

Fußbetätigung

Pedal assembly

Pédalier

Pedali

Pedales

Pedaler

Pedalen

35 Pedals

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Specifications

Pedals

Model	320/6 320/6 A	323 i 323 i A*)
35 21 ... Brake pedal		
Distance from lower edge of brake pedal to pivot mount (check dimension A in workshop manual)	mm (in)	
RHD cars	239 ... 249 (9.41 ... 9.80)	
	258 ... 268 (10.15 ... 10.55)	
Adjusting distance for brake light switch (check dimension B in workshop manual)	mm (in)	
	5 ... 6 (0.20 ... 0.24)	
35 31 ... Clutch pedal		
Distance from lower edge of clutch pedal to pivot mount (check dimension C in workshop manual)	mm (in)	
RHD cars	251 ... 259 (9.88 ... 10.20)	
	259 ... 267 (10.20 ... 10.51)	
35 41 ... Accelerator pedal		
Distance from upper edge of adjusting screw for full-throttle or kickdown stop on pedal assembly to pivot mount (check dimension C in workshop manual)	mm (in)	
– automatic transmission or manual gearbox		47 (1.85)

*) Version for Sweden

Specifications

Pedals

Model	320/6 320/6 A	323 i 323 i A *)
3541 ... Accelerator pedal – (continued)		
Lubricant for bearings and sliding-contact faces on pedal mechanism, including accelerator actuating linkage		
Fuchs FN 20 grease or equivalent product with drip point 150 °C (302 °F)		
Tightening torques		
3511 ... Pedal pivot mount		
Pivot mount to instrument panel carrier	Nm kpm lb.ft	22 ... 24 2.2 ... 2.4 15.9 ... 17.4
Pivot mount to bulkhead (B 6.3 self-tapping screws)	Nm kpm lb.ft	8 ... 9 0.8 ... 0.9 5.8 ... 6.5
3521 ... Brake pedal		
Brake and clutch pedals to pivot mount	Nm kpm lb.ft	25 ... 28 2.5 ... 2.8 18.1 ... 20.3
3541 ... Accelerator pedal		
Full-throttle stop or knurled screw (M 8 hex nut)	Nm kpm lb.ft	10 ... 11 1.0 ... 1.1 7.2 ... 8.0

*) Version for Sweden

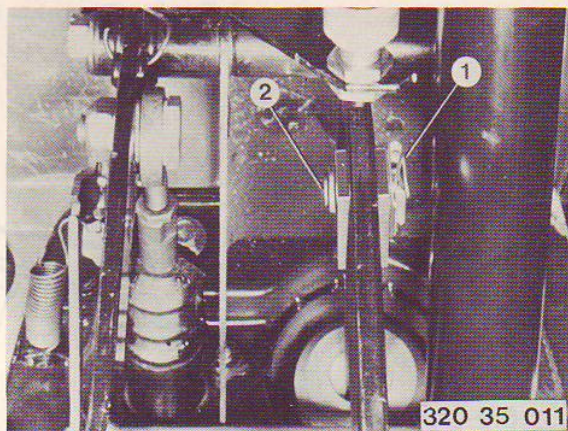
35 21 000 Brake pedal – removing and installing

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

Disconnect the brake pedal return spring.

Extract the bayonet clip (1) for the piston rod at the brake pedal and remove pin (2).

When installing: Lubricate pin before inserting¹⁾.

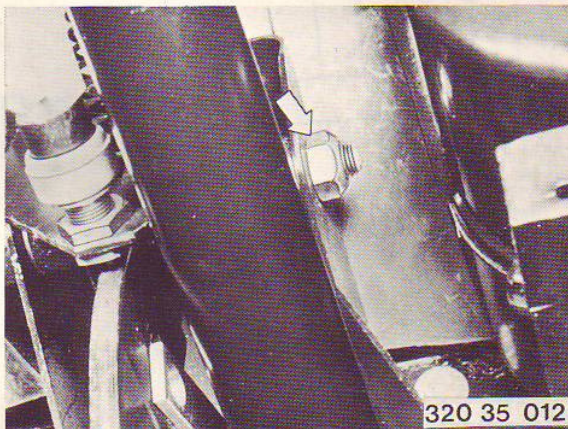


Remove stop nut from pivot bolt.

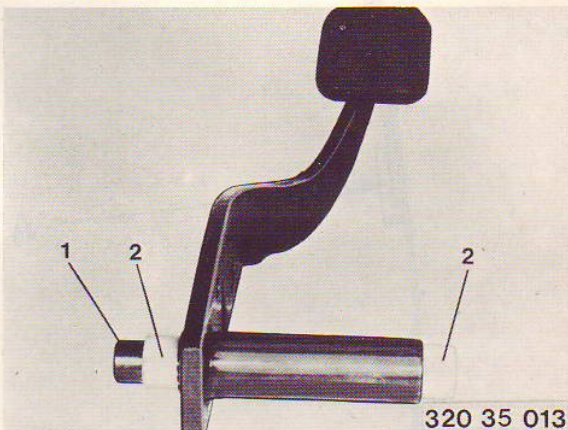
Pull out pivot bolt sufficiently to release brake pedal.

When installing: Use a new stop nut.

Note correct tightening torque¹⁾.

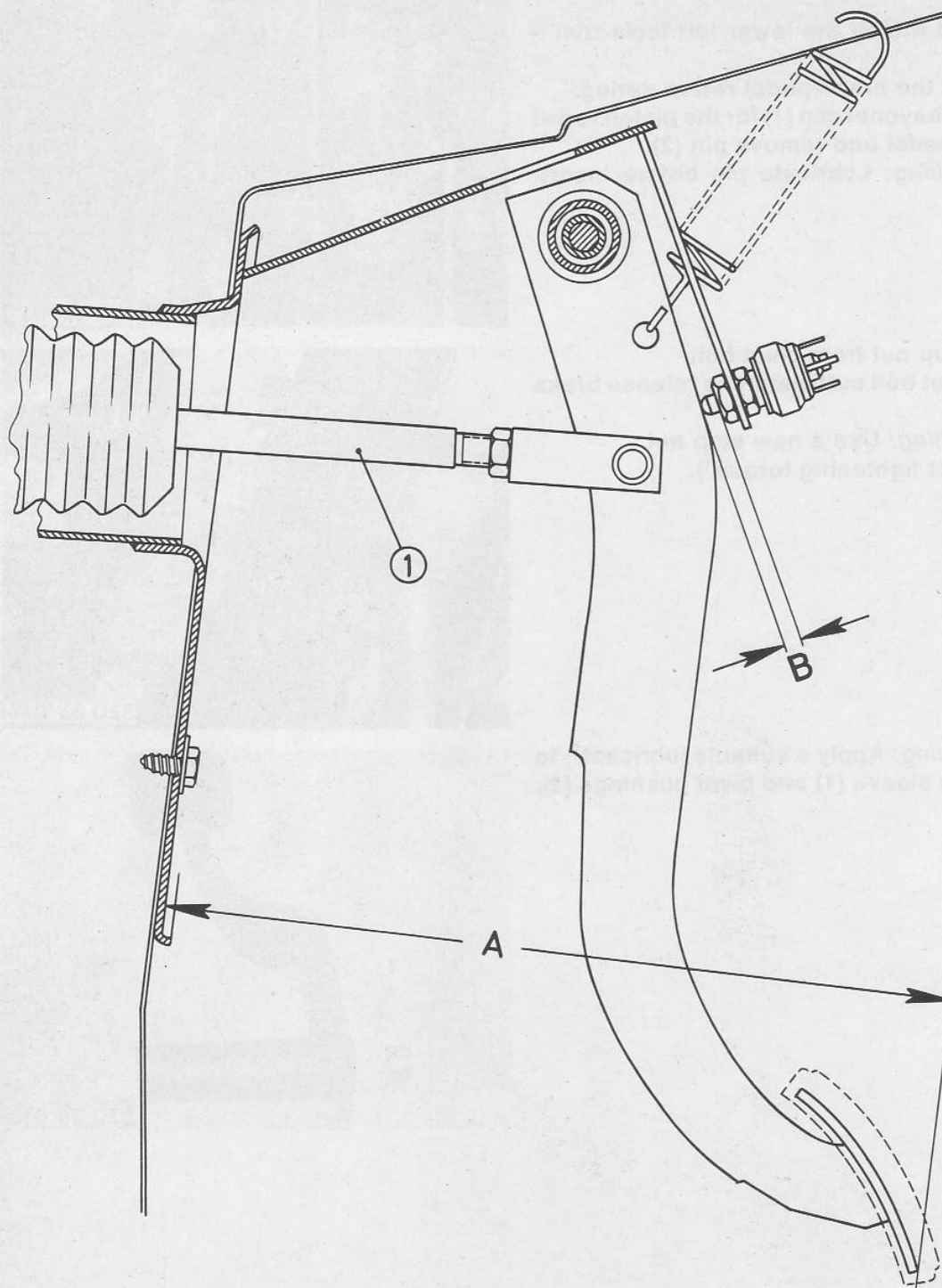


When installing: Apply a suitable lubricant¹⁾ to the spacing sleeve (1) and pivot bushings (2).



¹⁾ See specifications

Brake Pedal – General Arrangement



31635 004

When installing: Check dimension A¹⁾ and adjust if necessary at piston rod (1). Adjust stop light switch and contact button (B)¹⁾.

¹⁾ See specifications

35 31 000 Clutch pedal – removing and installing

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

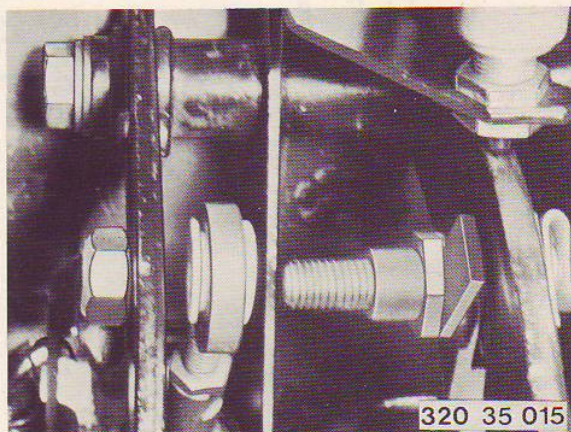
Disconnect the clutch pedal return spring.
Remove stop nut.

When installing: Use a new stop nut.
Note correct tightening torque¹⁾.



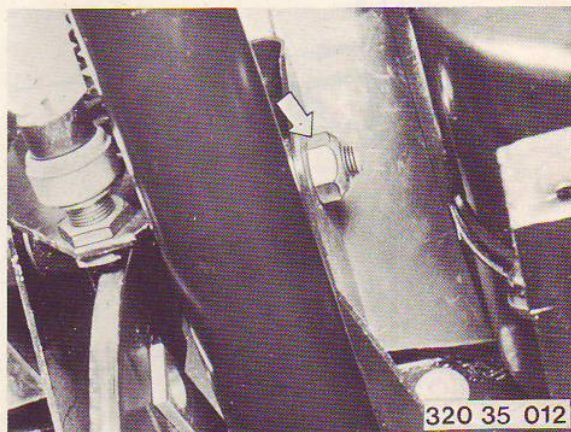
When installing: Note correct order of installation.

Inspect bushings for wear and renew if necessary; apply lubricant¹⁾ before inserting.

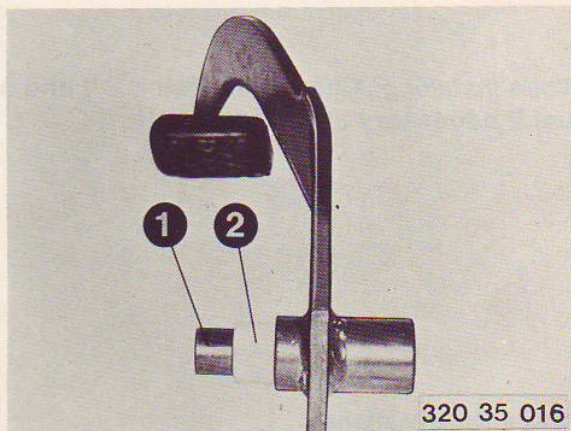


Unscrew stop nut and pull out pivot bolt.

When installing: Use a new stop nut. Note correct tightening torque¹⁾.

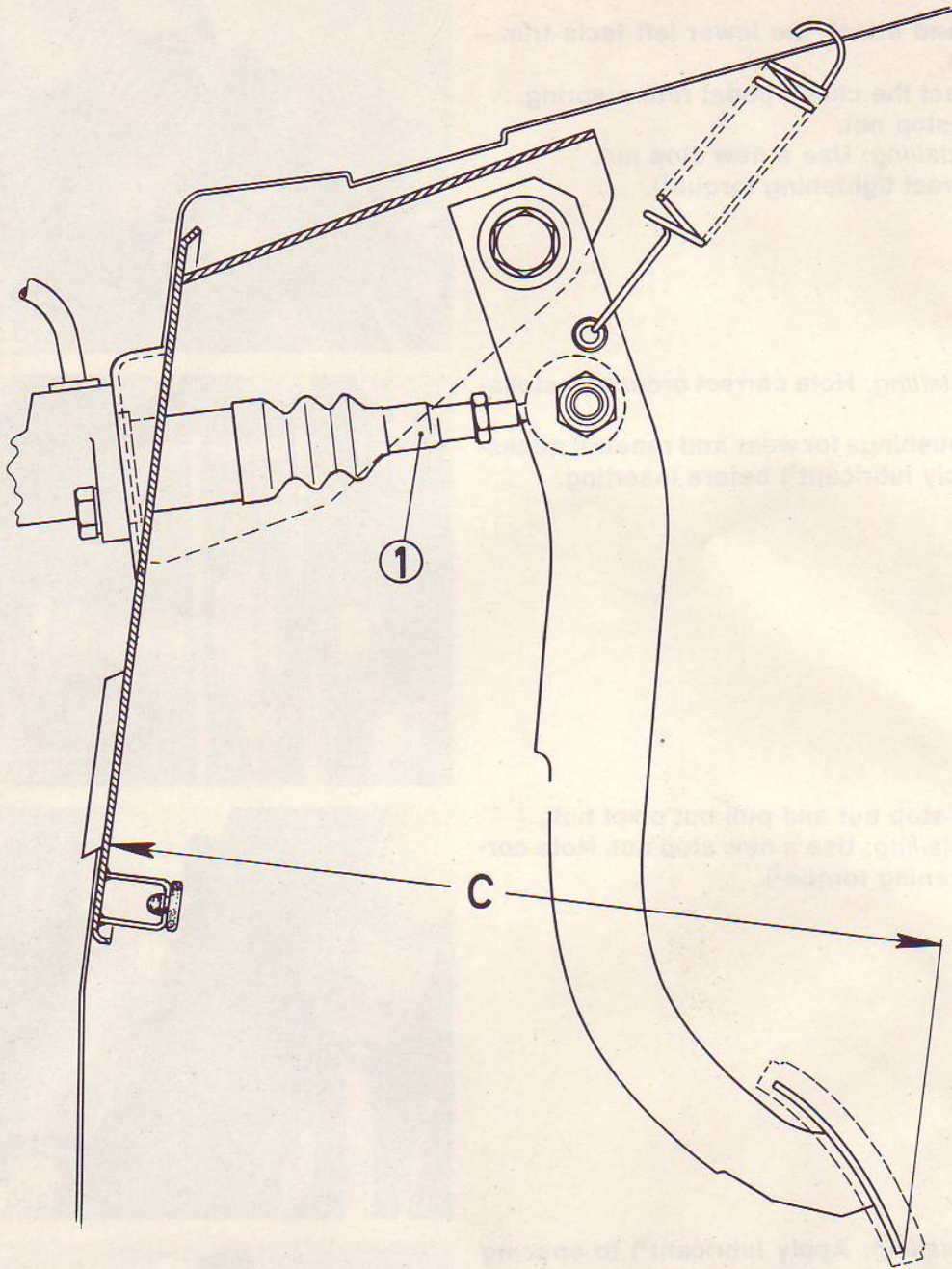


When installing: Apply lubricant¹⁾ to spacing sleeve (1) and pivot bushing (2) before inserting.



¹⁾ See specifications

Clutch Pedal – General Arrangement



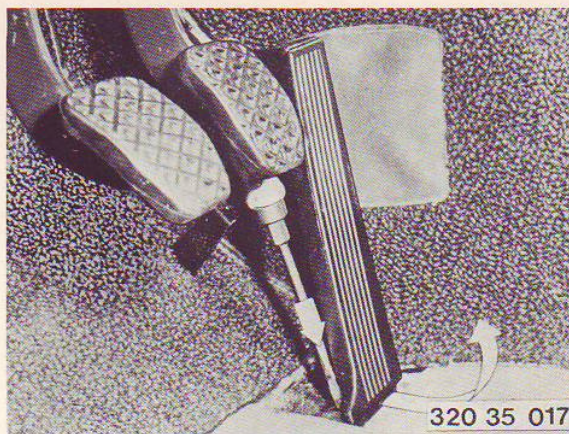
316 35 008

When installing: Check dimension C¹⁾ and adjust if necessary at piston rod (1).

¹⁾ See specifications

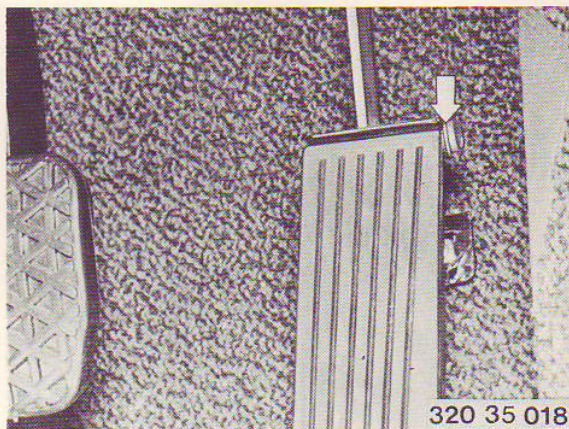
**35 41 000 Accelerator pedal tread plate
– removing and installing**

Press the bottom of the tread plate out of its fastening with a screwdriver.



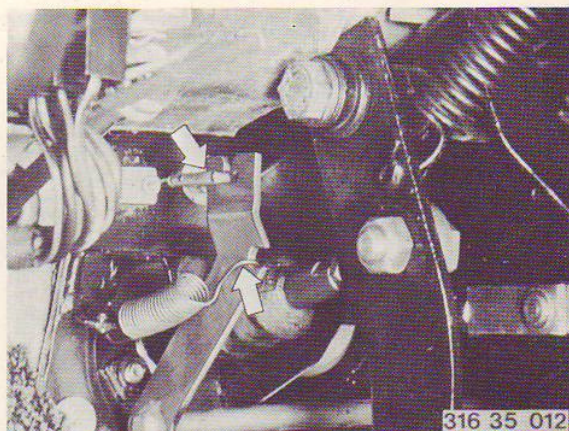
Detach the lock washer on the accelerator pedal arm and remove the tread plate.

When installing: Apply lubricant¹⁾ to the accelerator pedal arm.

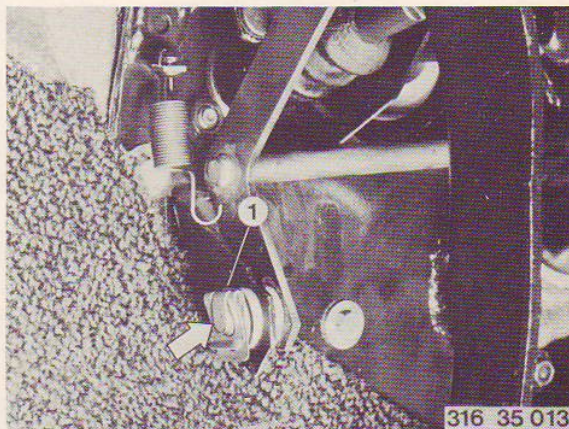


35 41 010 Accelerator pedal arm – removing and installing

Detach and attach the lower left facia trim – 51 45 180. Disconnect the return spring and the accelerator cable.



Release the bayonet clip.
Remove washer (1).
Push the accelerator pedal arm to the right out of its mounting.
When installing: Apply lubricant¹⁾ to pivot points; check condition of rubber bushing and renew if necessary.



¹⁾ See specifications


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ERROR: undefined
OFFENDING COMMAND: f'~

STACK:
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Räder und Bereifung

Wheels and tyres

Roues et pneumatiques

Ruote e pneumatici

Ruedas y neumáticos

Hjul och däck

Wielen en banden

36 Wheels and Tires

Specifications	Page 36-0/3
3610008 Electronic balancing of front wheel on vehicle	10/1
058 Electronic balancing of rear wheel on vehicle	10/2
209 Checking wheel for lateral and vertical runout	10/3
300 Front or rear wheel – removing and installing	10/4
508 Balancing wheel statically and dynamically (wheel removed)	10/4

Specifications

Wheels and tires

Model	320/6 320/6 A	323 i 323 i A*)
36 10 . . . Wheels		
Vertical runout of tire and steel disc wheel	max. mm (in)	2 (0.08)
Lateral runout of tire and steel disc wheel	max. mm (in)	2 (0.08)
Dynamic imbalance per wheel (Note: max. balance weight limit 90 g (3.18 oz) per side. If imbalance is greater, reposition tire on wheel. Correct imbalance up to 70 g (2.47 oz) with 1 weight, above 70 g with 2 weights.	max. gcm	180
36 11 . . . Steel-disc wheels ¹⁾ (well-base rims)		
Standard equipment Ref.	For non-standard specifications, see leaflet of conversion equipment and Service Information bulletins	
Approved manufacturers	5 1/2 J × 13 H2 – B Kronprinz Lemmerz Südrad	

*) Version for Sweden

1) Always use wheels from one manufacturer only on the car

Specifications

Wheels and tires

Model	320/6 320/6 A	323 i 323 i A *)
For non-standard specifications, see leaflet of conversion equipment and Service Information bulletins		
36 11 . . . Steel-disc wheels ¹⁾ (well-base rims)		
Dished depth	mm (in)	18 (0.71)
Hole pitch circle	mm (in)	100 (3.94)
Rim vertical runout	max. mm (in)	1 (0.04)
Rim lateral runout	max. mm (in)	1 (0.04)
Imbalance (static)	max. gcm	300
36 12 . . . Standard tires ²⁾	For non-standard equipment, see conversion equipment leaflet and Service Information bulletins	
Tire reference	185/70 HR 13	
Tubeless radial-ply tires for steel disc wheels with 43 GS/11.5 DIN 7780 rubber valve	5 1/2 J × 13 H2 – B	

*) Version for Sweden

1) Always use wheels from one manufacturer only on the car

2) All tires on car to be from same manufacturer. Unidirectional tires to be installed as specified by their manufacturer (note "inside" and "outside" markings on tire walls).

Specifications

Wheels and tires

Model		320/6 320/6 A	323 i 323 i A *)
36 12 . . . Tire pressures (for standard tires)			
Load up to 4 persons			
front	(gauge pressure) bar (lb/in ²)		
rear	(gauge pressure) bar (lb/in ²)	2 (28.5)	
Heavier loads			
front	(gauge pressure) bar (lb/in ²)	2 (28.5)	
rear	(gauge pressure) bar (lb/in ²)	2.1 (30)	
		2.3 (33)	
Tightening torques			
36 13 . . . Wheel attachment			
Wheel nuts/bolts		Nm kpm lb.ft	81 . . . 90 8.1 . . . 9.0 59 . . . 65

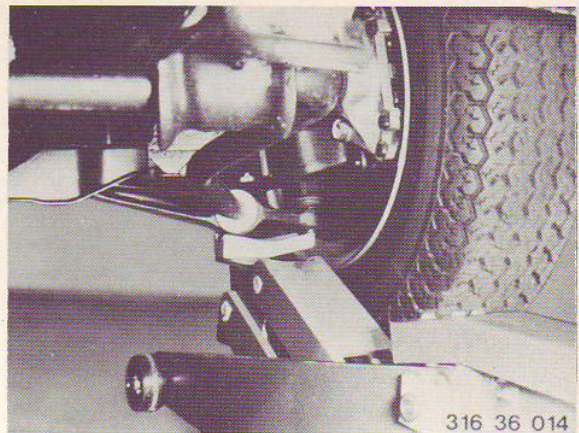
*) Version for Sweden

36 10 008 Electronic balancing of front wheel on vehicle

Check front wheel for lateral and vertical run-out – 36 10 209.

Wheel bearings must be correctly adjusted. Remove stones, old balance weights and major dirt deposits from wheel.

Position measuring stand for general balancing on wishbone, as close as possible to wheel. Raise vehicle with measuring stand.



316 36 014

Attach adhesive tape at one point on wheel, at height of stroboscope lamp.



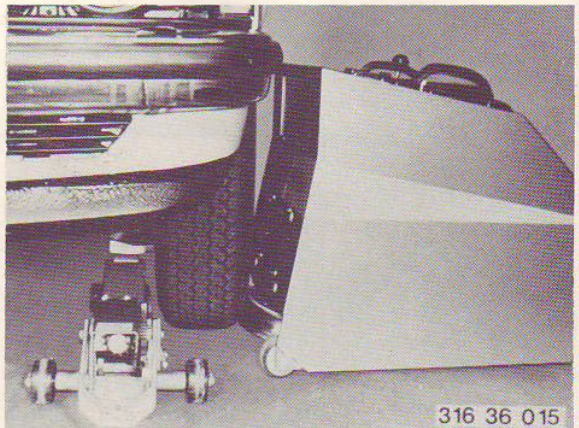
320 36 012

Balance wheel according to operating instructions supplied with balancing unit.

a) Steel rims: imbalance up to 70 g – use 1 weight; above 70 g – use 2 weights.

b) Light alloy wheels: imbalance up to 60 g – use 1 weight only.

Note maximum imbalance per wheel and side¹⁾.



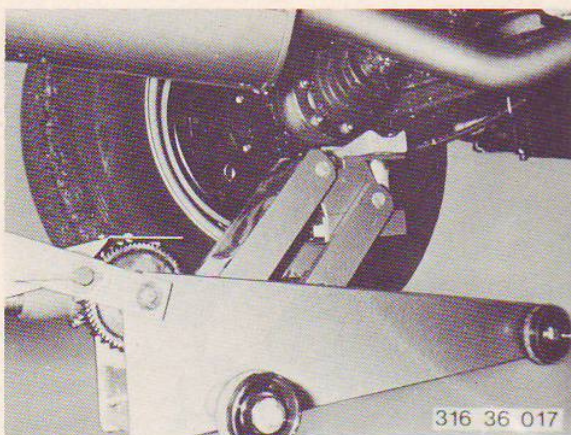
316 36 015

If some unbalance remains (steering wheel still shakes), position measuring instrument on stand against brake caliper for final dynamic balancing. Balance wheel dynamically according to operating instructions of the balancing unit used.



316 36 016

¹⁾ See specifications

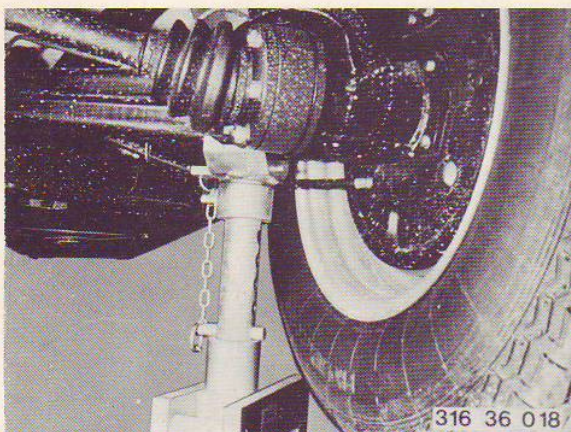


36 10 058 Rear wheel – electronic balancing on vehicle

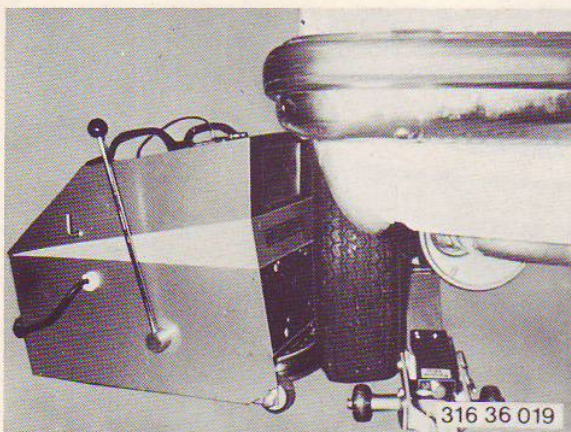
Check rear wheel for lateral and vertical runout – 36 10 209.

Remove old balance weights, stones from tire tread and heavy dirt deposits. Attach measuring stand for general balancing to semi-trailing arm as close as possible to wheel.

The half-shaft must rotate freely.



Raise the vehicle with the measuring stand. Raise the vehicle on the opposite side and support on stand. Attach a strip of adhesive tape to one point on the wheel to be balanced so that it is struck by the beam from the stroboscopic lamp.



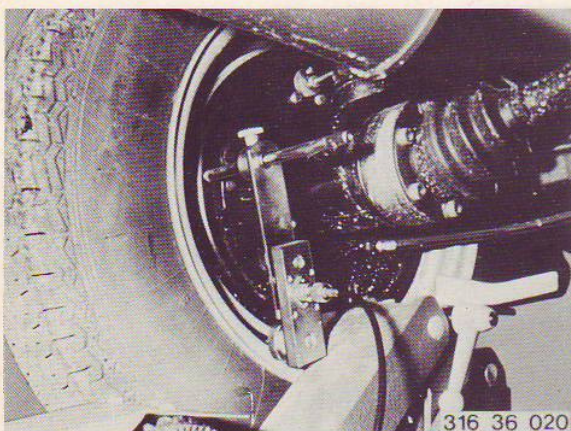
Accelerate the rear wheel to the equivalent of 110 km/h (68 mile/h) road speed with the engine (not with the wheel balancer).

Balance the wheel in accordance with the instructions for the balancer in use.

a) Steel rims: use one weight for imbalance up to 70 g (2.5 oz), and two weights for imbalance exceeding 70 g.

b) Light-alloy rims: use only one weight for imbalance up to 60 g (2.12 oz).

Do not exceed maximum balance weight per wheel and per side¹⁾.



For dynamic residual balancing, disconnect the half-shaft from the rear wheel at its flange. Attach the sensor to the brake caliper or brake carrier plate at axle centerline. The sensor must be approximately horizontal and at a right angle.

Drive the rear wheel with the wheel balancer, and determine imbalance.

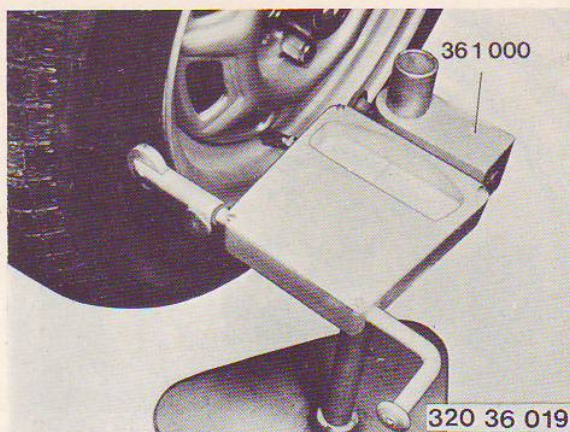
Important: follow the instructions issued with the wheel balancer in use.

¹⁾ See specifications

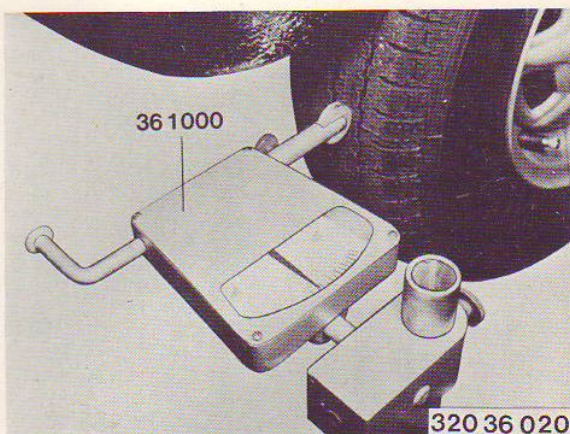
36 10 209 Checking wheel for lateral and vertical runout

Wheel bearings must be correctly adjusted.
Raise the vehicle.

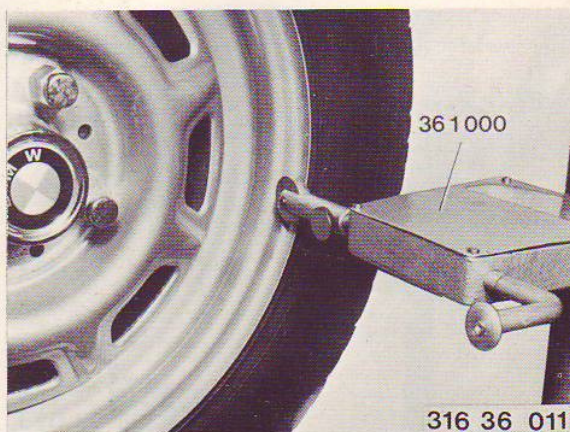
Check wheel for lateral runout¹⁾ with measuring device 36 1 000.



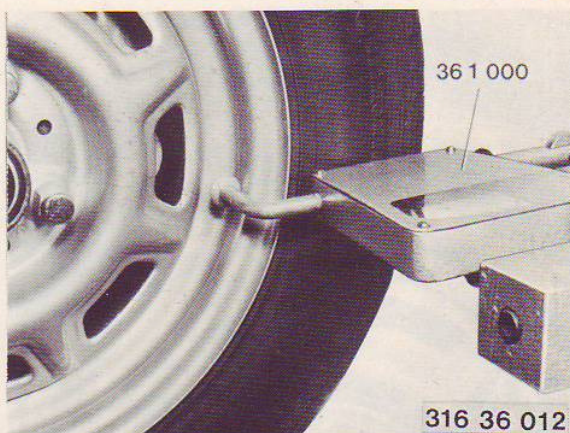
Check wheel for vertical runout¹⁾ with measuring device 36 1 000.



Check lateral runout¹⁾ of rim with measuring device 36 1 000.



Check vertical runout¹⁾ of rim with measuring device 36 1 000.



¹⁾ See specifications

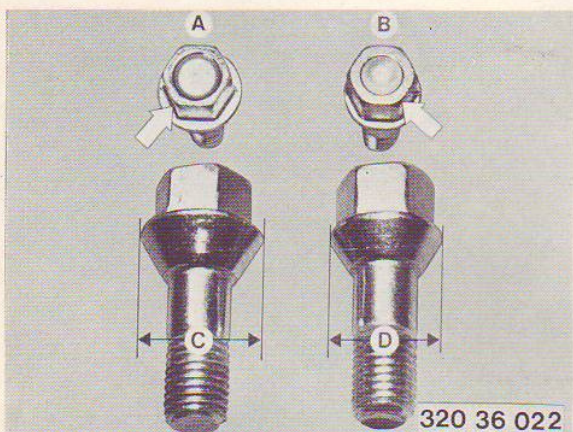


36 10 300 Front or rear wheel – detaching and attaching

Remove wheel bolts.

Warning: wheel is electronically balanced. Before removal, mark wheel with pencil in relation to hub.

When installing: note correct tightening torque¹⁾. Grease wheel bolts lightly before inserting.



Important:

Wheel bolts A = for aluminum rims

Wheel bolts B = for steel rims

External distinguishing marks:

cylindrical milled recess on wheel bolts A, spherical milled recess on wheel bolts B.

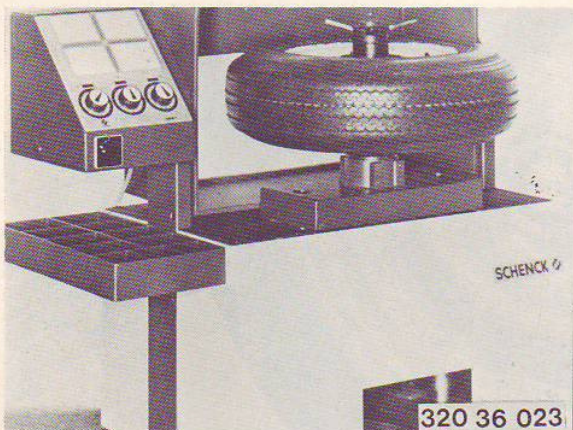
Cone diameter on wheel bolts A = C

$23 + 0.5 \text{ mm } (0.906 + 0.020 \text{ in})$

Cone diameter on wheel bolts B = D

$21 + 0.5 \text{ mm } (0.827 + 0.020 \text{ in})$.

Never use wheel bolts for steel rims on aluminum rims.



36 10 508 Road wheel – static and dynamic balancing (stationary) – wheel removed –

Remove old balance weights, stones from tire tread and heavy dirt deposits.

Balance the wheel in accordance with the instructions accompanying the wheel balancer in use.



Position of drive-on balance weights for steel rims.

Attach 1 weight for imbalance up to 70 g (2.5 oz), and two for imbalance above 70 g.

Note maximum imbalance per wheel und per side¹⁾.

¹⁾ See specifications

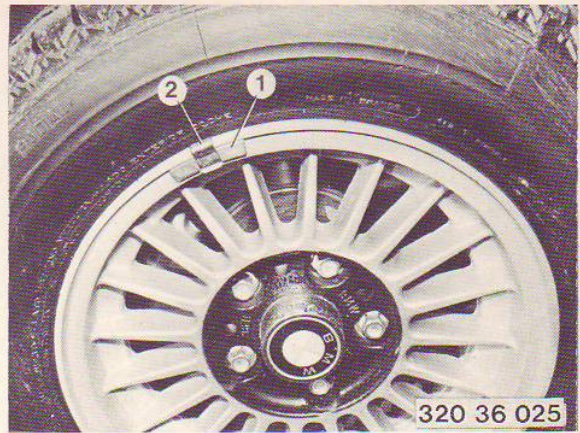
Position of balance weights for light-alloy rims:

1 = Balance weight

2 = Retaining clip

Use only 1 weight for imbalance up to 60 g (2.12 oz).

Note maximum imbalance per wheel and per side¹⁾.



¹⁾ See specifications

Karosserie-Ausstattung

Body – interior equipment

Carrosserie – équipement intérieur

Carrozzeria – arredamento interno

Carroceria – equipo interior

Kaross-utrustning

Carrosserie binnenuitrusting

51 Body – Equipment

Specifications	Page 51-0/3
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5112000 Complete rear bumper – detaching and attaching	12/1
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5123110 Engine compartment lock – removing and installing	23/1
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5124004 Luggage compartment lid catch – adjusting	24/1
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5132020	Door window crank mechanism – removing and installing	32/1
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5145030	Facia trim – removing and installing	45/1
180	Lower facia trim – detaching and attaching	45/3
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Specifications

Body – equipment and trim

Model	320/6 320/6 A	323 i 323 i A *)
Selected adhesives, sealing compounds and related products		
Application area	Adhesive	
Door seals	Teroson 2444 A	
Roof lining to body	Tivogum 7361, Herberts 3150	
Floor carpet and noise-absorbent underlay	Tivogum 7361	
Floor covering to body	Tivogum 7361	
Felt strip behind rear seat	Tivogum 7361, Teroson 2444 T	
'Acella' foil on door	Tivogum 7421/12	
PVC foil/heat resistant up to 100°C (212°C)	Terokal transparent	
Sealing area	Sealants	
Windshield and rear window	Terolan 2322 glass cement, Teroson, Terodicht light	
Body panel seams	Terolan 3531	
Sound deadening and protection against flying stones	Body panel treatment	
Body – underseal	Terophon 80 light	

*) Version for Sweden

51 11 000 Complete front bumper – detaching and attaching

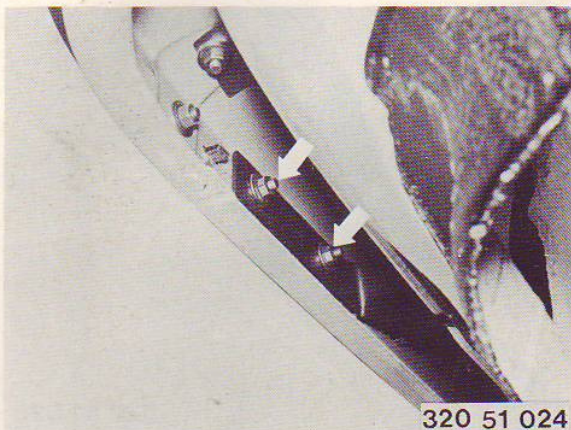
Remove bolts in left and right wheel arches.



When installing: Check condition of rubber between wheel arch and bumper and renew if necessary.



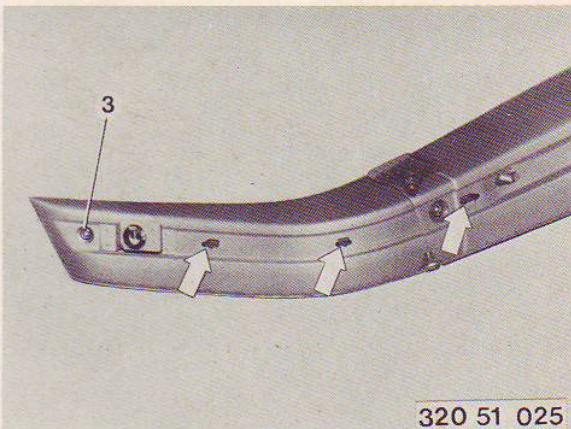
Remove nuts on both sides and take off bumper.

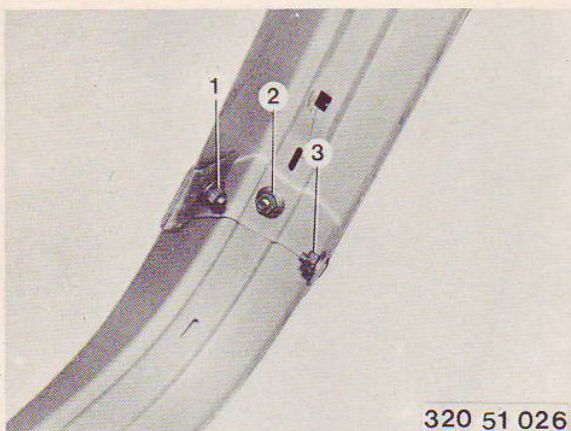


51 11 011 Front bumper center section – renewing

Detach complete front bumper – 51 11 000. Remove nuts (3) on both bumper side sections. Press out the retaining clips and take off the rubber strip.

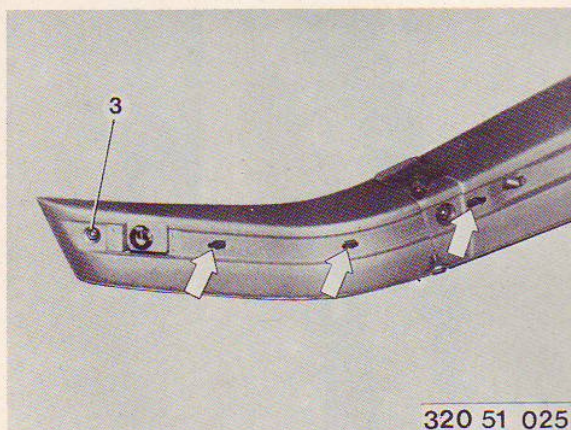
When installing: Check condition of clips and renew if necessary. Make sure that the retaining clips are correctly seated.





320 51 026

Remove nuts (1–3) at left and right and detach side sections from center section of front bumper.

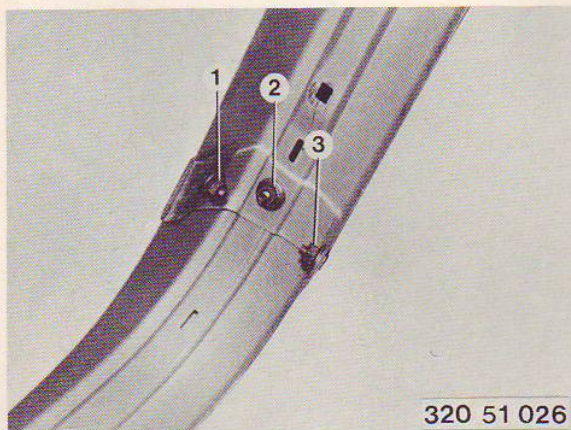


320 51 025

51 11 071 Front bumper side section – renewing

Detach complete front bumper – 51 11 000. Remove nut (3) on side section of bumper. Press out the retaining clips for the rubber strip until the side section is released.

When installing: Make sure the retaining clips are correctly seated.

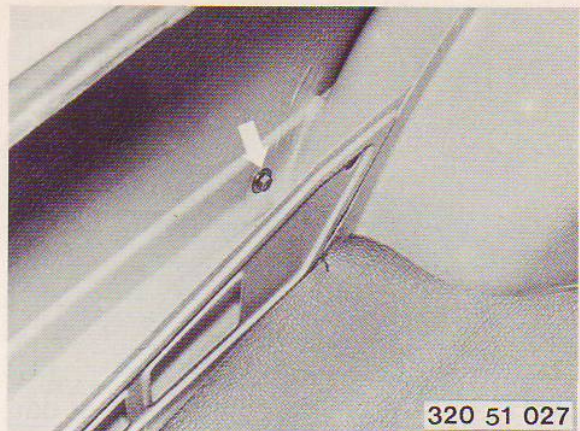


320 51 026

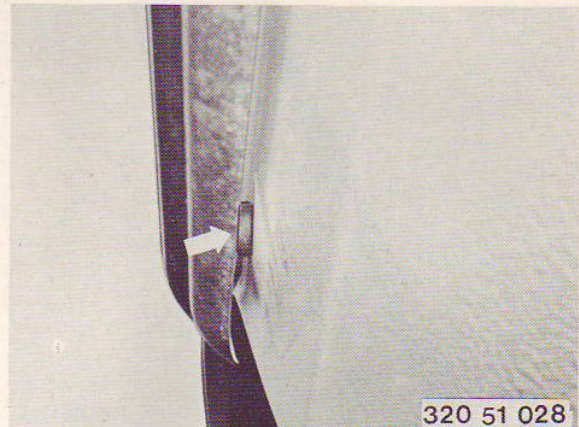
Remove nuts (1–3) and take off the side section of the bumper.

51 12 000 Complete rear bumper—detaching and attaching

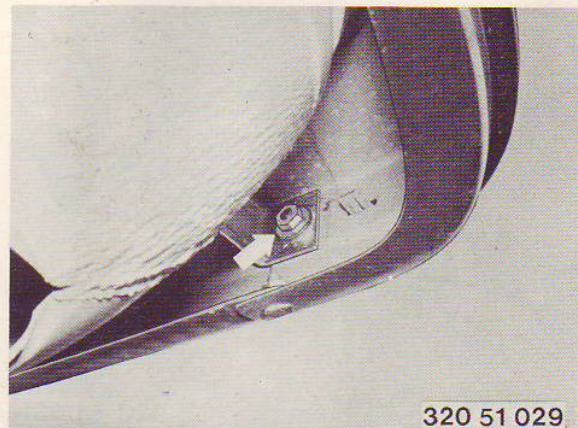
Remove screws at left and right in luggage compartment.



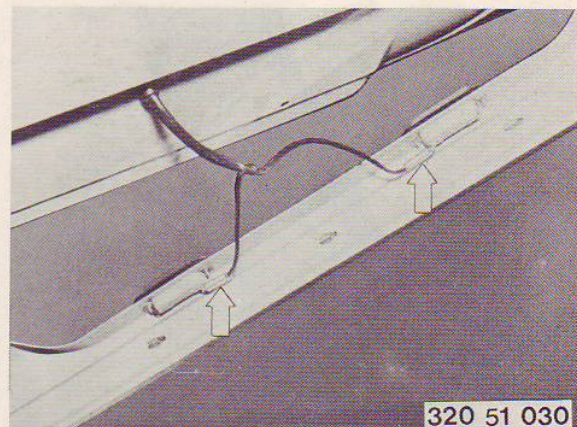
When installing: Check condition of rubber between wheel arch and bumper and renew if necessary.

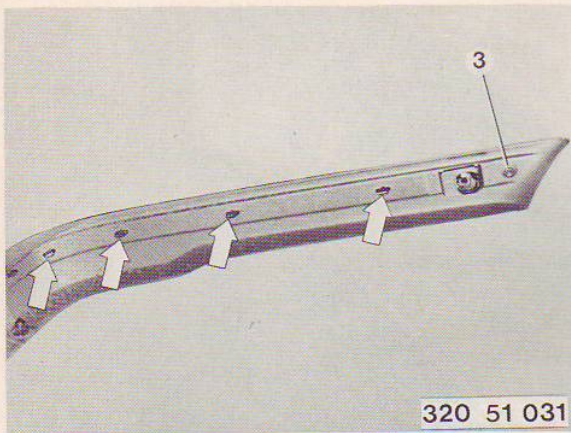


Remove nuts on both sides.



Pull off license plate light cables and take off bumper.

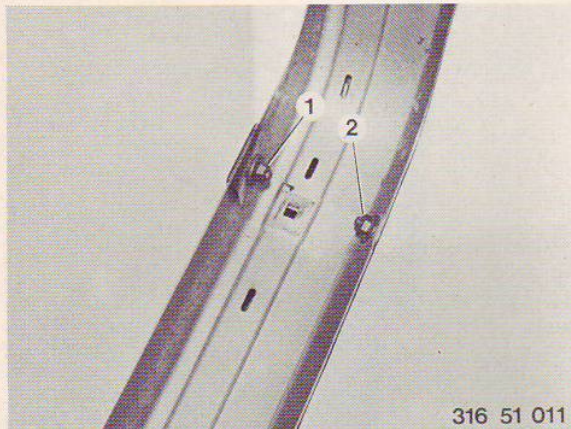




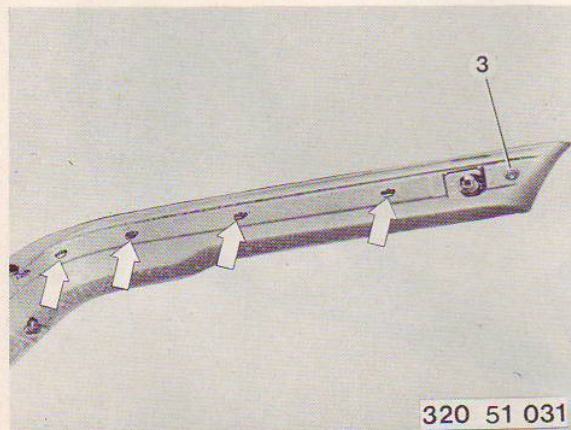
51 12 011 Rear bumper center section – renewing

Detach the complete rear bumper – 51 12 000. Remove nuts (3) from both bumper side sections. Press out the retaining clips and take off rubber strip.

When installing: Check condition of retaining clips and renew if necessary. Make sure that the clips are correctly seated.



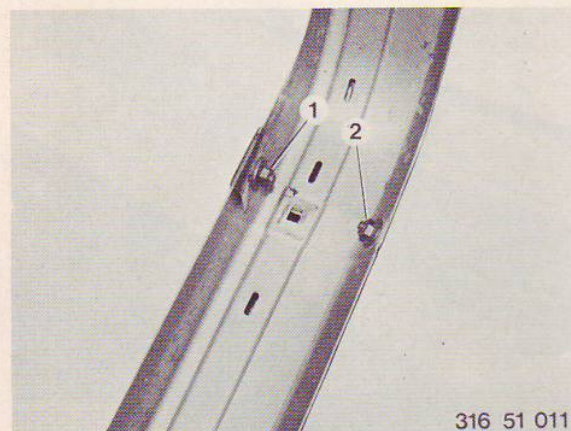
Remove nuts (1 and 2) at left and right and separate the side sections from the center section of the bumper. Transfer the license plate lights to the new bumper.



51 12 201 Rear bumper side sections – renewing

Detach the complete rear bumper – 51 12 000. Remove nut (3) on the side section of the bumper. Press out the retaining clips for the rubber strip until the side section is released.

When installing: Make sure the retaining clips are correctly seated.



Remove nuts (1 and 2) and take off the bumper side section.

51 13 000 Center front grille – removing and installing

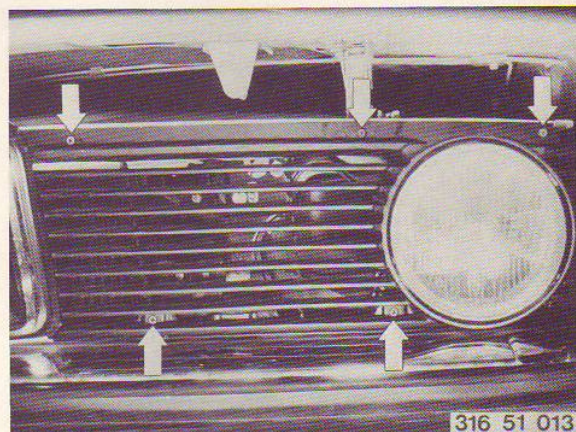
Open the engine compartment lid, remove the screws and take off the center front grille.



51 13 040 Side front grille – removing and installing

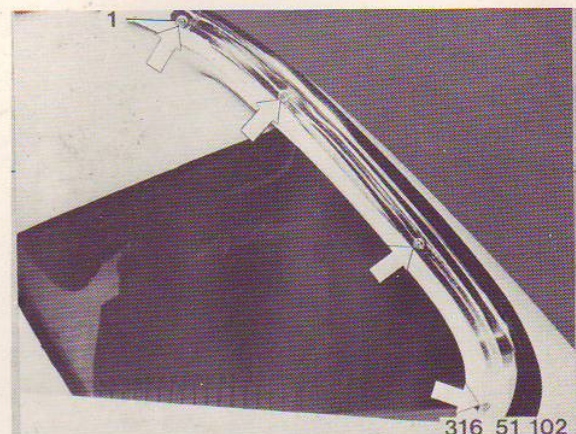
Remove the complete front turn indicator – 63 13 150.

Remove screws and take off side front grille.

