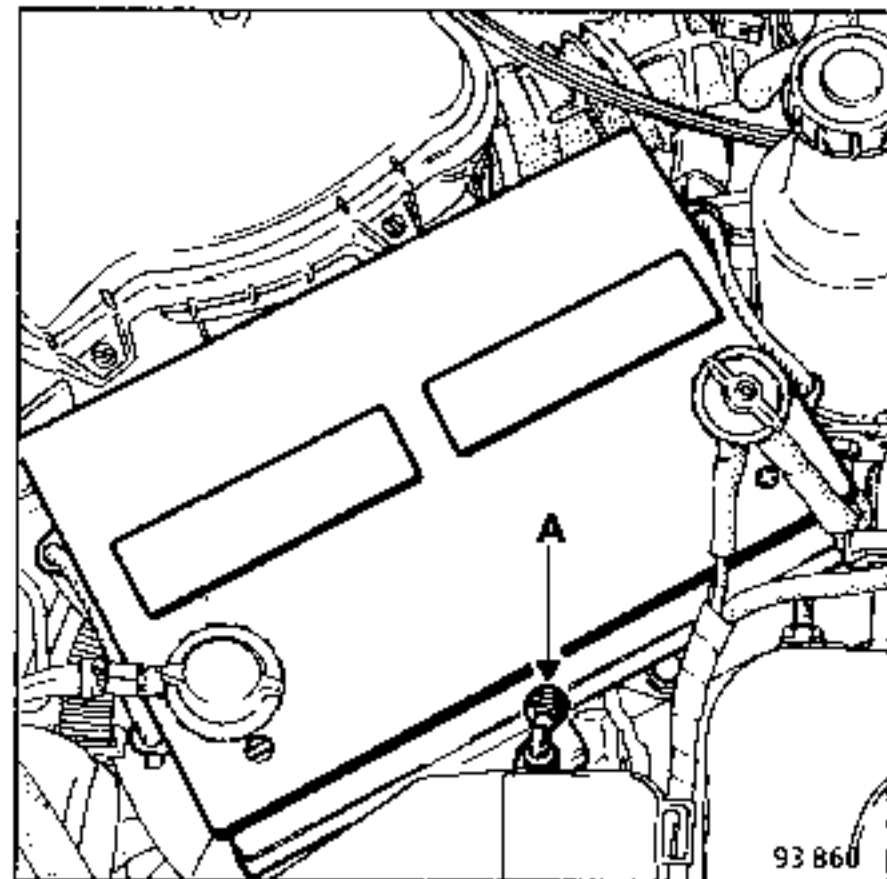


SPECIAL POINTS ON REFITTING



Grease the terminals before fitting the clip

Positive clip nut tightening torque:
0.5 daN.m

Battery cut off balance wheel tightening torque:
0.3 daN.m

Battery mounting (A):
1 daN.m

A - CHECKING

Check the following:

- that the battery tray and cover are not cracked or split;
- that the battery top is clean;
- the condition of the terminals.

It is essential to:

- . ensure that there is no salt adhering (sulphating) to the terminals and clips;
- . if necessary clean and grease them;
- . check that the clips are correctly tightened on the terminals. Poor contact could cause starting or charging incidents which risk causing sparks which could make the battery explode;

- . the electrolyte level

The battery is provided with a cover which can be removed.

- either remove the cover by hand or using a tool (rigid spatula);
- check that the electrolyte level in all components is largely above the plate separators.
- if necessary, top up the levels with demineralised water.

Note: certain batteries have translucent casings which enable the electrolyte level to be seen.

Never top up with electrolyte or other products.

B - PRECAUTIONS

It should be remembered that a battery:

- . contains sulphuric acid which is a dangerous product;
- . when charging produces oxygen and hydrogen. The mixture of these two gases forms a detonating gas hence the risk of explosion.

1 - DANGER: ACID

The sulphuric acid solution is a highly corrosive, toxic and aggressive product. It attacks the skin, clothing, concrete and corrodes the majority of metals.

It is thus very important to take the following precautions when handling a battery:

- protect the eyes with goggles;
- wear anti-acid gloves and clothing.

If the acid is splashed onto anything rinse the affected parts with plenty of water. If it splashed into the eyes consult a doctor.

2 - DANGER - RISK OF EXPLOSION

When a battery is charging (either in the vehicle or outside it), oxygen and hydrogen form. Most of the gas forms when the battery is completely charged and the amount of gas produced is proportional to the intensity of the current charge.

Oxygen and hydrogen combine in open spaces, on the surface of the plates and form a detonating mixture which is highly explosive.

The slightest spark, a cigarette, a match which is scarcely alight are sufficient to cause an explosion. Detonation is so great that the battery may shatter and the acid be dispersed in the ambient air. Any persons in the vicinity are in danger (shattered pieces or splashes of acid). Splashes of acid are harmful to the eyes, the face and the hands. They also attack clothing.

Protection against the risk of explosion which a carelessly handled battery may represent must therefore be taken very seriously. Avoid all risks of sparks.

- . Ensure that all accessories are switched off before disconnecting or re-connecting a battery.
- . When charging a battery in an enclosed space, switch off the charger before connecting or disconnecting the battery.
- . Do not place any metal objects on the battery so as not to cause a short circuit between the terminals.
- . Never place a battery near a naked flame, a welding lamp, hot air torch, cigarette or lighted match.

REMOVAL - REFITTING

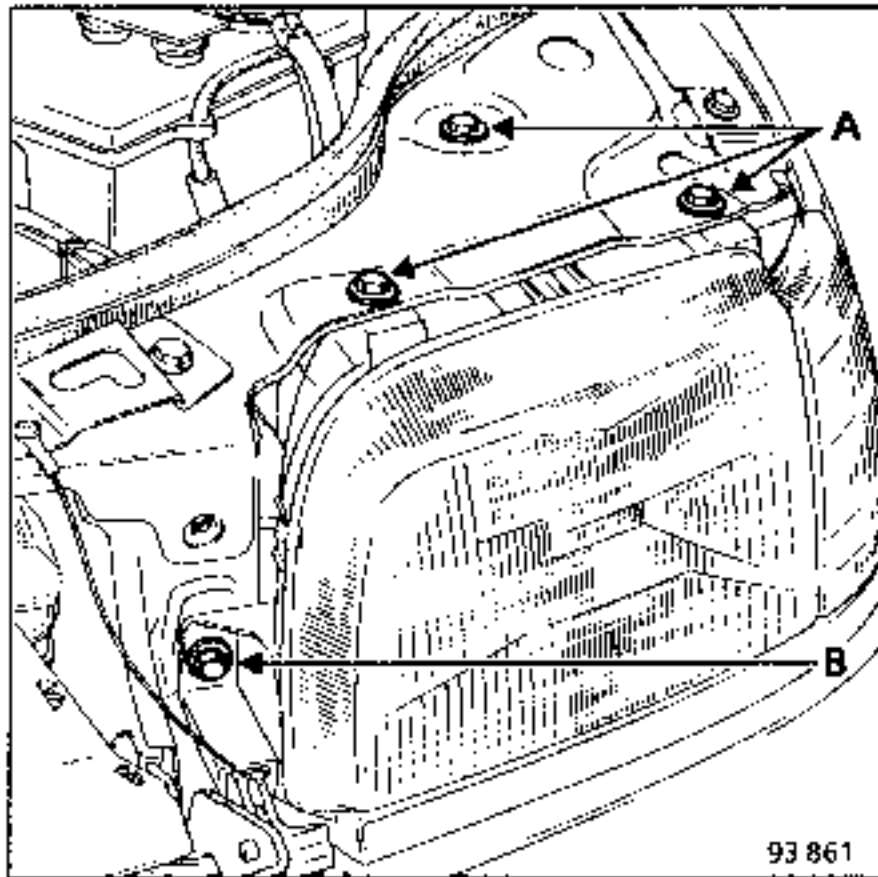
Disconnect:

- the battery;
- the connectors from the light units and direction indicators.

Remove:

- the front grille (2 bolts behind the covers);
- the indicator light (clip), move it towards the front to release it;
- the light unit by removing the 3 upper bolts (A) and the front bolt (B).

Take the assembly out from the rear.

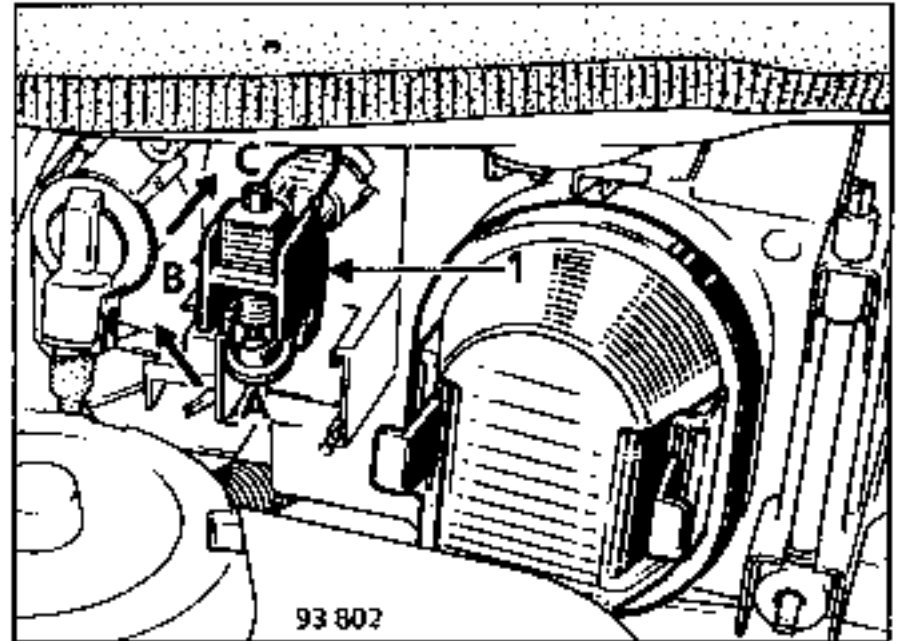


SPECIAL POINTS CONCERNING REFITTING

After refitting the light units, they must be adjusted.

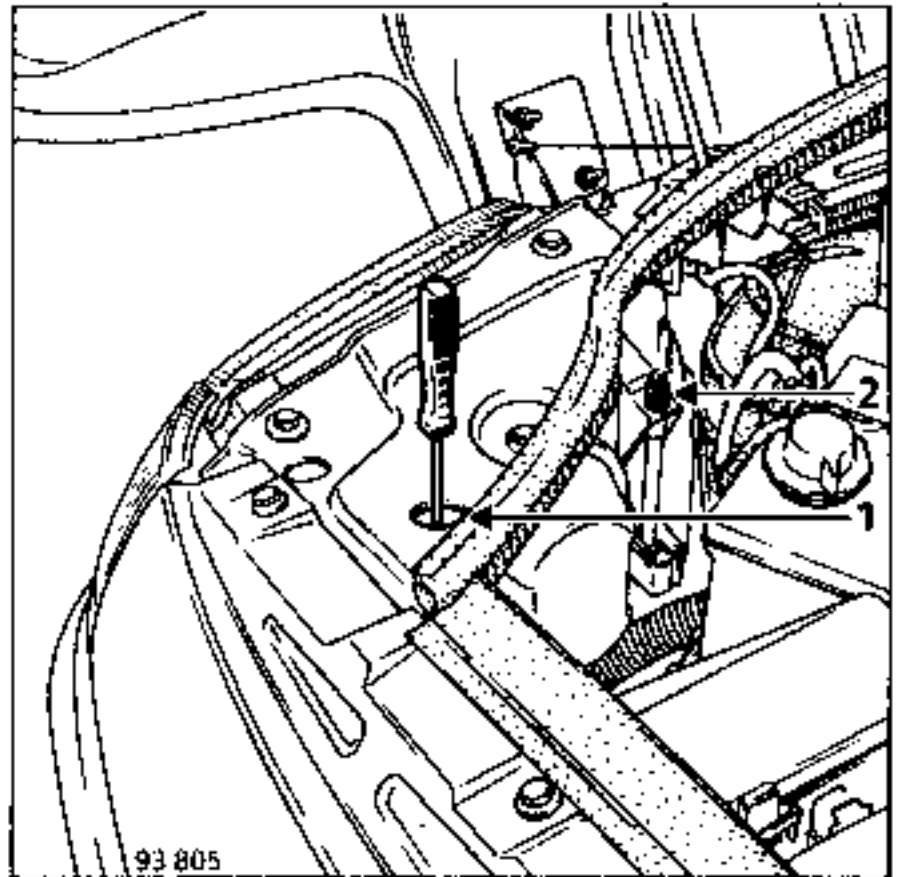
Adjusting:

Ensure that the vehicle is unladen.



Select the correct adjusting position by turning tumble wheel (1):
A normal position (unladen)
B average position
C laden position

Then adjust the beam height setting by turning screw (1) and the direction setting by turning screw (2).

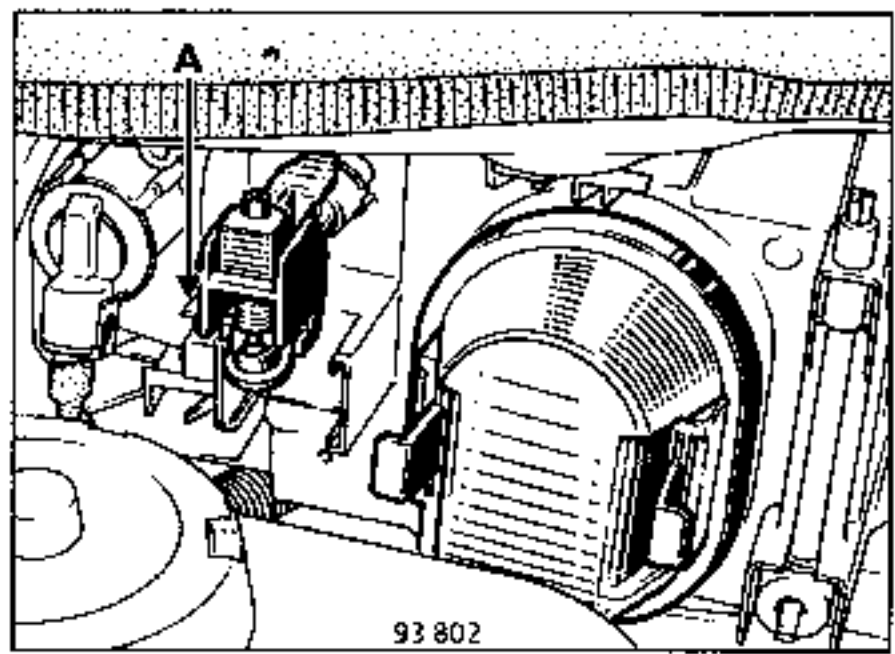


REMOVAL - REFITTING

Remove the direction indicator by squeezing fastening (A) and moving the light towards the front to remove it.

SPECIAL POINT CONCERNING REFITTING

Position the seal correctly at the light end.



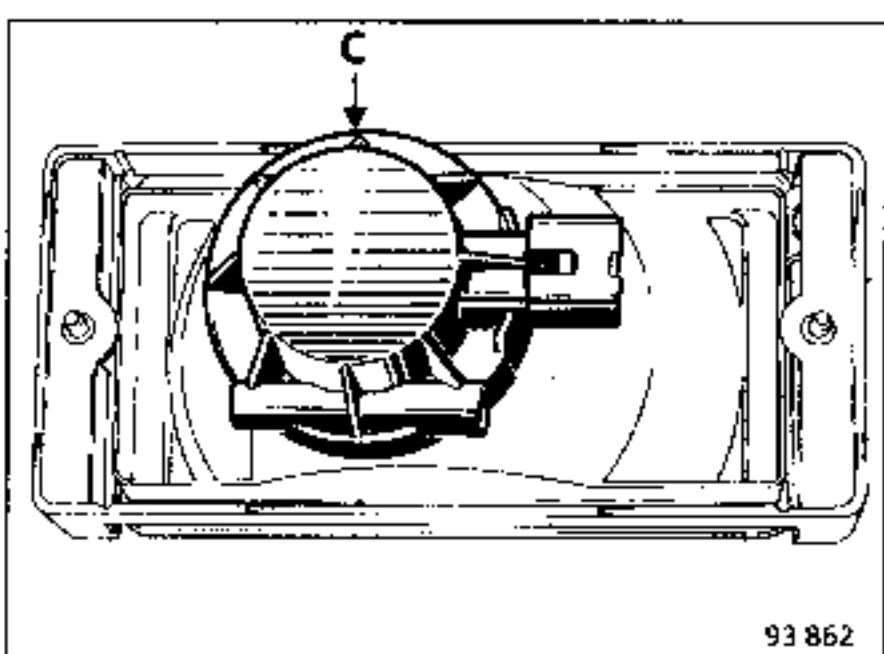
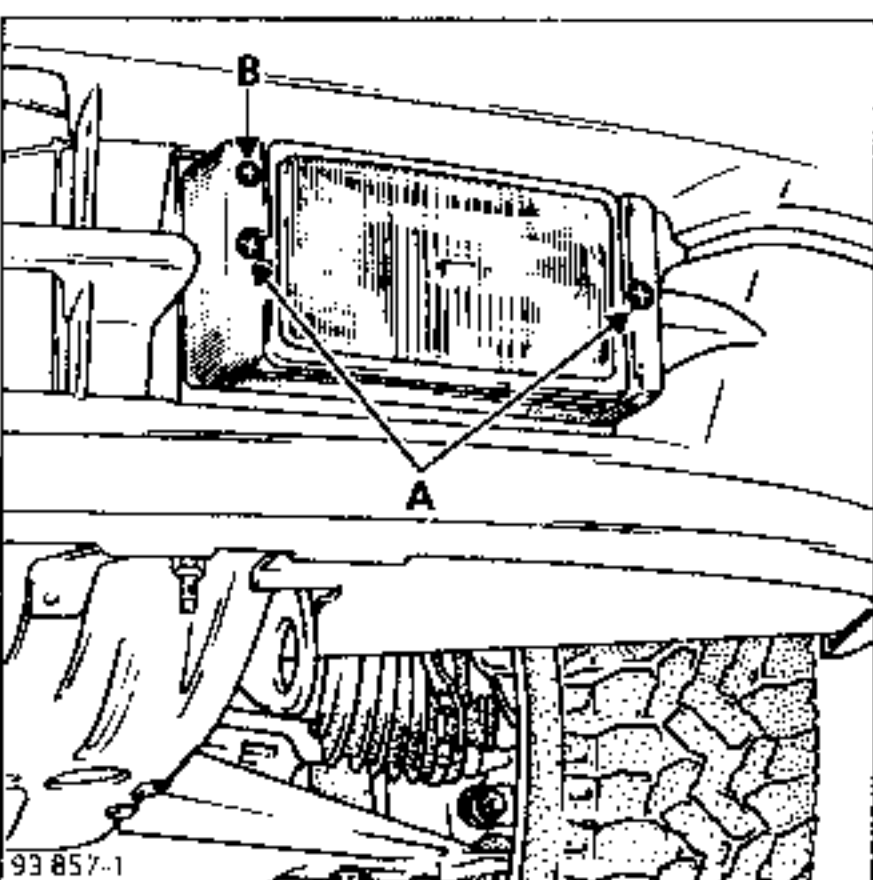
Foglights

For vehicles equipped with front foglights.

REMOVAL

- Unscrew the mounting bolts (A).
- Take the light unit out towards the front.
- Disconnect the connector.

- Replacing the bulb.
- Turn bulb holder (C) one quarter of a turn and take it out.
- Remove the bulb.
- Hold the new bulb in a piece of cloth and place it on its mounting.

