

Opel Astra Opel Kadett

Workshop Manual

Section R

Body Equipment

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General Information for Service Installation of Accessories

When drilling or cutting holes in the body, the rough edges must be deburred and painted afterwards. Metal cuttings caused by drilling are to be removed from the body. Trim strips near the drilling point are to be covered to prevent cuttings from lodging between the trim strip and the paint, where weathering would lead to rust and destruction of the paint.

To avoid short circuits during operations involving the fuse box or leads that are not protected by a fuse, disconnect the ground cable from the battery and place it aside.

After reconnecting the battery, re-programme all electronic components (e.g. electric window winders, clock, board, computer, radio).

In order to guarantee a low level of noise after installation of accessories, the following must be observed when laying new cable:

- Lay electrical connecting cables with cable straps, clamps, insulating tape in standard wiring harness.
- Protect individual cables behind the instrument panel with self-adhesive foam strips, if necessary.
- It is important that a minimum distance of 10 mm be kept between the brake lines and fixed cables and a distance of 25 mm between the brake lines and cables which move with the engine or other components

The usual rules are to be observed when connecting cable terminals and multiple plugs or for laying cables in the vehicle.

When installing additional electrical consumers, it is necessary to check in each case whether the existing alternator can handle the additional load. If necessary, the alternator should be replaced by one of a higher capacity.

TRAILER HITCH

MECHANICAL EQUIPMENT —
KADETT

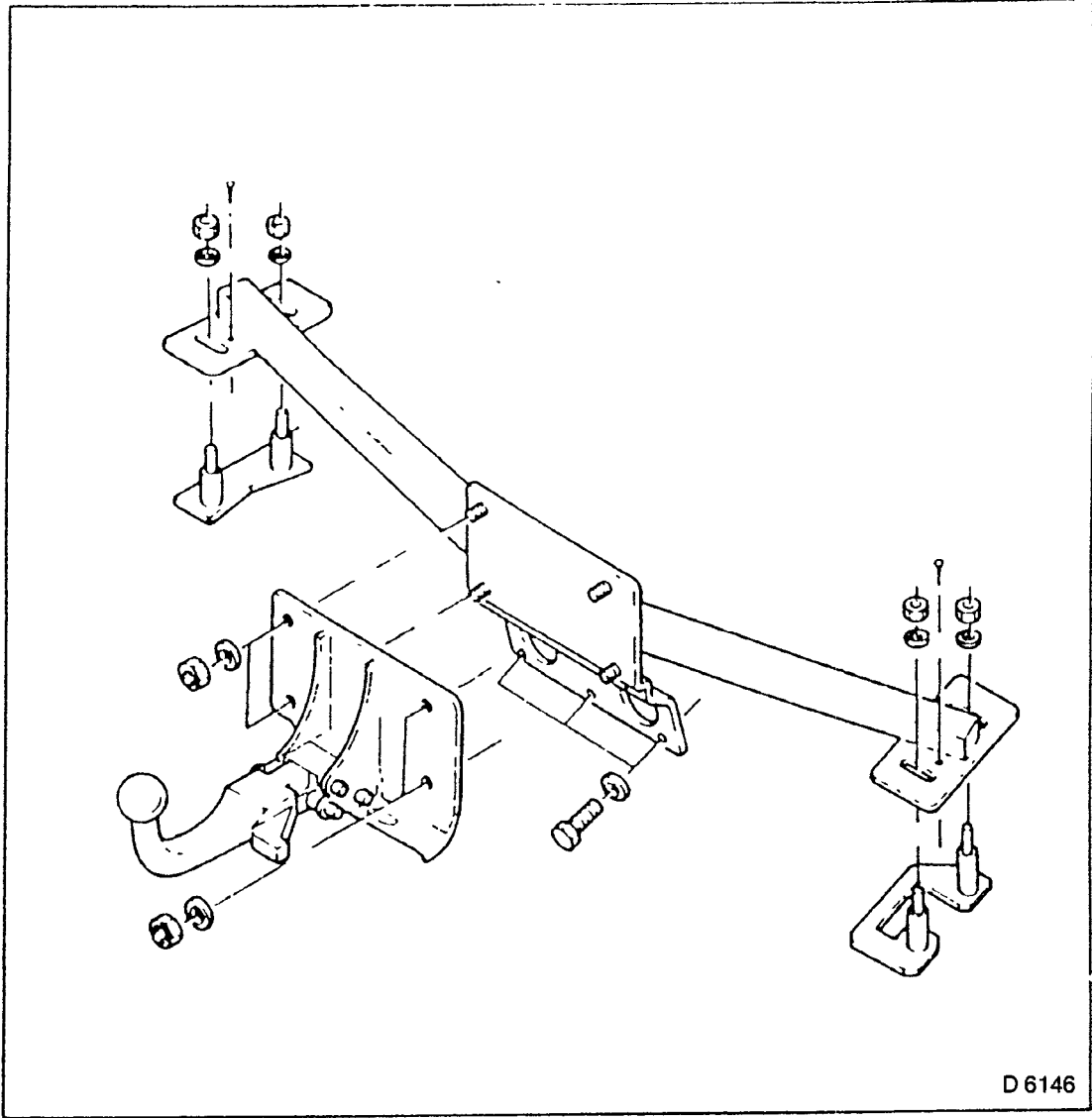


Fig. 1

**MECHANICAL EQUIPMENT —
ASTRA**

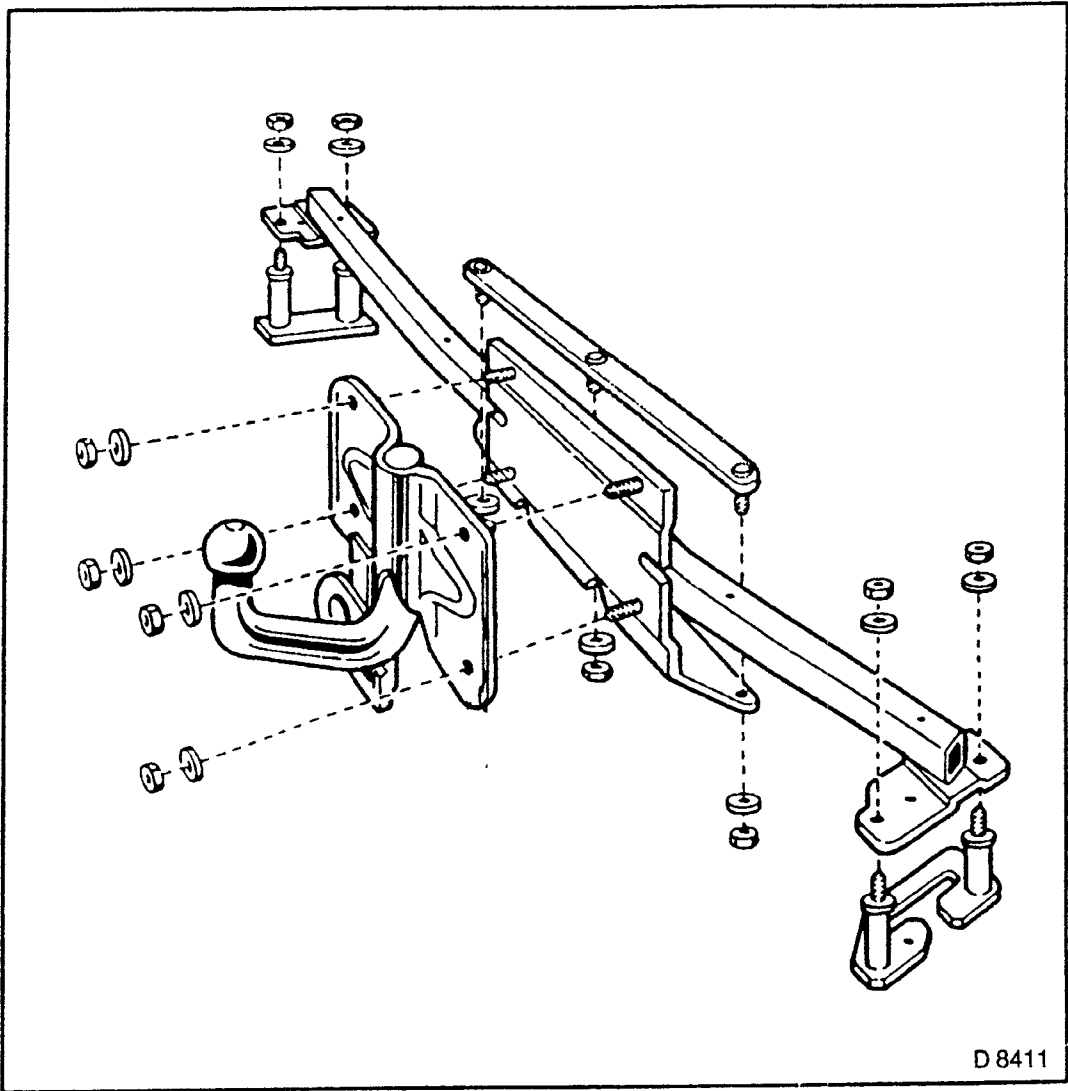


Fig. 2

REMOVE, DISCONNECT

- 1. Luggage compartment carpet.
- 2. Rear panel inner trim.
- 3. Pull off rubber seal
- 4. Rear panelling.
- 5. Nuts in luggage compartment.
- 6. Bolts in wheel arch.
- 7. If present — pull off wiring plug from license plate lamp.
- 8. If present — insulating material from luggage compartment floor — heat with hot air blower and remove.

The fitting instructions for towbars are to be obtained from the towbar manufacturers.

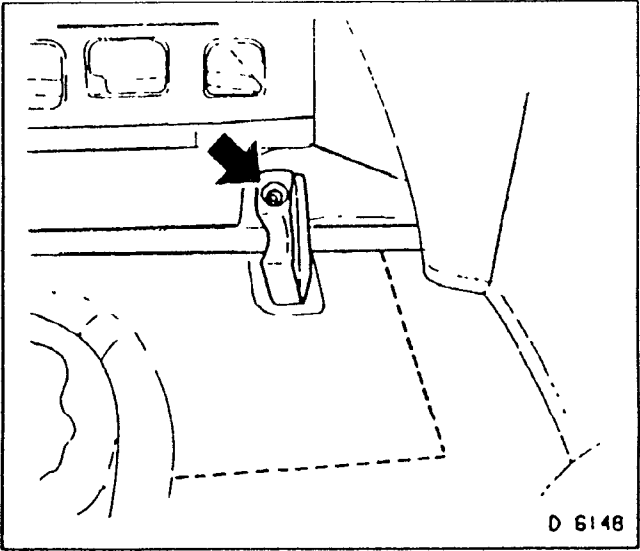


Fig. 3

ANTENNA

Automatic Antenna — Service Install

REMOVE, DISCONNECT

- 1. Ground cable from battery.
- 2. Rear left side panelling.
- 3. Left rear lamps.
- 4. Closure plugs for antenna holes.
- 5. Front and rear sill panelling.

