

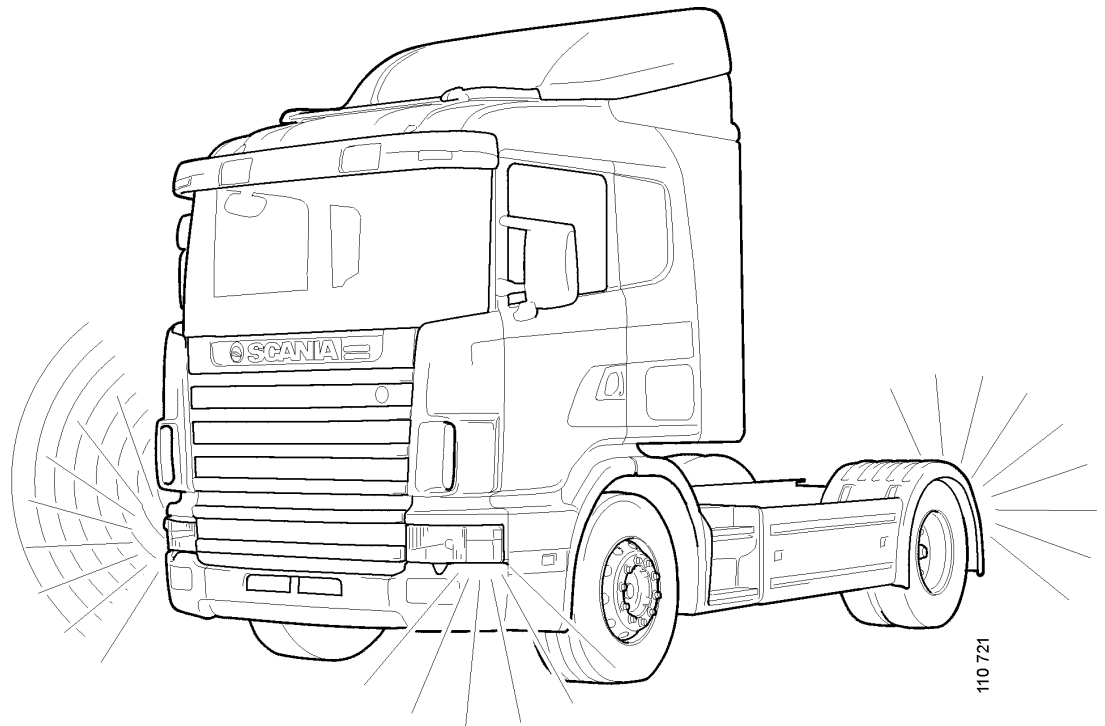
SCANIA

19:03-05

Issue 1 en

Retrofitting

Alarm and theft protection, VPS



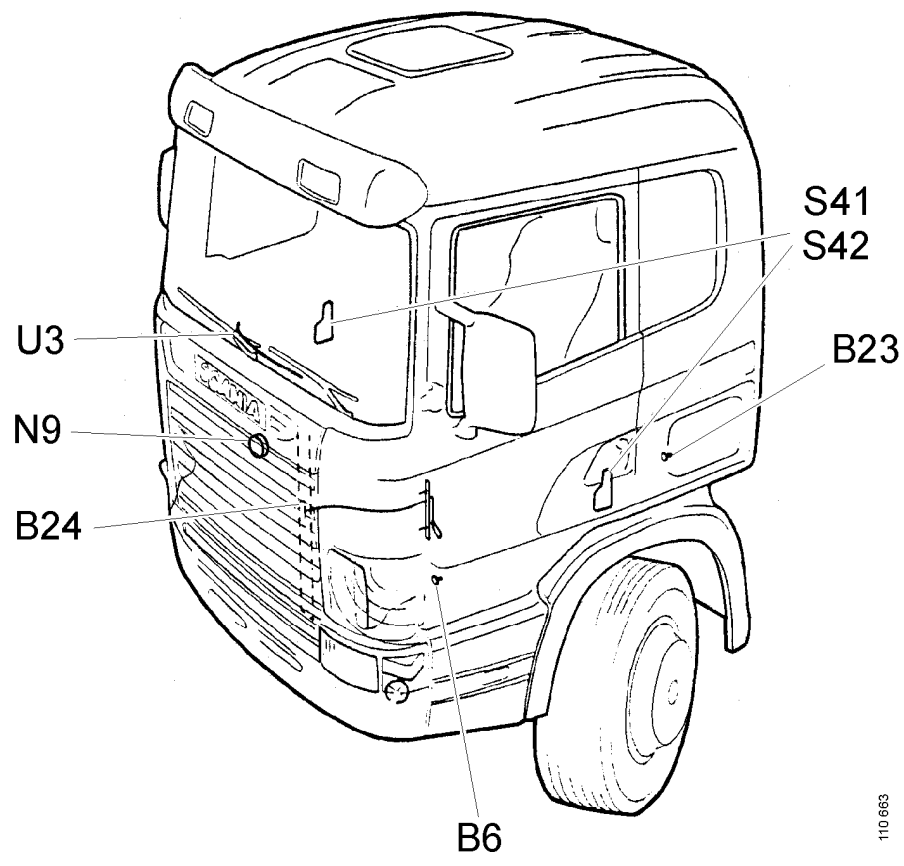
P and R cabs

Work description

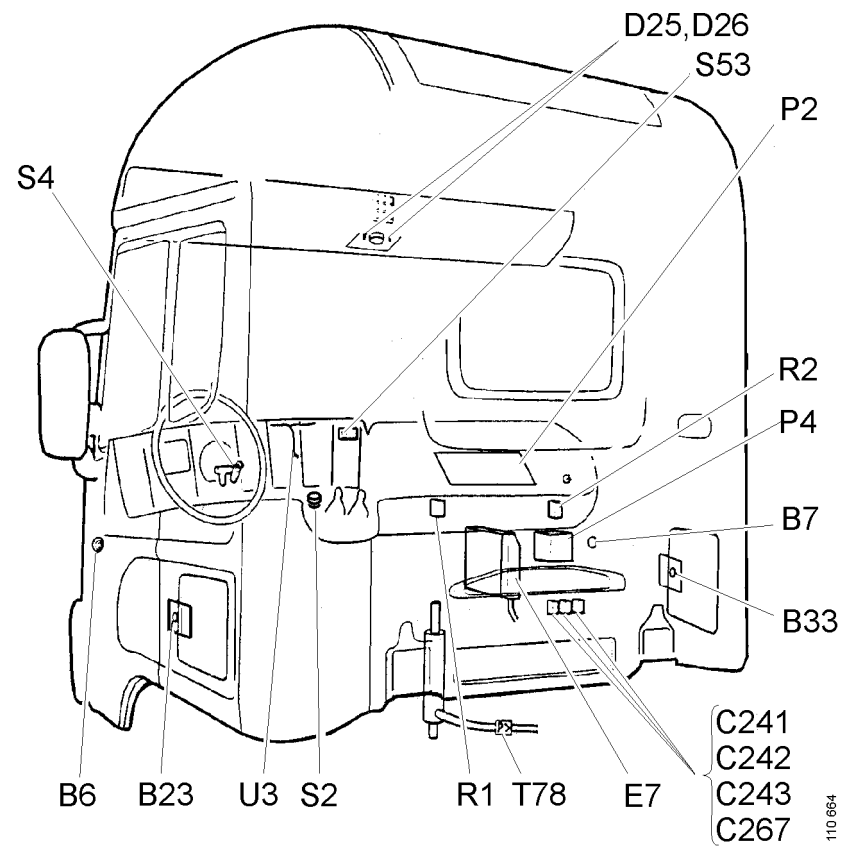
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Component overview

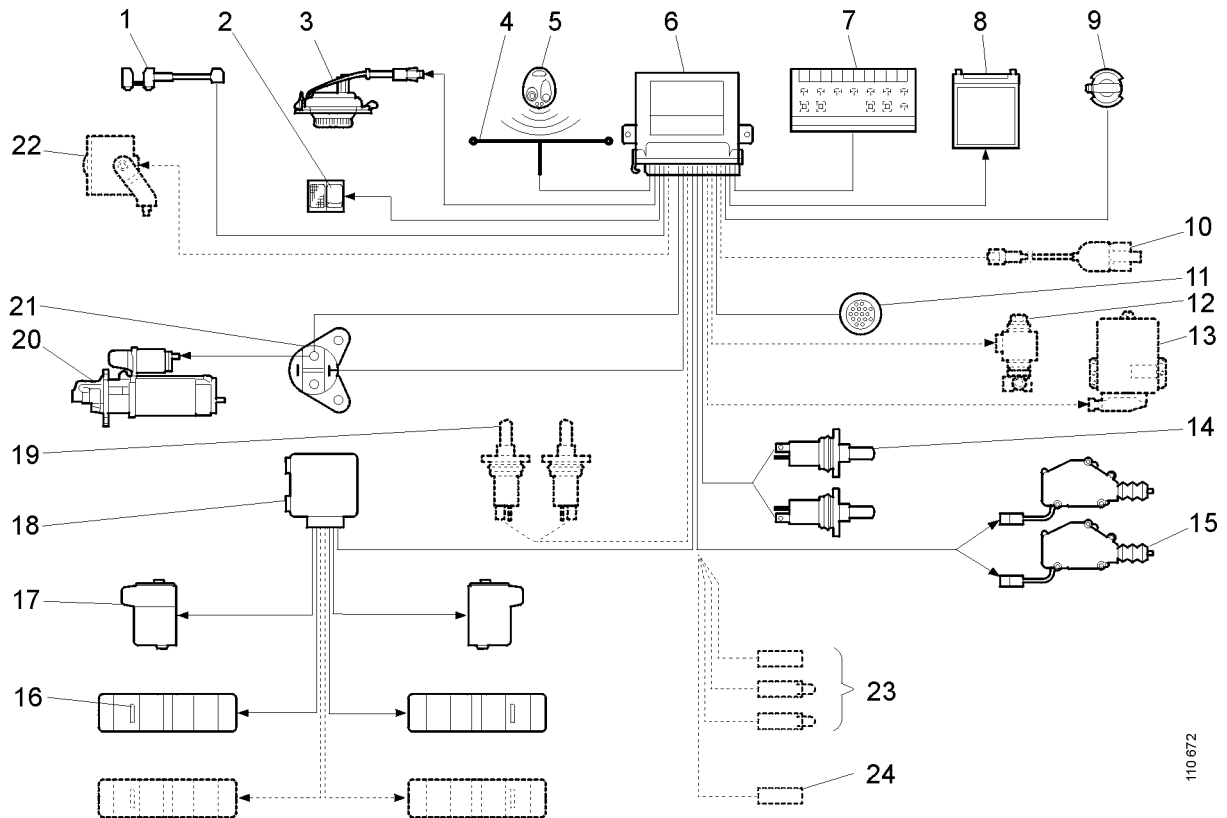


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Component overview



110 672

- | | |
|---|--|
| <p>1 Sensor for grille panel (B24)¹</p> <p>2 Diagnostics switch (S53)</p> <p>3 Light emitting diodes (D25, D26)</p> <p>4 Aerial</p> <p>5 Remote control</p> <p>6 VPS control unit (E7)</p> <p>7 Central electric unit (P2)</p> <p>8 Backup battery (P4)</p> <p>9 Starter lock (S4)</p> <p>10 Pressure sensor, cab tilt (T78)</p> <p>11 Diagnostics socket (K1)</p> <p>12 Fuel valve (V45)</p> <p>13 EDC control unit (E12)</p> | <p>14 Door switches (B6, B7)</p> <p>15 Central locking (S41, S42)</p> <p>16 Flashing direction indicators, rear (L37, L38)</p> <p>17 Flashing direction indicators, front (L9, L10)</p> <p>18 Flasher relay (R1)</p> <p>19 Sensors in storage box (B23, B33)</p> <p>20 Starter motor (M1)</p> <p>21 Starter relay (R2)</p> <p>22 Siren (N9)</p> <p>23 Connections for bodywork (C241, C242, C243)</p> <p>24 Output for special alarm</p> |
|---|--|

