OPERATING INSTRUCTIONS

Keys and locks
Controls, instruments and switches
Front seats, headrests
Sliding roof with elevated vent position
Heating and ventilation
Automatic transmission
Running-in rules

Before you start – what you need to know

The identity of your car can be established by comparing the registration documents with the
chassis and engine numbers.

The model reference, chassis number and other important data are entered in the documents, and should be verified with the numbers stamped on the car's bodywork. You will find this data is essential for all enquiries, inspection work, claims for parts, and similar. You should therefore familiarize yourself with their locations on the car.

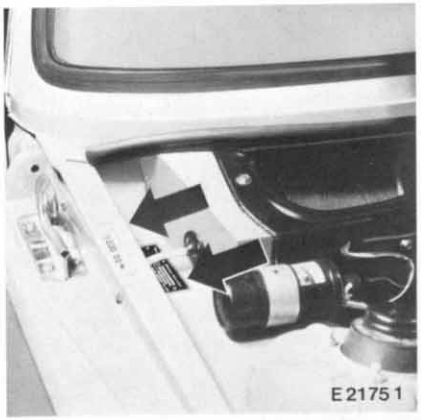
Maker's plate: In the engine compartment, on the right-hand wheel arch looking forward.

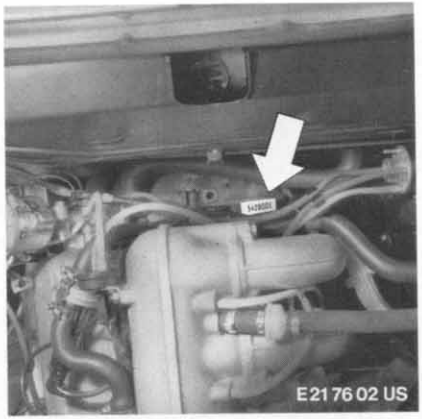
Chassis number: In the engine compartment, on the support plate of the right hand wheel arch looking forward and on a label affixed to the upper steering column.

Engine number: On the engine block at the rear left hand side, looking forward, above the starter motor.

With your new BMW you have received two master keys and one key fitting the door locks and the ignition/starter switch. It is advisable to desposit the second master key in a safe place so that it can be obtained without difficulty if the first is lost.

Moreover you have received a selfadhesive plate with the printed-in key number which is important to submitit a new key should be needed. Deposit this plate in your billfold or stide it onto your licence papers. All the BMW Service Stations will be glad to assist you in procuring new keys whenever necessary.


E21751


E21760 2 US

E24760 3

The black master key fits all the locks on your BMW. The other key fits only the doors and the ignition/starter switch. The doors are opened by inserting the key and turning it forwards, and closed by turning the key rearwards.

This combination of keys and locks enables you to leave the car in the hands of a garage or repair workshop with your luggage protected against theft.
To open the doors from the outside, lift the flap-type door handle.

To lock a door from the inside, press the lokking button down; to unlock and open from the inside, pull up the handle beneath the armrest.

If the driver's door is already open, the locking button cannot be pressed down; in this way you cannot accidentally lock yourself out of the car.

The **passenger door** is locked from the inside by pushing down the locking button. This locking button also remains in the locked position when the car door is shut from outside.

The black key is required to lock and unlock the **luggage compartment.**

Do not forget to lock the luggage compartment after closing.


