Front end

- Engine-compartment lid

The engine-compartment lid is made of aluminium. It can be raised to a service position, in which it is almost vertical. It can be opened to this position by disengaging the dampers and extending them with the aid of a special tool (similar to the E46).

The ornamental grilles are a snap-fit in the engine-compartment lid.
As in the E38, the two-part kidney grille is also snap-fitted into the engine-compartment lid.

Fig. 7: Kidney grille, two-part

- Engine compartment

The vehicle identification number (VIN) is stamped into the front right spring strut dome. The type plate is riveted to the longitudinal member at the front right. There is no separate plate for the colour code. The colour code is included in the information on the type plate.

The spring strut domes have slots for extra camber adjustment as standard.

The microfilters for the air conditioning system are easily accessible from inside the engine compartment. The system can also be converted easily to activated charcoal filters if necessary.

The electronics box with the digital engine electronics (DME) and the Valvetronic control unit (VVT) are beneath the housing to the right of the microfilter.
The integrated supply module (IVM) is also positioned here; this module has its own fuses.

The positive terminal and some fuses for the VVT system are readily accessible in front of the electronics box, level with the wheel arch.

The reservoir for the windscreen washer system is mounted below the front left wheel arch. The reservoir has a capacity of

6.5 l and can be filled from inside the engine compartment.

The new finishing panels of the N62 are a visually appealing feature.

The front left wheel arch also has a finishing panel.

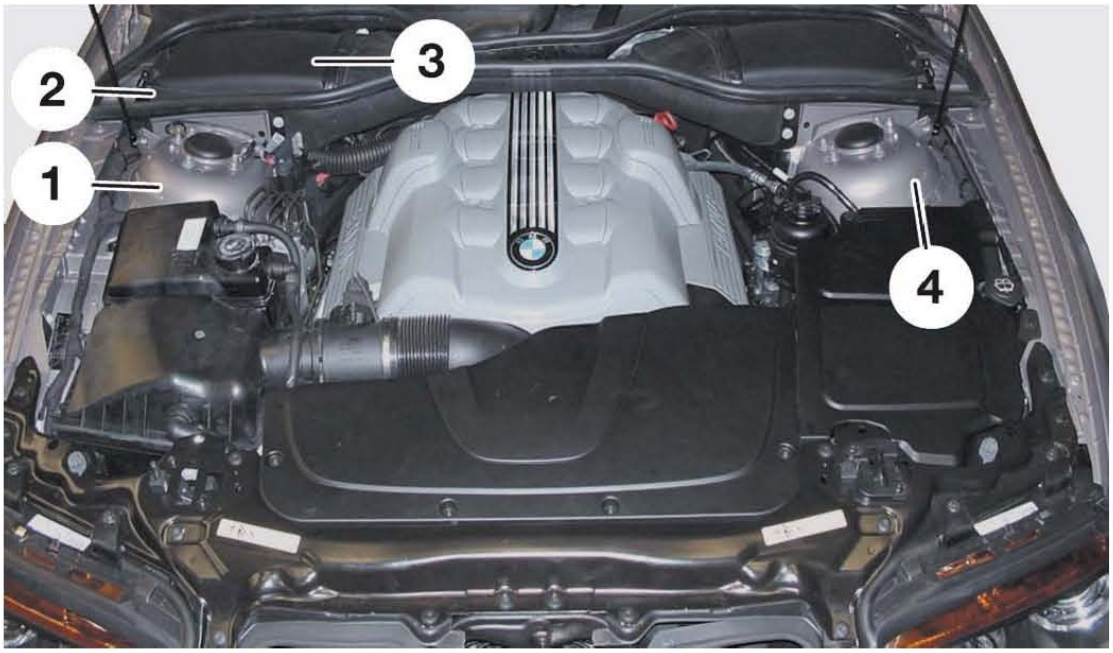


Fig. 8: Engine compartment

Index	Description
1	Vehicle identification number
2	Locations of control units and fuses
3	Microfilter
4	Number of body

