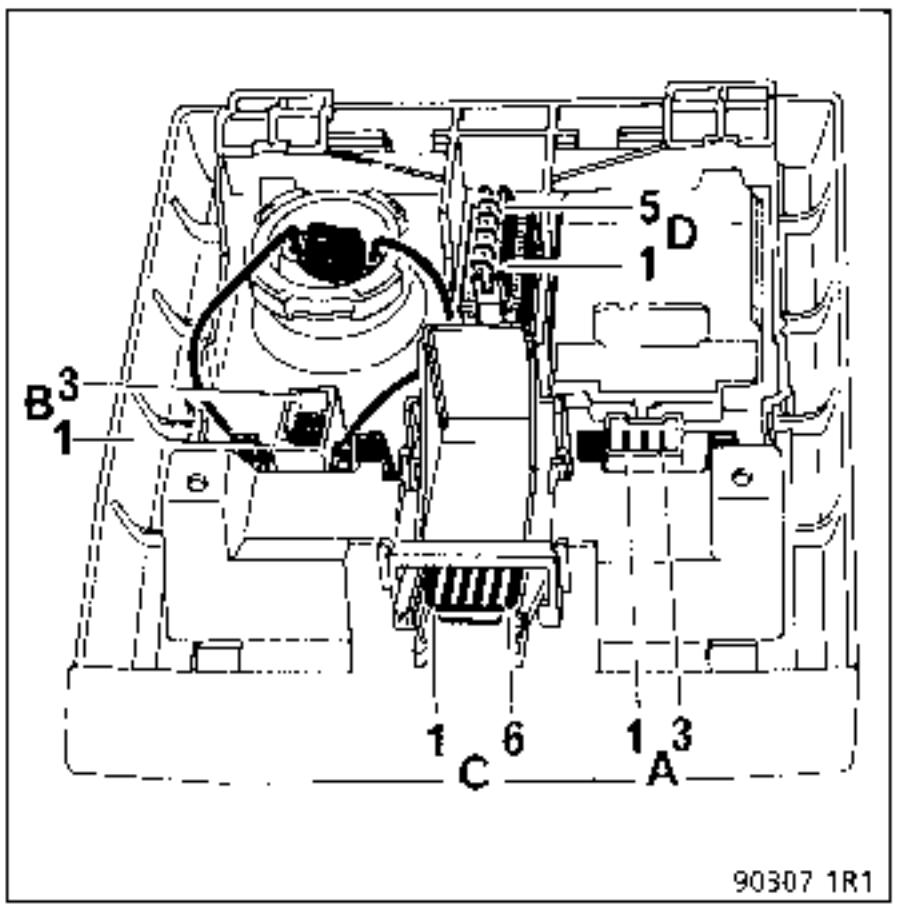
CONNECTIONS



CONNECTORS

INTERIOR LIGHTING (A)

1 + before ignition switch
2 Earth
3 Earth via door switch

MAP READING SPOT LIGHT (B)

1 + before ignition switch
2 Earth
3 Not used

INFRA-RED REMOTE CONTROL RECEIVER (C)
(vehicle without engine immobiliser)

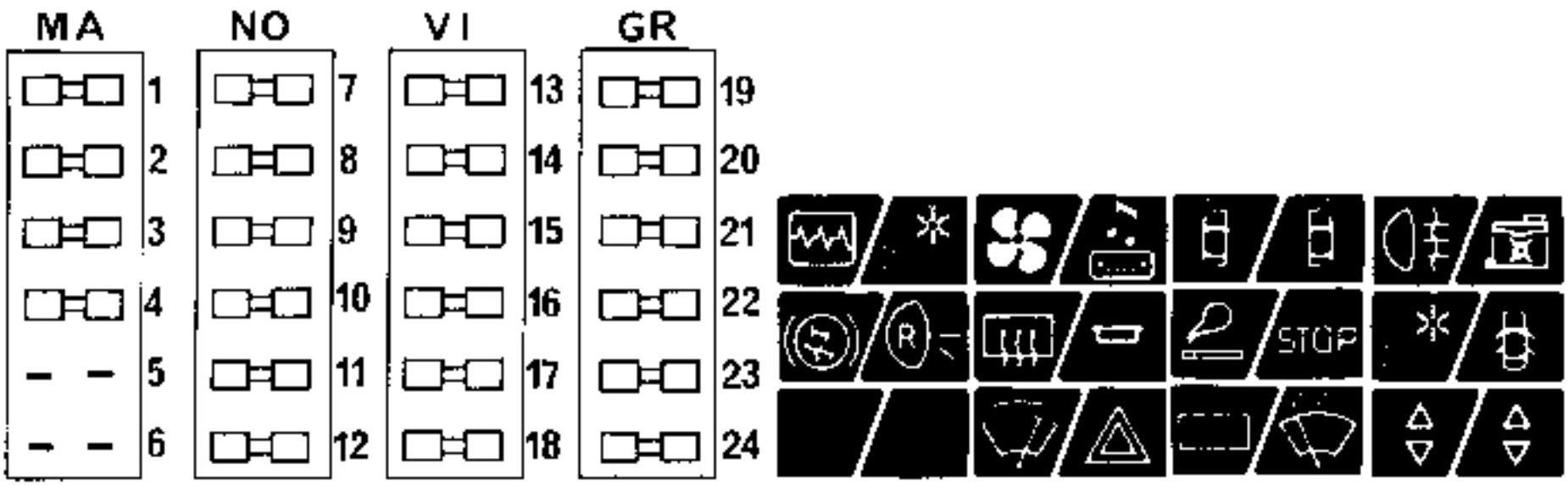
1 Earth
2 Door unlock signal
3 Door unlock information
4 Door locking signal
5 Door locking information
6 + before ignition switch

INFRA-RED REMOTE CONTROL RECEIVER (C)
(vehicle with engine immobiliser)

1 Earth
2 Not used
3 Infra-red receiver supply
4 Not used
5 Infra-red receiver outlet
6 Not used

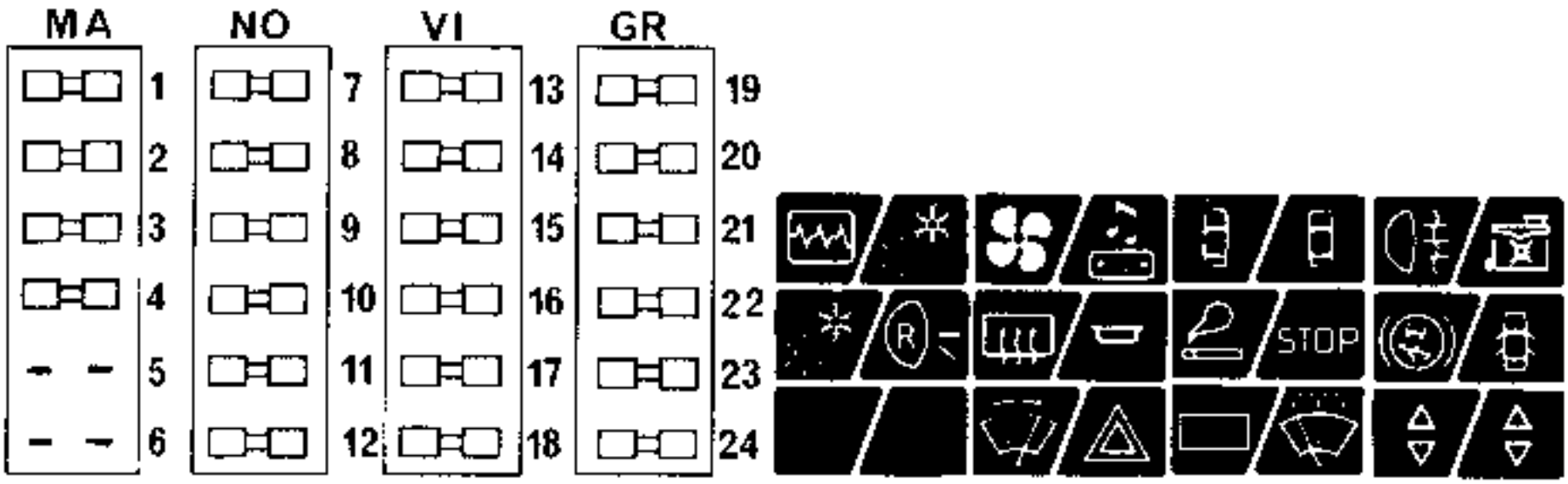
SUNROOF SWITCH (D)

1 Motor
2 Earth
3 + after ignition switch
4 Not used
5 Motor



218106

N°	Amps	Allocation
1	5	Automatic transmission
2	30	Air conditioning
3	3	A.B.S.
4	5	Reversing light/Automatic transmission
5	-	Not used
6	-	Not used
7	20	Heater
8	10	Radio
9	20	Heated rear screen/rear wash/wipe
10	5	Clock/Interior lights Radio (before ignition)/Instrument panel (before ignition)
11	10	Windscreen wiper park/timer
12	10	Flasher unit Hazard warning lights
13	5	LH side/rear lights
14	5	RH side/rear lights
15	0	Cigar lighter
16	10	Stop lights
17	10	Inst. panel/Reversing lights
18	15	Windscreen wipers
19	7,5	Rear fog lights
20	20	Engine cooling fan
21	30	Air conditioning
22	25	Electric door locks/Electric rear view mirrors
23	30	LH window winder
24	30	RH window winder/ Sunroof



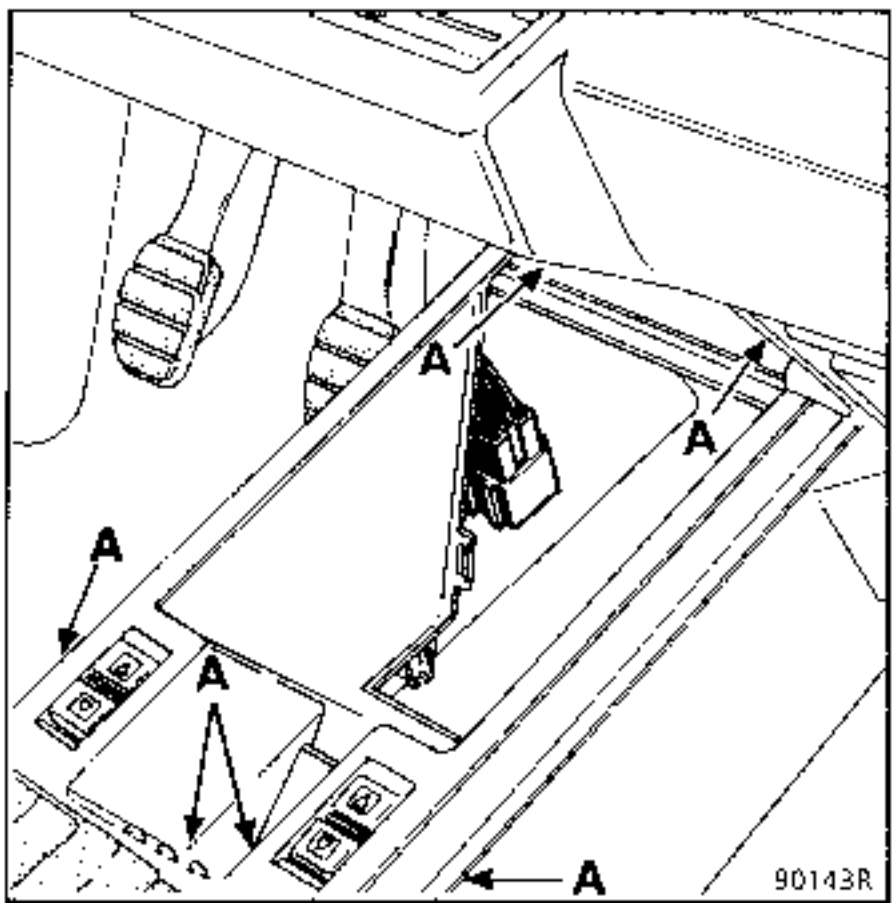
218107

N°	Amps	Allocation
1	5	Automatic transmission
2	30	Air conditioning
3	30	Air conditioning
4	-	Not used
5	-	Not used
6	-	Not used
7	20	Heater/Rear screen wash/wipe
8	10	Radio/Alarm (after ignition)
9	20	Heated rear screen
10	5	Clock/Interior lights Radio ((before ignition) / Instrument panel (before ignition)
11	10	Windscreen wiper park/timer
12	10	Flasher unit Hazard warning lights
13	5	LH side/rear lights Front fog lights
14	5	RH side/rear lights
15	10	Cigar lighter/Rear screen wash/wipe (park)
16	10	Stop lights/cruise control
17	10	Inst. panel/Reversing lights/Alarm
18	15	Windscreen wipers
19	7,5	Rear fog light
20	20	Engine cooling fan
21	3	A.B.S.
22	25	Electric door locks/Alarm (+ before ignition)/ Electric rear view mirrors
23	30	LH window winder
24	30	RH window winder/Sunroof

Disconnect :
- the connectors in the front and lefthand door pillars and the earth wires,
- the choke connector,
- the connectors from the steering column mounted controls and the anti-theft switch,
- the connectors on the console, the heater assembly and its controls,
- the speedometer drive cable.

Remove :
- the steering column,
- the heater controls (see section 6),
- the choke control (apply soft soap to the cable to remove the anti-rattle sleeves),
- the instrument panel

Pull back the central console (screw A for equipment levels E1-E2) - (screw B for equipment level E3).



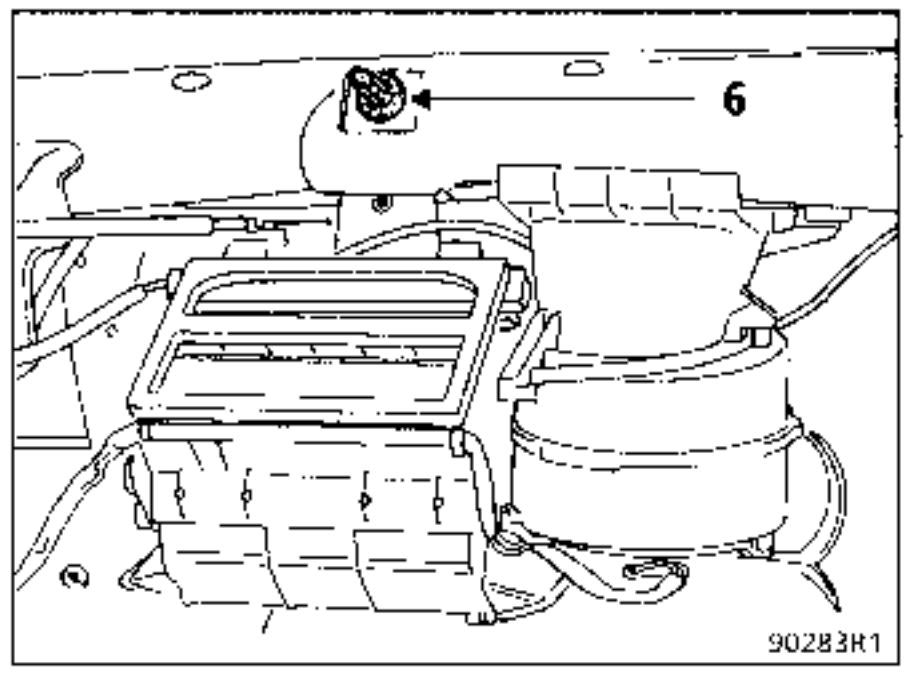
Remove :
- the two securing screws (2) from the heater assembly,
- the two securing screws (3) near the front left and righthand door pillars,
- the two nuts (4) in the speaker apertures (1).

Disconnect :
- the pedal assembly connector,
- the connector (5) between the fascia panel wiring harness and the windscreen wiper harness.

Remove the fascia panel.

REFITTING

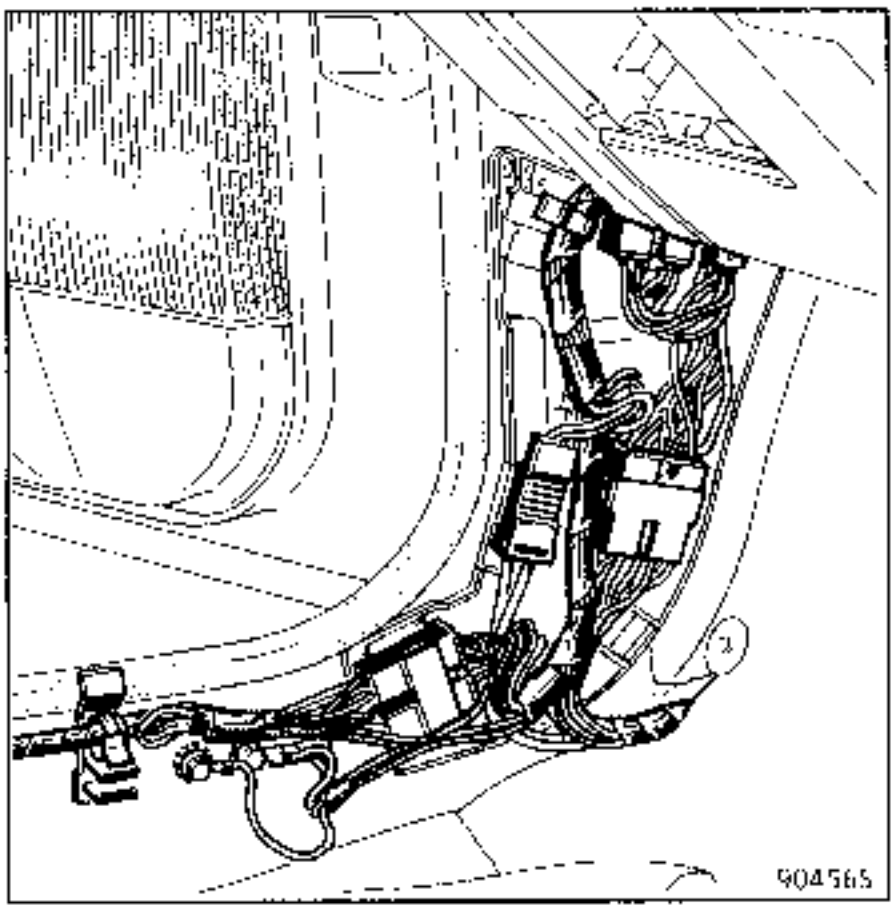
Check that the plastic locator (6) is in position.

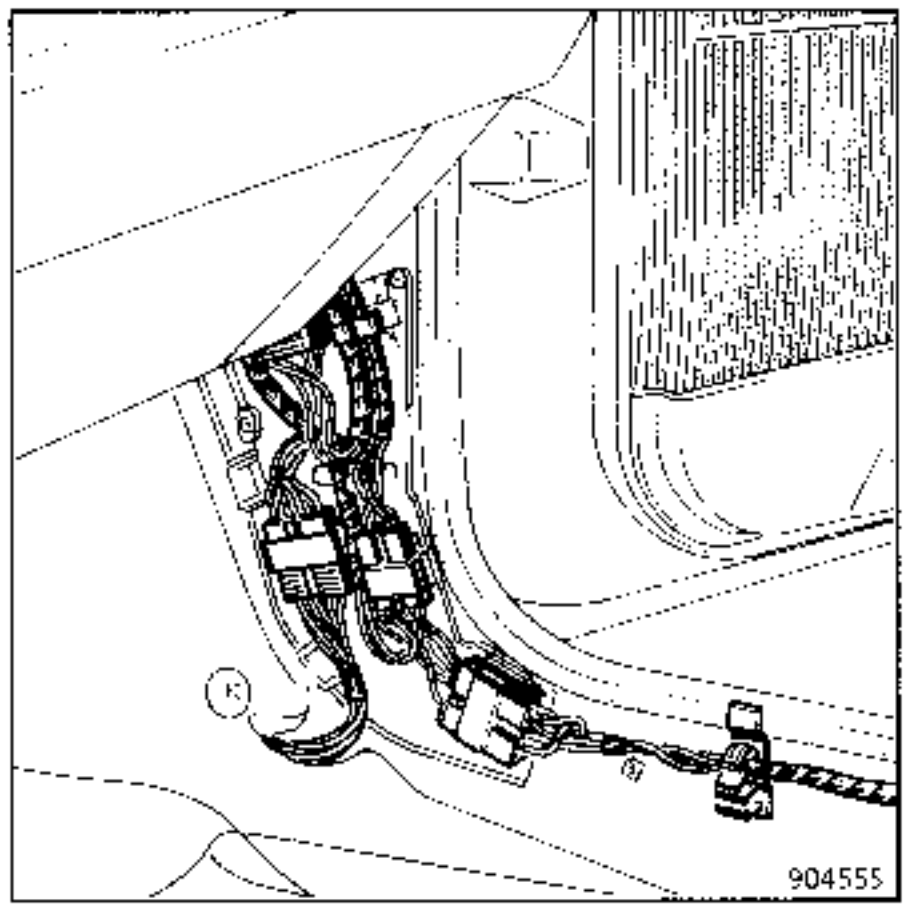


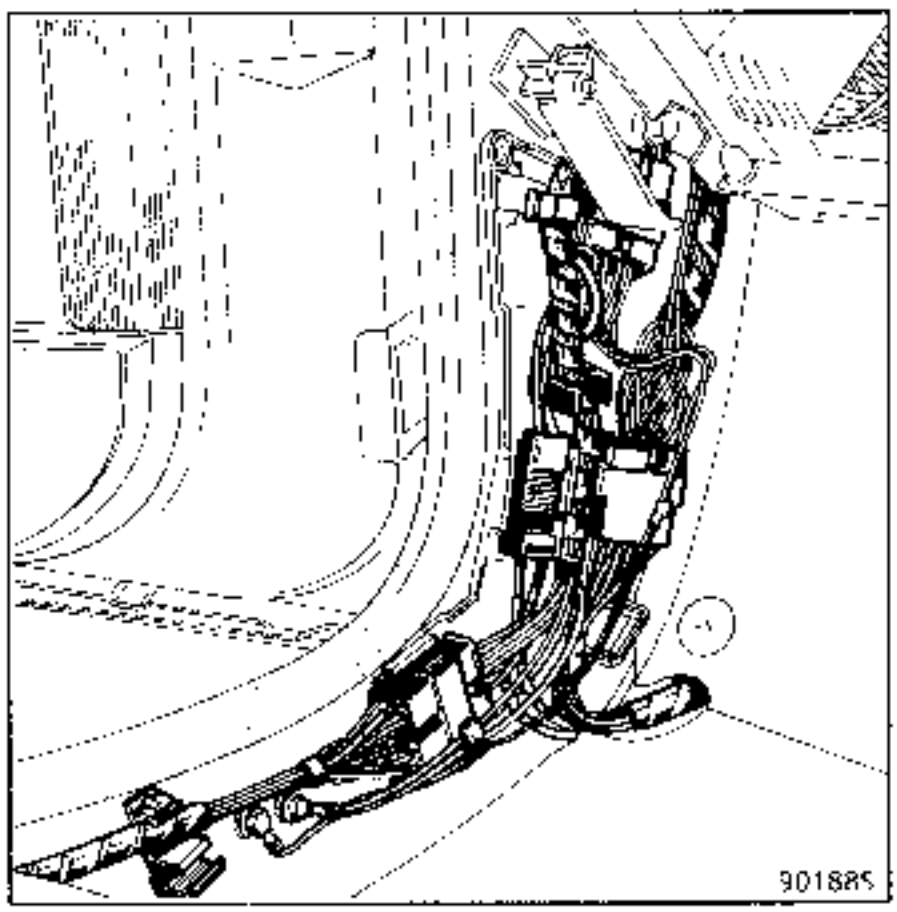
Place the fascia panel in position and fit it on to the locator (6) (take care not to trap the wiring) and secure the fascia panel in place.

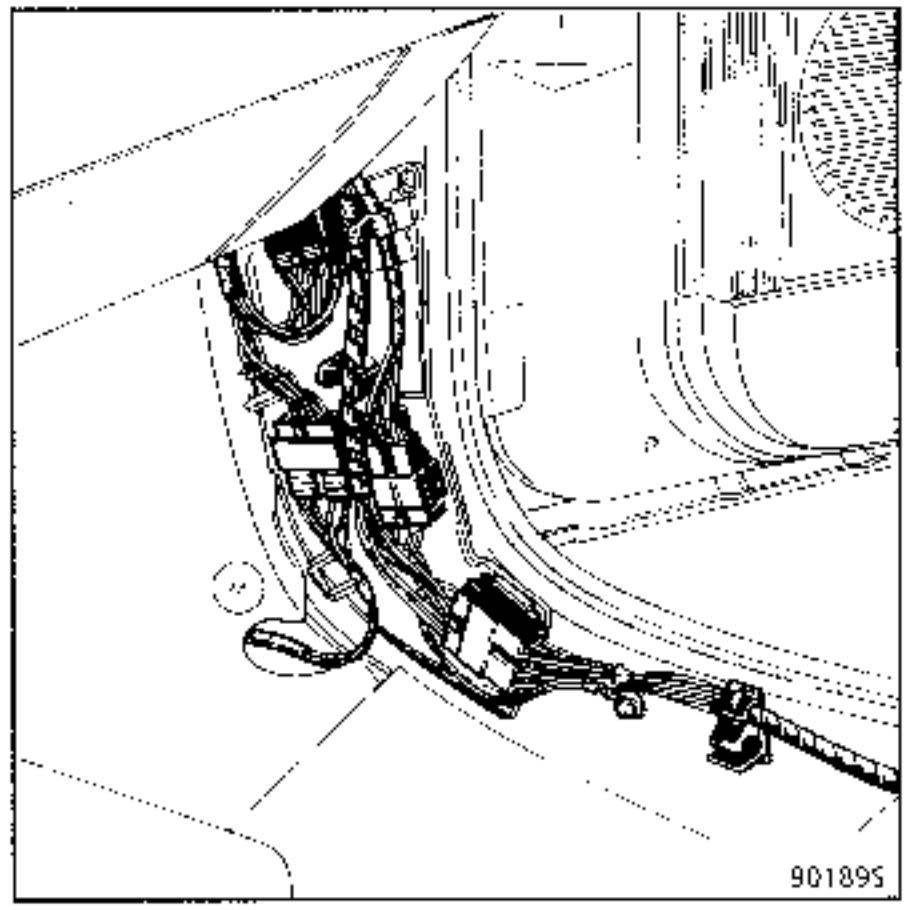
Special points for refitting

Ensure that the wiring is in its original positions.









Do not forget to reconnect the connector (5) on the fascia panel harness, the windscreen wiper harness and the pedal assembly connector.

Before refitting the lower cover, check that the rubber locating studs are in position and fit the cover over them.

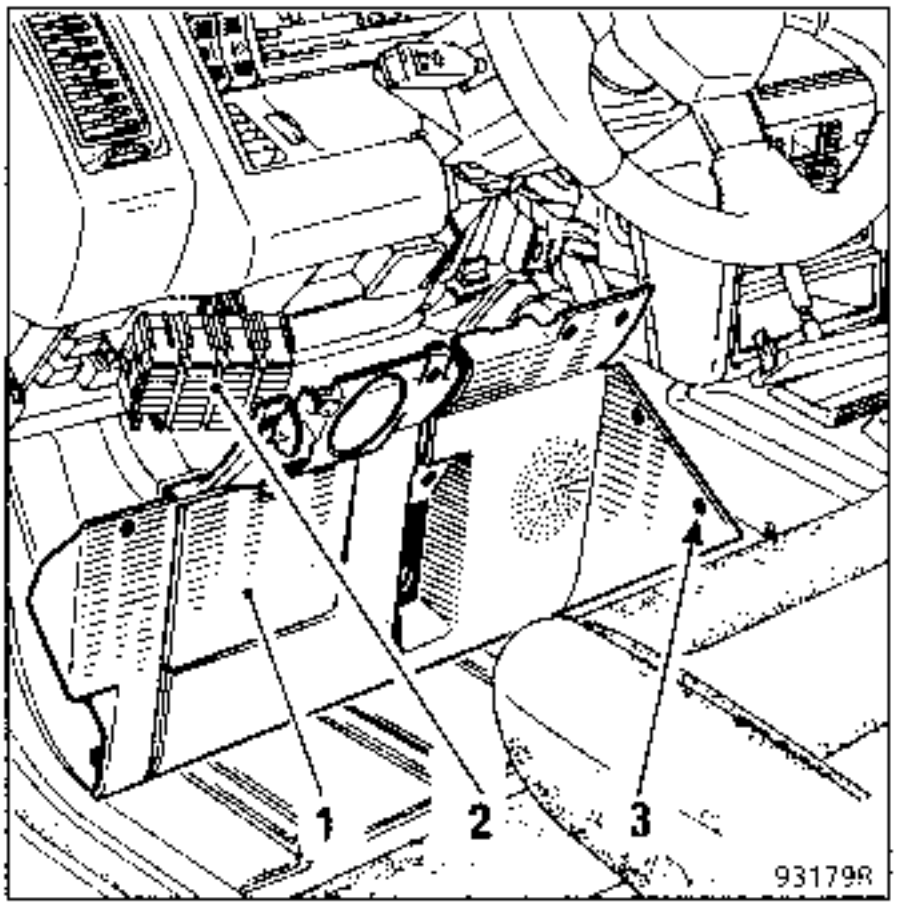
Reconnect the battery, with the ignition switched off and check that all the accessories are operating correctly.

NOTE : If the steering wheel is too near the steering wheel half casings, adjust the position of the steering column universal joint.

REMOVING

Disconnect the battery.

Remove :
- the central console,
  the left and righthand lower body side trims,
- the steering wheel after first marking its position,
  the lower and upper steering column half casings which are connected to one another by four screws,



Open the door (1).

Unclip the fuse holder casings (2).

Remove the steering column adjustment lever.

Remove :
- the 9 screws (3) that retain the trim under the steering wheel and remove the trim by tilting it,
- the trim on the lefthand side of the glove box.