E 21 75 4

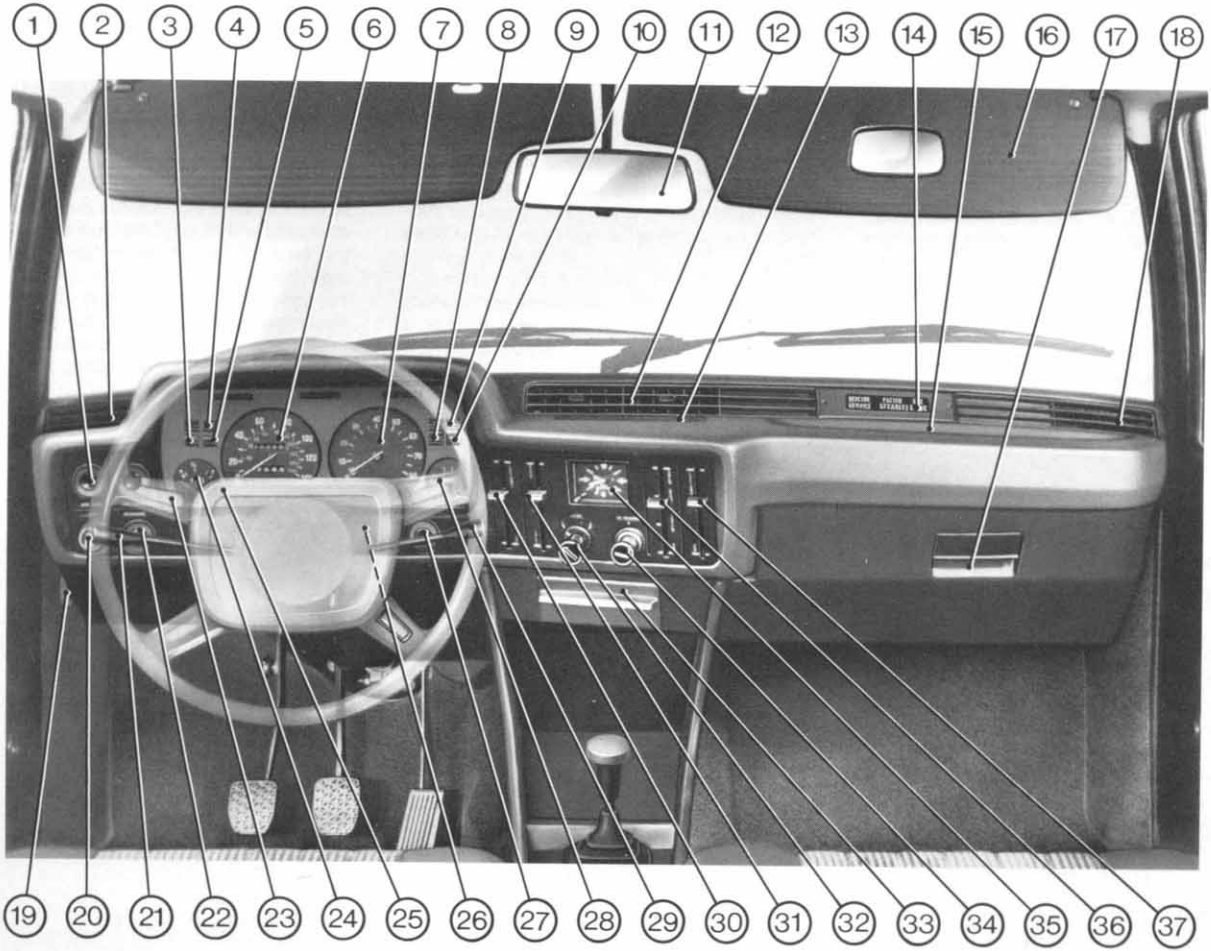

E 21 75 5

E 21 76 06 US

Controls and instruments

Note: Figures in square brackets [] indicate pages on which items are described in detail.

1. Switch for fog lights (optional equipment) [14]
2. Side fresh air and heater outlet [24]
3. Turn indicator telltale [11]
4. Fuel level telltale [15]
5. Handbrake and brake fluid telltale [32]
6. Speedometer with mileage and trip recorders [13]
7. Revolution counter [13]
8. Battery charge telltale [13]
9. Oil pressure telltale [13]
10. Headlight high beam telltale [13]
11. Anti-glare mirror [18]
12. Movable fresh air grille [23]
13. Loudspeaker grille
14. Warning lights (Fasten seat belts, EGR) [32]
15. Facia shelf
16. Sun visor with make-up mirror [18]
17. Glove box [19]
18. Side fresh air and heater outlet [24]
19. Engine compartment lid release [12]
20. Main light switch [10]
21. Turn indicator lever [10]
22. Switch for heated rear window [14]
23. Horn push [15]
24. Fuel gauge [15]
25. Trip distance recorder reset knob [13]
26. Ignition switch [10]
27. Switch for hazard warning flashers [14]
28. Coolant thermometer [15]
29. Wipe-wash lever [11]
30. Slide control for ventilation (left) [22]
31. Temperature selector lever [22]
32. Heater blower knob [22]
33. Ashtray [20]
34. Cigar lighter [19]
35. Quartz clock [19]
36. Slide control for warm air distribution [22]
37. Slide control for ventilation (right) [22]


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37

E 2176 US

The **ignition/starter switch** on the right of the steering column housing is combined with the steering lock. The key can only be inserted in the **"O"** position.

Turn the key clockwise to the **"1"** position: the steering lock will be heard to disengage, but if necessary the steering wheel should be turned slightly to free the lock. The radio can then be operated. Turning the key further to the **"2"** position switches on the ignition. The red charge and oil pressure warning lamps will come on, and the fuel gauge and the coolant thermometer will operate.

Key position **"3"** operates the starter. Release the key as soon as the engine has fired; the key will return automatically to position **"2"**.

To lock the steering, turn the key to the **"O"** position and remove. If necessary turn the steering wheel until the lock engages. The ignition key can **only** be removed in this position.