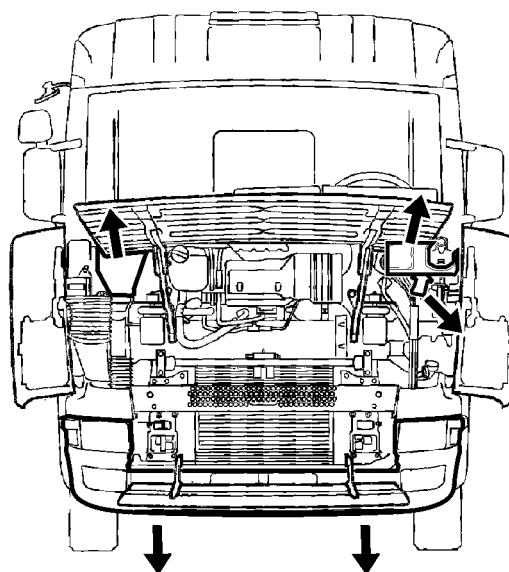
1. Bracketed figure groups in the wiring diagram are component designations.

Preparatory work

General

While making the connections, see also the wiring diagram for Alarm and Theft Protection, VPS, 16:04-08.

- 1 Disconnect the negative cable from the battery.
- 2 Open the grille panel, swing out the corners and detach and remove the plastic bumper covers. Remove the covers over the wiring grommets, both in front of the central electric unit and in front of the driver.

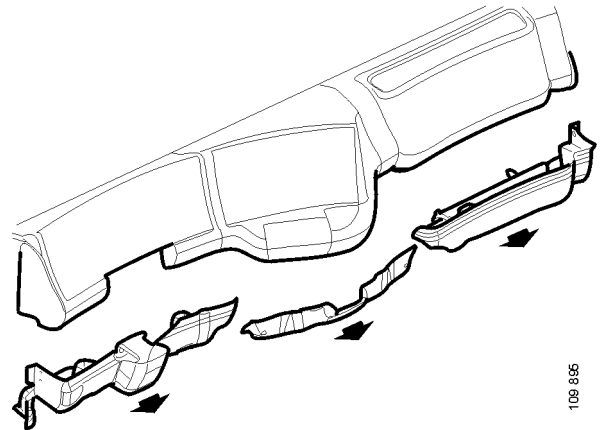


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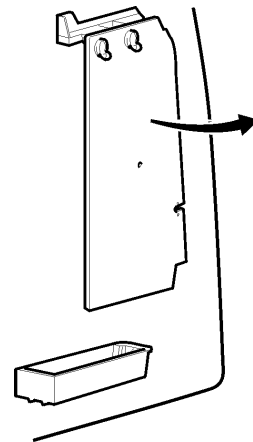
Fitting the side cover switch

On vehicles with lighting in the side compartment, vehicles after 9804, the wiring for the switch is run between the side cover switch and the connector panel underneath the central electric unit.

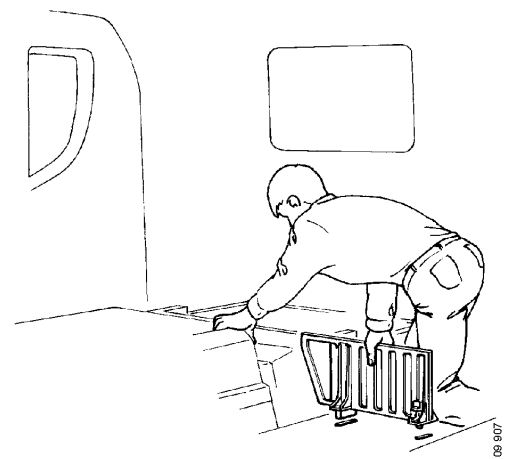
- 1 Remove the covers under the instrument panel.
- 2 Remove the screws from the instrument panel sections and lift out the various components.
- 3 Open the cover over the central electric unit and swing it out.
- 4 Remove the bunk behind the driver.
- 5 Remove the upper section of the wardrobe.



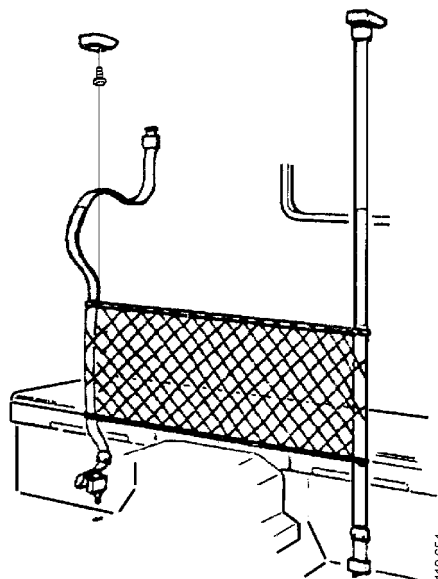
- 6 Unplug the connector for the reading lamp and remove the wardrobe wall complete with its base.



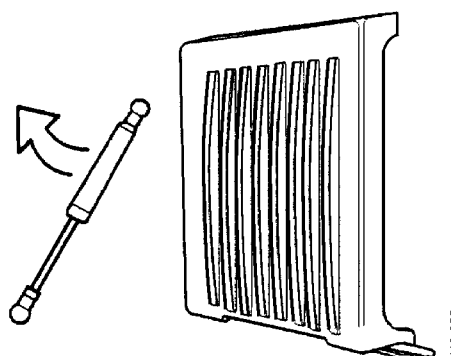
- 7 Remove the floor-mounted bunk supports on the sides where there is a side cover.



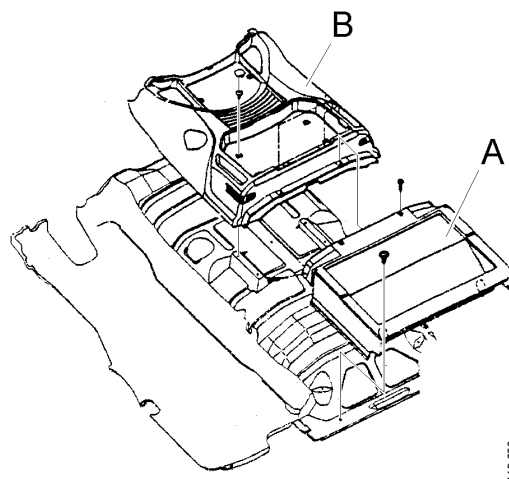
- 8 Remove the safety net for the lower bunk by unclipping it from floor and roof.



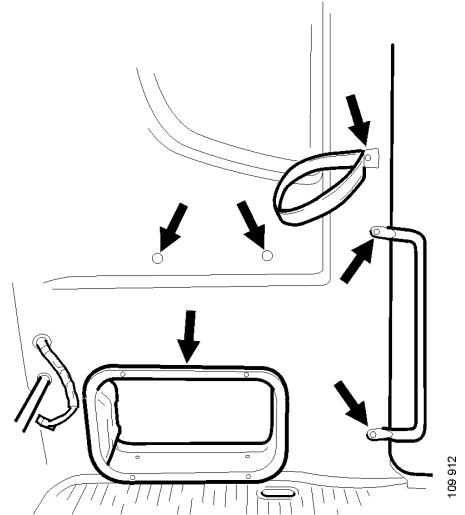
- 9 Remove the gas springs for the two other bunk sections and secure them in the raised position.



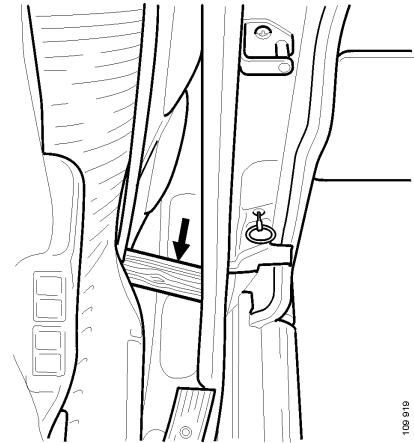
- 10 Remove rear trim panel A.
- 11 Detach the gear lever boot or Opticruise control.
- 12 Remove storage box B.



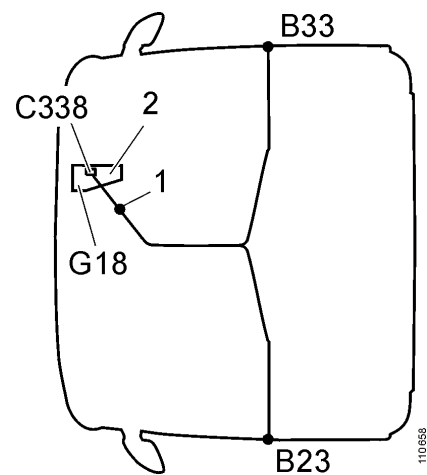
- 13 Remove the frame round the cover.
- 14 Remove the boarding handle.
- 15 Remove the curtain holder.
- 16 Remove the panel retaining screws.



- 17 Prise the trim panel off, using a wooden block.

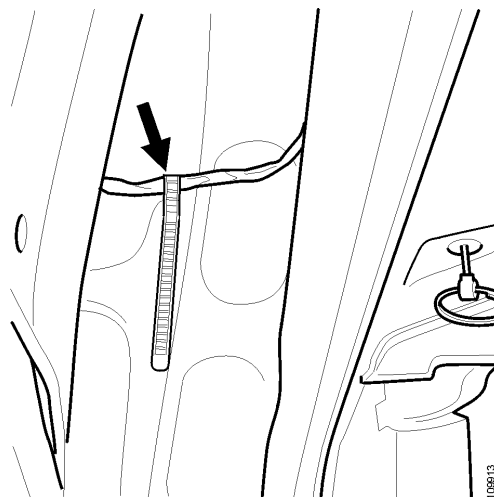


- 18 Run the floor wiring harness from the connector panel under the central electric unit, along the centre of the engine tunnel, under the floor mat and along to the relevant cover. White tape symbolizes mounting position.
- 19 Connect black lead 31 to earthing point G18.



