and shift transmission into a lower gear or driving position to control speed. Do not ride the brakes or hold pedal down too long or too often. This could cause the brakes to get hot and not function properly.**

With correctly adjusted brakes, and a correctly working brake system, the pedal travel to the point of brake actuation should be 1 -3/16" to 1 -9/16" or 30 to 40 mm. Whenever the brake pedal travel exceeds this distance, have the brake system checked.

Keep in mind that the braking distance increases very rapidly as the speed increases. At 60 mph or 100 km/h, for example, it is not twice but four times longer than at 30 mph or 50 km/h. Tire traction is also less effective when the roads are wet or slippery. Therefore, always maintain a safe distance from the car in front of you.

Moisture or road salt on brakes affects braking

WARNING

Driving through water may reduce the traction. Moisture on brakes from road water or car wash or coating of road salt may affect braking efficiency. Cautiously apply brakes for a test. When the vehicle is driven on salted roads for extended periods, the brakes should be hosed down thoroughly about every 2 weeks. An automatic car-wash facility cannot do this job properly. Brakes will dry after a few cautious brake applications.

Brake booster

The brake booster assists braking only when the engine is running.

When the car is moving while the engine is not running, or if the brake booster is defective, more pressure on the brake pedal is required to bring the car to a halt.

Brake operation and brake warning light

Make it a habit to check the operation of your brakes before driving.

The central warning light and the brake fluid warning light in the combination instrument will flash when the level in the brake fluid reservoir is too low (see "Central warning light system").

Brake wear

Our automobiles have excellent brakes, but they are still subject to wear, depending on how the brakes are used. Have the brake system inspected at the intervals recommended in your Warranty & Maintenance booklet.

New brake pads or linings

Brake pads or linings may not have the highest possible braking efficiency when new. Therefore, allow for longer braking distance during the initial 100 to 150 miles or 150 to 250 kilometers of normal city driving if fewer stops are realized.

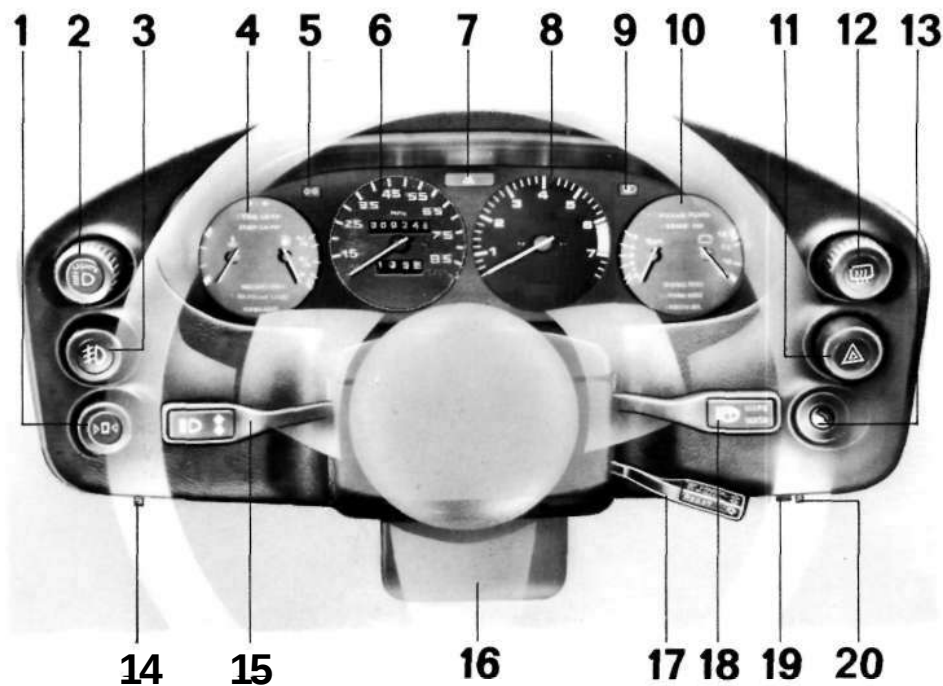
Clutch

Due to the hydraulic operation of the clutch, a free travel of the clutch pedal of 0,1" or 2.5 mm is necessary.

Should this free travel suddenly become bigger, it could mean a malfunction of the clutch. See your Porsche dealer for rectification.

The specified maximum rpm figures should not be exceeded when shifting down, as otherwise the engine speed would be too high. This applies to standard gear ratios only.

Instrument cluster



- | | | |
|-------------------------------|---|--|
| 1 Odometer reset switch | 9 High beam indicator light | 16 Locking lever for steering wheel/
instrument cluster height adjustment |
| 2 Light switch | 10 Right combination instrument | 17 Automatic speed control lever |
| 3 Fog light switch | 11 Emergency flasher switch | 18 Windshield wiper and windshield/head-
light washer lever |
| 4 Left combination instrument | 12 Rear window defogger switch | 19 Intensive washer system switch |
| 5 Turn signal indicator light | 13 Ignition/starter switch with steering lock | 20 Intermittent wiper interval control |
| 6 Speedometer | 14 Instrument illumination control | |
| 7 Central warning light | 15 Turn signal/headlight dimmer flasher/
parking light lever | |
| 8 Tachometer | | |



Ignition/Starter Switch with Steering Lock

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

For your safety, fasten safety belts.

Manual transmission:

Move gearshift lever to **Neutral**.

Automatic transmission:

Move gearshift lever to **Neutral** or **Park**.

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

There are 4 positions:

- 0 **Steering locked.** All electric circuits wired through the ignition switch are turned off. The ignition key can only be withdrawn in the "0" position. The parking lights can be operated in this position by pushing the turn signal indicator lever up and down (also see "Parking lights").
- 1 **Steering unlocked.** In this position all electric circuits are operational except for the following: turn signals, back-up lights, outside mirror remote control, rear window defogger/defroster and fresh air ventilation.
- 2 **Ignition on, steering unlocked.** All electric circuits are operational. With the engine stationary, the central warning light and all individual warning lights located in both combination instruments will light up for a **bulb check**. If the engine oil level is too low the central warning light will flash. (Lack of engine oil can, in comparison with all other functions, only be checked with the engine turned off and with the vehicle level.)
- 3 **The starter is operated** by turning the ignition key to the right. As soon as the engine starts, release the key. It will spring back to position "2". With the engine running, the central and individual warning lights should go out. The STOP LAMP will go out after depressing the brake pedal and the PARK BRAKE light after fully releasing the parking brake (see "Central warning light system").

To conserve battery power, the electric circuits for headlights, rear window defogger/defroster and wiper/washer system are temporarily interrupted during the starting process.

The starter should not be operated for more than 10 to 15 seconds at a time. If the engine does not start the first time or stalls at any time, the ignition will have to be switched off and then on again. The non-repeat lock in the switch prevents the starter from being operated when the engine is running and thus from being damaged.

To remove the key and to lock the steering, turn the key back to position "0" and pull it out. Turn the steering wheel until it locks.

Gong

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

For further details see "Starting Procedures" on the following page.

WARNING

Never remove key from ignition lock or turn key off while vehicle is moving. The steering wheel will lock, causing loss of control.

Starting Procedures

WARNING

- Fasten safety belts before driving off.
- Never start or let the engine run in an enclosed, unventilated area. Exhaust fumes from the engine contain carbon monoxide, which is a colorless and odorless gas. Carbon monoxide can be fatal if inhaled.
- Never leave engine idling unattended. An unattended vehicle with a running engine is potentially hazardous.
- Do not park or operate the vehicle in areas where the hot exhaust system may come in contact with dry grass, brush, fuel spill or other flammable material.
- Never leave engine idling. When starting engine, be ready to drive off immediately. Maintain moderate speed until engine is warm.

Before starting the engine, make sure the gearshift lever is in Neutral.

Temperature sensors on the engine automatically provide the correct fuel/air mixture required for starting.

Therefore, it is not necessary to depress the accelerator pedal while starting a **cold** or a **warm** engine.

When the engine is **hot**, fully depress the accelerator pedal while starting.

When starting at **very low outside temperatures**, fully depress the clutch pedal, so that the starter only has to crank the engine.

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

If the engine fails to start after 10 to 15 seconds of cranking, wait about 10 seconds before restarting.

Do not let the engine idle to warm it up. After starting, accelerate gradually and maintain moderate speed. Avoid high rpm and full throttle until the engine has reached normal operating temperature.

Stopping engine

Turn key back to position 0.

Do not stop engine immediately after hard or extended driving. Keep engine running at increased idle for about two minutes to prevent excessive heat build-up before turning off engine.

WARNING

- Before you check anything in the engine compartment, let the engine cool down. Hot components can burn skin on contact.
- The radiator fan switches on automatically when the coolant reaches a certain temperature and continues to run (even with ignition off) until the coolant temperature drops. Therefore, never touch the fan blades as they will rotate spontaneously when the thermostitch turns the fan on.

If you have an automatic garage door...

The transistorized ignition system in your Porsche may interfere with your electronically operated garage door. To check this: drive your Porsche close to the garage door and run the engine at different speeds.

If the garage door opens or closes without your operating the garage door unit in your car, contact the dealer who installed the automatic garage door to have the frequency and/or coding of the garage door signal modified.



Light switch - with ignition on

- 0 lights off
- 1 parking lights on (2 front/2 rear)
- 2 headlights on and raised

In positions 1 and 2, the following lights are also on:

tail lights
instrument illumination
shift pattern illumination for automatic transmission gearshift lever

When you open the door while the lights are on, the gong will sound. It is your reminder to switch off the lights.

Instrument illumination control

With headlights on, the brightness of the instrument illumination can be adjusted by turning the thumbwheel on the left side underneath the instrument cluster.



Fog lights

With headlights on, the fog lights can be turned on or off by depressing switch "A". The switch is illuminated when the fog lights are on.

Trip odometer

The trip odometer in the lower part of the speedometer instrument can be turned back to zero by depressing switch "B".



Tachometer

The transistorized tachometer operates on the pulse count principle and shows engine speed in revolutions per minute (rpm).

The red mark at the end of the scale indicates the maximum permissible engine rpm. Before reaching this area, the next **higher** gear should be selected. Earlier shifting saves fuel.

Shift to the next **lower** gear when the engine rpm drops below 1500 rpm.

CASIS

Computer Assisted Shift Indicator System (Manual Transmission only)

A computer continually evaluates vehicle data, such as driving speed, engine rpm, engine load and engine temperature.

When the CASIS arrow in the tachometer lights up, it means the engine could operate more economically. The light indicates that you can increase fuel efficiency by shifting into a higher gear. The CASIS light will go out when a higher gear has been engaged, when taking your foot off the gas pedal or when accelerating at a higher rate. In fifth gear the CASIS light is inoperative.

During maximum acceleration, the CASIS arrow light will only light up at a point where engine rpm is such that improved acceleration can be obtained by shifting into the next higher gear. This means the CASIS arrow does not indicate any set shift point, but that the computer calculated shift points depend on the way you drive. The arrow will light up at the lowest speed range when cruising, and the highest speed range when accelerating with wide open throttle.

How to use CASIS

Drive your Porsche shifting as you normally would.

As soon as the engine reaches uneconomical load range, the CASIS light will remind you to shift into the next higher gear to keep the engine at the same performance level but with lower fuel consumption.

You will get used to CASIS quickly and as a result operate your Porsche with the CASIS arrow light coming on only now and then.

WARNING

Use CASIS to your best advantage but remember that traffic, road and weather conditions must always have priority when shifting gears or changing speeds.



Central warning light

The central warning light in the instrument cluster will light up or flash when a fault occurs in one of the vehicle's systems. (Refer to "Central warning system").

High beam indicator light

The blue light in the instrument cluster will light up when the selector lever is pushed forward. The blue light will go out as soon as low beam is selected.

Turn signal indicator light

The green signal indicator light in the instrument cluster will flash with the selector lever in either up or down position. If a turn signal bulb becomes defective, the indicator light flashes at about twice the normal frequency.



Speedometer

The speedometer indicates driving speed per hour.

In **USA**: miles and kilometers per hour
In **Canada**: kilometers per hour

The upper odometer records total distance driven and cannot be turned back.

The trip odometer in the lower part of the instrument can be turned back to zero by depressing the odometer reset switch on the lower left side of the instrument cluster.



Coolant temperature gauge and warning light

Needle in **white field** - engine is cold

As long as needle is in white field, avoid high speeds and high engine rpm, until engine has reached normal operating temperature. Do not lug the engine.

Needle in **center striped field** - normal

Under normal driving conditions, needle should remain in center field. The needle may reach the red field, especially at high engine loads, but should return to "normal" when engine load is reduced.

Needle in **red field** - warning

If needle enters the red field, the engine is overheating. The central warning light will also come on. Reduce speed and engine rpm. If the needle does not return to the center field, and the central warning light remains on, pull off the road, turn off the engine and let it cool down.

Coolant temperature warning light

If this light comes on, check whether the V-belt driven **mechanical fan** is working. If the fan is not working, the V-belt may be loose or broken. The belt should be tensioned or replaced.

Do not continue to drive with a broken V-belt.

On vehicles equipped with a factory installed air conditioner, also check whether the **electric fan** in front of the air conditioner is working.

WARNING

- **Before you check anything in the engine compartment, let the engine cool down. Hot components can burn skin on contact.**
- **The radiator fan switches on automatically when the coolant reaches a certain temperature and continues to run (even with ignition off), until the coolant temperature drops. Therefore, never touch the fan blades as they will rotate spontaneously when the thermost switch turns the fan on.**
- **Be careful if you have to remove the cap from a hot coolant fluid reservoir. Protect your hands, arms and face against scalding. Use a thick rag and open the cap carefully one turn to allow excess pressure to escape before removing the cap.**



If the **electric fan** is not working, there may be a malfunction in the temperature sensor switch or in the electrical system. Check for a blown fuse.

If the problem cannot be readily located, be sure the engine has cooled down sufficiently. Then drive to the nearest Porsche dealer, but carefully watch the coolant temperature gauge and the warning light. Try to avoid engine idling, very low speeds and engine speeds in excess of 4000 rpm (revolutions per minute).

For other details refer to "**Cooling System**".



Fuel level gauge and warning light

With the ignition on, the amount of fuel in the tank is indicated by the fuel gauge needle.

Fuel level warning light

This light comes on when the fuel reserve level in the tank is down to about 2.11 U.S. gals, or 8 liters. Time to refuel.

The central warning light and the warning lights in the combination instrument light up for a bulb check when the ignition is turned on. They should go out as soon as the engine is started. Also see **"Central warning light system"**.

TAIL LAMP warning light comes on when a bulb is defective.

STOP LAMP warning light comes on and goes out after depressing the brake pedal. If the light **stays on** a bulb is defective.

WASH. FLUID warning light comes on when level in the windshield/headlight washer reservoir is down to 2 U.S. qts. or 2 liters.

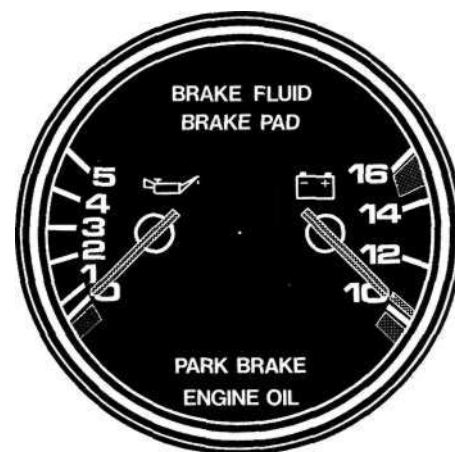
PARKING LIGHTS indicator comes on when the parking lights are turned on. The light will go out as soon as the headlights are switched on.

COOLANT warning light comes on when the fluid level in the expansion tank falls below the required minimum. Occasionally, the light may come on when starting the engine. As soon as the engine warms up, the coolant in the reservoir will expand, rise above the minimum level, and the light will go out. If the **COOLANT** warning light remains on, top up immediately and have the cooling system inspected for leaks.

For other details refer to **"Cooling System"**.



Trailer turn signal indicator light
Not connected



Oil pressure gauge Oil pressure warning light

Engine oil pressure is shown in bar. At 5000 rpm, with the engine at normal operating temperature, the oil pressure should be about 5 bar. A slight drop in oil pressure at higher temperatures is normal.

If the oil pressure should drop suddenly while you are driving, this light and the central warning light will flash. Pull off the road and **stop the engine immediately**. Check the engine oil level. If it appears to be normal, contact the nearest workshop.



Voltmeter Alternator warning light

The voltmeter shows the overall condition of the charging system. The needle should normally stay in the 12-14 volt range when the engine is running. A temporary drop below 12 volts when starting the engine is normal.

The alternator warning light comes on when the ignition is turned on and goes out as the engine rpm increases. If the light does not light up when turning the ignition on, or if it does not go out after starting the engine, there may be a malfunction in the electrical system. If this is the case, contact your Porsche dealer. If the light flickers or stays on while you are driving, the V-belt may be loose or broken. The belt should be in the regulator or the alternator itself. In this case, keep electrical consumption at a minimum and drive to the nearest workshop.

The central warning light and the warning lights in the combination instrument light up for a bulb check when the ignition is turned on. They should go out as soon as the engine is started. Also see "**Central warning light system**".

BRAKE FLUID warning light **flashes** when the brake fluid level falls below the required minimum.

BRAKE PAD warning light comes on when a brake pad is worn.

PARK BRAKE warning light comes on and **stays on** until parking brake is **fully** released.

ENGINE OIL warning light **flashes** if, with the ignition on, the engine stationary, and the vehicle in level position, the amount of oil in the sumps is less than 1.59 U.S. gal. or 6 liters.

Do not attempt to start the engine! Add oil at once.



WARNING

- 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. Do not remain in the car.
- Do not park or operate the car where the hot exhaust system may come in contact with dry grass, brush, fuel spill or other flammable material.
- Before working on any part in the engine compartment, turn the engine off and let it cool down sufficiently. Hot components can burn skin on contact.



Emergency flasher switch

If your car is disabled or parked under emergency conditions, depress the switch to make all four turn signals flash simultaneously. The light in the switch flashes at the same frequency.

The emergency flasher works independently of the ignition switch position.



Rear window defogger/defroster

The rear window defogger/defroster heating element is actuated by a push button/rotary switch. The switch is illuminated when the heating element is energized.

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

To defog - switch **not** depressed

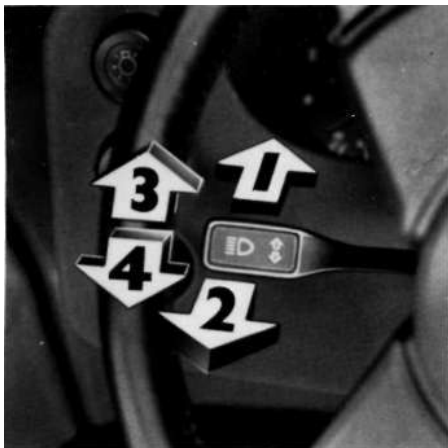
0 Heating element off.

- 1 Heating element on. The heating element will provide a steady energy output to keep the rear window free from fog.

To defrost - switch depressed (arrow)

0 Heating element is fully energized for defrosting. After about 15 minutes the heating turns off automatically.

- 1 Heating element is fully energized for defrosting. After about 15 minutes, the heating element automatically reduces energy output to "defogging".



Headlight dimmer and parking light lever-with ignition on: Turn signal/highbeam/lowbeam

Turn signal indicator

Lever up -- right turn signal (arrow 3)
Lever down - left turn signal (arrow 4)

The turn signal lever turns off automatically when the steering wheel is straightened out after completing a turn.

If a turn signal bulb becomes defective, the indicator light flashes at about twice the normal frequency.

Lane changer

To indicate your intention when changing lanes on expressways, slightly lift or depress the turn signal indicator lever to the resistance point. The lever turns off automatically when released.

High beam/low beam - with ignition on and light switch in position 2, push lever forward to select high beam (arrow 1). The blue indicator light in the instrument cluster comes on when high beam is switched on.

Pull lever toward steering wheel (arrow 2) to select low beam.

You can flash signal other motorists by repeatedly pulling and releasing the lever.

Headlight flasher

During daylight, you can flash signal other motorists with your foglights (in lieu of horn) by repeatedly pulling and releasing the lever.

Parking lights-with ignition off

Lever up - right side parking lights on (arrow 3)

Lever down - left side parking lights on (arrow 4)



1 Set/accelerate 2 Reset 3 Cancel

Automatic Speed Control

The automatic speed control allows you to maintain a constant cruising speed of 30 mph (50 km/h) or higher, without actuating the accelerator pedal. Any manual operation, such as accelerating, gearshifting or braking can be done independent of the automatic speed control. The spring loaded control lever operating the automatic speed control is located just below the wiper/washer lever.

While driving with the automatic speed control set (at speeds above 30 mph or 50 km/h), do not bring shift lever into the Neutral position to prevent excessive engine rpm.

To operate the automatic speed control

Accelerate to the desired cruising speed, push lever toward instrument cluster (arrow 1) and release. This sets the cruising speed and stores it in a memory.

After a second or two, automatic speed control will take over, and you can remove your foot from the accelerator pedal. The set cruising speed will be maintained automatically.

Passing: When you want to drive faster for a brief moment, for example when passing another vehicle, actuate the accelerator. When you take your foot off the accelerator pedal, the pressed speed will automatically be resumed.

Gearshifting: When shifting gears, the automatic speed control is only disengaged as long as the clutch pedal is depressed. The preset speed will be resumed as soon as you take your foot off the clutch pedal.

Braking and stopping: Whenever you apply the brake or come to a stop, the automatic speed control is disengaged. Move the lever down (arrow 2), and the preset speed will be resumed.