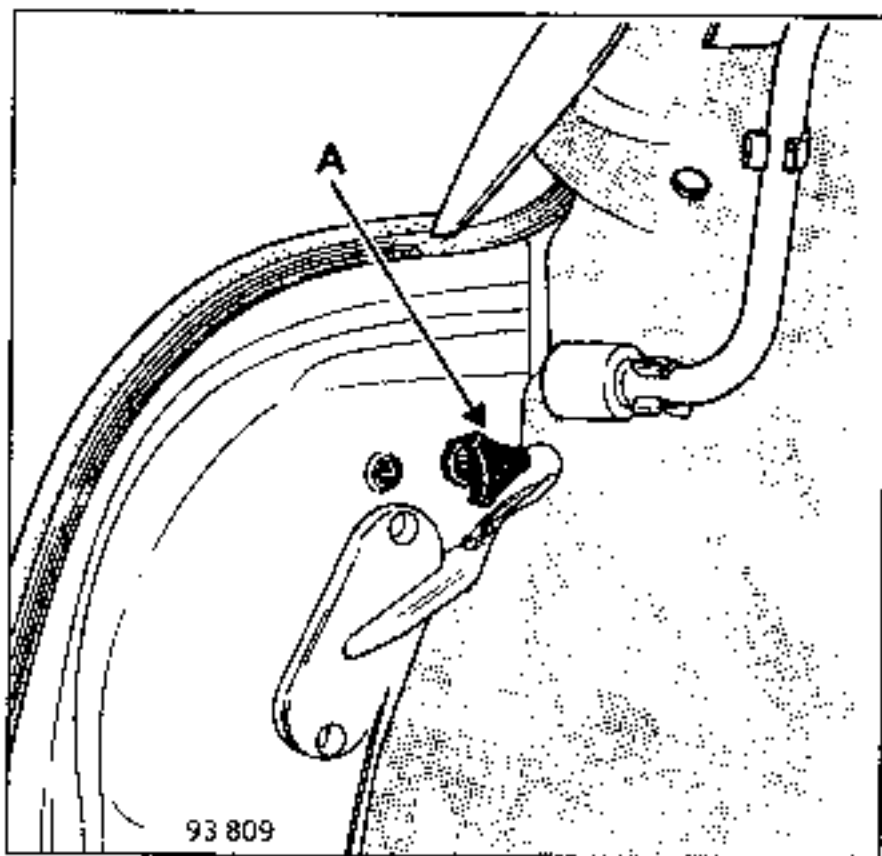


- Adjusting the foglight:
Adjust the beam height setting by turning screw (B).

REMOVAL - REFITTING

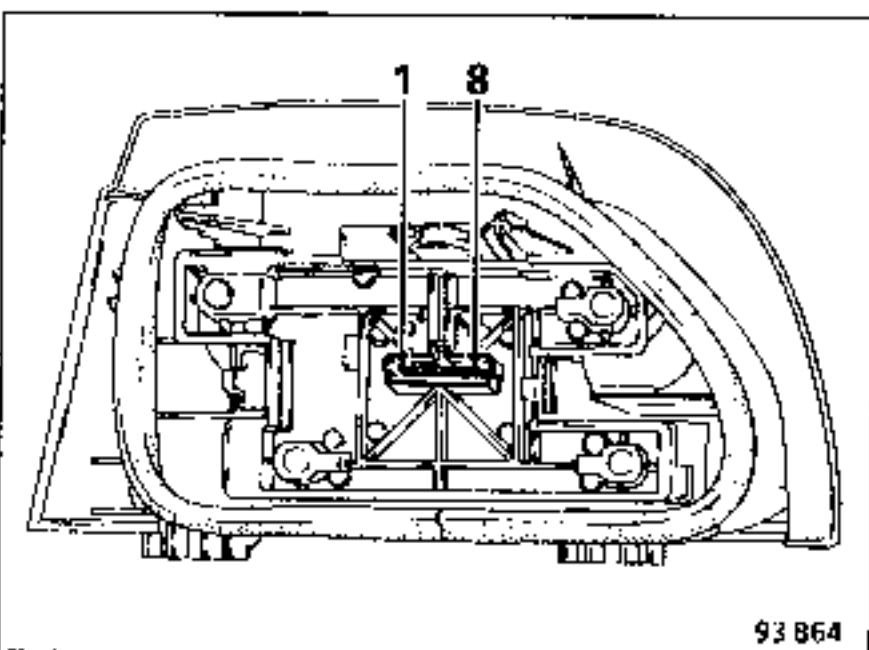
From the inside of the luggage compartment unscrew butterfly nut (A).

Move the light unit towards the exterior to release it.



Connection

Right hand rear light.



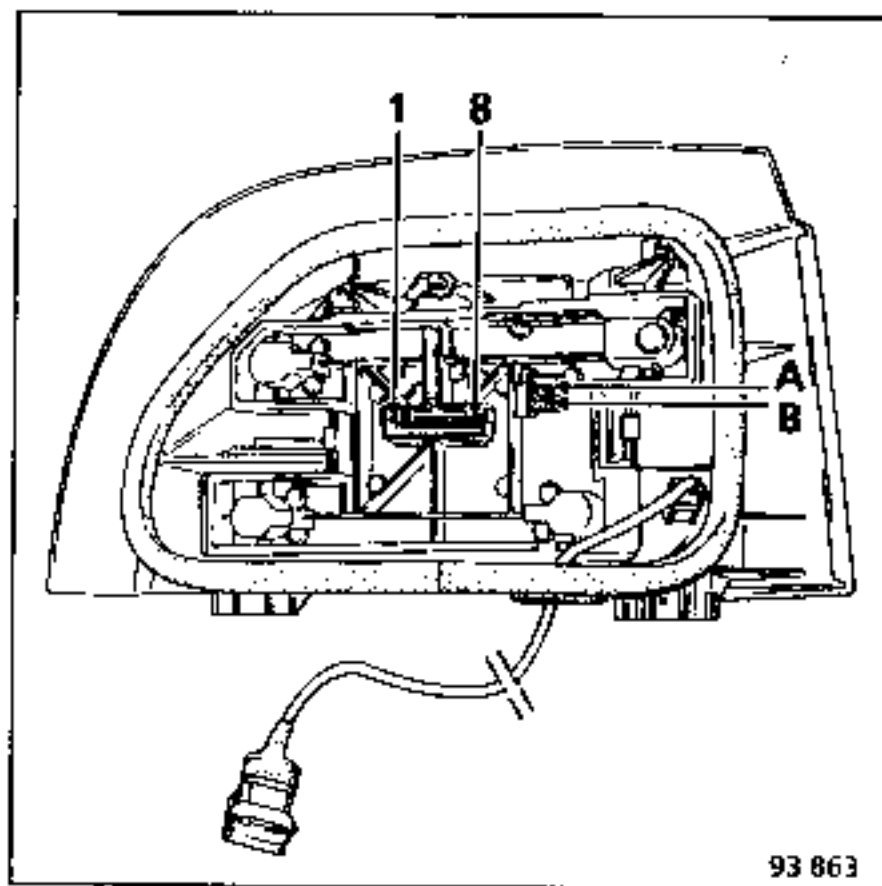
Right hand rear light connector

Track	Description
1	RH direction indicator feed
2	RH rear light -
4	RH stop light +
5	RH rear light earth
6	Luggage compartment switch earth
6	Fuel tank sender unit earth
7	RH rear fog light + *
8	RH reversing light feed

* Depending on version and country

Connection

Left hand rear light



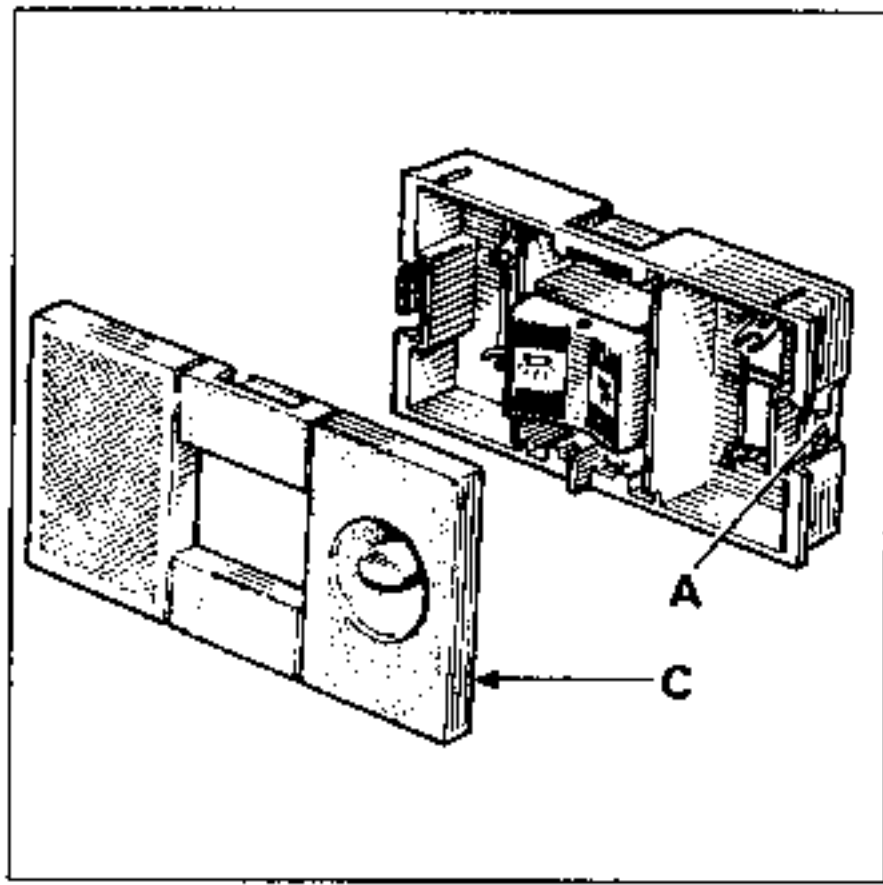
Left hand rear light connector

Track	Description	
1	LH reversing light feed	
2	LH rear fog light +	
3	LH rear light earth	
5	LH stop light +	
6	LH rear light +	
8	LH rear direction indicator feed	
A	Rear light +	} for rear number plate.
B	Earth	

REMOVAL

Remove clipped plate (C).

Release clips (A) to take out the interior lights.

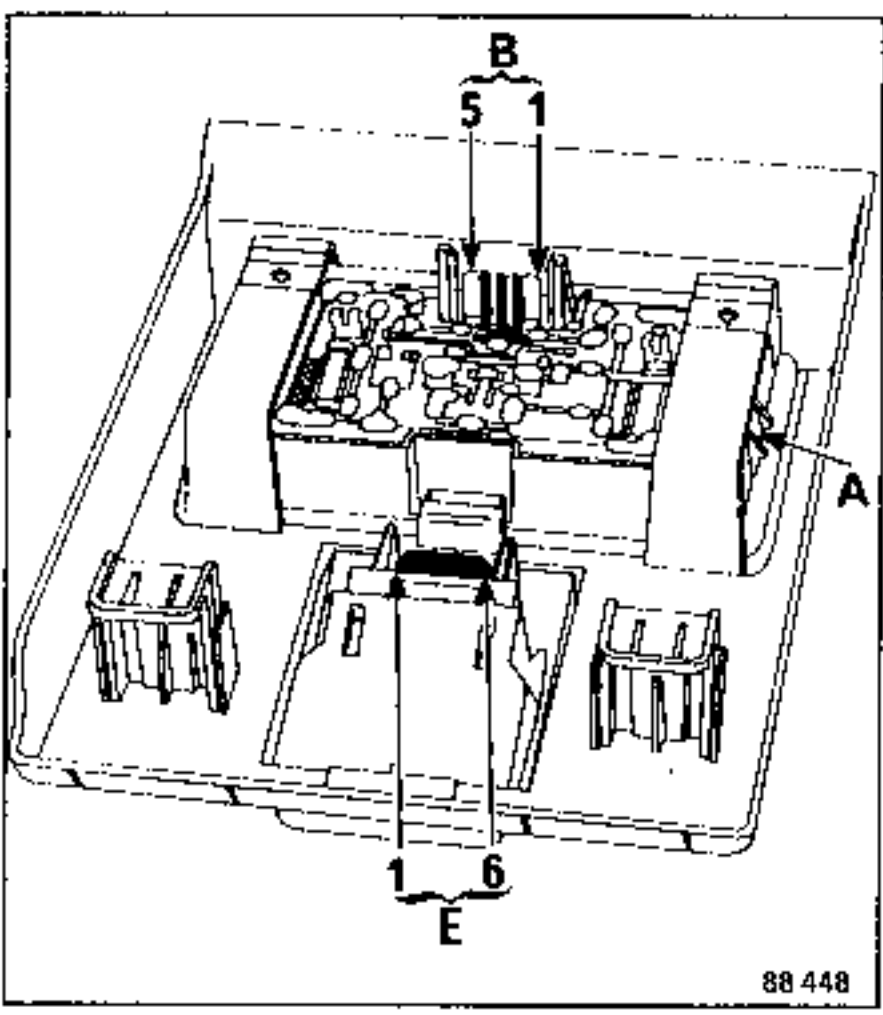


Interior light connector (B)

Track	Description
2	Earth
3	- before ignition
4	door pillar switch data

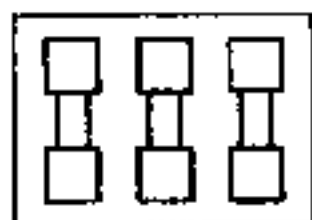
Infra-red remote control connector (E)

Track	Description
2	Infra-red remote control earth
3	Electric door locks closure switch
4	Electric door locks opening switch
6	Infra-red remote control - before ignition

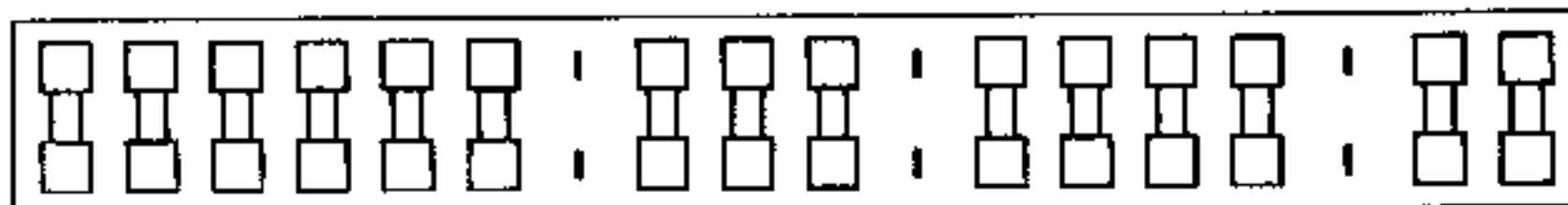


FUSE BOX (passenger compartment)

This box is located in the passenger compartment, under the dashboard on the passenger side. To open it, pull on the 2 tabs.



1 2 3



4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

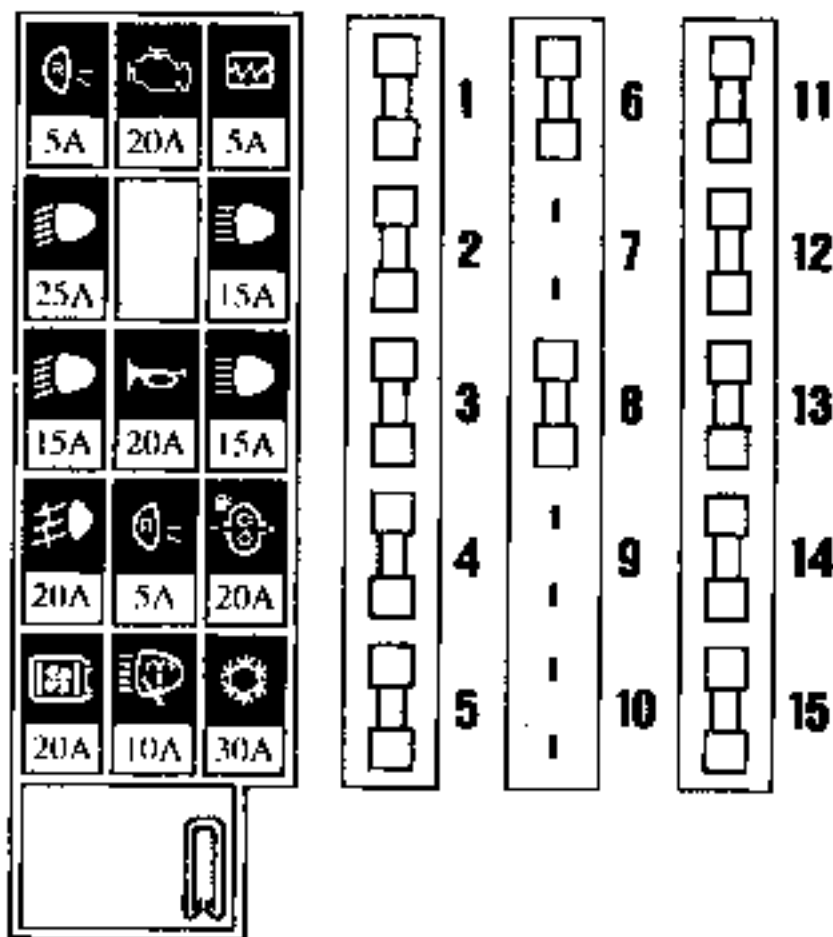


93 835

Allocation of fuses (depending on equipment level and country)

No.	Rating	Description
1	30 A	Passenger window winder
2	15 A	Not used
3	30 A	Driver's window winder
4	15 A	Interior light - radio - alarm
5	30 A	Before ignition feed
6	10 A	Clock
7	15 A	Windscreen wiper
8	15 A	Rear screen wiper
9	10 A	Stop light
10	-	Not used
11	20 A	Electric door locks - Electric rear view mirror
12	20 A	Heated rear screen - Heated rear view mirrors
13	10 A	Windscreen wiper timer
14	-	Caravan option
15	10 A	Flasher unit
16	10 A	Rear fog light
17	10 A	LH side and rear lights
18	10 A	RH side and rear lights
19	-	Not used
20	20 A	Heating
21	10 A	Radio - Alarm

FUSE BOX (engine compartment)



93 834

Allocation of fuses (depending on equipment level and country)

No.	Rating	Description
1	5 A	Reversing lights - Alarm
2	25 A	RH dipped beam headlight
3	15 A	LH dipped beam headlight
4	20 A	Front fog lights
5	20 A	Engine cooling fan motor
6	20 A	Engine functions
7	-	Not used
8	20 A	Horn
9	-	Not used
10	-	Not used
11	5 A	Automatic transmission
12	15 A	RH main beam headlight
13	15 A	LH main beam headlight
14	20 A	Fuel pump
15	30 A	Air conditioning

ESSENTIAL SPECIAL TOOLING	
Mot. 453-01	Hose clamps
M.S. 583	Hose clamps

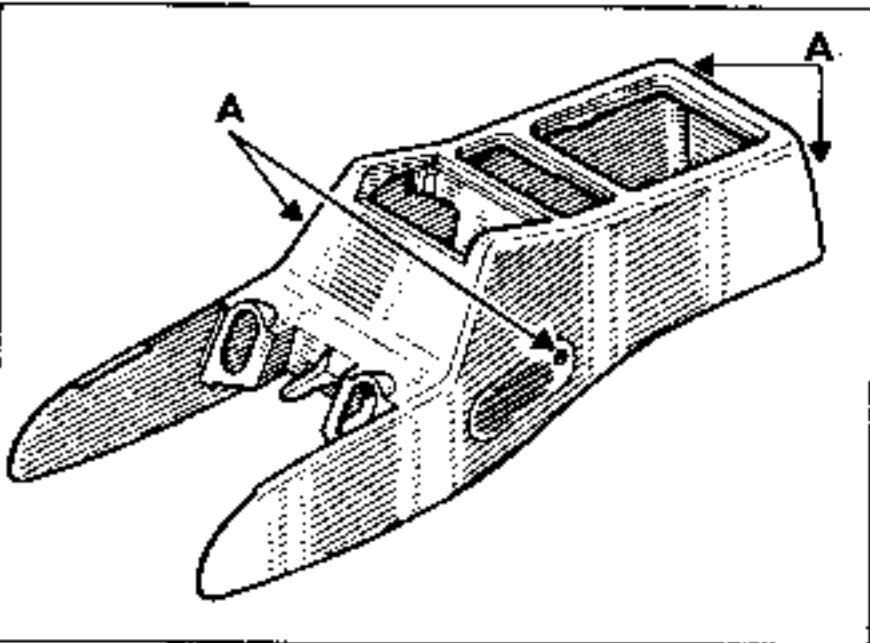
REMOVAL

The dashboard must be removed in order to take out the distributor unit.