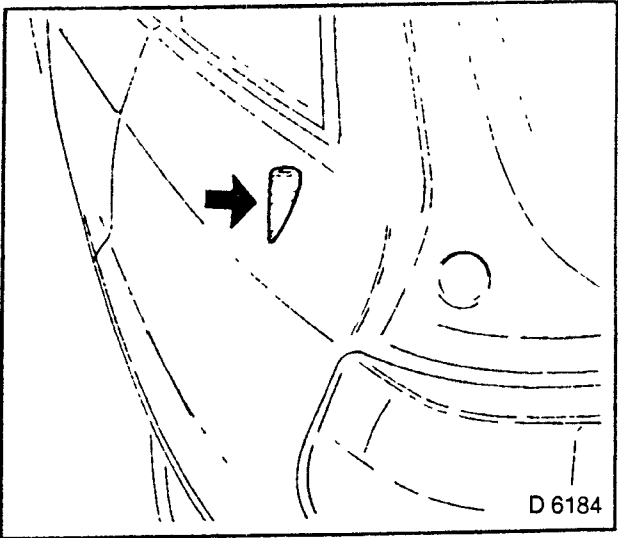


Fig 4

INSTALL, CONNECT

- 1. Rubber grommet in antenna hole.
- 2. Antenna in rubber grommet.
- 3. Antenna to inner rear quarter panel.
- 4. Antenna cable.
- 5. Lay cable via left sill panel and front rear quarter panel to radio.

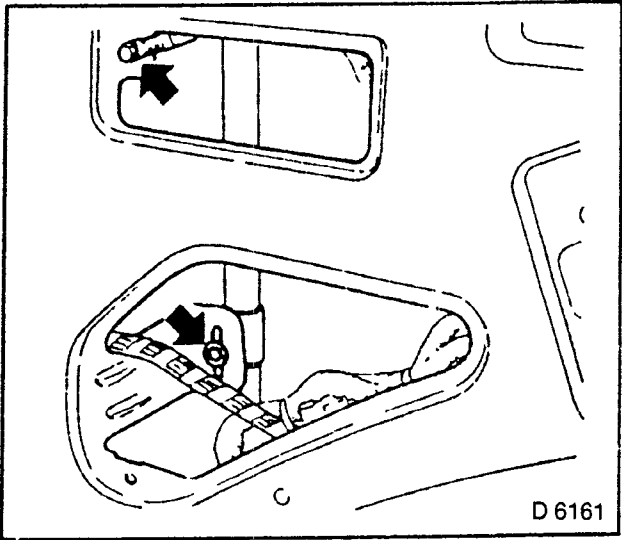


Fig 5

REMOVE, DISCONNECT

- 1. Ground cable from battery.
- 2. Rear left cover.
- 3. Antenna hole closure plug (Fig 6 shows Astra).
- 4. Front and rear sill panelling.

INSTALL, CONNECT

- 1. Rubber grommet in antenna hole — note installation position.
- 2. Antenna cable to antenna.
- 3. Antenna in rubber grommet.
- 4. Bolt antenna to inner rear quarter panel.
- 5. Route antenna cable along body wiring harness to radio.

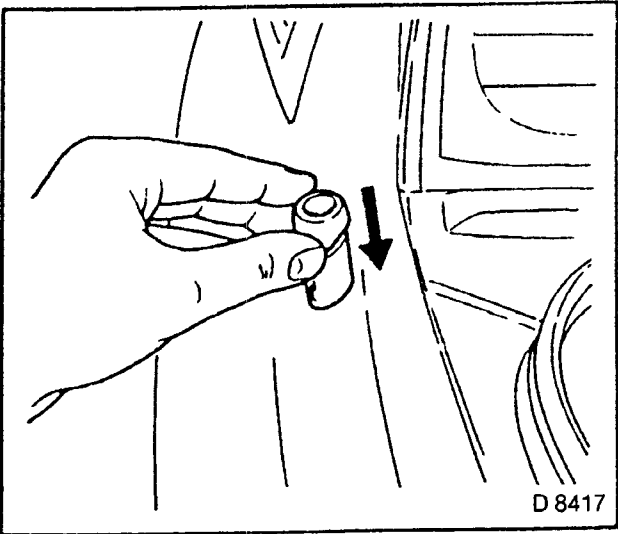


Fig. 6

ELECTRICAL CONNECTIONS

**VARIANT 1
ALL ELECTRICAL CABLES PRESENT**

INSTALL, CONNECT

- 1. Wiring harness plug from "rear receiver" or "antenna" wiring harness to antenna.
- 2. Ground cable to inner rear quarter panel.

**VARIANT 2
NO ELECTRICAL CABLES PRESENT**

INSTALL, CONNECT

- 1. Electrical connections to antenna.
 - A — Constant current to fuse box (fuse no. 24)
 - B — Control cable to radio or adapter cable.
 - C — Ground cable to inner rear quarter panel.
- 2. Side panelling.
- 3. Rear lamps.
- 4. Ground lead to battery.

Rod Antenna — Service Install (Kadett)

REMOVE, DISCONNECT

- 1. Rear left rear quarter panelling.
- 2. Closure plug from antenna hole.

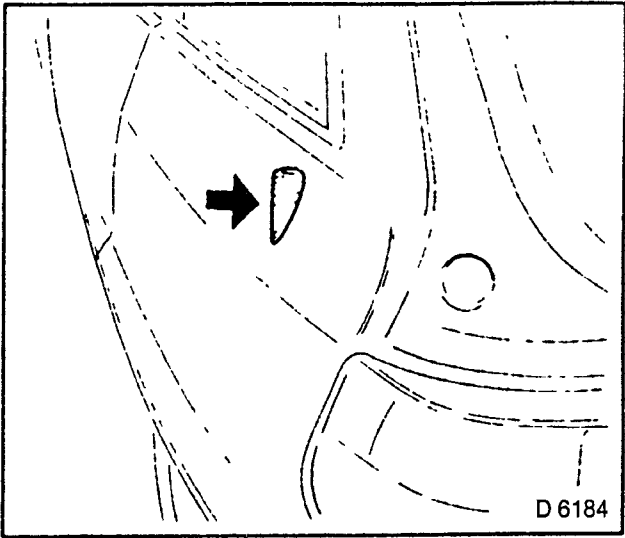


Fig. 7

INSTALL, CONNECT

1. Rubber grommet into antenna hole.
2. Antenna into rubber grommet.
3. Antenna on inner rear quarter panel.
4. Antenna cable.
5. If necessary — lay cable via left sill panel and front rear quarter panel to radio

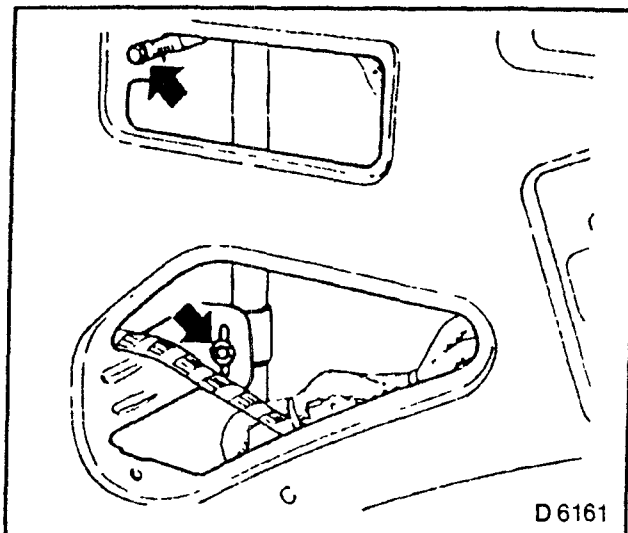


Fig. 8

Rod Antenna — Service Install (Astra)**REMOVE, DISCONNECT**

1. Rear left cover.
2. Closure plug from antenna hole.
3. Front and rear sill panelling.

INSTALL, CONNECT

1. Rubber grommet in antenna hole — note installation position.

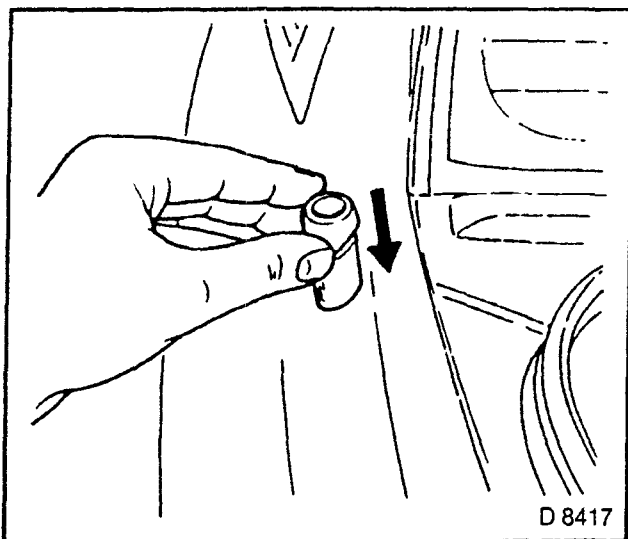


Fig 9

INSTALL, CONNECT

1. Antenna cable to antenna (1).
2. Antenna in rubber grommet.
3. Ground strap (2) and antenna (3) to inner rear quarter panel.
4. Route antenna cable along body wiring harness to radio.

