



**Towbar system
(electrical equipment)**

Astra Caravan

Scope of supply

- 1 x indicator relay
- 1 x signal lamp with base
- 1 x cable harness

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 without MID (Multi Info Display) and without instrument cable sets (recognizable from the absence of contact C2 in the indicator base, fig. 1) and/or without bodywork cable sets (recognizable from the absence of the 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

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.

Work on the boot area rear wall

Drill an 8 mm hole in the boot area rear wall, using the punch point provided. Extend the bore to 18...20 mm. Deburr the edges of the hole and apply anti-rust primer. Immediately remove all drilling chips (fig. 3).

Guide the cable harness from the inside to the outside through the hole (fig. 4). Insert a grommet into the hole (fig. 5). Guide the outside end of the cable harness through the grommet in the socket (fig. 6).

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. 7 to 10). With the 7-way socket, the unused red plus cable remains tied to the cable harness.

Fit the socket.

Lay the cable harness to the two tail lamps: the two-core cable to the right-hand lamp and the five-core cable to the left-hand tail lamp.

Bind the cable harness to the bodywork or to the standard cable to avoid rattling noises.

Remove the connecting plugs from the tail lamps and reconnect after interposing the cable harness adapters.



For 13-way sockets only:

Connect an extension lead to the red permanent plus cable with a plug connector, and lay this to the fuse box.

Converting the fuse box

Open the lid of the fuse box (fig. 11). Replace the existing indicator relay with the new relay (fig. 12).

For 13-way sockets only:

Connecting the permanent plus lead

Connect the end of the permanent plus extension lead 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. 13). Remove 2 plugs beside the steering column and remove 2 screws (fig. 14). Remove the two-part steering column cladding to the top and bottom (fig. 15).

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. 16) 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. 17).

Remove 3 screws (fig. 18) and swing the speedometer casing out to the front

(fig. 19). Disengage and remove the multiple plug on the rear of the speedometer casing (fig. 20). Remove the speedometer casing.

Insert the indicator control lamp in the lampholder (fig. 21), insert it in the speedometer casing and lock it in position with a quarter turn (fig. 22). 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. 23).

Concluding work

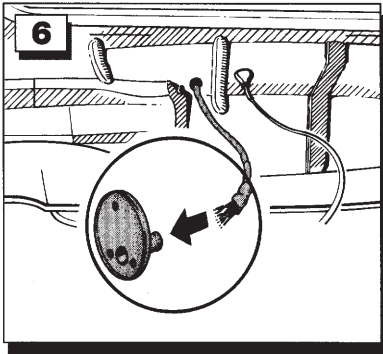
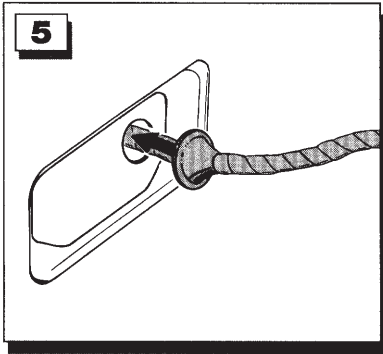
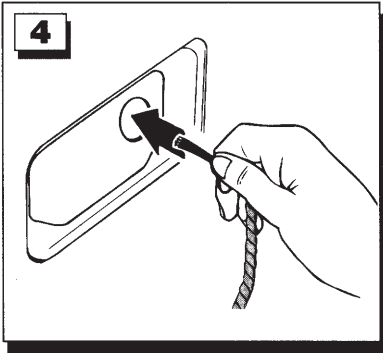
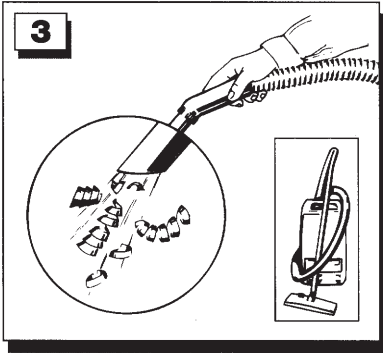
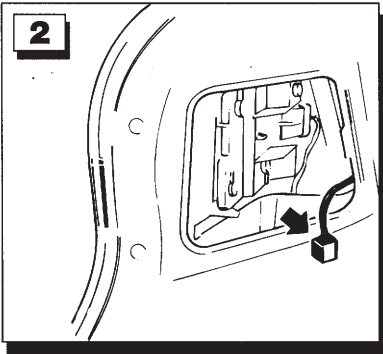
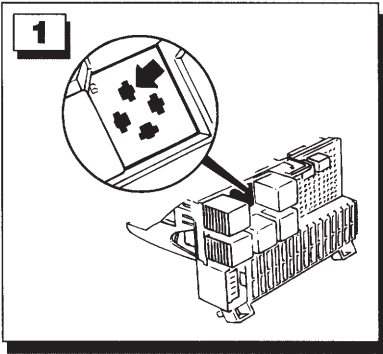
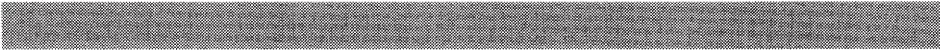
Refit all dismantled parts by reversing the above procedure. Reconnect the battery.

