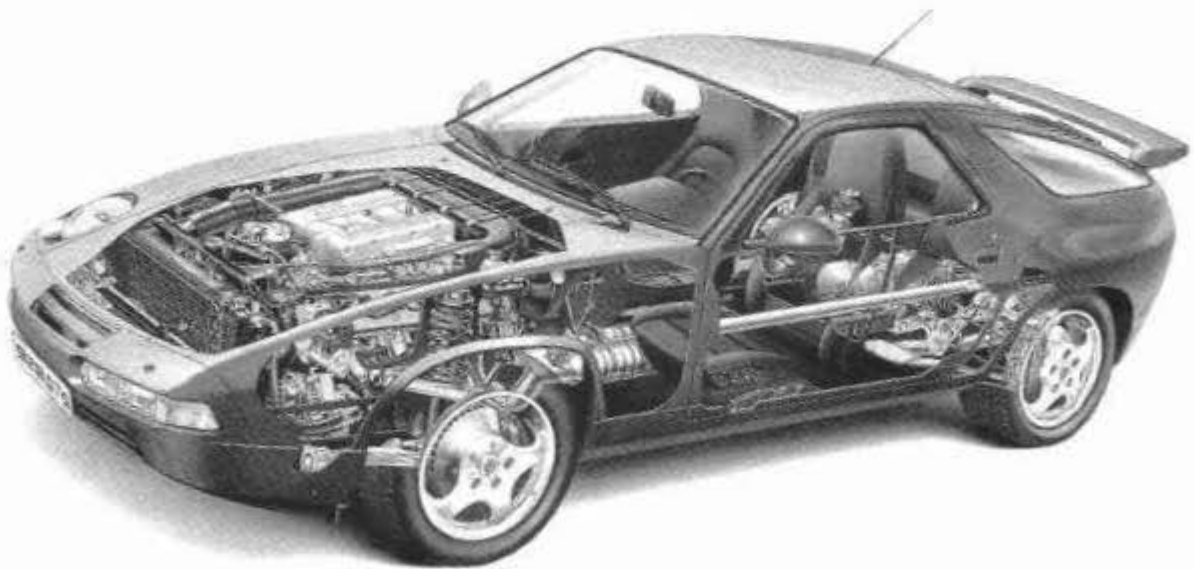
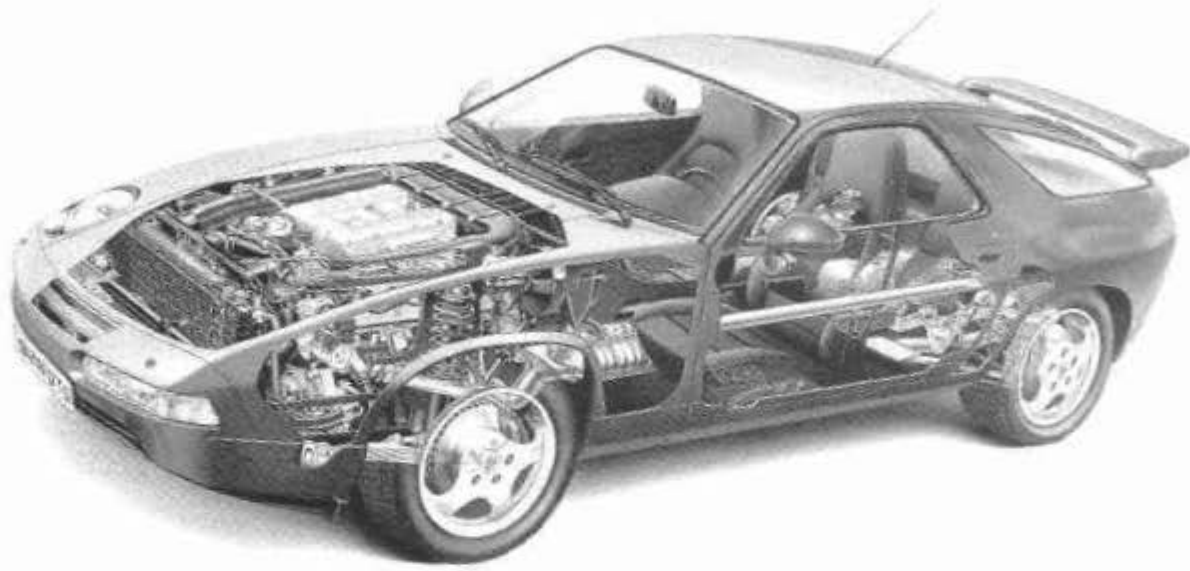


**PORSCHE**

**Driver's Manual**

***928 GTS***



Because our vehicles undergo continuous development: equipment and specification may not be as illustrated or described in this Driver's Manual.

You will find further important information in the transparent plastic pocket inside the rear cover of this Driver's Manual.

Some of the equipment described in the Driver's Manual is optional. Your Official PORSCHE Centre will be pleased to advise you on retrofitting. Should your Porsche be fitted with equipment not described in this Manual, your Official PORSCHE Centre will be pleased to provide information concerning correct operation and care of these items.

Because of different legal requirements in individual countries, the equipment of your vehicle may vary slightly from that described in this Driver's Manual.

## Important

Please use only Original Porsche Parts for your car. You can order such items from your Official Porsche Centre who will be conversant with the range of approved items and will be pleased to advise you further.

Porsche accepts responsibility, in accordance with its legal obligations, for Original Porsche Parts and for parts and accessories which it has approved for your car. But the use of other parts or accessories which are neither Original Porsche Parts nor approved by Porsche may adversely affect the safety of your car and Porsche can take no responsibility for any loss or damage caused by their use.

Even if the supplier of other accessories or parts is a recognized supplier, the safety of your car may still be affected if such items are installed. Due to the large variety of products offered in the accessory market it is not possible for Porsche to inspect and approve every one.

In addition, please note that the use of replacement parts which are not Original Porsche Parts or approved parts or the use of accessories not approved by Porsche may also detrimentally affect the Warranties relating to your car.

**Dear Customer,**

Your Porsche has been manufactured to the very highest standards of design and production technology. Not only is your Porsche a lively sports car, but also a reliable vehicle for day-to-day driving which will give you much pleasure.

In this "**Driver's Manual**" you will find all you need to know about your Porsche.

The booklet entitled "**Guarantee and Maintenance**" gives an indication to you, your Official PORSCHE Centre and the next owner of your vehicle a useful indication as to the carrying-out of servicing work. In order for any claims made under warranty to be upheld, you must ensure that the prescribed services are carried out by specialist staff of an Official PORSCHE Centre.

We would also advise you to have your Porsche serviced at the intervals suggested even after your warranty has lapsed. Your Porsche will serve you all the better for that. The re-sale value of your vehicle and its part-exchange value at your Official PORSCHE Centre will likewise be all the better.

A world-wide after-sales service organisation is at the ready.

**Dr. Ing. h. c. F. Porsche Aktiengesellschaft**

## Fuel Octane Rating:

The engine is designed to provide optimum performance and fuel consumption if **unleaded premium fuel, minimum 98 RON/88 MON** is used.

If unleaded premium fuels with octane numbers of **at least 95 RON/85 MON** are used, the engine's knock control system automatically adapts the ignition timing.

## Tyre Pressures

(see "Tyre pressure warning system")

Increase the tyre pressures when the "Pressure loss" message appears in the display in the instrument cluster.

**When replacing tyres, always follow the instructions in the section on "Tyres and tyre care."**

**Before Driving Off, Running In, Controls**

**Maintenance, Car Care**

**Practical Tips, Emergency Service**

**Vehicle Identification, Technical Data**

**Index**

**Pocket for Additional Information**



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## **For your own safety, before a journey, you should:**

check condition of all tyres

clean the windows and light lenses, front and rear

turn the ignition on, and check that headlamps and turn indicators are functioning

with the ignition switched on and the engine switched off check all the warning lights and the information-system display

adjust rear view mirrors for unhindered rear vision

fasten seat belts - driver, front and rear-seat passengers.

## **Tips for "Running-in"**

There are no particular rules to be observed when "running-in" your new Porsche. However, the following tips will be helpful in obtaining the optimum running properties.

Despite the most modern manufacturing methods with their high precision, it cannot be completely avoided that the moving parts have to wear in with each other. This wearing-in occurs mainly in the first 1000 km (600 miles).

**Oil consumption** can be somewhat higher than normal during the "running-in" period.

### **Therefore you should**

never overrev a cold engine, either in neutral or in gear,

continually change the demands made upon the engine and transmission,

never exceed 5000 rpm in the individual gears,

always change gear in good time, and thereby keep the engine in the optimum revolution range (note the transmission diagram). This of course also applies after running-in.

## **Maximum permissible engine speed**

The red line on the tachometer indicates the maximum permissible engine speed. The fuel supply is interrupted to prevent the engine accelerating past this maximum speed. When changing down through the gears, always bear the maximum permissible down-change speeds in mind.

## **Bedding in new brake pads**

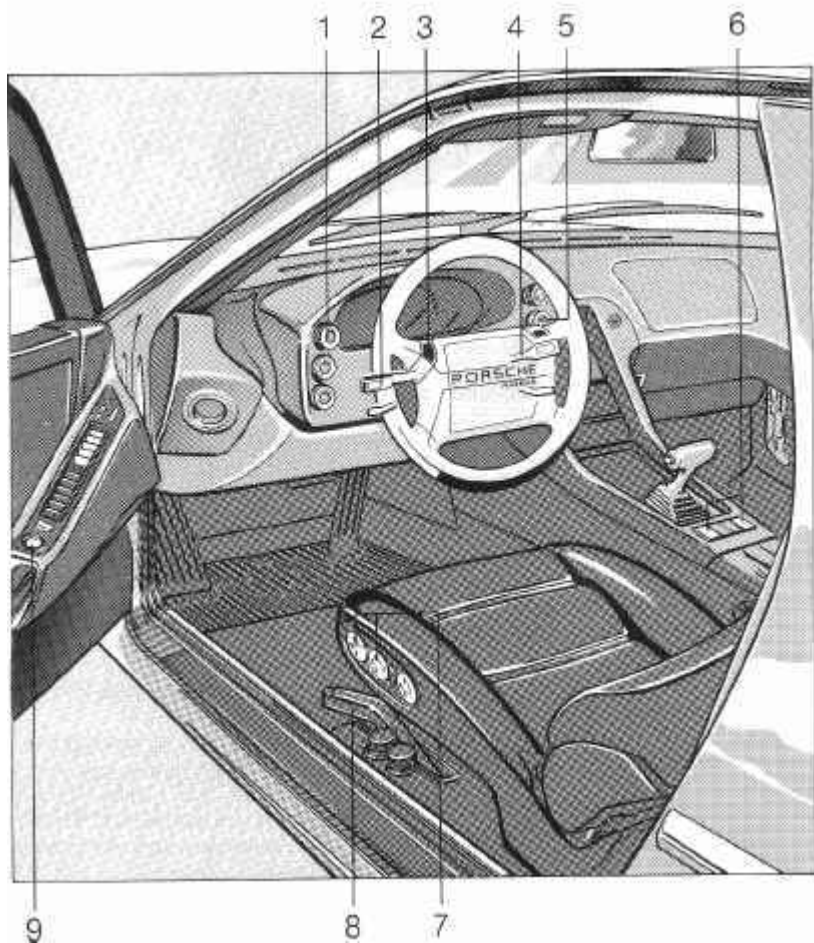
New disc pads have to be bedded in, and do not therefore have the full braking ability at the beginning. To compensate for this reduced braking ability for approx. the first 200 km (120 miles) a little more pedal pressure is necessary. This also applies after having the disc pads renewed at a later date.

## **Running in new tyres**

Please note: New tyres do not possess their full road-holding ability. Therefore, drive at lower speeds for the first 200 km (120 miles).



- 1 Light switch
- 2 Indicators/high, low beam/parking light/  
headlight flash stalk
- 3 Horn
- 4 Windscreen wiper/washer stalk
- 5 Hazard warning lights switch
- 6 Switches for power windows
- 7 Controls for power seat
- 8 Handbrake
- 9 Door-mirror control



## Keys

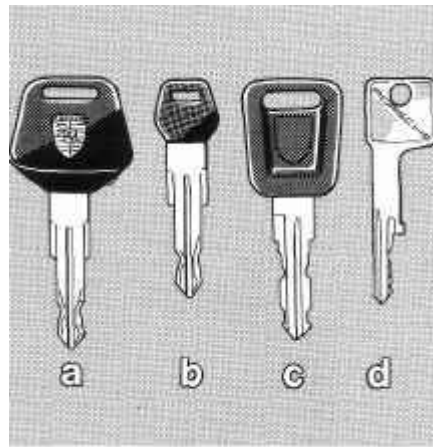
Three keys are supplied with the vehicle, all with the same cut. Two of the keys have a built-in battery-operated lamp in the plastic handle and this lights when the contact button is depressed.

**There is one flat key which you can keep in your purse or wallet, for instance, as an "emergency key."**

If you remove the plastic head of the flat key, you can clip on an illuminated plastic handle (available from your Official PORSCHE Centre).

Vehicles with a rear seat storage compartment have two additional keys for the compartment lock.

When the light begins to fade, the battery must be replaced with one of the same type. A discharged battery could leak and damage your clothing.



a Key with battery-operated lamp  
b Flat key  
c Rear seat storage compartment key  
d Key for lock-up wheel nuts

The new design of the key effectively prohibits unauthorized copying. This means however, that you yourself will not be able to get replacement keys cut, you must order them through an Official PORSCHE Centre.

Should you need replacement keys, you must state both key number and vehicle identification number. This number is noted on the key card that you receive with the keys. Keep this card somewhere safe, not in the vehicle.

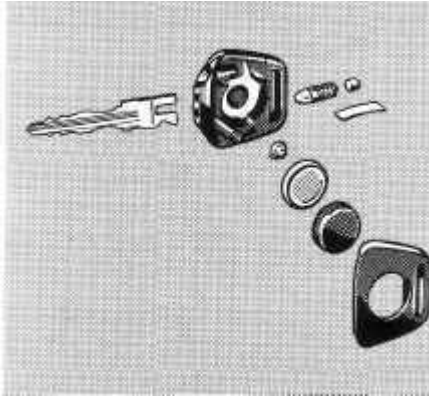
Key "a" or "b" operate

1. Door locks with central locking system  
alarm system  
power windows  
electric sunroof  
interior lights
2. Ignition/starter switch with steering lock
3. Luggage compartment lid lock with alarm system
4. Fuel filler cap lock
5. Glove box lock

Three identical keys are supplied with vehicles which have lock-up wheel nuts. Copies of lost keys **cannot** be supplied.

Please store separately.

If wheels are to be removed whilst your car is in the garage, please do not forget to hand over a key for the lock-up wheel nuts along with the ignition key.



### Replacing the Button Battery for Key Light

1. Carefully lift the cover in the key head with a fingernail or a small screwdriver, and remove the old battery.
2. Insert a new commercially available battery (1.5 V).  
Please dispose of batteries correctly.
3. Press the cover back into the key head as illustrated.

## Theft protection

To protect your vehicle from theft, you should always proceed as follows when leaving your vehicle:

- Close windows and sunroof
- Remove ignition key
- Engage steering lock
- Close the glove compartment
- Cover luggage
- Lock doors
- Lock petrol cap

### Alarm system

The alarm system is primed when one of the doors is locked with the key. Light-emitting diodes (LEDs) in the locking buttons start flashing immediately to indicate that the alarm is primed.

If the LEDs do not flash when the car is locked or change to a double-flashing signal after 10 seconds, not all of the alarm contacts have been closed.

The following components are monitored by the alarm:

- Doors (central door locking system)
- Engine- and luggage-compartment lids
- Glove compartment
- Radio
- Ignition

If an alarm contact is broken, the alarm horn will sound for approx. 30 seconds. At the same time, the interior lights and the hazard warning lights\* flash for approx. 5 minutes. When the alarm is triggered, the LEDs are switched to a double-flashing signal.

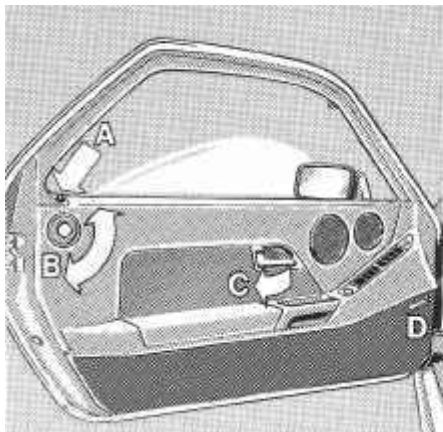
If the luggage-compartment lid is opened with the key when the alarm has been primed, the alarm status is automatically suspended until the lid is closed.

When a door lock is unlocked, the alarm system is unprimed and the LEDs go out.

### Emergency priming

If the central locking system is not working, the alarm system can be primed by closing a door three times in rapid succession. The LEDs indicate this with a double-flashing signal.

\*On Swiss version, alarm horn only



A - Lock door  
 B - Lock and unlock door  
 C - Open door  
 D - Footwell light

The **footwell lights (D)** mounted forward in the lower part of the door trim come on, with the switch in the appropriate position, when the door or the luggage-compartment lid is opened. Each light can also be switched on or off individually by means of the integrated switch.

## Doors

The doors are opened from the outside by pulling the inset door handle, and from inside, by pulling the recessed door handle (C).

Access to the storage compartments in the door is obtained by pressing the safety knob, and tipping the armrest outwards.

## Power windows

With the doors closed, the power windows can be operated when the ignition is switched on.

The switches can only be actuated one at a time. With the ignition key removed or ignition switched off, the windows can only be opened and closed until a door is opened or if one of the doors is open.

## Opening windows

**Tapping** the switches moves the windows in stages to the desired position.

**Pressing** the switches for longer than 0.5 seconds automatically opens the windows fully. The movement of the windows can be stopped in any position by tapping the switch again.

## Closing windows

To close the windows, the switch must be held down until the windows have reached the desired position.

With the ignition switched on, pressing the switch for longer than 0.5 seconds automatically closes the driver's door window fully. The movement of the window can be stopped in any position by tapping the switch again.

## Door lock contact

If the key is held in the locking position when locking a door, the sunroof and the door windows will close in succession automatically.

**Caution: In view of the danger of injury when the windows are closed by occupants unacquainted with the vehicle (children), the driver should always remove the ignition key even when leaving the car for a brief period.**

## Central door locking

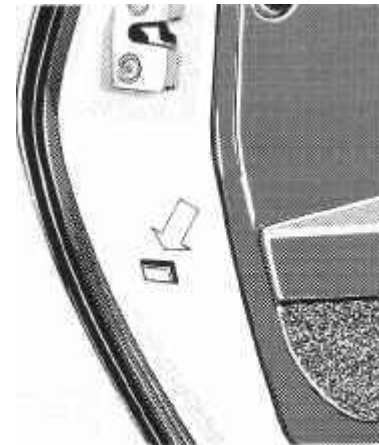
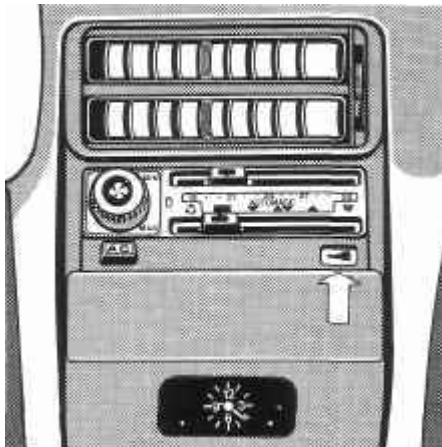
With the central door locking system, both doors can be locked and unlocked electrically.

When the doors are locked, the locking buttons (A) must be fully retracted.

The two doors can be locked **individually** from inside by turning button (B) or by pressing locking buttons (A). If one door is unlocked by turning button (B), the second door is automatically unlocked as well.

To prevent being accidentally locked out of the vehicle, the central locking system can only be actuated when the driver's door is closed (even if the passenger door is still open).

If the central locking system fails to work, open and close the two doors individually. The alarm system can be primed by closing a door three times in rapid succession.



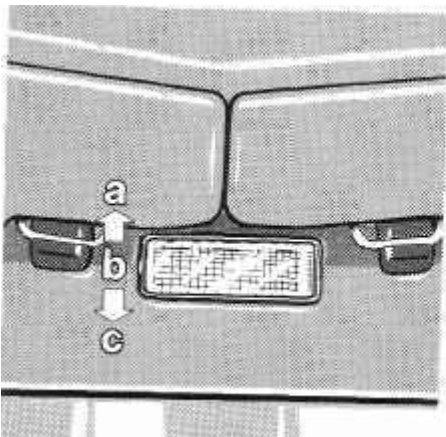
### Central locking button

Both doors can be electrically locked by pressing the central locking button in the centre console. The lamp in the central locking button remains lit whilst the system is activated.

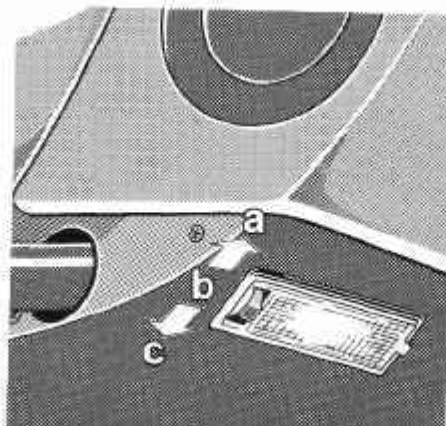
To unlock the doors via the central locking button, the ignition must be switched on.

## Door guard lights

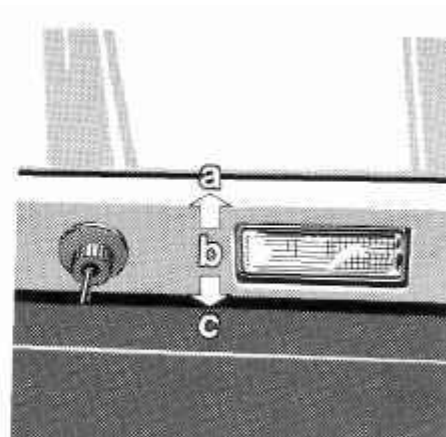
The door guard lights come on when a door or the luggage-compartment lid is opened.



**Interior light** in headlining



**Footwell light** in lower part of door trim



**Luggage-compartment light** in tailgate

## Interior lights

When the switches are in the appropriate positions, the interior lights come on as soon as a door is unlocked or opened or the luggage-compartment lid is opened.

The interior lights go out after approx. 20 seconds after the doors are closed. The lights go out immediately if the ignition is switched on or the vehicle locked with the key.

The positions of the interior light switches are as follows:

- a- light comes on only when a door or luggage-compartment lid is opened
- b - light switched off permanently
- c - light switched on permanently.

The interior light in the headlining and the luggage-compartment light are switched on and off by tilting the lens.

The footwell lights are operated by the switch integrated in the light.

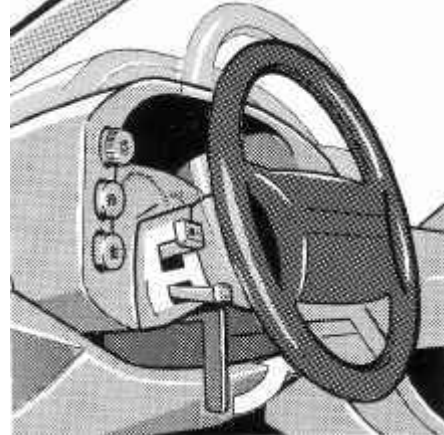
The light for the main fuse box is switched on via the door contact switch.

## Front seat adjustment

A correct seat position is essential for safe, tireless driving. The seat position can be adjusted to suit individual requirements. We recommend the following procedure:

1. Move the seat backward or forward until, with the clutch fully depressed, your leg is stretched but your foot is at an angle.
2. Set the desired seat height at front and rear.

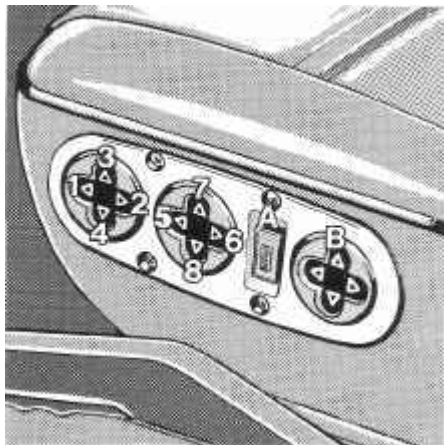
3. Grip the top half of the steering wheel. Then set the backrest angle so that with almost fully outstretched arms your shoulders still contact the backrest.
4. If necessary, correct the fore and aft adjustment once again.



## Steering wheel adjustment

After adjusting your seat, check the position of the steering wheel and your view of the instruments.

For optimum legroom and view of the instruments, the steering wheel with the instrument console is height-adjustable. To do this, release the lever under the console and clamp again when in the desired position.



- 1 ◆ 2 Fore and aft adjustment
- 3 ◆ 4 Height adjustment front
- 5 ◆ 6 Backrest adjustment
- 7 ◆ 8 Height adjustment rear
- A Seat heating
- B Lumbar support

## Front seats

Two four-function switches control the electric motors for fore-and-aft adjustment, seat height and angle of backrest tilt.

## Lumbar support (B)

The backrest support can be regulated vertically and horizontally to any position to guarantee a relaxed seated posture and provide individual lumbar support.

- ◆ Lumbar support horizontal
- ◆ Lumbar support vertical

## Seat heating (A)

The heating in the seat cushion and backrest is switched on and off by pressing the rocker switch.

Press upper half of switch - heating on

Press lower half of switch - heating off

Heating temperature is controlled with the aid of the knurled knob set in the switch; the temperature is held constant until the seat heating or the ignition is switched off.

Turn knurled knob up - to increase temperature

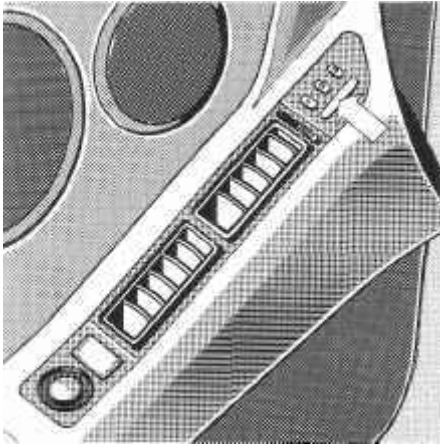
Turn knurled knob down - to reduce temperature



## Emergency adjustment of seat

Should the electrically operated seat adjuster fail, the seat can be moved backwards or forwards with the aid of the offset hex screwdriver from the tool kit. Use the screwdriver to turn the servo motor at the front of the seat.





### Storing a position

To store a position in the memory, press the memory button (arrowed) and the appropriate position button (button 1, 2 or 3). The memory button must be pressed before the position button.

### Pilot lamp

A red pilot lamp is set in the memory button.

If adjustment is initiated, the pilot lamp lights up until the adjustment is completed. If the procedure is interrupted, the lamp goes out only some 60 seconds after the ignition is switched off.

## Seat-position memory

The seat-position memory can store up to three different seat positions. Each position stored in the memory comprises fore-and-aft setting, seat height, backrest angle, positions of outside mirrors and position and size of lumbar support, if fitted. The positions can be adjusted, stored or called up regardless of whether the engine is on or off.

