

## Important!

With selector lever in position "D", "4" or "3", upshifting from 1st to 2nd to 3rd gear is delayed depending on vehicle speed and engine temperature. This allows the catalytic converter to heat up more quickly to operating temperatures.

During the brief warm-up period this delayed upshift and increased engine noise might be perceived as a malfunction. However, neither the engine nor transmission are negatively affected by this mode of operation. The delayed upshift is effective with vehicle speeds below 31 mph (50 km/h) at partial throttle and engine temperatures below 95°F (35°C). To avoid overrevving the engine when the selector lever is moved to a lower driving range, the transmission will not shift to a lower gear as long as the vehicle speed exceeds the speed limit of that gear.

To prevent the engine from laboring at low RPMs, do not allow the engine speed to drop too low on uphill gradients.

Depending on the degree of the incline, shift selector lever to a lower gear range early enough to maintain engine RPM within the best torque range.

## Warning!

**On slippery road surfaces, never downshift in order to obtain braking action. This could result in rear wheel slip and reduced vehicle control. Your vehicle's ABS will not prevent this type of loss of control.**

## Maneuvering

To maneuver in tight areas, e.g. when pulling into a parking space, control the car speed by gradually releasing the brakes. Accelerate gently and never abruptly step on the accelerator. To rock a car out of soft ground (mud or snow), alternately shift from forward to reverse, while applying slight partial throttle.

Rocking a car free in this manner may cause the ABS malfunction indicator lamp to come on. Turn off and restart the engine to clear the malfunction indication.

## Stopping

For brief stops, e.g. at traffic lights, leave the transmission in gear and hold vehicle with the service brake.

For longer stops with the engine idling, shift into "N" or "P" and hold the vehicle with the service brake.

When stopping the vehicle on an uphill gradient, do not hold it with the accelerator, use the brake. This avoids unnecessary transmission heat build up.

## Warning!

**Getting out of your car with the selector lever not fully engaged in position "P" is dangerous. Also, when parked on an incline, position "P" alone may not prevent your vehicle from moving, possibly hitting people or objects.**

**Always set the parking brake in addition to shifting to position "P".**

**When parked on an incline, also turn front wheel against curb.**



### Program Mode Selector Switch

The transmission is provided with a selector switch for Standard "S" and Winter/Wet (snow and ice) "W" program modes.

### Warning!

Always be certain of the program mode selected since the vehicle driving characteristics change with the selection of the program mode.

**S** Standard mode  
Press switch on symbol "S". Use this mode for all regular driving. The vehicle starts out in 1st gear.

**W** Winter/Wet (snow and ice) mode  
Press switch on symbol "W". The vehicle starts out in 2nd gear, except with selector lever in 1st gear, or with accelerator pedal in kick-down position.

The "W" mode helps to improve traction and driving stability of the vehicle.

With hard acceleration the upshifts occur at lower vehicle and engine speeds than in the "S" program mode.

### Caution!

Never change the program mode when the selector lever is out of position "P". It could result in a change of driving characteristics for which you may not be prepared

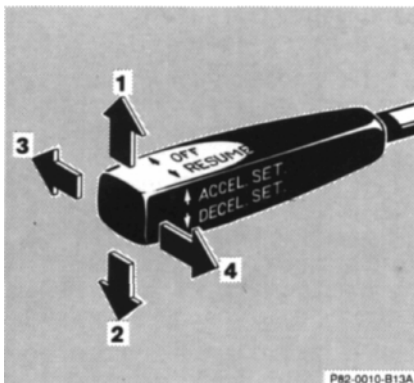
### Emergency Operation (Limp Home Mode)

If vehicle acceleration worsens, or the transmission no longer shifts, the transmission is most likely operating in Limp Home Mode which engages when there is a malfunction at the transmission. This condition may be accompanied by the "CHECK ENGINE" malfunction indicator lamp in the instrument cluster coming on. In this mode only the 2nd gear or reverse gear can be activated.

To engage 2nd gear or reverse:

1. Stop the vehicle.
2. Move selector lever to position "P".
3. Turn off the engine.
4. Wait 10 seconds.
5. Restart the engine.
6. Move selector lever to position "D" (for 2nd gear), or move selector lever to position "R" (for reverse gear).

Have the transmission checked at your authorized Mercedes-Benz dealer as soon as possible.



## Cruise Control

Any given speed above approximately 25 mph (40 km/h) can be maintained with the cruise control by operating the lever.

- 1** Accelerate and set:  
Lift lever briefly to set speed. Hold lever up to accelerate.
- 2** Decelerate and set:  
Depress lever briefly to set speed.  
Hold lever down to decelerate

Normally the vehicle is accelerated to the desired speed with the accelerator.

Speed is set by briefly pushing the lever to position 1 or 2. The accelerator can be released.

The speed can be increased (e.g. for passing) by using the accelerator. After the accelerator is released, the previously set speed will be resumed automatically.

If a set speed is to be increased or decreased slightly, e.g. to adapt to the traffic flow, hold lever in position 1 or 2 until the desired speed is reached, or briefly tip the lever in the appropriate direction for increases or decreases in 0.6 mph (1 km/h) increments. When the lever is released, the newly set speed remains.

## **3** Canceling

To cancel the cruise control, briefly push lever to position 3.

When you step on the brake pedal or the vehicle speed drops below approx. 25 mph (40 km/h), for example when driving upgrade, the cruise control will be canceled.

If the cruise control cancels by itself and remains inoperative until the engine is restarted, have the system checked at your authorized Mercedes-Benz dealer as soon as possible.

## **4** Resume

If the lever is briefly pushed to position 4 when driving at a speed exceeding approx. 25 mph (40 km/h), the vehicle resumes the speed which was set prior to the cancellation of the cruise control. The last memorized speed is canceled when the electronic key in the steering lock is turned to position 1 or 0.

## Notes:

If the engine does not brake the vehicle sufficiently while driving on a downgrade, the speed you set on the cruise control may be exceeded and you may have to step on the brake pedal to slow down. As soon as the grade eases, the cruise controlled speed will again be maintained as long as the brakes were not previously applied, or the lever may be used to resume the previously set speed if the brakes were applied.

## Important!

Moving gear selector lever to position "N" switches the cruise control off.

## Warning!

**Only use the cruise control if the traffic and weather conditions make it advisable to travel at a steady speed.**

- **The use of cruise control can be dangerous on winding roads or in heavy traffic because conditions do not allow safe driving at a steady speed.**
- **The use of cruise control can be dangerous on slippery roads. Rapid changes in tire adhesion can result in wheel spin and loss of control.**

**The "Resume" function should only be operated if the driver is fully aware of the previously set speed and wishes to resume this particular preset speed.**

## **Parking Assist (Parktronic) (optional)**

The Parktronic assists the driver during parking maneuvers at low speeds. It visually and audibly indicates the distance between the vehicle and an obstacle.

The front area of the vehicle is monitored when driving forward. When reversing, the front as well as the rear areas are monitored.

With the electronic key in steering lock position 2, the Parktronic engages automatically at speeds up to approx. 10 mph (15 km/h) and deactivates during higher speeds.

The Parktronic can be switched off by a control switch located in the center console.

## **Warning!**

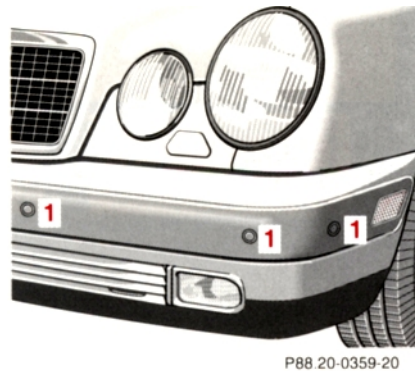
**Parktronic is a supplemental system. It is not intended to nor does it replace the need for extreme care. The responsibility during parking and other critical maneuvers rests always with the driver.**

**Special attention must be paid to objects having smooth surfaces or low silhouettes (e.g. trailer couplings, painted posts, or street curbs). Such objects may not be detected by the system and can damage the vehicle. The operational function of the Parktronic can be affected by dirty sensors, especially at times of snow and ice.**

**Interference caused by other ultrasonic signals (e.g. working jackhammers or the air brakes of trucks) should be taken into consideration.**

## **Sensors**

A total of 10 sensors monitor the vehicle front and rear areas. Six sensors are located in the front bumper, four in the rear bumper.

