

Instrumente

Instruments
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Instrumenten

Leuchten

Lights
Lampes
Luci
Luces
Belysning
Lampjes

62 Instruments

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Specifications

Instruments			
Model		320/6 320/6 A	323 i 323 i A*)
62 11 ... Instrument cluster			
Coolant thermometer Scale reading	°C (°F)	+ 40 ... + 120 ¹⁾ (104 ... 248)	
Scale reading/ equivalent resistance	°C/Ω	50/193.6 82.5/64 94.5/45 110/29.4	
Operating voltage	V	9 ... 15	
Test voltage	V	13 ± 0.26	
Fuel gauge Scale reading	liters	R 20 R 30 R 40 R 60	R 1/2 F

*) Version for Sweden

1) Blue zone = + 40 ... + 51.5°C (+ 104 ... + 125°F)

Red zone = + 115 ... + 120°C (+ 239 ... + 248°F)

Specifications

Instruments

Model	a) 320/6 b) 320/6 A		a) 323 i b) 323 i A *)
62 11 ... Instrument cluster, continued			
Scale reading/ equivalent resistance	°C/Ω	R/80.7 (R/80.7) ¹⁾ 20/57.3 (1/4/72.5) ¹⁾ 30/39.3 (1/2/47.8) ¹⁾ 40/21.9 (3/4/22.2) ¹⁾ 55/4.7 (F/4.7) ¹⁾	
Operating voltage	V	9 ... 15	
Test voltage	V	13 ± 0.26	
62 12 ... Speedometer (mechanical)			
Kilometer reading Scale range	km/h	20 ... 220	
Drive ratio		0.808	0.762
Mile reading Scale range	mph	0 ... 140 ²⁾	
Drive ratio		1.30 ²⁾	1.22 ²⁾

*) Version for Sweden

¹⁾ Scale readings and equivalent resistances for RHD cars

²⁾ Values for RHD cars

Specifications

Instruments

Model		a) 320/6 b) 320/6 A	a) 323 i b) 323 i A *
62 12 . . . Speedometer drive shaft			
Length ¹⁾ for LHD cars, one-piece shaft	mm (in)	a) 1680 ± 3 (66.14 ± 0.12) b) 1800 ± 3 (70.87 ± 0.12)	
Color code		a) silver/grey b) silver/brown	
Length ¹⁾ of upper section, RHD cars	mm (in)	260 ± 3 (10.24 ± 0.12)	
Color code		silver	
Length ²⁾ of lower section, RHD cars	mm (in)	a) 1820 ± 3 (71.65 ± 0.12) b) 1940 ± 3 (76.38 ± 0.12)	
Color code		a) orange/blue b) gold/white	
62 13 . . . Revolution counter			
Scale range	1/min	8 . . . 8000	
62 13 . . . Clock			
Operating voltage	V	9 . . . 15	

* Version for Sweden

¹⁾ Length of outer sleeve

Specifications

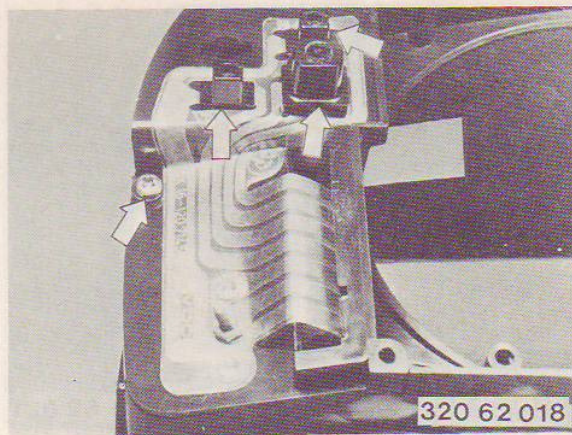
Instruments			
Model		320/6 320/6 A	323 i 323 i A *)
62 14 . . . Instrument and telltale lamp bulbs			
Bulbs for:			
Instrument lighting	W	1.2 (3x)	
Clock lighting	W	1.2 (3x)	
Fuel reserve	W	1.2	
Battery charge	W	3	
Oil pressure	W	1.2	
Turn indicator repeater	W	1.2	
High beam telltale	W	1.2	
Brake warning light (parking brake, brake fluid level)	W	1.2	
Selector position indicator (automatic transmission)	W	b) 1.2	
62 16 . . . Coolant temperature sensor			
Operating voltage	V	6 . . . 24	
Operating temperature, max.	°C (°F)	120 (248)	
Resistance test (at operating values shown) at °C	$\triangleq \Omega$	$60^{\circ} \triangleq 134 \pm 13.5 \Omega \triangleq \pm 4^{\circ}$ $90^{\circ} \triangleq 51.5 \pm 4.3 \Omega \triangleq \pm 3^{\circ}$ $100^{\circ} \triangleq 38.5 \pm 3 \Omega \triangleq \pm 3^{\circ}$	

*) Version for Sweden

62 11 090 Coolant thermometer – removing and installing

On BMW 320: Remove and install revolution counter – 62 13 000.

