



**Towbar system
(electrical equipment)**

Astra caravan / hatchback / saloon

Scope of supply

- 1 x indicator relay
- 1 x signal lamp with base
- 1 x cable harness
- 1 x set of slitting connectors

Additional components

- 1 x 7-way socket (old standard) or
- 1 x 13-way socket (new standard)
Jäger system or
- 1 x 13-way socket (new standard)
Multicon system and
- 1 x set of mechanical fasteners

Tools

- Drill bit
- Electric drill
- Anti-rust primer
- Round file
- Shell drill
- Screwdrivers (Philips and slotted head)
- Spanners
- Water pump wrench

Electrical system features

These instructions apply to vehicles with MID (Multi Info Display), without standard instrument cable sets (recognizable from the absence of contact C2 in the indicator base, fig. 1) and/or without standard bodywork cable sets (recognizable from the absence of a 9-way multiple plug at the left hand tail lamp, fig. 2).

Preparation

As always before performing any work on the vehicle's electrical system, disconnect both battery terminals.

Dismantling the bumper

For caravan only:

Lever the licence plate lamp out and disconnect the plug. Remove the cladding from the baggage area rear wall. Release the fastening screws and remove the bumper.

For hatchback only:

Lever the licence plate light out (fig. 3) and disconnect the plug (fig. 4). Remove 4 screws on the edge of the baggage platform (fig. 5) and lever the 4 plugs out from the boot area (fig. 6). Swing the rear wall cladding inwards (fig. 7) and remove it. Remove 2 hexagon screws from each of the bumper corners in the wheel arches (fig. 8). Unscrew 2 nuts from the boot area (fig. 9). Bend the ends of the bumper outwards and draw the bumper off to the rear (fig. 10).

For saloon only:

Lever the licence plate light out and disconnect the plug. Remove the cladding from the boot area rear wall. Release the fastening screws and remove the bumper.

Work on the boot area rear wall

Drill an 8 mm hole in the boot area rear wall, using the punch point provided (fig. 11). Caution: there are cables running close to the drilling point! Extend the bore to 18 ... 20 mm. Deburr the edges of the hole and apply anti-rust primer. Immediately remove all drilling chips (fig. 12).



Guide the cable harness from the inside to the outside through the hole (fig. 13). Insert a grommet into the hole (fig. 14). Guide the outside end of the cable harness through the grommet in the socket (fig. 15).

Connecting the cable harness

Connect the cable harness to the socket, ensuring that the contact assignment is correct to the terminal diagram and colour code (figs. 16 to 19). With the 7-way socket, the unused red plus cable remains tied to the cable harness.

Fit the socket.

Lay the cable harness as follows:

| | |
|--------------|---|
| black/green | to the right-hand tail lamp |
| black/white | to the left-hand tail lamp |
| black/blue | to the left-hand tail lamp |
| red | to the fuse box/foot space on driver's side |
| grey/black | to the fuse box/foot space on driver's side |
| black/yellow | to the fuse box/foot space on driver's side |
| grey/red | to the fuse box/foot space on driver's side |

Bind all cables to the bodywork or standard cable to avoid rattling noises.

Also connect the brown earthing cable to the existing earthing screw.

Connect the cables to the tail lamp cables of the same colours at the tail lamps, using slitting connectors.

Make the connections at the fuse box / driver's side foot space after converting the fuse box.

Converting the fuse box

Open the lid of the fuse box (fig. 20). Replace the existing indicator relay with the new relay (fig. 21).

Connecting the cable harness

Connect the cables in the driver's side foot space as follows:

| | |
|--------------|--|
| grey/black | output of fuse 18 (output = relay side) |
| grey/red | output of fuse 19 (output = relay side) |
| black/yellow | output of brake light switch |

For 7-way socket only:

Insulate and tie down the red cable.

For 13-way sockets only:

red Connect the cable end to the fuseholder assembly. Release the output terminal of fuse 8, withdraw the cable, cut off the contact, insulate the end of the cable and tie it down. Connect the fuseholder assembly to the output terminal of fuse 8 with the short cable. Insert the 20 A fuse.