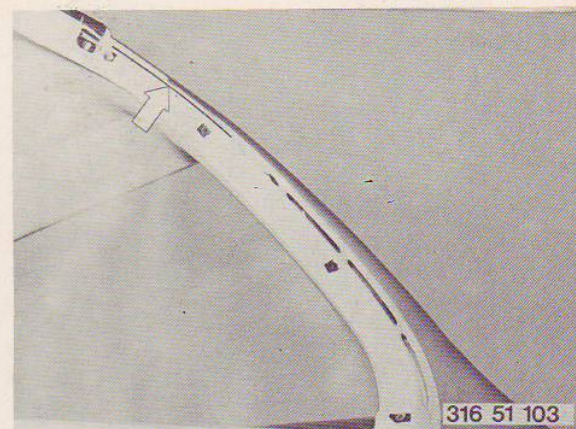


51 13 333 Rear air outlet trim – removing and installing

Remove rear side window – 51 36 050. Take out screw (1) and push the sleeve forwards. Take out the remaining screws and remove the trim.



When installing: Insert a “Terostat” cord seal at the outer edge.

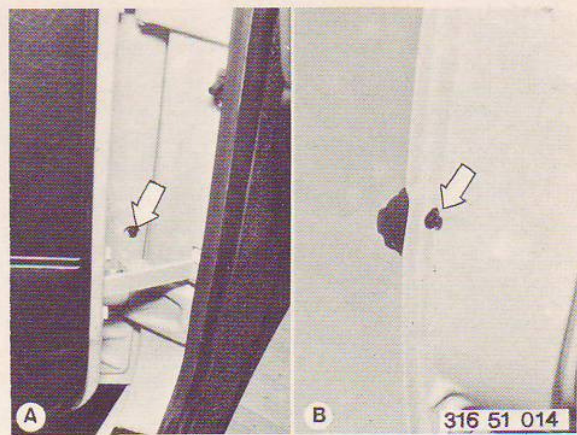


51 15 330 Rubbing strip on front door – detaching and attaching

Remove cap nuts.

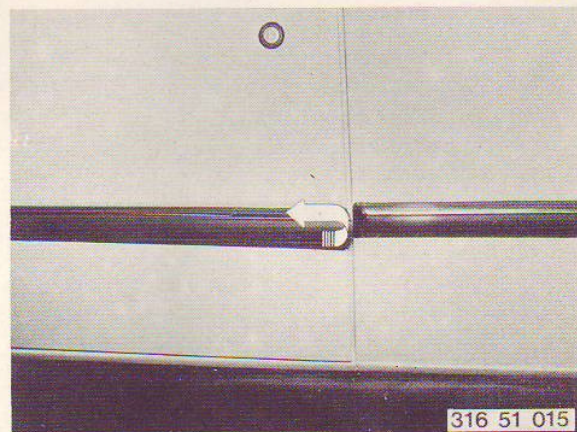
A = front

B = rear

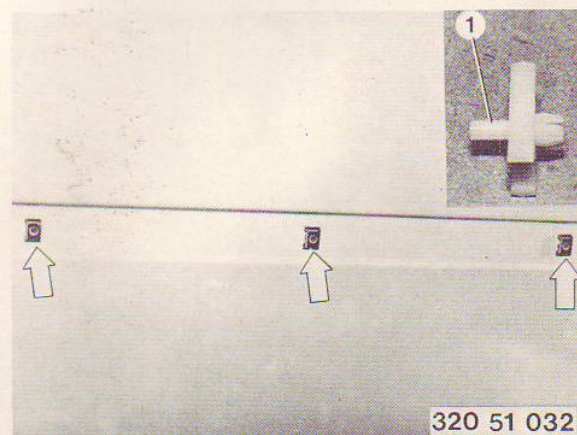


Lift the rubbing strip away from the clips.

When installing: **The taper outer edges must be parallel to the outer edges on the next sections of rubbing strip.**



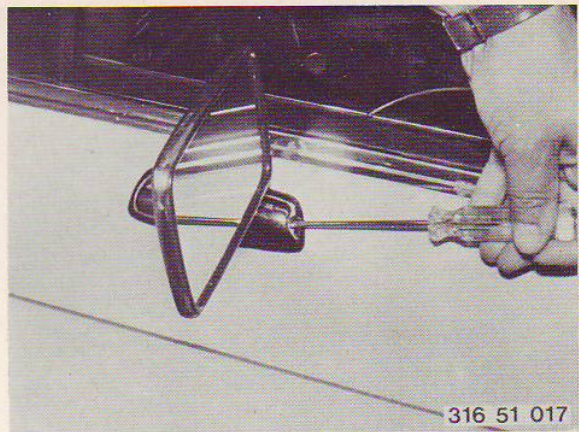
When installing: **Check trim clips and renew if necessary by detaching door trim, pressing out peg (1) from the inside and pulling out the clips.**



51 16 000 Mirror on front door – detaching and attaching

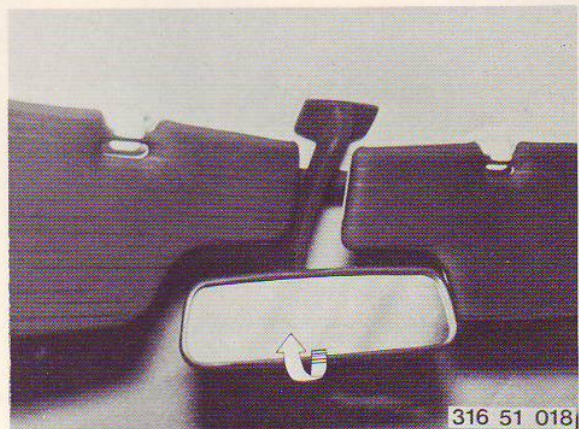
Fold back the rubber cover. Loosen the screw and take off the mirror.

When installing: Make sure the rubber base pad is correctly seated.



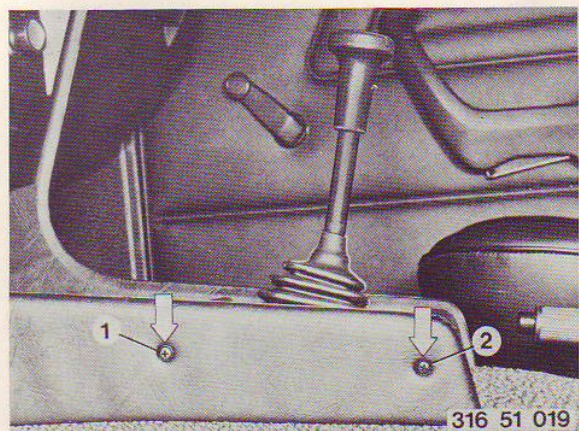
51 16 060 Inside mirror – removing and installing

Pull the mirror away to the rear.

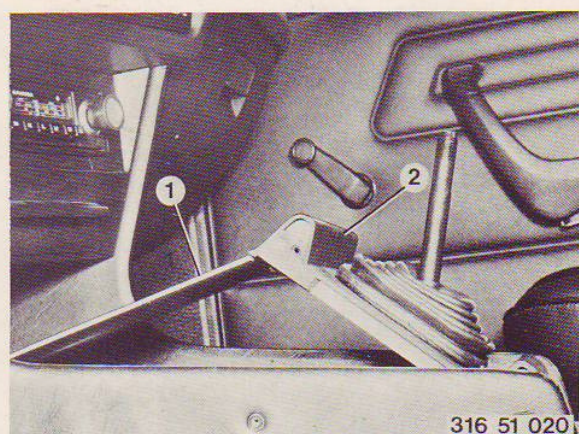


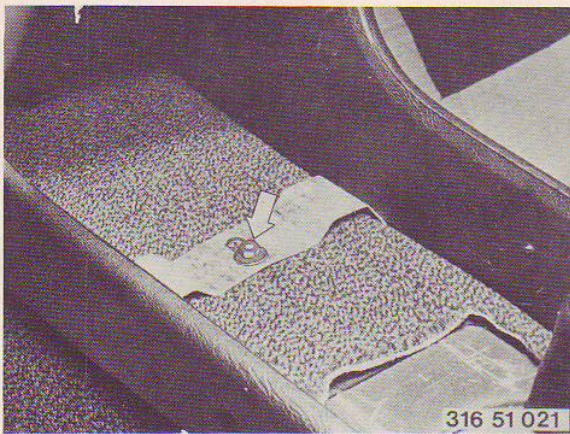
51 16 200 Center compartment – removing and installing

Remove screws (1 and 2) on the left and right sides of the compartment.

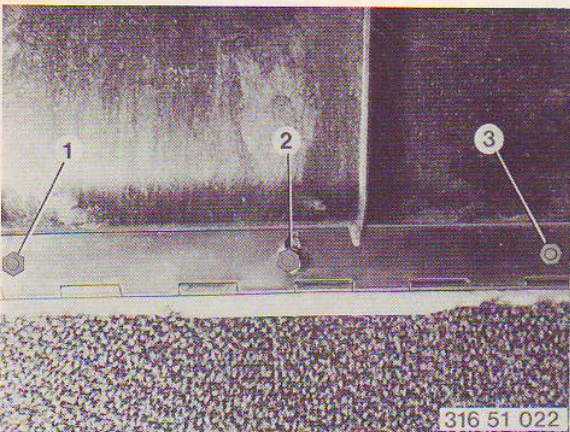


Unscrew the gear lever knob. Remove the compartment floor (1) and the gear lever cover (2).

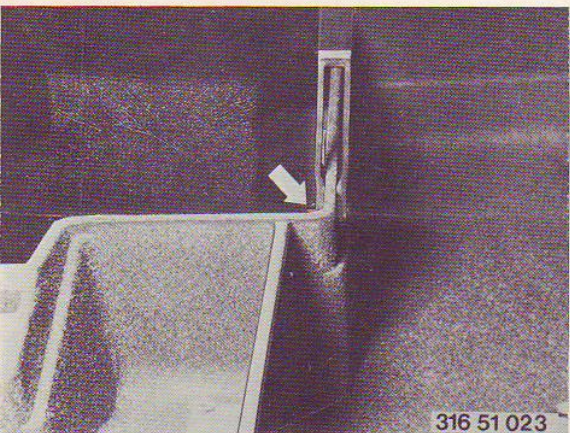




Unscrew the nut and take out the retaining plate. Disconnect the plug for the ashtray light. Pull the compartment out to the rear.
Note: If a radio is installed, detach the antenna lead, earth (ground) lead, power supply and loud speaker leads.



51 16 360 Glove box – removing and installing
 Remove bolts (1 to 3).



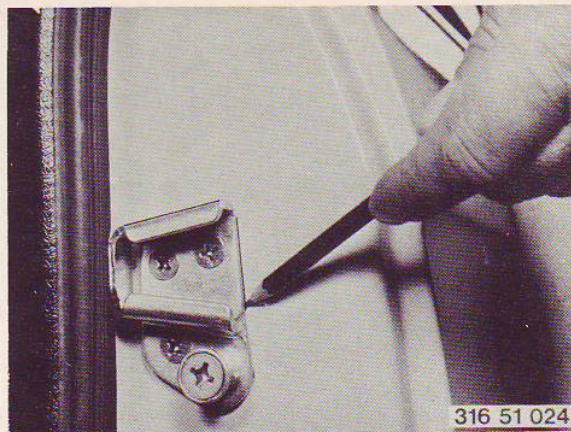
Press the plastic rivets (right and left) together and pull out. Remove the glove box.

51 21 000 Front door catch – removing and installing

Remove the left rear side panel trim – 51 43 000.

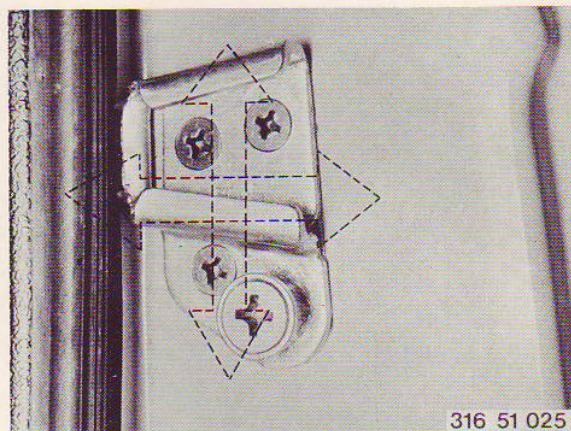
Mark the installed position of the door catch with a pencil. Remove all screws holding the door catch.

Warning: Hold the threaded plate.



When installing: Screw the door catch into position without tightening, and align with the door lock. Adjust the catch until the outer panel of the door is approx. 1 mm (0.04 inch) higher than the rear side panel when the door is closed.

Use a shim plate if necessary.



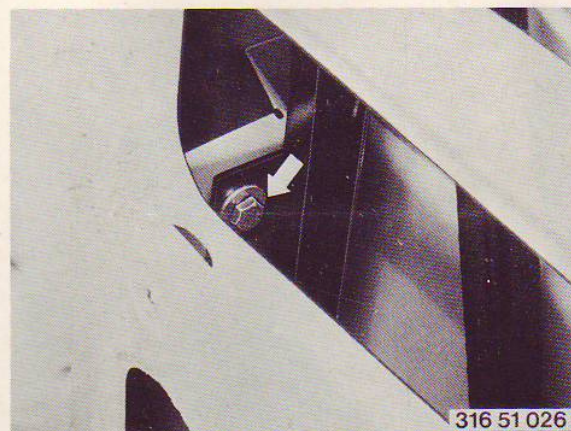
51 21 090 Door lock – removing and installing

Detach the door panel trim – 51 41 000.

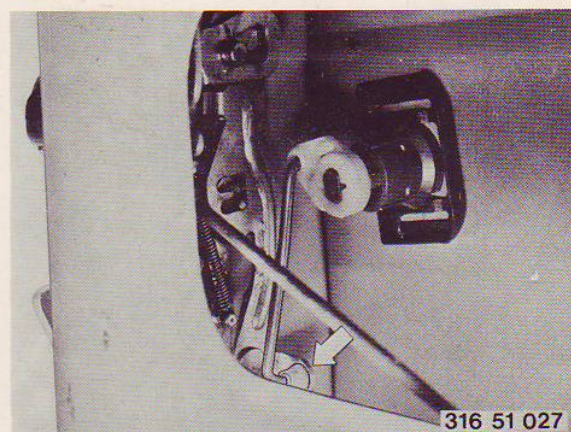
Remove the “Acella” sheet as far as necessary.

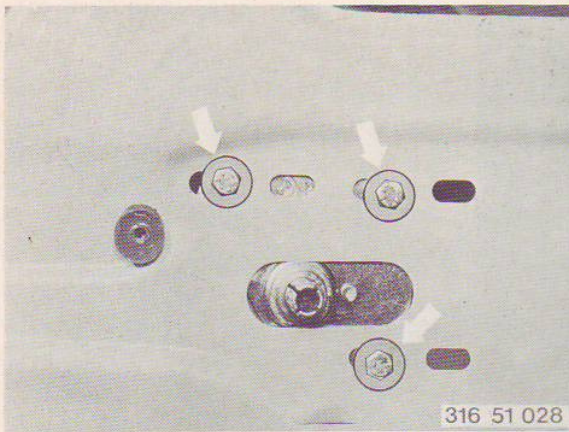
Remove the bolt holding the rear windows guide rail.

Pull the window guide partly out of the rail, and remove the window guide rail downwards.

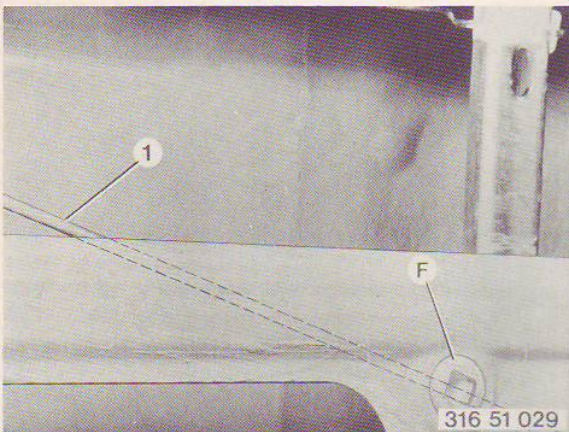


Lift out the connecting rod between the door lock and lock barrel.

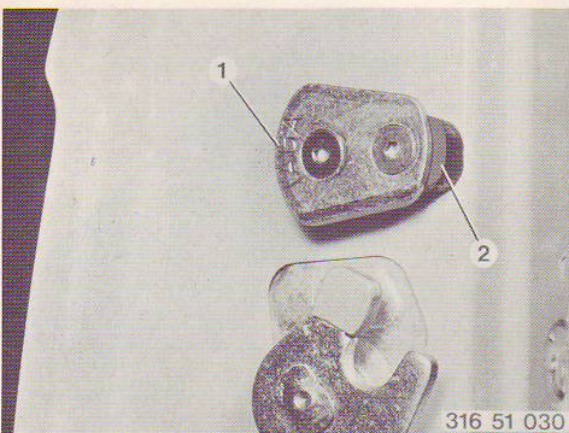




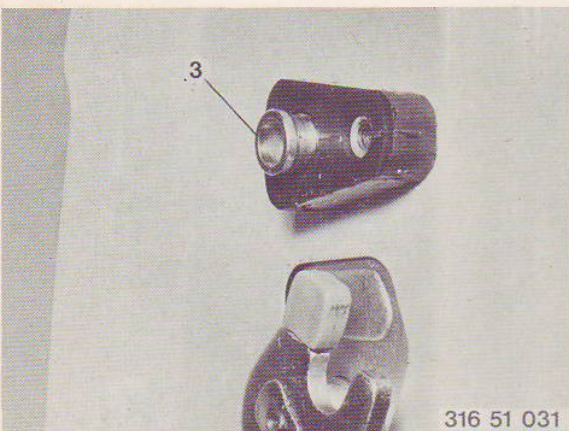
Remove the bolts holding the remote door lock mechanism.



Detach connecting rod (1) from guide clip (F).

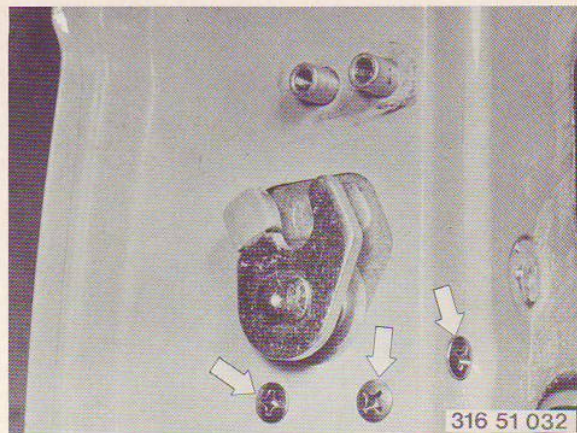


Remove screws and take off clamp plate (1) and guide pad (2).



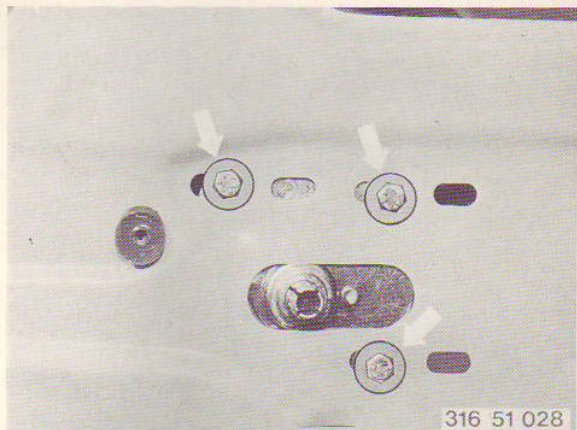
When installing: Insert bushing (3) into guide pad.

Close the rotary striker.
Remove the screws.
Detach the remote lock operating mechanism and remove the door lock.



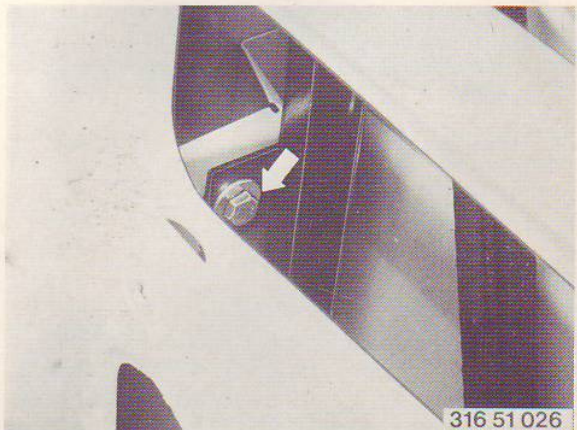
51 21 120 Remote door lock operating mechanism – removing and installing

Detach the door panel trim – 51 41 000. Remove the “Acella” sheet as far as necessary. Remove the bolts. Detach the connecting rod.

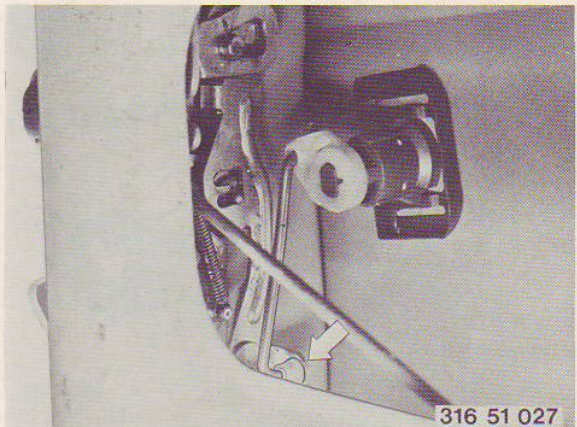


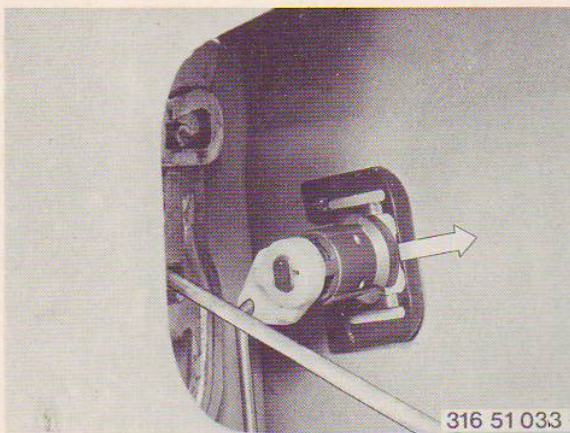
51 21 140 Complete lock barrel – removing and installing

Detach the door panel trim – 51 41 000. Remove the “Acella” sheet as far as necessary. Remove the bolt holding the rear window guide rail. Partly lift the window guide out of the rail and remove the window guide rail downwards.



Detach the connecting rod between the door lock and the lock barrel.





Pull out the lock barrel keeper.
Remove the lock barrel towards the outside of the door.

316 51 033



The key number can be seen when the lock barrel has been removed.

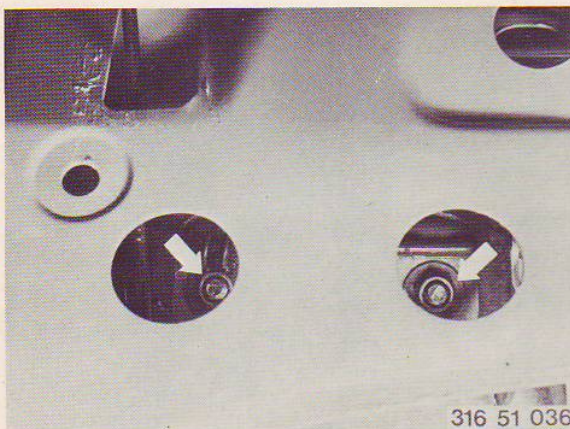
316 51 034



51 21 170 Outside door handle – removing and installing

Separate the outside door handle from the lock mechanism.

316 51 035

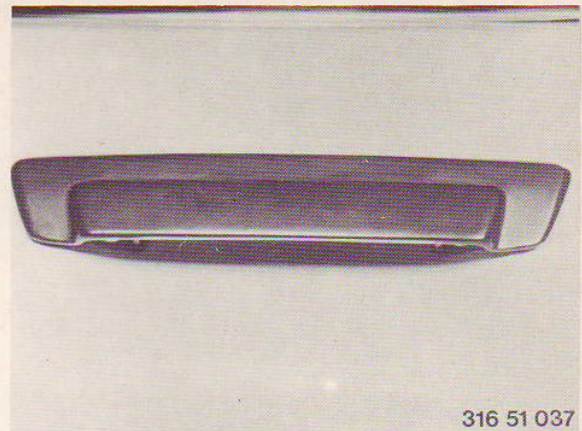


51 21 200 Outside door handle and lock operating mechanism – removing and installing

Remove the outside door handle – 51 21 170.
Detach the door panel trim – 51 41 000.
Pull off the "Acella" sheet as far as necessary.
Detach the lock operating mechanism.

316 51 036

When installing: Align the lock mechanism with the outside door handle.

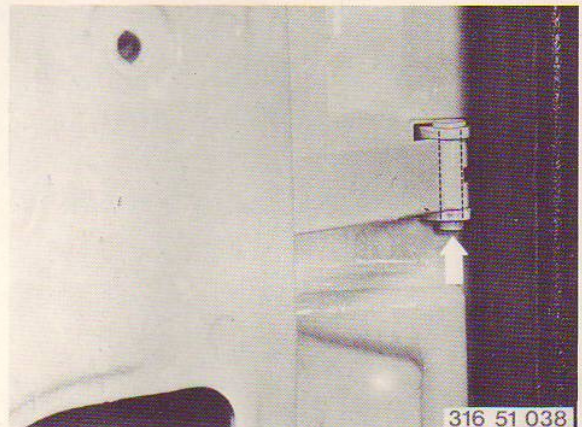


316 51 037

51 21 280 Door brake – removing and installing

Detach the door panel trim – 51 41 000.
Pull off the “Acella” sheet as far as necessary.
Drill the door brake pin from below, and pull out.

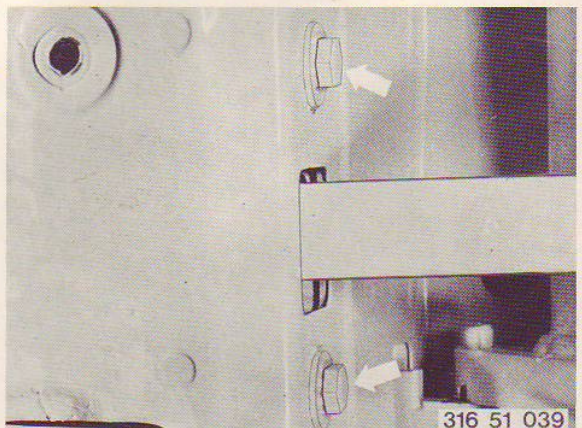
When installing: Rivet the door brake pin into position.



316 51 038

Remove the bolts and take off the door brake towards the inside of the door.

When installing: The door brake should be set to the second notch.

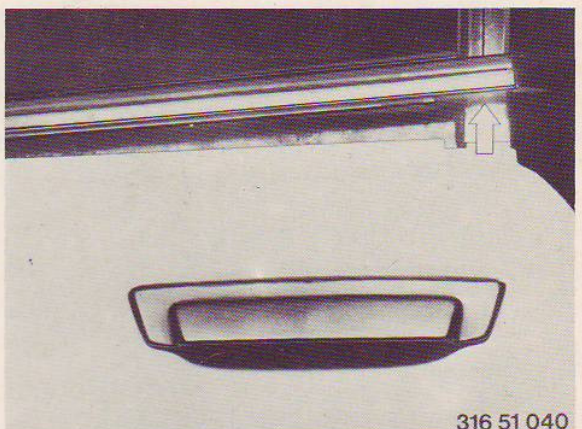


316 51 039

51 21 300 Outer window aperture cover strip – detaching and attaching

Strike the window aperture cover strip gently with a hardwood block to remove.

Warning: Apply adhesive tape to the window frame surround to prevent scratching.



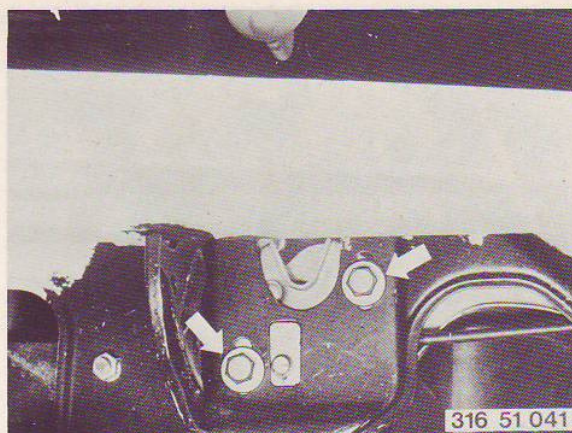
316 51 040

51 23 110 Engine compartment lid lock – removing and installing

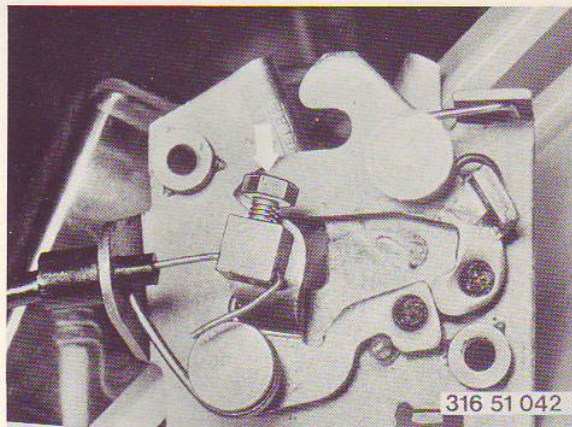
Detach the front grille – 51 13 010.

Disconnect the lock cable.

Mark installed position of lock and remove bolts.

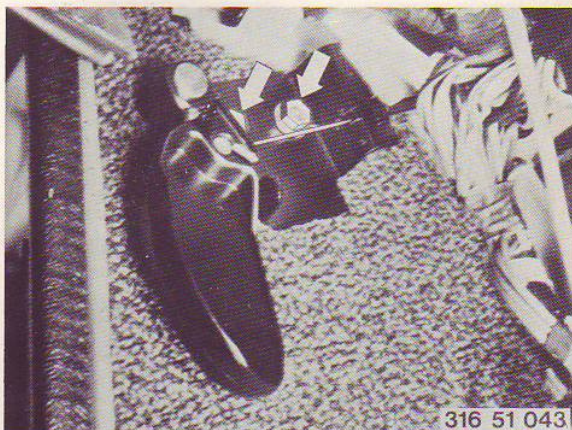


When installing: Push the engine compartment lid lock handle fully forwards and attach the wire cable in this position. Bend over the projecting end of the wire.

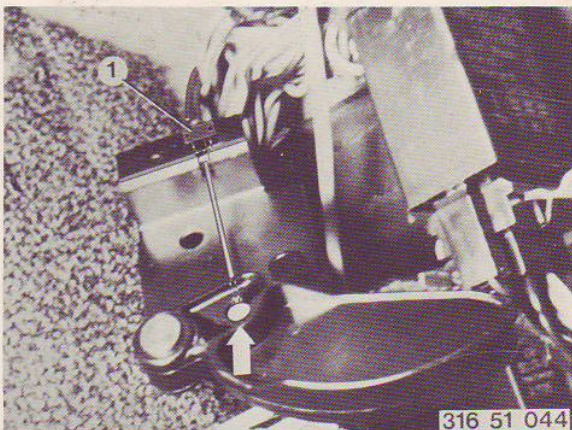


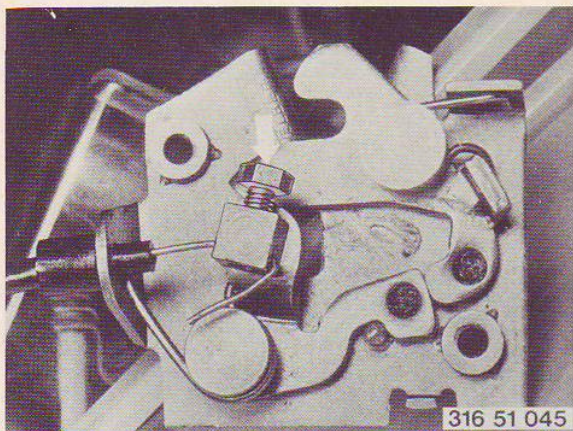
51 23 200 Lever with mount for engine compartment lock – removing and installing

Detach the lower left facia trim – 51 45 180. Remove the bolts.



Press out clip (1). Detach wire cable from lever.



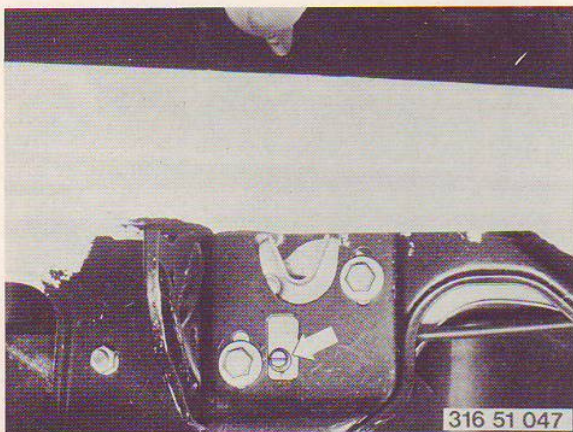


51 23 210 Engine compartment lid lock cable – removing and installing

Detach the lower left facia trim – 51 45 180.
Disconnect the wire cable at the lock.



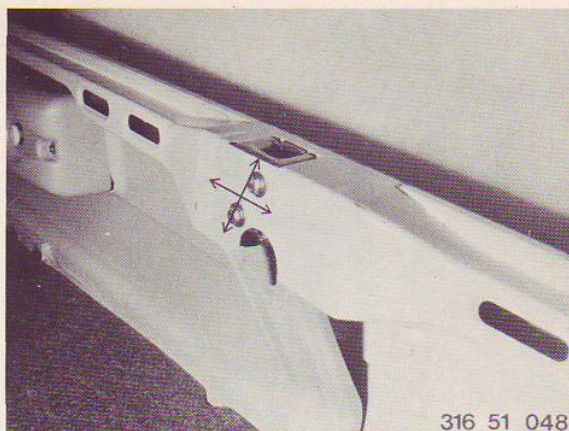
Pull the cable out of the mounting, clip and cable strap. Detach the cable from the lever and pull out of the rubber sleeve.



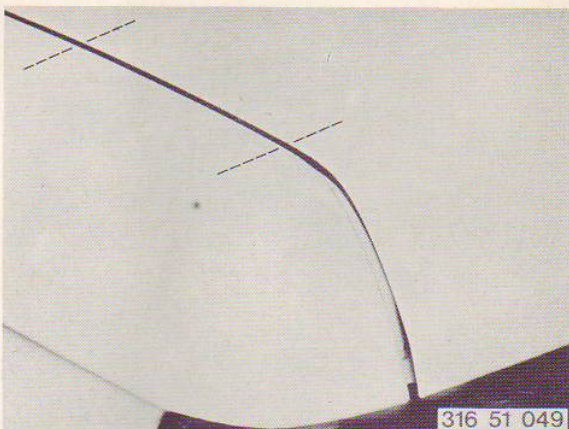
Warning: If the cable breaks when the lid is shut, the lid can be opened by slackening the locking screw.

51 24 004 Luggage compartment lid catch – adjusting

Loosen the bolts and move the lower part of the lock in its slots.



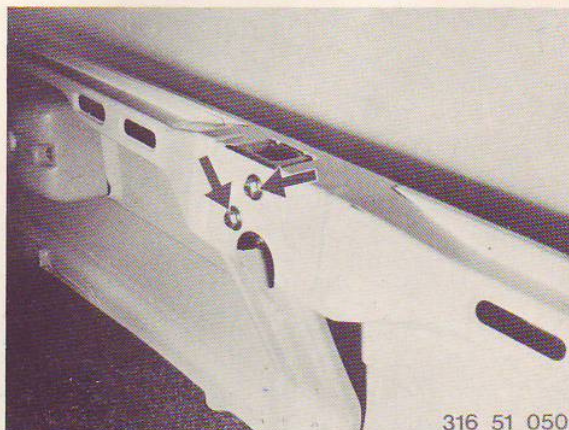
Adjust the lid catch so that the outer edges of the lid are at the same level as the inner edges of the rear side panels.



51 24 060 Luggage compartment lid catch – removing and installing

Remove the bolts.

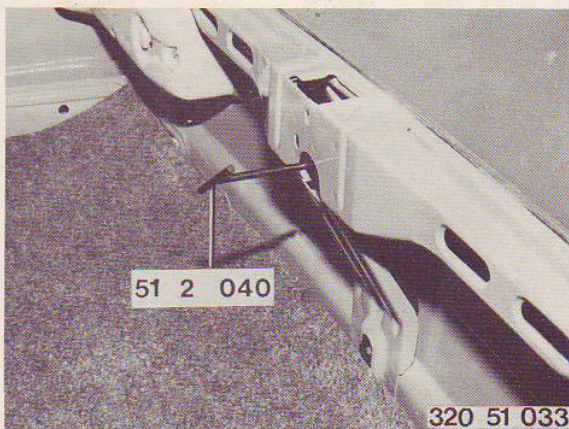
When installing: Adjust the luggage compartment lid catch – 51 24 004.

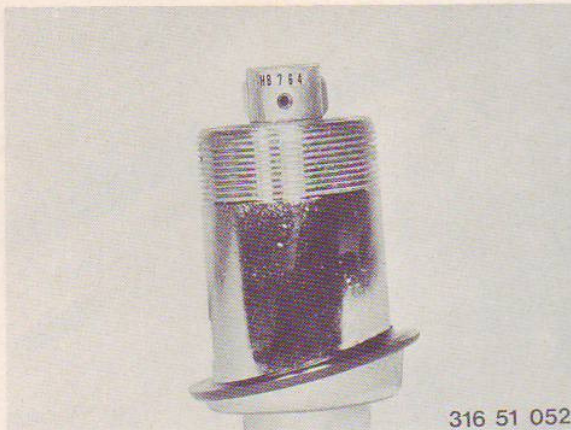


51 24 100 Luggage compartment lock – removing and installing

Remove the luggage compartment lid catch – 51 24 050.

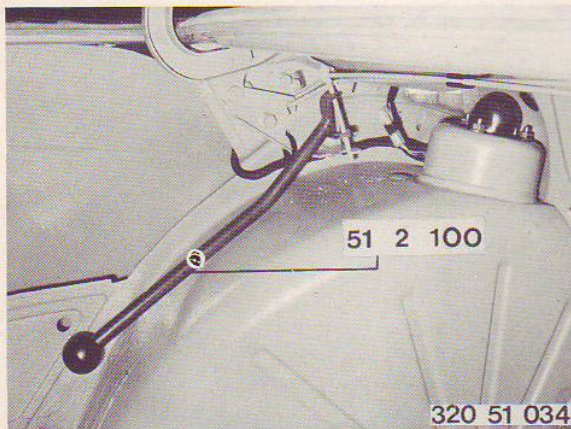
Unscrew the threaded ring with box spanner 51 2 040 and take off the catch sleeve. Remove the lock.





316 51 052

When the luggage compartment lock has been removed, the key number will be visible. This must be identical with the door lock number.



51 21 341 Torsion bar spring for luggage compartment lid – renewing

Disconnect the torsion bar spring with tool 51 2 100 at left and right.

Remove torsion bar spring from pivot mounts.

When installing: Note correct position.

The two torsion bar springs cross over.

51 31 000 Complete windshield – removing and installing

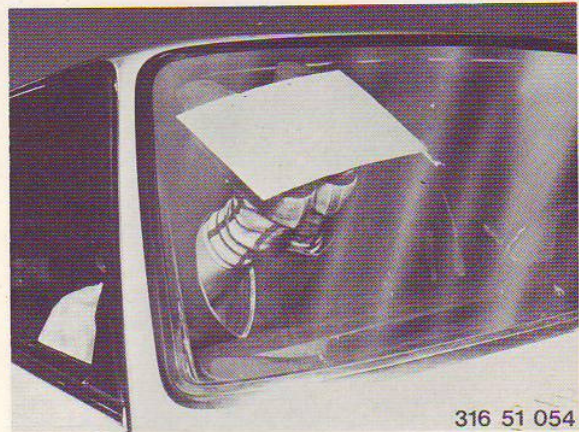
Carefully separate the rubber surround from the body with the lip-type puller.



Press out the windshield using the feet, and starting at a top corner.

Remove the old sealing compound.

When installing: Check condition of surround and filler strip and renew if necessary. Seal the windshield¹⁾.

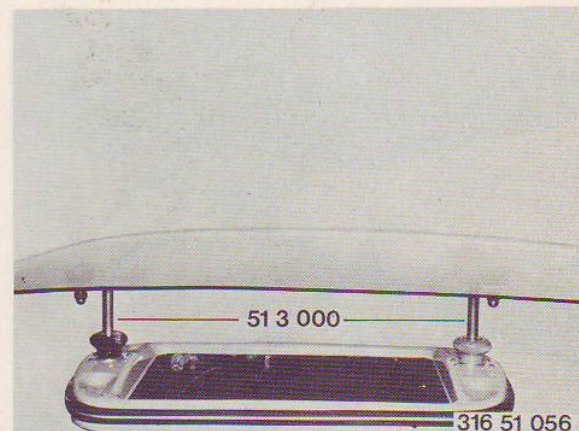
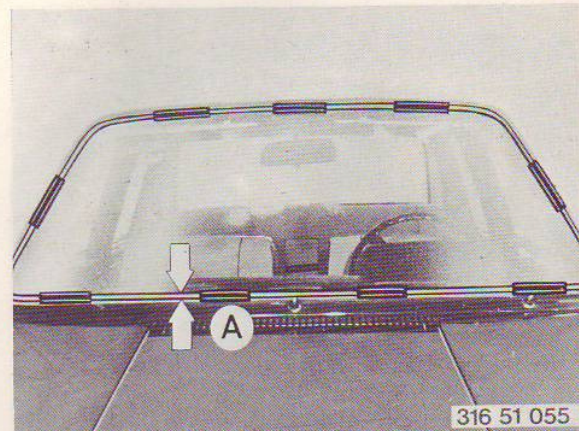


51 31 001 Windshield – renewing

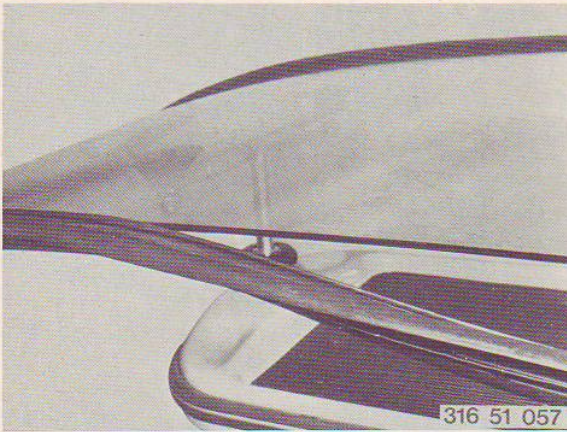
Check that the rubber surround and filler strip are suitable for further use. Insert the windshield into the body cutout with a number of sections of rubber surround.

The gap (A) between the glass and the body cutout must be approx. 9 ... 10 mm (0.35 ... 0.40 in) all round.

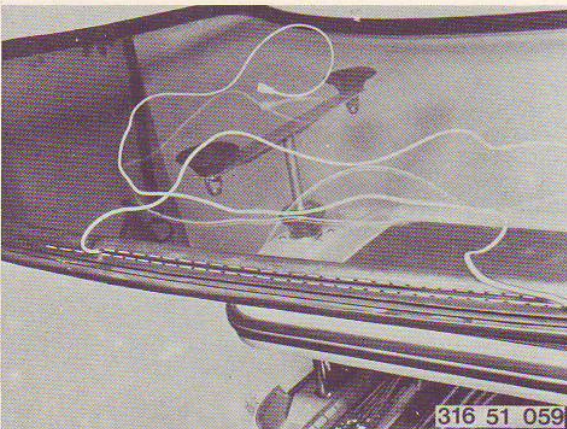
Attach glass holder 51 3 000 to the "Assistant", and place the new windshield on top.



1) See specifications



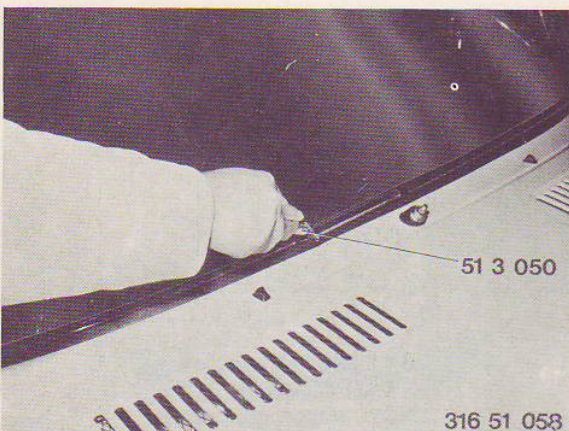
Coat the rubber surround with glycerin and pull on.



Pull a cord or wire approx. 3 mm (0.12 in) in diameter into the lip of the rubber surround. The ends of the cord or wire should overlap by approx. 30 cm (12 in) at one side.



Place the pre-assembled windshield against the body cutout and prevent from slipping sideways. With the cord or wire previously inserted, pull the rubber surround over the web on the body. During the installation procedure, strike the glass uniformly with a pad or the flat of the hand to bring it into the correct installed position.



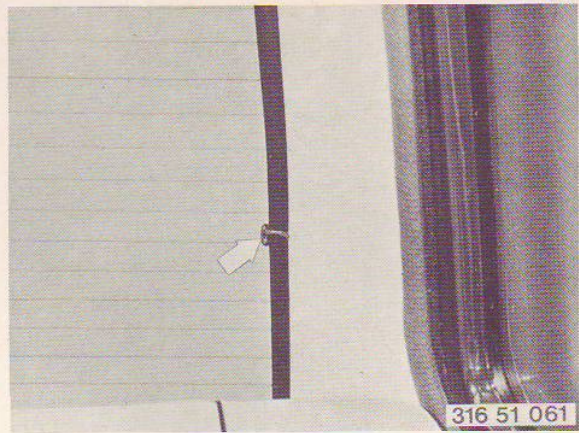
When installing: heat filler strip to app. 40°C (104°F). Insert the filler strip into the rubber surround with special tool 51 3 050, starting at the bottom center. Seal the windshield¹⁾.

¹⁾ See specifications

51 31 200 Rear window – removing and installing

Detach the heated rear window connections.
When installing: Check operation of heated rear window.

The remaining work is identical with job number 51 31 000.

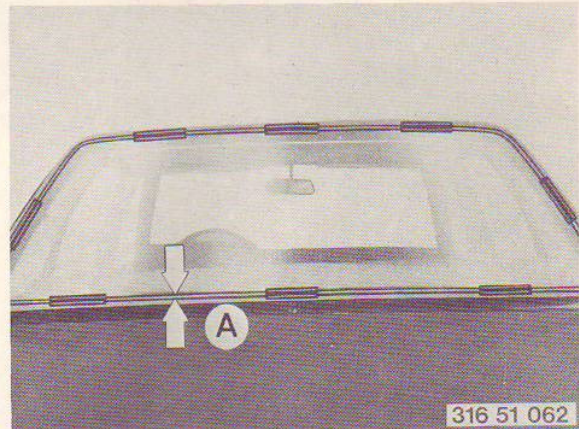


51 31 221 Rear window – renewing

Check that the rubber surround is in good condition, or renew if necessary. Insert new rear window into the body cutout with a number of pieces of rubber surround.

The gap (A) between the glass and the body must be approx. 9 ... 10 mm (0.35 ... 0.40 inch) all round.

The remaining work is identical with job number 51 31 001.

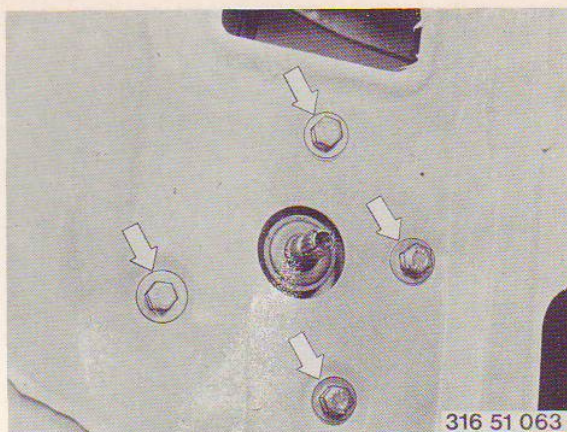


51 32 020 Window crank mechanism – removing and installing

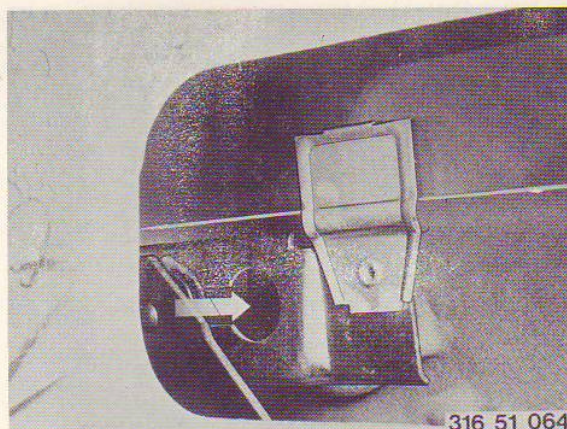
Detach door panel trim – 51 41 000.

Detach “Acella” sheet.

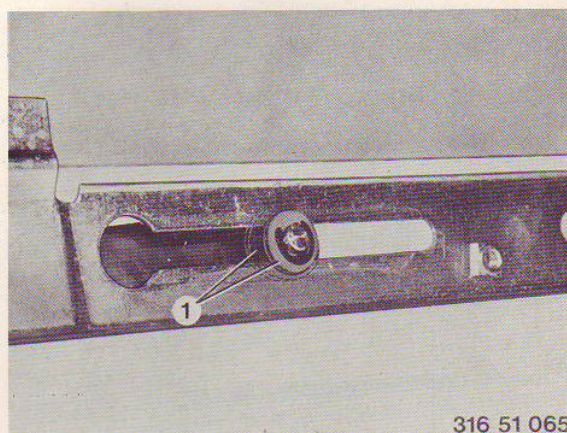
Close the window and detach the crank mechanism from the door.



Hold the window in the closed position.
Detach the lifting arm through the large hole in the lifting plate.



When installing: The lift rail must run between the two plastic discs (1).
Apply a brand-name multipurpose grease to the toothed sector of the window crank mechanism.



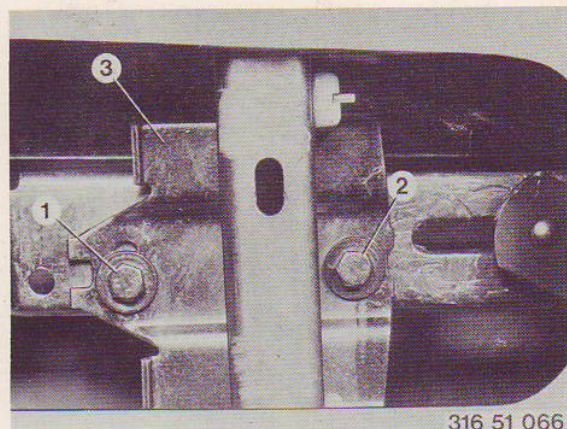
51 32 040 Window lift rail holder – removing and installing

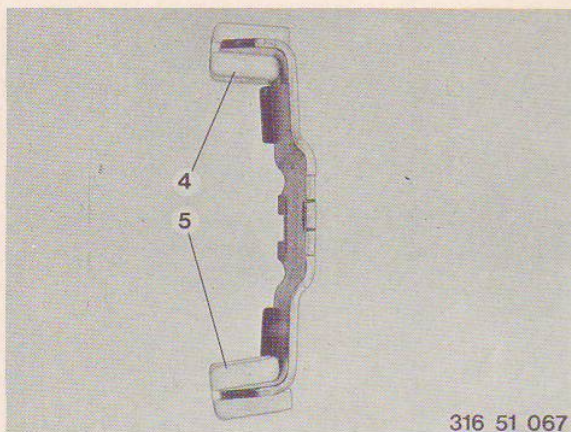
Adjust position of door window – 51 32 154.

Detach “Acella” sheet.

Remove retaining bolts (1 and 2) from holder (3).

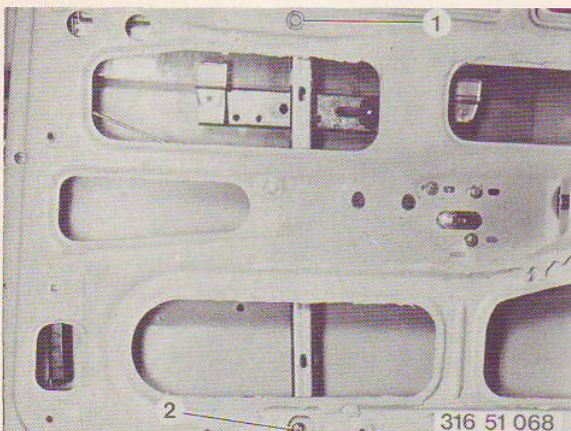
When installing: Adjust door window 51 32 154.





316 51 067

When renewing: pull off slider pads (4 and 5).
When installing: Note correct position of slider pads. The longer side must be on the outside of the holder. Apply a brand-name multipurpose grease to the slider pads.

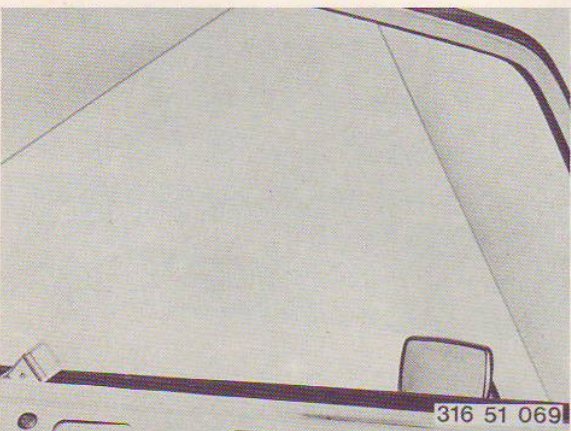


316 51 068

51 32 080 Window support rail – removing and installing

Remove the window lift rail holder – 51 32 050. Remove bolts (1 and 2) and take out the support rail.