Pull out the battery charge, oil pressure and headlight high beam telltale lamp holders. Remove screw and detach coolant thermometer with carrier plate.

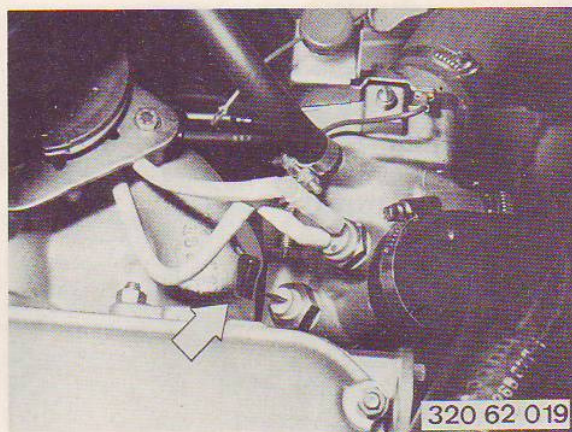


Methods of testing coolant thermometer:

a) Installed on vehicle

Detach the lead at the coolant temperature sensor and connect to ground (earth).

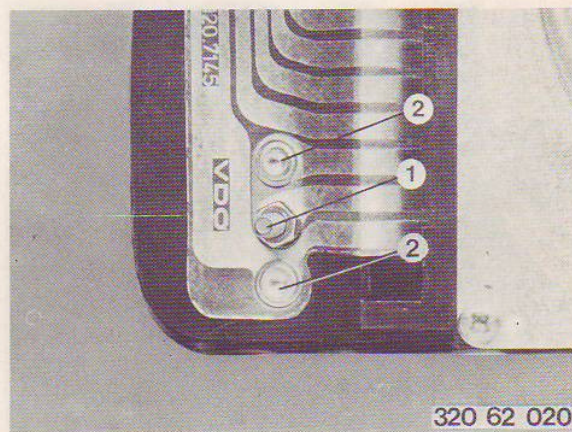
Switch on the ignition for a brief period only. If the thermometer needle moves fully over into the red zone, the coolant temperature sensor is defective.

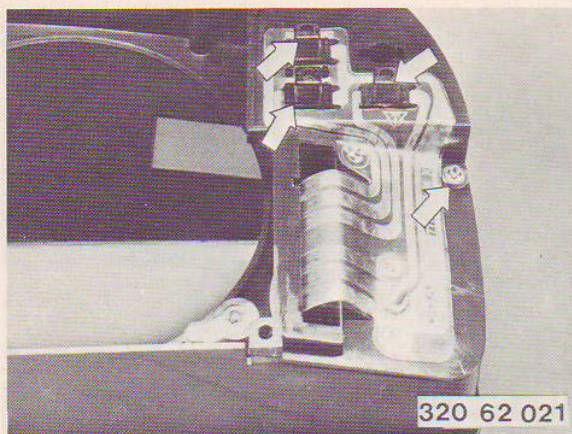


b) Removed from vehicle

Connect a lead from a 12 V battery + to terminal (1) and from battery – to terminal (2).

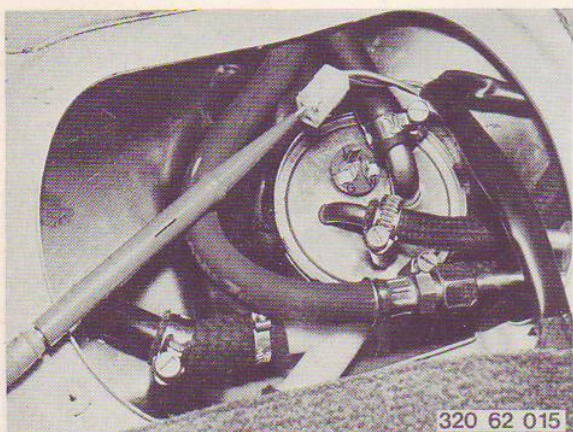
If the thermometer needle does not move into the red zone, the instrument is defective. If the needle moves, the fault must be in the connecting lead.





62 11 130 Fuel gauge – removing and installing

Remove and install speedometer – 62 12 000. Pull out the fuel level, brake fluid level, hand-brake and turn indicator telltale lamp holders. Remove the screw and detach the fuel gauge with carrier plate.