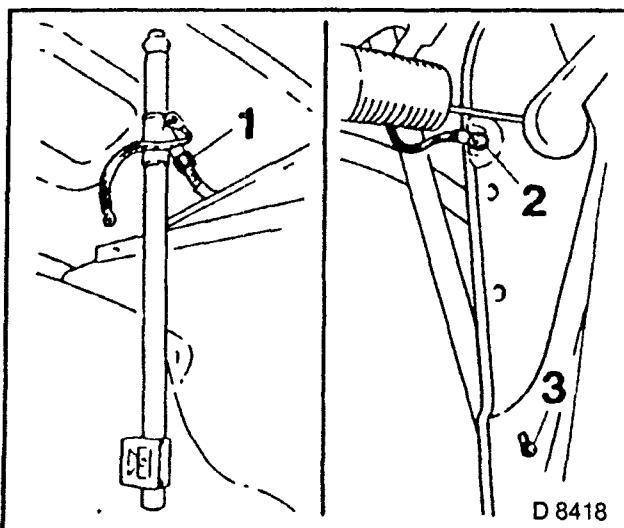


Fig. 10

OUTSIDE REAR VIEW MIRROR

Outside Rear View Mirror — Replace

REMOVE, DISCONNECT

- 1. Cover from door.
- 2. Manual adjustment — remove adjusting lever.

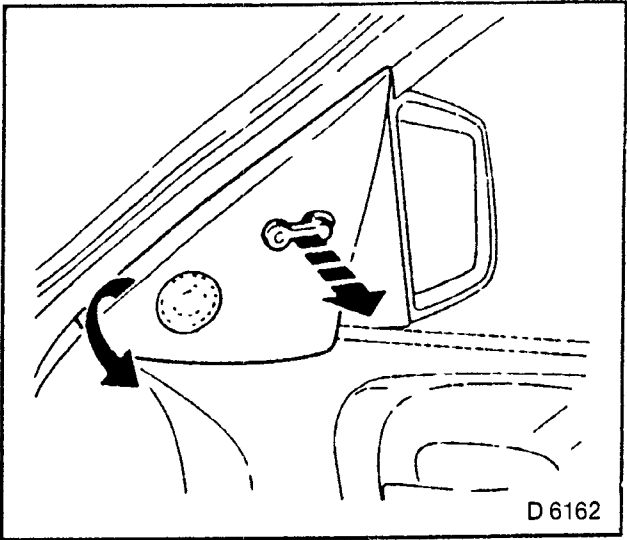


Fig. 11

REMOVE, DISCONNECT

- 1. Screws — if necessary.
- 2. Release wiring harness plug for mirror motor and remove.
- 3. Remove mirror.

INSTALL, CONNECT

- 1. Outside rear view mirror.
- 2. Rubber seal.
- 3. Wiring harness plug (if present).
- 4. Bolts.
- 5. Cover.
- 6. Adjustment lever (if present).

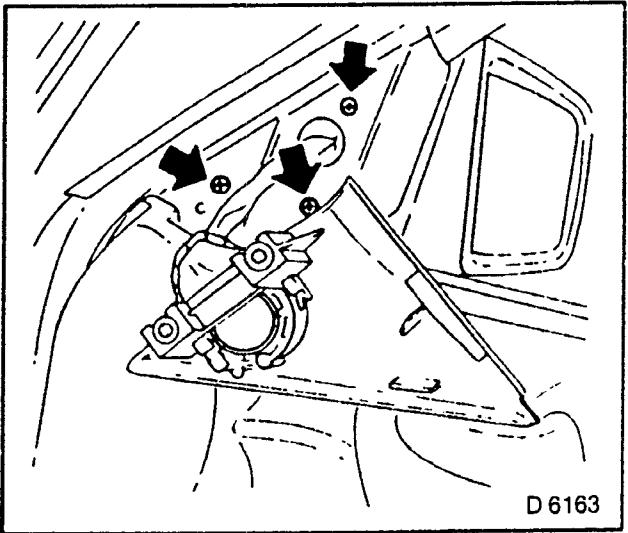


Fig. 12

Relay for Mirror Heating — Replace

REMOVE, DISCONNECT

- 1. Lower instrument panel trim on driver's side.
- 2. Release fuse box.
- 3. Relay

INSTALL, CONNECT

- 1. Relay.
- 2. Fuse box.
- 3. Instrument panel trim.

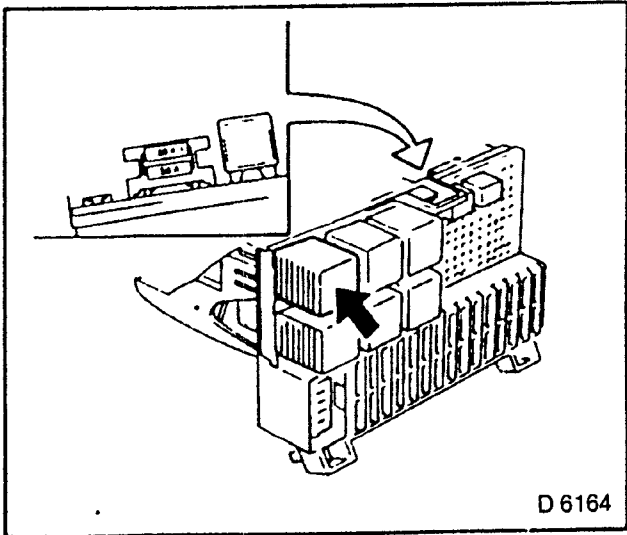


Fig. 13

Switch for Mirror Actuation — Replace

REMOVE, DISCONNECT

1. Door inner panelling.
2. Separate wiring harness plug.
3. Switch.

INSTALL, CONNECT

1. Switch
2. Plug.
3. Door inner panelling.

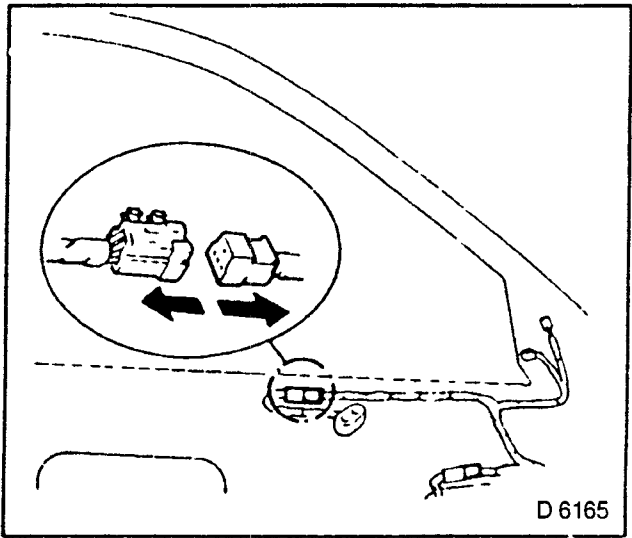


Fig. 14

Mirror Glass — Replace

REMOVE, DISCONNECT

1. Lever out mirror glass from outside, if fitted.
2. Remove wiring harness plug for mirror heating.

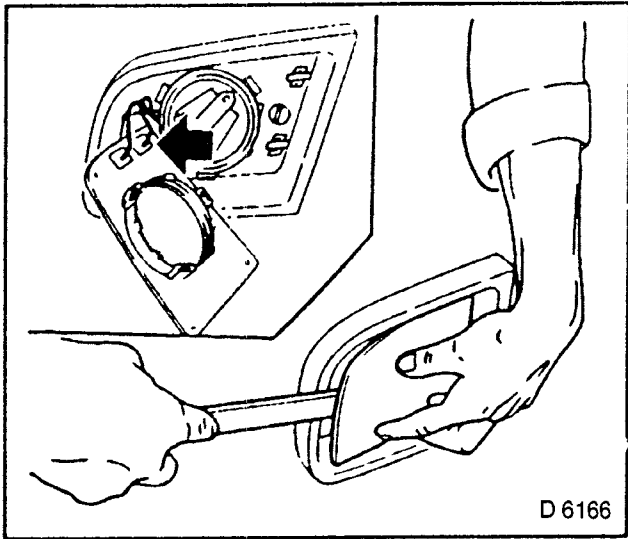


Fig. 15

INSTALL, CONNECT

1. Wiring harness plug for mirror heating — if fitted.
2. Press on mirror glass.

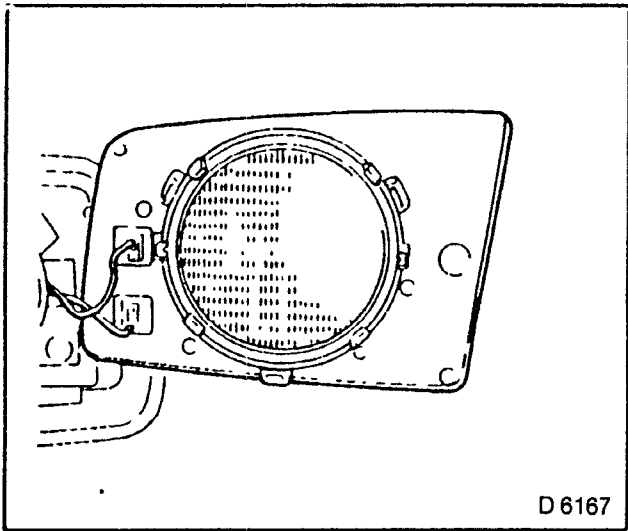


Fig. 16

Mirror Motor — Replace

REMOVE, DISCONNECT

1. Mirror glass.
2. Mirror motor.
3. Wiring plug.

INSTALL, CONNECT

1. Wiring plug (wiring behind motor).
2. Mirror motor
3. Mirror glass.

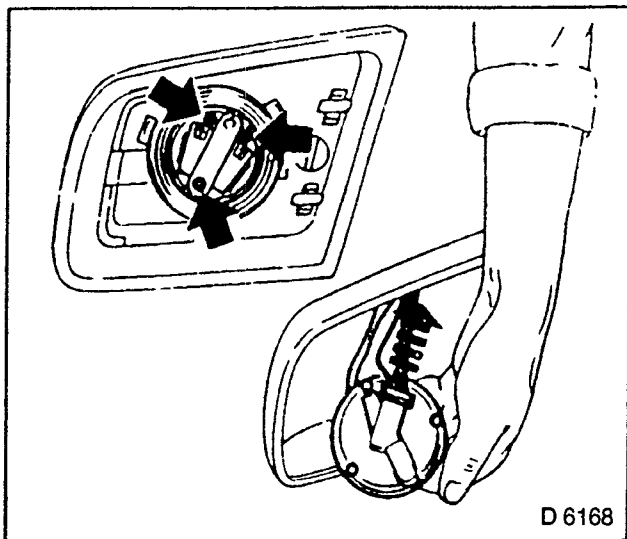


Fig. 17

Mirror Cover — Remove and Install

REMOVE, DISCONNECT

1. Counterhold mirror head.
2. Fold backwards with a blow.

DO NOT DAMAGE DOOR.