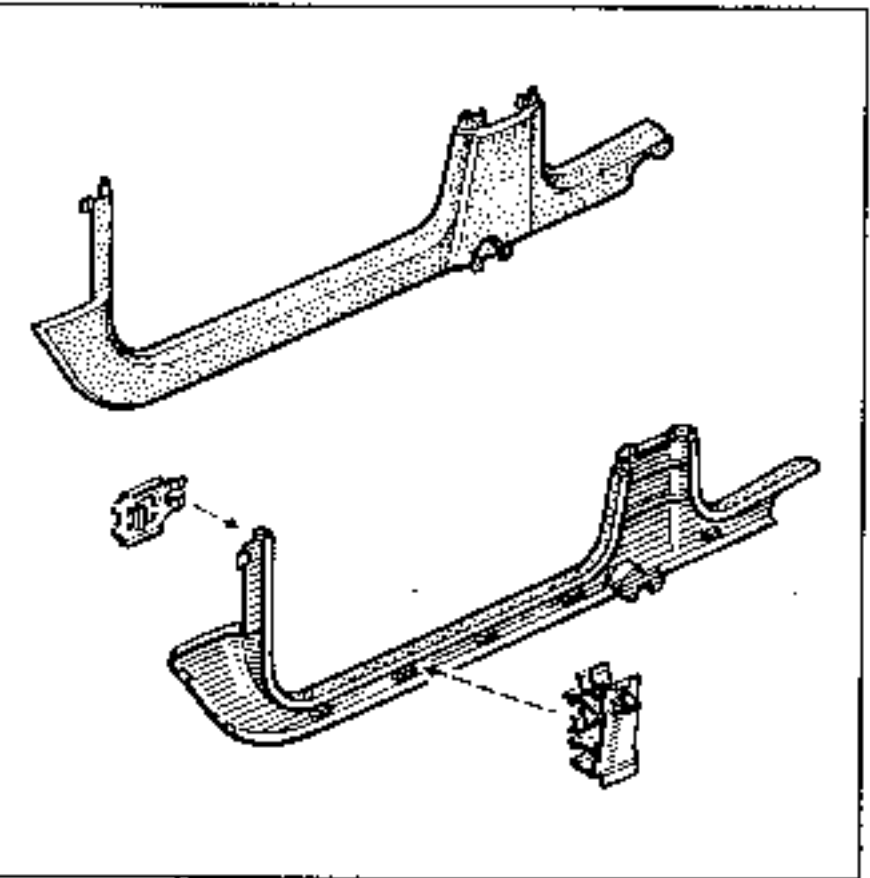
Disconnect the battery.

Remove:

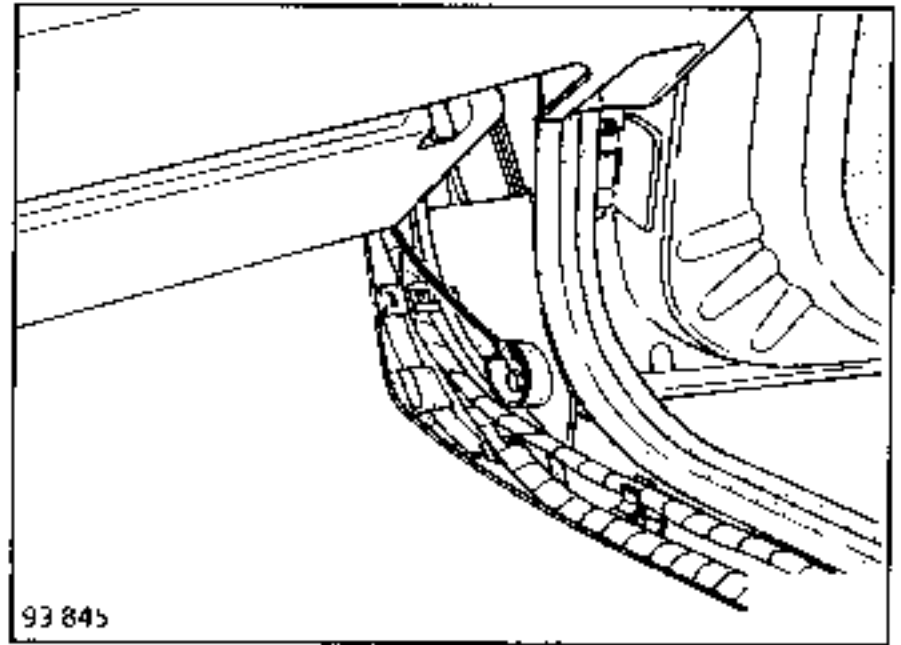
- the steering wheel;
- the centre console (4 screws A)



- the 2 front pillar lower trims.



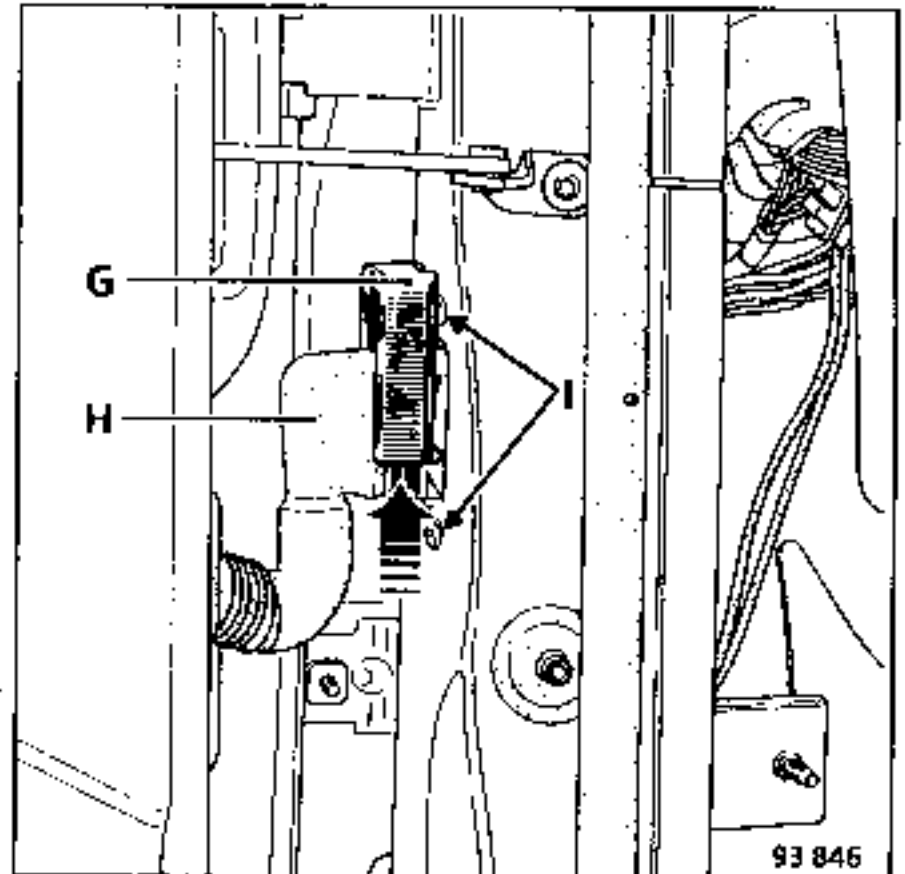
Disconnect the two earth leads



93 845

Disconnect the electric harness from the front pillars as follows:

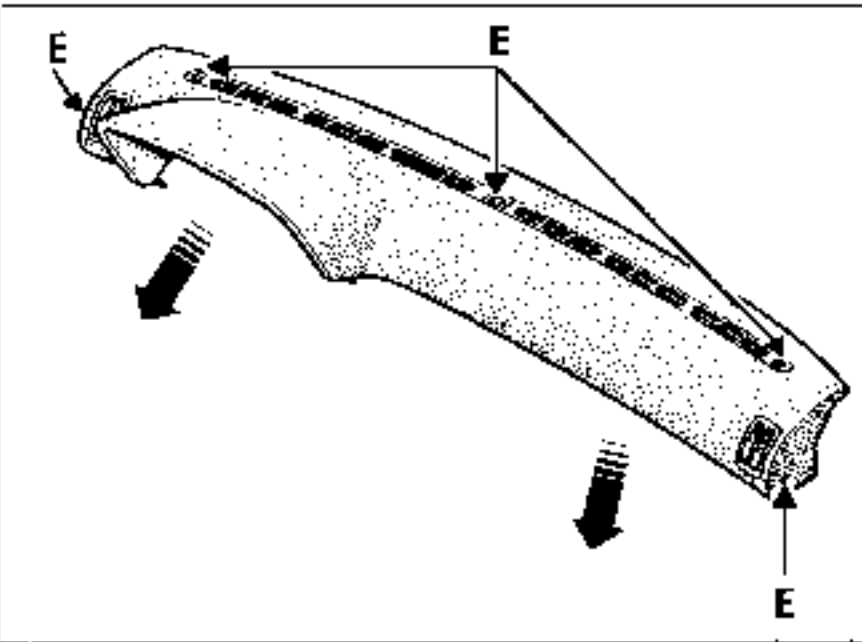
- push plastic (G) upwards;
- release connector (H);
- remove screws (I).



93 846

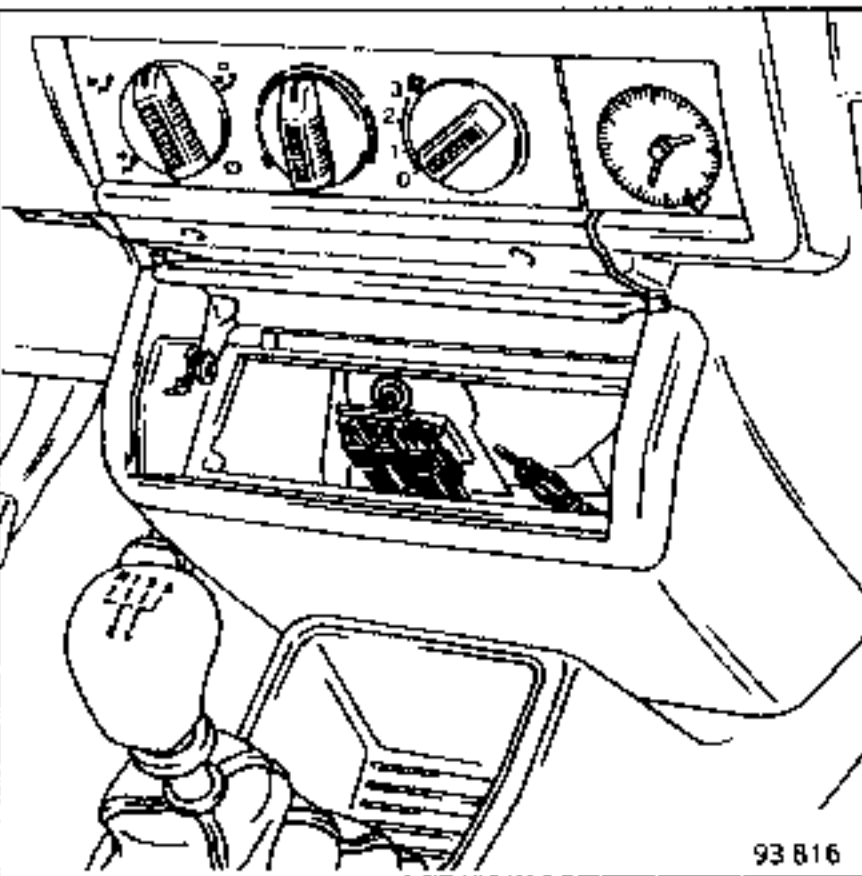
Remove the upper part of the dashboard by taking out 5 screws (E).

Pull the dashboard backwards so as to separate it from the assembly.



Remove the radio using the appropriate drifts (if necessary).

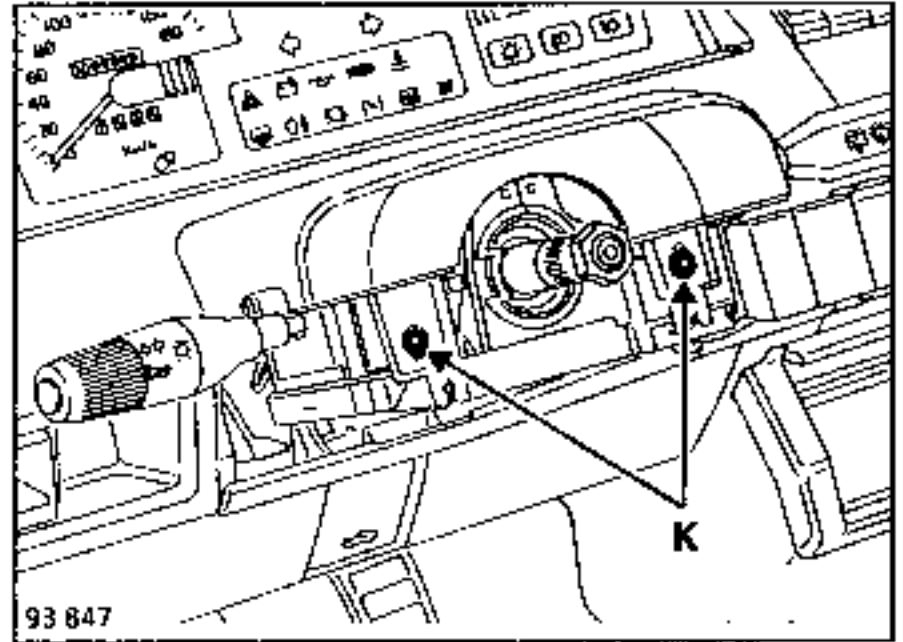
Unclip the connector inside the console.



Remove the half-casings under the steering wheel.

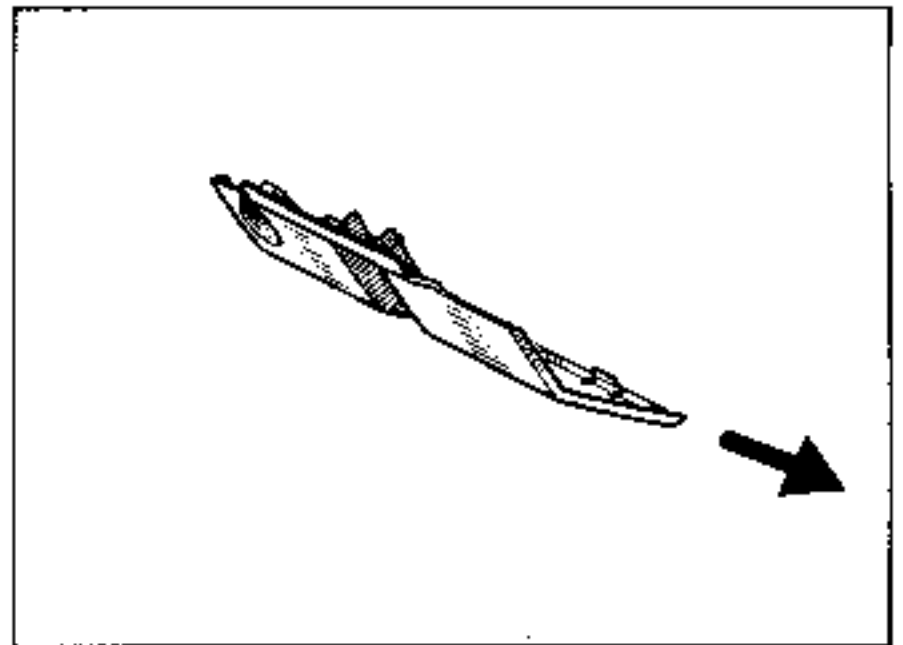
Start at the lower section after removing the 3 screws and unclip it carefully.

Remove the upper part by taking out the 2 screws (K).



Remove:

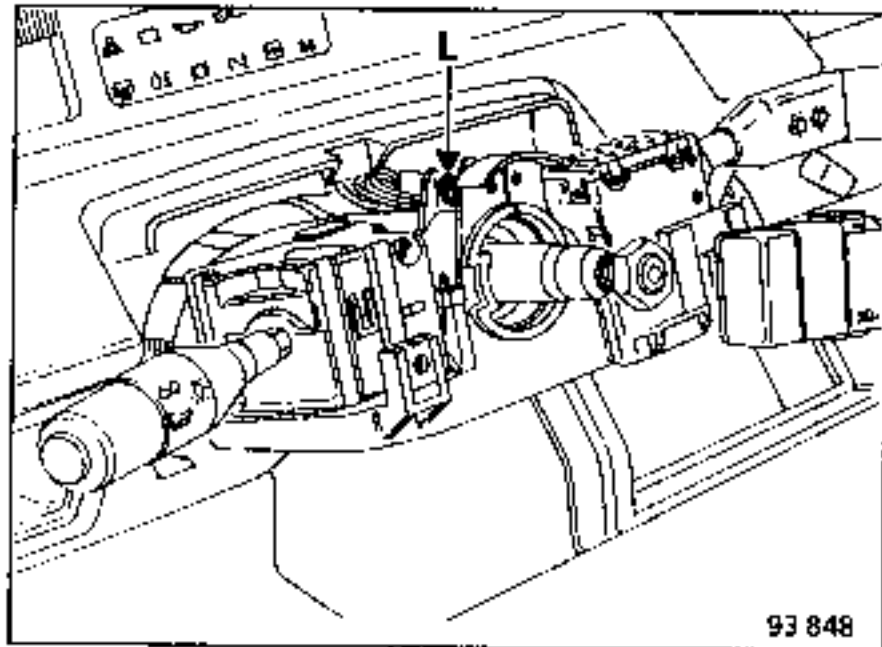
- the steering column cover
- the 2 upper screws and push downwards to unclip.



Remove the control unit .

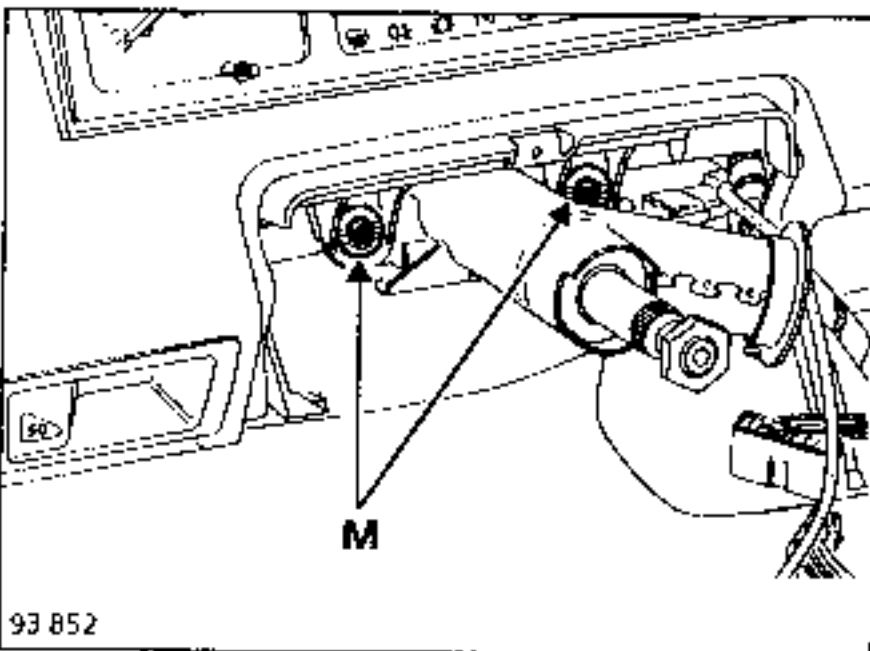
Slacken screw (L) and pull backwards.

Disconnect the connectors.