### Selecting a position

Adjust the seat and the two door mirrors to the desired position by operating the switches for seat and mirror adjustment.

### Calling up a position

To set the seat to the position stored in the memory, the appropriate position button must be depressed until the seat reaches its final position. **The procedure is curtailed as soon as the button is released.** The buttons are illuminated and easy to find.

Once the seat reaches its end position the mirrors are set automatically to the positions stored in the memory.

The seat switches always take priority over automatic adjustment. If a seat switch is operated, automatic adjustment is immediately interrupted.

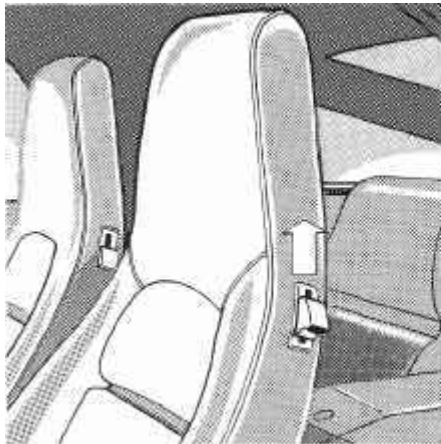


## Sports seat

Sports seats have manual fore-and-aft and backrest adjustment.

To move the seat **backwards or forwards**, pull the outside locking lever at the front of the seat upwards, move seat to desired position, release lever and ensure that the seat engages securely.

**Never unlock the driver's seat while the vehicle is in motion: the seat may move suddenly, causing you to lose control over the vehicle.**

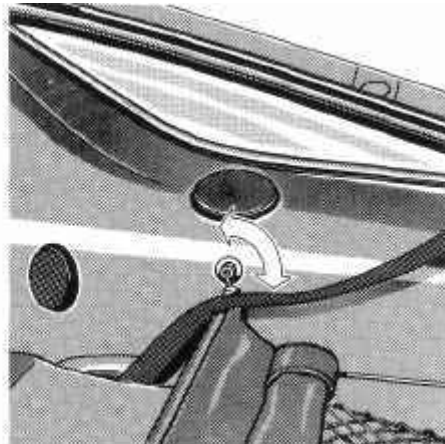


In order to **adjust the backrest**, pull the inside locking lever at the front of the seat upwards, set seat to desired position and release the lever.

When there is no load on the backrest, it will always be pushed forwards by spring force when the lever is pulled.

## Backrest lock

The backrests are secured in position to stop them tipping forward during braking. To release, raise the knob in the side part of the backrest. The backrests are locked in position when they are tilted back.



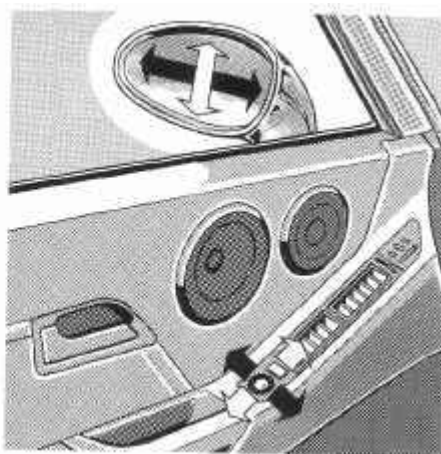
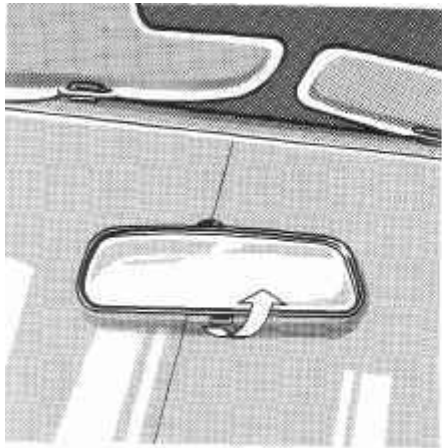
Similarly, the **rear seat backrests** can be released and tipped forward, thereby giving more luggage room in the rear.

## Luggage compartment

Any luggage you take with you can be protected from the sun and shielded from the gaze of unwelcome visitors with a **luggage-compartment cover**.

To remove the luggage-compartment cover, turn the catches on the end of the cords by 90°

Use the **luggage net** to secure your luggage to stop it sliding during braking or in bends. The brackets for attaching the luggage net are on the floor of the luggage compartment.



## Rear view mirrors

**Before beginning a journey you should ensure that the rear-view mirrors are properly adjusted.**

Press the lever in the bottom edge of the **inside rear-view mirror** to move the mirror to the anti-dazzle position.

The electrically adjustable **door mirrors** can be set with the switch in the driver's door.

The passenger-door outside mirror is adjustable by the same switch, by pressing the rocker switch in front of the adjuster switch into the appropriate position. When necessary, the door mirrors can also be adjusted by hand.

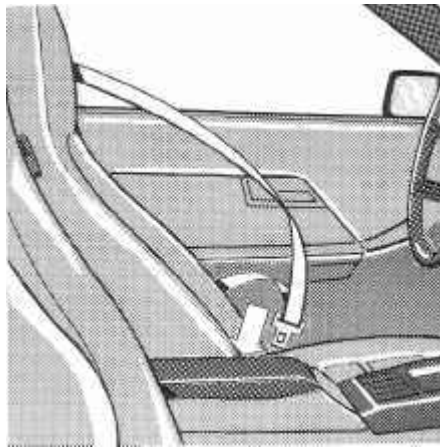
The door mirrors are electrically heated when the rear window heating is turned on.

**The convex glass of the passenger side mirror allows a wider field of vision. Please note that, consequently, vehicles or objects viewed using this mirror will appear smaller and more distant than they are in reality. Therefore, do not rely on this mirror for judging the distance of following traffic.**

## Seat belts

**All occupants of the car must wear seat belts for their own safety, on every journey.** To remind you of this, **the seat belt warning light** in the instrument cluster comes on every time the ignition is turned on and does not go out until the tongue on the driver's seat belt is inserted in the buckle.

The lap and shoulder belt as fitted to the front passenger's seat is not suitable for children under 140 cm (4 ft. 6 ins.) tall. To stop them distracting the driver's attention and for their own safety, children under 12 years old should always occupy the rear seats.



Never use one seat belt for two people.

Loose clothing affects the fit of the seat belt. You should therefore take your coat off, because a correct seating position and freedom of movement are important for comfort and safety.

Do not run the belt over fragile objects in your pockets, e. g. spectacles, pens or a pipe etc., as these could represent additional hazards.

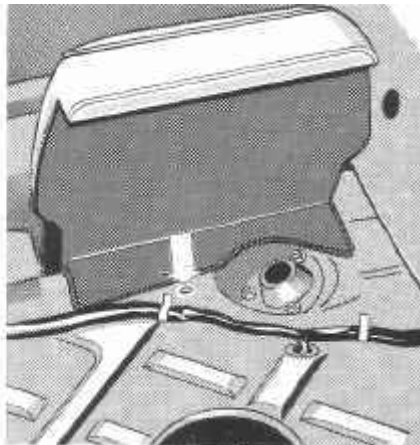
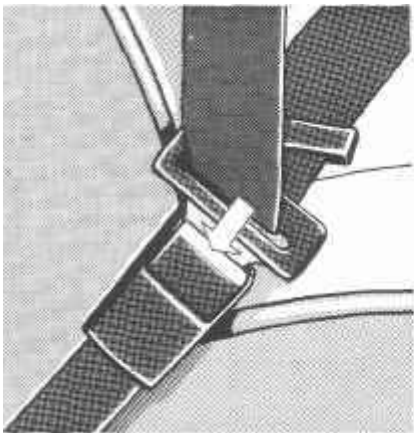
### Fastening the belt

Adjust the seat to the correct position. Grasp the belt tongue and pull the belt with a slow, steady motion across your chest and lap. Insert the tongue in the corresponding buckle on the inboard side of the seat and push down until the buckle engages with an audible click. Move the plastic slide down against the tongue.

### Make sure that the belts are not twisted.

The lower part of the belt should always fit snugly across the lap. After engaging the buckle, always pull the diagonal belt upward. Repeat this procedure now and again during the journey to ensure that the lap belt remains tight.

The inertia reel is designed to lock the belt more quickly when the car is retarded than when the belt itself unreels. This design combines maximum freedom of movement with optimum safety when braking.



### Releasing the belt

To release the belt, press the red button marked "PRESS". The tongue then springs out of the buckle, whether there is any loading on the belt or not.

Make sure that the belts are always fully retracted when not in use. This will prevent them becoming dirty and avoid unnecessary damage to the belts themselves.

You should check the seat belts regularly for signs of damage to the webbing. Make sure that the buckles and anchorage points are in good condition.

If the belts have been subjected to high loads or stretched in an accident, have them replaced in the interests of your own safety.

**Warning.** Please do not make any alterations or additions.

In case of doubt please consult your Official PORSCHE Centre.

Addresses are listed in your "**Service**" booklet.

### Child restraint system

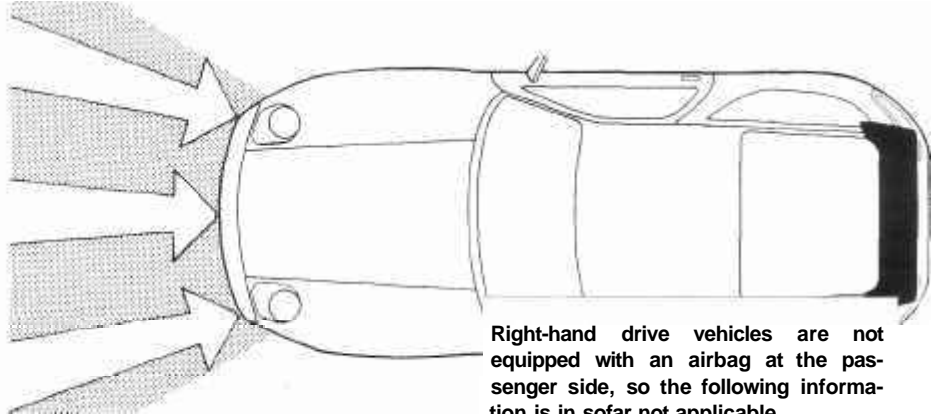
An additional anchorage point (arrowed) for a child restraint system is to be found beneath the carpet in the luggage compartment.

Please observe the installation instructions supplied by the manufacturer of the child restraint system.

### Note for models with airbags

If a child restraint system is used on the front passenger's seat of a model fitted with airbags, the seat must be moved to the rear-most position and remain there.

Child restraint systems which are supported by the dashboard must not be used in models fitted with airbags.



## Airbag system

In conjunction with the seatbelt, the airbag is a passive safety system designed to provide the driver and passenger maximum protection from accident injury.

The airbag system consists of the following 4 main elements:

- Airbag with gas generator (airbag unit)
- Control electronics
- Crash sensors
- Electrical wiring

In the event of a collision of sufficient impact, the crash sensors transmit a signal via the control electronics to the ignition mechanism.

In the ignition process, the solid chemical in the gas generator is combusted within fractions of a second. This combustion process generates the quantity of gas necessary for filling the airbag and the necessary gas pressure.

The airbag is situated on the driver's side beneath padded steering wheel panel and on the passenger's side beneath the padded trim above the glove compartment. The danger of vision being impeded by the inflated airbag is negligible as the airbag rapidly deflates. Equally, the ignition detonation will be drowned by the noise of the accident.

The airbag protects face and torso whilst cushioning the forward motion of the driver and passenger at the same time.

### Effective angle of impact

Even if your vehicle is equipped with an airbag, you still need to fasten your seatbelt as the triggering of the airbag system depends on the force and the angle of impact. See picture above for effective angle of impact.

If impact is below the threshold or at the wrong angle for triggering the airbag, correctly fastened seatbelts are essential to the safety of the vehicle's occupants. Therefore, all of the vehicle's occupants should always fasten

their seatbelts (in many countries, the use of seatbelts is obligatory).

See also the chapter "Seatbelts".

### **Maintenance/Warning lights**

The airbag system also monitors the correct functioning of the ignition devices, sensors, warning lights, control electronics and diagnostic instrument.

Any faults are immediately indicated by the warning light on the instrument cluster. When the ignition is switched on, the airbag warning lights up for about 5 seconds.

In the following cases, you should consult your Official PORSCHE Centre without delay to have any malfunctions rectified:

- The airbag warning lights up while you are driving or lights up repeatedly with the ignition switched on after the 5 seconds have elapsed.
- The airbag warning lamp does not light up when the ignition is switched on.

**To check that it is working properly, the airbag system should be checked after 4, 8 and 10 years of service - and every two years thereafter - by your Official PORSCHE Centre.**

### **Safety and disposal instructions**

Once the airbag has been triggered, it should be checked or replaced immediately at an Official PORSCHE Centre.

No modifications should be made to the wiring or components of the airbag system; do not attach any additional trim or stickers to the steering wheel or in the vicinity of the passenger's airbag.

**Do not lay any extra cables for additional electrical equipment in the vicinity of the airbag wiring.**

**Leave the elimination of all faults to an Official PORSCHE Centre.**

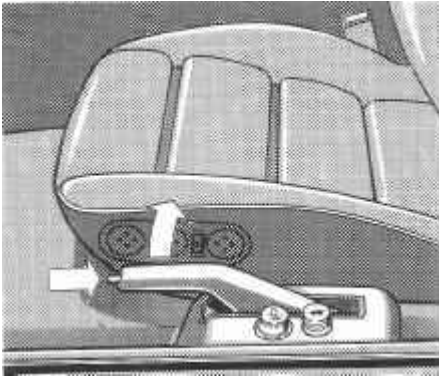
**Non-ignited gas generators, or whole vehicles or subassemblies with airbag units must not be disposed of as normal scrap or waste.**

Your Official PORSCHE Centre will be able to give you details on disposal.

Important: If you sell your Porsche, tell the buyer that the vehicle is fitted with an airbag and refer him to the chapter "Airbag system" in the Driver's Manual (Safety and disposal instructions).

You can find further information on the airbag system on an adhesive label in the glove compartment and on the airbag components.

When fitting child safety seats, please refer to the section entitled "Child restraint system."



## Handbrake

The handbrake lever is beside the driver's seat. The handbrake is cable operated to the rear wheels only. It is applied by pulling the lever upwards.

To release the brake, the lever must be pulled upwards slightly whilst pressing the button in the end of the lever until the ratchet is cleared, and then letting the lever downwards.

The warning light and the fault message in the information-system display are not cancelled until the handbrake is fully released.

## Clutch

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

Should this free travel suddenly change, the system may be defective. Please consult the nearest Official PORSCHE Centre for rectification.

Ensure that the pedal travel is not impaired by foot mats.

## Footbrake

To reduce the pedal effort necessary when braking, your Porsche has a brake servo unit. The vacuum necessary to operate this unit is taken from the engine intake manifold, when the engine is running.

Please note that with a defective servo unit, or when the vehicle is being towed with the engine turned off, the braking effort required is considerably increased as soon as the vacuum reservoir is used up.

With properly bled and functioning brakes, the free travel of the brake pedal will remain constant. This free travel before the brakes start to operate can be 20 mm (0.8 ins.).

Should this free travel suddenly increase, it could be that air has entered the brake system. The warning light comes on accompanied by the fault message in the information-system display to indicate that the brake-fluid level is too low.



## ABS brake system

(Anti-lock System)

The ABS System represents a major contribution to the enhancement of active safety in your Porsche. This system prevents the wheels from locking in a panic stop on almost all road surfaces until shortly before the vehicle comes to a standstill.

### The ABS System guarantees the following:

<b>Full steerability</b>	- Vehicle remains steerable
<b>Good directional</b>	no swerving caused by control locking of the wheels
<b>Excellent stopping</b>	stopping distances are usually reduced
<b>Prevention of</b>	no localized tyre wear wheel lock-up

The crucial advantage of the ABS System is that it allows directional control and manoeuvrability of the vehicle in emergency situations including panic braking on bends.

In spite of this it still remains the responsibility of the driver to adapt his style of driving to the prevailing road and weather conditions, as well as to the current traffic conditions.

**The higher degree of safety afforded by this system must not be regarded as justification for taking greater risks.**

### Driving with the ABS System

A wheel speed sensor is fitted to each of the 4 wheels. If the rotational speed of an individual wheel is low enough that it is liable to lock up, brake pressure is regulated individually for each front wheel and together for both rear wheels.

On a road surface which is slippery on only one side, the rear wheel braking on the slippery surface determines the brake pressure which will be applied equally to both rear wheels. This ensures that directional stability is maintained thanks to the good lateral stability of the rear axle.

If braking takes place near the wheel lock limit (panic braking), the ABS control procedure begins. Intervention by the ABS System (comparable with cadence braking in very rapid sequence) is perceived by the driver in the form of a pulsating brake pedal in conjunction with audible noise. The driver is thus warned to adapt vehicle speed to prevailing road conditions.

The functional readiness of all the main electrical components of the ABS is checked by an electronic monitoring system both before and while you drive. When the ignition is switched on the ABS warning lamp lights up and should go out again when the engine is started, at the latest. If the ABS warning lamp fails to go out, and if the ABS fault indicator appears in the information system display, this indicates that ABS has been deactivated due to a fault. If the warning lamp lights up while you are driving, this indicates that a fault has occurred. In both cases, normal braking, as in vehicles without ABS, is still retained. The ABS system should, however, be examined at an official PORSCHE Centre immediately, so as to prevent the occurrence of further faults which may have other, unforeseeable effects.

The switching-off of the the ABS system always results in the automatic limited-slip differential (PSD) being switched off.

### Note

The control unit of the ABS brake system is set for standard tyre size. If non-standard tyres are fitted, the control unit may misinterpret the speed of the vehicle, because of the variant data it receives from the sensors on the axles,

If the difference in rolling radius exceeds approx. 6 %, the control unit deactivates the ABS system and the ABS warning lamp lights up.

## Porsche limited-slip differential (PSD)

The PSD is an electronically controlled differential lock which switches on automatically without intervention from the driver.

It is an aid to driving off on road surfaces with varying degrees of traction and serves to improve driving stability when cornering with high lateral acceleration.

In spite of this it still remains the responsibility of the driver to adapt his style of driving to the prevailing road and weather conditions, as well as to the current traffic conditions. **The higher degree of safety afforded by this system must not be regarded as justification for taking greater risks.**

### Aid for driving off

The PSD cuts in whenever a speed difference (slip) of more than 2 km/h occurs in the drive wheels and the speed of the vehicle is no higher than 30 km/h (19 mph). The extent of the differential locking effect is determined by the slip of the drive wheels. However, some skidding of both drive wheels cannot be avoided if acceleration is too severe.

### Acceleration out of corners

The PSD cuts in over the entire speed range whenever the control unit receives a high lateral acceleration signal when accelerating out of corners and the inside wheel shows signs of slipping.

The lock transmits the non-transferable driving force of the inside wheel to the outside wheel.

The lock is opened for safety reasons if both wheels slip.

### Deceleration in corners

If the control unit receives a high lateral acceleration signal at speeds of over 60 km/h (37 mph), a limited-slip torque is also built up when decelerating in corners to counteract any slewing of the vehicle.

### Note

A solenoid valve regulates the gentle built-up and reduction of the limited-slip torque. The acoustic timing noise indicates that PSD regulation is occurring.

Should the control unit detect a fault in the limited-slip differential, the PSD is switched off for safety reasons and a fault display appears in the information system.



You should then have your PSD tested at an Official PORSCHE Centre as soon as possible! The switching-off of your PSD changes the driving characteristics of the vehicle.

The switching-off of the ABS System always results in the PSD being switched off.

The **PSD indicator light** in the instrument cluster lights up when the limited-slip differential is activated or if both drive wheels slip.

## Starting and stopping the engine

Temperature sensors on the engine automatically provide the correct fuel/air mixture. Therefore, always refrain from depressing the accelerator when starting.

### **Please note the tips on running in.**

Before starting the engine, move the gearshift lever to neutral (automatic transmission: selector-lever position "P" or "N") and apply the handbrake.

The starter motor should not be operated for longer than 10-15 seconds. If the engine does not fire, repeat the starting procedure after a pause of approx. 10 seconds. Every time the starter motor is operated, the key must be returned to position 1 before trying again, as a device is built into the ignition switch to prevent inadvertent operation of the starter motor whilst the engine is running.

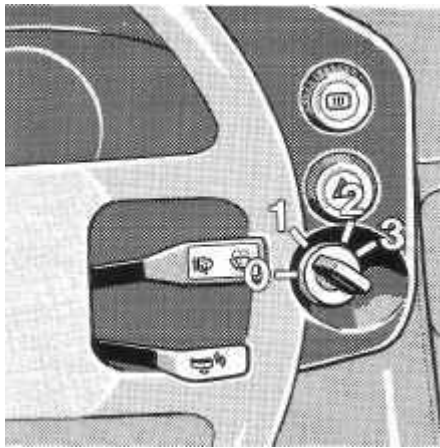
**In cold weather, it is advisable to depress the clutch pedal when starting the engine, even though the gearbox is in neutral.**

**To assist the engine when starting from cold at extremely low outside temperatures, it is advisable not release the ignition key as soon as the engine begins to fire.**

If the battery is insufficiently charged, your Porsche can be started with jump leads or by towing.

- **Never start the engine or let it run in confined spaces. The exhaust contains the colourless and odourless gas carbon monoxide, which is poisonous, even in small quantities.**
- **Do not allow the engine to warm up in neutral, but drive off immediately while avoiding high rpm and full throttle until the engine has reached its normal operating temperature.**
- **Never turn the key back to position 1 whilst the vehicle is moving.**
- **It is in your own interest to always remove the ignition key when leaving your Porsche, if only for a short period, and to ensure that the steering lock is fully engaged. This is done by rocking the steering wheel left and right. This might also be necessary to release the lock when turning on the ignition.**
- **Never park your Porsche or run the engine where there is a danger of flammable material such as dry grass or leaves coming into contact with the hot exhaust system.**

**Please note the information contained in the chapter entitled "Emission Control System."**



## Steering lock and ignition switch

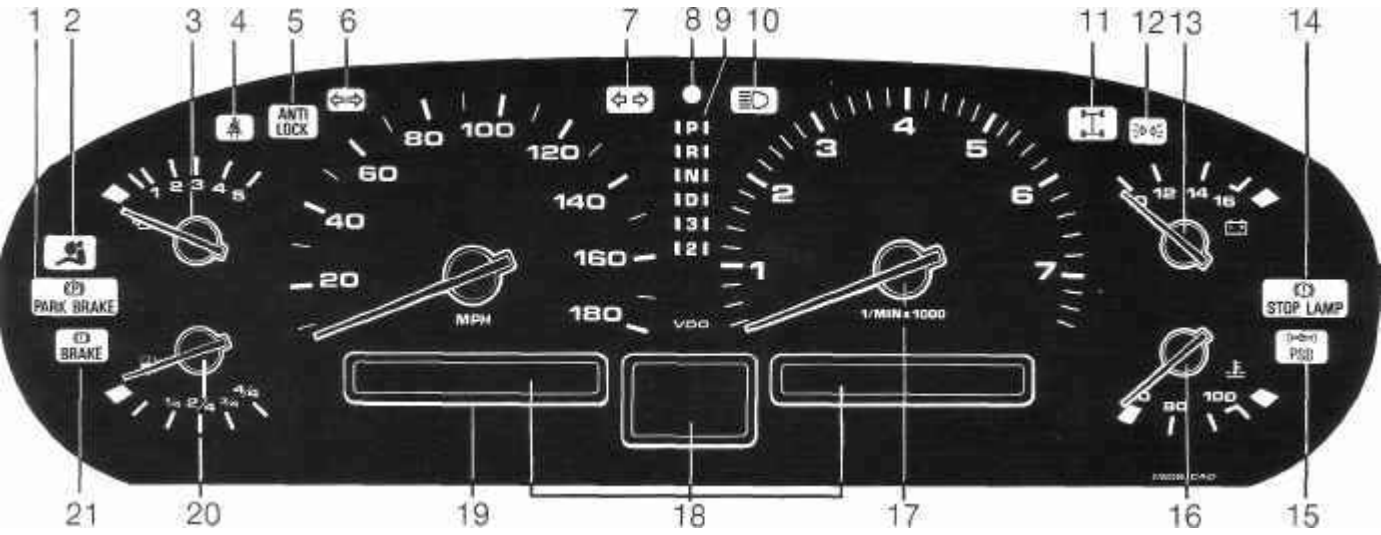
The ignition key has 4 positions:

**0 - The steering is locked.** All circuits connected to the ignition switch are off. This is the only position in which the ignition key can be withdrawn, and the steering lock only operates after the key is withdrawn. The parking lights can be operated with the switch in this position by moving the direction indicator stalk.

**1 - Steering unlocked.** All electrical circuits are operational except direction indicator and reversing lights, door mirror adjustment, and rear screen heating.

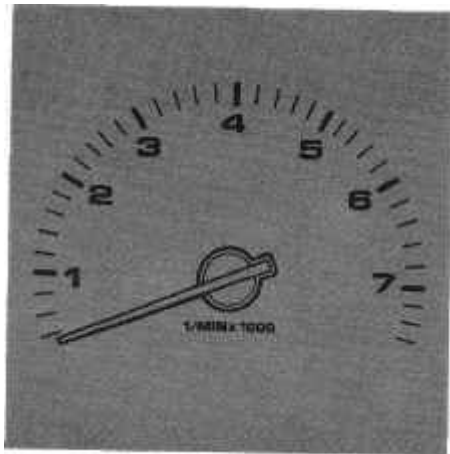
**2 - Ignition is switched on.** All circuits can now be operated. With the engine off, **the warning lights come on as a check.**

**3 - By turning the key to the right, the starter motor is operated.** As soon as the engine fires, release the key. It will spring back to position 2. With the engine running, the warning lights should go out except the warning light for the stop lamp, which will go out after the first application of the brakes. During the operation of the starter motor, the items with heavy electrical consumption, e. g. headlights, rear screen heating, wipers/washers, will be interrupted.



### Instrument Panel

- |                                   |  |                                    |
|-----------------------------------|--|------------------------------------|
| 1 Handbrake warning light         | 8 Phototransistor for brightness control | 15 PSD warning light               |
| 2 Airbag warning light            | 9 Selector-lever position indicator      | 16 Cooling-fluid temperature gauge |
| 3 Oil-pressure gauge              | 10 Main-beam warning light               | 17 Tachometer                      |
| 4 Seat-belt warning light         | 11 Tyre-pressure warning light           | 18 Information-system display      |
| 5 ABS warning light               | 12 Parking-light warning light           | 19 Speedometer                     |
| 6 Trailer-indicator warning light | 13 Voltmeter                             | 20 Fuel gauge                      |
| 7 Indicator warning light         | 14 Stop-lamp warning light               | 21 Brake-fluid warning light       |



## Tachometer

The tachometer indicates engine speed in 1000 rpm.

The red range on the scale of the instrument is a visible warning of the maximum permitted revolutions per minute. The fuel supply is interrupted to prevent the engine accelerating past this maximum speed. When changing down through the gears, always bear the maximum permissible down-change speeds in mind.