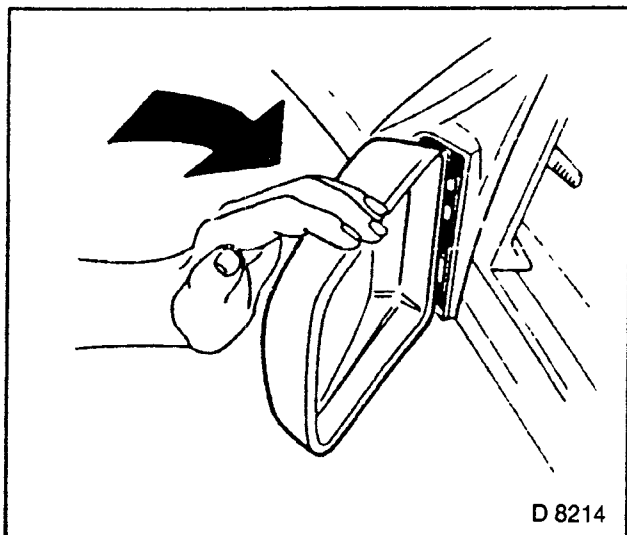


Fig. 18

3. Push in screwdriver at side near catch linkage between inner housing and outer panelling.
4. Lever out catch by turning screwdriver.
5. Remove cover by pulling gently

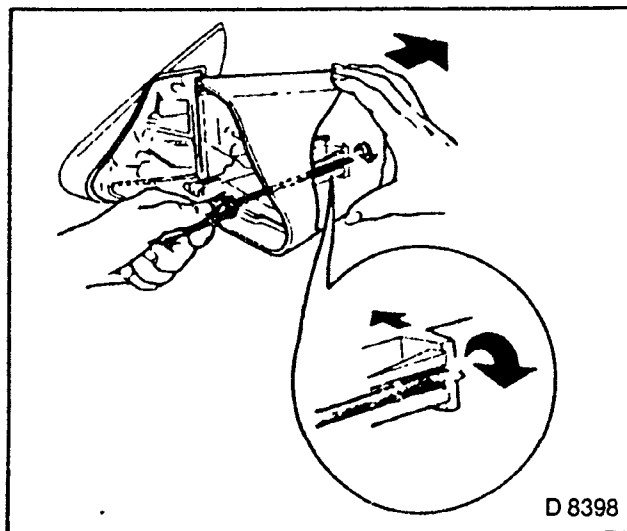


Fig. 19

INSTALL, CONNECT

1. Push on cover until it engages audibly.

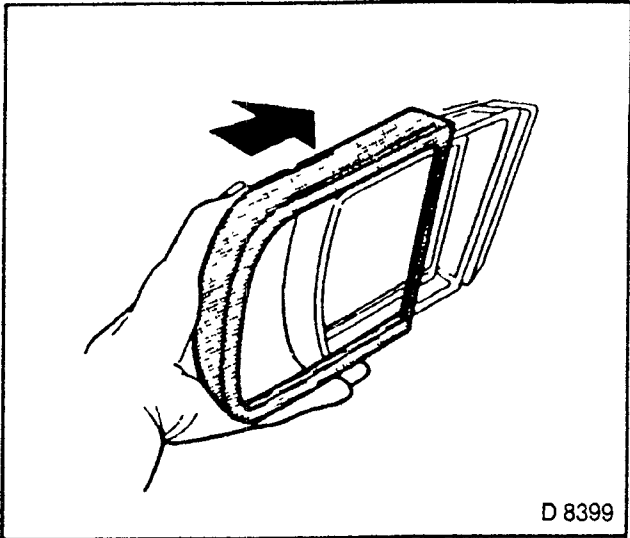


Fig. 20

- 2. Guide mirror head to catch and hold parallel to mirror base.
- 3. Engage by striking outside edge with flat of hand.

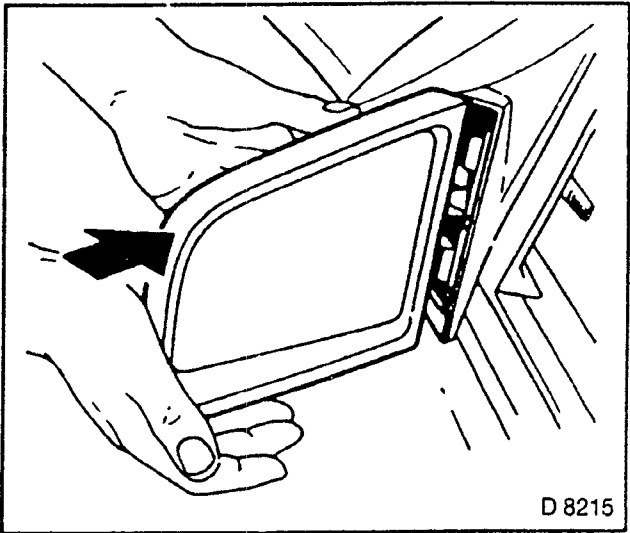


Fig. 21

RADIO, LOUDSPEAKERS

Rear Loudspeakers — Replace (Kadett)

REMOVE, DISCONNECT

- 1. Loudspeaker.
- 2. Wiring harness plug.

INSTALL, CONNECT

- 1. Wiring harness plug.
- 2. Loudspeaker.

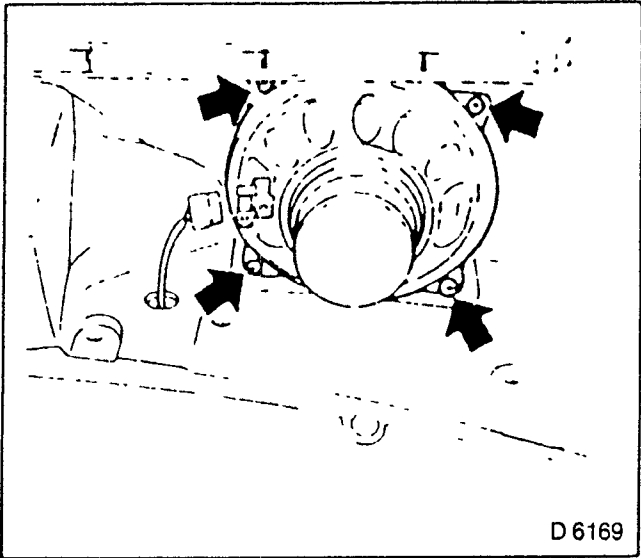


Fig. 22

Rear Loudspeakers — Replace (Astra)

REMOVE, DISCONNECT

- 1. Lift rear loudspeaker cover at front (1).
- 2. Push aside slightly (2).
- 3. Pull forward (3).

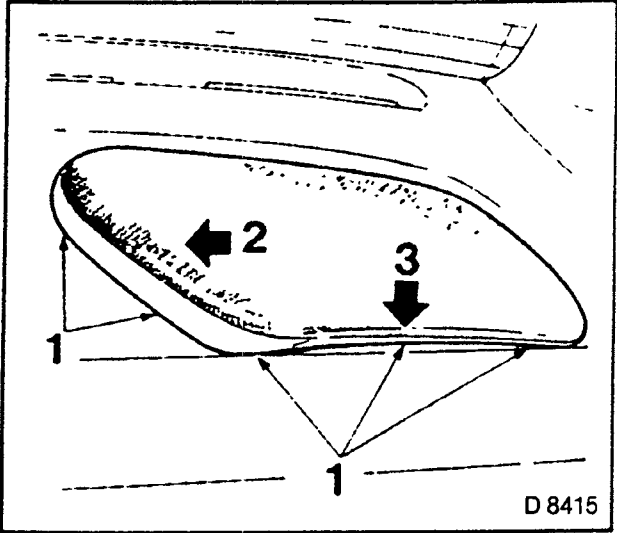


Fig. 23

- 4. Unscrew rear loudspeaker at top front rear end panel.
- 5. Wiring harness plug.

INSTALL, CONNECT

- 1. Wiring harness plug.
- 2. Rear loudspeaker.
- 3. Rear loudspeaker cover.

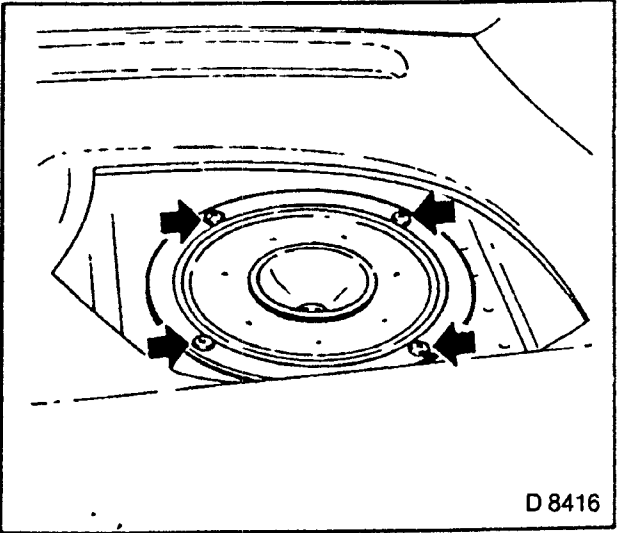


Fig. 24

Treble Loudspeakers in Front Doors — Replace

REMOVE, DISCONNECT

- 1. Panel from door.
- 2. Loudspeaker.
- 3. Wiring harness plug.

INSTALL, CONNECT

- 1. Wiring harness plug.
- 2. Loudspeaker.
- 3. Panel.

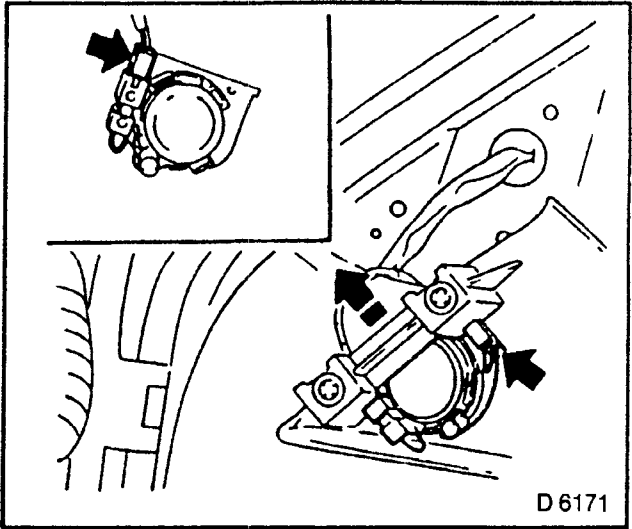


Fig. 25

Bass Loudspeakers in Front Doors — Replace

REMOVE, DISCONNECT

- 1. Door inner panelling.
- 2. Loudspeaker.
- 3. Wiring harness plug.