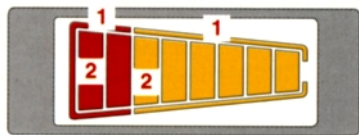


**1** Sensor located in bumper

For proper operation of the Parktronic always keep the sensors clean.

Use a mild car wash detergent, such as Mercedes-Benz approved Car Shampoo, with plenty of water. When using a steam cleaner or power washer, aim nozzle only briefly from a minimum distance of 4 in. (10 cm) at sensors.

To prevent scratches, never apply strong force or use a hard cloth when cleaning the sensors. Do not attempt to wipe dirty sensors with a dry cloth or sponge.



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## Warning Indicators

- 1 Frame
- 2 Segments

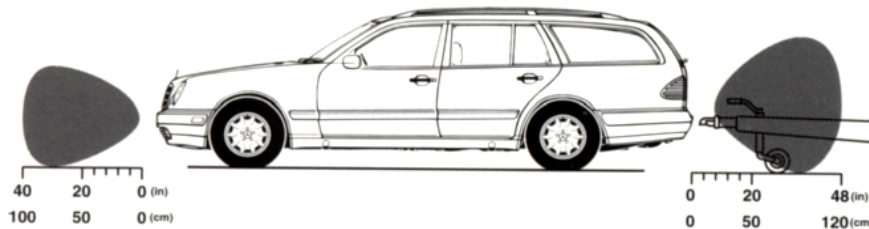
Visual and audible signals indicate to the driver the distance between the vehicle and an obstacle.

Warning indicators for the front area are located above the left and center air outlets in the dashboard.

Warning indicator for the rear area are integrated in the rear passenger compartment lamp.

The frames are illuminated in white when the Parktronic is engaged. Each of the warning indicator has 6 yellow and 2 red segments.

As soon as the sensors detect an obstacle, one or more segments light up, depending on the distance.



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## Monitoring reach of sensors

### Front bumper:

center approx. 40 in (100 cm)  
corner approx. 24 in (60 cm)

### Rear bumper:

center approx. 48 in (120 cm)  
corner approx. 32 in (80 cm)

The first yellow segment lights up at above distance. Additional segments light up as the vehicle comes closer to the obstacle.

## Minimum distance between vehicle and obstacle.

### front

corners approx. 6 in (15 cm)  
center approx. 8 in (20 cm)  
rear approx. 8 in (20 cm)

One or both red segments light up. In addition, an alarm sounds for approximately 3 seconds.

The obstacle may not be recognized if outside the shaded sensor field, and no longer be indicated when approaching it any closer (warning indicator lights go out).



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## Parktronic Switch

- 1 Parktronic switched off
- 2 Parktronic switched on
- 3 Indicator light - comes on when Parktronic is switched off.

The switch is located on the center console.

## **Parktronic Malfunction**

All red segments of the warning indicators light up, and a warning sounds for 3 seconds, if Parktronic does not function properly.

A dirty sensor could be the reason.

After cleaning the sensors, turn electronic key in steering lock to position 2. If the defect continues to be displayed, have the system checked at your authorized Mercedes-Benz dealer.

## **Multifunction Indicator**

### **Language Selection**

Warning message selection is available in the English, French, German, Italian, or Spanish language.

With the electronic key in steering lock position 2, simultaneously press reset buttons for Trip Odometer (**O**) and Multifunction Indicator (**R**), located in the instrument cluster, until the presently selected language appears on the screen.

Press button **O** until the requested language appears.

Turn the electronic key in steering lock to position 0.

### **Multiple Malfunctions**

When the multiple malfunction symbol appears, this indicates that several malfunction messages are stored in memory.

Push reset button (**R**) in the instrument cluster for subsequent messages.

## **Temporarily Switching Off**

To temporarily switch off the multifunction indicator warning symbol and message, push reset button (**R**) in the instrument cluster.

The multifunction indicator display is inoperative until the electronic key in steering lock is turned again to position 0 or 2.

The symbols and messages for Parking Brake, Seat Belts, Exterior Lights, and Display Defective cannot be switched off.

### **Defective**

When the message "Display Defective" appears, this indicates that the system is not operational, and possibly other warnings cannot be shown.

Have the vehicle electronic system checked at your authorized Mercedes-Benz dealer as soon as possible.



## Charge Indicator

When the symbol and message appear while the engine is running, this indicates a fault which must be repaired at an authorized Mercedes-Benz dealer immediately.

It may indicate that the poly-V-belt has broken. Should this condition occur, the poly-V-belt must be replaced before continuing to operate the vehicle. Otherwise, the engine will overheat due to an inoperative water pump which may result in damage to the engine.

Do not continue to drive the vehicle with the charge indicator symbol displayed. Doing so could result in serious engine damage that is not covered by the Mercedes-Benz Limited Warranty.

## Low Engine Oil Level Warning

When the symbol and message appear while the engine is running and at operating temperature, the engine oil level has dropped to approximately the minimum mark on the dipstick.

When this occurs, the warning will first come on intermittently and then stay on if the oil level drops further. If no oil leaks are noted, continue to drive to the nearest service station where the engine oil should be topped to the "full" mark on the dipstick with an approved oil.

The low engine oil level warning should not be ignored. Extended driving with the symbol displayed could result in serious engine damage that is not covered by the Mercedes-Benz Limited Warranty.

In addition to the warning symbol, the engine oil level should be periodically checked with the dipstick or via the multifunction indicator, for example during a fuel stop, or before a long trip (see Index).

Note:

E 300 Turbodiesel - Oil level check via multifunction indicator not possible.

## Engine Oil Consumption

Engine oil consumption checks should only be made after the break-in period. During the break

in period, higher oil consumption may be noticed and is normal. Frequent driving at high engine speeds results in increased consumption.

## Fuel Reserve and Fuel Cap Placement

### Warning

When the symbol and message appear after starting the engine, or if it comes on while driving, it indicates that the fuel level is down to the reserve quantity of approximately: 2.6 gal (10 liters).

The warning lamp blinks when the fuel cap is not closed, or a fuel system leak has been detected. Retighten cap and see if lamp goes out.

If the warning lamp continues to blink after closing the fuel cap correctly, have the fuel system checked at your authorized Mercedes-Benz dealer as soon as possible.

Leaving the engine running and the fuel cap open can cause the "Check Engine" lamp to illuminate.

## Tachometer

Red marking on tachometer: Excessive engine speed.

Avoid this engine speed, as it may result in serious engine damage that is not covered by the Mercedes-Benz Limited Warranty.

For engine protection, the fuel supply is interrupted if the engine is operated within the red marking.

## Seat Belt Warning Lamp

With the electronic key in steering lock position 2, the warning lamp comes on, a message is displayed in the multifunction indicator, and a warning sounds for a short time if the drivers seat belt is not fastened.

After starting the engine, the warning lamp blinks for a brief period to remind the driver and passengers to fasten seat belts.

## Outside Temperature Indicator

The temperature sensor is located in the front bumper area. Due to its location, the sensor can be affected by road or engine heat during idling or slow driving. This means that the accuracy of the displayed temperature can only be verified by comparison to a thermometer placed next to the sensor, not by comparison to external displays (e.g. bank signs etc.).

Adaptation to ambient temperature takes place in steps and depends on the prevailing driving conditions (stop-and-go or moderate, constant driving) and amount of temperature change.

### Warning!

**The outside temperature indicator is not designed to serve as an Ice-Warning Device and is therefore unsuitable for that purpose. Indicated temperatures just above the freezing point do not guarantee that the road surface is free of ice.**

## Coolant Temperature Gauge

If the antifreeze mixture is effective to -22°F (-30°C), the boiling point of the coolant in the pressurized cooling system of your vehicle is approx. 266°F (130°C).