Adding the indicator control lamp

Remove 3 screws on the underside of the steering column cladding (fig. 22). Remove 2 plugs beside the steering column and remove 2 screws (fig. 23). Remove the two-part steering column cladding to the top and bottom (fig. 24).

Disengage the trafficator and windscreen wiper lever, pulling it upwards and off, and allowing it to hang freely.

Swing the top panel over the foot space down (fig. 25) by opening 2 bayonet couplings. Reach behind the speedometer casing from the direction of the foot space. Release the fastening and draw the speedometer shaft off (fig. 26).

Remove 3 screws (fig. 27) and swing the speedometer casing out to the front (fig. 28). Disengage and remove the



multiple plug on the rear of the speedometer casing (fig. 29). Remove the speedometer casing.

Insert the indicator control lamp in the lampholder (fig. 30), insert it in the speedometer casing and lock it in position with a quarter turn (fig. 31). Ensure that the position is correct!

Lay the connecting cable from the 12-way multiple plug to the fuse box. Fit the top end of the cable with a spade contact and insert this in position 6 of the 12-way multiple plug. Fit the bottom end of the cable with a flat connector and insert it in position C2 of the relay base (fig. 32).

Concluding work

Refit all dismantled parts by reversing the above procedure. Reconnect the battery.

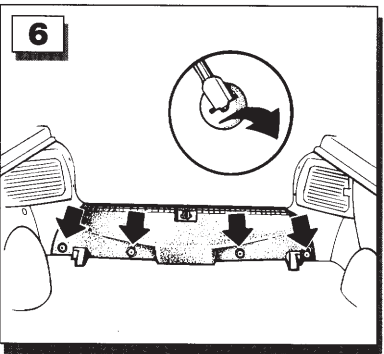
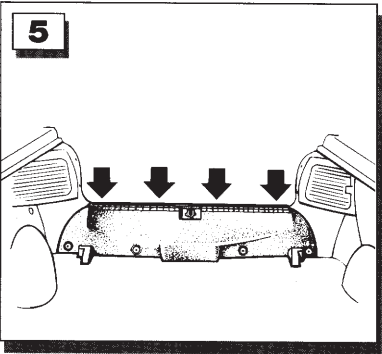
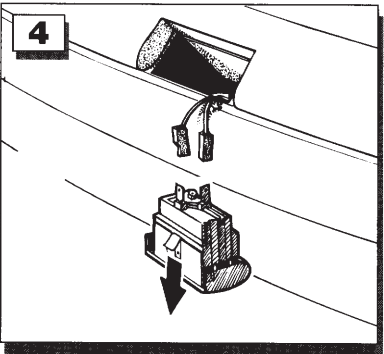
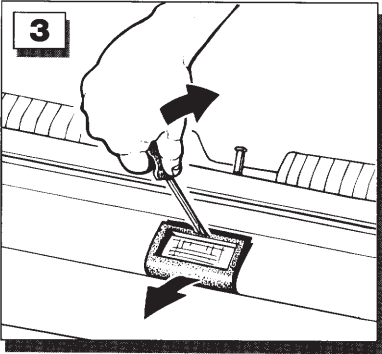
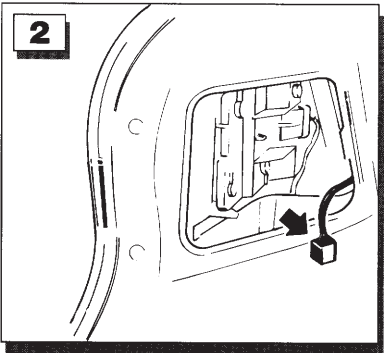
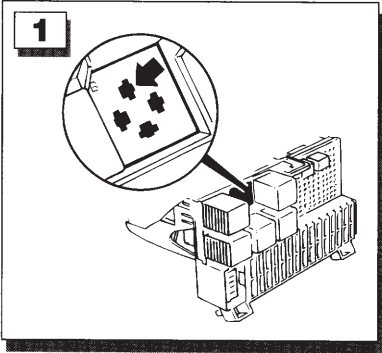
Testing the system

