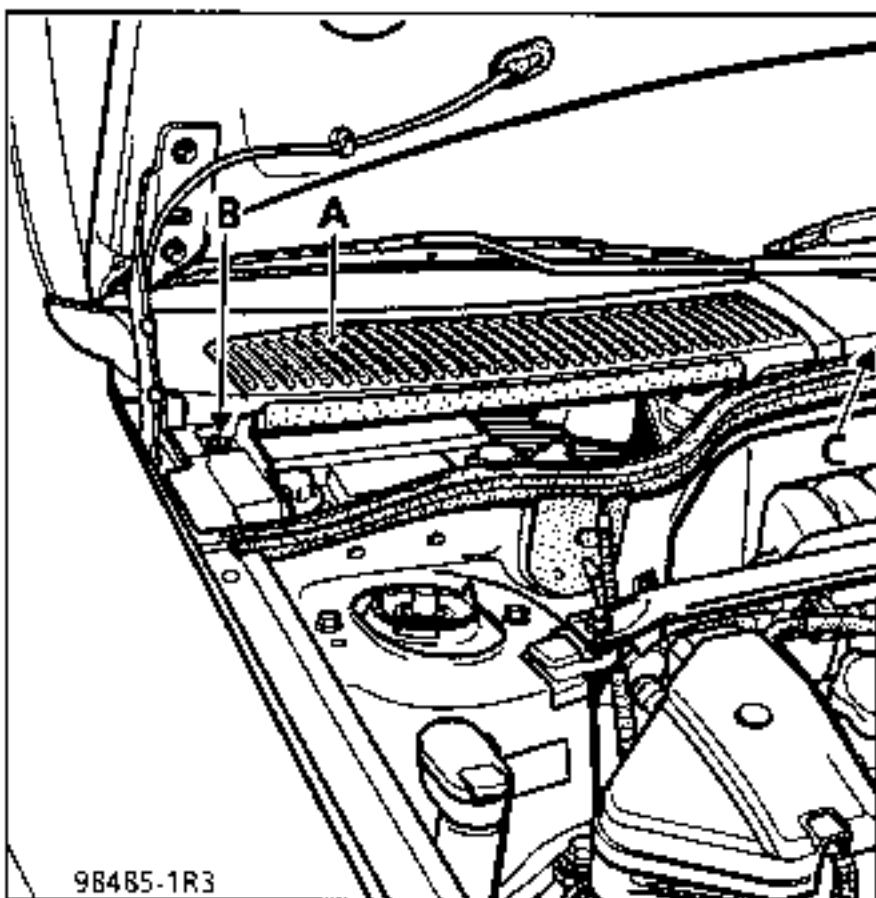


To remove the battery, the half scuttle panel grille must be removed (A).



To do this:

- slacken the grille mounting (B),
- unclip the grille at (C) and release it, tilting it in relation to the corner of the windscreen (see section 5).

#### A - CHECKING

Check and ensure that:

- the battery tray and cover are not cracked or split,
- the top of the battery is clean,
- the terminals are in good condition.

It is vital:

- to ensure that there is no sulphation on the terminals,
- to clean and grease the terminals if necessary,
- to check that the nuts are correctly tightened on the terminals. Incorrect contact could cause starting faults or charging faults which could cause sparks, making the battery liable to explode,
- to check the electrolyte level.

Batteries with sets of removable plugs:

- remove the cover by hand or by using a tool (stiff spatula),
- check that the electrolyte level in all the cells is well above the level of the separators,
- if necessary, use demineralised water to top up the level.

**Note :** certain types of battery have translucent bodies which allow the level of the electrolyte to be seen.

Never add electrolyte or other products to the battery.



**B- PRECAUTIONS**

Remember that a battery:

- contains sulphuric acid which is a dangerous substance,
- gives off oxygen and hydrogen when charging. The mixture of these two gases forms an explosive gas, likely to cause explosions.

**1) DANGER = ACID**

The sulphuric acid solution is a very harmful, toxic and corrosive substance. It attacks skin, clothing, concrete and corrodes most metals.

In addition, when handling a battery, the following precautions must be taken :

- wear safety glasses,
- wear anti-acid gloves and clothing.

If acid is spilt, rinse the affected areas with copious quantities of water. If the acid comes into contact with the eyes, consult a doctor.

**2 - DANGER = RISK OF EXPLOSION**

When a battery is charging (either in a vehicle or elsewhere), oxygen and hydrogen are produced. Gas production is at a maximum when the battery is completely charged and the quantity of gas produced is proportional to the intensity of the charging current.

The oxygen and the hydrogen join together in the open air, on the surface of the plates and form a highly explosive mixture.

The smallest of sparks, a cigarette or a recently extinguished match are sufficient to cause an explosion. The explosion is so strong that the battery can shatter and the acid is dispersed into the surrounding atmosphere. People nearby are at risk (shattered casing parts, acid splashes). The acid splashes are harmful to the eyes, face and hands. They also attack clothes.

Safeguarding against the danger of explosion, which can be caused by a poorly handled battery, must be taken very seriously. Avoid all risks of sparks.

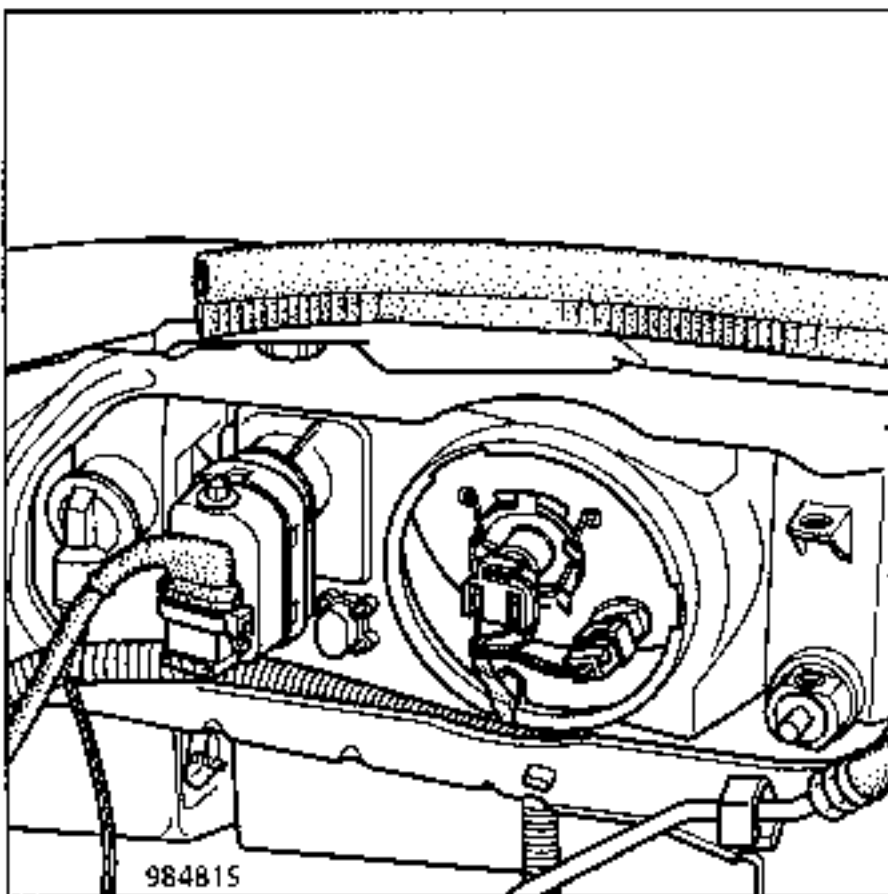
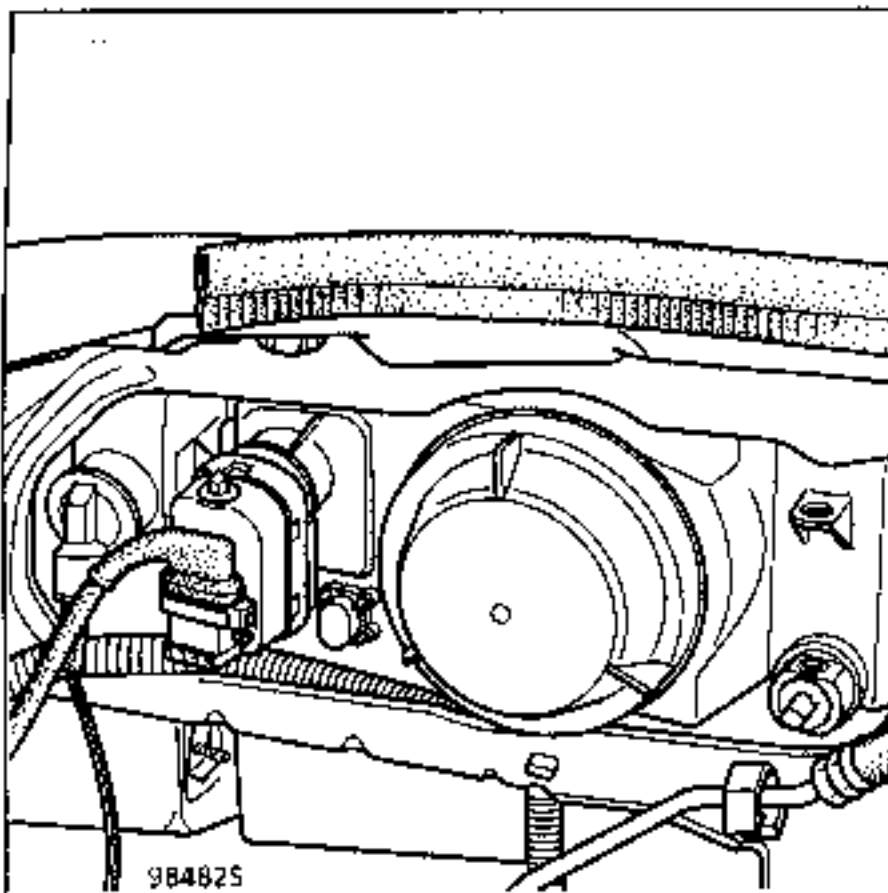
- Check that the "consumers" are switched off, before disconnecting or reconnecting a battery.
- When a battery is being charged in a room, switch off the charger before connecting or disconnecting the battery.
- Do not put any metallic items onto the battery so as not to cause a short circuit across the terminals.
- Never place a naked flame, a welding torch, hot air gun, a cigarette or a lighted match near to a battery.



## REMOVAL - REFITTING

## Disconnect:

- the battery,
- the connectors for the bulbs at the rear of the lens unit, after removing the protective cover.