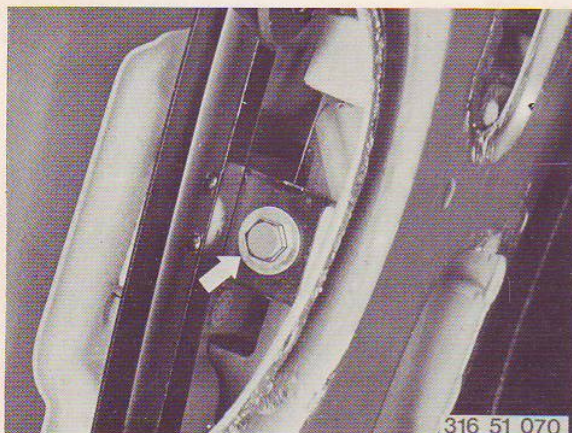
When installing: If necessary, use shims between the window support rail and the inner door panel under bolt (1).



316 51 069

51 32 120 Front window guide rail – removing and installing

Remove the window lift rail holder – 51 32 040. Detach the glass from the lifting arm and position at an angle.

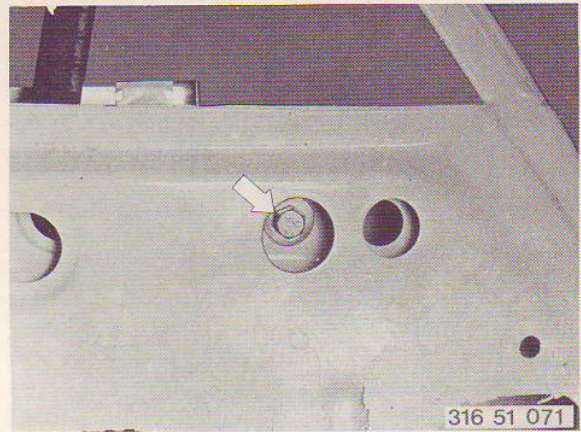


316 51 070

Pull the window guide out of the guide rail. Remove the lower bolt.

Remove the upper bolt.

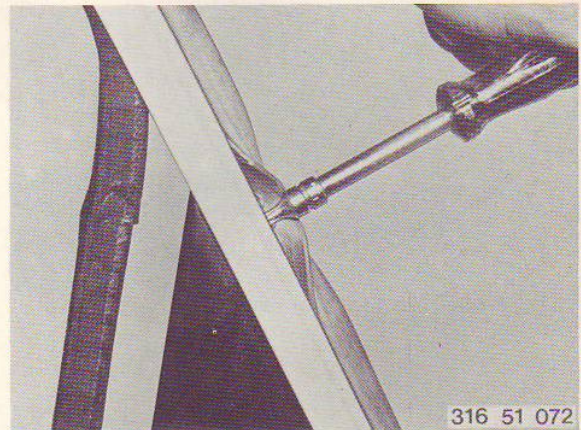
When installing: Use shims if necessary.



Partly detach the rubber door seal.

Remove the screw.

Take off the window guide rail downwards.



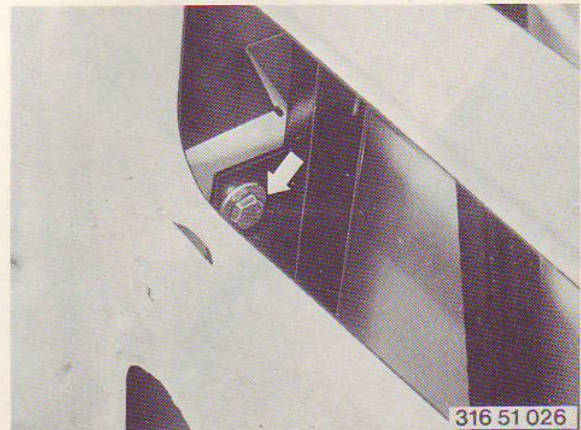
51 32 125 Rear window guide rail – removing and installing

Detach the door panel trim – 51 41 000.

Remove the “Acella” sheet.

Remove the rear window guide rail bolt.

Pull the window guide partly out of the rail and take out the window guide rail downwards.



51 32 154 Door window – adjusting

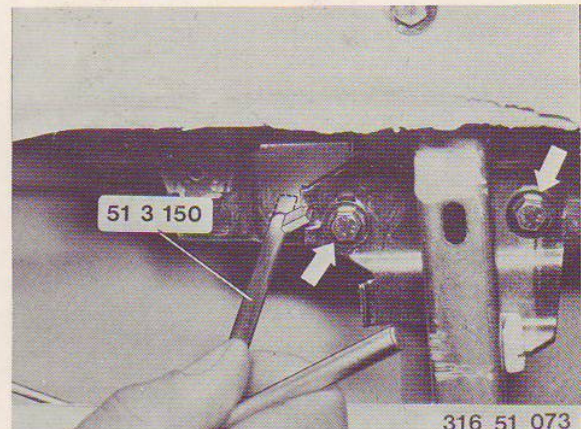
Detach the door panel trim – 51 41 000.

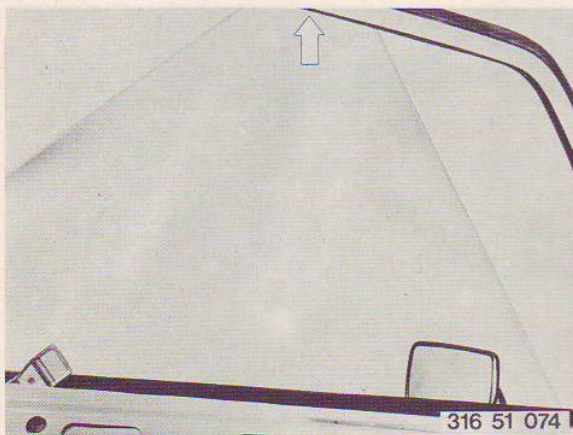
Remove the “Acella” sheet.

Loosen the bolts and adjust door window play to zero with adjusting wrench 51 3 150.

Grease the guides.

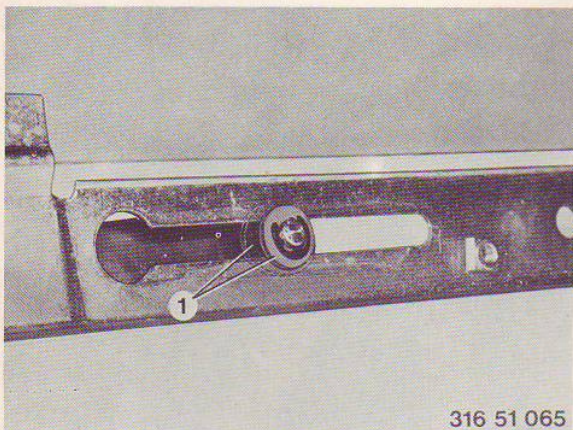
Tighten the retaining bolts.



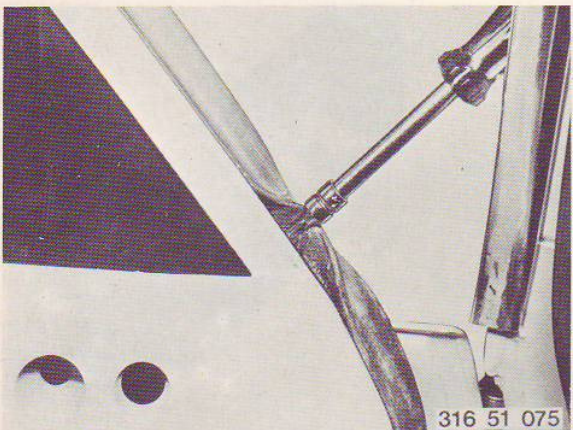


51 32 170 Door window – removing and installing

Remove window lift rail holder – 51 32 040.
Detach door window glass from lifting arm and take out upwards.

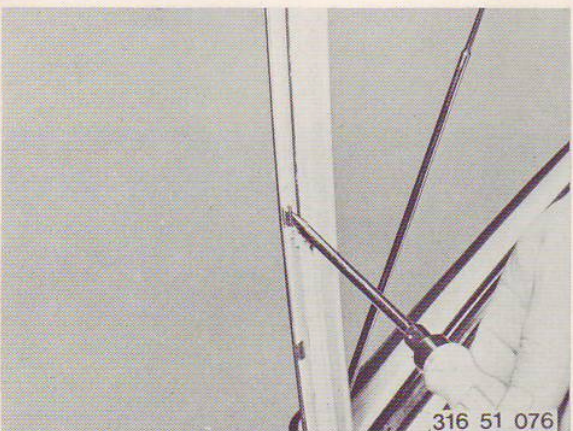


When installing: The lift rail must run between the two plastic discs (1).



51 32 390 Window frame trim – detaching and attaching

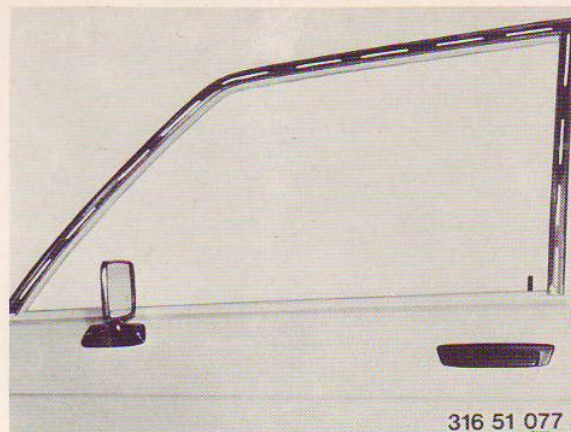
Remove the door window glass – 51 32 170.
Remove the window guide rail – 51 32 120.
Detach the window aperture outer cover strip – 51 21 300.
Pull the window guide out of the guide rail and the window frame. Remove screw and take off corner trim.



Beginning at the front, extract the clips with a screwdriver and take off the trim.

When installing: Use new clips. Insert the clips into the window frame first, then press on the trim.

When installing: To prevent the window frame trim from rattling, insert pieces of "Terostat" cord at intervals beneath the trim.

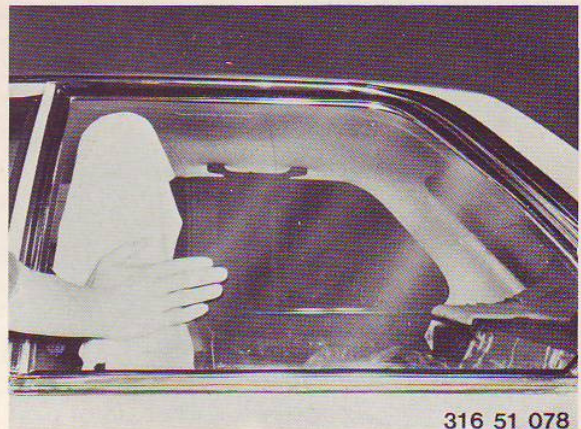


51 36 050 Rear side window – removing and installing

Remove the rear side panel trim – 51 43 000. Press the rear side window out with the feet, starting at the top corner.

Warning: Always have the glass held securely on the outside to prevent it from falling.

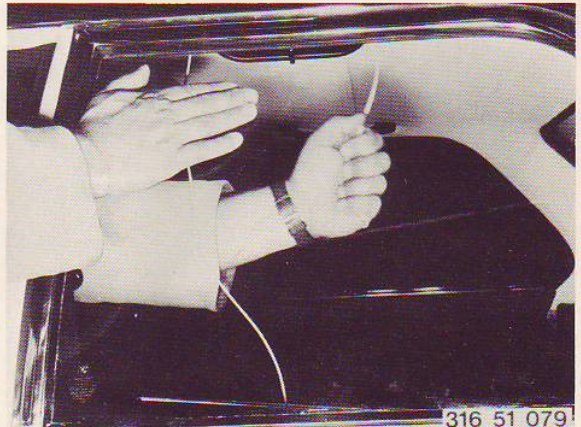
When installing: Remove the old sealing compound. Seal the corners with “Terostat” cord.



316 51 078

When installing: Insert “Terostat” cord into the cutout for the glass.

Insert a cord or wire into the final lip on the rubber surround, install the glass and pull the rubber surround over the web on the window frame. Use a soft pad or the flat of the hand at the same time to move it into the correct installed position.

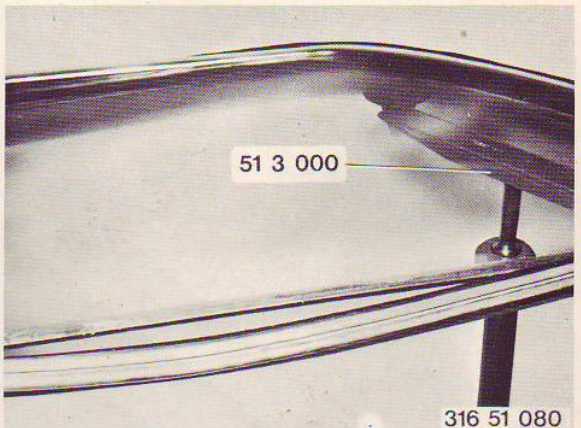


316 51 079

51 36 071 Rear side window glass – renewing

Check that the rubber surround and trim strip can be re-used.

Mount glass holder 51 3 000 in the “Assistant” and place the glass on top. Attach the rubber surround.

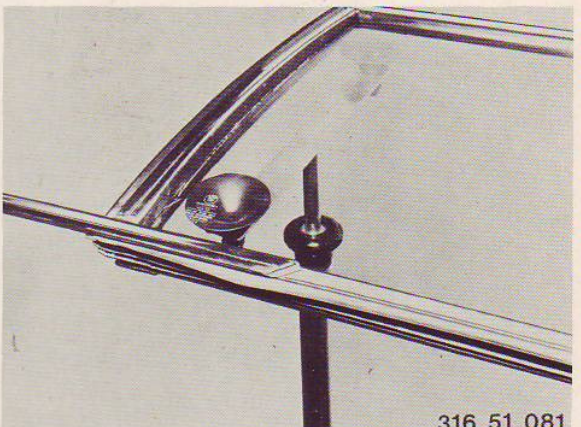


316 51 080

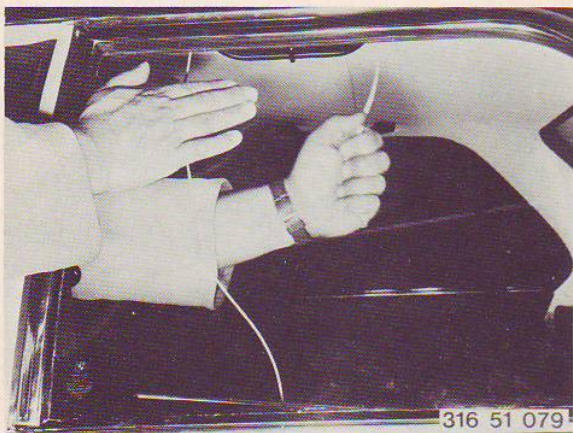
Insert the trim strips into the rubber surround. Correct order:

1. Vertical trim strip
2. Upper trim strip
3. Horizontal trim strip

Make sure that the rubber lips rest correctly against the trim strips.



316 51 081



Place "Terostat" cord into cutout for glass all round the frame. Pull a cord or wire approx. 3 mm (0.12 inch) in diameter into the lip of the rubber surround. The ends of the cord or wire must overlap by approx. 30 cm (12 inches) at one side.

Place the pre-assembled window against the body cutout and hold firmly to prevent slipping to one side. With the cord or wire, pull the rubber surround over the web on the body.

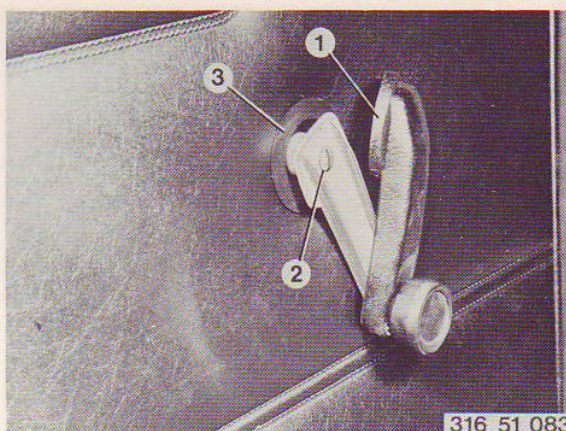
During installation, strike the glass evenly with a pad or the flat of the hand to bring it into the correct installed position.

51 41 000 Door panel trim – detaching and attaching

Detach the armrest – 51 41 060.

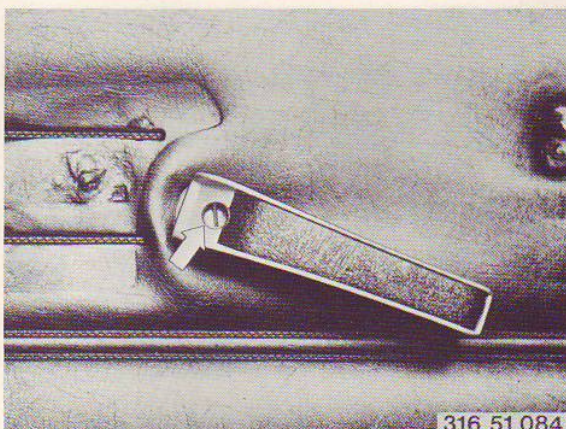
Pull out the cover (1).

Remove the retaining screw (2) and detach the window crank with baseplate (3).



Remove the retaining screw and take off the inside door handle.

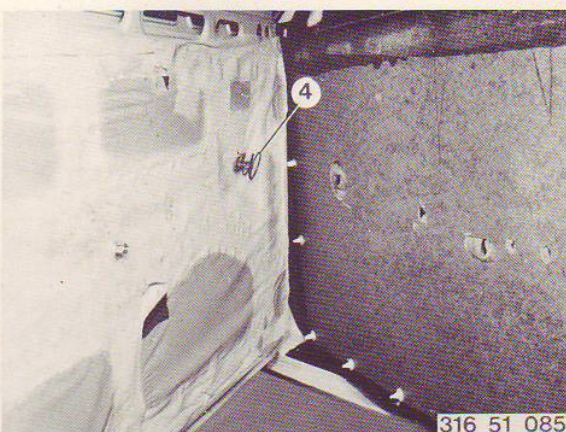
When installing: Note correct position of door handle.



Pull out the clips and lift the door panel trim away.

Warning: The wider turns of spring (4) face the trim panel.

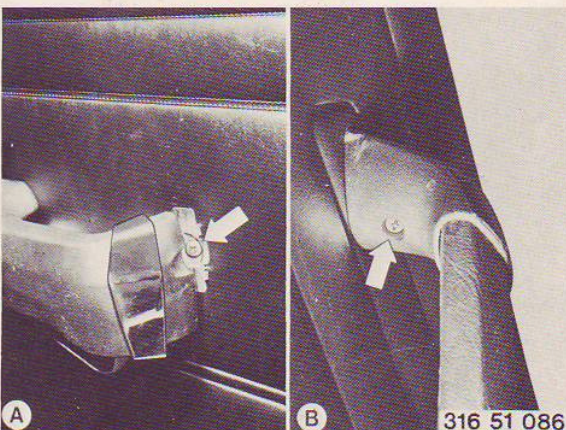
When installing: Check condition of clips and bushings and renew if necessary.

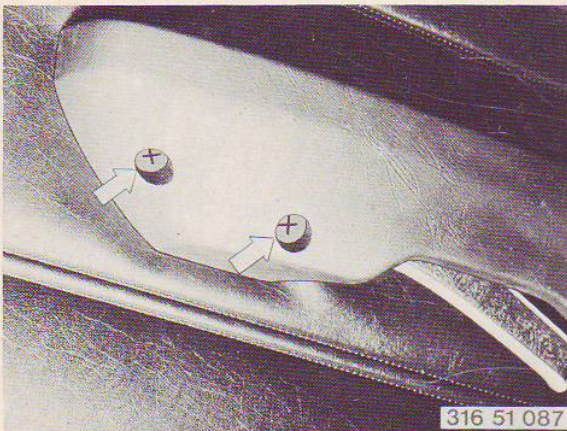


51 41 060 Armrest – detaching and attaching

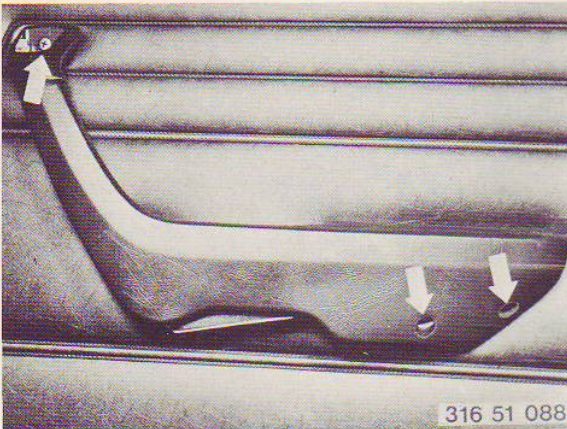
A) On driver's side:
push back the cover and remove the screw.

B) On passenger's side:
unscrew the cover.





On driver's side:
Take off the armrest.



On passenger's side:
Take off the armrest.

51 43 000 Rear side panel trim – removing and installing

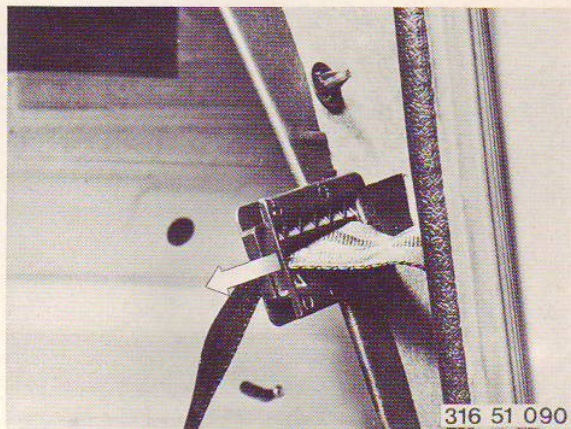
Remove rear seat and seat back – 52 20 000.

Pull out the clip and lift out the side panel trim.

When installing: Check condition of clip, bushing and locating pins and renew if necessary.



Pull out the seat belt guide and take off the side panel trim.

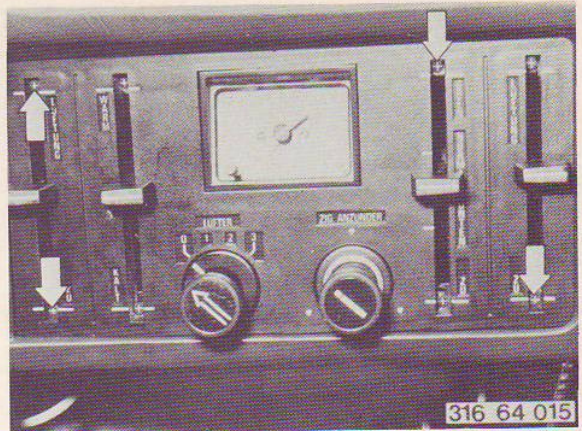


51 45 050 Facia trim – removing and installing

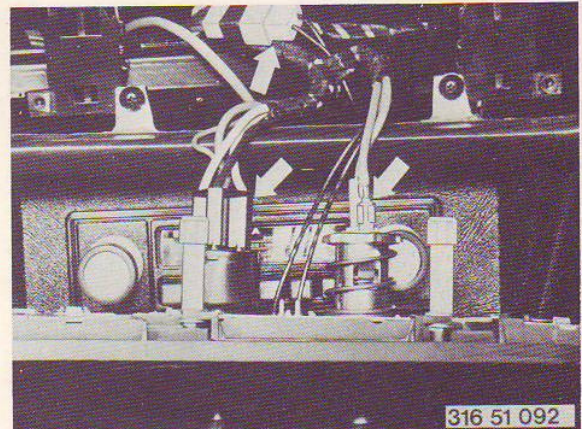
Remove and install the center storage compartment – 51 16 200. Remove the complete instrument panel – 62 21 000.

Detach the lower center right facia trim – 51 45 200.

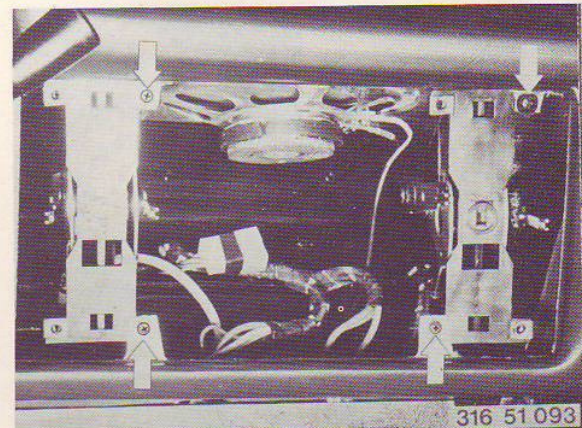
Pull off the control knobs. Remove the screws and take out the switch panel.



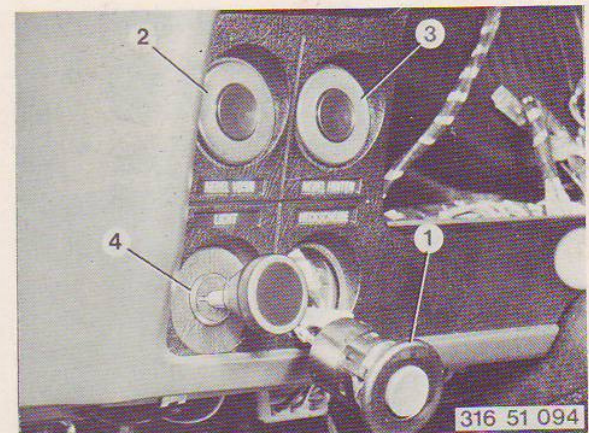
Detach the central plug and leads from the switch panel.

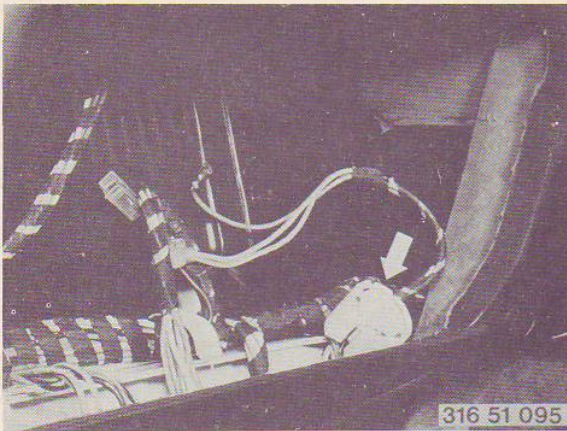


Detach the switches.
Disconnect cable at loudspeaker if fitted.

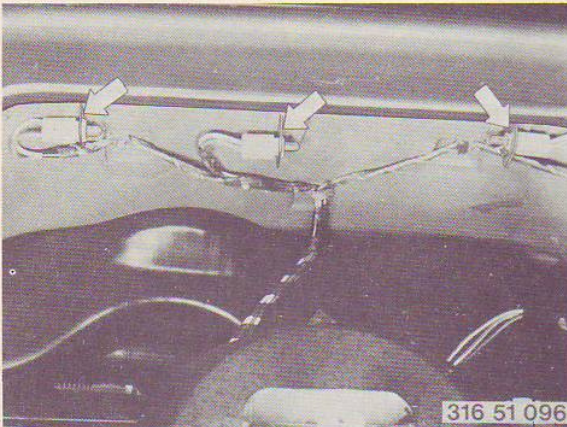


Press out switch (1) – and switches (2 and 3) if in use – and detach the leads.
Unscrew knob from switch (4). Prevent the shaft from turning so that the potentiometer is not damaged.
Take out switch (4).

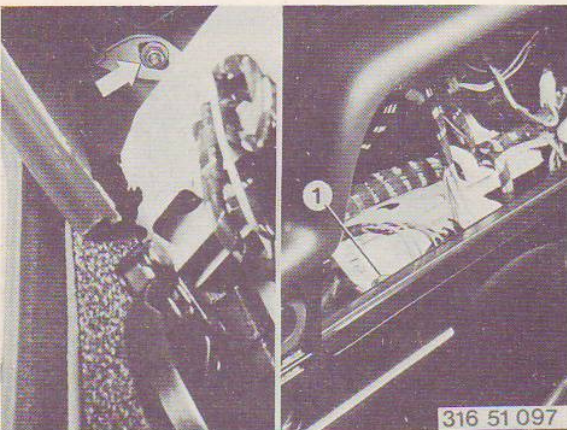




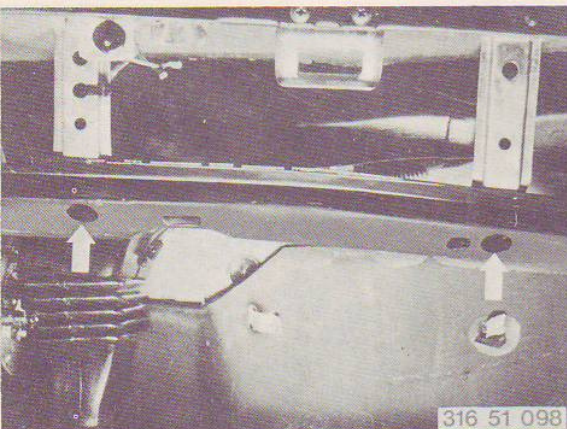
Detach central plug at hazard warning switch.



Pull out instrument lighting bulb holders.
When installing: **Secure cables in clips.**

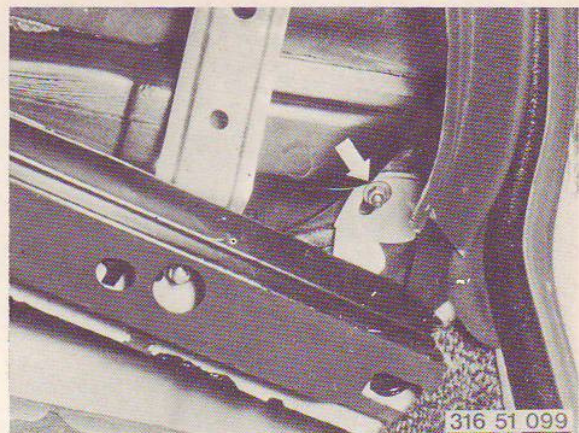


Unscrew nut at left and screw (1) at right.

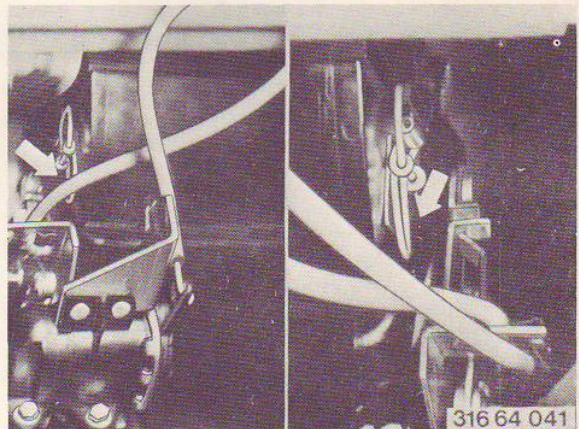


Disconnect pivot at glove box.
Detach glove box light cable and remove cable strap.
Unscrew nuts at angle brackets.

Remove the nut on the right.
When installing: First press the trim panel fully forwards, then tighten all nuts.

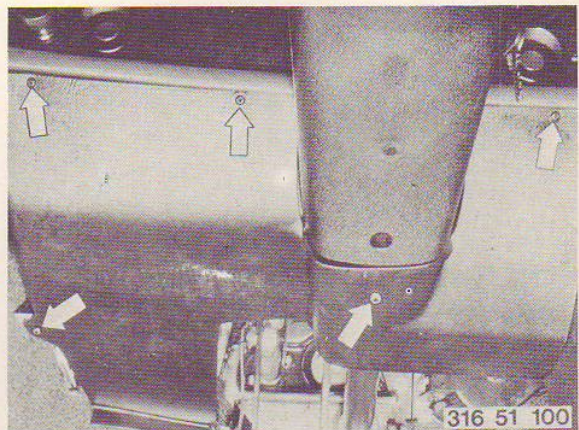


Open the left and right snap fasteners.
Lift the trim out, starting at one side, and remove to the rear.
When installing: Make sure that the heater connecting pipes are located in the demisting outlets.



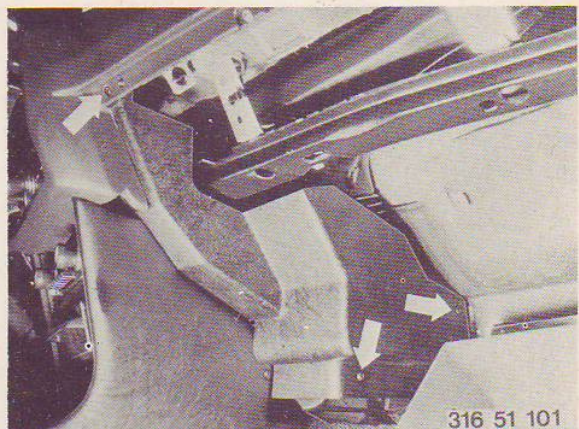
51 45 180 Lower left facia trim – detaching and attaching

Remove screws and take off trim.
Note: Remove fader at cars with air condition and stereo/CR radio, do not pull off cable.



51 45 200 Lower center right facia trim – detaching and attaching

Disconnect the left and right glove box pivots.
Remove screws and take off trim.



Sitze

Seats
Sièges
Sedili
Asientos
Säten
Zittingen

Verdeck, Stahlkurbeldach

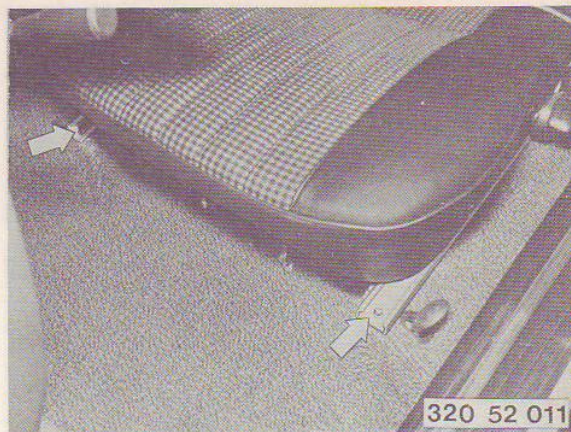
Sliding roof
Toit ouvrant
Tetto scorrevole
Techo corredizo
Taklucka
Schuifdak

52 Seats

52 10000	Front seat—removing and installing	Page 52-10/1
180	Outer front seat catch—removing and installing	10/1
185	Inner front seat catch—removing and installing	10/2
424	Cable for seat back lock—adjusting	10/2
52 20000	Rear seat and seat back—removing and installing	20/1

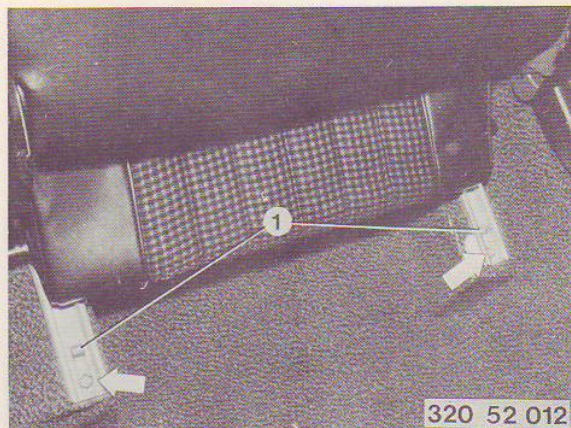
52 10 000 Front seat – removing and installing

Remove bolts at front.



Remove bolts at rear.

When installing: Stop (1) for seat must face forwards.

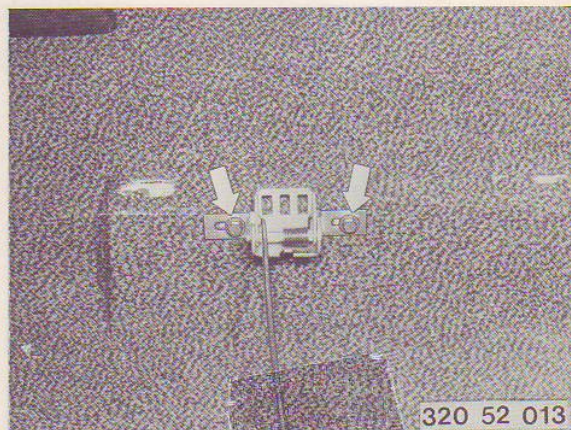


52 10 180 Outer front seat catch – removing and installing

Remove front seat – 52 10 000.

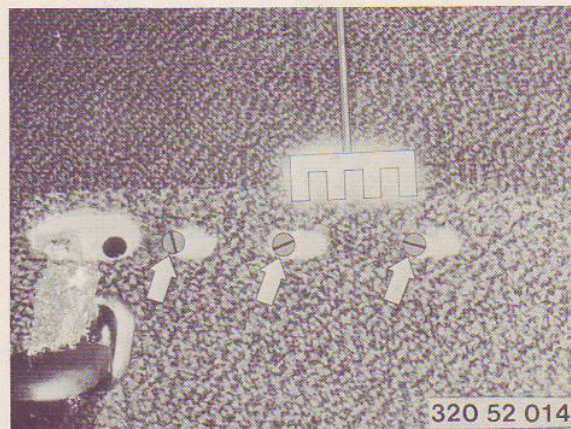
Detach inner seat catch and disconnect rod at outer seat catch.

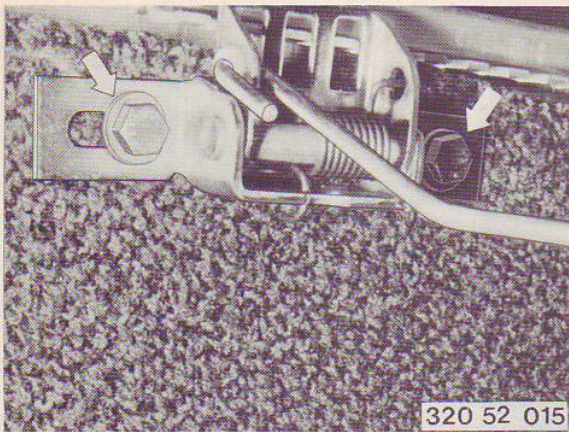
When installing: Adjust the catch with the seat in position so that the seat rail engages.



Press off the seat adjusting knob.

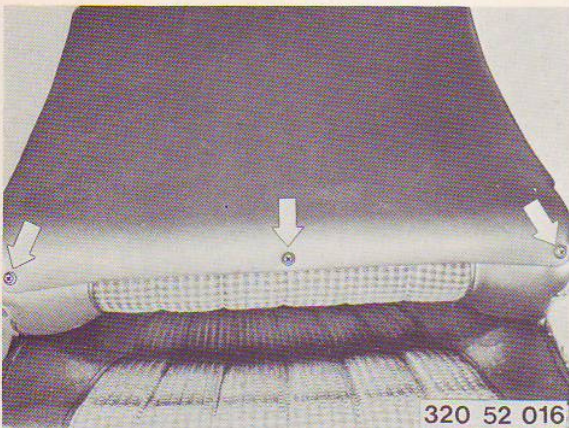
Remove the screws and take off the seat catch.





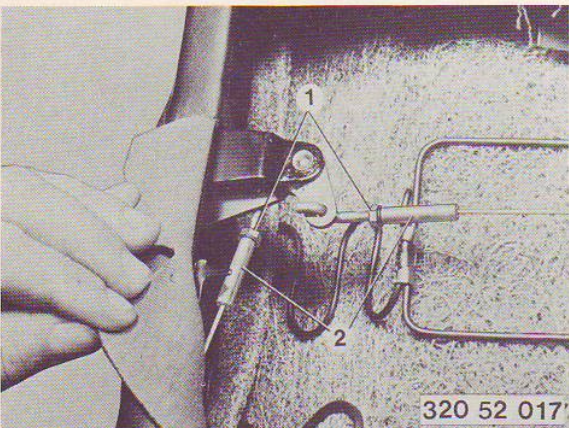
52 10 185 Inner front seat catch – removing and installing

Remove bolts and detach connecting rod.
When installing: The seat catch should be positioned so that the seat rail can engage.



52 10 424 Front seat back lock cable – adjusting

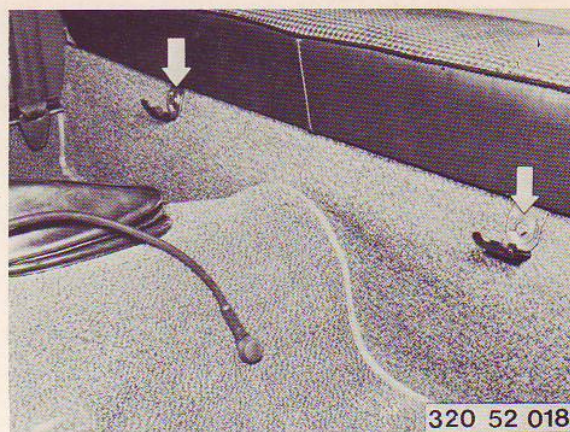
Remove screws from rear panel of seat back.
 Pull back rear panel down and remove.



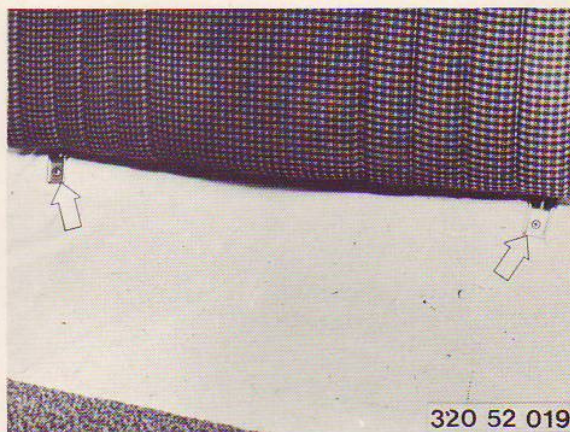
Loosen lock nuts (1). Adjust cables uniformly by turning sleeves in position with nuts.

52 20 000 Rear seat back – removing and installing

Remove cover caps, unscrew bolts and take off rear seat.



Remove screws.
Push seat back upwards and remove.



54 Sliding roof

54 12 004	Sliding roof panel – adjusting	Page 54-12/1
100	Sliding roof outer panel – removing and installing	12/2
120	Sliding roof outer panel seal – renewing	12/3
130	Roof lining frame, complete – renewing	12/3
230	Gear drive (manual) for sliding roof – removing and installing	12/4
240	Both drive cables for sliding roof – renewing	12/5
	Trouble-shooting – sliding roof	12/7

54 12 004 Sliding roof panel – adjusting

Operating principle:

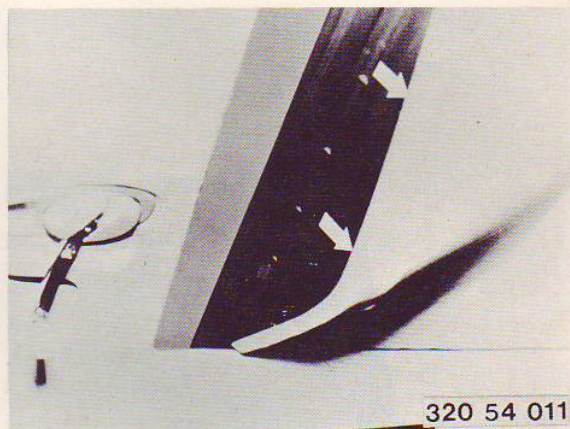
The sliding roof panel has two functions:

- a) sliding b) raised at rear

Changeover from sliding to raising the rear end is possible only when the roof is closed. On the manually operated sliding roof the crank handle must be turned past a pressure point. On the electric-motor operated roof, the switch has an additional micro-switch operates in the 'close' position.

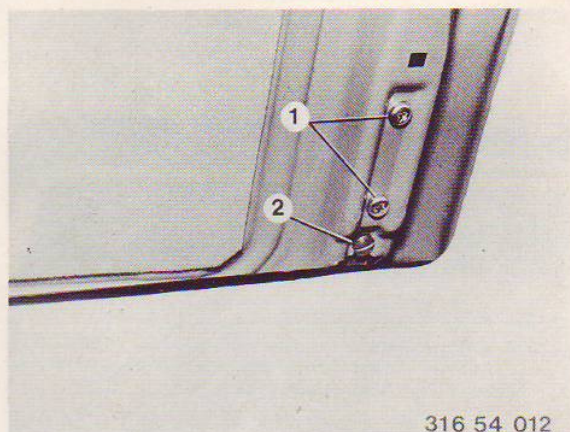
Open the sliding roof by app. 5 cm (2 in). Press off the roof lining frame at the front and push back slightly. Close the roof with the crank handle and push the roof lining frame back fully.

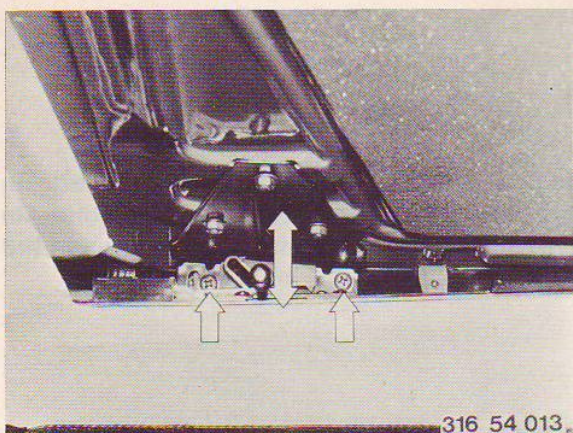
When installing: close the sliding roof panel. Pull the roof lining frame evenly forwards. Open the sliding roof slightly, holding the roof lining frame firmly with one hand. Press in the retaining clips for the roof lining frame at the front.



Height adjustment, front:

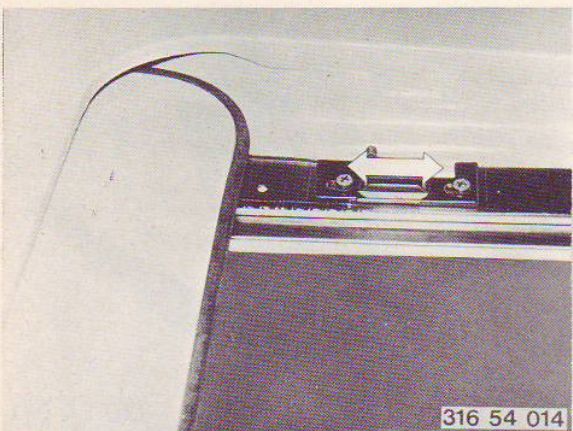
The ideal position of the sliding roof panel is 1 mm (0.04 in) lower than the outer roof panel. Slacken bolts (1) and adjust at height adjusting screw (2). Retighten bolts (1) while pressing inwards.





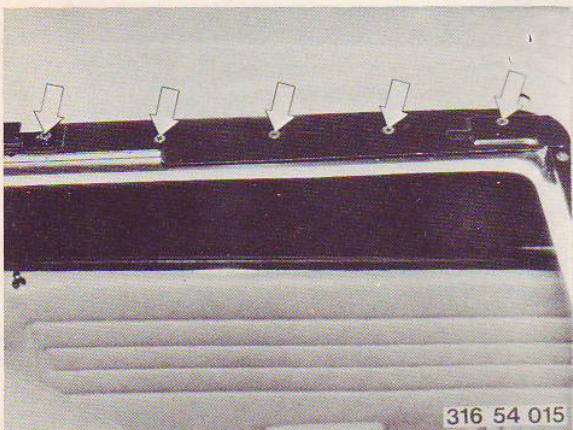
Height adjustment, rear:

The ideal position of the sliding roof panel is 1 mm (0.04 in) higher than the outer roof panel. Slacken the bolts at the gate holder. The roof panel can then be moved in the slots. Retighten the bolts when the adjustment is correct.



Raised rear position:

In the raised position the sliding roof panel must be in contact with the front of the roof cut-out. Reposition the guide journals to correct the setting.

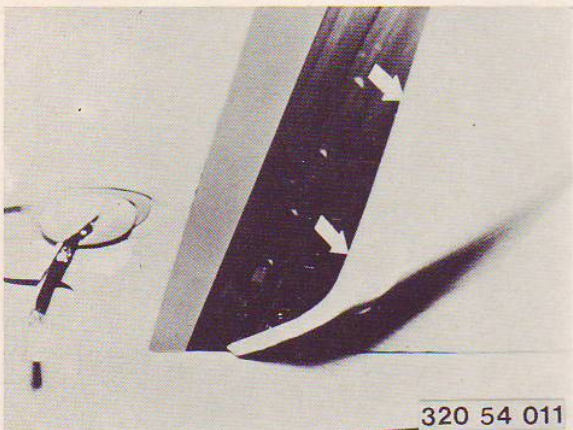


54 12 100 Sliding roof outer panel – removing and installing

Open the sliding roof fully.

Remove the left and right guide rails.

When installing: grease guide rails with Vaseline.



Close the sliding roof until a gap of only app. 5 cm (2 in) remains.

Press off the roof lining frame at the front and push it back. Close the sliding roof fully.

When installing: adjust sliding roof – 54 12 004.

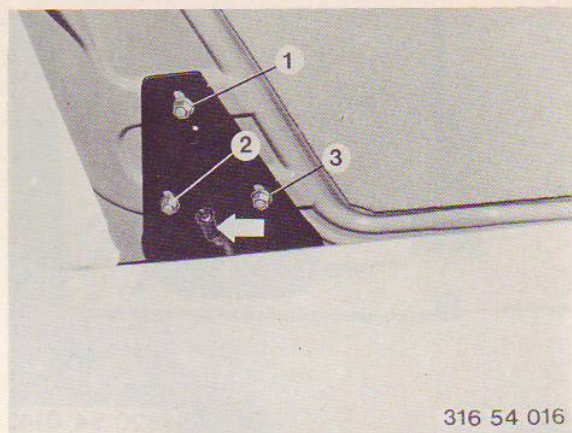
Unscrew nuts (1 ... 3) at left and right.

Take off the sliding roof panel.

When installing: attach sliding roof panel to holder at rear, at the same time pulling the holder slightly inwards.

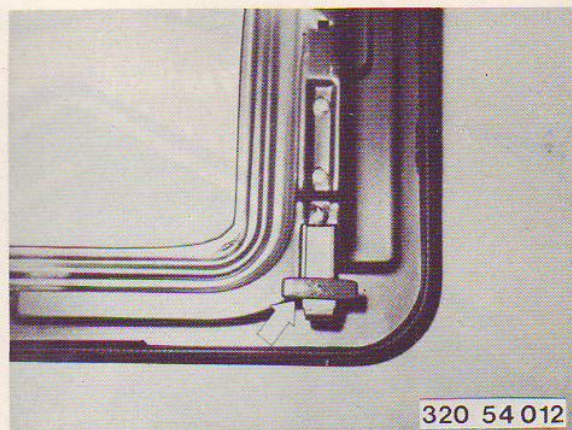
Push the gate holder back by hand and with the aid of the gear drive.

Warning: do not trap the roof lining frame.



316 54 016

When installing: check sliding shoes at left and right, and renew if necessary.



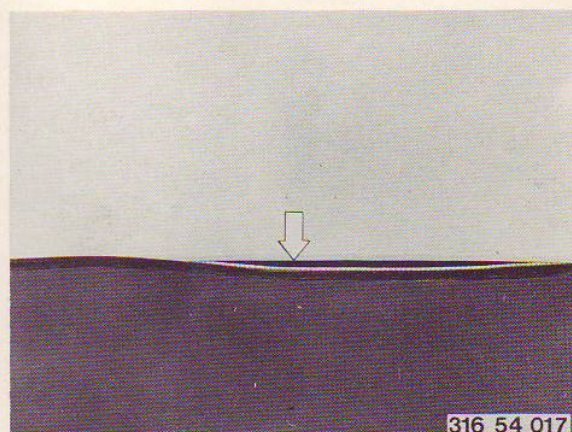
320 54 012

54 12 120 Sliding roof outer panel seal – renewing

Remove and install sliding roof panel – 54 12 100.

Pull seal away from outer panel.

When installing: attach seal with Terokal 2012 white adhesive.



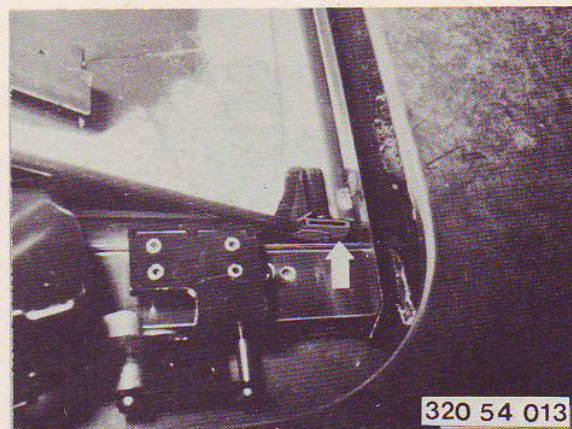
316 54 017

54 12 130 Roof lining frame, complete – renewing

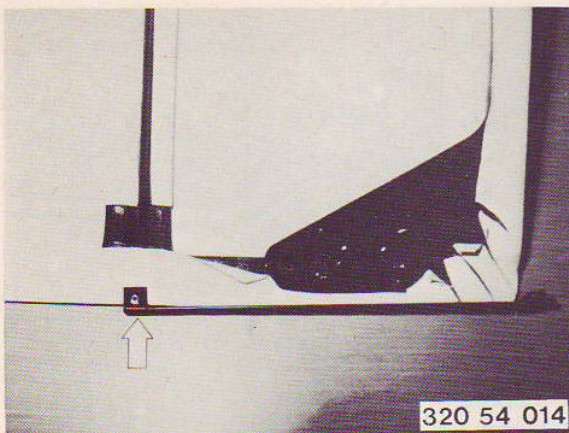
Remove and install sliding roof panel – 54 12 100.

Pull roof lining frame forwards and disconnect linkage from left and right water drain channel.