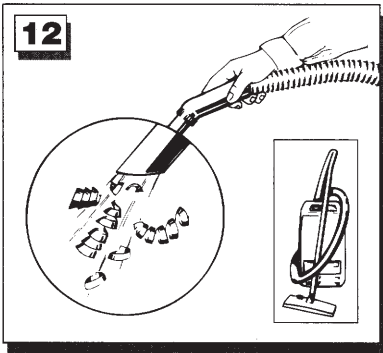
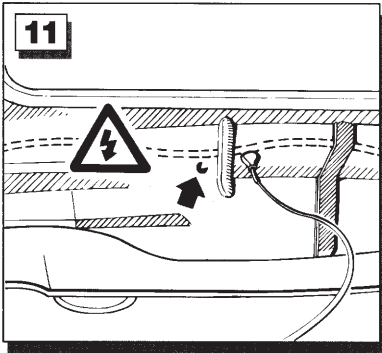
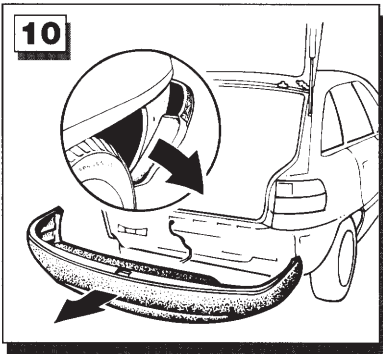
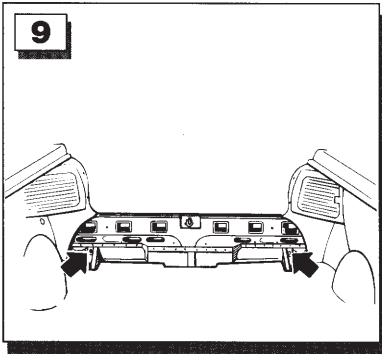
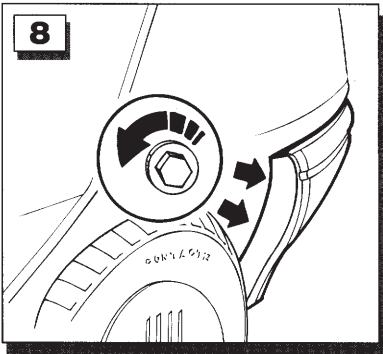
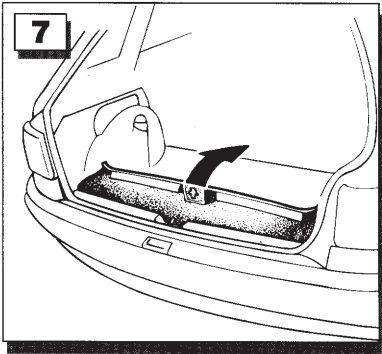
Testing should be carried out with a trailer connected. As an alternative, test lamps of a defined power may be used. See the wiring diagrams (figs. 33, 34, 35).

The additional control lamp in the speedometer displays the function of the trailer trafficators.