Switching system off: To switch the automatic speed control off, move the lever toward you (arrow 3). To resume the preset speed, move the lever down (arrow 2).

To change the preset cruising speed

Increase preset speed:

Accelerate by depressing the accelerator pedal. When the desired speed is reached push lever toward instrument cluster (arrow 1) and

take the foot off the accelerator pedal. Now the new cruising speed is set and stored in the memory.

As an alternative, you can hold the lever in the front position (arrow 1), without depressing the accelerator pedal. The car will accelerate on its own. When the desired speed is reached, release the lever.

Decrease preset speed:

Apply the brake, which will disengage the automatic speed control. When the vehicle has slowed down to the desired speed, push lever toward instrument cluster (arrow 1) to set the new cruising speed.

As an alternative, disengage the automatic speed control by moving the lever toward you (arrow 3). When the vehicle has slowed down to the desired speed, push lever toward instrument cluster (arrow 1) to register the new cruising speed in the memory.

Note: When driving up a hill, if the engine power is insufficient in a particular gear, the speed control will be disengaged automatically. Shift to a lower gear to avoid lugging the engine.

WARNING

Do not use the cruise control when it may be unsafe to keep the car at a constant speed. For example, a constant speed may not be safe in heavy traffic, or on winding or slippery roads. With the cruise control system engaged, the engine speed will not return to idle when removing the foot from the accelerator pedal.

Please observe all local and national speed limits.



Windshield wiper/washer and headlight washer (where applicable) lever

This lever has 6 switch positions. The electric wiper system is actuated by pulling the lever up or down to the following 4 positions:

- 0 wipers turned off
- 1 wipers on slow speed
- 2 wipers on medium speed
- 3 wipers on fast speed
- 4 wipers on intermittent speed

The intermittent wiper interval can be adjusted by turning thumbwheel "A" on the right side underneath the instrument cluster.

The electric washer system is actuated as follows:

- 5 Pull lever toward steering wheel to operate windshield washer. Fluid can be sprayed into the windshield from any selected wiper speed position.
- 6 Push lever toward instrument cluster to operate headlight washer.

The headlight washer system operates only with the headlights on and raised.

Avoid running the wiper blades over a dry windshield to prevent scratching the glass. Spray on washer fluid first. A scratched windshield will reduce visibility.

Always loosen blades frozen to glass before operating wipers to prevent damage to wiper motor.

WARNING

Worn or dirty wiper blades will reduce visibility, making driving hazardous. Clean blades regularly to remove road film and carwash wax buildup. Use an alcohol base cleaning solution, a lint free cloth and wipe lengthwise.

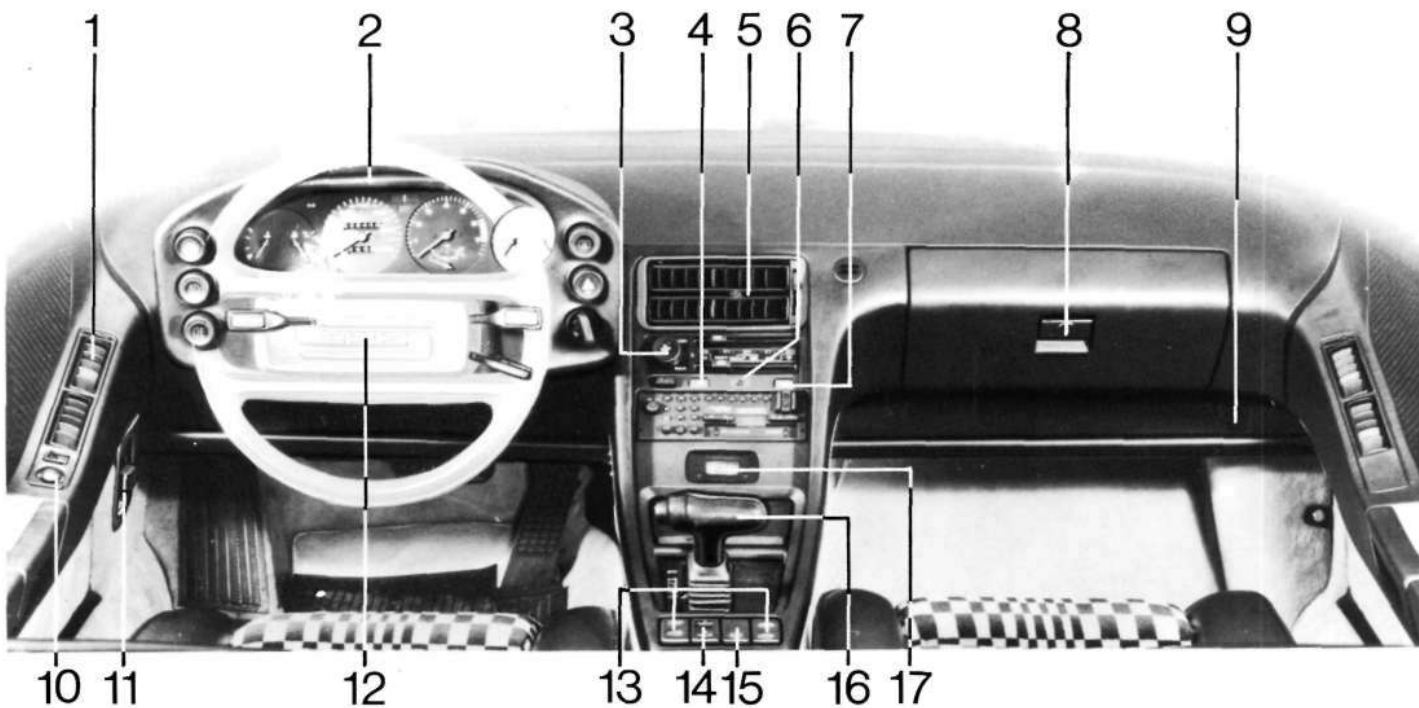
Clean all inside and outside window glass regularly. Use an alcohol base cleaning solution and wipe dry with a lint free or a chamois cloth.



(seen from below)

Intensive windshield washer system (where applicable)

By depressing switch "B" on the right side underneath the instrument cluster, a supply of special intensive cleaning solution is pumped to the windshield. Heavy road dirt, silicone or insects can be removed quickly without smearing. The spray duration is controlled by a time relay to avoid excessive use of the special cleaner. The regular windshield wiper/washer system can then be operated to finish the cleaning process.



Dashboard panel and center console

- 1 Side window defogger/defroster vents
- 2 Instrument cluster
- 3 Automatic climate control

- 4 Reset button for central warning light
- 5 Center air vents
- 6 Safety belt warning light
- 7 Central door locking button
- 8 Glove compartment lock
- 9 Open storage shelf
- 10 Side view mirror adjuster

- 11 Front-hood release lever
- 12 Horn
- 13 Power window switch
- 14 Electric sliding roof switch
- 15 Rear window wiper switch
- 16 Gearshift lever
- 17 Clock



Central warning light system

This electronic warning system monitors the most important functions of your Porsche for increased safety and reliability of performance. Should a problem arise, the center warning system will inform you immediately.

The central warning light is located in the center of the instrument cluster. The individual warning lights are divided between the two combination instruments.

When the ignition is turned on, the central warning light and all individual warning lights will light up for a **bulb check**. If the engine oil level is too low the central warning light will flash. (Lack of engine oil can, in comparison with all other functions, only be checked with

the engine turned off and with the vehicle level.) As soon as the engine is started, the lights should go out. The STOP LAMP light will go out after the brake pedal has been depressed. The PARK BRAKE light will go out as soon as the **parking brake lever is fully released**.

Should a problem arise, the central warning light will light up or flash, together with the respective individual warning light.

The control function of the central warning light system is divided into two major groups:

- Group "A" -
- engine oil pressure
 - engine oil level
 - brake circuit (pressure) failure
 - brake fluid level

Any malfunction reported by the system must be corrected immediately.

Group "B" -

- brake wear (pads) indicator
- parking brake
- coolant level
- coolant temperature
- fuel reserve level
- windshield and headlight washer (where applicable)
- fluid level
- stop lamps
- tail lamps

Any malfunction reported by the system should be corrected as soon as possible.



Reset button (white arrow)

By pressing this button, you can turn off the central warning light for group "B" related problems. The individual warning light in the respective combination instrument will remain on as a reminder to have the fault corrected.

The reset button does not apply to group "A" related problems. Both central and individual warning light will continue to flash because an immediate remedy of the problem is necessary.



Central door locking button

With the ignition key in Pos. "1" or "2" both doors can be locked or unlocked by pressing the central locking button.

See "Central door locking system".

Climate control system

Your Porsche factory installed climate control system combines ventilation, heating, defrosting/defogging and air conditioning for year-round driving comfort.

WARNING

- **Familiarize yourself thoroughly with the proper use and function of the climate control system.**
- **For safe driving it is extremely important that you follow the operating instructions in this manual. If in doubt, consult your Porsche dealer.**
- **Maximum heating output and fast defrosting can be obtained only after the engine has reached operating temperature.**

Fresh air ventilation can be obtained by turning the ignition key to position "2" and by selecting a fan speed.

The heater works only when the engine is running.

The air conditioner works only when the engine is running. The higher the engine rpm, the more intensive the cooling effect. Air from inside the car is drawn through the evaporator for cooling and then reenters the car interior through the air outlets.

The air conditioner compressor can be operated at any air distribution setting by pressing the AC switch in the center console.

With the activated compressor, the engine runs at increased idle speed.

Operating hints

When driving off it is not necessary to set the temperature control lever to a higher temperature, because the automatic temperature regulator guarantees maximum heating-up until the selected interior temperature has been reached.

To obtain maximum cooling, move temperature control lever to the extreme left and turn the fan control knob to speed 4.

In damp weather it is recommended to switch on the air conditioner, even if the outside temperature is low. This dehumidifies the air and prevents the windshield from fogging up.

The air conditioner can only be operated when the temperature is above 32° F/0° C.

WARNING

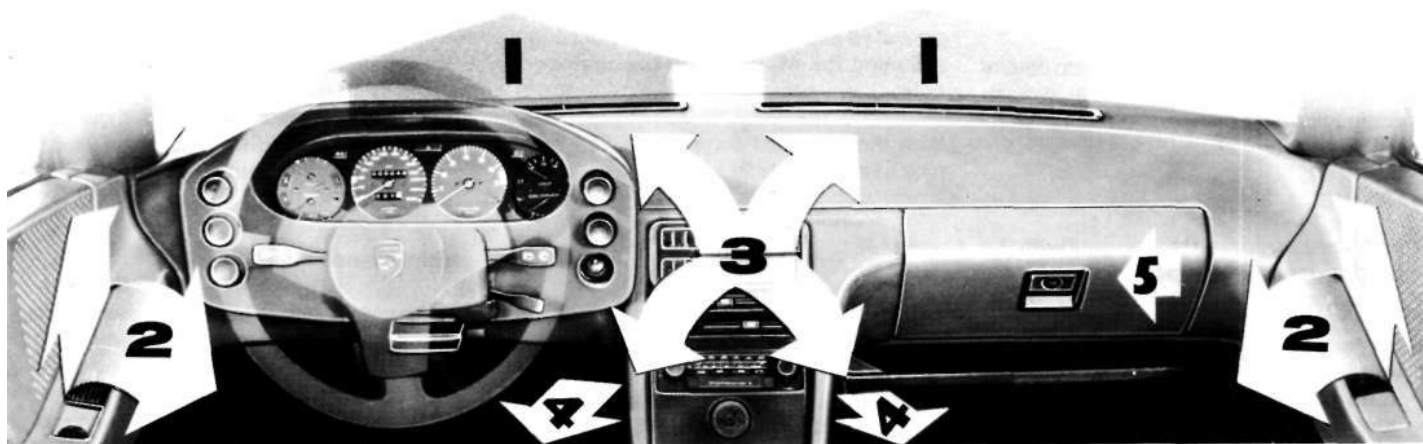
Should uncooled air flow from the air outlets, switch the system off. Have your Porsche dealer locate and correct the problem. He has qualified personnel and the necessary equipment.

Maintenance

The air conditioner should be switched on briefly at least twice a month. Periodic operation of the air conditioner is necessary to lubricate the movable parts of the air conditioner compressor and the expansion valve. This is especially important during the cold season when the air conditioner is not used. The air conditioner can only be operated when the temperature is above 32° F/0° C. The condenser should be checked periodically for cleanliness. If clogged with dirt or insects, the condenser should be washed down with water. After the winter months and before extended summer usage, the air conditioner should be checked and, if necessary, serviced by your Porsche dealer.

Payload reduction

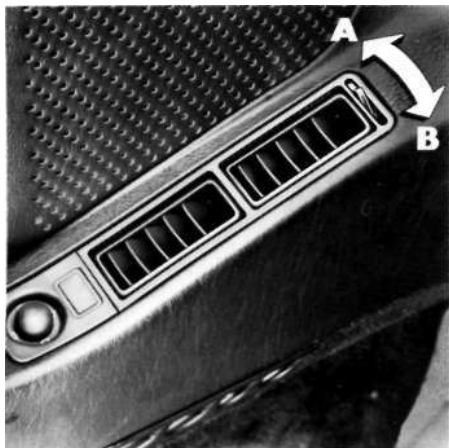
The weight of the air conditioner installation reduces the vehicle's capacity weight. For weight information see sticker on left door sill.



Air outlets

- | | |
|--|---------------------------------------|
| 1 Defogging/defrosting nozzles for wind-
shield | 3 Air vents for passenger compartment |
| 2 Defogging/defrosting vents for side
windows | 4 Air outlet nozzles for foot wells |
| | 5 Air nozzle inside glove compartment |

The side window and center air vents are adjustable to permit the regulation of air flow within the vehicle. If the air flow becomes uncomfortable the vents can be shut.



Side window vents

The air outlets in the armrests permit adjustment of air flow either sideways or up and down. Open and close vents with small side lever.

A vents closed
B vents open

Center air vents

The center air vents direct air flow to the passenger compartment and are adjustable either sideways or up and down. Open and close vents with small side lever.



Automatic climate control

This system automatically controls the air flow distribution and the temperature level inside the car according to the occupants wishes. The distribution and mixture of cool and warm air is electrically regulated and kept constant, regardless of weather conditions.

Individual controls

Fan speed control - rotary switch knob

The **air volume** is controlled by a 4-speed fan. When the ignition is turned on, the fan automatically operates at low speed, even with the switch in 0 position. By turning the knob clockwise, fan speeds 1 - 4 can be selected to increase the air volume.

Temperature control - upper lever

Move lever to desired temperature setting.

Program control - lower lever

- ☐ Climate control system and fan motor off.
- ☒ Air flow distribution only through side window and center air vents.
- ▼▲ Air flow distribution through windshield and footwell outlets. The side and center vents can be opened optionally.
- ▲ Air flow distribution through windshield outlets. The side and center vents can be opened optionally.
- ▼ Air flow distribution through footwell outlets. The side and center vents can be opened optionally.



Automatic air flow distribution for heated air through windshield outlets and open side window vents. Heating system and fan motor are automatically switched on maximum output and high speed for fast defrosting or defogging. At temperatures above 32° F/0°C the air conditioner compressor runs automatically.



Checking refrigerant level

Check the refrigerant level in the reservoir at least once a year because the fluid diminishes gradually during operation.

Turn the air conditioner and observe refrigerant level through sight glass (arrow) in the reservoir.

Occasional bubbles are normal.

Foam or a constant stream of bubbles indicate that the system does not contain enough refrigerant.

In case the system requires recharging, contact your Porsche dealer. He has qualified personnel and the necessary equipment.



Cigarette lighter

The cigarette lighter can be operated with the ignition in position 1 or 2. To operate, push in knob. When ready for use, the lighter will snap back. With the cigarette lighter removed, the socket may be used for small electrical appliances, such as a shaver, hand vacuum cleaner or air compressor to inflate the collapsible emergency spare tire. The maximum rating of such equipment should not exceed 120 Watt/12 Volt.

Do not damage the socket by trying to insert plugs of the wrong design.

Clock

The left-hand-push-button beneath the display is used for setting the hour. The right-hand push-button is used for setting minutes.

A brief press of a button (best done with a ball point pen) will set the time forward by one hour or one minute.

Prolonged pressure on the button(s) will cause the hours and/or minutes to be displayed in sequence.

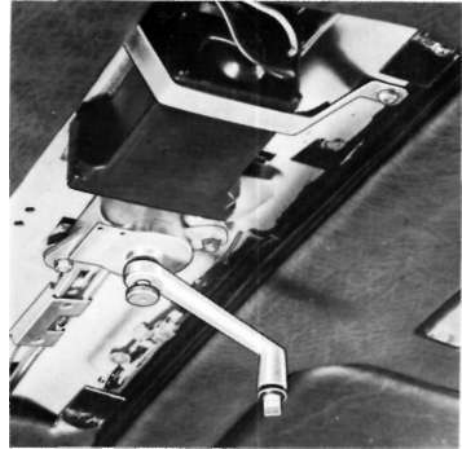
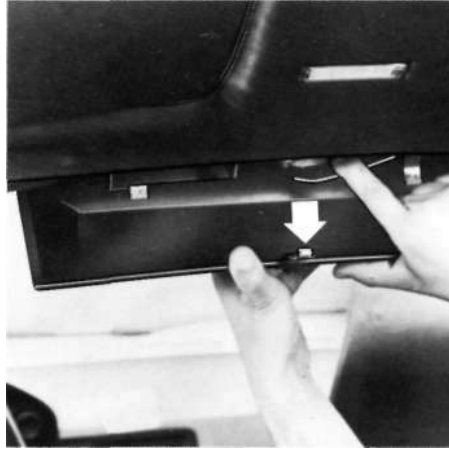
In order to set the time to the very second, press the minute button at the very moment you hear the time signal on your car radio.

Ashtray

The ashtray is located in front of the gearshift lever in the center console. To empty tray, pull it out of its well.

WARNING

Never use ashtray as waste paper disposal. Fire hazard!



Power Sunroof

The roof can be opened and closed, fully or partially, by depressing the respective symbol on the rocker switch in the center console in front of the gear shift lever.

The mechanism has a built-in safety feature. Should the moving roof encounter an obstacle, it will stop automatically to avoid possible injury.

Do not operate the sunroof at driving speeds exceeding 62 mph or 100 km/h. The force to

overcome wind resistance at higher speeds may cause damage to the sunroof.

Manual operation

If the electric drive mechanism fails, the roof can be operated manually. The crank handle provided for this purpose is in the tool kit.

Remove the cover from the electric drive mechanism at the rear of the headliner by pulling it down and disengaging the spring catch.

Remove screw and washer on bottom of drive mechanism. Keep screw and washer within easy reach.

Install handle in slot of drive mechanism and tighten thumb screw.

Close the roof, remove the handle and reinstall washer and screw. Replace the cover.

Do not depress the rocker switch but let your Porsche dealer correct the fault.



Rear window wiper

To avoid scratching the glass, the rear window should be sufficiently wet before turning on the wiper.

To actuate the wiper, push the rocker switch in the center console.

The wiper action disengages or engages automatically when the luggage compartment lid is opened or closed.

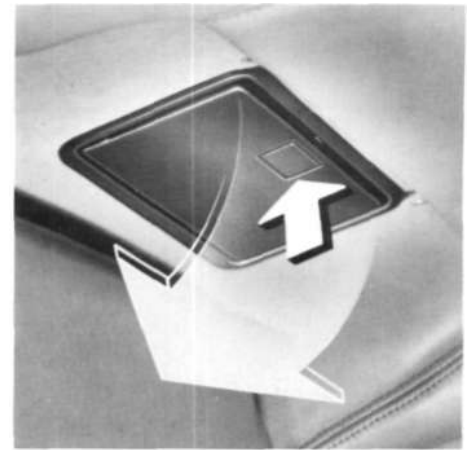
When cleaning the rear window, the wiper should be lifted only slightly.



Sun visors

The front sun visors can be moved to the sides as well as forward (arrows).

The rear sun visors can be moved backward.

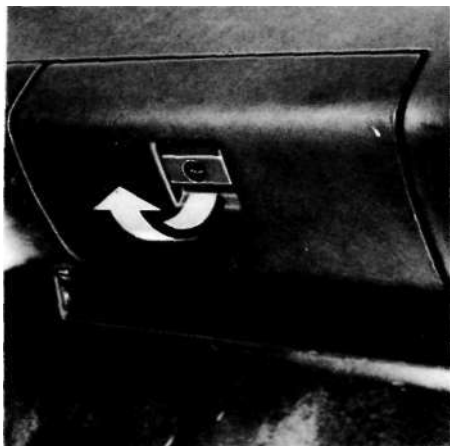


Vanity mirror

The vanity mirror is located in the headliner behind the sun visor on the passenger side.

On cars equipped with an electric sliding roof, the vanity mirror is located in the cover trim underneath the sun visor.

When opened (arrows), the mirror is illuminated.



Glove compartment

The illuminated glove compartment can be opened by pulling the recessed handle in the lid (arrow).