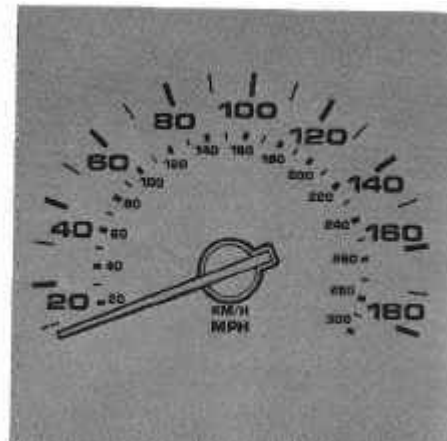


## Selector lever position indicator

### Automatic gearbox

With the ignition on or with the vehicle lighting on, the current position of the selector lever is lit up in the instrument cluster.

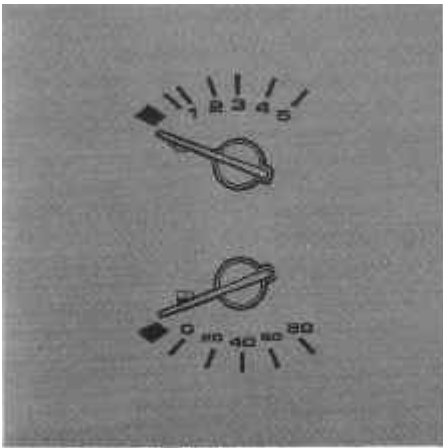
The display is cancelled when the key is removed or the vehicle lighting switched off.



## Speedometer

The speedometer indicates the driving speed per hour.

The odometer reading and the readings for tripmeters I and II appear in the information-system display.



### Oil pressure gauge

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.

Should the oil pressure suddenly drop while driving or if the fault message appears in the information-system display, **stop the engine immediately**. If the oil level is correct, have the fault remedied by the nearest Official PORSCHE Centre.

### Warning light

The oil-pressure warning light comes on when the ignition is turned on and goes out as soon as the correct operating pressure is reached. Should the light come on during driving, this indicates that the oil pressure is not correct.

In this case stop immediately.

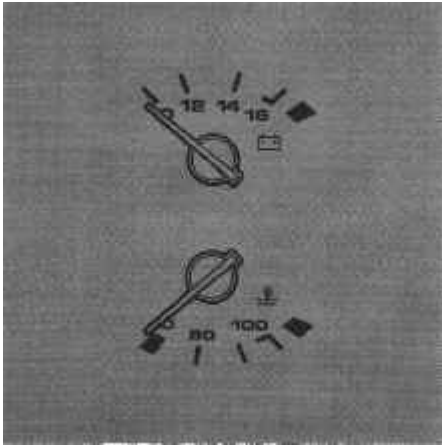
If the oil level is correct the nearest Official PORSCHE Centre should be called in to rectify the fault.

### Fuel gauge

With the ignition turned on, the gauge shows the amount of fuel in the tank. If the level is too low the fuel warning light comes on and fault message appears in the information-system display.

### Warning light

The warning light comes on when about 12 liters (10.5 Imp. qts) are left in the tank. The tank should be filled at the next opportunity. Never keep driving until the tank is empty!



### Voltmeter

The voltmeter shows the overall condition of the charging system. The needle should normally stay in the range 12 - 14 volts when the engine is running. A temporary drop under 12 volts when starting the engine is normal. A fault message appears in the information-system display if voltage is too low.

### Warning light

The warning light checks the function of the alternator. It comes on when the ignition is turned on and goes out as soon as engine rpm are high enough. If the warning light flickers or comes on during driving, it can mean that the fan belt is loose or broken. The fault could also lie, however, in the regulator or the alternator. In the latter cases the journey can be continued but only to the nearest Official PORSCHE Centre. Electrical consumption should be kept to a minimum.



### Cooling fluid temperature gauge

#### Left range - engine cold

Avoid overrevving or labouring the engine.

#### Middle range - normal

The temperature gauge needle should normally stay in this range. When engine load is high, it is not unusual for the needle to move towards the upper range, but it should return to the middle when the engine loading is reduced.

### Right range - Warning

If the needle goes into the upper range it means that the engine is being overloaded by severe strain or by high outside temperatures. The warning light comes on and fault message appears in the information-system display.

#### Warning light

If the warning light comes on, check that the fans are working. If the fans are not rotating, the power supply to the fan control is defective.

Allow the engine to cool down and drive to the nearest Official PORSCHE Centre, keeping a constant check on the temperature gauge. Avoid idling, crawling and engine speeds over 4000 rpm.



## Warning lights



The **handbrake warning light** comes on when the handbrake is applied or not fully released.



With the ignition on, the **seat-belt warning light** remains on until the seat-belt tongue is inserted in the seat-belt buckle.



The **airbag warning light** monitors the airbag system and indicates any faults as they occur.



When the ignition is switched on the **ABS warning lamp** lights up and should go out again when the engine is started, at the latest. If the ABS warning lamp fails to go out, and if the ABS fault indicator appears in the information system display, this indicates that ABS has been deactivated due to a fault. If the warning lamp lights up while you are driving, this indicates that a fault has occurred. In both cases, normal braking, as in vehicles without ABS, is still retained. The ABS system should, however, be examined at an official

PORSCHE Centre immediately, so as to prevent the occurrence of further faults which may have other, unforeseeable effects.



The **indicator warning light for trailer operation** flashes at the same frequency as the indicator lights. Should a trailer indicator fail the frequency is noticeably quicker.



The **indicator warning light** flashes at the same frequency as the indicator lights. Should one of the indicator lights fail, the flashing is noticeably quicker.



The **main beam warning light** in the instrument panel lights when the headlamps are on main beam or the headlamp flasher is operated. It goes out when dipped beam is selected.



The **tyre pressure warning light** comes on if a tyre loses pressure or if there is a fault in the tyre pressure warning system.



The **PSD indicator light** comes on if the automatic limited-slip differential is activated.



This **sidelight warning lamp** comes on in the instrument cluster when the sidelights are turned on and goes out again when the headlights are turned on.



The **brake warning light** comes on when the ignition is switched on and must go out after the first brake application.



The **brake fluid warning light** flashes on if the brake fluid drops beneath the minimum permissible level.

## Information system

The information system helps enhance road safety and operational reliability. Automatically and without any action on the part of the driver, it provides notification of faults in a number of systems. In the event of a system malfunction, a symbol appears in the instrument-cluster display, accompanied by an explanatory worded message.

The text appears in the language assigned to the national version of the vehicle. Your Official PORSCHE Centre can change the information system to several languages stored in the system.

Electronic components can store warnings as they occur, and at your Official PORSCHE Centre these can later be read out.

This system can help to protect you or your Porsche from unjustified liabilities.

**The messages have been subdivided into three priority groups:**

### Priority I

Faults which are detrimental to road safety and operational reliability are indicated by red lettering and flashing symbols (tyre pressure warning system: steady light or flashing arrow). Stop and rectify the fault immediately.

### Priority II

Faults which could cause damage to your Porsche are indicated by red lettering and a symbol which does not flash. The fault in question must be rectified at the earliest possible opportunity.

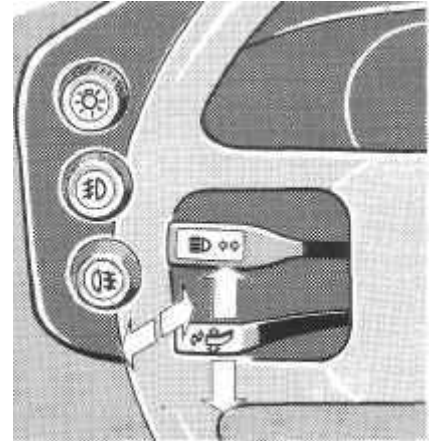
### Priority III

If a part has to be changed or the water in the washing-water reservoir topped up, the fault is indicated by red lettering and a symbol which does not flash. In this event, it is not necessary to interrupt the journey immediately or seek the assistance of an Official PORSCHE Centre.

If the oil level is too low, the corresponding fault message will appear as soon as the ignition is switched on, irrespective of whether the engine is started or not. The other fault messages can appear once the engine has been started and the brake pedal pressed. If the handbrake is not released the warning lamp remains lit, accompanied by the fault message at speeds above 10 km/h (6mph).

### Fault acknowledgement

Pulling the control stalk acknowledges the fault message and cancels the worded message. The messages issued for priority I and II faults are repeated 15 or 30 minutes after ac-



knowledge and after every engine start until the fault in question is rectified. Messages for priority III faults are issued once only. If the fault in question is not rectified, the message reappears every time the engine is restarted only.

Faults of different priorities occurring simultaneously are displayed in sequence. Once one fault is acknowledged, other faults of the same priority can be displayed, followed by those of lower priority. Each fault message must be acknowledged in turn, before the on-board-computer and auxiliary functions can be called up.

## Warnings displayed in response to faults

Priority I	ENGINE TEMP.		TOO HIGH	over 120° C, see "Cooling system"
	OIL PRESSURE		INSUFFICIENT	See "Engine-oil pressure"
	CHECK		BRAKE FLUID	See "Brake-fluid reservoir"
	TYRE PRESSURE		CONTROL OFF	System malfunction, see "Tyre pressure warning system"
	TYRE PRESSURE		LOSS	Arrow indicates tyre losing pressure, see "Tyre pressure warning system"
	TYRE		PRESSURE	As a reminder of low pressure. Only after ignition has been switched off
Priority II	ENGINE TEMP.		TOO HIGH	Up to 118° C, see "Cooling system"
	TOOTHED BELT		SERVICE	Toothed belt slack. Have belt checked and retensioned
	CHECK		OIL LEVEL	See "Oil level in engine"
	SAVE POWER		SERVICE	See "Voltmeter"
	CHECK		COOLANT LEV.	See "Cooling system"
	CALL		RANGE	See "Fuel gauge" and on-board computer functions
	RELEASE		PARK BRAKE	Message is cancelled once handbrake is released
	ANTILOCK		OFF	See "ABS braking system"
	STRAPS		INFLATION	See "Airbag system"
Priority III	DIFFERENTIAL		CONTR. OFF	See "Automatic limited-slip differential (PSD)"
	BRAKE PADS		SERVICE	Brake pads down to wear limit – replace pads
	STOP LAMP		FAILURE	See "Fuses" and "Replacing bulbs"
	TAIL LAMP		FAILURE	See "Fuses" and "Replacing bulbs"
	REFILL		WASHER FLUID	See "Water reservoir"

## Selectable on-board-computer and auxiliary functions

When the ignition is switched on, the following appear:

**Display, left:** odometer reading

**Display, centre:** last on-board-computer function selected

**Display, right:** tripmeter I reading

With the ignition on, the on-board-computer and auxiliary functions below can be called up in turn with the aid of the information-system control stalk. The letters, digits and symbols for all the function displays are orange. Any messages concerning faults occurring simultaneously in the car will appear in red. If the tyre pressure warning system issues an alarm, an orange reminder remains visible for two minutes after the ignition has been switched off. Once the ignition is switched off, the last function selected is displayed until the central locking system is activated, or for a period not longer than 4 minutes.

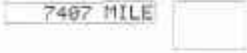



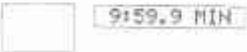
### On-board-computer functions

Press the control stalk forwards to enter the on-board-computer selection mode.

<p>INSTANT 16.9 FUEL RATE MPG</p>	<p>The function selected appears in the centre display. Worded messages appear on the left and right. Push the stalk up to select the next function; pushing the stalk down calls up the previous function. The worded messages are cancelled when the stalk is pulled, or automatically after 4 minutes. After this, the auxiliary functions reappear in the left and right displays.</p>	
<p>AVERAGE #125 FUEL RATE MPG</p>		<p>Pull control stalk for 3 seconds to reset.</p>
<p>REMAINING 130 DISTANCE H → 80</p>		<p>Range calculated on the basis of fuel left in tank, present consumption and average consumption.</p>
<p>OUTSIDE -12.5 TEMPERATURE * °C</p>	<p>Dependant upon the country specification the display for fuel rate is in l/100 km, for the distance in kilometres and for speed in km/h.</p>	<p>Reading between -40° and +60° C. The outside temperature display is not an ice-warning!</p>
<p>AVERAGE # 80 SPEED MPH</p>		<p>Pull control stalk for 3 seconds to reset.</p>

## Auxiliary functions

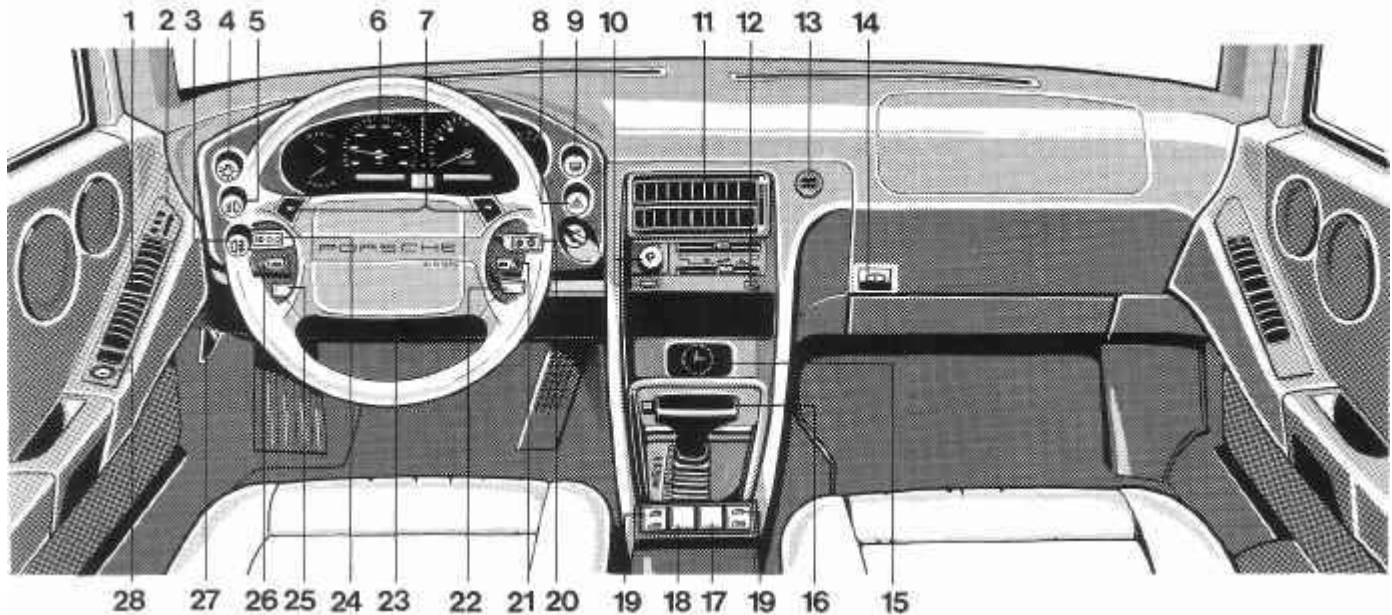
Pull the control stalk to call up auxiliary functions

	Push the stalk <b>down</b> to change from odometer reading to digital speedometer reading and vice versa.	Memory cannot be erased
		Readings at speeds above 10 km/h (6 mph)
	Push the stalk <b>up</b> to select tripmeter I, tripmeter II or stopwatch. To reset the tripmeters press the <b>zero button</b> in the instrument cluster for at least 2 seconds.  Tapping the button is sufficient for operating the stopwatch.	Tripmeter for distance travelled
		Tripmeter for interim readings or distances between refuelling stops
		Start: push button for 1st time Stop: push button for 2nd time Reset: push button for 3rd time*

Stop is indicated by a flashing colon.

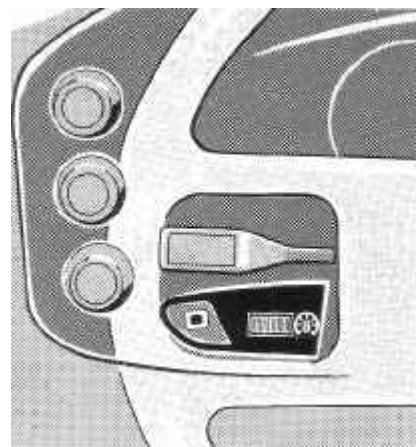
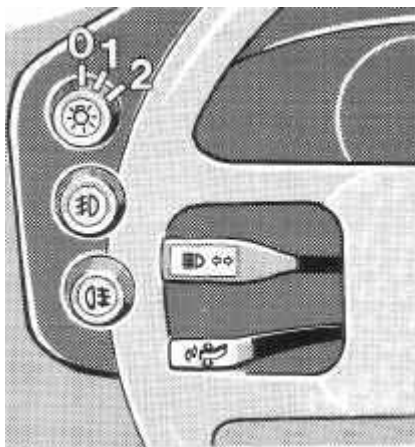
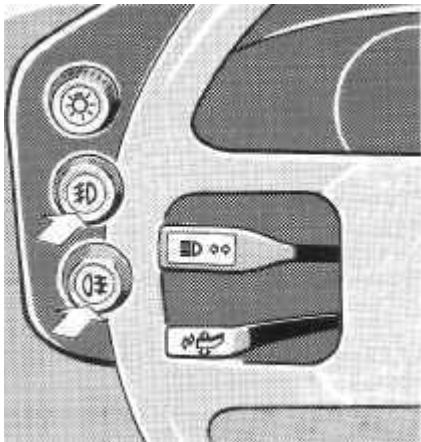
A four-digit reading appears once the stopwatch has been stopped.

Once the stopwatch has been activated, it continues to run even after the ignition is switched off.



## Cockpit Layout

- |                                |                                     |  |
|--------------------------------|-------------------------------------|--|
| 1 Side window demisting        | 12 Central door locking button      | 23 Locking lever for instrument-panel height adjustment          |
| 2 Seat position memory         | 13 Inside-temperature sensor        | 24 Indicator-dipswitch-parking light and headlight flasher stalk |
| 3 Rear fog lamp switch         | 14 Glove compartment lock           | 25 Control stalk for information system                          |
| 4 Light switch                 | 15 Clock                            | 26 Dimmer control for instrument lighting and zero button        |
| 5 Fog lamps switch             | 16 Gearshift/selector lever         | 27 Engine compartment hood release                               |
| 6 Instrument cluster           | 17 Rear screen wiper switch         | 28 Door mirror control   |
| 7 Horn                         | 18 Sunroof switch                   |  |
| 8 Hazard warning lights switch | 19 Power windows switch             |  |
| 9 Heated rear window           | 20 Wiper-washer stalk               |  |
| 10 Air conditioning controls   | 21 Intermittent-wiper adjuster knob |  |
| 11 Centre vent                 | 22 Tempostat stalk                  |  |



### Fog lights Rear fog light

The fog lights and the rear fog light can be switched on in addition to the headlights by pressing the respective switch. The lamp built into the switch comes on when fog lights are switched on. (The rear fog light operates only when the front fog lights are switched on.)

**Note:** Take account of the varying laws in different countries controlling the use of fog lights.

### Light switch

- 0 - Lights switched off
- 1 - Side lights
- 2 - With the ignition on, the main headlights come on once the lamp units emerge.

If the lights are switched off after the ignition, the headlamps remain extended.

In switch positions 1 and 2 the following are also on: taillights, number plate lights and instrument illumination.

### Instrument illumination

When the headlights are switched on the instrument illumination comes on automatically.

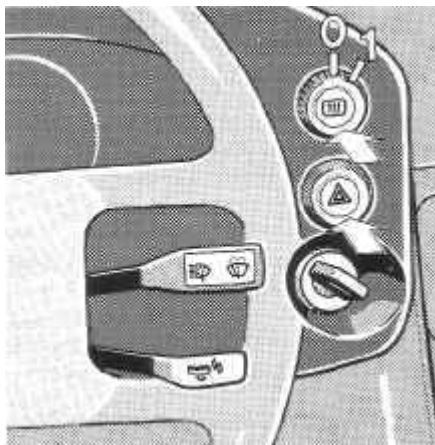
The illumination intensity of the instruments is controlled by turning the knurled wheel.

## Zero button

This button is used to operate the stopwatch and to reset the tripmeter I and II. The button must be pressed for at least 2 seconds to reset the tripmeter.

Tapping the button is sufficient for operating the stopwatch.

(see also "Information system)



## Heated rear window

The heating for the rear screen and door mirrors is operated by the combined twist-push-pull switch in the instrument panel. The switch is illuminated when the heating is on.

### **Switch in pulled-out position**

0 - Rear screen heating off.

1 - Rear screen heating on. The heating is so regulated that the rear screen will not mist up.



## Hazard warning light switch

When the hazard warning light switch is operated, all 4 indicators flash in unison. A pilot lamp in the switch indicates that the system is in operation.

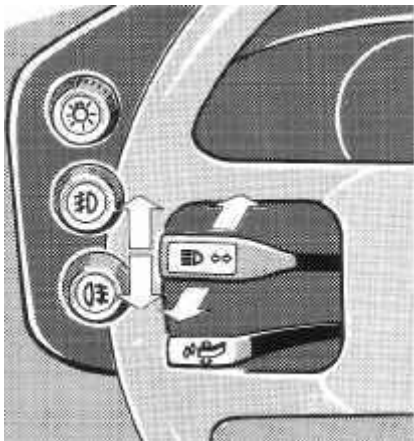
The hazard warning light switch is operative in any of the ignition switch positions.

### **Switch in the pushed-in position**

0- Full heating for de-icing. After approx. 15 minutes the heating turns off automatically.

1 - Full heating for de-icing. After approx. 15 minutes a relay switches the heating down to demisting power.





## Indicator - dip - parking light - headlight flasher stalk

This switch operates the headlight flasher, the dipped and main beams, the indicators and the parking lights.

### Indicators

Push the stalk upwards past the point of resistance - right indicator.

Push the stalk down past the point of resistance - left indicator.

If the stalk is only pushed to the point of resistance, the indicators only operate until the stalk is released.

**The malfunction of an indicator light is apparent by a faster flashing rate.** The indicators only operate when the ignition is on.

### Parking light

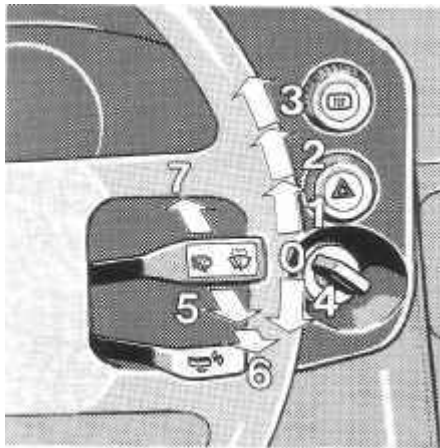
With the ignition key removed, the stalk in the up position turns the right-hand parking lights on, and in the down position the left-hand parking lights (the front parking light and rear sidelights of the respective side light up).

### Main and dipped beam, headlight flasher

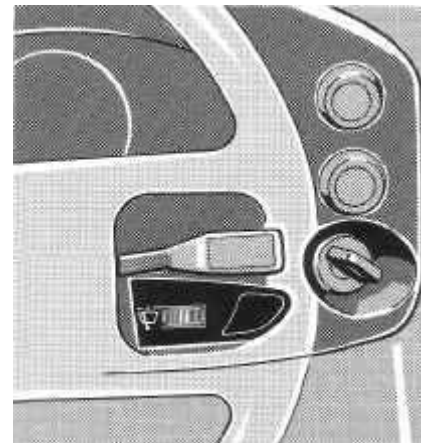
With the headlights switched on:

- dipped beam - stalk in centre position
- main beam - push stalk forwards
- headlight flasher - pull stalk towards steering wheel (even with vehicle lighting off)

With main beam and headlight flasher selected, the blue light in the instrument panel comes on when the headlights are on.



- 5- **Cleaning windows.** Pulling the stalk towards the steering wheel activates the 1st stage of the windscreen washer pump. Releasing the stalk causes the wiper to perform several dry wipes.
- 6- In the 2nd stage, the washer system and wipers function in unison. The windscreen should be sufficiently wet before the wipers are actuated to avoid scratching it. The wiper blades must be checked regularly, and replaced at least once a year. With the ignition on, the windscreen washer jets are heated.
- 7- **Headlight washers.** By pushing the stalk towards the instrument panel, the headlight washer system is activated, but only when the headlights are on. A separate pump supplies high-pressure water to the nozzles. The powerful water jet softens the dirt and washes it away. If necessary, repeat the procedure.



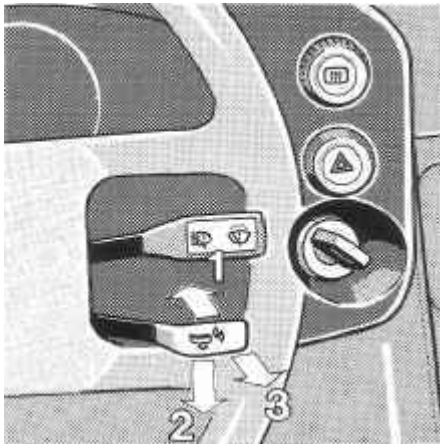
### Wipe interval

The wipe intervals can be regulated to any setting by turning the knurled knob.

### Wipe-wash stalk

The wipe-wash stalk has 7 switch positions:

- 0 - Wipers off
- 1 - Slow wipe
- 2 - Fast wipe
- 3 - Very fast wipe
- 4 - **Intermittent wipe.** The wipers operate automatically at regular intervals.



- 1 Set/accelerate
- 2 Reset
- 3 Cancel

## Tempostat (Automatic speed control)

The Tempostat will maintain any desired speed within the range 40 - 250 km/h (25 to 160 mph) without your foot being on the accelerator. Independent of this, you can brake, change gear and accelerate as normal.

The operation of the Tempostat is controlled by the stalk lever behind the wiper stalk.

The speed being travelled can be programmed into the electronic control unit by moving the lever forwards (position 1). You can then take your foot off of the accelerator and this speed will be maintained.

By braking or stopping, the unit cuts itself out, but the last speed programmed into the unit remains registered. This registered speed can be recalled by moving the lever downwards (position 2). Should the ignition be turned off, the registered speed is cancelled from the unit.

If you wish to drive faster than the entered speed, you can increase speed with the accelerator or by moving the lever forwards to position 1 and holding until the desired speed is attained, and then letting the lever free. This speed is now programmed into the unit and registered. If you exceed the speed registered in the control unit, e. g. during overtaking by using the accelerator, as soon as you come off the accelerator, the registered speed will be automatically resumed.

If the registered speed is too high, pull the control lever towards the steering wheel (position 3) or brake; this interrupts the Tempostat control, until the required lower speed is attained, and then move the lever forwards to position 1. Again this new speed is registered and maintained.