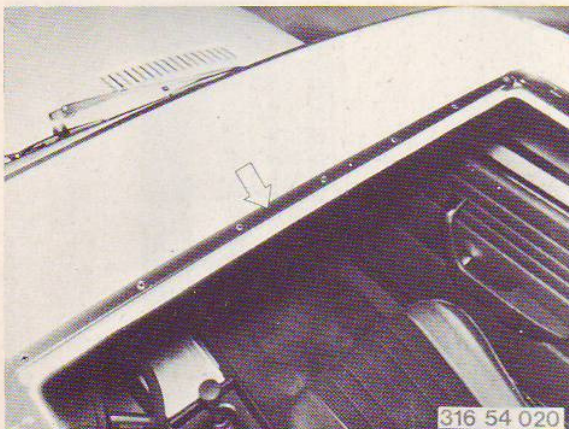
When installing: check plastic bearing mount on linkage and renew if necessary. The slotted side faces down.



320 54 013

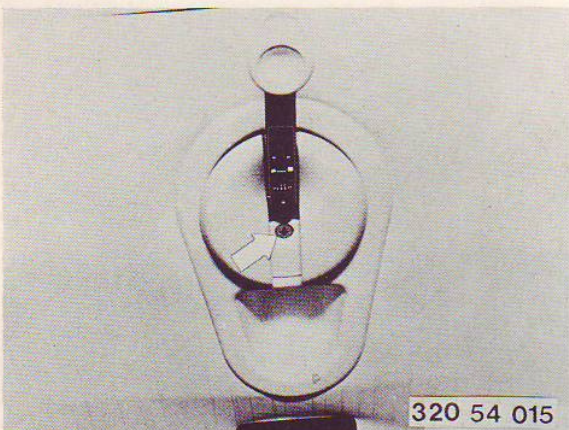


Detach linkage from roof lining frame by opening up rivets. Transfer retaining clips to new frame.

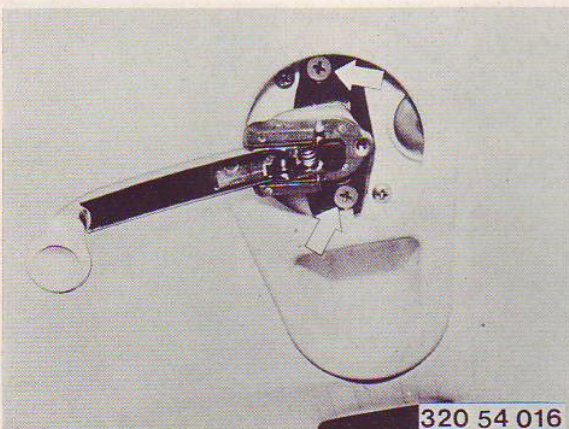


54 12 230 Gear drive (manual) for sliding roof – removing and installing

Open the sliding roof.
Detach front cover strip.
Partly detach the roof lining at the center.
Close the sliding roof (not in raised position).
When installing: place Terostat cord under cover strip and attach roof lining with Terokal 2444 adhesive.

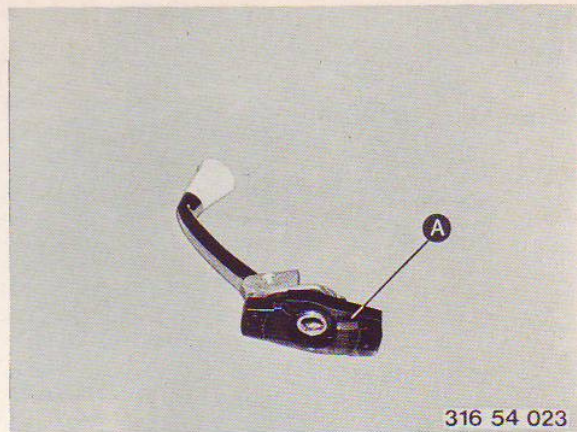


The sliding roof panel must be closed.
Detach the handle escutcheon.

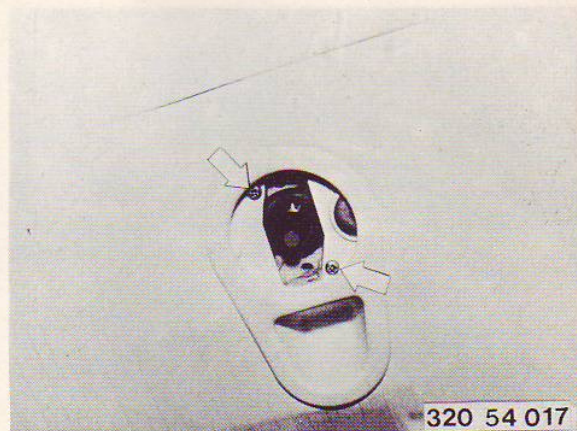


Take out the screws and remove the winder crank.

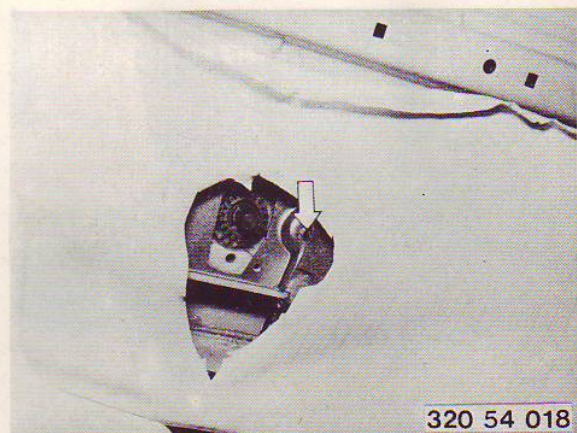
When installing: cutout A on the winder crank holder must face to left.



Detach recess for winder crank handle.

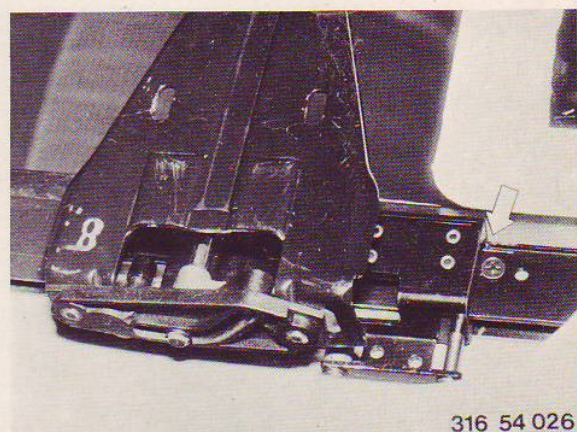


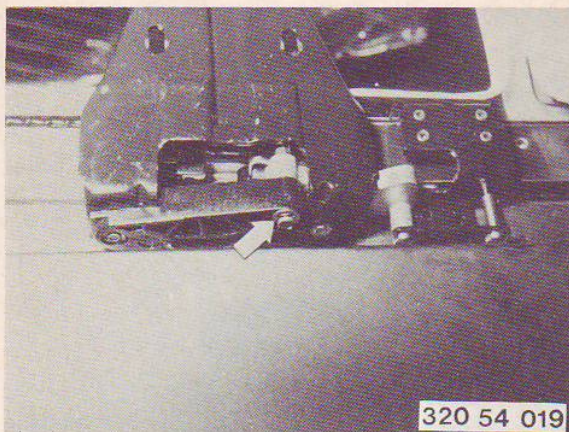
Remove retaining bolt and take off gear drive.



When installing: turn gear drive clockwise (to right) to bring to 'O' position (point at which increased effort is required). Install the gear drive.

The sliding roof panel must be closed. The rear edges of the gate holder must be 2 mm (0.08 in) ahead of the mark on the guide rails.





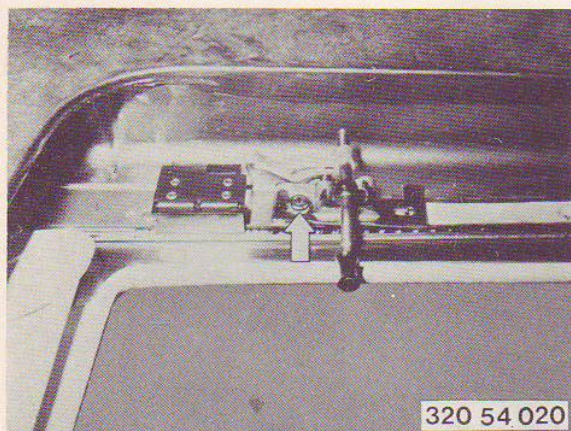
54 12 240 Both drive cables for sliding roof – renewing

Remove and install the sliding roof panel – 54 12 100.

Remove and install the (manual) gear drive for the sliding roof – 54 12 230.

Lift out the keeper and detach the gate holder from the guide.

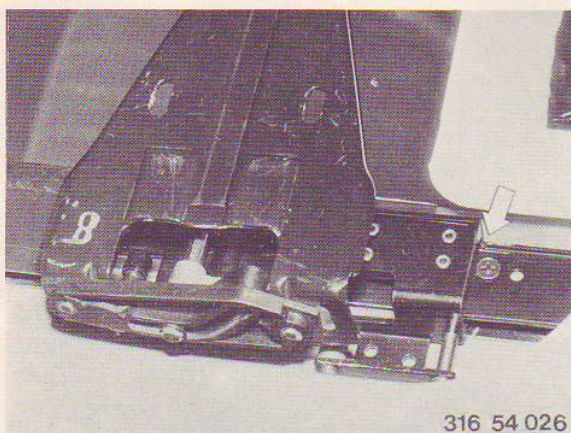
When installing: lightly grease the gate holder linkage.



Detach guide journals and guiding plates.

Push guide forwards and pull drive cable out of guide tube.

When installing: grease guide and cable lightly.



When installing: the rear edge of the gate holder must be 2 mm (0.08 in) ahead of the mark on the guide rail.

Install the gear drive in this position.

Trouble-shooting – sliding roof

Fault	Cause	Remedy
Grating noise when opening	Seal at front is dry	Grease front seal with Vaseline
Rattling noises	a) Front sliding shoes defective b) Sliding shoe bolts loose c) Roof adjustment incorrect	a) Renew front sliding shoes b) Tighten bolts c) Adjust sliding roof panel correctly
Roof panel leaks	Seal loose at corners	Attach seal at corners with Terokal 2012 white adhesive
Sliding roof panel can still be raised at rear but not slid shut	Pins at gate holder bent	Renew gate holder
Sliding roof panel lifts at one side	a) Basic guide setting at rear (cables) not uniformly adjusted b) Gear drive loose	a) Repeat basic adjustment b) Tighten gear drive

Allgemeine Fahrzeugelektrik

Chassis-electrical

Châssis-électricité

Telaio-impianto elettrico

Autobastidor-instalación eléctrica

Elsystem allmänt

Onderstel-elektrisch

61 General Vehicle Electrical System

Specifications	Page 61-0/3
6113021 Component carrier – renewing	13/1
6131016 Turn indicator/ dip switch – renewing	31/1
020 Steering lock/ignition-starter switch – removing and installing	31/2
030 Light pull switch – removing and installing	31/3
040 Wiper switch – removing and installing	31/4
050 Heater (blower) switch – removing and installing	31/4
060 Heated rear window switch – removing and installing	31/5
080 Hazard warning flasher switch – removing and installing	31/5
260 Transmission-operated switch – removing and installing	31/6
270 Backup (reversing) light switch – removing and installing	31/7
280 Oil pressure sensing switch – renewing	31/7
304 Brake light switch – adjusting	31/7
340 Temperature sensing switch for auxiliary fan – renewing	31/7
360 Hazard warning flasher relay – removing and installing	31/9
370 Wipe-wash and intermittent-wipe control unit – removing and installing	31/9
400 Starter inhibit relay – renewing	31/9
6161250 Wiper motor – removing and installing	61/1
6163005 Headlight cleaning system – subsequently installing	63/1
6171100 Windshield washer pump – removing and installing	71/1
110 Windshield washer pump – stripping and assembling	71/1

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
61 13 . . . Component carrier (fuse box)		
Fuse box	No. of poles	18
Fuses – number and rating)		9 × 8 7 × 16 2 × 25
Spare fuses – number and rating		2 × 8 1 × 16 1 × 25
61 20 . . . Battery		
Nom. voltage	V	12
Capacity	Amp/h	44
Polarity		negative earth (ground)
61 31 . . . Switches and relays		
Wiper switch		
Test voltage	V	13 ± 0.26
Max. load (1 min)	Amp	20

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
61 31 . . . Switches and relays, continued		
Voltage drop under continuous load	V	≤ 0.25
Turn indicator/dip switch Test voltage	V	13 ± 0.26
Max. load (1 min)	Amp	20
Voltage drop under continuous	V	≤ 0.25
Light pull switch Test voltage	V	13
Max. load (1 min)	Amp	20
Voltage drop under continuous load	V	≤ 0.1
Heated rear window switch Test voltage	V	13
Max. load (1 min)	Amp	50
Voltage drop under continuous load	V	≤ 0.15
Bulb (glass base)	W	1.2

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model		a) 320/6 b) 320/6 A	a) 323 i b) 323 i A *)
6131 . . . Switches and relays, continued			
Hazard warning flasher switch Test voltage	V	13	
Max. load	Amp/min	20/2	
Voltage drop under continuous load	V	≤ 0.15	
Bulb (glass base)	W	1.2	
Oil pressure sensing switch Cut-in pressure (gauge)	bar (lb/in ²)	0.2 . . . 0.5 (2.84 . . . 7.11)	
Transmission-operated switch Test voltage	V	b) 13 $\pm$ 0.26	
Operating voltage	V	b) 9 . . . 15	
Nom. contact load (15-1; 15-2; 15-A; 15-0; 15-P)	W	b) 2	
15-R	W	b) 44	
31-13 b	VA ind.	b) 6	
Voltage drop	V	b) ≤ 0.25	

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
61 31 . . . Switches and relays, continued		
Temperature-sensing switch, 17 °C (63°F) Operating voltage V	9 . . . 15	-
Max. load A/min	20/1	-
Cut-in point °C (°F)	+ 17 $\pm$ 2 - 3 (+ 63 $\pm$ 4 - 4)	- -
Cutout point °C (°F)	app. + 5 (app. + 7) below cut-in point; min. + 10.5 (51)	-
Temperature-sensing switch, 91 °C (196°F) No. on hexagon	1 364 272	
Operating voltage V	6 . . . 24	
Max. continuous load A ind.	16	
Voltage drop V	$\leq$ 0,25	
Cut-in point °C (°F)	+ 91 $\pm$ 2 (+ 196 $\pm$ 3 app.)	
Cutout point °C (°F)	+ 84 $\pm$ 2 (+ 183 $\pm$ 3 app.)	

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
6131 . . . Switches and relays, continued		
Temperature-sensing, switch 99 °C (210°F) No. on hexagon	1 364 273	
Operating voltage V	6 . . . 24	
Test voltage V	13 ± 0.26	
Continuous load A ind.	16	
Voltage drop V	≤ 0.25	
Cut-in point °C (°F)	+ 99 ± 2 (+ 210 ± 3 app.)	
Cutout point °C (°F)	+ 92 ± 2 (+ 198 ± 3 app.)	
Blower switch (3-speed) Operating voltage V	9 . . . 15	
Test voltage V	13 ± 0.26	
Max. load at all contacts, for 1 min A	40	
Voltage drop at all contacts V	≥ 0.1	

*) Version for Sweden

General Vehicle Electrical System

Specifications

Model		a) 320/6 b) 320/6 A	a) 323 i b) 323 i A *)
6131 . . . Switches and relays, continued			
Handbrake telltale switch	V		
Operating voltage		9 . . . 15	
Test voltage	V	13 ± 0.26	
Max. load (1 min)	A	10	
Voltage drop under continuous load	V	≤ 0.25	
Continuous load	A	4	
Brake light switch			
Test voltage	V	13 ± 0.26	
Max. load (1 min)	A	40	
Voltage drop at 5 A	V	≤ 0.25	
Continuous load	A	5	
Backup (reversing) light switch			
Test voltage	V	a) 13	
Max. load (1 min)	A	a) 20	
Voltage drop	V	a) ≤ 0.25	
Continuous load	A	a) 5	

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
6131 . . . Switches and relays, continued		
Miniature relay for auxiliary fan (stage II) Make/No.	Bosch/0 332 014 406	
Test voltage	V	13 ± 0.26
Operating voltage	V	9 . . . 15
Continuous load	A	30
Coil current consumption	A	0.2
Fuel pump relay Make/No.		Stribel/ . . .
Test voltage	V	13 ± 0.26
Operating voltage	V	6.8 . . . 15
Nom. current, terminals 15/87	A ind.	20
Short-circuit current, terminals 15/87 (1 min.)	A	40
Miniature diode relay for K-Jetronic fuel injection Make/No.		Stribel/. . .
Test voltage	V	13 ± 0.26

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
61 31 . . . Switches and relays, continued		
Operating voltage	V	9 . . . 15
Continuous load	A	9 . . . 15
Coil current	A	≤ 0.2
Pickup voltage	V	8
Drop-off voltage	V	≥ 2
Miniature relay Make/No.	Bosch/0 332 014 406 Hella/4 RA 003 205-00 Stribel/SR 9875 Valvar/1 364 986 Wehrle, Kirchzarten/21 201 12 V Wehrle, Tiengen/74502	
Operating voltage	V	9 . . . 15
Coil current consumption	A	≤ 0.2
Test voltage	A	13 ± 0.26
Continuous load	A	30 ¹⁾

*) Version for Sweden

1) 25 for Hella No. 4 RA 003 205-00 and for Wehrle Nr. 21 201 12 V

Specifications

General Vehicle Electrical System

Model	a) 320/6 b) 320/6 A	a) 323 i b) 323 i A *)
61 31 . . . Switches and relays, continued		
Hazard warning relay Make/No.	Hella TBB 44 DOT 4 DB 003 425-00 Stribel/SK 6756 719 005	
a) as hazard warning flasher unit Operating voltage V	9 . . . 15	
Nom. load W	4 × 21, 1 × 3, 1 × 2	
Voltage drop at nom. load V	0.3	
b) as turn indicator unit Operating voltage V	11 . . . 15	
Nom. load W	2 × 21, 1 × 3	
Wipe-wash and intermittent-wipe control unit Make/No.	Hella/5 WG 002 450-07 1 353 892 Siemens/1 357 904	
Operating voltage between terminals 85, 31/15, 15 b V	10.5 . . . 15	
between terminal F and 31 V	9 . . . 15	
Test voltage V	13 ± 0.26	

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
61 31 . . . Switches and relays, continued		
Changeover relay Make/No.	-	Bosch 0 332 204 401 Hella 4 RD 003314-00
Operating voltage	V	9 . . . 15
Test voltage	V	13 ± 0.26
Pickup voltage	V	≤ 8
Drop-off voltage	V	$\geq 2^1)$
Coil current consumption	A	≤ 0.2
Continuous load at 87 at 87 a	A	30 20
Voltage drop	V	≤ 0.25
61 61 . . . Wiper motor		
Make/No.	Bosch/0 390 241 056 SWF/. . .	
Operating voltage	V	12 ± 2.4
Test voltage	V	13 ± 0.26

*) Version for Sweden

1) ≥ 3 on Hella relay

Specifications

General Vehicle Electrical System

Model		320/6 320/6 A	323 i 323 i A *)
61 61 . . . Wiper motor, continued			
Operating speed	Stage I	1/min	52 ± 5
	Stage II	1/min	73 ± 8
61 66 . . . Windshield washer pump			
Make/No.			VDO/. . . Helphos/. . .
Operating voltage	V		10 . . . 16
Test voltage	V		13
Power consumption	W		45

*) Version for Sweden

Specifications

General Vehicle Electrical System

Model	320/6 320/6 A	323 i 323 i A *)
61 31 . . . Switches and relays, continued		
Tightening torques		
61 31 . . . Switches and relays		
Oil pressure sensing switch, max.	Nm kpm lb.ft	50 5 36
Brake light switch locknut	Nm kpm lb.ft	3 . . . 4 0.3 . . . 0.4 2.2 . . . 2.9
Temperature-sensing switch on intake manifold, max.	Nm kpm lb.ft	30 3 22
Temperature-sensing switch on radiator	Nm kpm lb.ft	32 3.3 23.9

*) Version for Sweden

Electrical circuit diagram



BMW 320/6
323 i

320/6 A
323 i A

Key to electrical circuit diagram – BMW 320/6
BMW 323 i

320/6 A
323 i A

- | | |
|--|--|
| 1 Turn indicator, front right | 12 Connection for engine compartment light |
| 2 Headlight, right, with parking light | 13 Plug connector for left turn indicator |
| 3 High beam headlight, right | 14 |
| 4 Fog light, right (special equipment) | 15 |
| 5 Horn, right | 16 Engine compartment light (special equipment) |
| 6 Horn, left | 17 Switch for engine compartment light (special equipment) |
| 7 Fog light, left (special equipment) | 18 Windshield washer pump |
| 8 High beam headlight, left | 19 Coil ¹⁾ |
| 9 Headlight, left, with parking light | 20 Distributor ¹⁾ |
| 10 Turn indicator, front left | |
| 11 Plug connector for right turn indicator | |

¹⁾ Connection 1 with contact breaker not used with transistorized coil ignition
Connections A and B with inductive detector only on transistorized coil ignition
Wire TR 0.9 Ω /m not used on transistorized coil ignition

Key to electrical circuit diagram – BMW 320/6
BMW 323 i

320/6 A
323 i A

- | | |
|--|--|
| 21 Battery | 52 Hazard warning flasher relay |
| 22 Power distributor with fuses | 53 Turn indicator-dip switch |
| a Fog light relay (special equipment) | 54 Wiper switch |
| b) Low beam relay | 55 Heater blower motor |
| c) High beam relay | 56 Heater blower switch |
| d Load-shedding relay | 57 Cigar lighter |
| e Auxiliary fan relay, stage II | 58 Lighting for switch panel |
| f Plug connector to power distributor | 59 Plug connector for switch panel lighting |
| g Horn relay | 60 Ashtray light |
| h Engine plug | 61 Connection for radio |
| i Connection for diagnosis tester | 62 Clock |
| k Plug connector to wiring harness | 63 Instrument lighting |
| l Connection 30 | 64 Switch for rear window heating |
| 23 Auxiliary fan motor | 65 Rear fog light switch (special equipment) |
| 24 Plug connector | 66 Fog light switch (special equipment) |
| 25 Temperature-sensing switch | 67 Instruments |
| 26 Alternator with regulator | a Oil pressure telltale |
| 27 Starter | b Battery charge telltale (red) |
| 28 Temperature-sensing switch | c Headlight high beam telltale (blue) |
| 29 Oil pressure sensing switch | d Plug connector, right |
| 30 Coolant temperature sensor | e Coolant thermometer |
| 31 Connection for rear fog light switch
(special equipment) | f Revolution counter |
| 32 Transmission switch with selector lever
position indicator (automatic transmission
cars only) | g Speedometer |
| 33 Wiper motor | h Turn indicator repeater |
| 34 Starter inhibit relay (automatic
transmission cars only) | i Brake fluid level telltale |
| 35 Handbrake contact | k Fuel level warning light |
| 36 Brake fluid level telltale switch | l Fuel gauge |
| 37 Hazard warning flasher switch | m Plug connector, left |
| 38 Horn push | 68 Glove box light |
| 39 Plug connector for ignition-starter switch | 69 Hand lamp (special equipment) |
| 40 Connection for ignition-starter switch | 70 Fuel pump (fuel injection cars only) |
| 41 Wipe-wash-intermittent wipe control unit | 71 Door-operated switch, right |
| 42 Transmission switch lighting (automatic
transmission cars only) | 72 Fuel level sensor |
| 43 Plug connector for automatic transmission
switch (automatic transmission cars only) | 73 Interior light |
| 44 Backup (reversing) light switch (manual
gearbox cars only) | 74 Switch for luggage compartment light
(special equipment) |
| 45 Connection for transmission switch | 75 Door-operated switch, left |
| 46 Connection for backup (reversing) light or
transmission switch | 76 Luggage compartment light
(special equipment) |
| 47 Plug connector for wiper switch | 77 Heated rear window |
| 48 Ignition-starter switch | 78 Plug connector |
| 49 Connection for turn indicator-dip switch | 79 Brake light switch |
| 50 Plug connector for turn indicator-dip switch | 80 Rear light cluster, left |
| 51 Light switch | a Turn indicator |
| | b Brake light |
| | c Backup (reversing) light |
| | d Rear light |
| | 81 License plate light, left |
| | 82 License plate light, right |

Electrical circuit diagram



BMW 320/6 RHD
323 i RHD

320/6 A RHD
323 i A RHD

Key to electrical circuit diagram – BMW 320/6 RHD 320/6 A RHD BMW 323 i RHD 323 i A RHD

- | | |
|---|--|
| 1 Turn indicator, front right | 12 Connection for engine compartment light |
| 2 Headlight, right, with parking light | 13 Plug connector for left turn indicator |
| 3 High beam headlight, right | 14 Connection for Australian cars |
| 4 Fog light, right (special equipment) | 15 Connection for sliding/raised vent roof |
| 5 Horn, right | 16 Engine compartment light (special equipment) |
| 6 Horn, left | 17 Switch for engine compartment light (special equipment) |
| 7 Fog light, left (special equipment) | 18 Windshield washer pump |
| 8 High beam headlight, left | 19 Coil ¹⁾ |
| 9 Headlight, left, with parking light | 20 Distributor ²⁾ |
| 10 Turn indicator, front left | |
| 11 Plug connector to right turn indicator | |

¹⁾ Starter terminal 16 and resistor line on 6-cylinder engine and special equipment only
On 4-cylinder engine, lead 1 green in place of resistor line

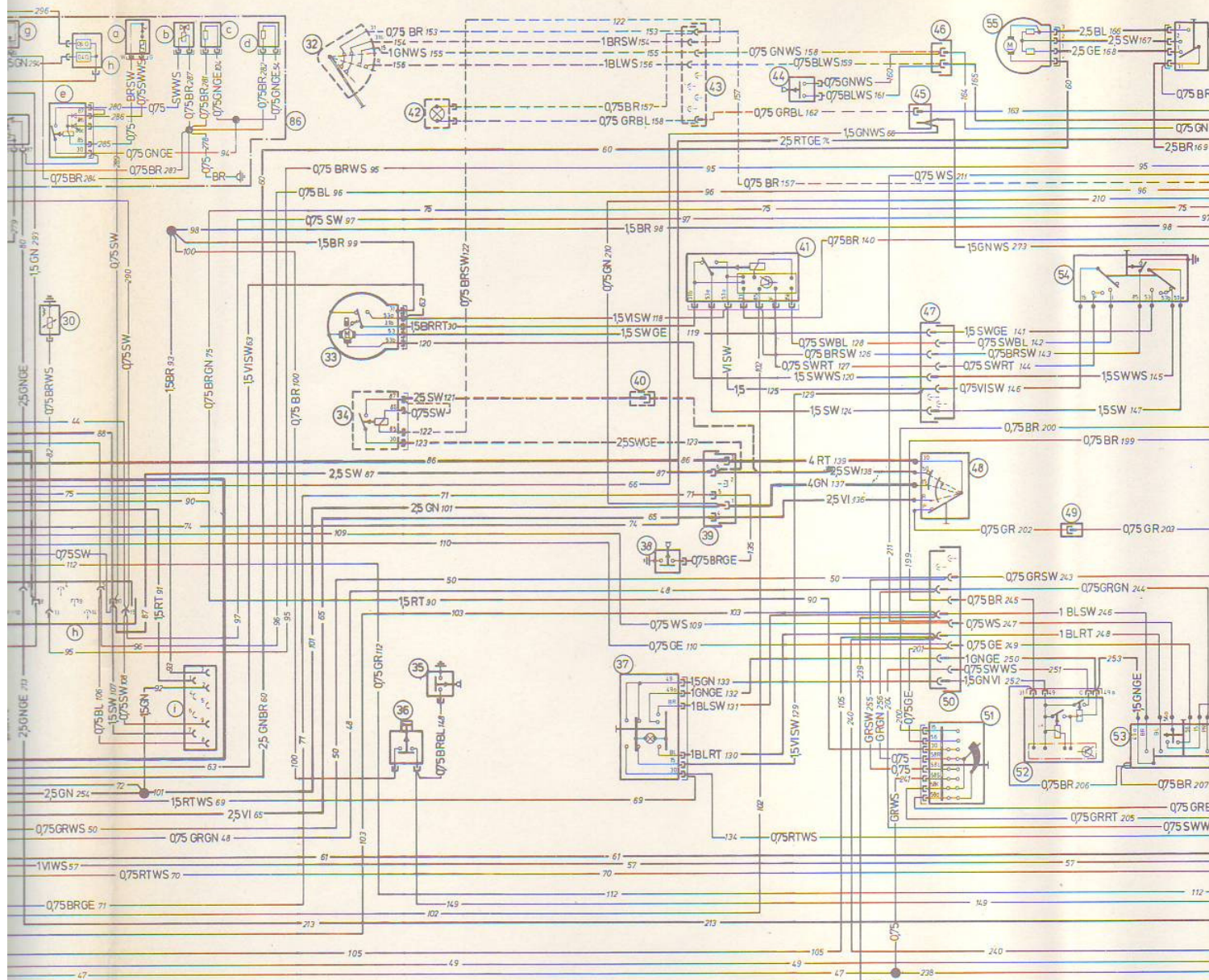
²⁾ Shown for 4-cylinder engine
Connection 1 deleted on transistorized coil ignition
Connections A and B used only on transistorized coil ignition

Key to electrical circuit diagram – BMW 320/6 RHD
BMW 323 i RHD

320/6 A RHD
323 i A RHD

- 21 Battery, 12 V
- 22 Power distributor with fuses
 - a Fog light relay (special equipment)
 - b Low beam headlight relay
 - c High beam headlight relay
 - d Load-shedding relay
 - e Auxiliary fan relay (stage 2)
 - f Plug connector to power distributor
 - g Horn relay
 - h Engine plug
 - i Connection for diagnosis tester
 - k Plug connector for wiring harness
 - l Connection 30
- 23 Auxiliary fan motor
- 24 Plug connector
- 25 Temperature-sensing switch
- 26 Alternator with regulator
- 27 Starter¹⁾
- 28 Temperature-sensing switch
- 29 Oil pressure sensing switch
- 30 Coolant temperature sensor
- 31
- 32 Transmission switch with selector lever position indicator (automatic transmission cars only)
- 33 Wiper motor
- 34 Starter inhibit relay (automatic transmission cars only)
- 35 Handbrake contact
- 36 Brake fluid level telltale switch
- 37 Hazard warning flasher switch
- 38 Horn push
- 39 Plug connector for ignition-starter switch
- 40 Connection for ignition-starter switch
- 41 Wipe-wash-intermittent wipe control unit
- 42 Transmission switch lighting (automatic transmission cars only)
- 43 Plug connector to transmission switch (automatic transmission cars only)
- 44 Backup (reversing) light switch (manual gearbox cars only)
- 45 Connection for special equipment
- 46 Connection to reversing (backup) light or transmission switch
- 47 Plug connector for wiper switch
- 48 Ignition-starter switch
- 49 Connection to turn indicator-dip switch
- 50 Plug connector to turn indicator-dip switch
- 51 Light switch
- 52 Hazard warning flasher relay
- 53 Turn indicator-dip switch
- 54 Wiper switch
- 55 Heater blower motor
- 56 Heater blower switch
- 57 Cigar lighter
- 58 Lighting for switch panel
- 59 Plug connector for switch panel lighting
- 60 Ashtray light
- 61 Connection for radio
- 62 Clock
- 63 Instrument lighting
- 64 Switch for rear window heating
- 65 Rear fog light switch (special equipment)
- 66 Fog light switch (special equipment)
- 67 Instruments
 - a Oil pressure telltale
 - b Battery charge telltale (red)
 - c Headlight high beam telltale (blue)
 - d Plug connector, right
 - e Coolant thermometer
 - f Revolution counter
 - g Speedometer
 - h Turn indicator repeater
 - i Brake fluid level telltale
 - k Fuel level warning light
 - l Fuel gauge
 - m Plug connector, left
- 68 Glove box light
- 69 Hand lamp (special equipment)
- 70 Fuel pump (fuel injection cars only)
- 71 Door-operated switch, right
- 72 Fuel level sensor
- 73 Interior light
- 74 Switch for luggage compartment light (special equipment)
- 75 Door-operated switch, left
- 76 Luggage compartment light (special equipment)
- 77 Heated rear window
- 78 Plug connector
- 79 Brake light switch
- 80 Rear light cluster, left
 - a Turn indicator
 - b Brake light
 - c Backup (reversing) light
 - d Rear light
 - e
- 81 License plate light, left
- 82 License plate light, right

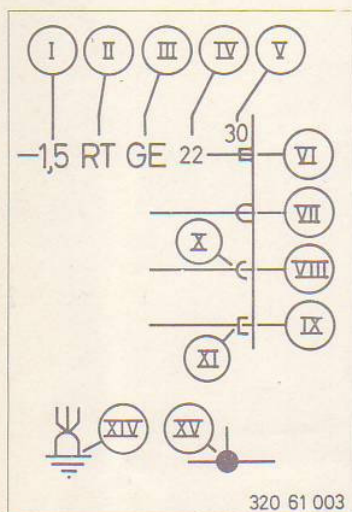
Circuit diagram – BMW 320/6, 320/6 A, 323 i, 323 i A



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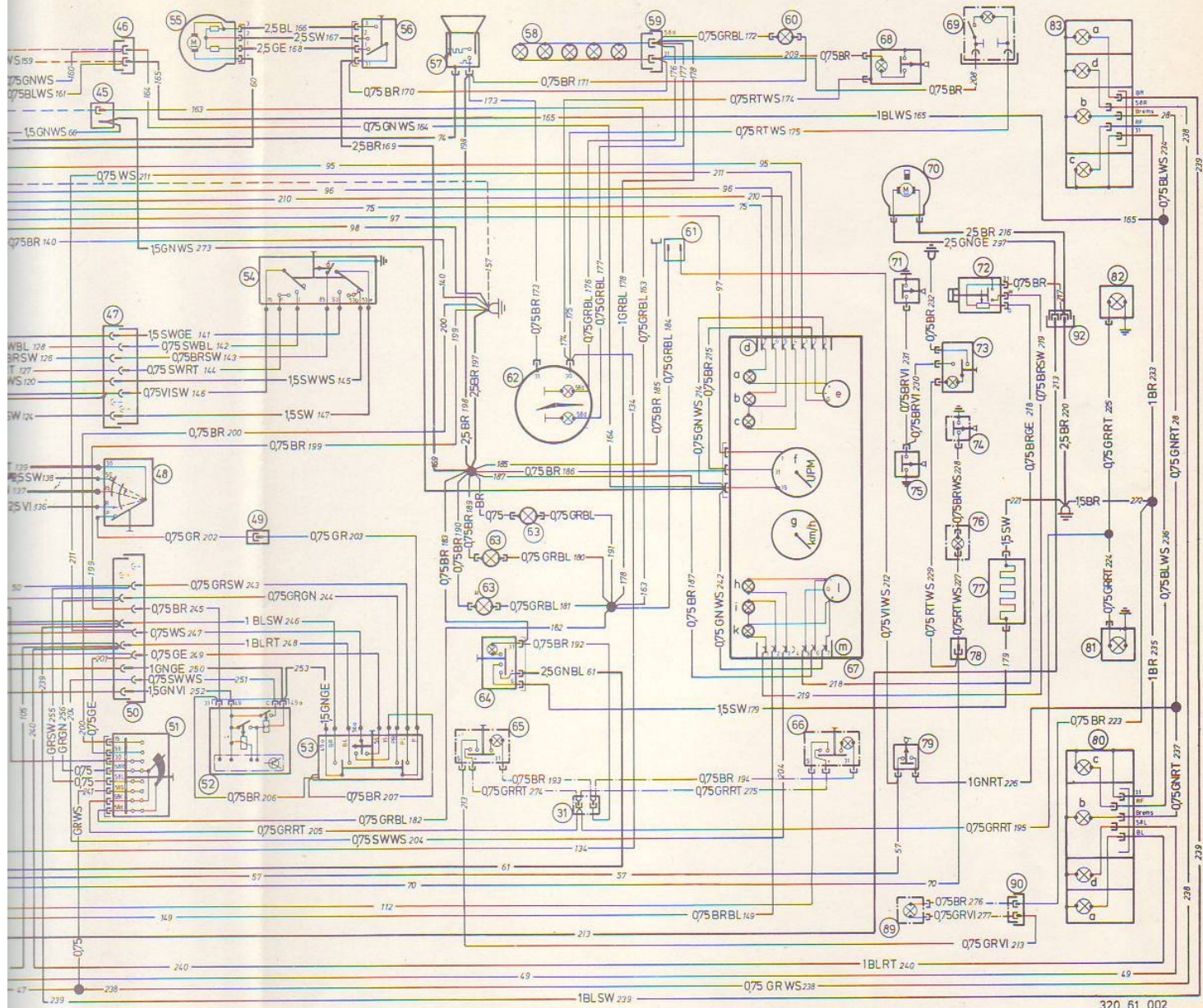
on

equipment)
light



Key to Drawing 32061 003

- | | |
|-----|----------------------------------|
| I | = Cross-section, mm ² |
| II | = Basic color |
| III | = Identification spiral |
| IV | = Cable number |
| V | = Terminal designation |
| VI | = Terminal (cable end tinned) |
| VII | = Screw connection (cable shoe) |



061 003

section, mm²

color

location spiral

number

al designation

al (cable end tinned)

connection (cable shoe)

- VIII = Round pin plug
- IX = Flat pin plug
- X = Round pin socket
- XI = Flat pin socket
- XIV = Earth (ground)
- XV = Solder point or connector

Color code

- BL = blue
- BR = brown
- GE = yellow
- GN = green
- GR = grey
- RT = red
- SW = black
- VI = violet
- WS = white
- TR = transparent

61 13 021 Component carrier – renewing



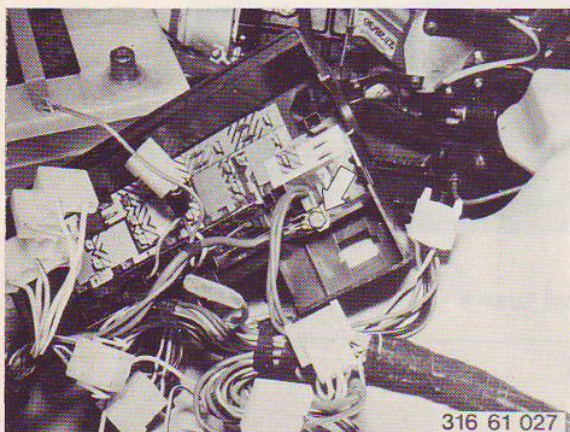
Arrangement of fuses

No.	Fuse (to DIN 72581 standard) Amp	Electrical equipment
1	8	Fog light, right ¹⁾
2	8	Fog light, left ¹⁾
3	16	Electric fuel pump, automatic cold-start device
4	8	Low beam headlight, right
5	8	Low beam headlight, left
6	8	Overnight, tail, parking lights (right), license plate, instrument, rear fog light, engine compartment light ¹⁾
7	8	High beam headlight, right
	(16)	
8	8	High beam headlight, left
	(16)	Extra high beam headlight, right ¹⁾
9	8	Overnight, tail, parking lights (left)
10	16	Heated rear window
	(25)	Electric sliding roof ¹⁾
11	25	Heater blower, extra fan control, air conditioner ¹⁾
12	8	Stop lights, radio ¹⁾
13	25	Extra elec. fan
14	8	Backup lights, revolution counter, fuel/temperature gauges, indicator lamps for oil pressure, fuel level, parking brake, brake fluid level and high beams
15	16	Horn, turn indicators, wipe/wash system, headlight cleaners ¹⁾ , electric mirror ¹⁾
16	16	Cigar lighter, automatic antenna ¹⁾
17	8	Hazard lights, interior light, glove compartment light, clock, trunk light ¹⁾
18	16	Electric auxiliary fan

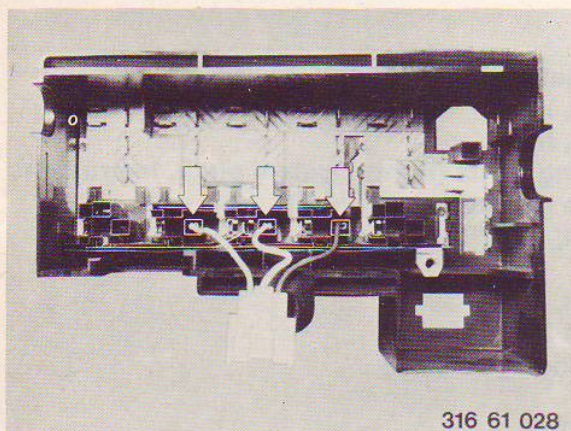
¹⁾ Optional extra equipment



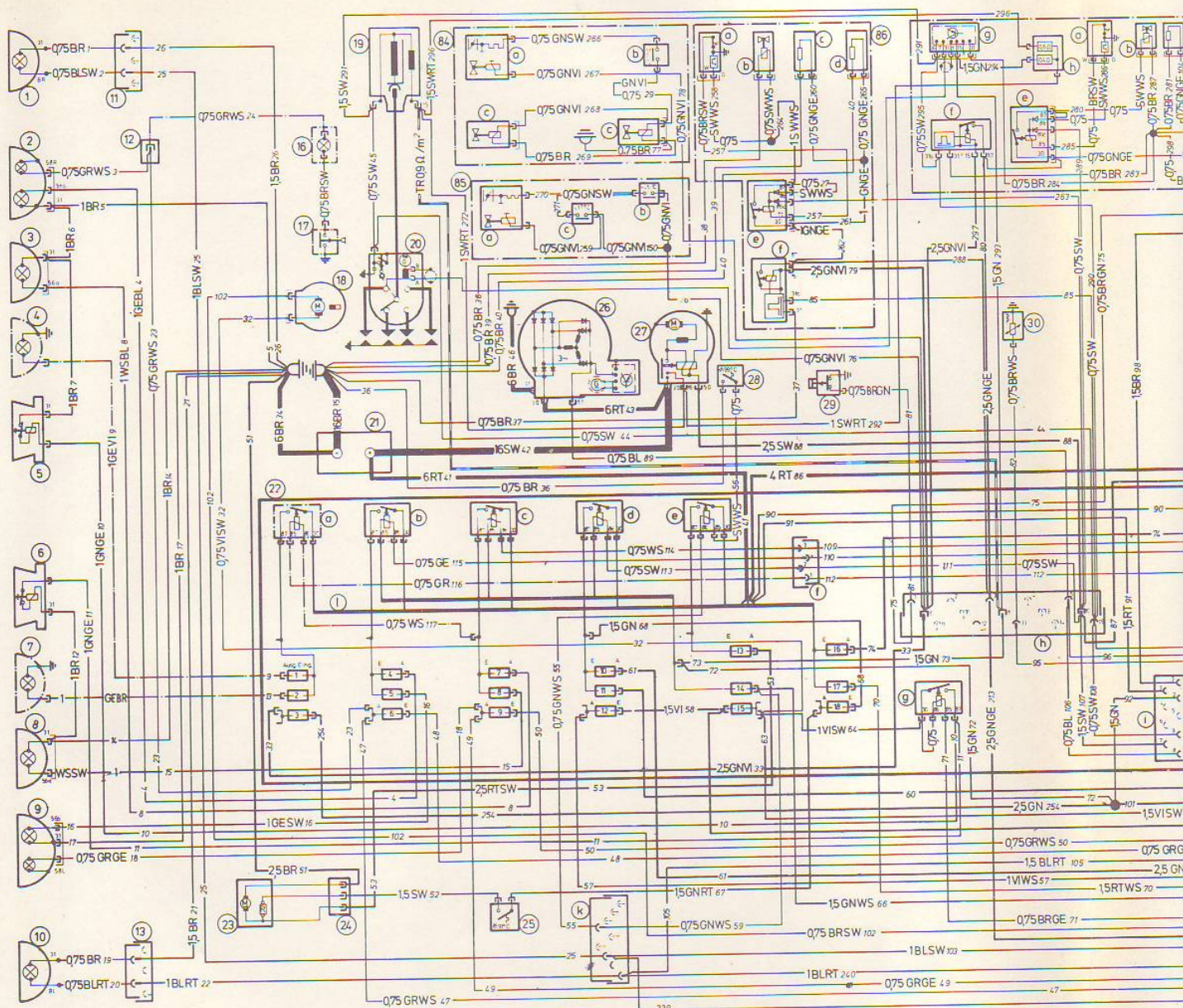
Disconnect the negative lead at the battery.
Take off the equipment carrier cover.
Detach the central plug with engine wiring harness from the equipment carrier.
Unscrew the nut.
Turn the equipment carrier through 180°.



Take off the lower cover.
Detach the various terminal strips and central plug from the defective equipment carrier in sequence. Remove the bolt and detach the power supply cable from the busbar.



Detach the plug connector between the power distributor cable and the relays.
Detach the relays from the equipment carrier.
When installing: Connect leads as shown in wiring diagram. Connect the two halves of the central plug together.

**83 Rear light cluster, right**

- a Turn indicator
- b Brake light
- c Backup (reversing) light
- d Rear light

84 On carburetor engined cars only:

- a Automatic choke
- b Coolant temperature switch
- c Idle shutoff valve

85 On carburetor engined 4-cylinder cars only:

- a Automatic choke
- b Coolant temperature switch
- c Air temperature switch

86 On fuel injection 4-cylinders cars only:

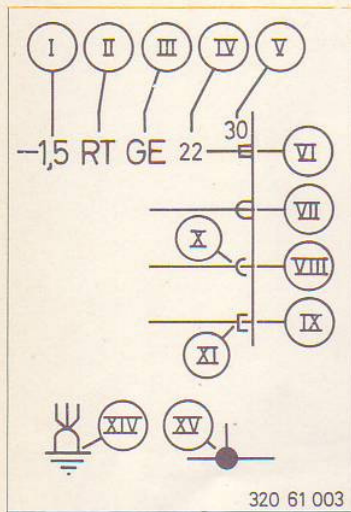
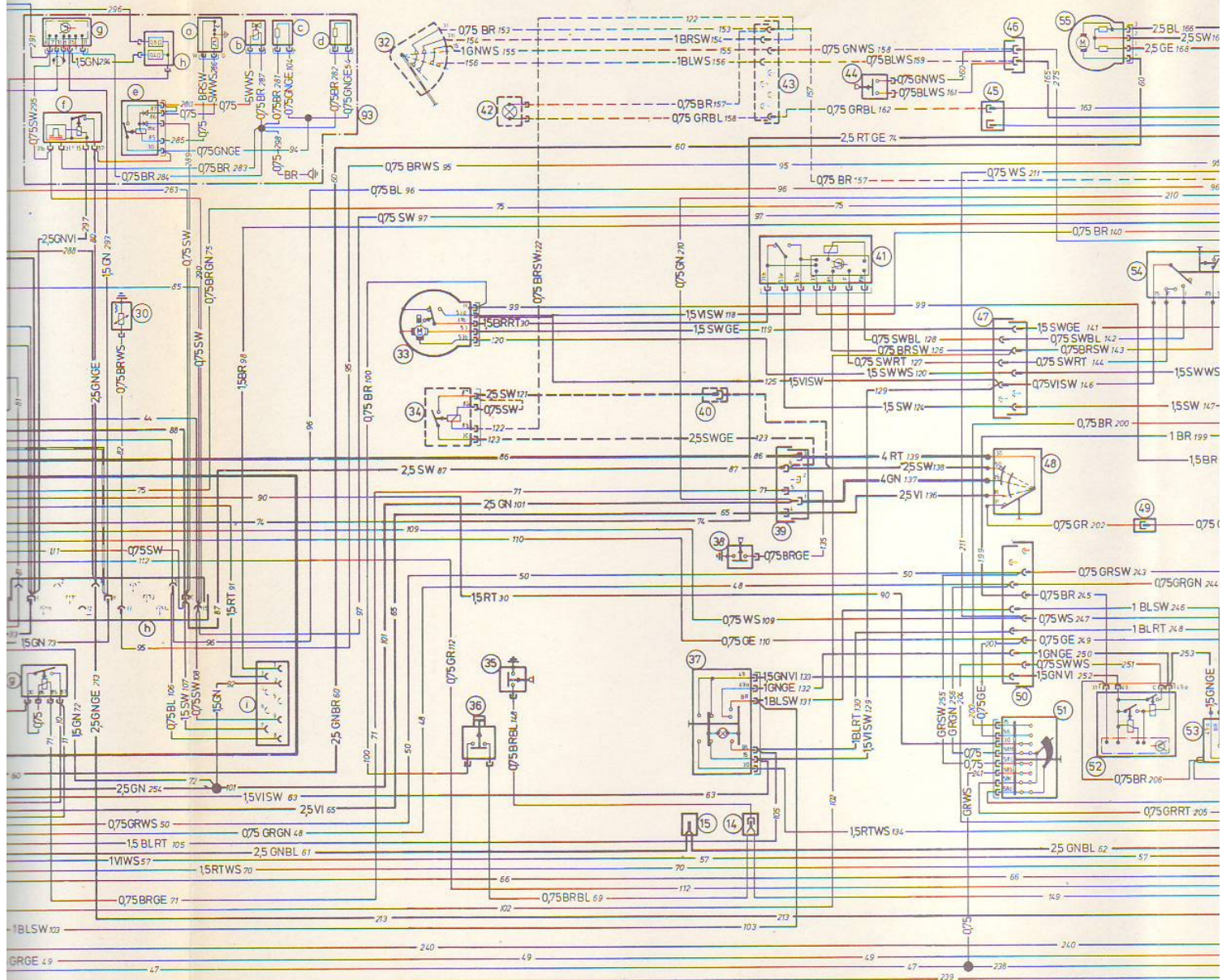
- a Heat-sensitive time switch
- b Starting valve
- c Warming-up regulator

d Additional air slide**e Diode relay****f Fuel pump relay****90 Rear fog light (special equipment)****91 Connection for rear fog light (special equipment)****92 Connection for rear fog light switch (special equipment)****93 On 6-cylinder fuel injection cars only:**

- a Heat-sensitive time switch
- b Starting valve
- c Warming-up regulator
- d Additional air slide
- e Diode relay
- f Fuel pump relay
- g Transistorized coil ignition
- h Resistors

94 Plug connector

Circuit diagram 320/6 RHD, 320/6 A RHD, 323i RHD, 323i A RHD



Key to Drawing 320 61 003

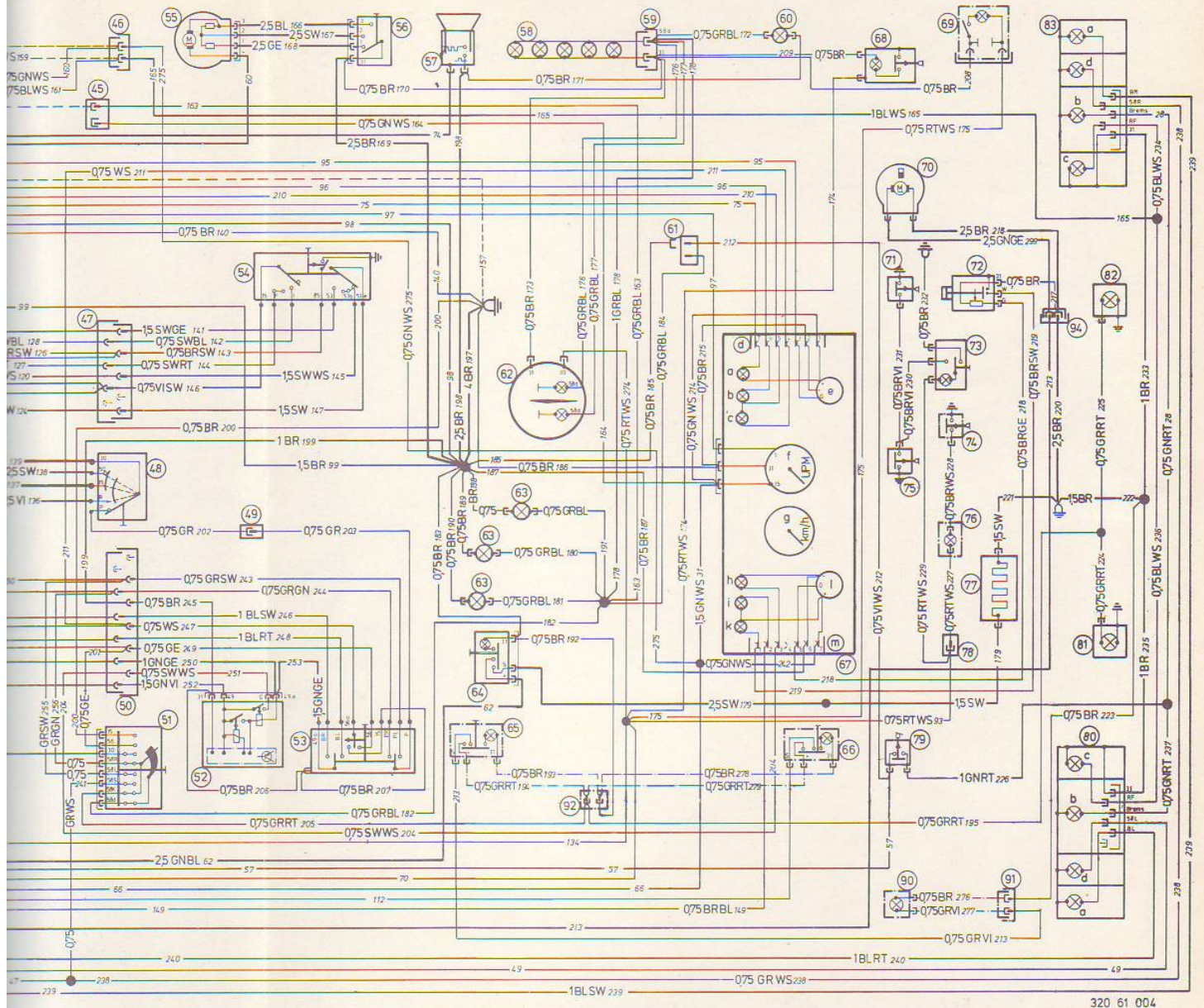
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|-----|----------------------------------|
| I | = Cross-section, mm ² |
| II | = Basic color |
| III | = Identification spiral |
| IV | = Cable number |
| V | = Terminal designation |
| VI | = Terminal (cable end tinned) |
| VII | = Screw connection (cable shoe) |

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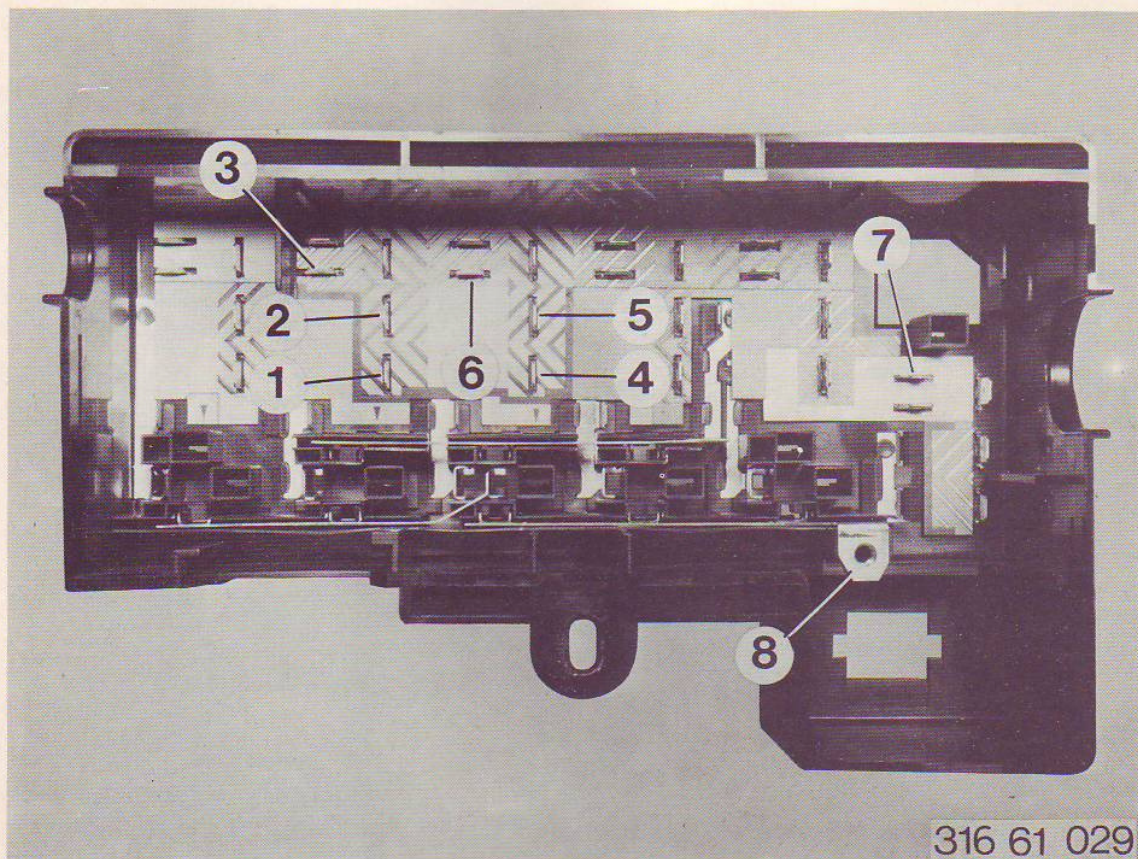
onnection (cable shoe)

- VIII** = Round pin plug
- IX** = Flat pin plug
- X** = Round pin socket
- XI** = Flat pin socket
- XIV** = Earth (ground)
- XV** = Solder point or connector

- Color codes**
- BL** = blue
 - BR** = brown
 - GE** = yellow
 - GN** = green
 - GR** = grey
 - RT** = red
 - SW** = black
 - VI** = violet
 - WS** = white
 - TR** = transparent

When installing: Connections for front section of wiring harness
 Color codes for wiring at equipment carrier

Fuse No.	Output
4	(1) yellow/blue
5	(2) yellow/black
6	(3) grey/white
7	(4) white/blue
8	(5) white/black
9	(6) grey/yellow
	(7) green/yellow
	(8) red



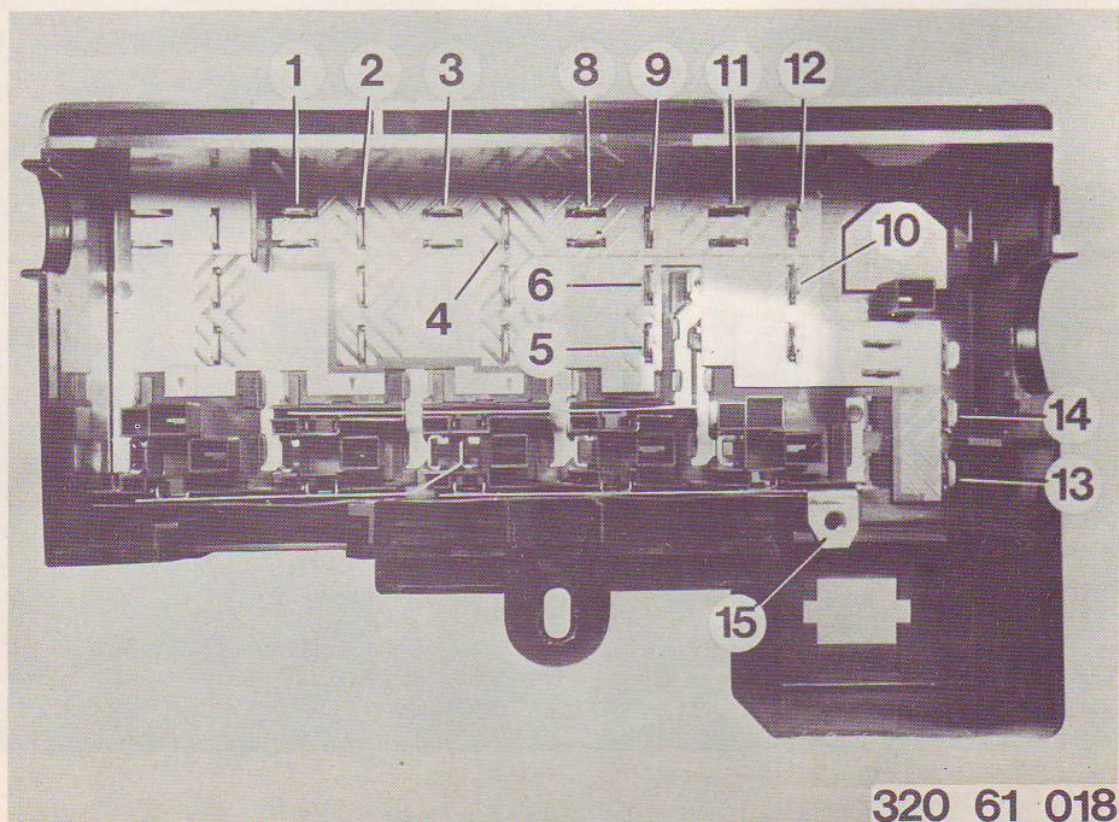
316 61 029

When installing: Connections for rear section of wiring harness.