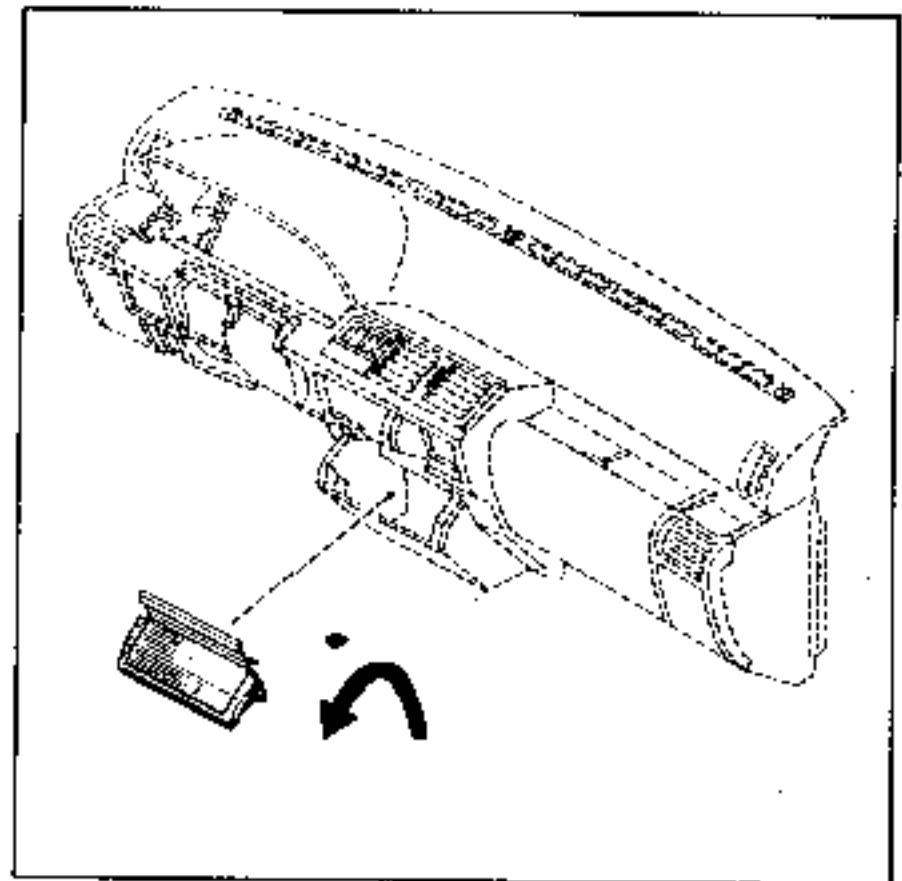


Remove:

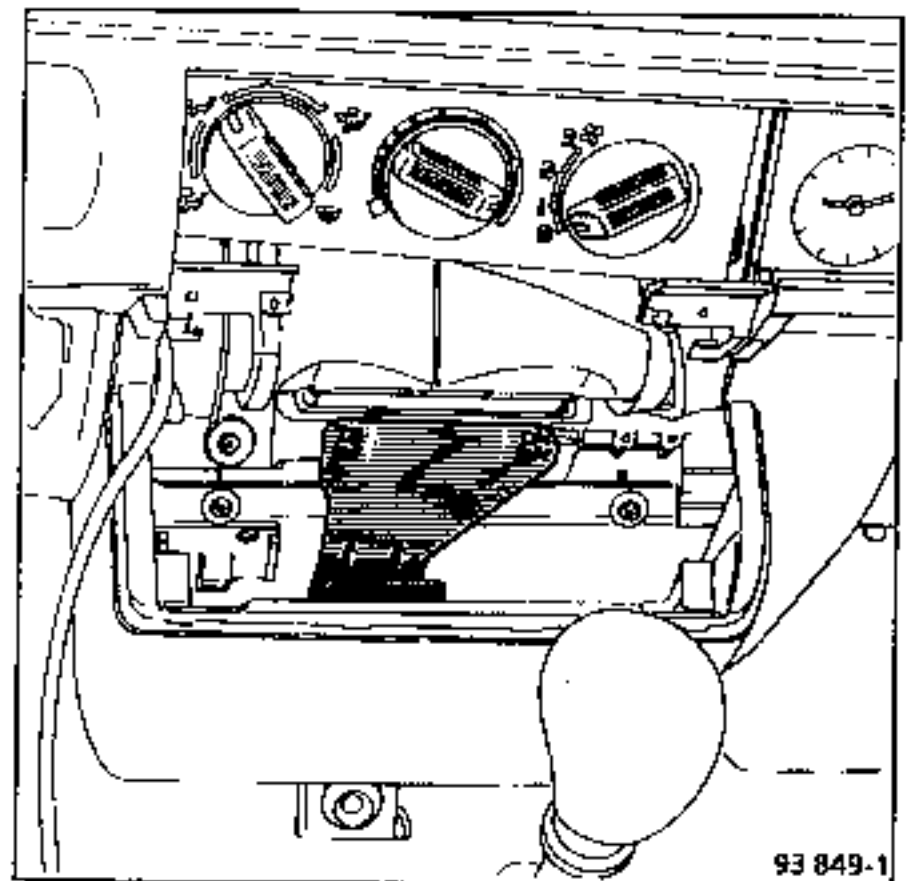
- the 2 screws (M);



- the upper part of the radio console (2 screws) and tilt it backwards;



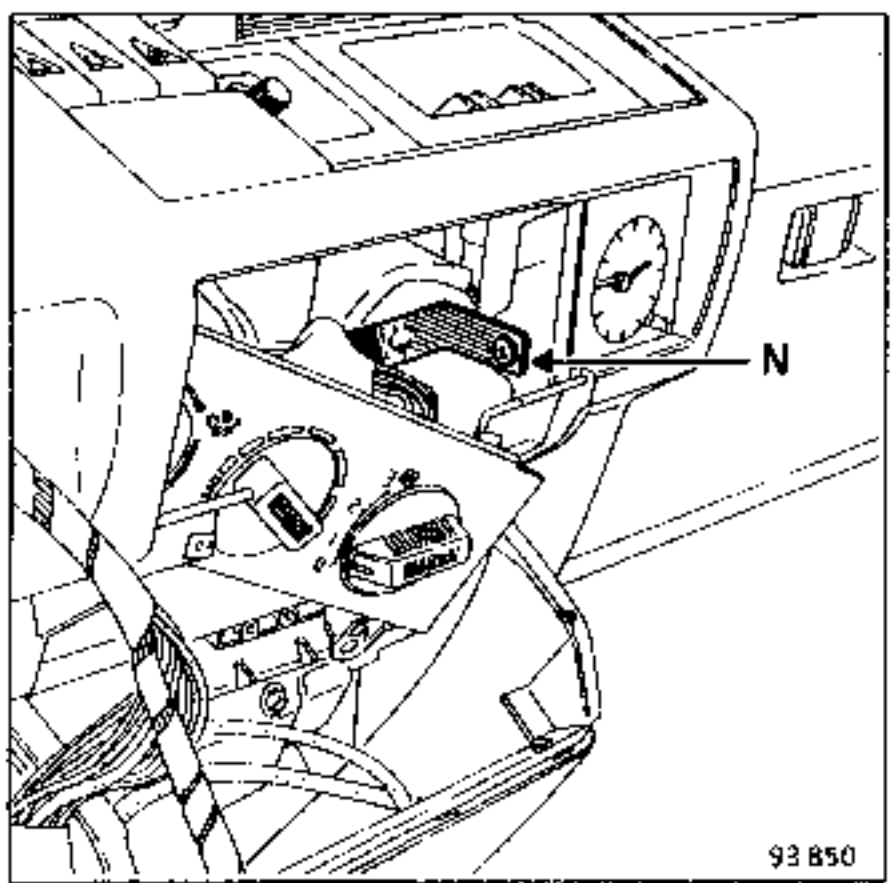
- the metal plate inside the console;



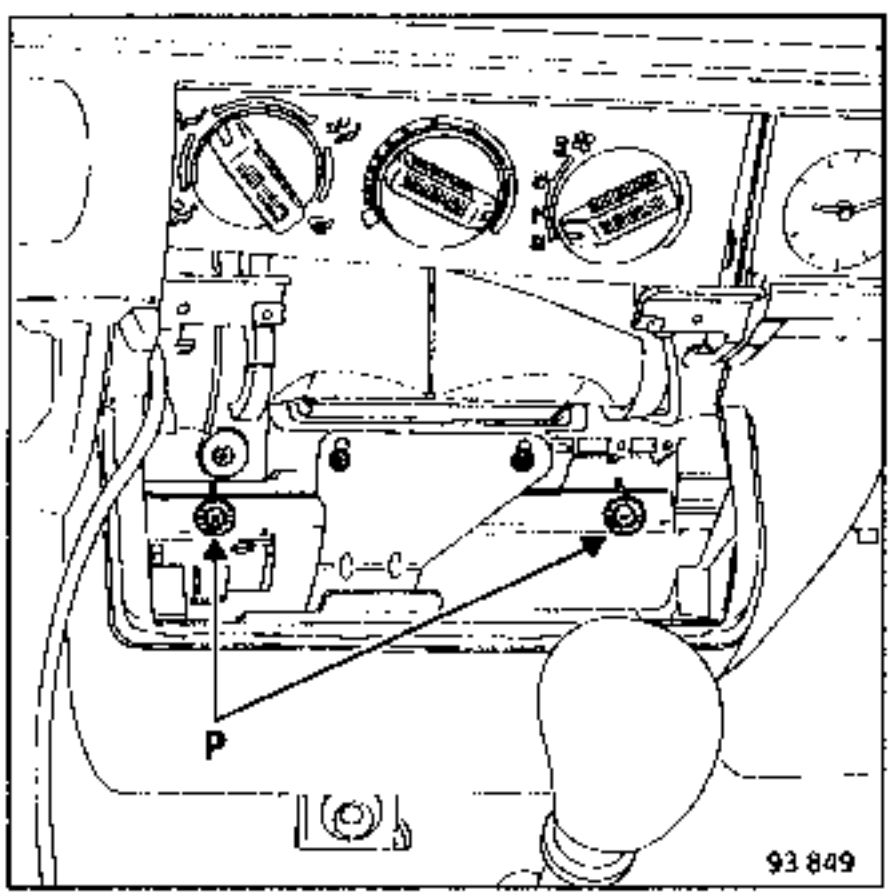
- the heating control panel (2 screws).

leave the cable controlled assembly coupled to the blower device.

- Remove:
- the metal mounting screw at the clock side (N);

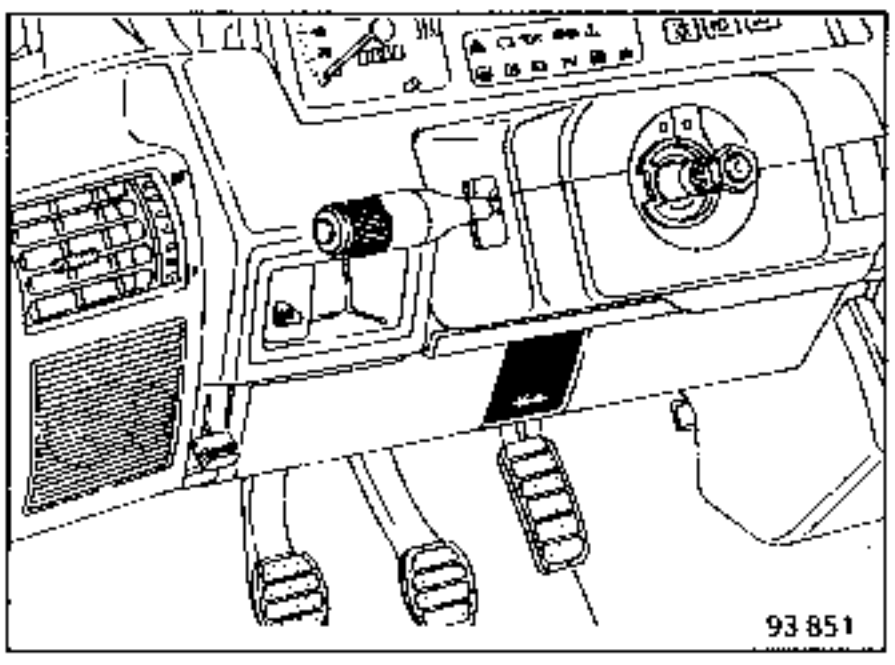


- the 2 mounting screws (P) from the blower device.

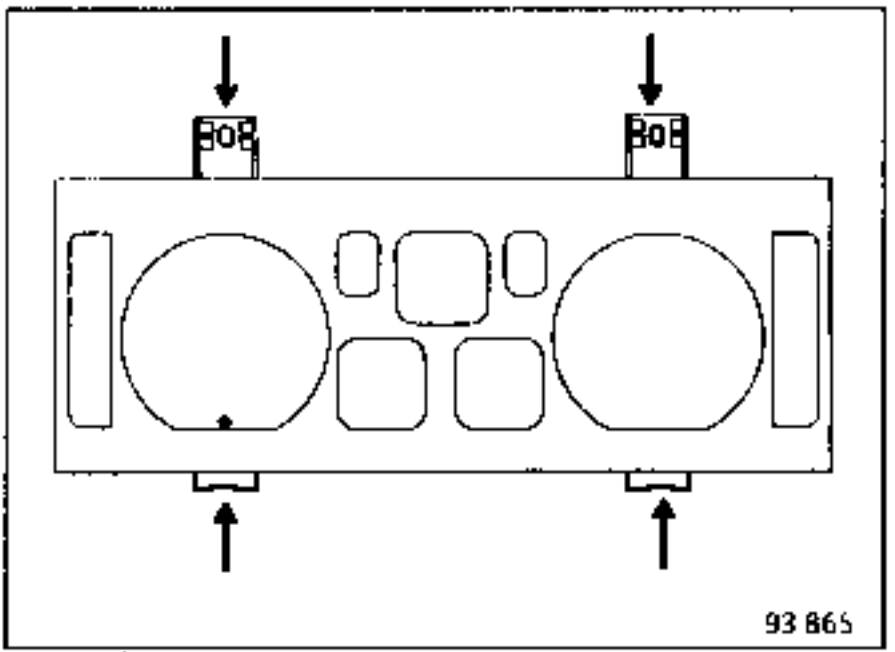


Unfasten the choke cable (if necessary) (at engine end).

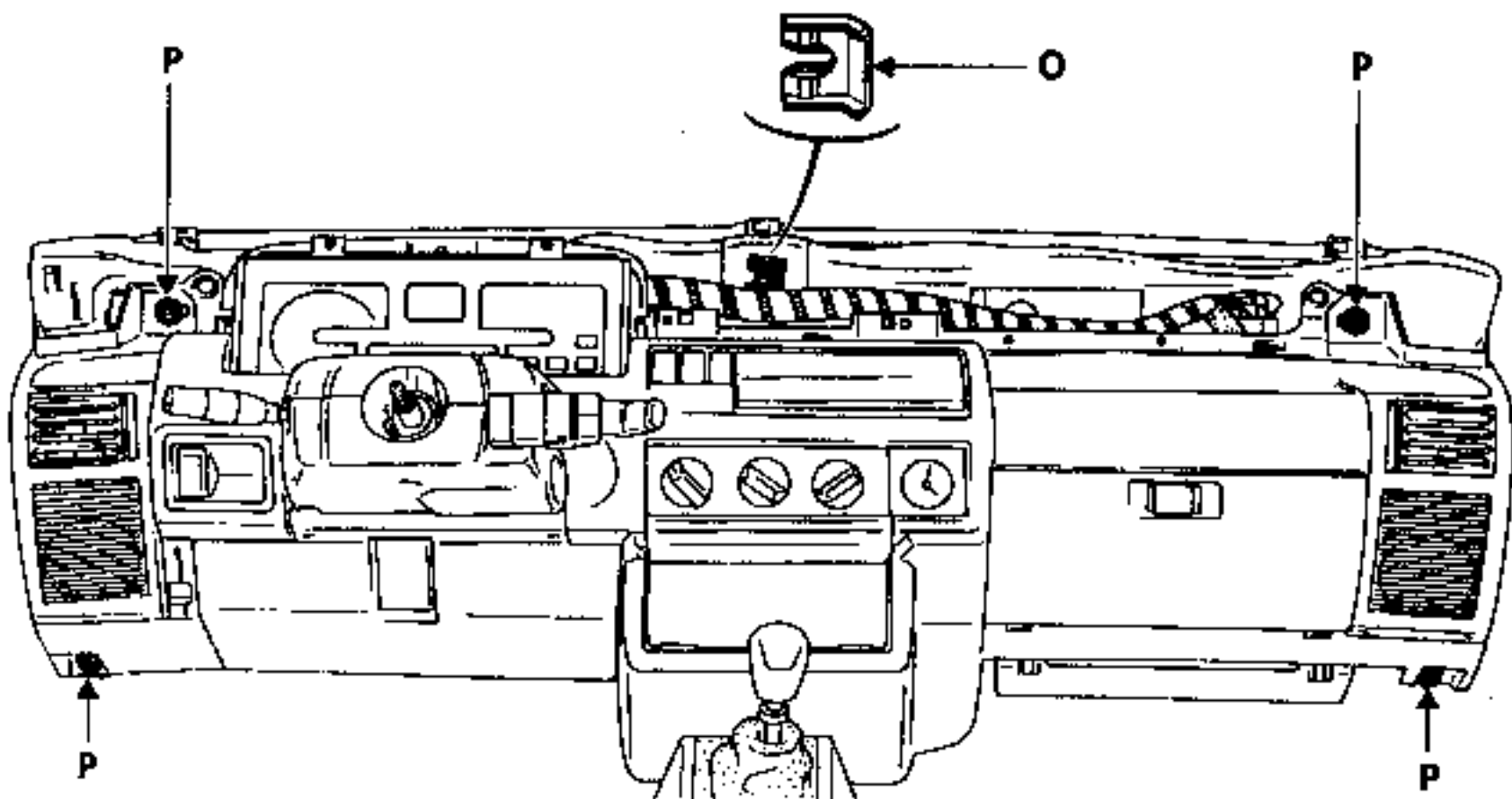
- Remove;
- the bonnet opening control;



- the instrument panel, unfastening the 4 screws;



- plastic clip (O) and mountings (P).

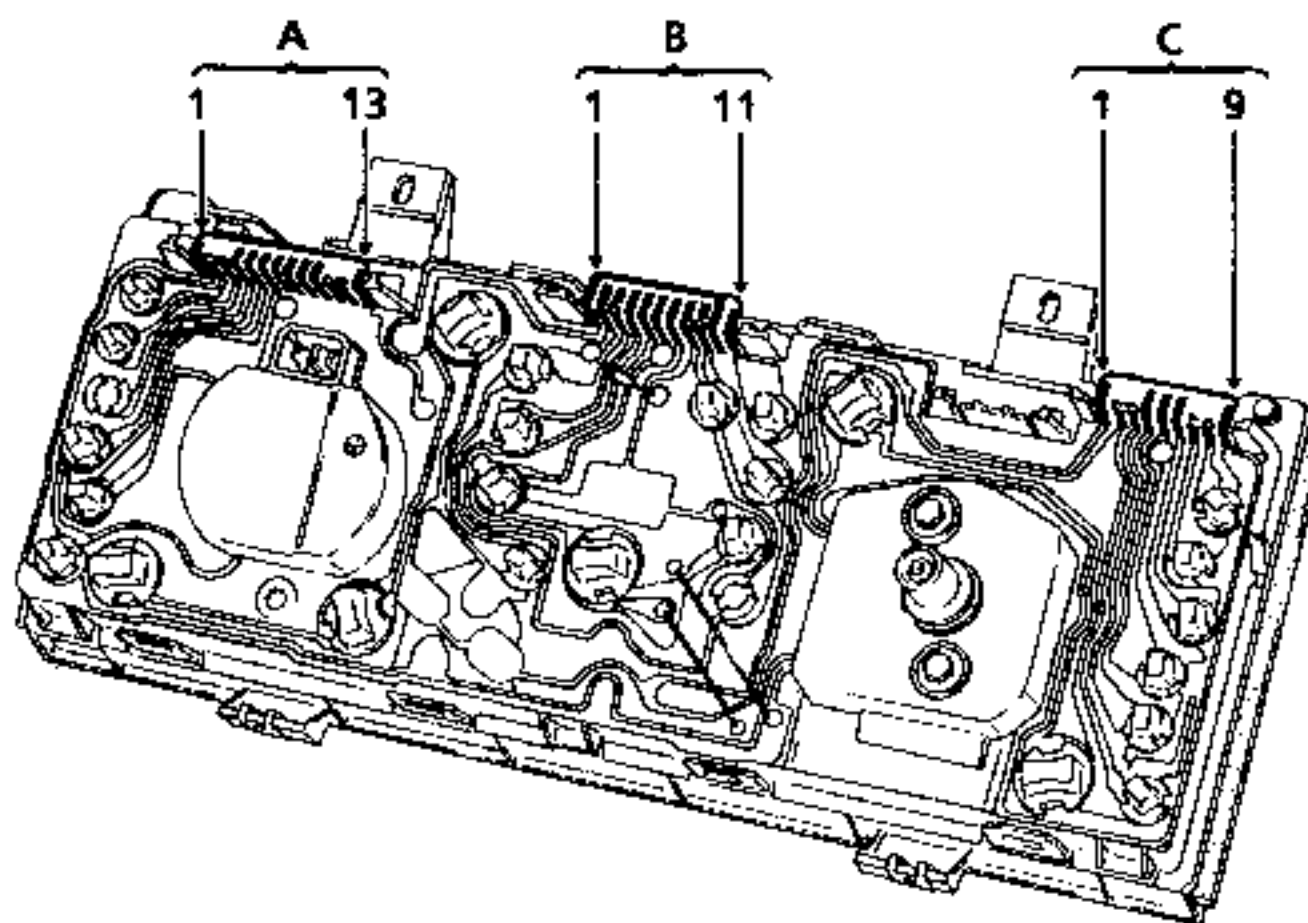


93 884

Gently release the dashboard moving it backwards so as to disconnect the upper connectors and the ignition switch connectors.

Take out the lower dashboard.