Testing the system

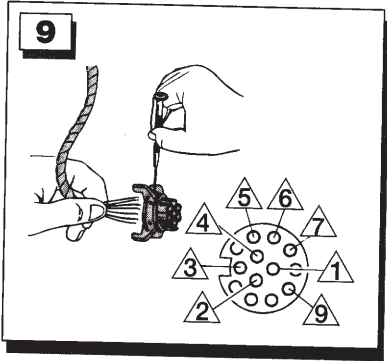
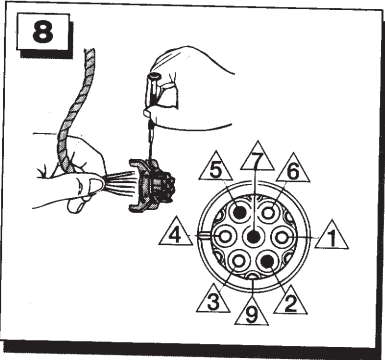
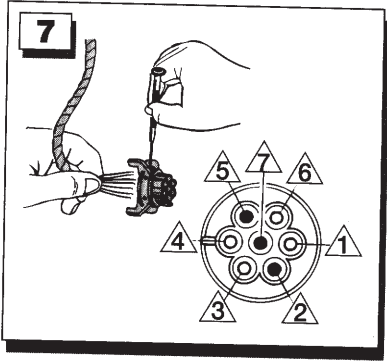
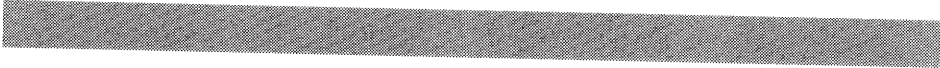
Testing should be carried out with a trailer connected. As an alternative, test lamps of a defined power may be used. See the wiring diagrams (figs. 24, 25, 26).

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.

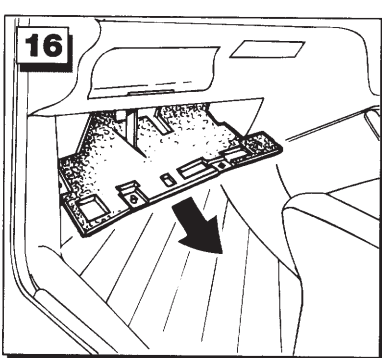
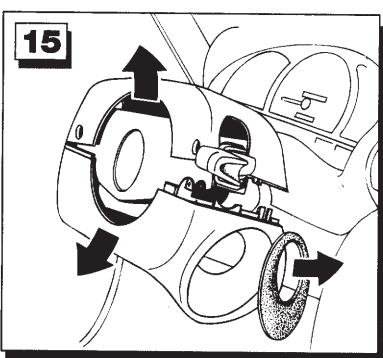
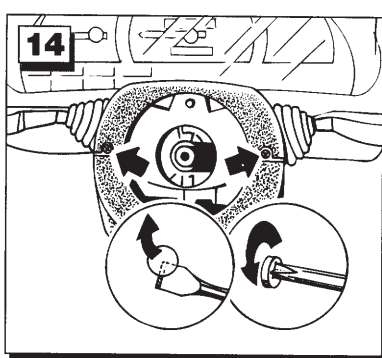
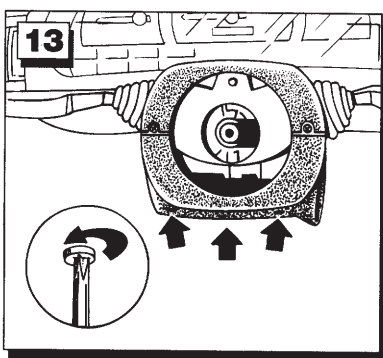
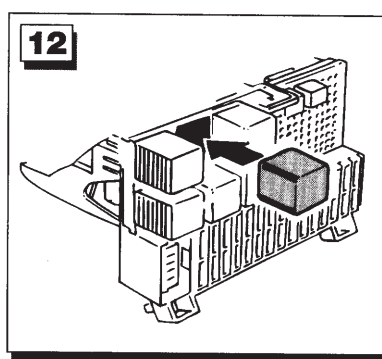
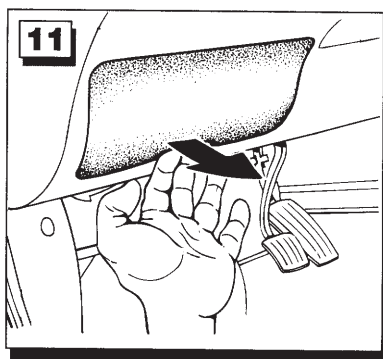