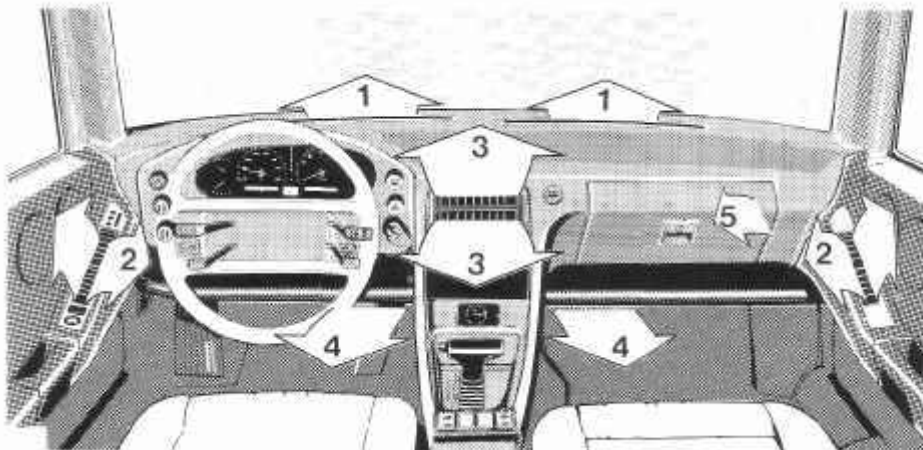
### Note:

When you depress the clutch, the speed control is interrupted, but when the clutch is released, the speed control takes over again.

**To avoid accidentally overrevving the engine, do not move the gearshift or selector lever into neutral at road speeds above 40 km/h (25 mph) while the cruise control is engaged.**

On a steep incline either up or down, it is possible that the vehicle will not maintain the registered speed in a higher gear, then you must change down to avoid labouring the engine by uphill, or to achieve sufficient engine retardation by downhill driving.

We do not recommend use of the Tempostat in heavy traffic or when road conditions are unsuitable (e. g. winding or slippery roads).



## Air vents

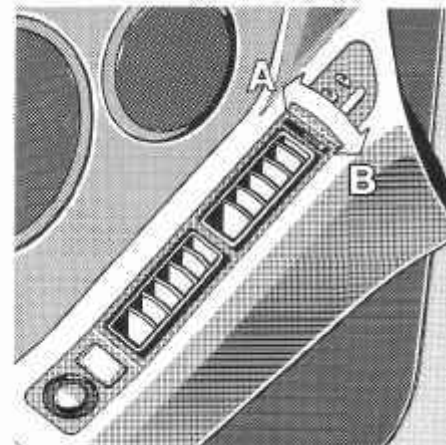
- 1 Air vents for windscreen
- 2 Air outlet grille for side windows
- 3 Air outlet grille for passenger compartment
- 4 Air vents for footwells
- 5 Air vent in glove box

## Air vents for windscreen and footwells

The air vents for windscreen and footwells have fixed outlet openings. The air flow is controlled only by means of the blower switch.

## Central and side jets

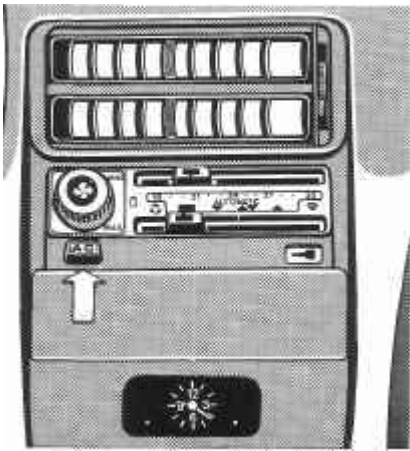
The air flow through the central and side jets can be varied by pivoting the nozzle units and by moving the outlet vanes.



The air flow through the side and central jets is infinitely adjustable by means of a lever attached at the side of the jets.

A - Air jet closed

B-Air jet open



**Since the heating effect is dependent on the coolant temperature, full heating is not obtained until the engine is at operating temperature.**

Hot and cold air is automatically blended by air mixer flaps which are operated by a servo motor.

Temperature fluctuations are quickly detected and the servo motor is controlled accordingly. Changes in temperature are detected by way of the passenger compartment temperature (temperature sensor behind the perforated panel) and the outside temperature (temperature sensor in wheel housing).

#### **"AC" push-button switch**

In the hot season the supply of fresh air is not always sufficient to reach the desired passenger compartment temperature.

To cool the air to the level set with the temperature slide, the air conditioning compressor must be switched on by pressing the AC switch in the centre console (arrow).

If cooling of the air is not necessary in the cold season, the air conditioner should not be switched on in order to save fuel.

In the case of sudden changes in temperature the system controls the supply of hot and fresh air and, with the compressor on, also controls the supply of refrigerated air until the set temperature has been reached again.

The **air conditioning** only functions with the engine running. The cooling efficiency is dependent on engine revolutions. If more cooling is required it is necessary - especially in city or stop go conditions - to increase engine rpm.

Proper operation of the automatic air conditioner is guaranteed only if the windows and the roof are closed and the side vents as well as the central vent are fully open.

If the vehicle has been standing for a long time in direct sunlight, it is recommended that the air conditioning be turned on with the windows open to provide through ventilation.

When the air conditioner is switched on additional cooled air is fed via a vent to the glove compartment.

In damp weather it is advisable, even at low outside temperatures, to switch on the air conditioner. This dries the air and prevents the windows from misting up.

## **Automatically controlled airconditioning**

The automatic system controls the passenger compartment temperature in accordance with the programme you have chosen and the passenger compartment temperature set with the slide.

The passenger compartment temperature is reached as quickly as possible and is kept constant under changing climatic conditions. It is not normally necessary to re-adjust the temperature.

## Important:

- The air conditioner only functions with the engine running.
- With the air conditioner on, at least one air outlet grille must be open since otherwise the evaporator may ice up. The condensation which forms during operation escapes through openings on the underside of the vehicle.
- The air conditioner must be operated for a short period at least once a month so that the seals and bearings of the compressor as well as the expansion valve are lubricated. This is especially important during the cold season when the air conditioner is not required. The outside temperature must be above 0°C.
- Should the air conditioner become defective, e. g. if there is no cold air despite the system being switched on, switch the air conditioner off and proceed immediately to an Official PORSCHE Centre.

The following controls enable you to ideally adapt the system to your personal requirements.

## Temperature slide

The temperature of the air entering the passenger compartment can be raised by moving the slide to the right. The value set on the temperature scale corresponds to an average passenger compartment temperature.

In program positions  and  there is no automatic temperature control.


## Blower switch

To provide air circulation even when your Porsche is standing still or at low speeds the blower fan runs at low speed even when the switch is in the 0 position.


The air flow can be controlled by turning the blower switch from speed 0 to 4.


## Programme slide


An automatically controlled air conditioner offers several programs for meeting your individual requirements:


 Outside air intake switched off. Only for brief use when driving, e. g. in the event of odour nuisance from exhaust fumes. At temperatures above 0°C the air is additionally dried by the air conditioner which switches on automatically.

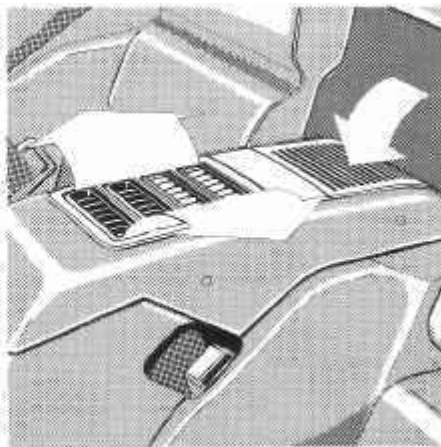
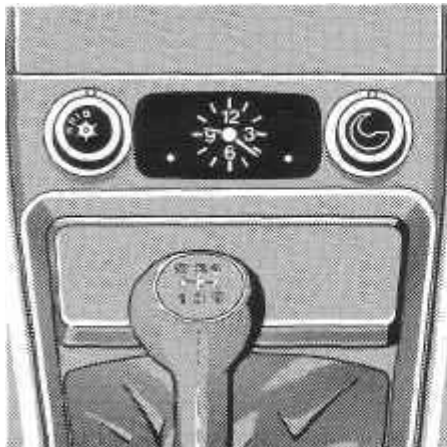
 Air stream via side and centre vents only.

 Air stream into the footwells. The side and centre vents can be open if desired.

 Air stream into the footwells and head area. The side and centre vents can be opened if desired.

 Air stream to windscreen. The side and centre vents can be opened if desired.

 Defrost position: provides fastest possible defrosting of the iced or misted-up windscreen and side windows. With this programme the maximum heating effect and highest blower fan speed are switched on automatically and the full air flow is directed to the windscreen and the side vents. At temperatures above 0° C the air is additionally dried by the air conditioner which switches on automatically.



### **Auxiliary evaporator for increased refrigeration**

In vehicles with increased refrigeration, the rear storage compartment is replaced by an additional evaporator with a blower.

With the air conditioner on (AC-switch pressed) the rear evaporator can be switched on by turning the left-hand knob in the centre console to the right. The blower speed is controlled between speeds 1 and 3.

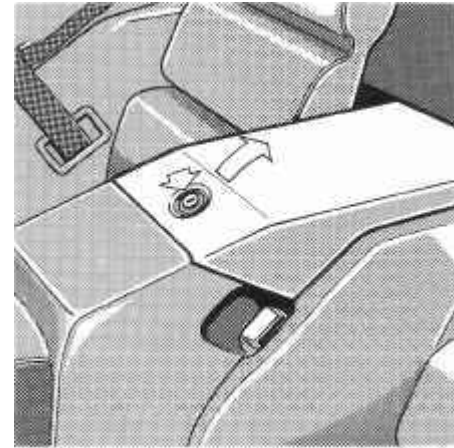
The output of the rear evaporator is increased by turning the right-hand knob to the right.

The passenger compartment air is drawn in through the rear grille, cooled and distributed through the grilles in the rear. If the AC-switch is not pressed, there is only a recirculation of the air.



## Ashtray

The ashtray is mounted in the middle console in front of the gear lever. To empty the ashtray pull the tray upwards out of the housing.



## Clock

- Left button: clockwise adjustment.
- Right button: anticlockwise adjustment.
- Tapping the button: minute hand jumps forwards one minute.
- Pressing the button: the longer the button is pressed, the quicker the clock is adjusted.



## Cigarette lighter

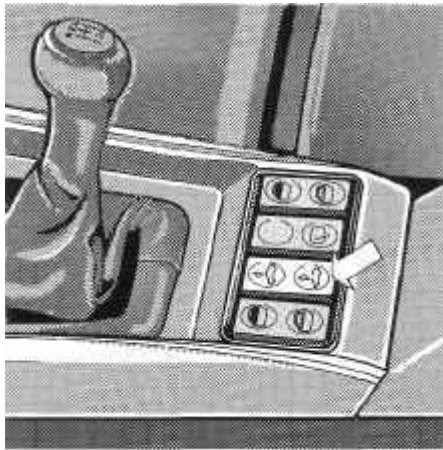
The element is heated by pushing the lighter in. When the correct temperature is reached, the lighter springs out to the normal position.

With the lighter out, the socket can be used for electrical auxiliaries such as handlamp, with a consumption of up to 120 watts at 12 volts.

## Rear seat storage compartment

The storage compartment is opened by pressing the button and lifting the lid. For security reasons, the storage compartment is lockable.





## Electric sunroof

The sunroof is operated by a spring loaded rocker switch on the centre console. Appropriate movement of the switch opens or closes the sunroof. The drive mechanism is equipped with a safety clutch which disengages when a certain resistance is met.

### Opening sunroof

Tapping the switch opens the sunroof in stages to the desired position.

**Pressing** the switch for longer than 0.5 seconds automatically opens the sunroof fully. The movement of the sunroof can be stopped at any position by tapping the switch again.

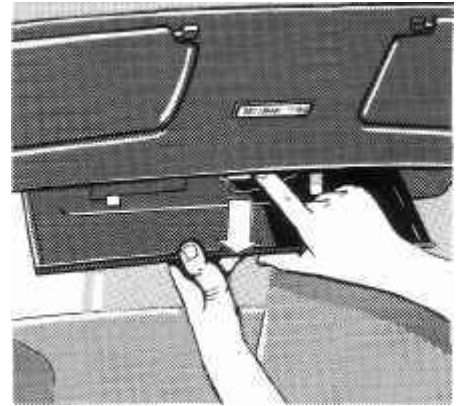
### Closing sunroof

To close the sunroof, the switch must be pressed until the sunroof has reached the desired position.

### Door lock contact

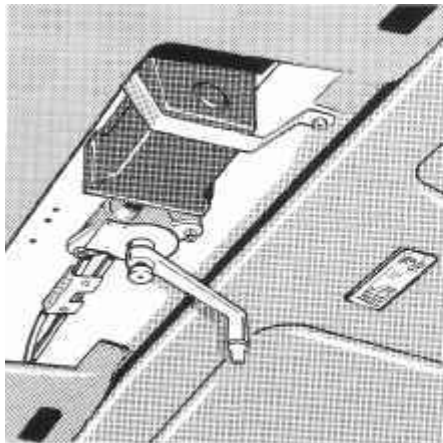
If the key is held in the lock position when locking a door, the sunroof and the door windows will close in succession automatically.

**We do not recommend that the sliding sunroof be operated at speeds in excess of 100 km/h (60 mph). The force required to overcome the resistance of the air pressure at higher speeds can cause damage to the sliding roof.**



### Manual operation

A hand crank is provided in the glove compartment for manual operation in the event of an electrical failure. To do this the cover of the sunroof drive must be removed. Pull the cover down at the rear and unhook the spring. Unscrew the now visible slotted screw with the screwdriver tip of the hand crank. Before inserting the fork-end of the

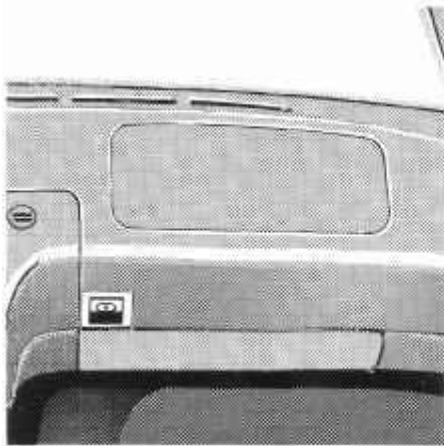


### Rear screen wiper

crank remove spacers which were under the screw. Turn the knurled screw of the crank into the threaded hole in the drive shaft making sure that the lugs engage in the slots. The roof can then be moved by turning the crank.

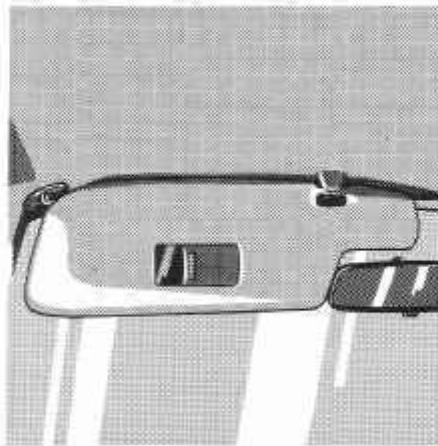
The rear screen wiper is switched on by a push-button switch in the centre console. To prevent the rear screen from becoming scratched it should be sufficiently wet before operating the wiper. After wiping the rear screen 3-5 times, the wiper is switched off automatically.

The wiper motor is mounted in the bodywork of the vehicle and not in the luggage compartment door, and drives the wiper with a clutch, that disengages and engages automatically when opening or closing the door.



### Glove compartment

The glove box is opened by pulling the handle. For security reasons, the glove box is lockable.

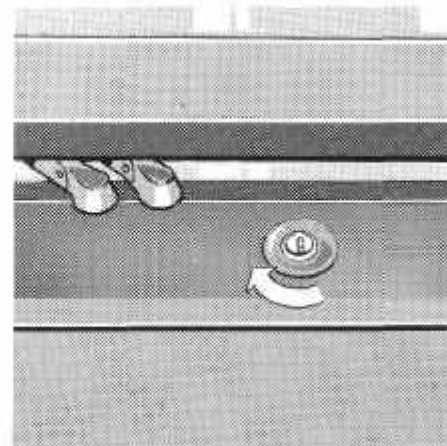


### Sun visors

The front sun visors can be either pulled down in front of the screen or swung to the side in front of the door windows to prevent dazzle from the sun.

### Make-up mirror

The make-up mirrors are mounted in the backs of the sun visors and are protected by sliding shutters.



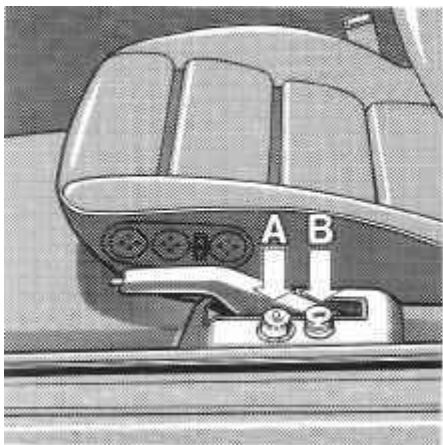
### Luggage compartment lid

#### To open the lid

In order to do this, pull the **luggage compartment lid release knob** next to the driver's seat, or alternatively unlock the luggage compartment lid by turning the key to the right, then lift to open.

#### To close the lid

Pull the lid down and close with a gentle push.



Position		Load condition
	0	1-2 persons
	1	4 persons and luggage up to permissible rear axle load
	2	2 persons and luggage up to permissible rear axle load
	3	1 person and luggage up to permissible rear axle load

### Luggage compartment lid release (B)

If either the driver's or passenger side door is open, the luggage compartment lid can be electrically unlocked by pulling the knob (B).

**Never drive with the luggage compartment lid ajar or open, as exhaust fumes could enter the vehicle.**

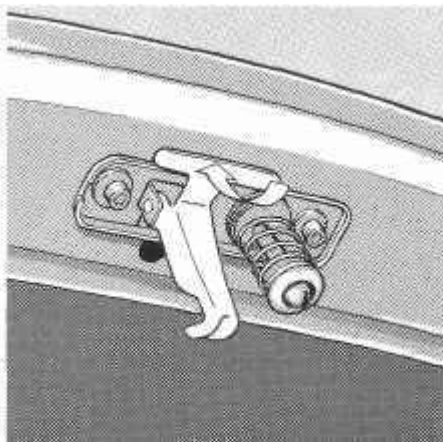
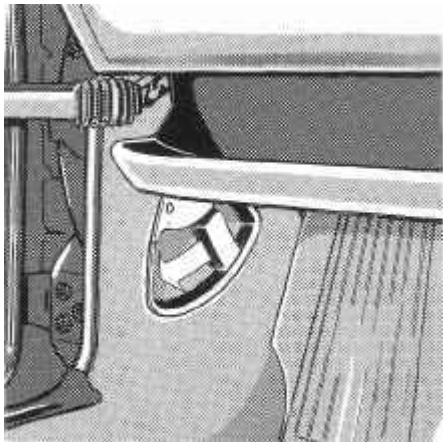
### Headlight beam regulator (A)

The height of the headlight beams can be regulated to the laden condition of the vehicle with the knob (B). This enables maximum road illumination without dazzling other road users.

The normal headlight beam setting is obtained by turning the rotary knob as far as the noticeable stop, i. e. the white dot must be in line with "0" (see also "Headlight adjustment").

The beam setting must be corrected as shown in the table when the vehicle load is increased.

Turning the knob clockwise raises the beam and vice versa. The correction should be checked by observing the dipped beam cut-off (e. g. on the back of the vehicle driving ahead of you).



## Engine compartment hood

### To release the hood

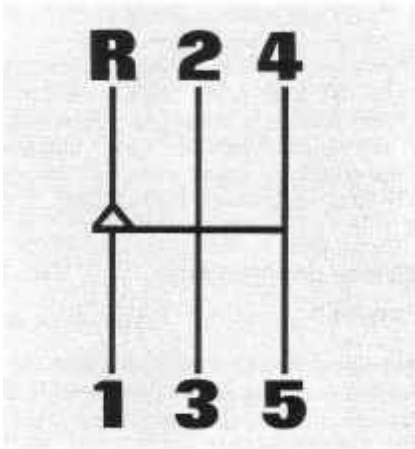
Pull the lever on the left-hand side panel underneath the instrument panel.

### To open the hood

Lift the hood slightly and release the safety catch by pressing the lever upwards.

**Make sure the windscreen wipers are not tilted forward!**

When the hood is open the engine compartment light comes on automatically.



## Manual gearbox

The fully Synchromesh gearbox permits rapid gear changes without the need to double de-clutch. Be sure however that the clutch is fully depressed before engaging or disengaging a gear.

The gear positions are shown in the diagram.

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

To shift from 1st into reverse gear, the gear-shift lever must first be moved into neutral position between the 4th and 5th gear and then shift into Reverse.

With the ignition on, the reversing lights come on automatically when reverse gear is selected.

Maximum permissible rpm before shifting down.

5 <sup>th</sup> - 4 <sup>th</sup> gear.....	4800 rpm / 207 km/h
4 <sup>th</sup> - 3 <sup>rd</sup> gear.....	5000 rpm / 156 km/h
3 <sup>rd</sup> - 2 <sup>nd</sup> gear.....	4700 rpm / 112 km/h
2 <sup>nd</sup> - 1 <sup>st</sup> gear.....	4300 rpm / 73 km/h

## Automatic Transmission

The individual driving ranges are selected automatically depending on

- selector lever position
- speed
- accelerator pedal position

In the display in the instrument cluster, the indicator corresponding to the driving range selected at any given time lights up when the vehicle's lights or the ignition are on.

### Operating instructions

For reasons of safety, the engine can be started only when the selector lever is in the P or N position. Do not release the brakes until you intend moving off, because power is transmitted as soon as a driving range is selected and the car is set in motion (creep). If the car is at a standstill, wait until the driving range is engaged after moving the selector lever!

**Do not accelerate until power is transmitted.**

**Under no circumstances may the selector lever be moved from a driving range to N while the car is travelling at speeds in excess of 40 km/h (25 mph) - see "Tempostat".** If you inadvertently move the selector lever to N while driving, switch off the Tempostat, take your foot off the accelerator pedal

and wait until engine speed drops to idle before selecting a forward driving range. Failure to adopt this procedure would mean exposing the automatic clutches to excessive strain on account of the higher engine speed.

The locking button in the selector lever prevents inadvertent selection of a lower range. The button must be pressed to select 2, R and P. At speeds of more than 15 km/h (10 mph), a hydromechanical lock prevents selection of R or P. **To avoid damaging the engine, do not under any circumstances exceed the engine speeds listed below when selecting a lower driving range:**

From D to 3 4650 rpm or 210 km/h (131 mph)  
From 3 to 2 4250 rpm or 130 km/h (79 mph)

### Accelerator Pedal Position

- Under moderate acceleration in the **part-load range**, upshifts are effected at low speeds for the sake of economy and quietness.
- **Under full acceleration**, the upshift points slide to higher speed ranges.

- To achieve optimum acceleration (for overtaking), the accelerator pedal must be pressed down past its point of resistance at full load (**kick-down**). The transmission can shift down to a lower gear, depending on selector-lever position and road speed. When engine speed increases, the transmission shifts up into the next gear.

## Selector Lever Positions

### Position D

Select this position for normal driving. All the forward gears are shifted up and down automatically depending on accelerator pedal position and speed.

**With the selector lever at "D" or "3", the car will pull away in 2nd gear if the accelerator is only slightly depressed, and in 1st gear if the accelerator is depressed further.**

### Position 3

It is advisable to select this position when towing a trailer on light ascents or descents, or when driving without a trailer on mountain roads. Engine power is used more efficiently and the engine's braking effect is increased. The transmission shifts automatically between first, second and third gears.

## Position 2

This position is intended for extreme gradients and towing a trailer on mountain roads. Since the transmission does not shift past 2nd gear, the braking effect of the engine is increased.

The transmission may switch between 1st and 2nd gear when driving, depending on prevailing conditions and the position of the accelerator pedal.

## Position P - Park

**Do not select this position unless the car is at a stands still.**

With the selector lever in the P position, the driving wheels are mechanically blocked. Move the selector lever to P **after** applying the handbrake and shift out of P **before** releasing the handbrake.

## Position N- Neutral

Position N corresponds to the neutral position of a manual transmission and should be selected for lengthy waiting periods (e.g. traffic jams) or if the car has to be towed. **Never shift from N to a driving range unless the engine is idling.**

While the car is in motion, do not select N unless the car threatens to skid on an icy surface.

## Position R - Reverse

Do not select unless the car has come to rest. Do not accelerate until power is transmitted.

## Waiting

For short waiting periods, e. g. traffic lights, the vehicle can be left in gear, and held stationary with the footbrake.

For longer waiting periods, with the engine running, position N should be selected. Never hold the vehicle stationary on a hill with the accelerator: always apply the hand-brake or foot-brake.

This avoids unnecessary warming up of the torque converter or gearbox.

## Parking

When parking, or manoeuvring in confined spaces, the speed can be adjusted with the brakes, and very little acceleration is required.

## Trailer operation

Selector position 3

For inclines, up or down, select position 2 in good time to attain maximum engine power or braking, and thereby reduce the loading on the brakes. For mountainous terrain only use selector position 2.

## Being towed

When the engine is not running, the gearbox is not lubricated sufficiently. The following points must therefore be noted:

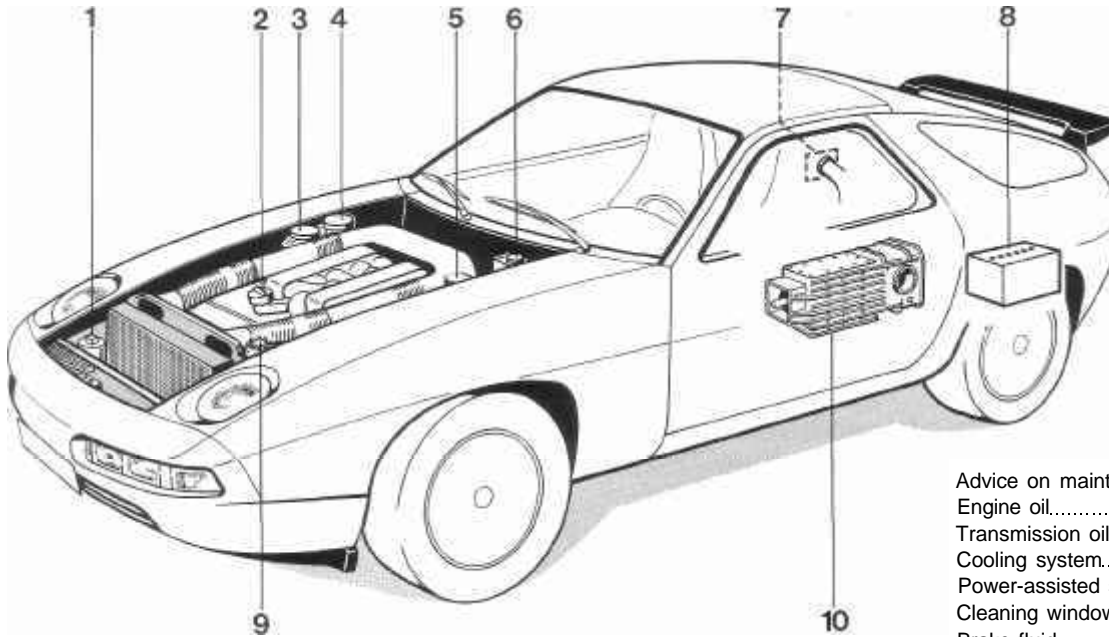
1. Selector in position N.
2. Towing speed must not exceed 50 km/h (30 mph).
3. Maximum towing distance 120 km (75 miles).
4. For distances over 120 km (75 miles) the vehicle must be lifted by the rear axle or transported on a trailer.