CHOKE CONTROL (depending on version)

REMOVING

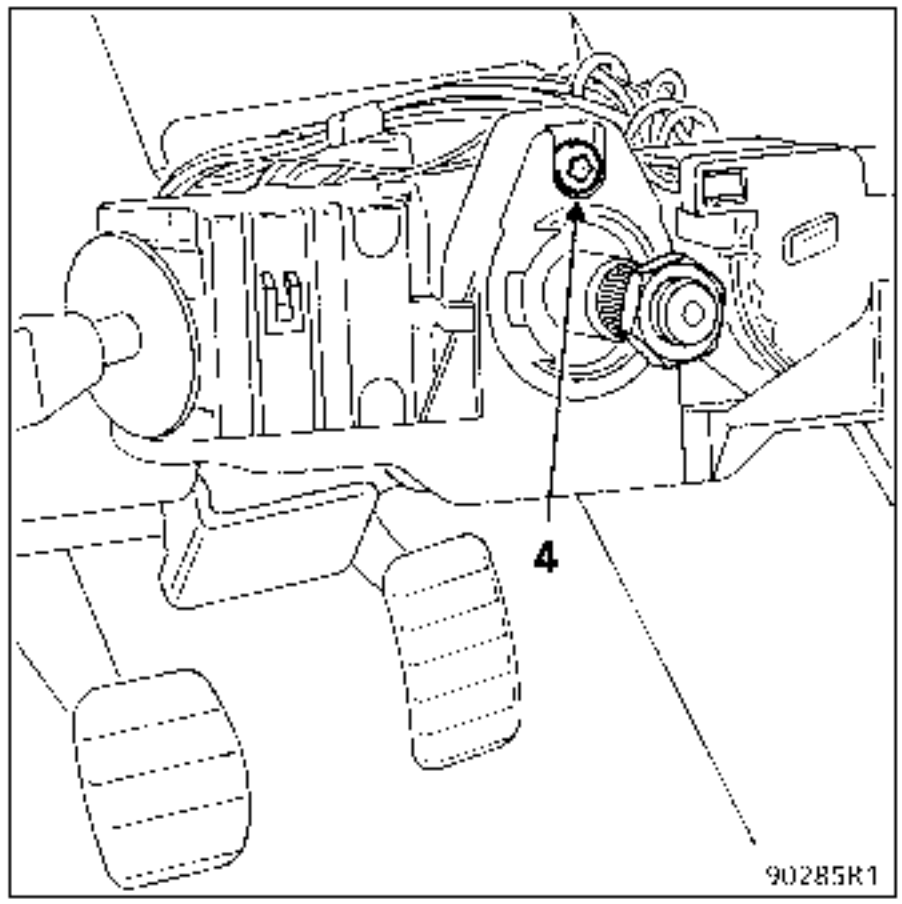
Unclip the cable at the carburettor end.

Remove the 2 foam anti-noise pads which are on the cable sleeve.

Unclip :
- the warning light connector,
- the knob assembly at the fascia panel end and remove the complete control, together with its cable sleeve and cable.

STEERING COLUMN

REMOVING



Unscrew screw (4) without removing it, then push it back to free the clamping taper.

Disconnect the connectors and remove the control assembly.

STEERING COLUMN (continued)

Disconnect the starter switch.

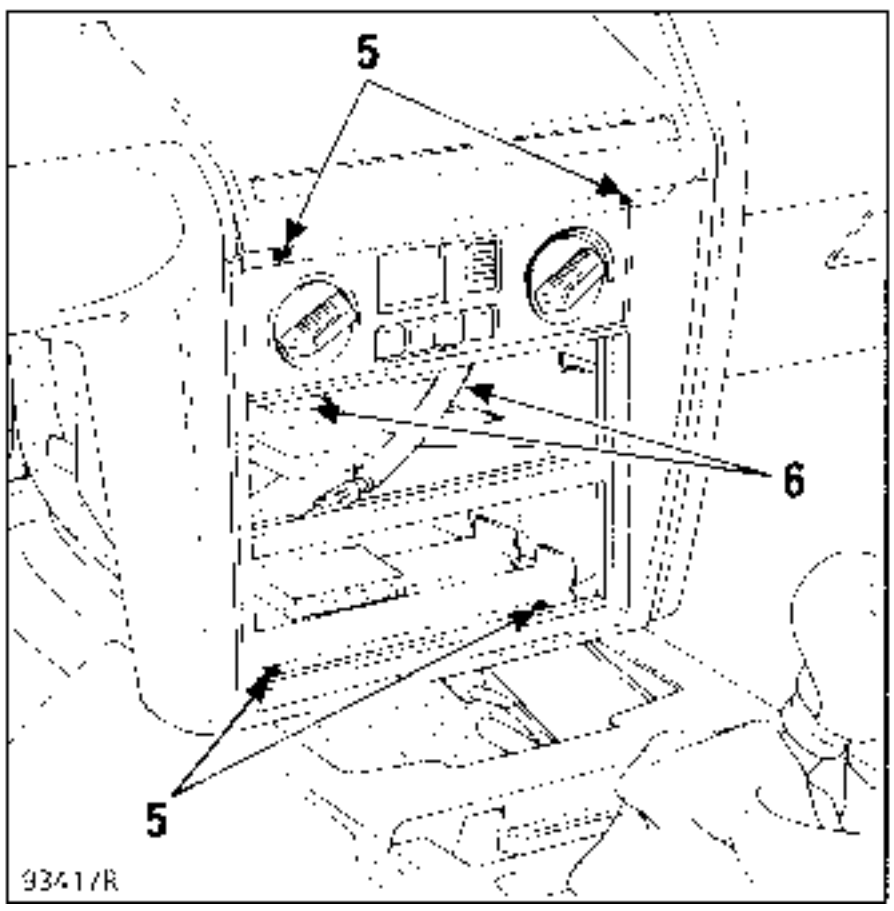
Place the steering wheel in position and turn it to gain access to the universal joint clamping bolt.

Remove the universal joint clamping bolt.

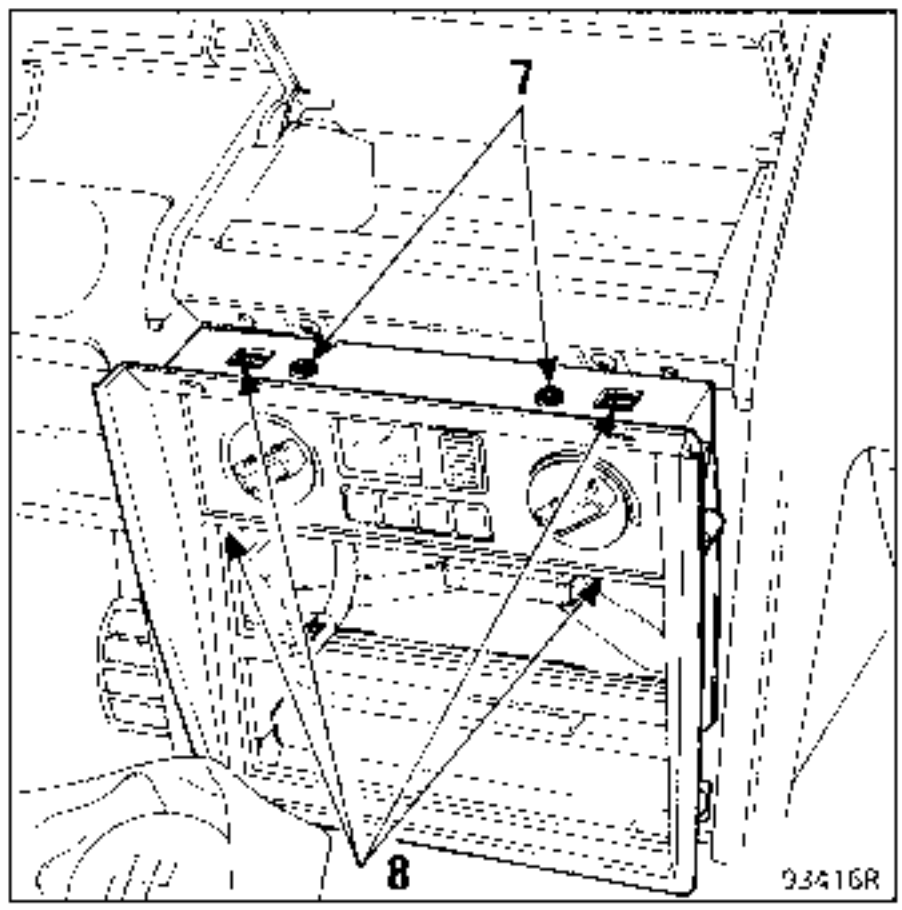
Remove the five fastenings to secure the column in place (2 screws, 1 bolt, 1 nut and 1 Torx screw).

Tilt the column downwards and pull it to remove it.

HEATER CONTROL PANEL AND RADIO MOUNTING



Remove :
- the radio or the radio compartment trim,
- the lower compartment casing,
- the four screws (5) that hold the control panel in place,
  the two nuts (6) at the back of the radio mounting bracket.

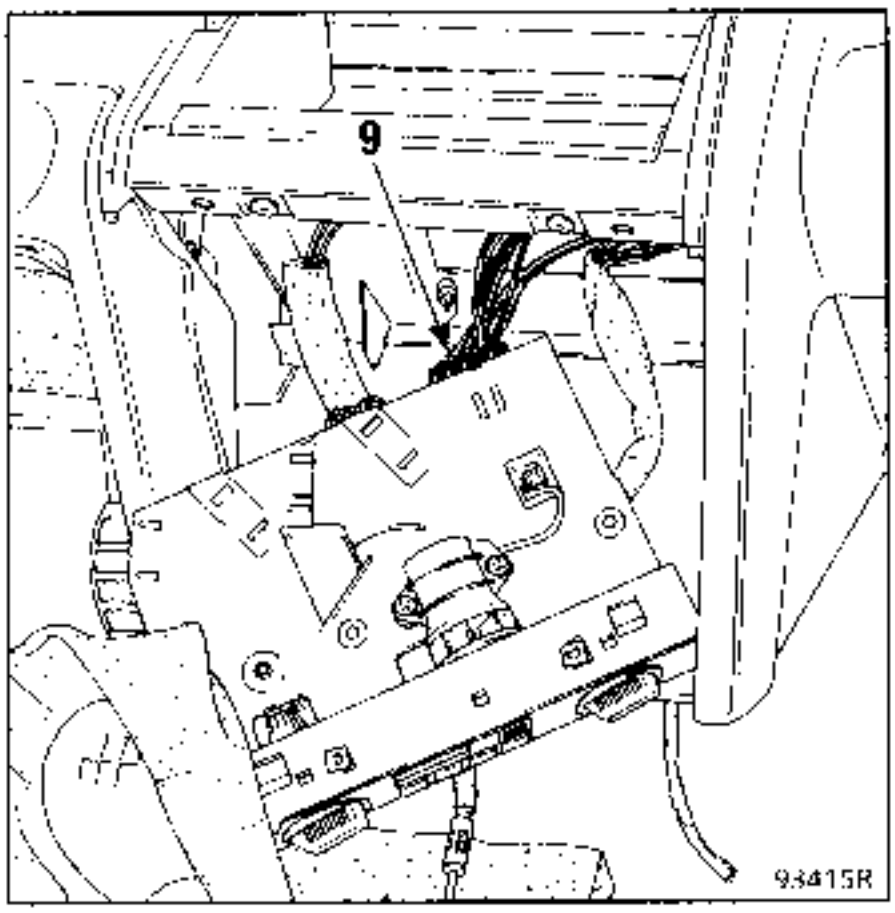


Pull out the mounting, slightly, from the fascia panel.

Remove the two screws (7) that secure the control panel to the mounting.

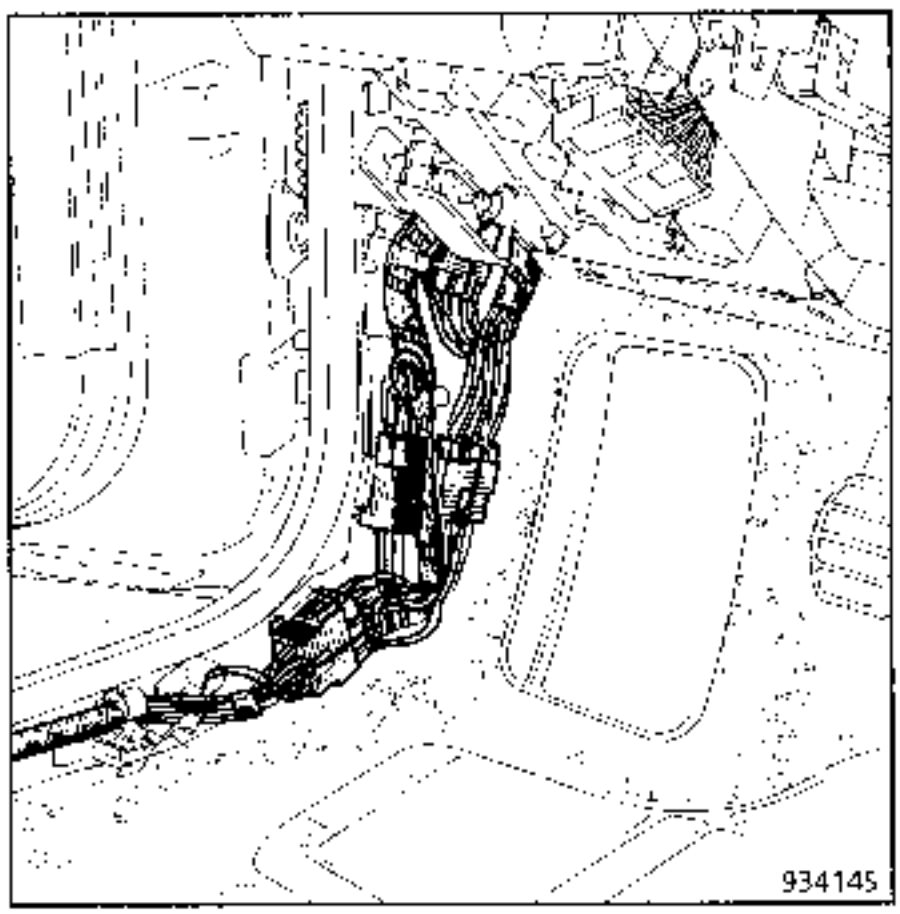
Unclip the four studs (8) that retain the control panel and push the panel inwards.

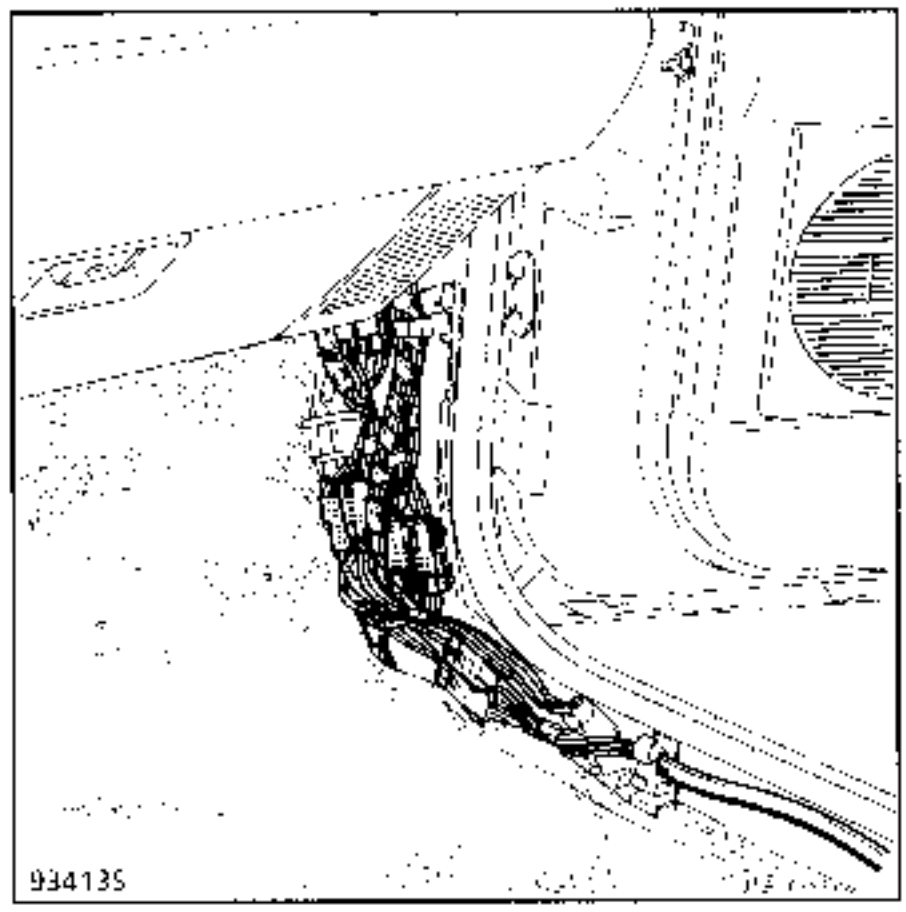
Remove the mounting by tilting it downwards.



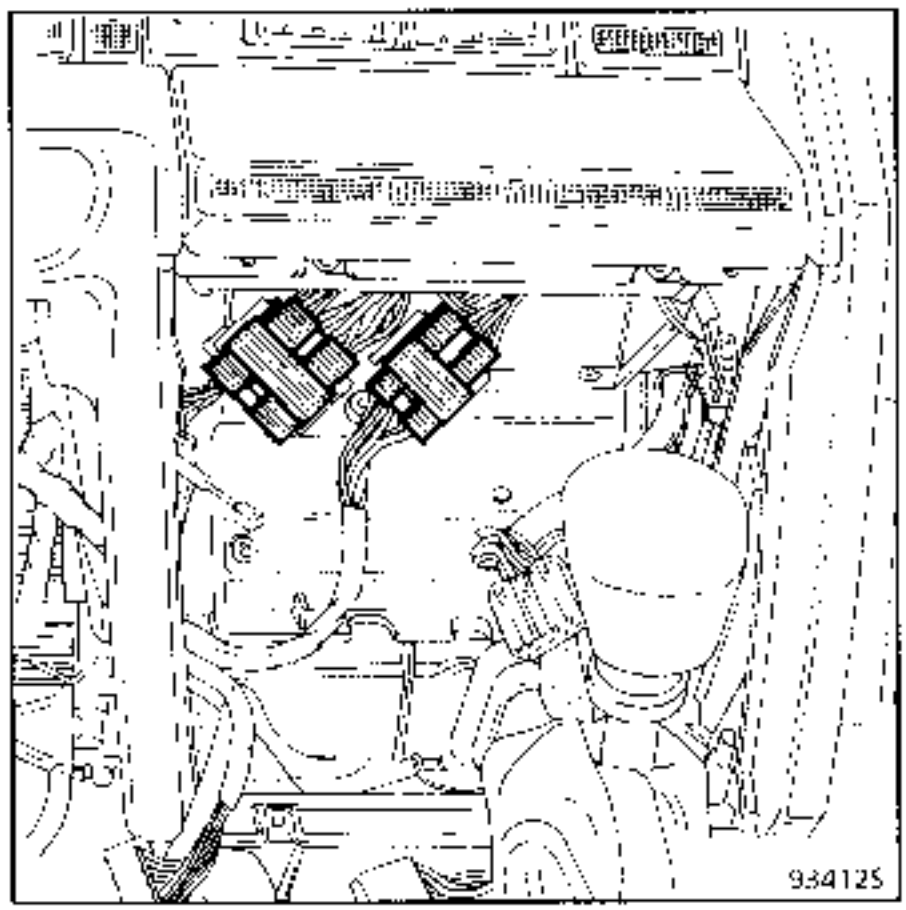
Disconnect :

- the brown connector (9) that provides the electrical supply to the panel, without removing it.

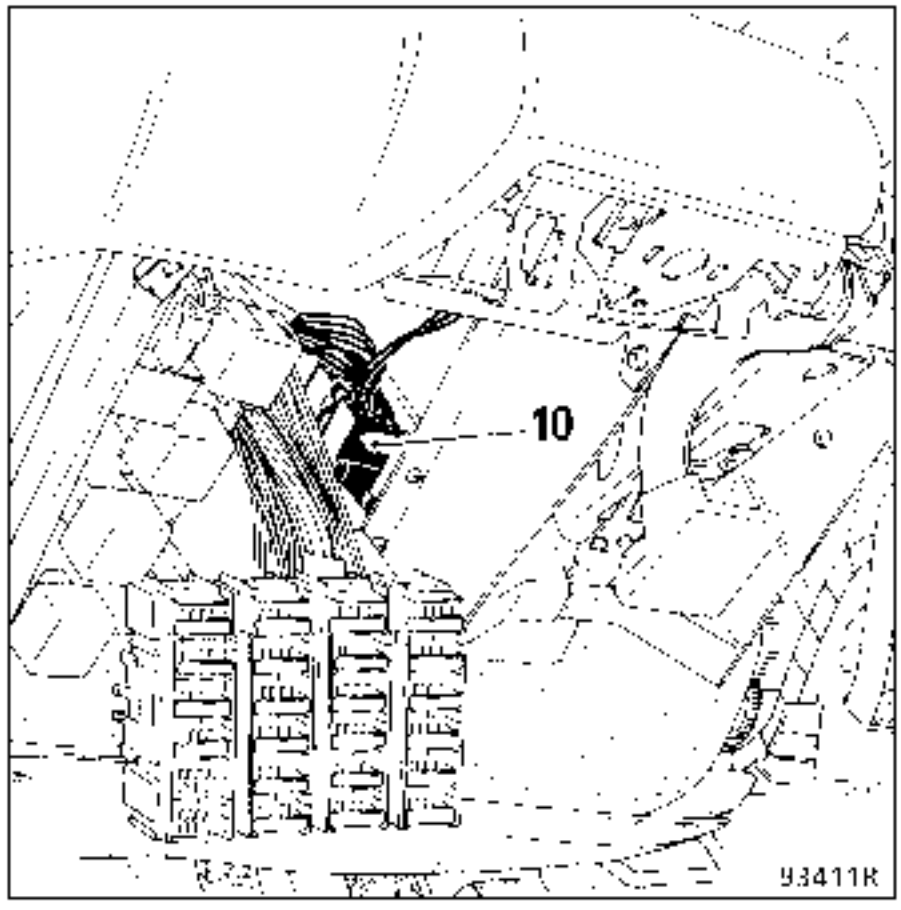




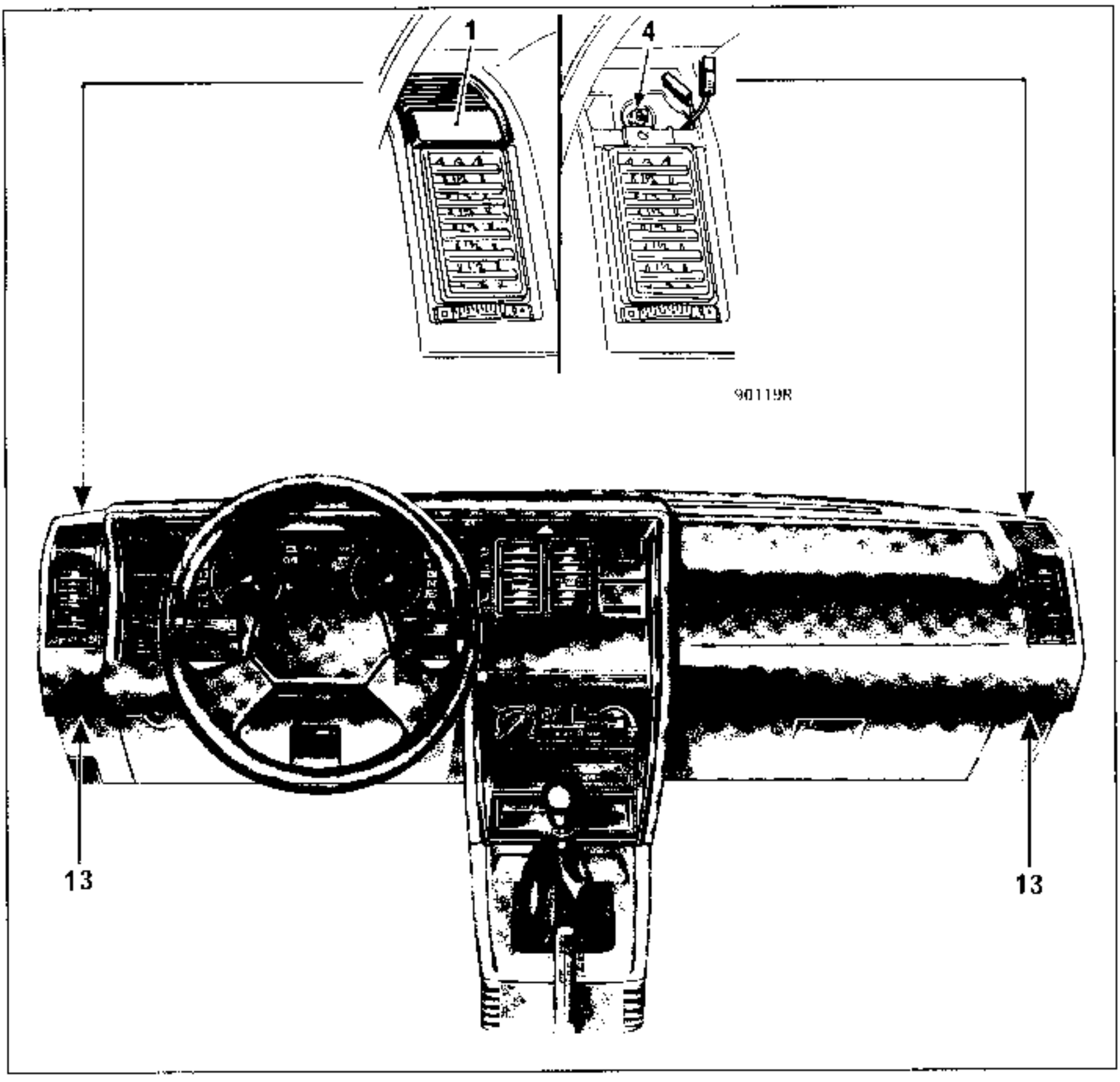
- Disconnect the connectors on the front lefthand and righthand door pillars and remove the screws that retain the earth terminals.



- Disconnect the two connectors located on the air distribution casing,
- Disconnect the speedometer drive cable,
- Disconnect the pulse generator connector on the speedometer drive cable (depending on version).



- Disconnector connector (10) on the scuttle wiring harness.

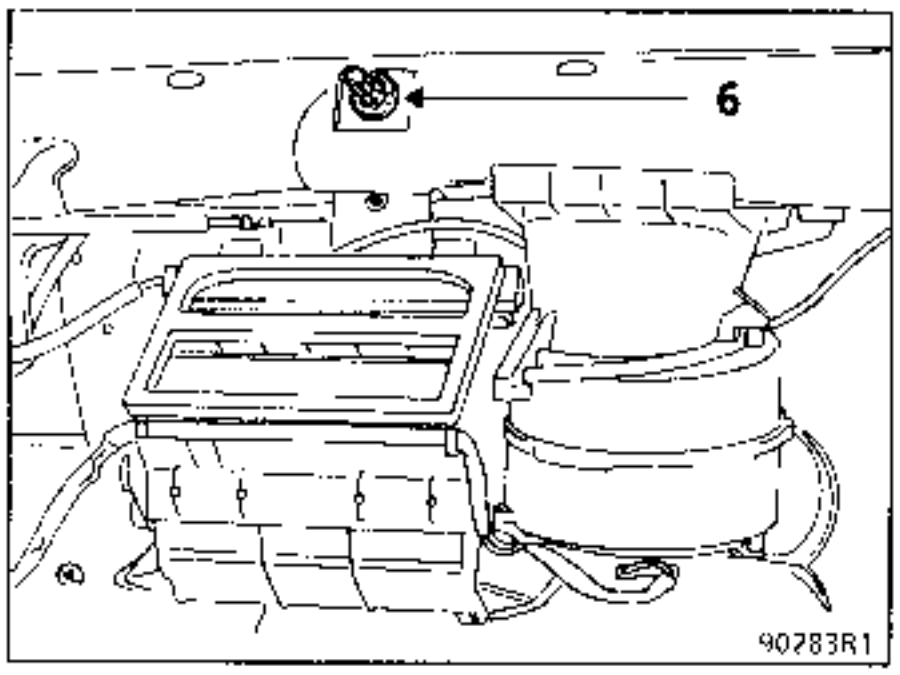


On both left and righthand sides :

Unclip the trim (11),

Remove :
- the speaker grille,
- the two lower securing screws (13),
- the 2 upper securing screws (12),
- the fascia panel.

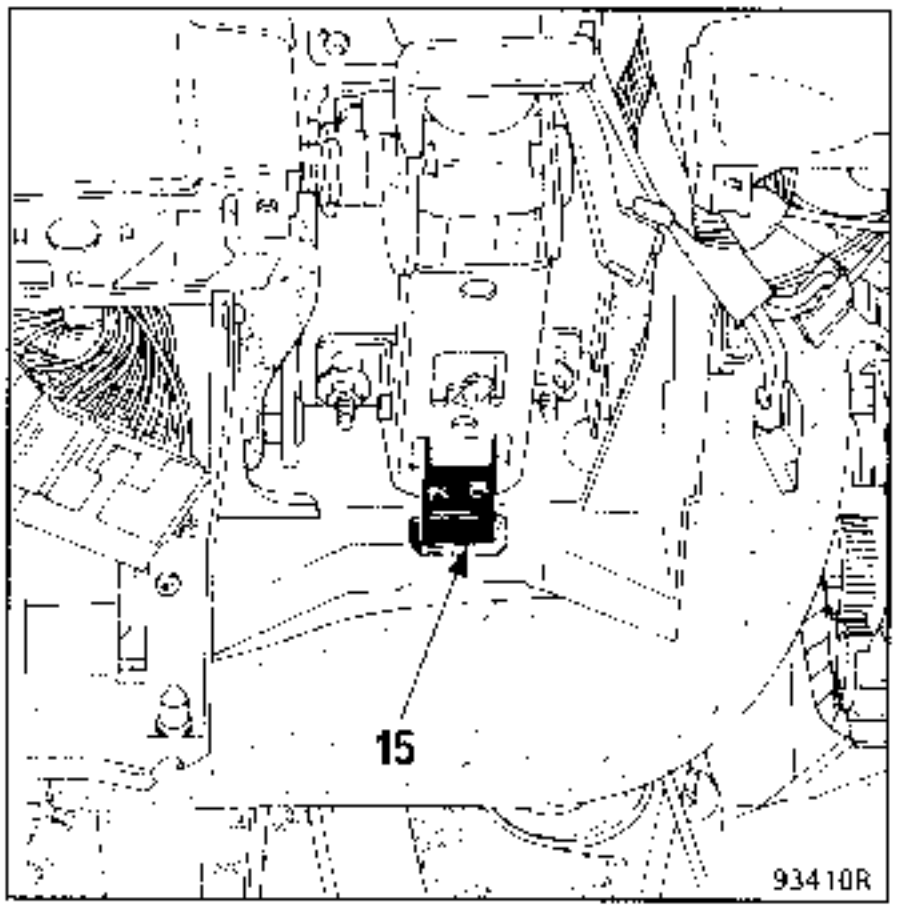
REFITTING



Check that the plastic locator (14) is in position.

Place the panel on the locator and on its four securing points (take care that it does not trap the wiring harnesses or foul the steering column intermediate shaft).

Secure the fascia panel in place.



Place the steering column in position, engaging the tab (15) into its location and the steering column shaft in its universal joint.

Secure the steering column in place.

Fit the universal joint clamping bolt without tightening it. When the steering wheel is fitted, adjust the lengthwise position of the steering column shaft and clamp the universal joint bolt.

Refit the radio mounting and the heater control panel.

Reconnect the speedometer drive cable, all the connectors and earth wires.