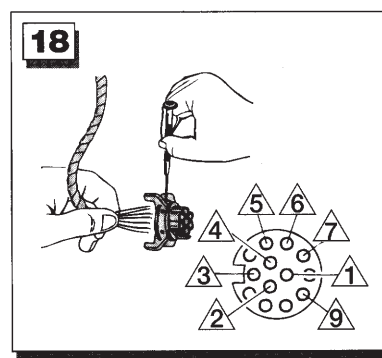
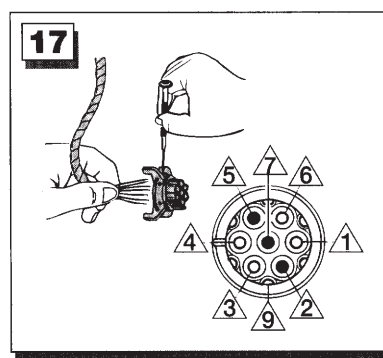
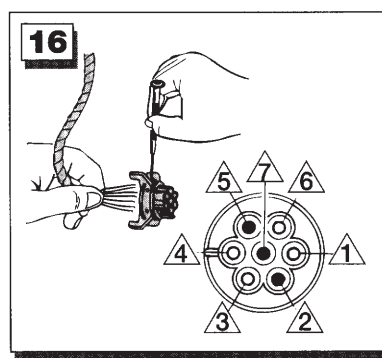
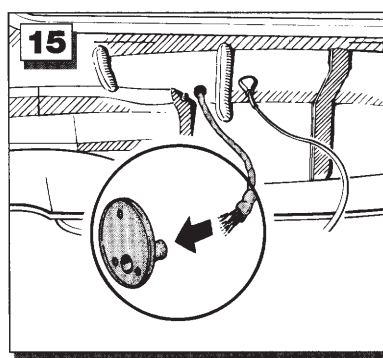
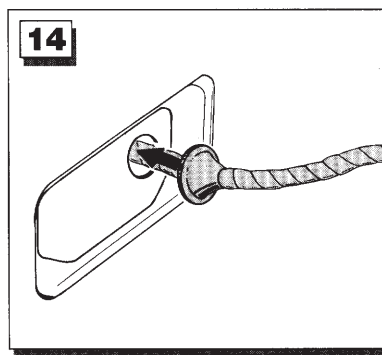
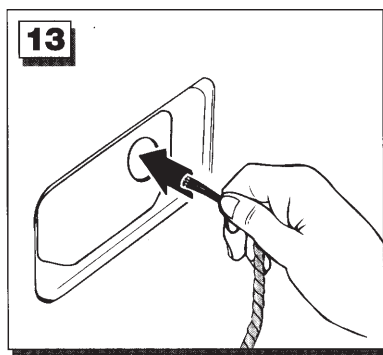
If the trailer or vehicle control lamp fails to flash or flashes too rapidly, there is a fault. The cause may be one or more defective bulbs on the trailer or vehicle. Cable breakage and corroded contacts are also possible causes of faults.