Color code for wiring at equipment carrier

Fuse No.	Output	Input
6	① grey/white	② grey/green
9	③ grey/yellow	④ grey/black
10	⑤ green/blue	
11	⑥ green/brown	
12	⑧ violet/white	⑨ violet
14	10 green/white	
15	11 violet/black	12 violet
16	13 red/yellow	
17	14 red/white	
17	15 red	

Horn relay: Brown/yellow, terminal 85
violet/white, terminal 86
violet/white, terminal 30/5 I (twin cable)

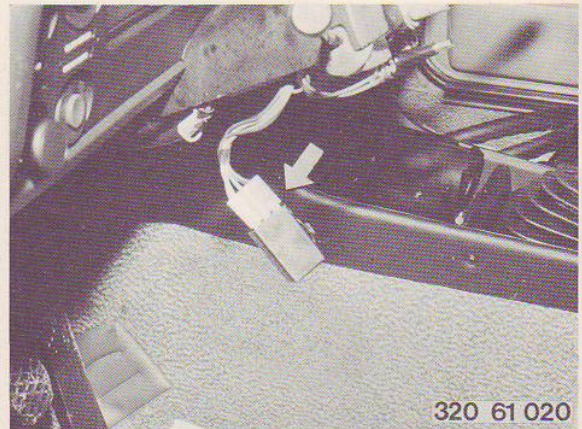


61 31 016 Turn indicator and dip switch – renewing

**Remove the lower trim panel – 32 31 020.
Remove the steering wheel – 32 33 000.
Disconnect the negative lead at the battery.
Separate the plug connection.**

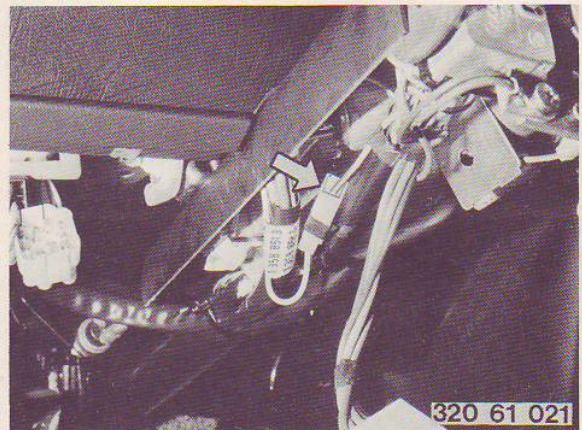


Disconnect the hazard warning relay and pull off the plug.



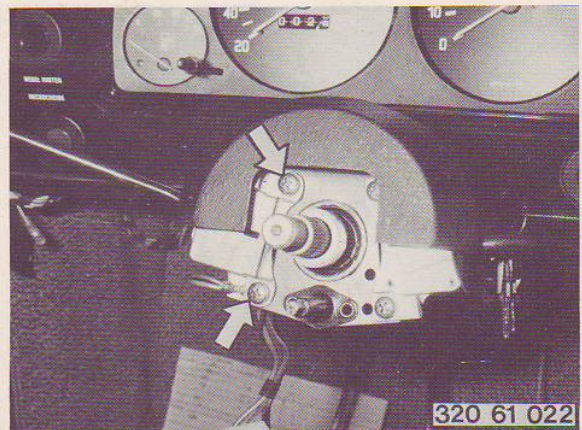
Separate the parking light plug connector and detach the cable straps from the steering column.

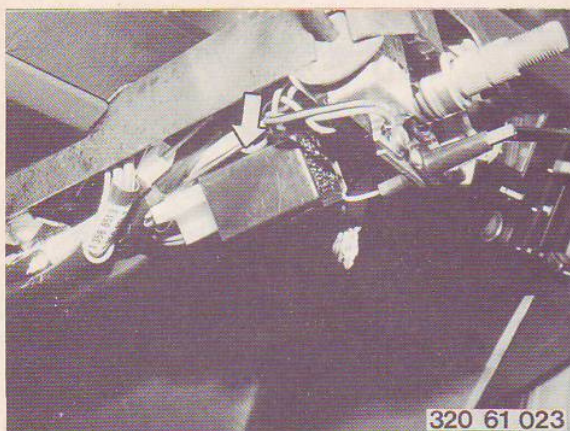
When installing: Check condition of cable straps and renew if necessary.



Remove screws and detach switch complete with wiring harness.

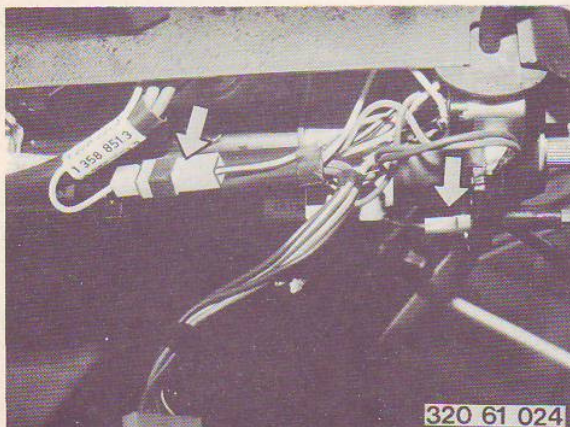
When installing: Attach earth (ground) lead (1) together with switch.



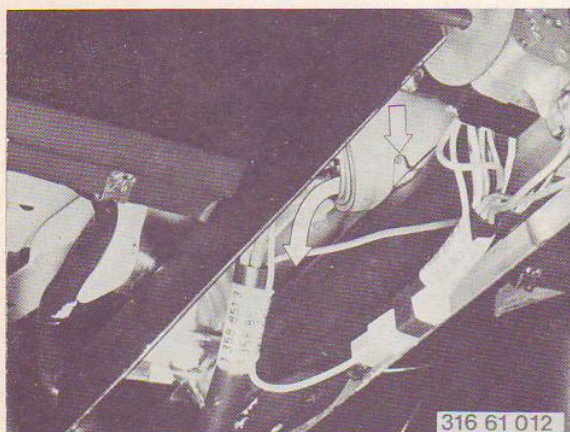


61 31 020 Steering lock and ignition-starter switch – removing and installing

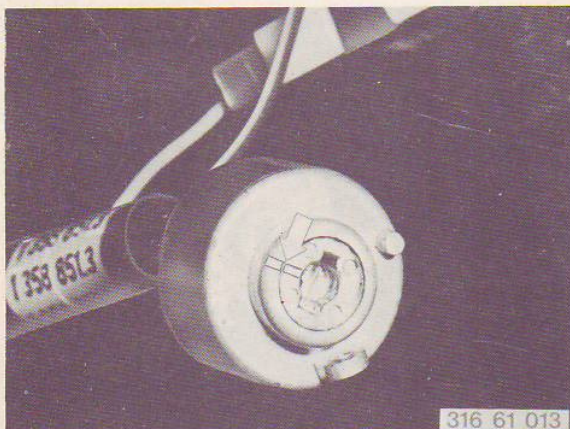
Disconnect negative lead at battery.
Remove and install lower trim – 32 31 020.
Detach hazard warning relay from retaining plate.



Pull off connectors for parking light and horn leads.
Detach cable straps from steering column.
When installing: check condition of cable straps and renew if necessary.

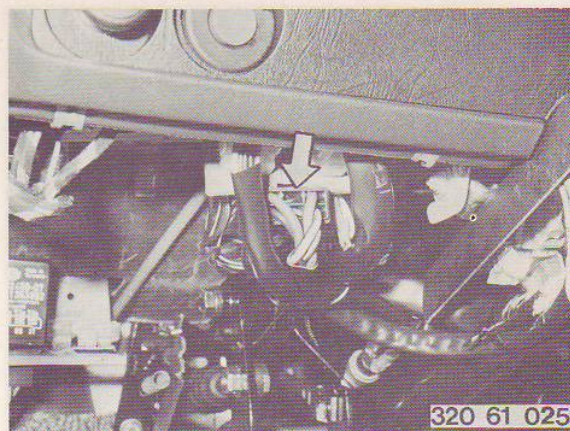


Remove grub screw and take out ignition-starter switch.



When installing: Turn ignition switch to the "O" position. The marks on the ignition-starter switch should be opposite one another.

Separate the central plug connection.



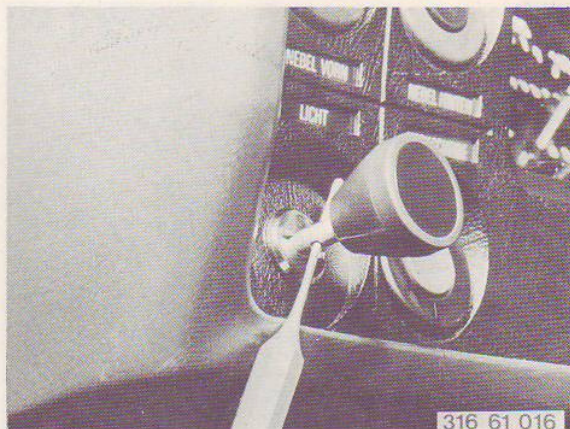
61 31 030 Main light switch – removing and installing

Detach the lower left facia trim – 51 45 180.

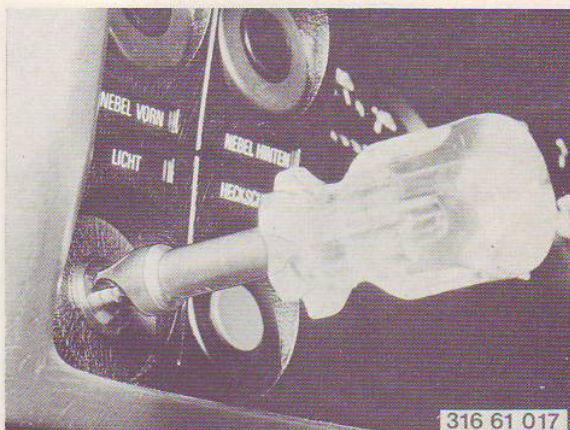
Disconnect the negative lead at the battery.

Unscrew the main light switch knob.

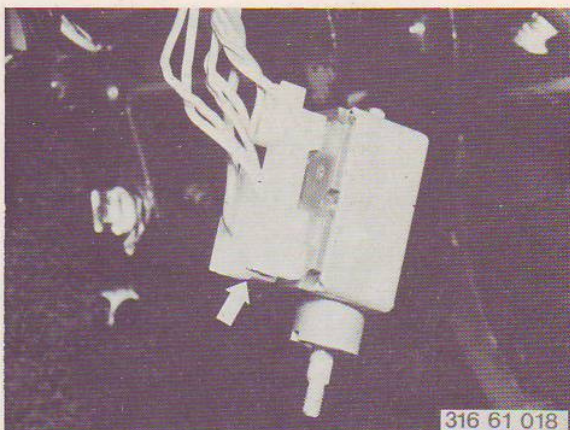
Warning: Use a pin or drift of suitable size to prevent the light switch shaft from turning.

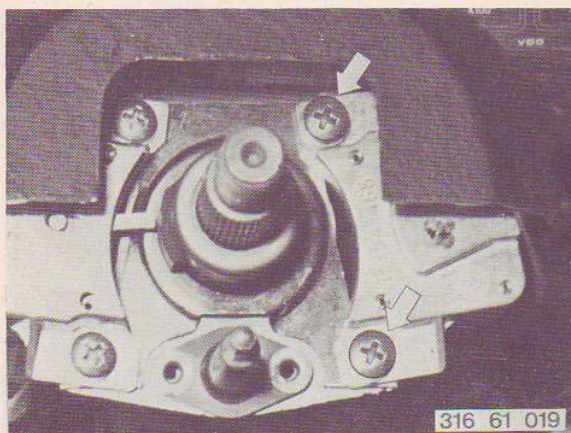


Unscrew the switch locking plate with a pin screwdriver and remove the complete switch with backing plate.



Detach the multi-pin plug from the switch.

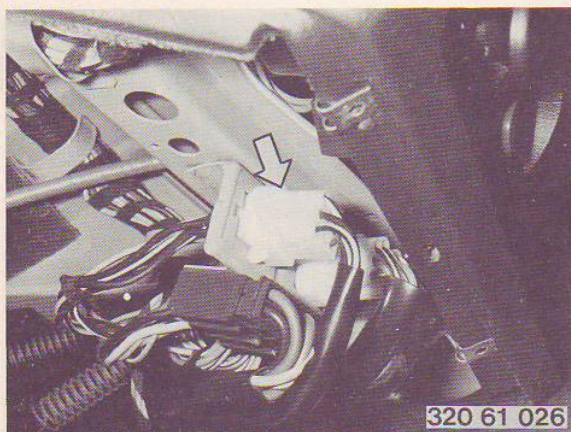




61 31 040 Wiper switch – removing and installing

Remove and install the lower trim – 32 31 020.
Remove and install the steering wheel – 32 33 000.

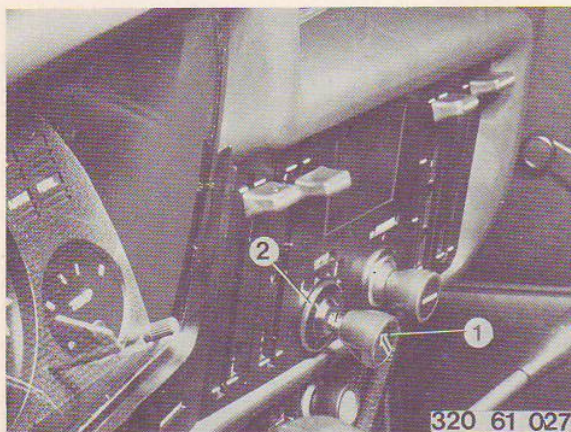
Disconnect the negative lead at the battery.
Remove the screws.



Detach the central plug.

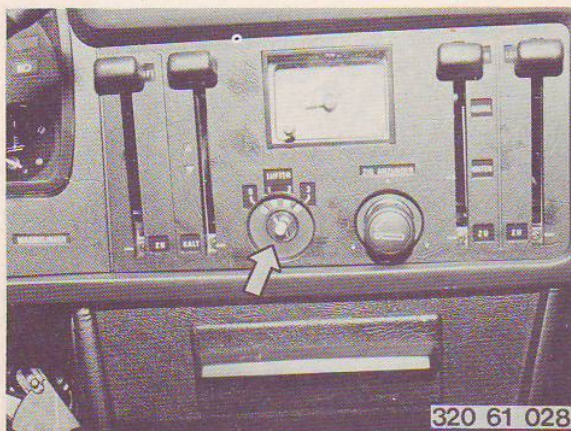
Detach the cable straps from the steering column.

When installing: Check condition of cable straps and renew if necessary.



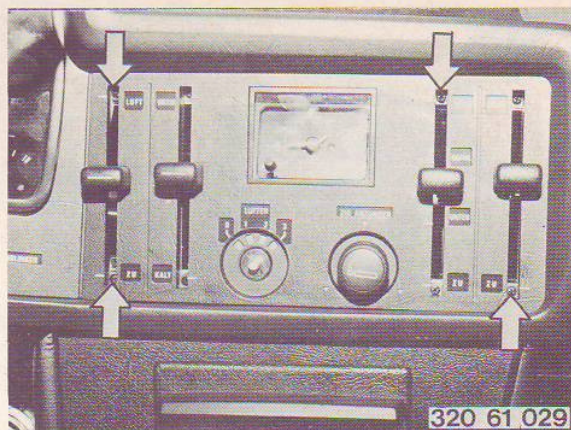
61 31 050 Heater blower switch – removing and installing

Disconnect the negative lead at battery.
Pull off knob (1) and plate (2).



Unscrew the switch retaining plate with a pin screwdriver.

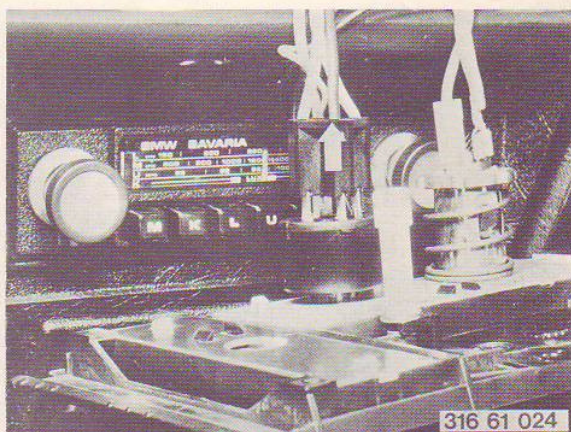
Pull off the control knobs and detach the switch panel.



Carefully detach the central plug from the switch.

Take off the switch.

When installing: Make sure that the switch is correctly located in the switch panel.



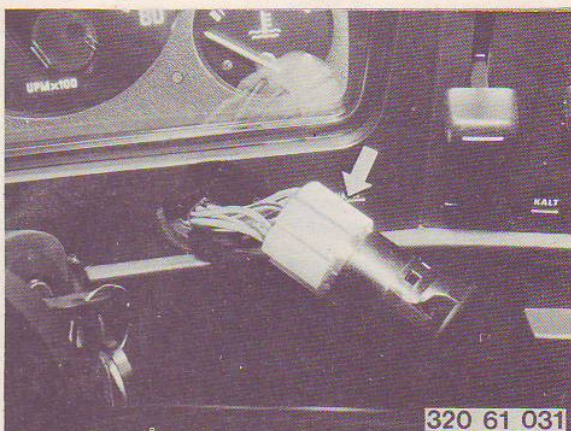
61 31 060 Switch for heated rear window – removing and installing

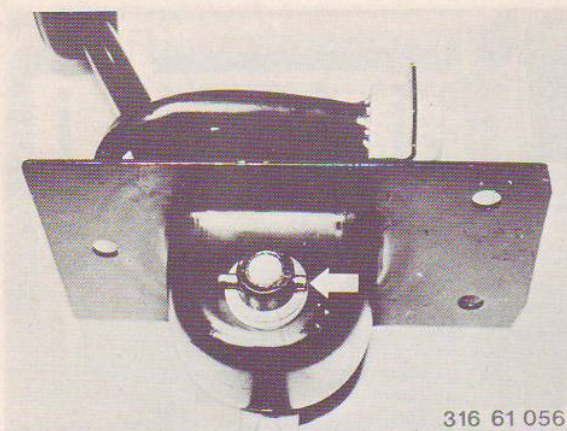
**Disconnect negative lead from battery.
Lift out switch and pull off plug.**



61 31 080 Switch for hazard warning flashers – removing and installing

**Disconnect negative lead at battery.
Lift out switch and pull off plug.**

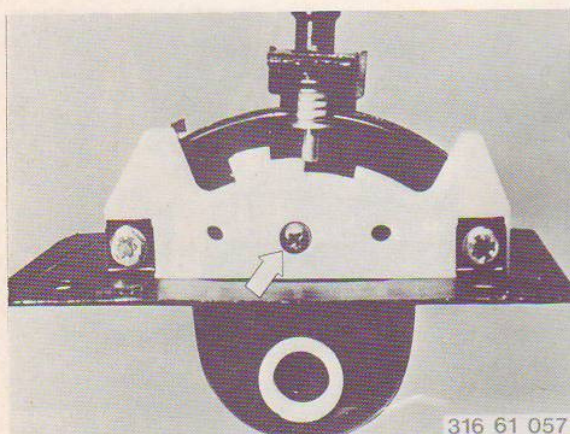




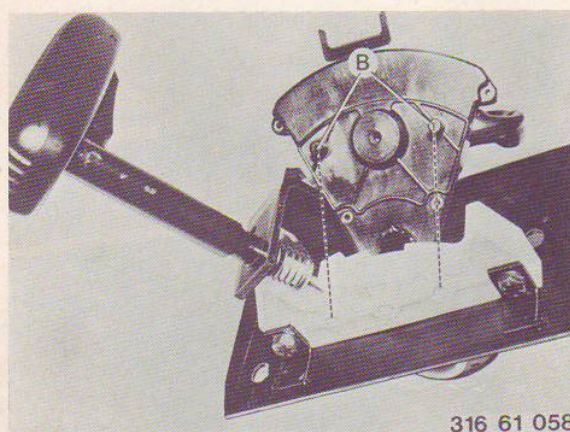
61 31 260 Transmission switch – removing and installing

Remove and install complete selector lever with pivot mount – 35 16 050.

Drive out locating collet and detach lower part of selector lever.



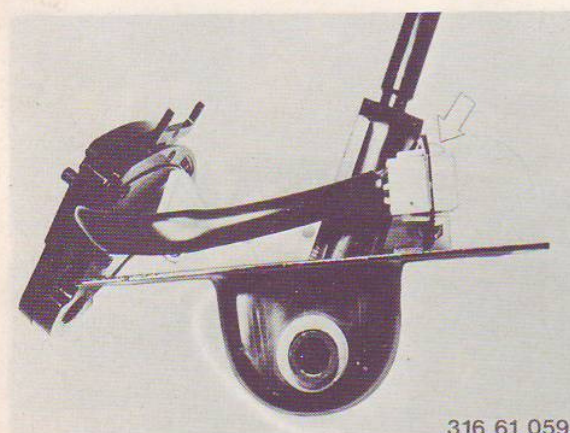
Remove bolt.



Take out the transmission switch.

When installing: the two pins (B) on the transmission switch must locate in the holes provided on the selector gate.

Connect the drive element to the selector lever.



Detach plug housing and light from holder.

Take off transmission switch.

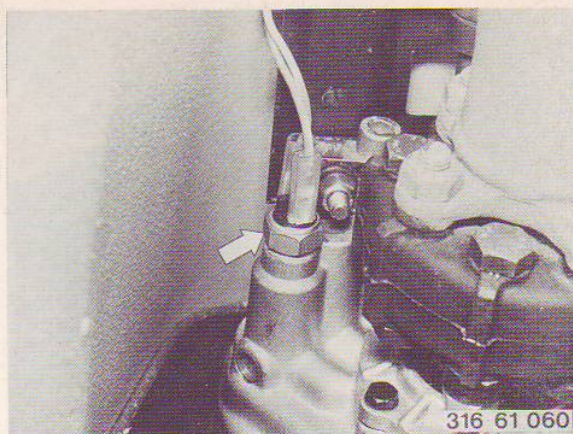
61 31 270 Switch for backup (reversing) light – removing and installing

Detach lead from switch.

Unscrew switch from gearbox.

When installing: use a new sealing ring.

Note correct tightening torque¹⁾.

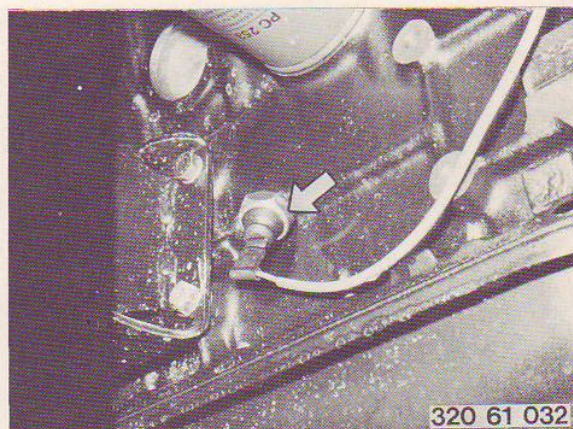


61 31 280 Oil pressure sensing switch – renewing

Detach lead and unscrew switch.

When installing: note correct tightening torque¹⁾.

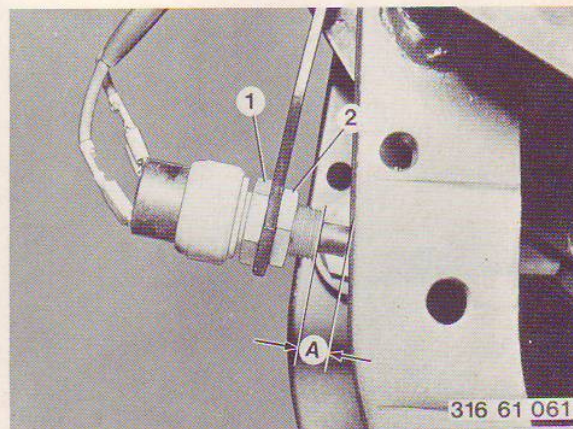
Use a new sealing ring. Check oil level.



61 31 304 Brake light switch – adjusting

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

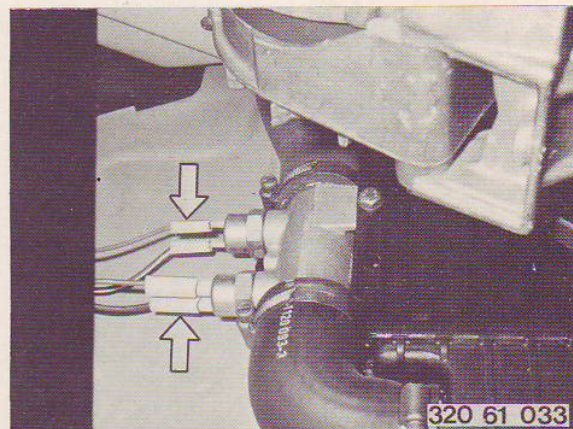
Loosen nuts (1 ... 2) and adjust brake light switch so that 5 ... 6 mm (0.20 ... 0.24 in) of the contact button is visible (A) when in contact with the brake pedal.



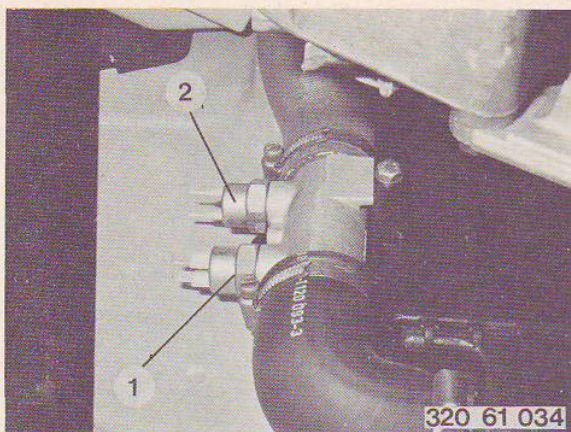
61 31 340 Temperature-sensitive switch for auxiliary fan – renewing

Pull off the leads.

When installing: do not confuse leads for stages 1 and 2.



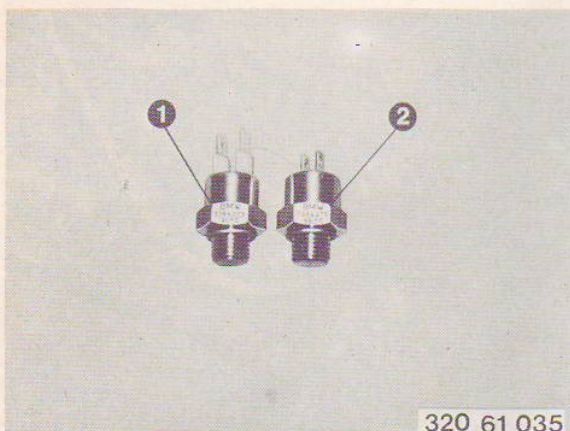
¹⁾ See specifications



Remove the temperature-sensitive switch.
 1 = 91°C (196°F) temperature-sensitive switch (stage 1)
 2 = 99°C (210°F) temperature-sensitive switch (stage 2)

When installing: use a new sealing ring. Restore coolant level in cooling system and bleed system – 17 00 039.

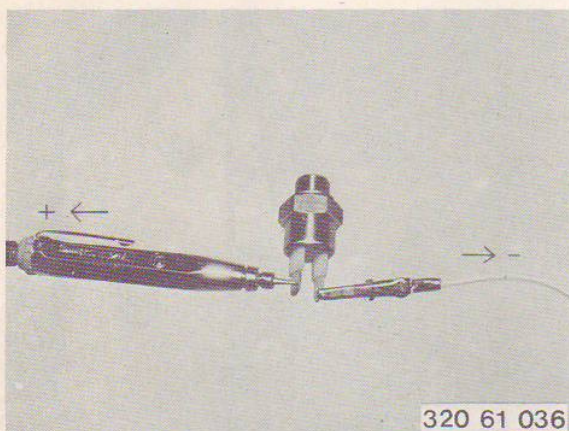
Note correct tightening torque¹⁾.



Distinguishing features: BMW No. and temperature in degrees are stamped on hexagon body of temperature-sensitive switch.

1 = 1 364 272 91°C (196°F)

2 = 1 364 273 99°C (210°F)

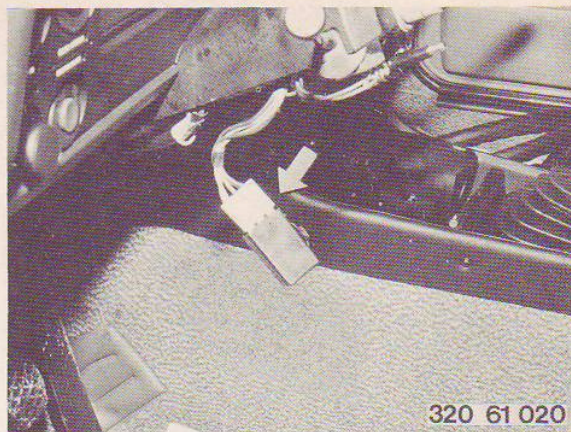


Testing method: connect test lamp to battery + and to flat pin plug of temperature-sensitive switch (which should be cool). Earth (ground) the second flat pin plug of the switch. The test lamp must not light up. If it does, the temperature-sensitive switch must be renewed. Note correct cut-in and cutout points¹⁾.

¹⁾ See specifications

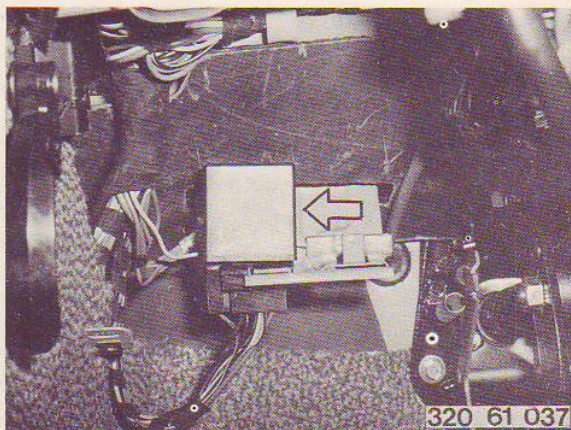
61 31 360 Hazard warning flasher relay – removing and installing

Disconnect negative lead at battery.
Remove and install lower section of trim – 32 31 020.
Disconnect the hazard warning flasher relay and pull off the plug.



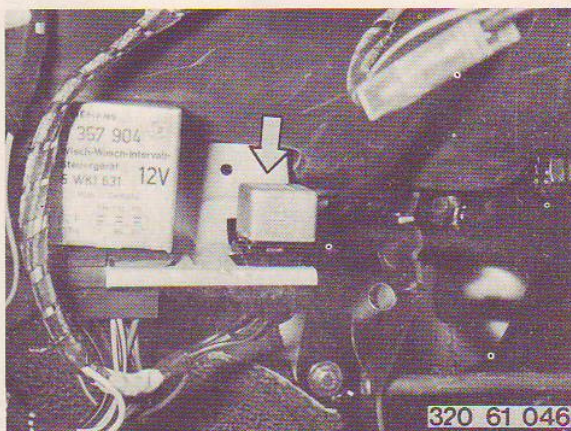
61 31 370 Wipe-wash-intermittent wipe control unit – removing and installing

Disconnect the negative lead from the battery.
Detach and attach the lower left facia trim – 51 45 180.
Detach the control unit from its mount and pull off the plug.



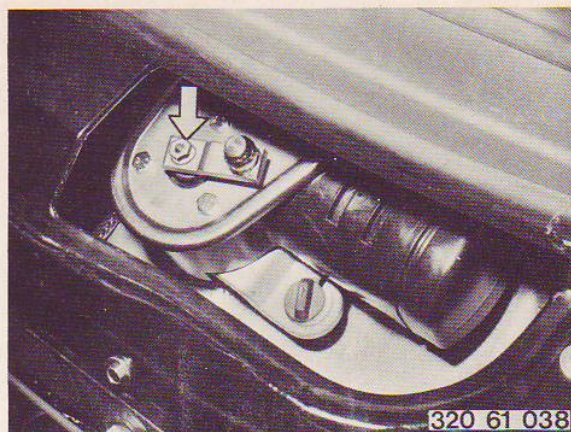
61 31 400 Starter inhibit relay – renewing

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



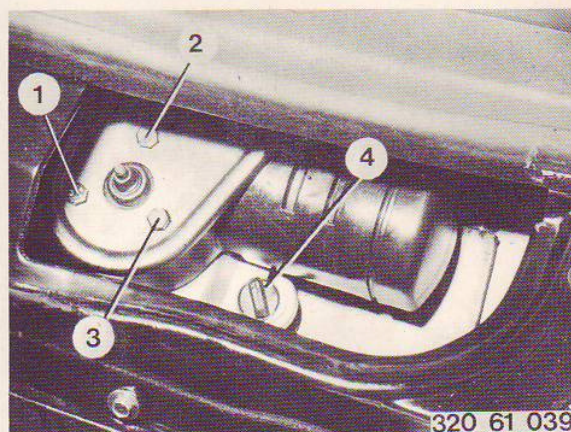
61 61 250 Wiper motor – removing and installing

Disconnect the negative lead from the battery.
Disconnect the drive linkage.
Mark the end position of motor crank movement, and detach the crank.

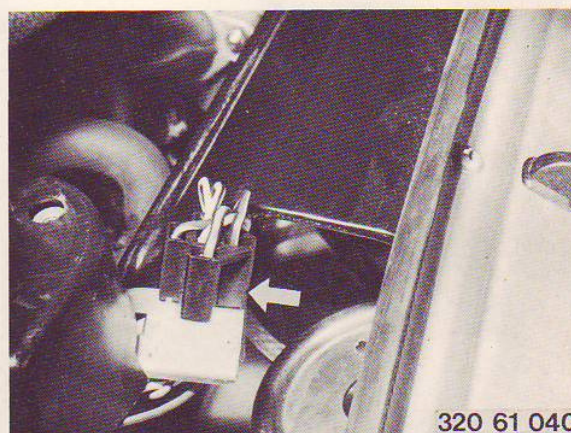


Unscrew bolts (1 ... 3) and loosen stop buffer (4).

When installing: tighten the stop buffer until the wiper motor is supported.



Remove the wiper motor and pull off the central plug.



61 63 005 Headlight cleaning system – subsequently installing

Remove and install both side front grilles – 51 13 060.

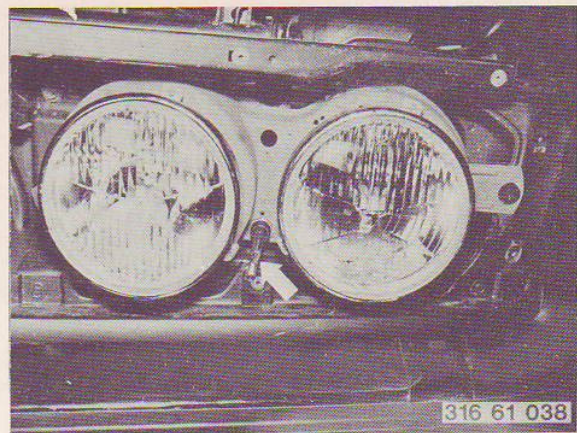
Disconnect the negative lead from the battery. Secure the headlight wiper motor to the support frame.

The side with the inscription faces down.

Important: install toothed washer between wiper motor and support frame.

Push the rubber protective cap on fully.

The motors are marked 'L' (left) and 'R' (right).



Attach the hose with the spray jets to the angle bracket.

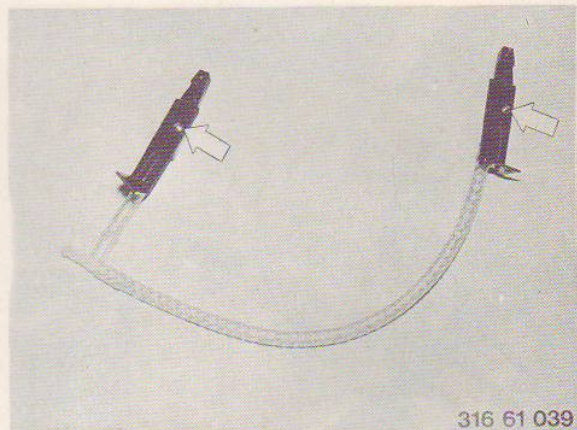
Important: angle brackets are marked as follows:

LA = left low beam headlight

LF = left high beam headlight

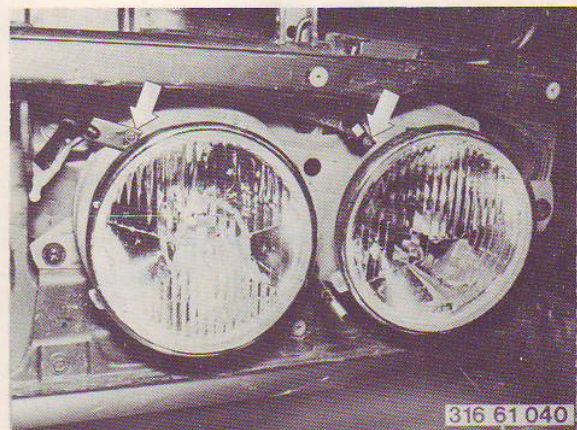
RA = right low beam headlight

RF = right high beam headlight



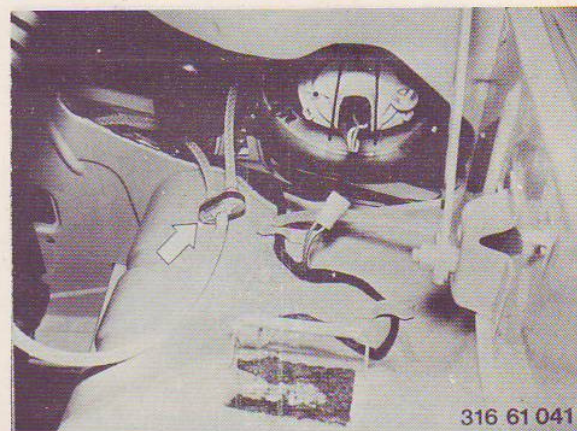
Secure the spray jets to the support frame with 3.5 x 13 mm self-tapping screws.

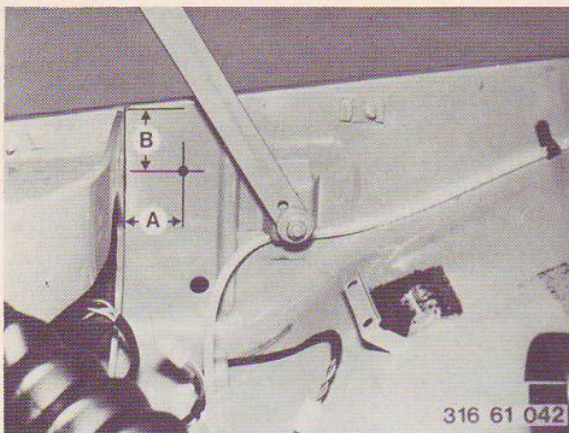
Make sure that the angle bracket locates correctly in the lock.



Run the hose with junction block along the wiring harness to the left and right headlights, and secure.

Connect the hose to the spray jets.





Detach the standard washer fluid tank.
Drill a 3.5 mm (0.14 in) diameter hole for the headlight cleaning control unit.

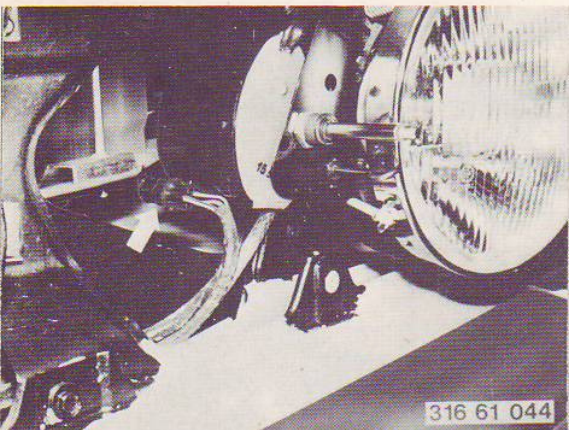
Distance

A = 40 mm (1.57 in)

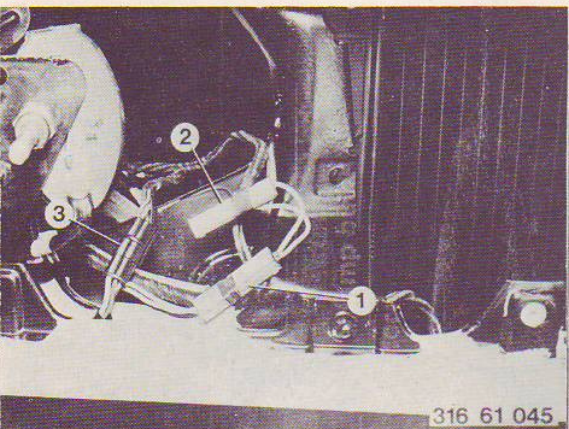
B = 50 mm (1.97 in).



Connect the auxiliary wiring harness to the cleaning control unit. Attach the control unit with earth (ground) cable (1) to the wheel arch.



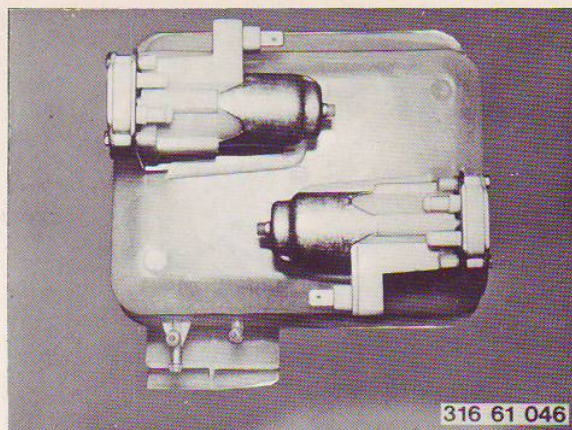
Run the additional wiring along the existing harness, and secure.
Connect the round pin plug with the left wiper motor.



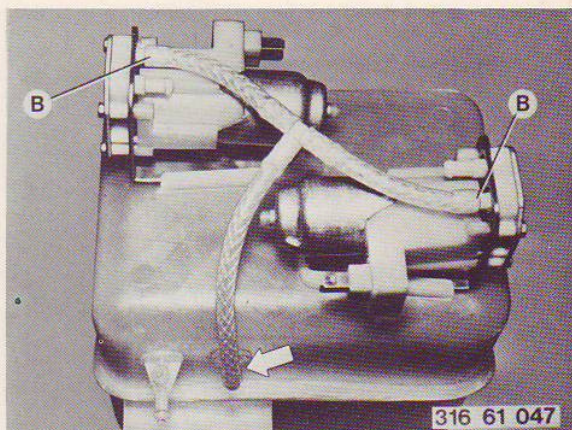
Connect the existing terminal strip (1) for the engine compartment light to terminal strip (2) for the additional wiring.

Connect the round-pin plug (3) to the right wiper motor.

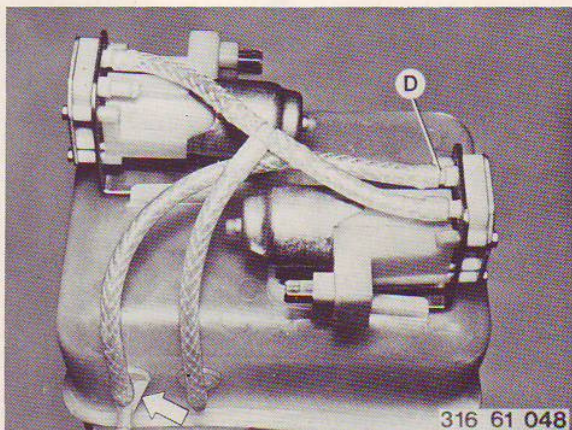
Detach the pump from the standard fluid tank just removed.
Attach both fluid pumps to the new tank.



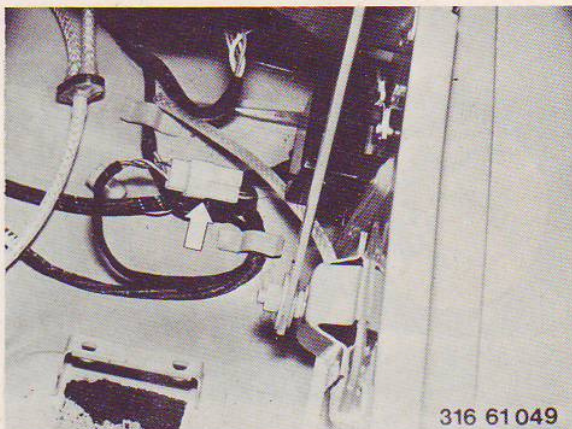
Connect hose with T-piece to pump (B) and to tank.

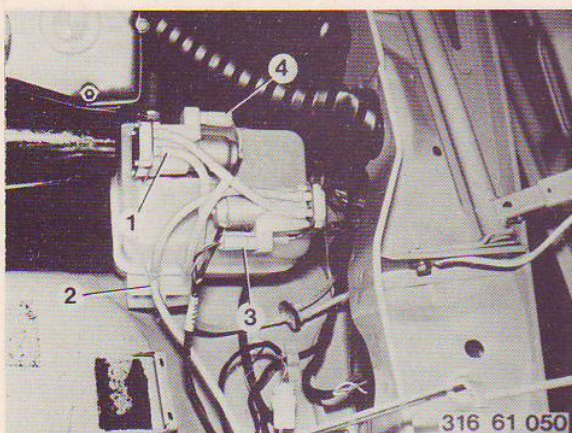


Connect hose to pump (D) and to tank.

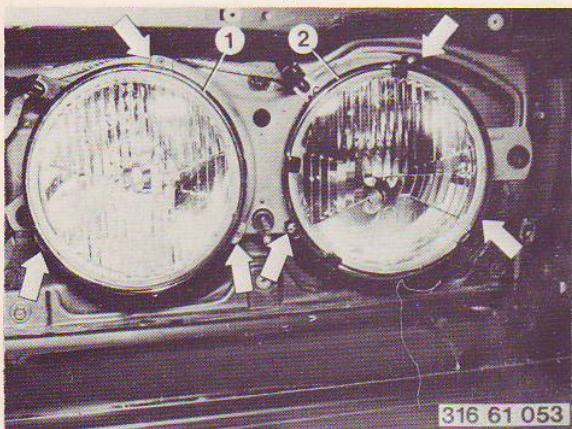


Connect the large central plug (additional wiring) to the small plug from the fluid pump previously removed.

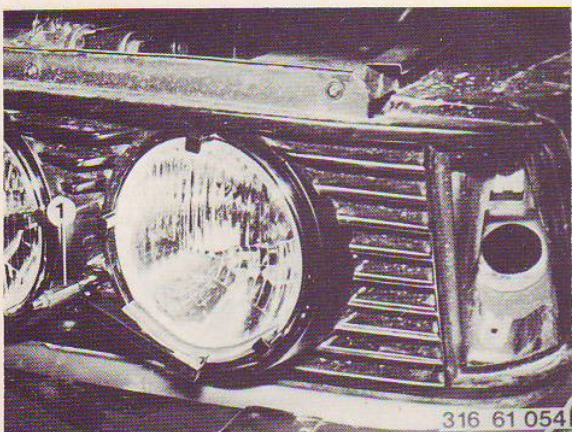




Connect the hose (1) for the headlights to pump (D) and the hose (2) for the windshield to the tank.
 Connect central plug (3) – short lead – and central plug (4) – long lead – to the washer pumps.
 Attach the fluid tank.



Detach the headlight bezel (1) and install a headlight bezel (2) with stop buffer for wiper blades.