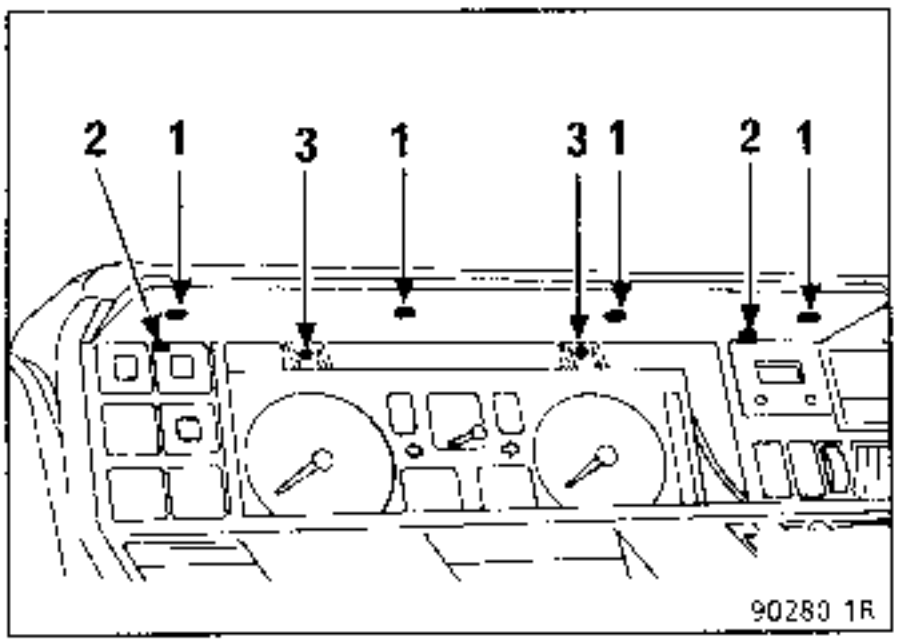
Connect the battery, with the ignition switched off and then check the operation of all the accessories before refitting all the trim.

REMOVING

Disconnect the battery.

Remove the fours screws (1) with a stub screwdriver.

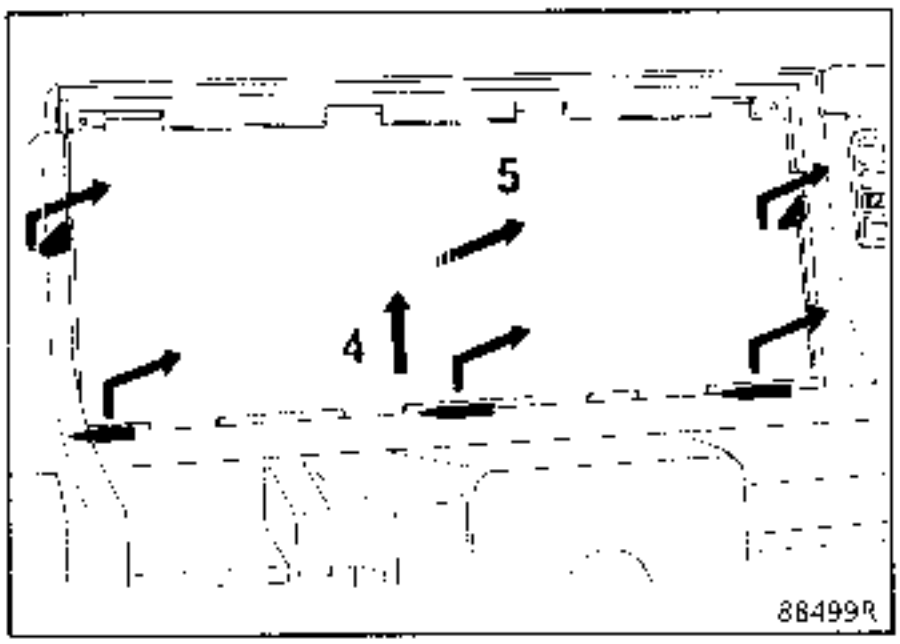
Push in the two studs (2) on the panel visor and swing it to remove it.



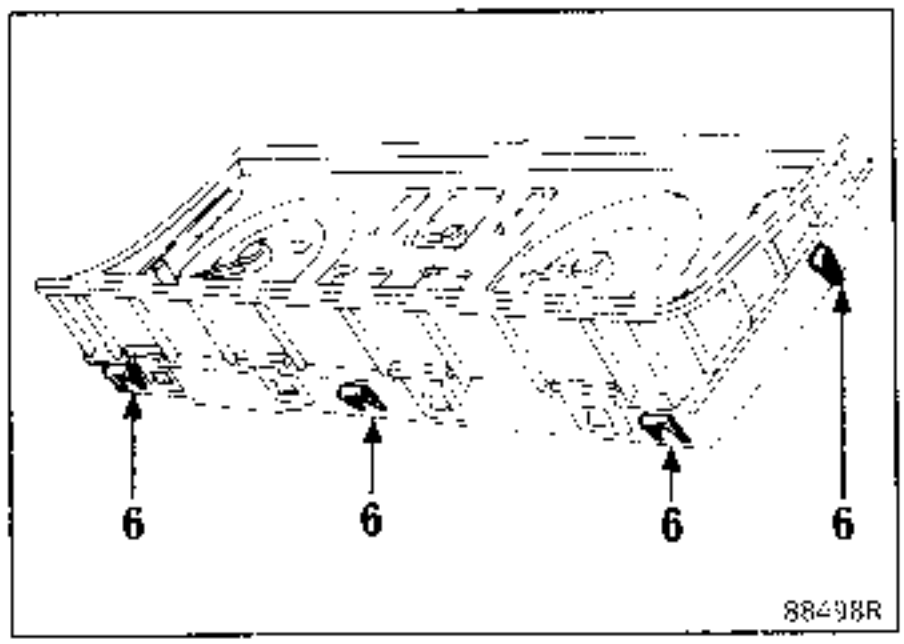
Disconnect the speedometer drive cable through the fuse box access panel.

Remove the two screws from the instrument panel (3).

Lift the panel (4) as far as it will go.



Remove the instrument panel (5) whilst holding it up to free the lugs (6).



REFITTING (Special points)

Before reconnecting them, check that the connectors and their wires are all in good condition.

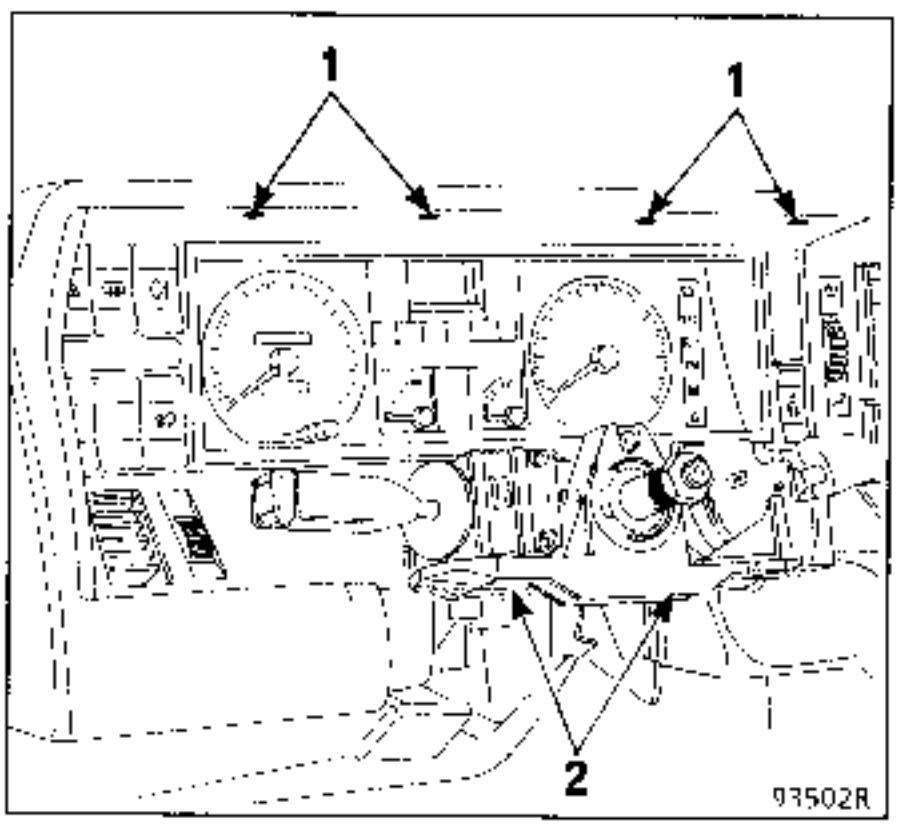
Ensure that the connectors are fully clipped in place.

Check the operation of all the instrument panel functions.

REMOVING

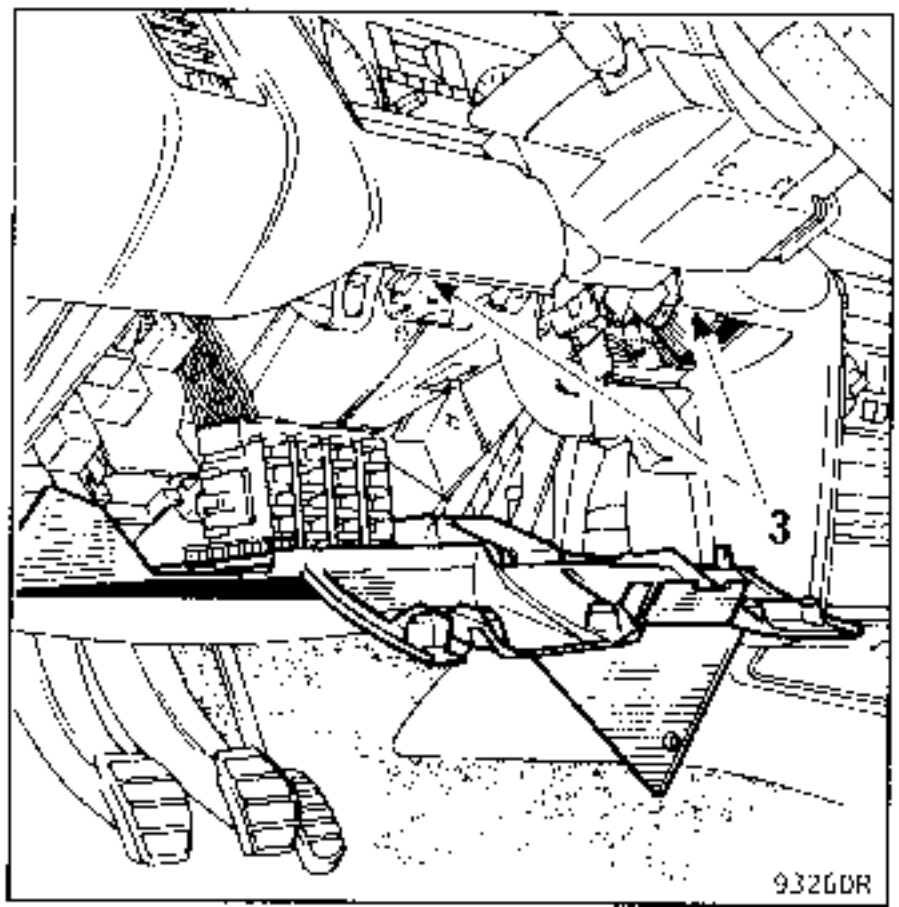
Disconnect the battery.

Remove :
- the lower cover under the fascia panel (9 screws),
- the 2 screws that retain the visor (2).

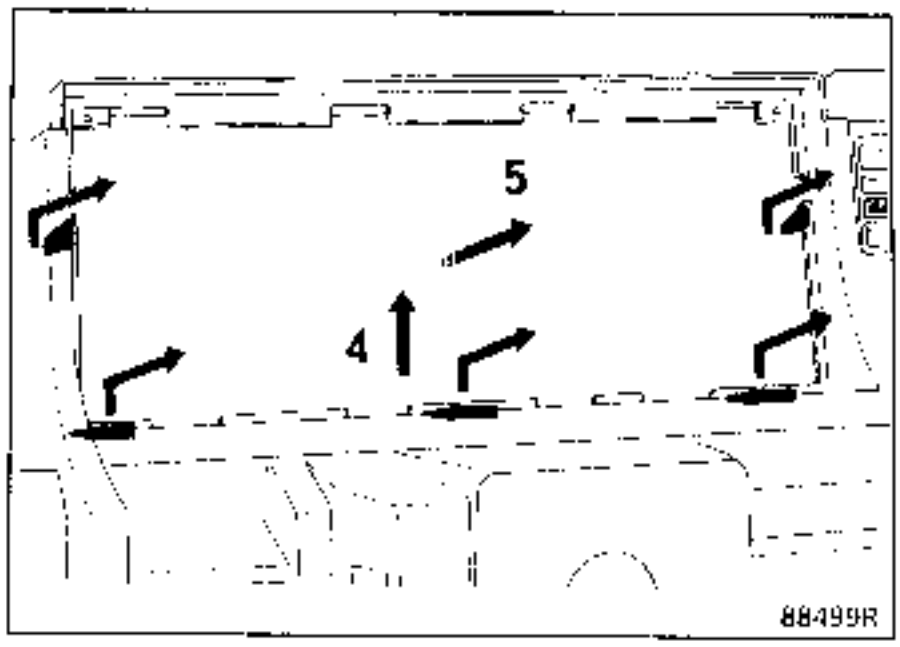


Disconnect the speedometer drive cable.

Remove :
- the 4 screws from the visor (1) and swing it to remove it,
- the 2 screws from the panel (3).



Lift the instrument panel fully up and remove it, whilst holding it raised.



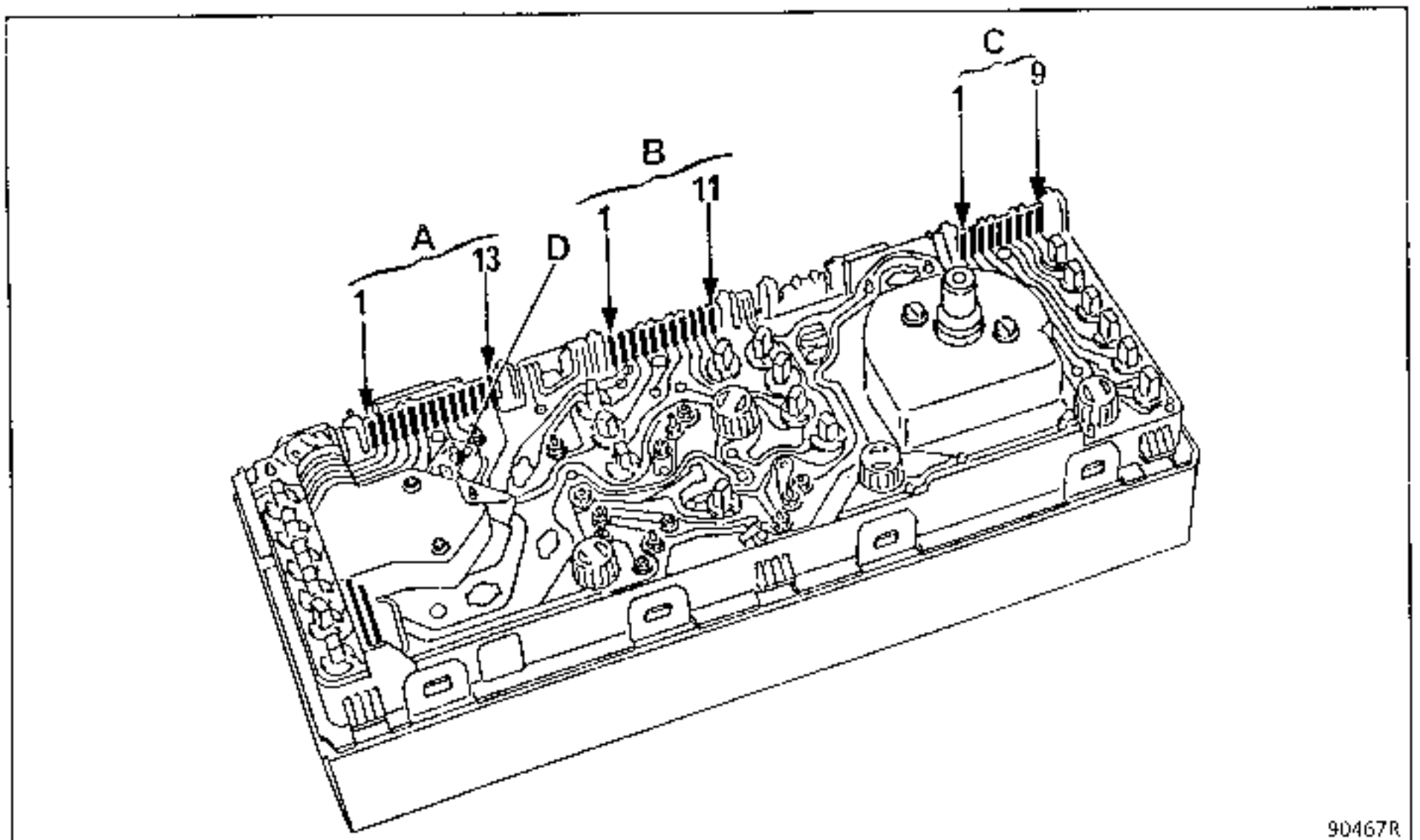
REFITTING (Special points)

Before reconnecting them, check that the connectors and their wires are all in good condition.

Ensure that the connectors are fully clipped in place.

Check the operation of all the instrument panel functions.

CONNECTIONS



Connector A (13-track)

1 Hazard warning light repeater
2 Brake wear warning light
3 Transmission engagement or transmission selection warning light (Automatic transmission)
4 Minimum washer bottle level or ABS or excessive speed warning light*
5 Choke or seat belts "on" warning light*
6 Automatic transmission and injection warning light
7 Not used
8 Tachometer
9 Oil pressure indicator or warning light (2 bars)**
10 Not used
11 Not used
12 Not used
13 Fuel gauge

Connector B (11-track)

1 Minimum fuel level warning light
2 Oil pressure warning light 0.3 bar
3 – after ignition
4 Pre-heater or catalytic convertor defect warning light*
5 LH direction indicator repeater
6 Coolant temperature indicator*
7 RH direction indicator repeater
8 Coolant temperature warning light
9 Brake (Nivocode) and handbrake warning light
10 Not used
11 Charge/discharge warning light

Connector C (9-track)

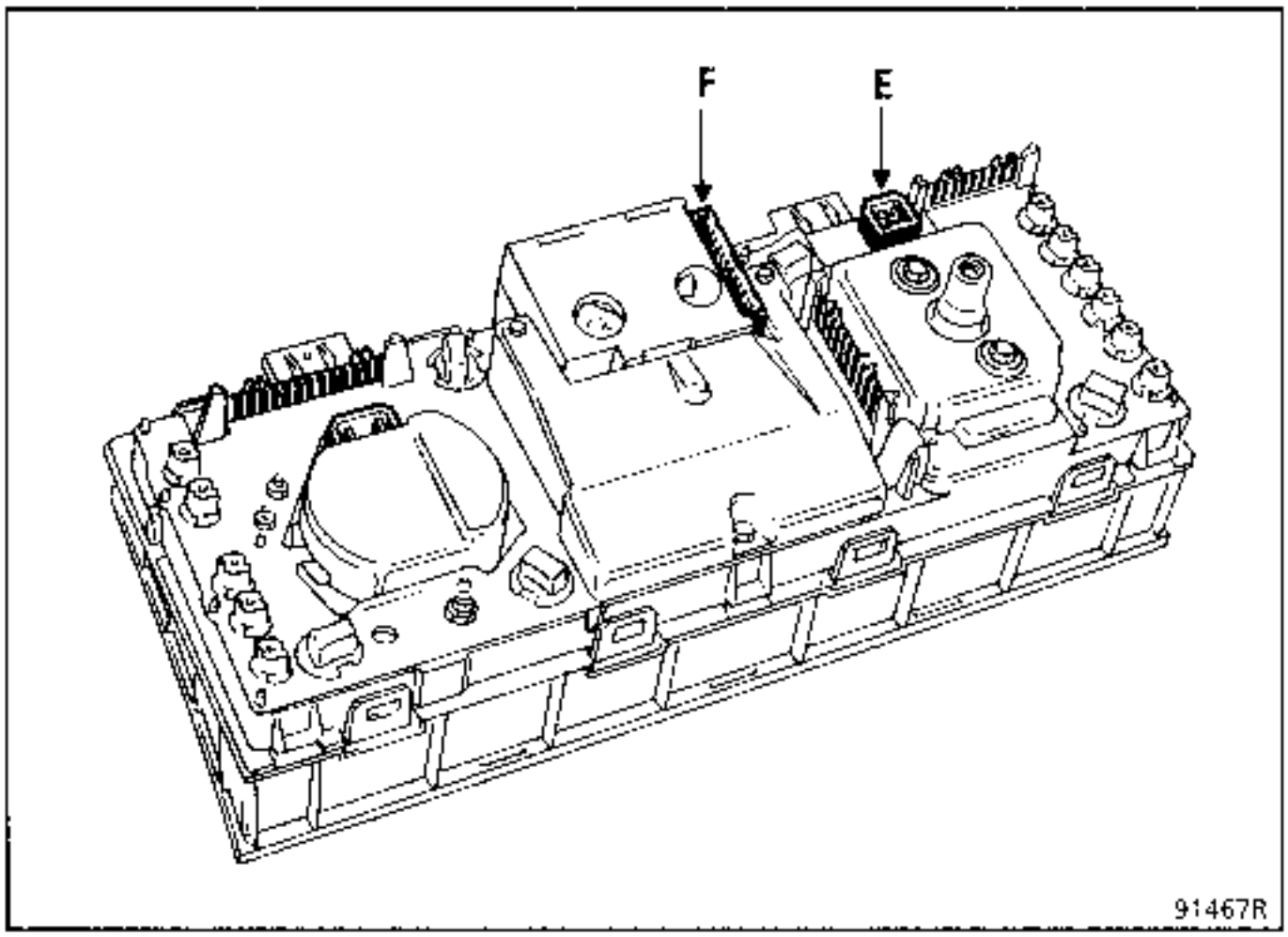
1 Coolant temperature indicator
2 Instrument panel lighting
3 Main beam warning light
4 Dipped beam warning light
5 Side light warning light
6 Front fog lights warning light
7 Rear fog light warning light
8 Heated rear screen warning light
9 Earth

Connector D

1 Oil level sensor
3 Oil level sensor

* depending on country
** depending on version

CONNECTIONS



Connector E (2-track)

1 On-board computer reset button
2 Earth

Connector F (15-track)

1 On-board computer earth
2 + before ignition
3 − after ignition
4 Speed signal
5 Flow sensor signal
6 Fuel gauge signal
7 Outside temperature signal
8 Lighting rheostat
9 Instrument panel lighting
10 Outside temperature electronic earth
11 Fuel gauge electronic earth
12 Fuel gauge warning light
13 On-board computer reset button
14 On-board computer display
15 Not used

SPEED SIGNAL INFORMATION

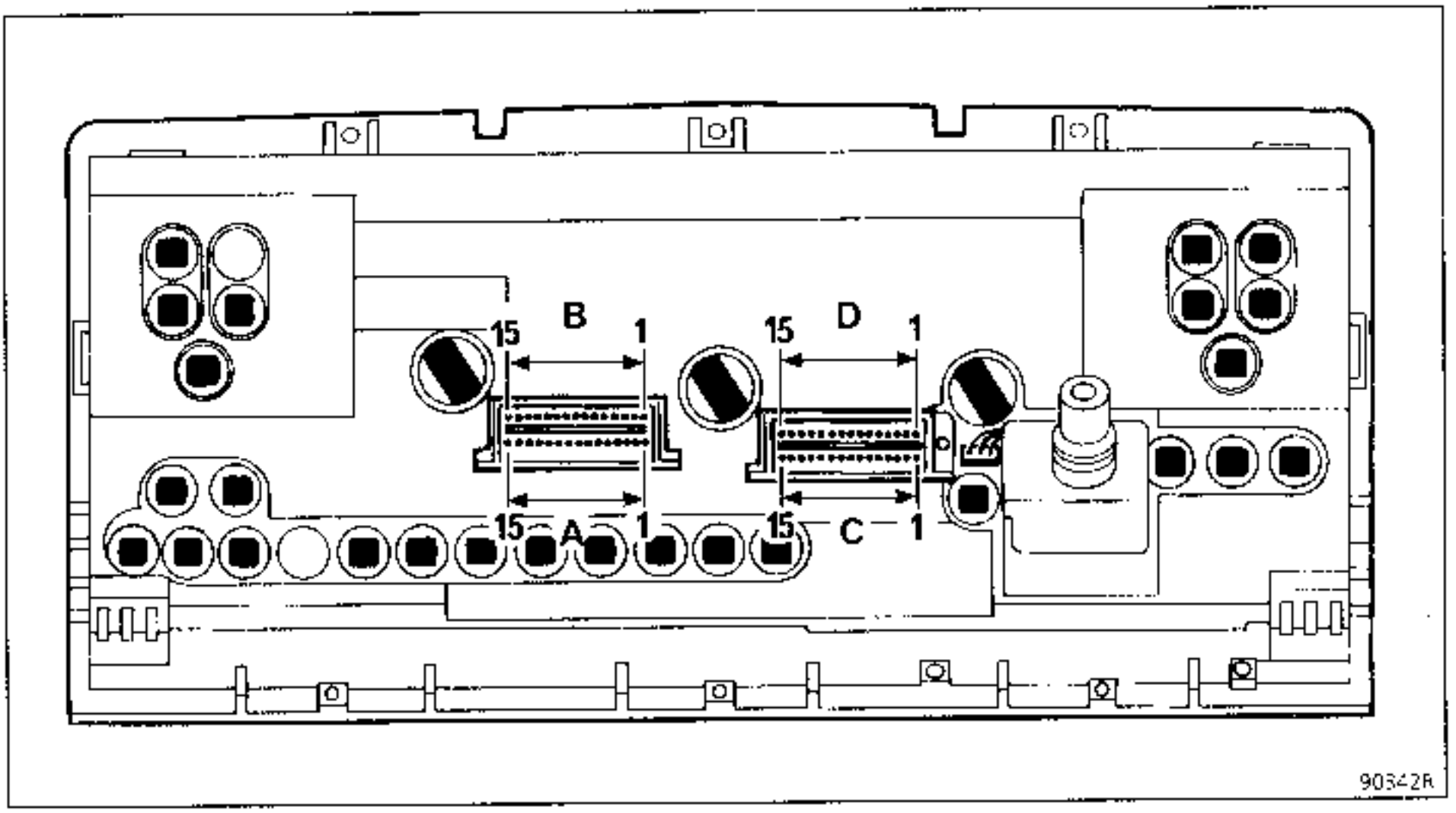
The speedometer cable is fitted with a speed sensor. Vehicle speed information is sent to the on board computer.

Connection via the black 3-way connector

1 + 12 V after ignition
2 Vehicle speed information
3 Earth

NOTE : Connection of the other 3 connectors is identical to that on a conventional type instrument panel (see previous pages).