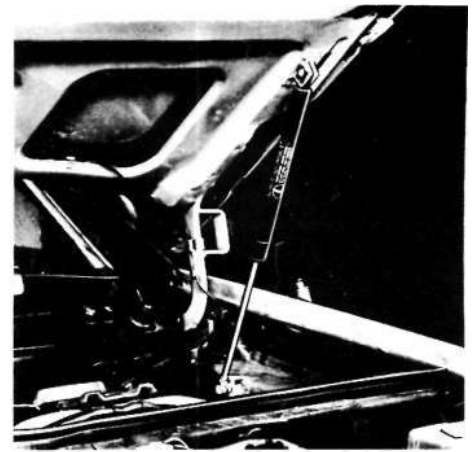
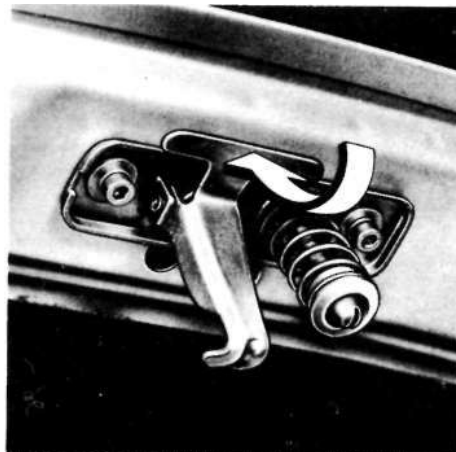
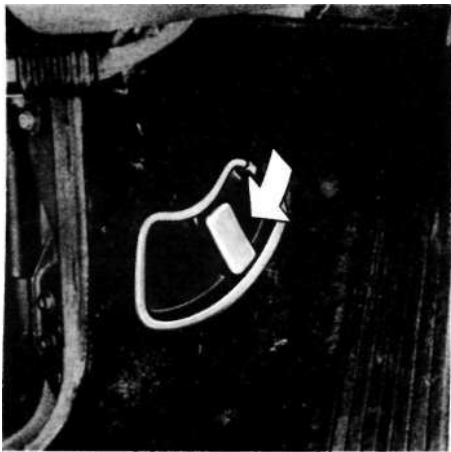
The glove compartment can be locked or unlocked with either the master or the auxiliary key. An additional storage shelf is located under the glove compartment.

WARNING

Keep glove compartment door closed while driving to prevent injury during a collision.

Rear seat glove compartment

To open the glove compartment, press the button (arrow) and lift the lid. The glove compartment is lockable.



Engine compartment hood

To release

Slide the release lever (arrow) on the left side underneath the dashboard panel.

The hood springs up slightly under spring pressure.

To open

Lift hood slightly and press safety catch handle upward (arrow). Then lift up the hood.

The windshield wipers should not be tilted forward.

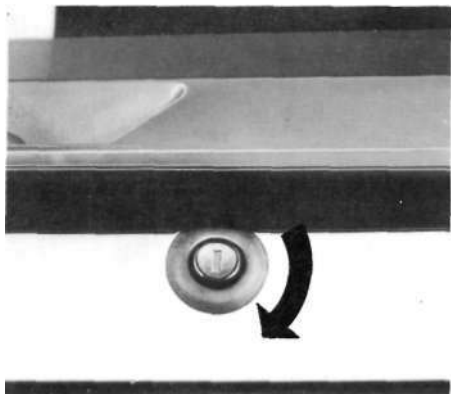
With light switch in either position 1 or 2, the engine compartment light will come on automatically.

To close

Lower the hood slowly and then push down with both hands until the lock snaps shut.

WARNING

Should you notice at any time while driving that the hood is not secured properly, please stop at once and close it.



Hatchback

(If vehicle is equipped with an anti-theft alarm see "Anti-theft alarm".)

To open...

see "Hatchback release" or insert the master or auxiliary key into the lock and turn clockwise. The hatchback springs up slightly under spring pressure. Lift the hatchback by hand to open.

To close...

Lower the hatchback slowly and then push down with both hands until lock snaps shut. Pull up on hatchback to make sure it is securely locked.

Caution: Do not drive with the hatchback open to prevent exhaust gas from being drawn into the car.

Be careful when removing large objects through the rear. Sharp edged objects may damage the defogger wires in the rear window.

Luggage Compartment

Protect your luggage and other belongings from the sun and "inquisitive eyes" by using the snap-on luggage cover.

To prevent luggage and other objects from sliding around while the car is in motion, you can secure them with spider straps available through your dealer or other supply firms. The eyelets for this purpose can be found behind the rear bolster and on the luggage compartment floor.

WARNING

Because of inherent hazards, we do not recommend transporting objects larger than those fitting safely into the luggage compartment. Keep the hatchback closed while driving to prevent poisonous exhaust gas from being drawn into the vehicle.

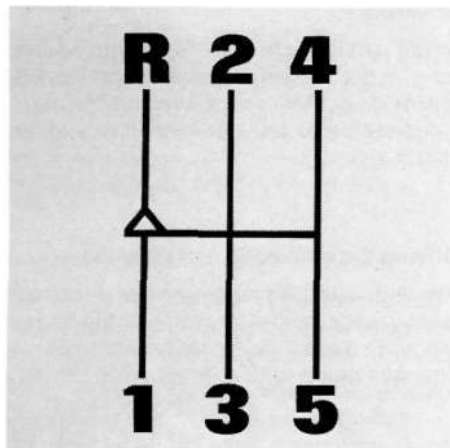
Roof racks

The installation of commercially available roof racks is not compatible with the roof design of your Porsche.

When installing the **Genuine Porsche Roof-rack** available up till now, the maximum permissible weight load of 75 lbs or 35 kg must not be exceeded.

The **"New Genuine Porsche Roofload Transport System"** provides for maximum permissible weight loads of up to 165 lbs or 75 kg.

Your Porsche dealer will be glad to advise you which type of roof rack can best serve your individual needs and load carrying requirements.



Gearshifting (Manual Transmission)

The Porsche transmission with servo-lock synchronisation permits rapid and precise shifting of gears. When changing gears make sure that the clutch pedal is fully depressed to the floor, and that the gearshift lever is completely engaged. The engine speeds for the individual gears are listed in the chart on this page.

The clutch pedal must be depressed several seconds before shifting into reverse; only then move the gearshift lever to the left, overcoming the spring resistance, and to the front.

Both back-up lights come on when the transmission is put into reverse (with ignition on).

Reverse should only be selected after the vehicle has come to a complete stop.

The gear positions are shown in the diagram above.

If you wish to shift from **1st gear** into **Reverse**, the gearshift lever must first be brought into the **Neutral** position between 4th and 5th gear and then shifted into Reverse. This is necessary because of the reverse gear lock-out mechanism.

For smooth shifting, observe the following shift points (applies to standard gear ratios only):

Maximum downshifting points

5th to 4th gear
129 mph/208 km/h or 4000 rpm

4th to 3rd gear
97 mph/156 km/h or 4600 rpm

3rd to 2nd gear
69 mph/111 km/h or 4400 rpm

2nd to 1st gear
46 mph/74 km/h or 4100 rpm

Minimum upshifting points

1st to 2nd gear
15 mph/24 km/h or 2000 rpm

2nd to 3rd gear
25 mph/40 km/h or 2200 rpm

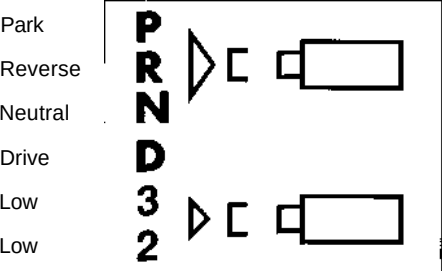
3rd to 4th gear
40 mph/64 km/h or 2500 rpm

4th to 5th gear
48 mph/77 km/h or 2300 rpm

Please observe all local and national speed limits!

Controls for Automatic Transmission

The selector lever has 6 positions:



Start in Neutral or Park

The selector lever has a push button in the handle. The push button must be depressed when selecting the following positions:

From P to R
R to P
N to R
3 to 2 } depress push button in handle

The selector lever can be moved freely between the other positions.

The selector lever console is illuminated.

Remember the following basic rules:

Apply the parking brake or foot brake before selecting a driving range. When the selector lever is in a driving range, the car may creep even at idle speed. Therefore, do not release the parking brake or foot brake until you are ready to move.

Do not accelerate while selecting a driving range. At this time the engine must run at idle speed so that no undue stress will be placed on the automatic clutches in the transmission.

If the selector lever is unintentionally moved into Neutral (N) while driving, take your foot off the accelerator pedal and wait until the engine speed has dropped to idling before selecting a driving range.

Never shift into reverse (R) or Park (P) when the car is in motion.

Never get out of the driver's seat when the engine is running and the selector level is not in the "P" position. **Move the selector lever to "P" and apply parking brake.**

Always make sure the selector level is in the "P" position when checking under the hood. Otherwise, any increase in engine speed may set the vehicle in motion, **even with the parking brake applied.**

The driving ranges must never be used for holding the vehicle at rest uphill. Always use your foot brakes when stopped on inclines.

WARNING

While driving with the automatic speed control set (at speeds above 30 mph or 50 km/h), do not bring shift lever into the Neutral position to prevent excessive engine rpm.

Driving the automatic transmission

The Automatic Transmission has 4 forward driving ranges and one reverse. In the driving ranges D, 3 and 2 the Automatic Transmission changes gears automatically while driving.

Position D

is the driving range normally used for city and highway driving. It ranges from zero to top speed, and all four gears shift automatically depending on the speed.

Position 3

is to be used for mountain driving or slow driving, when towing a trailer and also when you want to make use of the engine's braking effect. In "3", the first, second and third gears will engage automatically. Therefore, only shift down into driving range "3" when the speed is below 90 mph or 145 km/h. It is not necessary to let up on the accelerator.

Position 2

is needed on rare occasions. It should only be used up to 75 mph or 120 km/h. In "2" the transmission will only shift into first or second gear and not shift into the third or fourth gear.

Only shift down into "2" when the car speed is below 40 mph or 65 km/h.

The reverse driving range R

The reverse driving range should be selected only when the car has come to a full stop and the engine is running at idle speed.

The back-up lights come on automatically when you engage Reverse (with ignition on).

Starting the engine N or P

is only possible when the selector lever is in **Neutral** or in **Park**. As long as one of the driving ranges is engaged a safety switch prevents the engine from being started.

Emergency starting

Should the engine fail to start see "Emergency starting with jumper cables" or consult your authorized Porsche dealer.

Do not start or tow the car without ATF in the transmission, as this will result in serious damage to transmission and torque converter.

Moving off

With the parking brake or foot brake set, shift into the range you wish to use, usually position D. To move off, release the brake and accelerate.

WARNING

Do not release the brake before you are prepared to move, because power is transmitted to the wheels as soon as a driving range is engaged.

Selecting a driving range while driving

is easy. Simply release the accelerator pedal and move the selector lever from the range you are into the range you want. Then step on the accelerator again.

WARNING

Do not shift to a lower driving position until vehicle speed has dropped below the specified limits. Engine speed will suddenly increase and may cause engine damage and loss of vehicle control.

Stopping

When stopping temporarily, at traffic lights for example, it is not necessary to move the selector lever to Neutral. Simply apply the brakes. To start again release the brake and accelerate.

Parking

When parking your car, apply the parking brake first, and then move the selector lever to position P. To do this, depress the button and push the lever through R to P. The transmission is then mechanically locked. Park may only be engaged when the car is stationary. At driving speed above 10 mph or 15 km/h, a hydraulic lock prevents the driver from unintentionally moving the selector lever into position R or P.

Do not remove the key from the ignition steering lock until you have parked the car, because removal of the key locks the steering wheel.

Shift out of the Park position, before releasing the parking brake.

When the car is parked on a steep hill, shifting out of Park may be a little harder. This is due to the weight the car exerts on the transmission.

Neutral

Shift to this position for standing with brakes applied.

Never use Neutral for coasting downhill. You may lose control over the car because of reduced braking and cause serious damage to the transmission when a driving range has to be selected.

Maneuvering

When alternating between forward and reverse drive (for instance, while maneuvering the car into a tight parking space), only shift into **Reverse** or **Drive** when the car has come to a full stop and the engine is running at idle speed.

Stuck in snow, mud or sand

When alternating between **Drive** and **Reverse** in an effort to free the vehicle, depress the accelerator pedal lightly while the transmission is in gear, and release the accelerator pedal while shifting. Do not race the engine and avoid spinning the wheels.

Do not repeat "rocking" back and forth with wheels spinning at high engine speed and heavy throttle, as serious damage may be caused in the automatic transmission and other critical parts.

If you cannot free the vehicle after a few "rocking" attempts, call for help or a tow truck.

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.

Accelerator "Kickdown"

When depressing the accelerator pedal you will find resistance at the throttle position. By applying greater pressure the pedal can be pushed beyond this point to the kickdown position. The transmission will now shift automatically into the next lower gear to give you maximum acceleration, and only shift up again after the engine has reached maximum speed in that particular gear.

Be careful when using the kickdown on slippery roads. Rapid acceleration may cause skidding.

Please observe the following when applying the accelerator kickdown:

With the selector lever in D, you can apply the kickdown to make the transmission shift down into third gear when driving below 120 mph or 195 km/h, into second gear when driving below 70 mph or 115 km/h and down to first gear when driving below 25 mph or 40 km/h.

With the selector lever in "3", you can apply the kickdown to make the transmission shift down into the second gear when driving below 70 mph or 115 km/h and into first gear when driving below 25 mph or 40 km/h.

With the selector lever in "2", you can apply the kickdown to make the transmission shift down into first gear when driving below 25 mph or 40 km/h.

As soon as you release the pedal from the kickdown position the next higher gear is automatically engaged.

Please observe all local and national speed limits.

Break-in Hints for the first 1.000 miles/1.600 kilometers

There are no specific break-in rules for your Porsche; however, by taking a few precautions you can help extend the service life and performance of your engine.

During the first 1.000 miles/1.600 km, all working components of the engine adjust to each other to a certain degree. Therefore: Avoid full throttle starts and abrupt stops. Change speeds frequently. Vary the throttle load.

Do not exceed max. engine speed of 5.000 rpm (revolutions per minute).

Do not run a cold engine at high rpm or in Neutral.

Do not let the engine labor, especially when driving uphill. Shift to the next proper gear in time (use the most favorable rpm range).

There may be a slight stiffness in the steering, gearshifting or other controls during the break-in period which will gradually disappear.

Never lug the engine in high gear at low speeds. This rule applies all the time, not just during the break-in period.

Breaking in brake pads

Brake pads do not have maximum braking efficiency when the car is new. Therefore, more pedal force is necessary during the first 100 to 150 miles/150 to 250 km. This also applies to replacement brake pads.

Breaking in new tires

New tires do not have maximum traction. They tend to be slippery. Break in new tires by driving at moderate speeds during the first 60 to 120 miles/100 to 200 km.

Engine Oil Consumption

During the break-in period oil consumption may be slightly higher than normal.

The rate of oil consumption depends on the quality and viscosity of oil, the speed at which the engine is operated, the climate, road conditions as well as the amount of dilution and oxidation of the lubricant.

Engine Exhaust

WARNING

- Engine exhaust is dangerous if inhaled.
- Never start or let the engine run in a closed garage.
- Exhaust fumes from the engine contain carbon monoxide, which is a colorless and odorless gas. Carbon monoxide can be fatal if inhaled.
- If you smell gas fumes in the vehicle, drive with the windows open but keep the hatchback closed. Have the cause immediately located and corrected.
- Because of inherent hazards, we do not recommend transporting objects larger than those fitting safely into the luggage compartment. Keep the hatchback closed while driving to prevent poisonous exhaust gas from being drawn into the vehicle.
- Never carry additional fuel containers in your vehicle. Such containers, full or partially empty, may leak, cause an explosion, or result in fire in case of a collision.

Fuel Economy

Fuel economy will vary depending on where, when and how you drive, optional equipment installed, and the general condition of your car. A car tuned to specifications and correctly maintained, will help you get maximum fuel economy.

- Have your vehicle tuned to specifications.
- Fuel injection should be adjusted to specifications.
- Spark plugs should be clean, properly gapped and fire efficiently.
- Air cleaner should be dirtfree to allow proper engine "breathing".
- Battery should be fully charged.
- Wheels should be properly aligned.
- Tires should be inflated at correct pressures.
- Keep a light foot on the gas pedal.
- Drive smoothly, avoid abrupt changes in speed as much as possible.
- Avoid jack rabbit starts and sudden stops.
- Do not drive longer than necessary in the lower gears. Shifting up early helps to save fuel.
- Avoid unnecessary idling. Turn the engine off.
- Prolonged "warm up" idling wastes gas. Start the vehicle just before you are ready to drive. Accelerate slowly and smoothly.
- Any additional weight carried in the vehicle reduces fuel economy. Always keep cargo to a minimum and remove all unnecessary items.
- Organize your trips to take in several errands.
- Use air conditioner only when needed.
- All electrical consumers contribute to increased fuel consumption.

Operating Your Porsche in other Countries

Government regulations in the United States and Canada require that automobiles meet specific emission regulations and safety standards. Therefore, cars built for the U.S. and Canada differ from vehicles sold in other countries.

If you plan to take your Porsche outside the continental limits of the United States or Canada, there is the possibility that

- unleaded fuel may not be available;
- unleaded fuel may have a considerable lower octane rating. Excessive engine knock and serious damage to both engine and catalytic converter could result;
- service may be inadequate due to lack of proper service facilities, tools or diagnostic equipment;
- replacement parts may not be available or very difficult to get.

Porsche cannot be responsible for the mechanical damage that could result because of inadequate fuel, service or parts availability.

If you bought your car abroad and want to bring it back home, be sure to find out about shipping and forwarding requirements, as well as current import and customs regulations.



Fuel filler cap

The fuel filler cap is located under the flap in the rear quarter panel behind the right rear wheel.

When putting the cap back on the fuel filler neck, be sure cap is securely seated. Twist cap counter-clockwise, until it stops with an audible click.

We recommend you turn off the engine when filling the fuel tank.

Fuel tank capacity

Fuel tank capacity is listed under "Filling Capacities".

Porsche recommends not using any fuel additives.

Fuel Recommendations

Your Porsche is equipped with a catalytic converter and must use UNLEADED FUEL ONLY. Minimum octane rating is 91 RON (87 CLC or AKI rating on U.S. fuel pumps).

The use of UNLEADED FUEL ONLY is critically important to the life of the catalytic converter. Deposits from leaded gasolines will ruin the converter and make it ineffective as an emission control device.

Cars with a catalytic converter have a smaller fuel tank opening, and gas station pumps have smaller nozzles. This will prevent accidental pumping of leaded fuel into cars with a catalytic converter.

Unleaded fuels may not be available outside the continental U.S. and Canada. Therefore, we recommend you do not take your car to areas or countries where unleaded fuel may not be available.

Octane ratings

Octane rating indicates a gasoline's ability to resist detonation. Therefore, buying the correct octane gas is important to prevent engine damage.

The 91 RON octane rating which you will find on a label on the right side of the engine compartment of your car is based on the research method. The CLC (U.S. Cost of Living Council octane rating) or AKI (antiknock index) octane rating usually displayed on U.S. gasoline pumps is calculated as research octane number plus motor octane number, divided by 2, that is:

$$\frac{\text{RON} + \text{MON}}{2}$$

The CLC octane rating is usually 4 points lower than the RON rating:

91 RON equals.....87 CLC or AKI

Never carry additional fuel in portable containers in your car. Such containers, full or partially empty, may leak, cause an explosion, or result in fire in case of a collision.

Do not use any unleaded fuel with octane ratings lower than 91 RON or 87 CLC or AKI.

Gasolines containing alcohol

Gasoline containing alcohol is available at gas stations in some areas. The gas pump may not be labeled to identify that alcohol is present in the gasoline. If it is labeled, it may not identify what amount and type(s) of alcohol are used. We recommend you do **not** use fuels where the alcohol content cannot be identified.

- Deterioration of driveability and performance.
- Substantially reduced fuel economy.
- Vapor lock and non-start problems, especially at high altitude or at high temperatures.
- Engine malfunction or stalling.

Continued use of gasohol under these conditions may cause costly damage to the fuel system and the emission control system of your vehicle.

Gasolines containing methanol

Do not use fuels containing methanol (methyl alcohol, wood alcohol). The use of fuel containing this type of alcohol can result in vehicle driveability and performance problems and may damage critical parts of your vehicle's fuel and emission control systems.

Gasolines containing ethanol

A mixture of unleaded gasoline and ethanol (ethyl alcohol, grain alcohol) is sold in some areas. This mixture is sometimes called "Gasohol". You may decide to use gasohol in your Porsche, provided it contains no more than 10 % ethanol, and the octane requirements for your vehicle are met. However, we strongly recommend switching back to gasoline without ethanol, if you experience any of the following problems with your vehicle:

Car care instructions

Regular and correct care helps to maintain the value of your car and is also a precondition for the long-life guarantee.

The Porsche paint finish is of a high quality baked synthetic enamel. The color and enamel type designation are indicated on a plate attached to the left front doorjamb. When buying touch-up paint, always give the paint and the car's identification numbers to your dealer.

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

Your Porsche dealer has a number of car-care products and can advise you which ones to use for cleaning the interior and exterior of your car. Whether you use Porsche recommended products or other commercially available cleaning agents, first make sure of their correct application.

WARNING

- **Cleaning agents may be poisonous. Keep them out of the reach of children.**
- **Observe all caution labels.**
- **Always read directions on the container before using any product.**

- **Most chemical cleaners are concentrates which require dilution.**
- **Do not use gasoline, kerosene, naphtha, nail polish remover or other volatile cleaning fluids. They may be toxic, flammable or hazardous in other ways. Only use spot removing fluids in well ventilated areas.**
- **Do not wash, wax or dry the vehicle with the engine running.**
- **Do not clean the underside of chassis, fenders, wheel covers, etc., without protecting your hands and arms. You may cut yourself on sharp-edged metal parts.**
- **Moisture and road salt on brakes may affect braking efficiency. Test the brakes after each vehicle washing.**

Washing and waxing

The paint on your Porsche is very durable but must be protected from losing its luster due to outside influences. Therefore, wash and wax your Porsche often. 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. **Do not wash or wax in direct sunlight. Do not use hot water. Lukewarm to cool water is kinder to the paint.**

Pamper your Porsche! Wash it by hand! The mechanical brushes in an Automatic Car Wash may not reach every angle of the vehicle, and some **tracks may cause damage to the underbody.**

Use plenty of water, a car-wash and wax solution and a soft sponge or hose brush. Begin by spraying water over the dry surface to remove all loose dirt before applying the car-wash and wax solution. Use plenty of water to rinse the vehicle off. Wipe everything dry with a chamois to avoid water spots.