CONNECTION



93 901

Connector (A) 13 tracks

- 1 Hazard warning light tell-tale
- 2 Brake pad wear warning light
- 5 Choke flap warning light
- 6 Injection incident warning light
- 8 Rev counter data
- 13 Fuel level data

Connector (B) 11 tracks

- 1 Low fuel level warning light
- 2 Oil pressure warning light
- 3 + APC
- 4 Preheating warning light
- 5 LH direction indicator feed
- 6 Flasher unit warning light
- 7 RH direction indicator feed
- 8 Coolant temperature warning light
- 9 Nivocode brake warning light
- 11 Charging circuit warning light

Connector (C) 9 tracks

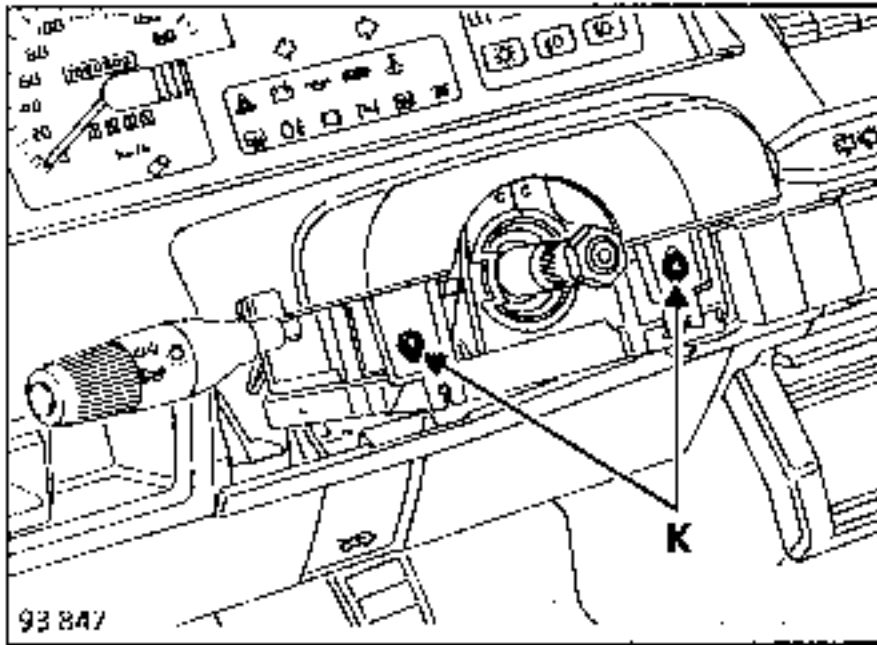
- 1 Coolant temperature data
- 2 Lighting
- 3 Main beam headlights warning light
- 4 Dipped beam headlights warning light
- 5 LH light
- 6 Front foglight warning light
- 7 Heated rear screen warning light
- 8 Rear foglight warning light
- 9 Earth

REMOVAL - REFITTING

Disconnect the battery.

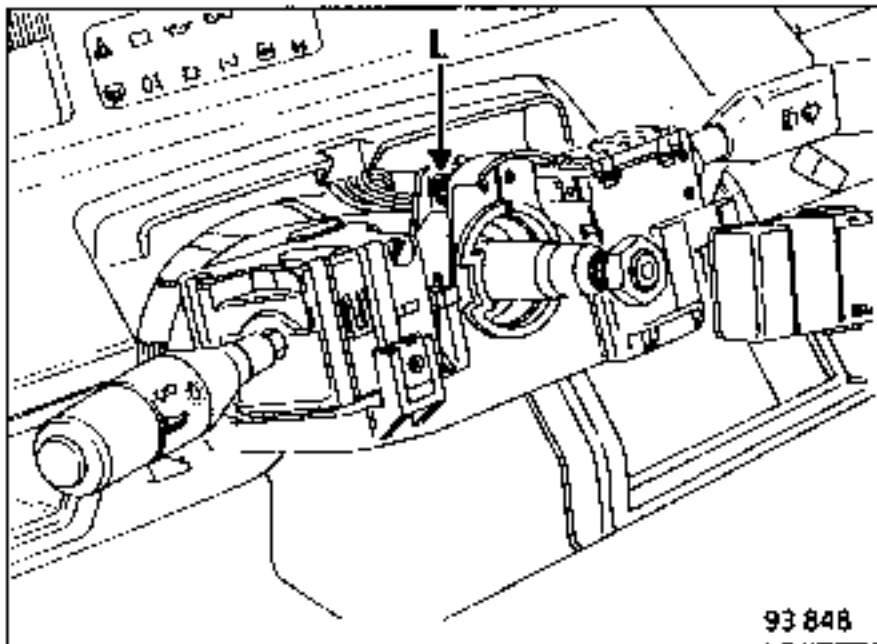
Remove:

- the steering wheel (with wheels **straight**);
- the lower casing under the steering wheel (3 screws), pulling it downwards;
- upper casing by removing the 2 screws (K);



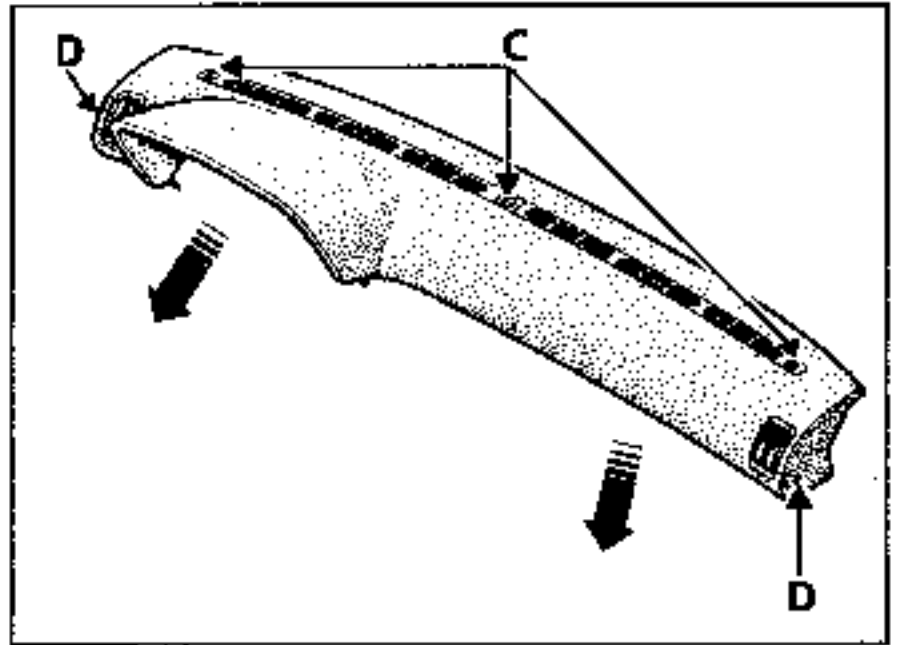
- the switch stalk holder assembly by gently slackening screw (L).

Pull the assembly backwards and leave it on the side without disconnecting the connectors.

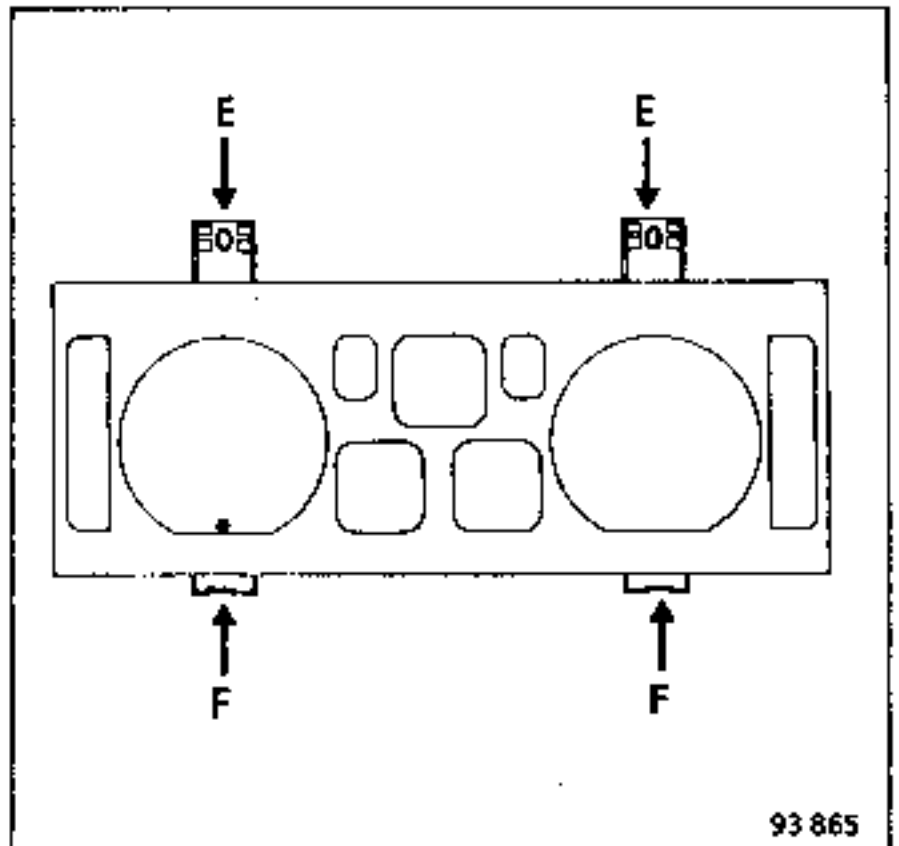


Remove:

- the dashboard cover by unfastening the 3 upper screws (C) and 2 side screws (D). Pull it towards you to release.



- Remove the instrument panel by unfastening the 2 screws (E) and 2 screws (F).



- the trim under the steering wheel (3 screws) and free it by pulling downwards to reach the speedometer cable and disconnect it.

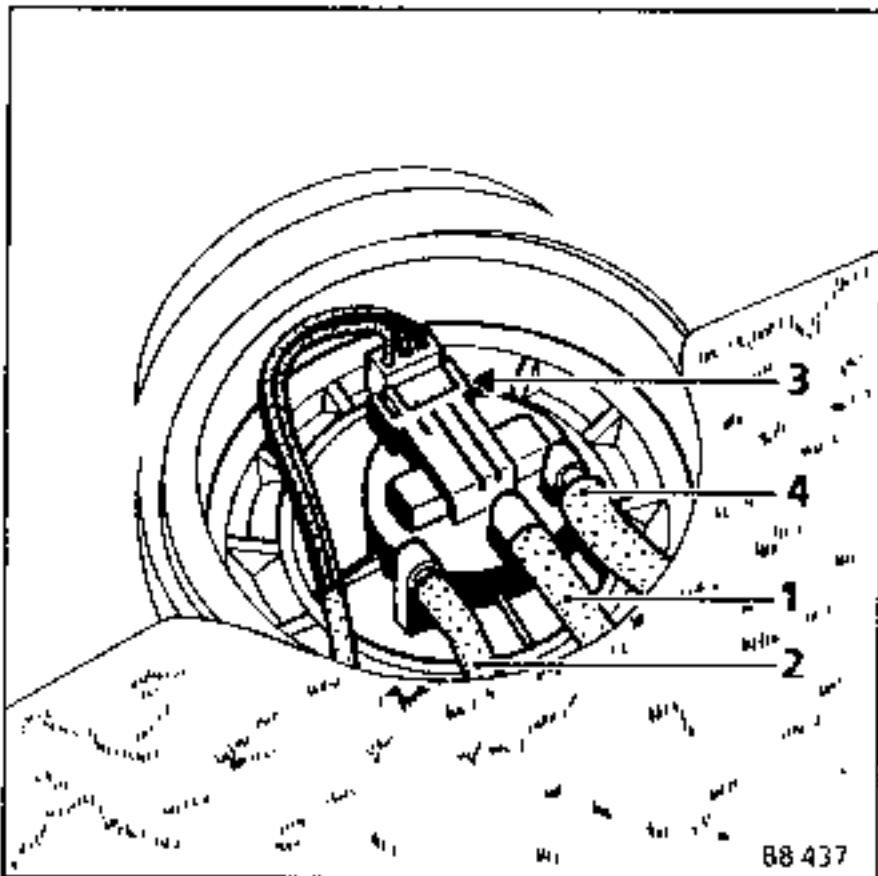
Release the instrument panel and disconnect the connectors.

REMOVAL

Disconnect the battery

Do not use screwdrivers or hammers since there is a risk of damaging the notches on the plastic nut and the sender unit.

Access: tilt the rear seat and remove the blanking cover.

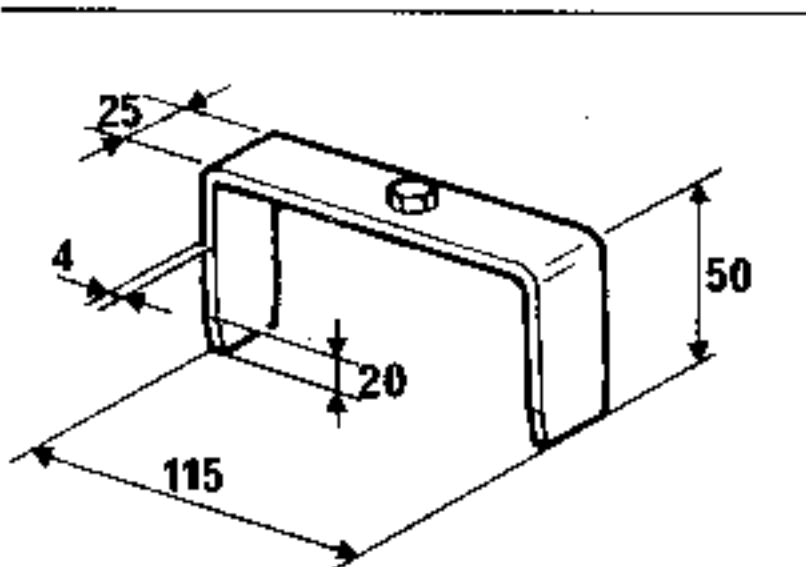


- 1 Feed hose
- 2 Return hose
- 3 Connector
- 4 Vent to atmosphere

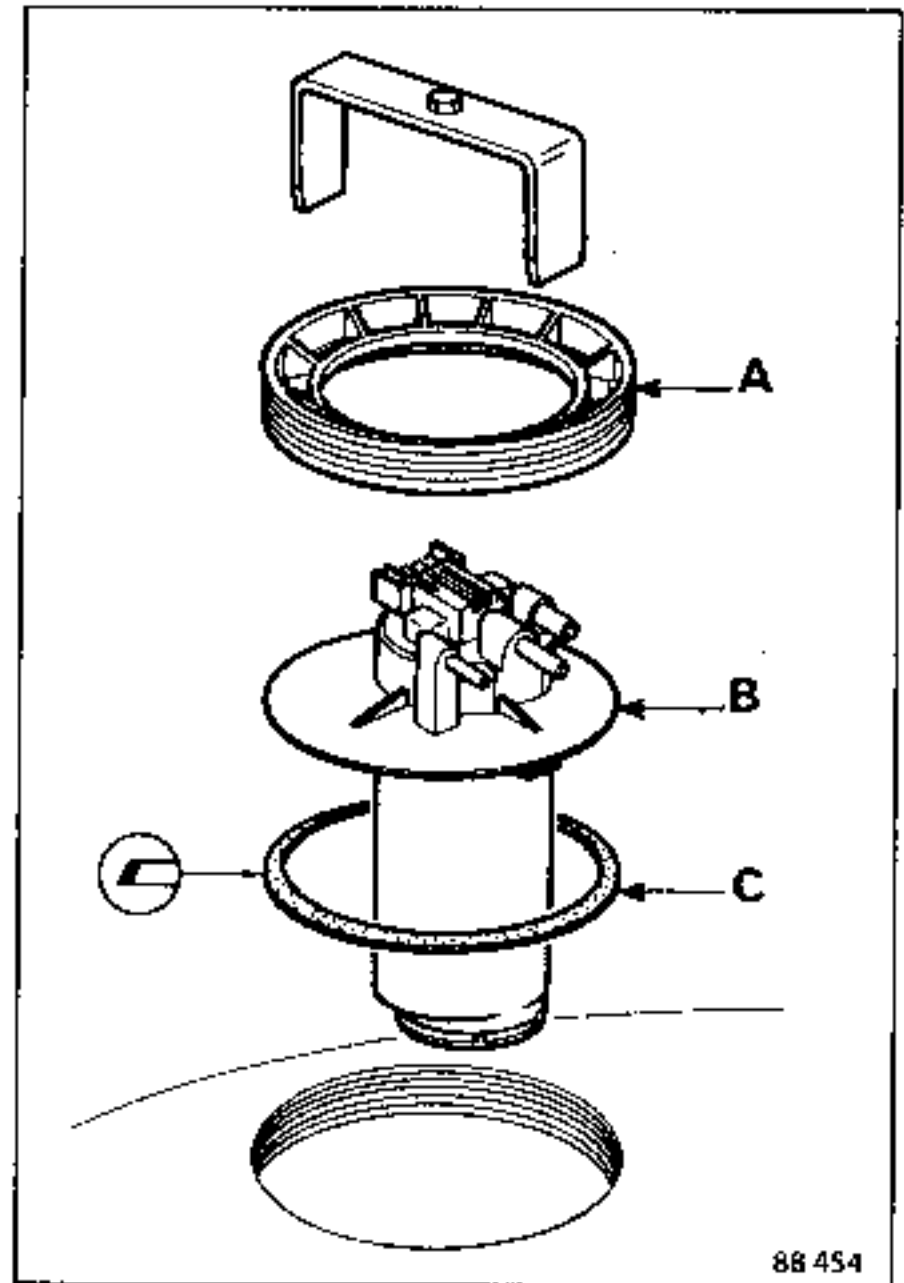
REFITTING

Make up a tool locally to ensure that the sensor is torque tightened to 6 to 7 daN.m

Making up the tool:



Drill a hole in the centre of a flat piece of iron 25 X 4 X 210 mm and weld a hexagon head bolt, 13 mm across flats. Fold the bar to form a U shape. Align it so that it enters the notches in the plastic nut.



- A Nut
- B Sender Unit
- C Seal

CHECKING

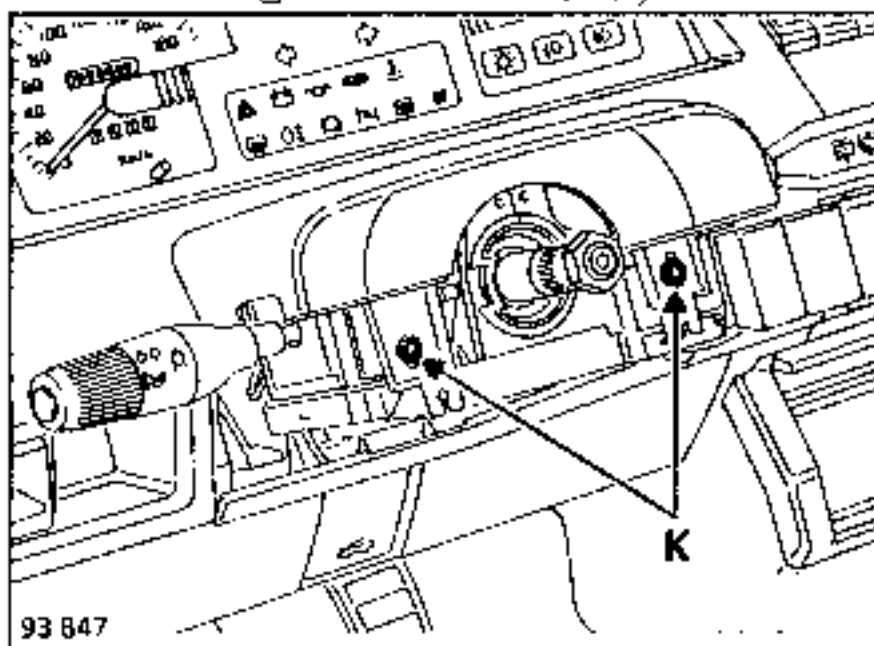
Reading	Values between 1 & 3 ohms
4/4	7 MAX
3/4	51 ± 5
1/2	100 ± 10
1/4	150 ± 16
Reserve	300 ± 20

REMOVAL - REFITTING - CONNECTION

Disconnect the battery.

Remove:

- the steering wheel with the wheels in line;
- the lower half casing (3 bolts), pulling it downwards;
- the upper half casing by removing 2 screws (K);

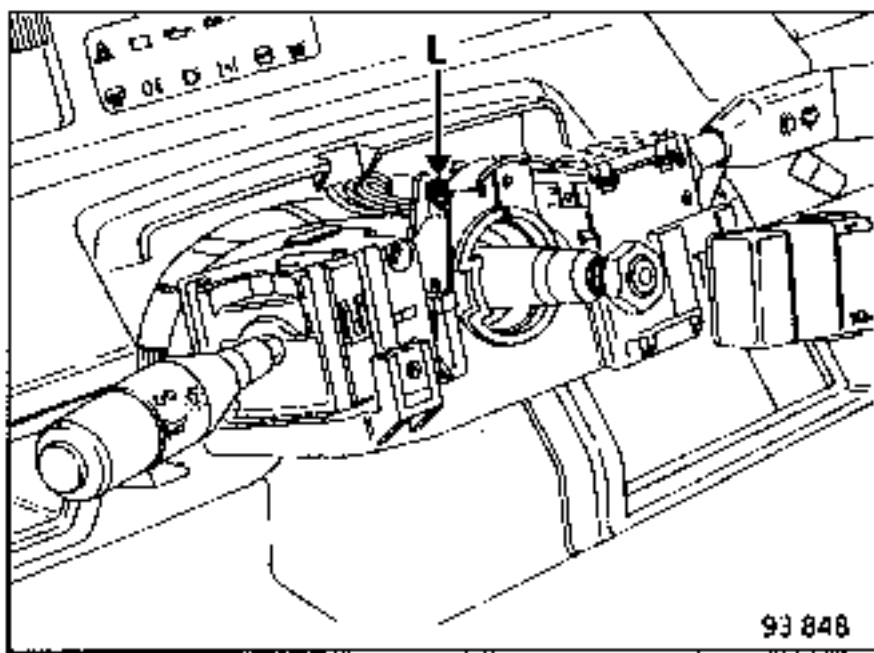


- the switch stalk holder assembly by slackening screw (L) gently.