## Tow or push starting

If your Porsche is fitted with an automatic gearbox, it cannot be tow or push started with the ignition switched on.



# Maintenance, Car Care



- 1 Refrigerant
- 2 Engine oil
- 3 Windscreen/headlight washing water
- 4 Coolant
- 5 Brake fluid

- 6 Concentrated cleaning fluid
- 7 Fuel
- 8 Battery electrolyte
- 9 Hydraulic fluid for steering
- 10 Transmission oil or ATF

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## Advice on maintenance

As a rule, we recommend that you have all the necessary work on your Porsche carried out by an Official PORSCHE Centre. Training and experience of the workshop staff, technical information supplied by the manufacturer and special tools and equipment constitute a good basis for the fault-free care of your Porsche.

However, if you work on your Porsche yourself, you must exercise the greatest care. Only in this way is operational reliability fully guaranteed.

Incorrect maintenance during the guarantee period may invalidate your guarantee.

Work on your Porsche only in the open air or in well ventilated rooms.

Never smoke near or bring a naked flame into proximity with the battery or fuel system.

Before working on any part in the engine compartment, switch the engine off and let it cool down sufficiently. Be careful when working near parts of the engine which are hot - they may cause burns.

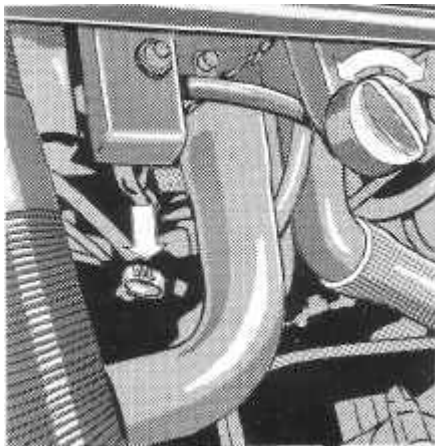
Caution! Depending on coolant temperature, the thermostatically controlled radiator fan may start up automatically, even when the engine is switched off - danger of injury.

if work has to be done with the engine running, always apply the handbrake and move the gearchange lever to the neutral position or the selector lever to P.

In particular, take great care to ensure that ties, items of jewelry or long hair cannot be caught by the fan, V-belt or other moving parts.

Your Porsche is equipped with an electronic ignition system. When the ignition is on, all the cables and leads of the ignition system and the tachometer carry high tension; for this reason, extreme caution must be exercised.

Always place your Porsche on strong supports if you have to work beneath the car. The car jack is not suitable for this purpose.



## Engine oil level

The oil level should be between the two marks on the dipstick. If the oil level drops below the lower mark, or if the oil level switch is faulty, a fault message appears in the information-system display when the ignition is switched on.

Top up the engine oil or replace the oil level switch.

## Checking oil level

(with the car standing level)

Do not check the oil level immediately after the engine has been turned off, because the circulating oil takes a few minutes to flow back to the sump.

1. Pull dipstick out and wipe with clean cloth.
2. Push the dipstick fully in, and then pull out and read the level. The difference between the upper and lower marks is approx. 1.5 litres.

## Topping up engine oil

1. Unscrew the cap and pull out the dipstick.
2. Top up with an engine oil of the same quality. Also see "Engine oils".
3. Check oil level on dipstick. It must not be over the top mark.
4. Screw the cap up tightly.

## Engine Oils

Use only engine oils which have been tested and approved by Porsche. Your Official PORSCHE Centre will be glad to advise you on the correct type of oil for your engine.

These engine oils can be intermixed. Since, however, each brand of oil has a special composition, you should, if possible, use the same oil if it becomes necessary to top up between oil changes. Porsche engines have long intervals between oil changes. You can make best use of these long oil change intervals by using multigrade oils or multigrade fuel economy oils since these are largely independent of seasonal fluctuations in temperature.

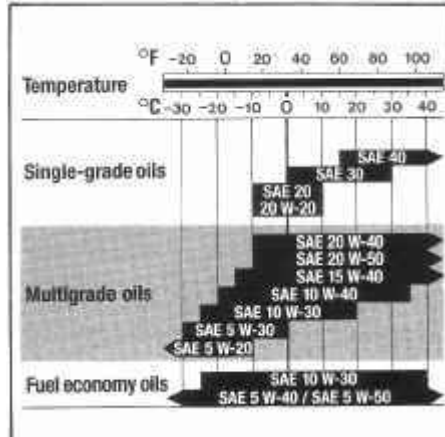
If your vehicle is used in stop-and-go traffic in winter, the engine will not always reach its optimum operating temperature. Condensates from products of combustion may accumulate in the oil. It is therefore advisable to change the oil in spring so that your engine once again has an efficient engine oil.

## Engine oil performance class

Engine oil is not only a lubricant, but also serves to keep the engine clean, to neutralize the dirt which penetrates into the engine through combustion and to protect the engine against corrosion. To perform these functions, the oil contains additives which have been specially developed for these functions. Such oils are also known as non-conventional oils.

So-called mineral oils are produced directly from crude oil. The oils can be further refined (hydrocrack oils) or totally converted (synthetic oils) through a number of chemical processes. These oils are structurally more efficient and require fewer additives than simple mineral oils.

The efficiency of an oil is expressed by classifications. The requirements for Porsche engines are API class SG (US specification) and CCMC G4/G5 (European specification).



Examples of approved viscosity classes

## Viscosity

Engine oil is viscous when cold, and thin-bodied when warm. The viscosity of an oil is expressed by its SAE class. For cold viscosity the SAE class is given as a number and the letter "W" (as in winter); for hot viscosity the SAE class is given only as a number.

The viscosity of an oil is, therefore, always the same for a specific temperature range if it has the same number of an SAE class.

E.g.: A 10 W-30 oil and a 10 W-40 oil have the same viscosity when cold; when hot the oil with the number 30 is thinner than the oil with the number 40.

## Single-grade/multigrade oils

Oils with two viscosities are called multi-grade oils; oils with only one viscosity are termed single-grade oils.

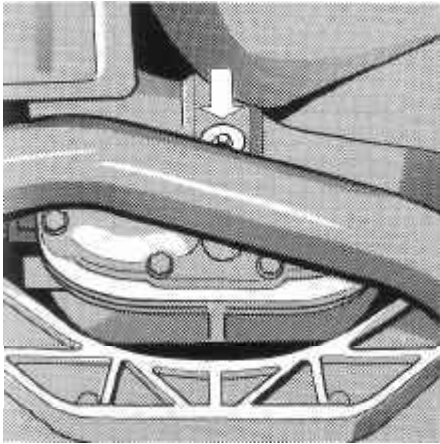
Single-grade oils can only be used for the narrow temperature range identified by their SAE number; multigrade oils cover a wider temperature range (see chart).

## Light running oils

Light running oils are of lower viscosity at all temperatures and therefore permit a certain degree of fuel economy.

Light running oils, which have to be suitable for year-round use, require a particularly high thermal stability.

Oils with this kind of performance are non-conventional engine oils and are termed "all season fuel economy oils" in the PORSCHE approval.



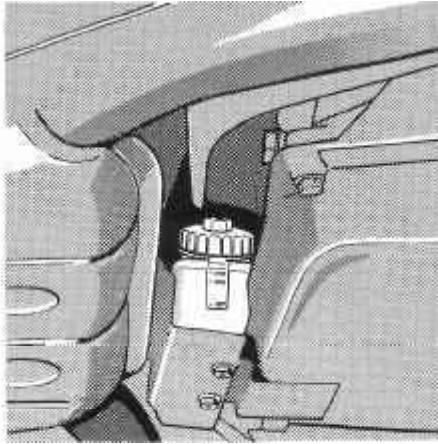
## Oil level, gearbox

**Should oil leakage be visible call in at the nearest Official Porsche Centre to rectify the fault.**

### **Checking oil level of manual transmission and differential of automatic transmission:**

To check the oil level, the plug must be wiped clean and removed by unscrewing.

With your Porsche standing horizontally, the oil (cold) should be topped up to the lower lip of the hole.



To check the level, the vehicle must be standing level. The selector must be in position N and the engine running at tick-over.

The difference between the two marks is approx. 0.2 litres (12 pint).

**If too much oil is added inadvertently, it must be removed.**

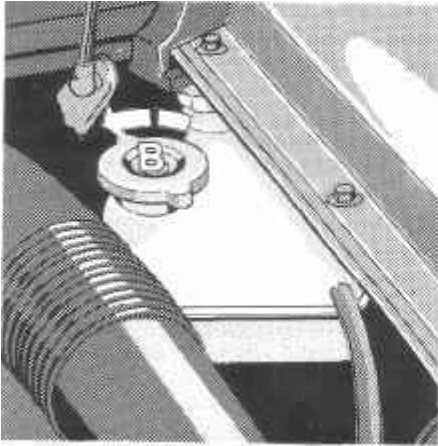
If there is no automatic transmission fluid in the gearbox or the torque converter, the engine must not be started, nor must the vehicle be towed.

To refill the gearbox, only use the oils recommended in the table "Filling capacities".

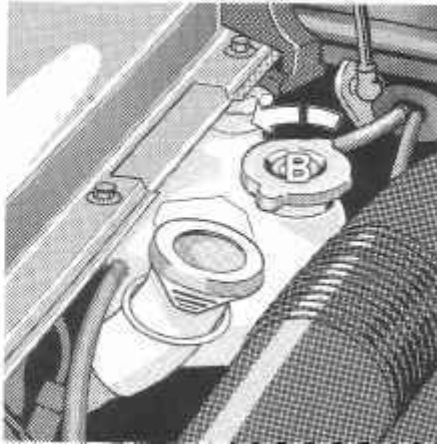
### **Checking oil level of automatic transmission (ATF):**

**It is extremely important for correct functioning of the automatic gearbox that the correct fluid level is maintained.**

The level can be seen through the transparent reservoir that is mounted on the back end of the gearbox housing. The fluid level must be between the max. and min. marks when at normal operating temperature.



Right-hand drive



Left-hand drive

## Cooling system (B)

The cooling system capacity is approx. 16 litres (3.5 Imp. galls.). The cooling fluid is a mixture of approx. 8.8 litres (7.7 Imp. qts.) softened water and approx. 7.2 litres (6.3 Imp. qts.) of cooling fluid additive, and gives frost protection down to - 30° C, as well as protection against corrosion. For greater frost protection, see the chapter "Filling capacities".

### Topping up the coolant

There must always be some coolant in the expansion tank.

Since the expansion tank is transparent, there is no need to remove the cap to check the coolant level.

**When cold (approx. 20° C)** the coolant should be up to the level of the joint in the expansion tank. When the engine is warm, the coolant level should be above this line.

As engine temperature rises, excess coolant is discharged through the pressure relief valve in the tank cap.

**WARNING:** Do not remove the expansion tank cap when the engine is hot, otherwise you may be scalded.

To remove the cap proceed in two steps: If the engine is hot, release excess pressure by turning the cap to the first stop. Protect your fingers! The cap can then be turned further to remove it.

To guard against corrosion and prevent scale forming in the cooling system, the mixture strength of cooling fluid should not be altered, **so even in warm weather, never top up the system with just water.**

**The system should only be topped up with a mixture of soft water and cooling system additive. For mixing ratios see the chapter "Filling capacities".** To avoid damaging the engine, **cold** fluid should only be added to a **cold** engine.

**Note:** There should seldom be need to top up this sealed cooling system.

If the level drops considerably, the fault will be indicated by a fault message in the information-system display. Top up the coolant.

If there is a considerable fluid loss, it probably means a leak in the system. In this case, have the cooling system checked immediately by an Official PORSCHE Centre.

## Fan control

This device permits cooling output to be adapted to the operational status of the engine. A control unit processes the information it receives from the sensors in the engine compartment and passes the appropriate signals to the fans. If more air is needed, the speed of the two continuously adjustable electric cooling fans is increased.

If the temperature of the coolant drops below 75 °C, the fans are switched off; in the event of a fault, they operate at maximum speed.

The system has both auto and remote supervision. Should a component fail, the coolant temperature warning light gives indication of excessively high coolant temperatures and a fault message appears in the information-system display.

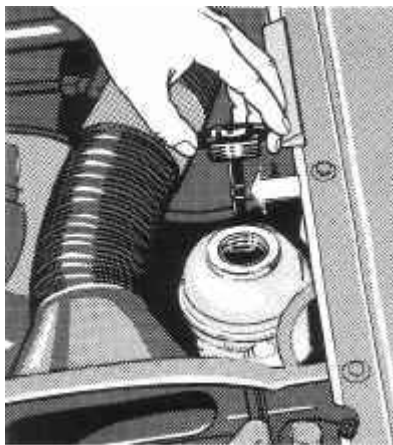
**When the engine is warm, the fans may continue to run after the ignition key has been removed. To avoid any danger of injury, the fans are switched off when the engine-compartment hood is opened. However, this protective measure to prevent the fans starting suddenly while the hood is open is only fully operative as long as the key is removed from the ignition.**

## Power-assisted steering

With power-assisted steering, the steering forces are assisted by a hydraulic mechanism. At low engine speeds, e.g. when parking or when driving slowly, the power-assisted steering is fully effective. The power assistance reduces with increasing engine revolutions or increasing vehicle speed and has the effect of producing increasingly positive steering action.

The audible rushing noise that occurs at full steering lock is a characteristic of the design and does not indicate a fault in the steering assembly.

**Note that when the engine is not running (when being towed) or when the hydraulic steering mechanism is faulty, there is no power-assisted action present. In this case, a significantly greater effort is required to steer the vehicle.**

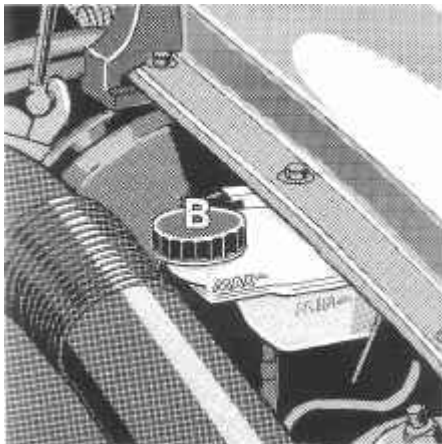


### Checking the hydraulic fluid

The reservoir is secured in the engine compartment on the left-hand wheel housing.

1. Unscrew the reservoir cap.
2. Wipe the dipstick clean. Let the engine run at idle speed. Screw on the cap and then screw it off once again. The fluid level should lie between the upper and lower marks. Top up with hydraulic fluid if necessary. The grade of fluid used should be as specified in the chapter "Filling capacities."
3. Put the cap back on and screw tight.





Left-hand drive

## Brake fluid reservoir (B)

The brake fluid reservoir is mounted in the engine compartment. It has three chambers: one for each of the two brake circuits, and one for the clutch.

The screw cap for the combined filler neck has a ventilation hole which must always be kept free.

The reservoir is transparent, so that the fluid level can be checked from the outside. The level should always be between the max. and min. marks.

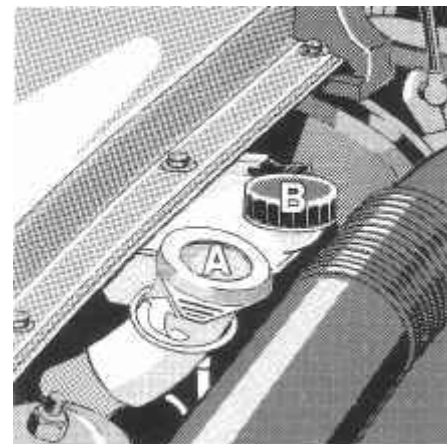
A nominal dropping of the fluid level will occur during the use of the vehicle as the brake disc pads wear and automatically adjust. This is quite normal.

Should the fluid level drop appreciably, the brake-fluid warning light comes on and a fault message appears in the information-system display. Consult an Official PORSCHE Centre immediately and have the braking system checked.

Brake fluid is hygroscopic! A too high water content in the brake fluid adversely affects the braking system, and therefore the brake fluid **must be renewed in accordance with the intervals specified in the booklet "Guarantee and Maintenance"**.

To top up the level, only use new (unused) brake fluid. For specification and amounts see the chapter "Filling capacities".

**Note:** Brake fluid is corrosive and attacks paintwork.



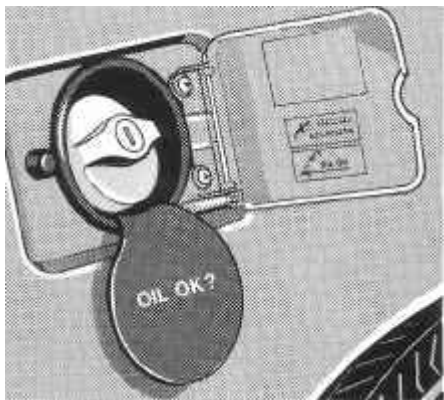
Right-hand drive

## Screenwash water container (A)

The transparent water container is in the right-hand side of the engine compartment and has a capacity of approx. 7.5 litres (1.65 Imp. galls.). To top up with washing fluid, you can pull out the filling tube extension.

It is a good idea to add the correct amount of Porsche Window Cleanser - either summer or winter grade according to the time of year - to the water. Clear water is in general not sufficient to clean the windscreen and the headlights.

To drain the container, unscrew the plug in the underside of the reservoir.



## Fuel tank

The fuel filler neck is set in the side panel behind the right-hand rear wheel.

An extra space is built in to stop the fuel from overflowing when it warms up. This space should not be filled when filling up with fuel.

The tank is "full" when the correctly operated automatic fuel-hose nozzle cuts off.

Carefully place the tank cap in position, turn it until it engages with an audible click, and lock with the ignition key.

**When refuelling, the engine should always be switched off.**

To protect the exhaust system from damage, the tank filler neck is smaller in diameter and neck is fitted with a flap designed to prevent the tank being filled with leaded fuel by mistake.

Only the nozzle of an unleaded-fuel pump will open the flap.

## Fuel Octane Rating

The engine is designed to provide optimum performance and fuel consumption if **unleaded premium fuel, minimum 98 RON / 88 MON** is used.

If unleaded premium fuels with octane numbers of **at least 95 RON / 85 MON** are used, the engine's knock control system automatically adapts the ignition timing.

## Fuel can

If the tank is filled up in good time and as the tank has a large capacity, it is not necessary to carry a fuel can.

If a fuel can has to be carried in the vehicle, this should be secured in a safe place where it will not slip (e.g. behind rear seat backrest). Incorrectly stowed cans may be damaged in an accident and spilt fuel represents an additional risk of fire or explosion.

**Escaping fumes may be harmful to health.**

Fuel cans with special necks are required for cars with catalytic converters.

## The Emission Control System

In conjunction with the lambda sensor and the electronic control unit, the closed-loop three-way catalytic converter represents the most effective **emission control system**.

To assure the efficiency of the emission control system, always have your car serviced at the specified intervals.

The system consists of several components:

- the catalytic converter
- the lambda sensor
- the electronic control unit
- the tank ventilation system.

**To avoid permanent damage to the functionality of catalytic converter and lambda sensor, use only unleaded fuel.**

**The tank ventilation system** prevents fuel vapours escaping from the tank into the atmosphere.

## Tips on Driving

If backfiring occurs while driving (identifiable by rough running of the engine or loss of power), reduce speed and engine load.

To prevent overheating of the catalytic converter the malfunction should be corrected immediately at the nearest Official PORSCHE Centre.

It is for this reason that you should never drive until the fuel tank is completely empty.

## Underseal

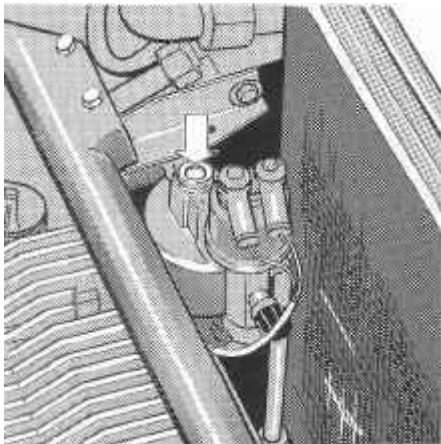
Do not apply underseal on or near the exhaust manifold, exhaust pipes, catalytic converter or heat shields. With the engine running, the protective material may overheat and ignite.

## Parking

**Never park your car or run the engine where there is a danger of flammable material such as dry grass or leaves coming into contact with the hot exhaust system.**

## Tow-starting

Cars with a catalytic converter should only be tow-started or bump-started if the engine is cold.

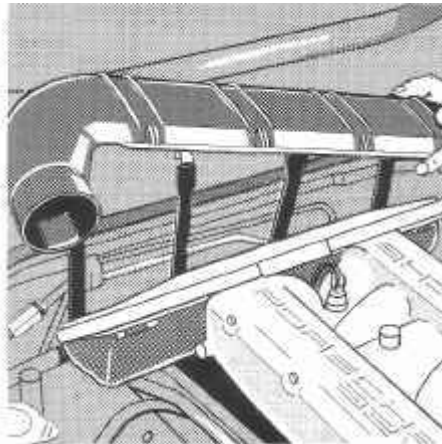


## Refrigerant for air conditioner

Due to the unavoidable loss of refrigerant, it is necessary to check the level of refrigerant in the reservoir at least once a year.

If gas bubbles remain visible in the inspection glass for a lengthy period of time when the air conditioner is on, there is not enough refrigerant in the system. Bubbles may be visible for a short period: this is normal.

If necessary, have the system refilled by an Official PORSCHE Centre with the appropriate equipment.



## Changing the air filter

1. Release the fixing clips and remove top of filter housing complete with filter element.
2. Clean out filter housing and renew the filter element.
3. Carefully replace top of filter housing and element, and refasten fixing clips.

## Car Care Instructions

Regular and correct care helps to maintain the value of your Porsche and can be a precondition for the vehicle guarantee and the Long-life guarantee.

Your Official PORSCHE Centre has specially developed Car Care products from the Porsche range available either singly or as complete Car Care kits. He will be pleased to help you select suitable products.

Always follow the instructions for use printed on the package.

In order to ensure that the vehicle's condition is professionally checked and the Long-life guarantee remains valid for the full 10-year period, any Official PORSCHE Centre will inspect the level of care and maintenance of the vehicle and record the results in writing. He will then make out a Status Report and certify this in the booklet Guarantee and Maintenance under "Long-Life Guarantee Status Report".

## Washing

The best method of protecting your car from the damaging effects of the environment is frequent washing and the application of a preservative. The underside of your Porsche should also be washed thoroughly, at the latest when salt is no longer spread on the roads.

The longer salt, road dust and industrial dust, dead insects, bird droppings or substances from trees (resin, pollen) are allowed to remain on the bodywork, the more serious is their harmful effect.

### Caution:

\* **Using high-pressure cleaning devices to wash your car can cause damage to the tyres. When cleaning with a flat-jet nozzle or what is known as a "dirt cutter," maintain a minimum distance of 20 cm (8"). Tyres must never be cleaned with a round-jet nozzle. If a tyre is inadvertently sprayed with a jet of water from a high-pressure nozzle, its surface should immediately be examined for possible damage.**

• **The design features of some car-wash systems can also cause damage to the wheel rims. Please ask your car-wash operator for information.**

• **If the Porsche is washed in a gantry-type automatic car wash (in which the brushes move backwards and forwards while the car remains at a standstill) there is a danger of the overhead brush jamming beneath the projecting rear spoiler.**

**To avoid damage to the spoiler or the luggage-compartment lid, the operator must guide the brushes manually when they reach the rear of the car.**

**In contrast to the gantry type, other automatic car washes move the car past the rotating brushes: there is no danger of damaging the spoiler in one of these car washes.**

Door and lid folds or door sills and the other parts of the bodywork inaccessible of the car wash must be cleaned by hand and leathered down.

Cars should be washed carefully with plenty of clear water to protect the paintwork. Dark paint finishes show up the smallest of surface damage (scratches) more readily than lighter colours.

Dark colours are also more susceptible to scratches because of the composition of their pigments and therefore require special care and attention.

Washing a car by hand does more damage to the environment than using a car-wash system. To prevent soot, grease, oil and heavy metals from contaminating the environment, your car should only be washed at places specially designed for that purpose.

When washing by hand, use an abundant amount of water, a soft sponge or wash brush, and the Porsche car shampoo. Begin by spraying the body thoroughly with water to rinse away loose dirt. Do not wash your Porsche in bright sunlight or while the bodywork is still hot. After washing, rinse the car with plenty of water and then dry with a chamois leather.

Do not use the same chamois leather for rubbing down as you use for cleaning the windscreen and windows.

Wet brakes can reduce braking efficiency or make the brakes pull unevenly. Always apply the brakes a few times after washing your car to test braking efficiency and dry the brake discs.

Dust should never be wiped off the car with a dry cloth since dust particles are abrasive and could dull and damage the surface finish.

### **Preservation**

The paintwork contains certain fats which maintain its high lustre and prevent it from becoming brittle. Climatic influences can remove these fats from the paintwork. This should be counteracted by applying a paint preservative in good time to restore the fats, preserving the high lustre and preventing dirt from settling on the surface and industrial dust penetrating the paint.

Provided it is washed and treated with preservative regularly, the brand new finish of your car will be retained for years to come. Apply the Porsche paint preservative after the car wash and polish it dry to obtain a bright finish or simply add the Porsche liquid preservative regularly to the final rinse water and rub down with a leather.

### **Cleaning and preserving engine compartment**

The engine compartment and the surface of the engine are treated with a corrosion inhibitor at the factory.

If grease solvents are used to clean the engine compartment or the engine is washed down, the process almost invariably removes the corrosion-inhibiting coating. It is then absolutely necessary to have a durable preservative applied to all surfaces, body seams, joints and assemblies in the engine compartment. This also applies when corrosion-inhibited parts are replaced.

Effective rust-proofing is particularly important during the cold weather season. If your Porsche is driven frequently in areas where salt has been spread on the roads, the whole engine compartment should be cleaned thoroughly after the winter to prevent salt causing any lasting damage. A full underbody wash should be performed at the same time.

### **Windows**

The road dust which settles on the windscreen and windows contains particles of tyre rubber and oil residue. The interior trim and upholstery release particles, particularly in strong sunlight, which collect on the insides of the windows. These deposits are augmented by impurities in the air which enters the car through the fresh air vents.

The Porsche Spray-on Window-Cleanser can be used to clean the windows, both inside and outside. Remember to clean the wiper blades as well and replace them once or twice every year, depending on condition. If you use a chamois leather for the windows, do not use it for the paintwork as it will otherwise pick up a certain amount of preservative or polish and cold smear the windows and thus impair vision.

Remove dead insects with the Porsche Insect Remover.

## Polishing

Do not resort to using Porsche Polish until it becomes evident that the normal preservatives no longer produce the desired finish.

**Caution: Do not apply silicone polishes to the windscreen or windows.**

The paintwork of your Porsche is exposed to all manner of mechanical and chemical conditions, particularly climatic ones such as bright sunlight, rain, frost and snow. Ultraviolet light, rapid changes in temperature, rain, snow, industrial dust and chemical deposits constantly attack the paint which is only able to withstand such exposure in the long term if it is given regular care and attention.