Methods of testing fuel gauge:

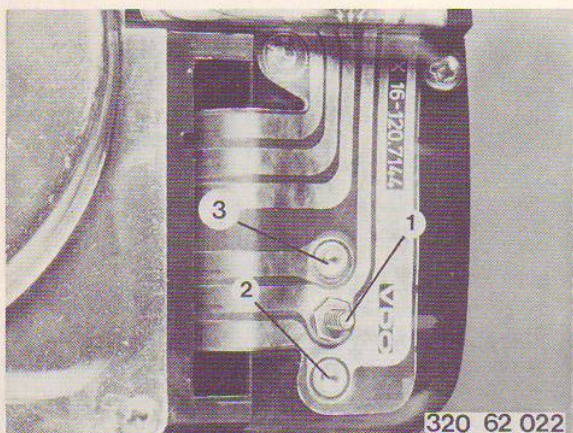
a) Installed on vehicle

Remove rear seat and cover.

Detach plug and connect lead from terminal 'G' to ground (earth).

Switch on the ignition for a brief period only.

If the fuel gauge needle moves right over to the "full" position, the immersed fuel level sensor is defective.



b) Removed from vehicle

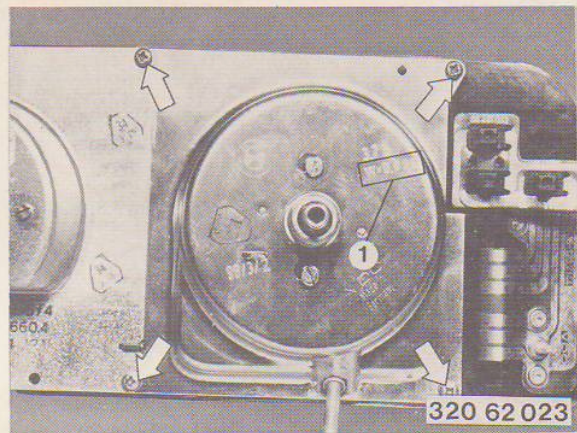
Connect a lead from the positive terminal of a 12 V battery to the positive terminal (1) and from the negative terminal of the battery to terminal (2). If the fuel gauge fails to move to the "full" reading, the instrument is defective. If this reading is obtained, the fault must be in the supply lead.

62 12 000 Speedometer – removing and installing

Remove and install the complete instrument carrier – 62 21 000.

Pull off the trip distance recorder reset knob. Unscrew the bolts and detach the speedometer.

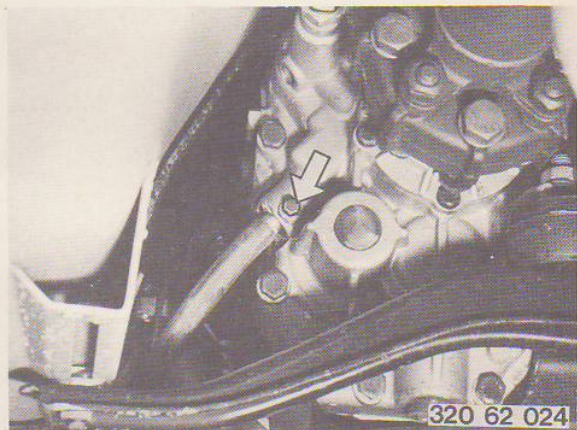
When installing: When renewing a speedometer, make sure that an instrument with the correct operating ratio¹⁾ is installed. The ratio (1) is stamped on the rear of the instrument.



62 12 020 Speedometer cable – removing and installing

Detach and attach the lower left facia trim – 51 45 180.

Disconnect the speedometer drive cable from the gearbox.



Release the speedometer shaft from its clips.



Loosen knurled nut. Pull instrument carrier out slightly and unscrew speedometer shaft.

When installing: Make sure when renewing the speedometer drive cable that the correct length¹⁾ is used.



¹⁾ See specifications

62 13 000 Revolution counter – removing and installing

Remove and install the complete instrument carrier – 62 21 000.

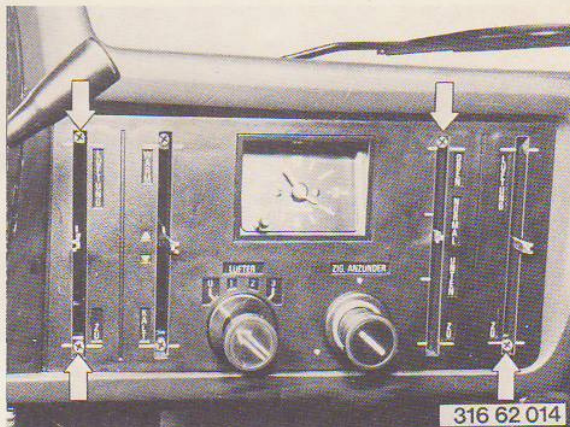
Remove bolts and take off the revolution counter.