part number: 90443250





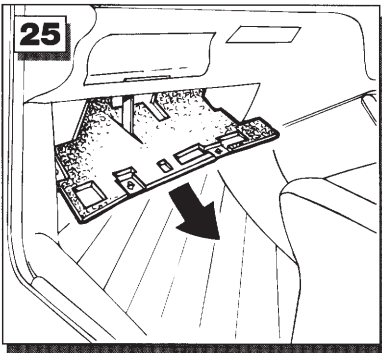
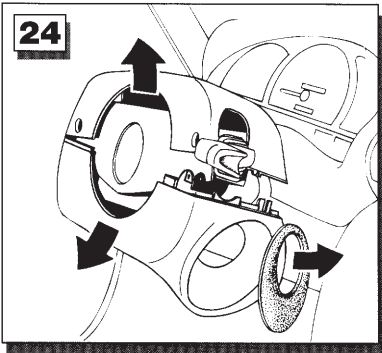
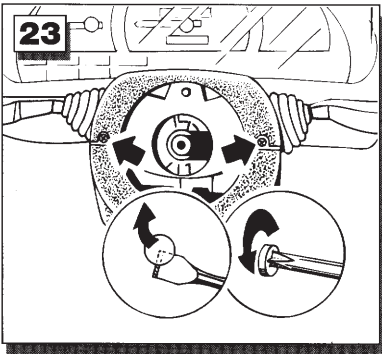
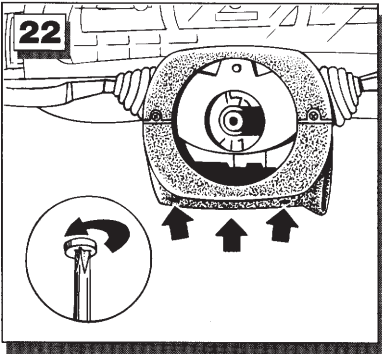
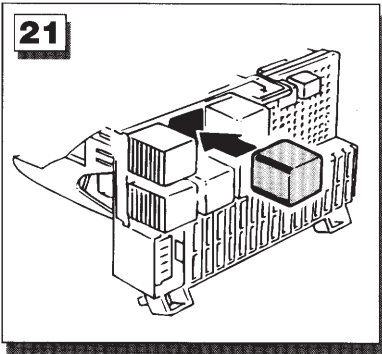
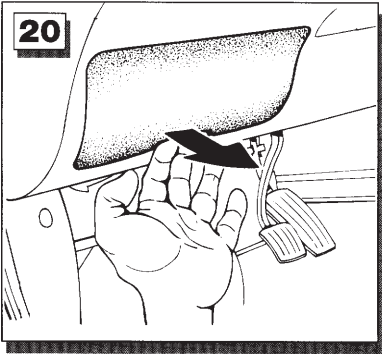
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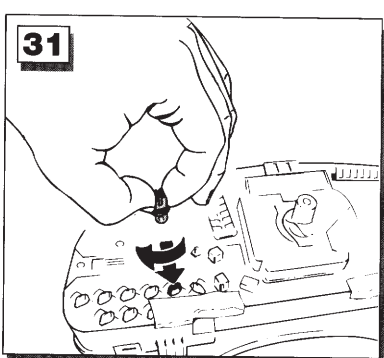
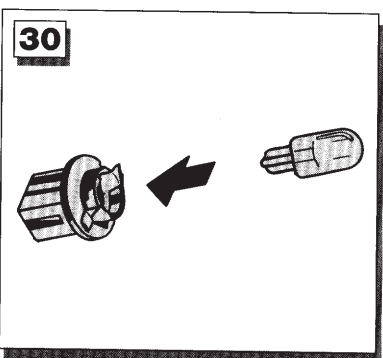
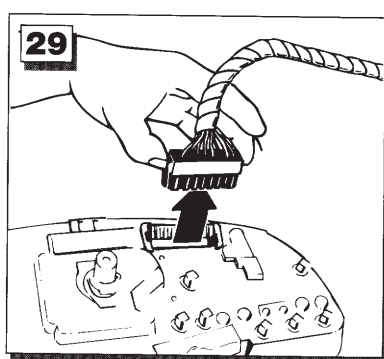
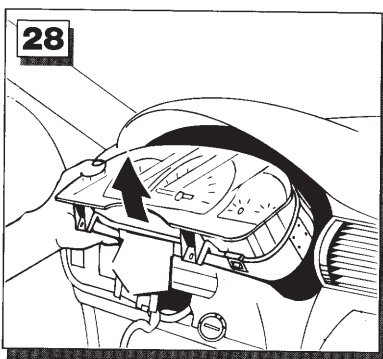
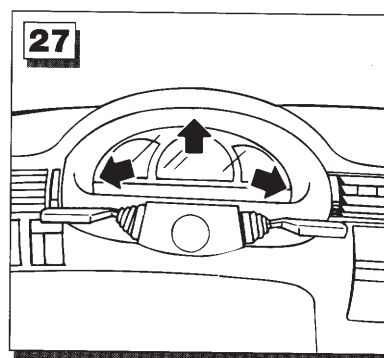
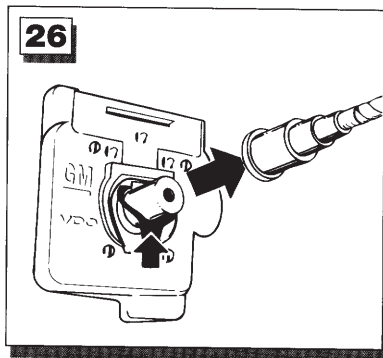
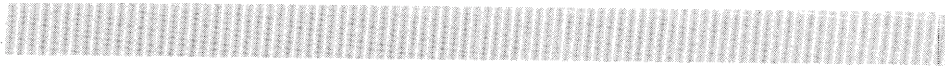
| | D | GB | F | I | E | GR | NL | DK | N | S | SF | P |
|---|--------|--------------|------------|--------------|----------------|---------------|-------------|------------|------------|------------|-----------------|----------------|
| 1 | 1/L | Schwarz/weiß | noir/blanc | nero/bianco | negro/blanco | japso/ompo | zwart/wit | sort/hvid | sort/hvit | svart/vit | musta/valkoinen | preto/branco |
| 2 | 54 g | schwarz/blau | noir/bleu | nero/blu | negro/azul | japso/jintle | zwart/blauw | sort/blå | sort/blå | svart/blå | musta/sininen | preto/azul |
| 3 | 3/31 | braun | marron | marrone | marrón | kogé | bruin | brun | brun | brun | nuskea | marrom |
| 4 | 4/R | schwarz/grün | noir/vert | nero/verde | negro/verde | japso/tpidano | zwart/groen | sort/groen | sort/groen | svart/grön | musta/vihreä | preto/verde |
| 5 | 5/58 R | grau/rot | gris/rouge | grigio/rosso | gris/rojo | vep/kokkivo | gris/rood | grå/rod | grå/rod | grå/rod | harmaa/punainen | cinza/vermelho |
| 6 | 6/54 | schwarz/gelb | noir/jaune | nero/giallo | negro/amarillo | japso/kipivo | zwart/geel | sort/gul | sort/gul | svart/gul | musta/keltainen | preto/amarelo |
| 7 | 7/58 L | grau/schwarz | gris/noir | grigio/nero | gris/negro | vep/kuopoo | gris/zwart | grå/sort | grå/sort | grå/svart | harmaa/musta | cinza/preto |
| 9 | 2 | rot | rouge | rosso | rojo | kokkivo | rood | rod | rod | rod | punainen | vermelho |