-Headlights

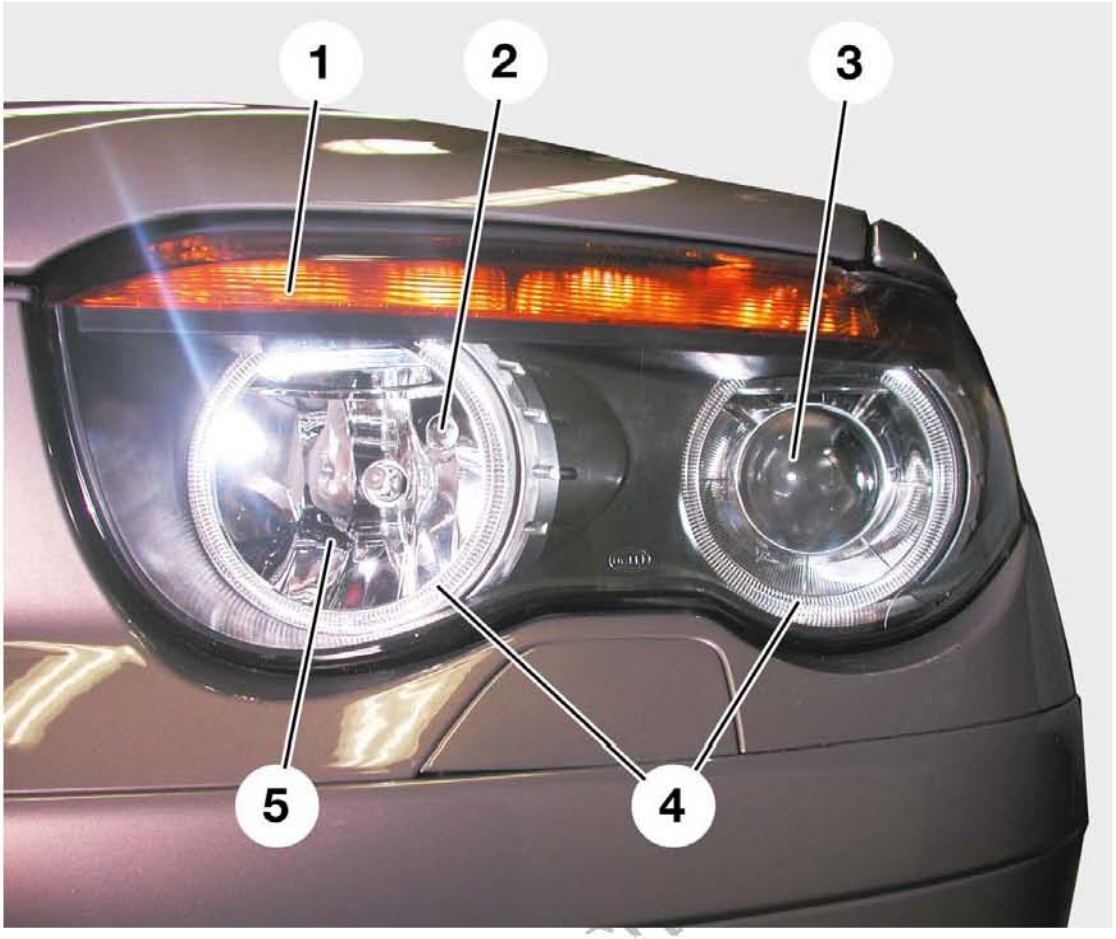


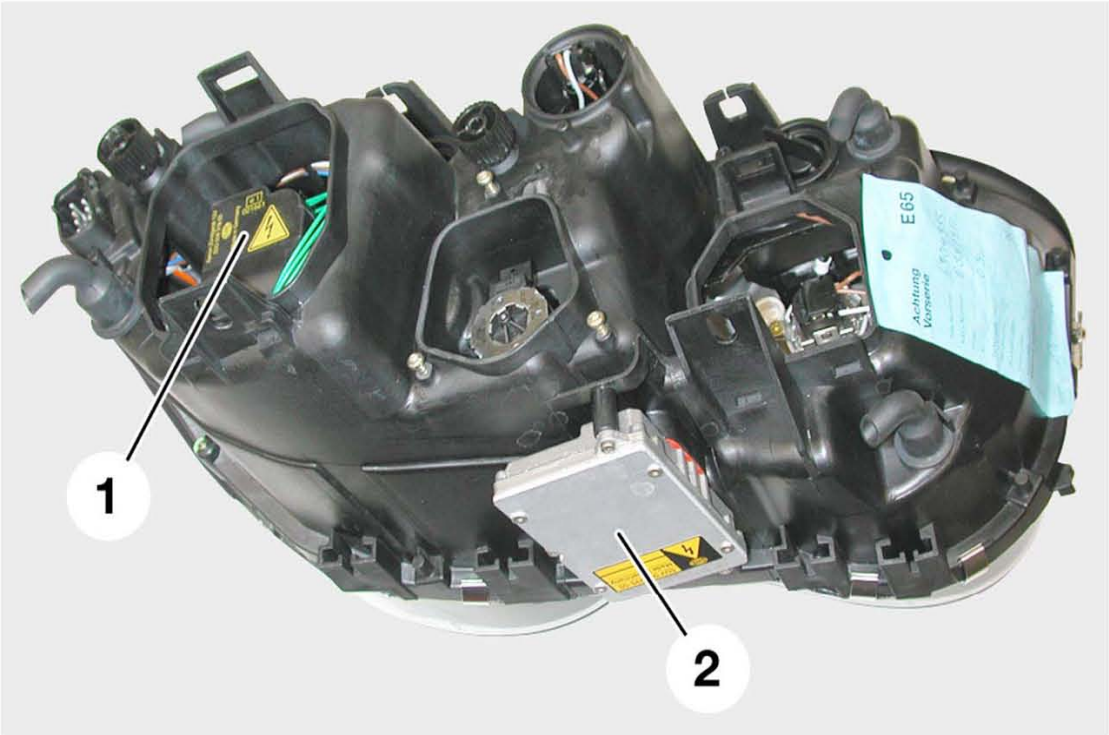
Fig. 9: Front headlights

Index	Description
1	Flashing turn indicators
2	Parking light (halogen version)
3	Low beam: also high beam in the case of bi-xenon light optional extra
4	Parking light: bi-xenon light optional extra