Attach grilles and new headlight cover caps.
 Attach wiper blades for low beam headlights with spacing sleeve (1).
 Cover spacing sleeve (1) with insulating tube.



Attach wiper blades for high beam headlights with nut and spring washer.
 Press on the protective cap.

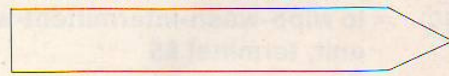
When the light
When the windshield washer switch is first
and the windshield cleaning system will not
operate. 3 seconds. Then switch off.
The windshield cleaning system cannot be used
second time until approx. 30 seconds have
elapsed.

Electrical circuit diagram
Cleaning operation
Reconnect the negative lead to the battery
and start.
Adjust the direction of the windshield cleaning
rod with a fine needle with the water strokes
the windshield glass.

Color code
BL = blue
BR = brown
GE = yellow
GR = green
OR = grey
PT = red
BW = black
VI = violet
WS = white

- 1 - Connection for engine compartment light
- 2 - Plug connector (additional cable with washer pump wiring harness)
- 3 - Washer pump for windshield
- 4 - Washer pump for windshield cleaning
- 5 - Earth (ground) on windshield cleaning control unit
- 6 - Windshield cleaning control unit
- 7 - Left water motor
- 8 - Right water motor

Electrical circuit diagram



Electrical circuit diagram

Checking operation

Reconnect the negative lead to the battery.

Add water.

Adjust the direction of the headlight cleaning jets with a fine needle until the water strikes the headlight glass.

Switch on the lights.

When the windshield washer switch is operated, the headlight cleaning system will run for approx. 5 seconds, then switch off.

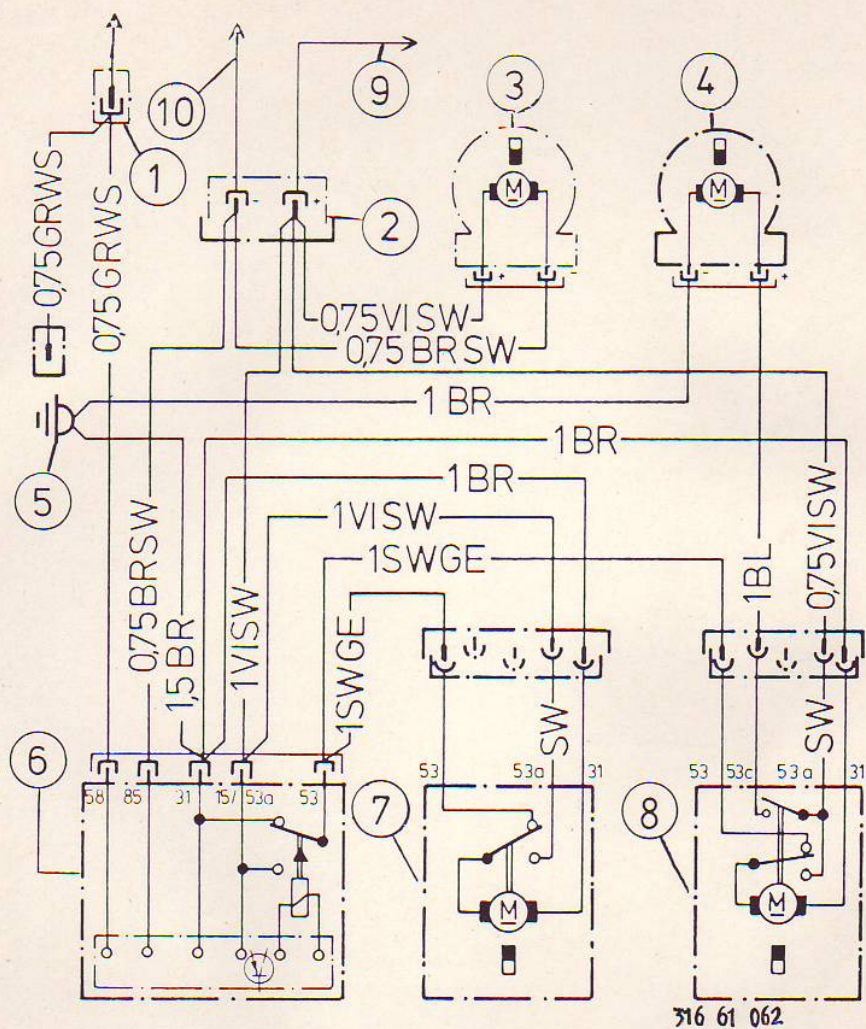
The headlight cleaning system cannot be run a second time until approx. 30 seconds have elapsed.

- ① = Connection for engine compartment light
- ② = Plug connector (additional cable with washer pump wiring harness)
- ③ = Washer pump for windshield
- ④ = Washer pump for headlight cleaning
- ⑤ = Earth (ground) on headlight cleaning control unit
- ⑥ = Headlight cleaning control unit
- ⑦ = Left wiper motor
- ⑧ = Right wiper motor
- ⑨ = to power distributor, fuse 12
- ⑩ = to wipe-wash-intermittent-wipe control unit, terminal 85

Color codes

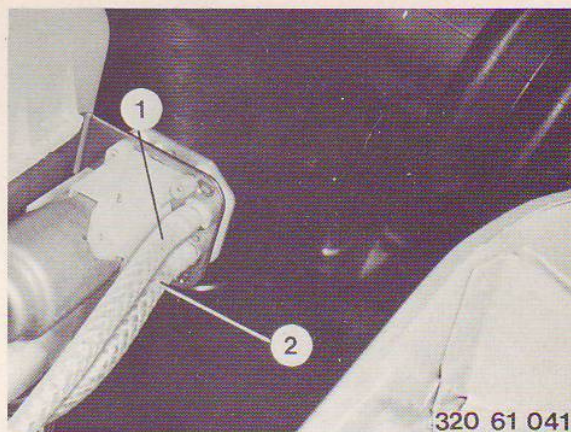
- BL = blue
- BR = brown
- GE = yellow
- GN = green
- GR = grey
- RT = red
- SW = black
- VI = violet
- WS = white

Circuit diagram for headlight cleaning system

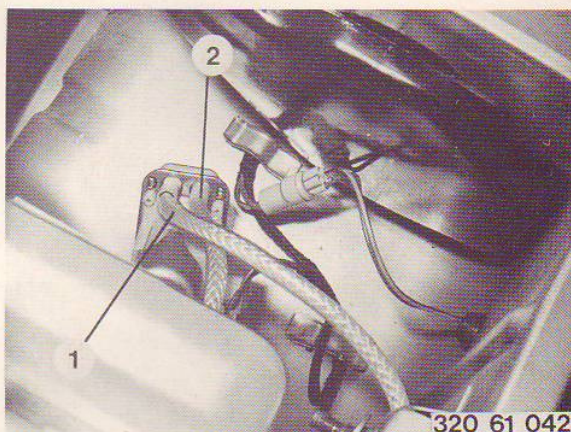


61 71 100 Windshield washer pump – removing and installing

Detach hoses (1) and (2). Pull the washer pump out of its mount and detach the plug.



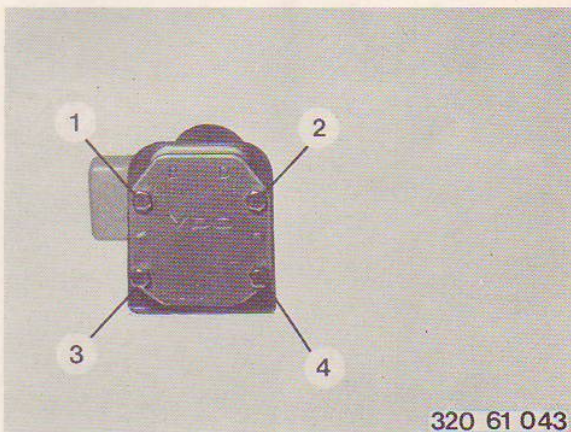
When installing: hose (1) runs from pump (D) to the spray jets. Hose (2) runs from pump (B) to the tank. Restore the correct fluid level.



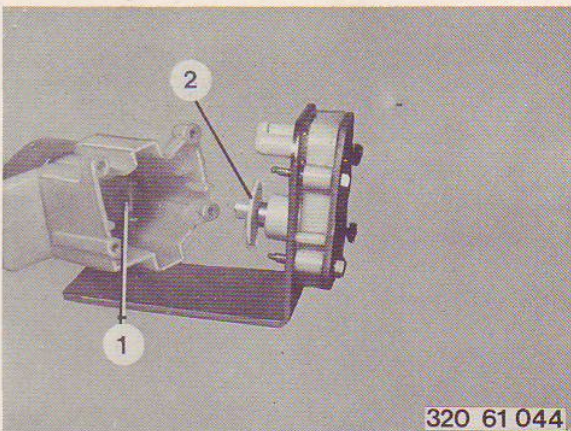
61 71 110 Windshield washer pump – stripping and assembling

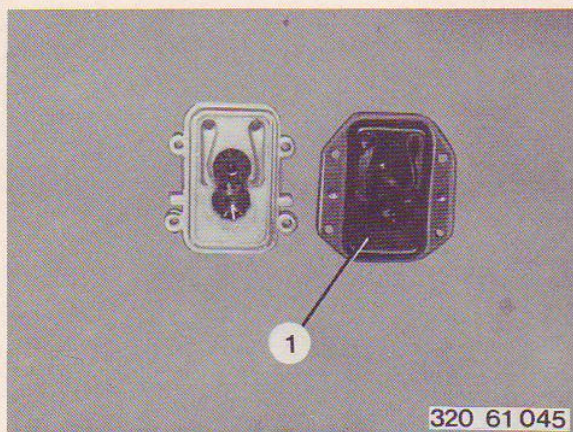
Remove and install the washer pump – 61 71 100.

Remove bolts (1 ... 4) and separate motor from pump.



When installing: driver of motor (1) must be properly engaged in driving disc (2) of pump.





Take off cover. Clean all parts with alcohol spirit and dry with compressed air.
When installing: check condition of gasket (1) and renew if necessary.

Instrumente

Instruments
Instruments
Strumenti
Instrumentos
Instrument
Instrumenten

Leuchten

Lights
Lampes
Luci
Luces
Belysning
Lampjes

62 Instruments

Specifications	Page 62-0/3
6211090 Coolant thermometer—removing and installing	11/1
130 Fuel gauge—removing and installing	11/1
6212000 Speedometer—removing and installing	12/1
020 Speedometer shaft—removing and installing	12/1
6213000 Revolution counter—removing and installing	13/1
050 Clock—removing and installing	13/1
6216000 Immersed fuel level sensor—removing and installing	16/1
050 Coolant temperature sensor—removing and installing	16/2
6221000 Complete instrument carrier—removing and installing	21/1

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 30 40 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

1.22²⁾

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

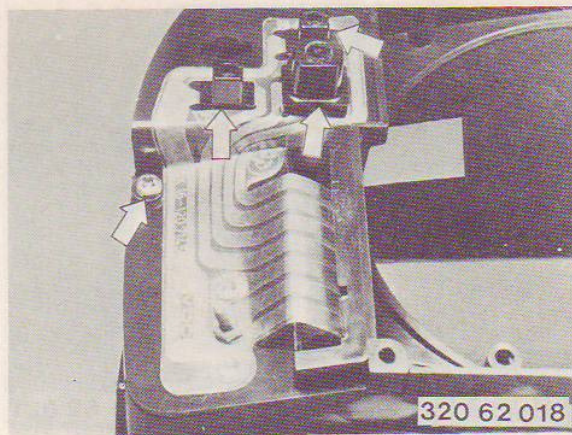
Instruments			
Model		320/6 320/6 A	323 i 323 i A *)
62 14 . . . Instrument and telltale lamp bulbs			
Bulbs for:			
Instrument lighting	W	1.2 (3x)	
Clock lighting	W	1.2 (3x)	
Fuel reserve	W	1.2	
Battery charge	W	3	
Oil pressure	W	1.2	
Turn indicator repeater	W	1.2	
High beam telltale	W	1.2	
Brake warning 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.

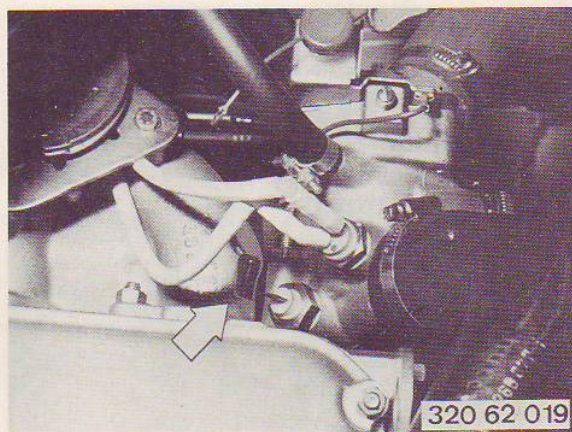


Methods of testing coolant thermometer:

a) Installed on vehicle

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

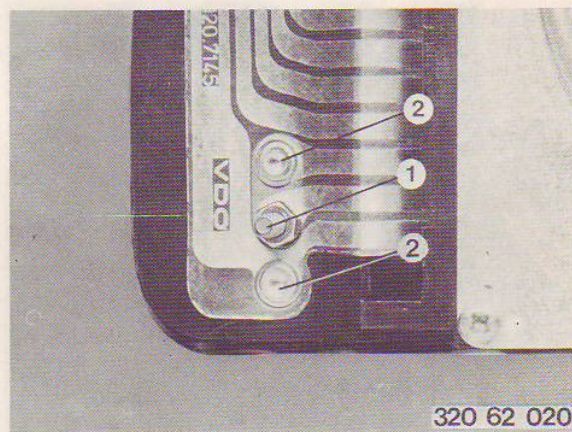
Switch on the ignition for a brief period only. If the thermometer needle moves fully over into the red zone, the coolant temperature sensor is defective.

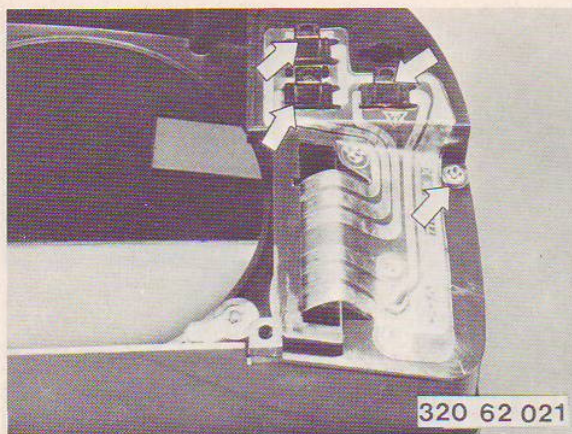


b) Removed from vehicle

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

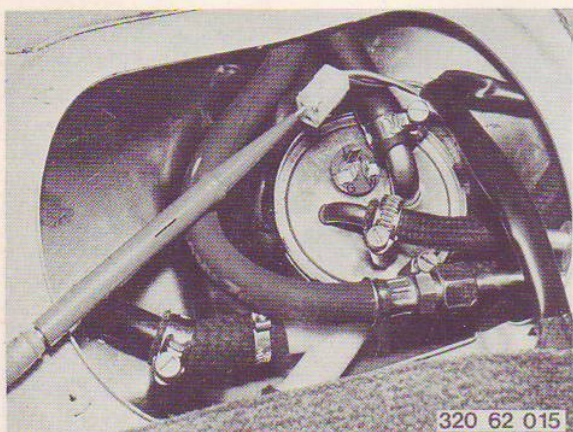
If the thermometer needle does not move into the red zone, the instrument is defective. If the needle moves, the fault must be in the connecting lead.





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:

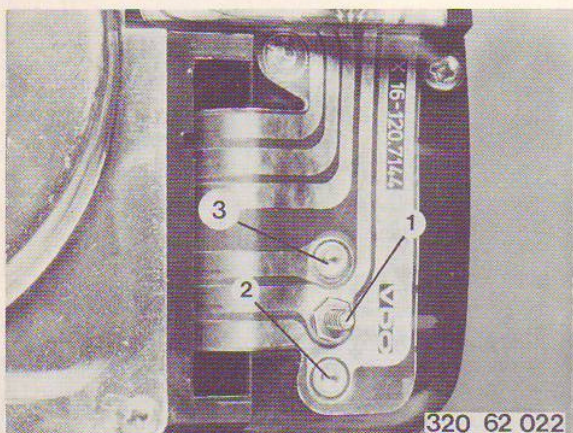
a) Installed on vehicle

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

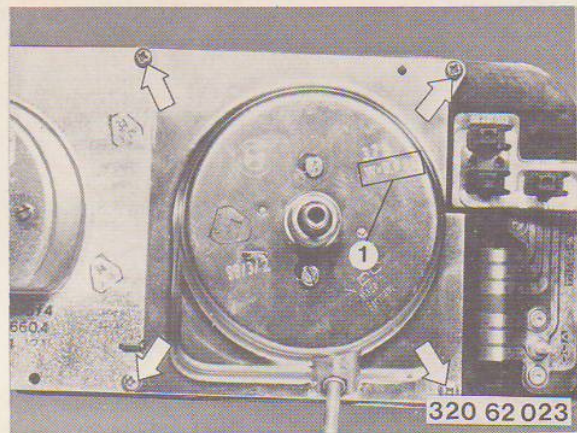
Connect a lead from the positive terminal of a 12 V battery to the positive terminal (1) and from the negative terminal of the battery to terminal (2). If the fuel gauge fails to move to the "full" reading, the instrument is defective. If this reading is obtained, the fault must be in the supply lead.

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.

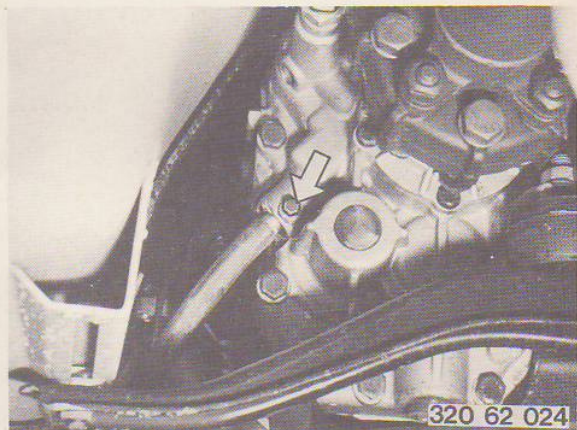
When installing: When renewing a speedometer, make sure that an instrument with the correct operating ratio¹⁾ is installed. The ratio (1) is stamped on the rear of the instrument.



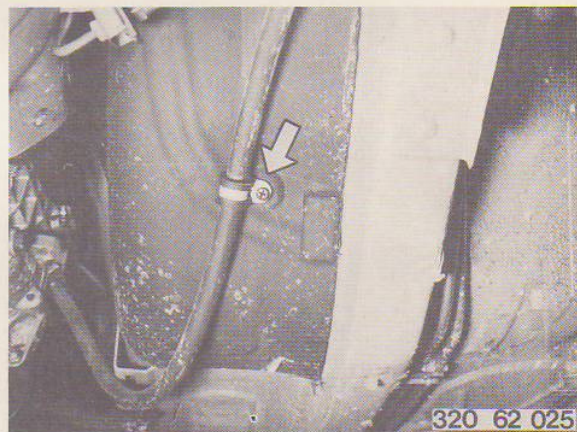
62 12 020 Speedometer cable – removing and installing

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.

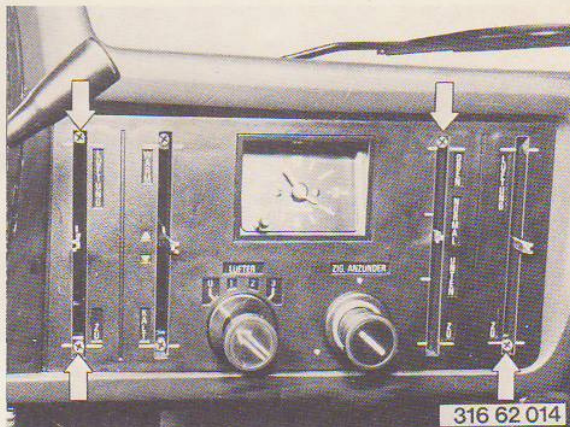
Remove bolts and take off the revolution counter.



62 13 050 Clock – removing and installing

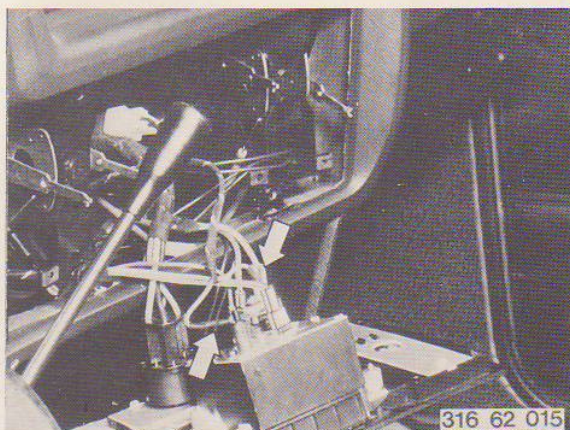
Pull off the control levers.

Detach the heater control assembly.

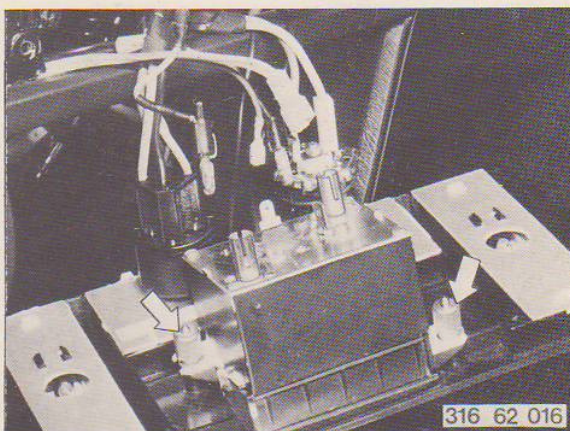


Detach the leads and bulb holders from the clock.

When installing: Connect leads as shown in circuit diagram.



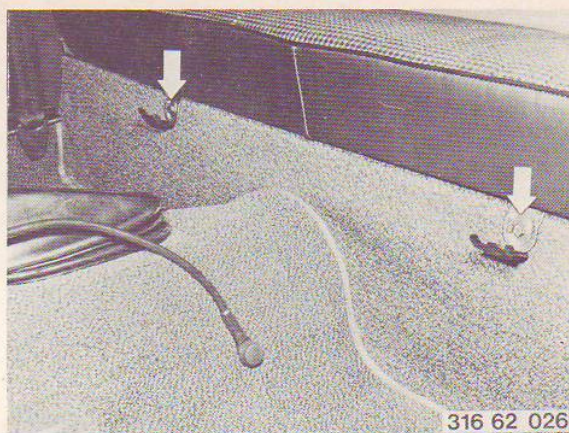
Unscrew the knurled knobs.
Take out the clock.



62 16 000 Immersed fuel level sensor – removing and installing

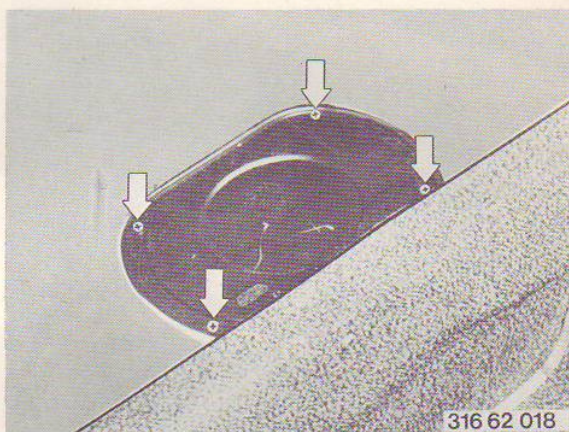
Lift out retaining bracket covers.

Unscrew bolts and take out the rear seat cushion.



316 62 026

Take off the cover plate.

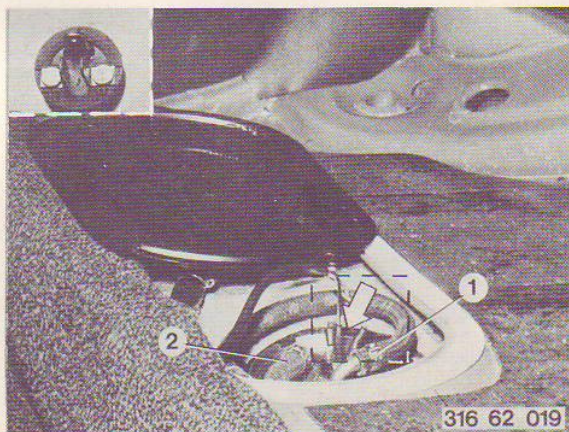


316 62 018

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

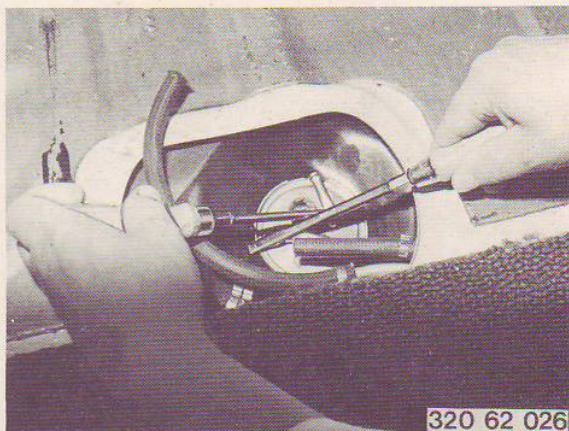
Disconnect the electric leads.

When installing: Use new hose clips.

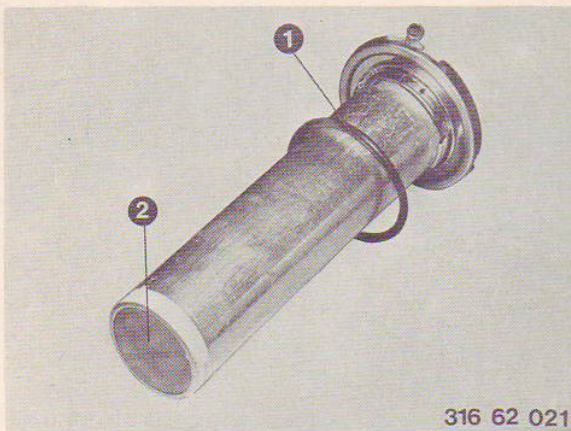


316 62 019

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



320 62 026

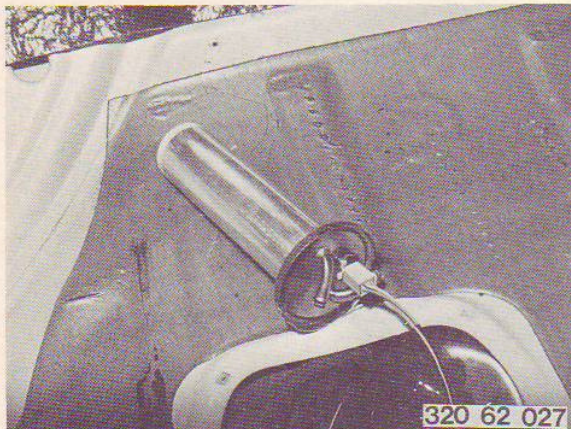


Warning: The cord ring seal (1) swells in contact with the fuel to provide a reliable seal. Cord ring seals which were already installed do not recover their original shape for approx. 48 hours.

Always coat the cord ring seal with Vaseline before inserting.

Clean the fine mesh filter (2).

When renewing, first take off the transit keeper.

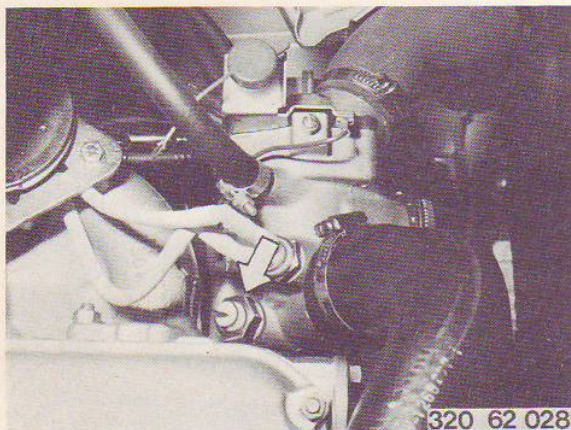


Checking the immersed fuel level sensor.

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.

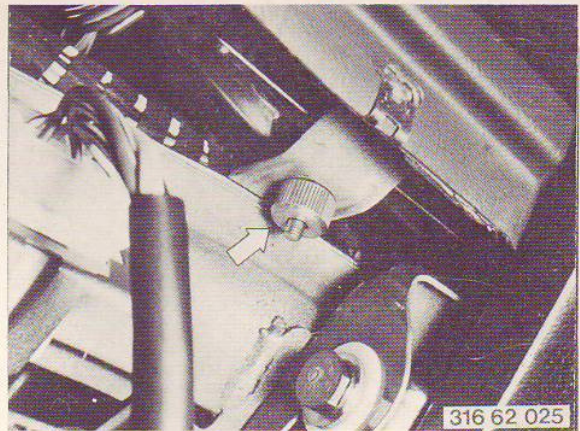
Bleed the cooling system.

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.

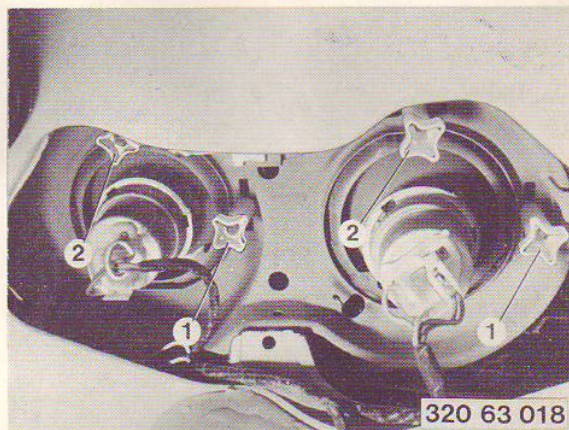


Headlight beam setting controls:
Open the engine compartment.
Remove the plastic covers from the rear of the headlights.

Turn the knurled plastic knobs as necessary.

1 Horizontal movement

2 Vertical movement



63 12 250 High beam headlight unit – removing and installing

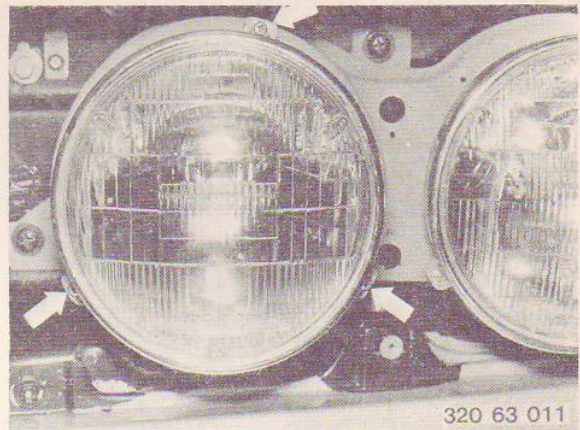
Remove and install front grille – 51 13 040.

Unscrew headlight.

Pull off plug.

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

Adjust headlight beam – 63 10 004.



63 12 280 Low beam headlight unit – removing and installing

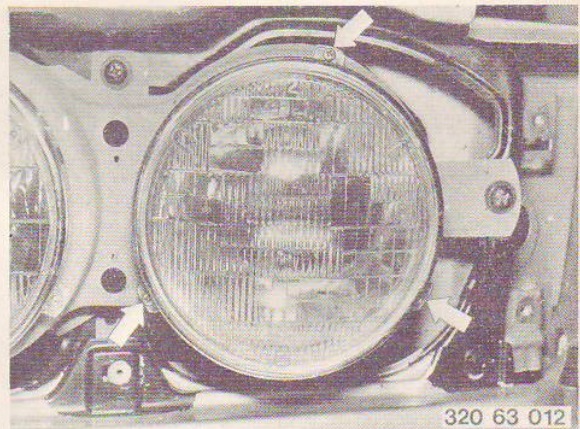
Remove and install front grille – 51 13 040.

Unscrew headlight.

Pull off plug.

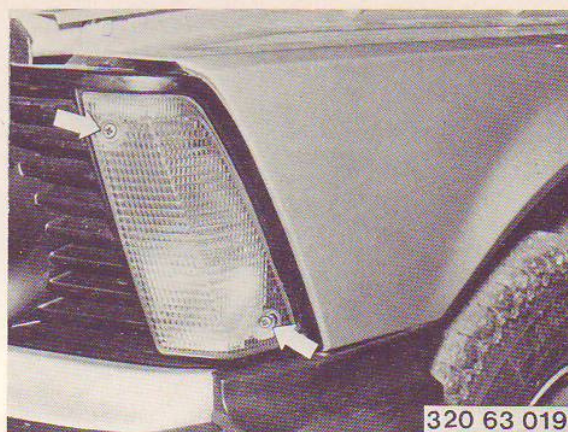
When installing: **locate the headlight unit in the cutouts on the support frame.**

Adjust headlight beam – 63 10 004.



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

Take out the retaining screws.
Take off the lens.



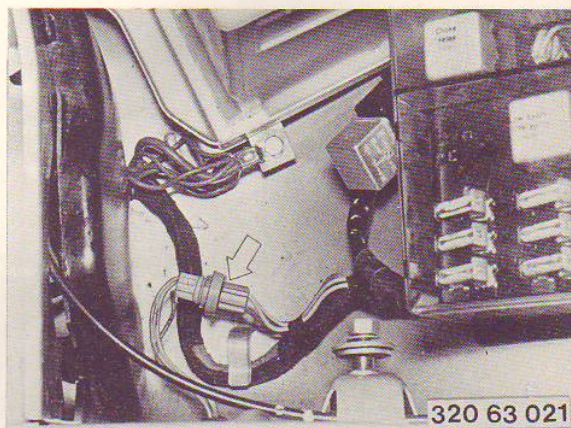
**63 13 150 Front turn indicator –
removing and installing**

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



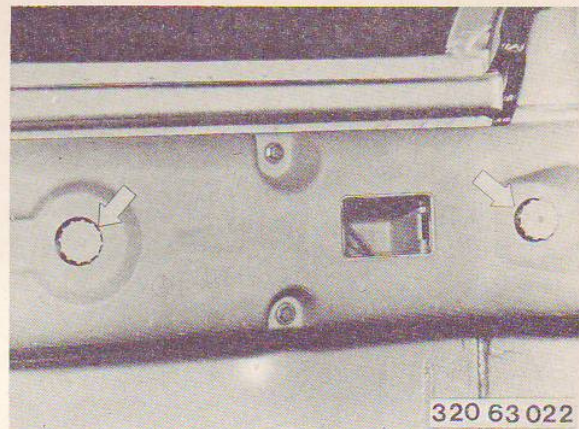
Open the engine compartment lid. Detach the
central plug and take off the bulb holder with
wiring harness.

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.

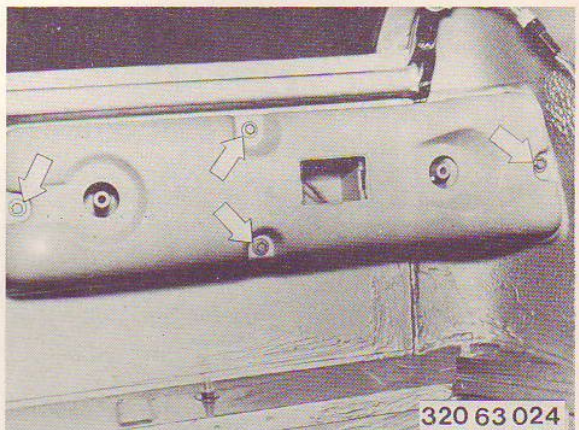


Take off the lens.



63 21 030 Rear light housing – detaching and attaching

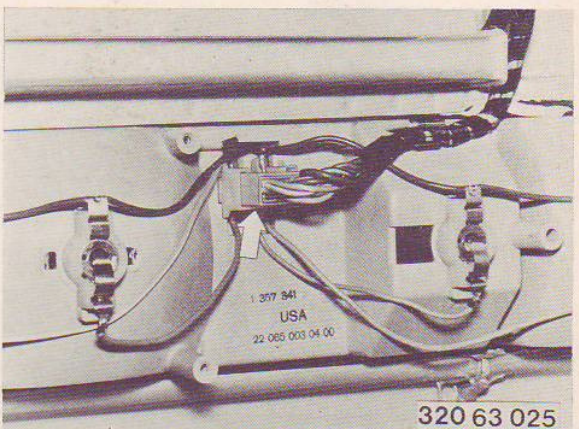
Detach and attach rear light lens – 63 21 000.
Remove screws and take off cover.



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).

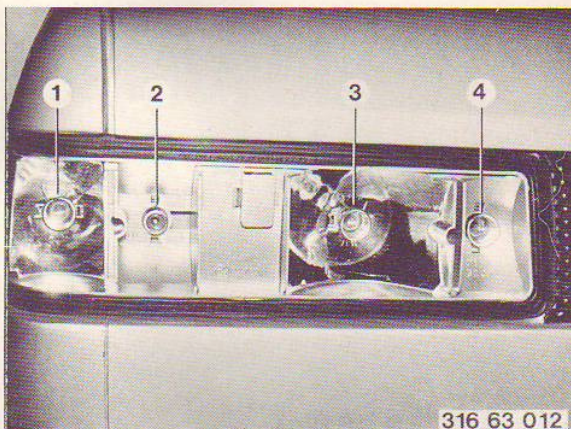
1 = turn indicator

2 = rear light

3 = brake light

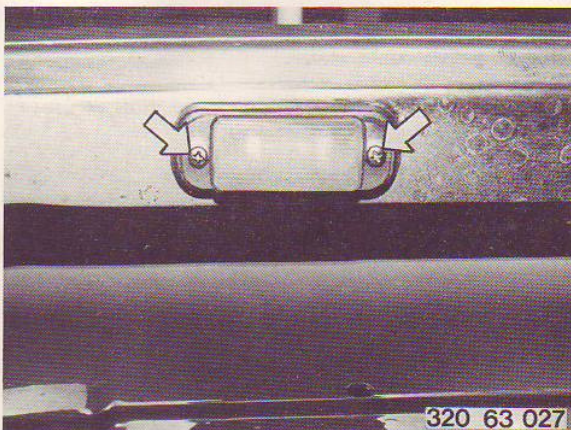
4 = backup (reversing) light

When installing: make sure bulb wattage¹⁾ is correct.



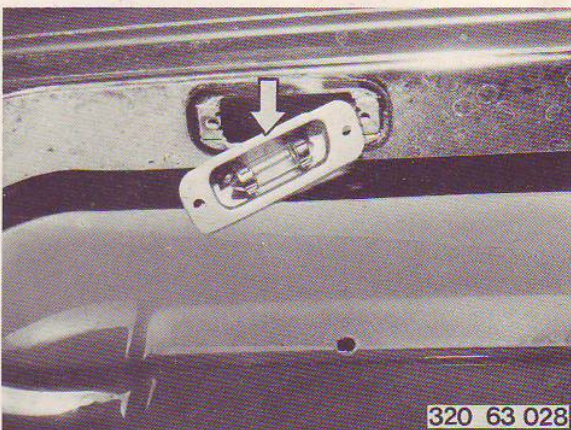
63 99 401 License plate light bulb – renewing

Remove screws and take off glass.



Press bulb out of holder.

When installing: make sure bulb wattage¹⁾ is correct.



1) See specifications

Heiz- und Klimaanlage

Heating and air conditioning system

Chauffage et système d'air conditionné

Climatizzazione

Calefacción e instalación de aire
acondicionado

Värme- och luftkonditionering

Verwarming en air-conditioning

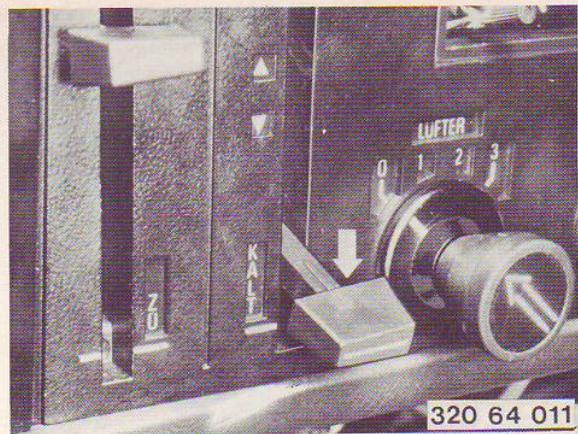
64 Heater and Ventilation

6411004	Heater valve control cables – adjusting	Page 64-11/1
061	Heater valve control cable – renewing	11/1
064	Both fresh-air supply cables – adjusting	11/2
106	Both fresh-air supply cables – renewing	11/3
134	Cable for defroster flaps (air distribution flaps) – adjusting	11/3
171	Cable for defroster flaps (air distribution flaps) – renewing	11/4
200	Heater unit – removing and installing	11/5
210	Heater motor – removing and installing	11/7
271	Heater water valve – renewing	11/9
531	Heater matrix – removing and installing	11/10
591	Heater motor resistor – renewing	11/12
6422040	All defroster outlets – removing and installing	22/1

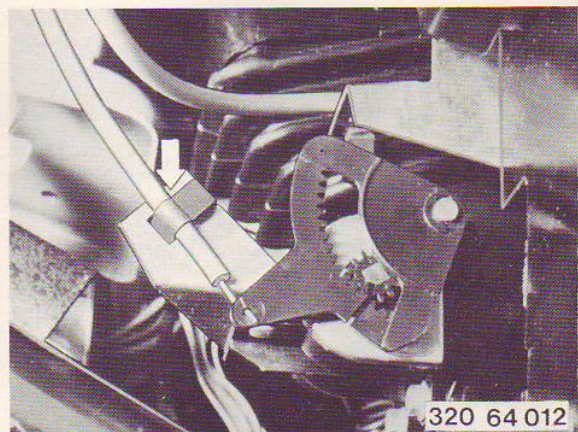
64 11 004 Heater valve control cable – adjusting

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

Set the temperature control lever to “Cold”, and hold in this position.

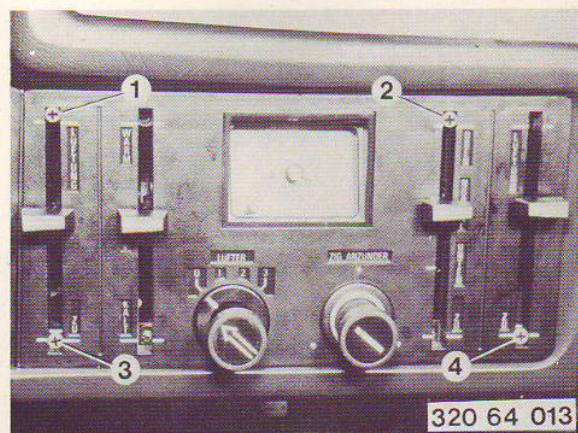


Detach the retaining clips at the water valve and move the cable until the marks on the toothed sector and the pinion are aligned. Secure the cable again with the retaining clips.

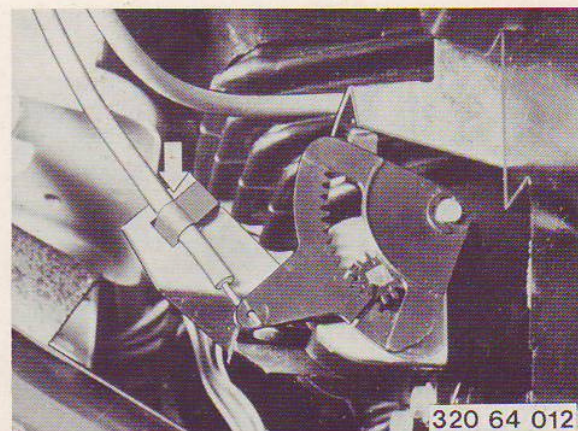


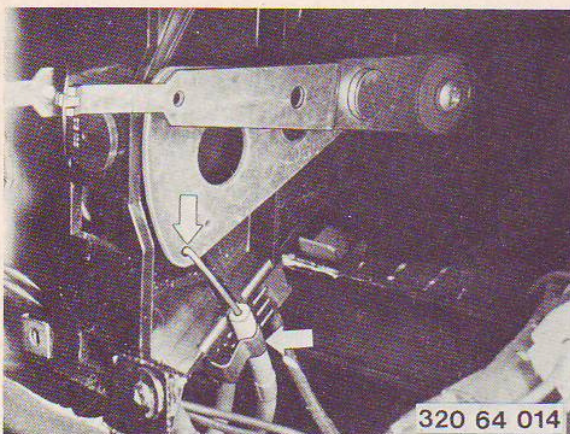
64 11 061 Heater valve control cable – renewing

Pull off the control knobs. Remove screws (1 to 4) and take off the switch panel.



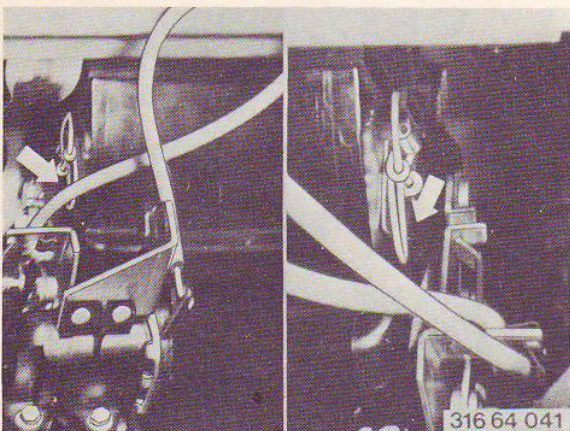
Release retaining clips and disconnect cable from water valve.





Release retaining clips and disconnect cable from temperature control relay lever.

When installing: Do not kink the control cable. Adjust the heater valve control cable – 64 11 004.

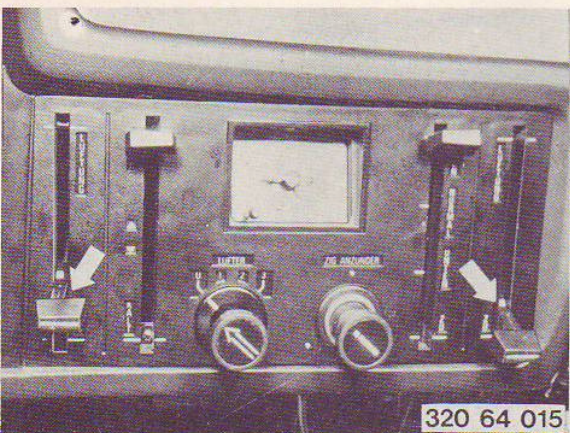


64 11 064 Both fresh-air supply control cables – adjusting

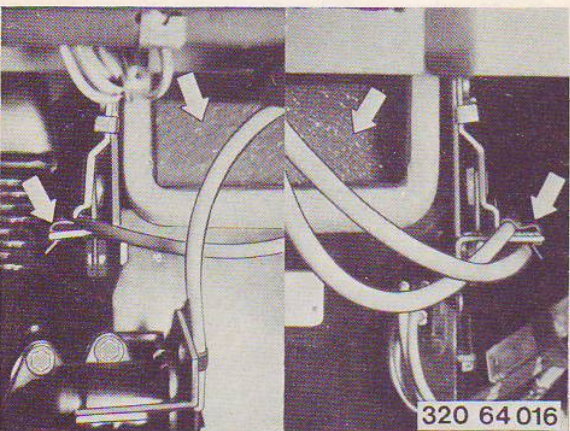
Detach and attach the lower left facia trim – 51 45 180.

Detach and attach the lower center right trim (at center tunnel compartment) – 51 45 200.

Disconnect the left and right snap fasteners. Take off the center cover.



Set the ventilation control lever to "Closed".



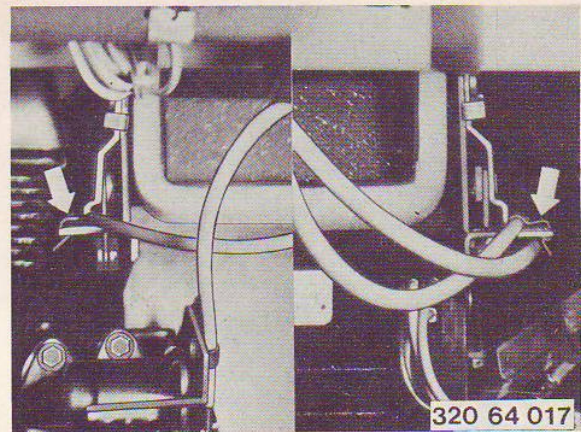
Release the retaining clips and move the outer cables until the fresh-air flaps are closed. In this position, secure the outer cables with the clips.

64 11 106 Both fresh-air supply control cables – renewing

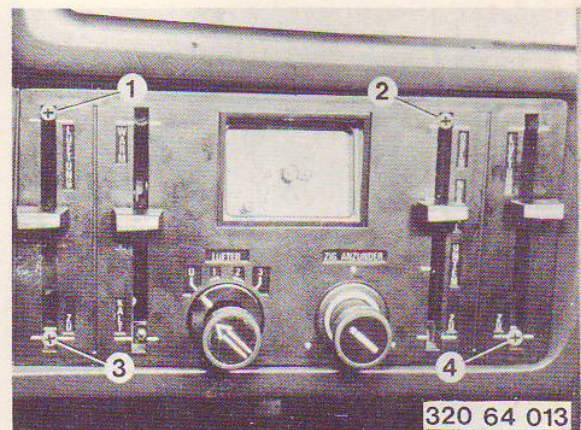
Detach and attach the lower left facia trim – 51 45 190.

Detach and attach the lower center right facia trim (at center tunnel compartment) – 51 45 200.

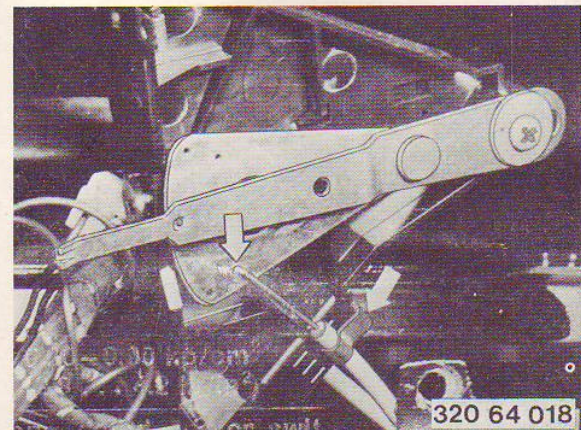
Release the retaining clips and press the cable away from the pin.



Pull off the control knobs.
Remove screws (1 to 4) and take off the switch panel.

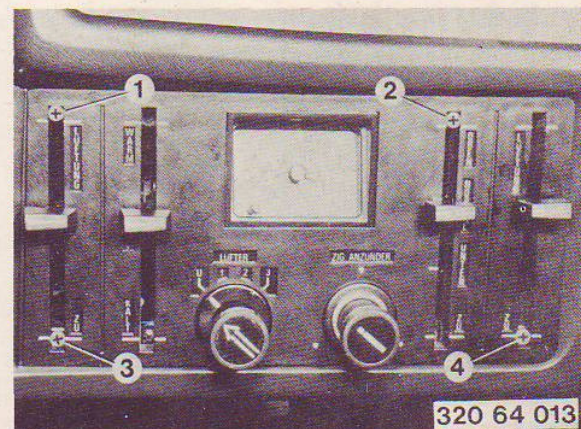


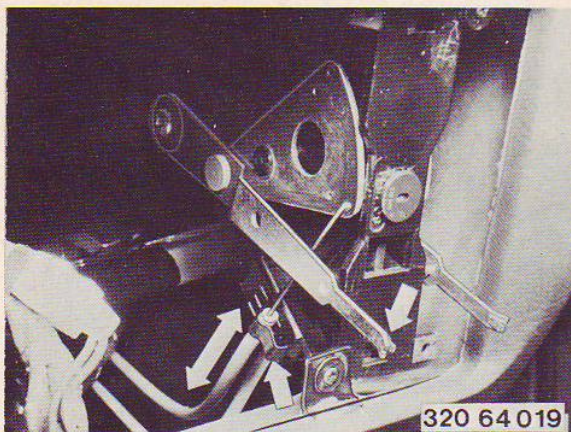
Detach the control switch.
Release the retaining clips and disconnect the cable at the control switch.
When installing: Adjust cable – 64 11 064.



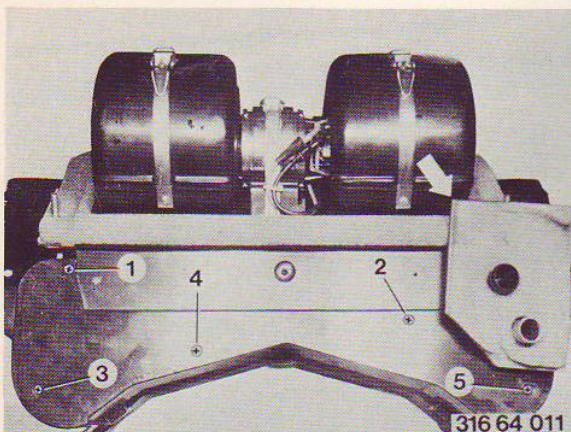
64 11 134 Cable for demister flaps (air distribution flaps) – adjusting

Pull off the control knobs.
Remove screws (1 to 4) and take off the switch panel.



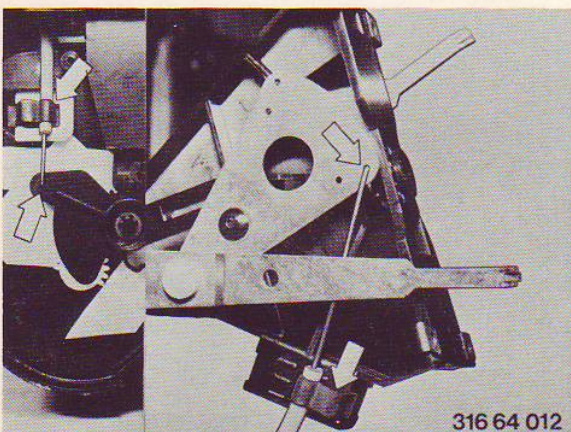


Set the control switch to "Closed".
Release the retaining clip and remove the outer cable until the air distribution flaps are closed. Secure the outer cable with the retaining clip in this position.
Checking: Switch on Stage II of the heater blower. No air should emerge from the outlets (upper or lower).



