

Underside of the vehicle

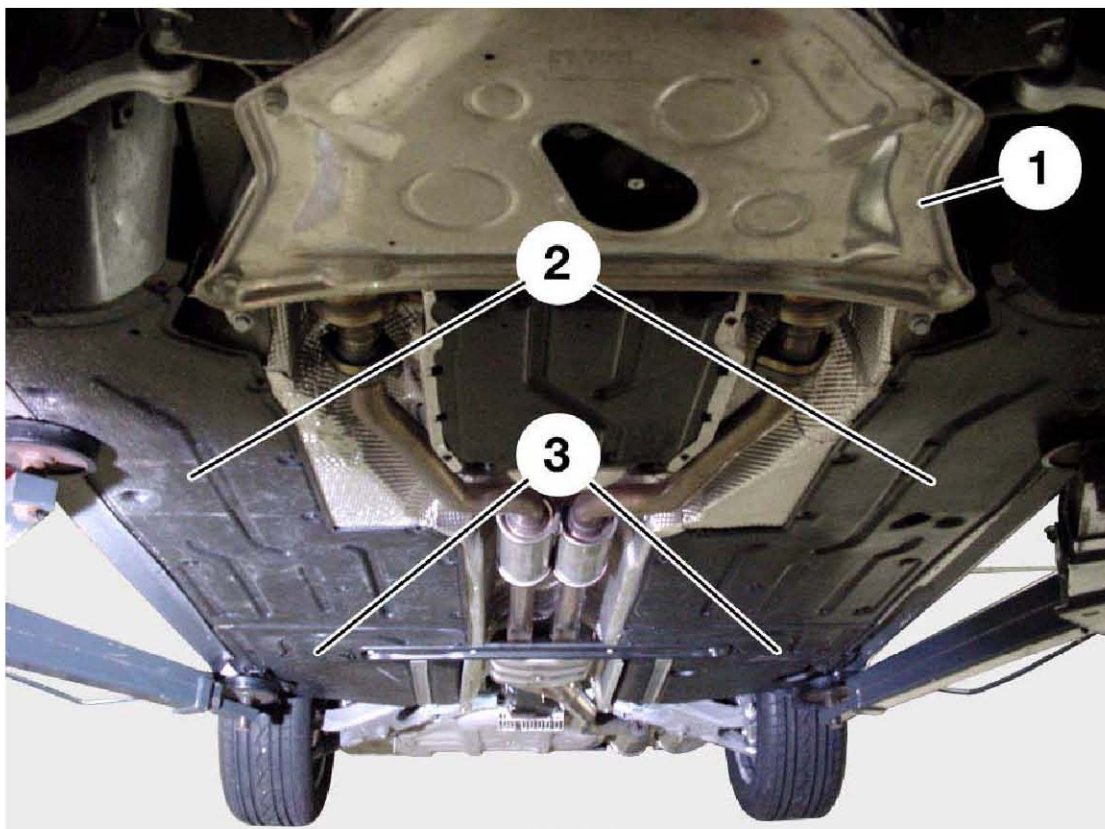


Fig. 53: Underside of the vehicle

Index	Index Description
1	Thrust panel
2	Underbody panelling, front, with ram-air lip
3	Underbody panelling, rear, with ram-air lip

- Underbody panelling

The panelling consists of several parts:

- Underbody panelling, front/rear
- Four wheel-arch liners

All these panelling elements are easily removed. The wheel-arch liners are made of a more flexible material than that used in the E38, and this makes them considerably easier to remove.

The ram-air lips are integrated into the underbody panelling. This optimises the aerodynamic effect of the underbody. This is also the reason why the panels themselves are extra smooth, with the result that the car's underbody produces no more than minimal airflow disruptions.

The underbody panels are also covers for the following components:

- The Dynamic Drive Control system (valve block with integrated sensor, tandem pump and oil reservoir), situated behind the panels at the front right
- The independent heating situated behind the panels at the front left
- The diagnosis module for tank leaks situated behind the panels at the rear left

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Just panel that help
that the engine oil

the underbody panels.