5	High beam headlight

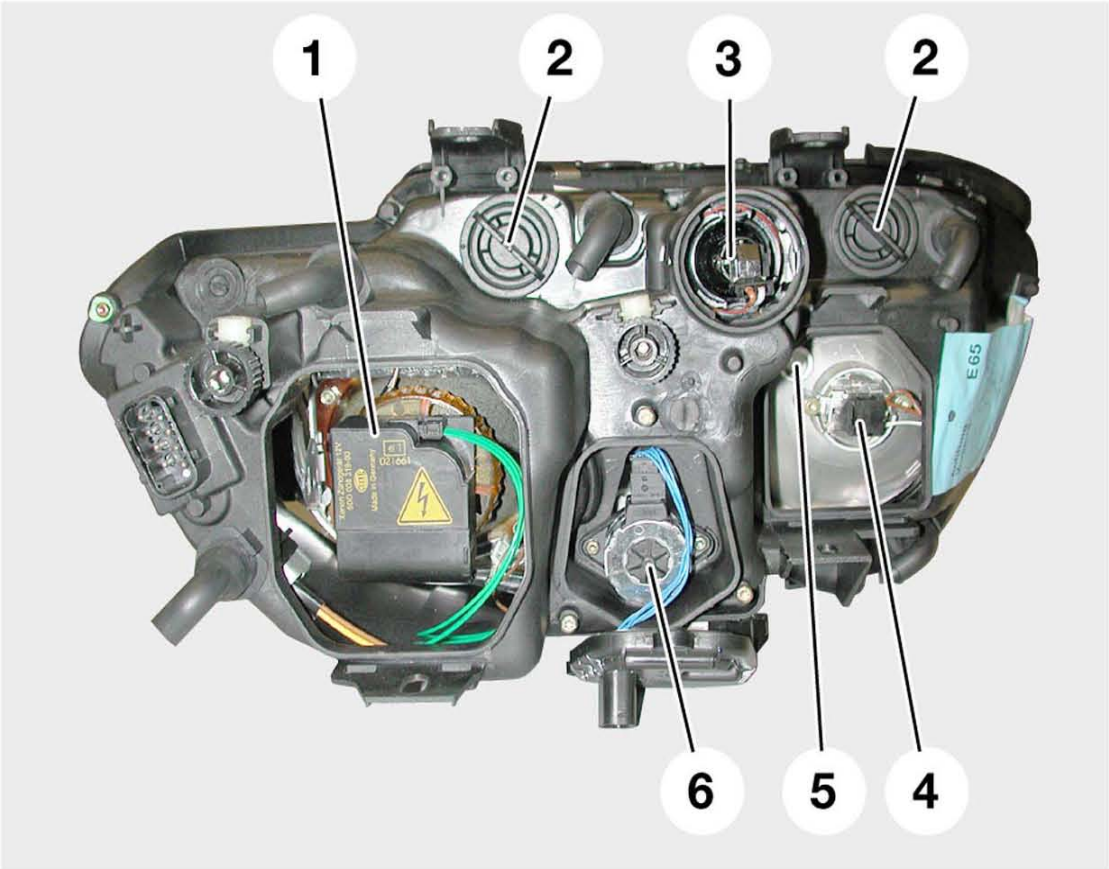
The new headlights with integral flashing turn indicators have a number of special features.
It is important to note, for example, that before the headlight can be removed it is necessary to remove the bumper panel.