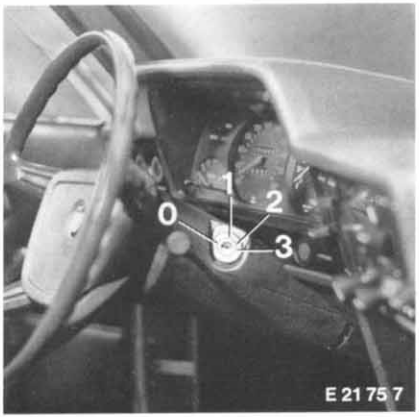
A buzzer is actuated when the ignition key is left in the lock and the driver's door is opened.

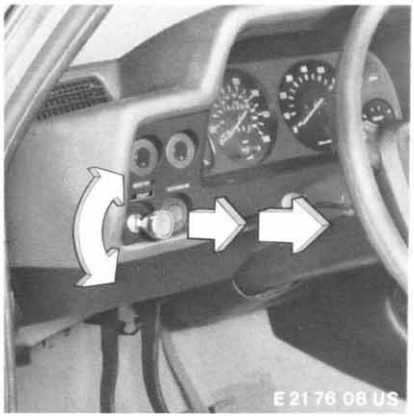
Head and side light switch (2-positions)

Position 1: side lights
Position 2: headlights

The intensity of the **instrument panel, ashtray and control lighting** can be adjusted by turning the light switch knob in its pulled-out position.

The **dip lever and turn indicator lever** on the left of the steering column can be finger-tip operated with the left hand without releasing the steering wheel. When the lever is set to **main beam** (front position) a blue telltale lamp on the instrument panel is illuminated. To **flash the headlights,** pull the lever towards the steering wheel. If the ignition key is turned to **"1"** or **"O"** while the headlights are on, the headlights will be switched off and only the parking lights will remain illuminated.





To operate the right hand **turn indicators** move the turn indicator lever upwards, to operate the left hand turn indicators move the lever down.
A regular ticking sound and illumination of the green telltale lamp in the combination instrument indicates that the flashing turn indicators are operating correctly.

The indicators are automatically cancelled and the lever returned to its initial position once the car has completed its turn. If the turn was only slight it may be necessary to cancel the lever by hand.

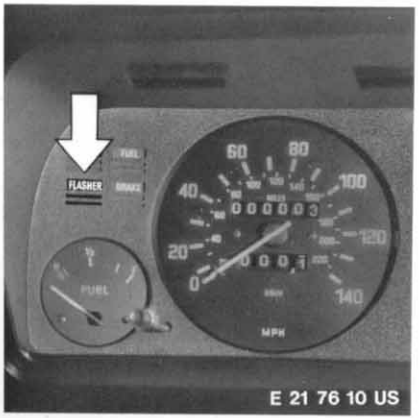
If the turn indicators are to be operated for a short period only (e. g. changing lanes, overtaking, moving off) press the turn indicator lever only slightly in the desired direction without allowing it to engage. As soon as it is released it will return to its original position.

The **wiper and screenwasher lever** on the right has four positions.

Lever position 1
= intermittent action
Lever position 2
= wiper speed 1 (normal)
Lever position 3
= wiper speed 2 (fast)
Lever position fully down
= wipers switched off

The automatic screenwasher is operated by pulling up the wiper and screenwasher lever towards the steering wheel rim.

The intermittent action position provides single wiper movements at regular intervals. This avoids having to switch the wipers on and off requently in light rain, snow etc. Select position 3 (fast) only in heavy rain or snow.
The **washer reservoir,** of approx. 2.5 liters (2.6 US quarts, 4.4 Imp. pints) capacity, is at the front right of the engine compartment.



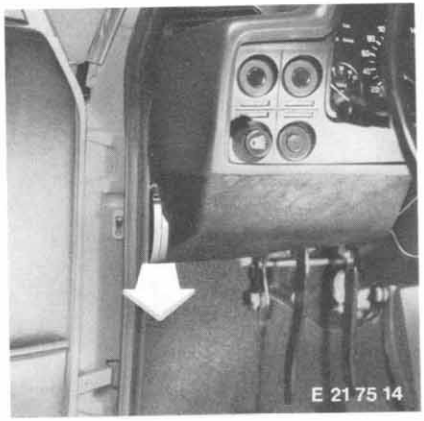
Warning: Do not operate the automatic wipe-wash mechanism when the reservoir is empty.