62 13 050 Clock – removing and installing

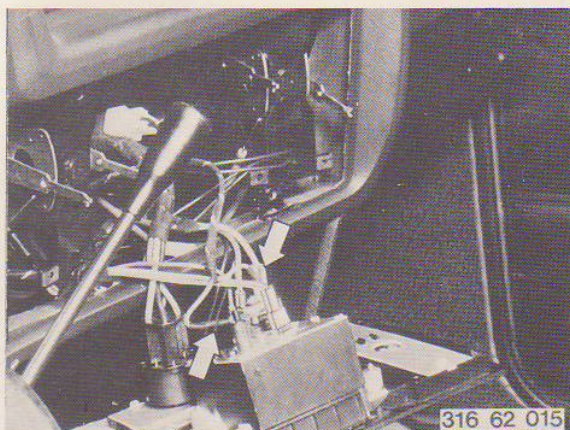
Pull off the control levers.

Detach the heater control assembly.

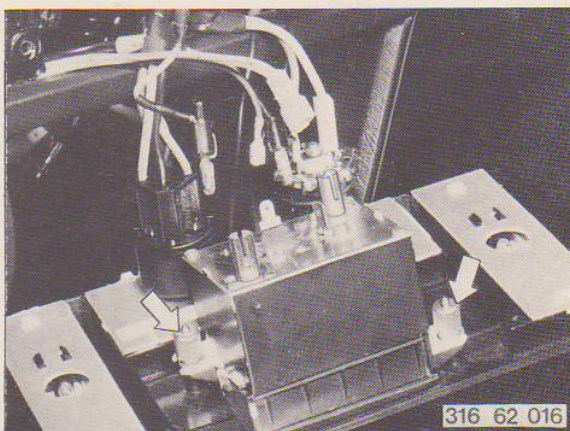


Detach the leads and bulb holders from the clock.

When installing: Connect leads as shown in circuit diagram.



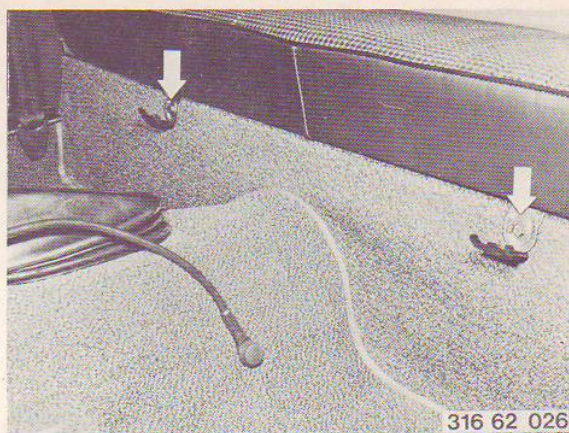
Unscrew the knurled knobs.
Take out the clock.



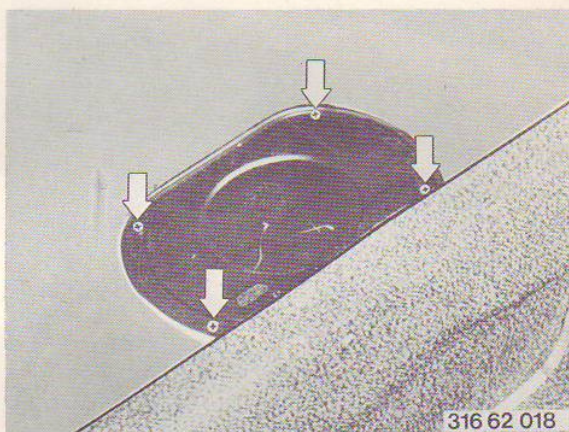
62 16 000 Immersed fuel level sensor – removing and installing

Lift out retaining bracket covers.

Unscrew bolts and take out the rear seat cushion.



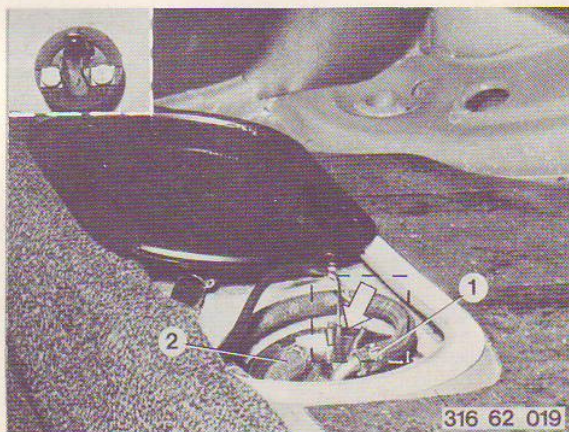
Take off the cover plate.