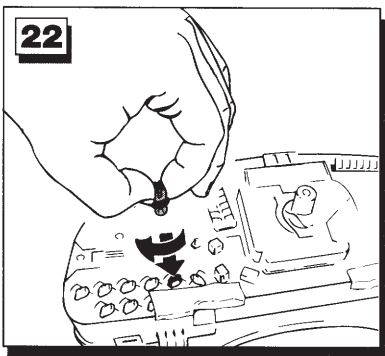
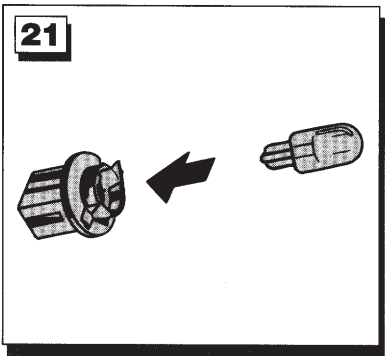
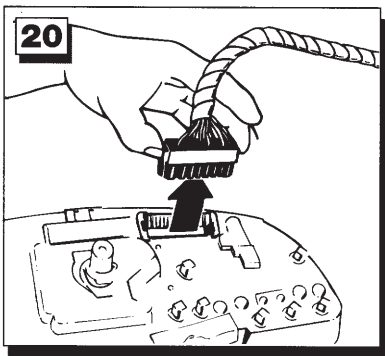
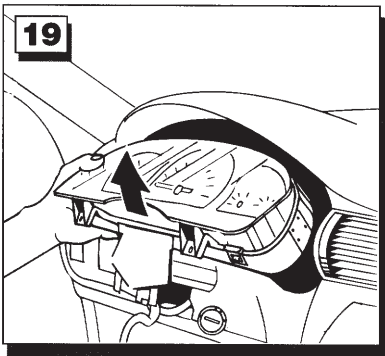
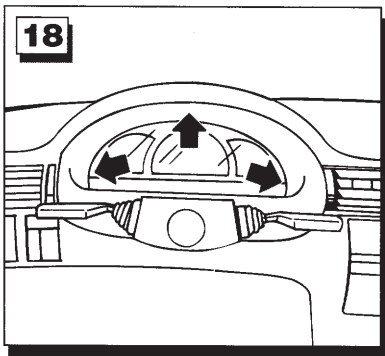
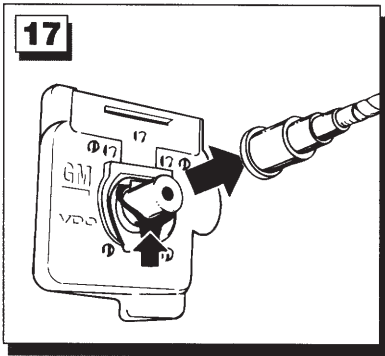
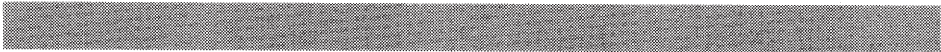
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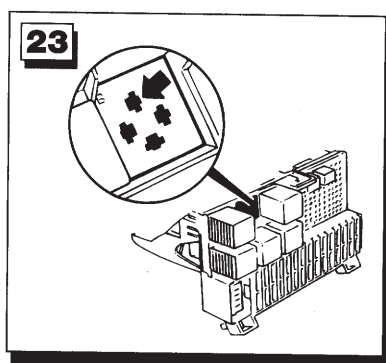
10												
1	D	GB	F	I	E	GR	NL	DK	N	S	SF	P
1/L	Schwarz/weiß	black/white	noir/blanc	nero/bianco	negro/blanco	jalapón/blanco	zwart/wit	sort/hvid	sort/hvit	svart/vit	musta/valkoinen	preto/branco
2/54 g	schwarz/blau	black/blue	noir/bleu	nero/blu	negro/azul	jalapón/azul	zwart/blauw	sort/blå	sort/blå	svart/blå	musta/sininen	preto/azul
3/321	braun	brown	marron	marone	marron	kape	brun	brun	brun	brun	nuskea	maron
4/4/R	schwarz/grün	black/green	noir/vert	nero/verde	negro/verde	jalapón/verde	zwart/groen	sort/grøn	sort/grenn	svart/gren	musta/vihreä	preto/verde
5/58 R	grau/rot	grey/red	gris/rouge	grigio/rosso	gris/rojo	Yokokokuvo	gris/rood	grå/rod	grå/rod	grå/rod	harmaa/punainen	cinza/vermelho
6/54	schwarz/gelb	black/yellow	noir/jaune	nero/giallo	negro/amarillo	jalapón/amarillo	zwart/geel	sort/gul	sort/gul	svart/gul	musta/keltainen	preto/amarelo
7/58 L	grau/schwarz	grey/black	gris/noir	grigio/nero	gris/negro	Yokokujo	gris/zwart	grå/sort	grå/sort	grå/sort	harmaa/musta	cinza/preto
8/2	rot	red	rouge	rosso	rojo	kokuvo	rood	rod	rod	rod	punainen	vermelho
1	D	GB	F	I	E	GR	NL	DK	N	S	SF	P
1	Schwarz/weiß	black/white	noir/blanc	nero/bianco	negro/blanco	jalapón/blanco	zwart/wit	sort/hvid	sort/hvit	svart/vit	musta/valkoinen	preto/branco
2	schwarz/blau	black/blue	noir/bleu	nero/blu	negro/azul	jalapón/azul	zwart/blauw	sort/blå	sort/blå	svart/blå	musta/sininen	preto/azul