To guard against corrosion from inside out, clean drain holes on the bottom of doors, tail gates hatches, etc., after each washing. Then wipe dry thoroughly. Also inspect all weatherstrips to make sure they do not allow water to enter the body panels.

Do not aim water jet directly at door, hatch or rear lid locks. Tape the key holes to prevent water from seeping into the lock cylinders. Water in lock cylinders should be removed with compressed air. To prevent locks from freezing in the winter, squirt glycerine or lock de-icer into the lock cylinders. **Do not use any solution that can damage the body paint.**

The underside of the vehicle picks up dirt and road salts used to keep streets and highways free of snow and ice. To guard against corrosion, it is important to remove mud, debris and road salt from the underside with a powerful jet of water. Be sure to include the wheel housings, bumpers, muffler, tailpipe and brackets. This should be done twice a year and is best accomplished after the vehicle has been driven through a heavy rain. Let engine and exhaust cool down before washing.

Waxing is not really needed when you have used a car-wash and wax solution. If you do not use a car-wash liquid with wax, apply wax to preserve the natural shine of the body paint. To obtain a long lasting finish, apply hard wax. Wax again if water remains on the surface in large patches instead of forming beads and rolling off.

Exterior

Care of the finish

Oils contained in the paint are the most important ingredients contributing to the elasticity of the finish. Because these oils are gradually lost, due to weather and similar causes, they must be replenished through regular and proper care of the finish. Given proper care, the original finish will retain its luster for many years. Ask your dealer for approved cleaning agents and preservatives. The use of polishes is recommended only after it becomes evident that the normal preservatives no longer accomplish the job.

Dull finishes and plastics

Plastic parts, such as light bulb lenses, decorative stripes, panels, etc., will come clean during car washing. Should additional cleaning or spot removal be necessary, use a soft brush or cloth soaked with a mild detergent solution. Then rinse thoroughly and immediately with clear water. **Do not use anything** which could mar the plastic or dull finishes surface, such as wax or polish, abrasive detergents or chemical cleaning solvents.

Metal trim

Bright or black anodized trim will come clean when you wash the vehicle. To protect the trim, use car wax.

Touch-up paint

Your dealer has touch-up paint for minor scratches and stone chips. Scratches should be touched up soon after they occur, to prevent corrosion. If corrosion formation becomes visible, however, a simple touch-up job will not suffice. The affected surface must be smoothed with sand paper and covered with an anti-rust primer, before restoring the painted finish.

Tar or oil

Do not allow tar or oil to remain on the paint. Remove as soon as possible with a cloth soaked with a special paint cleaner. If you do not have a tar or oil 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 as soon as possible with a lukewarm soap/water solution or apply insect remover.

Tree sap

Remove with a lukewarm soap/water solution. Do not allow tree sap or bird droppings to harden on the paint.

Windows

Keep silicone sprays off the windshield to avoid wiper smear in rain.

Clean all windows regularly to remove road film and car-wash wax buildup. Use a lukewarm soap/water solution or an alcohol base commercial window cleaning agent for the inside and outside. If a chamois is used for polishing the glass, it should exclusively be used for that purpose.

To assure that windshield washers also function at freezing temperatures, anti-freeze must be added to the washer fluid reservoirs beforehand. It is advisable to use window washer solvent with anti-freeze all year round. Follow directions on the can for the right amounts to be used. **Do not use engine coolant anti-freeze or any other solution that can damage the paint.**

Wiper blades

Always loosen frozen wiper blades from glass as they may tear otherwise.

Remove all wiper blades periodically and clean them thoroughly with an alcohol base cleaning solution. Use a sponge or soft cloth and wipe lengthwise.

Weatherstrips

To seal properly, weatherstrips around hood, windows and doors must be pliable. To retain flexibility of the rubber, spray with silicone, coat with talcum powder or glycerine to retain flexibility of the rubber and to protect against freezing in the winter.

Antenna

The telescopic radio antenna should be cleaned weekly. Do not retract a dirty antenna as this may damage the electric mechanism. A dirty antenna can also produce poor radio signal reception. Wipe the antenna with a soft, lightly oiled cloth. Do not use wax based oils. Use a clear, thin oil only (for example: sewing machine oil).

Light alloy wheels

To preserve the decorative appearance of the light aluminium cast, some special care is necessary. Aside from road dirt and salt sprays, brake metal dust will exert corrosive effects.

If left on too long, brake metal dust can cause pitting. Wash the wheels with a sponge or hose brush every other week. Road salts should be removed weekly with an acid free cleaning solution. Every three month (after regular cleaning) the wheels should be coated with petroleum jelly. Rub it in firmly with a soft cloth. Never use abrasive or metal polishing cleaning agents.

Remember that moisture and road salt on brakes may affect braking efficiency. Test the brakes after each car or wheel wash.

Interior

Glass

Use the same cleaning agents as for exterior and polish dry.

Fabric

Use a vacuum cleaner or a soft bristle brush to remove dust and loose dirt from carpeting, upholstery, headliner and other trim. Dirt stains can usually be removed with a lukewarm soap water or all purpose cleaner solution, or a dry foam cleaner. For greasy, oily and other stubborn stains, use a spot remover. Do not pour the liquid on the fabric. Dampen a clean cloth and rub carefully, starting at the edge and working inward.

Seat belts

Keep belts clean. Very dirty belts may not retract properly. Do not remove belts from the vehicle to be cleaned. Do not use chemical cleaning agents, bleach or dyes. They contain corrosive properties which will weaken the webbing. Do not allow inertia reel safety belts to retract before they are completely dry.

For cleaning, use a mild soap water solution. Let belts dry out thoroughly and away from direct sun light.

Plastic, vinyl and leatherette

Use a clean, damp cloth or sponge to keep this trim free from dust. For other soilage, use a lukewarm all purpose cleaning solution or a mild saddle soap for vinyl and leather trim. Remove water spots and soap traces with a clean, damp cloth or sponge. Use a clean, soft cloth to rub dry.

Grease, tar or oil stains can be removed with a clean cloth or sponge soaked with all purpose cleaner or with a solvent type vinyl or leather cleaning agent.

Occasionally apply a colorless vinyl or leather preservative to retain the material's luster and pliability.

Leather and leather trim

To keep leather seats and trim beautiful and soft, they should be cleaned and cared for regularly. Clean leather with a soft, white woolen cloth and a mild soap water solution. Do not use chemical or abrasive cleaning agents. Do not let moisture seep through perforated surfaces to safeguard against corrosion and cracking from underneath. After cleaning, apply the leather preservative "Karnel" - Porsche part-No. 000.043.007.00 - to all dry surfaces with a clean and soft woolen cloth. Let your Porsche dealer advise you on the use of the leather preservation product.

Corrosion protection

The engine compartment, as well as all engine, transmission, front and rear axle assembly surfaces at the factory have been treated with wax based coating for protection against corrosion.

WARNING

Do not apply additional undercoating or rustproofing on or near the exhaust manifold, exhaust pipes, catalytic converter or heat shields. During driving, the substance used for undercoating could overheat and cause a fire.

Engine Compartment

If it becomes necessary to steam clean or otherwise wash the engine compartment, the wax based protective coating is usually lost. It is, therefore, important to reapply this protective coating to all engine compartment panels, flanges, cavities, seams and engine assembly surfaces.

The accelerator cable return spring **must** be lubricated after each engine compartment cleaning.

Chassis

The lower body shell of your Porsche is thoroughly protected against corrosion. However, it is recommended to have the underbody inspected twice a year. Any detected damage to the undercoating, due to road hazards, should be repaired promptly. Oil based protective sprays must not be applied. Only tar or wax based anti-corrosion protectors are compatible with the factory applied undercoating. Before application, road dirt and oily substances must be removed.

Whenever the lower body shell, axle, transmission or engine assemblies are repaired, the lost anti-corrosion coating of the affected surface should be renewed.

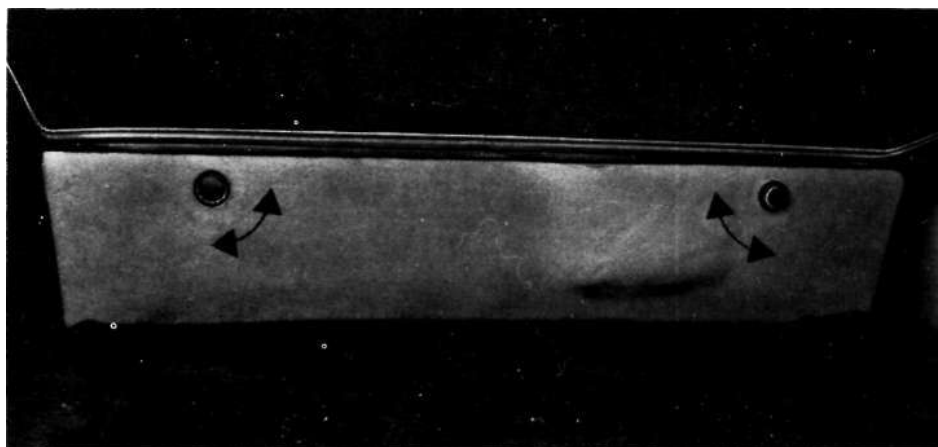
Let your Porsche dealer advise and assist you.

Exercise Extreme Caution when Working under the Engine Hood

The engine compartment of any motor vehicle is a potentially hazardous area. If you are not fully familiar with proper repair procedures, do not attempt the adjustments described on the following pages. This caution applies to the entire vehicle.

- Before working on any part in the engine compartment, turn the engine off and let it cool down sufficiently. Hot engine compartment components can burn skin on contact.
- Even after the engine has stopped, the radiator fan may continue running until temperature of the coolant has dropped to a certain level. Therefore, never touch the fan blades as they will rotate spontaneously when the thermostat turns the fan on, even with ignition off.
- Be alert and cautious around engine at all times while the engine is running.
- If work has to be done with the engine running, always set the parking brake, and make sure the shift lever is in either Neutral or Park.
- Exercise extreme caution to prevent neckties, jewelry or long hair from getting caught in the fan blades, the drive belts, or any other moving engine parts.
- Your Porsche is equipped with a transistorized ignition system with breakerless distributor. When the ignition is on, high voltage is present in all wires connected with the ignition system; therefore, exercise extreme caution when working on any part of the engine while the ignition is on or the engine is running.
- Always support your car with safety stands if it is necessary to work underneath the car. The jack supplied with the car is not adequate for this purpose.
- When working underneath the car without safety stands but with the wheels on the ground, make sure the car is on level ground, that the wheels are blocked, and that the engine cannot be started.
REMOVE THE IGNITION KEY.
- Do not smoke or allow an open flame around the battery or gasoline.
- Keep a fire extinguisher in close reach.
- Incomplete or improper servicing may cause problems in the operation of the car. If in doubt about any servicing, have it done by your authorized Porsche dealer or any other properly equipped and qualified workshop.
- Improper maintenance during the warranty period may affect your warranty coverage.

Maintenance and Emergency Service



The recommended service intervals, as listed in the Maintenance Record, apply under normal driving conditions.

The condition of oil and of wear and tear items depends greatly on the amount of driving and on driving habits. Therefore, oil and wear and tear items should be checked more frequently and possibly changed at shorter intervals.

Incomplete or improper servicing may cause problems in the operation of the car and affect your warranty coverage. If in doubt about any servicing, have it done by a qualified mechanic or by your Porsche dealer.

See "Cautions"

Tool kit

The tool kit is a lift-out tray fitted into the rear cross wall of the car. To remove or replace the tray, turn both holding knobs 90° (arrows). The tool kit contains tools needed for minor road side repairs or adjustments. Regulations in some countries require additional tools. Details should be obtained before leaving for a foreign country.

Car jack

The car jack is located underneath the luggage compartment, together with the collapsible spare tire. The tire is covered by a lid with a quick release catch.

WARNING

- **Use the jack only for changing a wheel. Never jack up other vehicles or other loads with it.**
- **The jack must never be used as a support to work underneath the vehicle. If the jack is accidentally dislodged, you could be seriously injured. When working under the vehicle, always use safety stands specifically designed for this purpose.**

Engine oil

It is normal for your engine to consume oil. The rate of oil consumption depends on the quality and viscosity of oil, the speed at which the engine is operated, the climate, road conditions as well as the amount of dilution and oxidation of the lubricant.

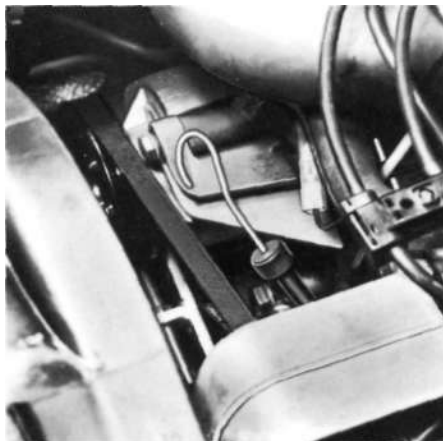
Because of these variables, no standard rate of oil consumption can be established, but drivers should expect an increased oil consumption at high speeds and when the engine is new.

- **The engine in your vehicle depends on oil to lubricate and cool all of its moving parts. Therefore, the engine oil should be checked regularly and kept at the required level.**
- **Make it a habit to have the engine oil level checked with every fuel filling.**
- **Lack of sufficient engine oil may lead to severe engine damage.**
- **The oil pressure warning light is not an oil level indicator.**

Checking oil level

To get a true reading, the car should be on level ground. After turning off the engine, wait a few minutes for the oil to return to the oil sump.

1. Pull out dipstick and wipe it clean with a rag.
2. Reinsert dipstick; push it in all the way for an accurate reading.



3. Pull dipstick out again. The oil level is correct if it is between the "max" and "min" marks on the dipstick.
4. If oil level is below "min" mark, or not showing on dipstick, add oil immediately.

The difference between the two marks is about 1.6 U.S. qt. or 1.5 liter.

Should the engine oil level be too low, the central warning light and the engine oil level warning light will flash as soon as the ignition is turned on (see "Central warning light system"). Do not start the engine but add oil immediately or contact your Porsche dealer.

See "Cautions"



Adding engine oil

Only add the amount of oil that is needed. The correct oil grade and viscosity recommendation is given under "Engine Oils".

1. Remove oil filler cap (arrow).
2. Top up with quality oil labeled "**API Service SF or SE**".
3. Check oil level on dipstick - upper mark should not be exceeded.
4. Replace cap and tighten.

WARNING

The oil filler cap must be secure to avoid oil spill causing fire hazard.



Changing oil and filter

High quality multi-grade oils are suitable for all year round driving. Seasonal oil changes are therefore not necessary. Only if multi-grade oils are not readily available, a single-grade oil of the correct viscosity can be used. Specifications of the various oils to be used are detailed under "Filling Capacities". **The use of oil additives is not recommended by Porsche.**

WARNING

- When removing oil drain plug with your fingers, keep your arms as high as possible. This will prevent hot oil from running down your arm. Wear eye protection.
- Always use a new gasket when reinstalling the plug. Do not overtighten the plug.

Be mindful of how you dispose of used engine oil. Do not dump it on the ground, into open streams or down sewage drains. Your zoning regulations or environmental rules will tell you how you can dispose of it. Should the disposal of old engine oil present a problem, we suggest that you have your oil changed at your dealer or at a service station.

Oil change intervals specified in the Warranty & Maintenance booklet accompanying the vehicle apply to normal operating conditions and must be adhered to, including intervals for oil filter change.

If you drive mostly short distances, or if you operate the vehicle in dusty areas, or under predominantly stop-and-go traffic conditions, or when temperatures remain below freezing for extended periods, the engine oil should be changed more frequently.

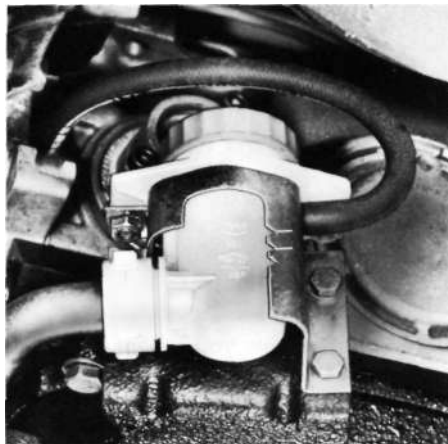
Changing engine oil

With the engine at operating temperature and ignition off.

1. Loosen and remove oil filler cap.
2. Loosen oil drain plug (arrow) on oil pan and allow oil to drain completely.
3. Loosen oil filter element with appropriate wrench and remove.
4. Lightly coat new filter seal with oil.
5. Screw on new filter element until seal just contacts the crankcase. Only handtighten according to filter manufacturer's instructions on container or filter element.
6. Clean oil drain plug and replace, using a new gasket. **Do not overtighten the plug.**
7. Fill the crankcase with about 7.9 U.S. qts. or 7.5 liters of engine oil labeled "API Service SF or SE" (see "Filling Capacities").
8. Check the oil level with dipstick and reinstall oil filler cap.
9. Run engine at various speeds for 3 - 5 minutes and check for leaks.

See "Cautions".

Manual transmission oil



The transmission oil has to be changed at the intervals listed in your **Maintenance Schedule**.

Hypoid oil SAE 75 W 90 labeled "For Service API/GL5 or Mil-L2105B" **must be used for the manual transmission** (also for limited slip differential). Also see "Filling Capacities".

We recommend that you have the transmission oil changed at your Porsche dealer, who has the required lubricants and the necessary filling equipment.

If you suspect an oil leak in the transmission, have your dealer check it out immediately.

Automatic transmission fluid

The torque converter and the transmission are lubricated with Automatic Transmission Fluid (ATF). The final drive requires hypoid oil SAE 90 only.

Do not tow the car or run the engine without ATF in the transmission.

The automatic transmission may be damaged by even a tiny speck of dirt. Only a clean funnel or spout must be used when adding ATF.

Checking the ATF level

The ATF should be checked at the intervals listed in your **Maintenance Schedule**. A correct ATF level is very important for the proper functioning of the transmission.

The reading should be done when the ATF is warm, with the engine idling, the selector lever in Neutral and the parking brake applied.

The level of the ATF can be checked visually through the transparent reservoir, located at the rear end of the transmission housing. You have enough ATF, if the fluid level is between the MAX and the MIN mark on the reservoir. **The level should never be above or below these two marks.**

Should the fluid level in the transparent reservoir drop below the MIN mark or rise above the MAX mark, do not just add or drain ATF. Have your dealer check and correct the cause promptly.

In the event of a noticeable loss of ATF, contact your dealer immediately.

Changing the ATF

The ATF has to be changed at the intervals listed in your **Maintenance Schedule**. When refilling, the level must reach **the mark below the MIN mark**. Also see "Filling Capacities". The hypoid oil in the final drive does not have to be changed.



Windshield washer fluid reservoir

The transparent fluid reservoir is located in the right rear in the engine compartment, in front of the expansion tank (see illustration). Clear water is normally not adequate to keep your windshield und headlights clean. Add a solution, such as windshield washer solvent and anti-freeze. Porsche does not recommend the use of a "special silicon remover" cleaning agent. Consult your Porsche dealer regarding accurate mixing ratios or follow instructions on container of the anti-freeze manufacturer

To assure that the windshield washer and the headlight washer (where applicable) systems also function at freezing temperatures, anti-freeze must be added to the water beforehand. Follow the instructions on the can for the right amount to be used.

Do not use engine coolant anti-freeze or any other solution that can damage the car paint.

Cooling system

For year round driving, anti-freeze is added at the factory for temperatures down to:

-23° F/-30° C for U.S.

-40° F/-40° C for Canada

Because of its anti-corrosion properties, anti-freeze should also remain in the cooling system for summer operation. Cooling system capacity and specified anti-freeze and water ratios are listed under "Filling Capacities".

Use any quality phosphate-free anti-freeze containing ethylene glycol, available at your Porsche dealer. **Anti-freeze other than specified by Porsche for aluminium engines and radiators may cause corrosion of the cooling system, leading to engine overheating and damage.**

Only for topping up coolant, a small amount of anti-freeze containing ethylene glycol and phosphates may be used if recommended anti-freeze is not available.

The anti-corrosion properties and the anti-freeze consistency will diminish gradually. We recommend renewing the coolant mixture at least every 2 years.

Warning: The air conditioner condensor fan is electrically driven. It is switched on automatically by a thermostat when the coolant reaches 92° C/198° F. Even when the engine is turned off, the fan will continue running, until the coolant temperature has dropped to 87° C/189° F and until the engine itself has cooled down sufficiently.

See "Cautions".

Checking coolant level in expansion tank

A correctly functioning cooling system requires only minor care. The coolant level should be checked from time to time, and always before going on a longer trip.

The **expansion tank** with filler cap opening is located in the right rear of the engine compartment (see illustration). Since the expansion tank is transparent, it is not necessary to unscrew the filler cap.

When the engine is cold, the coolant level should reach the filler mark on the expansion tank. When the engine is warm, the coolant level will be above the filler mark.

Since the closed cooling system loses almost no coolant, **topping up** is normally not required. An obvious loss of coolant indicates leakage. In this case contact your dealer.

WARNING

Do not open the filler cap when the engine is hot because of the danger of scalding. Allow the engine to cool down. Protect your hands, arms and face. Open the filler cap to the first catch to allow pressure to escape before removing the cap.

For more details see "Coolant temperature gauge and coolant temperature warning light".