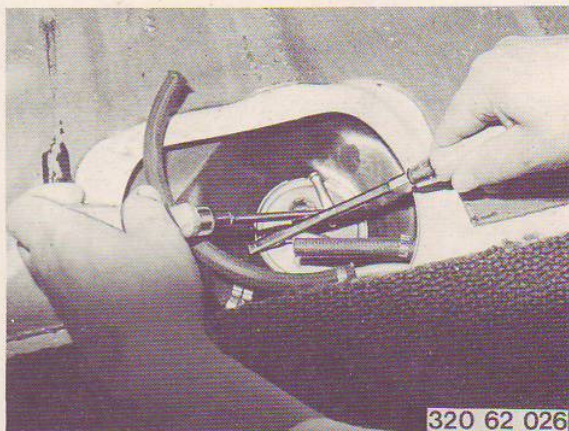
Disconnect the feed (1) and return (2) lines.

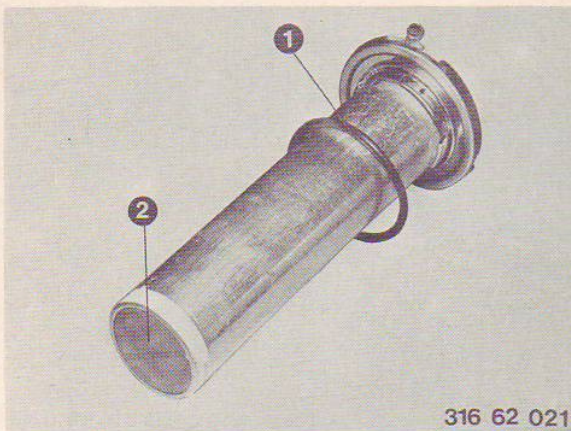
Disconnect the electric leads.

When installing: Use new hose clips.



Unscrew the immersed fuel level sensor using two crossed screwdriver blades, by turning to the left.



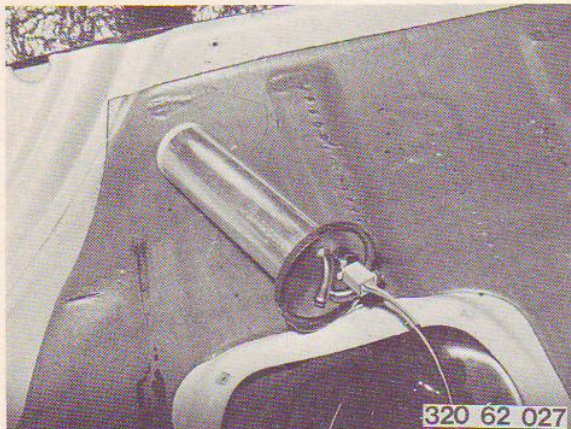


Warning: The cord ring seal (1) swells in contact with the fuel to provide a reliable seal. Cord ring seals which were already installed do not recover their original shape for approx. 48 hours.

Always coat the cord ring seal with Vaseline before inserting.

Clean the fine mesh filter (2).

When renewing, first take off the transit keeper.

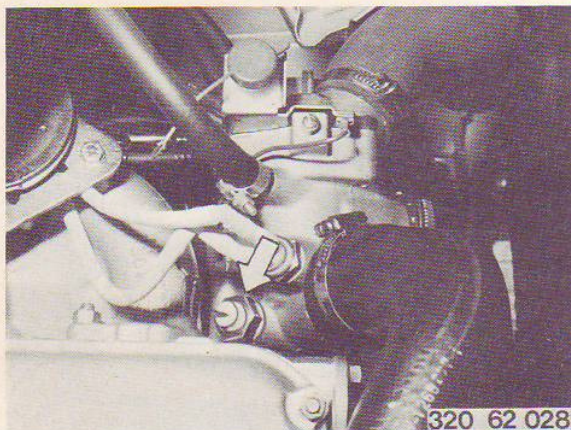


Checking the immersed fuel level sensor.

With the sensor removed from the vehicle, connect the plug.

Switch on the ignition for a brief period only. Tilt the fuel level sensor away from horizontal so that the float moves to the upper or lower limit position. The fuel gauge reading should then vary between "R" and "full".

Warning: Do not attempt to strip down the immersed fuel level sensor.



62 16 050 Coolant temperature sensor – removing and installing

Partly drain the coolant.

Detach leads.

Unscrew the coolant temperature sensor.

When installing: Check condition of gasket and renew if necessary.