During severe operating conditions and stop-and-go city traffic, the coolant temperature may rise close to the red marking.

The engine should not be operated with the coolant temperature in the red zone. Doing so may cause serious engine damage which is not covered by the Mercedes-Benz Limited Warranty.

### **Warning!**

- **Driving when your engine is badly overheated can cause some fluids which may have leaked into the engine compartment to catch fire. You could be seriously burned.**
- **Steam from an overheated engine can cause serious burns and can occur just by opening the engine hood. Stay away from the engine if you see or hear steam coming from it.**

**Turn off the engine, get out of the car and do not stand near the car until it cools down.**

### **Low Engine Coolant Level Warning**

When the symbol and message appear while driving, then the coolant level has dropped below the required level. If no leaks are noticeable and the engine temperature does not increase, continue to drive to the nearest service station and have coolant added to the coolant system (see Index).

The low engine coolant level warning should not be ignored. Extended driving with the symbol displayed may cause serious engine damage not covered by the Mercedes-Benz Limited Warranty.

In cases of major or frequent minor coolant loss, have the cooling system checked at your authorized Mercedes-Benz dealer as soon as possible.

Note:

Do not drive without coolant in the cooling system. The engine will overheat causing major engine damage. Monitor the coolant temperature gauge while driving.

### **Warning!**

**Do not spill antifreeze on hot engine parts. Antifreeze contains ethylene glycol which may burn if it comes into contact with hot engine parts. You can be seriously burned.**

### **Low Windshield and Headlamp Washer System Fluid Level Warning**

When the symbol and message appear while the engine is running, the level of the reservoir has dropped to approx.  $\frac{1}{3}$  of the total volume. The reservoir should be refilled with MB Windshield Washer Concentrate "S" and water (or commercially available premixed windshield washer solvent/antifreeze, depending on ambient temperature - see Index) at the next opportunity. The reservoir for the windshield and headlamp washer systems is located in the engine compartment.

## Exterior Lamp Failure Indicator

When the symbol and message appear after starting the engine, or if it comes on while driving, this symbol indicates a failure in the parking lamp, taillamps, stop lamp, or low beam headlamp.

If an exterior lamp fails, the indicator symbol will come on only when that lamp is switched on.

If a brake lamp fails, the lamp failure indicator will come on when applying the brake and stays on until the engine is turned off.

Note:

If additional lighting equipment is installed (e.g. auxiliary headlamps etc.) be certain to connect into the fuse before the failure indicator monitoring unit in order to avoid damaging the system.

## Brake Pad Wear Indicator

When the symbol and message appear during braking, this indicates that the brake pads are worn down.

Have the brake system checked at your authorized Mercedes-Benz dealer as soon as possible.

## Brake Warning

When the brake warning lamp and message appear while the engine is running, this means:

- there is insufficient brake fluid in the reservoir (engine running and parking brake released), or
- the parking brake is set (engine running).

## Warning!

**Driving with the brake warning lamp illuminated can result in an accident. Have your brake system checked immediately if the brake warning lamp stays on. Don't add brake fluid before checking the brake system. Overfilling the brake fluid reservoir can result in spilling brake fluid on hot engine parts and the brake fluid catching fire. You can be seriously burned.**


Note:

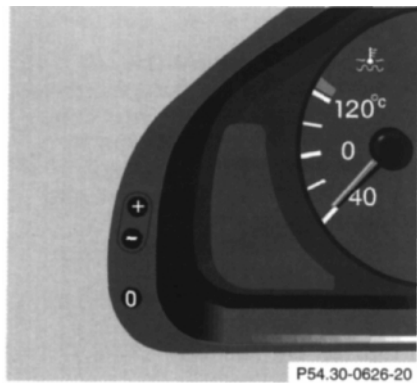
If you find that the minimum mark on the brake fluid reservoir is reached, have the brake system checked for brake pad thickness and leaks.



### Flexible Service System (FSS)

The FSS permits a flexible service schedule that is directly related to the operating conditions of the vehicle.

The symbol  appears together with a message in the multifunction indicator prior to the next suggested service. Depending on operating conditions throughout the year, the next service is calculated and displayed in days or distance remaining.



The message is displayed for approx. 10 seconds when turning the electronic key in steering lock to position 2, or it can be canceled manually by pressing button **0**.

Once the suggested term has passed, the symbol plus message "EXCEEDED BY" appear, when turning the electronic key to position 2.

The FSS display can also be called up for approx. 10 seconds with display illuminated by pressing button **0** twice.

Following a completed service the Mercedes-Benz dealer sets the counter to 10 000 miles (Canada: 15 000 km) and 365 days.

The counter can also be set by any individual. To do so:

1. Turn electronic key in steering lock to position 2.
2. Within 4 seconds press button **0** twice.
3. The present status for days or distance is displayed. Within 10 seconds turn electronic key in steering lock to position **0**.
4. Press and hold button **0**, while turning electronic key in steering lock to position 2 again. The present status for days or distance is displayed once more. Continue to hold button **0**. After approx. 10 seconds a signal sounds, and the display shows 10 000 miles (Canada: 15 000 km).
5. Release button **0**.

If the FSS counter was inadvertently reset, have a Mercedes-Benz dealer correct it.

## Notes:

When disconnecting vehicle battery for one or more days at a time, such days will not be counted. Any such days not counted by the FSS can be added by your Mercedes-Benz dealer. The interval between services is determined by the kind of vehicle operation.

Driving at extreme speeds, and cold starts combined with short distance driving in which the engine does not reach normal operating temperature, reduce the interval between services.

## Models E 320 and E 430:

The FSS allows for distances between 10 000 miles (Canada: 15 000 km) and 20 000 miles (Canada: 30 000 km), or from 365 to 730 days between services.

## Model E 300 TURBODIESEL:

The FSS allows for distances between 10 000 miles (Canada: 15 000 km) and 15 000 miles (Canada: 22 500 km), or from 365 to 730 days between services.

However you choose to set your reference numbers, the scheduled services as posted in the Service Booklet must be followed to properly care for your vehicle.

## Antilock Brake System (ABS)

### Important!

The ABS improves steering control of the vehicle during braking maneuvers. Do not pump the brake pedal, rather use firm, steady brake pedal pressure. Pumping the brake pedal defeats the purpose for ABS and significantly reduces braking effectiveness.

The ABS prevents the wheels from locking up above a vehicle speed of approximately 5 mph (8 km/h) independent of road surface conditions.

At the instant one of the wheels is about to lock up, a slight pulsation can be felt in the brake pedal, indicating that the ABS is in the regulating mode. Keep firm and steady pressure on the brake pedal while experiencing the pulsation.

On slippery road surfaces, the ABS will respond even with light brake pedal pressure because of the increased likelihood of locking wheels. The pulsating brake pedal can be an indication of hazardous road conditions and functions as a reminder to take extra care while driving.

## ABS Control

The ABS malfunction indicator lamp in the instrument cluster comes on with the electronic key in steering lock position 2 and should go out with the engine running.

When the ABS malfunction indicator lamp symbol and warning in the instrument cluster come on while the engine is running, it indicates that the ABS has detected a malfunction and has switched off. In this case, the brake system functions in the usual manner, but without antilock assistance.

With the ABS malfunctioning, the BAS, ASR or ESP, if vehicle so equipped, are also switched off. Both malfunction indicator lamps come on with the engine running.

If the charging voltage falls below 10 volts, the malfunction indicator lamp comes on and the ABS is switched off. When the voltage is above this value again, the malfunction indicator lamp should go out and the ABS should be operational.

Have the system checked at your authorized Mercedes-Benz dealer as soon as possible.

## Warning!

**ABS cannot prevent the natural laws of physics from acting on the vehicle, nor can it increase the traction made available by the road conditions. The ABS cannot prevent accidents, including those resulting from excessive speed in turns, following another vehicle too closely, or aquaplaning. Only a safe, attentive, and skillful driver can prevent accidents. The capabilities of an ABS equipped vehicle must never be exploited in a reckless or dangerous manner which could jeopardize the user's safety or the safety of others.**

Note:

To alert following vehicles to slippery road conditions you discover, operate your hazard warning flashers as appropriate.