To avoid damage to the engine, only add cold anti-freeze and cold water to the cooling system when the engine is also cold.

A warm engine should only be topped up if the coolant level has dropped appreciably below the filler mark. Too much added coolant will escape through the pressure cap when coolant warms up.

Bleeding cooling system

If more than about 1.1 U. S. qt. or 1 liter must be added, the cooling system should be bled.

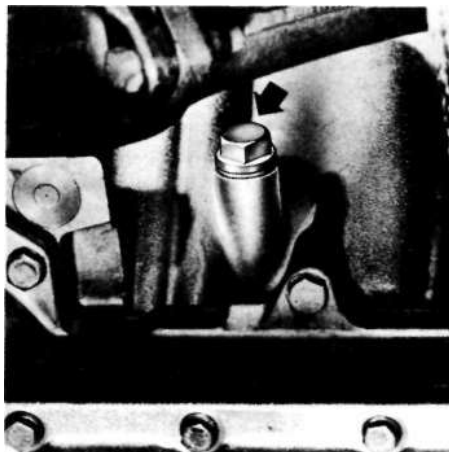
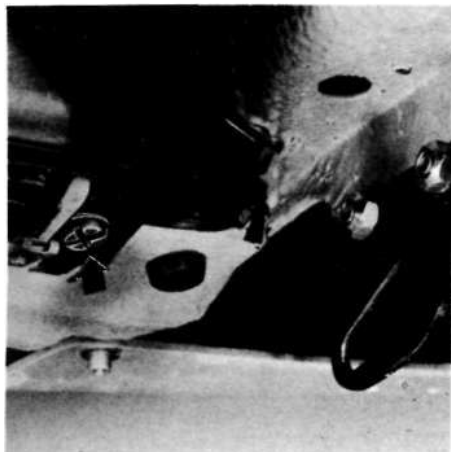
1. Move the temperature control lever (upper lever) in the center console all the way to the right.
2. Start the engine and allow it to run at increased idle for about one minute.
3. Turn the engine off.
4. Recheck the coolant level and add as necessary.

Winter operation

At the beginning of the winter season, have the coolant checked for anti-freeze concentration.

For anti-freeze/water mixing ratios and cooling system capacity, see "Filling Capacities".

Increasing the anti-freeze in the coolant further than shown on the container is not only uneconomical, it is also detrimental to engine cooling.



Changing coolant (with cold engine only)

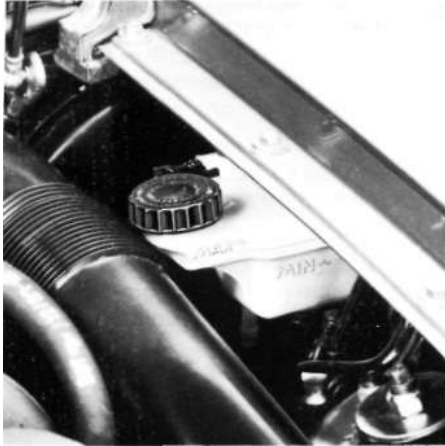
1. Move temperature control lever all the way to the right. On vehicles equipped with an automatic climate control system, also turn on the ignition, leaving key in position "2" for about 1 minute. Then turn ignition off.
2. Remove filler cap from expansion tank.
3. Unscrew and remove drain plug (arrow) from radiator and drain coolant.
4. Unscrew and remove drain plugs (arrow) from left and right hand sides of crankcase and drain coolant.
5. Replace seals for drain plugs on crankcase and the O-ring for drain plug on radiator.

Tightening torques:

radiator plug:
1.1-1.5 lbft or 1.5-2.0 Nm

crankcase drain plugs:
33-37 lbft or 45-50 Nm

6. Add coolant until level reaches edge of filler cap opening (with heater lever set at "warm").
7. Run engine at increased idle until it reaches operating temperature and recheck coolant level.
8. Coolant level should be in the middle of expansion tank above the filler mark.

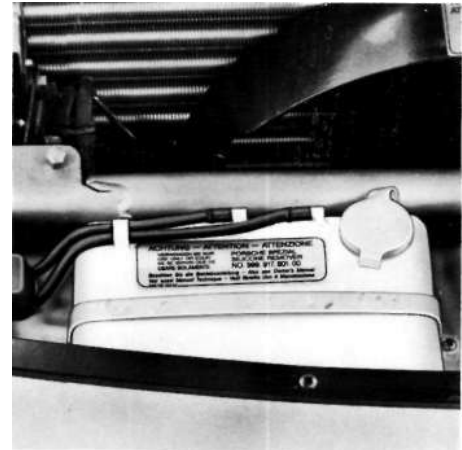


If the brake fluid level should drop below the MIN mark, the central warning light and the brake fluid warning light will flash (see "Central warning light system").

Pull off the road, stop the engine and add brake fluid immediately or contact the nearest Porsche dealer to have the cause located and corrected.

WARNING

- Every 2 years the brake fluid has to be replaced. See your Warranty & Maintenance booklet.
- If brake fluid must be added to the reservoir, use only new and unused DOT 3 or DOT 4 brake fluid that meets SAE specification J1703 and conforms to Motor Vehicle Safety Standard 116.
- Do not use any other brake fluid or brake fluids that have absorbed moisture from the open air, or brake fluid that is dirty. It may cause premature wear or unreliable braking action.
- Do not add or mix DOT 5 silicone type brake fluid with the brake fluid in your vehicle as severe component corrosion may result. Such corrosion could lead to brake system failure.
- The brake warning light does not indicate brake fluid level. Check fluid level between regular maintenance services.
- Brake fluid is poisonous. Brake fluid is also harmful to the paint of your vehicle.



Intensive windshield washer system reservoir (where applicable)

The reservoir is located in the engine compartment in front of the radiator.

To avoid paint damage, we recommend the exclusive use of a "special silicone remover" cleaning agent. Clear water and anti-freeze will not be sufficient.

Your Porsche dealer can advise you which product to use.

(Also refer to "Filling capacities" and "Cooling system mixing ratios".)

Brake fluid reservoir

The brake fluid reservoir is located in the engine compartment.

The brake fluid reservoir has three chambers: one for each of the dual brake circuits, and one for the clutch.

Check the brake fluid level regularly. Since the reservoir is transparent, the fluid level can be checked without removing the filler cap. The fluid level should always be between the MIN and MAX marks.

To add brake fluid, unscrew the cap. The vent bore in the cap should be kept clean.



Power steering fluid reservoir

The reservoir is located in the engine compartment on the left side.

To check fluid level...

1. Remove cap from reservoir.
2. With engine running at operating temperature, the fluid level should meet the mark on the reservoir. **If necessary, top up with ATF Dexron®.**
3. Reinstall cap and make sure that sealing ring is seated correctly.

If the engine is not running, power assisted steering is no longer effective. You can continue to steer the car but more effort will be required to turn the steering wheel.



Changing air cleaner filter element

A dirty air cleaner not only reduces engine performance, but can lead to premature engine wear. The filter element must be replaced at the intervals listed in your **Maintenance Schedule**. If driving is mostly done in areas where the air is very dusty, the air cleaner should be checked and cleaned frequently - perhaps daily.

1. Detach air intake hoses from air cleaner housing. Make sure that each hose stays connected to the toothed belt covers.

2. Loosen rubber fasteners and remove top of filter housing together with filter element.
3. Clean filter housing with lint-free rag and install new filter element.
4. Reattach air intake hoses to air cleaner housing.

WARNING

The paper filter element must never be cleaned or soaked with gasoline, cleaning solvents or oil.

Tires/Wheels

The original equipment tires on your Porsche comply with all applicable Federal Motor Vehicle Safety Standards.

For your driving safety remember the following:

- Wheel rims and wheel bolts are matched to fit your Porsche.
- If you intend to use other than original equipment wheels, be sure that they conform to Porsche specifications for your model.
- The use of wheel rims and wheel bolts that do not meet specifications of the original factory installed equipment will affect the safe operation of your vehicle.
- Before you plan on exchanging wheels, or snow tires already mounted on wheel rims, consult your Porsche dealer. He has the technical information necessary to advise you which wheel rims and wheel bolts are compatible with the original factory installations.

Tire pressures

WARNING

Incorrect tire pressures cause increased tire wear and adversely affect road holding of the vehicle, leading to loss of control.

Always use an accurate tire pressure gauge when checking inflation pressures. Do not exceed the maximum tire inflation pressure listed on the tire sidewall (Also refer to "Technical data"). Cold tire inflation pressure means: when a car has not been driven for at least 3 hours or less than 1 mile. Never let any air out of warm tires to meet cold tire pressure specifications.

Tire traction

WARNING

When driving on wet or slushy roads, a wedge of water may build up between the tires and the road. This phenomenon is known as aquaplaning and may cause partial or complete loss of traction, vehicle control or stopping ability. Reduce speed on wet surface.

Tire life

Tire life depends on various factors, i.e., roads, traffic and weather conditions, driving habits, type of tires and tire care.

Inspect your tires at least every 2000 miles or 3000 km for wear and damage. If you notice uneven or substantial wear, wheels might need alignment or tires should be balanced or replaced.

Tires must always remain on same side of vehicle.

After changing, adjust tire pressure and torque wheel nuts diagonally to 94 ftlb (130 Nm). See "Changing wheels".

Tire wear

The original equipment tires on your Porsche have built-in wear indicators. They are molded into the bottom of the tread grooves and will appear as approximately $\frac{1}{2}$ in (12 mm) bands when the tire tread depth is down to V16 of an in (1.6 mm).

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.

WARNING

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 Porsche 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 care

WARNING

- **Avoid damaging tires and wheel rims. If you must drive over a curb or other obstacle, drive slowly and at an obtuse angle. Frequently check tires for uneven wear and damage.**

- **Remove imbedded material.**
- **Replace worn or damaged tires immediately.**
- **Replace missing valve dust caps.**
- **Keep oil; fuel, brake fluid, etc. away from tires.**
- **Keep tires inflated correctly.**

Tire replacement

In the interest of maximum safety and best all-around car handling, always buy replacement tires that have the same specifications with regard to tire size, design load carrying capacity, tread pattern, tread depth, etc. This also applies to Porsche-recommended alternate replacement tires.

In case of tire damage where it is uncertain whether there is a break in the ply with all its consequences or tire damage caused by thermal or mechanical overloading due to a loss of pressure or any other prior damage, we recommend that the tire be replaced for safety reasons.

If one faulty tire is replaced it should be noted that the difference in tread depth on one axle must not be more than 30 %.

Tire specifications are imprinted on the sidewall of the tires. If in doubt, check with your Porsche dealer.

When replacing tubeless tires, always install new valve stems. When replacing tires requiring an inner tube, always install new tubes.

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 - 120 miles or 100 - 200 km.

Wheel balancing

A wheel should always be balanced after a tire repair. Even with regular use a wheel can get out of balance, and should, therefore, be balanced from time to time. Unbalanced wheels may affect car handling and tire life.

When balancing light alloy wheels, use only adhesive balancing weights supplied through the Porsche parts service.

Wheels

If you intend to use other than original equipment wheels, be sure that they conform to Porsche specifications for your model.

Check with your Porsche dealer regarding the correct wheel specifications for type and model year.

Removing and storing tires

The driving direction should be clearly marked on all tires before removing them for storage. This is to make sure that they are mounted and run in the same direction as before. When remounting, put tires with the most tread depth at the front. Have tires/wheels balanced as soon as possible.

Store tires in a cool and dry place.

Snow tires

For a better grip on snow and ice use radial M+S tires or snow tires with studs. Check with your local Motor Vehicle Bureau for possible restrictions.

Radial ply M+S tires should be inflated with the same cold tire inflation pressures required for the regular radial ply tires. However, do not exceed the maximum tire inflation pressure listed on the tire sidewall.

Snow tires should have the same load capacity as original equipment tires and should be mounted on all four wheels. Snow tires with studs should be run at moderate speeds when new in order to give the studs time to settle.

WARNING

Tires with badly worn treads and studs are very dangerous. Make sure they are replaced immediately.

Do not drive a vehicle equipped with snow tires at prolonged high speed. Snow tires do not have the same degree of traction on dry, wet or snowfree roads as a normal tire. Furthermore, snow tires wear rapidly under these conditions.

Snow tires do not fulfill their purpose if the tread depth is less than 5/32 in/4 mm.

Snow chains

Should snow chains be necessary, they must be mounted on the drive wheels only.

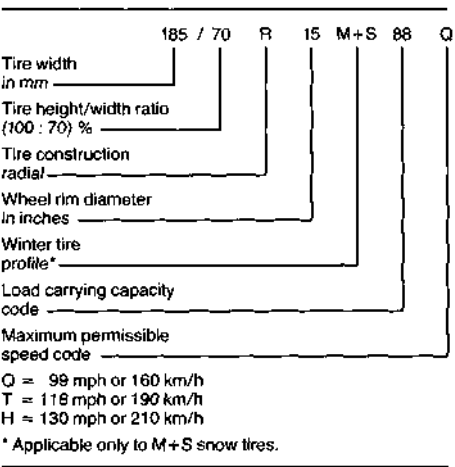
Check with local authorities for possible restrictions.

Use only snow chains with fine pitch links, so that enough space remains between the chains and the inside of the wheel arches.

Drive wheels must rotate freely with chains mounted to prevent damage to body, axle or brake components. Follow instructions issued by the supplier of the chains. Remove chains as soon as roads are free of ice and snow.

New tire identifications

The European tire manufacturers have changed their tire identification system for SR and HR-tires pertaining to maximum permissible speed and maximum load carrying capacity for belted tires. The following is an example only.



During the transition period some tires might show both old and new identification codes, such as: 185/70 SR 15 M+S 88 Q. In this instance, the new codes apply.

The identification codes for VR tires remain unchanged; for example: 225/50 VR 16. (V= maximum permissible speed for radial tires, i.e. over 130 mph or 210 km/h).



Collapsible spare tire

The collapsible spare tire is located underneath the luggage compartment. It is covered by a lid with a quick release catch. The car jack is stored behind the spare tire. Stored inside the wheel rim is the electric air compressor kit. This kit also includes a plastic cover for the road wheel to keep luggage compartment or car interior clean.

Due to tread and space saver design features of the collapsible tire, car handling may be affected.

Therefore, do not drive more than 50 mph or 80 km/h when using the collapsible spare tire. It is for emergency use and short distances only. Use the original road tire as soon as possible.

Inflating the collapsible tire

Inflate the collapsible tire with the electric air compressor that comes with your Porsche. Do not use other equipment!

1. Mount spare wheel before inflating the tire.
2. Attach hose of air compressor to tire valve and insert plug of electric cord into cigarette lighter socket.
3. **The required tire pressure is 32 psi or 2.2 bar.** Check pressure with tire pressure gauge.
4. Have flat road tire repaired and remounted on car at next service stop. Remember, the collapsible tire is for emergency use and short distances only.

When the air is released from the collapsible tire, it will return to its original shape after cooling down for several hours. Store collapsible tire in compartment underneath the luggage compartment.

The collapsible spare tire cannot be repaired or mounted with standard workshop equipment. Repair and remounting must only be done by the manufacturer.

Tire tread depth

As required by law, the tread depth of the collapsible tire is the same as that of the original equipment tire. Replace a worn collapsible spare tire in time.

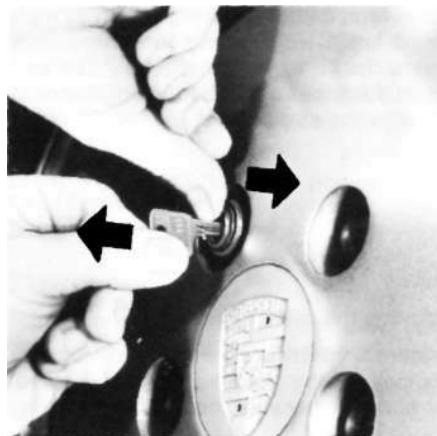
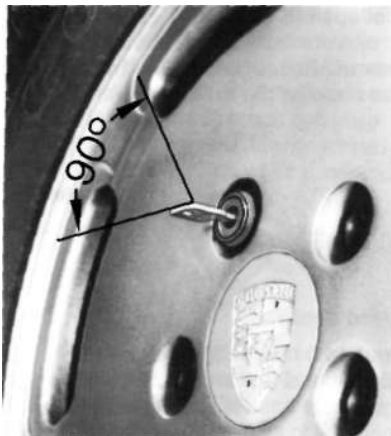
If air compressor does not work

- .. Check if tobacco or any other foreign matter is lodged in the cigarette lighter socket. Remove carefully with a wooden pick. Do not use metal object to prevent short circuit.
- .. Check if fuse is blown. Replace with new equivalent fuse.

Maintenance of air compressor

The air compressor is maintenance-free. Do not apply oil or any other lubricant.

The air filter should be cleaned periodically to assure maximum efficiency of the unit.



Lockable wheel nuts

You can guard against wheel theft by installing lockable wheel nuts on your wheels. Each kit contains four keys, four wheel nuts with lock sleeve and a standard wheel nut for the spare wheel. The locking mechanism is identical for all four wheel nuts. When taking the vehicle to your Porsche dealer or to a workshop for wheel or tire service, remember to leave one key with the service attendant.

In case of loss, duplicate keys cannot be furnished by your Porsche dealer. Do not leave these keys in the vehicle. Keep them in a safe place.

To unlock a wheel

1. Remove protective plastic cap from wheel nut.
2. Insert key all the way and turn left or right about 90°.
3. Remove lock sleeve together with inserted key.
4. Replace protective plastic cap.

Generally, it is not necessary to balance the wheels after installing lockable wheel nuts.

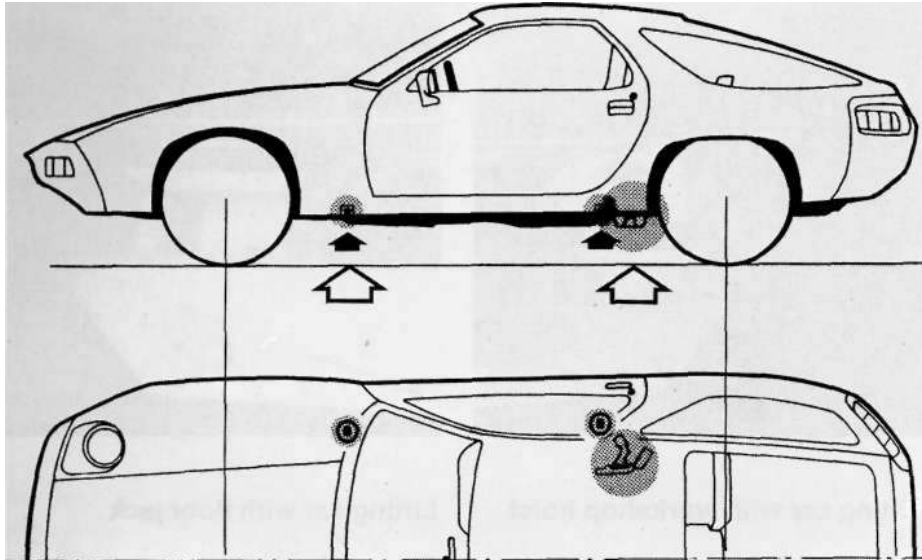
To lock a wheel

1. Remove protective plastic cap from wheel nut.
2. Insert key all the way and slide lock sleeve over wheel nut.
3. Make sure that the edge of the lock sleeve rests firmly against base of wheel nut.
4. Press lock sleeve firmly against wheel nut while removing key.
5. Replace protective plastic cap.

Changing a wheel

WARNING

- If you have a flat tire, move a safe distance off the road. Turn the emergency flasher on and use other warning devices to alert other motorists.
- Passengers must not remain in the vehicle when it is jacked up.
- Before you change a wheel, be sure the ground is level and firm. If necessary, use a board under the jack.
- Set the parking brake and block the wheels opposite the flat tire on the other side of the vehicle.
- The jack is only to be used for changing a wheel. Do not use it as a support to work under the car.
- Never jack the car up by the body or the bumpers.



Black arrows: Jackports for car jack
White arrows: Lifting points for workshop hoist
or floor jack

Sequence of operation

1. Loosen the wheel nuts about one turn. Do not yet remove the nuts.
2. Securely insert the car jack in the jackport located under the body. There are two on each side; front and rear.

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

To raise the car, turn the handle clockwise. Only raise the car as much as is needed to change the wheel.

Fully unscrew all wheel nuts and remove the wheel.

When the spare wheel is in position, re-install the nuts and handtighten them cross-

wise. Vehicles equipped with a spare steel wheel and light alloy road wheels which have been theft-protected with lockable wheel nuts must use a standard wheel nut when mounting the spare. Vehicles delivered with lockable wheel nuts by the manufacturer include, in addition to the four keys, a standard wheel nut for the spare. It is permissible to interchange a standard wheel nut with a lockable wheel nut from another wheel. Be sure the wheel nuts are inserted with the beveled edge toward the wheel. When tightened crosswise, the nuts will center the wheel correctly.

6. Inflate the collapsible spare tire with the air compressor. Check pressure with tire pressure gauge.
7. To lower the car, turn the jack handle counterclockwise till tire touches ground.
8. Fully lower the vehicle and remove jack.
9. Firmly tighten the wheel nuts again in a crosswise pattern.

Correct tightness of the wheel nuts is important. Correctly tightened nuts should have a torque of 94 ft. lb. (130 Nm). This torque can be obtained with the wheel nut wrench by any person of average strength. If in doubt about the correct tightness of wheel nuts, have it checked with a torque wrench by your dealer or at a service station.