INSTALL, CONNECT

- 1. Wiring harness plug.
- 2. Loudspeaker.
- 3. Door inner panelling.

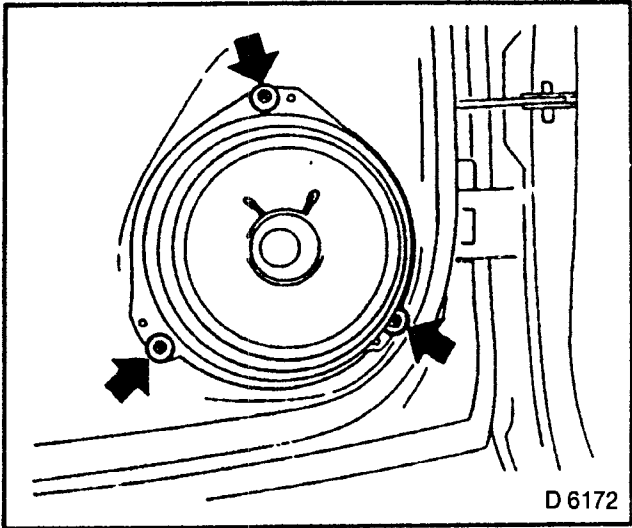


Fig. 26

Radio — Service Install

REMOVE, DISCONNECT

- 1. Ground cable from battery.
- 2. Radio recess cover.

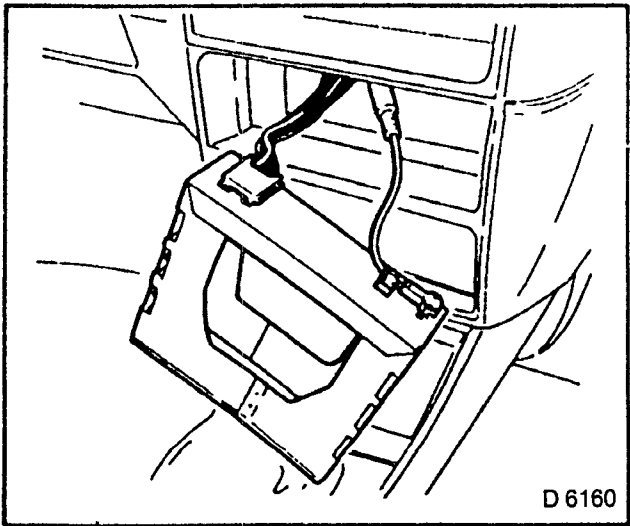


Fig. 27

REMOVE, DISCONNECT

- 1. Instrument assembly — Section N.

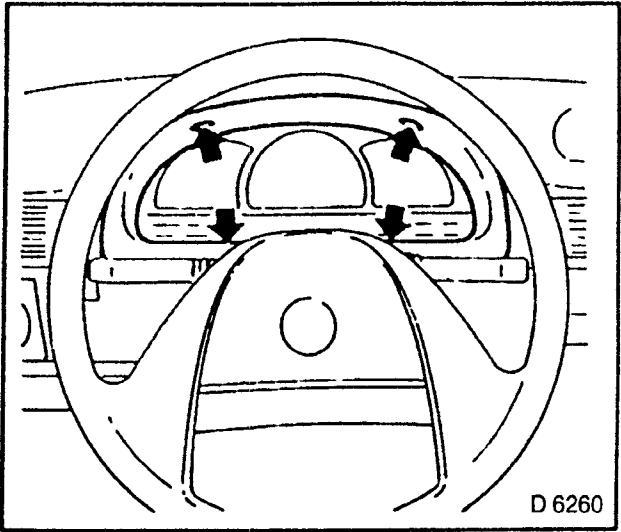


Fig. 28

ELECTRICAL EQUIPMENT

No electrical wiring present for installing radio.

REMOVE, DISCONNECT

- 1. Fuse box.

INSTALL, CONNECT

- 1. Constant current wiring (Ter. 30):
From output of fuse no. 24 to adapter cable.
- 2. Fuse output = relay side.

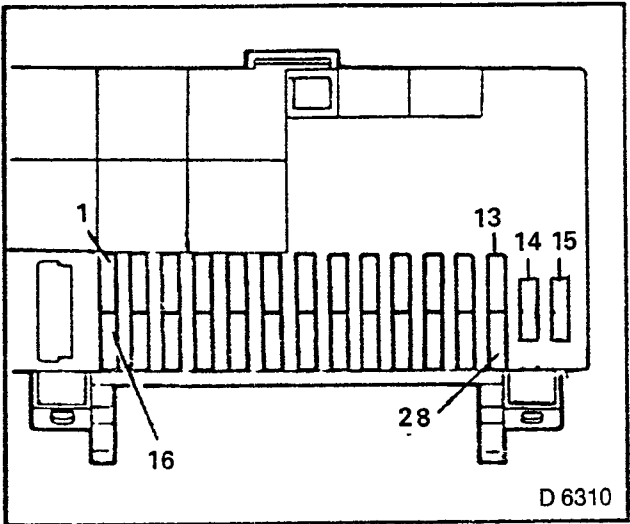


Fig. 29

INSTALL, CONNECT

- 1. Ignition current wiring (Ter. 15):
From output fuse no 7 to adapter cable.
- 2. Lighting wiring (Ter. 58):
From output of fuse no. 18 to adapter cable.
- 3. Fuse output = relay side.

INSTALL, CONNECT

- 1. **ANTENNA CABLE.**
- 2. Ground lead:
From steering column retainer to adapter cable or radio.
- 3. Self-tapping screw.
- 4. Toothed lock washer.
- 5. Cable terminal.

INSTALL, CONNECT

- 1. If necessary, leads from radio wiring harness ter. 1 to automatic antenna.
- 2. Loudspeaker connection.
See installation instructions enclosed with loudspeaker installation set.
- 3. Antenna cable to radio or adapter cable.

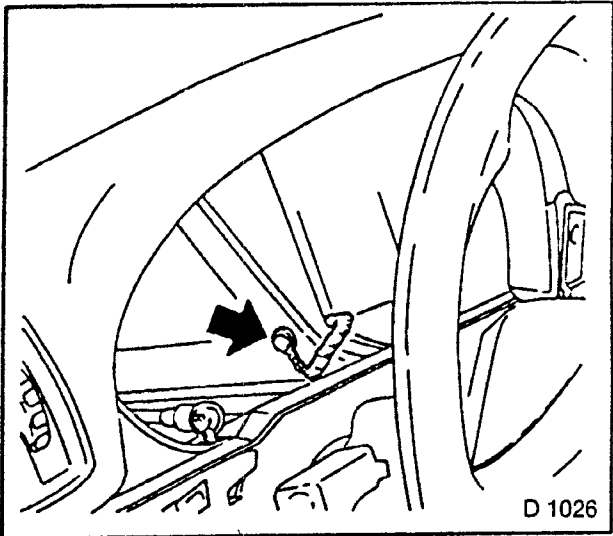


Fig. 30

INSTALL, CONNECT

- 1. Instrument assembly.

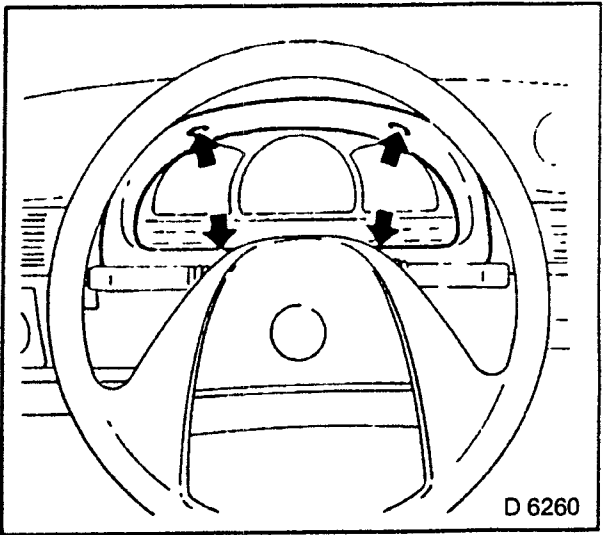


Fig. 31

INSTALL, CONNECT

- 1. Insert wiring harness plug in retaining frame.
- 2. Insert retaining frame (Fig. 43 shows retaining frame for radio with central plug).
- 3. Radio.
- 4. Ground lead to battery.

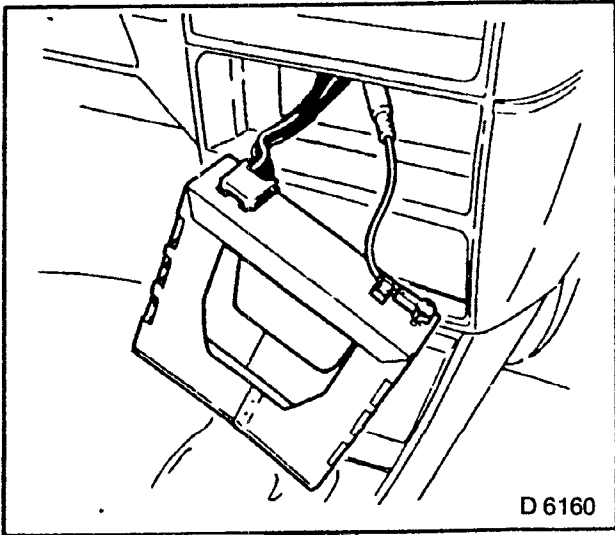


Fig. 32

AUXILIARY LIGHTING

Front Fog Lamp Bulb — Replace

REMOVE, DISCONNECT

- 1. Open cover.
- 2. Remove cable.
- 3. Bulb from socket.

INSTALL, CONNECT

- 1. Bulb into socket.
- 2. Connect cable.
- 3. Close cover.