## Brake Assist System (BAS)

### Warning!

**BAS cannot prevent the natural laws of physics from acting on the vehicle, nor can it increase braking efficiency beyond that afforded by the condition of the vehicle brakes and tires or the traction afforded. The BAS cannot prevent accidents, including those resulting from excessive speed in turns, following another vehicle too closely, or aquaplaning. Only a safe, attentive, and skillful driver can prevent accidents. The capabilities of a BAS equipped vehicle must never be exploited in a reckless or dangerous manner which could jeopardize the user's safety or the safety of others.**

The BAS is designed to maximize the vehicle's braking capability during emergency braking maneuvers by having maximum power boost applied to the brakes more quickly in emergency braking conditions than might otherwise be afforded solely by the driver's braking style. This can help reduce braking distances over what ordinary driving and braking style might do. The BAS complements the Antilock Brake System (ABS).

To receive the benefit of the system you must apply continuous full braking power during the stopping sequence. Do not reduce brake pedal pressure.

Once the brake pedal is released, the BAS is deactivated

The malfunction indicator lamps for the ASR or ESP are combined with the BAS malfunction indicator lamp.

The BAS/ASR or BAS/ESP malfunction indicator lamp in the instrument cluster comes on with the electronic key in steering lock position 2 and should go out with the engine running.

If the BAS/ASR or BAS/ESP malfunction indicator lamp comes on permanently while the engine is running, a malfunction has been detected in either system. As a result, it is possible that now only partial engine output will be available, and pressing the accelerator pedal will require more effort. If the BAS malfunctions, the brake system functions in the usual manner, but without BAS.

If the charging voltage falls below 10 volts, the malfunction indicator lamp comes on and the BAS is switched off. When the voltage is above this value again, the malfunction indicator lamp should go out and the BAS is operational.

With the ABS malfunctioning, the BAS, ASR or ESP are also switched off. Both malfunction indicator lamps come on with the engine running.

Have the BAS, ASR or ESP checked at your authorized Mercedes-Benz dealer as soon as possible.



## **Electronic Traction System (ETS)** (Model E320 with All Wheel Drive [AWD]: 4-ETS)

The 4-ETS improves vehicle's ability to utilize available traction, especially under slippery road conditions. The brakes are applied to the spinning wheel and power is transferred to the wheel(s) with traction. At approximately 50 mph (80 km/h), the ETS switches off at the front wheels, and at approximately 80 mph (130 km/h) at the rear wheels. The ETS warning lamp, located in the speedometer dial, starts to flash at any vehicle speed, as soon as the tires lose traction and the wheels begin to spin.

### **Important!**

If the ETS warning lamp flashes:

- during take-off, apply as little throttle as possible,
- while driving, ease up on the accelerator.

Adapt your speed and driving to the prevailing road conditions.

### **ETS Control**

If the yellow BAS/ETS malfunction indicator lamp comes on while the

ETS warning lamp flashes, with the engine running, the electronic traction system is being switched off temporarily on one or more wheels to prevent overheating of the drive wheel brakes.

If the BAS/ETS malfunction indicator lamp comes on permanently with the engine running, a malfunction has been detected in either system.

If the BAS malfunctions, the brake system functions in the usual manner, but without BAS.

Have the BAS or ETS checked at your authorized Mercedes-Benz dealer as soon as possible.

With the ABS malfunctioning, the ETS is also switched off.

### **Caution!**

Model E320 with AWD: 4-ETS

Operational tests with the engine running can only be conducted on a 2-axle dynamometer. Otherwise the 4-ETS applies the brakes to the spinning wheels.

If the vehicle is towed with one axle raised (see *Towing the vehicle* in Index), or when testing the parking brake on a brake test dynamo

meter, the engine must be shut off (electronic key in steering lock position 0 or 1). Otherwise, the electronic traction system will immediately be engaged and will apply the brakes.

Notes:

The indicator lamp for the ETS is combined with that of the BAS. The yellow BAS/ETS malfunction indicator lamp in the instrument cluster and the yellow ETS warning lamp in the speedometer dial come on with the electronic key in steering lock position 2. They should go out with the engine running.

Driving the vehicle with varied size tires will cause the wheels to rotate at different speeds, therefore the acceleration slip regulation may activate (yellow ETS warning lamp in speedometer dial comes on). For this reason, all wheels, including the spare wheel, must have the same tire size.

In winter operation, the maximum effectiveness of the four wheel electronic traction system is only achieved with Mercedes-Benz recommended M+S rated radial-ply tires and/or snow chains.

## Acceleration Slip Regulation (ASR)

The acceleration slip regulation will engage at all vehicle speeds, if one or both drive wheels begin to lose traction and spin due to excessive acceleration. While engaged, the yellow warning lamp in the speedometer flashes.

With the acceleration slip regulation engaged, the brake is applied to the spinning drive wheel until it regains sufficient traction. If both drive wheels lose traction and spin, the brake is applied to both drive wheels and simultaneously, engine torque is limited, to improve the vehicle's driving stability.

As traction on the road surface increases, the allowable engine torque also increases again and the brake is no longer applied to drive wheels.

### Important!

If the ASR warning lamp flashes, adapt your speed and driving to the prevailing road conditions.

### Caution!

If the vehicle is towed with the front axle raised (see *Towing the vehicle* in Index), the engine must be shut off (electronic key in steering lock position 0 or 1). Otherwise, the acceleration slip regulation will immediately be engaged and will apply the rear wheel brakes.

### Notes:

The indicator lamp for the ASR is combined with that of the BAS. The yellow BAS/ASR malfunction indicator lamp in the instrument cluster and the yellow ASR warning lamp in the speedometer dial come on with the electronic key in steering lock position 2. They should go out with the engine running.

If the BAS/ASR malfunction indicator lamp comes on with the engine running, a malfunction has been detected in either system. Pressing the accelerator pedal will require greater effort. Only partial engine output will be available.

If the BAS malfunctions, the brake system functions in the usual manner, but without BAS.

Have the BAS or ASR checked at your authorized Mercedes-Benz dealer as soon as possible.

With the ABS malfunctioning, the ASR is also switched off.

Driving the vehicle with varied size tires will cause the wheels to rotate at different speeds, therefore the acceleration slip regulation may activate (yellow ASR warning lamp in speedometer dial comes on). For this reason, all wheels, including the spare wheel, must have the same tire size.

When testing the parking brake on a brake test dynamometer, the engine must be shut off. Otherwise, the acceleration slip regulation will immediately be engaged and will apply the rear wheel brakes.

In winter operation, the maximum effectiveness of the acceleration slip regulation is only achieved with Mercedes-Benz recommended M+S rated radial-ply tires and/or snow chains.



### ASR Control Switch

ASR control switch located on center console

To improve the vehicle's traction when driving with snow chains, or starting off in deep snow, sand or gravel, press the upper half of the ASR switch. The ASR warning lamp, located in the speedometer dial, is continuously illuminated.

With the ASR system switched off, the engine torque reduction feature is cancelled. Therefore, the enhanced vehicle stability offered by ASR is unavailable.

Adapt your speed and driving to the prevailing road conditions.

A portion of the ASR system remains active, even with the switch in the OFF position.

If one drive wheel loses traction and begins to spin, the brake is applied until the wheel regains sufficient traction. The traction control engages at vehicle speeds up to approximately 24 mph (40 km/h), and switches off at 50 mph (80 km/h).

Note:

Avoid spinning of one drive wheel. Doing so may cause serious damage to the drive train which is not covered by the Mercedes-Benz Limited Warranty.

The ASR warning lamp, located in the speedometer dial, starts to flash at any vehicle speed as soon as the tires lose traction and the wheels begin to spin.

To return to the enhanced vehicle stability offered by ASR: press lower half of the switch (the ASR warning lamp in the speedometer dial goes out).

### Important!

If the ASR warning lamp flashes:

- during take-off, apply as little throttle as possible,
- while driving, ease up on the accelerator.