The parking light differs, depending on whether the car is fitted with halogen headlights or xenon headlights: The standard version has a position light bulb set in the reflector
of the low beam headlight.
In the case of the bi-xenon light optional extra, there is no hole in the reflector at the position otherwise occupied by this position light bulb. The parking light is an optical-fibre ring around each high-beam and low-beam headlight. These opticalfibre rings are installed in the standard version, but they are not activated.

By the same token, the procedures for changing the position lights vary as well:
The position light of the bi-xenon light optional extra can be replaced only with the headlight removed.
Similarly, the headlight has to be removed in order to permit the removal of the xenon bulb (low beam) and its control unit.

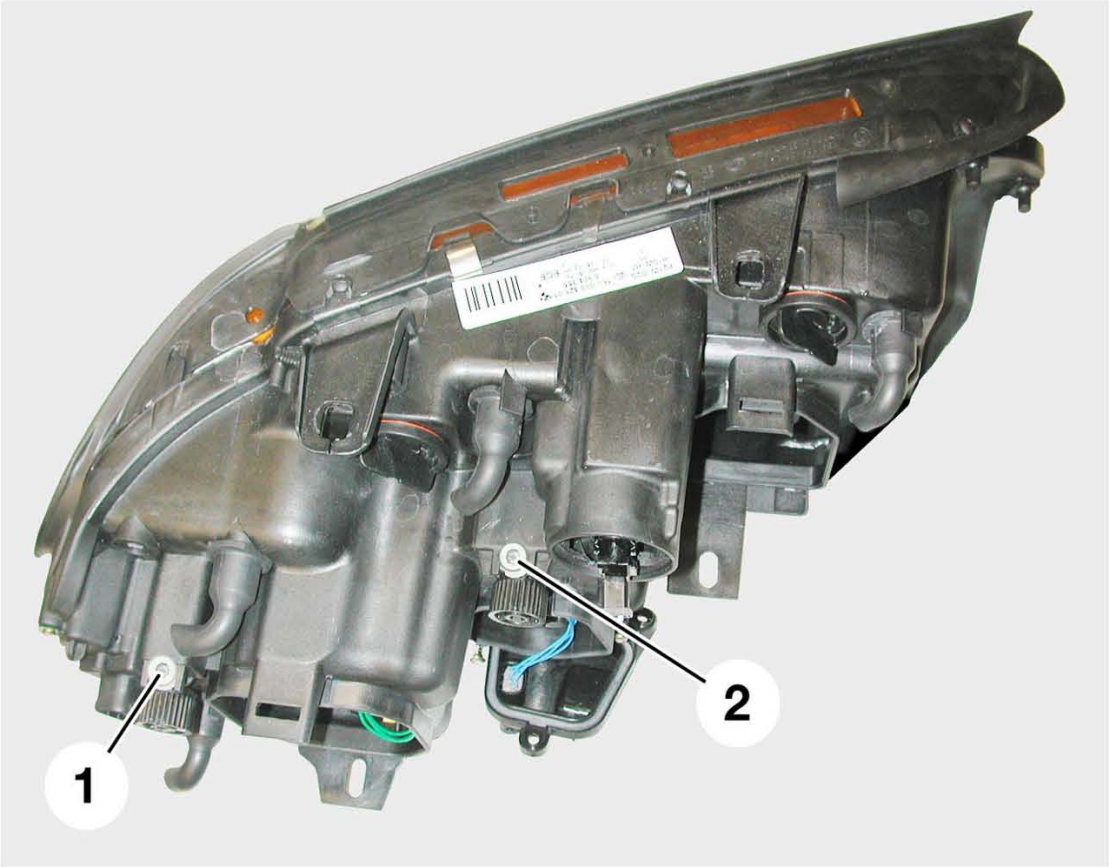


Index	Description
1	Xenon bulb
2	Control unit for xenon light



Index	Description
1	Low beam (bi-xenon light optional extra), also high beam in the case of bi-xenon light optional extra
2	Flashing turn indicator bulbs (2 of)
3	Position light of the bi-xenon light optional extra
4	High beam, halogen bulb
5	Parking light of the halogen low beam headlight
6	Servomotor for headlight beam throw adjustment

All other bulbs (flashing turn indicators and high beam headlights) can be replaced without the necessity of removing the headlights. There are holes for easy access to the screws for height adjustment and lateral adjustment of the low-beam and highbeam headlights. The outer adjusting screw (1) is for lateral adjustment of both lights. The inner adjusting screw (2) is for vertical adjustment of the high-beam and low-beam headlights.



Index	Description
1	Screw for lateral adjustment
2	Screw for vertical adjustment

Do not attempt to remove the headlight lenses, because they are bonded to their housings.