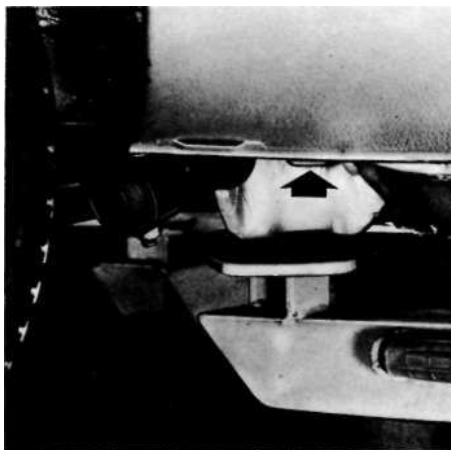


Lifting car with car jack

The car should be jacked up only at the jack-point points illustrated above and on preceding page (black arrows).

WARNING

If work is to be done underneath the vehicle, the car must be supported by suitable chassis stands or raised with a workshop hoist.



Lifting car with workshop hoist

Make sure there is sufficient clearance between pads and vehicle, before driving car on hoist. The car must only be lifted at the lift pad points illustrated on preceding page (white arrows).

The rear lift points are located on the rear axle control arm mount illustrated above (arrow).

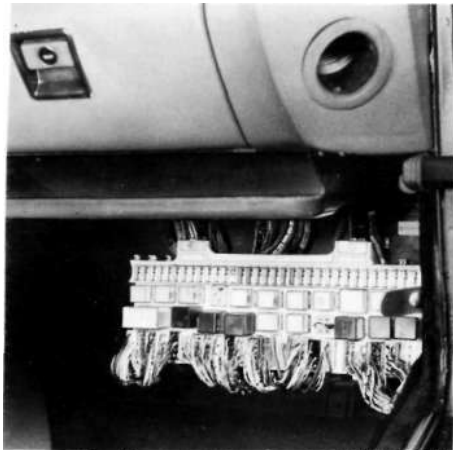


Lifting car with floor jack

The same lift points illustrated for the hoist also apply when using a floor jack. The rear end of the car can also be lifted with a floor jack in the center of the rear suspension cross member. To avoid possible damage, it is recommended to insert a wooden disk or a rubber pad between the floor jack and the lift point pads as illustrated above.

WARNING

The vehicle should never be jacked up from underneath the engine oil pan or the transmission. Severe damage could result.



Fuses and relays

A failure in the electrical system may be caused by a blown fuse or a faulty relay.

The central fuse/relay board is located in the passenger's footwell and protected by a cover plate.

The relay board holds a row of 34 fuses along the top edge, numbered 1 through 34. Underneath are two rows of relays, identified with Roman numerals I - XXII.

Before replacing a fuse, turn off all electrical components and the ignition; remove the key. Replacing a fuse or a relay with the engine running or the ignition on could cause electrical shock.

When replacing a fuse, do not hold fuse by its metal parts. In case of a repeated short circuit, the new fuse will burn out again, causing possible injury.

If a fuse blows repeatedly, do not keep on replacing 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 system.

To replace a fuse...

1. Lift carpet in the passenger's footwell and tilt up the protective cover plate from fuse/relay board.
2. Turn fuses between contact springs until metal fuse strip faces upward. In a blown fuse the metal strip is separated.
3. Take out blown fuse by carefully depressing the upper contact spring.
4. Carefully install new fuse so that the metal strip is visible. The fuse must fit tightly between the contact springs - do not bend the contact springs.
5. Replace cover plate and carpeting.

It is advisable to always carry a few spare fuses in the car.

Relays

I&II	rear window defogger
III	not connected
IV	not connected
V	emergency flasher unit
VI	power window controls
VII	headlight washer pump (where applicable)
VIII	not connected
IX	not connected
X	two-tone horn
XI	not connected
XII	fog lights
XIII	intermittent wiper speed control
XIV	starter relay
XV	intensive washer system pump (where applicable)
XVI	EFI-control unit
XVII	fuel pump
XVIII	extra cooling fan for A/C
XIX	
&XX	retractable headlight relays
XXI	fresh air fan
XXII	defroster

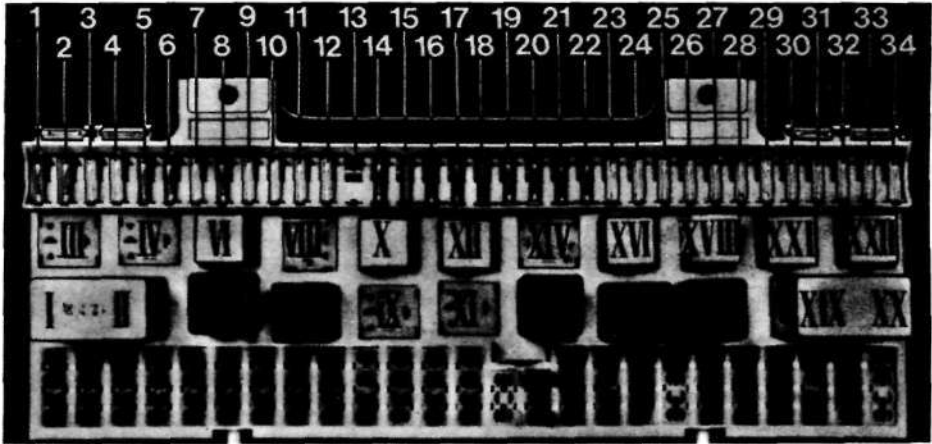
The seatbelt warning system relay is located behind the radio.

The rear window wiper relay (where applicable) is located on the left-hand side behind the tool kit tray.

The relay for the automatic forward slide seat mechanism is located under the seat.

Fuse Chart

No.	Electrical component	Amperes
1	fog lights	.16
2	notconnected	
3	engine compartment/license plate lights.	.8
4	switch illumination lights.	.8
5	cigarette lighter.	.16
6	windshield wipers, intensive windshield washer.	.16
7	notconnected	
8	sunroof (optional equipment).	.16
9	backup lights/outside mirror control, rear window wiper, automatic climate control.	.8
10	brake lights/automatic speed control	.8
11	instrument and switch illumination	.8
12	combination instrument, warning lights.	.8
13	not connected	
14	power seat controls (optional equipment).	.25
15	two-tone horn, power antenna, rear window wiper (return).	.16
16	electric radiator fan.....	.25
17	heating.	.25
18	rear window defogger.	.25
19	headlight motor.	.16
20	headlight washer.	.16

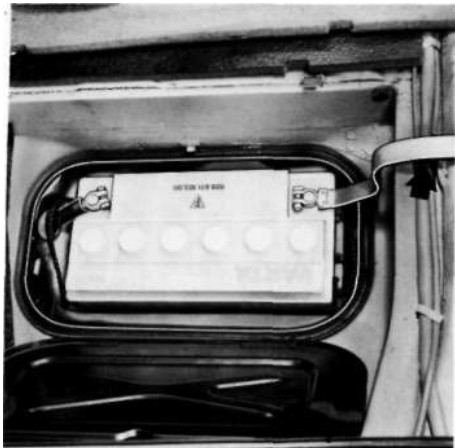


Relays

To preclude any possibility of damage, we recommend you have a defective relay checked and exchanged by your Porsche dealer.

Two additional 400 mA fuses for the central locking system are located above the central fuse/relay board.

21	power window controls, central door locking system.	.25	27	low beam/right	.8
22	fuel pumps.	.16	28	side marker light/left	.8
23	interior lights/clock	.8	29	side marker light/right.	.8
24	high beam/left, high beam indicator light	.8	30	turn signal/front left	.8
25	high beam/right.	.8	31	turn signal/rear left	.8
26	low beam/left	.8	32	turn signal/front right	.8
			33	turn signal/rear right	.8
			34	notconnected	



Battery-12 Volt

The battery is located underneath the collapsible spare tire in the luggage compartment. The battery is accessible after taking out the spare tire.

A replacement battery should always have the same rating as the original equipment battery. Specifications are printed on the battery housing.

Before work is done on the electrical system, the battery must be disconnected to prevent short circuiting. First disconnect the negative ground wire at body (arrow) and then the positive cable. To reconnect battery, reverse the procedure.

Disconnecting the battery while the engine is running will damage the alternator. This also applies to cars equipped with a battery main switch.

Never drive the car with a disconnected battery as this will damage the alternator.

WARNING

- Do not lay tools or other metal objects on the battery as they could cause a short circuit across the battery terminals.
- 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.
- If you get electrolyte, which is an acid, in your eyes or on skin, immediately rinse with cold water several minutes and call a doctor.
- Spilled electrolyte must be rinsed off at once with a solution of water and baking soda to neutralize the acid and prevent damage to fabric and metal.

Checking the electrolyte fluid level

The electrolyte fluid level in your battery can be checked by unscrewing and opening the filler vent caps of **each** cell. The fluid level should meet the indicator mark in each cell. If necessary, top up with distilled water.

How often water must be added depends on operating conditions and on the time of year. Generally, the electrolyte level must be checked more often in the summer than in the winter, and more often when driving long distances.

Only top up to mark, otherwise the electrolyte will overflow when the battery is being charged and cause damage.

Battery care

- Battery should be securely mounted.
- Terminals and connections should be kept clean and properly tightened. Corrosion can be prevented by coating terminals and connections with petroleum jelly or silicone spray.
- Vent caps must be securely tightened to prevent spillage.

Winter operation

During the winter months, battery capacity tends to decrease as temperatures drop. Additionally, more power is consumed while starting, and the headlights, heater, rear window defogger, etc., are used more frequently. Curtail unnecessary power consumption, particularly in city traffic or when travelling short distances only. Let your Porsche dealer test the battery's capacity before winter sets in. A well charged battery will not only prevent starting problems but will also live longer.

Battery charging

Automotive batteries lose their efficiency when not in use. The charge available in your battery can be measured with a hydrometer. We recommend that battery voltage be tested by your Porsche dealer who has the appropriate equipment. If the car is not driven for prolonged periods, the battery must be charged at least every 6 weeks. A discharged battery allows rapid formation of sulfates, leading to premature deterioration of the plates.

WARNING

- **Charge battery in a well ventilated area. Keep away from open flame or electrical spark. Do not smoke. Hydrogen gas generated by the battery is explosive.**
- **Electrolyte fluid that may spill during charging should be washed off with a solution of warm water and baking soda to neutralize the acid.**
- **If you get electrolyte in your eyes or on your skin, immediately rinse with cold water for several minutes and call a doctor.**
- **Never charge a frozen battery. It may explode because of gas trapped in the ice. Allow a frozen battery to thaw out first.**
- **Never use a fast charger as a booster to start the engine. This may seriously damage the vehicle's electrical system and the charger.**

- **Fast charging a battery is dangerous and should only be attempted by a competent mechanic with the proper equipment.**

Slow battery charging

WARNING

Heed all warnings and follow instructions that come with your battery charger.

- Disconnect battery cables and remove the battery.
- All vent caps should be open. If fluid level is low, it should be topped up to the full mark in each cell.
- Connect charger cables.

Charger cables must be connected POSITIVE (+) to POSITIVE (+) and NEGATIVE (-) to NEGATIVE (-).

- Do not connect or disconnect charger cables while charger is operating.
- Switch on charger.
- Normally, a battery should be charged at no more than 10 percent of its rated capacity. Rated capacity of the battery in your vehicle is listed on the battery housing.
- After charging, turn off charger and disconnect charger cables. When the electrolyte fluid has stopped "bubbling" in the cells, close the vent caps.
- Tighten the vent caps and reinstall battery.

Emergency starting with jumper cables

WARNING

- **Improper use of booster battery to start a vehicle may cause an explosion.**
- **Lead-acid batteries generate explosive gases. Keep sparks, flames and lighted cigarettes away from batteries.**
- **Do not charge a frozen battery, thaw it out first. Gas trapped in the ice may cause an explosion.**
- **No attempt should be made to jump start any vehicle with a low electrolyte level in the battery.**
- **Check electrolyte level of each cell. If necessary, fill with distilled water to just above plates.**
- **Make sure the voltage of both batteries is the same.**
- **The capacity (Ah) of the booster battery should not be lower than that of the discharged battery.**
- **Vehicle with discharged battery: turn off lights and accessories, remove key, move lever to N or P and set parking brake.**

- **Vehicle with booster battery should not be running. Disconnect ground cable.**
- **Remove vent caps from booster battery and discharged battery. Preferably lay a cloth over open vents to reduce explosion hazard.**

How to use jumper cables

WARNING

- **To avoid serious personal injury and damage to the vehicle, heed all warnings and instructions of the jumper cable manufacturer.**
- **The jumper cables must be long.**

Improper hook-up of jumper cables can ruin the alternator.

Always connect POSITIVE (+) to POSITIVE (+), and NEGATIVE (-) to ground on engine block.

1. Connect clamp of plus-cable to positive (+) terminal of discharged battery.
2. Connect clamp on opposite end of cable to positive (+) terminal of booster battery.
3. Connect clamp of minus-cable to negative (-) terminal of booster battery.

4. Connect clamp on opposite end of cable to a bare metal part of car with discharged battery. Connect clamp as far away from battery as possible.
5. Start engine in the usual manner. If engine fails to start, do not continue to crank but contact nearest workshop.
6. With engine running, remove jumper cables from both cars in exact reverse order: Steps 4 through 1.
7. Reconnect ground cable of booster battery.



Start assist connecting points sequence

On right side of engine compartment you will find a positive (+) battery post (remote connection).

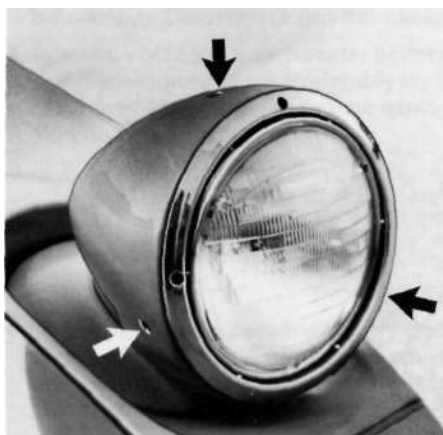
First connect clamp at end of positive (+) cable to the remote connection in the engine compartment (+arrow). Then connect clamp at other end of positive (+) cable to the positive (+) terminal of the booster battery.

Next connect clamp at end of negative (-) cable to the negative (-) terminal of the booster battery. Then connect clamp at other end of negative (-) cable to the engine compartment strut rod (- arrow).

Caution: The cable clamps must not contact each other, and the plus-cable leading to the positive (+) post must not contact any metal part of the car.

Caution: Do not try to start car by pushing or towing. Damage to the catalytic converter and other components of the car may result.

Replacing Bulbs



To avoid short circuits, turn off the respective electrical components when changing light bulbs.

Keep bulbs free of grease and dirt. Hold them only with a clean cloth or soft paper.

Do not use chemical cleaning agents for the plastic lenses. Plastic lenses should only be cleaned with water or a mild soap/water solution.

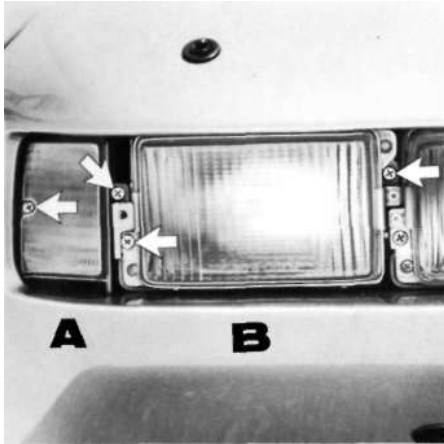
We recommend you keep an assortment of spare bulbs in the car.

When traveling abroad, remember that some countries require spare bulbs as part of the safety equipment.

Sealed Beam Headlights

Replacing light unit

1. Turn the ignition on.
2. Turn light switch to position 2 to raise the headlights.
3. Turn the ignition off.
4. Unscrew the 3 Phillips screws (arrows) and remove headlight cover and trim ring.
5. Unscrew the 3 small Phillips screws from sealed beam securing ring and remove ring.
6. Unplug wires, replace sealed beam unit and reconnect the wires.
7. Reinstall sealed beam securing ring.
8. Check lights.
9. Reinstall trim ring and headlight cover.



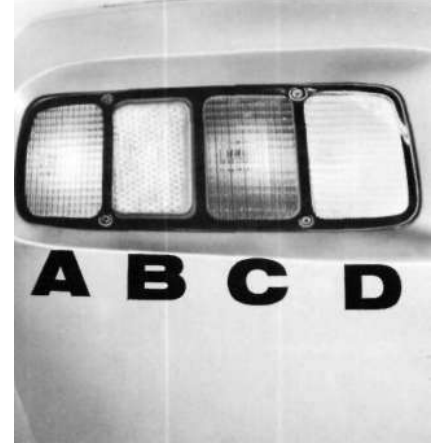
Front turn signal lights (A) Front parking lights (B)

1. Remove screws from plastic trim, take off trim.
2. Remove screws holding the lens, and remove lens.
3. Remove bulb from bulbholder, and fit new bulb.
4. Reinstall lens, tighten screws. Check functioning of light.
5. Install plastic trim and tighten retaining screws.



Fog lights

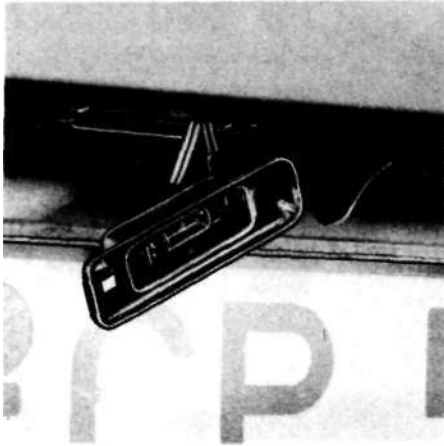
1. Remove screws from plastic trim, take off trim.
2. Remove Phillips screws. Take off lamp.
3. Disconnect wire. Push down holding clamp for bulb.
4. Remove defective bulb and replace. Be sure guide pins on bulb base fit into socket of reflector.
5. Reinstall lamp, Tighten screws. Check functioning and adjustment of light.
6. Install plastic trim and tighten retaining screws.



Tail lights

The tail lights are housed in one unit.

- | | |
|-----------------------|-------------------|
| A - turn signal light | C - stop light |
| B - tail light | D - back-up light |
1. Remove Phillips screws and lamp lens.
 2. Replace bulb.
 3. Reinstall lamp lens and tighten Phillips screws evenly, alternating from one to the other.
 4. Check light.



License plate lights

1. Unscrew both screws and lift out lamp housing.
2. Replace bulb.
3. Reinstall lamp housing and make sure it is firmly seated.
4. Check light.



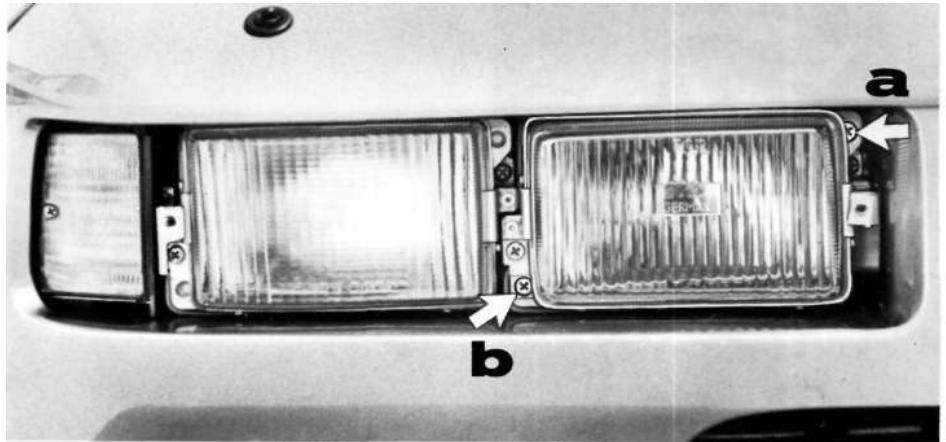
Interior lights

The following description applies to the dome lights, courtesy lights and the luggage compartment light:

1. Insert screwdriver in cut-out on headliner and carefully pry out the lamp housing.
2. Remove defective bulb between contact springs and insert new bulb.
3. Insert one side of the lamp housing into cut-out and press firmly on the other side. Light unit will snap into place.

Ashtray light

1. Remove the two screws in ashtray housing and pull the housing upward and out.
2. Slide bulb holder out of the housing and replace defective bulb.
3. Slide bulb holder back into housing and check light by turning on the ignition.
4. Reinstall the ashtray housing.



Headlight adjustment

Headlight adjustment should be done with a headlight aiming device under the following conditions:

At curb weight of car (i.e. car ready for use and with full fuel tank).

Driver's seat should be occupied by a person or a weight of approx. 155 lbs (70 kg).

Tire pressure must be correct.

Roll car forward a few feet so that the suspension seeks its normal position.

Adjustment screws

Each headlight and fog light has two adjusting screws, one for lateral setting and one for vertical. By turning these screws left or right, the corresponding adjustment in beam position is effected.

Screw "a" (lateral adjustment)

right turn = beam moves right
left turn = beam moves left

Screw "b" (vertical adjustment)

right turn = beam moves up
left turn = beam moves down



Manual Operation of Retractable Headlights

If the retractable headlights do not work automatically, they can be opened manually by turning the knob on the end of the motor drive shaft (arrow). The connecting rod assembly is designed in such a way that it need only be turned to the left to either raise or retract the headlights.

WARNING

Do not turn the knob on the drive shaft as long as the automatic mechanism is operating. The motor may turn suddenly and cause injury. Before turning the knob, check whether the motor will work with the ignition in position 1 or 2 and the light switch in position 2.

Emission Control System

In the Interest of Clean Air

Pollution of our environment has become a problem that is of increasing concern to all of us. We urge you to join us in our efforts for cleaner air in controlling the pollutants emitted from the automobile.