CONNECTIONS



Connector A (red)

1 Hazard warning light repeater
2 Not used
3 RH direction indicator repeater
4 + after ignition (instrument panel fuse)
5 Choke warning light
6 Pre-heater warning light
7 Front fog lights warning light
8 Rear fog light warning light
9 Heated rear screen warning light
10 ABS warning light
11 AR4 automatic transmission warning light
12 Seat belts "on" warning light (depending on equipment level)
13 Handbrake warning light
14 Not used
15 Not used

Connector B (black)

1 Not used
2 LH direction indicator repeater
3 Not used
4 On-board computer display (by earthing circuit)
5 Not used
6 Windscreen washer level warning light
7 Brake pad wear warning light
8 Instrument panel lighting (instrument panel fuses)
9 Not used
10 Injection/Automatic transmission warning light
11 Oil pressure drop indicator to voice synthesiser
12 Voice synthesiser speaker
13 Voice synthesiser speaker
14 Electronic earth
15 + before ignition (interior light fuse)

CONNECTIONS (continued)

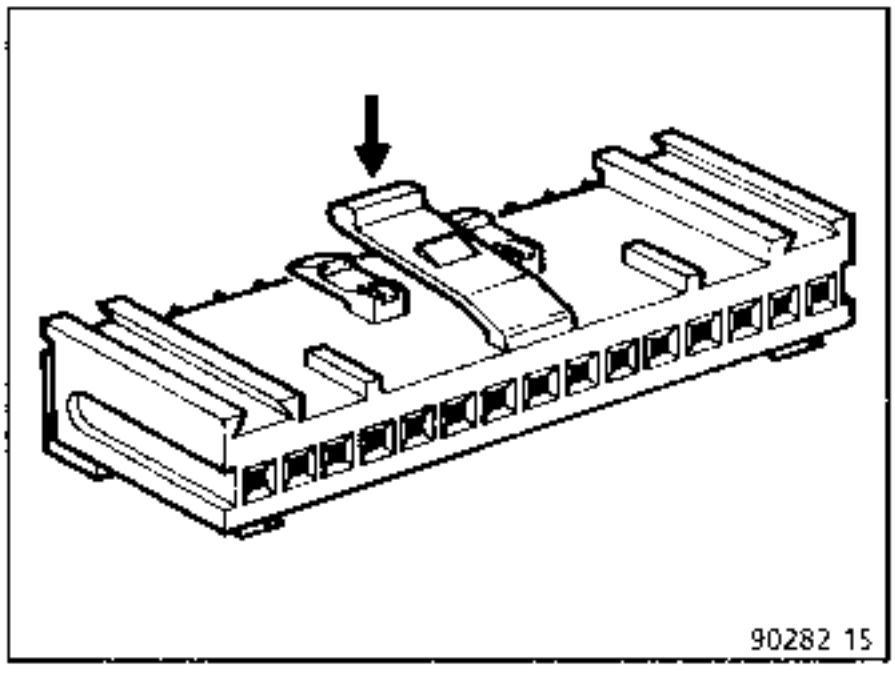
Connector C (blue with retaining lock)

1 Not used *
2 Not used*
3 Not used
4 Coolant temperature warning light via temperature switch
5 Charge/discharge warning light
6 Oil pressure warning light (0.35 bar pressure switch)
7 Brake warning light (Nivocode)
8 Dipped beam warning light
9 Warning lights earth
10 Main beam warning light
11 Side lights warning light
12 Diesel tachometer
13 Petrol tachometer
14 Voice synthesiser demonstration and repeat **
15 Oil pressure warning light (2 bar pressure switch)

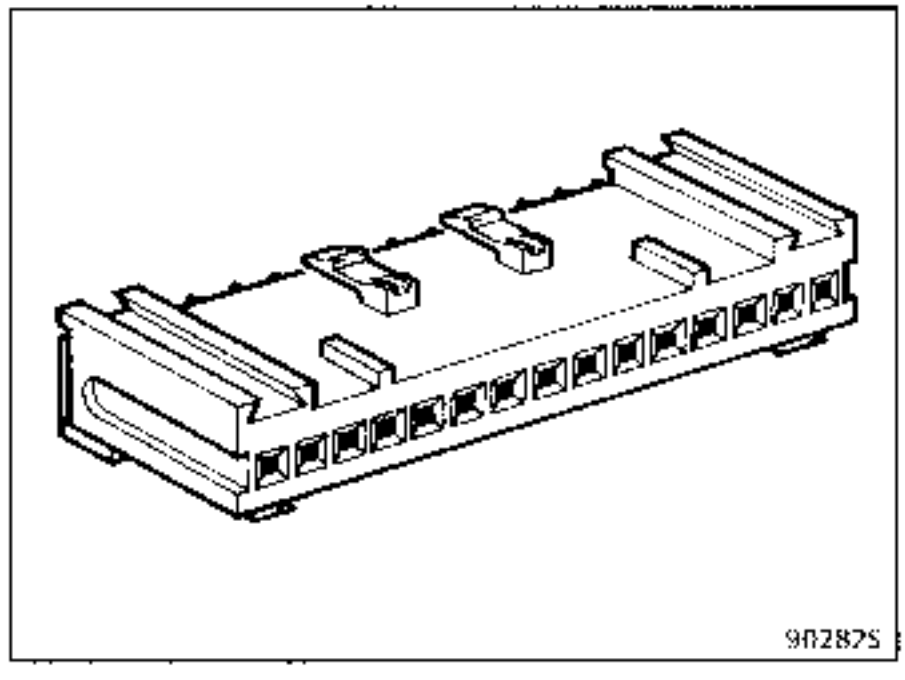
Connector D (blue)

1 Flow sensor signal
2 Not used
3 Coolant temperature via temperature switch
4 External temperature sensor return (in rear view mirror)
5 To external temperature sensor (in rear view mirror)
6 Fuel gauge return
7 Radio shut-off**
8 To fuel gauge
9 To oil level sensor
10 Oil level sensor return
11 Rear LH door signal**
12 Rear RH door signal**
13 Warning lights earth
14 Driver's door signal**
15 Passenger door signal**

Connector with retaining lock



Connector without retaining lock



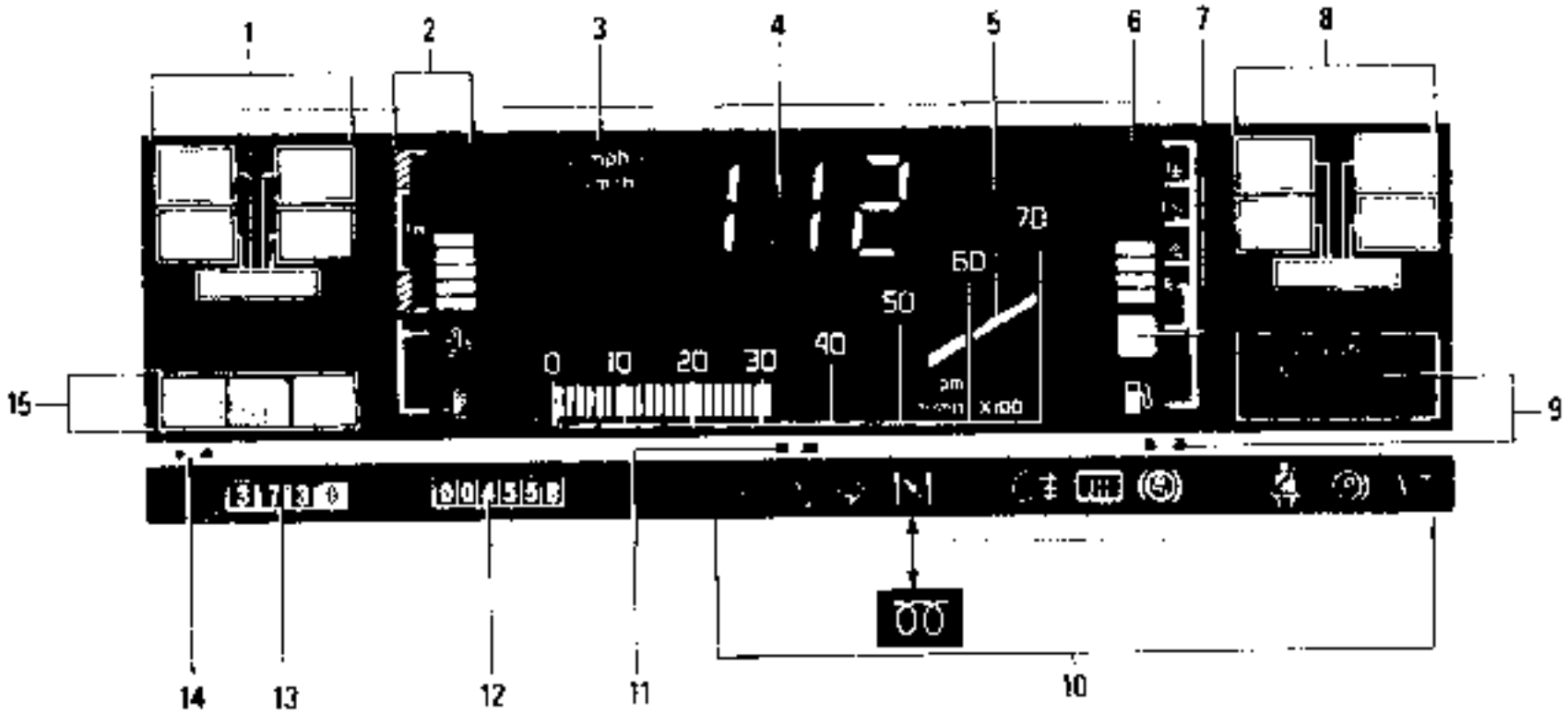
* Speed signal output to be used for special applications
** Vehicle equipped with voice synthesiser

DESCRIPTION

The electronic instrument panel consists of several distinctly separate units contained in a single casing :

- a liquid crystal display assembly,
- a warning light assembly.

In addition, the instrument panel checks that certain sensors and detectors are operating correctly and, if they are not, displays an error code in place of the speed display.



NOTE : The lighting rheostat controls the brightness of the display.

1/ WARNING LIGHTS

- Braking system defect warning light (Nivocode).
  This warning light is tested when the ignition is switched on, before the engine starts but should switch off as soon as the engine is running.

- Battery charge/discharge warning light.
  This warning light switches on when the ignition is switched on but should switch off when the engine starts.

- Coolant temperature warning light.
  This warning light should be off when the ignition is switched on.
  It illuminates **when the 115 °C temperature switch* opens.**

- Engine oil pressure warning light.
  This should switch on when the ignition is switched on and switch off when the engine starts.

Special features of the J type petrol engine

There are two pressure switches*.

One set at **0.35 bars** which maintains a permanent check on the oil pressure. Its warning light illuminates if the oil pressure falls below **0.35 bars**.

The second pressure switch (2 bars) checks the oil pressure at speeds above **2 500 rpm**. Its warning light illuminates if the oil pressure falls below **2 bars** at engine speeds of more than **2 500 rpm**.

(*) Sensors, detectors or wiring, whose condition is monitored by the instrument panel.

DESCRIPTION

2/ OIL LEVEL OR COOLANT TEMPERATURE BARGRAPH

A - Oil level *

The engine oil level is displayed only after the ignition has been switched off for at least two minutes with the vehicle stationary.

When the ignition is switched on, the bargraph segments will illuminate after approximately two seconds.

The coolant temperature bargraph will replace the above display when the ignition switch is operated a second time or when the engine is running or the vehicle is in motion.

B - **Engine coolant temperature**

A thermistor controls the operation of some of the segments on the bargraph.

If the engine overheats, the the opening of the **115 °C*** temperature switch switches on the complete bargraph **(10 segments)**, with the engine running.

NOTE : When the engine coolant temperature is lower than **52 °C**, one of the bargraph segments should be illuminated.

At a coolant temperature of 52 °C, two segments should switch on, etc.

3/ SPEED DISPLAY UNITS

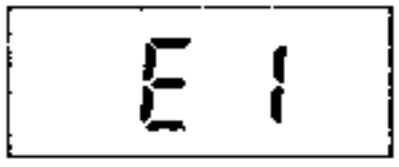
km/h or mph.

4/ DIGITAL SPEED DISPLAY AND DIAGNOSTIC CODE

The speed signal is provided by the speedometer drive cable that drives the mileometer drums. A sensor built in to this mechanism provides the speed signal to the instrument panel and the on-board computer **(5 pulses per metre)**.

Diagnostic code display

Example :



This display will appear in place of the speed display under the following conditions :

after the ignition has been switched off for at least two minutes,

if one of the sensors or detectors or their wiring monitored by the instrument panel is defective (See fault-finding on pages 83-24 and 83-39).

NOTE : The codes range from E1 to E9.

- the vehicle is stationary.

5/ TACHOMETER

The engine speed is displayed by means of a 50 segment bargraph **(7 segments per 1 000 rpm)**.

Petrol engine
Scale : 0 to 7 000 rpm.
At speeds of more than 6 000 rpm, the complete bargraph will flash.

6/ FUEL LEVEL BARGRAPH*

Each segment of the bargraph represents 1/10 of the fuel tank capacity.

WARNING : When filling the tank, the vehicle must have been stationary for at least **15 seconds** for the fuel contents level to be correct with the ignition switched off.

7/ MINIMUM FUEL LEVEL WARNING LIGHT

When the quantity of fuel in the tanks falls to below **5 litres**, the minimum fuel level warning light will flash.

(*) Sensors, detectors or wiring, whose condition is monitored by the instrument panel.

8/ SERVICE WARNING LIGHTS

- Screen washer fluid minimum level warning light.
- Front brake pad wear warning light.
- Electronic defect warning light.
  It illuminates as soon as the ignition is switched on and should go extinguish when the engine is running (injection test warning light).

9/ ON-BOARD COMPUTER

9/ RESET BUTTON

10/ OTHER WARNING LIGHTS

11/ BUTTON TO CHANGE UNITS

km/h or mph (for righthand drive vehicles).

12/ TOTAL MILEAGE RECORDER

13/ TRIP MILEAGE RECORDER

14/ TRIP MILEAGE RECORDER RESET BUTTON

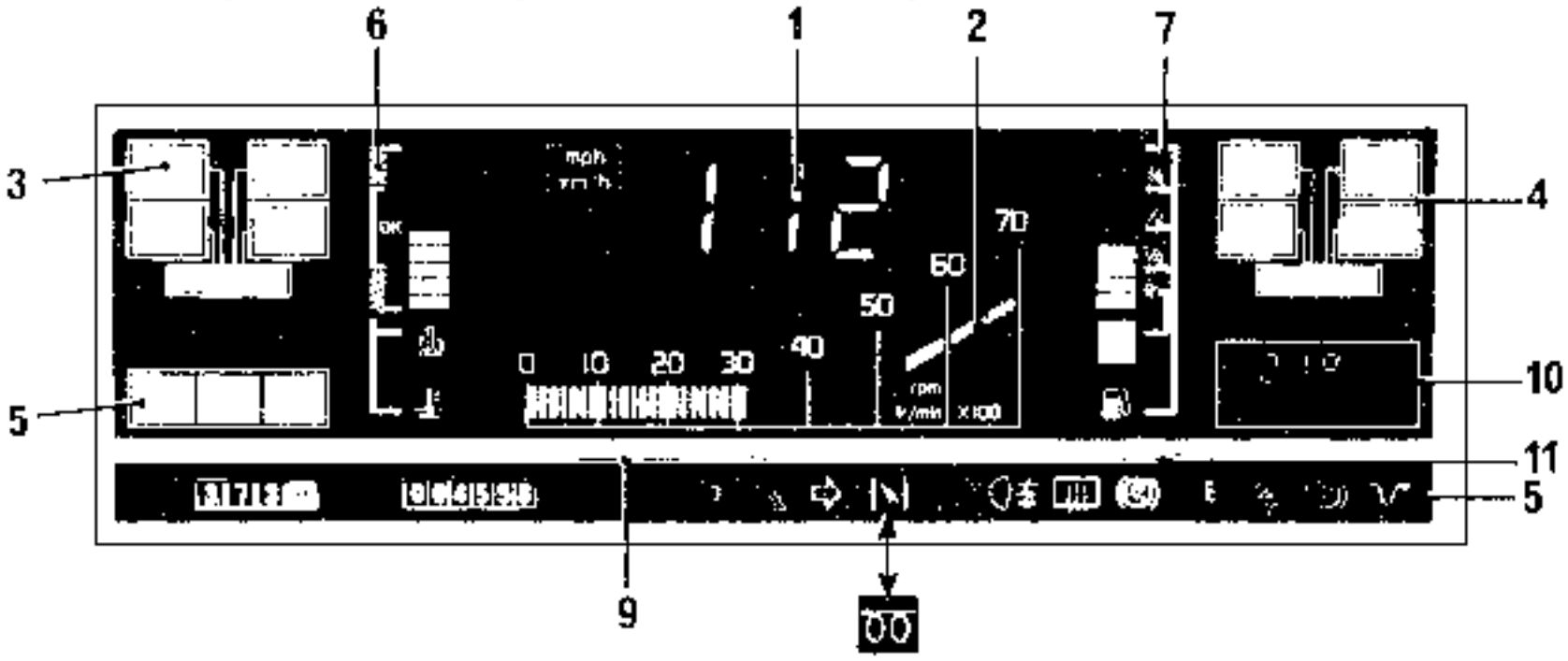
15/ LIGHTING WARNING LIGHTS

DESCRIPTION

The electronic instrument panel consists of several distinctly separate units contained in a single casing :

- a liquid crystal display assembly,
- a warning light assembly,
- a voice synthesiser unit (depending on equipment level).

In addition, the instrument panel checks that certain sensors and detectors are operating correctly and, if they are not, displays an error code in place of the speed display.



NOTE : The lighting rheostat controls the brightness of the display.

1/ VEHICLE SPEED

The digital speedometer consists of three figures that can indicate a maximum speed of 255 km/h.

The speed data is provided by a sensor built-in to the mechanical mileometer assembly.

2/ ENGINE SPEED

The engine speed is displayed by means of a 50 segment bargraph (7 segments per **1 000 rpm**). The first three segments are illuminated as soon as the ignition is switched on, before the engine starts).

A - Petrol engines

The engine speed displayed on the bargraph ranges from **0 to 7 000 rpm**. At speeds of more than **6 000 rpm**, the bargraph will flash.

B - Diesel engines

The engine speed displayed on the bargraph ranges from **0 to 5 500 rpm**. At speeds of more than **4 800 rpm**, the bargraph will flash.

3/ DANGER WARNING LIGHT

If one of the following defects is detected, the warning light that corresponds to the actual defect will switch on together with the "STOP" warning light. There will also be a spoken message.

- **BATTERY CHARGING SYSTEM DEFECT**

  This warning light will illuminate when the ignition is switched on and should extinguish when the engine starts.

  If the warning light illuminates whilst the engine is running, it is an indication of a defect in the charging system.

DESCRIPTION (continued)

The voice synthesiser will generate the spoken message "electrical system defect" if :

- the charging defect lasts for more than **10 seconds**,
- the oil pressure has been correct for at least **60 seconds**.

- **BRAKING SYSTEM DEFECT**

This warning light is tested when the ignition is switched on and should extinguish as soon as the engine starts.

If the warning light remains illuminated with the engine running, it is an indication that there is a defect in the braking system (brake fluid level, pressure drop in the braking system).

The spoken message "braking system defect" is generated when the + circuit, after the ignition switch is closed and there is an indication of a defect in the braking system.

As soon as it is detected, this defect is memorised and the warning light will remain illuminated until the ignition is switched off.

- **OIL PRESSURE DROP**

This warning light should illuminate when the ignition is switched on and extinguish as soon as the engine starts.

If the warning light remains on with the engine running, it is an indication of low pressure in the lubrication system (**0.35 bar** minimum pressure switch and **2 bar** pressure switch for speeds of more than **2 500 rpm**).

The spoken message "low oil pressure" is generated if :

- the + circuit after ignition is closed,
- the engine has been running for at least 10 seconds,
- the defect has been detected for more than 2 seconds.

- **ENGINE COOLANT TEMPERATURE**

This warning light should extinguish when the ignition is on and the engine is running. If the warning light illuminates, it is an indication that the engine coolant temperature is too high (higher than **115 °C**).

The spoken message "engine overheating" is generated when :

- the ignition is on,
- an overheating condition has been detected for more than one second,
- the oil pressure has been correct for more than **10 seconds**.

4/ SERVICE WARNING LIGHTS

When one of the following defects is detected, the corresponding warning light will illuminate together with the "SERVICE" warning light.

A spoken message is generated for certain defects under the following conditions.

- **BRAKE PAD WEAR**

If this warning light illuminates it is an indication that the brake pads require replacing.

The spoken message "BRAKE PADS WORN" is generated with the ignition on, when the defect has been detected for a total of **30 seconds** since the ignition was switched on. The defect is held in the memory until the ignition is switched off.

DESCRIPTION (continued)

- **AUTOMATIC TRANSMISSION - INJECTION WARNING LIGHT**

  This warning light indicates a defect in the fuel injection system or the automatic transmission. It illuminates when the ignition is switched on and extinguishes when the engine is started

  There is no spoken message for these defects.

- **SCREEN WASHER BOTTLE LEVEL**

  This warning light indicates that the screen washer bottle is empty.

  There is no spoken message for this defect.

- **ANTI-LOCK BRAKING SYSTEM (ABS) DEFECT**

  This warning light illuminates when the ignition is switched on and extinguishes when the engine starts.

  It indicates that there is a defect in the anti-lock braking system.

  There is no spoken message for this defect.

5/ OTHER WARNING LIGHTS

6/ OIL AND WATER BARGRAPH

This displays the following two readings in succession :

- oil level,
- coolant temperature.

When the ignition is switched on, before the engine is started, the oil level reading is automatically selected if the ignition has been off for more than two minutes.

There will be no display on the bargraph before a maximum of 2.5 seconds after switching on the ignition.

Once the "engine running" signal is received, or if the vehicle is moving, the bargraph will provide a direct coolant temperature reading.

If an "engine overheating" signal is received from the temperature switch, all the bargraph segments will illuminate. (One bargraph segment corresponds to approximately 10°C. The bargraph indicates temperatures higher than 50°C).

7/ FUEL LEVEL BARGRAPH

The level of fuel in the tank is shown by ten segments and by a "minimum fuel level" warning light.

Each of the bargraph segments corresponds to 1/10 of the fuel tank capacity.

8/ VOICE SYNTHESISER

Functions covered :

- handbrake,
- side doors not closed properly,
- lights not switched off,
- minimum fuel level,
- brake pads worn,
- drop in oil pressure,
  engine overheating,
- braking system defects,
- electrical charging system defect,
- no defect,
- fault diagnosis.

FUNCTIONS

- handbrake on,
- doors not closed properly,
- lights left on

The message "HANDBRAKE ON" is generated when :

- the handbrake is applied,
  the ignition is on,
- the vehicle is moving at a speed of more than **10 mph** (15 km/h).

A message such as "**FRONT** RIGHTHAND DOOR NOT PROPERLY CLOSED" is generated when :

- the door in question is not closed properly,
- the ignition is on,
  the vehicle is moving at a speed of more than **10 mph** (15 km/h).

The message "LIGHTS ON" is generated when :

- the side lights are on,
- the ignition is switched off,
- the driver's door is opened.

MINIMUM FUEL LEVEL MESSAGE

A spoken message of the type "**FUEL** LEVEL LOW" is generated when the fuel reaches the minimum level (less than **5 litres).**

BRAKE PAD WEAR

The spoken message "BRAKE PADS WORN" is generated when :

the ignition is switched on,
- the defect has been detected for a total of more than **30 seconds** since the ignition was switched on.

OIL PRESSURE DROP

The defect "DROP IN OIL PRESSURE" is detected either by the first minimum oil pressure switch or by the second pressure switch (when the engine speed is higher than **2 500 rpm**).

The spoken message "DROP IN OIL PRESSURE" is generated when :

- the ignition is on,
- the engine has been running for at least **10 seconds,**
- the defect has been detected for at least **2 seconds.**

ENGINE OVERHEATING

Excessive temperatures are detected by a temperature switch (**115 °C**).

The spoken message "ENGINE OVERHEATING" is generated when :

- the ignition is switched on,
- the overheating condition has been detected for more than **1 second,**
- the oil pressure has been correct for more than **10 seconds,**

The message is not transmitted if the temperature switch is defective.

BRAKING SYSTEM DEFECT

The message "BRAKING SYSTEM DEFECT" is generated when :

- the ignition is switched on.,
- the defect is detected in the braking system.

The defect is memorised until the ignition is switched off (the warning light remains illuminated).

CHARGING SYSTEM DEFECT

The spoken message "ELECTRICAL SYSTEM CIRCUIT DEFECT" is generated when :

- the charging defect has been detected for more than **10 seconds,**
- the oil pressure has been correct for more **than 60 seconds**.

The message will not be transmitted if the first pressure switch (0.35 bars) is defective.

Musical "self-test" signal

The musical self-test signal is generated under the following conditions :

- if there is a defect in one of the sensors or detectors,
- if the ignition has been switched on for for more than **1 second,**
  if the engine is stopped.

VOICE SYNTHESISER

Conditions under which the messages are generated

Types of spoken message	Conditions under which message is generated	Fault detected by :	Held in memory until ignition switched off
Oil pressure drop	Ignition on Engine running for more than 10 **seconds** Fault detected for **2 seconds**	Oil pressure switch (Circuit earthed)	
Engine overheating	Ignition on Fault detected for **1 second** Oil pressure correct for more than **10 seconds**	Temperature switch (Circuit earthed)	
Battery charging system defect	Oil pressure correct for more than **60 seconds** Fault detected for **10 seconds**	Voltage regulator (warning light circuit earthed)	
Braking system defect	Ignition on Braking system defect	Sensor on brake fluid reservoir (Circuit earthed)	X
Minimum fuel level	Ignition on Fault detected for 30 **seconds** Less than **5 litres**	Fuel tank unit (Circuit earthed)	X
Brake pads	Ignition on Fault detected for more than a total of **30 seconds** since ignition switched on	Brake pads (Circuit earthed)	X
Rear lefthand door Rear righthand door Front righthand door Front lefthand door	Ignition on Vehicle speed more than **10 ± 5 mph (15 ± 5 km/h)** Doors not fully closed	Door switches (Circuit earthed)	
Handbrake on	Ignition on Vehicle speed more than **10 ± 5 mph (15 ± 5 km/h)** Handbrake applied	Switch (Circuit earthed)	
Lights on	Ignition off Side lights on Driver's door open	Circuit earthed via the door switch + side lights	

DESCRIPTION (continued)

A fault detected by one of the sensors switches off the message "MONITORED FUNCTIONS CORRECT".

The musical signal replaces the "lights still on" message when all the voice synthesiser messages have been obliterated.

NOTE : Any of the warning messages will interrupt any of the messages currently being transmitted unless the message in question is already a warning message. The interrupted message will be re-transmitted if the conditions giving rise to it still exist.

9/ "OBLITERATION" SWITCH

This cuts out all the voice synthesiser messages when the switch operated by its button earths the circuit.

NOTE : The obliteration does not apply to the defect summary messages :

- the musical signal can be obliterated,
- if the obliteration system is operating, the "lights still on" message is replaced by the musical signal.

DEMONSTRATION RE-RUN SWITCH

When this switch earths its circuit, with the ignition on, the system can be used either to re-transmit the messages, re-run the defect summary or carry out a demonstration run (this switch is mounted with the other switches on the fascia panel).

Operating the re-run switch when one or more consecutive messages are being transmitted or re-transmitted, interrupts the message currently being broadcast and causes the message to be re-transmitted.

During the demonstration run, if no defect is present, all the bargraphs on the instrument panel will switch on.

10/ ON-BOARD COMPUTER

11/ RESET BUTTON

FAULT-FINDING

WARNING LIGHTS

The fault-finding test sequence is identical to that for the other tests.

a) Warning lights which are earthed via the instrument panel and the supply (+) for which comes via their control switches :

- side lights	blue connector (C) with lock	terminal 11
headlights	blue connector (C) with lock	terminal 10
- rear fog light	red connector (A)	terminal 8
- front fog lights	red connector (A)	terminal 7
- direction indicator light	red connector (A)	terminal 3 (righthand)
- direction indicator light	black connector (B)	terminal 2 (lefthand)
- heated rear screen	red connector (A)	terminal 9
- hazard warning lights	red connector (A)	terminal 1

b) Warning lights whose supply (+) comes via the instrument panel and the earths for which are via switches :

- handbrake	red connector (A)	terminal 13
- choke	red connector (A)	terminal 5
- pre-heater	red connector (A)	terminal 6
- brake pads	black connector (B)	terminal 7
- automatic transmission/ injection	black connector (B)	terminal 10
- screen washer bottle level	black connector (B)	terminal 6
- charge/discharge	blue connector (C) with lock	terminal 5
- oil pressure (0.35 bar)	blue connector (C) with lock	terminal 6
- coolant temperature	blue connector (C) with lock	terminal 4
- oil pressure (2 bars)	blue connector (C) with lock	terminal 15
- brake fluid level (nivocode)	blue connector (C) with lock	terminal 7

NOTE : The full supply for the dipped headlights comes through the switch (+) **terminal 8** - (-) **terminal 9** blue connector **(C)** with a locking system.

FAULT-FINDING

FOR ANY OTHER DEFECT, CHECK, USING THE JUNCTION BLOCK :

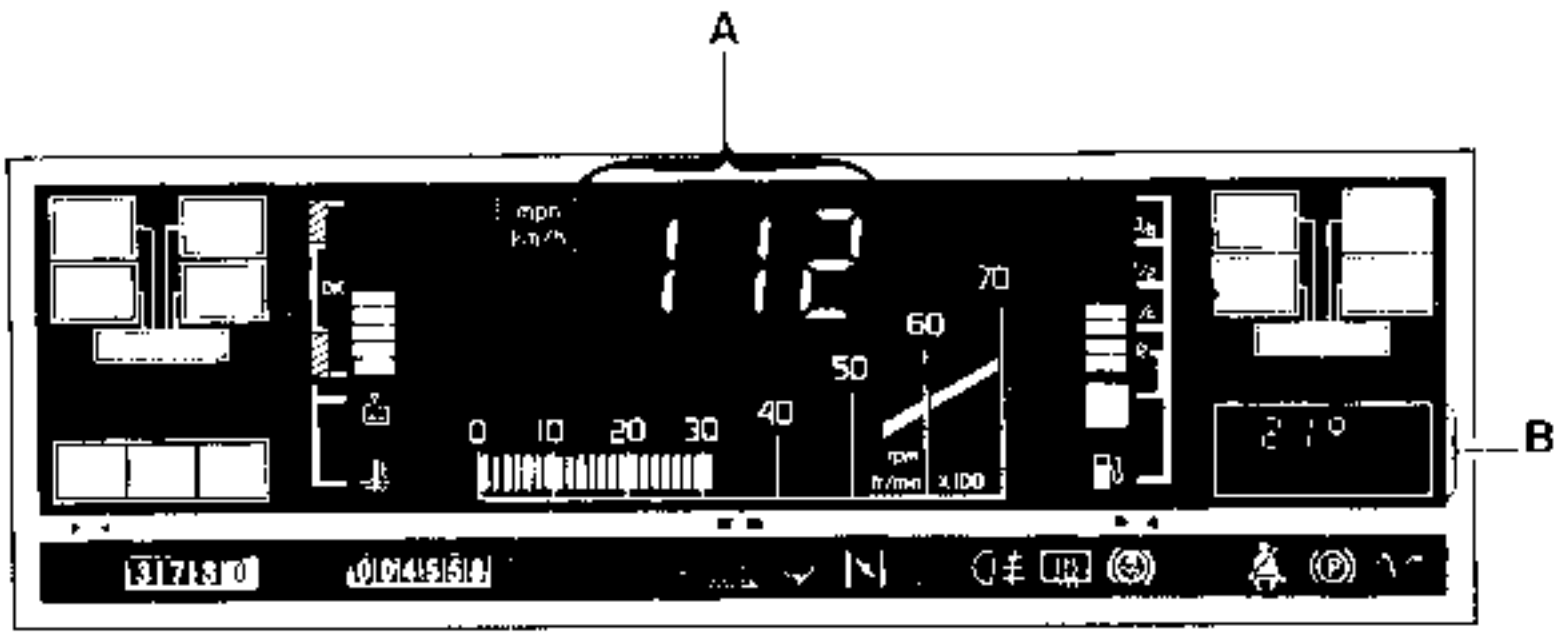
THE INSTRUMENT PANEL EARTH CIRCUITS :

- electronic earth — black connector **(B)** — terminal **14**
- warning light earth : see pages **83-31** and **83-32**.

INSTRUMENT PANEL CURRENT SUPPLY :

- + before ignition switch : — black connector **(B)** — terminal **15**
- + after ignition switch : — red connector **(A)** — terminal **4**
- + instrument panel lighting : — black connector **(B)** — terminal **8**

FAULT-FINDING



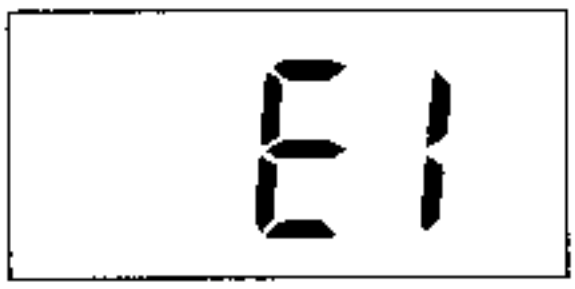
I - ZONE A

The instrument panel displays defects on the following sensors and their wiring :

- fuel gauge,
- instrument panel resistance,
- engine oil pressure switch,
- engine oil level indicator,
- external temperature sensor,
- engine coolant temperature switch,

by messages which are displayed in place of the vehicle speed.

Example :



If a defect occurs on more than one sensor, these codes will be displayed one after the other.

CONDITIONS UNDER WHICH THE CODED MESSAGE APPEARS

The ignition must have been switched off for at least **2 minutes**.

Ignition switch to be in "ignition on" position.

WARNING:
If the starter is operated or if the ignition switch is switched off and then on again, the fault-finding codes are eliminated. You will have to wait for a period of 2 minutes before they reappear.

NOTE : The fault-finding mode can be selected without waiting for 2 minutes by switching off the ignition and disconnecting the battery.

The code will be erased as soon as the defect is rectified.

FAULT-FINDING

DEFECT DISPLAY (ZONE A)

Code	Defective sensor or wiring	Defect	For rectification, see page :
E1	Instrument panel resistance	Short-circuit	83-42
E2	Fuel gauge	Disconnected or wire broken	83-43
E3	Not used	Not used	
E4*	**2 bar** oil pressure switch	Disconnected or wire broken or open contact	83-44
E5	Engine oil level sensor	Disconnected or wire broken or short-circuit	83-45
E6	External temperature sensor (in rear view mirror)	Broken or disconnected	83-46 83-47
E7		Short-circuit	
E8	Engine coolant temperature switch	Disconnected or broken	83-48
E9*	**0.35 bar** oil pressure switch	Disconnected or wire broken or short-circuit	83-49

* For the **F type** engine there is only one oil pressure switch **(0.35 bar)**. If a defect occurs on this, both codes **(E4-E9)** will be displayed one after the other.