A repair solution for headlights with a broken retainer is in preparation.

The new design integrates a clear-glass look, so the reflectors are visible.

The bi-xenon light incorporates a function for automatic changeover from low beam to high beam. This supports optimised use of the high beam headlights.
The bi-xenon light optional extra includes automatic headlight beam throw control (ALR). Cars with standard headlights have manual beam-throw adjustment. The servomotor in the headlight is controlled by the light module. The requisite information for automatic beam-throw adjustment is supplied by the level sensors on the front and rear axles. In a car equipped with manual beam-throw adjustment the driver uses the knurled knob on the left of the steering wheel to make the necessary adjustments. The US version has an extra side light (cat's eye) in the design surface at the side. The sidemarker (US version) is integrated into the flashing turn indicator. The Automatic Light Control optional extra (ALC) is in preparation. This function requires additional servomotors in the headlights. These motors turn the low beam headlights to match the direction in which the steering wheel is turned.

-Fog lights

Index	Description
1	Hole for securing screw
2	Adjusting screw

A screw secures each fog light in position. The snap-fit grille has to be removed in order to gain access to this screw. The screw for vertical adjustment is freely accessible. The fog light has to be removed in order for the bulb to be replaced.

Index	Description
1	Bulb, fog light

- Auxiliary turn indicator light

The auxiliary turn indicator light is set in the front side panel.
To remove the light, push it to the rear and disengage it. Then turn the light through 90º and remove it.
When changing bulbs, bear in mind that the threads are not the same: the bulb on the left has a left-hand thread and the bulb on the right has a right-hand thread.