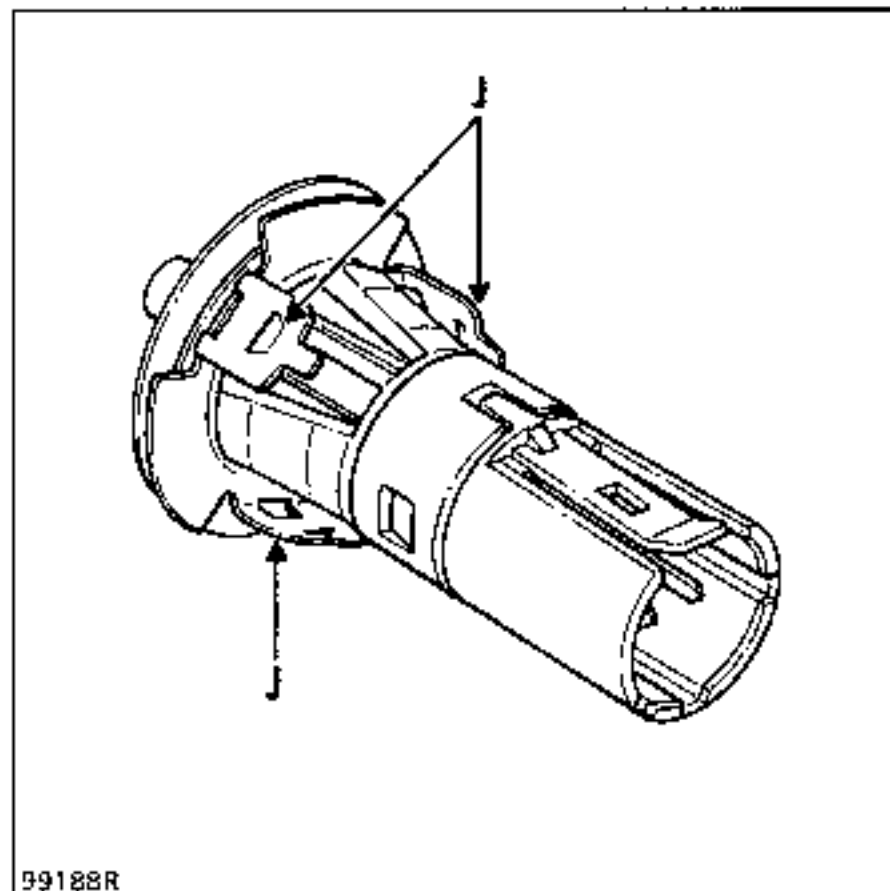
NOTE : if the vehicle is fitted with remote headlight adjustment, remove the receiver following the method described in the section "Remote adjustment".

## Remove:

- the indicator light (see relevant section),
- the "bonnet closed" switch mounted on the right hand section of the radiator grille, if necessary

## To do this:

- disconnect the switch connector,
- release the 3 metal clips (J) and remove the switch.



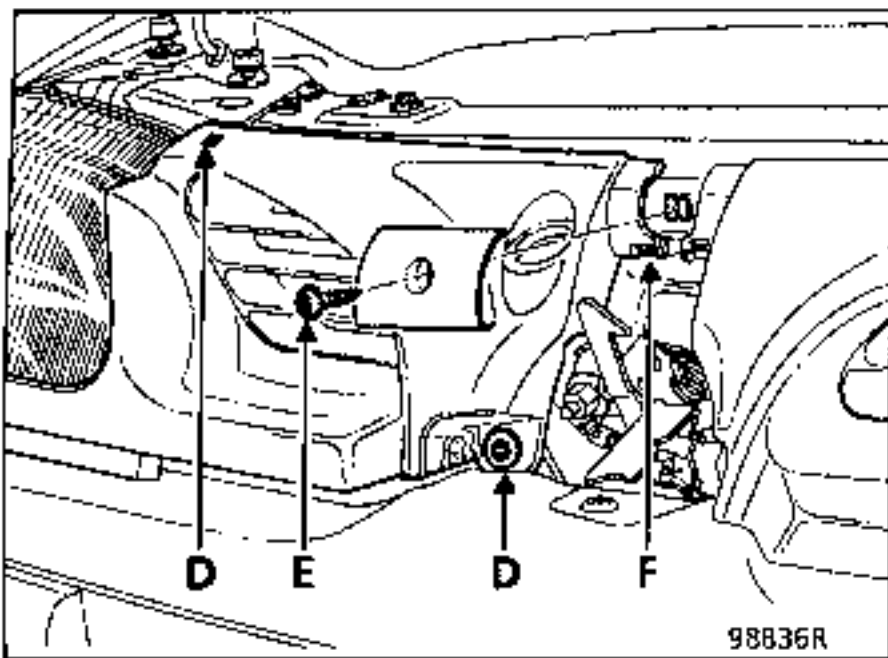


Remove:

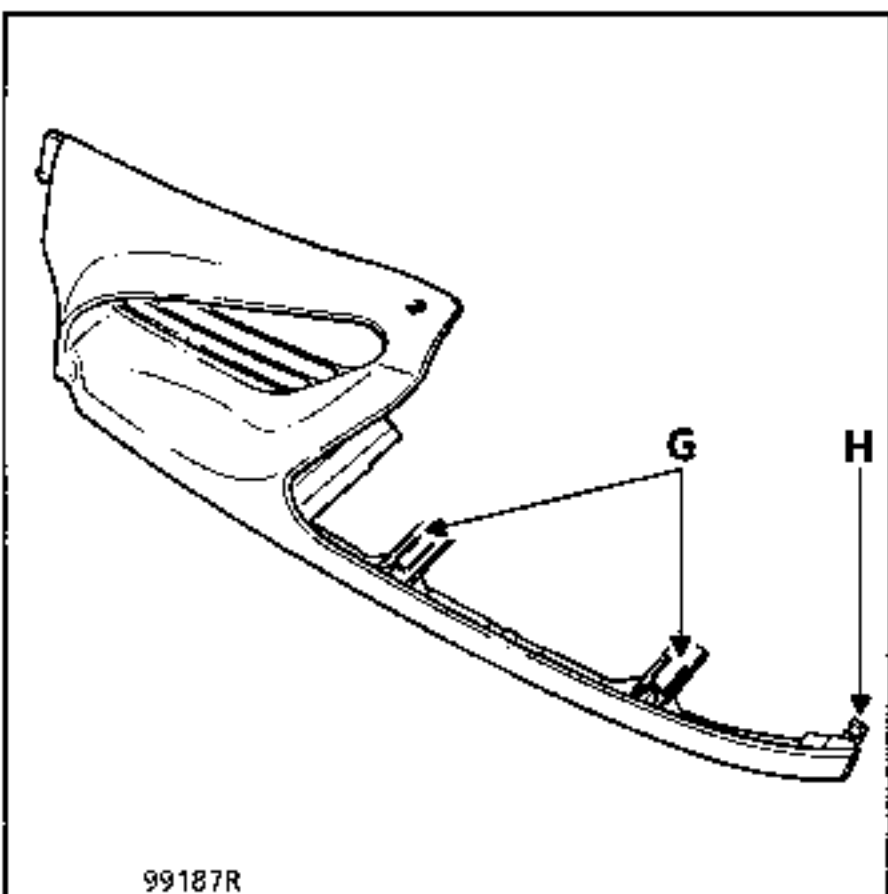
- the half radiator grille.

To do this:

- slacken the central mounting (E) for the 2 half grilles and the 2 mountings (D) for the half grille in question,



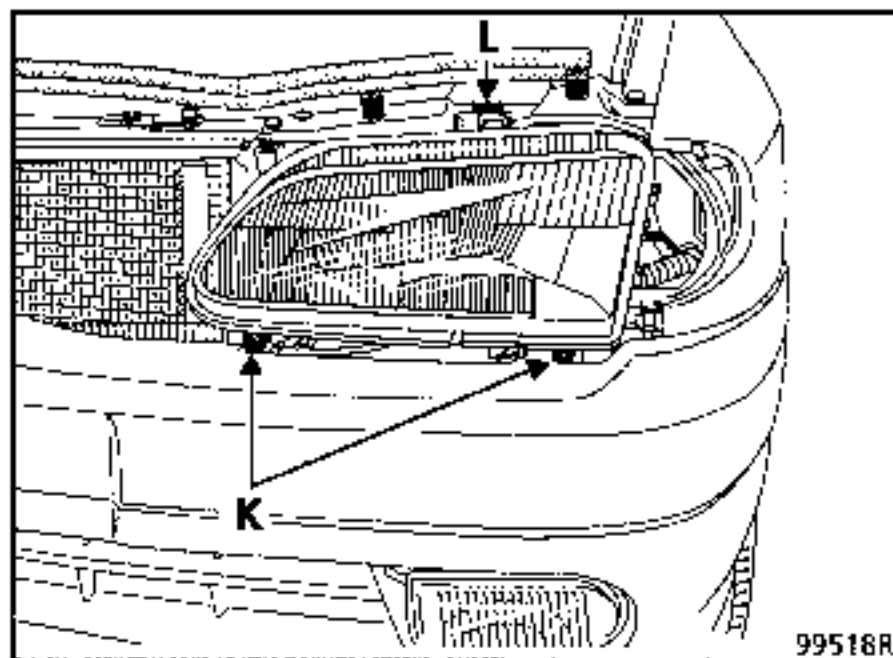
- unclip the half grille at the centre section (E) then at the lower section (G) sliding a screwdriver into the lugs in the radiator grille.



- unclip the side by lifting tab (H),
- remove the half grille with care.

Take care to retain the metal clips on the lens unit.

Note the position of the lens unit on the 2 mounting brackets (K) before removing the 2 bolts so the lens unit is correctly aligned when refitting.



Remove the lens unit upper mounting bolt (L).

Release the lens unit from the vehicle.