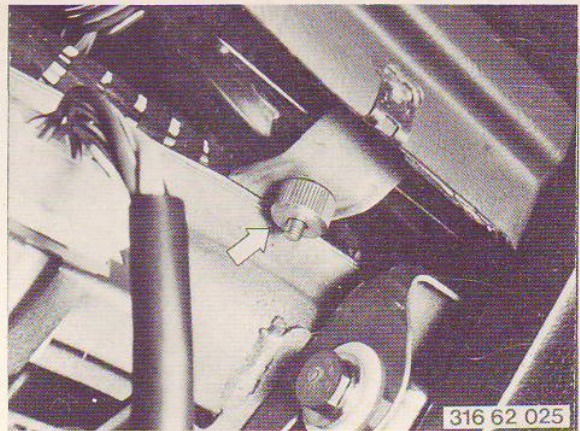
Bleed the cooling system.

62 21 000 Complete instrument carrier – removing and installing

Remove and install the steering wheel – 32 33 000.

Detach and attach the lower left facia trim – 51 45 180. Unscrew the knurled nut.

Pull out the instrument carrier and unscrew the speedometer shaft.



Pull out further the instrument carrier. Press the central plug together and pull it off. Detach the lead from the revolution counter.



63 Lighting

Specifications	Page 63-0/3
63 10004 Headlight beam setting	10/1
63 12250 High beam headlight unit – removing and installing	12/1
280 Low beam headlight unit – removing and installing	12/1
63 13000 Front turn indicator lens – detaching and attaching	13/1
150 Front turn indicator – removing and installing	13/1
63 21000 Rear light lens – detaching and attaching	21/1
030 Rear light housing – detaching and attaching	21/1
63 99271 Bulb for front turn indicator – renewing	99/1
301 Bulb(s) for rear light – renewing	99/1
401 Bulb for license plate light – renewing	99/1

Specifications

Lighting

Model		320/6 320/6 A	323 i 323 i A *)
63 12 . . . Headlights			
Bulbs for: High beam	Ref./W	H-1/55	
Low (dipped) beam	Ref./W	H-1/55	
Side/parking beam	W	4	
63 13 . . . Front turn indicators			
Bulb	W	21	
63 21 . . . Rear light cluster			
Bulbs for: Rear/parking light	W	10	
Turn indicator	W	21	
Brake light	W	21	
Backup (reversing) light	W	21	
63 26 . . . License plate light			
Bulb	W	5	
63 31 . . . Interior lights			
Bulbs for: Interior light	W	10	
Glove box light	W	4	
Ashtray (standard or special equipment)	W	1.2	

*) Version for Sweden

63 10 004 Headlights — adjusting beam settings

Check tire pressures and correct if necessary. Position the car on a flat, level surface and place a 70 kg (154 lb) weight (equivalent to 1 person) on the center of the rear seat.

Adjust the low and high headlight beams with an optical alignment device in accordance with the manufacturer's instructions.

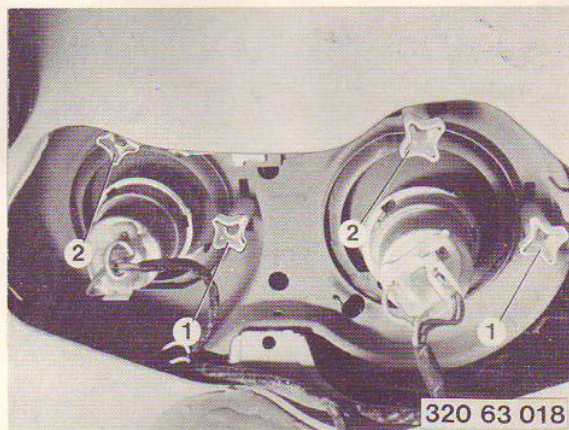


Headlight beam setting controls:
Open the engine compartment.
Remove the plastic covers from the rear of the headlights.

Turn the knurled plastic knobs as necessary.

1 Horizontal movement

2 Vertical movement



63 12 250 High beam headlight unit – removing and installing

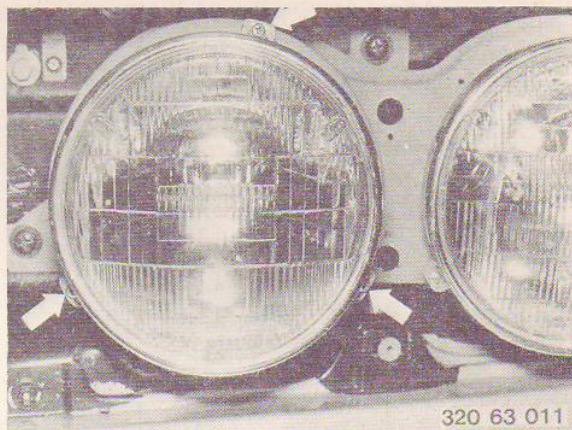
Remove and install front grille – 51 13 040.

Unscrew headlight.

Pull off plug.