- Front side panel

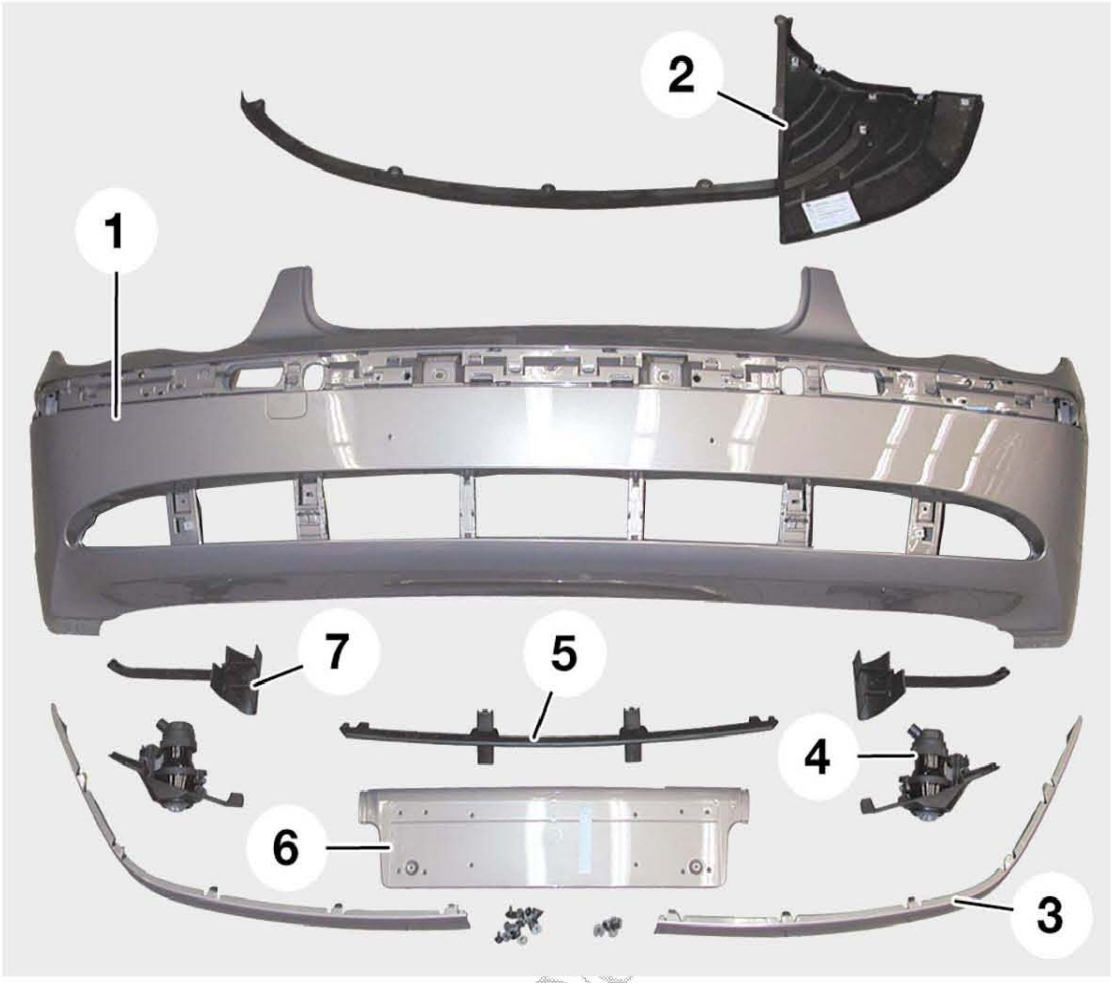
The front side panels of the E65 are made of aluminium.
This, of course, means that wing covers with magnetic fasteners cannot be used in the usual way.

The front side panels are bolted to the body.

On a car fitted with the "Automatic Roll Stabilisation" optional extra (ARS), the control unit is below the side panel at the front right.

On a car fitted with the "independent heating" optional extra, the heating device is below the side panel at the front left.

-Front bumper



Index	Description
1	Panel of bumper
2	Ram-air lip
3	Side trim panels
4	Fog lights
5	Grille in centre
6	Finisher for licence plate
7	Side grille

The font bumper differs in a number of ways from that of the E38.

For example, it does not have impact dampers. The forces are carried through the section itself and transmitted to an aluminium mounting.

Impacts up to 8 km/h cause only slight damage. Only at higher speeds is the engine mount affected.

A ram-air lip has been integrated to improve the c_d value at the front wheels.

The towing lug screws into a tapped hole. As on the predecessor model, the thread is protected by a captive cover. The cover for the headlight cleaning system (SRA) is integrated into the bumper trim and finished in the same colour as the car.

PDC is an optional extra. All bumper panels are, however, recessed to accommodate the sensors. If a car is ordered with PDC the only change is that different rubbing strips are fitted.

Active Cruise Control (ACC) is available as an optional extra. The control unit for this function is located behind the bumper trim.