Porsche has developed an emission control system that controls or reduces those parts of the emission that can be harmful to our environment. Your Porsche is equipped with such a system.

Porsche warrants the Emission Control System in your new car under the terms and conditions set forth in the Warranty & Maintenance booklet.

You, as the owner of the vehicle, have the responsibility to provide regular maintenance service for the vehicle and to keep a record of all maintenance work performed. To facilitate record keeping, have the service performed by authorized Porsche dealers. They have Porsche trained mechanics and special tools to provide fast, efficient service.

WARNING

To assure efficient operation of the Emission Control System:

- Have your vehicle maintained properly and in accordance with the recommendations described in your Warranty & Maintenance booklet. Lack of proper maintenance, as well as improper use of the vehicle, will impair the function of the emission control system and could lead to damage.
- Do not alter or remove any component of the emission control system unless approved by the manufacturer.
- Do not alter or remove any device, such as heat shields, switches, ignition wires, valves, etc., which are designed to protect your vehicle's emission control system.
- Do not continue to operate your vehicle if you detect engine misfire or other unusual operating conditions.

Starting

- Do not leave vehicle engine idling unattended after starting. If warning lights should come on to indicate improper operation, they would go unheeded. Extended idling also produces heat, which could result in overheating or other damage to the vehicle or other property.

Parking

- As with any vehicle, do not park or operate your vehicle in areas where combustible materials, such as dry grass or leaves, can come into contact with a hot exhaust system.

Undercoating

- Do not apply additional undercoating or rustproofing on or near the exhaust manifold, exhaust pipes, catalytic converter or heat shields. During driving the substance used for undercoating could overheat and cause a fire.

How Emission Control Works

When an automobile engine is running, it uses energy generated through the combustion of a mixture of air and fuel. Depending on whether a car is driven fast or slowly or whether the engine is cold or hot, some of the fuel (hydrocarbons) may not be burned completely but be discharged into the engine crankcase or exhaust system. Additional hydrocarbons may enter the atmosphere through evaporation of fuel from the fuel tank. These hydrocarbons (HC), when released into the air, contribute to undesirable pollution.

In addition, carbon monoxide (CO) and oxides of nitrogen (NOx) contribute to engine emissions. They, too, are formed during the combustion process and discharged into the exhaust system.

To reduce these pollutants, your Porsche is equipped with a precisely calibrated fuel injection system to assure a finely balanced air/fuel mixture under all operating conditions.

Oxygen Sensor

The oxygen sensor, installed in the exhaust pipe continuously senses the oxygen content of the exhaust and signals the information to an electronic control unit. The control unit corrects the air/fuel ratio, so that the engine always receives an accurately metered air fuel mixture.

Crankcase Ventilation

Through Crankcase Ventilation undesirable emissions from the engine crankcase are not permitted to reach the outside atmosphere. These emissions are recirculated from the crankcase to the air intake system. From here the emissions mix with the intake air and are later burned in the engine.

Catalytic converter

The catalytic converter is an efficient "clean-up" device built into the exhaust system of the vehicle. The catalytic converter burns the undesirable pollutants in the exhaust gas before it is released into the atmosphere.

The exclusive use of unleaded fuel is critically important for the life of the catalytic converter. Therefore, only unleaded gasoline without additives must be used.

The catalytic converter will be damaged by

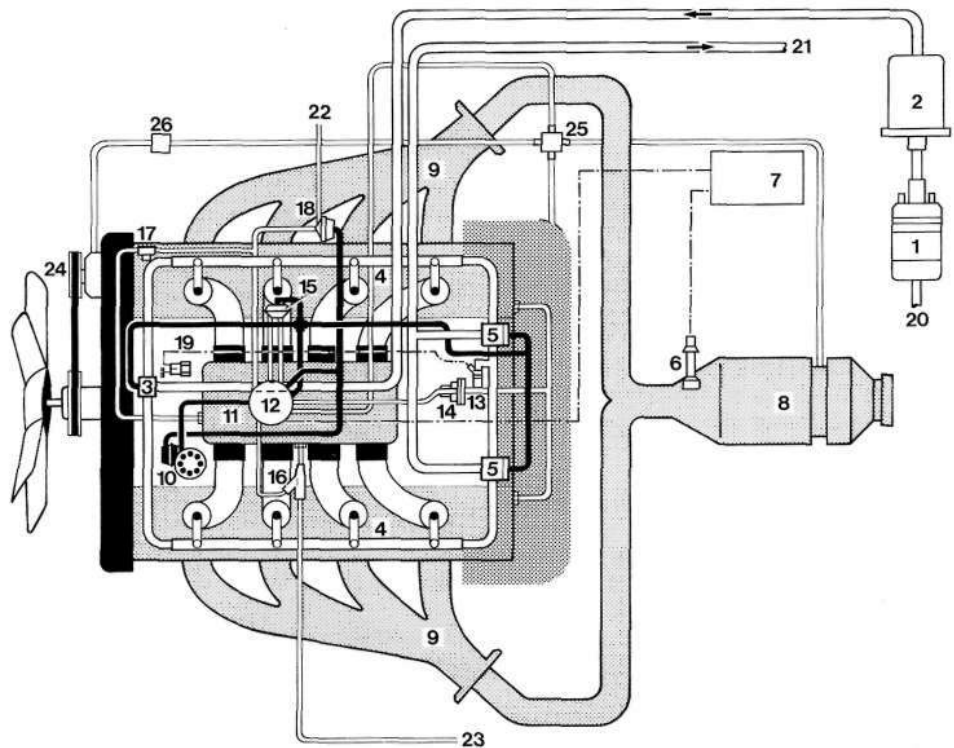
- push or tow starting your vehicle
- misfiring of the engine
- turning off the ignition while the vehicle is moving or
- by other unusual operating conditions.

Do not continue to operate your vehicle under these conditions, as otherwise fuel can reach the catalytic converter. This could result in overheating of the converter.

The Emission Control System and its other related components are illustrated and described on the following pages.

Emission Control System

- 1 Fuel pump
- 2 Fuel filter
- 3 Fuel pressure damper
- 4 Fuel injector (8 x)
- 5 Fuel pressure regulator
- 6 Oxygen sensor
- 7 Control unit
- 8 Three way catalyst
- 9 Exhaust manifold
- 10 Ignition distributor
- 11 Intake manifold
- 12 Throttle valve housing
- 13 Cold start injector
- 14 Aux. air valve for cold start
- 15 Vacuum limiter (vehicles with manual gearbox only)
- 16 Venturi tube
- 17 El. air valve
- 18 Control valve
- 19 Thermo time switch
- 20 from fuel tank
- 21 to fuel tank
- 22 to charcoal canister
- 23 to brake booster system
- 24 Secondary air pump
- 25 Air diverter valve
- 26 Check valve



Fuel Evaporation Control

Fuel Tank Venting

The expansion chamber and the safety valve prevent fuel from escaping to the outside at extreme high outside temperatures and when the car is driven or parked at an incline or in any other nonlevel position. The safety valve works as a restrictor in the tank vent line between the expansion chamber and the carbon canister.

Vapor Control System and Storage

When the fuel tank is filled, vapors are collected in the expansion chamber and filler tube by a vent line leading the vapors to the activated carbon canister where they are stored as long as the engine does not run. During running of the engine, the vapors are stored in the activated carbon canister as long as the temperature controlled ON/OFF valve is in the OFF-position. The temperature controlled ON/OFF valve stops purging of the canister during all other running conditions of the engine if the coolant temperature of the engine is below a defined temperature.

Purge System

Fuel vapors from the carbon canister will be mixed with fresh air taken from the engine compartment. This mixture will be directed via two vacuum controlled valves to the air intake system housing.

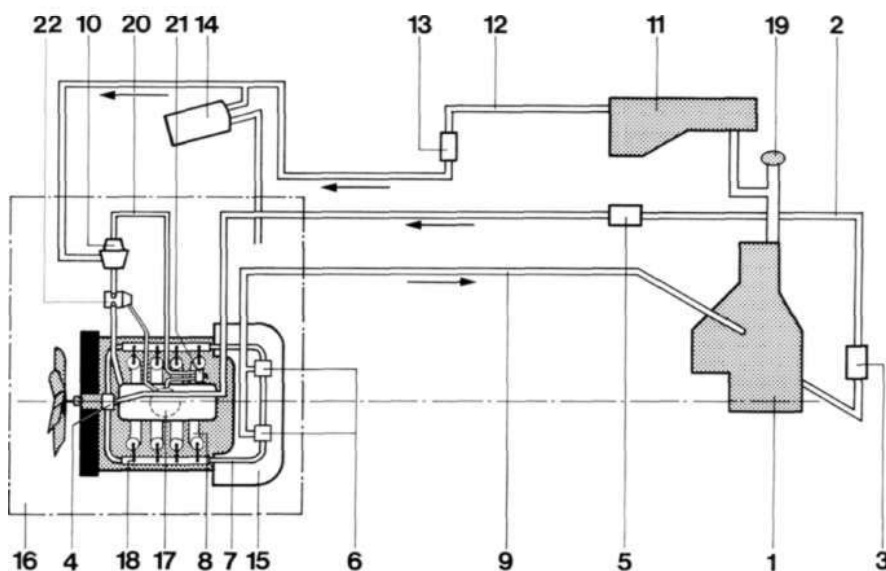
The temperature controlled ON/OFF valve has the following functions:

To stop purging of the canister during idle (the rich vapor flow from the canister would influence the mixture characteristic).

To allow purging of the canister during all other running conditions of the engine.

The vacuum controlled ON/OFF valve has the function to control the purge flow (high intake vacuum means low purge flow and low intake vacuum means high purge flow).

- 1 Fuel tank
- 2 Fuel line
- 3 Fuel pump
- 4 Fuel pressure damper
- 5 Fuel filter
- 6 Fuel pressure regulator
- 7 Fuel injection lines
- 8 Air distributor/intake manifolds
- 9 Fuel return line
- 10 Control valve
- 11 Expansion chamber
- 12 Tank vent line
- 13 Safety valve
- 14 Carbon canister
- 15 Air cleaner
- 16 Engine compartment
- 17 Throttle plate
- 18 Injection valve
- 19 Filler cap
- 20 Vacuum control line
- 21 Temperature controlled ON/OFF valve
- 22 Vacuum controlled ON/OFF valve



Technical Data

Engine M 28.19/20

Number of cylinders	8
Bore	3.82 in / 97.0 mm
Stroke	3.11 in / 78.9 mm
Displacement	284.60 cu.in. / 4664 cm ³
Compression ratio	9.3 :1
SAE net-horsepower SAE J 1349	234 hp /174 kW at 5250 rpm
SAE net-torque SAE J1349	263 ft.lb / 357 Nm at 4000 rpm
Max. permissible rpm	6100
Fuel octane rating	Unleaded fuel only 91 RON (87 CLC or AKI rating on fuel pumps in U.S.A.)
Spark plugs	Bosch WR 8 DS; Beru RS 35
Spark plug gap	0.028 - 0.032 in / 0.7+0.1 mm
Battery capacity	12 Volts, 88 Ah
Alternator output	1260 W/90 A AC
Firing order	1 - 3 - 7 - 2 - 6 - 5 - 4 - 8
Ignition timing	20° before TDC at 3000 rpm with distributor vacuum disconnected
Ignition	Transistorized ignition system with breakerless distributor
Fan belts	Alternator: Polyrib K 4 858; cooling fan and air pump 12.5 x 1040 LA-FD toothed belt; air conditioning pump 12.5 x 1125 LA; servo pump 12.5 x 975 LA
Valve clearance	Self-adjusting hydraulically operated

Engine Design Specifications

Design.	.8 cylinders in V configuration
Operating cycle.	.4 stroke
Cooling.	water cooled
Lubrication.	pressure-fed from sump
Cylinder block and head.	light metal alloy
Valve operation.	.1 overhead camshaft per cylinder bank
Camshaft drive.	toothed V-belt
Crankshaft.	forged
Fuel supply.	electric pump
Fuel injection.	AFC (Air Flow Control)

Power Train

Power Train		Manual transmission			Automatic transmission
		Number of teeth	Gear ratio	Total ratio	Gear ratio
Gear ratio 1st gear	$\frac{33 \cdot 44}{20 \cdot 17}$		$\triangleq 4.2706 : 1$	9.6795 : 1	3.6760 : 1
2nd gear	$\frac{33 \cdot 38}{20 \cdot 22}$		$\triangleq 2.8500 : 1$	6.4593 : 1	2.4120 : 1
3rd gear	$\frac{33 \cdot 32}{20 \cdot 26}$		$\triangleq 2.0308 : 1$	4.6025 : 1	1.4360 : 1
4th gear	$\frac{33 \cdot 27}{20 \cdot 29}$		$\triangleq 1.5362 : 1$	3.4817 : 1	1.0000 : 1
5th gear	$\frac{1}{1}$		$\triangleq 1.0000 : 1$	2.2667 : 1	
Reverse	$\frac{33 \cdot 50}{20 \cdot 22}$		$\triangleq 3.7500 : 1$	8.4995 : 1	5.1390 : 1
Rear axle ratio	$\frac{34}{15}$			2.2667 : 1	2.2000 : 1
Clutch	Double plate disc				
Power transmission	Double constant velocity joints and drive shafts				

Rims, Tires, Wheel Alignment

Summer tires	.225/50 VR 16 on 7 J x 16 H 2 rims
Snowtires	.185/70 R 15 M+S 88 or 89 Q or T on 7 J x 15 H 2 rims or 205/55 R16 M+S88 Q or T on 7 J x 16 H 2 rims
Collapsible spare tire	.165-15 4 PR 83 P on 5 J x 15 H 2 rim
Tire pressure, front and rear with cold tires	.36 psi or 2.5 bar for summer and snowtires; 32 psi or 2.2 bars for collapsible spare tire
Snow chains	Mounting only on drive wheels - possible with all specified tire sizes. When used in conjunction with spacers, sufficient clearance is only guaranteed when using tire size 185/70 R 15 M+S.
Wheel camber*	Front -30'±10'; rear -40'±10'; maximum difference left to right 10'
Toe-in*	Front +15' ± 5'; rear + 10' ± 5'
Toe angle difference*	At 20° lock to left and right -1'±20'
Caster*	.3° 30'±15' difference left to right max. 20'

* At curb weight (unladen with full tank)

Weights

Curb weight ¹⁾	.3351 lbs/1520 kg
Maximum load capacity	.683 lbs / 310 kg
Maximum permissible weight	.4123 lbs /1870 kg
Maximum axle load, front*	.1985 lbs / 900 kg
Maximum axle load, rear*	.2205 lbs /1000 kg
Permissible rack load*	.165 lbs / 75 kg

* Do not exceed maximum permissible weight
) With optional equipment up to 3439 lbs/1560 kg

The vehicle capacity weight (max. load), the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Ratings (GAWR) for front and rear, are listed on a sticker located on the doorsill on the driver's side.

The gross vehicle weight rating includes the weight of the basic vehicle plus full fuel tank, oil and coolant, plus max. load which combines passenger (150 pounds/68 kg per designated seating position) and luggage weight. Luggage weight may not be increased by the use of roof, ski or luggage racks, unless passenger capacity is reduced accordingly.

Dimensions

(at permissible max. load)

Wheelbase	.98.43 in / 2500 mm
Wheel track front	.60.40 in/1549 mm
Wheel track, rear	.59.90 in /1521 mm
Turning circle (curb to curb)	.31 ft 5 in / 9,6 m
Turning circle (wall to wall)	.37 ft 8 in /11,5 m
Length	.175.67 in / 4462 mm
Width	.72.28 in /1836 mm
Height (at curb weight)	.50.47 in/1282 mm
Ground clearance	.4.72 in / 120 mm

Performance*

Manual transmission

Automatic transmission

Maximum speed.	146 mph (235 km/h)
Acceleration 0 - 60 mph	6,8 seconds
Time for 1/4 mile.	15,2 seconds
Time for 1 km.....	27,5 seconds

143 mph (230 km/h)
7,2 seconds
15,5 seconds
28,2 seconds

* At curb weight and half-load capacity excluding optional equipment and accessories.

Climbing Performance

Manual transmission

Automatic transmission

Approximate values at curb weight and half-load capacity

1st gear approx.	61 %
2nd gear approx.	39,5 %
3rd gear approx.	25 %
4th gear approx.	16 %
5th gear approx.	9,5 %

1st gear approx.	52 %	61 % *
2nd gear approx.	30,5 %	47 % *
3rd gear approx.	14,5 %	26 % *
4th gear approx.	7,5 %	18 % *

* shortly climbing performance

Brake System

Hydraulic dual circuit brake system with front and rear brake circuits
Front and rear: Disc brakes
Brake power assist
Parking brake acting on rear wheels

Chassis Suspension

Unitized construction	
Suspension.	Independent suspension with double control arms, coil spring and shock absorber assembly for each wheel, front and rear
Shock absorbers.	Double acting hydraulic shock absorbers, front and rear
Stabilizers.	Diameter 28 x 4 mm front, 22,5 x 3,5 mm rear

Filling Capacities

Engine oil.	Approx. 7.9 U.S. qts. or 7.5 liters. Check oil level with dipstick a few minutes after engine has stopped. The difference between the max. and min. marks on the dipstick is approx. 1.6 U.S. qts. or 1.5 liters.
Porsche does not recommend the use of oil additives.	
Cooling system with heating.	Approx. 4.23 U.S. gals, or 16 liters. Factory filled to -22° F (-30° C) for U.S.A. and -40° F (-40° C) for Canada. Only use phosphate-free anti-freeze containing ethylene glycol recommended for aluminum engines and radiators.
Manual transmission. (also for limited slip differential)	Approx. 4 U.S. qts. or 3.8 liters. Use hypoid oil SAE 75 W-90 labeled "For Service API/GL 5 or Mil-L 2105 B". If 75 W-90 hypoid oils is not readily available, use 80 W-90.
Automatic transmission with torque converter . . .	Approx. 1.59 U.S. gal. or 6 liters ATF Dexron®. At oil changes 1.45 U.S. gal. or 5.5 liters are required.
Differential of automatic transmission.	Approx. 2.85 U.S. qts. or 2.7 liters hypoid oil SAE 90 according to API classification GL 5 or Mil-L 2105 B.
Powersteering.	Approx. 0.74 U.S. qt. or 0.7 liters ATF Dexron®.
Fuel tank.	Approx. 23 U.S. gals, or 86 liters including a reserve of 2.11 U.S. gals, or 8 liters. Unleaded fuel only! Minimum octane rating 91 RON (87 CLC or AKI rating on fuel pumps in U.S.A.).
Brake fluid.	Approx. 0.42 U.S. pint or 0.2 liters. Only use brake fluid conforming to specifications SAE J1703, DOT 3 or DOT 4.
Windshield/headlight washer system.	Approx. 6.3 U.S. qts. or 6 liters.
Intensive windshield washer system.	Approx. 1.3 U.S. pint or 0.6 liter. Only use a "special silicone remover".
Refrigerant for air conditioning.	Approx. 37 oz or 1050g. Refrigerant R12 (C Cl ₂ F ₂).

Cooling system mixing chart

(Average values)

Anti-freeze - Water	Temp, down to	Anti-freeze	Water	Anti-freeze	Water
	-30° C (-22° F)	45%	55%	7.2 liters / 7.6 U.S. qts.	8.8 liters/9.3 U.S.qts.
Consult your authorized dealer	-35° C (-31° F)	50%	50%	8.0 liters/ 8.4 U.S. qts.	8.0 liters/8.4 U.S.qts.
about approved anti-freeze mixtures.	-40° C (-40° F)	55%	45%	8.8 liters/9.3 U.S. qts.	7.2 liters/7.6 U.S. qts.

Engine Oils — petroleum based and/or synthetic based

Always use quality oil labeled "API Service SF or SE" which has been approved by Porsche. The terms SF or SE may appear on the oil container singly or in combination with other designations, for example: SE/CC, SF/CC or SF/CD. Engine oils are graded according to their viscosities. The grade to be used depends on existing or anticipated seasonal climates. Refer to the temperature chart when selecting engine oil. If you need to add oil, it is permissible to mix oil of different viscosities. As the temperature ranges for different oil grades overlap, brief outside temperature variations are no cause for alarm. When using SAE 10 or SAE 5 W-20 engine oil, avoid high speed long distance driving if outside temperature rises above the indicated limits.

Single grade oil

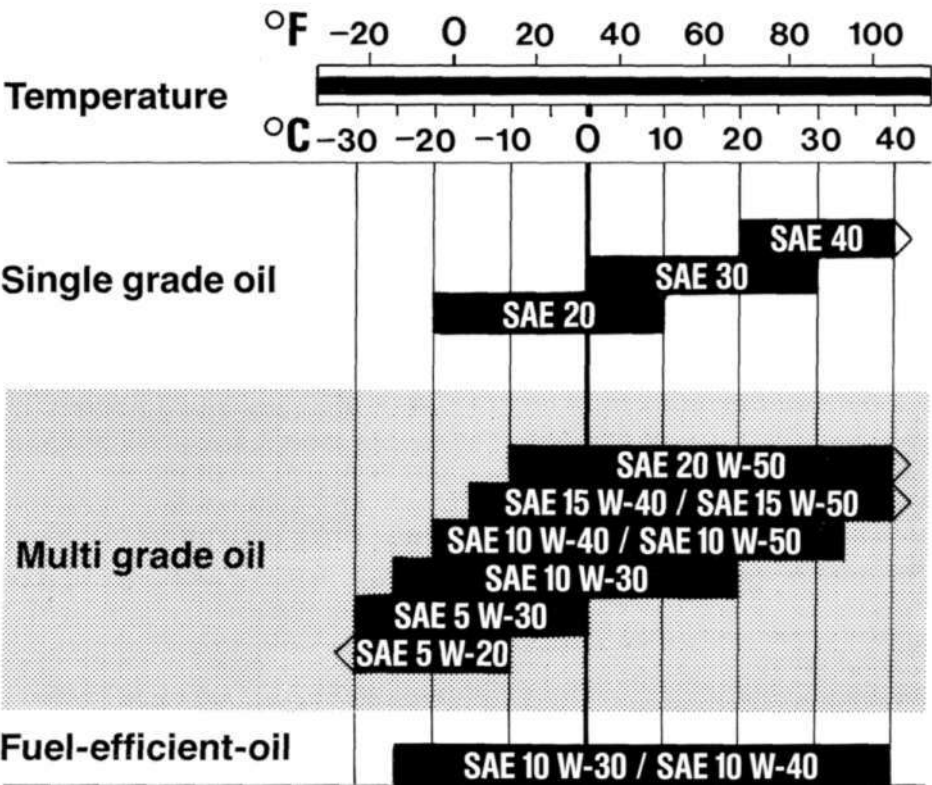
Porsche recommends the use of single grade oils only if multi grade oils are not readily available. However, engine oil changes must then be performed according to seasonal temperature changes to guard against engine damage.