3	braun	brown	marron	marone	marron	kape	brun	brun	brun	brun	nuskea	maron
4	schwarz/grün	black/green	noir/vert	nero/verde	negro/verde	jalapón/verde	zwart/groen	sort/grøn	sort/grenn	svart/gren	musta/vihreä	preto/verde
5	grau/rot	grey/red	gris/rouge	grigio/rosso	gris/rojo	Yokokokuvo	gris/rood	grå/rod	grå/rod	grå/rod	harmaa/punainen	cinza/vermelho
6	schwarz/gelb	black/yellow	noir/jaune	nero/giallo	negro/amarillo	jalapón/amarillo	zwart/geel	sort/gul	sort/gul	svart/gul	musta/keltainen	preto/amarelo
7	grau/schwarz	grey/black	gris/noir	grigio/nero	gris/negro	Yokokujo	gris/zwart	grå/sort	grå/sort	grå/sort	harmaa/musta	cinza/preto
8	(nicht belegt)	(not connected)	(non raccordé)	(non usato)	(no conectado)	(a-luolapso)	(niet bezet)	(ikke tilsluttet)	(ikke tilsluttet)	(ei tilloppilasi)	(vapa)	(não ocupado)
9	rot	red	rouge	rosso	rojo	kokuvo	rood	rod	rod	rod	punainen	vermelho
10	(nicht belegt)	(not connected)	(non raccordé)	(non usato)	(no conectado)	(a-luolapso)	(niet bezet)	(ikke tilsluttet)	(ikke tilsluttet)	(ei tilloppilasi)	(vapa)	(não ocupado)
11	(nicht belegt)	(not connected)	(non raccordé)	(non usato)	(no conectado)	(a-luolapso)	(niet bezet)	(ikke tilsluttet)	(ikke tilsluttet)	(ei tilloppilasi)	(vapa)	(não ocupado)
12	(nicht belegt)	(not connected)	(non raccordé)	(non usato)	(no conectado)	(a-luolapso)	(niet bezet)	(ikke tilsluttet)	(ikke tilsluttet)	(ei tilloppilasi)	(vapa)	(não ocupado)
13	(nicht belegt)	(not connected)	(non raccordé)	(non usato)	(no conectado)	(a-luolapso)	(niet bezet)	(ikke tilsluttet)	(ikke tilsluttet)	(ei tilloppilasi)	(vapa)	(não ocupado)

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