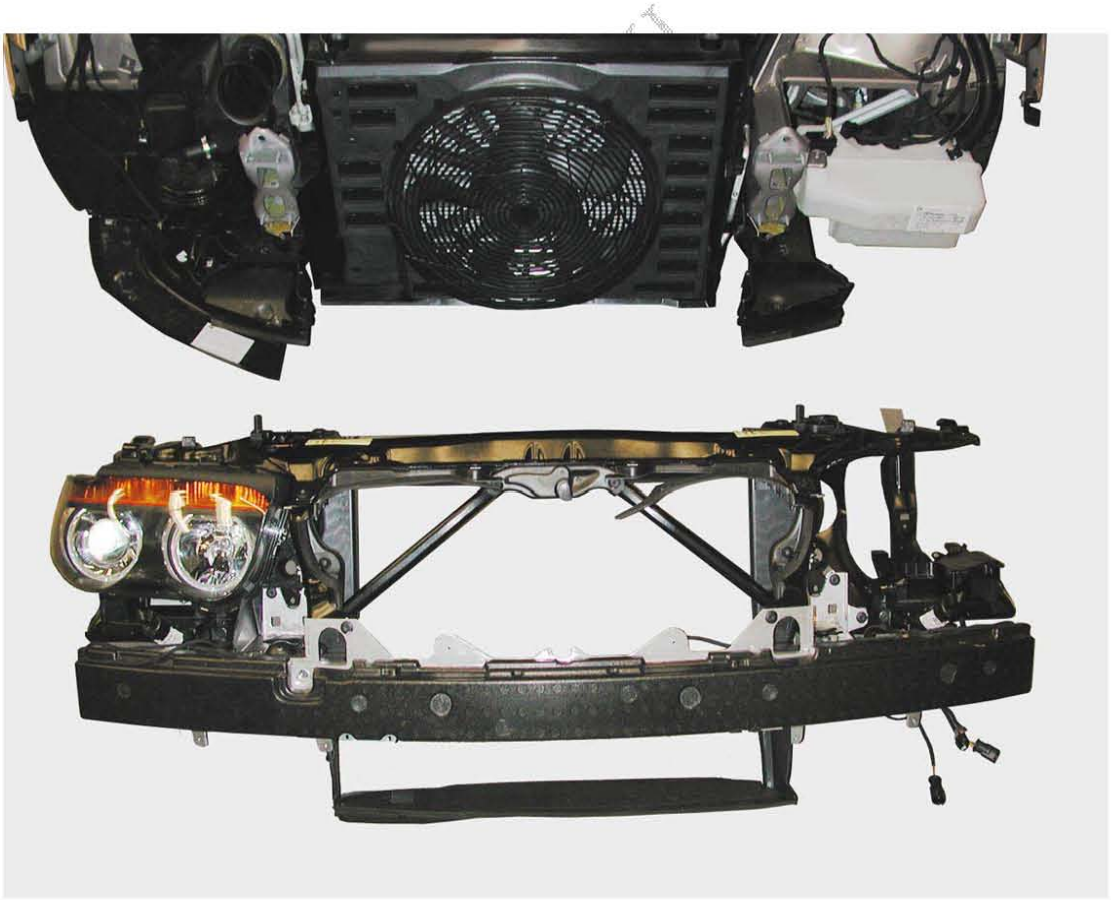
Unlike other BMW models, there are no central impact absorber screws. Instead, the bumper is built up in layers from the inside to the outside.

The panel can also be removed complete with the front end. The finishers have holes permitting access to the screws.

- Front end

The front end is bolted to the body. It can be removed complete with headlights and bumper.

The Bowden cable (for the engine compartment lid release) can be disengaged at the connector on the left side carrier of the wheel arch. There is a central plug-in connector for separating the parts of the wiring harness.



- Windscreen

As is the case with the E38, the front windscreen is bonded to its frame.

It is made of laminated safety glass (VSG).
A heat-control windscreen will be available as an optional extra. This windscreen incorporates an extra membrane that helps prevent heat building up inside the passenger compartment.

The rain sensor, which is available as an optional extra, is bonded to the windscreen is the same way as in the E38.