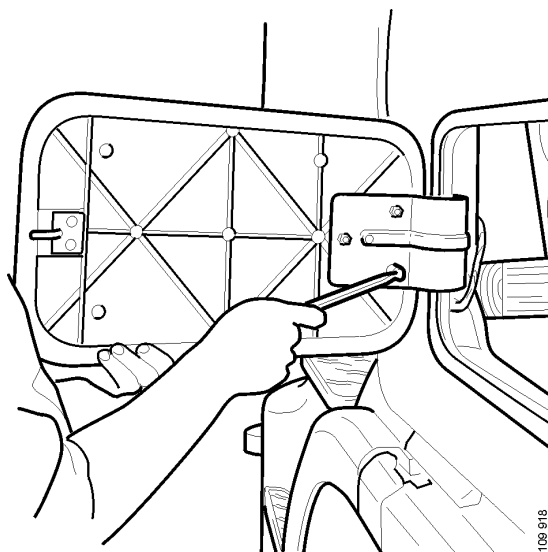
- 1 White tape
- 2 Connector panel

20 Clamp existing wiring in place.

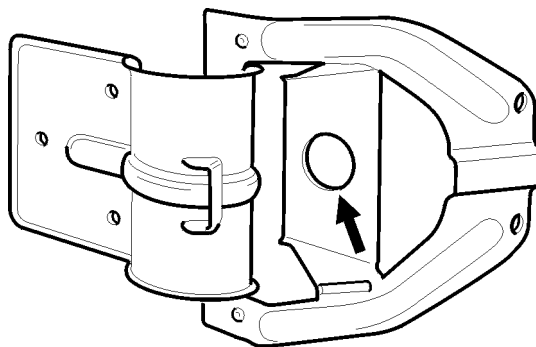


Securing to floor with clamps by side cover.

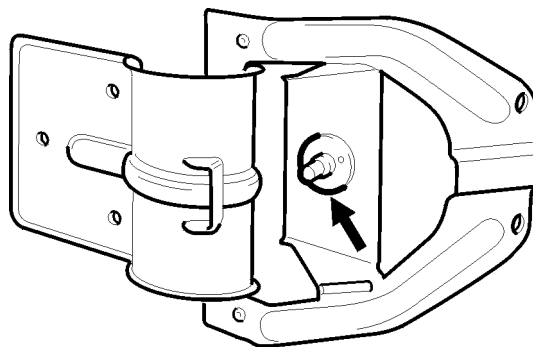
21 Undo the screws and remove the hinge.



- 22 Change the hinge for one having a bracket for the switch.



- 23 Fit the switch. B23 on the left-hand side.
B33 on the right-hand side.



- 24 Refit the hinge, cover frame, side trim, boarding handle, curtain holder, storage boxes, gas springs, safety net and bunk supports.

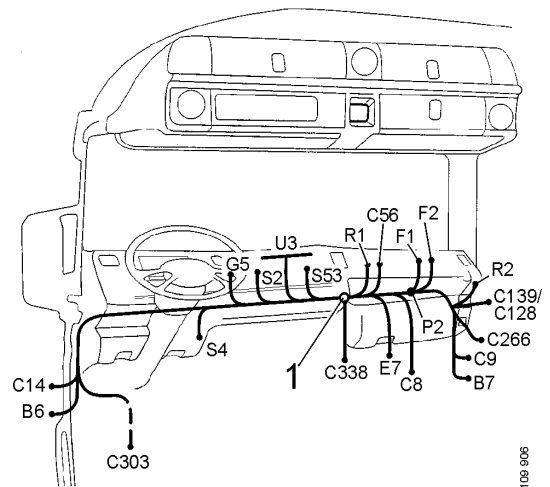
Note: Make sure that the cable is not pinched when refitting the bunk supports.

Running the wiring in the instrument panel

There are three separate wiring harnesses to be run in the instrument panel.

Wiring for LHD and RHD vehicles is run in the same manner.

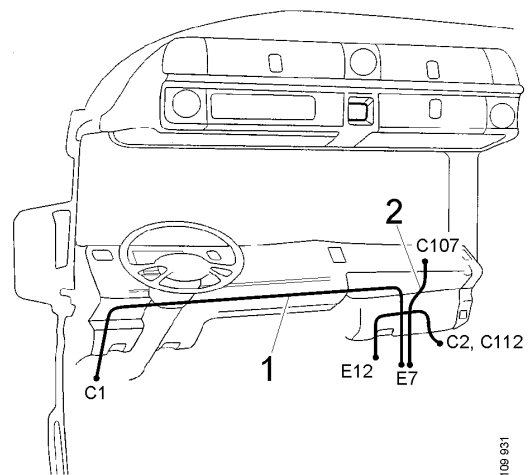
- 1 Run the instrument wiring as shown in the illustration. White tape symbolizes mounting position.



1 White tape

- 2 Run the siren wiring as shown in the illustration.
- 3 Run the wiring for fuel shut-off as shown in the illustration.

The choice of fuel wiring harness will depend on the vehicle's equipment. See "Connection of fuel wiring harness" for further information.

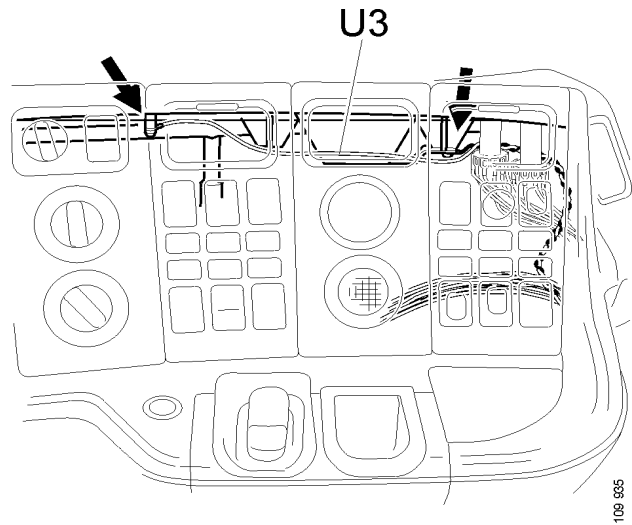


1 siren wiring harness
2 Fuel wiring harness

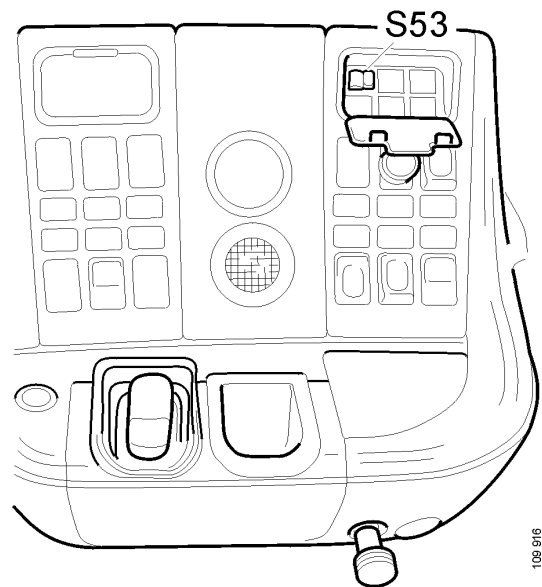
Connection of instrument wiring harness

- 1 Fit aerial U3 in two predrilled screw holes in the centre panel section.

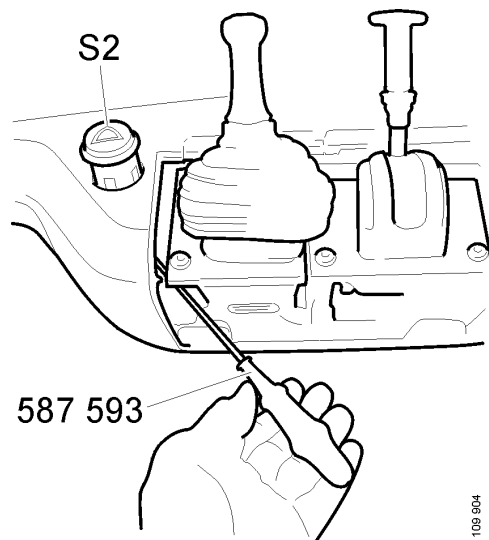
(The aerial cables are part of the wiring harness.)



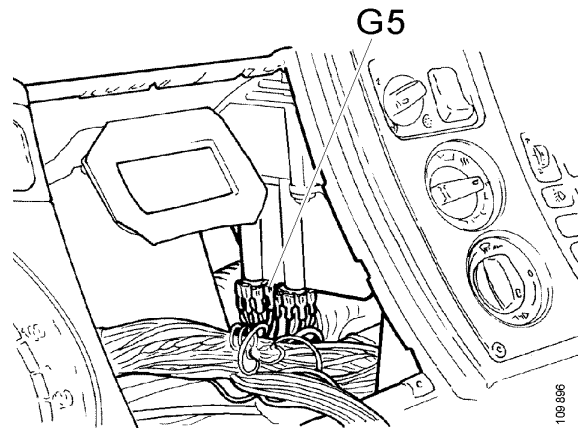
- 2 Fit the diagnostics panel and switch S53 in the instrument panel.
- 3 Plug the connector into S53.



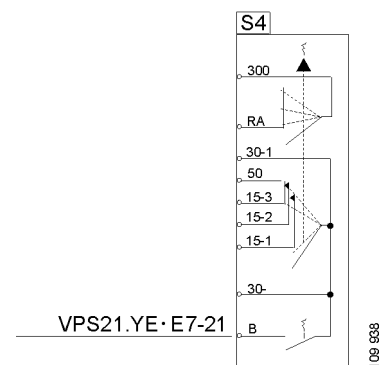
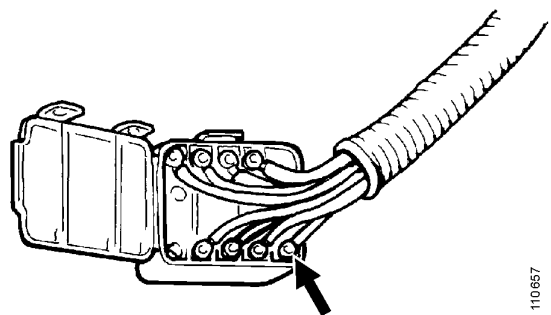
- 4 Detach the cable from pin 4 on S2. Use special tool 587 593.
- 5 Replace with a new cable HW (BN) on pin 4.



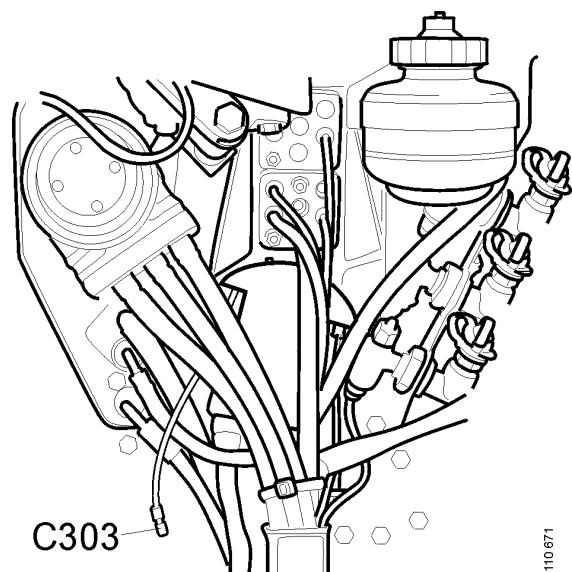
- 6 Connect earth cable 31/S53 to earthing point G5.