# **SPECIAL NOTE FOR REFITTING**

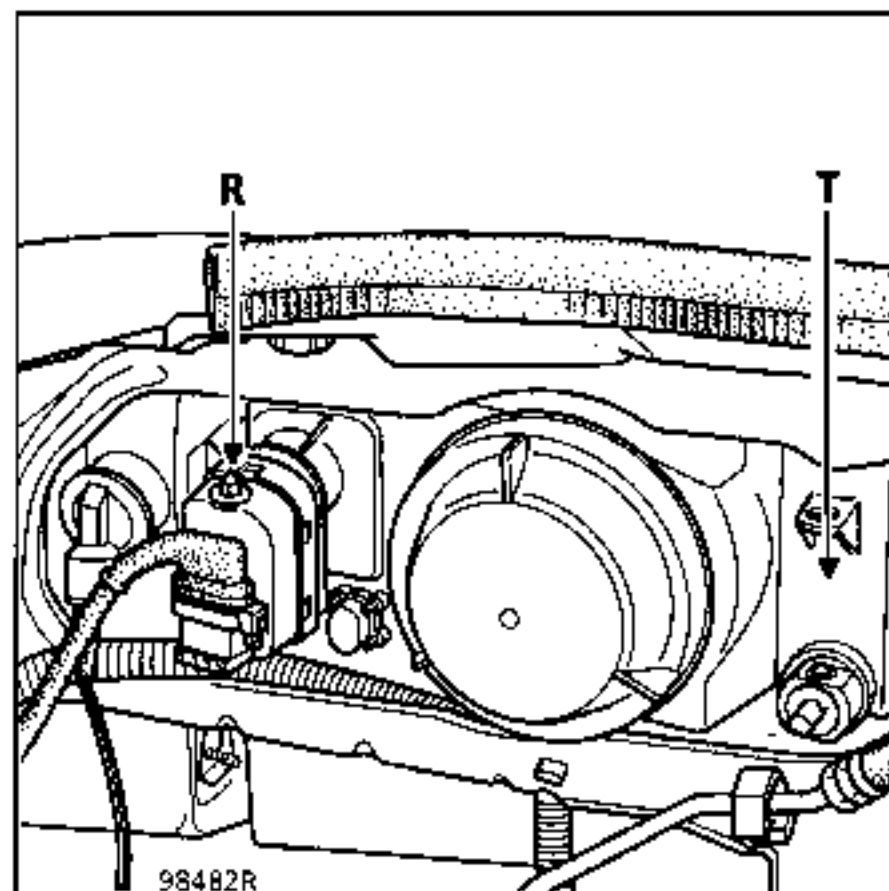
To ensure the lens unit is correctly refitted, the lens unit and the indicator light may be assembled before refitting to the vehicle.

After refitting the lens unit, it must be adjusted.

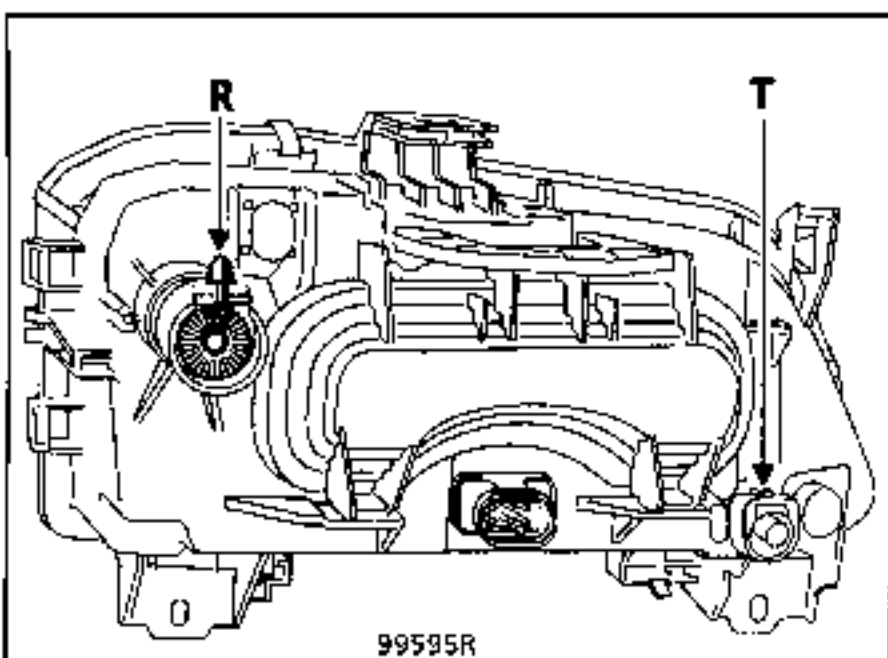
**Adjustment:**  
ensure the vehicle is unladen.

**NOTE :** if the vehicle has remote adjustment, set the control to position "0".

Adjust the height setting using screw (R) and the lateral adjustment using screw (T).

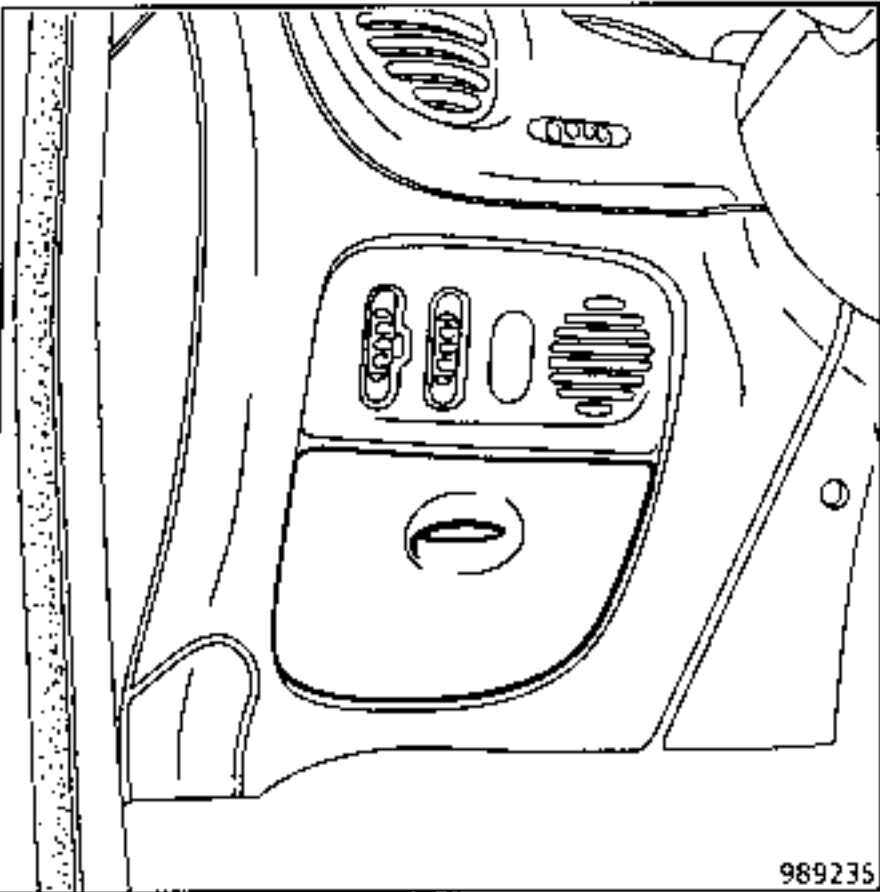


**REMINDER:** the "dual headlight " fuse should not be fitted for a vehicle with only single headlights (lens unit will be damaged).



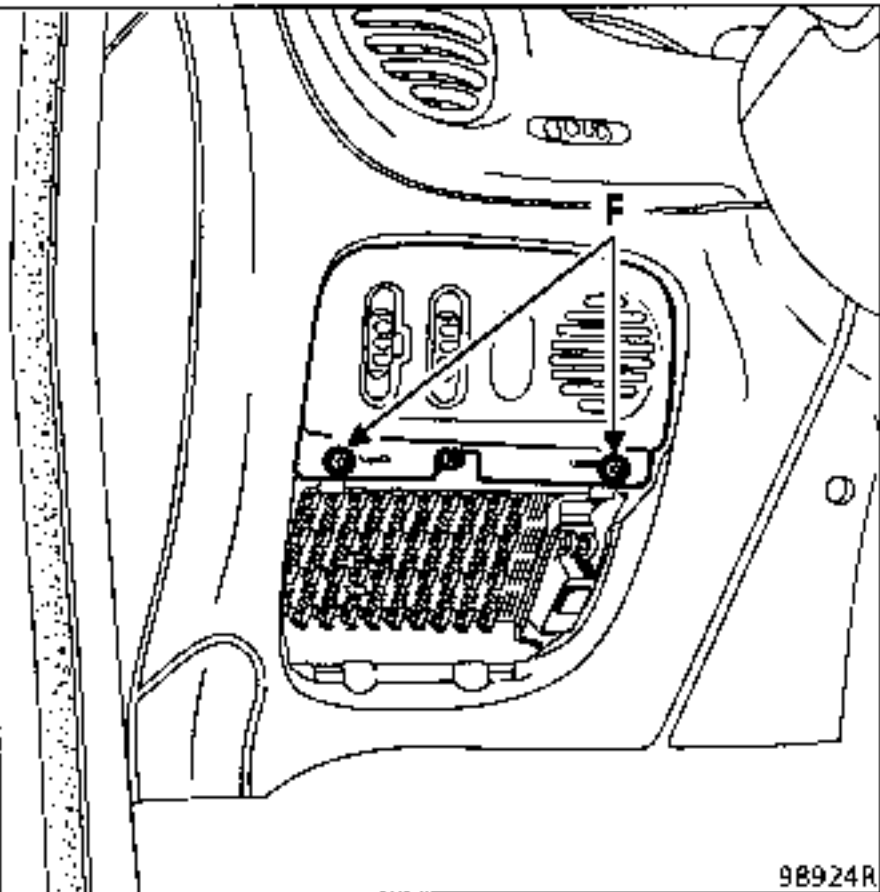


### REMOVING - REFITTING THE CONTROL



Remove the passenger compartment fuse box cover.

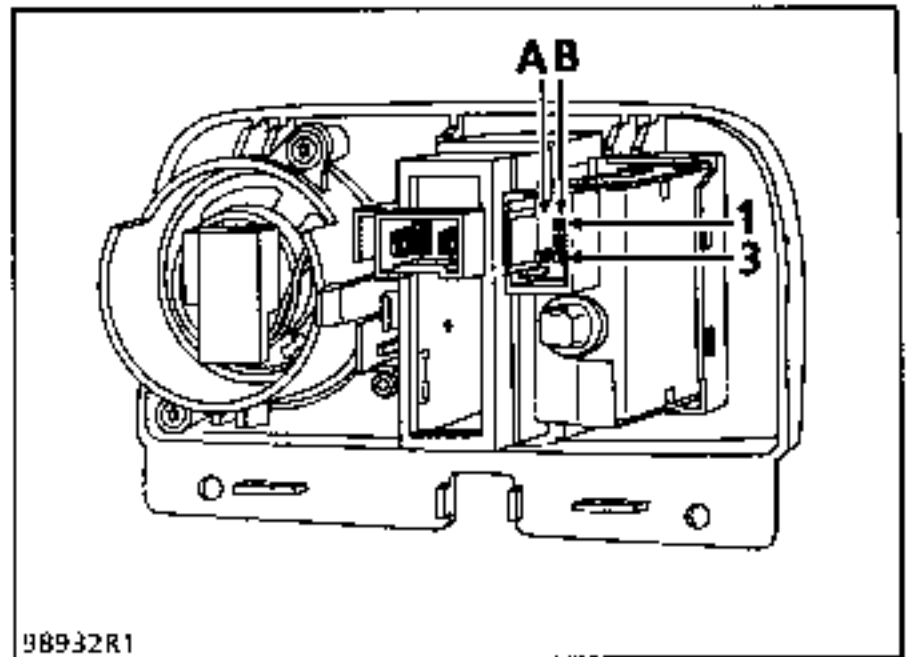
Unscrew the 2 mountings (F) for the remote adjustment control and lighting rheostat mounting plate.