FAULT-FINDING

DEFECT DISPLAY (ZONE A)

Code	Defective sensor or wiring	Defect	Voice synthesiser	Page
E1	Not used	-	-	-
E2	Fuel gauge	Disconnected or wire broken	musical	83-43
E3	Not used	Not used		-
E4*	**2 bar** oil pressure switch	Disconnected or wire broken or short-circuit	musical	83 44
E5	Engine oil level sensor	Disconnected or wire broken or short-circuit	musical	83-45
E6	External temperature sensor (in rear view mirror)	Broken or disconnected	musical	83-46
E7		Short-circuit		83 47
E8	Engine coolant temperature switch	Disconnected or circuit broken	musical	83-48
E9*	**0.35 bar** oil pressure switch	Disconnected or wire broken or short-circuit	musical	83-49

* For the **F type** engine there is only one oil pressure switch **(0.35 bar)**. If a defect occurs on this, both codes **(E4-E9)** will be displayed one after the other.

THE ON-BOARD COMPUTER LOOP

The on-board computer display is selected by means of key 3.

This operation runs through 7 types of display one after the other.

- **The amount of fuel remaining in the tank**
  There is no display below **5 litres**.

- **Range (in km)**
  This is obtained by dividing the quantity of fuel remaining in the tank by the average consumption since the Start key was pressed.

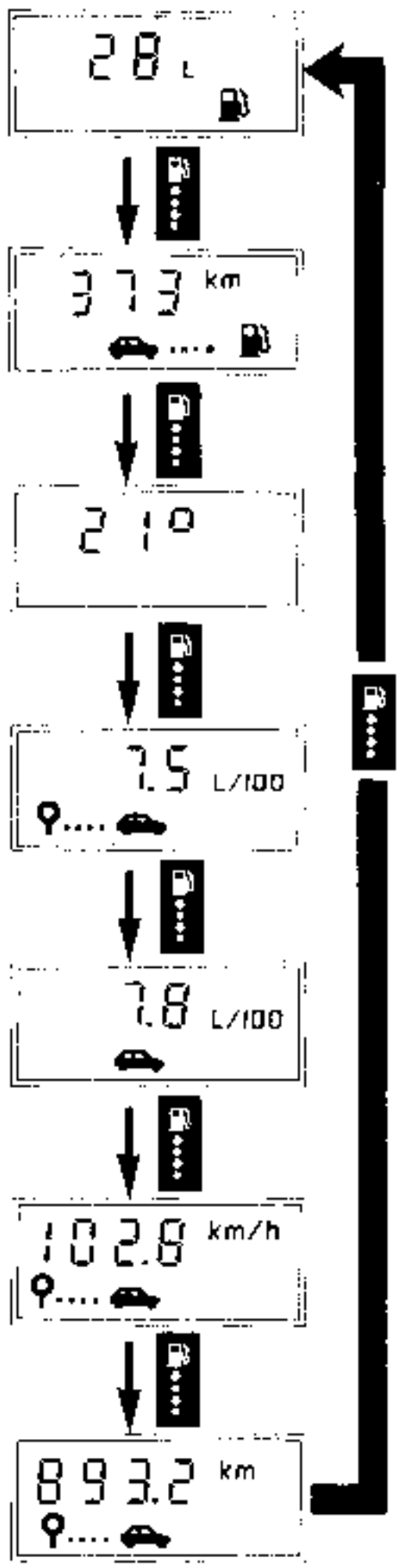
- **External temperature in degrees Celsius**
  Capacity - **30** to **+ 50**.

- **Average fuel consumption (in l/100 km)**
  Obtained by dividing the fuel consumed by the distance covered since the last time the Start key was pressed.
  Minimum distance required to obtain display : **400 m**.
  Maximum capacity for fuel consumed: **2 500 litres**.

- **Consumption at any given point (in l/100 km)**
  Minimum distance required to obtain display: **400 m**.
  Minimum speed required to obtain display : **40 km/h**.
  The figure displayed is limited to three times the average fuel consumption.

- **Average speed (in km/h)**
  Obtained by dividing the distance covered by the time elapsed since the last time the Start key was pressed. Minimum distance required to obtain display: **400 m**.
  Capacity : **250 hours** since the last time the ignition was switched on (stops deducted).

- **Distance travelled (in km)**
  Since the last time the Start key was pressed.
  Displayed in hundreds of metres up to **1 000 km**.
  Maximum capacity : **9 999 km**.



R3521

ON-BOARD COMPUTER

DESCRIPTION (continued)

NOTE : If any of the maximum capacities of the indicators are exceeded, the system returns to zero (as with Start key). After the current is switched off (battery disconnected), press key **2** to stop the display flashing and to restart the function.

WARNING : if one of the displays flashes with the the current having been cut off, see fault-finding sequence on the following page.

The displays are calculated from the following data :

- the injection computer which sends one pulse every **160 mm³** of fuel consumed or a flow sensor delivering one pulse every **80 mm³**,

- a thermistor mounted in the external rear view mirror,

- a fuel gauge tank unit providing information for the fuel consumption unit (**5 Ω per** litre),

- the speed information is given by the instrument **panel** or by a speed sensor (**5 pulses per metre**).

OPERATING

The on-board computer is zeroed by pressing key (2)

FAULT DETECTION

The on-board computer has been designed so that it detects and informs the driver of any defect which might affect the fuel content display.

If { the amount of fuel in the tank / the range / the average consumption / the given point consumption }

displays flash, it is an indication that there has been a fuel signal defect for more than **10 km.**

If only { the amount of fuel in the tank / the range }

displays flash, it is an indication that there has been a fuel signal defect for more **than 2 minutes**.

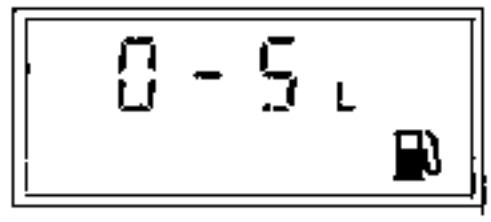
NOTE : When the ignition is first switched off **and** then switched on again, the display will show **99 L** and will flash.

If only the external temperature display flashes, it is an indication that the temperature signal has been defective for more than **2 minutes**.

NOTE : after disconnecting the battery, the display module will show **50°C** and will flash.

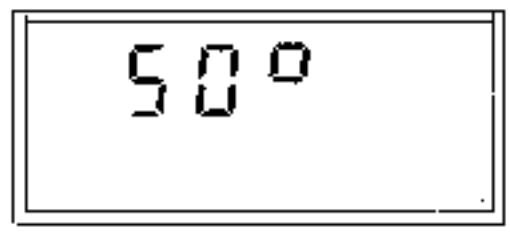
Other cases (when the display does not flash).

If the display module shows that less than **5 litres** of fuel remain in the tank.



But the tank is not empty, there is a short-circuit on the tank unit or its wiring.

If the display module shows a temperature of **50°C**.



But the temperature is not **50°C**, it is an indication of a short-circuit on the **thermistor** or its wiring.

Before carrying out any rectification work, start the on board computer fault-finding sequence.

FAULT-FINDING SEQUENCE

The instrument panel microprocessor incorporates a test programme for the :

- receiver (display module),

  sensors which are connected to it (fuel gauge unit, fuel flow signal, speed signal, temperature signal).

ACCESS TO THE FAULT-FINDING SEQUENCE

WITH THE ENGINE STOPPED

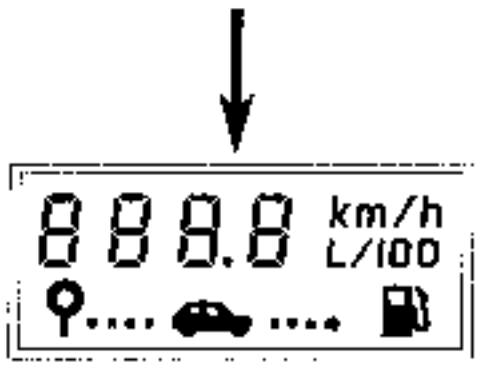
- Switch on the ignition.
- Disconnect and reconnect the battery negative ( ) terminal.

ON-BOARD COMPUTER

FAULT-FINDING

TESTING THE DISPLAY

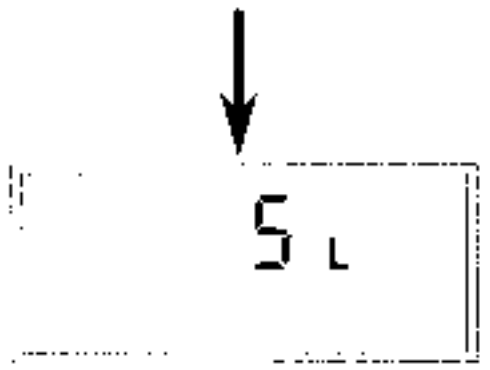
If all the display segments are illuminated and flashing



Check that no section of the segments is missing.

TESTING THE FLOW SENSOR

Press key **3** (run-through key) and start the engine.

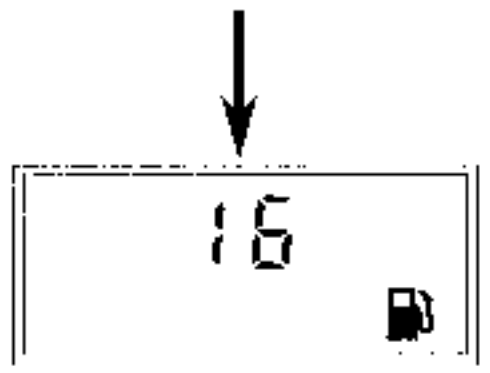


The display module will show the pulse frequency in Hertz.

The display should be other than zero (engine running).
Example : **5 Hz**.

CHECKING THE FUEL GAUGE TANK UNIT

Press key **3** (run-through key).

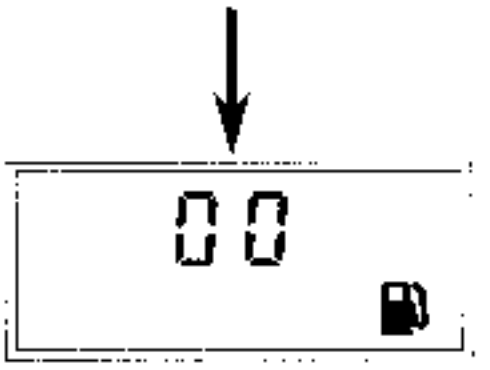


The display module should show the quantity of fuel remaining in the tank.
Example : **16 litres.**

NOTE : under fault-finding conditions, the display module will show the true figure even if there is less than **5** litres in the tank.

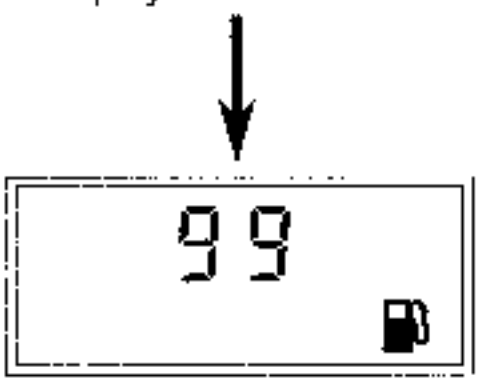
OTHER FAULT-FINDING DISPLAYS FOLLOWING THE FAULT-FINDING SEQUENCE (testing the fuel gauge tank unit)

1st ARRANGEMENT
If the module displays zeros.



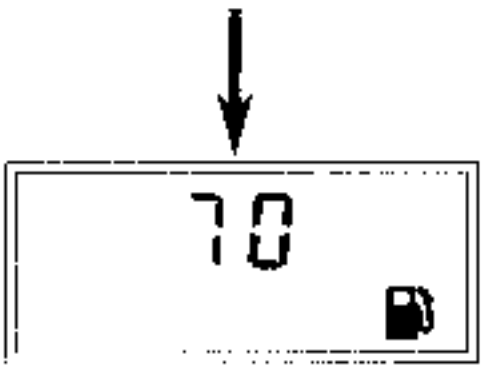
It is an indication that there is a short-circuit on the tank unit or its wiring.

If the module displays **99**.



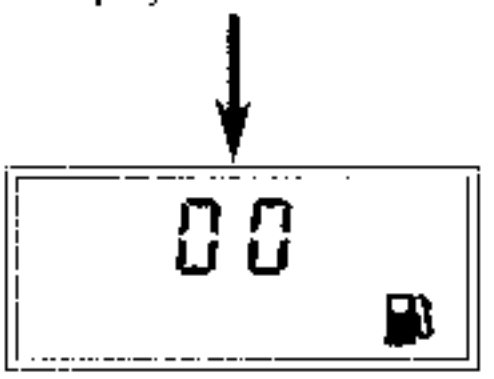
It is an indication of a broken circuit on the tank unit or its wiring.

2nd ARRANGEMENT (model year 1990)
If the module displays **70**.



It is an indication that there is a short-circuit on the tank unit or its wiring.

If the module displays zeros.



It is an indication that there is a broken circuit on the tank unit or its wiring.

END OF FAULT-FINDING SEQUENCE
To exit the fault-finding sequence, just press key **2** (Start key).

CONNECTIONS

With electronic instrument panel

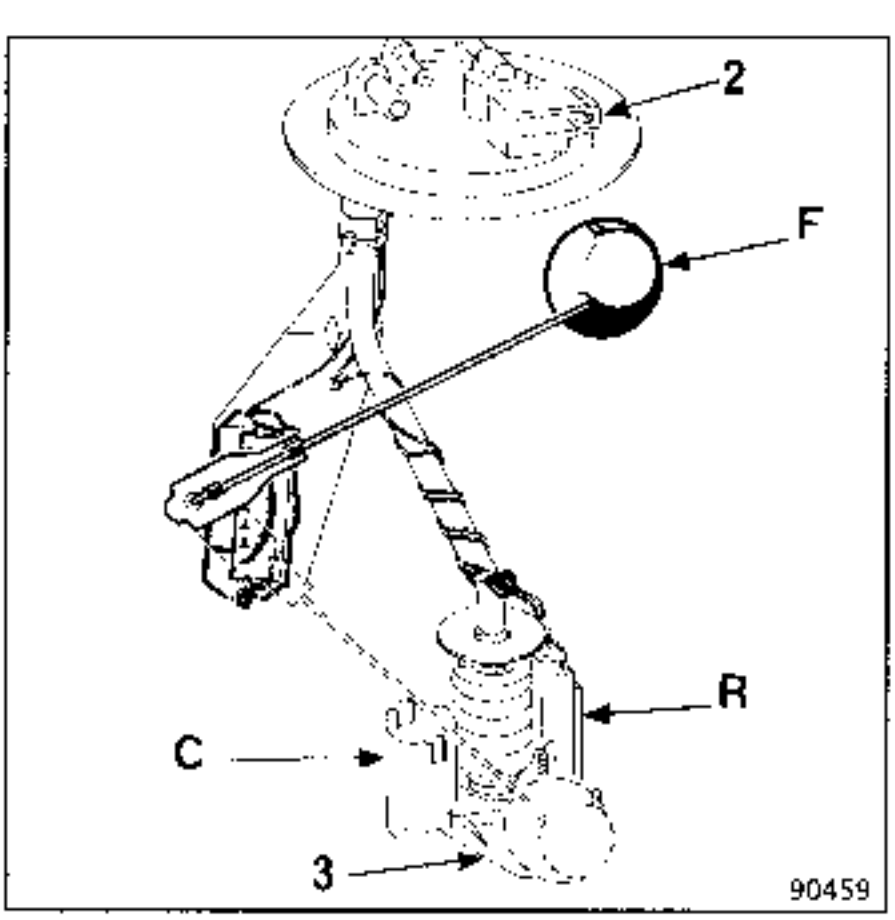
1 Indicator on instrument panel
2 Not used
3 Not used
4 Earth

With conventional instrument panel

1 Not used
2 Indicator on instrument panel
3 Minimum level
4 Earth

With on-board computer

1 Indicator on instrument panel
2 Not used
3 Not used
4 Earth



Special points and operations on vehicles fitted with an electronic instrument panel or an on-board computer.

This tank unit has **2** sections :

- a float mounted on an arm (F),
- a variable height strainer (C).

To improve the accuracy of the instrument panel reading, the tank unit is fitted with a strainer, the height of which is variable, which moves down or up to suit the distortion of the plastic tank. This strainer is fitted with sensors which move along a track on a variable resistance (R) which is added to the resistance in the float unit.

The strength of the resistance (R) varies from 0 to approximately 25Ω. This system cannot be removed.

TESTING

Vehicles with a conventional instrument panel.

Vehicles fitted with the 2nd type of on-board computer (1990 model).

INDICATOR

Display	Readings across terminals 2 and 4 (Ω)
4/4	7 MAXIMUM
3/4	51 ± 5
1/2	100 ± 10
1/4	150 ± 16
Reserve tank	300 + 200

TESTING (continued)

Vehicles fitted with the 1st type of on-board computer.

INDICATOR

Display	Readings across terminals 1 and 4 (Ω)
4/4	326 ± 10
3/4	289 ± 10
1/2	220 ± 10
1/4	148 ± 10
Reserve tank	78.4 ± 10
Lower stop	13.1 ± 10

2nd type (since June 1989)

Display	Resistance at terminals 1 and 3 (Ω)
Lower stop	25 ± 5
4/4	60 ± 5
3/4	130 ± 5
1/2	200 ± 10
1/4	280 ± 16
Reserve tank	335 ± 20

TESTING THE MOVING STRAINER

Secure the float in the upper position and gradually push down the strainer whilst reading on the ohmmeter, (terminals 1 and 4), the variation in the resistance.

The correct resistance variation is a lowering of **25 Ω ± 5 Ω**.

NOTE : All these figures are given for information only. Check that the resistance varies as the float is moved.

REMOVAL

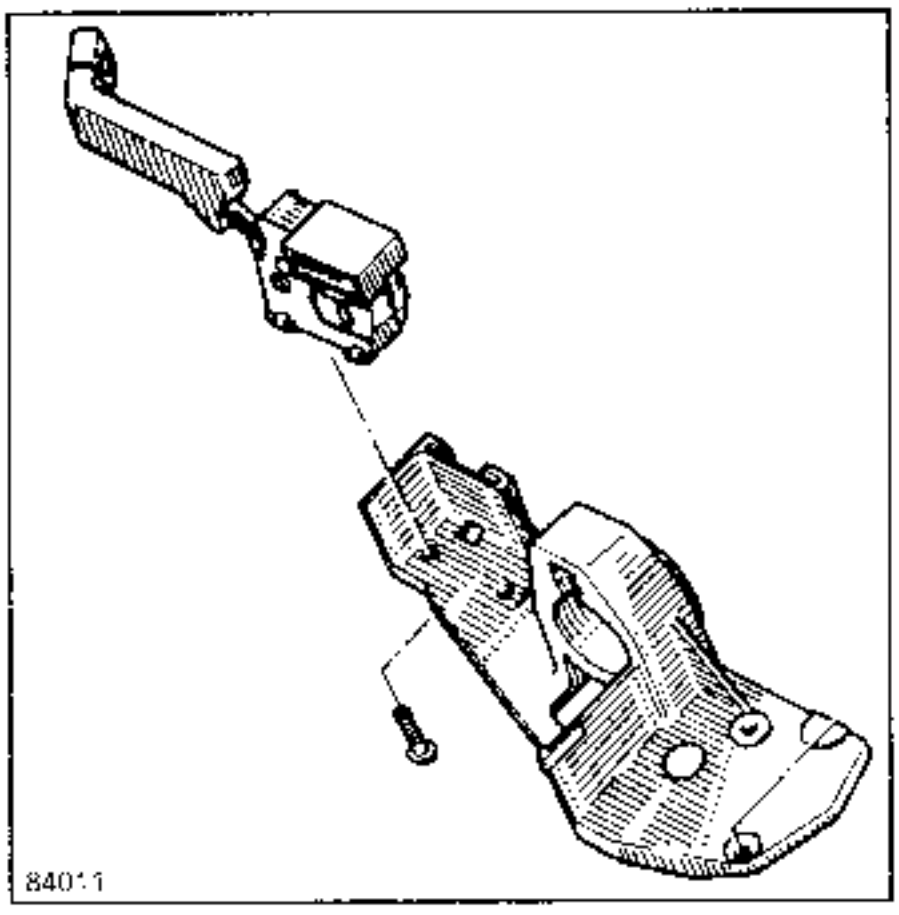
Disconnect the battery.

Remove :

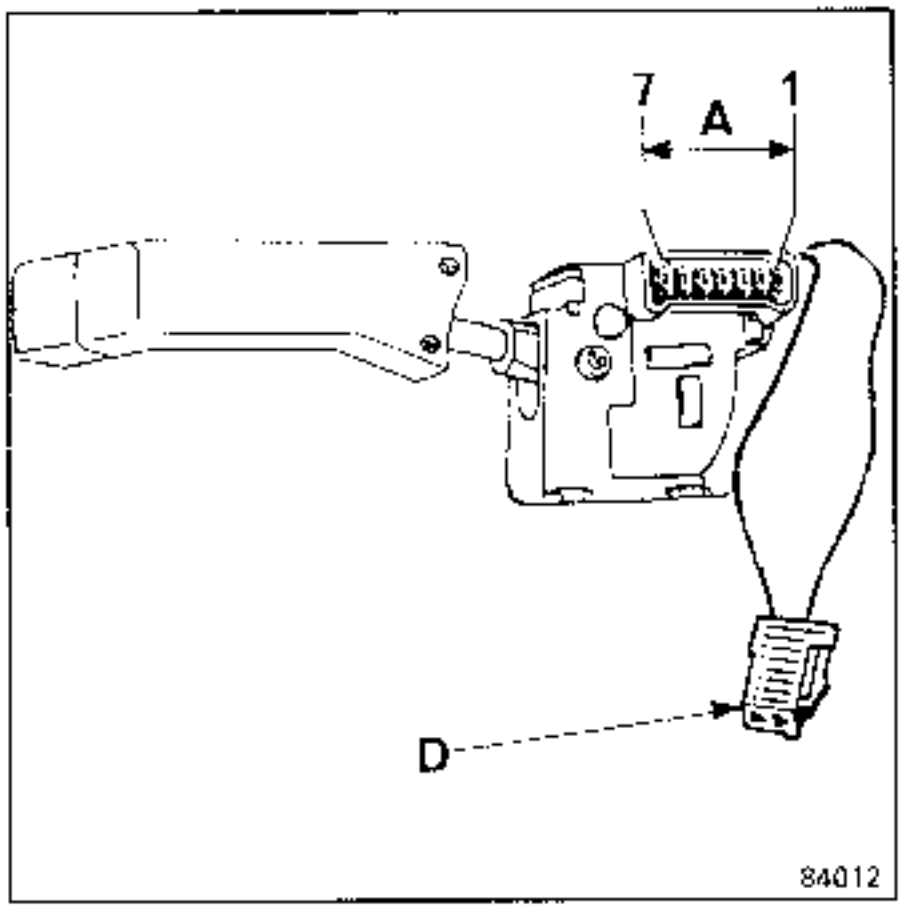
- the steering wheel,
- the two steering column half casings,
- the two screws,

Disconnect the connectors.

Remove the switch stalk assembly



CONNECTIONS



CONNECTIONS

(A) SCREEN WIPER CONNECTOR

1 Timed sweep input
2 + after ignition
3 High speed
4 Low speed
5 Park/Timer
6 − after ignition
7 Screen washer

(D) ON-BOARD COMPUTER SWITCH CONNECTOR

REMOVAL

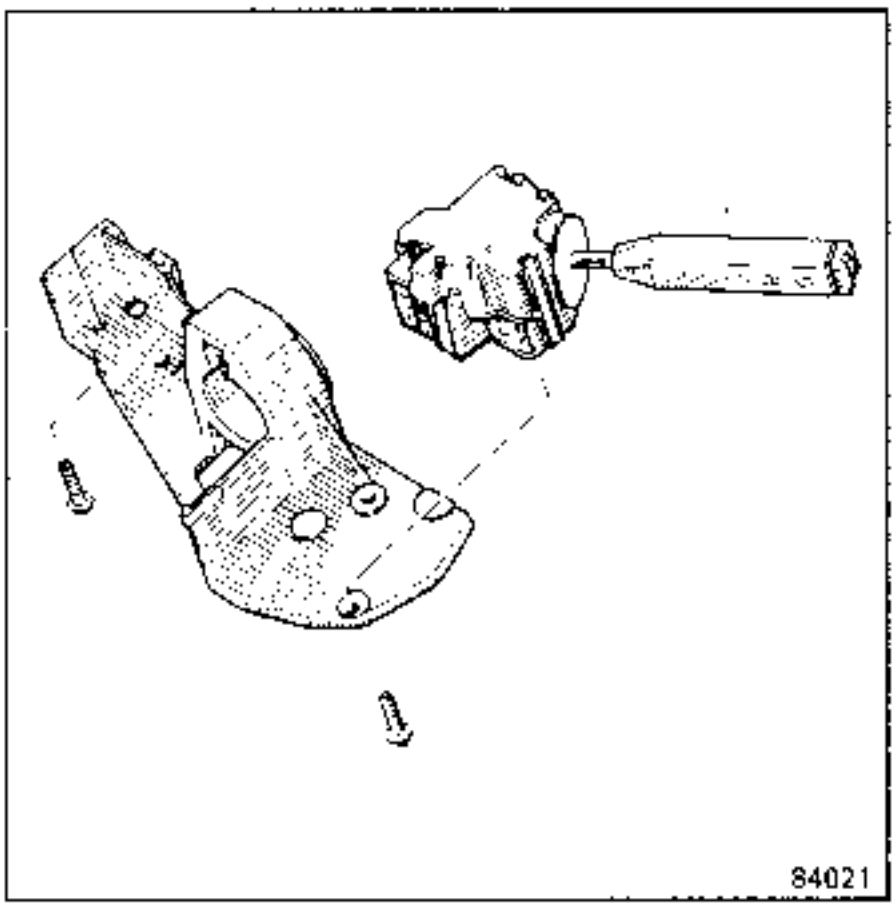
Disconnect the battery.

Remove :

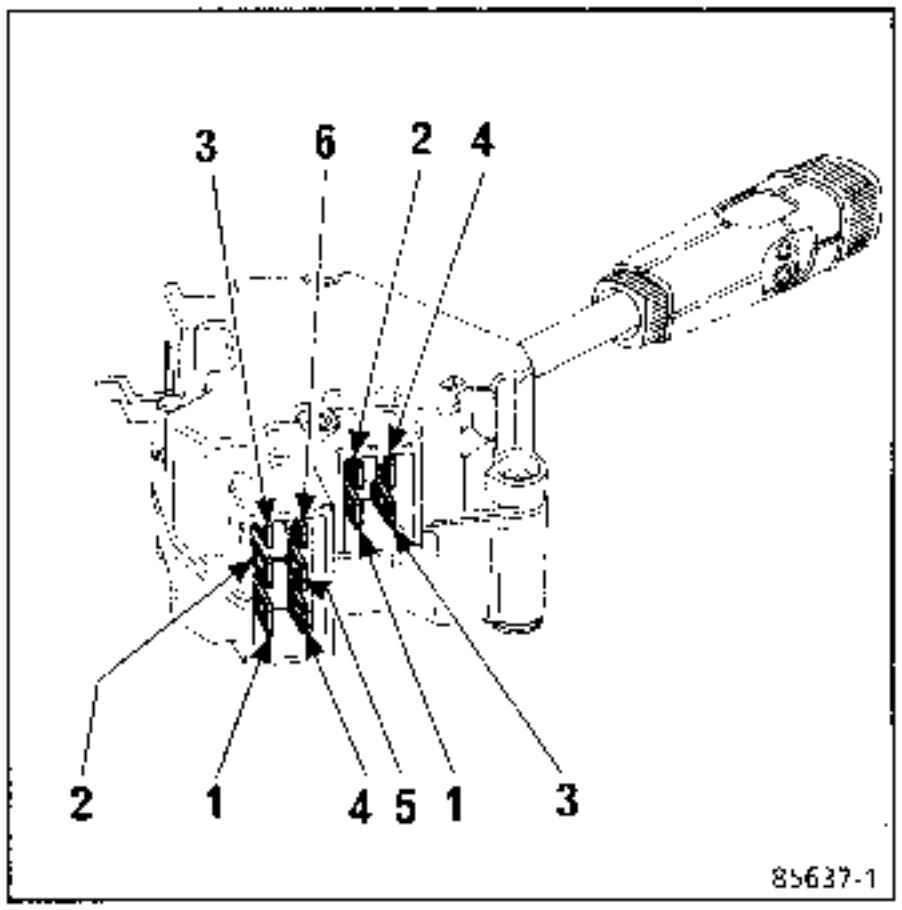
- the steering wheel,
- the two steering column half casings,
- the two screws,

Disconnect the connectors.

Remove the switch stalk assembly



CONNECTIONS



Lighting connector

Pin	Description
1	Main beam
2	Dipped beam
3	+ before ignition
4	Sidelights

Direction indicator - Horn Connector

Pin	Description
1	Horn
2	Rear fog light output
3	+ before ignition
4	RH direction indicator
5	Flasher unit
6	LH direction indicator

REMOVAL

Disconnect the battery.

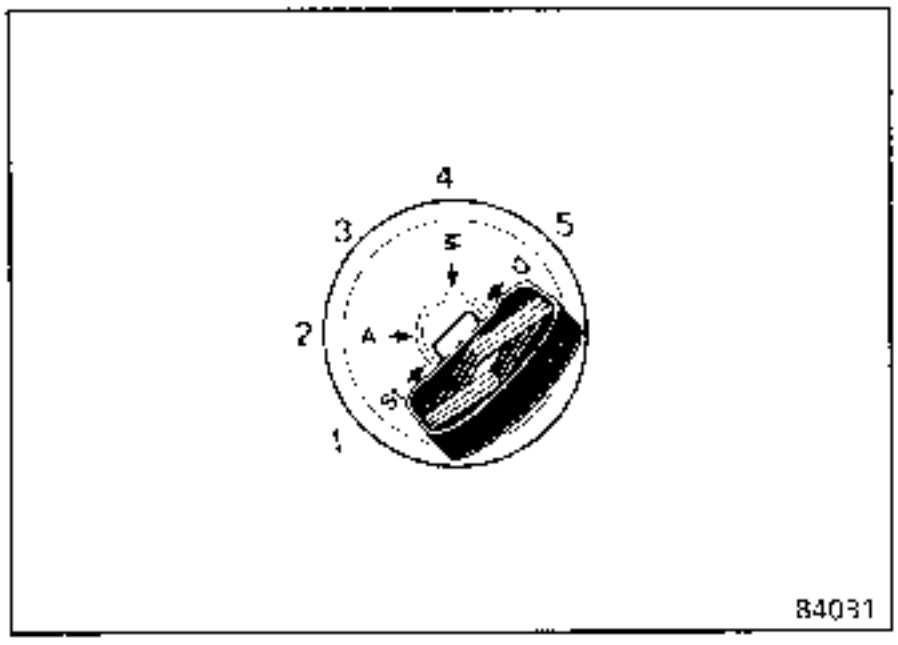
Remove:

- the steering column half casings,
- the switch cover.