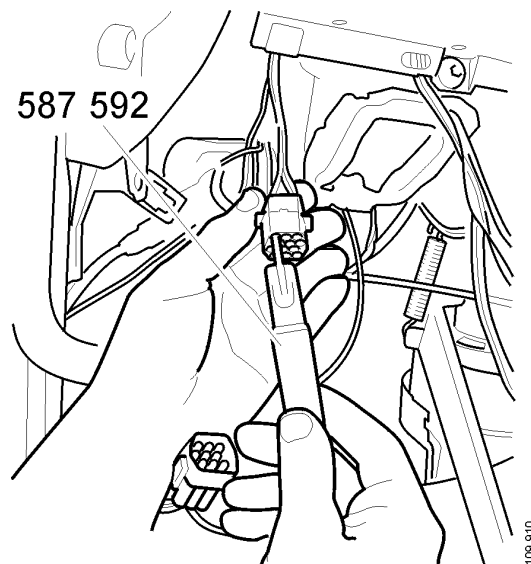
- 7 Remove the covers round the starter lock.
- 8 Connect cable VPS 21 (YE) to S4 pin B.



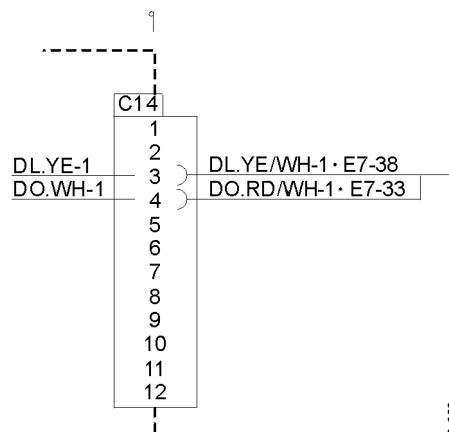
- 9 Unplug connector C303. Remove the right-hand connector in the cab lead-through and run the cable with connector C303 through the right-hand lead-through in the housing.



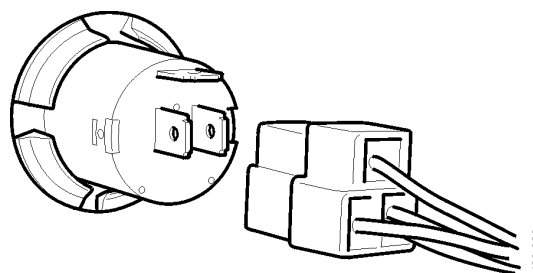
- 10 Remove the leads from pins 3 and 4 of connector C14 by the left-hand door. Use special tool 587 592. Cut off and insulate.



- 11 Replace with the new leads DL (YE/WH) pin 3 and DO (RD/WH) on pin 4.

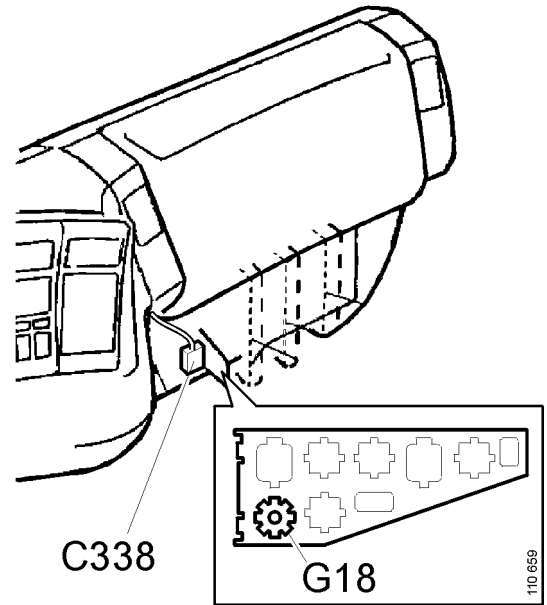


- 12 Connect lead VPS 19 (BN) to pin 3 of the left-hand door switch, B6. On vehicles before 9804, door switch B6 should be changed for a double-pole switch.

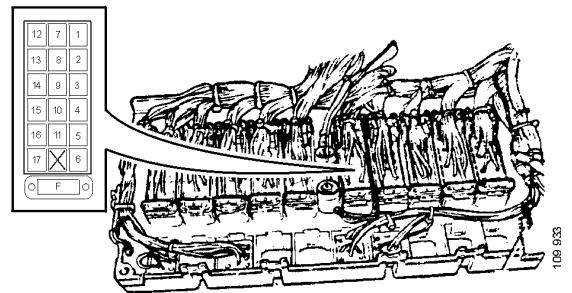


- 13 Run lead VPS 18 (VT) down to connector C338 located by the connector plate under the central electric unit and connect it to pin 1.

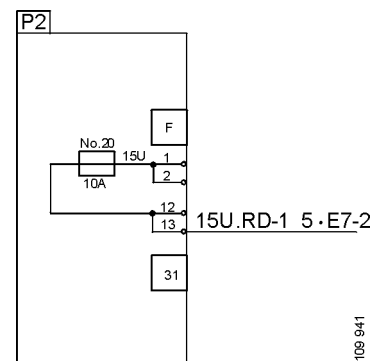
On vehicles before 9804 where the floor wiring harness has been run to a storage compartment, an insulator should be fitted.



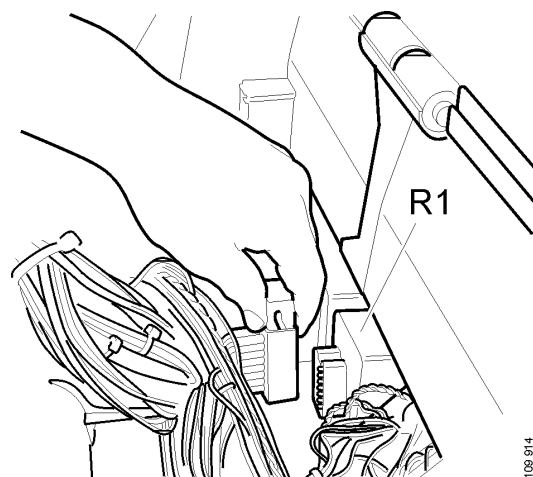
- 14 Remove the lead from P2 terminal block F-13. Use special tool 587 593. Cut off and insulate.



- 15 Connect lead 15U (RD) to terminal block F pin 13.

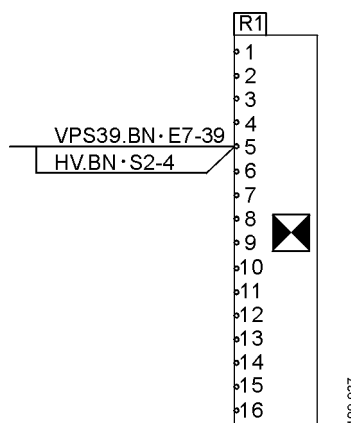


- 16 Remove the lead from pin 5 on R1 behind the central electric unit. Use special tool 587 593. Cut off and insulate.



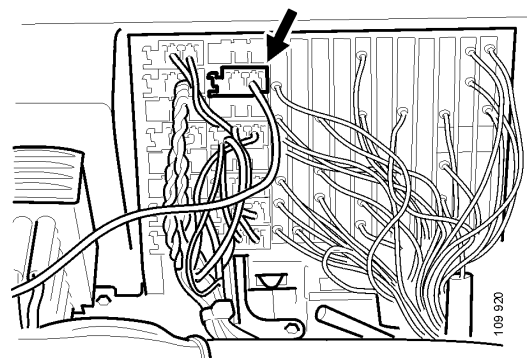
109 914

- 17 Replace with new lead VPS 39 (BN) and lead HV (BN) on pin 5.



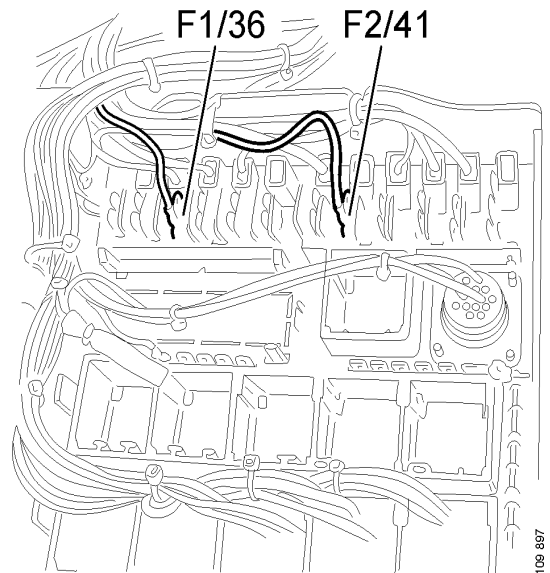
109 937

- 18 Connect lead VPS 13/E17 (WH) with green connector to C56 pin 9-2.



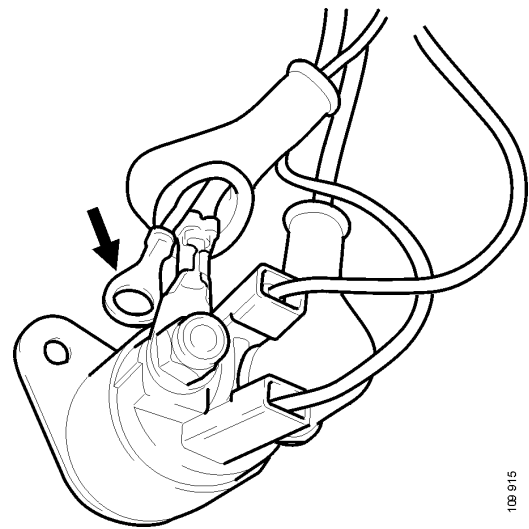
109 920

- 19 Connect lead 30K (RD) to F2/41 terminal block C.
- 20 Connect lead 15XD to F1/36 terminal block C.

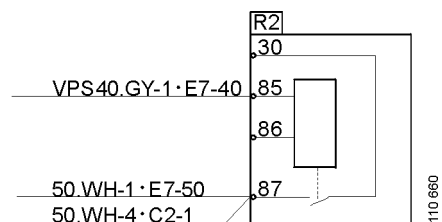


109 897

- 21 Remove black lead 31 from pin 85 on R2.
- 22 Connect lead VPS 40 (GY) to pin 85.
- 23 Connect lead VPS 50 (WH) to pin 87. The lead should be run through the rubber cap together with the lead already fitted there.

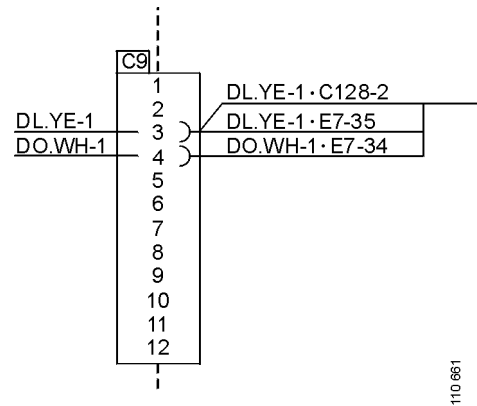


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110 660

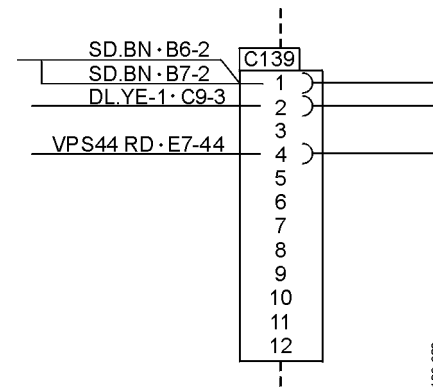
- 24 Detach the leads connected to pins 3 and 4 of connector C9 by the right-hand door. Use special tool 587 592, Cut off and insulate.
- 25 Replace with the new leads DL (YE) pin 3 and DO (WH) on pin 4.