- Thrust panel

The E65 has an aluminium thrust panel that helps stabilise the front axle. It has openings so that the engine oil can be changed without the panel having to be removed.

The central car jacking point is also on the thrust panel.

- Running-gear components, front

The E65 has an aluminium front axle with rack and pinion steering gear. The ride height sensor for headlight beam throw adjustment is on one of the front right control arms. This sensor also supplies data for the ride-height control system optional extra, if fitted.

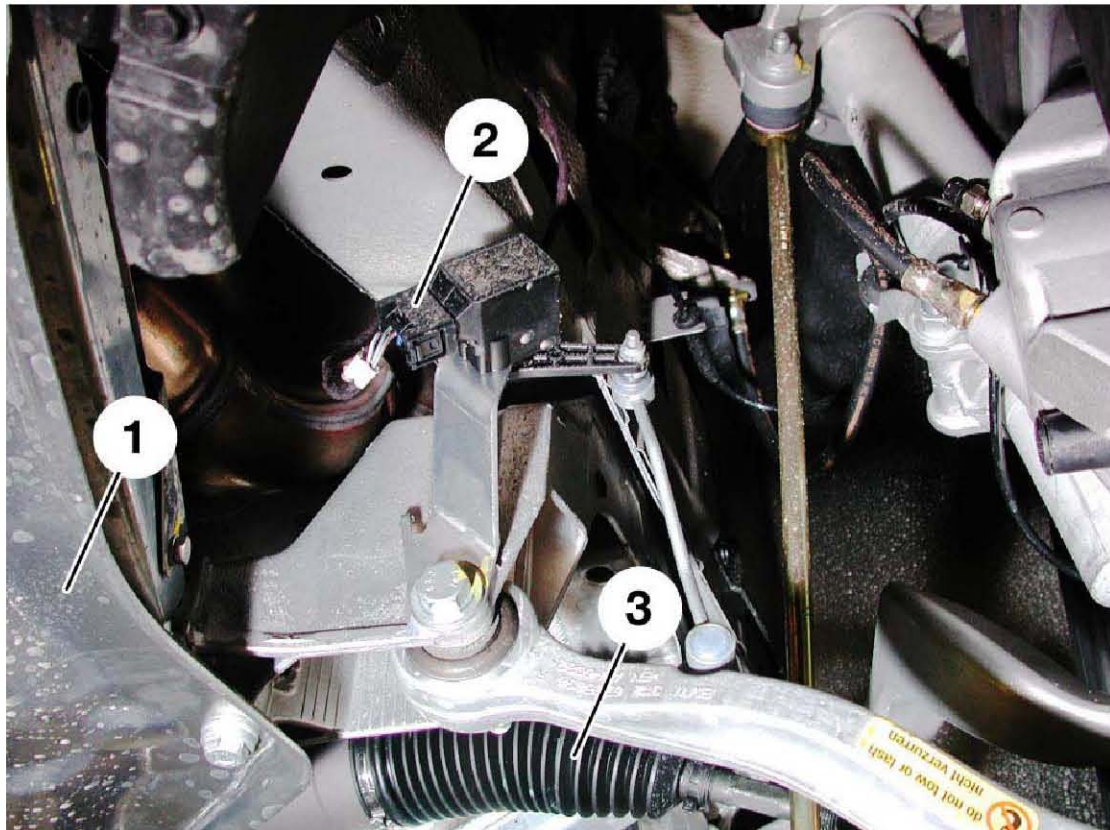


Fig. 54: Front ride height sensor

Index	Description
1	Thrust panel
2	Ride height sensor
3	Rack and pinion steering

The E65 is equipped with aluminium floating-calliper brakes. The sensor system for the brake lining wear indicator is integrated into the callipers. The material for the calliper brakes was selected in order to save weight and on account of the good resistance to corrosion.