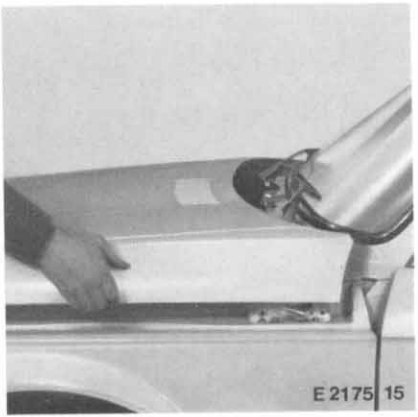
The two screenwasher jets are located beneath the windscreen.
If a water jet fails to strike the glass correctly (i.e. in the middle of the wiper area) the nozzle can easily be adjusted with a needle. **Fig.**

The **engine compartment lid** opens forwards, and is released from inside the car by pulling the lever on the sidewall. **Fig.**

A built-in spring-loading mechanism ensures that the lid can easily be opened by lifting at the rear. **Fig.**


E 21 75 13


E 21 75 14


E 21 75 15

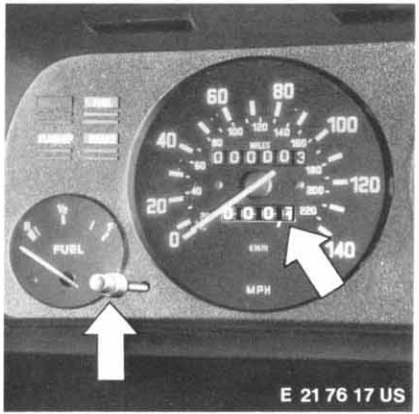
To close the engine compartment lid, move it down and press slightly to the rear at the middle of the lid front section. The lock will automatically engage.
Fig.

The **trip mileage recorder** in the speedometer can be set to zero by pressing the reset knob. **Fig.**

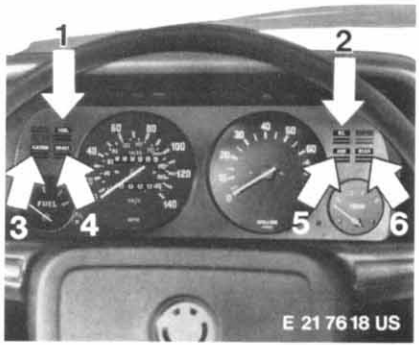
In addition to the speedometer and revolution counter, the **instrument** cluster includes the fuel gauge, the coolant thermometer and the telltale lamps for:

1	Fuel level	(white)
2	Oil pressure	(red)
3	Turn indicators	(green)
4	Brake fluid level and handbrake	(red)
5	Battery charge	(red)
6	Headlight main beam	(blue)


E 21 76 16 US



E 21 76 17 US



E 21 76 18 US

The **hazard warning flashers** are set in action by the push button switch on the right facia panel. They function whether or not the ignition is switched on. The red switch knob and the green telltale lamp for the turn indicators are illuminated at regular intervals to show that the hazard warning flashers are functioning correctly. (see SAFETY) **Fig.**

To switch on the **fog lamps** (optional extra) press the left push button on the panel. The dipped headlights must be switched on.

The push button contains a telltale lamp. **Fig.**

For the heated rear window (14 elements) operate the lower push button on the left facia panel (violet telltale lamp). **Fig.**


E 21 75 19


E 21 76 20 US


E 21 76 21 US

The **electric twin-tone horns** are sounded by means of horn pushes let into the steering wheel spokes. **Fig.**

When the ignition is switched on, **the fuel gauge** in the combined instrument indicates the level of fuel in the tank. If the needle enters the red warning zone, and the white "Fuel" telltale lamp lights up, you should add fuel immediately although enough for about 30 miles or 50 km still remains in the tank, depending on the way the vehicle is driven.

As soon as the white telltale lamp begins to burn continuously, add fuel at once. **Fig.**

The coolant thermometer has two colored zones:

Blue: engine too cold. Keep engine and road speeds moderate.

Red: engine too warm. This need cause no alarm if the needle reaches or enters the red zone for short periods when outside temperatures are very high or when the car is being driven at very high speeds for a long time. If the needle tends to remain in the red zone, the matter should be investigated. (see MINOR DEFECTS)

The normal operating temperature is between the two colored zones. **Fig.**


E 21 76 22 US

E 21 76 23 US

E 21 76 24 US

The fuel filler screw cap is behind a flap on the right-hand rear side panel of the body. **Fig.**

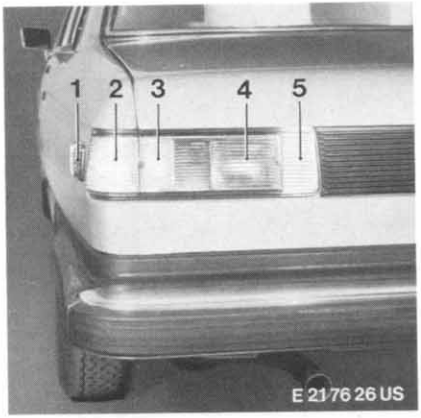
The picture shows the arrangement of the rear light cluster:

1. Rear side marker
2. Turn indicators (yellow)
3. Rear light and reflector (red)
4. Stop light (red)
5. Reversing light (white)

When the main light switch is pulled out, the luggage compartment will be indirectly illuminated.