Front Fog Lamp — Replace

REMOVE, DISCONNECT

- 1. Wiring harness plug.
- 2. Fog lamp.

INSTALL, CONNECT

- 1. Fog lamp.
- 2. Wiring harness plug.
- 3. Adjust fog lamps.

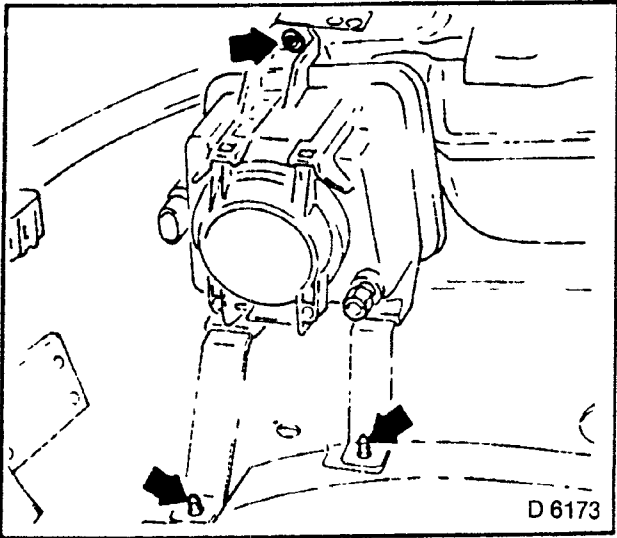


Fig. 33

Fog Lamp — Service Install

Vehicles with prepared “body” and “instrument panel” wiring harnesses.

REMOVE, DISCONNECT

- 1. Ground lead from battery.
- 2. Front panelling — Section A.
- 3. Saw out cut-outs along marking; deburr cut edges.

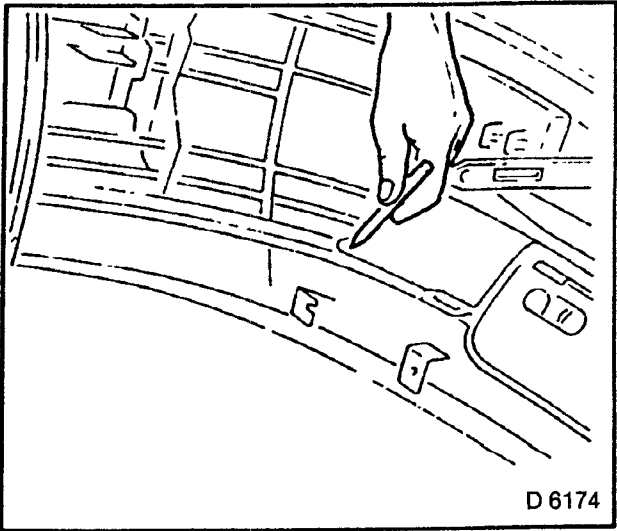


Fig. 34

INSTALL, CONNECT

- 1. Fog lamp into front panelling.
- 2. Front panelling.
- 3. Wiring harness plug.

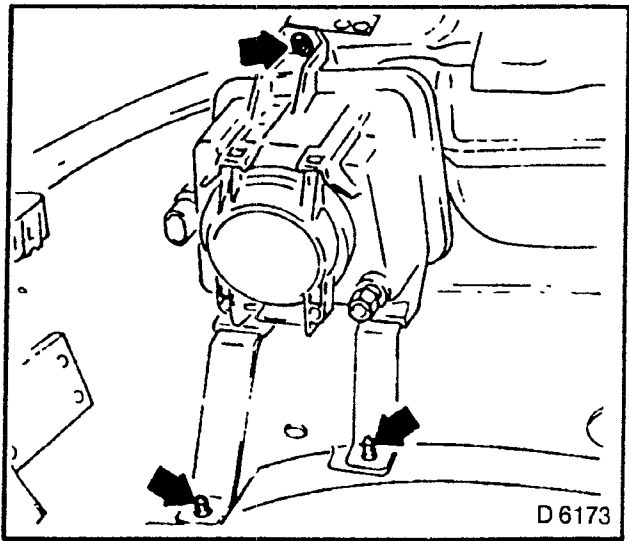


Fig. 35

INSTALL, CONNECT

- 1. Fog lamp relay.
- 2. 20 A fuse on position no. 17.

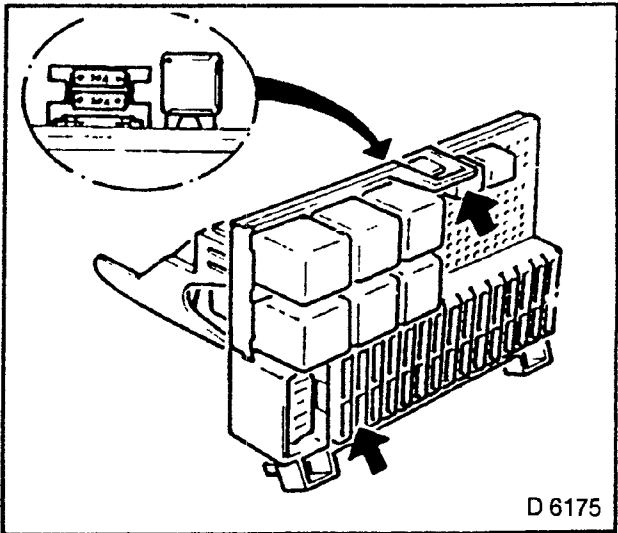


Fig. 36

REMOVE, DISCONNECT

- 1. Remove blind cover.

INSTALL, CONNECT

- 1. Switch in instrument panel.
- 2. Ground lead to battery.

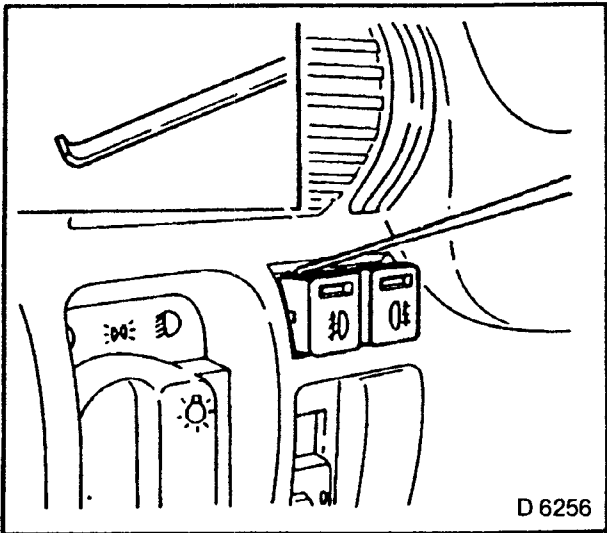


Fig. 37

Front Fog Lamps — Service Install

Vehicles without prepared “body” and “instrument panel” wiring harnesses.

REMOVE, DISCONNECT

- 1. Pull radiator grille forwards (1).
- 2. Pull lower bracket upwards out of front panelling (2).
- 3. Headlamp washer system hose (if fitted) (3).

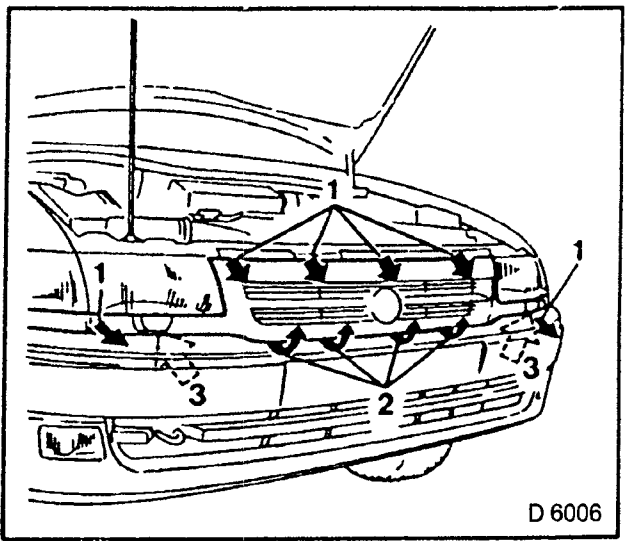


Fig 38

- 4. Front panelling.
To side member — Two nuts.
To wheel well — Four bolts.
Four body-bound rivets from crossmember — if fitted

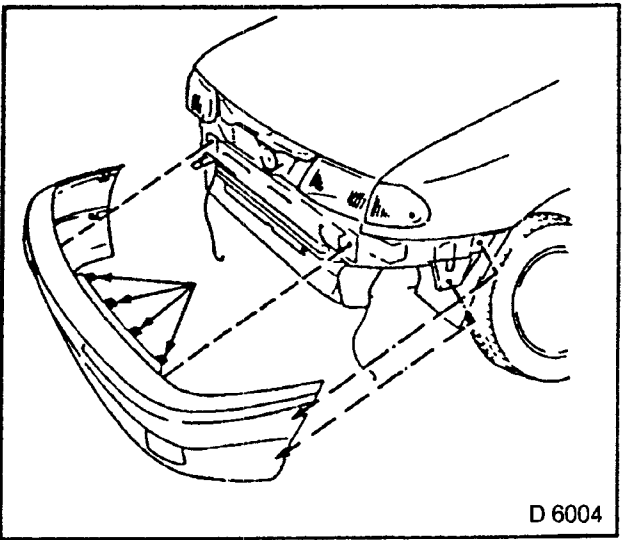


Fig. 39

REMOVE, DISCONNECT

- 1. Saw out cutouts along markings.
- 2. Deburr cut edges.

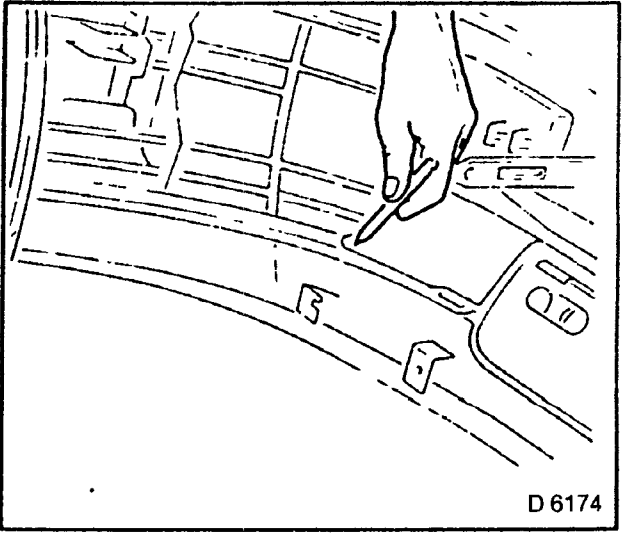


Fig. 40

INSTALL, CONNECT

- 1. Insert tightening nuts at top of front panelling.
- 2. Fog lamps in front panelling.
- 3. Front panelling.