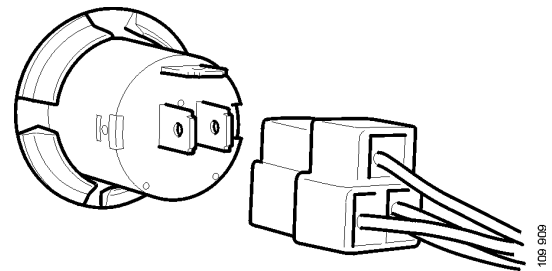
- 26 Disconnect the leads on pin 2 of C128 or C139. Cut off and insulate.
- 27 Connect lead DL (YE) to pin 2 and VPS 44 (RD) to pin 4.

Vehicles supplied earlier have no lead between C 128-4 and C252-1 in the roof shelf. A separate lead should be run there.

On vehicles equipped with connector C128, cable terminals on the leads of the wiring harness should be changed.

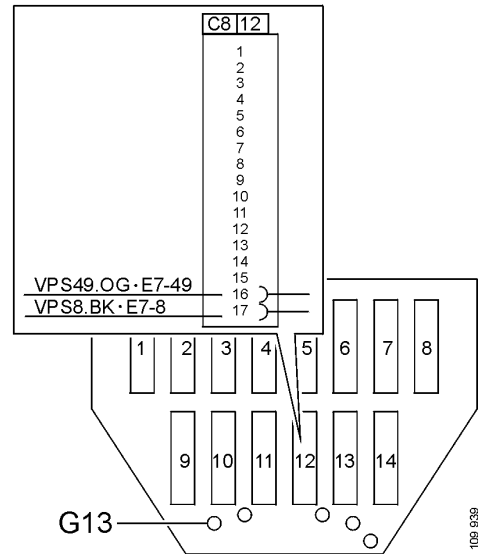


- 28 Connect lead VPS 19 (BN) to pin 3 of the right-hand door switch, B7. On vehicles before 9804, door switch B7 should be changed for a double-pole switch.

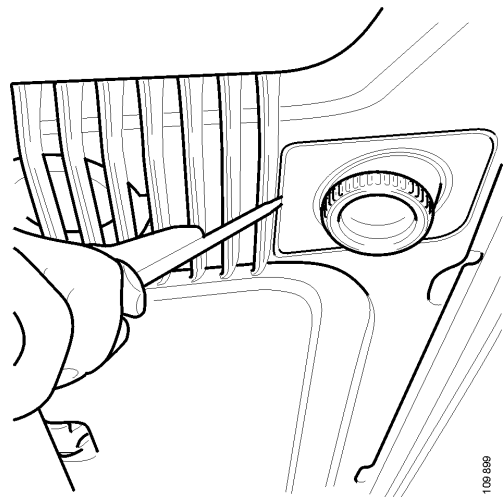


- 29 Pull connector C266 along to the battery position to the right of the central electric unit.

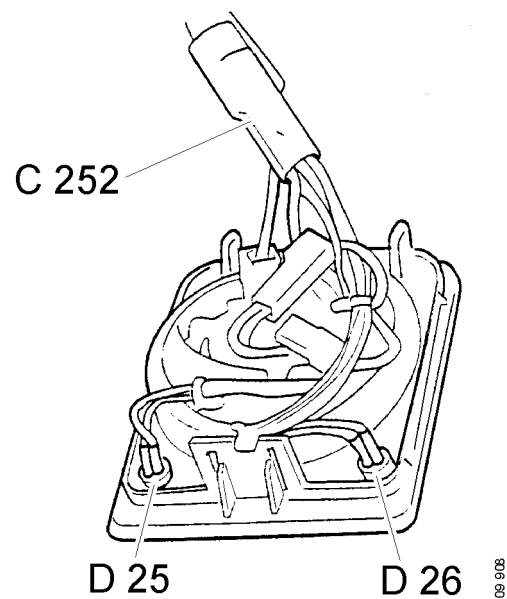
- 30 Pull lead VPS 49 (OG) down and connect it to C8 pin 16 and VPS 8 (BK) to pin 17. C8 is located in the cab lead-through under the central electric unit.
- 31 Connect earth cable 31 (BK) to earthing point G13.



- 32 Remove the lighting in the storage shelf above the instrument panel.



- 33 Separate connector C252.
- 34 Replace with new lighting D25, D26 and plug in connector C252.
- 35 Fit the new lighting in place.

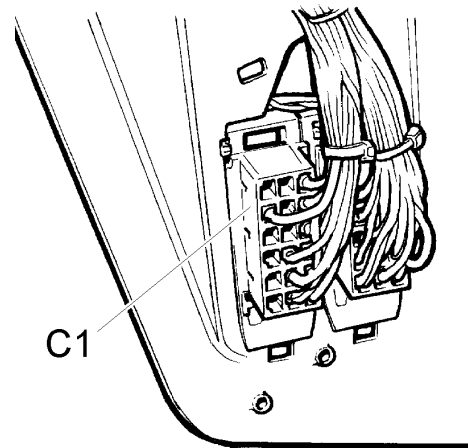
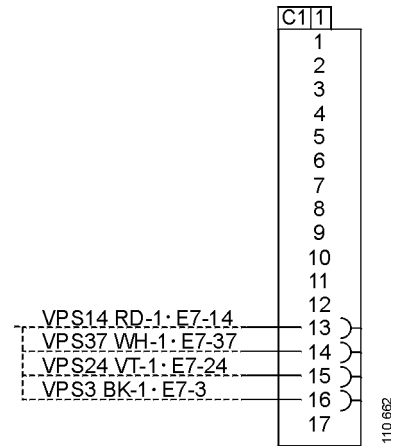


Connecting the siren wiring harness

Run the wiring harness as shown in the illustration on page 12.

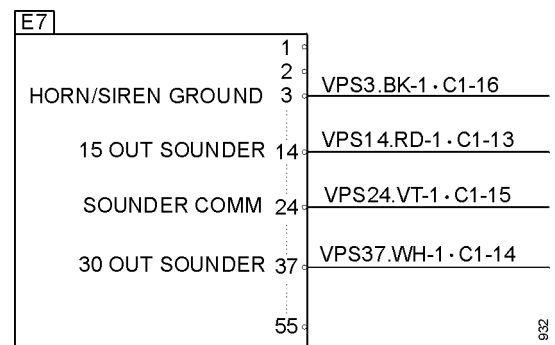
1 Connector C1's leads should be connected as follows:

- VPS 14 (RD) to C1-13
- VPS 37 (WH) to C1-14
- VPS 24 (VT) to C1-15
- VPS 3 (BK) to C1-16



2 Connect the E7 leads as follows:

- VPS 3 to pin E7-3
- VPS 14 to pin E7-14
- VPS 24 to pin E7-24
- VPS 37 to pin E7-37

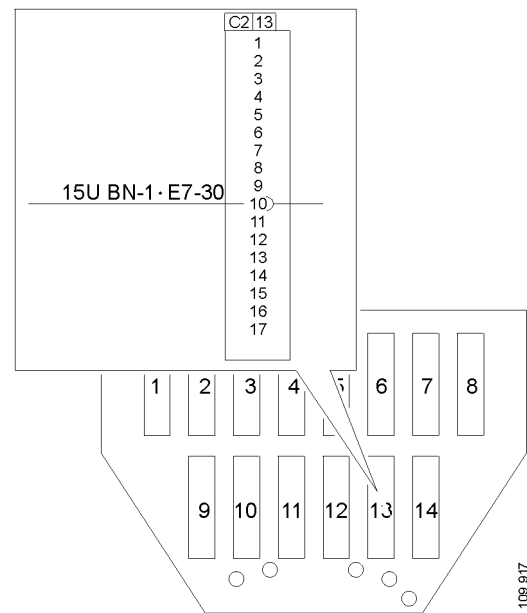


Connecting the fuel wiring harness

Vehicles without EDC

Run the wiring harness as shown in the illustration on page 12.

- 1 Detach the lead from C2 pin 10. Cut off and insulate.
- 2 Connect lead 15U (BN) between E7-30 and C2-10.

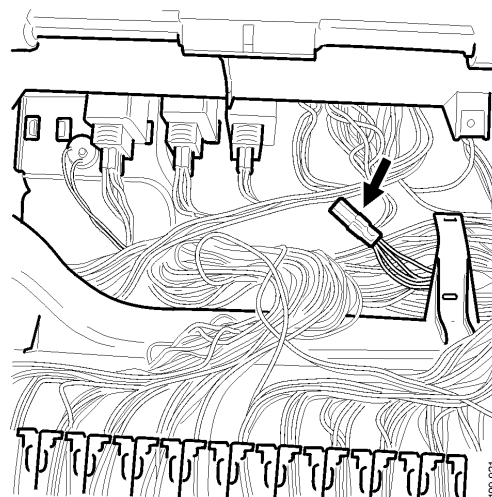


Vehicles with EDC MS5 (injection pump)

See also wiring diagram EDC, 16:04-51.

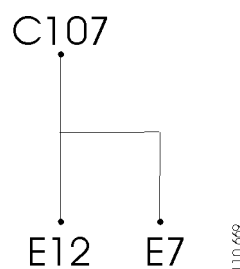
Use wiring harness 1395894.

- 1 Disconnect the leads from pins 23, 25, 34, 35 and 41 on EDC control unit E12. Remove the leads together with connector C107, which is located in the central electric unit.



Location of C107

- 2 Replace with a new wiring harness between E12, C107 and E7.



- 3 Connect the leads to E12 as follows:

- EDC 23 (VT) to E12-23
- EDC 25 (GY) to E12-25
- EDC 34 (BN) to E12-34
- EDC 35 (GN) to E12-35
- EDC 41 (WH) to E12-41

- 4 Run the single lead between C107 and VPS control unit E7.

- 5 Connect lead EDC 25 (GY) to E7-12.

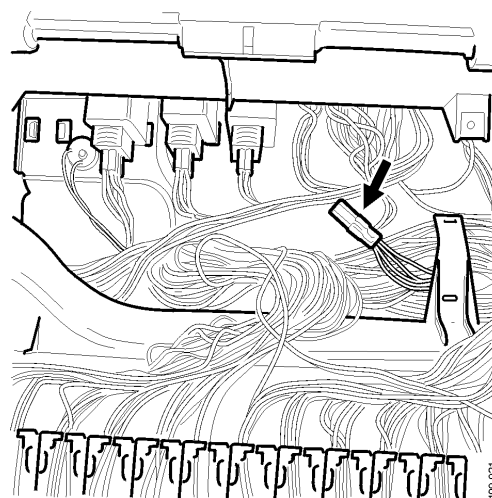
- 6 Secure connector C107 with clamps in the central electric unit.

Vehicles with EDC MS6 (PDE injectors)

See also wiring diagram EDC MS6.2 Unit injectors, 16:04-56.