To **adjust the front seats** backwards or forwards, pull up the lever on the outside edge of the seat base and move the seat to the desired position. Then release the lever and ensure that the seat has locked into position. See "SAFETY".


E21 76 25 US



E 21 76 26 US


E 21 75 28

The **front seat backs** can be adjusted to any angle by pulling up the lever on the outside of each seat back support. (2) They can be moved down by pressing lightly against the spring pressure and will move up automatically. When the lever is released, the seat back will remain in the desired position.

In addition, the seat backs are provided with safety catches to prevent them from folding forwards accidentally. The catches are released by pulling up the knobs on the outer faces of the front seat backs. (1)
The passenger's seat back is additional equipped with a second releasing knob on the inner face.

Your BMW is equipped as standard with **automatic** (inertia-lock) **front seat belts,** with lap and diagonal straps.

Details of how to use the front seat belts and also the automatic lap-and-diagonal rear seat belts are given under the section "SAFETY".

The height of the front **headrests** can be varied after pressing in the release button. See "SAFETY".

The **gearbox gate pattern** on the rear edge of the middle tray indicates the gear lever positions for each ratio
There is synchromesh on all forward gears.

To engage reverse gear (only when the car is standing still) press the gear lever over to the left until slight resistance is overcome. Before selecting reverse, it is best to hold the lever in neutral for 1 second. This will result in smoother reverse gear engagement.

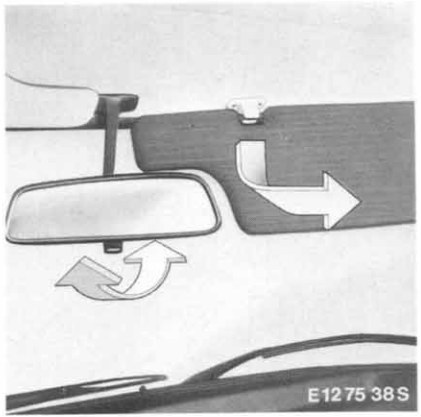
The **handbrake** operates on the rear wheels. To brake or secure the vehicle, pull the lever up. To release the handbrake lever, pull it up slightly, press in the button on the end and push the lever down. When the handbrake is applied, the **red** "Brake" **warning lamp** in the instrument cluster will come on. This also enables a check on correct operation of the telltale lamp to be made.

If the brake telltale lamp comes on during a journey, see instructions under the "SAFETY" heading.

A useful hint: to apply the handbrake without undue noise, press the button on the lever in as the lever is pulled up.

Remember to alter the settings of the **outside and interior mirrors** to suit driving position.(See "SAFETY".) The interior mirror has an anti-glare position, obtained by moving the small lever as shown. Use this position when following vehicles headlights are too bright.

Either **sun visor** can be released from its clip and swung to one side to cover part of the door window if strong sunlight is encountered from that direction. See "SAFETY".



The switch on the **interior light** has three positions:

Position 1: Light operates only when a door is opened

Position 2: Permanently off
Position 3: Permanently on

The lockable **glove box** is opened downwards by pulling the let in flap handle. To shut, move lid up and release flap hande.

When the lid is lowered, the glove box is automatically illuminated.

The power socket and rechargeable hand lamp (accessory item) are located inside the glove box on the left.

The hands of the electronic **quartz clock** can be adjusted after pressing in the knurled knob.

To use the **cigar lighter,** push in the knob. When the element has heated up the knob will spring back to its original position and can then be pulled out.

The cigar lighter **socket** can also be used to plug in an inspection lamp, electric razor or similar appliance provided that the rating does not exceed 12 Volts, 200 W. Make sure that the socket is not damaged by attempting to insert unsuitable plugs.

To empty the **ashtray on the instrument panel:** Pull out as far as the stop, press down the retaining spring and remove the ashtray from its holder. **Fig.**

Make sure that the protecting flap is folded back when inserting.

To empty the **rear ashtray:** tilt fully open, press firmly down and remove. **Fig.**

A **car radio** can be installed in your BMW as an option. For operating instructions, please consult the manual supplied for the radio model concerned together with the remaining car documents. **Fig.**

The **steel-panel sliding roof with elevating rear section** installed in your BMW can either be slid back normally, or raised at the back to provide more intensive ventilation of the car's interior.

To open: Unfold the hand crank. Turn clockwise (1) until the roof panel reaches the desired position. The sliding roof is positively located at any intermediate position.

To close: Turn the crank anti-clockwise (2) to move the sliding panel forwards. It is fully closed when definite resistance to further movement of the hand crank is felt.

To raise at the rear: With the sliding roof closed, unfold the crank and turn anti-clockwise (3). The roof panel can be raised fully or left with safety in any intermediate position.