64 11 171 Cable for demister flaps (air distribution flaps) – renewing

Remove and install the heater – 64 11 200.
Pull off the foam rubber seal.
Remove bolts (1 to 5) and take off the cover.



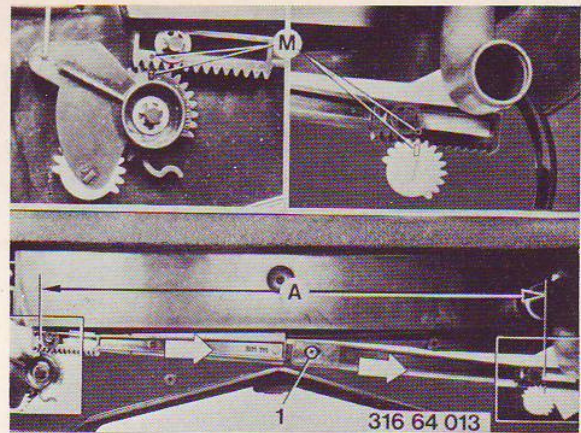
Release the retaining clips. Disconnect the cable at the toothed sector and the control lever.

When installing: Do not kink the cable. Secure the cable with a retaining clip to the heater in such a way that 4 to 5 mm (0.16 – 0.2 in) of the outer cable projects.
Adjust the cable – 64 11 134.

When renewing the toothed rack, note the following:

The marks (M) on the toothed racks and pinion must be aligned.

Dimension A = 322 mm (12.68 in) must be measured when the marks (M) are opposed. If necessary, loosen bolt (1) and move the rack to the right until the air distribution flaps are closed, then retighten the bolt.



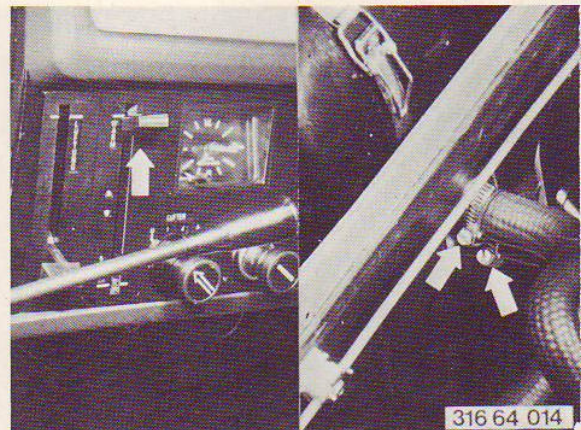
64 11 200 Heater—removing and installing

Remove and install the center tunnel compartment – 51 16 200.

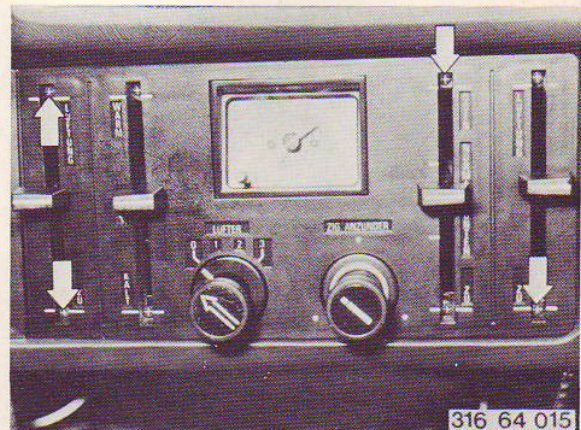
Detach and attach the lower right trim (next to the center tunnel compartment) – 51 45 200.

Detach the negative lead at the battery. Set the temperature control switch to "Hot". Partly drain the coolant and disconnect the hot water hoses. Take off the screen panel with foam rubber seal.

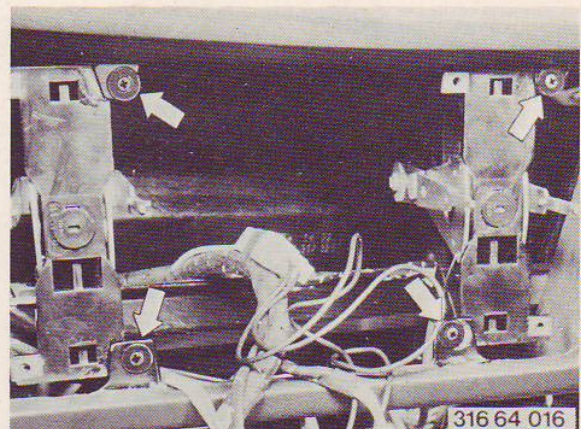
When installing: Add coolant and bleed the cooling system. Use the hot water hoses to press the screen panel firmly against the bulk-head, then tighten the hose clips.

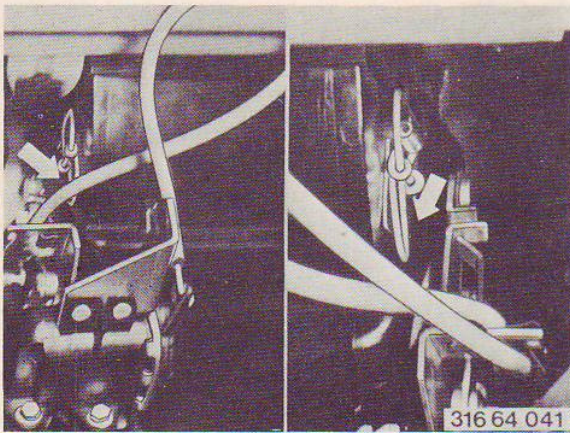


Pull off the knobs and detach the switch panel.

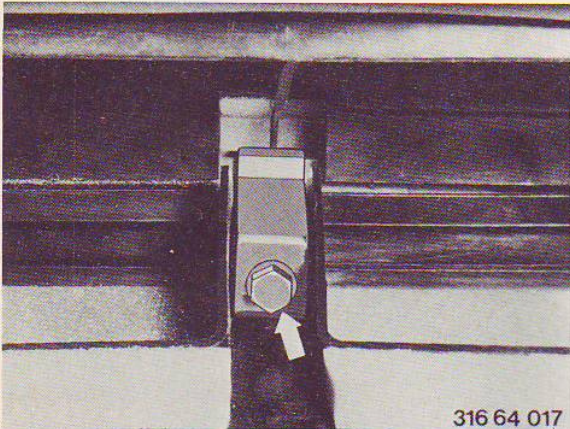


Detach the control switch.

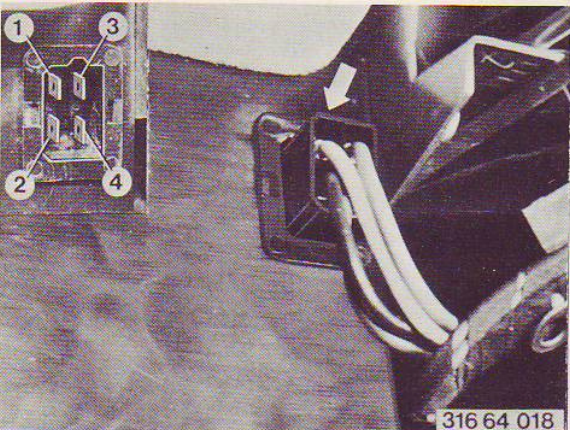




Release the left and right snap fastenings and take out the cover.

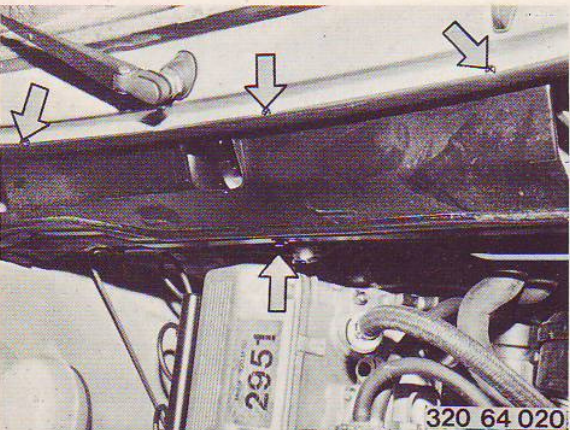


Remove the bolt and lift out the retaining angle.



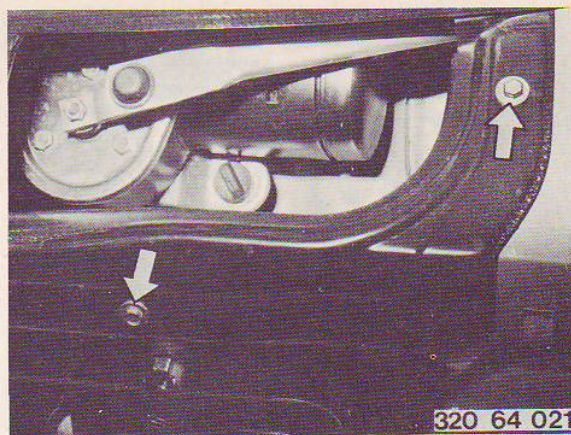
Detach the cable plug from the socket.

- 1 = Heater blower, stage 1
- 2 = Heater blower, stage 2
- 3 = Heater blower, stage 3
- 4 = Heater blower, + positive

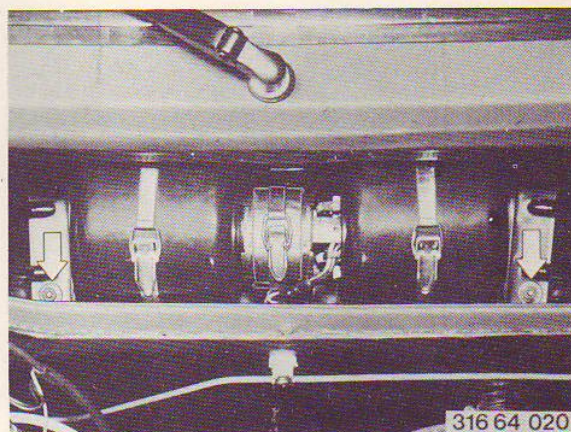


Remove the center bolts.

Unscrew the left and right bolts.
Take off the heater bulkhead.

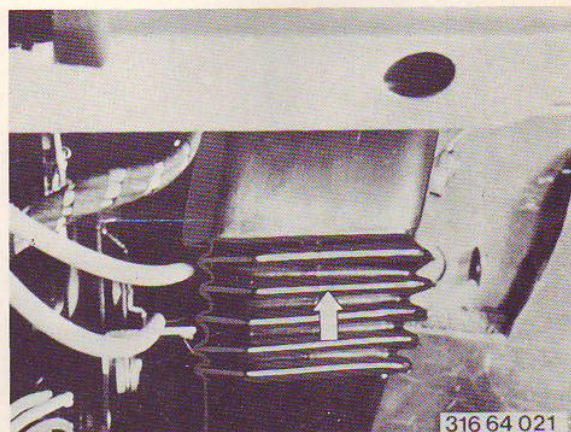


Unscrew the left and right nuts.
Take off the water deflector plates.



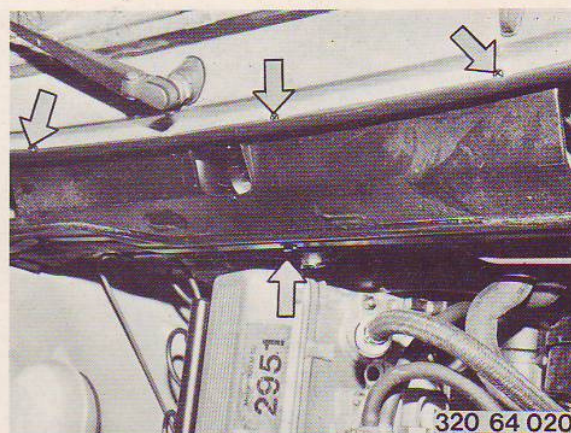
Turn the heater with control switch and remove inwards.

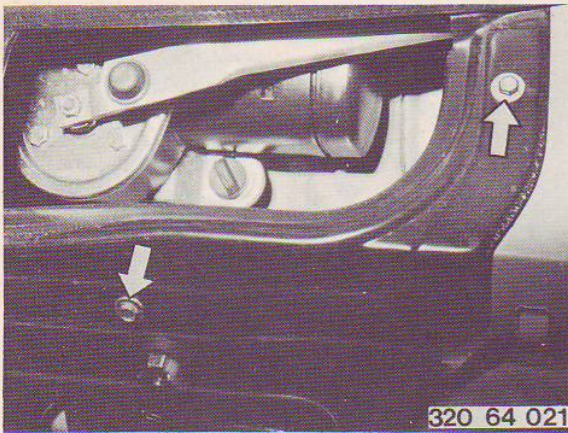
When installing: Insert the connecting section into the defroster outlets.



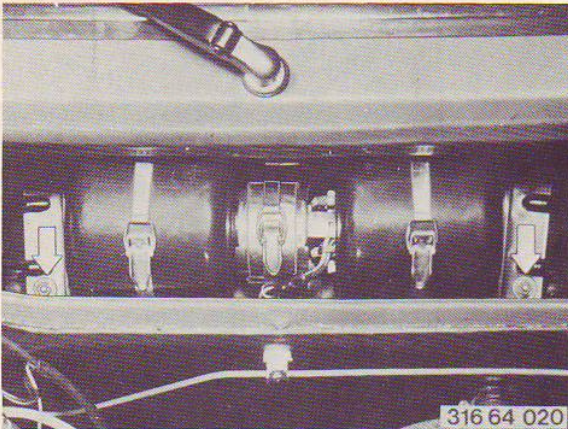
64 11 210 Heater motor – removing and installing

Unscrew the center bolts.

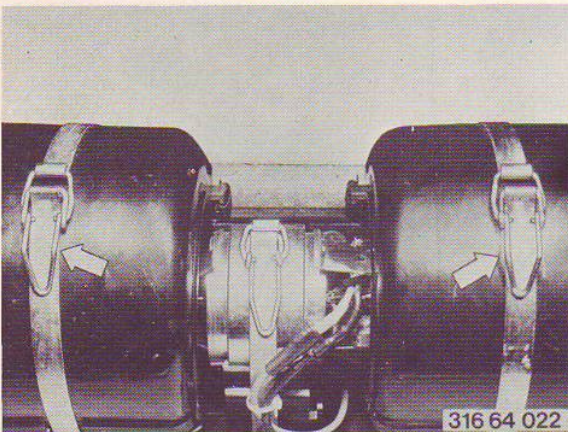




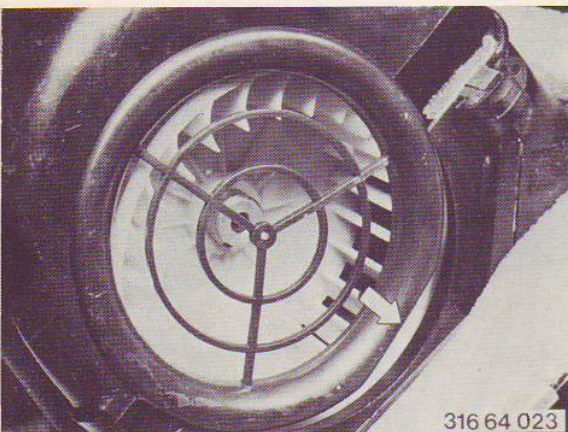
Unscrew the left and right bolts and take off the heater bulkhead.



Unscrew the left and right nuts and take off the water deflector plates.



Release the snap fastener and take out the upper section of the housing and the inlet shrouds.



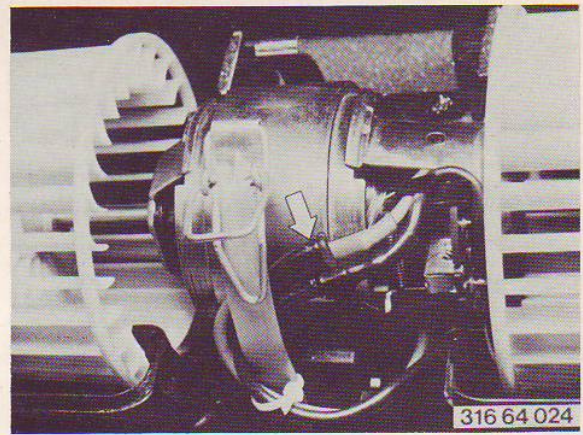
When installing: The flat section on the outside of the inlet shrouds faces downwards.

Release the snap fastener. Separate the cable connectors and lift out the motor complete with impellers.

When installing: Connect leads so that the colors match.

Warning: Do not detach the blower from the motor shaft, since the two components have been balanced as a single unit.

Renew the motor only complete with the impellers.

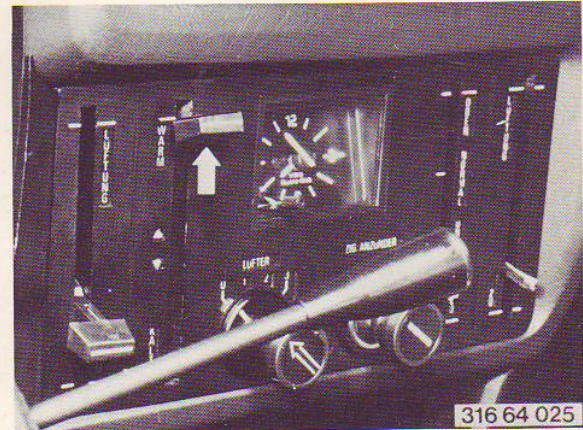


64 11 271 Heater water valve – renewing

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

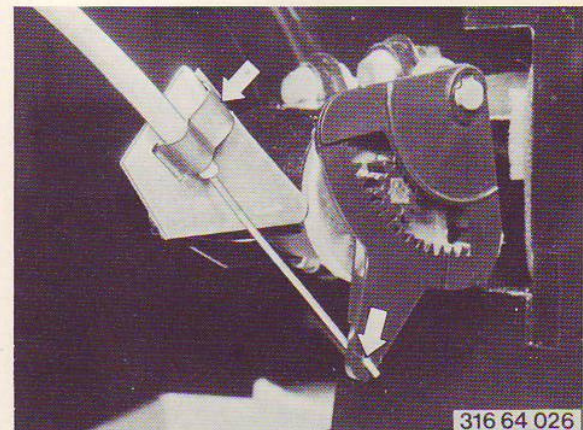
Set the temperature control switch to “Hot”.
Partly drain the cooling system.

When installing: Add coolant and bleed the system.

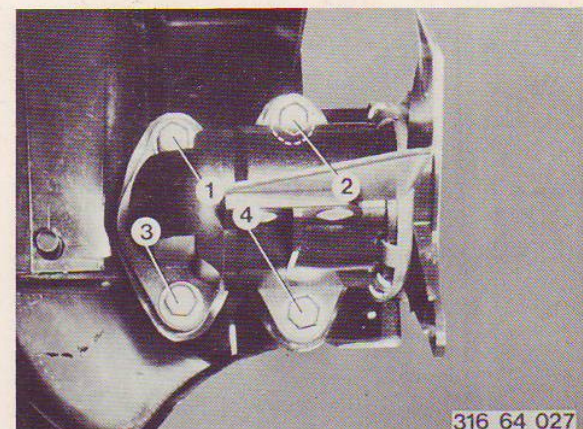


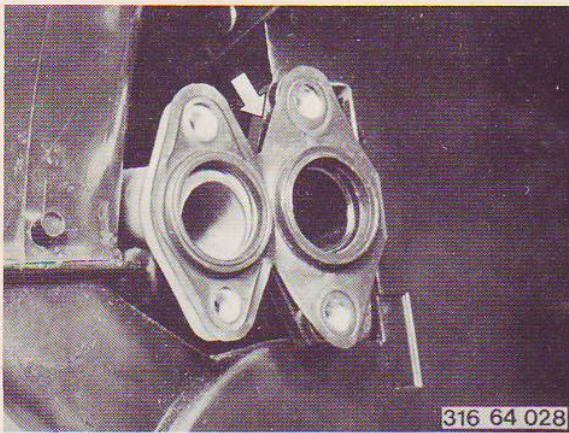
Release the retaining clips and disconnect the cable at the water valve.

When installing: Adjust cable – 64 11 004.

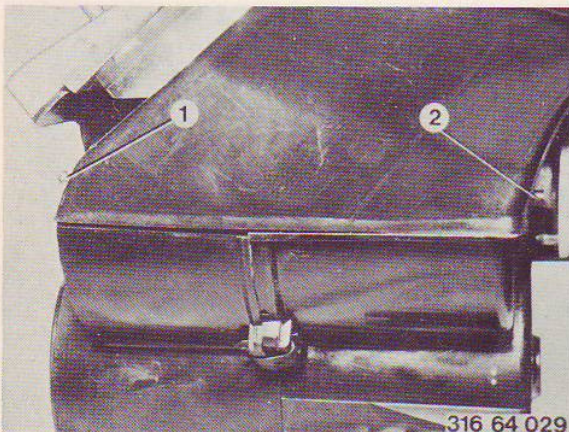


Unscrew bolts (1 to 4) and take off the water valve.



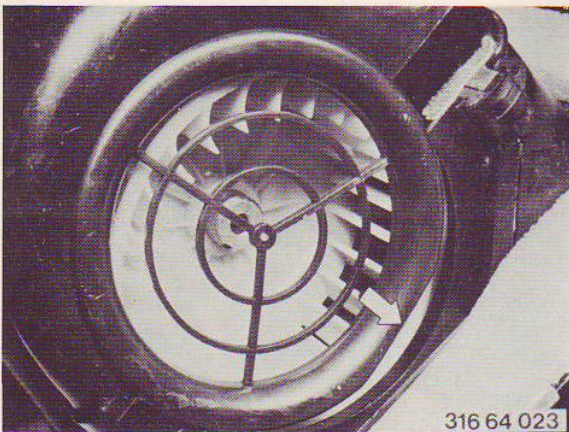


When installing: Check condition of gasket and renew if necessary.



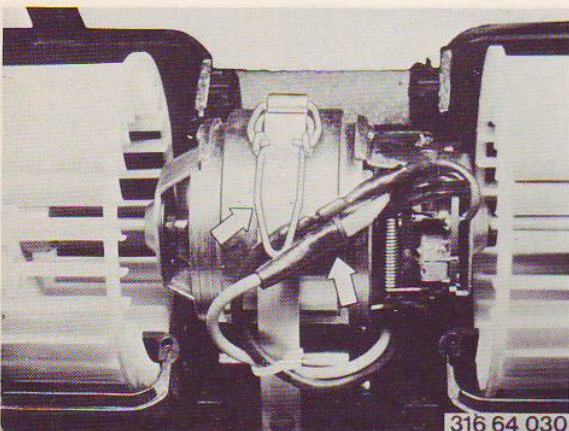
64 11 531 Heater matrix – removing and installing
– Heater removed –

*Pull out the plastic rivet (1).
Lift the connecting sections away from the retaining pins (2).*



Release the snap fastener. Remove the upper section of the housing and the outer inlet shrouds.

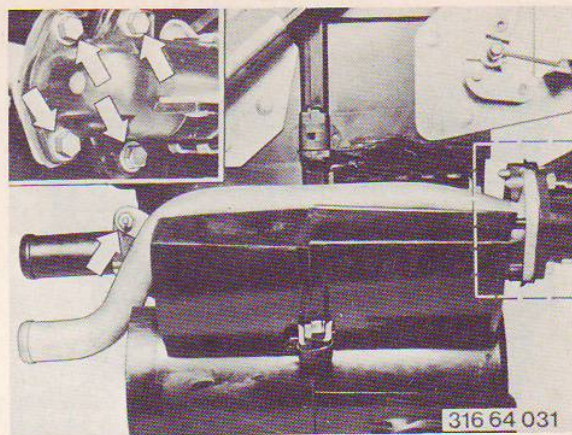
When installing: The flat section of the outer inlet shrouds faces downwards.



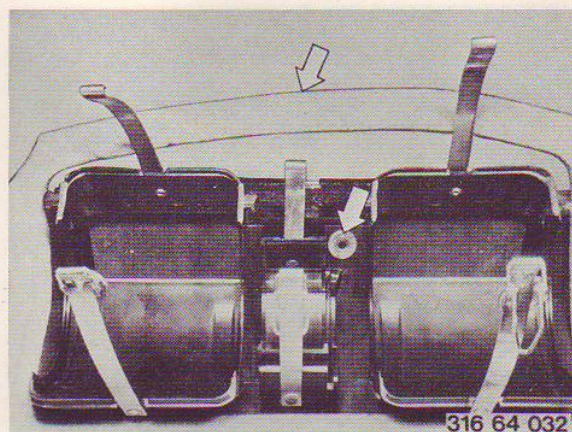
Release the snap fastener. Separate the cable connectors and lift out the blower motor.

When installing: Connect leads so that the colors match.

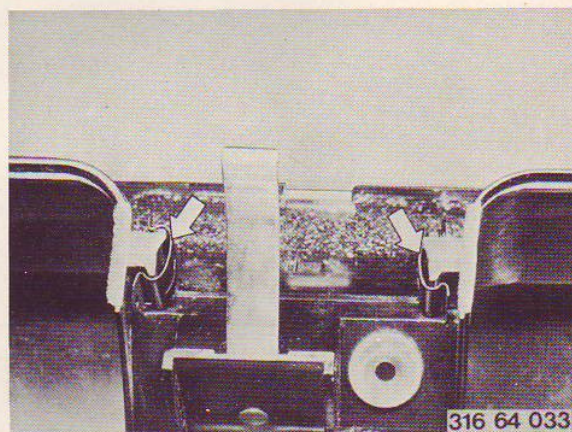
Detach the water valve from the heater matrix. Loosen the clip and take off the water valve with the supply pipe.
When installing: Check condition of gasket and renew if necessary.



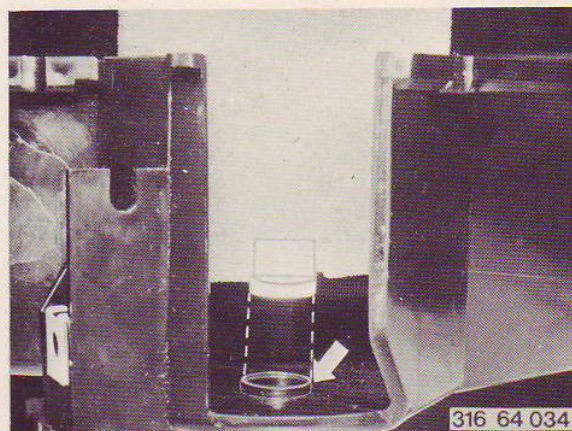
Partly pull off the foam rubber seal. Loosen the cable strap and push the cable inwards through the rubber grommet.

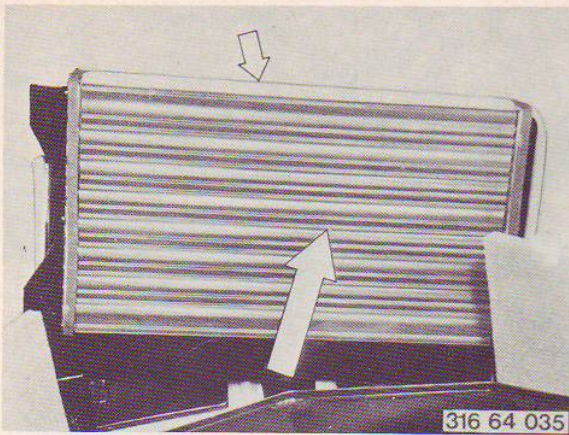


Loosen the clips and separate the two halves of the housing.
When installing: Make sure that the clips are correctly seated.

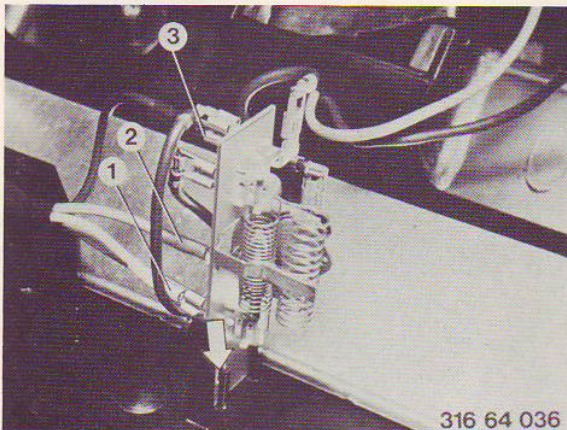


When installing: Make sure that the air distribution flap pivots are located in the pivot holes.





Take out the heater matrix.
When installing: Attach a new foam rubber surround with a suitable adhesive.

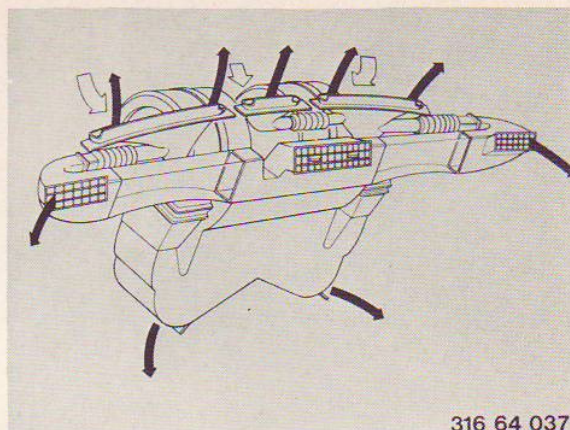


64 11 591 Heater motor resistor – renewing
– Heater stripped –

Remove the resistor from its holder.
Pull off the leads.

1 = yellow
2 = green
3 = black

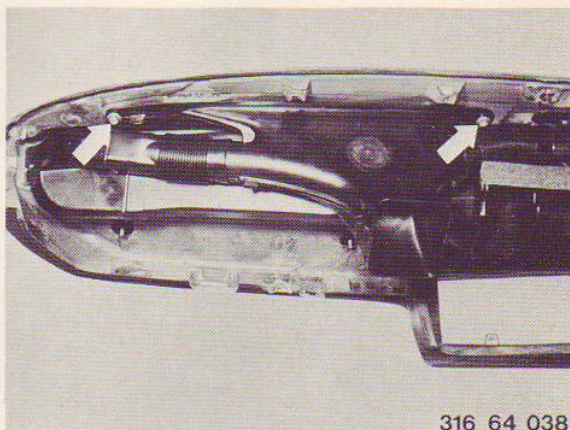
Layout of demisting outlets and hoses
White arrows = fresh air
Black arrows = heated air



316 64 037

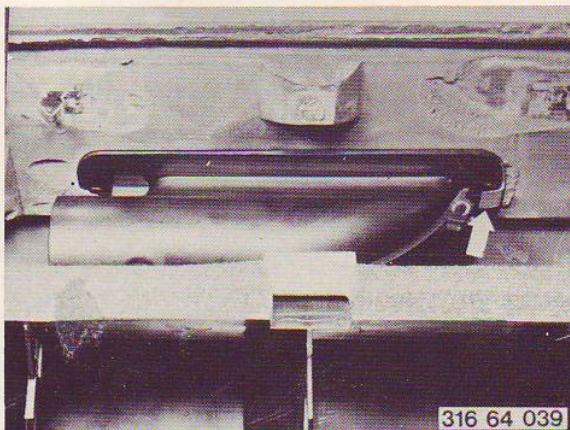
64 22 040 All demisting outlets – removing and installing

Remove the upper facia trim – 51 45 030.
Remove the nuts, pull off the hoses and detach the right demisting outlet.



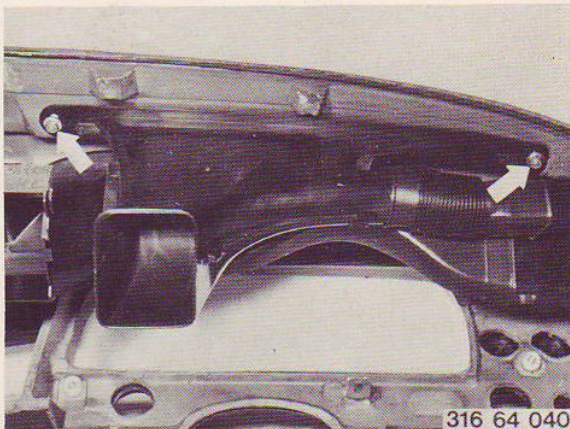
316 64 038

Bend up the metal tongues and take off the center demisting outlet.



316 64 039

Remove the nuts, detach the hose and remove the left demisting outlet.



316 64 040

Radio- und Sondergeräte

Radio and accessories

Radio et accessoires

Radio e strumenti speciali

Radio y accesorios

Radio och specialtillbehör

Radiö en accessoires

65 Radio and Special Equipment

6511000	Radio with loudspeaker and interference suppression (mono and stereo) – installing	Page 65-11/1
6521100	Retracting antenna – installing	21/1

65 11 000 Radio with loudspeaker and interference suppression – installing

– mono and stereo –

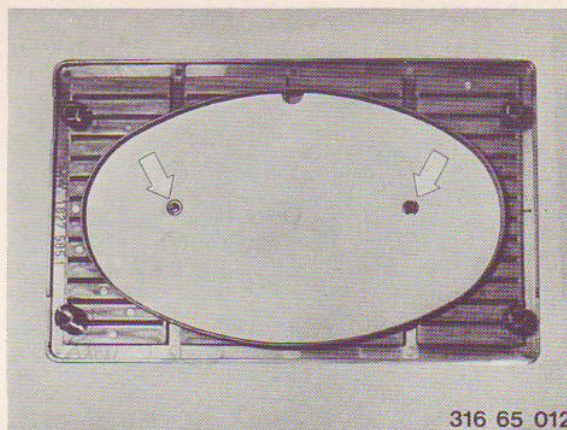
Disconnect the negative lead from the battery.

Install the antenna – 65 21 100.

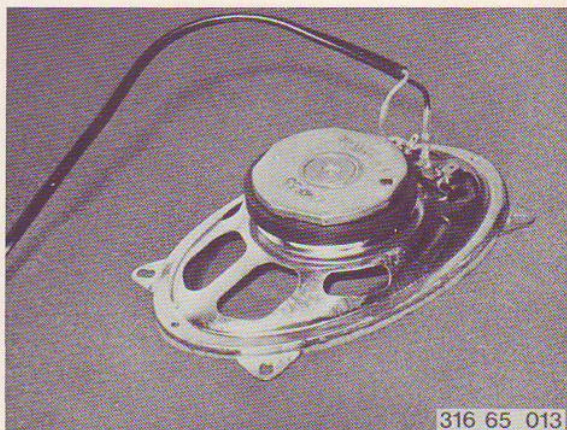
Remove and install the center stowage compartment – 51 16 200.

Mono loudspeaker:

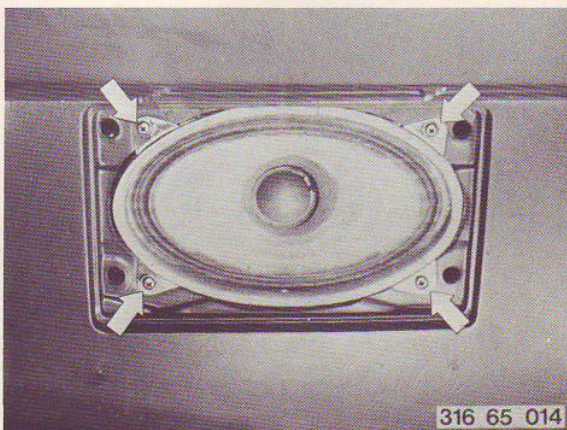
Lift out the loudspeaker grille and cut away the covering with a knife.



Plug the leads in at the loudspeaker.



Insert the loudspeaker into the cutout provided and screw down firmly. First run the lead to the radio installation point. Install the loudspeaker grille.



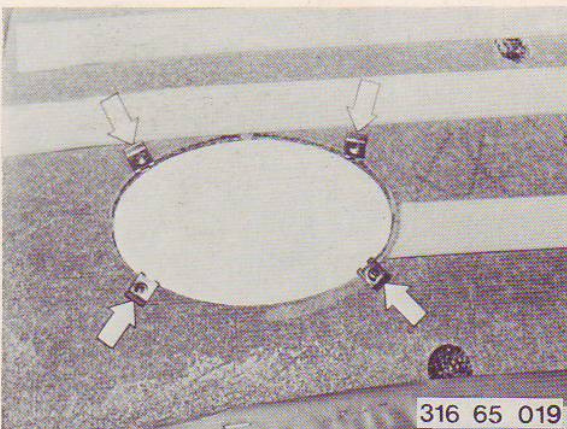
Stereo loudspeakers:

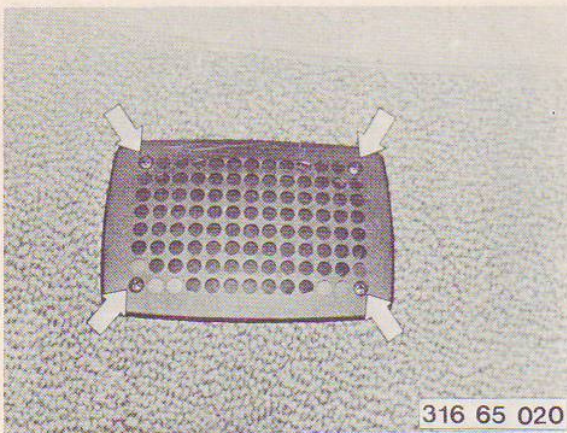
Remove and install the rear seat and seat back – 52 20 000.

Pull the rear window shelf out forwards.

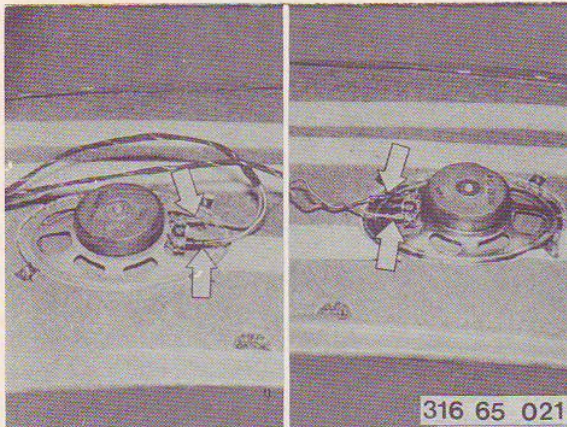
Cut away the pre-formed holes for the loudspeakers.

Insert sheet-metal nuts at the holes provided.





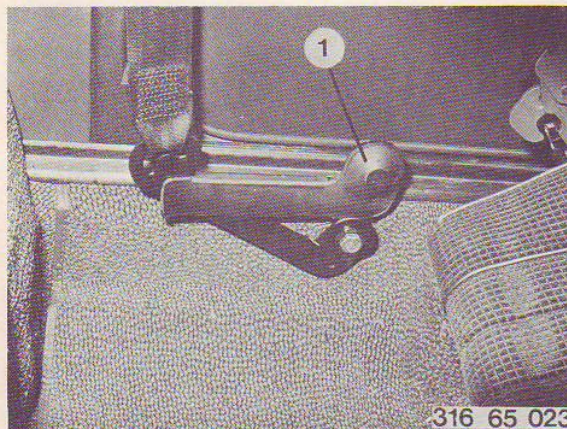
Insert loudspeakers from the top and secure screen panels with screws.



Connect cables to both loudspeakers.

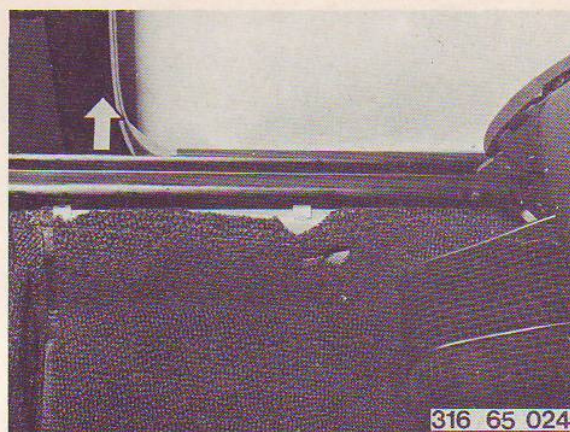


Install the rear window shelf and run the leads under the shelf and forwards along the left wiring harness.



Take off the cover (1) and detach the seat belt at the bottom.
Important: note installed sequence of components.

Lift the cover strip away from its clips.
Pull off the floor carpet along the wiring harness. Install the loudspeaker leads as far as the radio installation point.
When installing: use new clips.



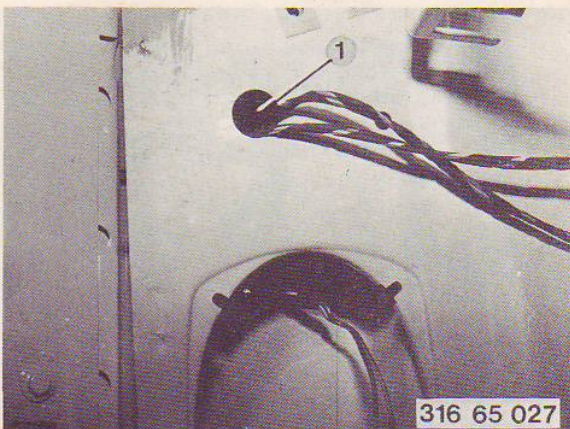
Pull away the edge protector and the door pillar trim.
Cut away the door pillar trim to suit the cutout indicated.

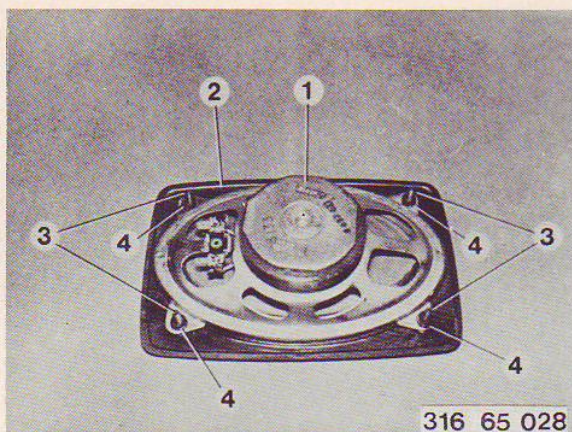


Insert sheet-metal nuts in the cutout.



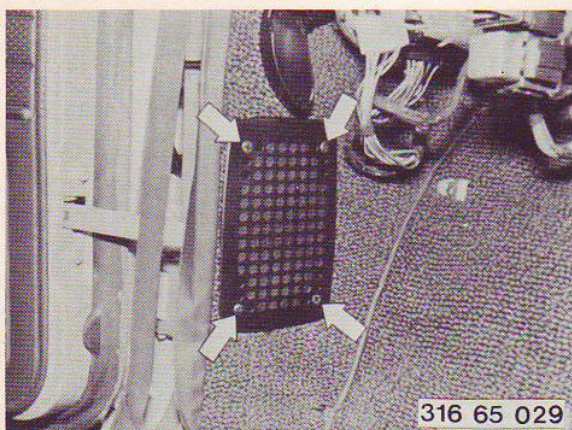
Run the left front loudspeaker lead (coded yellow) behind the gusset plate trim and through the existing hole (1) to the loudspeaker cutout. Right loudspeaker is coded blue.





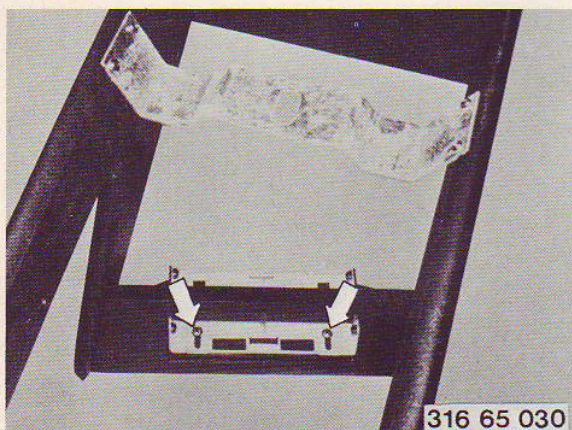
Pre-assemble loudspeaker (1), screen (2) with screws (3) and spacing washers (4).

316 65 028



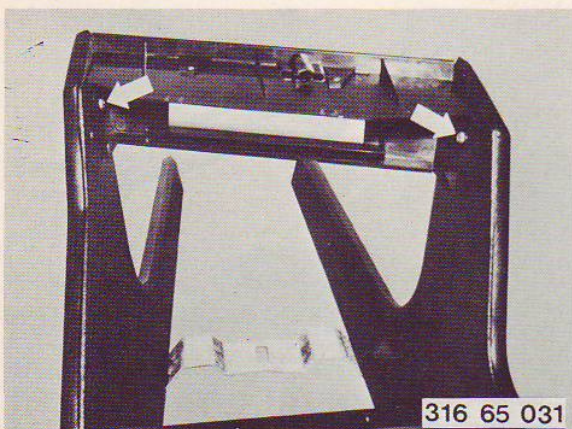
Attach the loudspeaker leads and install the loudspeaker.
Install the right loudspeaker as described.

316 65 029



Installing radio receiver (mono or stereo):
Remove screws from center stowage compartment and push off holder for ashtray.

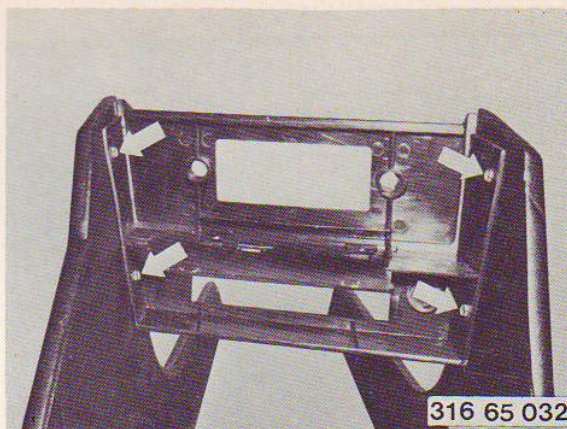
316 65 030



Remove screws and detach screen panel from stowage compartment.

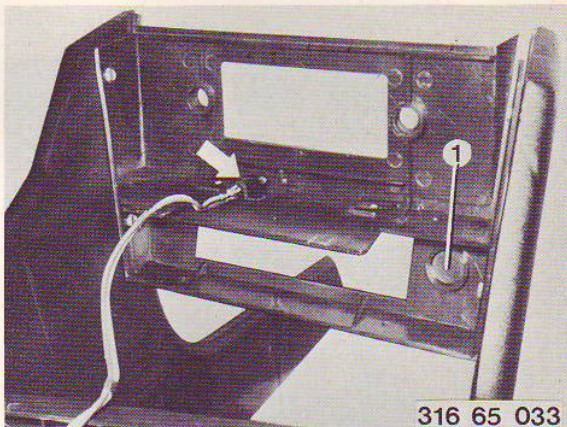
316 65 031

Attach screen panel from installation kit to center compartment.

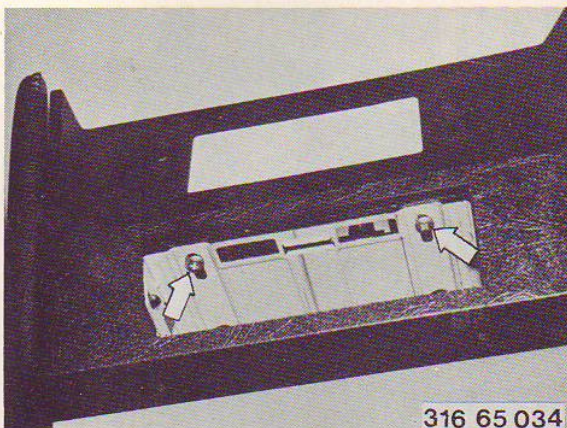


Insert bulb holder into screen panel and turn through 180°.

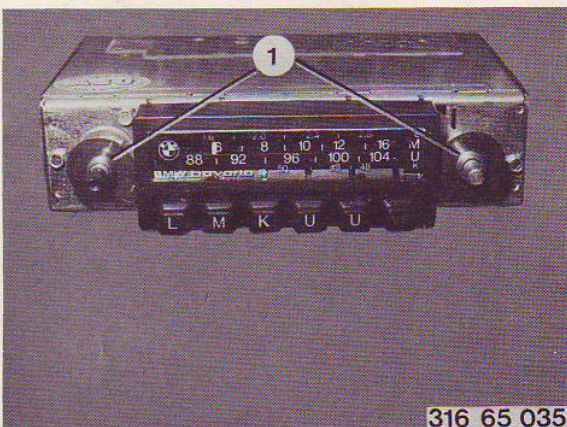
Insert bulb with holder. For stereo radio, press out center of hole (1) and install balance control.



Attach the ashtray holder previously removed to the new radio screen panel.



Stereo/Mono radio: place washers (1) on to unit.

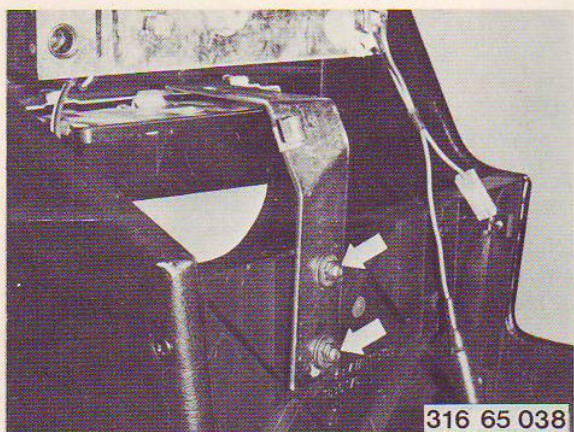




Install radio in screen panel. Tighten nuts (1) with socket wrench (2) from installation kit.



Install tone control on left and decorative disc on right, and push on knobs. With stereo radio attach lever 'Mono/Stereo' instead of decorative disc.

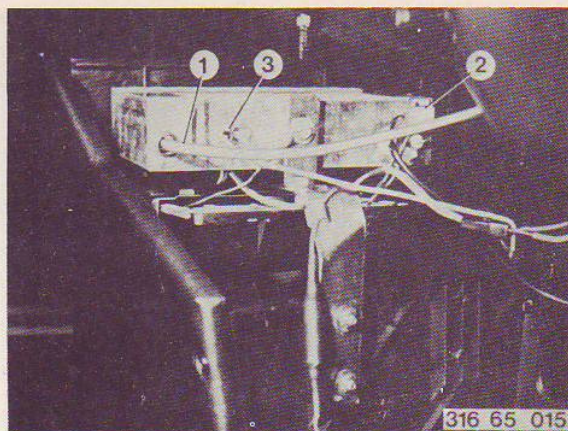


Attach radio support to center compartment.



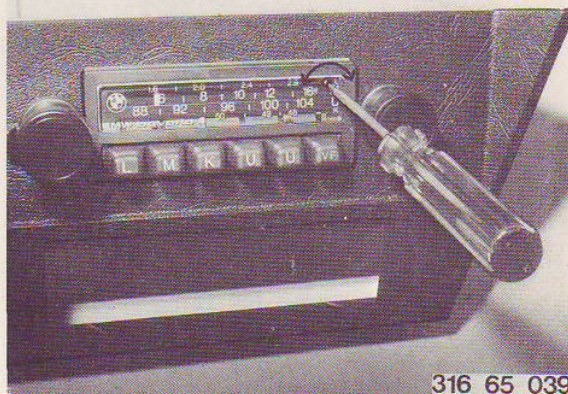
Secure angle bracket to support and to radio. Secure earth (ground) lead from ashtray light (1) to radio at the same time.

Attach lead with flying fuse from installation kit to radio and connect to existing plug board. Connect antenna cable (1), loudspeaker cable (2) and earth (ground) cable (3) to unit. Connect cable from ashtray lighting to same color terminal (lead) on existing plug board.



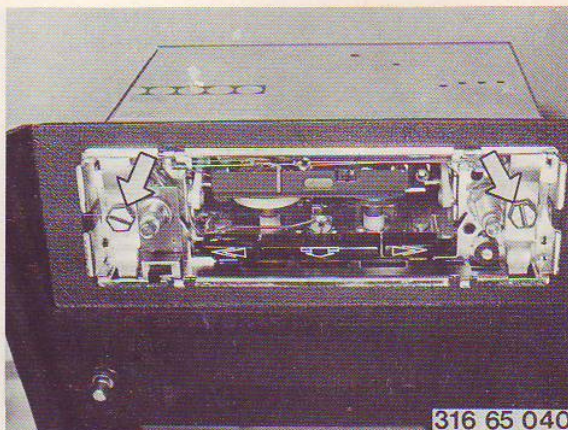
316 65 015

Reconnect negative lead at battery and check operation. Install the center compartment and trim the antenna in accordance with the manufacturer's instructions.



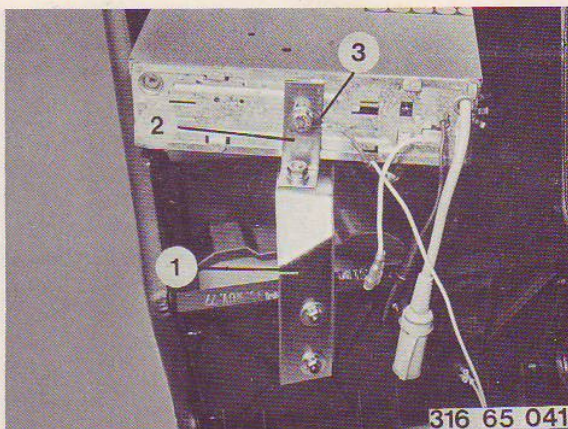
316 65 039

Stereo radio: install the unit in the screen panel and secure with holders. Important: holders must be properly centered.