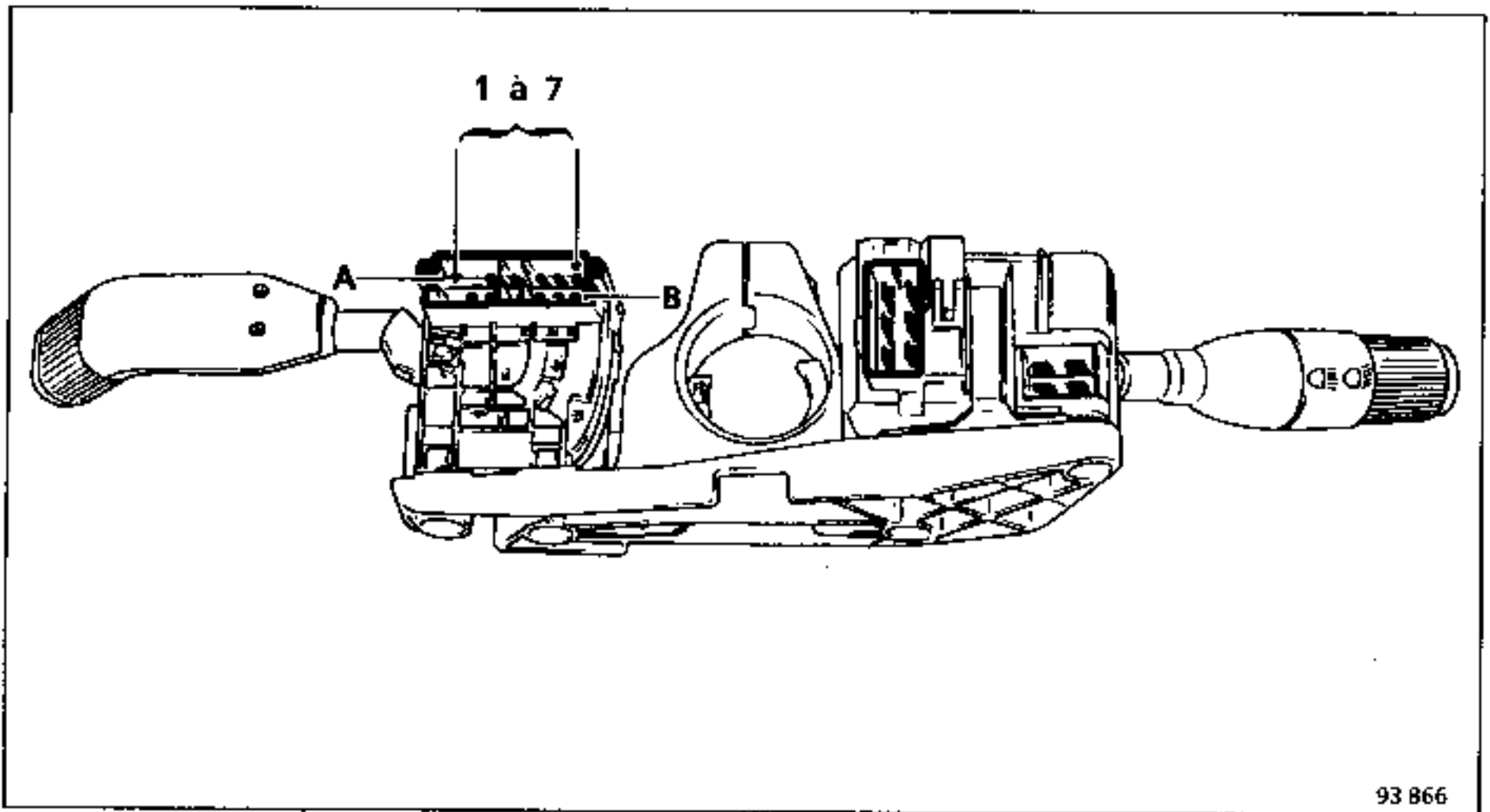
Pull the assembly backwards.

Disconnect the windscreen wiper switch stalk connector.

Remove the 2 screws holding the switch stalk on the mounting.



CONNECTION



The windscreen - rear screen wiper switch stalk

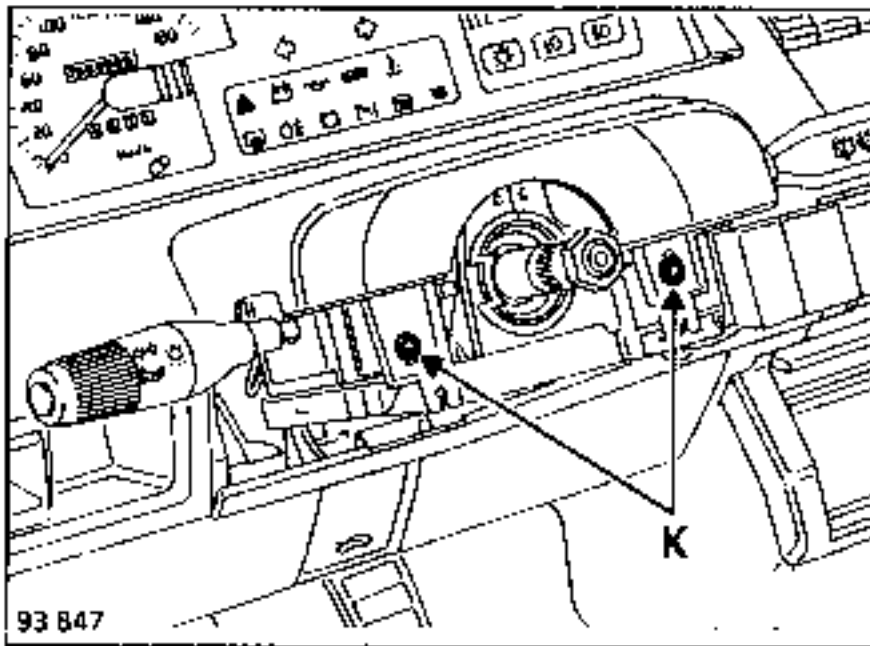
Track	Description
A1	Windscreen wiper + APC
A2	Windscreen wiper fast speed
A3	Windscreen wiper normal speed
A5	Timed normal speed
A6	Front timer
A7	Windscreen wiper "Park"
B1	Rear timer
B2	Not used
B3	Rear screen wiper + APC
B4	Windscreen washer pump
B5	Rear screen washer pump
B6	Not used
B7	Not used

REMOVAL - REFITTING - CONNECTION

Disconnect the battery.

Remove:

- the steering wheel with the wheels aligned;
- the lower half casing (3 screws), pulling it downwards;
- the upper half casing, 2 screws (K);

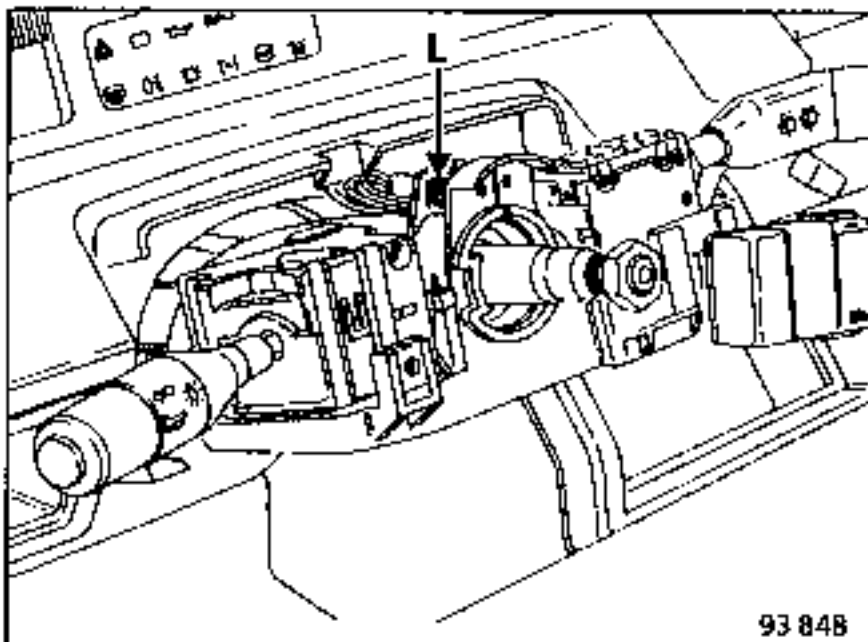


- the switch stalk holder assembly by slackening screw (L) gently.

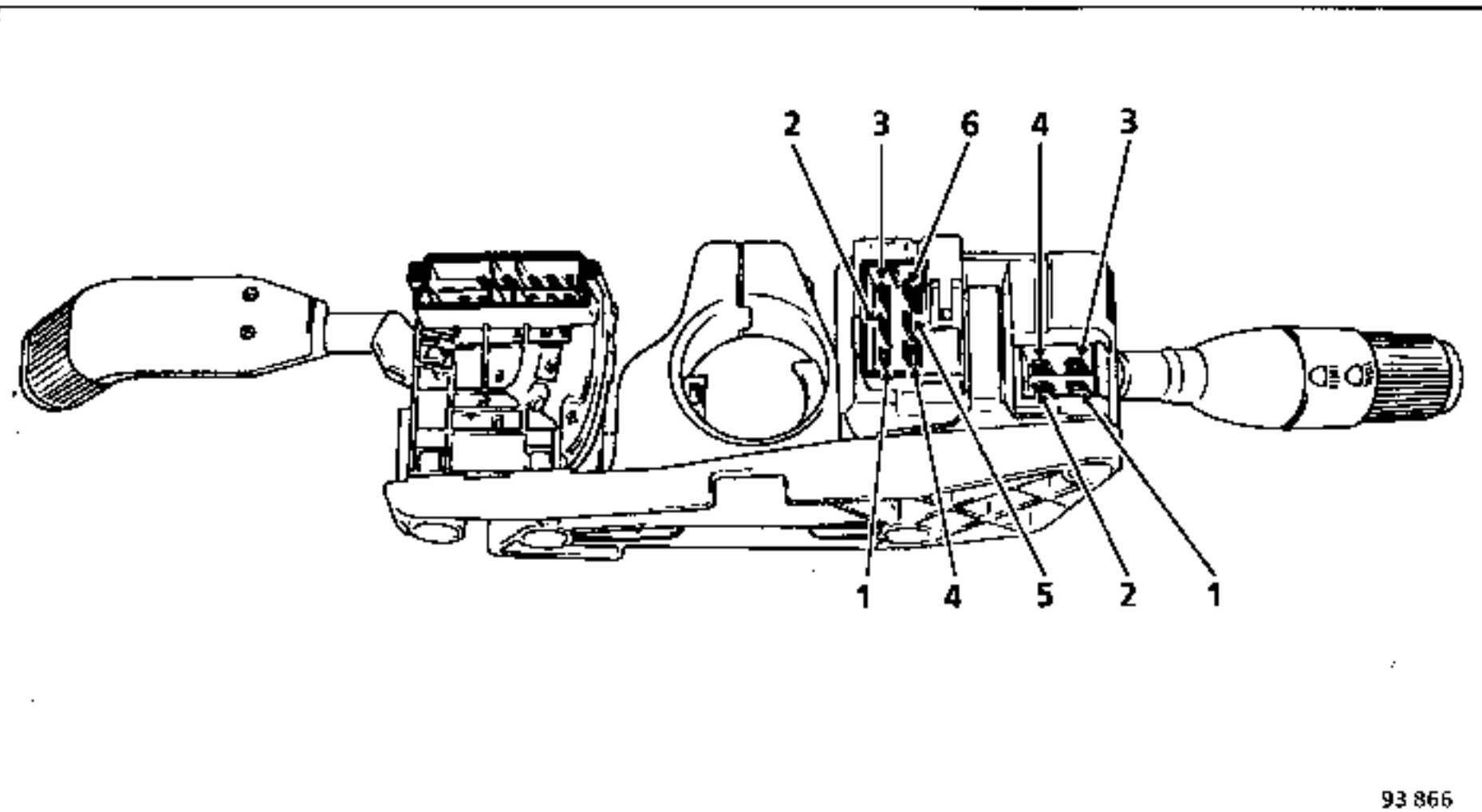
Pull the assembly backwards.

Disconnect the light control switch stalk connector.

Remove the 2 screws holding the switch stalk on the mounting.



CONNECTION



Light control switch stalk

Black 6 way connector

Track	Description
1	Horn - APC
2	Rear foglight
3	+ AVC
4	RH direction indicators
5	Flasher unit
6	LH direction indicators

Black 4 way connector

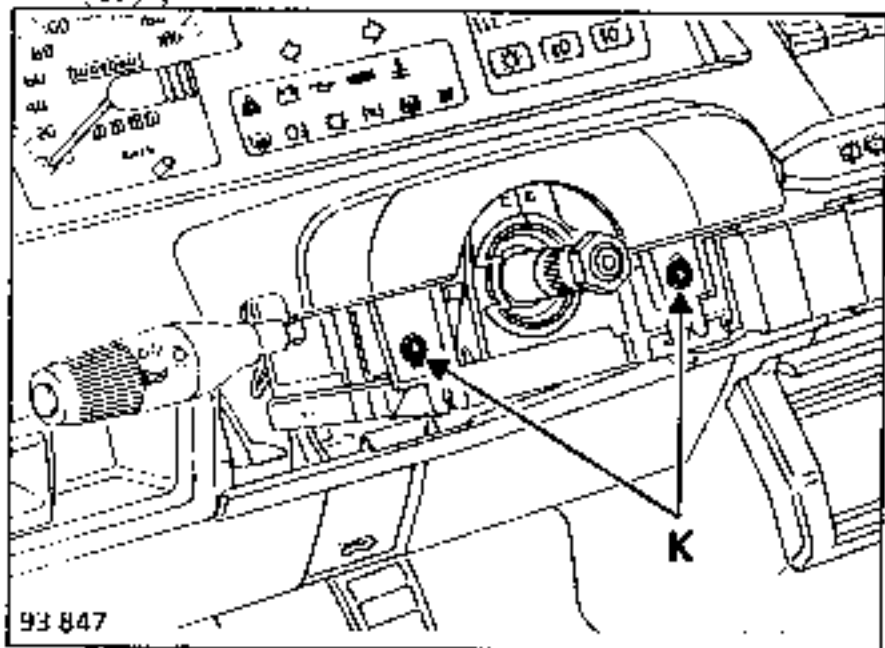
Track	Description
1	Main beam headlights
2	Dipped beam headlights
3	- AVC
4	Side and rear lights

REMOVAL - REFITTING - CONNECTION

Disconnect the battery.

Remove:

- the steering wheel with the wheels aligned;
- the lower half casing (3 screws), pulling it downwards;
- the upper half casing, 2 screws (K);



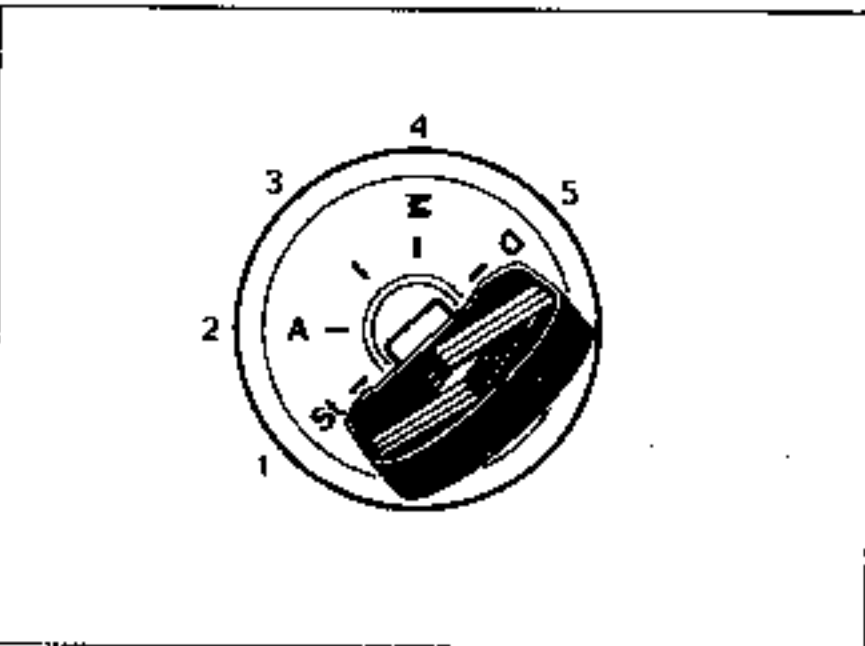
- the trim under the steering wheel (3 screws) pulling it downwards.

Disconnect the 2 connectors from the starter switch.

Remove the starter switch securing screw.

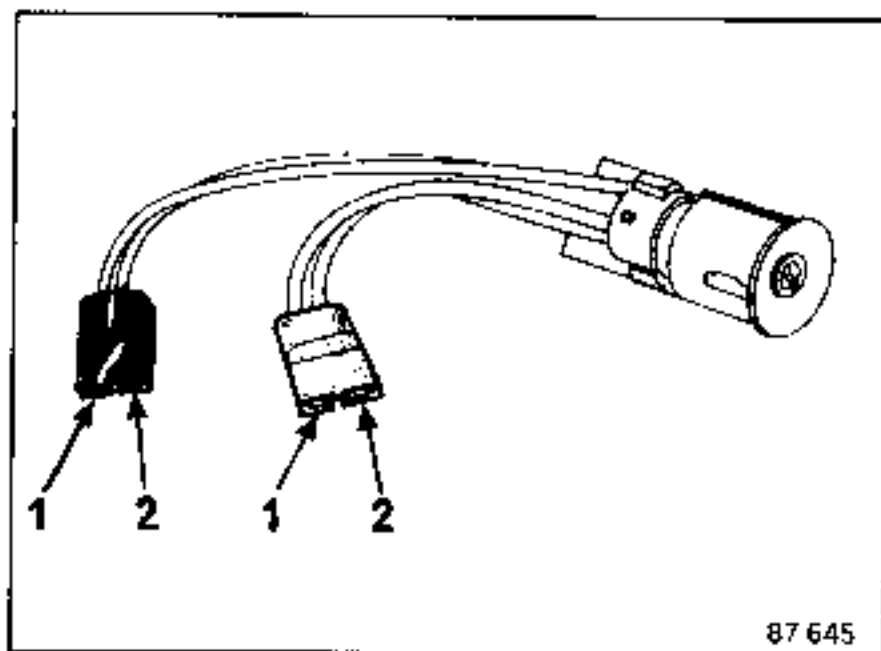
Turn the key to the "garage" position or setting (3).

Press on the retaining lugs and take out the starter switch.



On refitting, ensure that the harness is routed correctly.