Release the plate and disconnect the connectors (depending on equipment).

Unclip the control unit from the mounting plate.

### CONNECTIONS

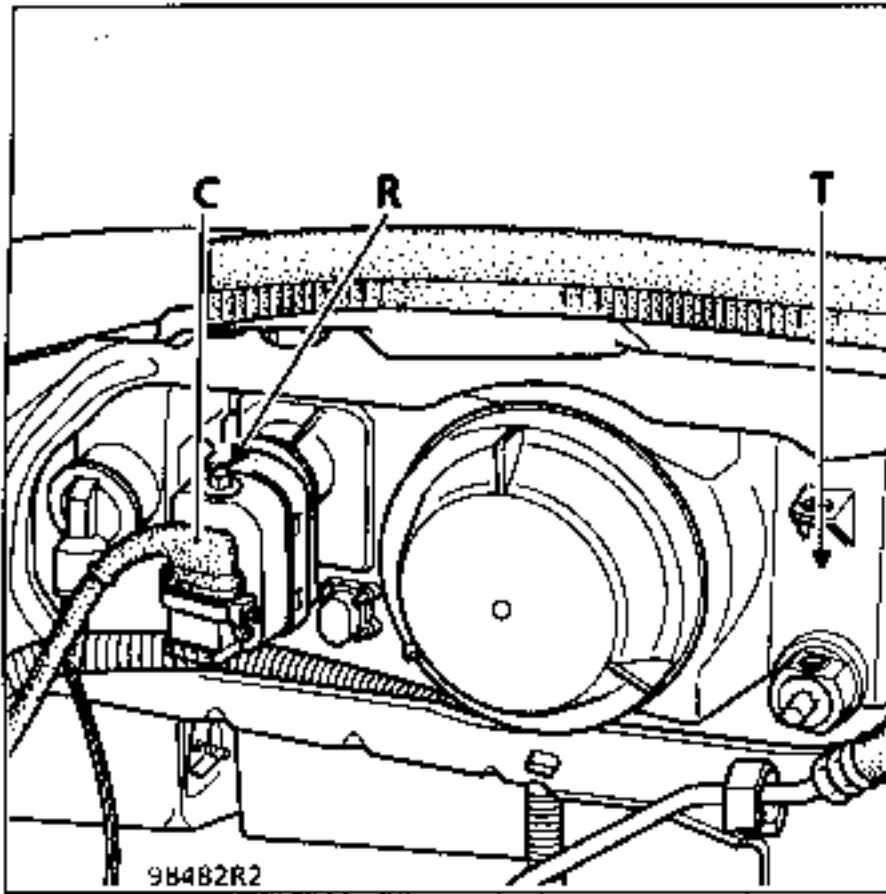


Track	Allocation
A1	Lighting
A2	Not used
A3	Not used
B1	Earth
B2	Dipped beam headlights
B3	Remote adjustment control



## REMOVING - REFITTING THE RECEIVER

Disconnect the remote adjustment receiver connector (C).

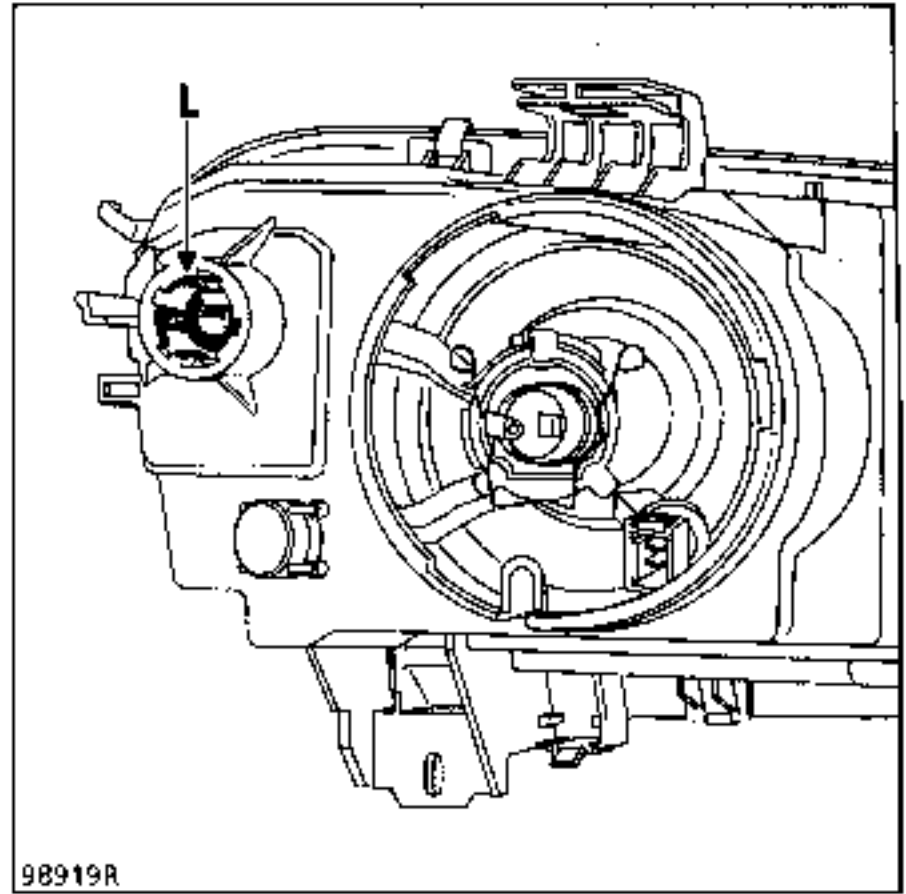


Turn the receiver an eighth of a turn towards the vehicle wing to release it from the lens unit.

Release the receiver ball joint and the lens unit parabola to remove the receiver.

## SPECIAL NOTE FOR REFITTING

Remove the protective cover for the bulb connectors at the rear of the lens unit.



Hold the parabola at the back of the lens unit by pulling the base of the bulbs and clip the ball joint into the special housing (L).

Now reposition the receiver on the lens unit, turning it an eighth of a turn.

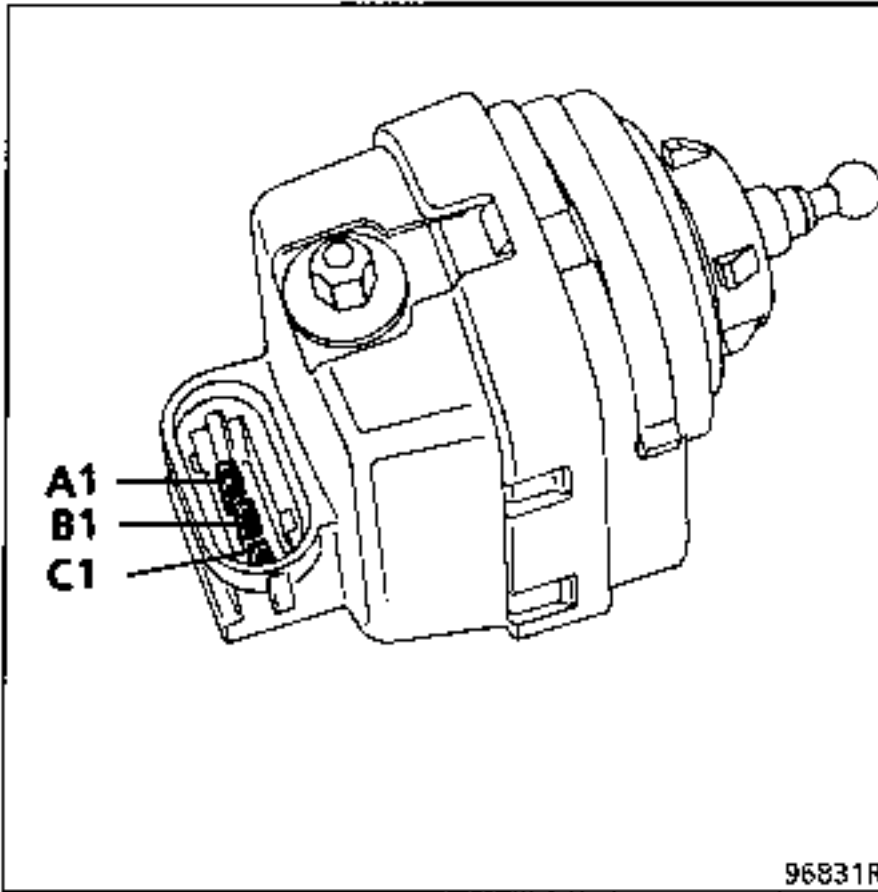
Reconnect the connector and refit the protective cover for the bulbs at the rear of the lens unit.

Set the remote adjustment control to position "0" and adjust the lens unit :

- screw (R) to adjust the height,
- screw (T) to adjust the lateral position.