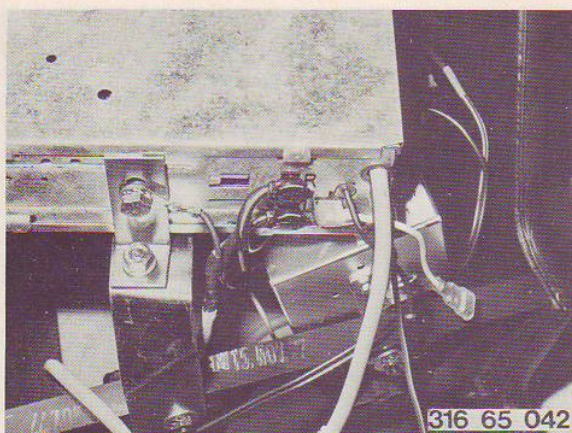


316 65 040

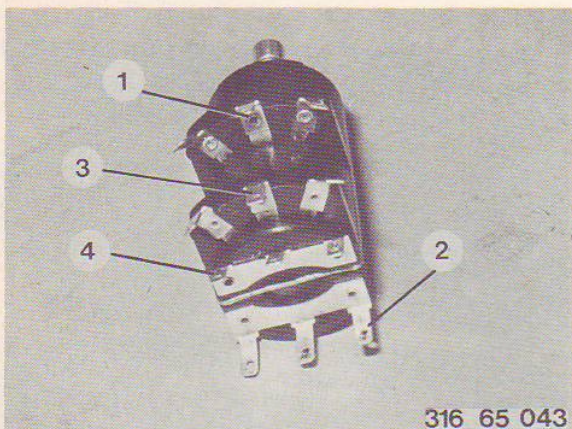
Attach support strut (1) and angle bracket (2) to radio. Screw earth (ground) lead (3) for ashtray lighting on to radio at the same time.



316 65 041

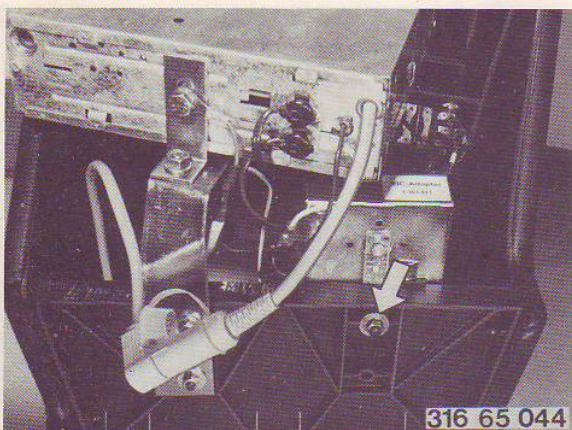


Connect blue coded loudspeaker lead to radio terminal R and yellow coded loudspeaker lead to radio terminal L.

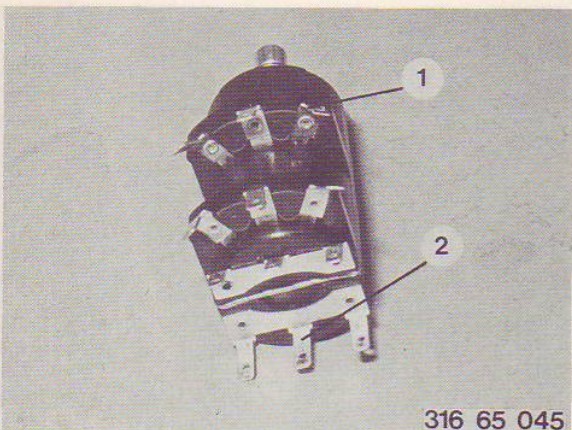


Connect loudspeaker leads to balance control as shown in circuit diagram.

1 = blue Channel II (right)
2 = brown
3 = yellow Channel I (left)
4 = brown



Attach electronic suppression unit to center compartment.
Connect cables to radio.



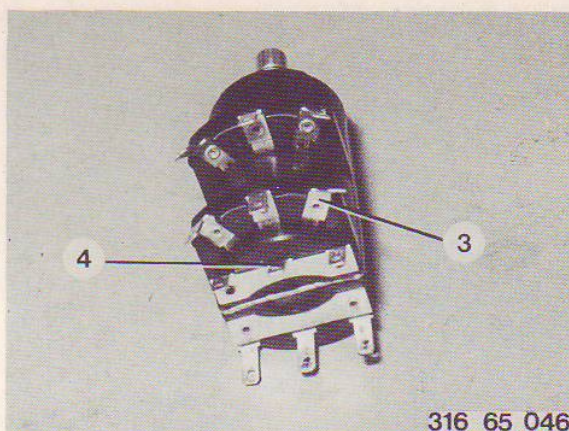
Insert center compartment into car.
Attach blue/red leads from front loudspeakers to balance control.

1 = blue/red
2 = brown

Attach the yellow/red leads from the left front loudspeaker to the balance control.

3 = yellow/red

4 = brown



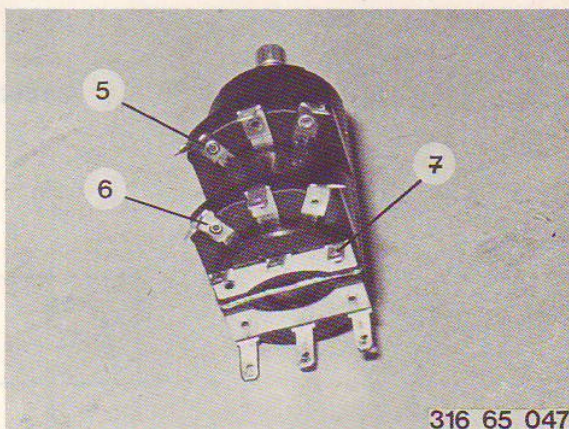
316 65 046

Attach the leads from the rear loudspeakers to the balance control.

5 = blue/black, 6 = yellow/black,

7 = brown.

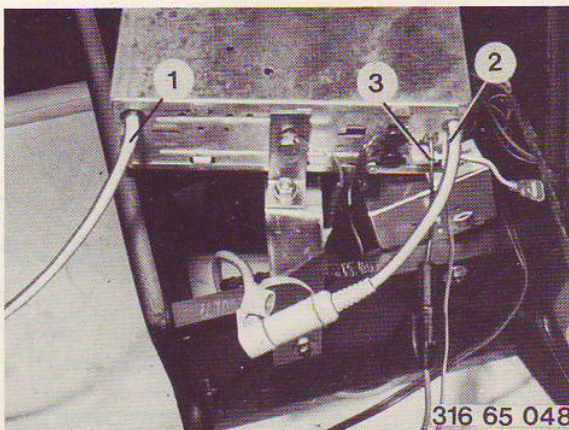
Secure all cables to support strut with insulating tape.



316 65 047

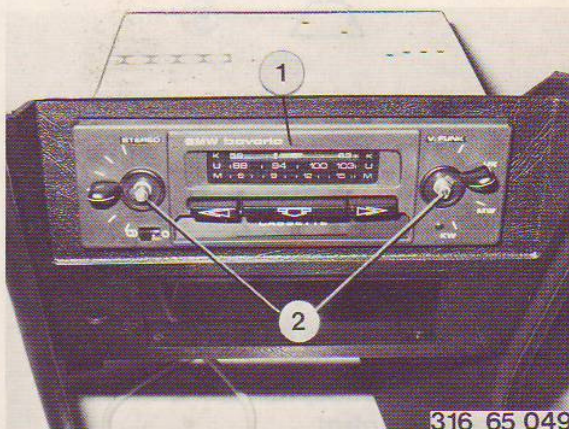
Connect lead with flying fuse (3) from installation kit to radio and to existing plug board. Connect antenna cable (1) and earth (ground) cable (2) to unit.

Connect cable from ashtray light to same color code position on existing plug board.

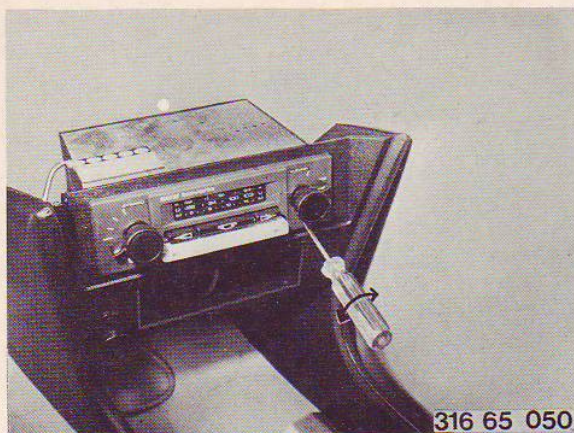


316 65 048

Install the radio screen panel (1) and press into spring clips. Insert switch lever (2) into lock. Push on knobs.



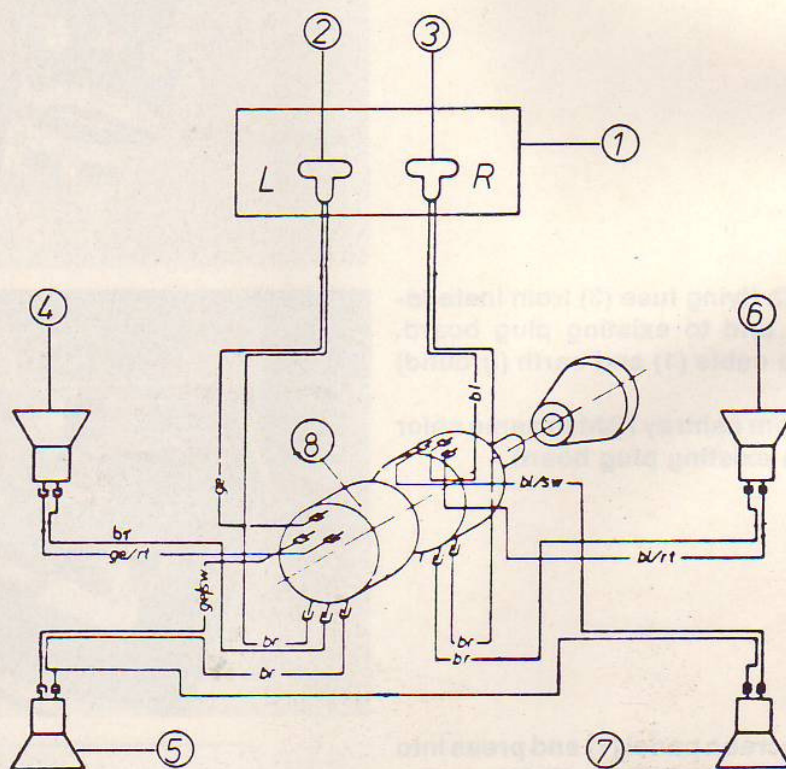
316 65 049



Connect negative lead to battery and check operation.
Install the center stowage compartment and trim the antenna in accordance with the manufacturer's instructions.

316 65 050

Circuit diagram

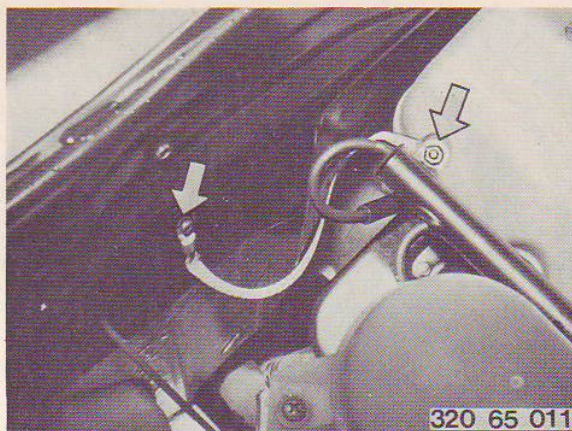


320 65 001

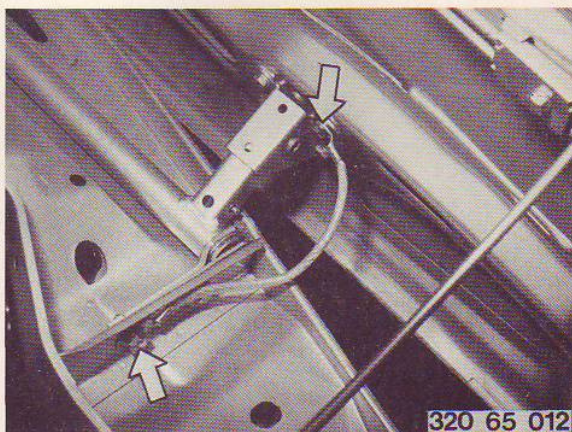
- ① Amplifier stage
- ② Channel I (L)
- ③ Channel II (R)
- ④ Front left loudspeaker
- ⑤ Rear left loudspeaker
- ⑥ Front right loudspeaker
- ⑦ Rear right loudspeaker
- ⑧ Balance control

Color codes:
br = brown
bl = blue
bl/rt = blue/red
bl/sw = blue/black
ge = yellow
ge/rt = yellow/red
ge/sw = yellow/black

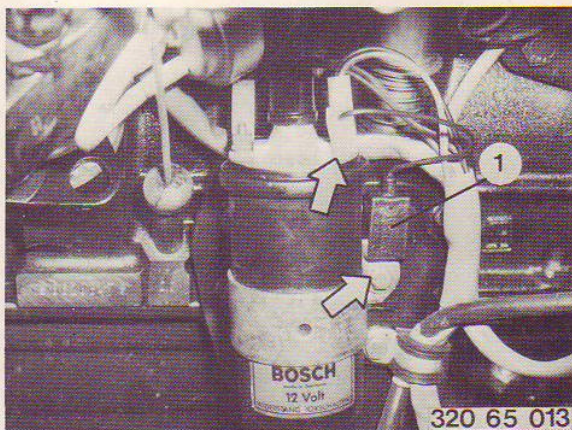
**Install the interference suppression:
Install earth (ground) lead between engine and
body.**



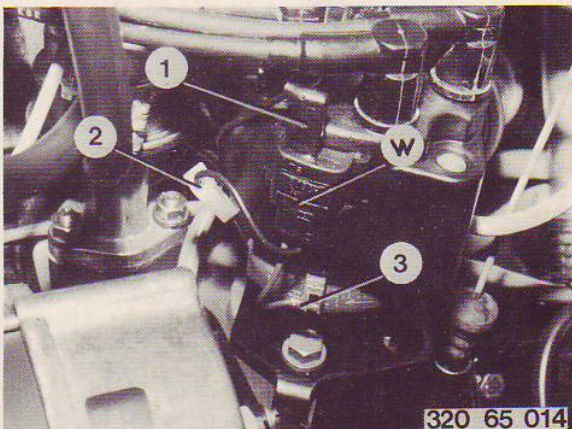
**Install earth (ground) lead between front bulk-
head and engine compartment lid.**

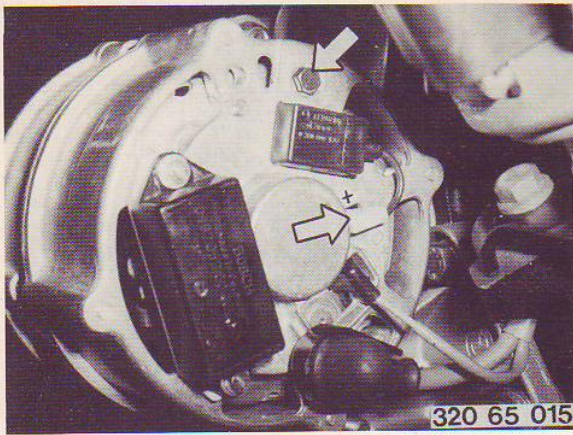


**Attach resistor (1) to coil holder and to coil ter-
minal 15.**



**Insert resistor W in distributor cap.
Detach cable (1) at distributor and connect to
top of resistor.
Connect black (2) and brown (3) cables from
resistor to distributor.**





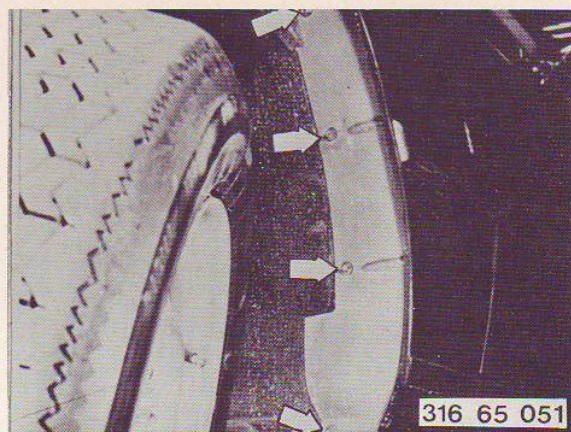
Attach resistor to alternator and connect lead to + terminal.

65 21 100 Retracting antenna – installing

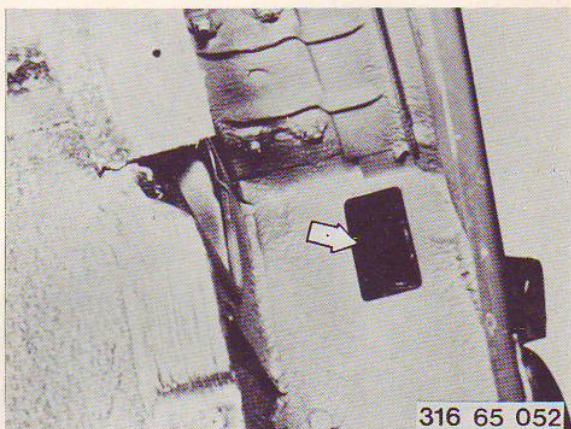
Detach and attach lower left fascia trim – 51 45 180.

Remove cover plate in wheel arch.

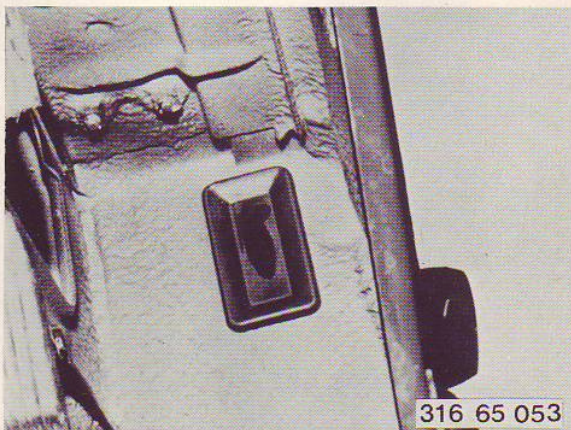
When installing: make sure that the rubber seal is located correctly.



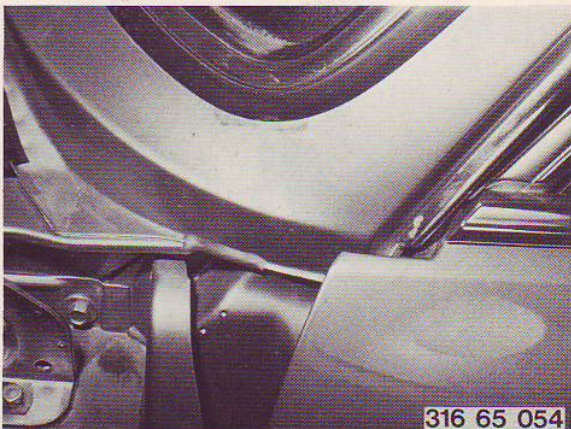
Press out the pre-formed section.

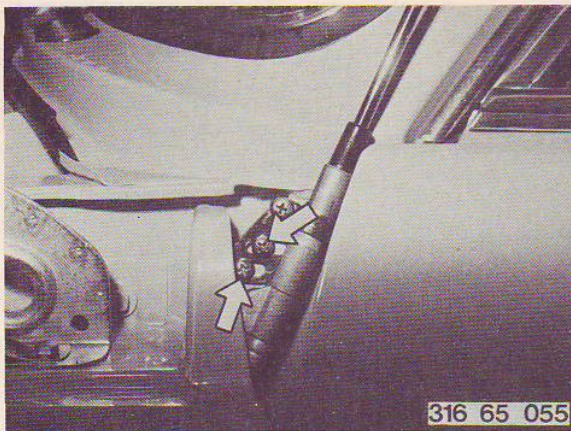


Insert the grommet for the antenna base in the cutout.

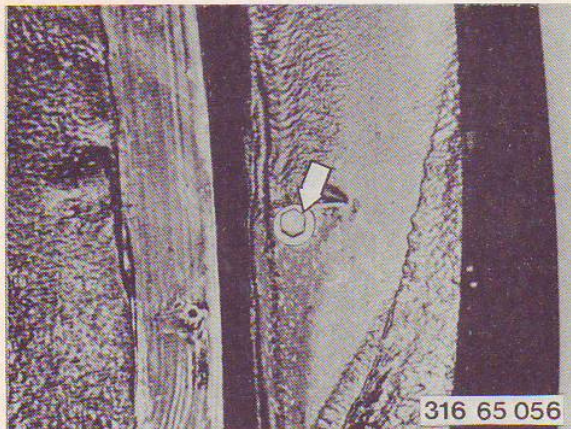


Drill 2 holes 3.2 mm (0.125 in) in diameter at the points where punch marks have been provided.





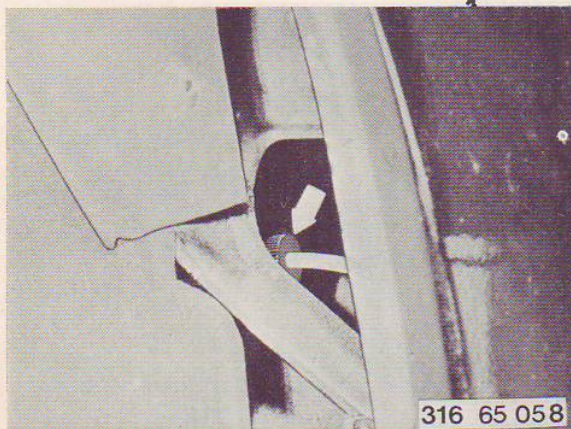
Insert the antenna from the top and fasten down lightly at first. Align, then tighten the bolts.



Remove the bolt.

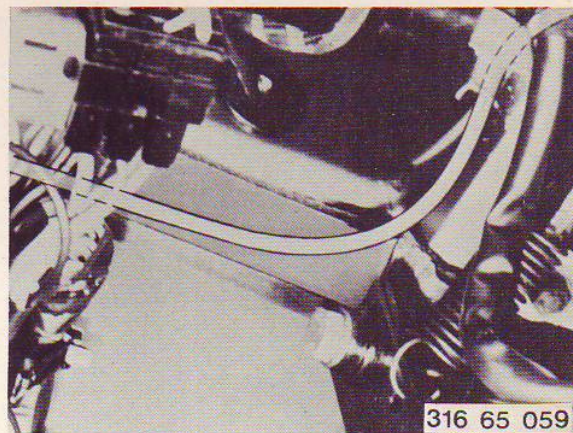


Push the antenna holder over the antenna, and secure. Use bolt from installation kit to secure antenna to side panel, and align.



Knock out the pre-formed cutout and run the antenna cable through to the inside. Push the cable grommet over the antenna cable and press in from the outside.

Run the antenna cable along the wiring harness to the radio installation point. Trim the antenna in accordance with the manufacturer's instructions.



Ausrüstungsteile und Zubehör für Motor und Fahrgestell

Equipment parts and accessories for engine
and chassis

Pièces d'équipement et accessoires pour
moteur et chassis

Equipaggiamento accessori motore e
autotelaio

Accesorios para motor y chasis

Onderdelen en accessoires voor motor
en chassis

Utrustningsdetaljer

71 Equipment and Accessories for Engine and Chassis

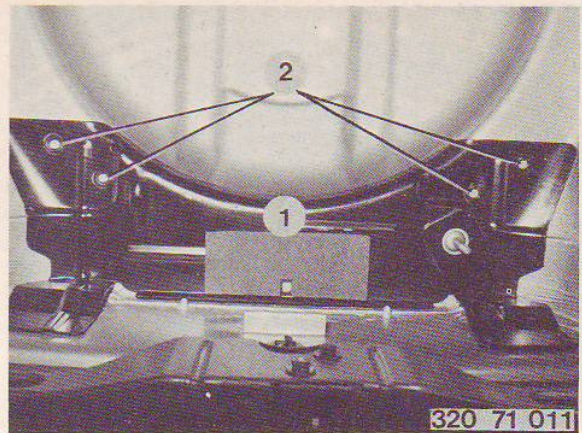
7160010 Trailer coupling complete with electrical connections – installing Page 71-60/1
Circuit diagram for trailer coupling 60/11

71 60 010 Trailer coupling complete with electrical connections – installing

Remove the spare wheel cover in the luggage compartment and take out the jack and the spare wheel.

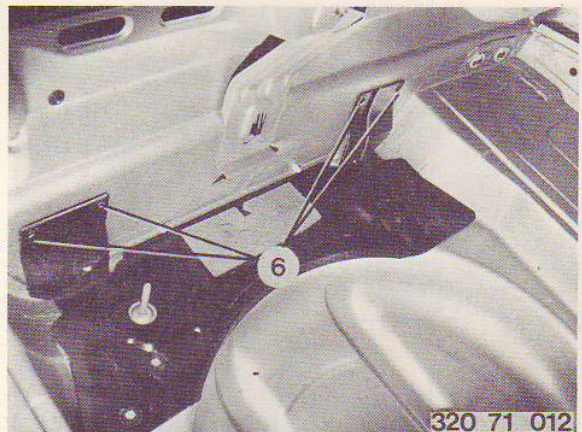
Carefully pull away the foam rubber surround for the jack.

Place the luggage compartment plate (1) in the center of the compartment. Mark the positions of the retaining holes (11 mm [0.43 in] diameter) (2) and drill through the floor.



Mark out and drill 4 holes (6) of 9 mm (0.35 in) diameter on the rear end panel.

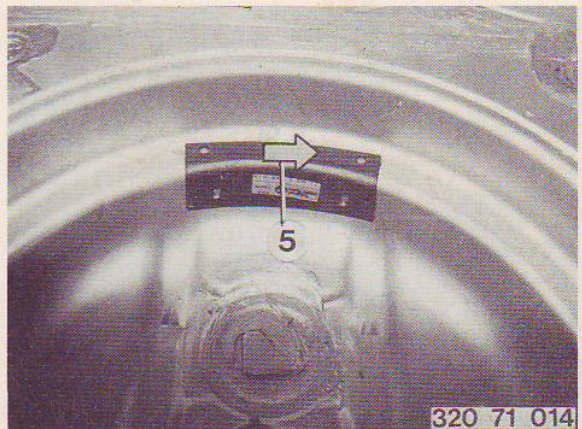
Apply zinc powder paint to the holes.

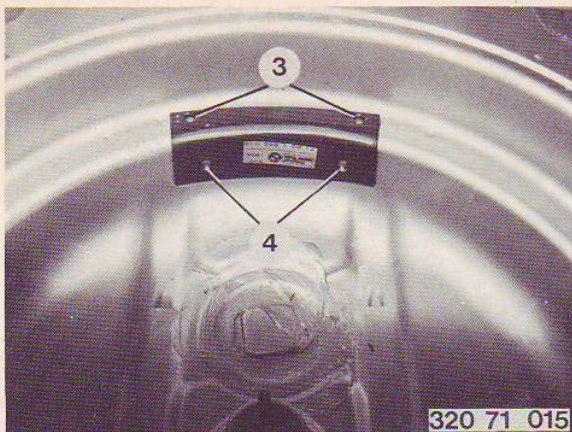


Offer up the plates to the rear end panel below the bumper and bolt lightly to the plate inside the luggage compartment. The weld nuts must face upwards.

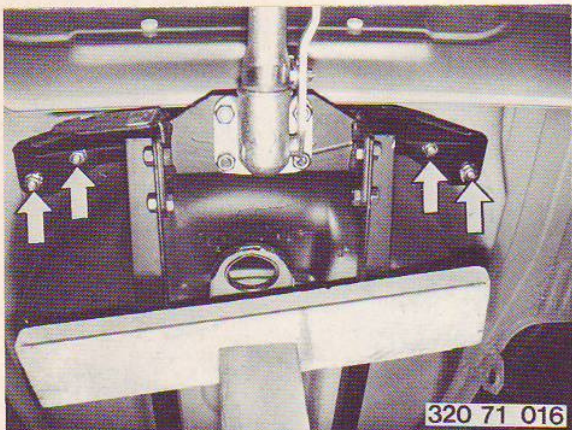


Place the front insert plate (5) against the spare wheel well, align centrally with the longitudinal swages in the spare wheel well, then shift 10 mm (0.4 in) to the right.





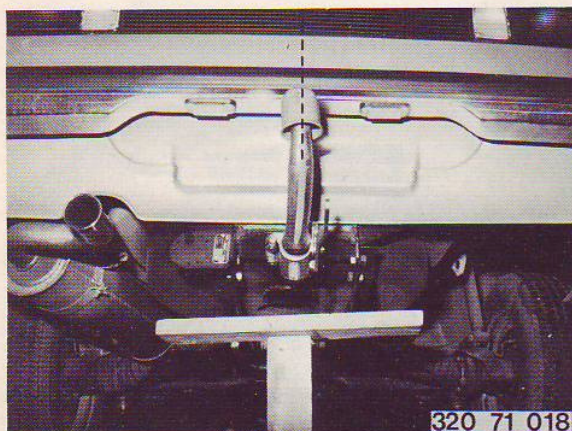
Mark the attachment holes and drill from the top:
11 mm (0.43 in) dia. (3), and to the front: 9 mm (0.35 in) dia. (4). Apply zinc powder paint to the holes.



Offer up the trailer coupling from below to the luggage compartment floor and bolt to the plate (1) inside the compartment without finally tightening.



Bolt the trailer coupling to the front insert plate (5) without tightening.

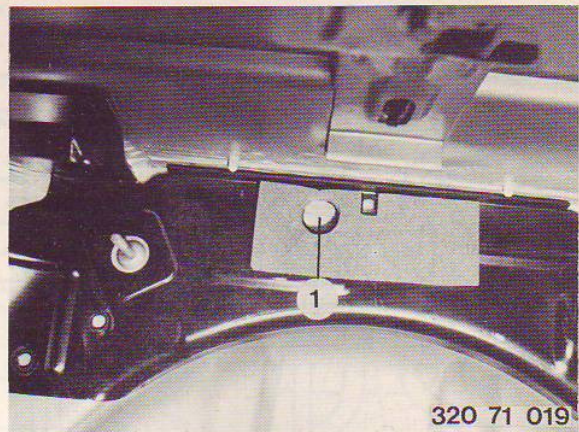


Align the trailer coupling and tighten all bolts firmly.

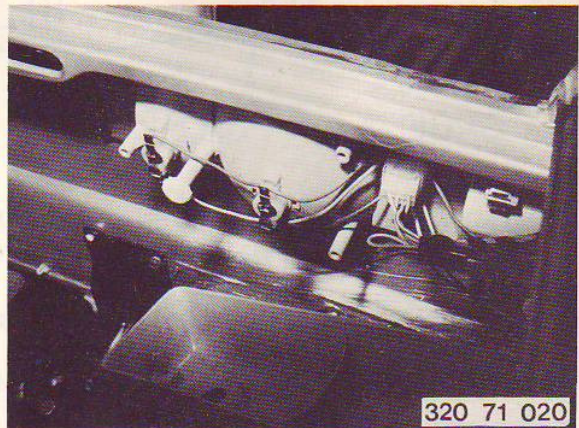
Make the electrical connections:

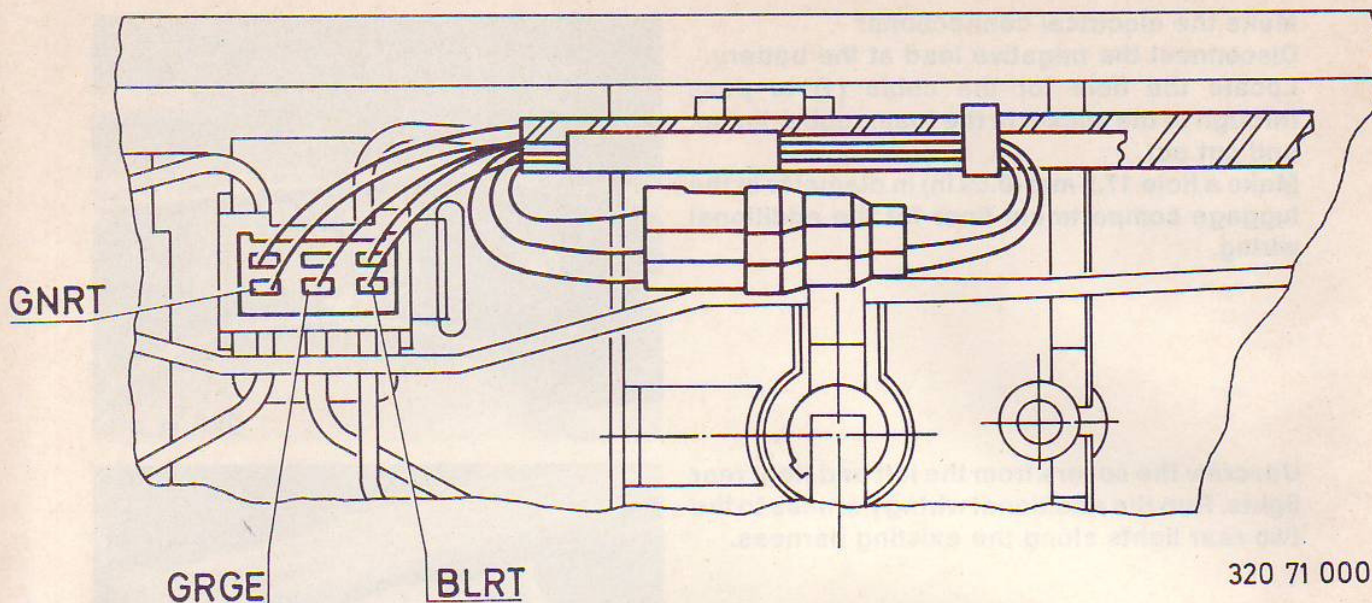
Disconnect the negative lead at the battery. Locate the hole for the cable (1) to pass through to the socket in the foam rubber lining, and cut out.

Make a hole 17.5 mm (0.69 in) in diameter in the luggage compartment floor for the additional wiring.



Unscrew the covers from the left and right rear lights. Run the additional wiring harness to the two rear lights along the existing harness.

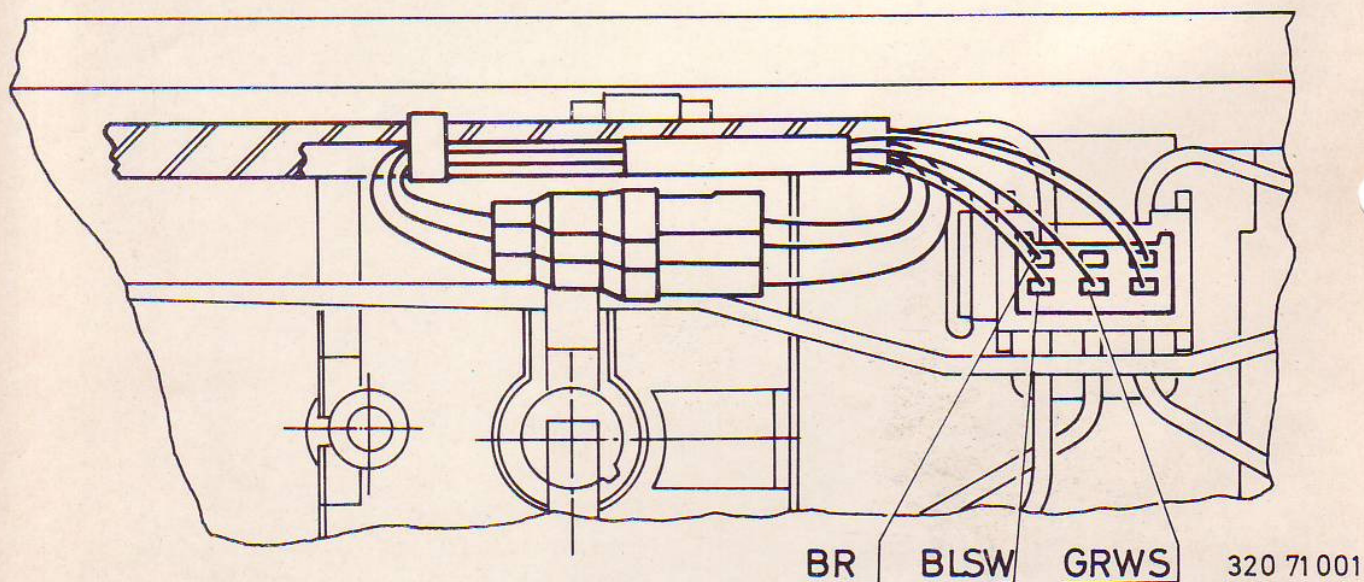




At the left rear light, pull the green/red, grey/yellow and blue/red leads out of the socket housing. Attach insulating sleeves to the three leads and connect to same colors on additional wiring harness.

Insert the leads from the additional wiring harness in the socket housing with the color codes unchanged.

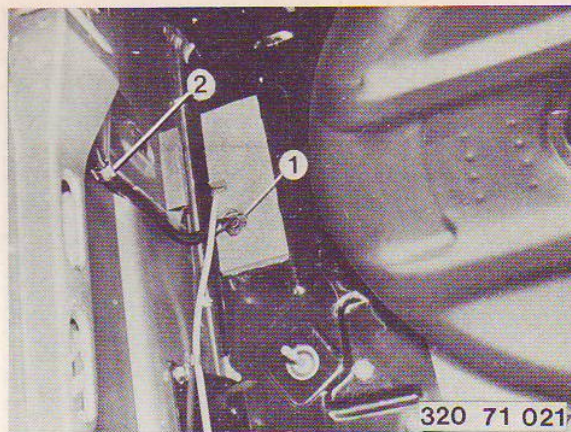
Warning: make sure that the flat pin sockets engage properly.



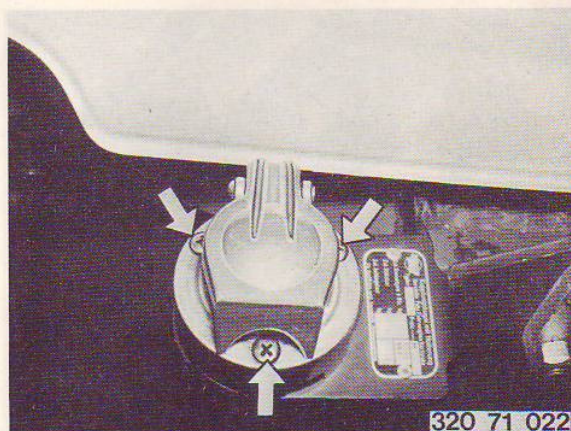
At the right rear light, pull the brown, blue/black and grey/white leads out of the socket housing. Attach insulating sleeves to the 3 leads and connect to same colors on additional wiring harness. Connect the leads of the additional wiring harness to the same colors in the socket housing.

Important: make sure that the flat pin sockets engage properly.

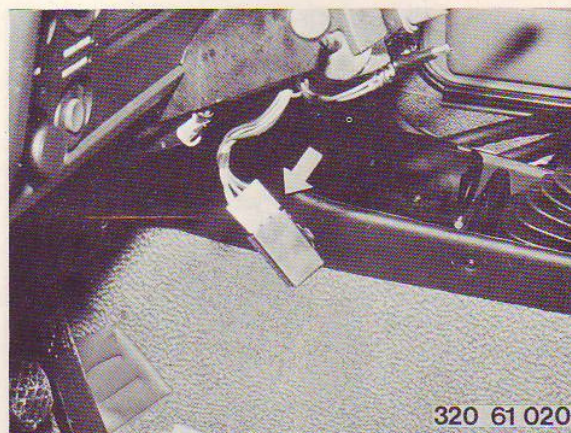
Install the rubber grommet (1) and pull the wiring harness through to the socket. Secure wiring with clip (2).



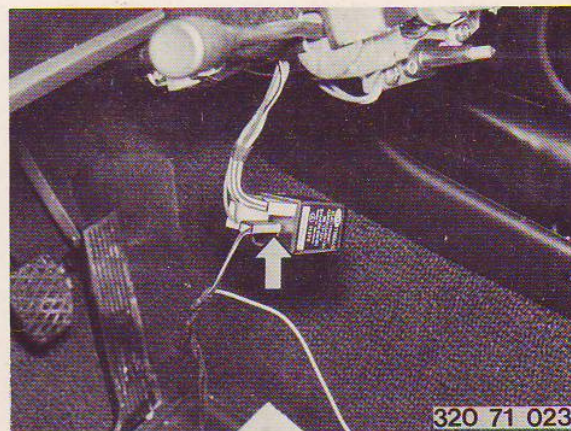
Wire up the socket as shown in the circuit diagram, and attach to trailer coupling.

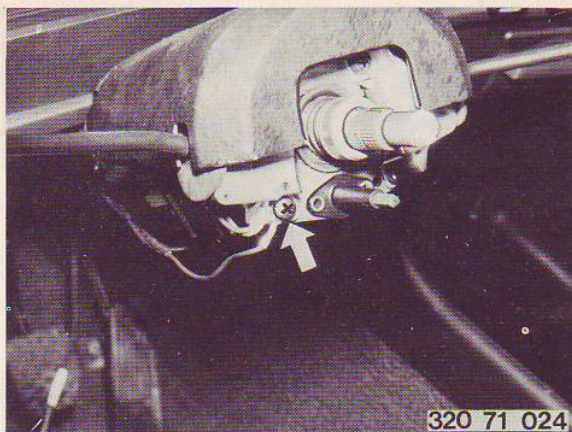


Detach and attach steering wheel – 32 33 000. Remove and install lower trim – 32 31 020. Disconnect hazard warning flasher relay and pull off plug.



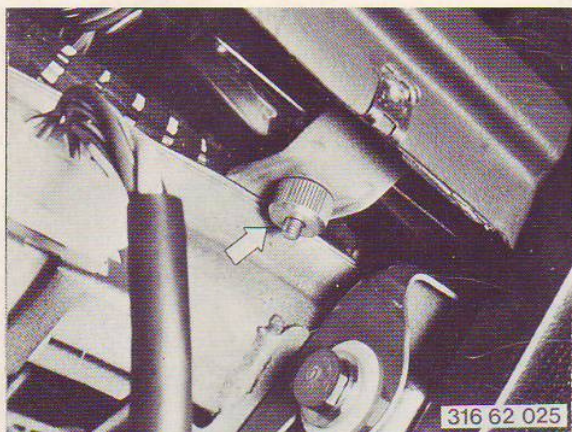
Connect the additional lead for the trailer turn indicator repeater – from the hazard warning flasher installation kit – and the existing plug to terminal C 2.





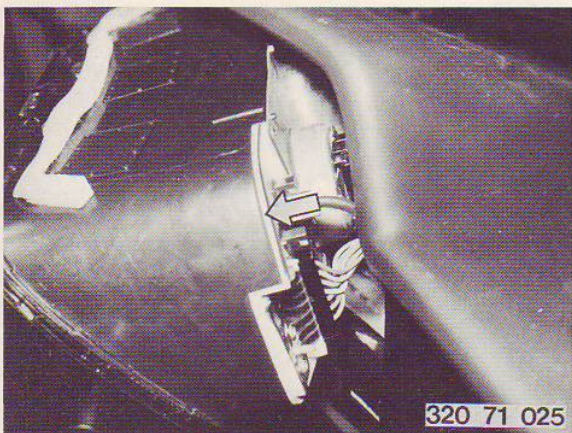
Re-attach the hazard warning flasher relay and connect the earth (ground) lead to the earthing (grounding) point at the turn indicator switch.

320 71 024



Unscrew the knurled nut and the speedometer shaft.
Pull out the instrument carrier.

316 62 025



Install bulb in holder and insert into free panel on instrument carrier.

320 71 025

Checking operation:

Make quite sure that the connections at the trailer plug agree those in the socket.

Attach the trailer and check operation of the trailer lights.

Trailer coupling with detachable head:

When driving without a trailer the head must be detached.

Trailer coupling with fixed head:

To suit vehicle legislation, the license plate and license-plate lighting must be re-positioned.

Renew center section of rear bumper – 51 12 011.

(The center section of the bumper is not included in the kit and must be ordered separately.)

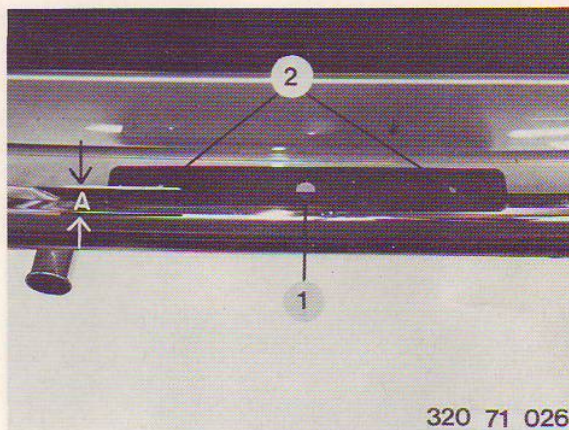
Align the rubber underlay centrally and mark the holes.

Drill the holes.

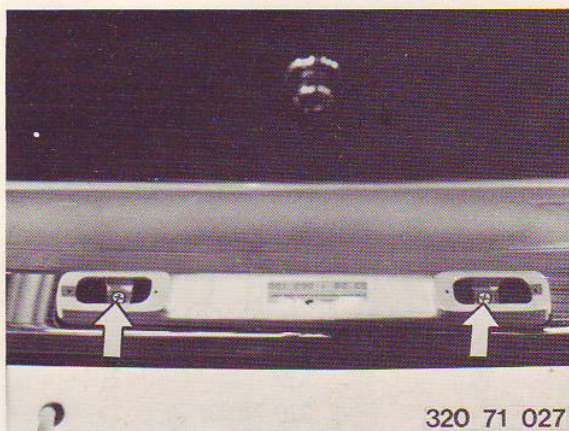
Distance A = 30 mm (1.18 in).

Hole (1) = 10 mm (0.39 in) diameter

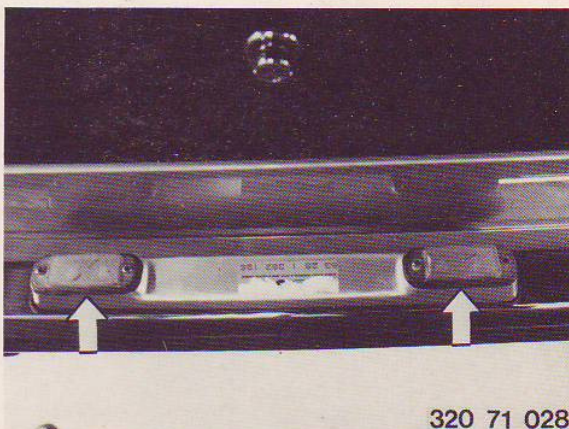
Holes (2) = 6 mm (0.24 in) diameter

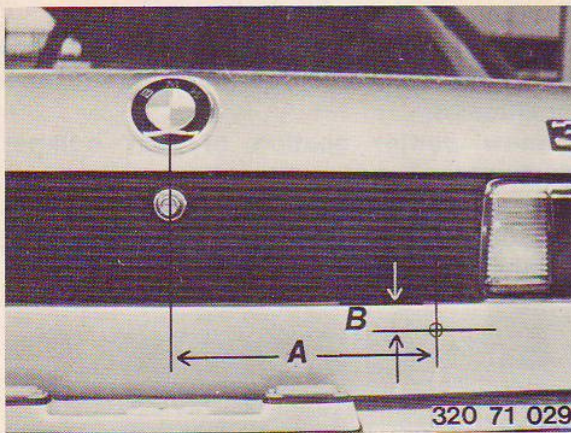


Install rubber grommet in hole, pull cable through and run to left and right.
Secure holders with screws.



Install light housings at left and right, connect to cables and screw on glasses with seals.



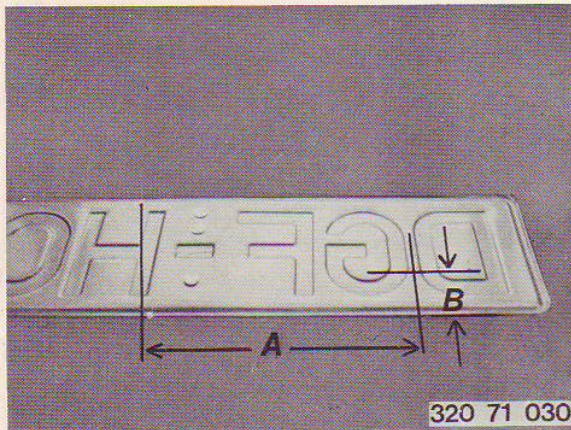


Drill holes at right and left for license plate underlay.

Distance A = 172 mm (6.77 in)

Distance B = 9 mm (0.35 in)

Hole diameter = 7 mm (0.275 in)

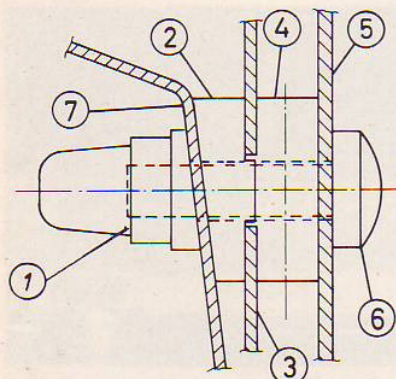


Detach existing license plate and plug holes with cap plugs.

Drill new holes in license plate.

Distance A = 172 mm (6.77 in) from center of license plate

Distance B = 37 mm (1.46 in)



Attach underlay and license plate.

① = Cap nut

② = Wedge-shaped underlay

③ = Underlay plate

④ = Rubber disc

⑤ = License plate

⑥ = Screw covers

⑦ = Rear end panel

Color codes:
 BL = blue
 BR = brown
 YL = yellow
 GN = green
 GR = grey
 RT = red
 BK = black
 VI = violet
 WS = white

1 = Turn indicator right
 2 = Parking light right
 3 = Parking light left
 4 = Turn indicator left
 5 = Ignition-starter switch
 6 = Brake light switch
 7 = Trailer turn indicator repeater
 8 = Battery
 9 = Low beam indicator resistor
 10 = Hazard warning flasher relay
 11 = Hazard warning flasher switch
 12 = Turn indicator switch
 13 = Light switch
 14 = Forward turn light coupling
 15 = Rear light right
 16 = Rear light left

Circuit diagram – trailer coupling

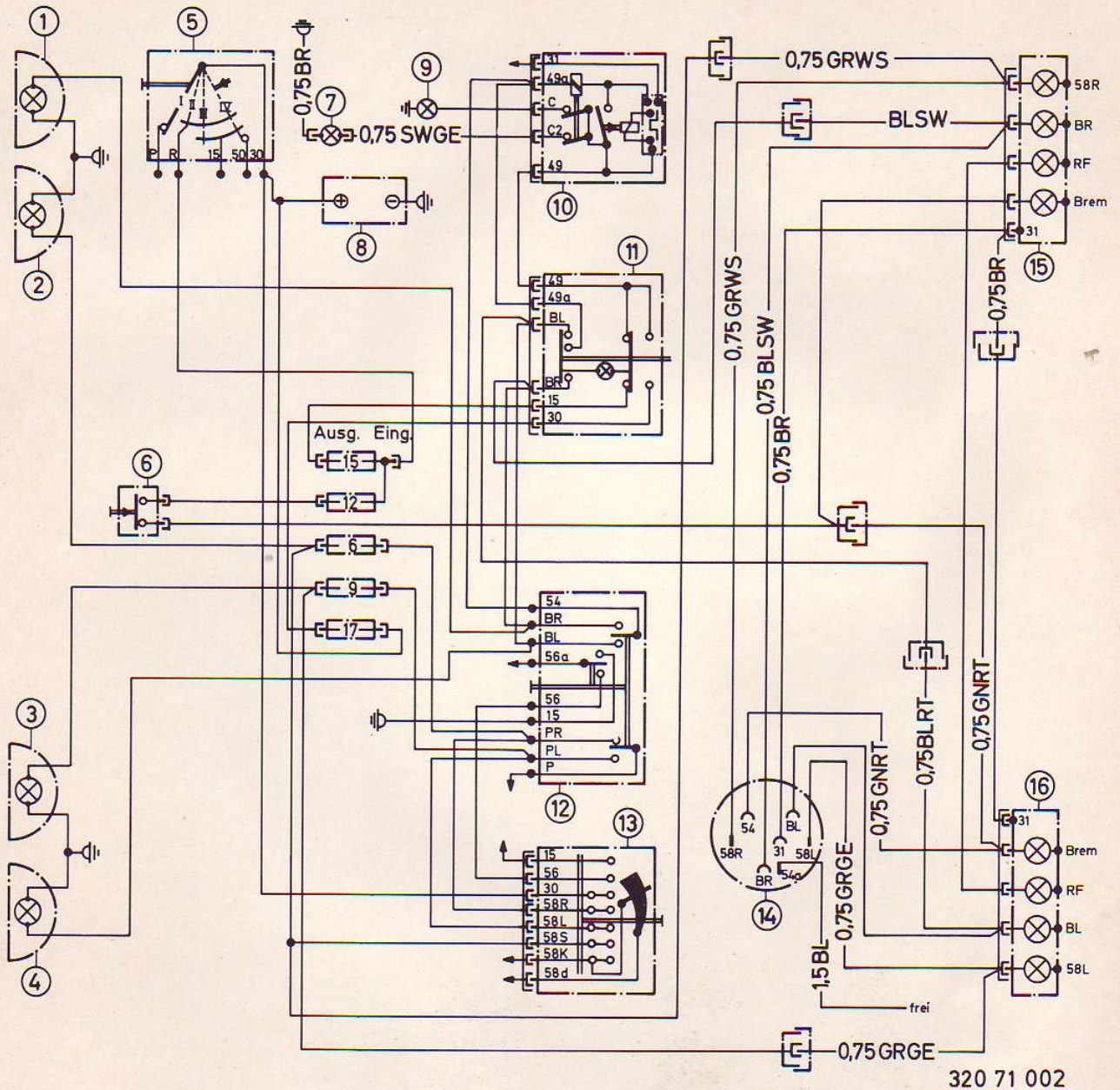


Key to circuit diagram

- ① = Turn indicator, right
- ② = Parking light, right
- ③ = Parking light, left
- ④ = Turn indicator, left
- ⑤ = Ignition-starter switch
- ⑥ = Brake light switch
- ⑦ = Trailer turn indicator repeater
- ⑧ = Battery
- ⑨ = Car turn indicator repeater
- ⑩ = Hazard warning flasher relay
- ⑪ = Hazard warning flasher switch
- ⑫ = Turn indicator switch
- ⑬ = Light switch
- ⑭ = Socket for trailer coupling
- ⑮ = Rear light, right
- ⑯ = Rear light, left

Color codes:
BL = blue
BR = brown
GE = yellow
GN = green
GR = grey
RT = red
SW = black
VI = violet
WS = white

Circuit diagram – trailer coupling



320 71 002