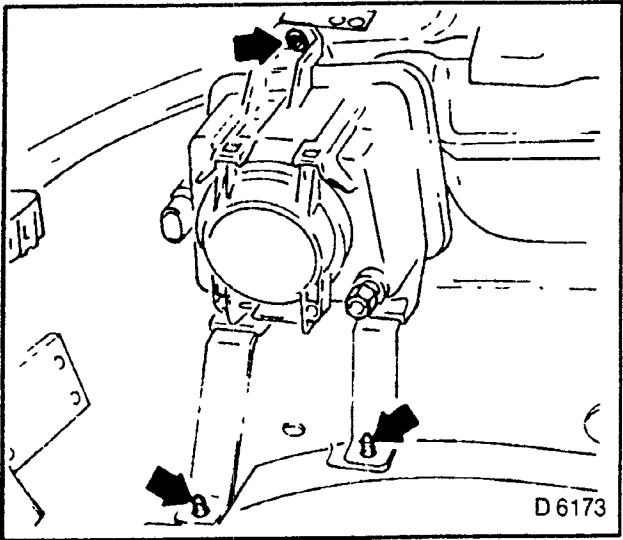


Fig 41

REMOVE, DISCONNECT

- 1. Disconnect battery ground strap.
- 2. Driver's side footwell panelling.
- 3. Unscrew fuse box (1).
- 4. Detach retaining spring (2), turn fuse box forward (reverse accessible).

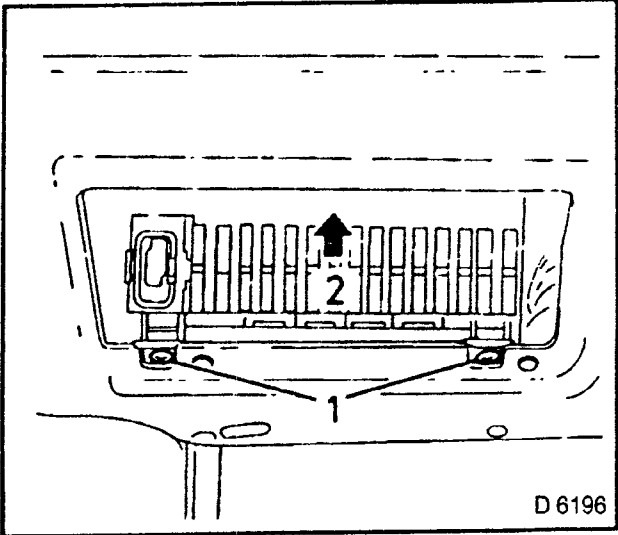


Fig. 42

- 5. Remove left vent duct housing — Section D.

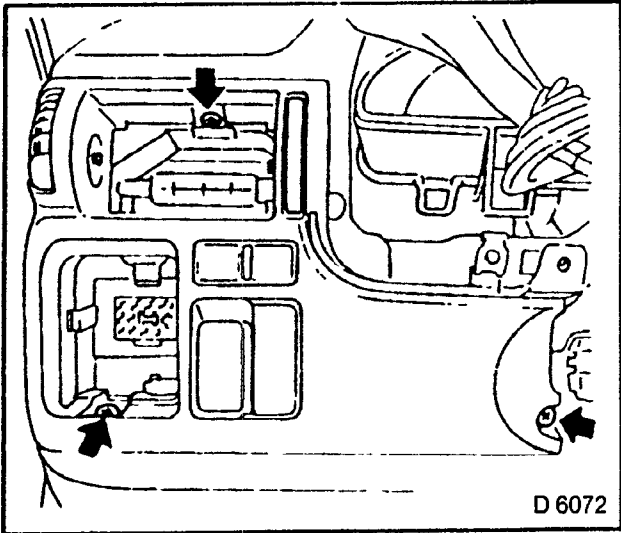


Fig 43

INSTALL, CONNECT

- 1. Connect prefabricated cable with wiring harness plug to front fog lamp.
- 2. Route cable along body wiring harness next to side of the battery.
- 3. Bolt ground cable for left and right front fog lamp with battery ground strap to body.
- 4. Equip positive cable for left and right front fog lamps with flat plug sleeves.
- 5. Connect 1,5 mm² cable to left and right positive cables with flat plug sleeves and flat plugs.
- 6. Route 1,5 mm² cable along body wiring harness to fuse box.
- 7. Connect to terminal 87 pos. 4 of front fog lamp relay with flat plug 6,3 x 0,8 mm.

INSPECT

- 1. Function of fog lamp.
The switched on fog lamps illuminate in conjunction with parking lamps, high beam and low beam.
- 2. The rear fog lamp only illuminates when front fog lamps, high beam and low beam lamps are switched on.
- 3. The switch symbol on fog lamp switch is illuminated when parking lamp is switched on.
- 4. The telltale is illuminated when fog lamps are switched on.

INSTALL, CONNECT

- 1. Route 1,5 mm² cable along body wiring harness from battery to fuse box. Input of fuse no. 17.
- 2. Fuse input = underside.
- 3. Route 1,5 mm² cable from output of fuse no. 17 to front fog lamp relay.
- 4. Connect to pos. 5 with flat plug 6,3 x 0,8 mm.
Fuse output = relay side.

INSTALL, CONNECT

- 1. Connect cable between:
Front fog lamp relay K5 terminal 85 pos. 3 and ground
Front fog lamp relay K5 terminal 86 pos. 1 and
front fog lamp switch S21 pos. 2
Front fog lamp switch S21 pos. 1 and ground
Front fog lamp relay, output of fuse 19 and
front fog lamp switch S21 pos. 3 and 4
Front fog lamp switch S21 pos. 5 and
front fog lamp relay K5 terminal 87 pos. 4 (splice connector).
- 2. Secure contact springs in wiring harness plug with retaining pins.
- 3. Switch.
- 4. Fuse box.
- 5. Insert fuse in pos. 17.
- 6. Front fog lamp relay.

ADJUST

- 1. Fog lamp.
- 2. Position vehicle on even surface.
- 3. Check/correct tyre pressure.
- 4. Load rear seat bench with approximately 70 kg.
- 5. Regulate fog lamp with adjusting screw according to upper light/dark border with adjuster.
- 6. The inclination of the light beam is two percent per 10 m.

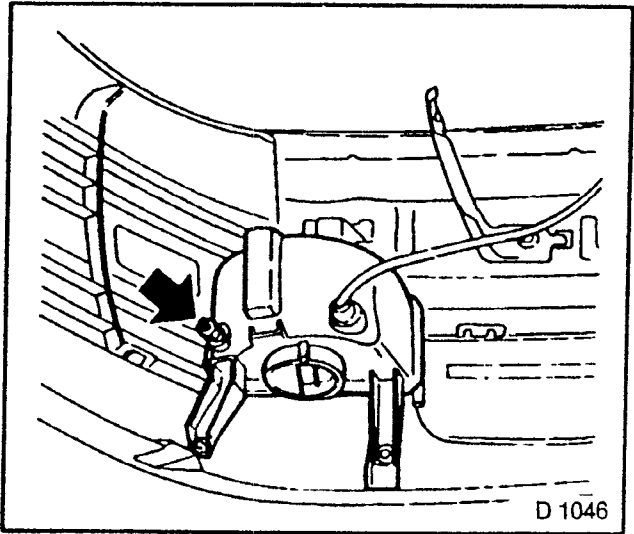


Fig 44

Front Fog Lamp Switch — Replace

REMOVE, DISCONNECT

- 1. Make removal tool out of welding rod.
- 2. Pull switch out of instrument panel.

INSTALL, CONNECT

- 1. Switch in instrument panel.

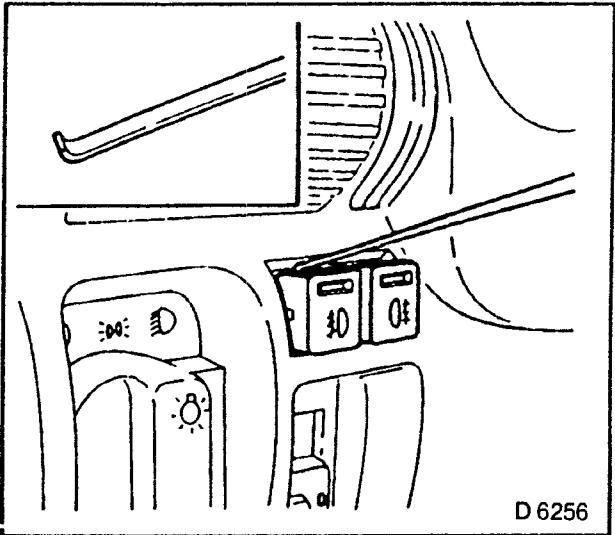


Fig. 45

Front Fog lamp — Adjust

NOTE:

Observe adjustment regulations in Section N.

ADJUST

- 1. Fog lamp.
- 2. Position vehicle on even surface.
- 3. Check/correct tyre pressure.
- 4. Load rear seat bench with approximately 70 kg.
- 5. Regulate fog lamp with adjusting screw according to upper light/dark border with adjuster.
- 6. The inclination of the light beam is two percent per 10 m.