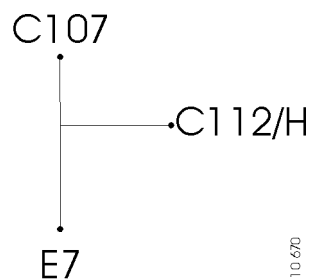
Use wiring harness 1403624.

- 1 Remove the wiring harness from connector C112/H together with connector C107, which is located in the central electric unit.



Location of C107

- 2 Replace with a new wiring harness between E7, C107 and C112/H.



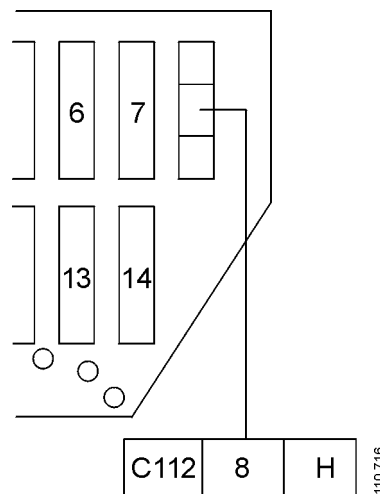
- 3 Connect the leads to C112/H as follows:

- EDC 19 (BN) to C112/H-1
- EDC 32 (WH) to C112/H-2
- EDC 21 (VT) to C112/H-3
- EDC 22 (GY) to C112/H-4
- EDC 28 (GN) to C112/H-5

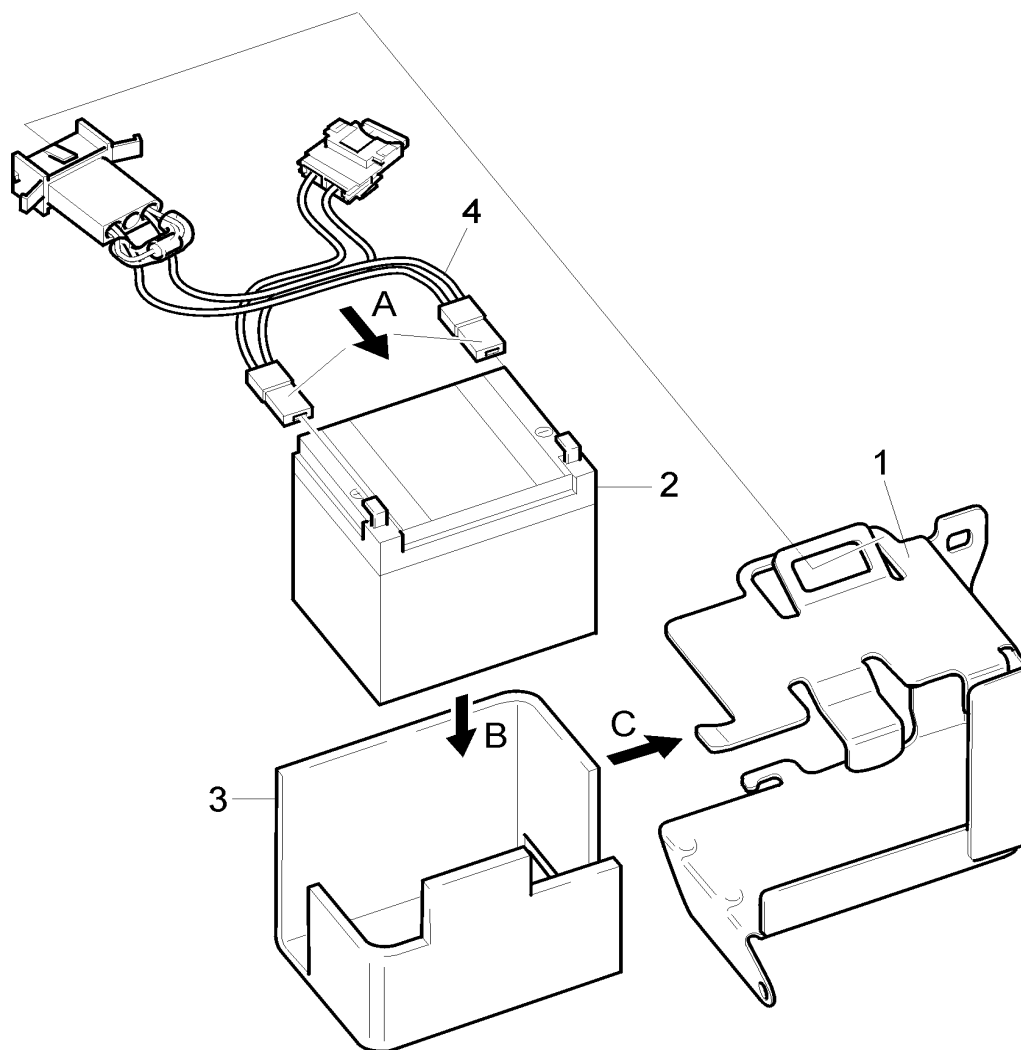
- 4 Run the single lead between C112/H and VPS control unit E7.

- 5 Connect lead EDC 22 (GY) to E7-12.

- 6 Secure connector C107 with clamps in the central electric unit.



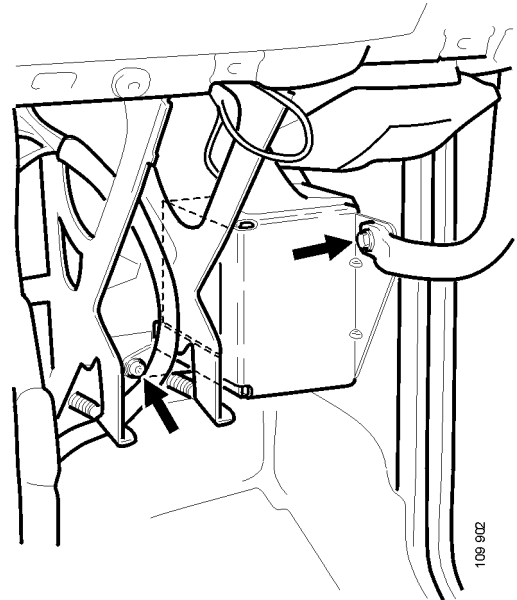
Fitting the battery



- 1 Bracket
- 2 Battery
- 3 Insulation
- 4 Wiring

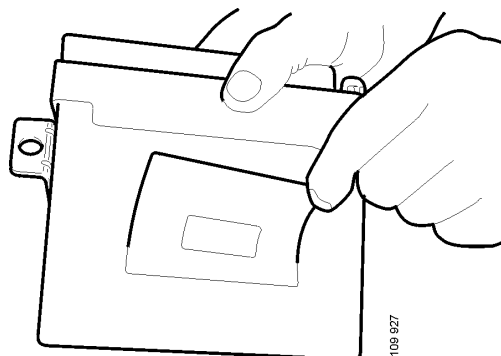
109 924

- 1 Remove the boarding handle's lower retaining bolt.
- 2 Prepare insulation, bracket and cable with battery and assemble same. See figure, fitting the battery.
- 3 Fit the battery with the bracket secured by the boarding handle's lower bolt, the hook in the hole and an M6 bolt in the front bulk-head.
- 4 Plug connector C266 into the instrument wiring harness.



Fitting the control unit

- 1 Remove the password card and save it for the vehicle owner.



- 2 Fit the control unit bracket on the EDC mounting plate.

The control unit bracket is mounted on the EDC's bracket. If the vehicle has no EDC, this mounting plate must be fitted first.



- 3 Plug connector E7 into the control unit.
- 4 Fit the control unit with connector E7 at the front and secure the control unit by means of its special screws.

Note: Do not tighten the screws yet.

Fitting the siren

- 1 Tilt up the cab, secure it, etc.

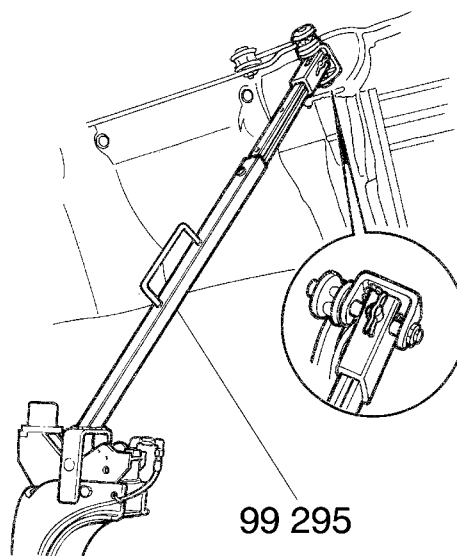


WARNING!

Always tilt the cab until it falls past its centre of gravity and is at its end position.

Set the switch valve to tilting back mode when the cab has been raised.

Always use the cab support strut when working under the cab.

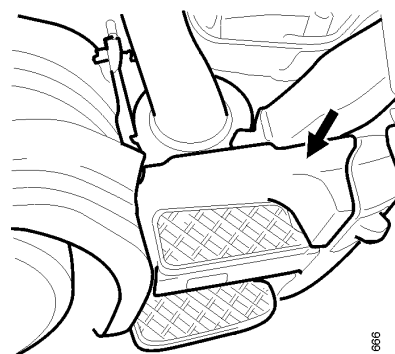


99 295

Cab support strut

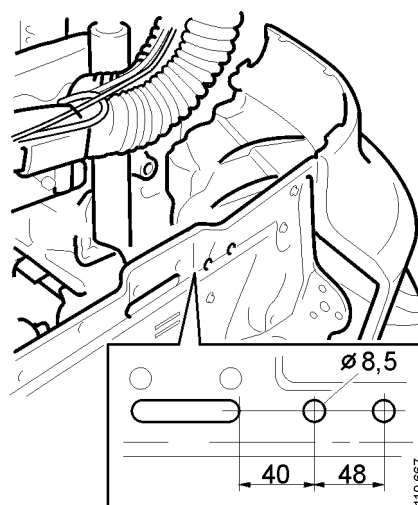
19_2301

- 2 Remove the protective cover.



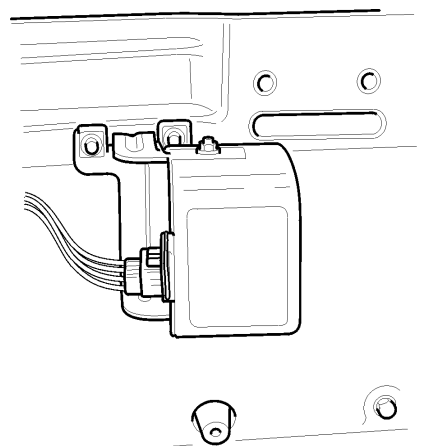
110 666

- 3 Drill two holes as shown in the illustration.
 ϕ 8.5 mm



110 667

- 4 Fit the bracket and siren.
- 5 Connect the wiring.