When installing: **locate the headlight unit in the cutouts on the support frame.**

Adjust headlight beam – 63 10 004.



320 63 011

63 12 280 Low beam headlight unit – removing and installing

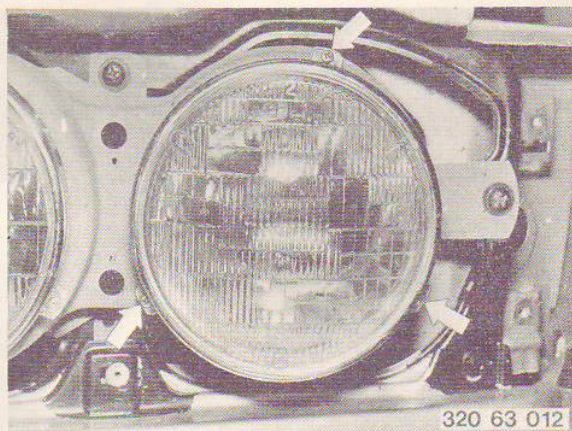
Remove and install front grille – 51 13 040.

Unscrew headlight.

Pull off plug.

When installing: **locate the headlight unit in the cutouts on the support frame.**

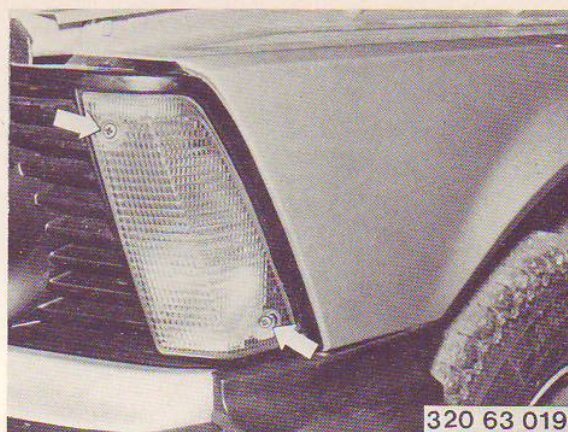
Adjust headlight beam – 63 10 004.



320 63 012

**63 13 000 Front turn indicator lens –
detaching and attaching**

Take out the retaining screws.
Take off the lens.



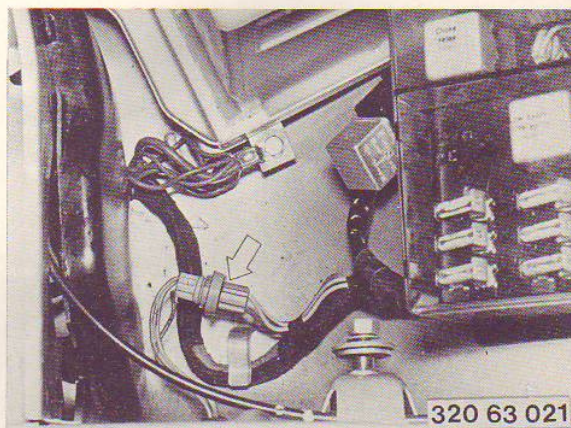
**63 13 150 Front turn indicator –
removing and installing**

Detach (attach) the front turn indicator lens –
63 13 000.
Remove the screws.



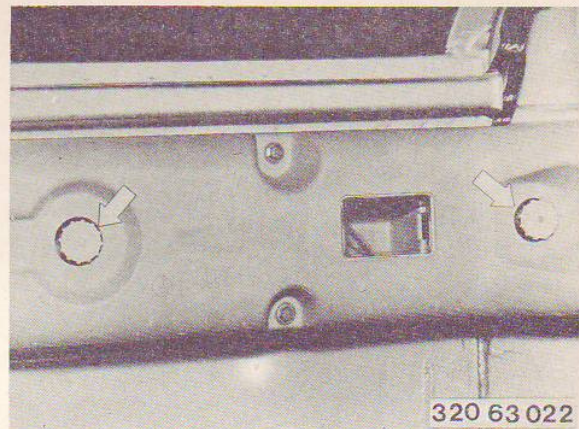
Open the engine compartment lid. Detach the
central plug and take off the bulb holder with
wiring harness.

When installing: check that the rubber grom-
met in the wheel arch is correctly seated.



63 21 000 Rear light lens – detaching and attaching

Unscrew the knurled knobs.