Disconnect the black and the grey connectors.

Remove the switch securing screws using a cranked screwdriver.

Place the key in the "garage" position (3).

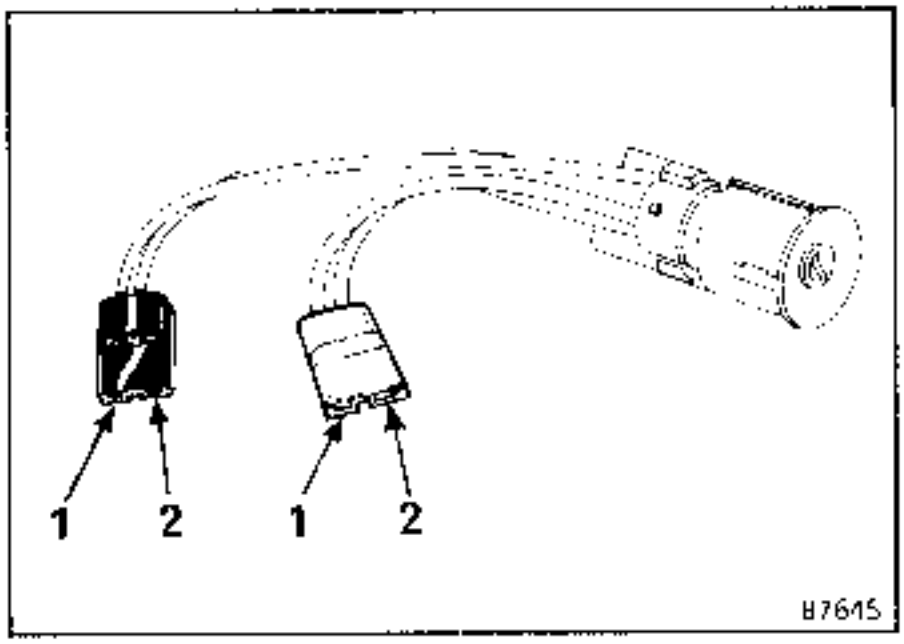


Press the retaining lugs and take out the switch.

REFITTING (special point)

Ensure that the wiring is correctly positioned.

CONNECTIONS



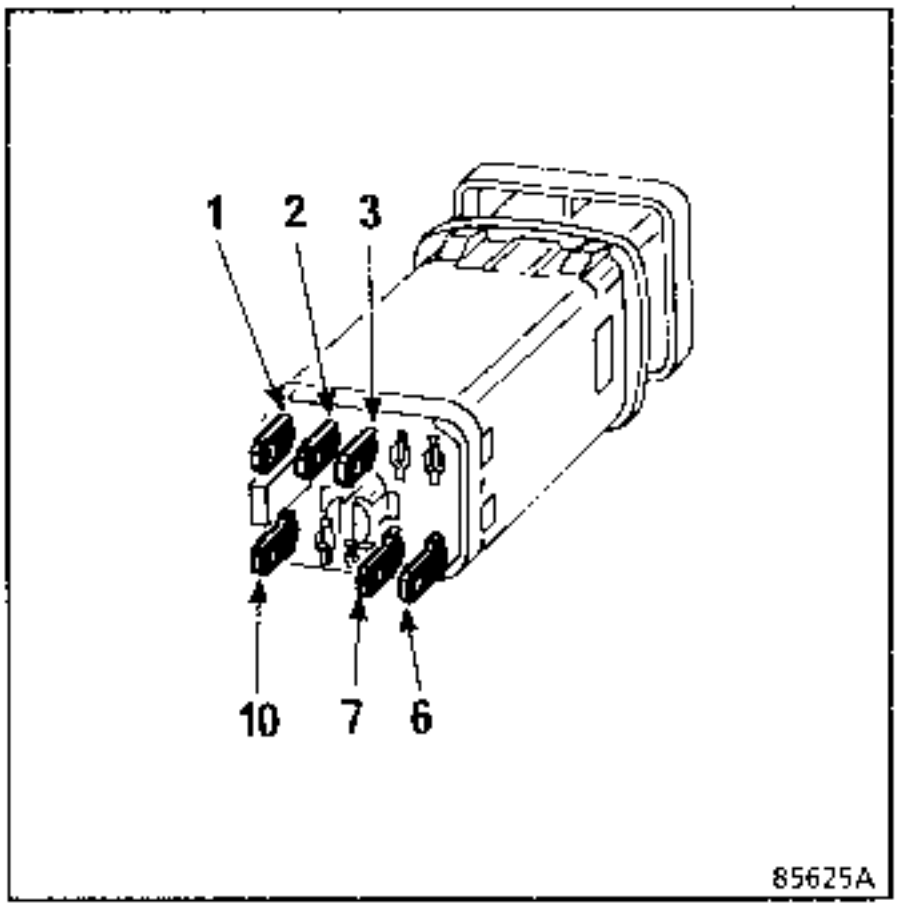
Black connector

Pin	Description
1	+ before ignition
2	Starter

Grey connector

Pin	Description
1	Accessories
2	+ after ignition

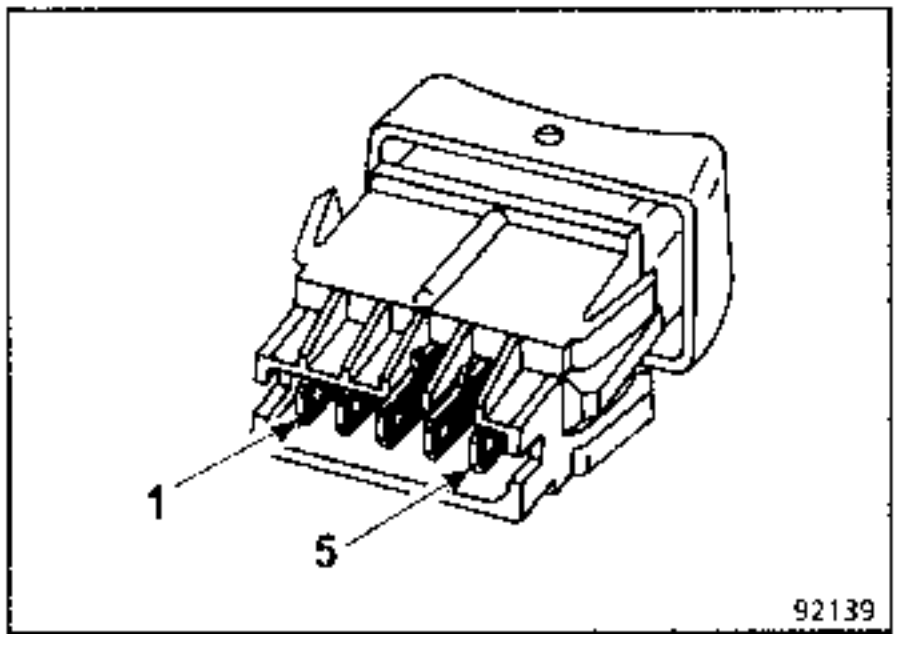
HEATED REAR SCREEN SWITCH
(1st arrangement)



CONNECTIONS

1 + after ignition
2 Relay control
3 Lighting +
6 Not used
7 Earth
10 Warning light

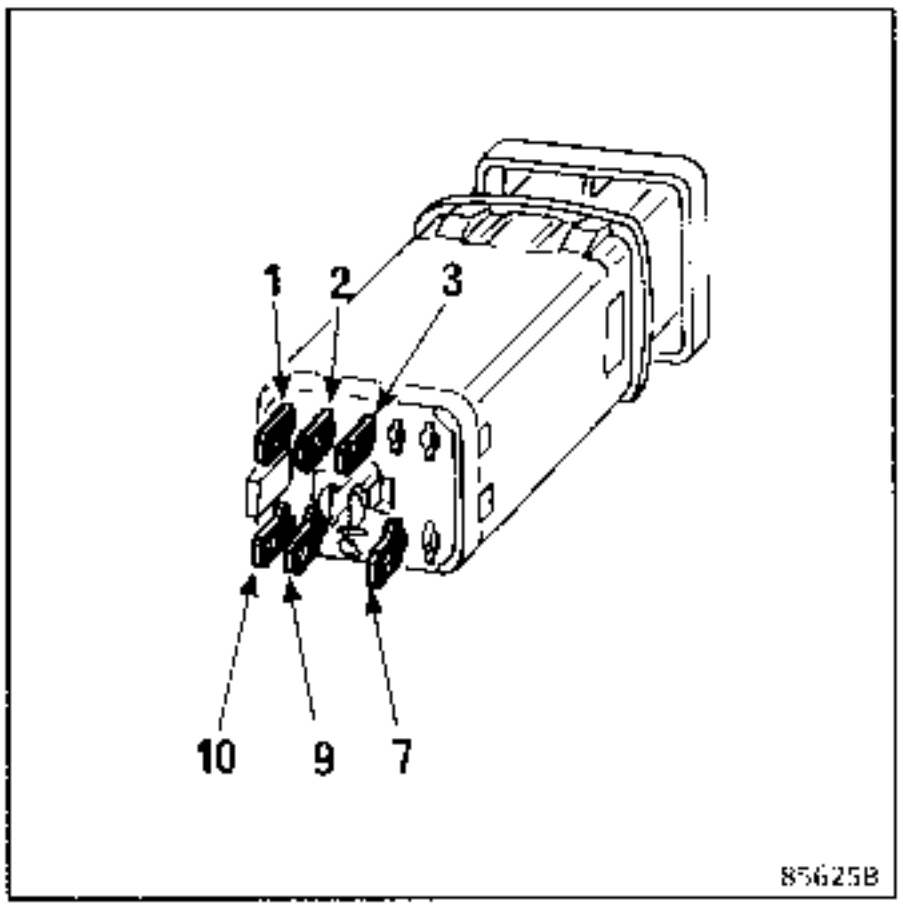
(2nd arrangement)



CONNECTIONS

1 Warning light
2 Screen relay –
3 + after ignition
4 Earth
5 Lighting +

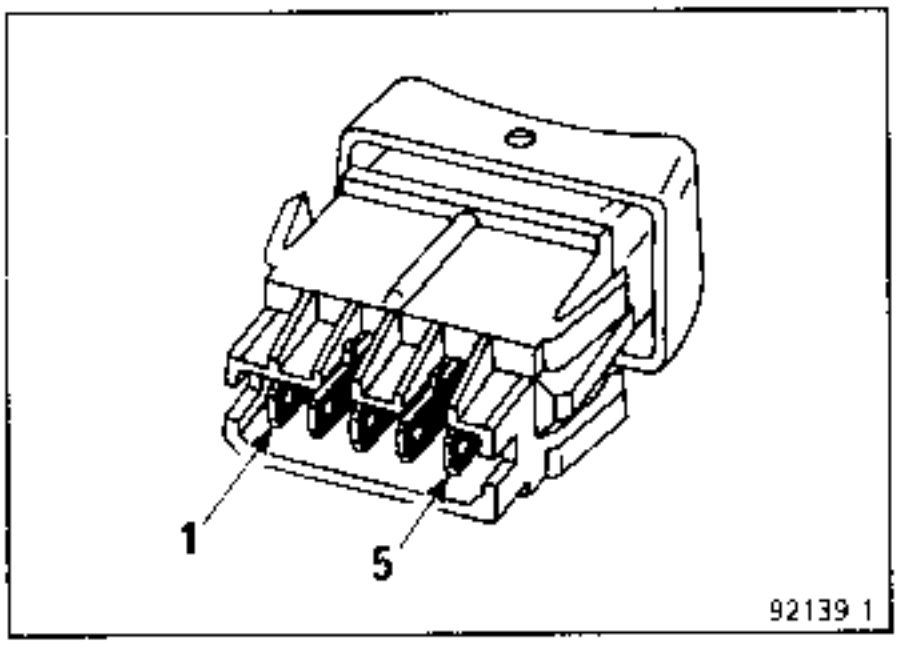
REAR FOG LIGHTS
(1st arrangement)



CONNECTIONS

1 To fog light fuse
2 Supply
3 Lighting
7 Earth
9 Not used
10 Warning light

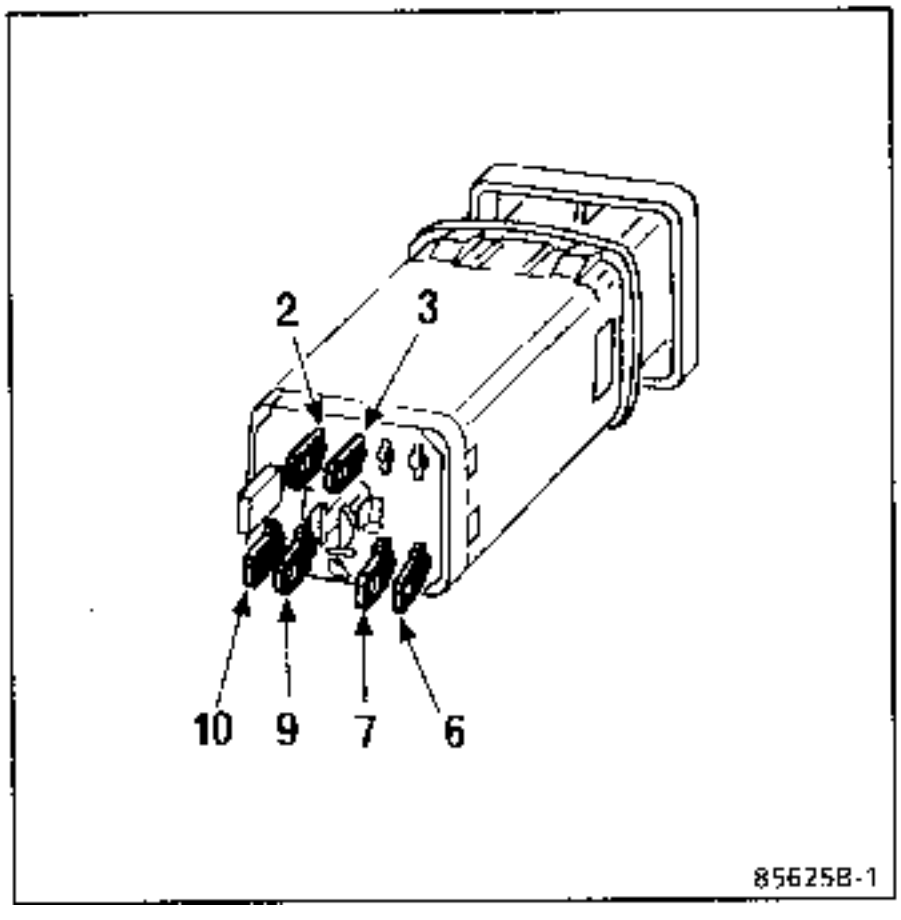
REAR FOG LIGHTS
(2nd arrangement)



CONNECTIONS

1 Warning light
2 Rear fog light -
3 Rear fog light +
4 Lighting +
5 Earth

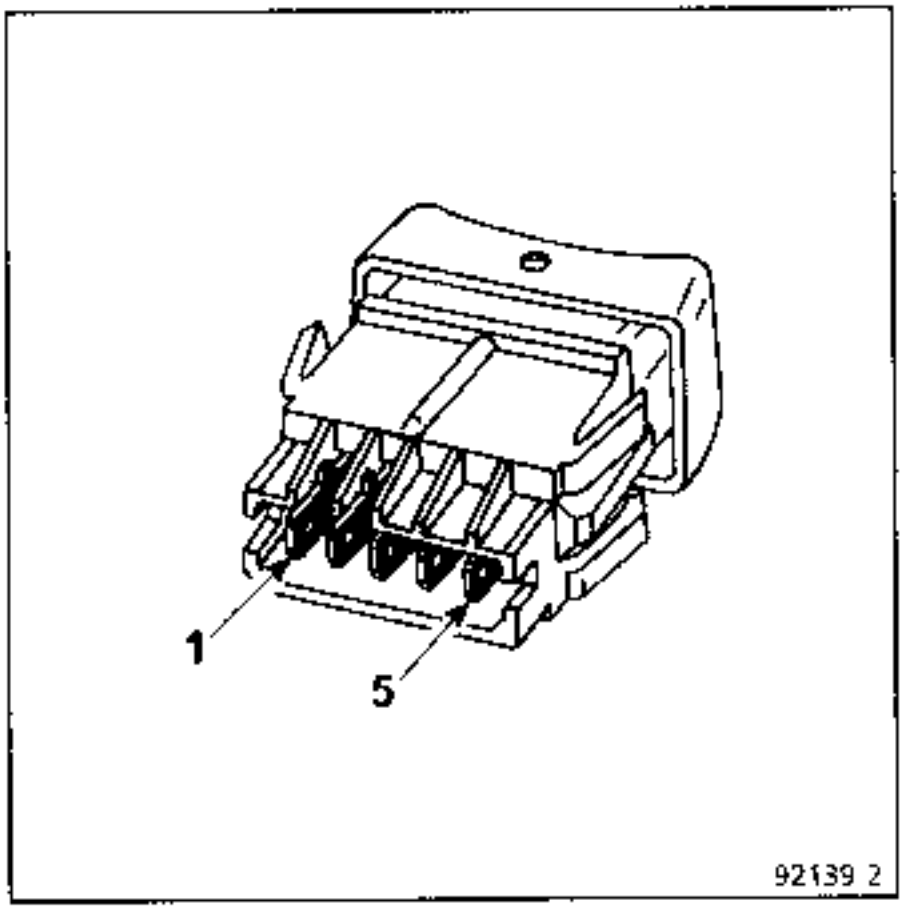
FRONT FOG LIGHTS
(1st arrangement)



CONNECTIONS

2 Supply
3 Lighting
6 Not used
7 Earth
9 Relay energising
10 Warning light

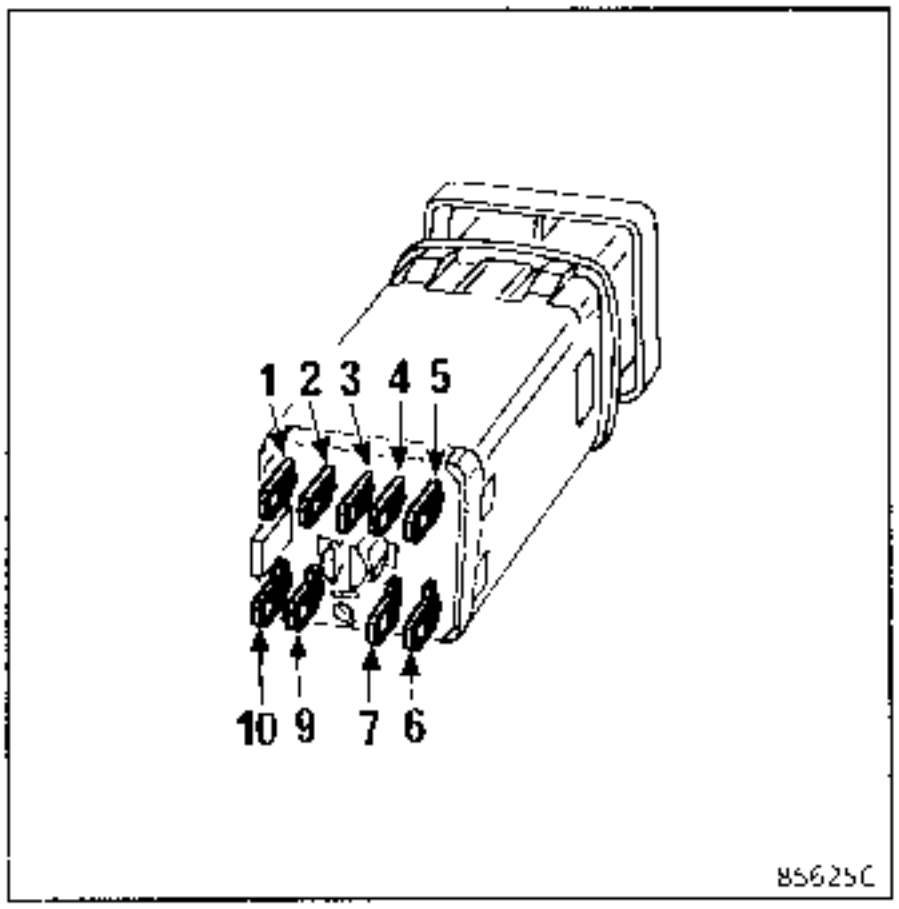
(2nd arrangement)



CONNECTIONS

1 Not used
2 Front fog light +
3 Lighting +
4 Lighting +
5 Earth

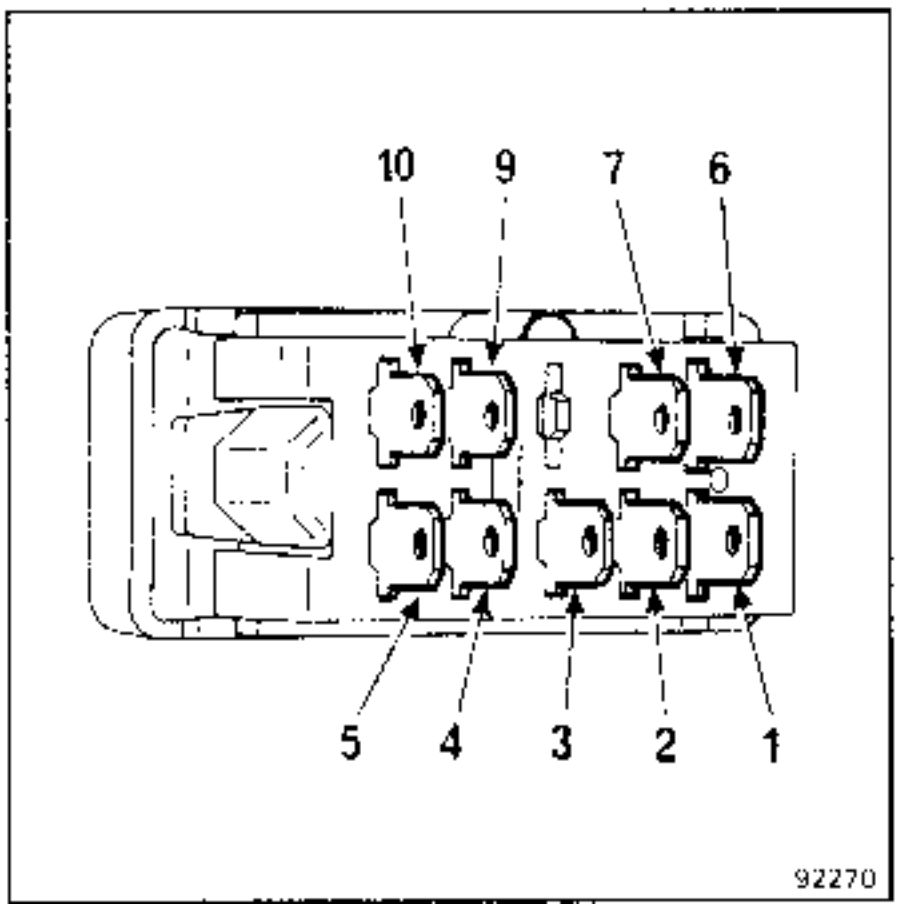
HAZARD WARNING LIGHTS
(1st arrangement)



CONNECTIONS

1 RH direction indicator
2 LH direction indicator
3 Lighting
4 + before ignition
5 + after ignition
6 Flasher unit + (fuse)
7 Earth
9 Direction indicator control switch
10 Warning light

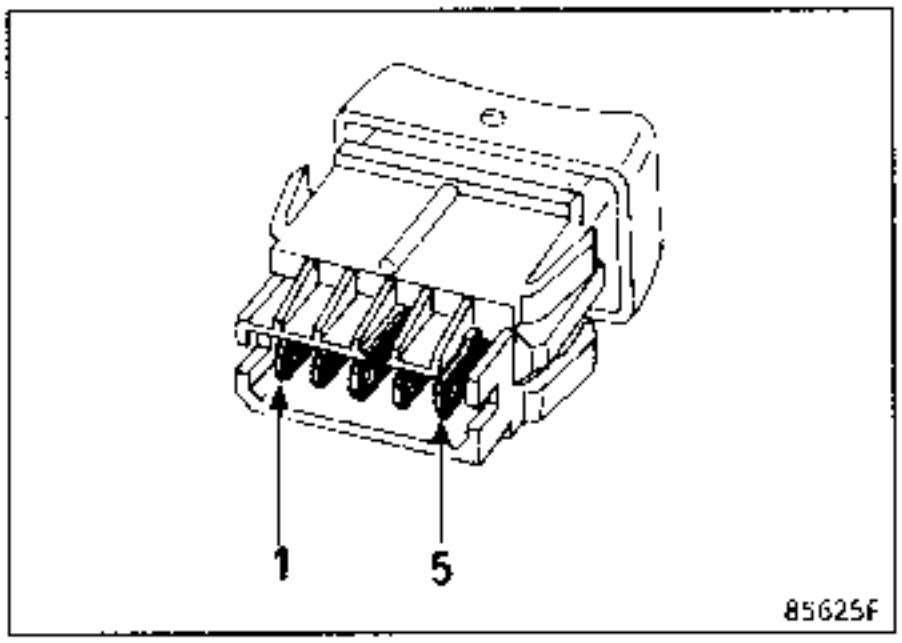
(2nd arrangement)



CONNECTIONS

1 Lighting +
2 + after ignition
3 + before ignition
4 Flasher unit
5 LH direction indicator
6 RH direction indicator
7 Hazard warning light repeater
9 Direction indicator fuse +
10 Earth

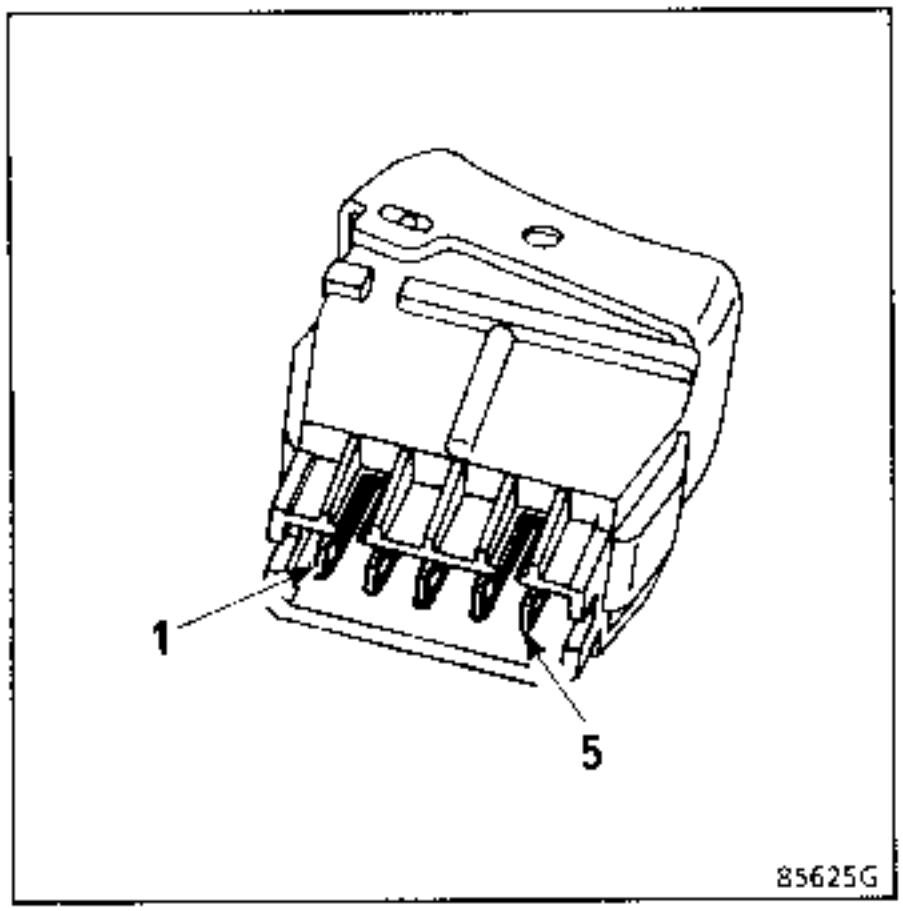
DOOR LOCKS
(1st and 2nd arrangements)