CONNECTION

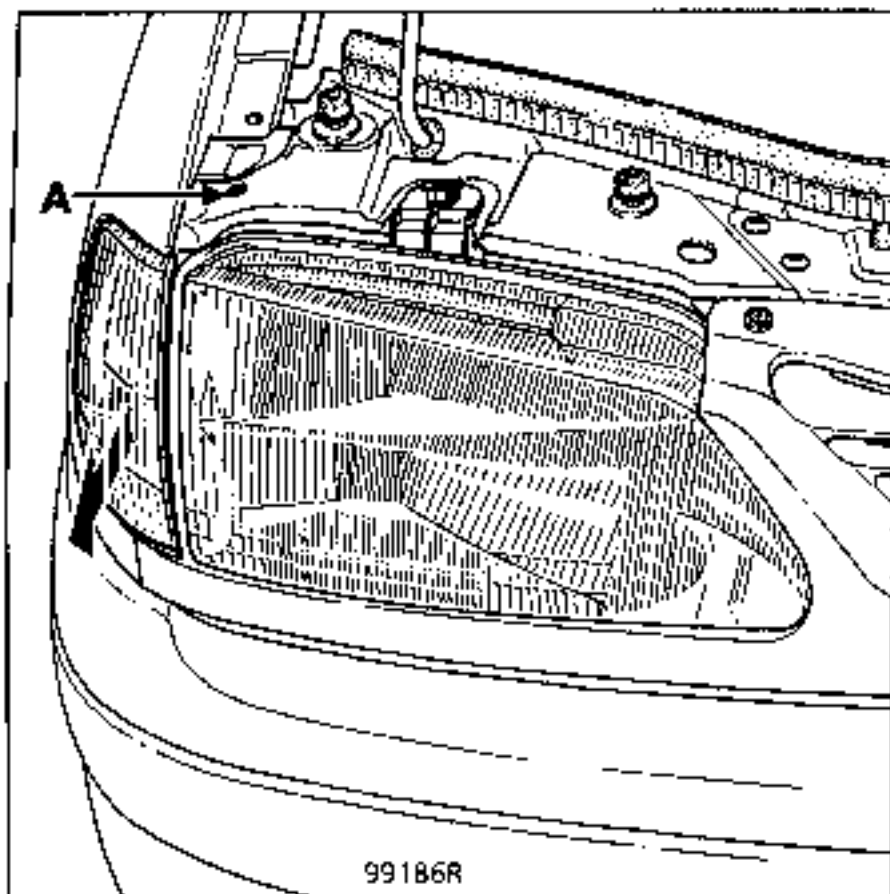


Track	Allocation
A1	Earth
B1	Adjusting control
C1	Dipped beam headlight information



## REMOVAL - REFITTING

Inserting a screwdriver into opening (A), remove the light mounting bolt.

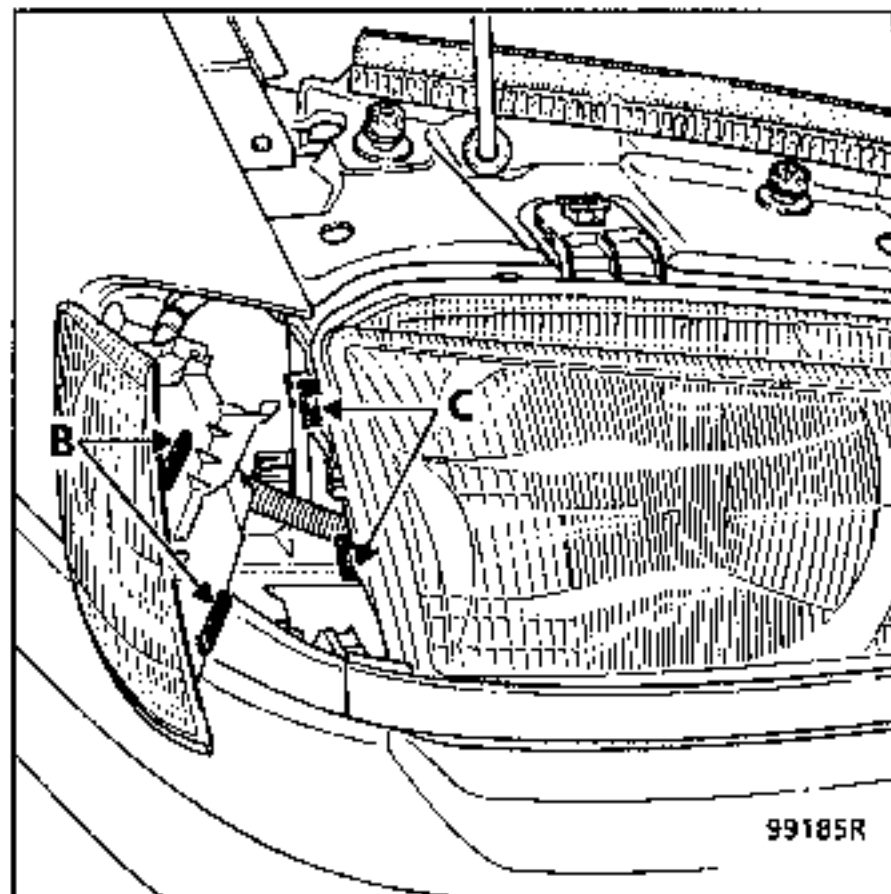


Release the light by sliding it along the lens unit, towards the outside.

Remove the bulb holder by turning it a quarter of a turn.

## SPECIAL NOTE FOR REFITTING

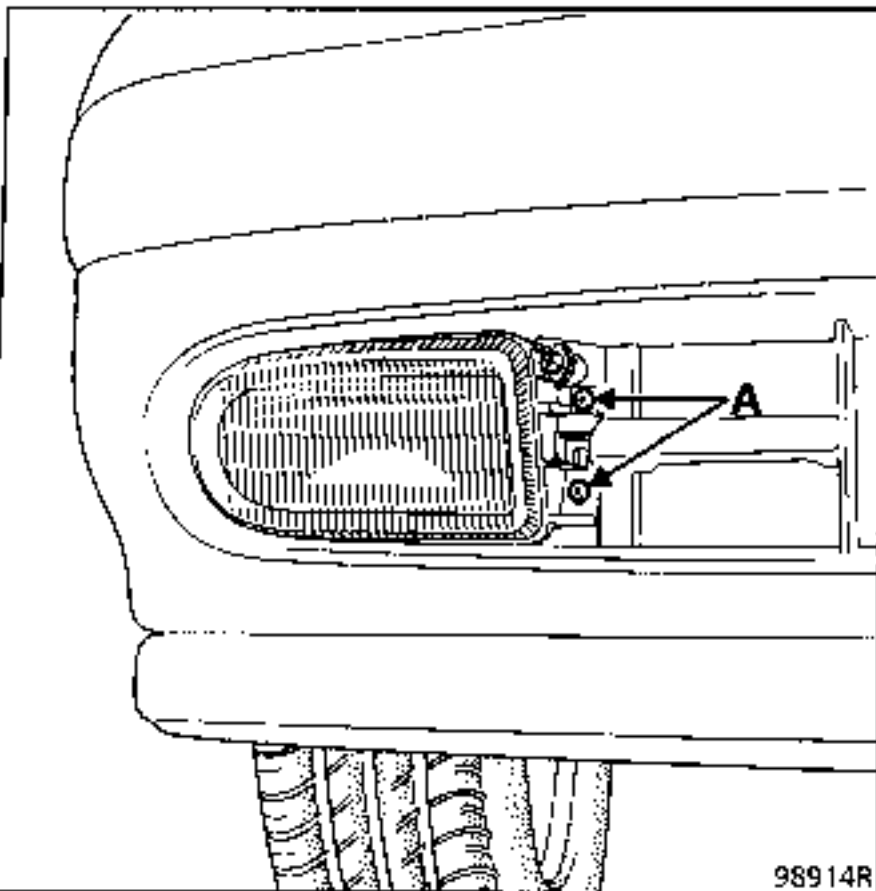
Reposition the light by sliding the 2 tabs (B) into special openings (C) on the side of the lens unit.





For vehicles with front fog lights.

## REMOVAL

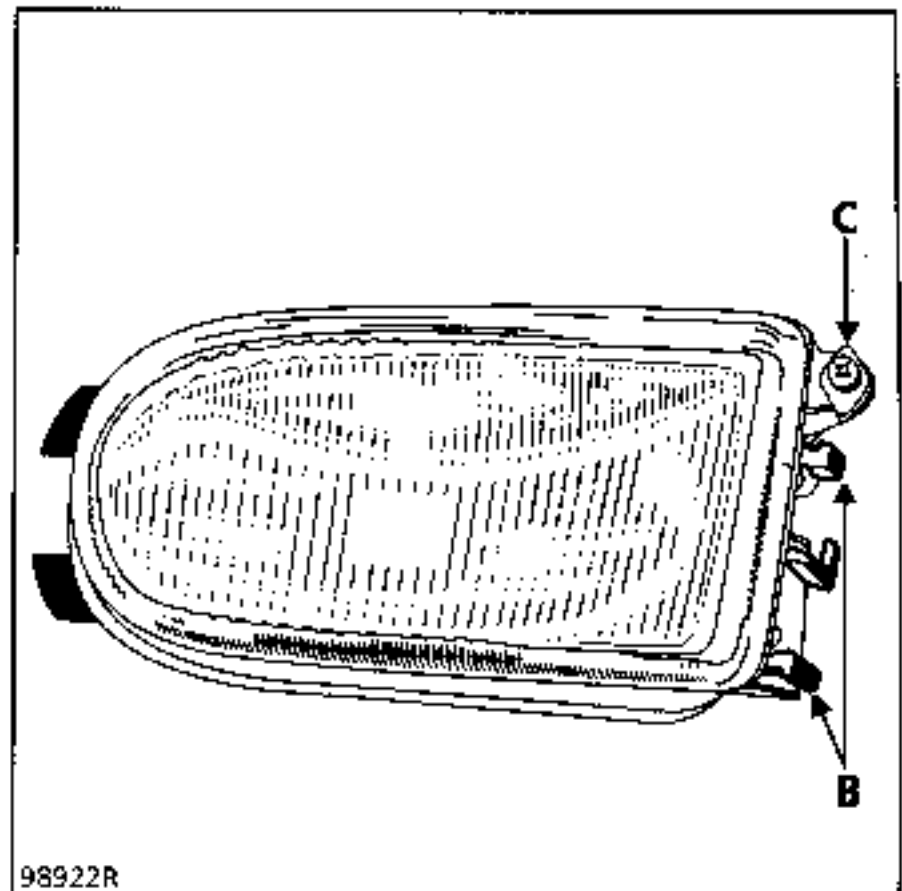


Remove the 2 mounting bolts (A) for the light, after removing their protective cover.

Remove the lens unit forwards, releasing the 2 brackets (B).

Disconnect the connector.

## REFITTING



Reconnect the connector.

Reposition the fog light using the 2 brackets (B).