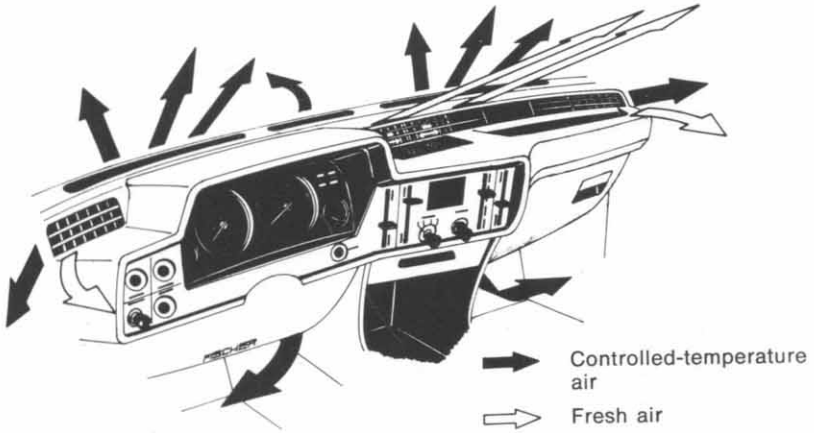
To lower: Turn the crank clockwise (4) to lower the rear of the roof panel.

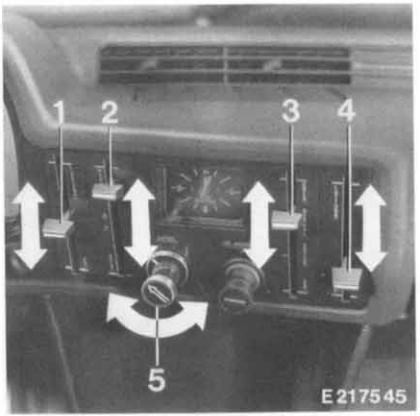
Note: After each movement, the hand crank should be folded back into its recess.

The **heating and ventilation system** is notable for exceptional heat output, accurate temperature control and an entirely separate fresh air supply for ventilation in hot weather.

The footwell area can be supplied with warm air while the fresh air supply is in use, the temperature depending on the setting of the air distribution (3) and temperature selector (2) slides. This ensures stratified heating and ventilation within the car, of great benefit for fatique-free driving. **Fig.**

The picture shows the layout of the controls:
1 = Cold air supply lever, left
2 = Temperature slide
3 = Air distribution slide
4 = Cold air supply lever, right
5 = Blower knob





Air distribution slide (3)

By moving the slide, the airflow can be distributed in the desired directions. In the closed position, the airflow is shut off altogether. As the slide is moved up, the footwell outlets are opened first. As the slide is moved further, to "normal", it opens the fottwell and the defroster outlets together. For defrosting most effectively or if the windows are misted or iced over, it is advisable to move the slide fully up, so that the full airflow is directed to the windows.

Flow of controlled-temperature air into car:

a) To footwells via openings at side of heater.
b) For defrosting via two defroster nozzles, one centre nozzle and two nozzles for the side windows.

Blower knob (5)

The blower knob is used for adjusting the amount of air flowing into the passenger compartment. To increase air volume, turn the knob clockwise.

With the temperature selector slide set to "Warm", do not select stage III of the blower until the engine has reached its normal operating temperature (see page 15).

Note: make it a rule to switch on the blower whenever heating, defrosting or fresh air supply is required.

Temperature selector slide (2)

By moving the temperature selector slide upwards, there is continuous temperature control of warm air flowing out of the defroster nozzles and footwell outlets. The desired temperature level can thus be selected very quickly.

Cold air supply levers, left (1) and right (4)

With the levers in the lower position, the cold air supply is shut off altogether. Pushing the levers up towards the ventilation position allows an increasing amount of fresh air to flow into the passenger compartment on the side desired. Air enters the interior of the car through fixed side grilles and two variable-direction centre grilles. Both levers can be adjusted separately, so that the fresh airflow to the left and right is independent.

Air Conditioner (optional extra)

If an air conditioner is installed in your BMW 320 i, see also pages 89-93.

The combination of the standard heater with the Air Conditioner offers you an ideal all-weather comfort control in your BMW.

The air conditioner is controlled by two turning knobs. **Fig.**

1 = Blower switch
2 = Temperatur selector

For cooling operate the blower switch; the various switch positions are:

0 = switch to the left = blower and air conditioner cut out.
1 = turning the switch to the right to the 1st notch = cuts in fan and air conditioning.

Turning the switch further to the right provides infinitely variable increase of fan speed.

2 = second notch: medium fan speed
3 = third notch (end-position) max. blower speed.

When your vehicle was exposed to direct sunlight for a fairly long time, first shift the fan control to high speed position for maximum cooling. Then switch down to a convenient lower blower speed.

3. Temperature selector knob (2)

Knob to the left = minimum cooling
Turning to the right = infinitely variable decrease of the air temperature.
Knob to right-hand end position = maximum cooling.