CONNECTION



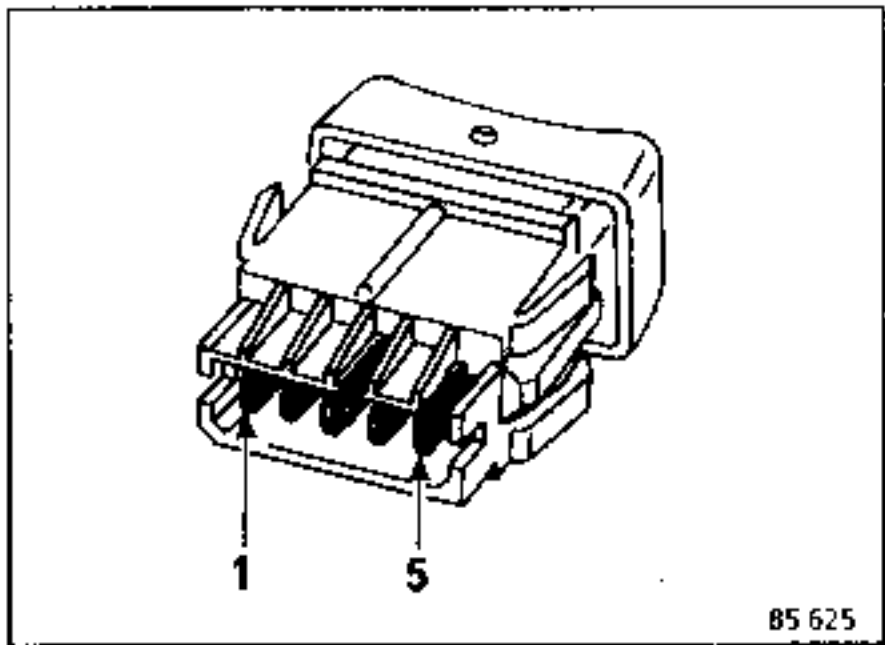
Black connector

Track	Description
1	- before ignition
2	Starter

Grey connector

Track	Description
1	Accessories
2	+ after ignition

DOOR LOCKING

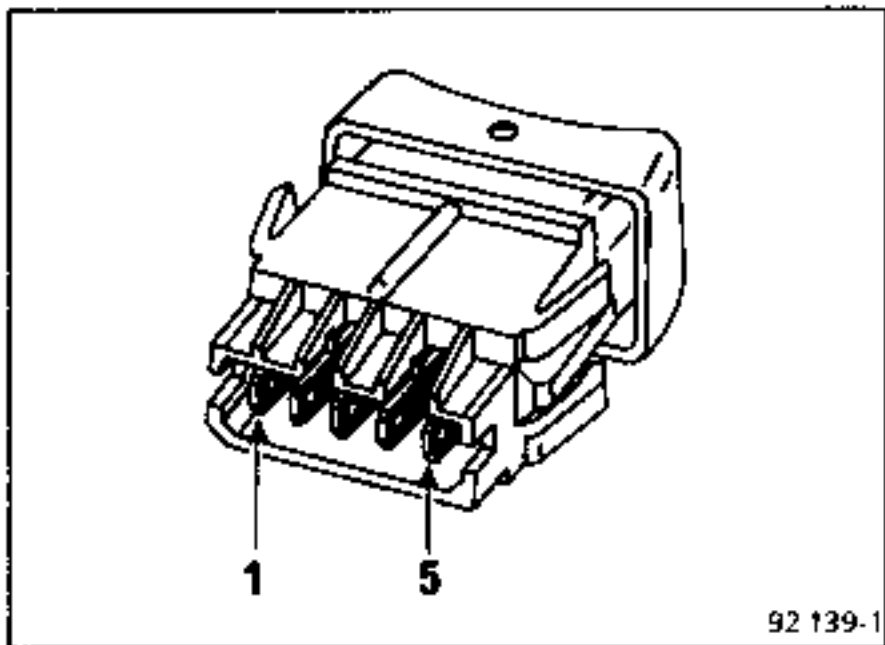


85 625

CONNECTION

Track	Description
1	Door opening
2	Lighting +
3	+ before ignition
4	Earth
5	Door closure

REAR FOGLIGHT

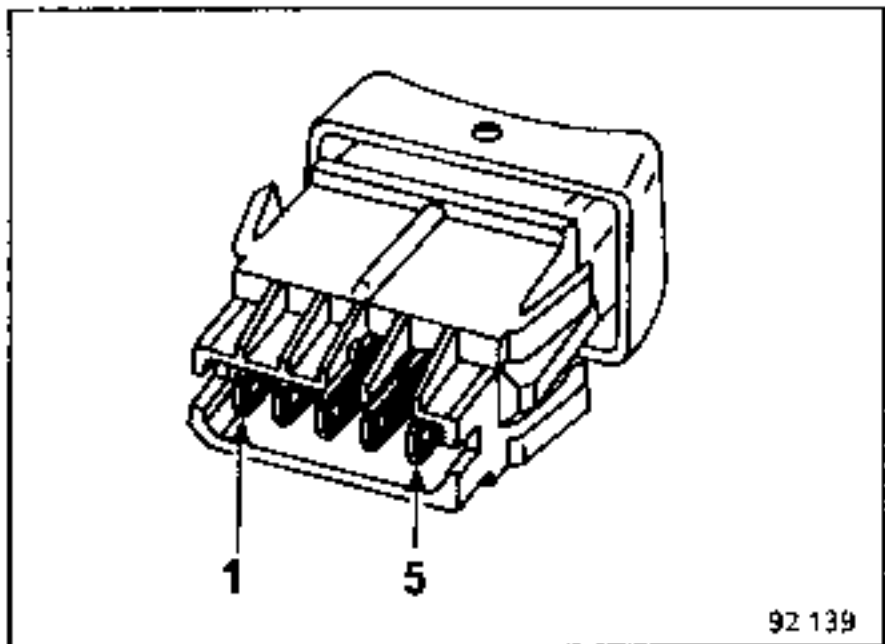


92 139-1

CONNECTION

Track	Description
1	Warning light
2	Rear foglight +
3	Rear foglight +
4	Lighting -
5	Earth

REAR SCREEN

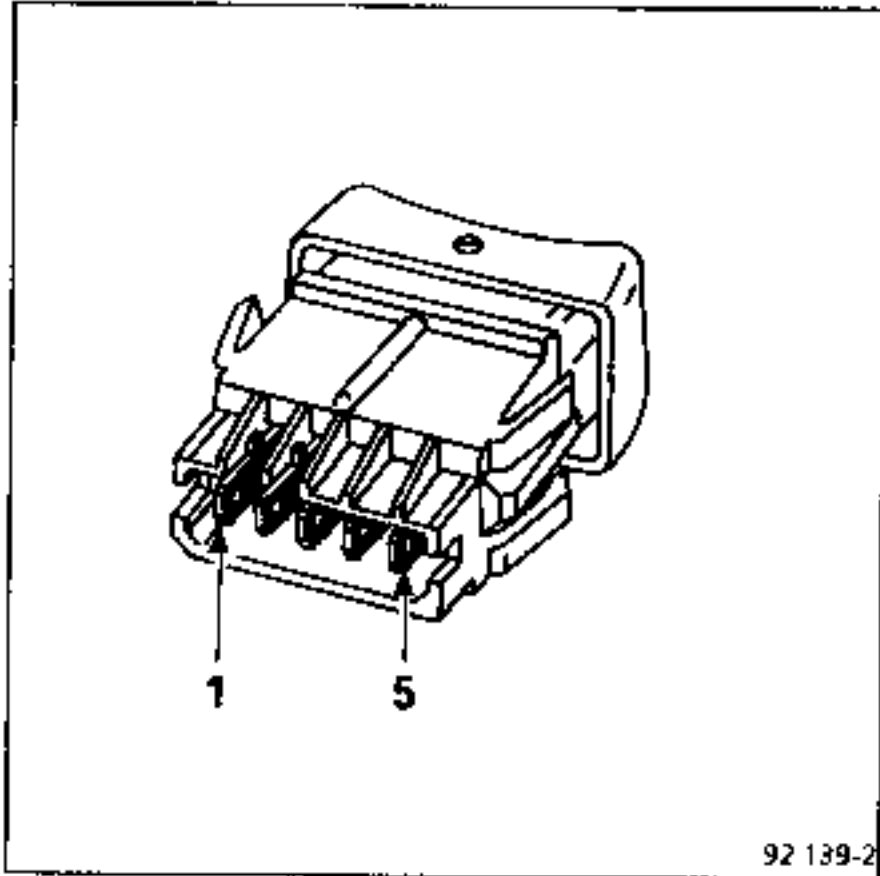


92 139

CONNECTION

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

FRONT FOGLIGHTS

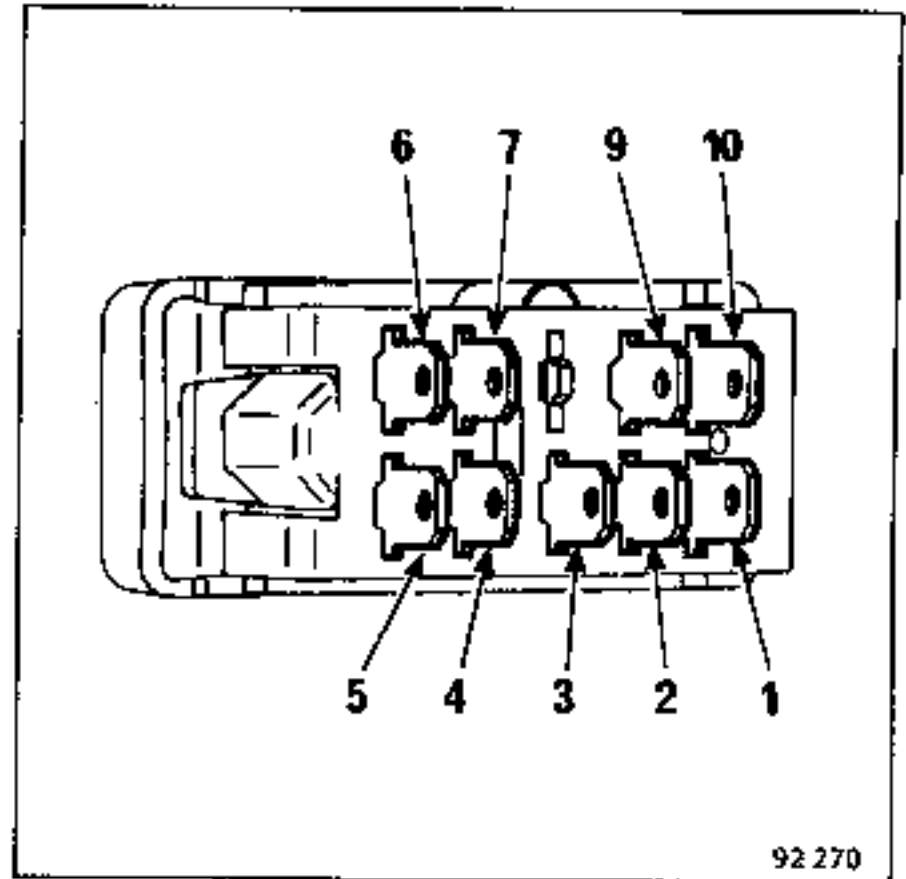


92 139-2

CONNECTION

Track	Description
1	Not used
2	Front foglight relay +
3	Lighting +
4	Lighting -
5	Earth

HAZARD WARNING LIGHTS

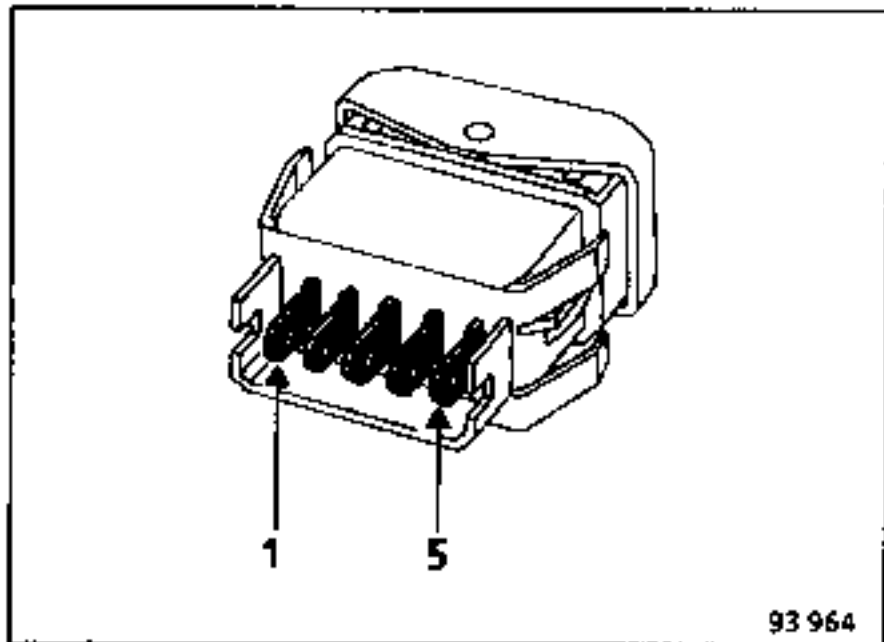


92 270

CONNECTION

Track	Description
1	Lighting -
2	+ after ignition
3	+ before ignition
4	Flasher unit
5	LH direction indicator
6	RH direction indicator
7	Hazard warning lights bell-tale
9	Direction indicator fuse +
10	Earth

DRIVER'S WINDOW WINDER

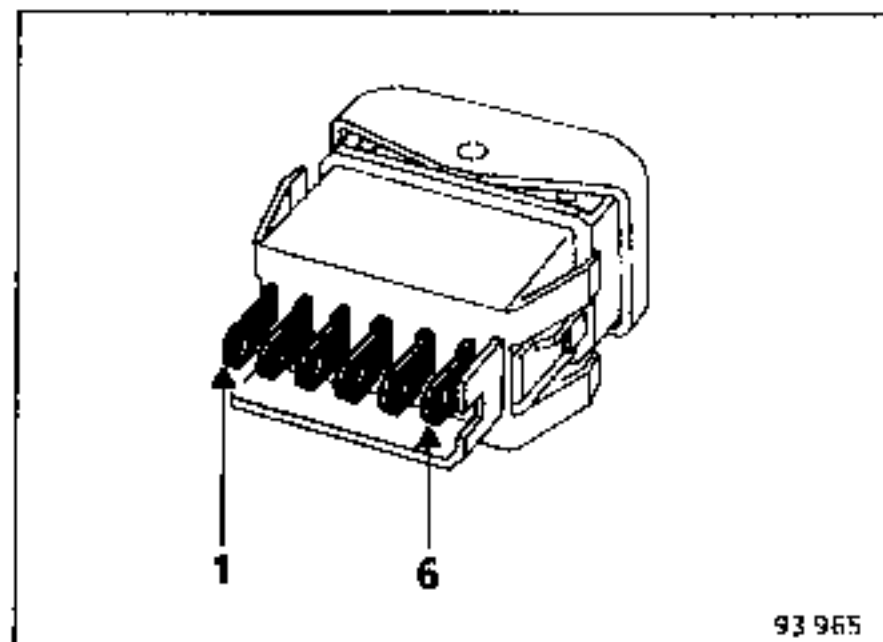


93 964

CONNECTION

Track	Description
1	Motor
2	Earth
3	- after ignition
4	Lighting +
5	Motor

PASSENGER WINDOW WINDER



93 965

CONNECTION PASSENGER SIDE

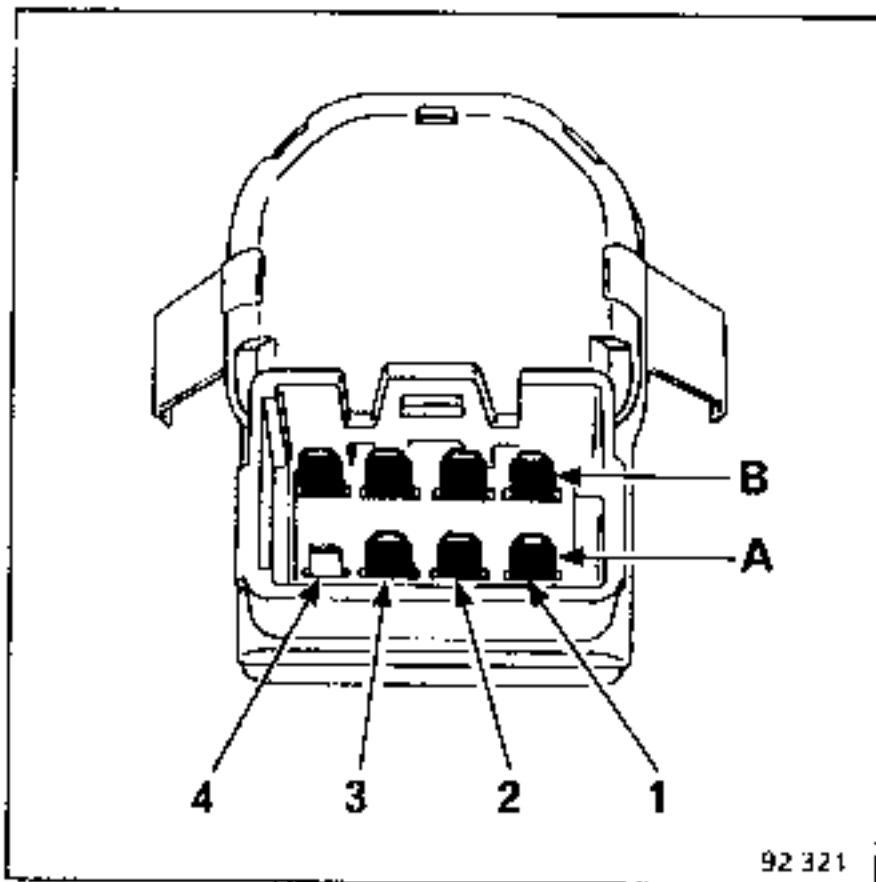
Track	Description
1	Lighting +
2	Motor
3	Two-way switch (driver's side)
4	Earth
5	Two-way switch (driver's side)
6	Motor

CONNECTION DRIVER SIDE

Track	Description
1	Lighting +
2	Two-way switch (passenger side)
3	+ after ignition
4	Earth
5	+ after ignition
6	Two-way switch (passenger side)

To remove these switches, the door trays must be dismantled.

REAR VIEW MIRROR SWITCH



CONNECTION

Track	Description
A1	Rear view mirror directing (1)
A2	Earth
A3	Rear view mirror directing (2)
B1	Rear view mirror directing (2)
B2	Rear view mirror directing (1)
B3	Battery +
B4	Rear view mirror combined switch

REMOVAL

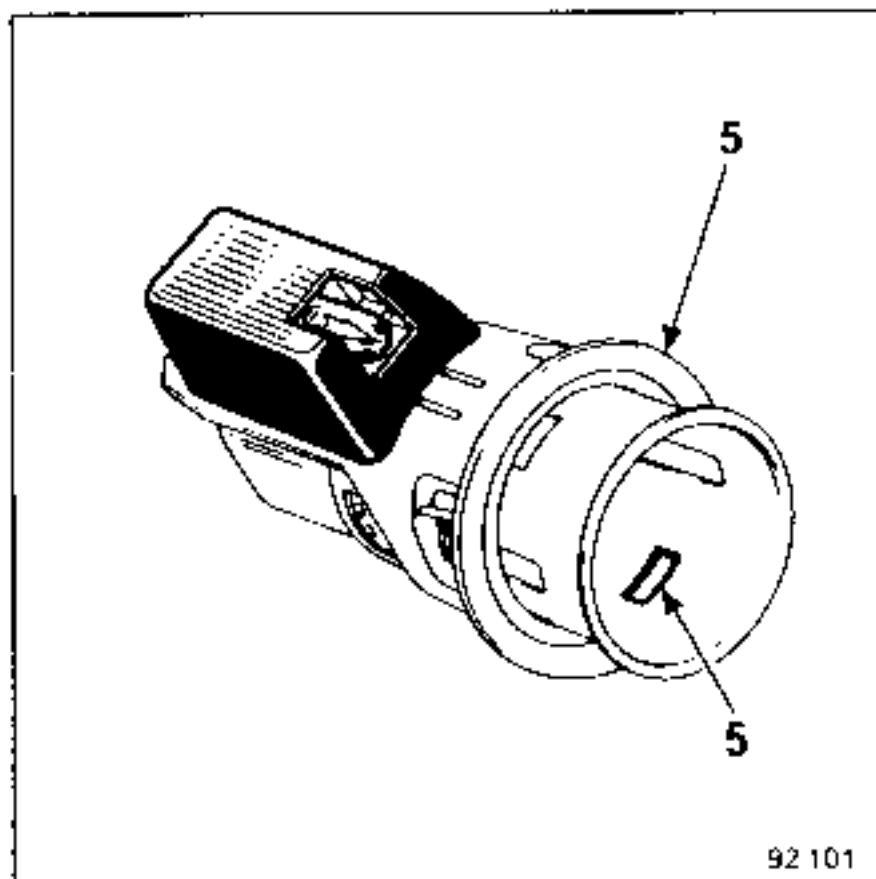
Disconnect the battery.

Remove the ashtray (from the dashboard) and remove the ashtray mounting or withdraw the cigar lighter support (on centre console).

Remove the cigar lighter.

To remove the fixed part of the cigar lighter (metal part), push behind the body whilst unclipping the two catches (5).

Remove the connector.



Take out the plastic part by pushing on the back.

REMOVAL - REFITTING

Ensure that the windscreen wiper assembly is in the "PARK" position.

Disconnect the battery.

Remove:

- the 2 blade carriers by unfastening nuts (A)
- the scuttle grille by removing the 5 screws.