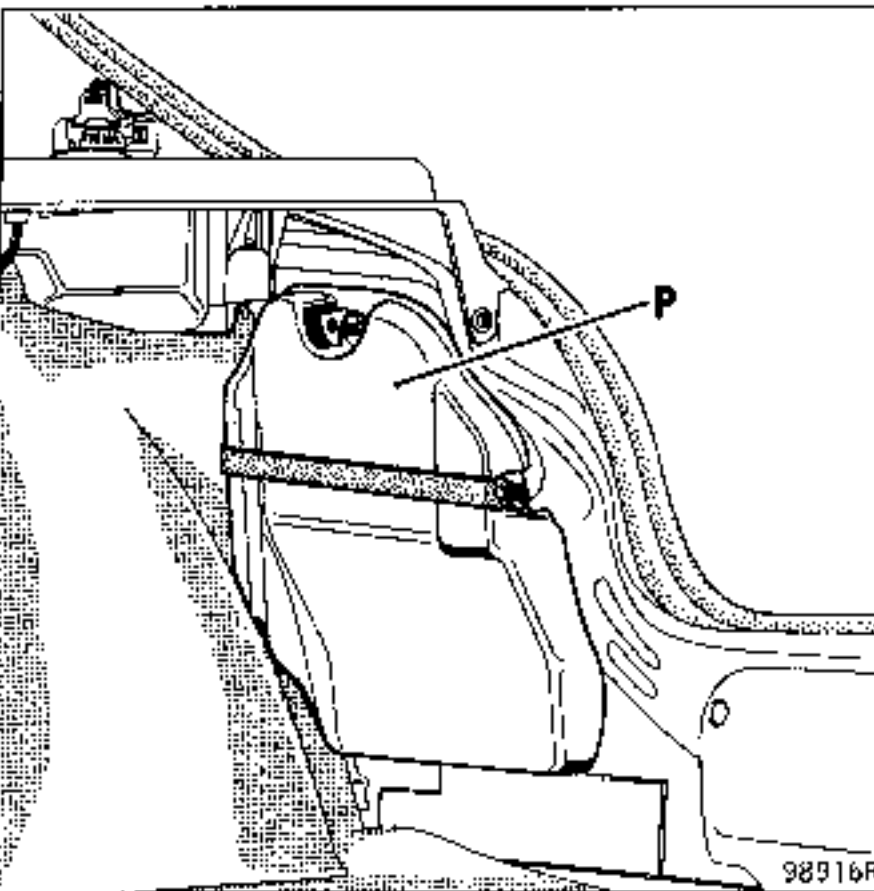
Refit the mounting bolts (A) and the protective cover.

Adjust the light using screw (C).

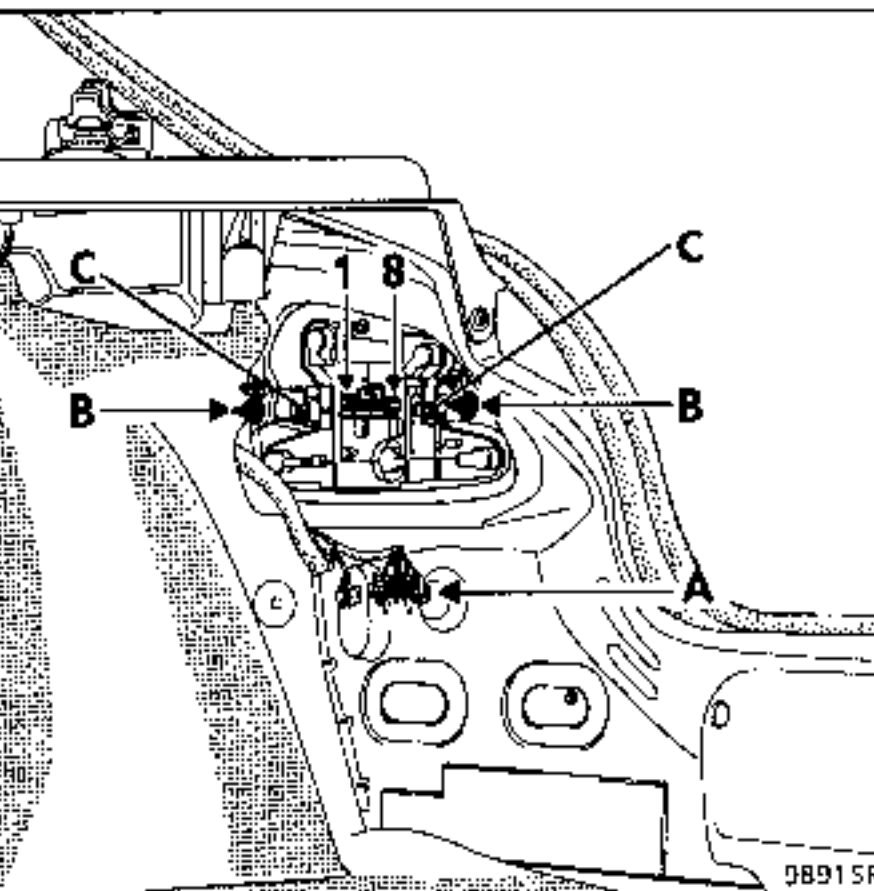


## REMOVING THE LIGHTS FROM THE WING

Remove the plastic cover (P) after unclipping the strap and removing the nut.



Disconnect the connector (A).



Slacken the 2 mounting nuts (B) for the rear lights unit and release towards the outside.

To reach the bulbs, unclip the bulb holder by pressing the 2 tabs (C).

**NOTE :** the bulbs may be replaced without removing the light.

## CONNECTION

### Rear right hand lights connector

Track	Allocation
1	Not used
2	Indicator
3	Earth
4	Stop light
5	Side light
6	Fog light
7	Earth
8	Reversing light

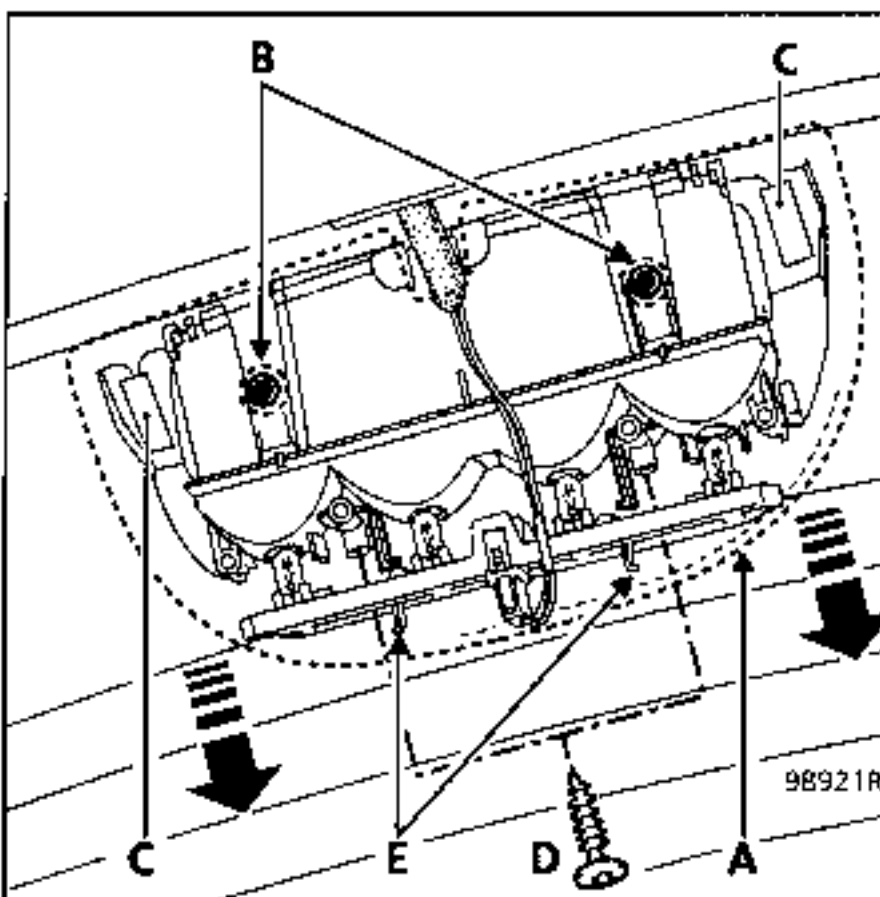
### Rear left hand lights connector

Track	Allocation
1	Reversing light
2	Earth
3	Fog light
4	Side light
5	Stop light
6	Earth
7	Indicator
8	Not used



## REMOVING THE RAISED STOP LIGHT

With the tailgate raised, unclip the cover (A) by pressing on the 2 points (B) then release the cover by sliding it.



Disconnect the connector.

To remove the light, separate the 2 tabs (C) and slide the assembly.

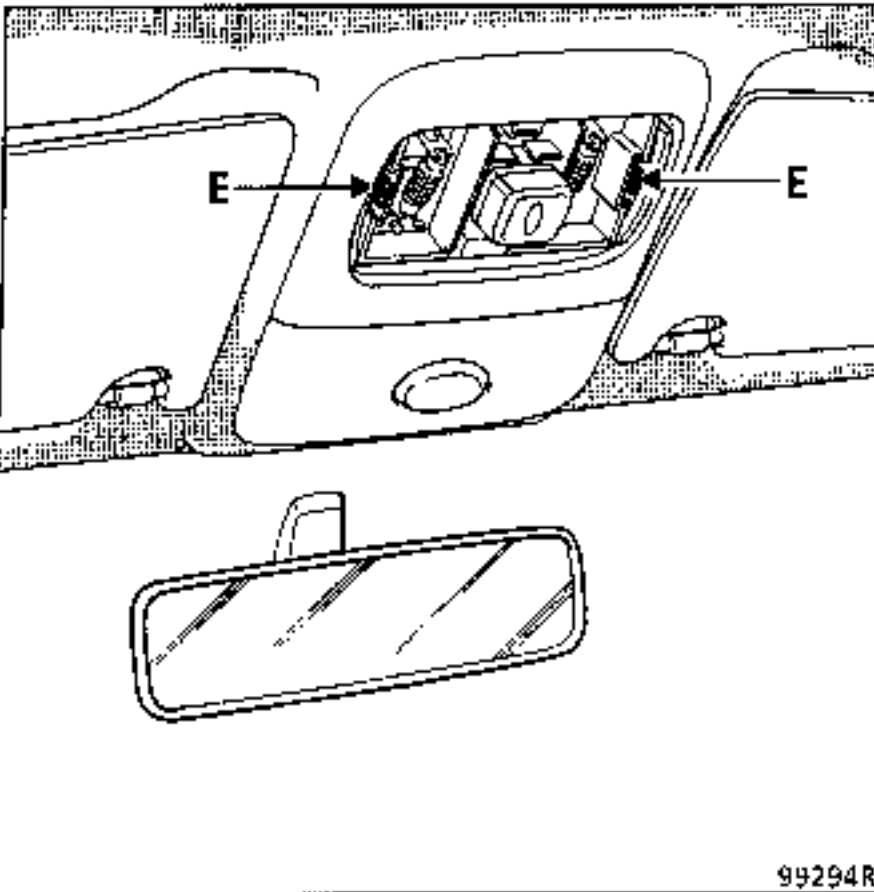
To reach the bulbs, remove the 2 mounting bolts (D) from the bulb holder then press the tabs (E) to release it from the lens unit.