## Electronic Stability Program (ESP) (optional)

The ESP enhances directional control and reduces driving wheel spin of the vehicle under any driving condition.

Over/understeering of the vehicle is counteracted by applying brakes to the appropriate wheel to create a counterpointing vehicle movement. The ESP warning lamp, located in the speedometer dial, starts to flash.

### Important!

If the ESP warning lamp flashes, adapt your speed and driving to the prevailing road conditions.

### Caution!

If the vehicle is towed with the front axle raised (see *Towing the vehicle* in Index), the engine must be shut off (electronic key in steering lock position 0 or 1). Otherwise, the ESP will immediately be engaged and will apply the rear wheel brakes.

Notes:

The indicator lamp for the ESP is combined with that of the BAS. The yellow BAS/ESP malfunction indicator lamp in the instrument cluster and the yellow ESP warning lamp in the speedometer dial come on with the electronic key in steering lock position 2. They should go out with the engine running.

If the BAS/ESP malfunction indicator lamp comes on permanently with the engine running, a malfunction has been detected in either system. Pressing the accelerator pedal will require greater effort. Only partial engine output will be available.

If the BAS malfunctions, the brake system functions in the usual manner, but without BAS.

Have the BAS or ESP checked at your authorized Mercedes-Benz dealer as soon as possible.

With the ABS malfunctioning, the ESP is also switched off.

Driving the vehicle with varied size tires will cause the wheels to rotate at different speeds, therefore the electronic stability program may activate (yellow ESP warning lamp in speedometer dial comes on). For this reason, all wheels, including the spare wheel, must have the same tire size.

When testing the parking brake on a brake test dynamometer, the engine must be shut off. Otherwise, the electronic stability program will immediately be engaged and will apply the rear wheel brakes.

In winter operation, the maximum effectiveness of the electronic stability program is only achieved with Mercedes-Benz recommended M+S rated radial-ply tires and/or snow chains



### ESP Control Switch

ESP control switch located on center console

To improve the vehicle's traction when driving with snow chains, or starting off in deep snow, sand or gravel, press the upper half of the ESP switch. The ESP warning lamp, located in the speedometer dial, is continuously illuminated.

With the ESP system switched off, the engine torque reduction feature is cancelled. Therefore, the enhanced vehicle stability offered by ESP is unavailable.

Adapt your speed and driving to the prevailing road conditions.

A portion of the ESP system remains active, even with the switch in the OFF position.

If one drive wheel loses traction and begins to spin, the brake is applied until the wheel regains sufficient traction. The traction control engages at vehicle speeds up to approximately 24 mph (40 km/h), and switches off at 50 mph (80 km/h).

Note:

Avoid spinning of one drive wheel. Doing so may cause serious damage to the drive train which is not covered by the Mercedes-Benz Limited Warranty.

The ESP warning lamp, located in the speedometer dial, starts to flash at any vehicle speed as soon as the tires lose traction and the wheels begin to spin.

To return to the enhanced vehicle stability offered by ESP: press lower half of the switch (the ESP warning lamp in the speedometer dial goes out).

### Important!

If the ESP warning lamp flashes:

- during take-off, apply as little throttle as possible,
- while driving, ease up on the accelerator.

## Emission Control

Certain systems of the engine serve to keep the toxic components of the exhaust gases within permissible limits required by law.

These systems, of course, will function properly only when maintained strictly according to factory specifications. Any adjustments on the engine should, therefore, be carried out only by qualified Mercedes-Benz authorized dealer technicians. Engine adjustments should not be altered in any way. Moreover, the specified service jobs must be carried out regularly according to Mercedes-Benz servicing requirements. For details refer to the Service Booklet.

## Warning!

**Inhalation of exhaust gas is hazardous to your health. All exhaust gas contains carbon monoxide, and inhaling it can cause unconsciousness and lead to death.**

**Do not run the engine in confined areas (such as a garage) which are not properly ventilated. If you think that exhaust gas fumes are entering the vehicle while driving, have the cause determined and corrected immediately. If you must drive under these conditions, drive only with at least one window fully open.**

## On-Board Diagnostic System

### Vehicles with Diesel engine

When the "CHECK ENGINE" malfunction indicator lamp comes on while the engine is running, this indicates a malfunction in the fuel injection system. Only partial engine output is available. Have the system checked at your authorized Mercedes-Benz dealer as soon as possible.

### Vehicles with gasoline engine

The Sequential Multiport Fuel Injection (SFI) control module monitors emission control components that either provide input signals to or receive output signals from the control module. Malfunctions resulting from interruptions or failure of any of these components are indicated by the "CHECK ENGINE" malfunction indicator lamp in the instrument cluster and are simultaneously stored in the diagnostic module.

If the "CHECK ENGINE" malfunction indicator lamp comes on, have the system checked at your authorized Mercedes-Benz dealer as soon as possible.

The control module switches off the "CHECK ENGINE" indicator lamp if the condition, causing the lamp to come on, no longer exists.

An on-board diagnostic connector is located in the passenger compartment near to the parking brake pedal, allowing the accurate identification of system malfunctions through the readout of diagnostic trouble codes.

## Winter Driving

Have your vehicle winterized at your authorized Mercedes-Benz dealer before the onset of winter.

- Change the engine oil if the engine contains an oil which is not approved for winter operation. For viscosity (SAE/CCMC class) and filling quantity, see *Capacities: Fuels, Coolants, Lubricants etc.* in Index.
- Check engine coolant anticorrosion/antifreeze concentration.
- Additive for the windshield washer and headlamp cleaning system: Add MB Concentrate "S" to a premixed windshield washer solvent/antifreeze which is formulated for below freezing temperatures (see Index).

- Test battery: Battery capacity drops with decreasing ambient temperature. A well charged battery helps to ensure that the engine can be started, even at low ambient temperatures.
- Tires: We recommend M+S rated radial-ply tires on all four wheels for the winter season. Observe permissible maximum speed for M+S rated radial-ply tires and the legal speed limit.

Note:

In winter operation, the maximum effectiveness of the acceleration slip regulation or of the electronic traction system can only be achieved with M+S radial-ply tires and/or snow chains recommended by Mercedes-Benz. Snow chains maximize performance.

Vehicles with diesel engine –

- For diesel fuels, refer to Index.
- Engine block heater:  
The engine is equipped with a block heater. The electrical cable may be installed free-of-charge at your authorized Mercedes-Benz dealer by using the coupon in the "Owner's Service and Warranty Policy" booklet. The coupon is valid for 12 months from date of vehicle delivery.

## **Snow Chains**

Use only snow chains that are tested and recommended by Mercedes-Benz. Your authorized Mercedes-Benz dealer will be glad to advise you on this subject.

Chains should only be used on the rear wheels. Follow the manufacturer's mounting instructions.

Snow chains should only be driven on snow covered roads at speeds not to exceed 30 mph (50 km/h). Remove chains as soon as possible when driving on roads without snow.

For tips on driving on slippery winter roads, refer to Index.

Vehicles with Acceleration Slip Regulation (ASR) or Electronic Stability Program (ESP):

When driving with snow chains, press the ASR control switch or the ESP control switch, refer to Index.

### **Model E430 with Sport Package**

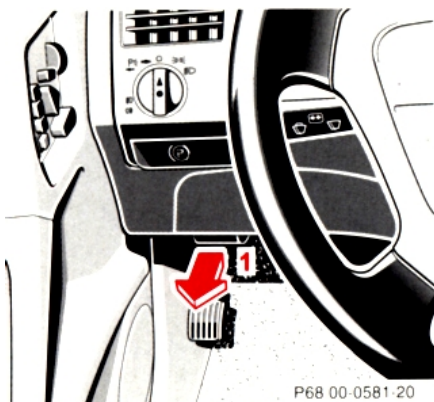
Use only the MB authorized special snow chain with tire size 235/45 ZR 17.

## **Traveling Abroad**

Abroad, there is a widely-spread Mercedes-Benz service network at your disposal. If you plan to travel into areas which are not listed in the index of your dealer directory, you should request pertinent information from your authorized Mercedes-Benz dealer.