| | D | GB | F | I | E | GR | NL | DK | N | S | SF | P |
|----|----|----------------|-----------------|----------------|----------------|---------------|--------------|-------------------|-------------------|------------------|-----------------|----------------|
| 1 | 1 | Schwarz/weiß | noir/blanc | nero/bianco | negro/blanco | japso/ompo | zwart/wit | sort/hvid | sort/hvit | svart/vit | musta/valkoinen | preto/branco |
| 2 | 2 | schwarz/blau | noir/bleu | nero/blu | negro/azul | japso/jintle | zwart/blauw | sort/blå | sort/blå | svart/blå | musta/sininen | preto/azul |
| 3 | 3 | braun | marron | marrone | marrón | kogé | bruin | brun | brun | brun | nuskea | marrom |
| 4 | 4 | schwarz/grün | noir/vert | nero/verde | negro/verde | japso/tpidano | zwart/groen | sort/groen | sort/groen | svart/grön | musta/vihreä | preto/verde |
| 5 | 5 | grau/rot | gris/rouge | grigio/rosso | gris/rojo | vep/kokkivo | gris/rood | grå/rod | grå/rod | grå/rod | harmaa/punainen | cinza/vermelho |
| 6 | 6 | schwarz/gelb | noir/jaune | nero/giallo | negro/amarillo | japso/kipivo | zwart/geel | sort/gul | sort/gul | svart/gul | musta/keltainen | preto/amarelo |
| 7 | 7 | grau/schwarz | gris/noir | grigio/nero | gris/negro | vep/kuopoo | gris/zwart | grå/sort | grå/sort | grå/svart | harmaa/musta | cinza/preto |
| 8 | 8 | (nicht belegt) | (not connected) | (non raccordé) | (no conectado) | (eludido) | (niet bezet) | (ikke tilsluttet) | (ikke tilsluttet) | (ei tilkoppilad) | (vapaal) | (não ocupado) |
| 9 | 9 | rot | rouge | rosso | rojo | kokkivo | rood | rod | rod | rod | punainen | vermelho |
| 10 | 10 | (nicht belegt) | (not connected) | (non raccordé) | (no conectado) | (eludido) | (niet bezet) | (ikke tilsluttet) | (ikke tilsluttet) | (ei tilkoppilad) | (vapaal) | (não ocupado) |
| 11 | 11 | (nicht belegt) | (not connected) | (non raccordé) | (no conectado) | (eludido) | (niet bezet) | (ikke tilsluttet) | (ikke tilsluttet) | (ei tilkoppilad) | (vapaal) | (não ocupado) |
| 12 | 12 | (nicht belegt) | (not connected) | (non raccordé) | (no conectado) | (eludido) | (niet bezet) | (ikke tilsluttet) | (ikke tilsluttet) | (ei tilkoppilad) | (vapaal) | (não ocupado) |
| 13 | 13 | (nicht belegt) | (not connected) | (non raccordé) | (no conectado) | (eludido) | (niet bezet) | (ikke tilsluttet) | (ikke tilsluttet) | (ei tilkoppilad) | (vapaal) | (não ocupado) |

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