**Matt finished parts** should not be treated with preservatives or polishes as this will spoil the mat effect.

## Spots and stains

Tar stains, grease, oil spots and dead insects cannot always be removed by washing alone. They can cause discoloration if allowed to remain on the paintwork. They should therefore be removed without delay with Porsche Tar Remover or Porsche Insect Remover.

Wash the affected area immediately after treating it.

## Minor paint damage

Minor paint damage, such as scratches, scores or chips caused by flying stones, should be covered immediately with the Porsche Touch-up Applicator **before** corrosion sets in. However, if there are already traces of corrosion they must first be removed carefully and thoroughly. Coat the area with a rust-proofing primer and finish off with a top coat. The paint code and colour number are found on the vehicle's paint data plate.

## Undersealing

The underside of your Porsche is durably protected against chemical and mechanical influences.

As it is not possible to exclude the risk of damage to this protective coating in day-to-day driving, it is advisable to have the underside of the car inspected at certain intervals - preferably before the start of Winter and again in Spring - and the undersealing restored as necessary.

Your Official PORSCHE Centre is familiar with the bodyseal treatment procedures and has the necessary equipment for applying factory approved materials. We recommend that you entrust him with all such work and inspections.

Unlike conventional spray oils, undersealing and rust-proofing compounds based on bitumen or wax do not attack the anti-drumming materials applied at the factory.

Before applying fresh underseal, carefully remove deposits of dirt and grease. Once it has dried the new undersealing compound forms a tough protective coating which provides efficient rust-proofing of the floor panels and components.

Do not apply any undersealing on or near exhaust manifold, exhaust pipe, catalytic converter or head shields. With the engine running, the material may overheat and ignite.

**Always apply a fresh coating of suitable preservative to unprotected areas after cleaning the underside of the body or the engine of carrying out repairs to underbody components.**

### Lights and plastics

Use only soap and water solution for cleaning the plastic light lenses. Never use chemical cleaning agents for the purpose. The same applies to other plastic parts and plastic films.

### Door, bonnet and window seals

Rubber seals tend to age and become brittle or crack if they are not treated occasionally with glycerine or talcum powder.

### Light alloy wheels

Pitting may occur if metallic particles which cause contact corrosion (e.g. brass or copper in brake dust) are allowed to remain on the aluminium for too long.

Regular care is necessary in order to retain the attractive surface finish. The wheels should be washed down with a sponge or wash brush about every two weeks. In areas where salt is spread on winter roads or there is a lot of airborne industrial dust, it is best to clean the wheels weekly.

**The Porsche Light Alloy Wheel Cleanser (pH-value 9.5) can be used for this purpose. If the pH-value of the detergent is incorrect, the protective coating on the wheels may be destroyed.**

Every three months you should coat the wheels with a non-corrosive grease (vaseline) after cleaning. Using a clean cloth thoroughly rub the grease into the surface.

Polishes which dissolve oxides, as frequently used for other metals, or abrasive tools or agents are unsuitable because they break down the oxide film of the protective coating.

### Leather care

Leather is a natural material. The tanned hide is a product of nature. The natural surface markings of leather skins, such as creases, healed scratches, insect bites, structural differences and slight variations in shade and grain add to the attractiveness of the real leather product.

We recommend that the leather be treated or cleaned initially after the first few weeks or after the car has covered a few thousand miles. Only by doing so can the leather patina, which emphasizes the inherent qualities of the leather upholstery, begin to form.

Cleaning is best performed with a white, soft woolen cloth and a cleaning agent with a neutral soap basis (mild soap and water solution). If the leather is heavily soiled the Porsche Cockpit cleaner can also be used. Please follow the instructions on the containers carefully.

Do not use aggressive cleaners or hard objects.



Take special care not to dampen the other side of the perforated leather trims.

Once you have cleaned the leather (especially the heavily used leather seats) treat it with the Porsche Leather Care Agent. Leather should be cleaned and treated several times a year, depending on how quickly it becomes dirty.

Should the leather become damaged during use (e.g. when transporting sharp objects or if tools etc. should slip) the damage can be made less conspicuous using the Porsche Leather Colour Coating.

### **Fabric upholstery and carpets**

Use only a vacuum cleaner or a medium stiff brush. Remove stains and spots with Porsche stain remover.

The Porsche range of accessories includes floor mats to protect the carpeting.

### **Care of the seat belts**

If it becomes necessary to clean the seat belts, you can use any mild washing agent. Allow the belts to dry, but avoid direct sunlight.

If unsuitable cleaners are used or any attempt is made to dye or bleach the seat belts, the webbing may be weakened and thus constitute a safety risk.

### **Storing your Porsche**

If you intend to store your Porsche for a prolonged period, please consult your Official PORSCHE Centre. The staff will be glad to advise you on the most suitable and necessary methods of corrosion protection.

## Tips for winter operation

### Engine oil

Change the engine oil and refill with oil of the correct viscosity before the cold season begins. If you are using multi-grade oil then it is not necessary to carry out temperature related oil changes and you can take advantage of the extended oil change intervals to the full. (See also "Filling capacities" and "Engine Oils".)

### Battery

The battery capacity drops with lower temperatures, but the demands made upon the battery generally increase. Therefore, have the battery checked and charged, if necessary, in good time. Also have the electrolyte level checked, and the terminals greased. See chapter "Battery check and care".

### Corrosion protection

The salt spread on winter roads can have a detrimental effect on your Porsche's bodywork. You should therefore wash your Porsche as often as convenient in accordance with our care instructions. Have a preservative applied and the underseal checked by an Official PORSCHE Centre before and after the cold weather season.

### Coolant

The coolant additive provides both antifreeze protection at low temperatures and corrosion protection for the engine components which is especially suited to aluminium parts.

Therefore, the vehicle must **never** be run **without** coolant additive.

The all-season cooling fluid in the cooling system, put in by the manufacturer, offers protection down to 30° C (Scandinavian countries 40° C). At the onset of colder weather, have the cooling fluid checked to make sure that the necessary protection is afforded. When necessary, top up with antifreeze. For amounts see chapter "Filling capacities".

### Brakes

After driving for extended periods on salt covered roads a film can form on the brake discs and pads which considerably reduces friction and thus the braking effect.

The brake discs and brake pads should therefore be cleaned every two weeks or so with a powerful water jet. The cleansing effect of automatic washers is insufficient.

### Door and window seals

To prevent the freezing of the rubber seals on the doors and hood top, they should be treated with talcum powder or glycerine.

### Door locks

To prevent the door locks freezing up, the lock cylinders should be masked when washing the vehicle to avoid ingress of water. Should however the locks still freeze up, a proprietary de-icing solution can be used to free them. A warmed-up key can also be useful, but never use force.

## **Water reservoirs**

To ensure the function of the screen and headlight washers under frost conditions, Porsche Winter-Grade Window Cleanser which will ensure clear vision down to temperatures of - 25° C should be added to the water in good time.

## **Winter tyres and snow chains**

Due to the reduced effectiveness of summer tyres in winter the winter tyres recommended by Porsche should be fitted to all four wheels in good time before the anticipated arrival of snow and ice.

Snow chains can only be fitted to the driving wheels and only to the tyre/rim combinations listed in the Technical Data. Use only fine-link chains recommended by Porsche. This ensures that the clearance between the wheel and wheelhouse is maintained.

Be acquainted with the different statutory requirements in different countries governing maximum speeds with these tyres.

When fitting tyres already mounted on rims, ensure that the coloured wheel bolt is opposite the valve. Always screw the lock-up wheel nut onto this bolt. When removing, mark the direction of rotation on each wheel, e. g. FR, FL, RR and RL. This precaution ensures that the wheels will be remounted in the same position, thus obviating the risk of imbalance.

## **Note**

It can be helpful during winter to keep a hand-brush and scraper in your Porsche to clear the screens of ice and snow, as well as a board to put under the jack and some dry sand to help traction when pulling away on icy slopes.

## Additional Equipment

### Roof racks

Normal commercially available roof racks **cannot** be fitted. If an **original Porsche rack** (as available hitherto) is fitted, the permissible roof load is 35 kg (77 lbs).

With the "**Porsche Roof Transport System**" you can transport a wide variety of sports and hobby equipment, up to a roof load of 75 kg (165 lbs). There are many different racks to choose from. Your Official PORSCHE Centre will be glad to advise you on the versatility of the "Roof Transport System".

To ensure minimum noise, maximum comfort and economy and a desirable level of safety when driving with an unloaded roof rack, you should not exceed a maximum speed of 180 km/h (110 mph).

When the roof rack is loaded, the recommended maximum speed depends on the nature, size and weight of the load. You should not however exceed a speed of 140 km/h (85 mph) at any time. Make sure that the load is carefully mounted. Secure it additionally by locking the roof transport system.

### Trailer coupling

When attaching or detaching the removeable ball head, always follow the operating instructions for the removeable ball head.

**The coupling ball must always be removed when driving without a trailer, so that the number plate is clearly visible. Store the removed coupling ball safely inside the vehicle!**

### Radio reception

The reception quality of your car radio changes constantly while you are driving. Interference due to buildings, topographic features or the weather is inevitable. FM stereo reception is particularly sensitive to changing conditions. To suppress interference, you can switch your radio over to mono operation or select a different FM stereo channel.

### Car telephone

Mobile communication systems (car telephone, 2-way radio etc.) should only be installed at a professional workshop. Incorrectly installed units or antennas inside the passenger compartment may cause interference to vehicle electronic systems when the radio is operated.

Only use an exterior antenna for radio operation!

# Practical Tips, Emergency Service

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## Advice on breakdowns

As a rule, we recommend that you have all the necessary work on your Porsche carried out by an Official PORSCHE Centre. Training and experience of the workshop staff, technical information supplied by the manufacturer and special tools and equipment constitute a good basis for the fault-free care of your Porsche.

However, if you work on your Porsche yourself, you must exercise the greatest care. Only in this way is operational reliability fully guaranteed.

Incorrect maintenance during the guarantee period may invalidate your guarantee.

Work on your Porsche only in the open air or in well ventilated rooms.

Never smoke near or bring a naked flame into proximity with the battery or fuel system.

Before working on any part in the engine compartment, switch the engine off and let it cool down sufficiently. Be careful when working near parts of the engine which are hot - they may cause burns.

Caution! Depending on coolant temperature, the thermostatically controlled radiator fan may start up automatically, even when the engine is switched off - danger of injury.

If work has to be done with the engine running, always apply the handbrake and move the gearchange lever to the neutral position or the selector lever to P.

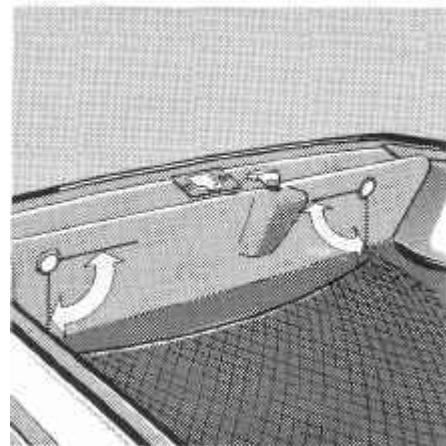
In particular, take great care to ensure that ties, items of jewelry or long hair cannot be caught by the fan, V-belt or other moving parts.

Your Porsche is equipped with an electronic ignition system. When the ignition is on, all the cables and leads of the ignition system and the tachometer carry high tension; for this reason, extreme caution must be exercised.

Always place your Porsche on strong supports if you have to work beneath the car. The car jack is not suitable for this purpose.

## Warning triangle, first aid kit

In cars equipped with a warning triangle and a first aid kit, the warning triangle is behind the tool plate in the rear of the vehicle and the first aid kit is in the spare wheel recess.



## Tool kit, car jack

The tool kit is in the tray fitted to the back panel of your Porsche. To remove the panel covering the tool kit, both knobs must be turned through 90°. It contains all the tools necessary to remedy small faults and to enable you to do your own servicing. The jack and the rim wrench are beside the spare wheel.

Some countries require that additional tools and replacement parts be carried in the vehicle. Please enquire before driving abroad.

**The jack supplied with the vehicle should only be used when changing the wheels on the vehicle. When working under the vehicle, it should be supported on purpose made stands for safety.**

## Tyres and Tyre care

Steel-belted radial tyres are high-quality engineering products. The service life of your tyres will depend on your driving style as well as correct air pressure and proper wheel alignment. Abrupt acceleration, high cornering speeds and heavy braking increase tyre wear. Tread wear is also greater at higher temperatures and on rough road surfaces. Like the engine, tyres must always operate under the right conditions. If treated properly they will be a long-lasting safety element on your Porsche. The following tips will show you what to do. To protect yourself and other road users, it is absolutely essential that you follow these rules.

### Tyre pressure

Tyres must be kept at the prescribed pressure. This pressure applies when the tyres are cold, and represent an absolute minimum. When the tyres warm up (after driving, for example) the pressure will rise. Therefore, never let air out of hot tyres; the pressure might drop below the minimum value.

The tyre pressures are monitored by the tyre pressure warning system.

Valve caps protect the valves against dust and dirt as well as leaks. Always screw the caps down tightly, and replace missing caps immediately.

Insufficient pressure can cause the tyres to overheat and suffer internal damage. Hidden tyre damage cannot be reversed by subsequent corrections in air pressure.

### Load and speed

Do not overload your Porsche. Never exceed specified roof loads and trailer towing loads. A combination of overloading + low tyre pressures + high speed + high outside temperature (on vacation trips, for example) is extremely dangerous.

### Kerbs

Drive over kerbs slowly, preferably at a right angle. Avoid driving over steep or sharp kerbs. Impacts at high speed or sharp angles against kerbs or other sharp-edged objects (like stones) can lead to concealed tyre damage that will not be noticed until later (risk of tyre failure at high speeds). Tyres never forget!

### Tyre damage

Examine tyres at regular intervals for foreign objects, nicks, cuts, cracks and bulges (in the sidewalls). If a tyre is damaged and you cannot absolutely rule out the possibility that a ply has broken (with all the resulting consequences), or that the tyre has been thermally and mechanically overloaded due to a loss of pressure or other damage, we recommend that the tyre be replaced for safety reasons. Even invisible damage to a tyre can lead to a blowout at high speeds. Tyres must never be repaired.

When replacing a defective tyre, note that the difference in tread depth on the same axle must be no more than 30 %. Never install a used tyre if you do not know its prior history!

## Storing tyres

Always store tyres in a cool, dry, dark place. Avoid contact with fuel, oil or grease.

There is no truth to the idea that tyres wear better after storing and aging. Chemical additives that make the rubber elastic lose their effectiveness over time, and the rubber becomes brittle. Tyres must never be more than 6 years old.

The age of a tyre can be determined from the "DOT" code on the sidewall (pump up the spare tyre). For example, if the last three digits are 121, the tyre was manufactured in the 12th week of 1991.

## Tread

The risk of aquaplaning increases as tread decreases. For safety reasons, the tyres should be replaced before the wear indicators (webs in the tread grooves, 1.6 mm high) appear.

Check tyres regularly, especially before and after long journeys.

## Balancing

As a precaution, have the wheels balanced in spring (summer tyres) and before winter starts (M+S tyres). Make sure that only approved weights are used for balancing (self-adhesive weights must not come into contact with cleaning agents, otherwise they might drop off). Uneven tread wear indicates wheel imbalance. Consult a tyre specialist.

When fitting complete wheels, make sure that the colour-coded wheel bolt is opposite the wheel valve. Always install the lock-up wheel nut on the colour-coded wheel bolt, before removing a wheel, always mark its direction of rotation, e.g., FR, FL, RR and RL. This precaution will ensure that the wheels can be refitted in their original positions, avoiding imbalance.

## Replacing Tyres

The makes and types of tyres explicitly indicated in your vehicle registration are binding. If a change is made to other tyres in the Federal Republic of Germany, it must be registered by an officially authorized expert (from the TV, for example).

In all other countries, observe applicable regulations. If you have any questions, please consult your Official PORSCHE Centre or the Porsche importer for your country.

Please ask your Official PORSCHE Centre about the latest authorization situation before fitting new tyres to your Porsche. If you are in doubt, however, you may of course contact the Customer Service Department of Porsche AG directly.

There is no binding standard concerning permitted top speed for ZR tyres above 240 km/h.

**Therefore, use only makes and types of tyres tested by Porsche.**

Only tyres from a single manufacturer and of a single type should be combined.

When replacing tyres, always be sure to replace the valves.

During the initial break-in period, new tyres do not have their full grip. Therefore, you should only drive at moderate speeds for the first 100 - 200 km.

Have tyres fitted by a specialist.



## Winter tyres

Do not exceed the maximum speed limit (e.g., 160 km/h for M+S [Q] radial tyres, or 190 km/h for M+S [T] radial tyres or 210 km/h for M+S [H] radial tyres).

The corresponding designation is marked on the tyre sidewall.

A corresponding sticker must be placed in the driver's field of vision.

Winter tyres lose their effectiveness if the tread depth goes below 4 mm.

## Tyre Pressure Warning System

The tyre pressures are monitored by a warning system that

- monitors correct tyre pressure more precisely and reliably than any tyre-pressure gauge in the tool kit, at a service centre or workshop,
- takes the effect of temperature on tyre pressure into account. (Style of driving, load, roadspeed, outside temperature, sunlight and the heat radiated by the engine affect the temperature of the air in the tyres),
- assures excellent handling and low fuel consumption by correct tyre pressures,
- helps prevent incipient tyre damage and increased tread wear due to low tyre pressures.

### Method of operation

Two pressure-operated switches in each wheel monitor the tyre pressures. If the pressure in the tyre drops beneath the trip pressure to which the switches are set or if there is a malfunction in the system, a corresponding message appears in the display in the instrument cluster.

When the ignition is switched on, the warning light in the instrument cluster comes on as a check. The light goes out as soon as the engine is started. Automatic tyre-pressure monitoring begins once a distance of approx. 20 metres has been covered at a speed of at least 5 km/h (3 mph).

The tyre Pressure warning system takes the effect of tyre temperature on tyre pressure into account. Nevertheless, it is possible that the pressure in the tyre may not be as high as the pressure required for a given driving situation.

Therefore, the system may not issue a warning immediately after the car pulls away. Even if the tyre pressure is not corrected, the warning may not be repeated after the ignition has been switched off and the car restarted, if the same conditions do not re-occur. Nevertheless, the pressure is too low for a particular combination of speed and temperature, in other words, for a particular driving situation.

**In the interests of your own safety, correct the tyre pressures at the earliest possible opportunity.testcaslökf**

**Low tyre pressure has an adverse effect on handling. Damage to the tyre and wheel may also result.**

If the information system repeatedly signals a loss of pressure at brief intervals, or if the pressure is considerably lower than specified (approx. 0.5 bar), tyre damage may be suspected.

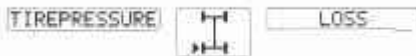
The tyre must be replaced or the spare wheel fitted as soon as possible. Failure to take such action would place your safety too much at risk.

**To avoid damaging the pressure-operated switches, the tyre pressure applied when a new tyre is fitted must not exceed 6 bar.**

## **Fault messages whilst underway**

See also "Information system"

**A loss of tyre pressure** is indicated by the warning light and a message which appears in the information-system display:

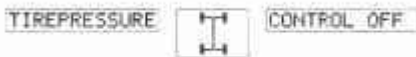


(by way of example, rear left)

The arrow indicates the wheel losing pressure. If the ignition is switched off, a reminder remains visible for approx. 2 minutes.

The tyre pressure of the spare wheel is not monitored. This display also appears when the spare wheel is fitted.

**If the System develops a fault**, the warning light in the instrument cluster comes on and the following message appears:



The system shuts down because of a malfunction. Tyre pressure is no longer monitored. Do not fail to seek the assistance of an Official PORSCHE Centre if a system malfunction message appears.

Fault messages can be acknowledged and the worded messages cancelled. However, the warnings are repeated periodically after they have been acknowledged and every time the engine is restarted, until the fault in question is rectified.

## **Checking tyre pressures**

There is always a certain amount of pressure loss, because the tyre rubber is very slightly permeable to air (diffusion).

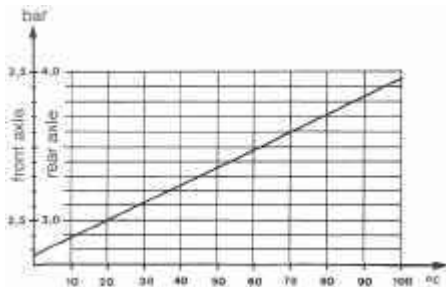
Tyre pressure must be checked if the "Pressure loss" message appears. Increase pressure in the tyre concerned by 0.3 bar, to the specified pressure at least. Since pressure losses due to diffusion are roughly equal for both the wheels on either axle, the pressure in the other tyre on the axle must be increased to the same level. Never reduce a higher pressure!

**The specified pressures at 20° C are:**

<b>for summer tyres</b>	<b>2.5 bar front and rear,</b>
<b>for winter tyres</b>	<b>2.5 bar front</b>
	<b>3.0 bar rear.</b>

Switch the engine off before adjusting tyre pressures, so that the warning system can register the new pressure settings.

To measure or correct tyre pressure exactly, therefore, the temperature of the tyre must be known (see graph). Tyre pressure increases by approx. 0.1 bar for every 10° C increase in the temperature of the air inside the tyre. Therefore, the correct pressure in tyres that have been driven until warm is always above the specified pressure. Never reduce tyre pressure while the tyres are warm.



Air temperature in the tyre

### **Brief test of the tyre pressure warning system when a tyre is changed.**

Please carry out this test every time a tyre has been changed. The car need travel no more than some 20 metres at a speed of at least 5 km/h (3 mph) with the tyres inflated as follows:

#### **1. Tyre pressure 0.5 bar beneath specified pressure:**

While driving, observe the instrument-cluster display.

**The arrows concerned must flash.**

If an arrow indicates steadily instead of flashing, **one** pressure-operated switch in the wheel concerned is defective and must be replaced.

Do not exceed 50 km/h (30 mph). At speeds above 50 km/h (30 mph), the display always flashes.

#### **2. Tyre pressure 0.5 bar above specified pressure:**

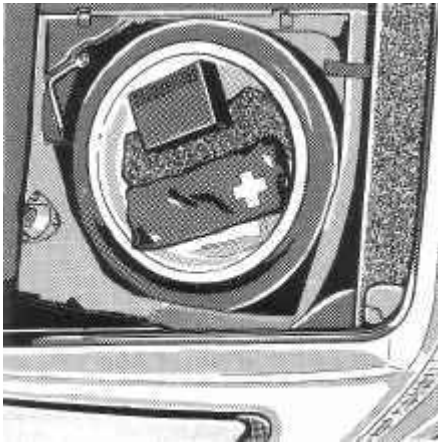
While driving, observe the instrument-cluster display.

**There should be no fault messages.**

A fault message indicates that there is a system malfunction.

Proceed with caution to the nearest Official PORSCHE Centre and have the tyre pressure warning system checked.

#### **3. Do not forget to correct tyre pressures to the specified settings after the brief test.**



## Spare wheel

The spare wheel is in the luggage compartment under a cover plate. Jack, compressor, tyre pressure gauge, and a plastic sheet to wrap the original wheel in the event of a puncture and protect the inside of the car or luggage compartment are stowed in the spare wheel recess.

**The following instructions on using the spare wheel must be followed precisely for reasons of safety.**

Mounting the spare wheel on the front rather than on the rear axle improves handling and reduces tyre wear.

The spare wheel is fitted with a collapsible tyre, and when it is needed, it must be inflated with the electric compressor.

The collapsible spare wheel must be mounted on the vehicle **before** it is inflated.

**Necessary tyre pressure: 2.5 bar (36 psi).**

Set the pressure precisely with the pressure tester. To guard against excessive inflation pressure, the collapsible spare wheel is provided with a blow-off valve. If the pressure is too high, the process of air removal should be accelerated by operating the inflation valve.

**The spare wheel with the collapsible tyre may only be used in an emergency, for short distances.**

**The tyre pressure of the spare tyre is not monitored by the tyre pressure warning system. The "Tyre pressure loss" message appears in the information-system display only as long as the wheel concerned is actually fitted.**

**The maximum speed for this tyre is**

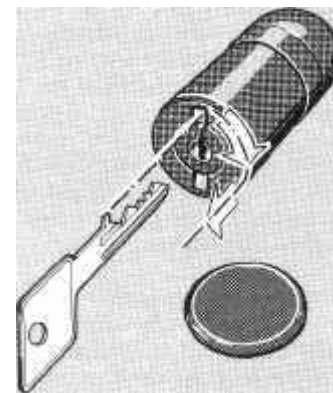
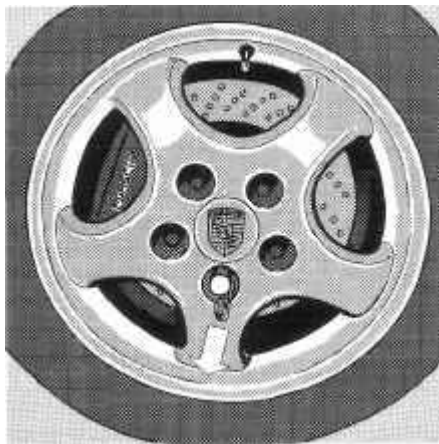
**80 km/h (50 mph)**

**and this speed must not be exceeded because of the changed handling characteristics of the vehicle, and the wear properties of the tyre. The same law applies to depth of tread for this tyre, as for the normal tyres.**

The vehicle may only be fitted with **one** collapsible tyre.

The collapsible tyre expands through warming up as it is used. When deflating the tyre (completely remove the valve core), it requires several hours to cool down and therefore assume its original form, before it can be replaced in the well in the luggage compartment.

The collapsible tyre can be neither repaired nor mounted in a normal workshop. All work on these tyres must be left to the tyre manufacturer. If the collapsible tyre is punctured, consult an Official PORSCHE Centre.



## Lock-up wheel nuts

The wheels of your vehicle are theftproof by means of a wheel nut lock. The wheel nut lock consists of a wheel nut and a plug-on sleeve with lock. The same lock is used on all four wheels.

Three keys are supplied. Copies of lost keys **cannot** be supplied. Please store separately!

If wheels are to be removed whilst your car is in the garage, please do not forget to hand over a key for the lock-up wheel nuts along with the master key.

## Removing the wheel nut lock

1. Pull off the plastic cap with the hook from the tool kit.
2. Insert the key into the lock and turn until it engages in the recess.
3. Turn the key slightly and withdraw it together with the lock.

## Fitting the wheel nut lock

1. Remove key and press on plastic cap.
2. Fit wheel nut lock to the coloured wheel bolt opposite the valve until it clicks into place.

## Changing a wheel

When a tyre is punctured, drive as far over to the offside of the road as possible, and if necessary turn the hazard warning lights on and set up a warning triangle at the correct distance behind the car.

The ground beneath the car should be firm and level. The handbrake must be firmly applied, and the wheels on the other side of the car should be blocked with a chock.

For vehicles with manual gearbox, engage 1st gear; for vehicles with automatic gearbox, engage selector "P". Nobody should be in the vehicle while it is being jacked up.