## **Practical Hints**



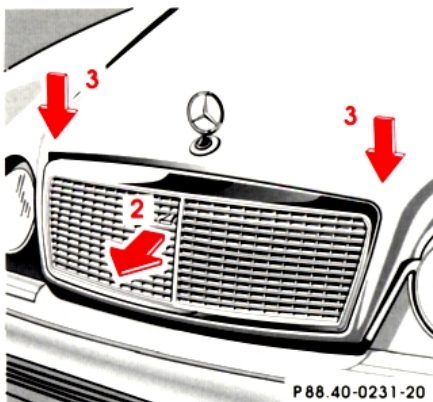
## Hood

To open:

To unlock the hood, pull release lever (1) under the driver's side of the instrument panel. At the same time handle (2) will extend out of the radiator grill (it may be necessary to lift the hood up slightly).

### Caution!

To avoid damage to the windshield wiper or hood, open the hood only with wiper in the parked position.



Pull handle (2) completely out of radiator grill and open hood (do not pull up on handle).

To close:

Lower hood and let it drop into lock from a height of approx. 1 ft. (30 cm), assisting with hands placed flat on edges of hood (3).

To avoid hood damage, if hood is not fully closed, repeat closing procedure. Do not push down on hood to attempt to fully close it.

### Warning!

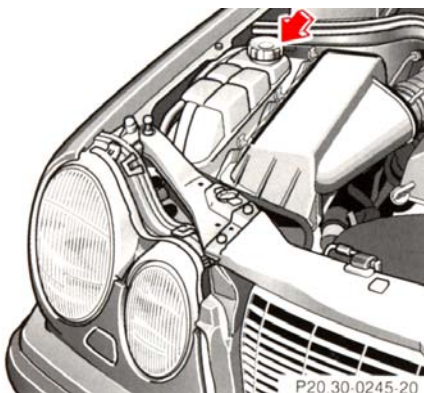
To help prevent personal injury, stay clear of moving parts when the hood is open and the engine is running. Be sure the hood is properly closed before driving. When closing hood, use extreme caution not to catch hands or fingers.

If you see flames or smoke coming from the engine compartment, or if the coolant temperature gauge indicates that the engine is overheated, do not open the hood. Move away from vehicle and do not open the hood until the engine has cooled. If necessary, call a fire department.

**Vehicles with gasoline engine:**

The engine is equipped with a transistorized ignition system. Because of the high voltage it is dangerous to touch any components (ignition coils, spark plug sockets, diagnostic socket) of the ignition system

- with the engine running,
- while starting the engine,
- if ignition is "on" and the engine is turned manually.



### Checking Coolant Level

To check the coolant level, the vehicle must be parked on level ground and the engine stopped.

Check coolant level only when coolant is cold.

### Adding Coolant

If coolant has to be added, a 50/50 mixture of water and MB anticorrosion/antifreeze should be added.

The drain plugs for the cooling system are located on the right side of the engine block and at the bottom of the radiator.

Anticorrosion/antifreeze, see *Coolants* in Index.

### Warning!

**In order to avoid possible serious burns or injury:**

- Use extreme caution when opening the hood if there are any signs of steam or coolant leaking from the cooling system, or if the coolant temperature gauge indicates that the coolant is overheated.

- Do not remove pressure cap on coolant reservoir if engine temperature is above 194°F (90°C). Allow engine to cool down before removing cap. The coolant reservoir contains hot fluid and is under pressure.
- Using a rag, slowly open cap approximately  $\frac{1}{2}$  turn to relieve excess pressure. If opened immediately, scalding hot fluid and steam will be blown out under pressure.
- Do not spill antifreeze on hot engine parts. Antifreeze contains ethylene glycol which may burn if it comes into contact with hot engine parts.



## Checking Engine Oil Level

- 1 Oil dipstick
- 2 Oil filler cap

The engine oil level can be checked by either the oil dipstick or via the multifunction indicator in the instrument cluster.

To check the engine oil level, park vehicle on level ground, with engine at normal operational temperature.

Check engine oil level approximately 5 minutes after stopping the engine, allowing for the oil to return to the oil pan.

### Oil Dipstick

Wipe oil dipstick clean prior to checking the engine oil level. Fully insert dipstick in tube, and remove after three seconds to obtain accurate reading.



Oil level must be between the lower (min) and upper (max) mark of the dipstick.

Fill quantity between upper and lower dipstick marking level is approximately 2.1 US qt (2.0 l).

Do not overfill the engine. Excessive oil must be drained or siphoned. It could cause damage to engine and catalytic converter not covered by the Mercedes-Benz Limited Warranty.

For *Low engine oil level* warning, see Index.



### Multifunction Indicator

Turn electronic key in steering lock to position 2 and wait until the message "DISPLAY OIL LEVEL?" appears in the multifunction indicator.

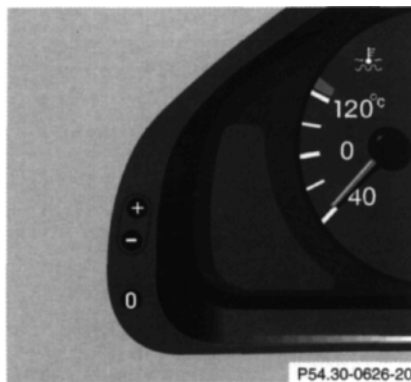
Within 1 second press button **0** twice. The following messages are available:

OIL LEVEL OKAY

ADD 1.0 Q OF OIL (Canada: 1.0 l)

ADD 1.5 Q OF OIL (Canada: 1.5 l)

ADD 2.0 Q OF OIL (Canada: 2.0 l)



### OIL LEVEL AT MINIMUM


Add oil to upper (max) mark of the dipstick

### OIL LEVEL BELOW MINIMUM

Add oil to upper (max) mark of the dipstick

### OIL LEVEL ABOVE MAX

Do not overfill the engine. Excessive oil must be drained or siphoned. It could cause damage to engine and catalytic converter not covered by the Mercedes-Benz Limited Warranty.

The symbol  flashes in the multifunction indicator if a proper oil level check cannot be performed.

The oil level check can be repeated after a short while. Perform the oil level check with the dipstick, if it cannot be completed via the multifunction indicator. In this case we recommend that you have the system checked at a Mercedes-Benz dealer.

### Bleeding of Diesel Fuel System

If the engine ran out of fuel, the fuel system has to be purged of air after refilling tank.

Turn the electronic key in steering lock fully to the right and crank engine (for up to 40 seconds maximum). Only release key after engine fires evenly.

### Automatic Transmission Fluid Level

The transmission has a permanent fill of automatic transmission fluid. Regular automatic transmission fluid level checks and changes are not required. For this reason the dipstick is omitted.

If you notice fluid leaks or gear shifting malfunctions, have your authorized Mercedes-Benz dealer check the transmission fluid level.



### Trunk Lamp

If the trunk is to remain open for a long period of time, the trunk lamp can be switched off by pulling out the plunger in the switch (arrow). This prevents the vehicle battery from being discharged. When the trunk lid is closed, the switch will reset and turn on the lamp next time the lid is opened.



### Spare Wheel, Vehicle Tools, Storage Compartment

- 1 Trunk floor
- 2 Handle
- 3 Luggage bowl
- 4 Vehicle tools

Lift trunk floor and engage handle in upper edge of the trunk.

To remove spare tire: Turn luggage bowl counterclockwise and remove.  
To store spare tire: Place spare tire in wheel well and secure it with luggage bowl. Turn luggage bowl clockwise to its stop.

Note:

Always lower trunk floor before closing trunk lid.

### Stowing Things in the Vehicle

#### Warning!

**To help avoid personal injury during a collision or sudden maneuver, exercise care when stowing things. Put luggage or cargo in the trunk if possible. Do not pile luggage or cargo higher than the seat backs. Do not place anything on the shelf below the rear window.**



## Vehicle Jack

- 1 Jack arm
- 2 Jack base

The vehicle jack is stored behind the spare wheel.

See illustration for proper storage of jack. To remove, first remove vehicle tools and spare wheel. Then open clamp and remove vehicle jack.