**NOTE :** the lens unit does not need to be removed to replace a bulb.



## CENTRAL COURTESY LIGHT

### 1st fitting

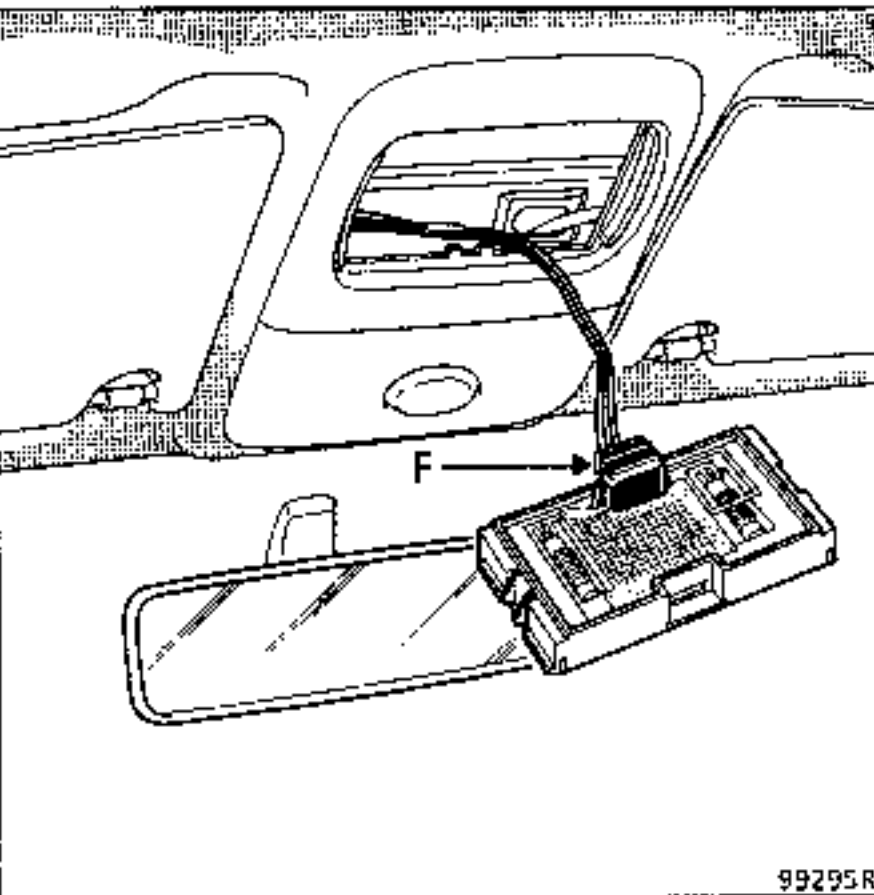


99294R

### REMOVAL

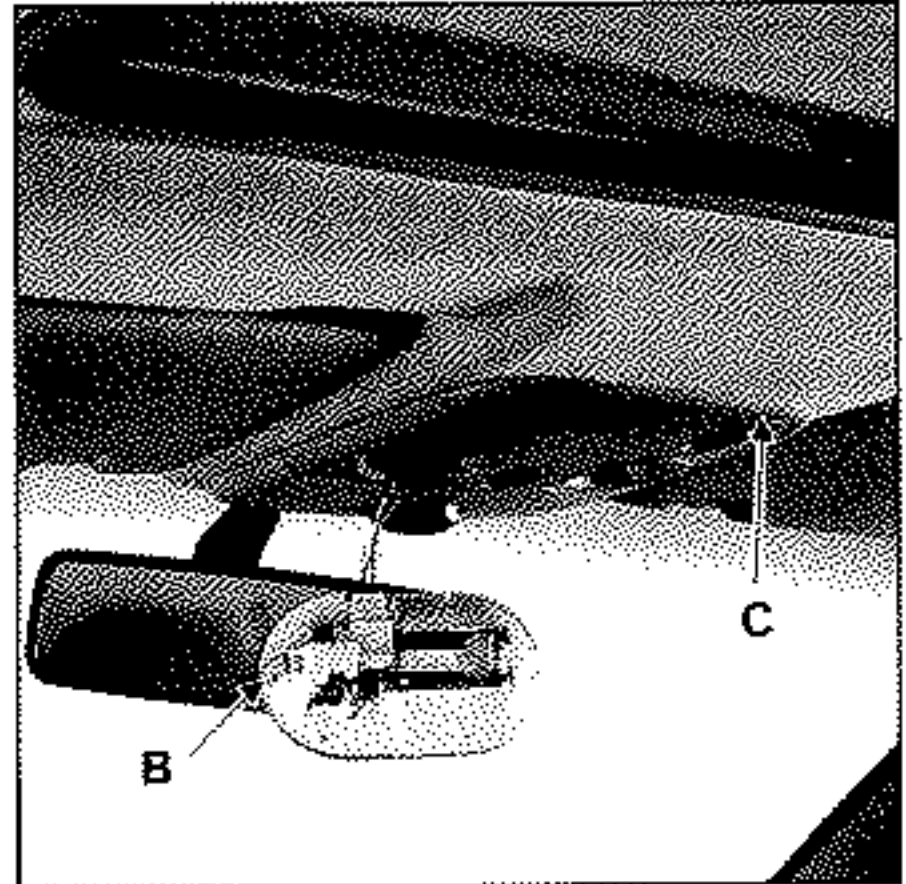
Unclip the mounting for the lenses.

Press tabs (E) to release the courtesy light and disconnect the connector (F).



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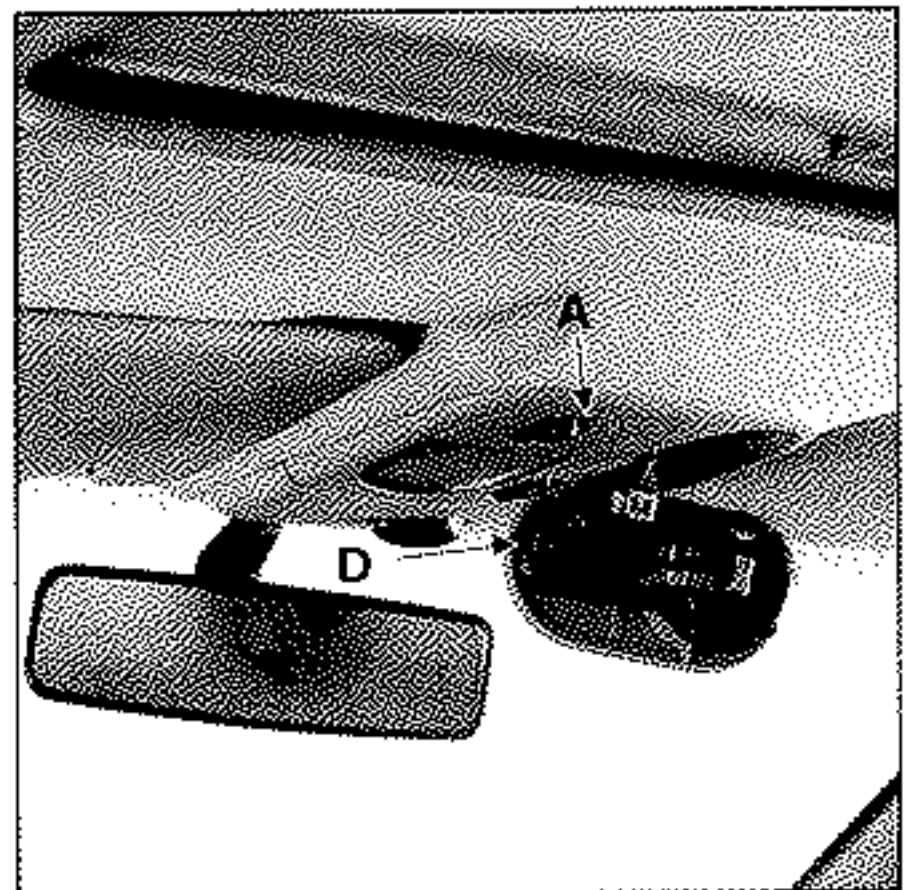
### 2nd fitting



### REMOVAL

Unclip the lens mounting and the switch by sliding a small screwdriver in at lug (A) to press tab (B).

## MAP READING LIGHT



### REMOVAL

Unclip the map reading light mounting and the switch by sliding a small screwdriver in at lug (C) to press tab (D).

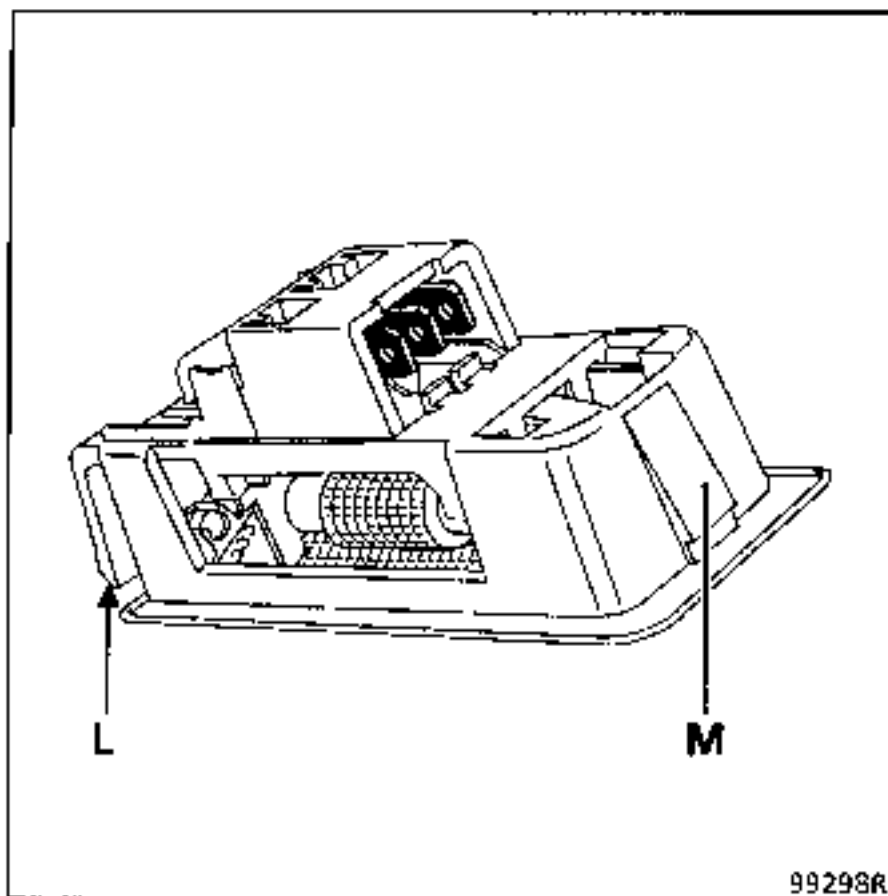


## REAR COURTESY LIGHT

### REMOVAL

To release the rear courtesy light, press tabs (L) by sliding a small screwdriver in at the special lugs.