### Procedure for changing a wheel

1. Slacken nuts of wheel to be changed.
2. Position the car jack at the appropriate jacking point, with the top of the jack tilted slightly away from the bodywork.
3. Raise the car until the wheel to be changed is clear of the ground.
4. Remove wheel nuts and change wheel. When fitting the new wheel, make sure that the coloured wheel bolt is opposite the valve. Screw the lock-up wheel nut onto this bolt.

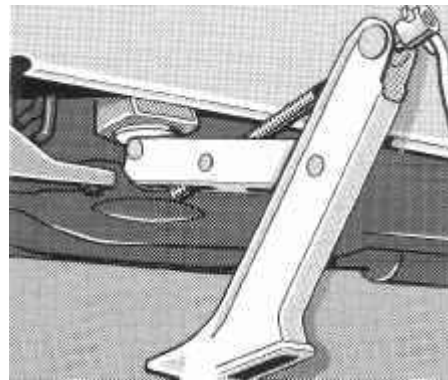
5 Tighten wheel nuts slightly in diagonally opposite sequence so that the wheel is centred (the collars of the nuts must engage the recesses in the wheel). Make sure the contact surfaces are clean.

6. If the collapsible spare wheel has been fitted, screw the compressor hose onto the valve and then plug the compressor into the cigarette-lighter socket. The tyre will inflate to the correct pressure within a few minutes.

7. Let the car down from the jack and remove jack. Tighten the wheel nuts.

8. Check the pressure with pressure gauge and carry out the brief test of the tyre pressure warning system.

**After changing a wheel, the wheel nuttorque must be checked with a torque wrench as soon as possible. (Tightening torque 130 Nm, 94 tflb.)**



### Lifting the vehicle with its own jack

**The jack may only be used at these points.**

It is essential that the jack is inserted accurately and correctly into the jacking point on the underside of the vehicle.

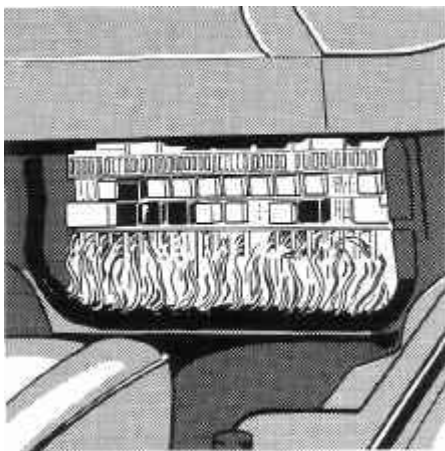
**Warning:** The jack is only provided to lift the vehicle for changing tyres. If work is to be carried out under the vehicle, the vehicle must be supported on a suitable chassis stand or similar.

## Lifting the vehicle with a lifting platform or trolley jack

**Before driving over the lifting platform, ensure that there is enough clearance between the underside of the vehicle and the lifting platform.**

The car may only be lifted at the jacking points for the car jack.

**The vehicle should never, under any circumstances, be jacked up from under the oil sump or the gearbox, as this could cause severe damage.**



## Fuses and relays

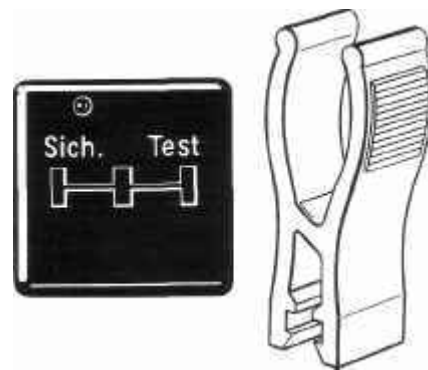
To avoid short circuit or overloading damage to the electrical cables or devices, the individual circuits are protected by fuses.

The main fuse box is mounted in the passenger footwell under the floor panel. A light goes on in the main fuse box when the door is opened. To change a fuse or relay, the carpet must be folded back, and the floor panel hinged upwards.

**Because of the danger of short-circuits, always disconnect the battery before beginning work on the electrical system.**

If the battery is disconnected, the data for the engine electronics stored in the control unit are erased. When the battery is reconnected, the engine should be run for approx. 10 minutes to allow the control unit to re-acquire these data. During this period, the engine may idle unevenly or too fast.

**The floor board shows a chart of the various fuses and relays.**



## Changing a fuse

Switch off the affected system.

You can detect a blown fuse by the melted metal strip. If in doubt or, for example, if in darkness, the fuse can be tested by plugging it onto the test relay. If the fuse is defective, the LED in the relay does not light up. To replace a fuse, it must be removed from the spring clamp. The appropriate tool is attached to the fuse box at the top left. As a replacement, use only fuses of the same rating.

The fuse must sit firmly in the clips.



## Note:

Should a fuse blow several times, an Official PORSCHE Centre should be consulted.

At the top edge of the fuse box is space for spare fuses. It is advisable to carry spare fuses of the different ratings in the vehicle.

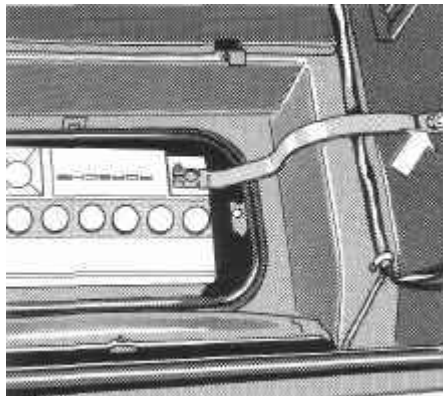
## Relays

Fitted underneath the fuses are relays for various electrical switching functions. Changing of defect relays should be left to an Official PORSCHE Centre.

The relay for the rear screen wiper is at the rear left behind the tool tray. The time-lag relay for the seat heating is under the seat.

**Should you require a wiring diagram your Official PORSCHE Centre will be pleased to assist you.**

**In order to prevent damage to electrical or electronic components, you are advised to have all work, even the mounting of electrical accessories, done by your Official PORSCHE Centre.**



## Battery check and care

The battery is accessible via a flap in the spare wheel well in the luggage compartment.

Because of the danger of short-circuits, always disconnect the battery before beginning work on the electrical system. This precaution must also be taken before charging with a quick charger, as otherwise the alternator will be destroyed. Disconnect the battery earth strap as shown in the picture (arrow).

If the battery is disconnected, the data for the engine electronics stored in the control unit are erased. When the battery is reconnected,

the engine should be run for approx. 10 minutes to allow the control unit to re-acquire these data. During this period, the engine may idle unevenly or too fast.

**Disconnecting the battery whilst the engine is running destroys the alternator. This applies also to vehicles with a built in battery disconnection switch.**

Remember that only a well charged battery can deliver the necessary energy to start the engine. The condition of the battery should therefore be checked regularly.

The battery capacity is reduced by low temperatures. However, during the winter months, the demands made upon the battery increase because of the need for more lighting, heating fan, windscreen wipers etc. **Therefore check, especially when only making short journeys, that all unnecessary electrical systems are turned off.**

### **Checking the acid level**

With the vehicle standing level, remove all the battery plugs, and check that the acid level in every cell reaches the full mark. If the battery has to be topped up, use only distilled water, not acid. During the summer months, and in warmer climates, the battery level should be checked more often.

### **Checking the specific gravity of the acid**

In a battery in good condition, the state of charge of the battery can be determined by the specific gravity of the acid, which is measured in kg/dm<sup>3</sup>, determined with the use of a hydrometer.

### **Checking the voltage of the battery**

The voltage of a battery can only be measured with a special instrument, and should therefore be left to an Official PORSCHE Centre.

### **Care of the battery**

The battery terminals must be kept clean. They should be smeared with a suitable grease, and check that the terminal clamps are properly fitted.

Check that the battery plugs are seated correctly, and that the vent holes in them are not blocked.

Never let any acid come into contact with clothing, or any parts of the vehicle. Should battery acid be splashed or spilled, it should be immediately neutralized with a soda solution.

Due to the explosive gases given off by a battery, never go near it with a naked flame or fire.

A battery loses its charge when not being used, so if the vehicle is laid up for any period, the battery should be charged approx. every 6 weeks to keep it in good condition. A battery left discharged for a length of time will be ruined. Check and if necessary top up the acid level every time the battery is charged.

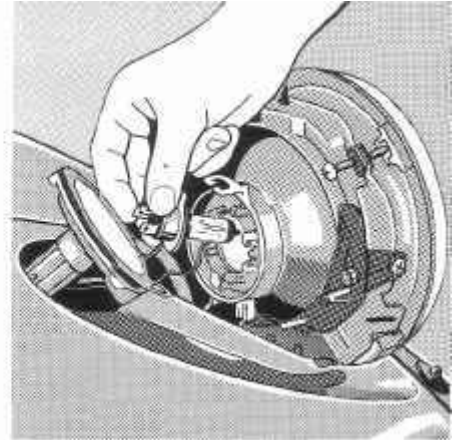
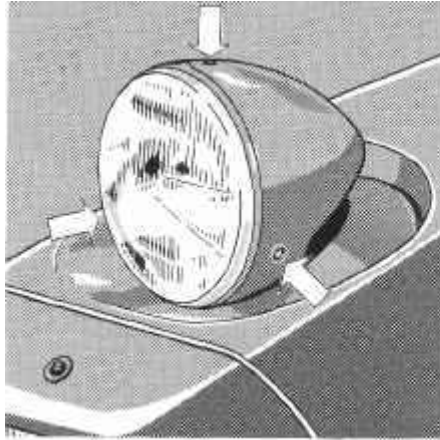
## Renewing bulbs

To avoid short circuits when changing bulbs, the respective circuit should be turned off.

**Bulbs should be clean and grease free. Therefore never touch the glass with your bare hands, always use a cloth or a soft piece of paper.**

For safety reasons, you should always carry spare bulbs in the vehicle so that any bulb can be immediately renewed when it blows. Remember when travelling abroad that in some countries it is compulsory to carry spare bulbs with you.

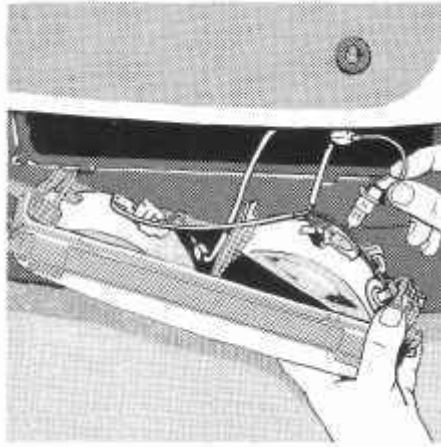
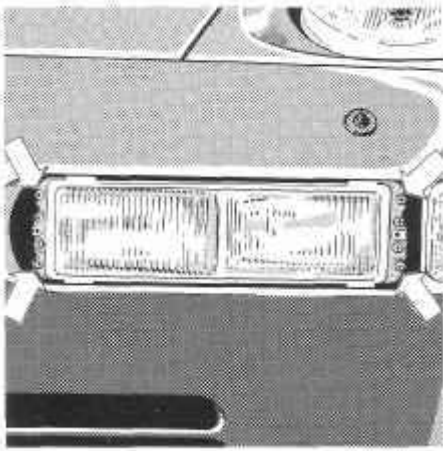
**Only use soapy water to clean plastic light lenses, never a chemical detergent.**



## Headlights

### (dipped beam, high beam)

1. Elevate the headlights by turning them on, and then turn the ignition off. Remove the screws from the headlight housing and then the housing itself.
2. Remove the spring holding the bulb cover, and remove the bulb cover.
3. Pull the spring holding the bulb, and remove bulb.
4. When fitting the new bulb, ensure that the tag on the bulb fits in the cutout in the lamp surround. Refit bulb retaining spring and bulb cover with its spring.
5. Refit headlight housing and check that the light functions, and that it is properly adjusted.



## Auxiliary driving lamps

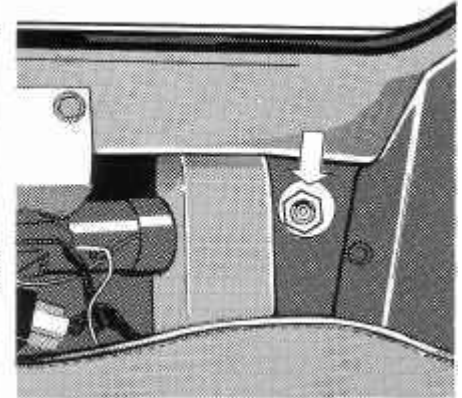
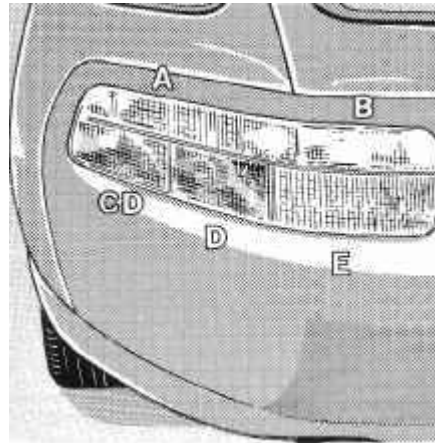
### (high beam, foglamps)

1. Unscrew cross-recessed head screws from the transparent side covers and remove covers.
2. Remove the lamp retaining screws (arrowed) and pull out the lamp as a unit.
3. Remove cable socket and bulb retaining spring. Refit new bulb ensuring that it sits properly.
4. Refit bulb retaining spring and cable socket.
5. Refit the lamp and the fixing screws. Check that the lamp functions and that it is properly adjusted.

## Front parking light

The front parking light is built into the outer auxiliary driving lamp.

1. Remove complete lamp, and then the side-light bulb holder,
2. Refit new bulb and replace lamp.
3. Check function of light.



## Front indicator

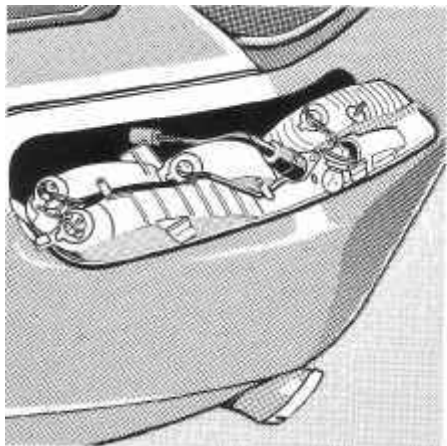
1. Remove screws holding the lens, and remove lens.
2. Remove bulb from bulb holder, and fit new bulb.
3. Replace lens, and refit screws, tightening gradually in sequence.
4. Check function of light.

## Rear lights

- A-Indicator light
- B - Reversing light
- C - Rear fog light
- D - Back light, parking light
- E - Brake light

If a brake light or back light fails, a fault message appears in the information-system display.

1. Remove tool tray inside luggage compartment.
2. Use the spark plug spanner to unscrew the hex nut (arrowed) which holds the rear light unit in place and remove the unit from the rear bumper.



3. Turn holder of defective bulb anticlockwise to limit stop and remove.
4. Remove bulb from socket and fit replacement. Reinstall bulb holder and turn clockwise to limit stop.
5. Install rear light unit in bumper and tighten retaining nut.
6. Check function of light.

### Number plate light

1. Remove both screws and lamp housing,
2. Replace defective bulb and refit housing, ensuring that it sits properly on the gasket,
3. Check that the light functions.

## Interior lights

The following description applies to the interior lights mounted in the roof lining and the footwell lights mounted forward in the lower part of the door trim.

1. Prise the complete light out of the cutout in the headlining carefully with a screwdriver.
2. Remove the defective bulb from the spring clips and fit new bulb.

3. Carefully press the light, first one side, then the other, into the headlining cutout. Check the function of the light.

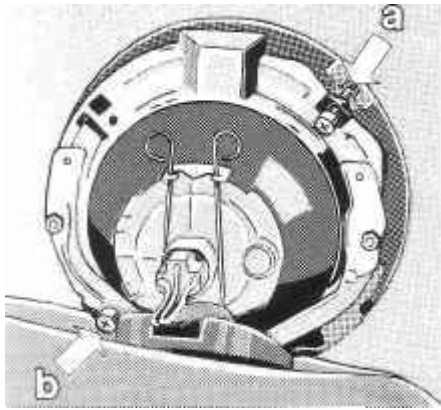
## Ashtray light

1. Remove the two screws in the ashtray housing and pull the ashtray upwards and out. Slide the bulb holder with bulb out of the housing.
2. Pull out defective bulb and replace with new. Slide bulb holder back into the housing.
3. Check that the light functions by turning on the vehicle lights.
4. Refit ashtray.

## Bulb table

Function	Wattage	Specification	Format	Socket
Headlight	60/55 W	Headlight bulb H4	1R + 1R	P 43 t-38
Aux driving lights	55 W	Headlight bulb H 3	YC	PK 22 s
Rear fog light with back light	21/4 W	Twin filament	ECE-R 37	BAZ 15 d
Side- and additional indicator lights	4 W	Side light bulb	T 8/4 (HL)	BA 9 s
Back light & side marker lights	5 W	Round bulb R	19/5 (G)	BA 15 s
Number plate light	5 W	Soffit bulb	C 11/L	SV 8.5-8
Interior and luggage compartment lights, footwell lights	10 W	Soffit bulb	C 11/K	SV 8.5-8
Glove compartment light	3 W	Soffit bulb	C 11	SV 7-8
Indicator, brake, reversing light	21 W	Single filament	P 25-1 (RL)	BA 15 s
Engine compartment light	10 W	Round bulb	R 19/10 (G)	BA 15 s
Cigarette lighter	2 W	Instrument bulb	J	BA 7 s
Illumination switch lights, clock	1.2 W	Instrument bulb	WT5/1.2	W 2x4.6 d
Combination instrument illumination	1.2 W	Socket bulb	.90 mA	
Combination instrument illumination	1.5 W	Socket bulb	.110 mA	
Combination instrument illumination	2 W	Socket bulb	.150 mA	
Door guard lights	2 W	Side light bulb	T 8/2 (H)	BA 9 s





a = lateral adjustment  
b = vertical adjustment

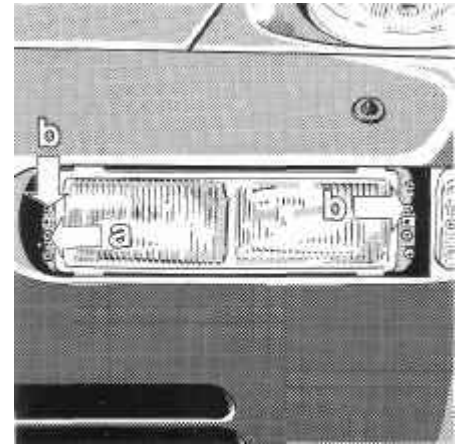
## Headlight adjustment

Your Porsche is fitted with a headlight beam adjustment device inside the vehicle, so that optimum headlight illumination can be obtained irrespective of the loading of the vehicle, and without dazzling oncoming drivers.

The basic adjustment of the headlights can only be performed on a special machine. This should be carried out on the vehicle in a ready to drive condition, and a full fuel tank. The driver's seat must be loaded with a 75 kg weight, or with a person, and the tyres must be inflated to the manufacturer's specifications.

With the vehicle in this condition, it must be rolled several meters to allow the road springs to settle, before starting to adjust the lights.

The adjuster knob for the interior headlight setting must be in the neutral position, i.e. the white mark on the knob directly over the mark "0" on the rosette (see headlight beam regulator). To adjust the headlights, the screws must be removed from the headlight housings, and the housings removed.

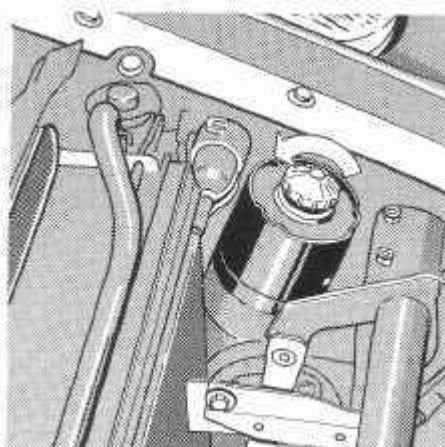
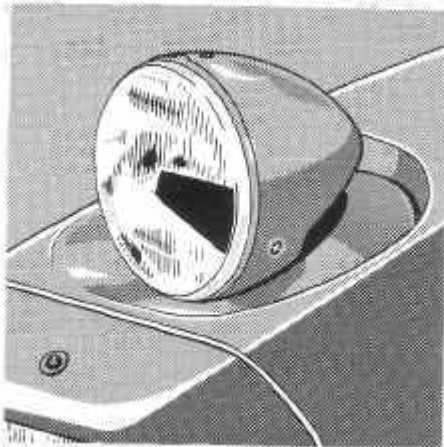


## Adjusting screws

Each headlight and auxiliary driving lamp has two adjusting screws, one for vertical and one for horizontal adjustment. The fog lights only have provision for vertical adjustment of the reflector. By turning these screws left or right, the corresponding adjustment in beam position is effected.

## Adjustment of auxiliary driving lamps

The auxiliary driving lamps are adjusted such that the centre of the light beam is the same height as the centre of the lamp.



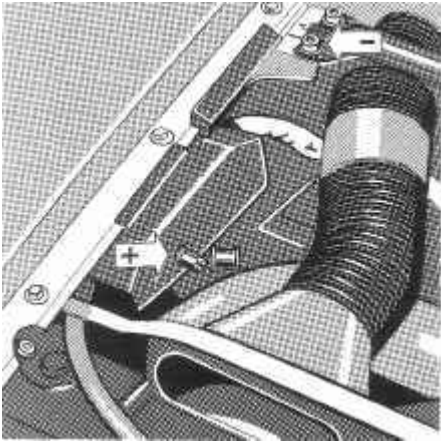
### Manual operation of the headlights

If your Porsche is equipped with asymmetrical dipped beam headlights, and you travel abroad, where the traffic drives on the other side of the road, you should stop at the border, and blank off the prism section of the light diffusing lens with opaque adhesive strip. The dipped beams will then be symmetrical, and will not dazzle oncoming drivers.

If, by reason of a malfunction in the headlight elevating motor, the headlights cannot be raised or lowered, the knob on the driveshaft of the elevating motor can be manually turned, to raise or lower the headlights. To do this, remove the rubber cap from the drive motor. Turn the knob anticlockwise to raise and clockwise to lower the headlights.

**If the motor functions as it should when the light switch is turned, do not attempt to turn the knob on the motor itself. Risk of injury.**

By virtue of the switching principle, the elevating motor drives the elevating mechanism another half a turn (180°). That is to say that after several turns of the knob a contact is closed so that when the headlights are functioning normally, they go up and come down immediately.



## Emergency Starting

(Terminals in engine compartment)

Should the engine not start because the battery is flat e.g. in winter or after your Porsche has stood for a long period, the battery from another vehicle can be used with the aid of **jump leads**. The following points should be observed:

1. Both batteries must be 12 volt. The capacity (Ah) of the battery supplying current should not be significantly below that of the discharged battery.

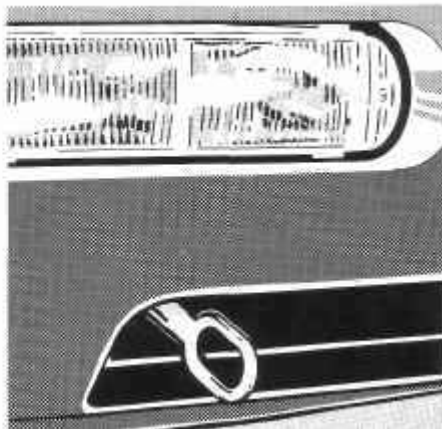
2. Only jump leads of adequate cross-section and fitted with insulated crocodile clips should be used. Follow the manufacturer's instructions.
3. A discharged battery can freeze at  $-10^{\circ}\text{C}$ . A frozen battery must be thawed out before the jump leads are connected.
4. There should be no contact between the two vehicles. Otherwise, current may flow as soon as the positive terminals are connected. Danger of short-circuit.
5. The discharged battery must be correctly connected to its vehicle's electrical system. Do not stoop over the battery. Danger of contact with caustic fluid.
6. Protect the battery from sources of fire such as naked flame, burning cigarettes or sparks generated by electrical contact. Danger of explosion.

Take great care to keep conductive articles of jewelry (rings, chains, wrist watches) well away from live parts of the car. Risk of injury by short-circuit.

7. **Connect the jump leads in the following order:**  
**First fix one end of the (+) lead to the (+) clamp on the right at the front of the engine compartment (arrowed). Then**

**connect the other end of the lead to the (+) terminal of the feed battery.**  
**Now clamp one end of the (-) lead to the (-) terminal of the feed battery, then connect the other end to the cylinder block or the transverse strut in the engine compartment (arrowed).**  
**Route jump leads well away from rotating parts inside the engine compartment.**

8. Start the engine of the vehicle with the supplying current. Run engine with higher rpm.
9. Do not crank the engine for more than 15 seconds; wait for at least 1 minute before repeating the attempt.
10. With the engine running, disconnect the cables in the reverse order.



During towing, always keep the tow rope taut, but avoid sudden jerks on the rope. The vehicle being towed should have the ignition turned on so that the brake and direction indicator lights function, and that the steering lock is released.

**Remember, when the engine is not running, that no servo assistance is given, and more power is required for braking and steering.**

**For towing vehicles fitted with automatic transmission please adhere to the regulations to be found in the section "Automatic Transmission".**

## Towing

The towing eye is located in the tool tray in the rear of your Porsche.

To tow another vehicle, the towing eye must be screwed into the hole in the rear bumper above the rear number plate. Always screw the towing eye right in.

If your Porsche is fitted with a towbar, it is not possible to screw the towing eye into the rear bumper. With these vehicles, the ball bar of the towbar must be stowed in the car ready to be used for towing.

Should it be necessary for your Porsche to be towed, the towing eye must be screwed into the right hole beside the cooling radiator, at the front of the car. Remove the cap with the aid of the offset hex screwdriver.

Always take into account the necessary laws governing towing.