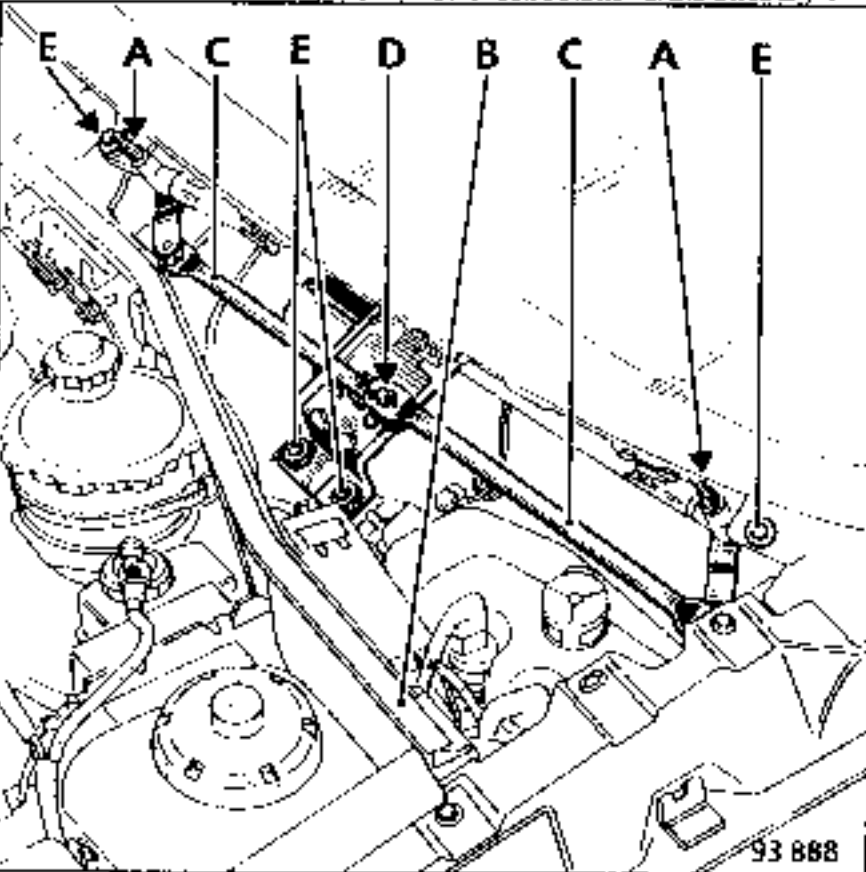
Separate the scuttle grille do not remove seal (B).

Disconnect the connector from the windscreen wiper motor.

Uncouple the 2 arms (C) by turning the clips 1/4 of a turn (D).

Remove the 4 mounting screws (E).

Take out the motor/mechanism assembly.



REMOVING - REFITTING THE WINDSCREEN WIPER MOTOR

(mechanism removed)

Mark the position of the drive arm.

Unscrew the nut securing the drive arm.

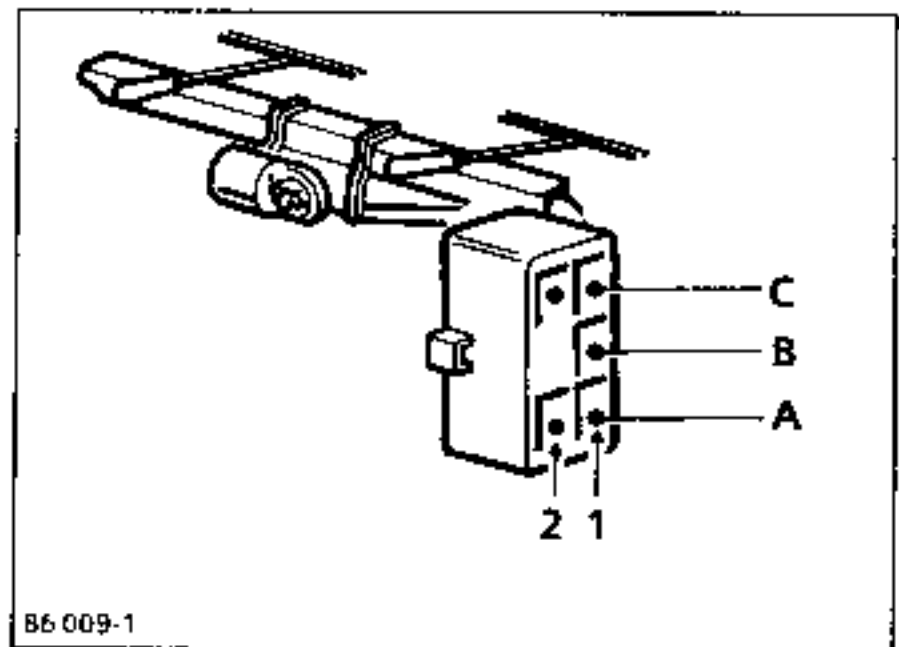
Remove:

- the 3 screws holding the motor;
- the motor.

SPECIAL POINT CONCERNING REFITTING

Position the drive arm opposite the mark made on dismantling.

CONNECTION



Track	Description
A1	Normal Speed
A2	"Park"
B1	Fast speed
C1	Park
C2	Earth

REMOVAL - REFITTING

Disconnect the battery.

Remove the blade carrier.

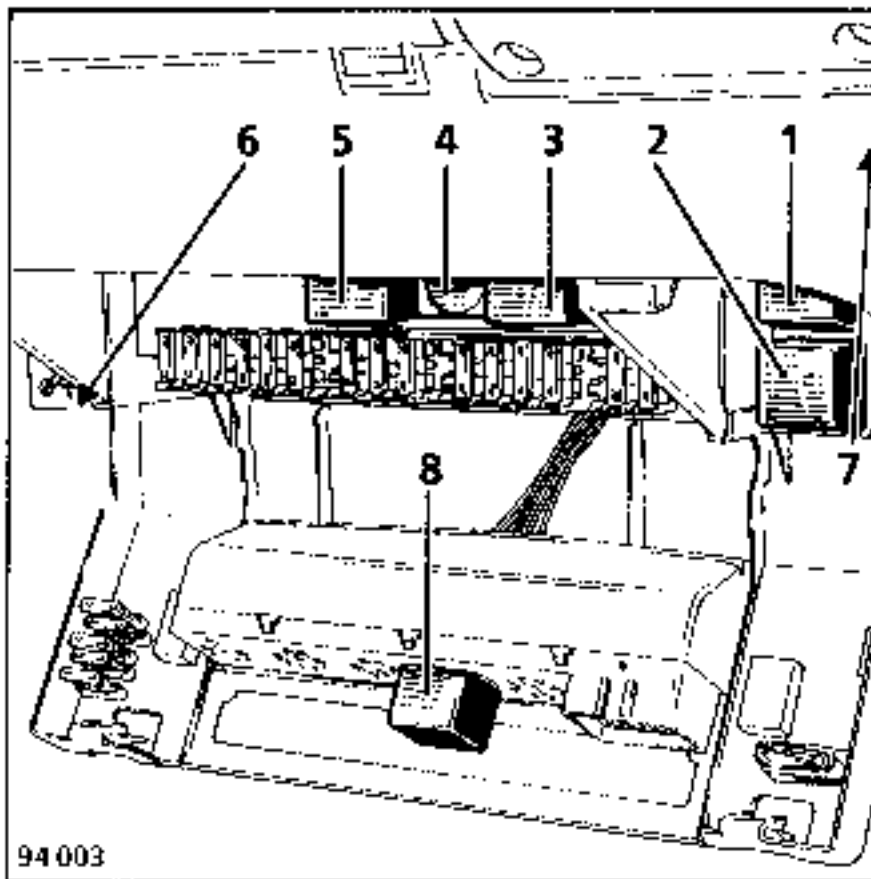
Remove the motor cover (3 screws).

Disconnect the connector from
the motor.

Remove the motor (3 screws).

NOTE: whenever the windscreen
wiper is dismantled, replace the
clips holding the rear screen
wiper motor cover in place.

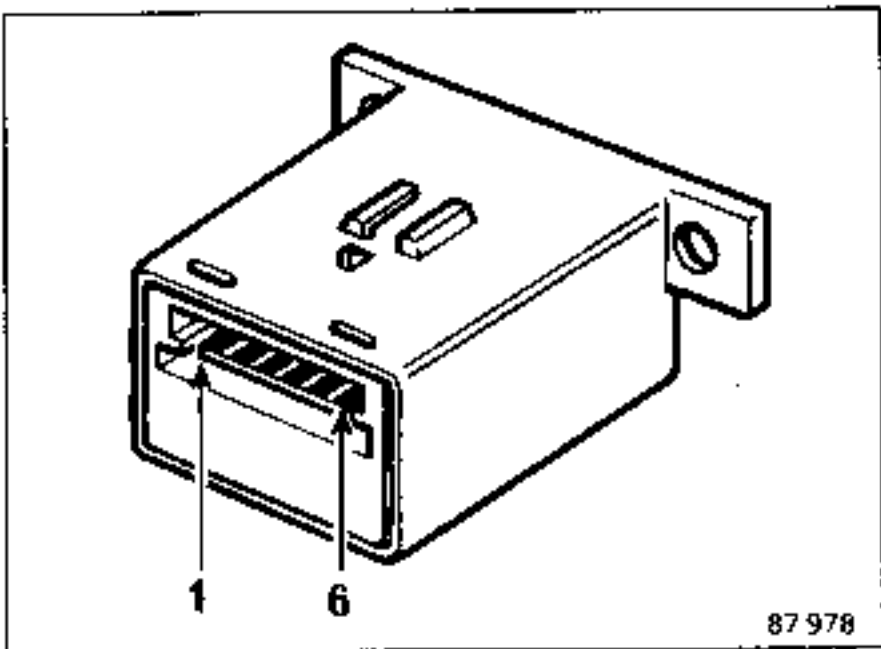
POSITION AND ALLOCATION



The relays are located around the fuse box in the passenger compartment under the dashboard. To reach them, open the fusebox by pulling on the 2 tabs.

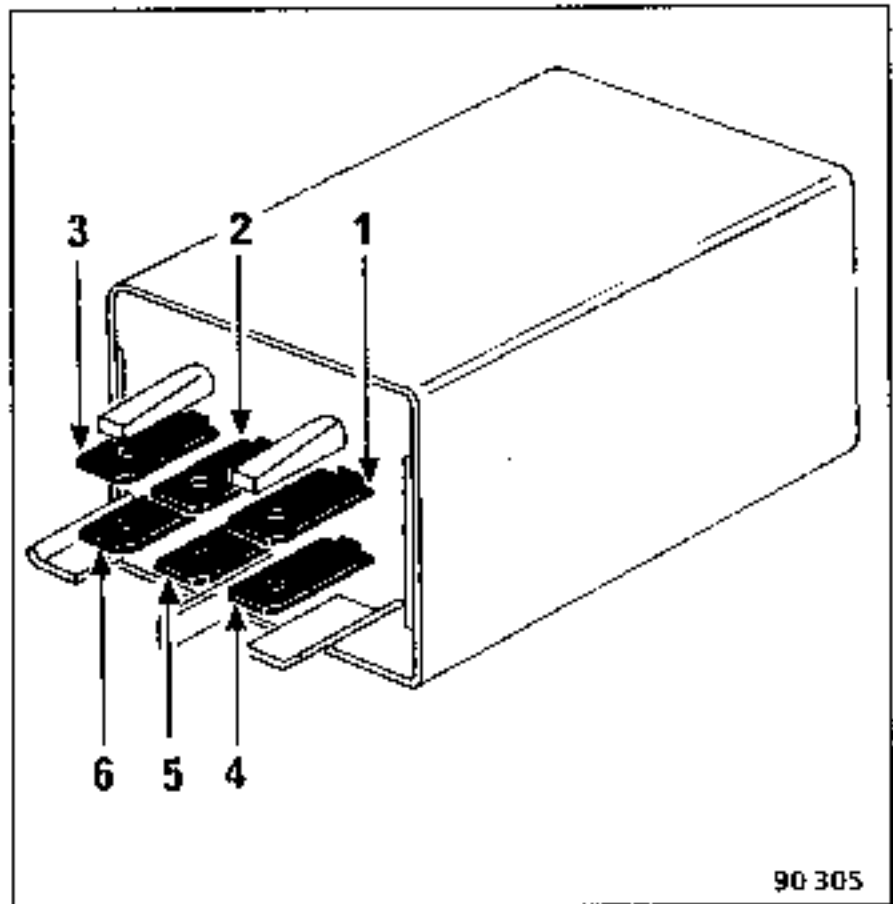
- 1 Rear foglight relay or shunt
- 2 Heated rear screen relay
- 3 Lights "on" reminder buzzer
- 4 Flasher unit
- 5 Electric door locks timer
- 6 Windscreen wiper timer unit
- 7 Rear screen wiper timer unit
- 8 Front foglight relay

WINDSCREEN WIPER TIMER



87 978

DOOR LOCKING TIMER RELAY



90 305

Duration of time-delay: 3 seconds \pm 1

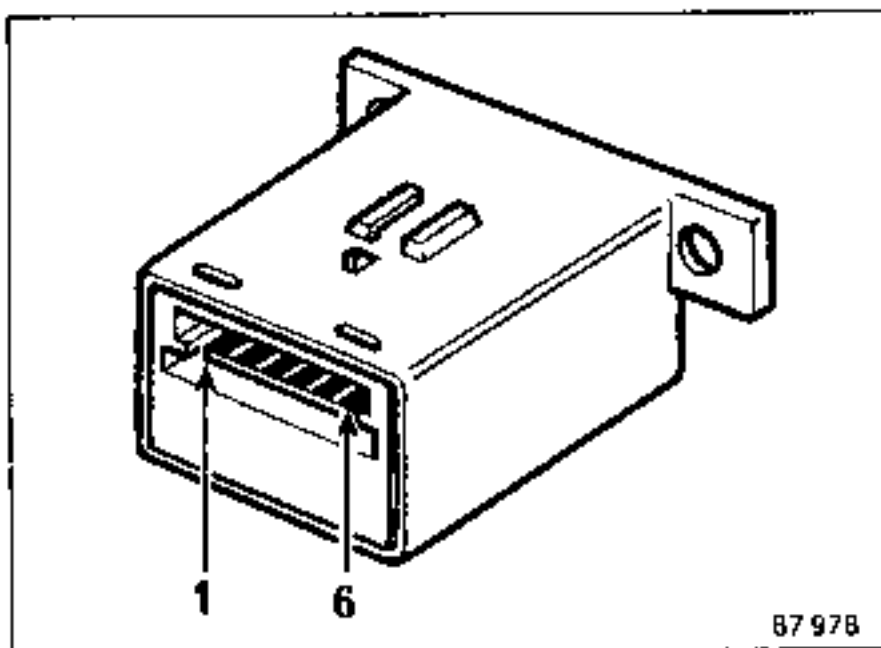
CONNECTION

Track	Description
1	Earth
2	Windscreen washer pump
3	Timer switch
4	Windscreen wiper "PARK"
5	- after ignition
6	Timed output to motor

CONNECTION

Track	Description
1	Closure switch
2	Timer earth
3	Opening switch
4	Electric door locks motors closure feed.
5	+ before ignition.
6	Electric door locks motor opening feed.

REAR SCREEN WIPER TIMER



87 978

Track	Description
1	Not used
2	Screen washer pump +
3	Timer switch
4	Screen wiper "PARK"
5	- after ignition
6	Timed output to motor

The demisting element applied by the silk screen process to the inside of the glass may be cut accidentally causing part of the circuit to be ineffective.

Using a voltmeter is now possible to find the exact location of the breaks.

Such can be repaired using the special rear screen demister varnish available from the Parts Department on quoting part number 77 01 421 135. It is supplied in 2 g bottles.

FINDING THE EXACT LOCATION OF THE BREAKS USING A VOLTMETER.

Switch on the ignition.

Switch on the rear screen demister.

CHECKING FOR THE BREAKS BETWEEN LINES B & A

Connect the voltmeter + wire to the rear screen + terminal.

Place the voltmeter - wire on one of the resistors at the rear screen terminal end (line B); the voltage reading should be more or less that of the battery.

Now move the - wire along towards line A (arrow): the voltage drops gradually.

If the voltage drops suddenly, the resistor is broken at that point (check each resistor in the same way).

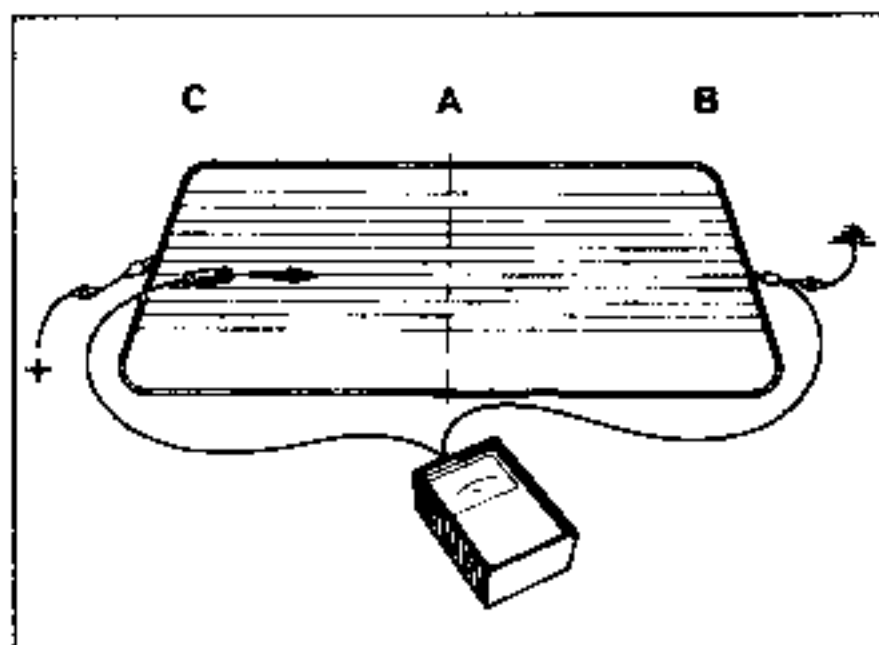
CHECKING FOR THE BREAKS BETWEEN LINES C & A

Connect the voltmeter + wire to the rear screen - terminal.

Place the voltmeter + wire on one of the resistors at the rear screen - terminal end (line C); the voltage reading should be more or less that of the battery.

Now move the - wire along towards line A (arrow): the voltage drops gradually.

If the voltage drops suddenly, the resistor is broken at that point (check each resistor in the same way).

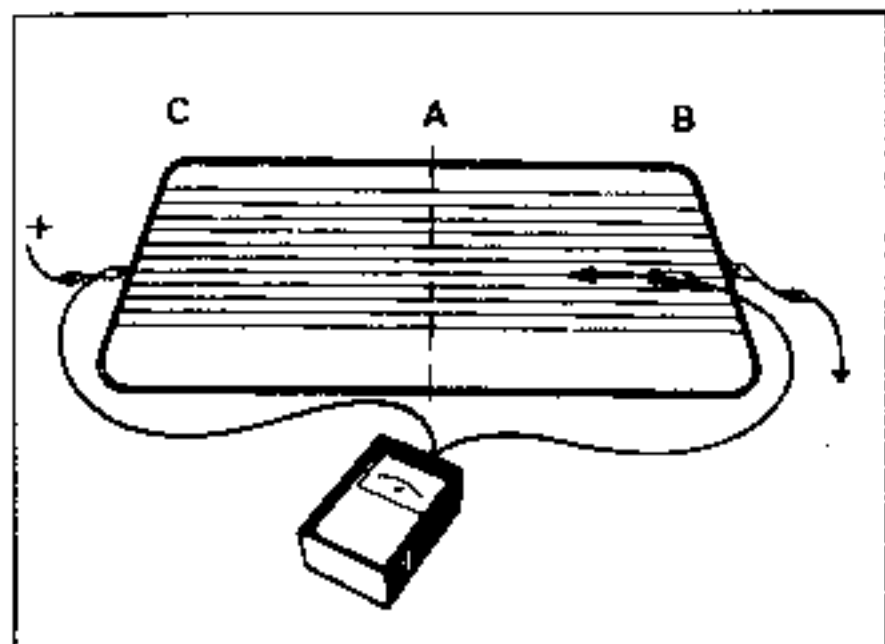


REPAIRING THE RESISTORS

Clean the area of the screen concerned preferably with methylated spirit or with window cleaning fluid and wipe with a clean dry cloth to remove all traces of dust or grease.

Place some adhesive tape along side each side of the conducting strip to act as a mask during the retouching process.

Shake the bottle well before use to distribute the silver particles which otherwise would remain at the bottom.



REPAIRING

Apply a sufficiently thick coat with a fine paint brush. If more than one coat is necessary, allow sufficient time to dry. Do not apply more than three coats over any one break.

If a rough edge has been formed this may be removed after an interval of several hours with a knife or razor blade when the product has hardened thoroughly.

Allow about 1 hour for drying before removing the adhesive tape used as masking. Lift the tape up carefully at right angles to the strip in the direction of the arrow. The varnish will be dry through in three hours in an ambient temperature of 20°C. Drying time will increase slightly if the temperature is lower.