CONNECTIONS

1 Lock doors
2 Lighting +
3 + before ignition
4 Earth
5 Unlock doors

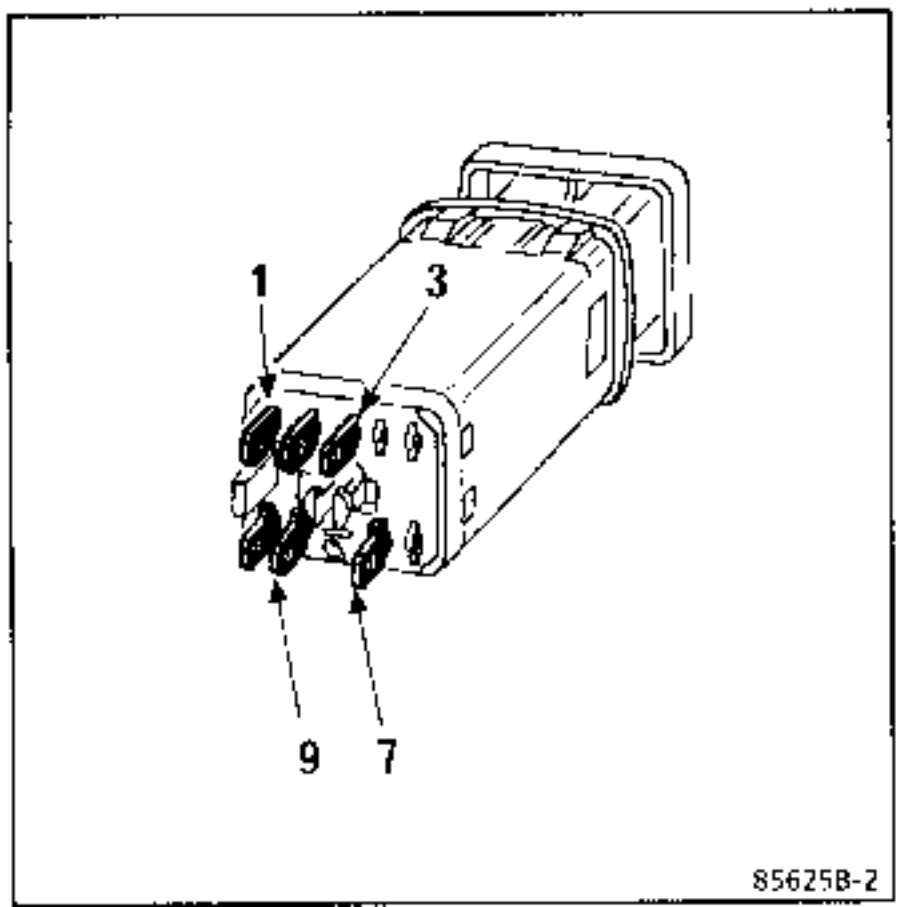
WINDOW RISER LOCKING SWITCH



CONNECTIONS

1 Not used
2 To passenger switch lock (earth)
3 Earth
4 Lighting earth
5 Lighting

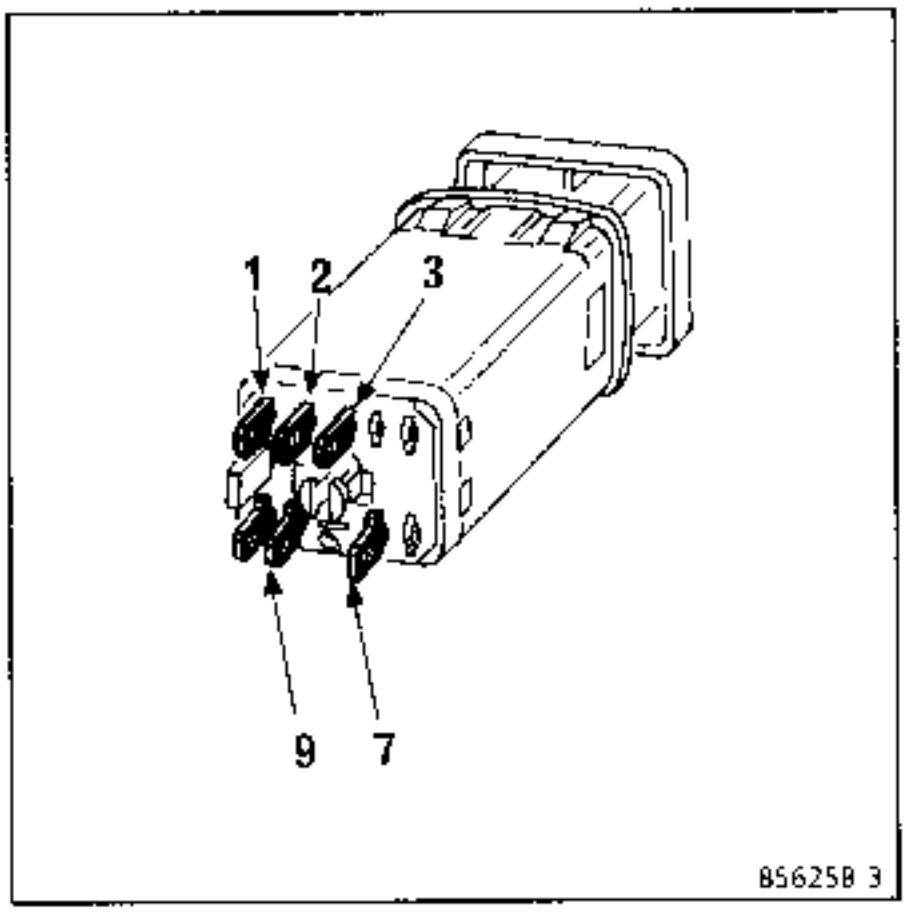
REAR SCREEN WIPER SWITCH
(1st arrangement)



CONNECTIONS

1 Timed sweep
3 Lighting
7 Earth
9 After ignition

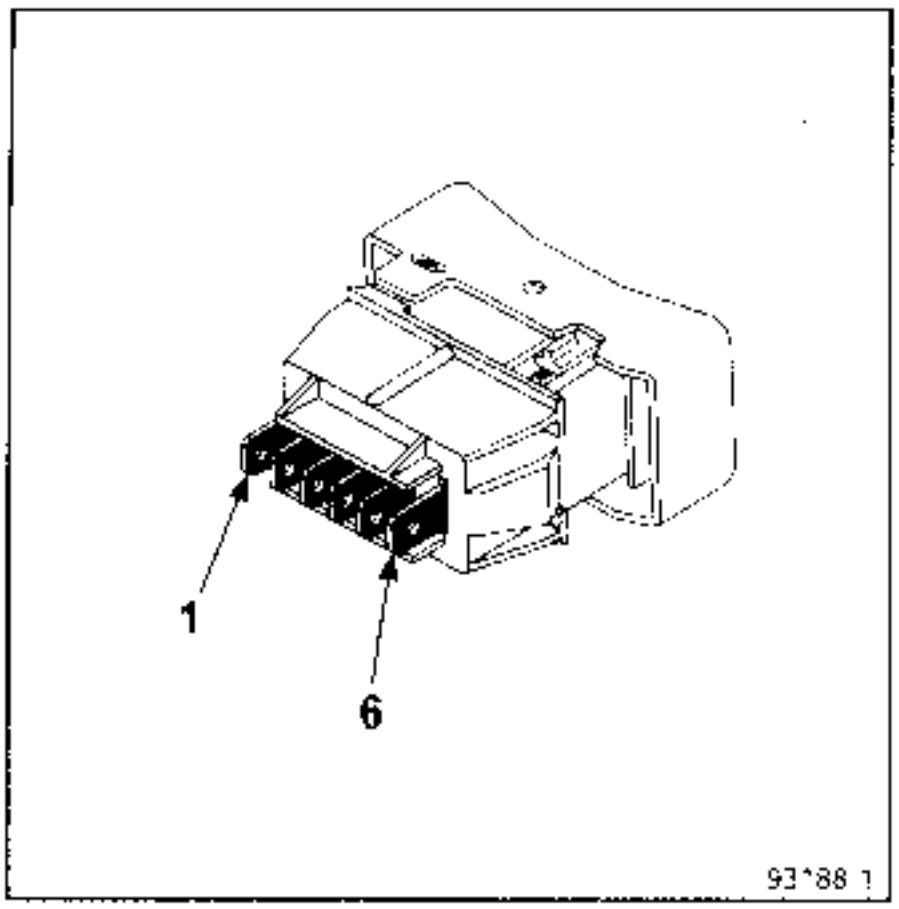
SCREEN WASHER SWITCH



CONNECTIONS

1 To pin 10 on screen wiper switches
2 Washer pump +
3 Lighting
7 Earth
9 + after ignition

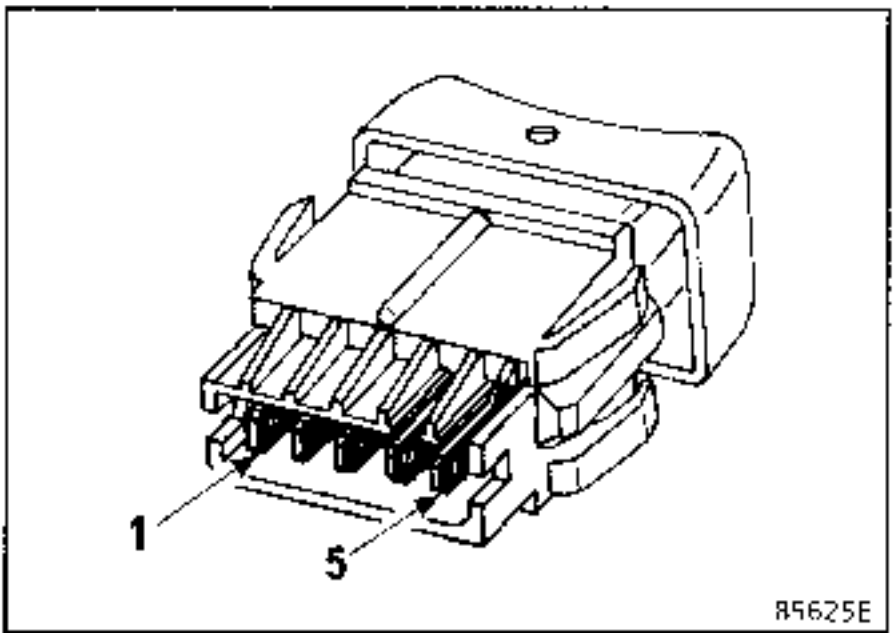
REAR SCREEN WASHER SWITCH
(2nd arrangement)



CONNECTIONS

1 Washer pump +
2 Wiper motor −
4 + after ignition
5 Lighting
6 Earth

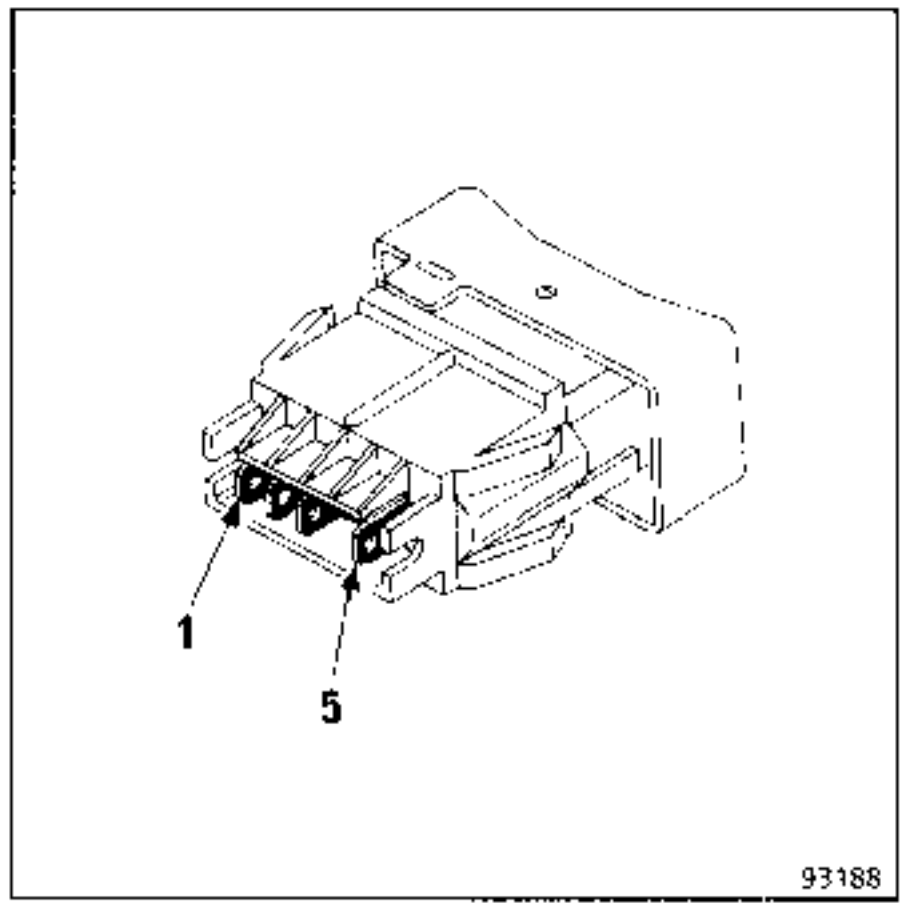
WINDOW RISER SWITCH
(1st arrangement)



CONNECTIONS

1 Motor
2 Earth
3 − after ignition
4 Lighting +
5 Motor

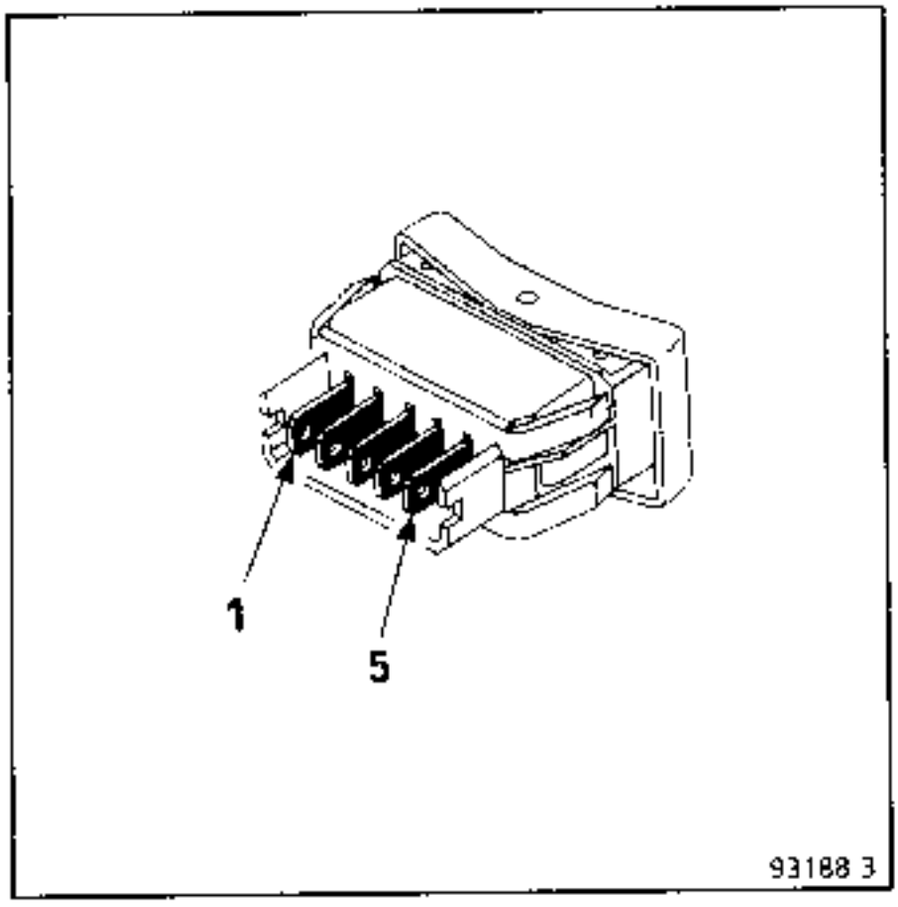
VOICE SYNTHESISER SWITCH



CONNECTIONS

1 Synthesiser
2 Lighting +
3 Synthesiser
5 Earth

REAR WINDOW RISER SWITCH

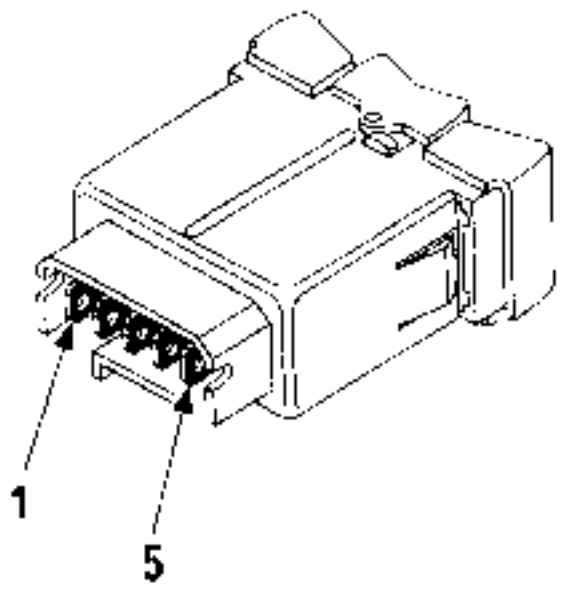


CONNECTIONS

1 Motor
2 Earth
3 + after ignition
4 Lighting +
5 Motor

WINDOW RISER (ONE-TOUCH) SWITCH
(2nd arrangement)

NOTE : The one-touch unit is an integral part of the switch.

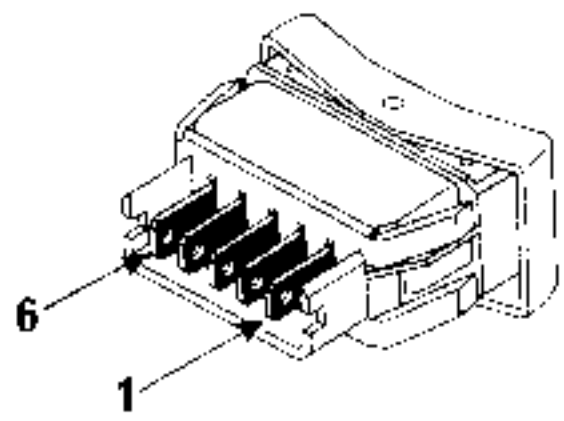


93188-7

CONNECTIONS

1 Motor
2 Earth
3 + after ignition
4 Lighting +
5 Motor

PASSENGER SIDE WINDOW RISER SWITCH
(2nd arrangement)



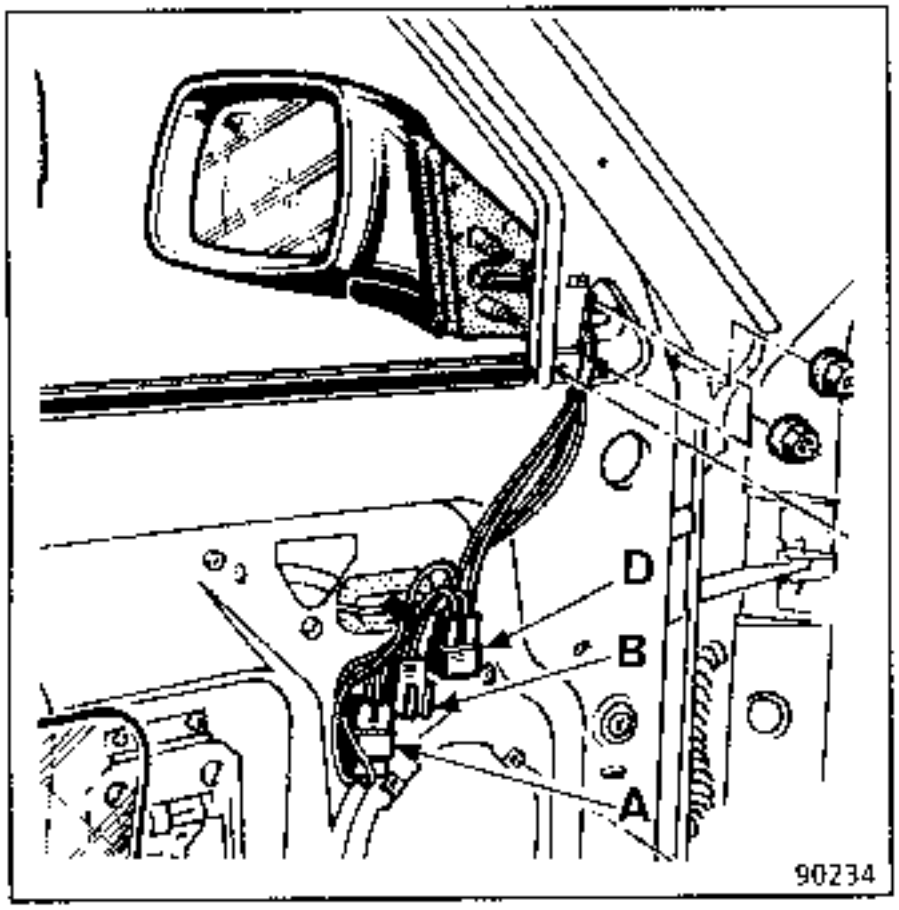
93188 4

CONNECTIONS

1 Lighting +
2 Motor
3 + after ignition or earth
4 + after ignition
5 + after ignition or earth
6 Motor

NOTE : It is possible to raise and lower the windows with the ignition off and the front doors open.

REAR VIEW MIRROR CONTROL



CONNECTIONS

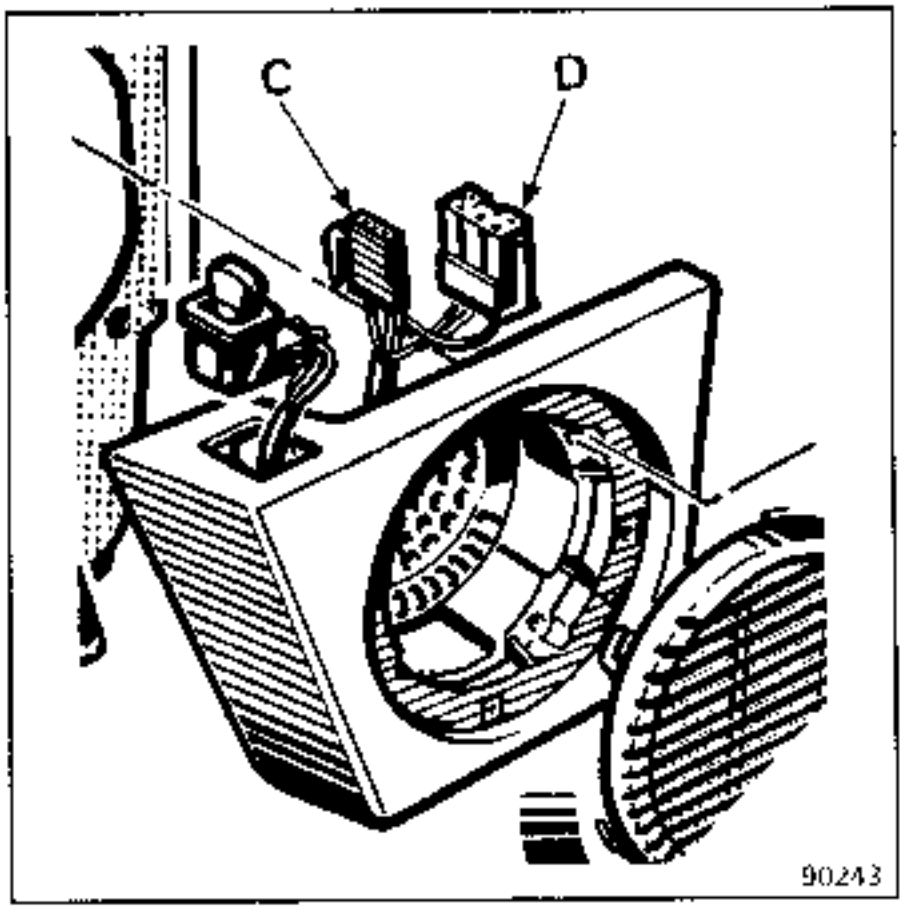
Connector **A** (white)

A1 Defrosting earth
A3 Temperature sensor

B2 + after ignition, defrosting
B3 Temperature sensor

Connector **B** (grey)

1 Rear view mirror common
2 Rear view mirror X
3 Rear view mirror Y



CONNECTIONS

Connector **C** (grey)

1 Rear view mirror, common
2 Rear view mirror adjustment, driver's side
3 Rear view mirror adjustment, passenger side

Connector **D** (black) 1st arrangement

A1 + before ignition
A3 Earth

B1 Passenger side rear view mirror, common
B2 Passenger side rear view mirror X
B3 Passenger side rear view mirror Y

Connector **D** (black) 2nd arrangement

A1 Passenger side rear view mirror adjustment
A2 + before ignition
A3 Passenger side rear view mirror adjustment

B1 Driver's side rear view mirror adjustment
B2 Driver's side rear view mirror adjustment
B3 Earth
B4 Rear view mirror, common

REMOVAL

Disconnect the battery.

Remove:
- the wiper arm securing nut,
- the wiper arm from its shaft using special tool **Elé. 1294**.

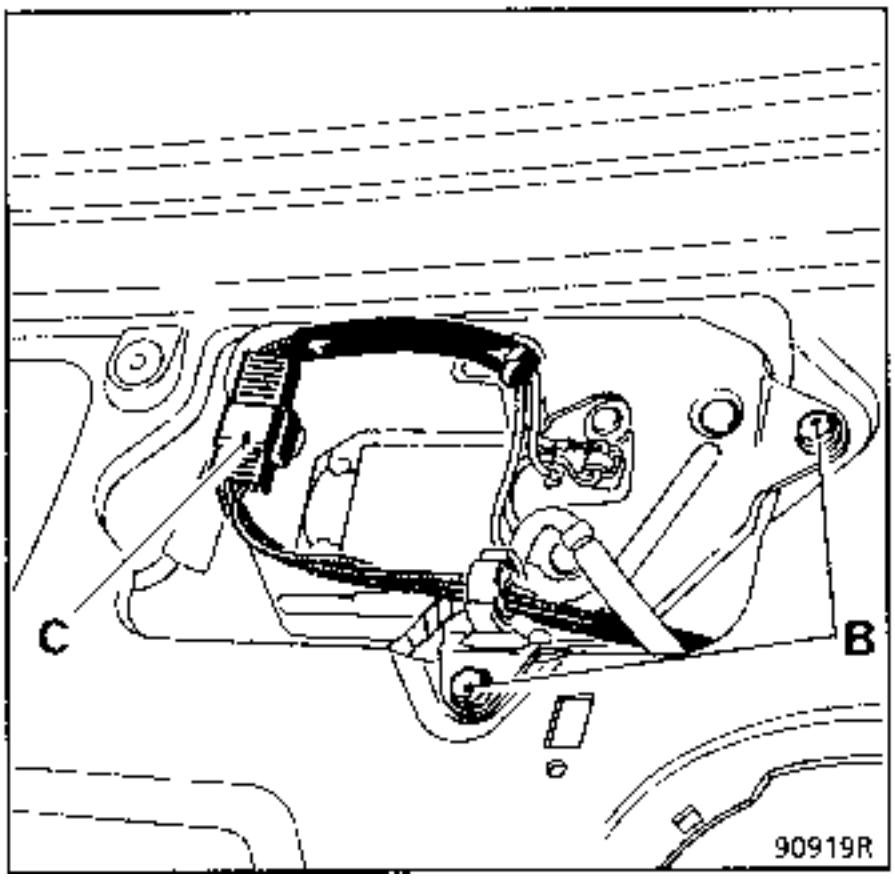
From the inside :

Remove the interior tailgate trim.

Remove the connector (locking tab C).

Take out the 2 screws (B).

Remove the motor.



REFITTING

When refitting, ensure that the motor is in the fixed park position before refitting the wiper arm.

Torque tighten the new nut to 2 daN.m (± 10 %).

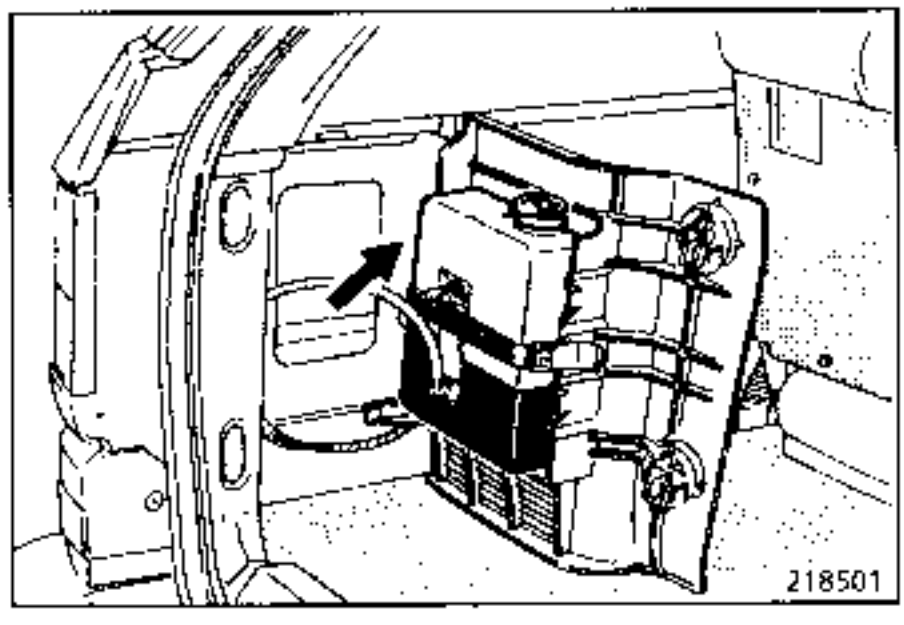
NOTE : The motor will only operate when the tailgate is closed.

CONNECTIONS

Pin	Description
1	Wiper +
2	Fixed park +
3	Earth

REAR SCREEN WIPER TIMER

The rear screen wiper timer is located behind the lefthand side panel trim, near the rear washer bottle.



REMOVAL

Disconnect the battery.

Remove:
- the wiper arm securing nut,
- the wiper arm from its shaft using special tool **Elé. 1294.**

From the inside :

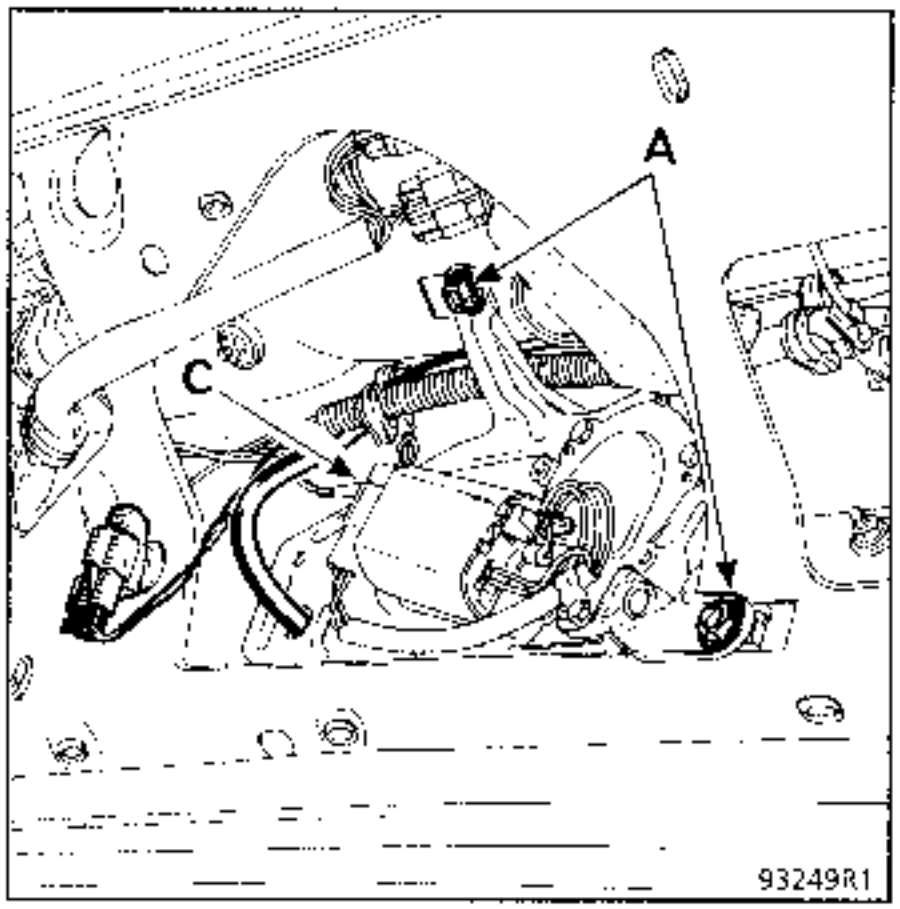
Remove the interior tailgate trim.

Remove the connector (locking tab C).

Take out the 2 screws (A).

Disconnect the washer jet pipe.

Remove the motor.



REFITTING

When refitting, ensure that the motor is in the fixed park position before refitting the wiper arm.