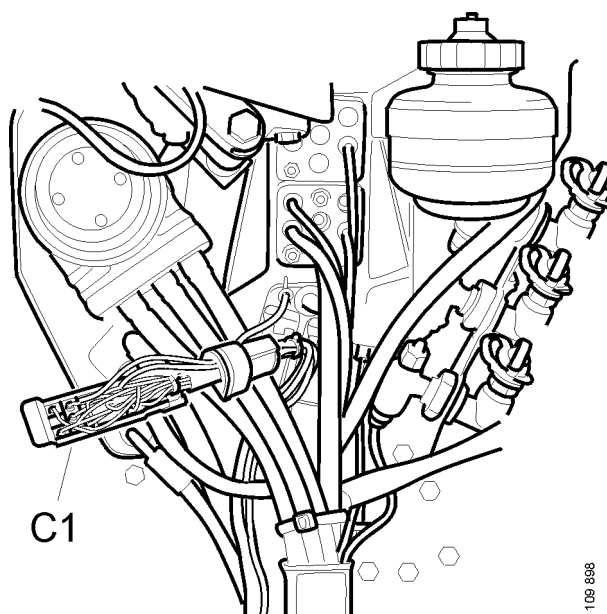
- 6 Remove the protective covers below each headlamp.
- 7 Introduce a pull wire through the front cable conduit under the bumper and pull the wiring harness in from the right-hand side.
- 8 Secure the wiring harness at suitable points to the existing wiring loom for the headlamps.

- 9 Run the wiring harness, together with other wiring, along to C1.

The leads from the siren are pulled in through the rubber grommet.

- 10 Connect the leads as follows:

- VPS 14 (RD) to C1-13
- VPS 37 (WH) to C1-14
- VPS 24 (VT) to C1-15
- VPS 3 (BK) to C1-16



Fitting the pressure monitor in the cab tilt system

The design of the pressure monitor differs between different vehicle configurations.

See also the booklet entitled "Cab suspension: cab tilt system".

- 1 Tilt up the cab, secure it, etc.

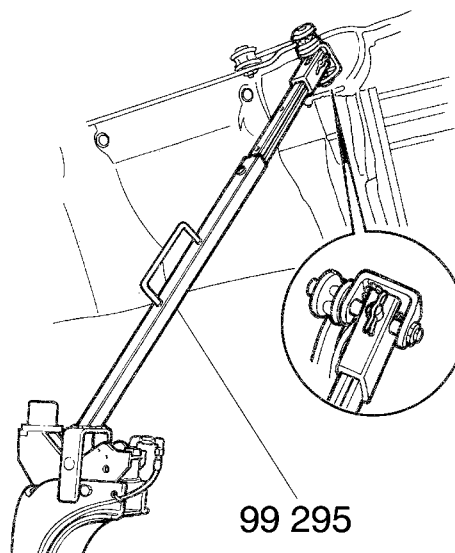


WARNING!

Always tilt the cab until it falls past its centre of gravity and is at its end position.

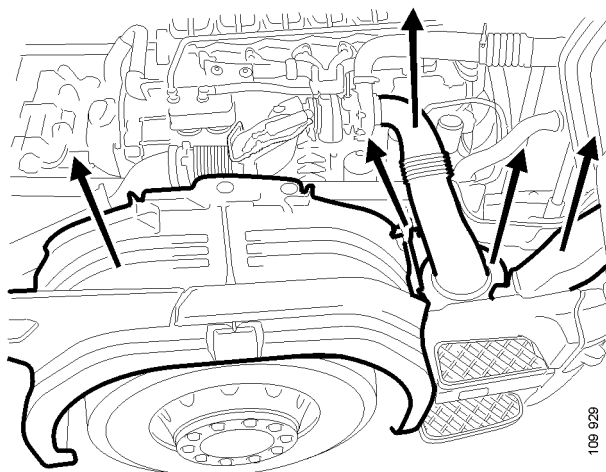
Set the switch valve to tilting back mode when the cab has been raised.

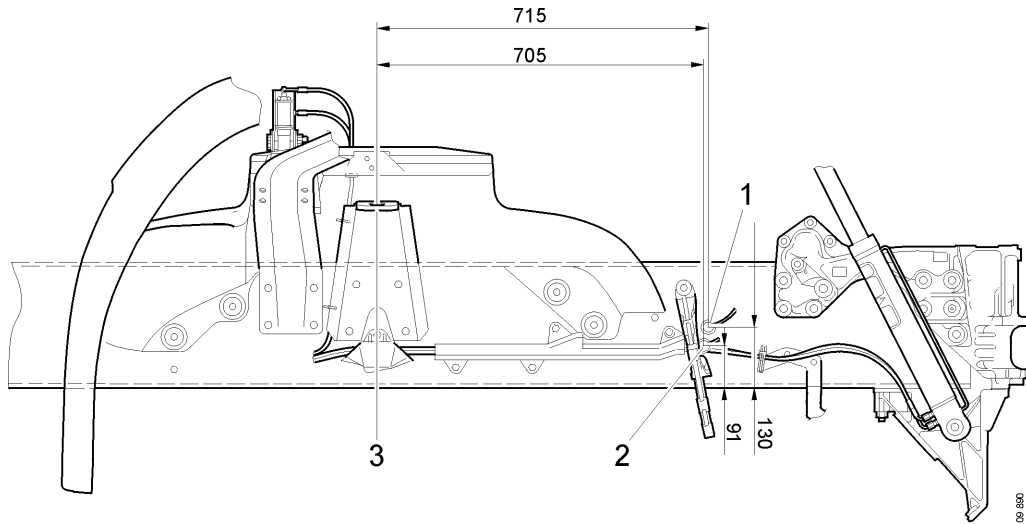
Always use the cab support strut when working under the cab.



Cab support strut

- 2 Remove the wheel housing cover
- 3 Remove the air connection between the air cleaner and turbo and the air connection between air cleaner and intake.
- 4 Remove the air cleaner.
- 5 Remove the wall between the wheel housing and air cleaner.
- 6 Remove the old delivery hose between the cab tilt pump and tilt cylinder.





- 1 Vehicles equipped with EBS
- 2 Vehicles without EBS
- 3 Front axle centre

7 Drill a 16.5 mm hole in the frame for the pressure monitor. See illustration above for the location of the hole.

8 Fit the new delivery hose with pressure monitor.

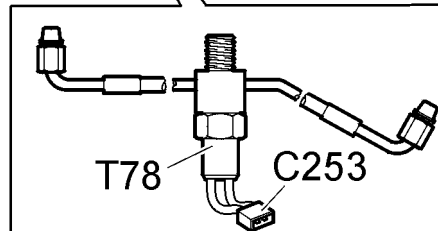
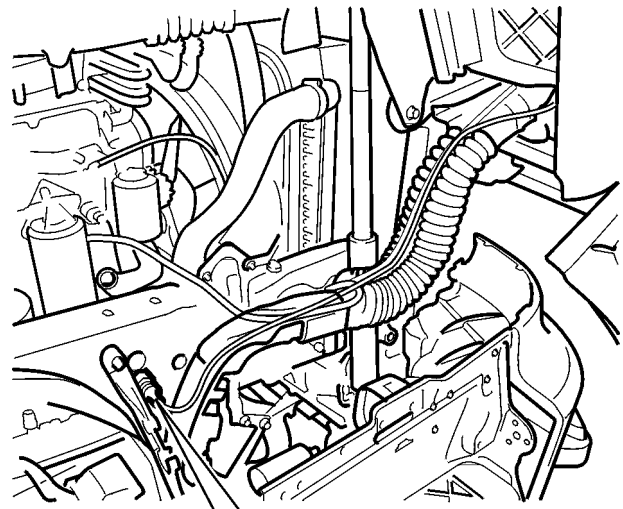
9 Secure the delivery hose.

10 Run the lead from connector C253, along the existing wiring loom, to connector C8 in the cab lead-through.

11 Connect to connector C8, VPS 49 (OG) on pin 16 and VPS 8 (BK) on pin 17.

12 Secure the wiring with clamps together with other wiring.

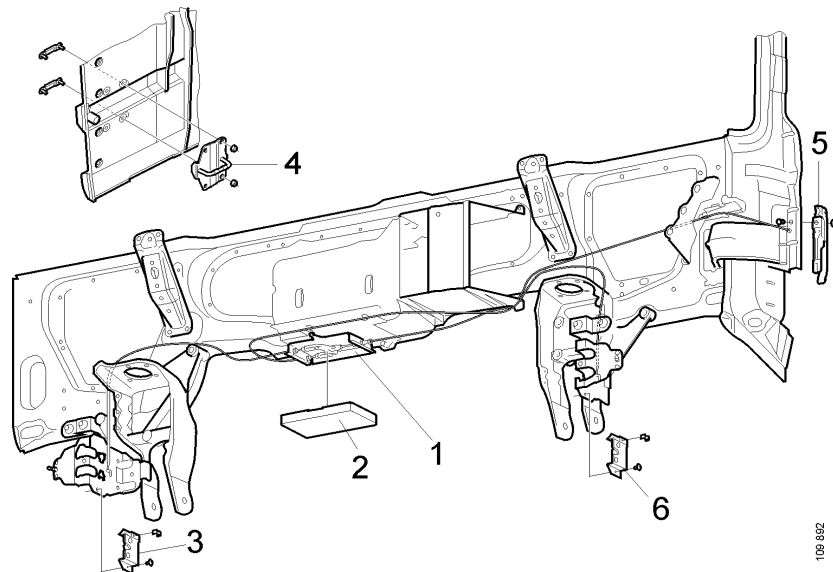
13 Refit the wall, air cleaner, air connections and wheel housing cover.