Before storing the jack in the spare wheel well, the jack arm must be lowered almost to the base of the jack.

## Warning!

The jack is designed exclusively for jacking up the vehicle at the jack tubes built into either side of the vehicle. To help avoid personal injury, use the jack only to lift the vehicle during a wheel change. Never get beneath the vehicle while it is supported by the jack. Keep hands and feet away from the area under the lifted vehicle. Always firmly set parking brake and block wheels before raising vehicle with jack.

Do not disengage parking brake while the vehicle is raised. Be certain that the jack is always vertical when in use, especially on hills. Always try to use the jack on level surface. Be sure that the jack arm is fully inserted in the jack tube. Always lower the vehicle onto sufficient capacity jackstands before working under the vehicle.

## Wheels

Replace rims or tires with the same designation, manufacturer and type as shown on the original part. See your authorized Mercedes-Benz dealer for further information.

See your authorized Mercedes-Benz dealer for information on tested and recommended rims and tires for summer and winter operation. They can also offer advice concerning tire service and purchase.

## Tire Replacement

Front tires should be replaced in sets. Rims and tires must be of the correct size and type. For dimensions, see "Technical Data".

We recommend that you break in new tires for approx. 60 miles (100 km) at moderate speed.

It is imperative that the wheel mounting bolts be fastened to a tightening torque of 80 ft .lb. (110 Nm) whenever wheels are mounted.

For rim and tire specifications, refer to "Technical Data"

## Warning!

**Worn, old tires can cause accidents. If the tire tread is badly worn, or if the tires have sustained damage, replace them.**

**When replacing rims, use only genuine Mercedes-Benz wheel bolts specified for the particular rim type. Failure to do so can result in the bolts loosening and possibly an accident.**

## Rotating Wheels

The wheels can be rotated according to the degree of tire wear while retaining the same direction of travel.

Rotating, however, should be carried out at the scheduled service intervals, before the characteristic tire wear pattern (shoulder wear on front wheels and tread center wear on rear wheels) becomes visible, as otherwise the driving properties deteriorate.

## Important!

Unidirectional tires must always be mounted with arrow on tire sidewall pointing in direction of vehicle forward movement.

Notes:

Thoroughly clean the inner side of the wheels any time you rotate the wheels or wash the vehicle underside.

The use of retread tires is not recommended. Retread tires may adversely affect the handling characteristics and safety of the vehicle.

Dented or bent rims can cause tire pressure loss and damage to the tire beads. For this reason, check rims for damage at regular intervals. The rim flanges must be checked for wear before a tire is mounted. Remove burrs, if any.

Check and ensure proper tire inflation pressure after rotating the wheels. For *Tire Inflation Pressure* refer to Index.



## Warning!

The jack is designed exclusively for jacking up the vehicle at the jack tubes built into either side of the vehicle. To help avoid personal injury, use the jack only to lift the vehicle during a wheel change. Never get beneath the vehicle while it is supported by the jack. Keep hands and feet away from the area under the lifted vehicle. Always firmly set parking brake and block wheels before raising vehicle with jack.

Do not disengage parking brake while the vehicle is raised. Be certain that the jack is always vertical when in use, especially on hills. Always try to use the jack on level surface. Be sure that the jack arm is fully inserted in the jack tube. Always lower the vehicle onto sufficient capacity jackstands before working under the vehicle.

## Spare Wheel for Sport Package

The spare wheel rim size is 7 $\frac{1}{2}$  Jx16 H 2 with tire size 215/55 R 16 93 H.

In the case of a flat tire or breakdown, you may temporarily use a 7 $\frac{1}{2}$  J x 16 H 2 instead of the 8 J x 16 H 2 wheel rim on the rear axle, when observing the following restrictions:

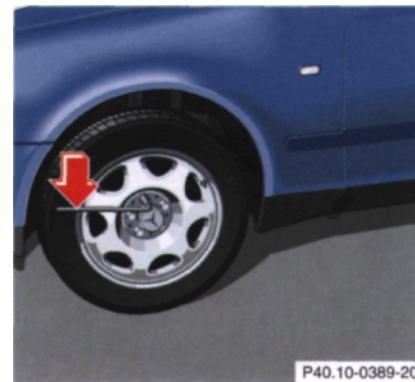
- Do not exceed vehicle speed of 50 mph (80 km/h).
- Drive to the nearest repair facility.

For additional information, refer to "Technical Data".

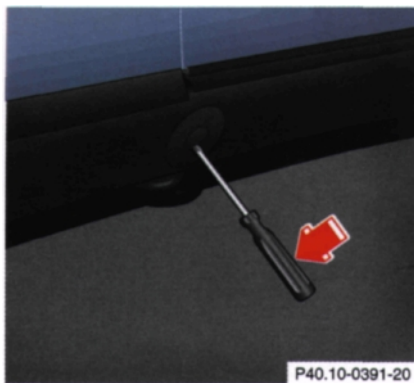
## Changing Wheels

Move vehicle to a level area which is a safe distance from the roadway.

1. Set parking brake and turn on hazard warning flasher.
2. Move selector lever to position "P" and turn off engine.



3. Prevent vehicle from rolling away by blocking wheels with wheel chocks (not supplied with vehicle) or sizable wood block or stone. When changing a wheel on a hill, place chocks on the downhill side blocking both wheels of the other axle. On a level road, place one chock in front of and one behind the wheel that is diagonally opposite to the wheel being changed.
4. Using the wrench, loosen but do not yet remove the wheel bolts.



5. Remove the protective cover from the jack support tube opening by inserting the screwdriver (supplied in the tool kit) in the opening and prying it out.

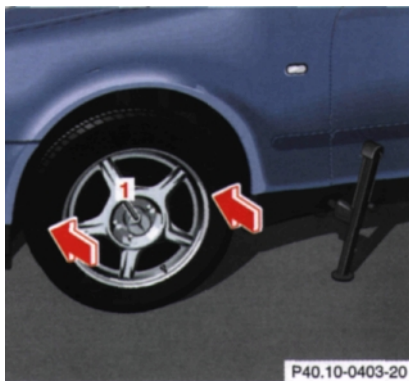
The tube openings are located directly behind the front wheel housings and in front of the rear wheel housings.



6. Insert jack arm fully into the tube hole up to the stop. Place jack on firm ground. Position the jack so that it is always vertical (plumb-line) as seen from the side (see arrow), even if the vehicle is parked on an incline.
7. Jack up the vehicle until the wheel is clear of the ground. Never start engine while vehicle is raised.

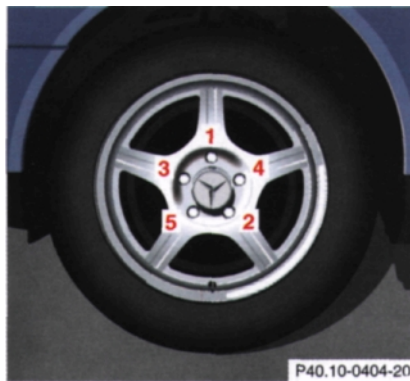


8. Unscrew upper-most wheel bolt and install alignment bolt (1) supplied in the tool kit. Remove the remaining bolts. Keep bolt threads protected from dirt and sand.
9. Remove wheel. Grip wheel from the sides. Keep hands from beneath the wheels.



10. Clean contact surfaces of wheel and wheel hub. Install spare wheel on wheel hub. Insert wheel bolts and tighten them slightly. To avoid paint damage, place wheel flat against hub and hold it there while installing first wheel bolt. Unscrew the alignment bolt (1) to install the last wheel bolt.
11. Lower car. Remove jack and insert jack tube cover.

Before storing the jack, the jack arm must be lowered almost to the base of the jack.



### **Warning!**

**Always replace wheel bolts that are damaged or rusted.**

**Never apply oil or grease to wheel bolts.**

**Damaged wheel hub threads should be repaired immediately.**

**Incorrect mounting bolts or improperly tightened mounting bolts can cause the wheel to come off. This could cause an accident. Be sure to use the correct mounting bolts.**

12. Using the wrench, tighten the five bolts evenly, following the sequence illustrated, until all bolts are tight. Observe a tightening torque of 80 ft.lb. (110 Nm).
13. Ensure proper tire pressure.