The new snap-on roof mouldings have to be taken into consideration when the windscreen has to be removed. These one-piece mouldings extend all the way from the A-pillars to the C-pillars. The trimmer beneath the windscreen also has to be removed.

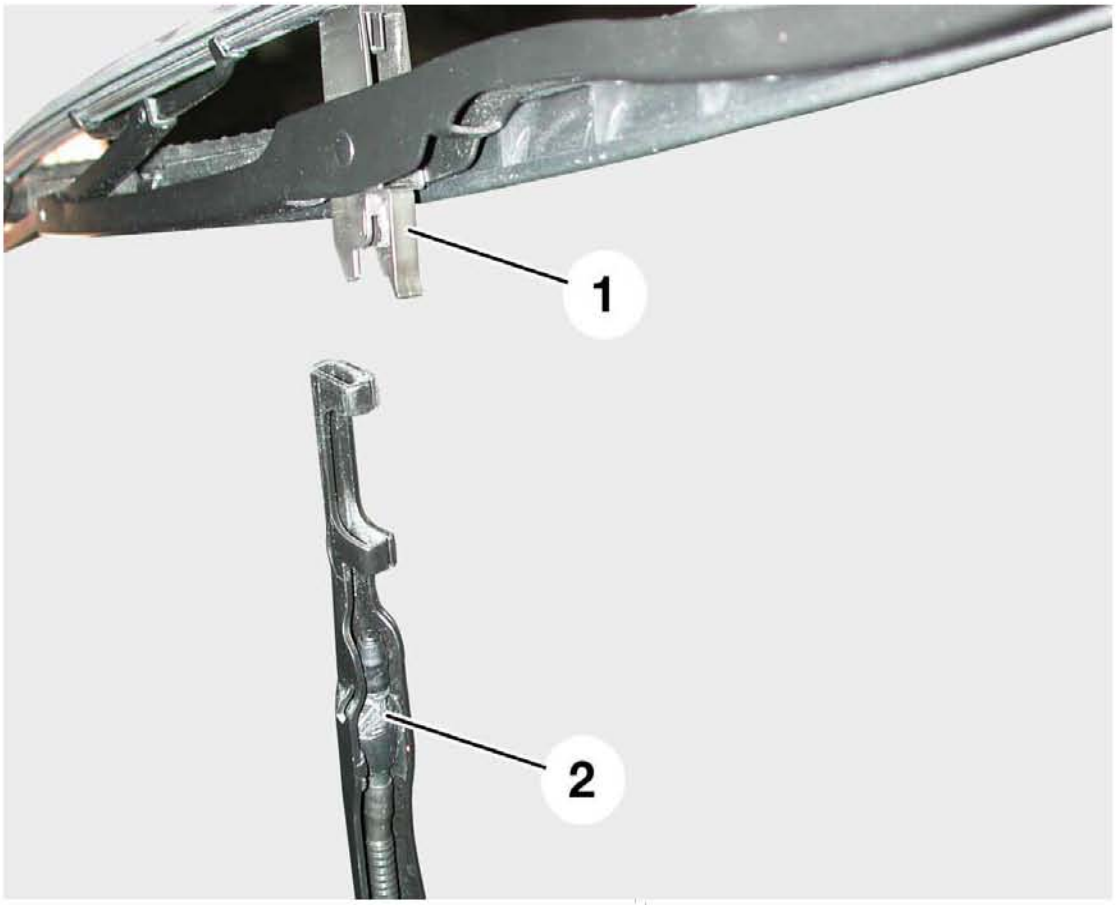
- Windscreen cleaning system (SRA)

A wet-arm wiper mechanism is a new feature of the E65.

The spraying nozzles are integrated into the windscreen wiper. This means that it is no longer necessary to adjust the nozzles.

The windscreen cleaning system and the headlight-cleaning system have a common tank.
It is beneath the left wheel arch and is protected on the wheel side by a panel.
The tank has a capacity of 6.5 litres and is refilled through a filler neck in the engine compartment.

The wipers can be swung away from the windscreen to a defined position so that the wiper blades can be removed and installed. The wipers are moved to this position by pressing the wiper switch for at least 3 seconds with terminal R switched OFF.



Index	Description
1	Retaining clip for wiper blade
2	Spraying nozzle