On order to avoid errors the heater blower is automatically switched off when you turn on the air-condition.

Blower control for air distribution in position 0.
Temperature slide in position "cold".

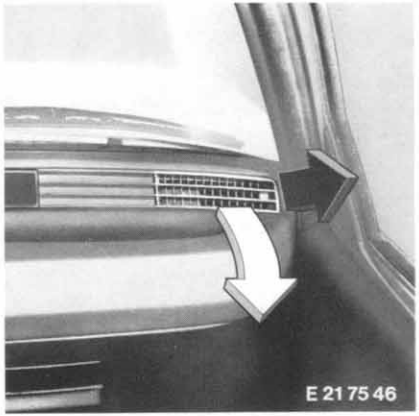
For quick cooling we recommend to close for a moment the fresh air by closing the cold air supply slides left and right. When driving you may then mix the desired quantity of fresh air with cooled air by opening these slides.

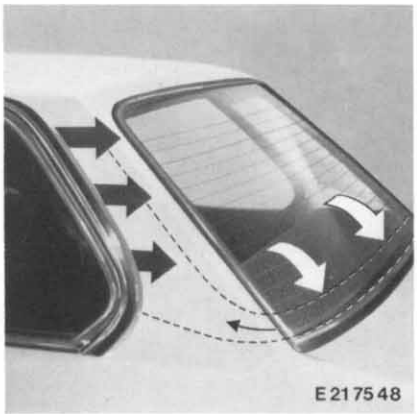
The two pictures show the side outlets for controlled temperature air (black arrow) and fresh air (white arrow).

Air extraction:

Stale air is extracted from the passenger compartment through slots below the rear window, leading to openings in the rear roof pillars. **Fig.**


E 21 76 44 US


E 21 75 46


E 21 75 48

Automatic transmission

The following **selector lever positions** are available to suit various traffic conditions:

P-R-O-A-2-1

P = Park

Select only when the car is at standstill. The drive train is locked as an additional precaution against running away on a slope. To select position P, press locking catch in below lever knob. The engine can still be started.

R = Reverse

Select only when the car is at standstill, with the locking catch pressed in. If reverse is selected while the car is moving forward, the rear wheels will lock - this could cause an accident.

O = Neutral

The engine is disconnected from the drive train and can be started. Engage neutral also when stopping for **lengthy** periods (for instance in traffic jams).

A = Automatic (normal driving position)

This position should be selected for all normal road conditions. The car moves off in 1st gear and automatically changes up into 2nd and 3rd gears as soon as the most favourable and economical point is reached.

2 = Hill-climbing and engine braking

This position can be selected on mountain roads or other lengthy rising or falling gradients. Better use is made of available engine power and the engine braking effect.

Position 2 can be selected at any road speed. If the speed is initially too high for 2nd gear to engage, it will come into operation only after road speed has fallen to about 70 mph or 112 kph. If the road speed then rises again, the transmission will not reengage 3rd gear, and so excessive engine speeds can result.

1 = Hill-climbing and engine braking

This position is normally reserved for road and traffic conditions in which it is desirable to hold 1st gear in engagement, for instance on very steep uphill or downhill gradients.

Position 1 can also be selected at any road speed. At about 70 mph or 112 kph 2nd gear will then engage, and after speed has fallen to about 42 mph or 67 kph, 1st gear will be engaged in turn. However, even if road speed then rises the transmission will not change up again into 2nd or 3rd gear, and so excessive engine speeds can result.

Kick-down

The accelerator pedal can be pressed down beyond the normal full-throttle position (increased resistance will be felt).
In special circumstances, for example when overtaking, more rapid acceleration can thus be obtained; the transmission will select, up to a certain engine speed, the next lower gear without any delay.

When the kick-down has been used, the subsequent upward changes will occur at a considerably higher road speed than normal, close to the maximum permissible engine speeds in each gear. This ensures that the full available engine power can be made use of when needed.

Starting off

Before you operate the starter, always make sure that the gear shift lever is in Neutral.

On cars fitted with automatic transmission the engine can only be started when the selector elver is in the "P" or "O" position.

To **start the engine,** turn the ignition key clockwise to the **"3"** position (without pressing down the accelerator until the engine fires. Do not allow the engine to turn over without firing for longer than about 20 seconds. When the ignition key is released, it will spring back automatically to the **"2"** position. When a cold engine is started in this way, it will run initially at a slightly higher speed during the warm-up phase.

To make starting easier, especially in freezing conditions, switch off all current-consuming items and press down the clutch pedal.

If the starter has to be operated a second time, the ignition key must first be returned from the **"2"** position to the **"1"** position. This deliberate delay is included to prevent as far as possible re-engagement of the starter pinion while the engine is still turning. Try to prevent damage to the flywheel ring or starter pinion teeth by waiting until the engine has ceased to rotate before operating the starter.