## Tire Inflation Pressure

A table (see fuel filler flap) lists the tire inflation pressures specified for Mercedes-Benz recommended tires as well as for the varying operating conditions.

### Important!

Tire pressure changes by approx. 1.5 psi (0.1 bar) per 18°F (10°C) of air temperature change. Keep this in mind when checking tire pressure inside a garage - especially in the winter.

Example:

If garage temperature = approx. +68°F (+20°C) and ambient temperature = approx. +32°F (0°C) then the adjusted air pressure = specified air pressure +3 psi (+0.2 bar).

Tire pressures listed for light loads are minimum values offering high driving comfort. Increased inflation pressures for heavy loads produce favorable handling characteristics with lighter loads and are perfectly permissible.

The ride of the vehicle, however, will become somewhat harder.

Tire temperature and pressure increase with the vehicle speed. Tire pressure should therefore only be corrected on cold tires. Correct tire pressure in warm tires only if pressure has dropped below the pressure listed in the table and the respective operating conditions are taken into consideration.

An underinflated tire due to a slow leak (e.g. due to a nail in the tire) may cause damage such as tread separation, bulging etc.. Regular tire pressure checks (including the spare tire) at intervals of no more than 14 days are therefore essential.

If a tire constantly loses air, it should be inspected for damage.

## Warning!

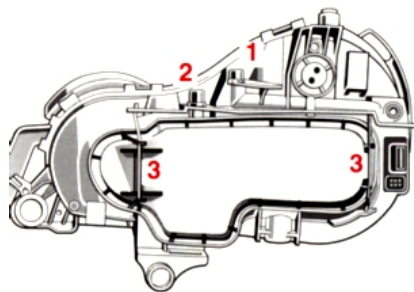
**Do not overinflate tires. Overinflating tires can result in sudden deflation (blowout) because they are more likely to become punctured or damaged by road debris, potholes etc.. Follow recommended inflation pressures.**

**Do not overload the tires by exceeding the specified vehicle capacity weight (as indicated by the label on the driver's door latch post). Overloading the tires can overheat them, possibly causing a blowout.**

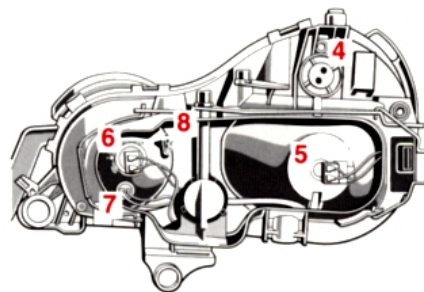
## Exterior Lamps

### Headlamp Adjustment

Correct headlamp adjustment is extremely important. Check and readjust headlamps at regular intervals and when a bulb has been replaced.



P82.10-0329-20



P82.10-0328-20

### Headlamp Assembly

- |   |   |
|---|---|
| <b>1</b> Headlamp horizontal adjustment screw | <b>5</b> Electrical connector for low beam headlamp bulb  |
| <b>2</b> Headlamp vertical adjustment screw   | <b>6</b> Electrical connector for high beam headlamp bulb |
| <b>3</b> Clamps for headlamp cover            | Xenon lamp (optional) ignition module for low beam        |
| <b>4</b> Bulb socket for turn signal lamp     | <b>7</b> Bulb socket for parking and standing lamp        |
|   | <b>8</b> Level for headlamp vertical adjustment           |

## **Replacing Bulb:**

When replacing bulbs, install only 12 volt bulbs with the specified watt rating.

When replacing halogen bulbs do not touch glass portion of bulb with bare hands. Use plain paper or a clean cloth.

## **Warning!**

**Halogen lamps contain pressurized gas. A bulb can explode if you:**

- touch or move it when hot,
- drop the bulb,
- scratch the bulb.

**Wear eye and hand protection.**

## **Bulbs for Low or High Beam H7 (55 W)**

Open hood.

Move retaining clamps (3) aside and remove cover. Pull off electrical connector (5) or (6). Unhook clamping ring and pull out bulb together with clamping ring. Remove bulb.

Insert new bulb (seating properly in cutouts of bulb socket), mount clamping ring. Reinstall and push electrical connector on securely. Reinstall cover and fasten with retaining clamps (3).

## **Xenon (optional) Bulb for Low Beam**

## **Warning!**

**Because of high voltage in Xenon lamps, it is dangerous to replace the bulb or repair the lamp and its components. We recommend that you have such work done by a qualified technician.**

## **Turn Signal Lamp 1156 NA (26.9/5 W/32/4 cp bulb)**

Open hood.

Twist bulb socket (4) counterclockwise and pull out. Push bulb into socket, turn counterclockwise and remove.

Insert new bulb in socket, push in and twist clockwise. Reinstall bulb socket. Reinstall lamp assembly until properly seated.

## **Parking and Standing Lamp H 6W (6 W bulb)**

Open hood.

Rotate cover (3) counterclockwise and remove.

Twist bulb socket (7) counterclockwise and pull out. Push bulb into socket, turn counterclockwise and remove.

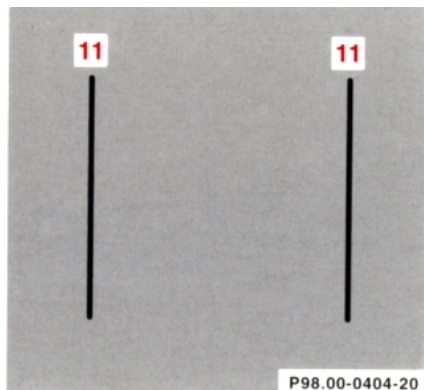
Insert new bulb in socket, push in and twist clockwise. Reinstall bulb socket. Reinstall lamp assembly until properly seated.



## Adjusting Headlamp

Correct headlamp adjustment is extremely important. To check and readjust a headlamp, follow steps 1 through 7. Please note:

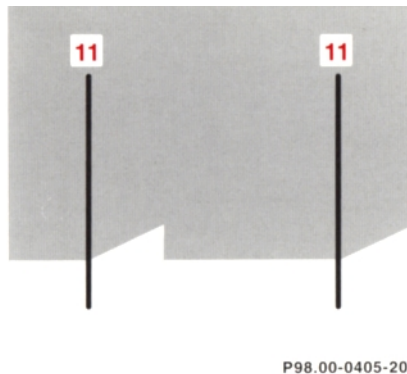
- Low beam adjustments simultaneously aim the high beam.
- Vehicle should have a normal trunk load.
- Vertical aim adjustments change horizontal aim.



1. Park vehicle on level surface approx. 6 inches (152 mm) from a vertical test screen or wall. The centerline of the vehicle must be at a 90° angle to the test screen.
2. Using a "T" square and a carpenter's level, align and mark a vertical centerline (8) on the test screen using the outer reference point (low beam) as found on each headlamp lens. As a check, the distance between centerlines should be 49<sup>1</sup>/<sub>4</sub> inches (1250 mm).
3. Move vehicle on the level surface 25 feet (7.6 m) straight back from the wall.
4. Open hood.
5. Vertical headlamp aim (low beams on):  
  
Turn adjusting screw (2) (counterclockwise to adjust headlamp downward, clockwise upward) until bubble in the level (8) is centered on the "O" mark.  
Graduations: 0.18° pitch.

6. Horizontal headlamp aim (low beams on):  
Turn adjusting screw (1) (counterclockwise to adjust to the left, clockwise to the right) until the headlamps (low beam) illuminate the test screen as shown. The vertex of the angle formed in each beam image should align with the vertical centerline (11) of each lamp.

The left and right headlamps must be adjusted individually



7. The "O" on the indicator wheel (9) should align with projection (10). If it does not, with a small screwdriver, pry indicator wheel up and rotate so that the "O" aligns with projection (1). Push down indicator wheel until it snaps in place.

Graduations:  $0.38^\circ$  pitch.