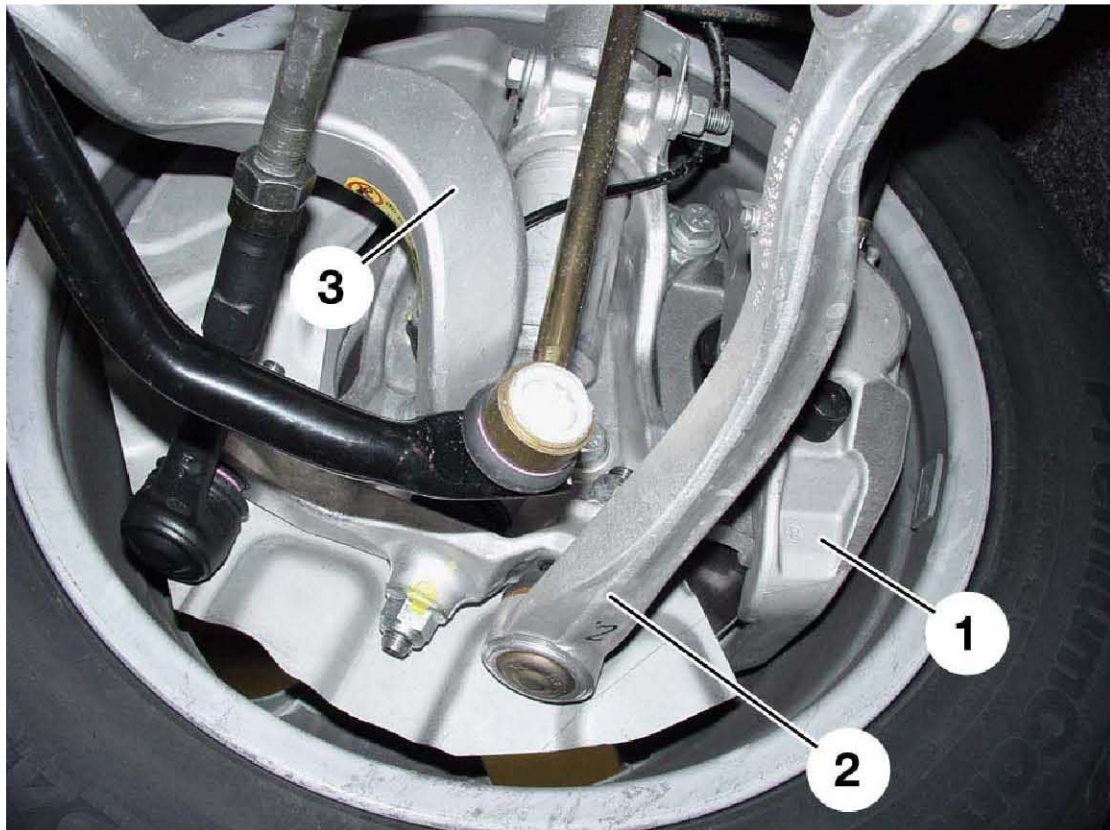


Fig. 55: Floating-calliper brake, front right

Index	Description
1	Aluminium floating-calliper brake
2	Aluminium control arm
3	Aluminium leading link

If the Dynamic Drive optional extra is fitted, the active stabiliser with swivel motor is secured to the front axle.

- Running-gear components, rear

Most of the components of the rear-axle assembly, too, are made of aluminium.

Ride height sensors are mounted on the rear axle: depending on the options fitted, they supply data to the control units for headlight beam throw adjustment (one sensor at rear left) or the ride-height control system (one sensor on each side at rear). The data from these sensors is processed along with the data from the sensor at the front axle.

If the Dynamic Drive optional extra is fitted, there is also an active stabiliser with hydraulic swivel motor mounted on the rear axle.

- Wheels

The E65 is fitted with 245/55 R17 tyres as standard. These tyres are on 8J x 17 EH2 rims. These are the sizes for both summer and winter tyres. The winter tyres are M+S-rated.

The following are available as optional extras:

SA Summer	245/50 R18 on 8J x 18 EH2 rims
SA Summer	275/40 R19 on 10J x 19 H2/EH2 rims
SZ Summer	275/35 R20 on 10J x 20 H2/EH2 rims
SA All seasons	245/50 R18 M+S on 8J x 18 EH2 rims

re, shafts

transmission (first transmiss

Only a new 6-speed automatic transmission (GA6HP26Z) is installed in the E65. This is the first transmission to have the control unit (ESG) integrated inside the transmission case. If the control unit requires replacement it has to be replaced along with the hydraulic shift actuator. This involves partial disassembly of the transmission.