109 930

Fitting the grille panel latch

R cab



1 Bracket

2 Cover

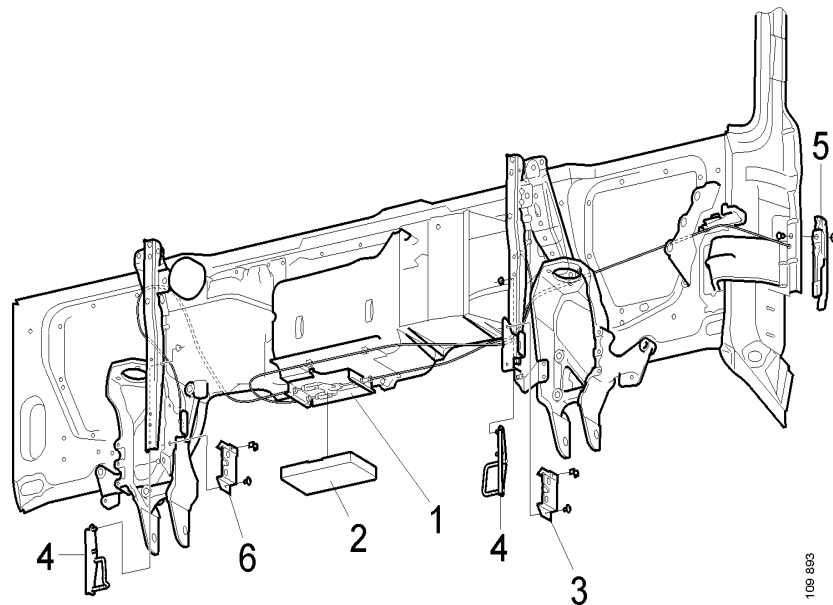
3 Cover latch

4 Catch

5 Release handle

6 Cover latch with lug for grille panel switch

P cab



1 Bracket

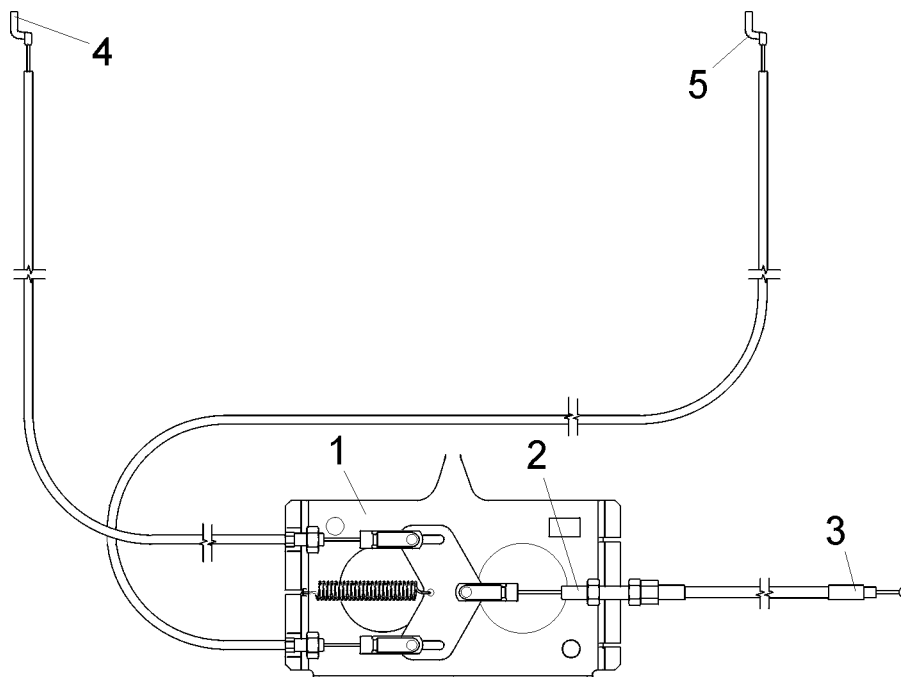
2 Cover

3 Cover latch

4 Catch

5 Release handle

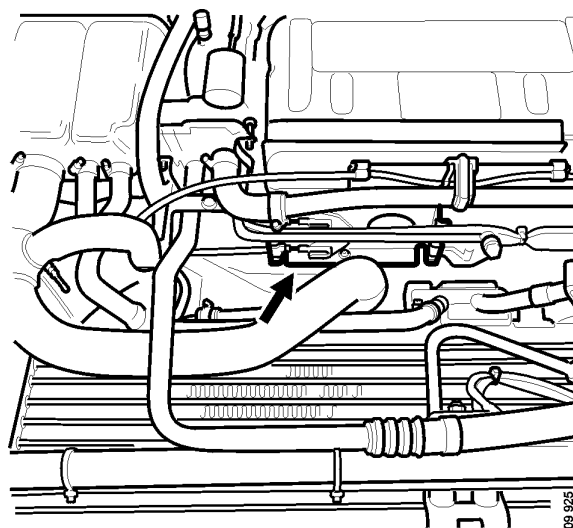
6 Cover latch with lug for grille panel switch



109 891

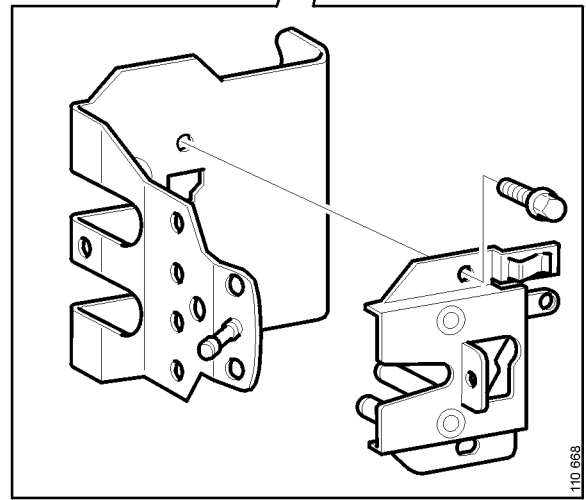
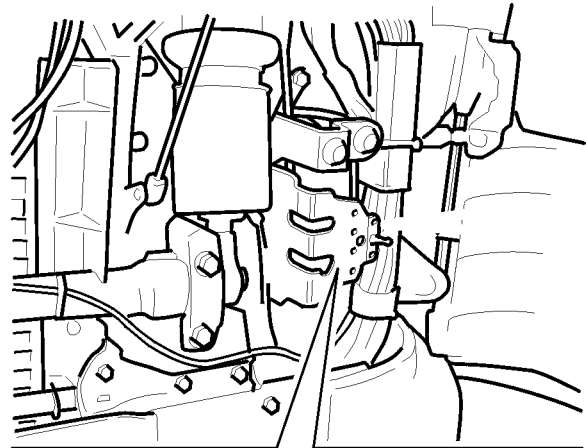
- 1 Bracket
- 2 Adjusting screw
- 3 Release cable
- 4 Right-hand cable
- 5 Left-hand cable

1 Fit the attaching plate.

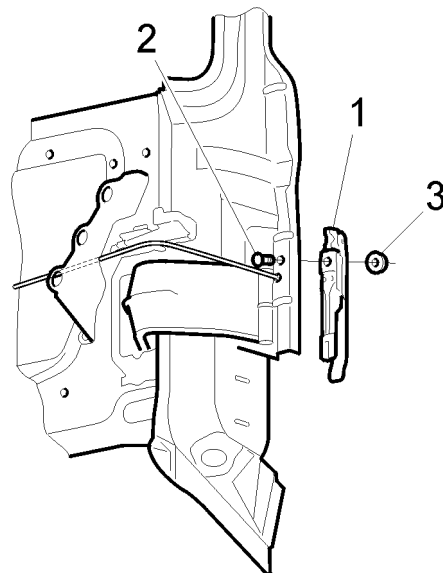


109 925

- 2 Fit the brackets with the catches on each side.
- 3 Run the cables to the respective catch and to the location of the release handle.



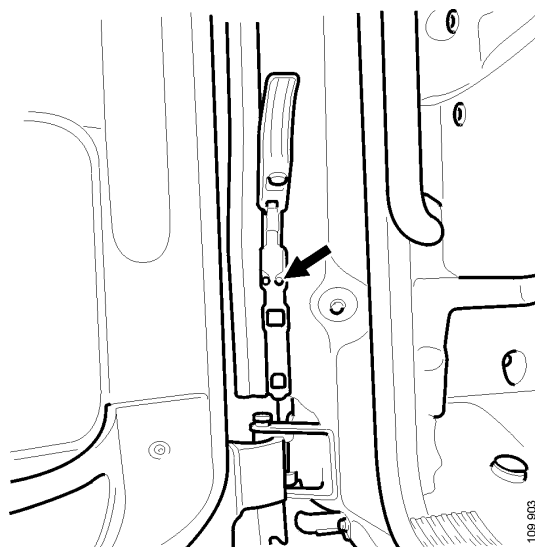
- 4 Open the driver's door and hook the handle at bottom and secure it with a press-fit bolt and nut in the prepared hole.



- 1 Release handle
- 2 Press-fit bolt
- 3 Nut

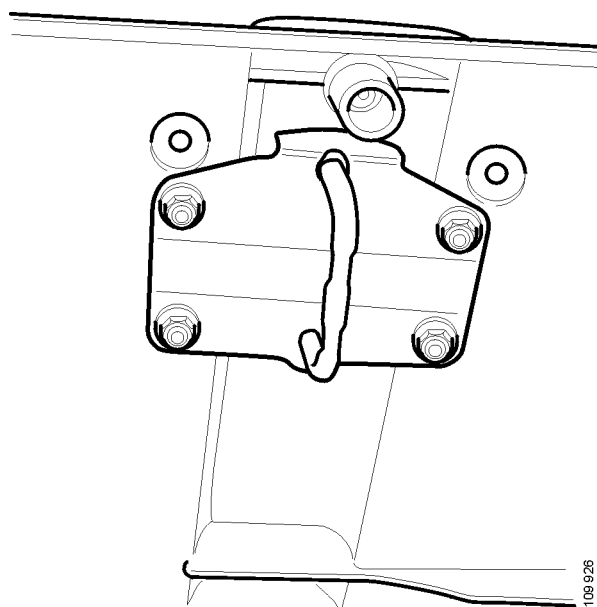
109 901

- 5 Detach the release cable from the mounting plate. Insert the other end into the handle and hook it in place.



- 6 Close the handle.
- 7 Secure the release cable to the mounting plate again.
- 8 Close the catches.
- 9 Adjust the adjusting screw until there is no free play in the handle when in the locked position.

- 10 Remove the cover plates in the grille panel.
- 11 Fit the latch clamps, one on each side, on the inside of the grille panel.



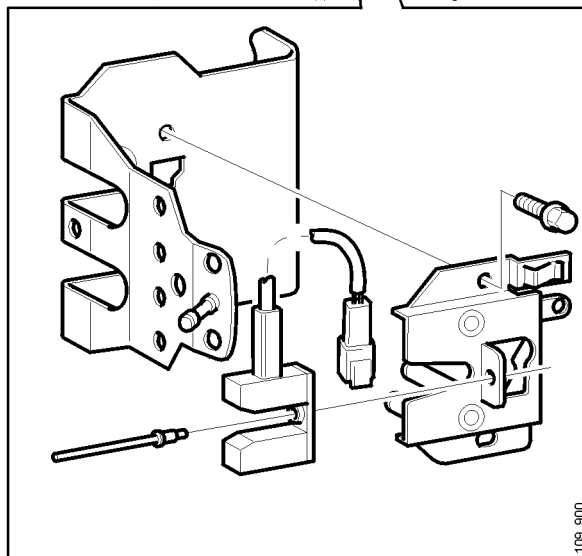
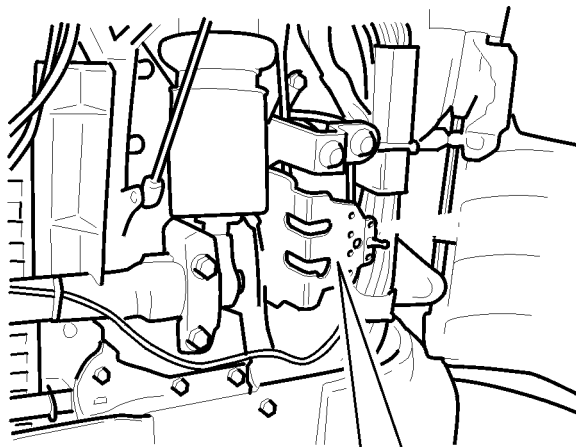
R cab

Fitting the grille panel switch

- 1 Mount the switch by means of blind rivets.
- 2 Plug the connector into C303.

On R cabs the switch should be mounted on the left-hand side's cover latch.

On P cabs the switch should be mounted on the right-hand side's cover latch.



R cab

Miscellaneous

Connection of alarm from body

C241, C242 breaking (opening) function.

C 243 making (closing) function.

C267 Extra alarm function gives earthing in event of alarm.

Commissioning

- 1 Program the control unit and keys as described in Alarm and Theft Protection, VPS, 16:06-61.

Completion

- 1 Pull off the control unit screws.
- 2 Fit back into place all the covers and panels that have been removed.

Specifications

Intermediate tools

Number	Designation	Shown on page
587 592	Tool for 3.5 mm round sleeve	14, 18
587 593	Tool for 6.3 mm flat pin and 1.6 mm timer terminal	12, 15, 16