Multi grade oil

For all year round driving use multi grade oil. Oil change intervals specified in the Warranty & Maintenance brochure accompanying the vehicle must be adhered to, including intervals for oil filter change.

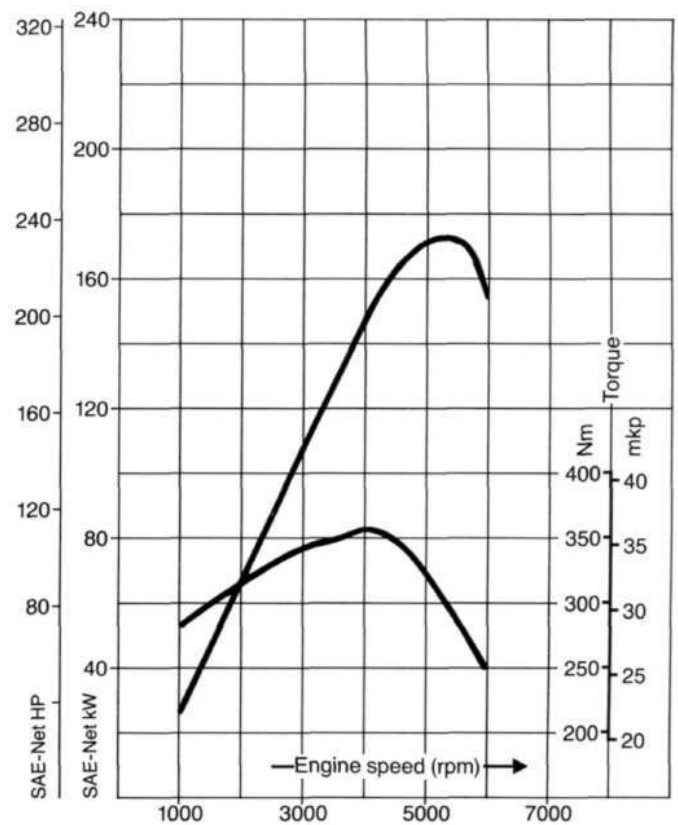
Fuel-efficient-oil

For all year round driving a top quality "Fuel-efficient"-oil can have a beneficial influence on fuel economy. Before selecting these unconventional oils, consult your Porsche dealer.



Full-power Curves

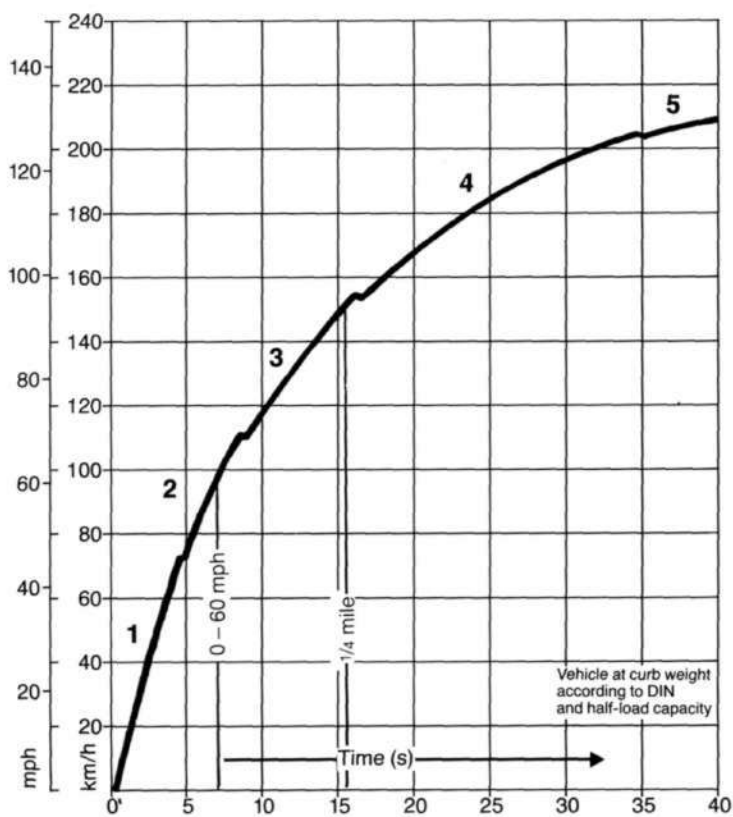
9285



Acceleration Curve

Manual gearbox

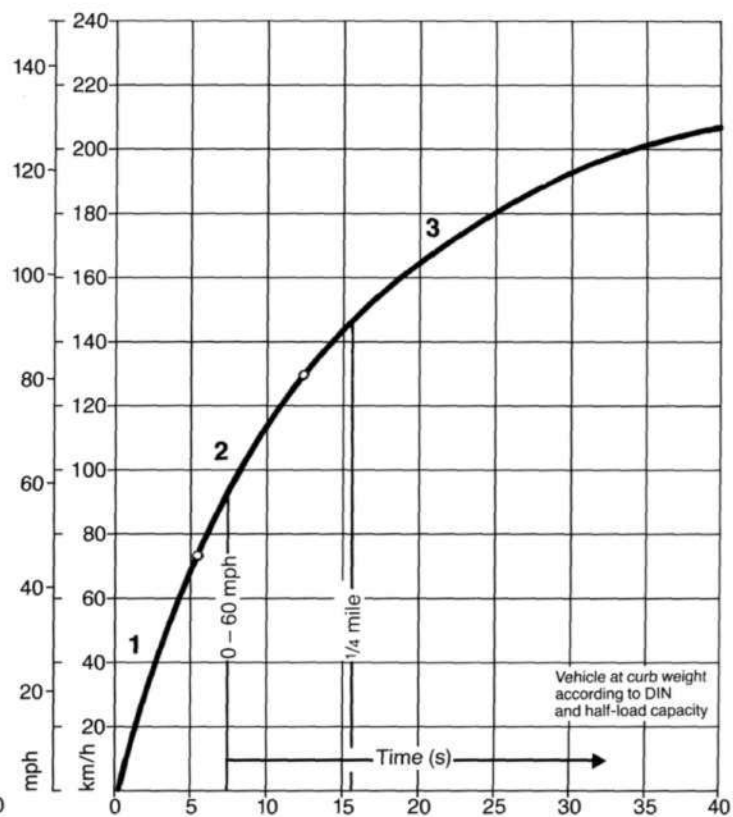
928S



Acceleration Curve

Automatic

928S

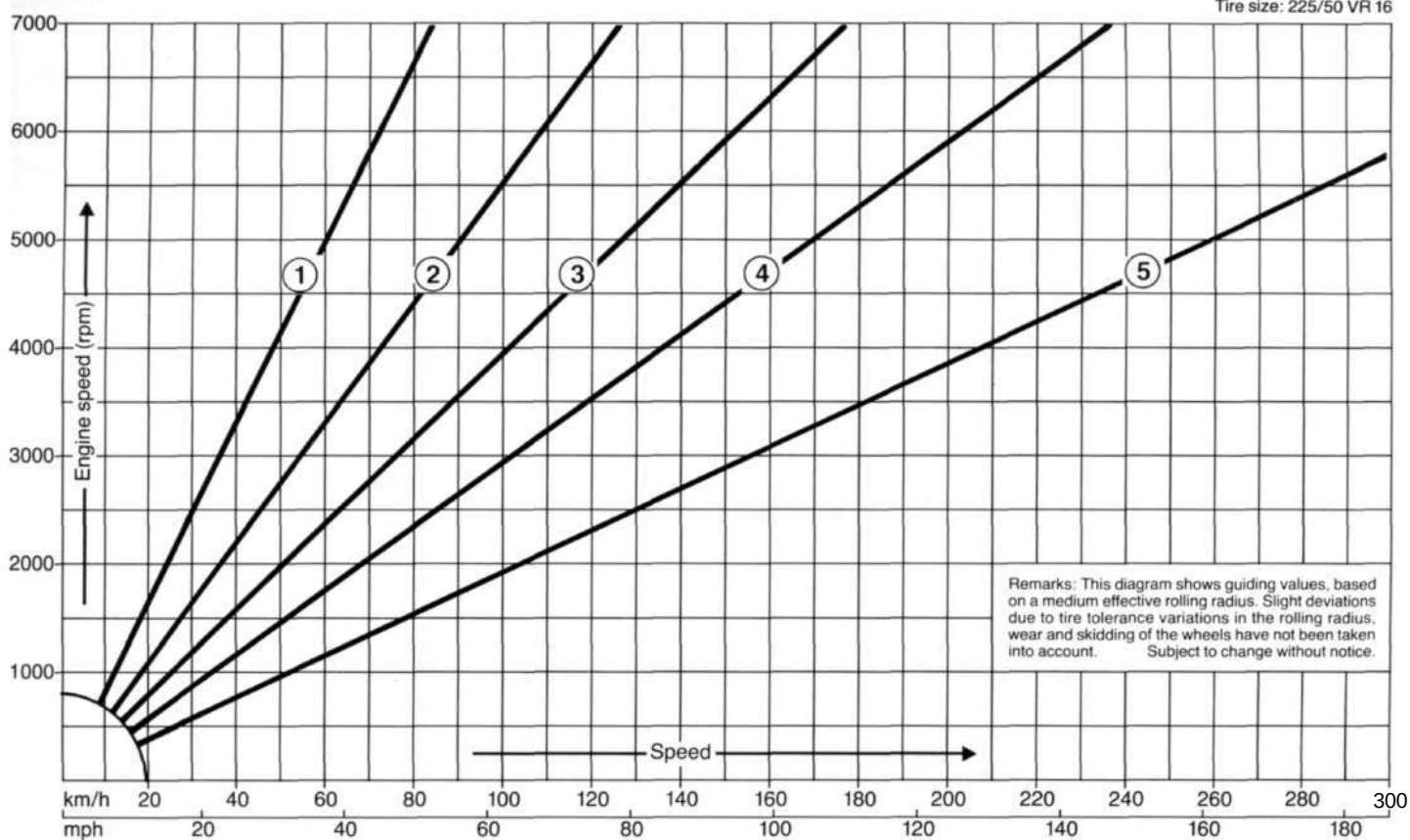


Transmission Diagram

Manual gearbox

928S

Tire size: 225/50 VR 16

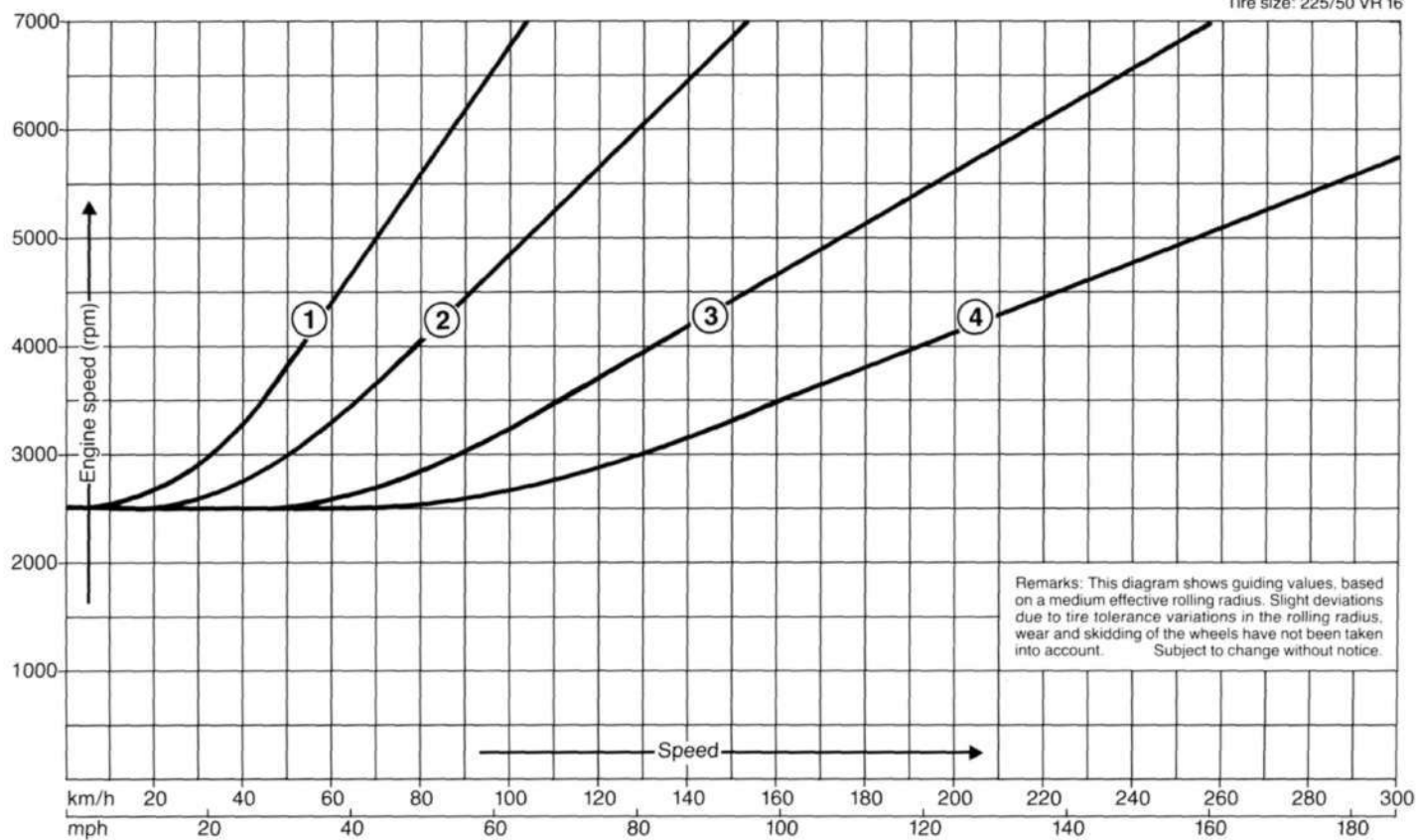


Transmission Diagram

Automatic

928S

Tire size: 225/50 VR 16



Gas Station Information

Starting

Manual transmission: Only start in Neutral, clutch pedal depressed.

Automatic transmission: Start in Neutral or Park.

Starting engine

Just turn ignition key. Do not depress accelerator pedal when starting. This applies to warm or cold engine.

Emergency starting

Cars with automatic transmission must not be started by pushing or towing. See "Emergency starting with jumper cables".

Fuses, Relays

The central fuse/relay board is located in the passengers footwell under the floor panel

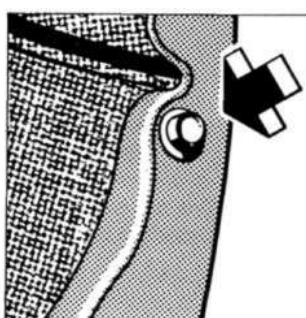
Fuel recommendation

91 RON (87 CLC or AKI on U.S. fuel pumps) minimum. **UNLEADED FUEL ONLY**. Fuel tank capacity: 23 U.S. gals, or 86 liters.



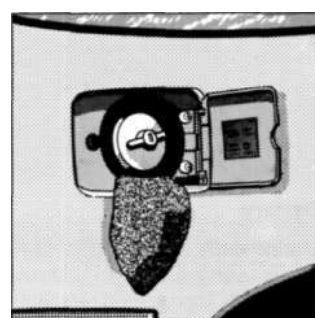
Seat adjustment

Pull lever in front of seat.



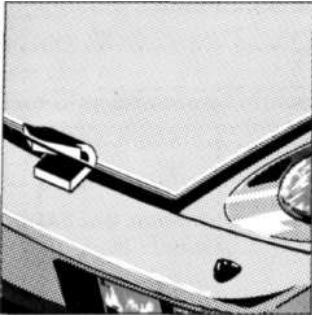
Backrest

Press button on side of seat-back.



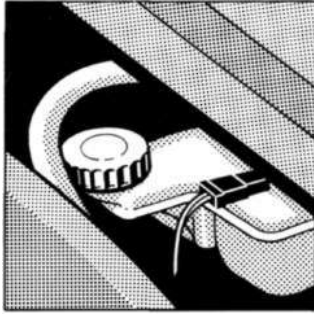
Fuel cap

Located in the right rear panel. To close, twist cap to stop.



Engine hood release

Pull lever on left underneath dashboard. Pull safety hook under hook. Lift engine hood.



Brake fluid reservoir

Level should be between MIN and MAX marks.

Only use new, unused brake fluid according to SAE recommendation J 1703, DOT 3 or DOT 4 and conforming to Motor Vehicle Safety Standard 116.



Engine oil dipstick

Check oil level a few minutes after engine has stopped. Level should be between upper and lower marks on dipstick. Difference between marks is approx. 1.6 U.S. qt. or 1.5 liter.

Warning: Before checking anything in the engine compartment, let the engine cool down. The fan blades will rotate spontaneously (even with ignition off) until coolant temperature drops.

Engine oil

Use only quality oil labeled "API Service SF or SE". Details under "Engine Oils". Filling capacity is 7.9 U.S. qts. or 7.5 liters. Check oil level as prescribed.

Manual transmission

For manual transmission (also for limited slip differential) use hypoid oil SAE 75 W-90 labeled "For service API/GL 5 or Mil-L 2105 B". If 75 W-90 hypoid is not readily available, use 80 W-90. Total quantity approx. 4 U.S. qts. or 3.8 liters.

Automatic transmission

ATF lubricates torque converter and transmission. Check ATF level visually through transparent reservoir at rear end of transmission housing when ATF is warm, with engine idling, selector lever in Neutral and car on level ground.

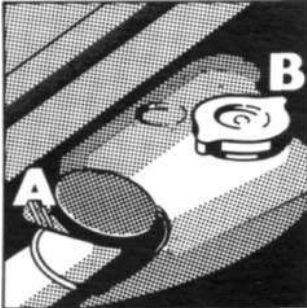
Should level be below MIN or above MAX mark, do not just add or drain ATF. Have a Porsche dealer correct the cause promptly.

Battery

Underneath spare tire in luggage compartment. Check each cell. Top up with distilled water. **Never disconnect battery while engine is running. It can ruin the alternator.** Before connecting quick-charger, battery must be disconnected.

Do not use silicone base brake fluid (DOT 5). Even the smallest traces may cause severe corrosion in the brake system.

For differential use oils API/GL 5 (or Mil-L 2105 B), viscosity SAE 90.



Windshield washer fluid reservoir (A)

6.3 U.S. qts. or 6 liters.

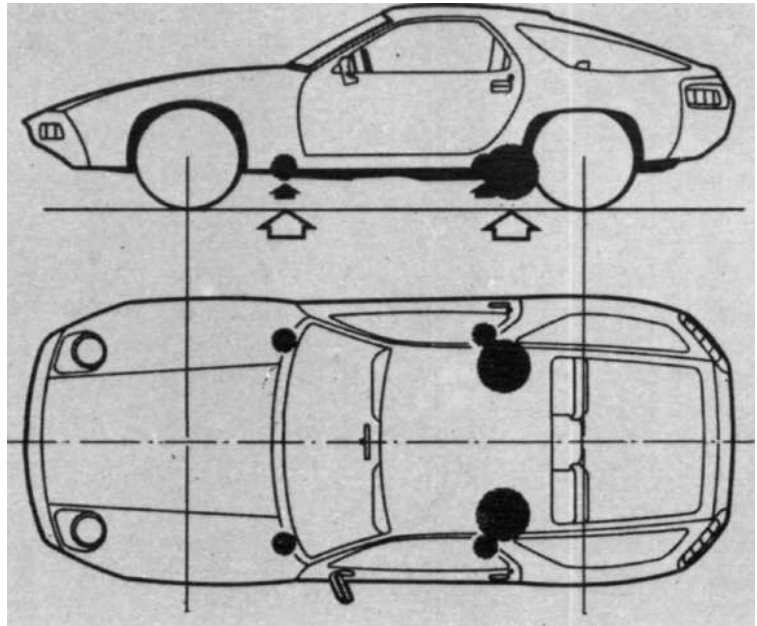
Coolant reservoir (B)

Anti-freeze must remain in cooling system all year round.

Coolant level should be up to filling mark when engine is cold.

Always add anti-freeze and water in ratio specified under "Filling Capacities".

Use only additives recommended for aluminium engines and radiators. See "Cooling System".



Jack support points

Black arrows: Jackports for car jack

White arrows: Lift points for workshop hoist or floor jack

Tire pressure, front and rear

36 psi or 2.5 bar for summer and snow tires.

32 psi or 2.2 bar for collapsible spare tire.

Spare tire, jack

Underneath luggage compartment.

Tool kit

Fitted into rear cross wall.

Never lift car by bumpers.