The final-drive ratio of the E65 is not the same as that of the E38. No provision is made for repair. If it is damaged the entire final-drive assembly has to be replaced. The only exception is that the sealing rings can be replaced. The case is filled with lifetime oil, so an oil change is not necessary.

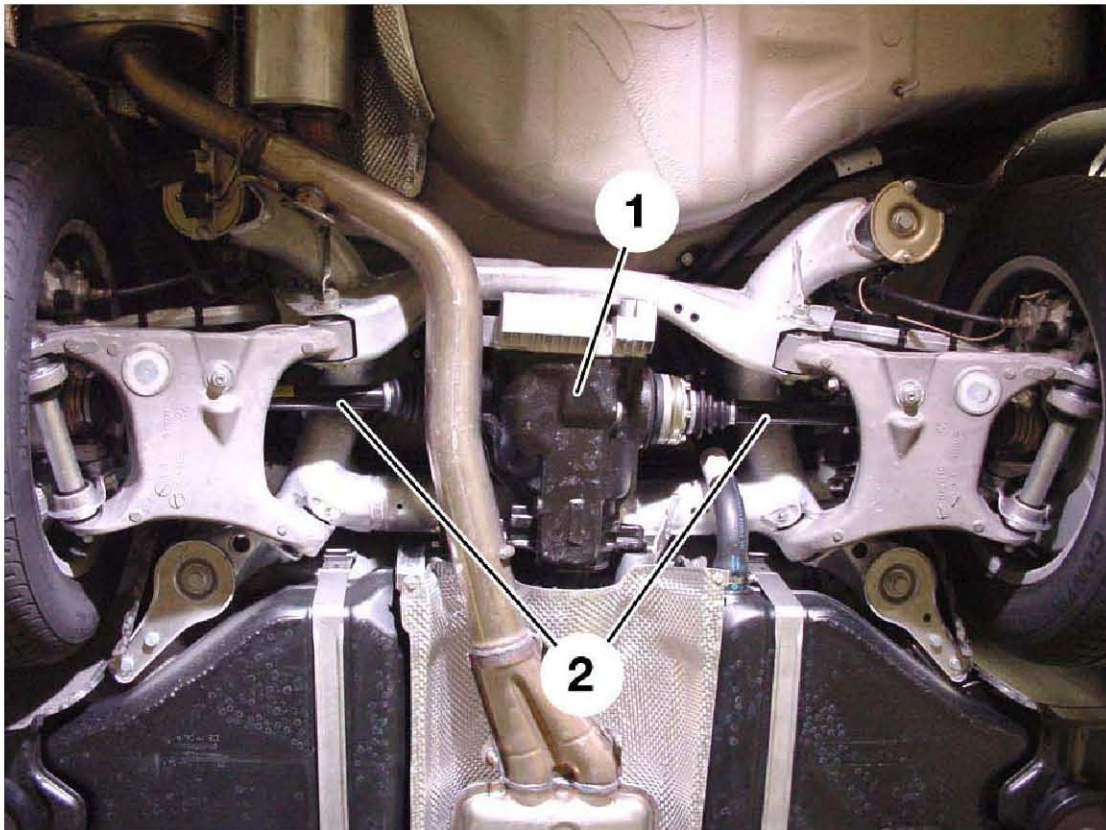


Fig. 56: Final-drive assembly

Index	Description
1	Final-drive assembly
2	Drive shafts

The E65 breaks new ground in that it does not have underbody sealing, so a special surface finish is applied to the screws of the final-drive assembly. The oil-filler and oil-drain plugs, too, with their integral sealing rings have an anti-corrosion finish.

The propshaft is made of aluminium in order to reduce weight. In terms of design it is similar to that of the E39. The compact output shafts, too, are weight-optimised.