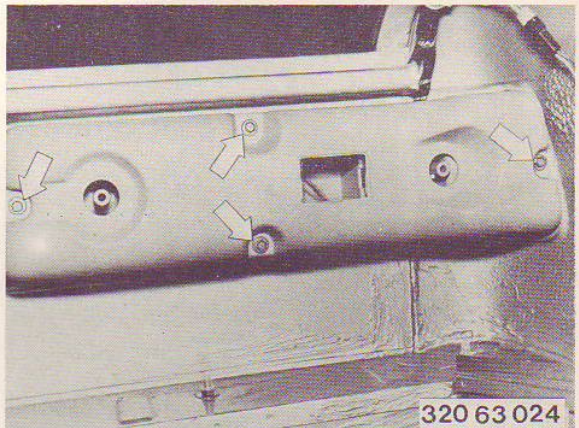


Take off the lens.



63 21 030 Rear light housing – detaching and attaching

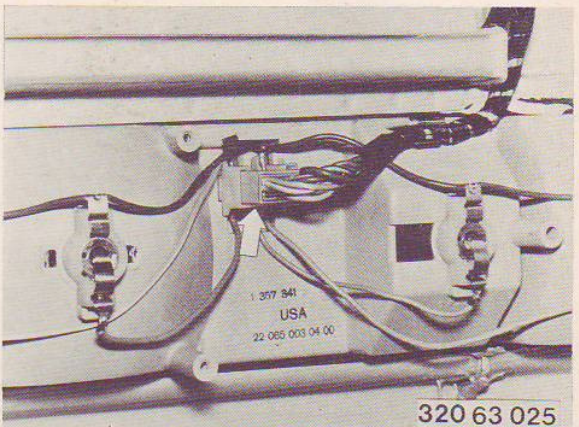
Detach and attach rear light lens – 63 21 000.
Remove screws and take off cover.



Detach plug.

Take off housing.

When installing: check condition of sealing surround and renew if necessary.



63 99 271 Front turn indicator bulb – renewing

Detach and attach turn indicator lens – 63 13 000.

Take out bulb.

When installing: make sure bulb wattage is correct¹⁾.



63 99 301 Rear light bulb(s) – renewing

Detach and attach lens – 63 21 000.

Take out bulb(s).

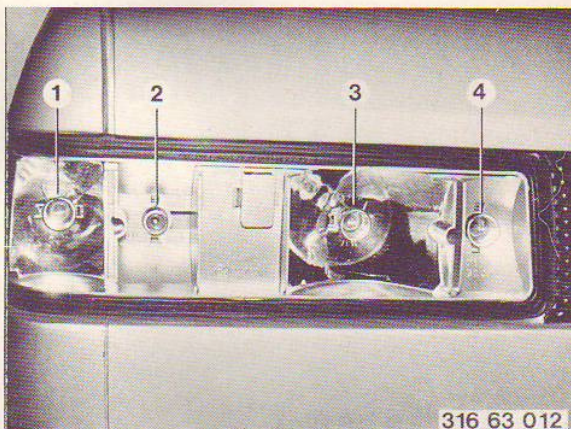
1 = turn indicator

2 = rear light

3 = brake light

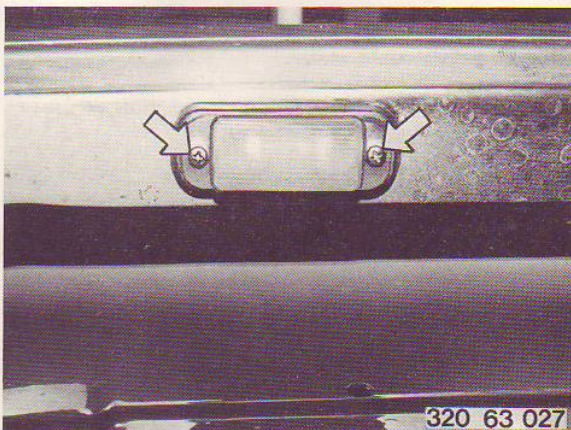
4 = backup (reversing) light

When installing: make sure bulb wattage¹⁾ is correct.



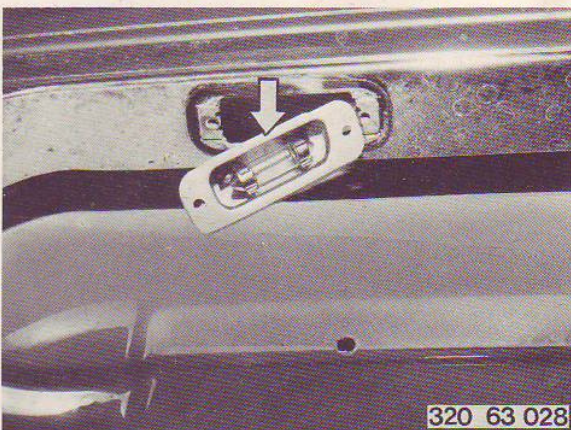
63 99 401 License plate light bulb – renewing

Remove screws and take off glass.



Press bulb out of holder.

When installing: make sure bulb wattage¹⁾ is correct.



1) See specifications