The fuel injection engine of this BMW model is equipped with an automatic starting and warming-up device.

Starting

When starting, a magnetic valve controlled by the ignition current is opened so that fuel is injected into the inlet manifold for a certain period depending on the temperature of the coolant. The fuel/air mixture is enriched further while the engine is warming up by means of an electrical and coolant heatid bimetallic spring.

When starting, do not depress the accelerator pedal at all. It is possible to start driving immediately after the engine has fired, running at a medium engine speed only.
If the engine will not start or fires only irregularly after several attempts, try again with the **accelerator pressed down fully.**

If the engine is warm, start with the accelerator pressed down halfway.

When the engine has fired, the oil pressure telltale and battery charge telltale lamps (red) in the combined instrument must extinguish when engine speed is increased.

If the oil pressure telltale lamp comes on while driving, disengage the clutch **immediately** and switch off the ignition. If the engine oil level is sufficient, take the car to a BMW Service Station. If the light comes on briefly during idling, there is no danger provided that the lamp extinguishes again when the accelerator is depressed. (See MINOR DEFECTS)

It is not advisable to let the engine warm up while idling and this is in fact forbidden in some countries. It is better to move off immediately after starting the engine, using **moderate** engine speeds. If the outside temperature is exceptionally low however, it is better to run a cold engine for about 1/2 minute at a fast idling speed, to ensure that all parts of the engine receive an adequate supply of lubricant. In all cases avoid running a cold engine at high speeds, as this will shorten its working life.

When **disengaging the clutch,** always **depress the pedal fully;** while driving never rest the left foot on the clutch pedal.

Before selecting reverse gear, wait with the clutch pedal fully depressed for approx. 1 second, so that the gearbox shafts have time to come to a standstill.

When driving an automatic transmission car, operate both brake pedal and accelerator with the **right foot only.**

Moving away from standstill with automatic transmission:

with the engine idling, selector lever positions A, 2, 1 or R can be engaged from P or O with the **brakes applied.** Let the transmission engage (slight transmission jerk) before pressing down the accelerator.

Stopping a car equipped with automatic transmission:

At normal idling speeds with a drive position selected, the car will tend to creep forward on a level surface. The foot brake should be applied to prevent this.

To stop the engine, turn the ignition key back to position **1.**

If the battery charge telltale lamp comes on while driving, you should take the car to a BMW Service Station as soon as possible, or else the battery may become fully discharged.

Running in – but how?

Your BMW's engine is not governed to reduce its output artificially while still new. It is therefore up to you to observe the following **running-in rules** so as to ensure that your car later achieves its full reliable working life and maximum operating economy.

Allowing the engine to work hard at low speeds is just as dangerous during running-in as exceeding the permitted engine speed limits. Try to keep the engine turning over freely at speeds above 1500 rev/min.

During running-in, do not drive at the maximum permissible road speeds in the intermediate gears for more than a short period each time. Vary your speed frequently during longer journeys so that the engine can operate in different speed ranges, and remember to shift to a lower gear in good time, especially on uphill gradients.

During the first 1300 miles or 2000 km do not use the **full throttle** or **kick-down** positions of the accelarator pedal at all.

Engine speed is shown continuously on the **revolution counter.** Please note the following **engine speed limits during running-in:**

From 0–650 miles or 0–1000 km 4000 rev/min

From 650–1300 miles or 1000–2000 km 4500 rev/min

Never allow the revolution counter needle to enter the **red engine speed zone,** i.e. above 6400 rev/min, in particular in the lower gears or on long straight sections of downhill gradient.

Running-in instructions for brakes:

Until 300 miles or 500 km have been covered, avoid repeated violent brake applications, particularly from high speeds, and do not subject the brake to prolonged endurance tests, or else the pads will fail to develop their full wear-resistance and friction characteristics.

Running-in new tires:

The manufacturing techniques used for automobile tires result in less than the full road-surface grip being available initially. We therefore recommend a restrained driving approach during the first 200 miles or 300 km so that the tires can develop their best initial wear pattern.

During the **running-in period,** the driver may feel that the gear shift, steering and other controls are slightly **stiff to move.** However, the normal running-in process will result in these items becoming less stiff, and the effect disappearing completely after a short time.

After 1300 miles or 2000 km have been covered, you can **gradually** increase your road speeds – subject to suitable road and traffic conditions – to the permissible **continuous and maximum speeds.**

For satisfactory operation, the engine requires the following commercially-available fuel for spark-ignition engines, without additives such as upper-cylinder lubricants etc.:

Normal (Regular) grade fuel with a minimum octan of 91 RON (Research method) equal to 87 AKI.

Please note that in certain countries it may be difficult to obtain fuel of the correct octans rating or quality at all garages and filling stations.