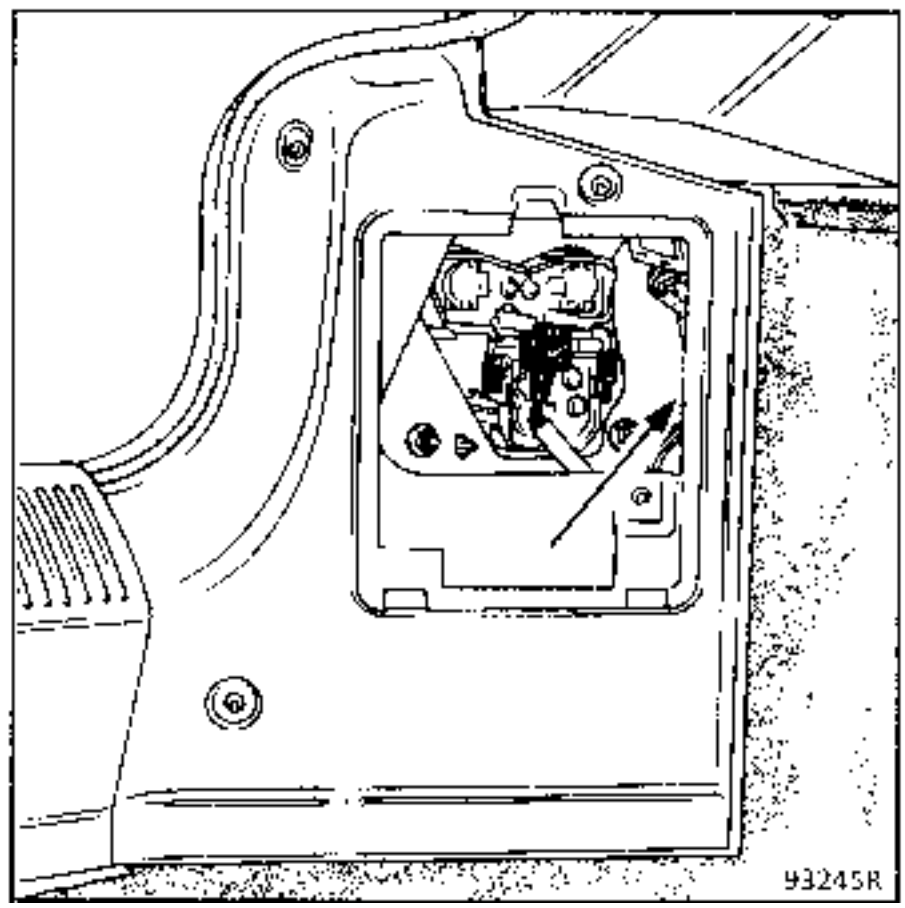
Torque tighten the new nut to 2 daN.m (± 10 %).

CONNECTIONS

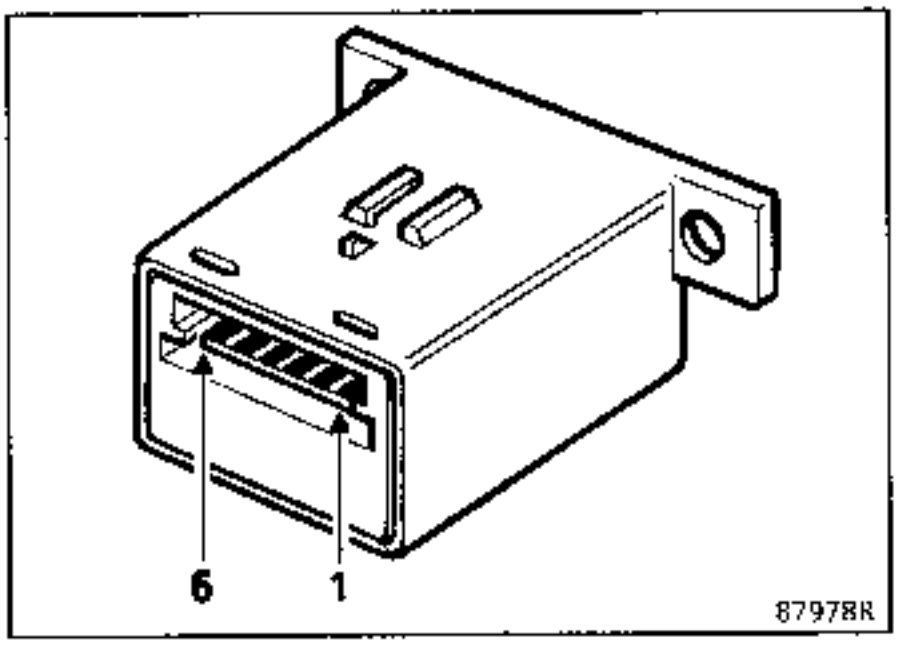
Pin	Description
1	Wiper +
2	Fixed park +
3	Earth

REAR SCREEN WIPER TIMER

The rear screen wiper timer is located behind the lefthand side panel trim, near the rear washer bottle.



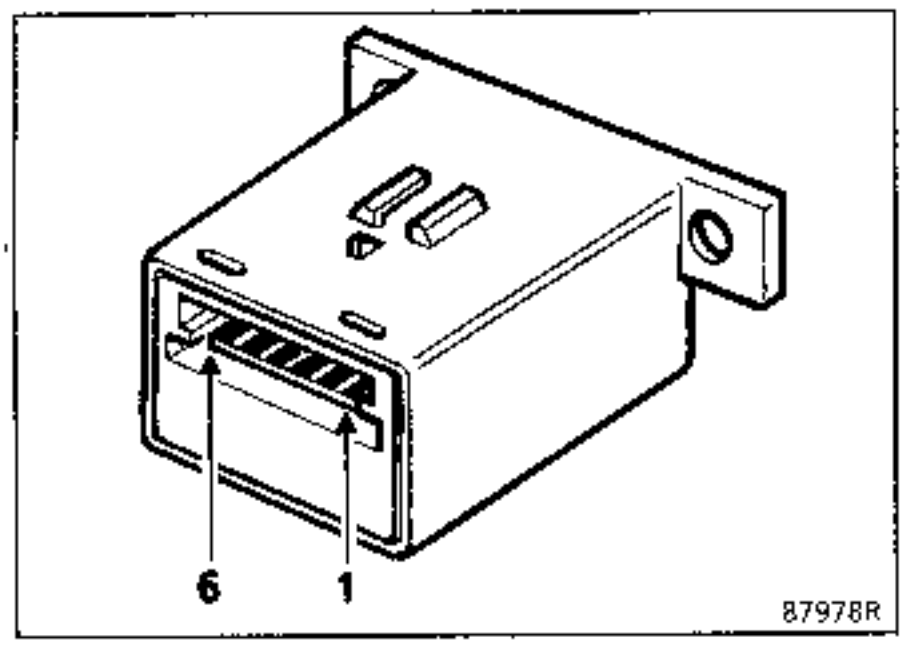
WINDSCREEN WIPER SWEEP TIMER



CONNECTIONS

Pin	Description
1	Earth
2	Washer pump +
3	Sweep timer control
4	Wiper fixed park
5	+ after ignition
6	Sweep timing signal to motor

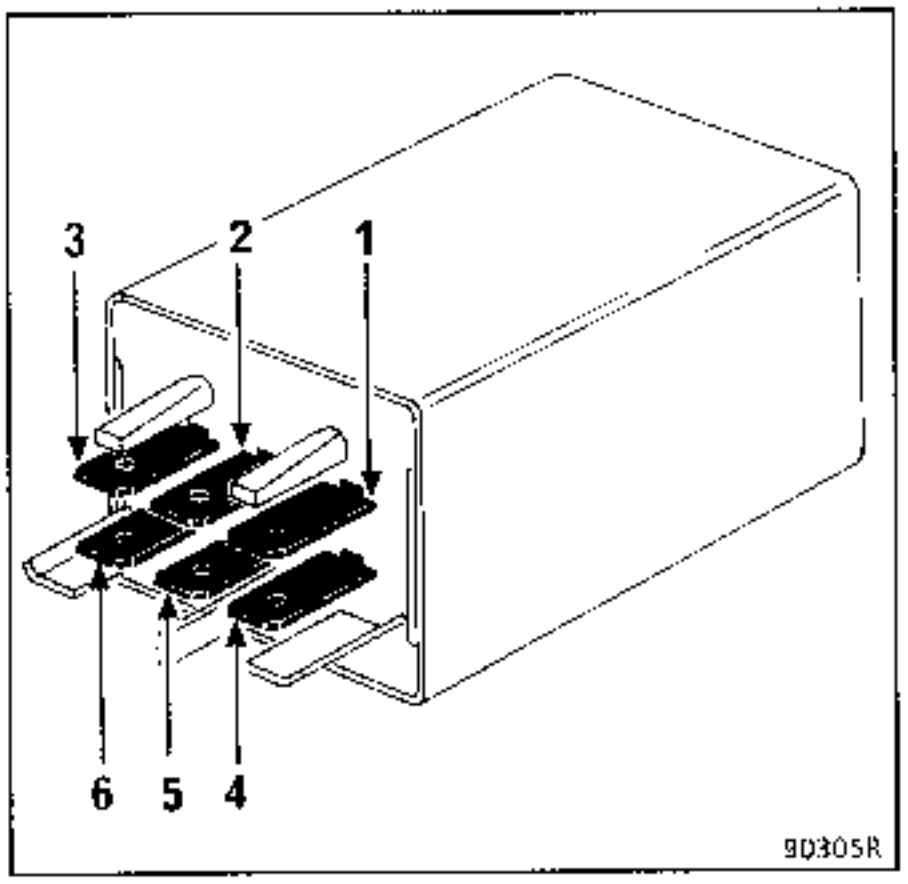
REAR SCREEN WIPER TIMER



CONNECTIONS

Pin	Description
1	Earth
2	Washer pump +
3	Sweep timer control
4	Earth
5	+ after ignition
6	Sweep timing signal to motor

DOOR LOCK RELAY TIMER



Timer delay : **3 seconds** ± 1

CONNECTIONS

Pin	Description
1	Doors locked control
2	Timer earth
3	Doors opened control
4	CPE* motor closed supply
5	+ before ignition
6	CPE* motor open supply

*CPE : ELECTRIC DOOR LOCKS

NOTE : On vehicles fitted with an engine immobiliser system, this timer is incorporated in the decoder unit.

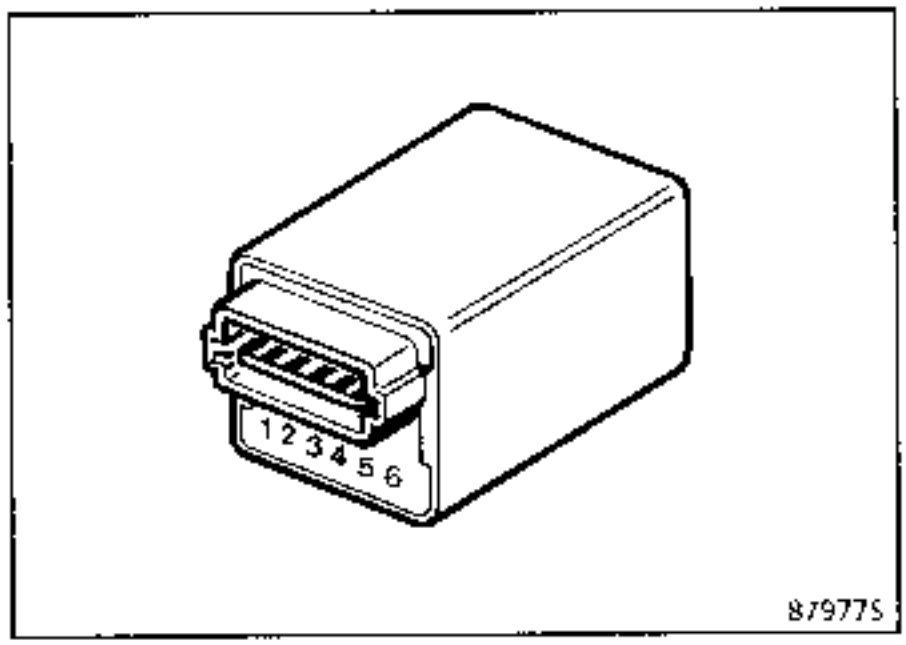
This timer is located :

B48
Near the lefthand rear light.

L48
Under the rear parcel shelf on the lefthand side.

K48
Behind the interior boot trim on the lefthand side.

INTERIOR LIGHTING TIMER



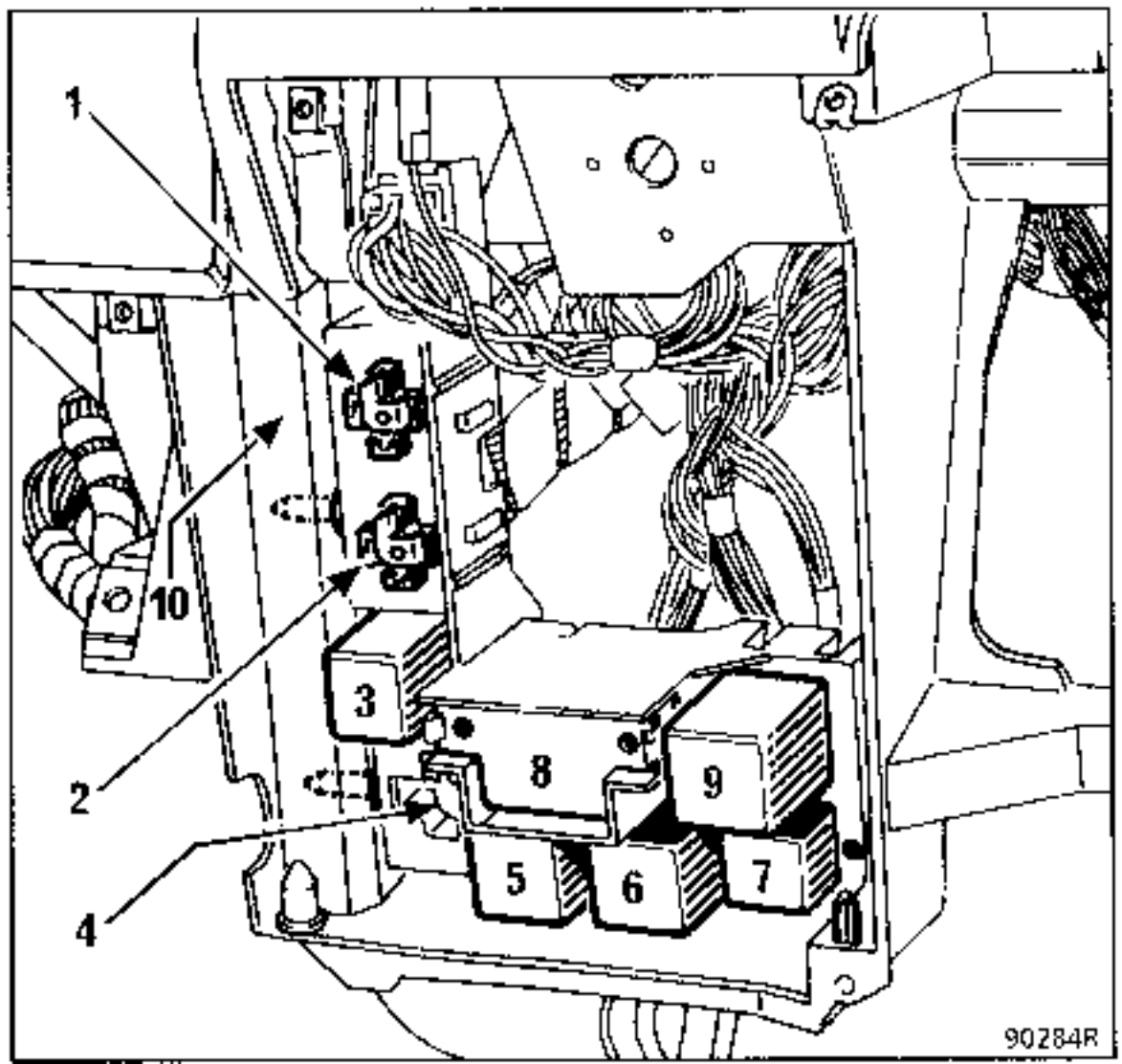
CONNECTIONS

Pin	Description
1	– before ignition
2	Interior lighting, common (earth)
3	Earth
4	Not used
5	Interior lighting switch
6	Infra-red remote control

NOTE : On vehicles fitted with an engine immobiliser system, the timer is incorporated in the decoder unit.

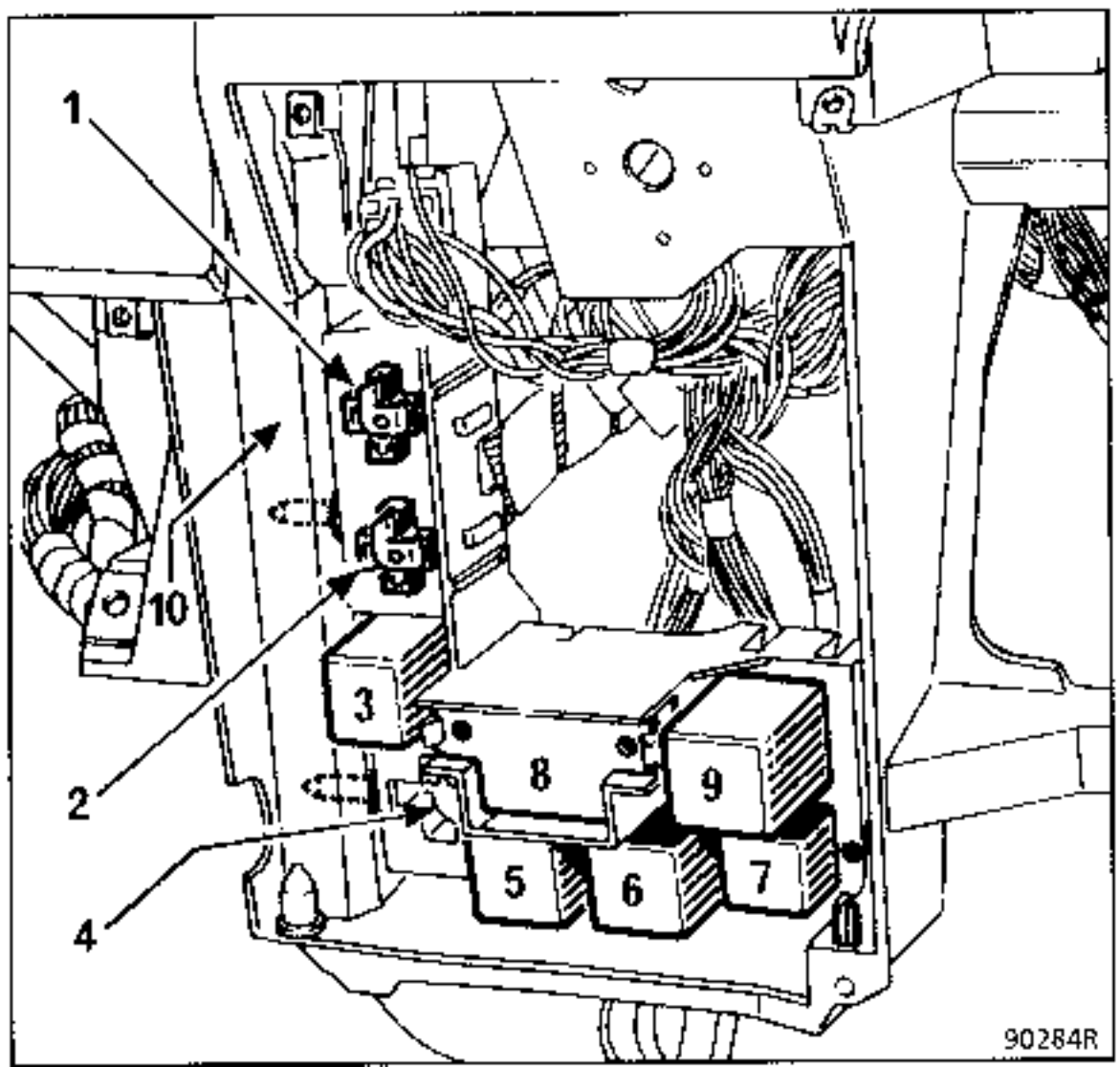
RELAY POSITIONS - 1st ARRANGEMENT

	Lefthand Drive	Righthand Drive	L485	Saudi Arabia
1	Rear fog light shunt	Rear fog light relay	Rear fog light shunt	Not used
2	Front fog light shunt	Not used	Front fog light shunt	Not used
3	Front fog light relay			Not used
4	Not used		Front righthand headlight relay	Heated rear screen relay
5	Flasher unit			
6	"Lights on" signal			
7	Heated rear screen relay			Over-speed relay
8	Screen wiper timer			
9	Electric door lock timer			



RELAY POSITIONS - 2nd ARRANGEMENT

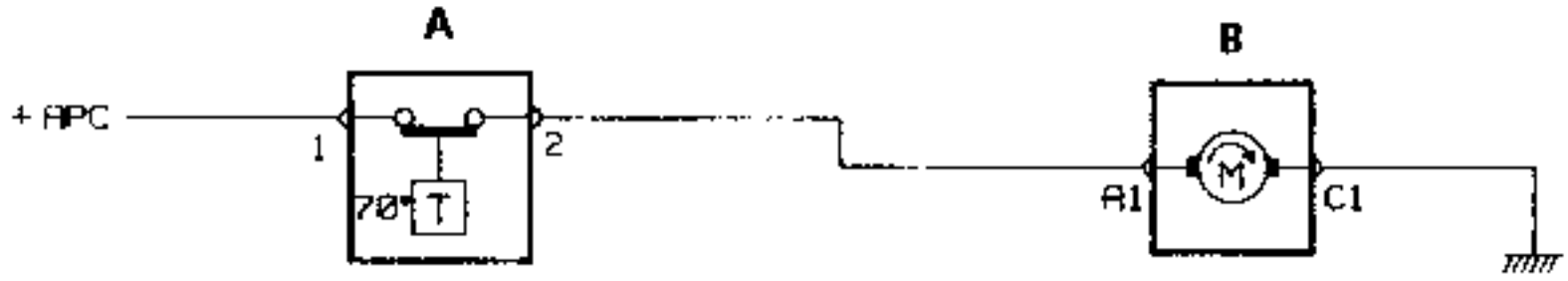
	Lefthand Drive	Righthand Drive	Saudi Arabia
1	Front fog light shunt or electric window relay	Electric window relay	
2	Shunt or rear fog light relay	Rear fog light relay	Rear fog light shunt
3	Rear fog light relay		
4	Righthand headlight relay or heater control shunt	RH headlight relay	Over-speed relay
5	Flasher unit		
6	"Lights on" signal		
7	Heated rear screen relay		
8	Screen wiper timer		
9	Electric door lock timer		
10	Rheostat relay	-	



Vehicles equipped with the **J8S** engine have an electric coolant pump which speeds up the increase in the heater radiator temperature.

1st ARRANGEMENT

The pump turns as soon as the ignition is switched on and cuts out as soon as the temperature exceeds approximately 70° C.



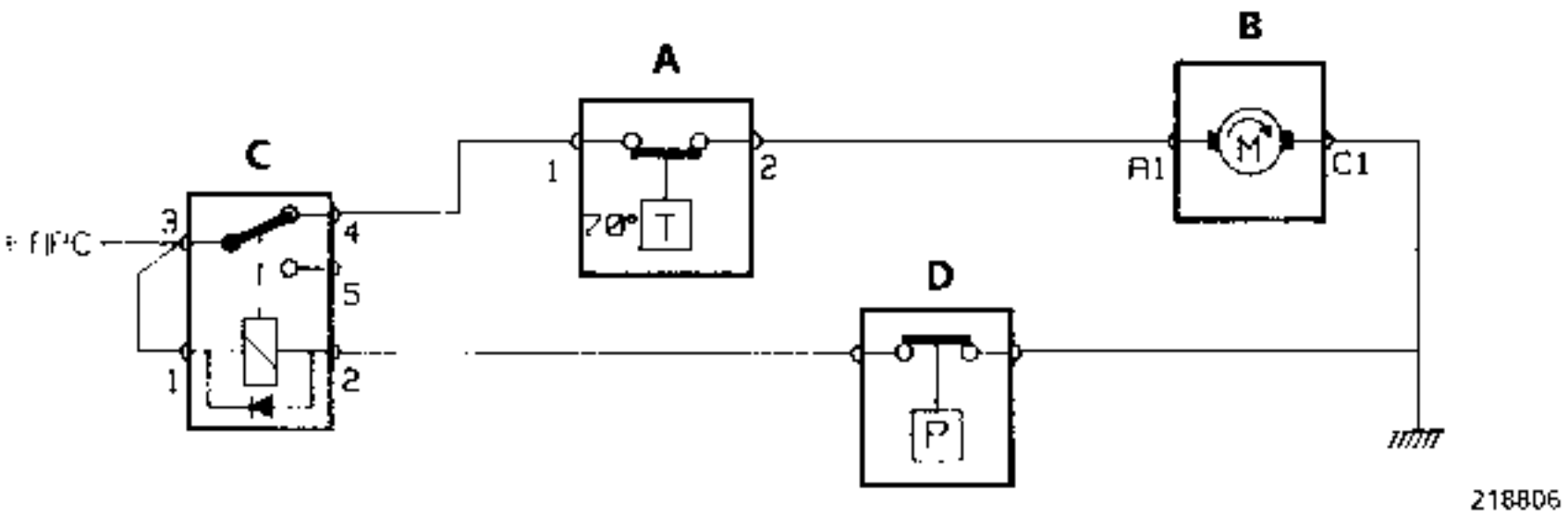
218805

2nd ARRANGEMENT

When the ignition is switched on, the relay is energised (relay earth via oil pressure switch) :

the pump does not operate

With the engine running (oil pressure established), the relay is no longer energised and supplies the electric pump which will stop operating as soon as the coolant temperature reaches approximately 70° C.



218806

A Thermocontact
B Electric coolant pump
C Relay
D Oil pressure switch

Vehicle types **X48E** (F3N engine with air conditioning) are equipped with an antipercolation system.

OPERATION

When the ignition is switched on :

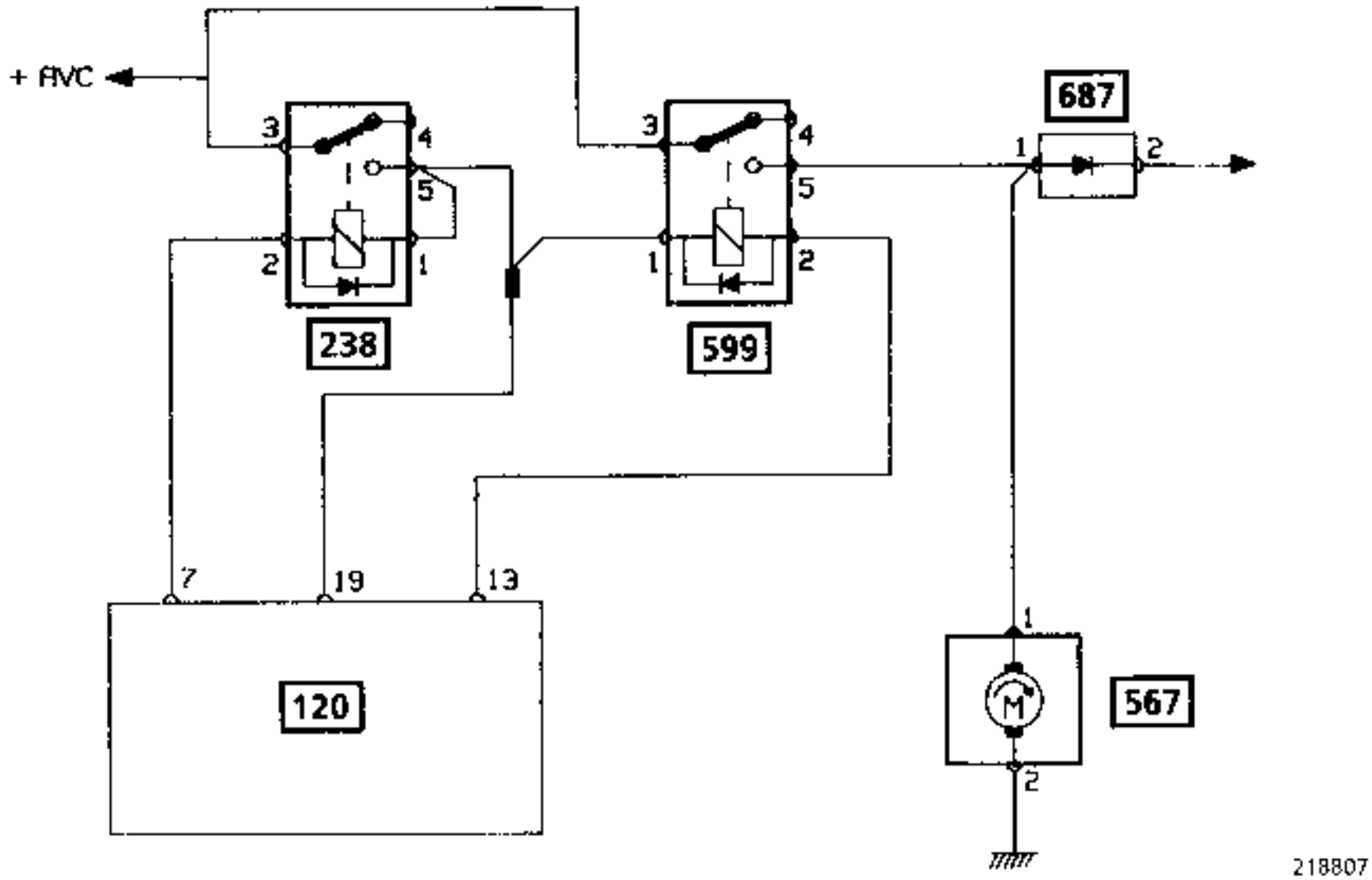
- the injection computer sends an earth via its track 7 to track 2 of the relay (238). This earth will be maintained for 30 seconds after each time the ignition is switched off or when the coolant temperature circuit reaches a temperature of more than 90° C.

- the injection computer sends a + for a few seconds via its track 19 to tracks 1 and 5 of the relay (238) to self-supply this (+ AVC at track 3).
  The relay (599) is therefore + supplied at track 1.

When the ignition is switched off, if the temperature of the coolant circuit is greater than 90°C, the injection computer sends an earth via its track 13 to track 2 of relay (599) and maintains that of relay (238).

The antipercolation coolant pump is then supplied as well as the cooling fans via the unit until the temperature drops back down to 90°C.

NOTE : The diode unit prevents the antipercolation pump being supplied when the cooling fans are operating and the engine is running.



+AVC	+ before ignition
120	Injection computer
238	Injection locking relay
567	Electric pump relay
599	Coolant pump support relay
687	Diode unit