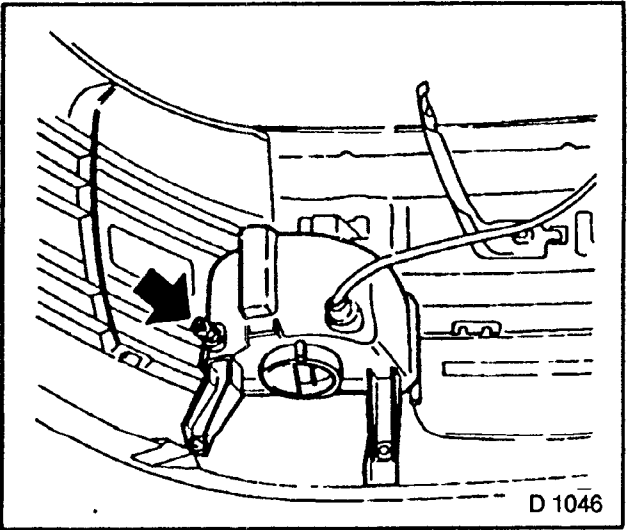


Fig. 46

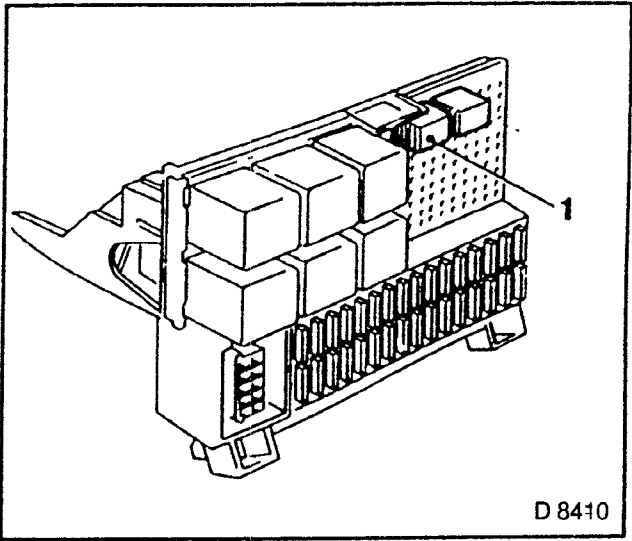
Relay — Front Fog Lamps — Replace

REMOVE, DISCONNECT

- 1. Cover from fuse box.
- 2. Detach fuse box.
- 3. Front fog lamps relay (1).

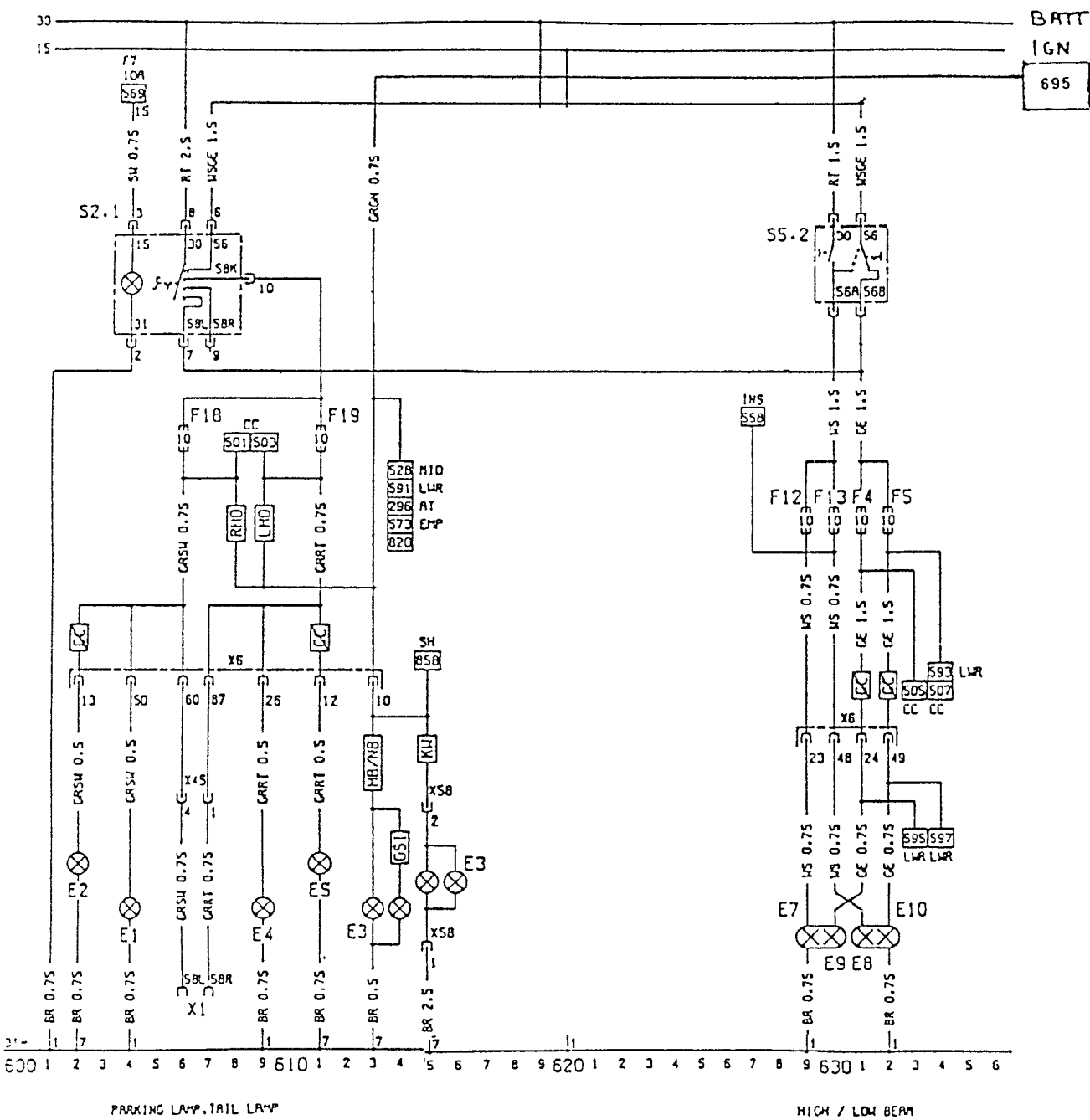
INSTALL, CONNECT

- 1. Relay.
- 2. Fuse box.
- 3. Fuse box cover.



D 8410

Fig. 47



LAMPS — CIRCUIT DIAGRAM

E1	Parking lamp — left	604	X45	Body & Socket — Trailer SP	606, 607
E2	Tail lamp — left	602	X58	Body & Tail Gate 9P (KW)	615
E3	Lamp — Licence plate	613, 616	E20	Fog lamp — left	650
E4	Parking lamp — right	609	E21	Fog lamp — right	651
E5	Tail lamp — right	611	E24	Fog lamp — rear left — N/A	
E7	High beam — left	629	E39	Fog lamp — rear right — N/A	
E8	High beam — right	631	F8, F11, F17, F28	Fuse	657, 645 660
E9	Low beam — left	630	H9	Stop lamp — left	659
E10	Low beam — right	632	H10	Stop lamp — right	660
F4, F5, F12, F13	Fuse	631, 632 629, 630	K5	Relay — Fog lamp	651 652
F18 F19	Fuse	606, 611, 620	K89	Relay — Fog lamp, rear	
K59	Relay — day running light	619, 625	S8	Switch — Stop lamp	660
S2	Switch asm-light		S21	Switch — Fog lamp	652, 654
S2 1	Switch-light	604, 607	X1	Socket — Trailer 7P	677, 682
S5	Turn signal switch asm		X6	Instrument panel & body 95P	
S5 2	Switch — low beam	630, 631	X13	Diagnostic link 10P	
X1	Socket — Trailer 7P	606, 607	X45	Body & Socket — Trailer 9P	
X6	Instrument panel & body 9SP	602, 613, 629, 632	X50	Code — Fog lamp, Rear EP	



Switch lamp, passenger compartment	689
Turn signal switch ASM	682, 684
Switch — turn signal	698
Switch — Reverse lamp	687
Switch-lamp, trunk	694
Contact switch — co-driver door	691
Contact switch — door, rear left	691
Contact switch — door, rear right	692
Contact switch — driver door 2P	693, 696
Switch — hazard warning	672, 676
Light Diode-anti-theft warning unit	671
Socket — Trailer 7P	677, 682
Instrument panel & engine 30P	698
Instrument panel & boot 95P	675, 698
Boot & Tailgate 5P H8	686
Boot & socket — Trailer 9P	677, 682
Boot & Tail gate 9P (KW)	685
Boot & Heading lamps, rear 4P,	691, 692
Lamp — Trunk	687
Lamp — Passenger Compartment	689
Reverse lamp — left	698
Reverse lamp — right	699
Reading lamps, rear — left	692
Reading lamps, rear — right	694
Fuse	673
Teillae-hazard warning System	674
Turn signal lamp — front left	675
Turn signal lamp — rear left	676
Turn signal lamp — front right	683
Turn signal lamp — rear right	684
Warning buzzer — Headlamps on	695, 696
Auxiliary turn signal lamp — left	679
Auxiliary turn signal lamp — right	681
Flasher unit	670, 672/2
Switch ASM-light	

- | | |
|-------------------------------------|------------|
| Switch lamp, passenger compartment | 689 |
| Turn signal switch ASM | 682, 684 |
| Switch — turn signal | 698 |
| Switch — Reverse lamp | 687 |
| Switch-lamp, trunk | 694 |
| Contact switch — co-driver door | 691 |
| Contact switch — door, rear left | 691 |
| Contact switch — door, rear right | 692 |
| Contact switch — driver door 2P | 693, 696 |
| Switch — hazard warning | 672, 676 |
| Light Diode-anti-theft warning unit | 671 |
| Socket — Trailer 7P | 677, 682 |
| Instrument panel & engine 30P | 698 |
| Instrument panel & boot 95P | 675, 698 |
| Boot & Tailgate 5P H8 | 686 |
| Boot & socket — Trailer 9P | 677, 682 |
| Boot & Tail gate 9P (KW) | 685 |
| Boot & Heading lamps, rear 4P, | 691, 692 |
| Lamp — Trunk | 687 |
| Lamp — Passenger Compartment | 689 |
| Reverse lamp — left | 698 |
| Reverse lamp — right | 699 |
| Reading lamps, rear — left | 692 |
| Reading lamps, rear — right | 694 |
| Fuse | 673 |
| Teillae-hazard warning System | 674 |
| Turn signal lamp — front left | 675 |
| Turn signal lamp — rear left | 676 |
| Turn signal lamp — front right | 683 |
| Turn signal lamp — rear right | 684 |
| Warning buzzer — Headlamps on | 695, 696 |
| Auxiliary turn signal lamp — left | 679 |
| Auxiliary turn signal lamp — right | 681 |
| Flasher unit | 670, 672/2 |
| Switch ASM-light | |

**SPECIAL SERVICE
TOOLS**

KM-569-A — PLUG EXTRACTOR
To remove fastening plugs on inner
panelling.