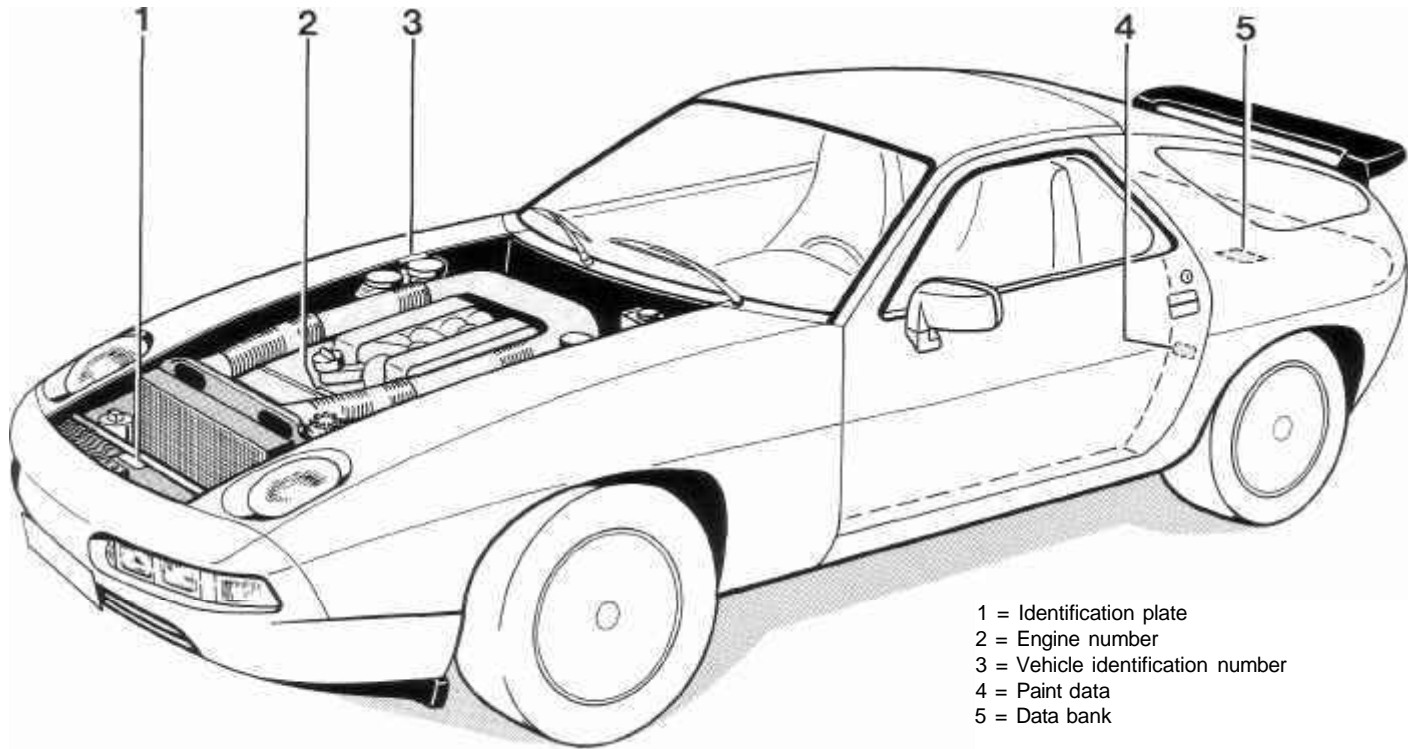
When you tow another vehicle, it must not be heavier than your Porsche.

## Tow or push starting

If your Porsche is fitted with an automatic gearbox, it cannot be tow or push started.

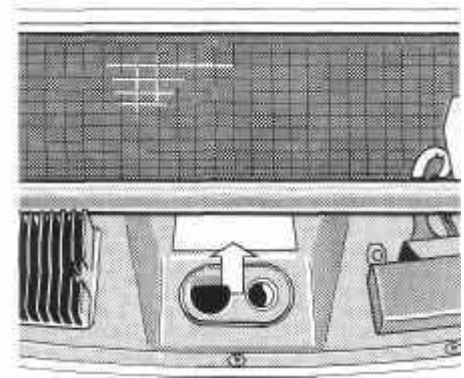
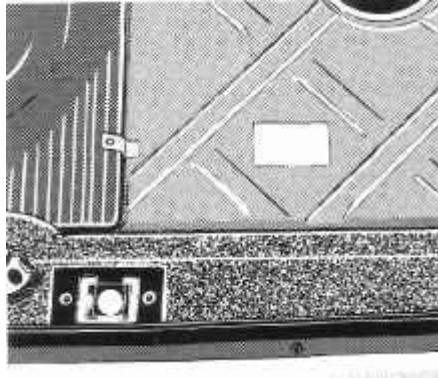
If the battery is defective or completely flat, the engine can only be started by replacing the battery or using jump cables.

# Identification of your Porsche, Technical Data



## Vehicle identification data

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



### Radio number

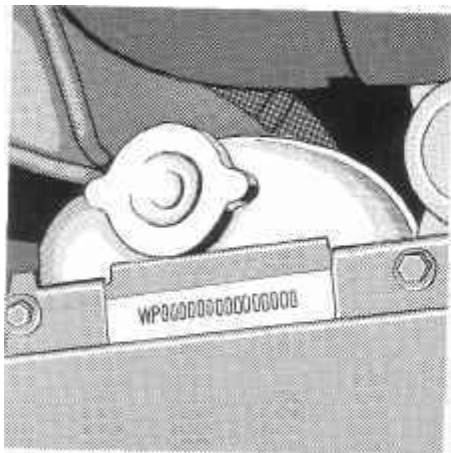
The radio number is beneath the ashtray cover. The number is revealed by removing the ashtray.

### Data bank

The data bank is fixed to the floor in the rear of the luggage compartment next to the spare wheel well. The data bank contains all the important information for your car.

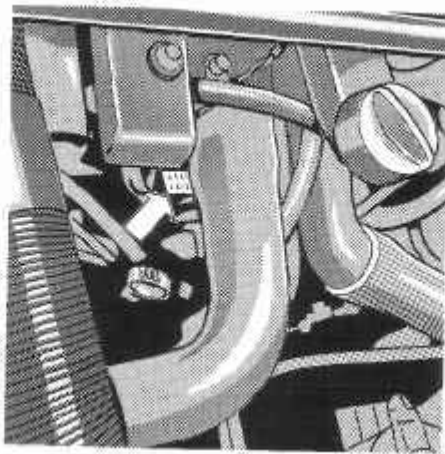
### Identification plate

The identification plate is fitted to the front cross member, behind the engine hood lock.



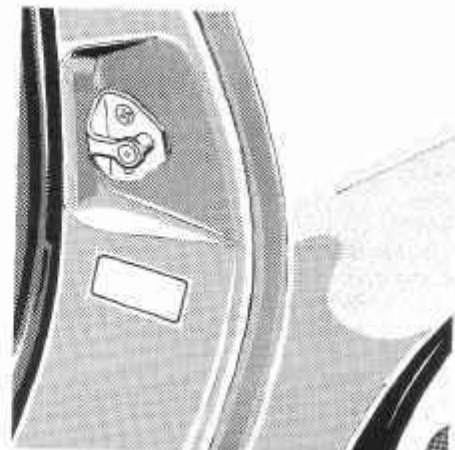
### Vehicle identification number

The vehicle identification number is stamped on the top of the right wheel arch in the engine compartment and is visible through a cut-out in the wing flange.



### Engine number

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



### Paint data

The paint data plate is fixed on the left-hand door lock pillar.

## Technical Data

### Engine M 28.49/50

No. of cylinders	8
Bore	100 mm/3.94 in.
Stroke	85,9 mm/3.38 in.
Effective displacement	5397 cm <sup>3</sup> /329.3 cu in.
Compression ratio	10,4:1
Horsepower (to EEC standard)	257 kW (350 b.h.p.)
at engine speed	5700 rpm
Torque (to EEC standard)	500 Nm (51 kpm)
at engine speed	4250 rpm
Power/volume ratio (to EEC standard)	47.6 kW/litre (64.9 b.h.p./litre)
Oil consumption	up to 1.5 litres (2.6 pts)/ 1000 km
Max. permissible rpm	interruption of fuel supply at 6600 rpm
Spark plugs	Bosch WR 7 DTC
Electrode gap	0,8+ 0,1 mm
Battery	12 V, 72 Ah
Alternator	Three-phase 1610 W/115 A
Firing order	1 _ 3 _ 7 _ 2 - 6 - 5 - 4 - 8
Ignition system	Electronic map-controlled ignition with knock control
Fuel system	LH-Jetronic
Timing gear	Overhead camshafts, bucket tappets with hydraulic valve play compensation, 32 valves
Drive belts	Alternator: Polyrip K 6 - 872; Addit. air pump: 12,5 925-FO with shaped teeth; AC compressor belt: 12,5 x 1080; Servo pump: 12,5 x 1000



## Fuel Octane Rating

The engine is designed to provide optimum performance and fuel consumption if **unleaded premium fuel, minimum 98 RON/88 MON** is used.

If unleaded premium fuels with octane numbers of **at least 95 RON/85 MON** are used, the engine's knock control system automatically adapts the ignition timing.

## Fuel Consumption Figures

In litres/100 km (EEC standard)	Manual transmission	Automatic
at 90 km/h	9,8	9,8
at 120 km/ City cycle	12,0 20,7	11,9 18,8

---

## Power Train

	Manual transmission	Automatic
Gear ratios		
1st gear	3,775:1	3,87:1
2nd gear	2,519:1	2,25:1
3rd gear	1,795:1	1,44:1
4th gear	1,358:1	1,00:1
5th gear	1,000:1	
Reverse gear	3,314:1	5,59:1
Final drive	2,727:1	2,538:1
Clutch	Single plate dry disc hydraulically operated	

## Tyres, rims

Summer tyres. . . . .	<b>front</b> 225/45 ZR 17 on 7,5 J x 17 AH rims (rim offset 65) <b>rear</b> 255/40 ZR 17 on 9 J x 17 AH rims (rim offset 55)
Winter tyres. . . . .	225/45 R 17 90 M&S on 7,5 J x 17 AH rims (rim offset 65) front and 8 J x 17 AH rims (rim offset 52) rear The load rating and code for permissible maximum speed (e.g. 90T) represent minimum requirements. <b>Note instructions in chapter "Tyres and tyres care" before mounting new tyres or changing the type of tyres.</b> <b>In order to ensure the function of tyre pressure warning system, rims with pressure switches must be used.</b>
Collapsible tyre. . . . .	.165/70-16 92 P on 5,5 J x 16 H 2 rim; maximum speed 80 km/h (50 mph).
Tyre pressure. . . . .	for summer tyres 2,5 bar (36 psi) front and rear
(air temperature in tyres 20 °C. . . . .	for winter tyres 2,5 bar (36 psi) front, 3,0 bar (44 psi) rear Collapsible tyre: 2,5 bar (36 psi) <b>Note instructions in chapter on the "Tyre pressure warning system"</b>
Snow chains. . . . .	Fitting only possible on winter tyres (on the driven wheels), size 225/45 R 17 on 8 J 17 AH rims. Max. speed 50 km/h (30 mph).

## Weights

Empty weight per DIN. . . . .	.1620 kg (3571 lbs)	Maximum trailer load, unbraked**. . . . .	.750 kg (1653 lbs)
(with automatic 1640 kg (3615 lbs); load capacity is reduced accordingly)		Maximum trailer load, braked**. . . . .	.1600 kg (3527 lbs)
Maximum gross weight . . . . .	.1960 kg (4321 lbs)	Maximum roof load***. . . . .	.75 kg (165 lbs)
Maximum axle load, front*. . . . .	.940 kg (2072 lbs)	Maximum supported load. . . . .	.75 kg (165 lbs)
Maximum axle load, rear*. . . . .	.1100 kg (2425 lbs)	Maximum towed weight . . . . .	.3560 kg (7848 lbs)

\* Do not exceed maximum gross weight

\*\* Gradient up to 16 %.

\*\*\* Only applicable with the Original Porsche Roof Transport System.

If the previously available Porsche ski and luggage racks are used, the maximum roof load is 35 kg (77 lbs).

## Performance\*

### Manual transmission

### Automatic

Maximum speed. . . . . 275 km/h (172 mph)  
Acceleration 0-100 km/h (0-62 mph). . . . . 5,7 seconds  
Kilometre with standing start. . . . . 24,7 seconds

275 km/h (172 mph)  
5,9 seconds  
25,2 seconds

\*Measured at DIN empty weight and half load, without extras which impair performance.

## Climbing performance

### Manual transmission

### Automatic

1 st gear. . . . . approx. 60 %\*  
2nd gear. . . . . approx. 60 %  
3rd gear. . . . . approx. 40 %  
4th gear. . . . . approx. 27 %  
5th gear. . . . . approx. 18 %

approx. 60 %\*  
approx. 47 %  
approx. 27 %  
approx. 17 %

\*The slip limit on a dry road surface and with standard tyres is at approx. 60 %.

## Filling capacities

Engine . . . . .	approx. 7.5 litres (6.6 Imp. qts.) (The criterion is the dipstick). The difference between the Max. and Min. marks on the dipstick is approx. 1.5 litre (1.3 Imp. qts.). <b>Only use oils tested and recommended by Porsche.</b> Your Official PORSCHE Centre will gladly advise you. Also see chapter "Engine Oils".
Cooling system including heating. . . . .	approx. 16 litres (3.5 Imp. galls.) of cooling fluid; factory filling frost protection down to -30 °C (Scandinavian countries -40 °C). Use only specially developed antifreeze and anticorrosion agents for light-alloy engines and radiators which have been approved by Porsche. Your Official PORSCHE Centre will be glad to advise you.
Manual gearbox with differential. . . . .	approx. 4.8 litres (approx. 1 Imp. gall.) hypoid gear oil SAE 75 W-90 of API classification GL 5 (Mil-L 2105 B).
Automatic transmission with torque converter . . . . .	approx. 9.3 litres (2.0 Imp. galls.). After oil change 7.3 litres (1.6 Imp. galls.) ATF (Dexron II).
Differential of automatic transmission. . . . .	approx. 1.9 litres (approx. 0.4 Imp. galls.) hypoid gear oil SAE 75 W-90 of API classification GL 5 (Mil-L 2105 B).
Power steering. . . . .	approx. 0.7 litre (approx. 1.2 pint) hydraulic fluid ATF (Dexron II).
Fuel tank. . . . .	approx. 86 litres incl. 12 litres reserve (approx. 19 Imp. galls. incl. 7 Imp. qts. reserve).
Brake fluid reservoir.....	approx. 0.2 litres (approx. 1/3 pint). Only use brake fluid conforming to specification SAE J 1703 or DOT 4
Reservoir for limited-slip differential. . . . .	approx. 0.3 litre (approx. 1/2 pint). Only use brake fluid conforming to specification SAE J 1703 or DOT 4
Screen and headlight washers. . . . .	approx. 7.5 litres (approx. 1.64 Imp. galls.).

## Cooling system mixing chart

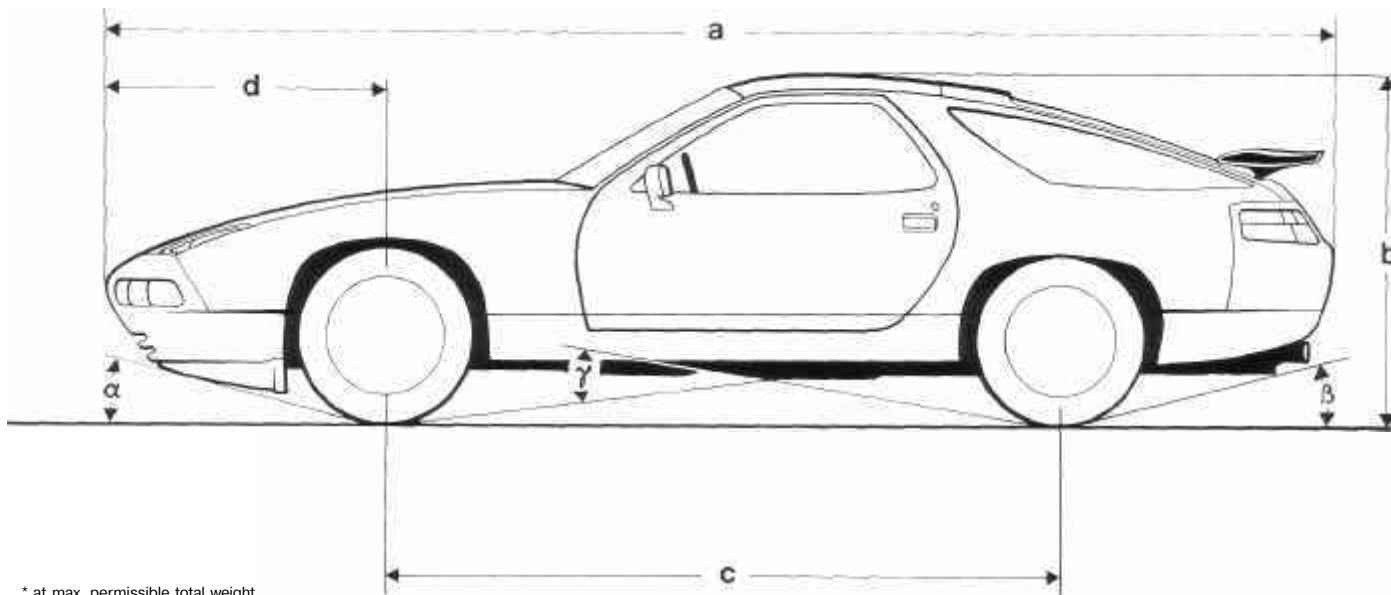
(Average values)

	Frost resistance down to	Antifreeze	Water	Antifreeze	Water
Consult your Official PORSCHE Centre on the approved ante-freeze mixtures.	-30°C (-22°F)	45 %	55%	7,2 litres/6.3 Imp.qts	8.8 litres/7.7 Imp.qts.
	-35°C (-31 °F)	50 %	50 %	8,0 litres/7.0 Imp.qts.	8.0 litres/7.0 Imp.qts.
	-40 °C (-40° F)	55 %	45 %	8,8 litres/7.7 Imp.qts.	7.2 litres/6.3 Imp.qts.

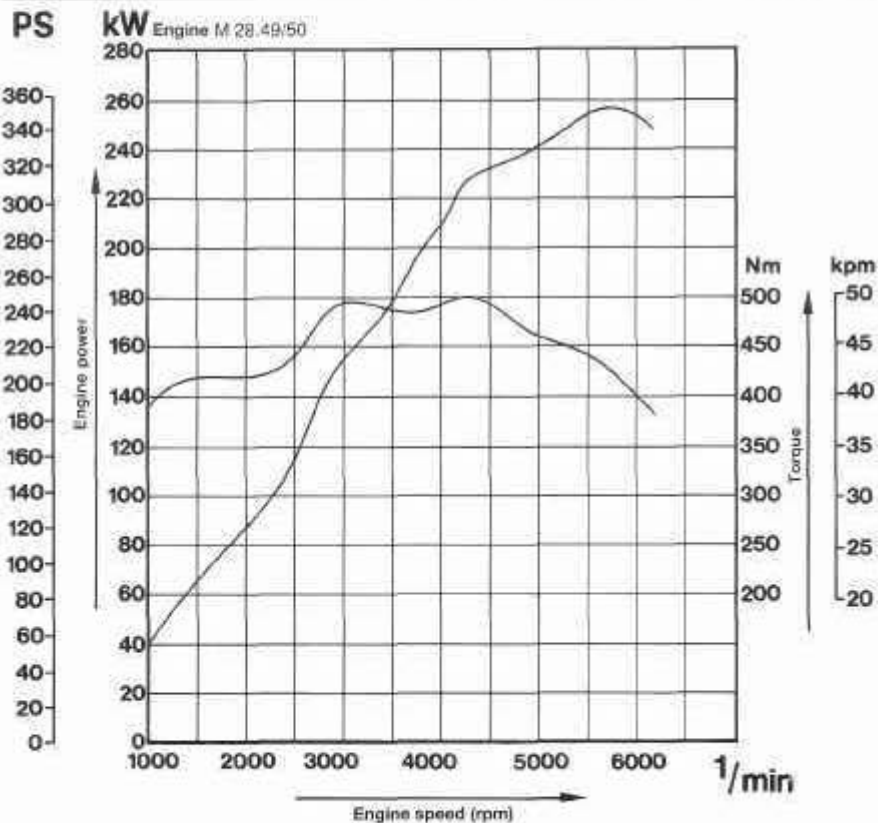
## Dimensions (at curb weight to DIN)

Wheelbase (c)	.2500 mm( 98,43 ins)
Front track	.1551 mm( 61,06 ins)
Rear track	.1616 mm( 63,62 ins)
Length (a)	.4520 mm(177,95 ins)
Overall width	.1890 mm( 74,41 ins)
Height (b)	.1282 mm( 50,47 ins)

Overhang front (d)	.1021 mm(40,20 ins)
Ground clearance	*120 mm( 4,72 ins)
Turning circle	env. 11,5 m(37 ft 7 ins)
Overhang angle front (α)	*14°
Overhang angle rear(β)	*14,5°
Ramp angle (γ)	*12,0°



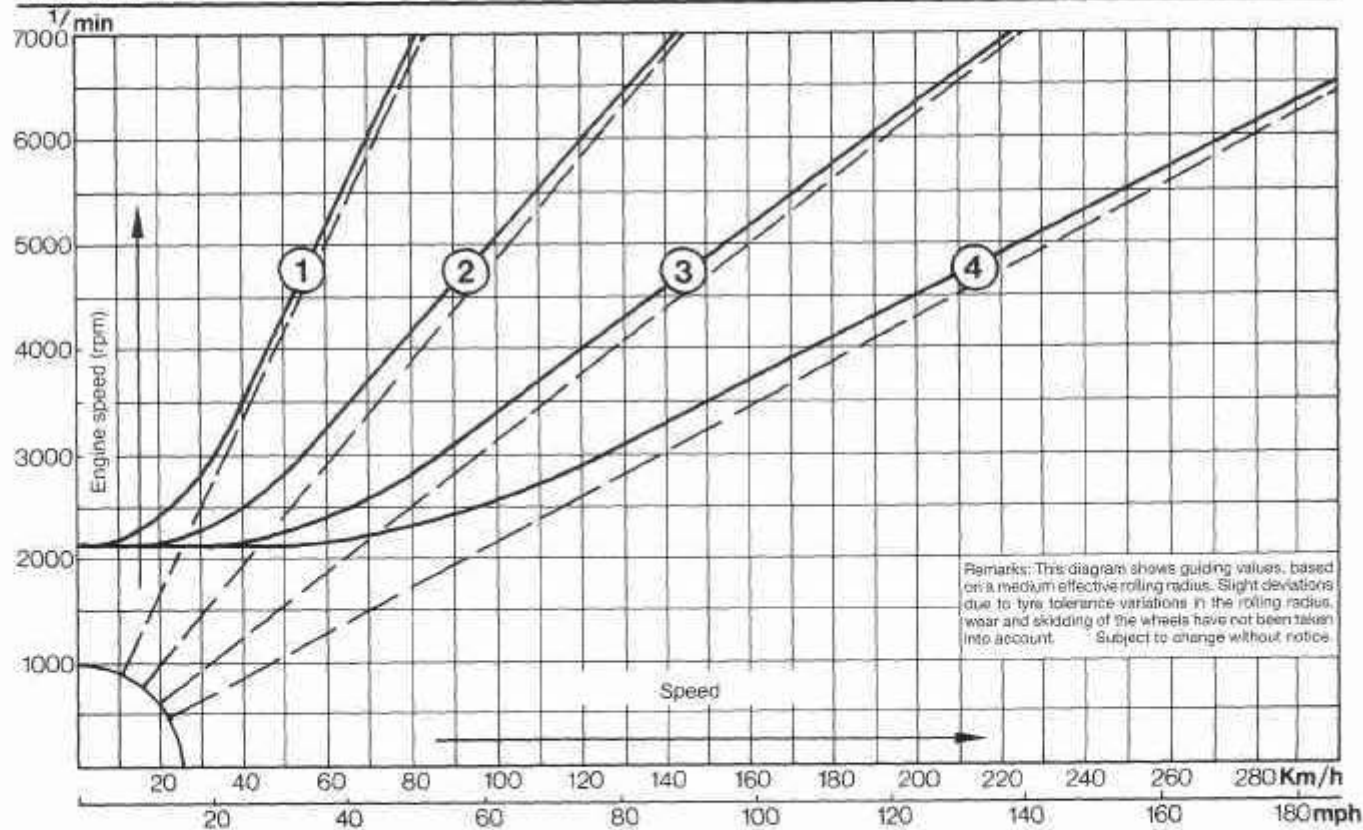
\* at max. permissible total weight  
 \*inc. standard 38 mm spacers



# Transmission diagram

928 GTS

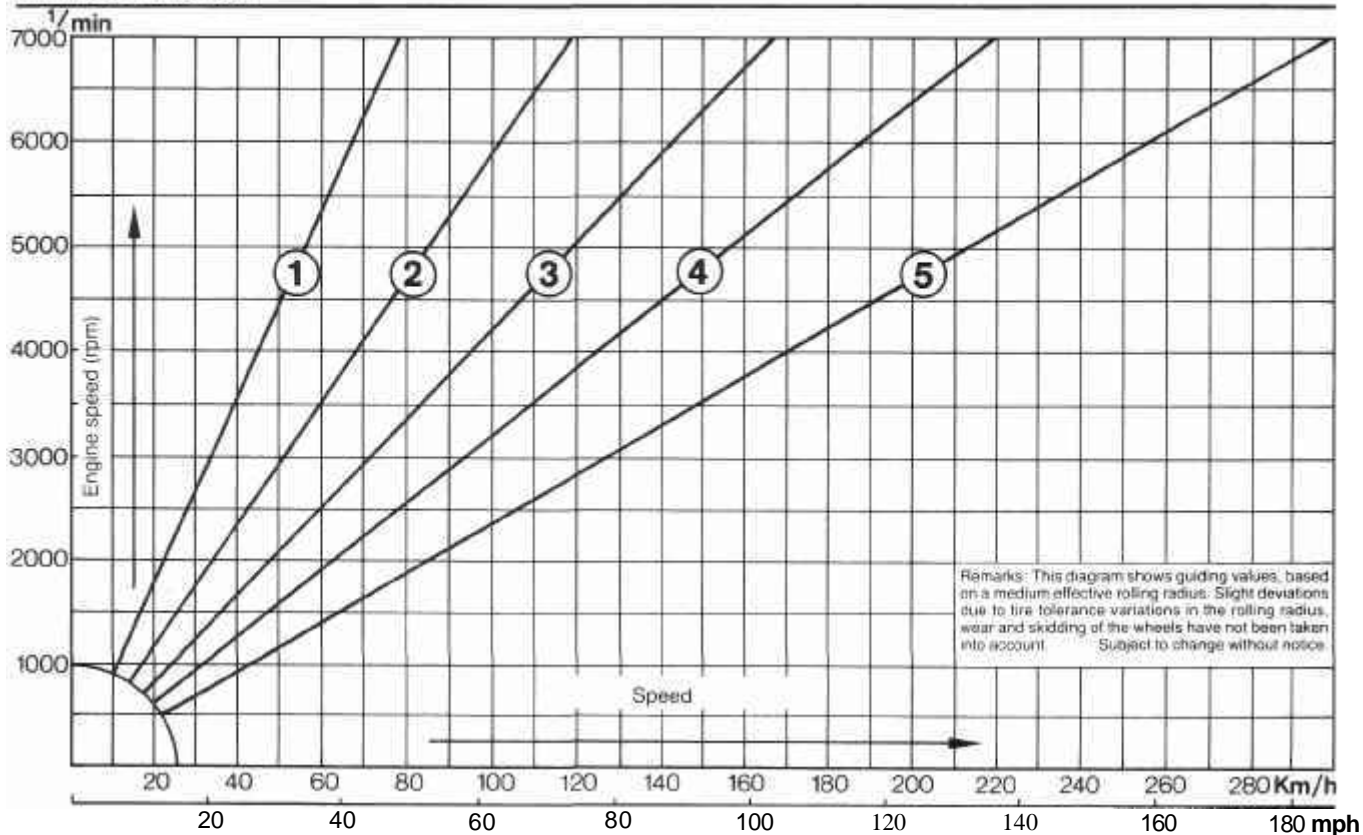
Automatic A 28/18



# Transmission diagram

Manual gearbox G28/57

*928 GTS*





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