Now release notch (M) at the front of the courtesy light and disconnect the connector.

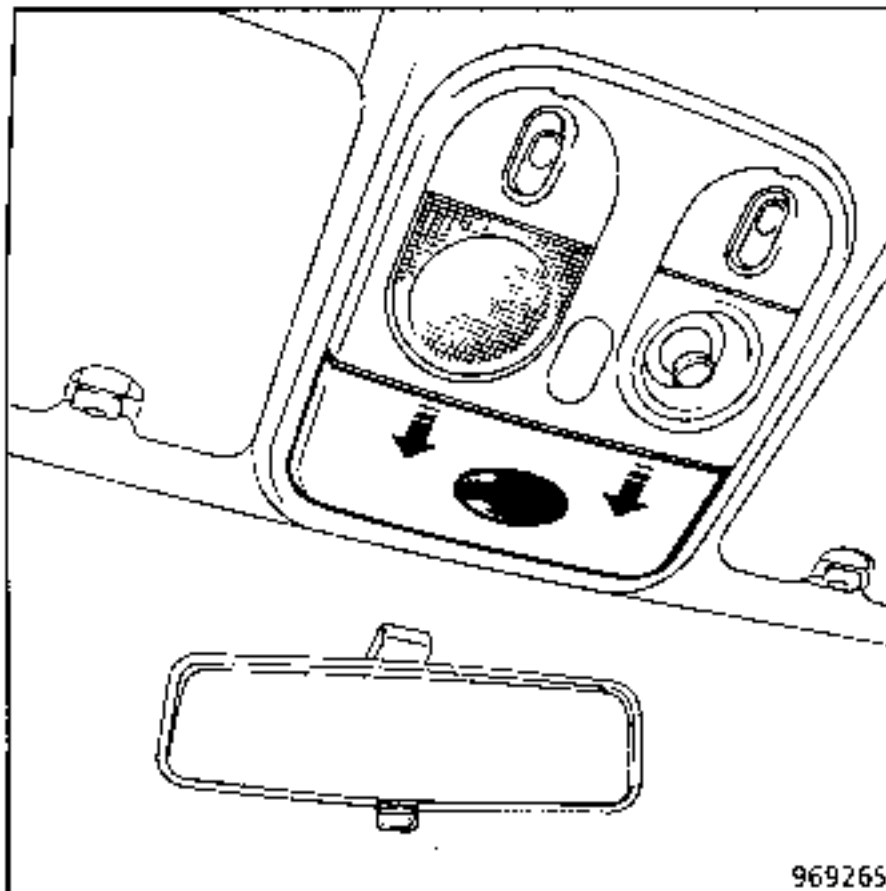




## ROOF CONSOLE

### REMOVAL

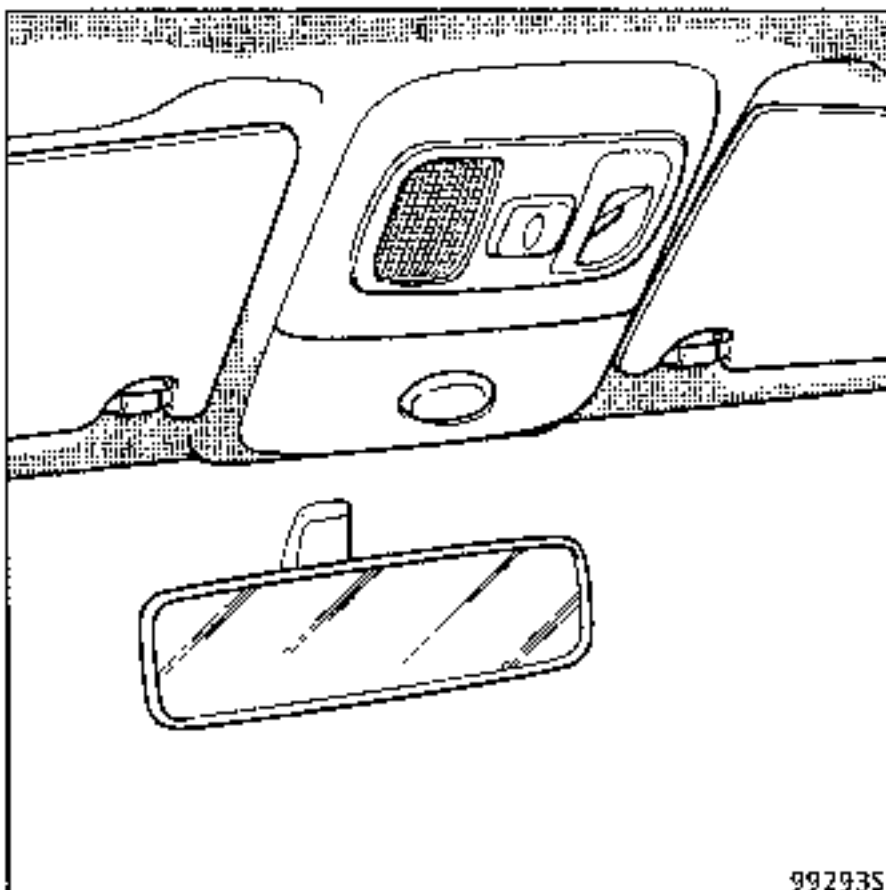
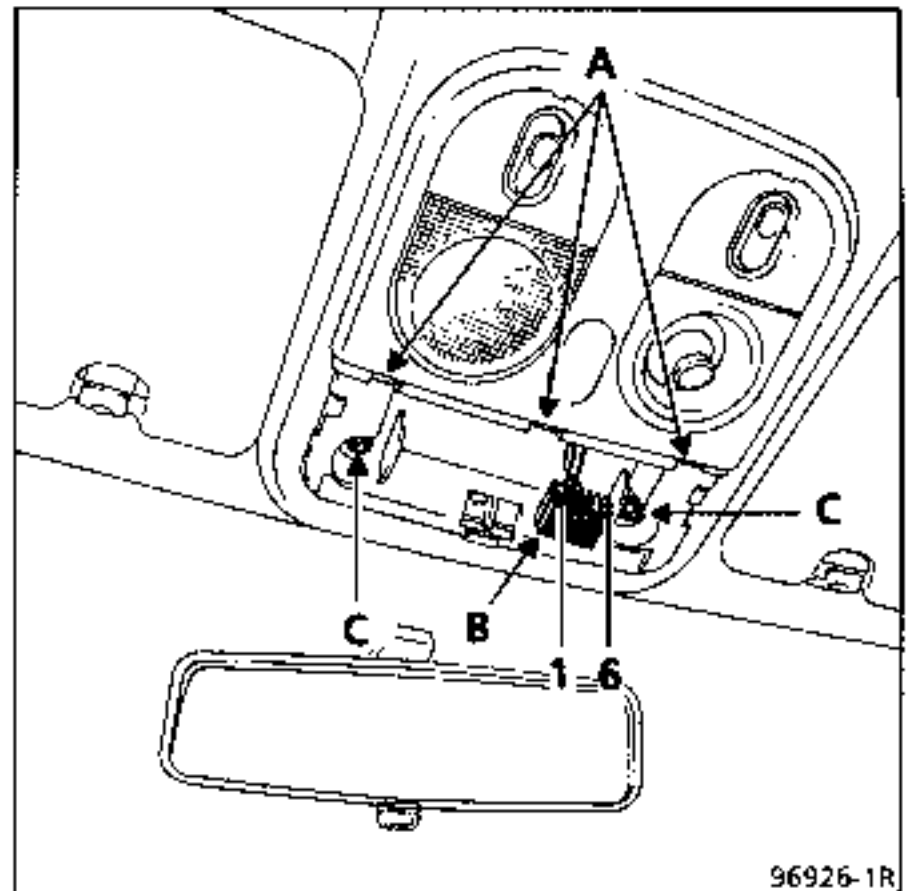
Unclip the roof console plastic cover, by moving it forwards, which mounts the infrared receiver (if the vehicle is fitted with central door locking) to release the three notches (A).



Disconnect the connector (B) if necessary and remove the cover.

Remove the 2 bolts (C) and release the roof console towards the front of the vehicle.

Disconnect the various connectors.



### CONNECTIONS FOR CONNECTOR (B) (all possible connections)






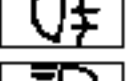
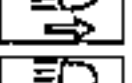



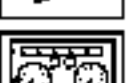
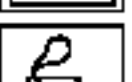

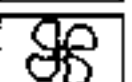




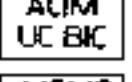


Track	Allocation
1	Ultrasound detector information
2	Ultrasound feed
3	Earth
4	Infrared receiver return
5	Infrared receiver feed
6	Not used



# FUSE BOX (passenger compartment side)

This fuse box is located in the passenger compartment on the driver's side.

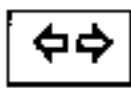







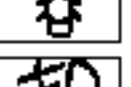


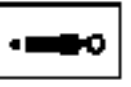
## Allocation of fuses (depending on equipment level)

Symbol	Rating	Allocation
	25	Heated rear screen
	15	Horn
	5	Anti-lock braking system (ABS)
	7,5	Left hand side light / glovebox
	7,5	Right hand side light / instrument panel
	5	Rear fog light
	10	Right hand main beam headlight
	10	Left hand main beam headlight
	10	Right hand dipped beam headlight / headlight adjustment
	10	Left hand dipped beam headlight/ headlight adjustment
	20	Dual headlight fuse *
	15	Instrument panel/ stop lights / memorised seat position / airbag / pretensioners
	15	Cigar lighter / radio / illumination of controls
	-	Not used
	20	Heating
	20	Cooling fan
	10	Headlight washers
	15	Interior and luggage compartment lighting
	15	Clock/ instrument panel lighting / radio / memorised seat position
	5	Connection unit/ remote control/ alarm / engine immobiliser system
	5	Injection

**\*ATTENTION :** do not fit if the vehicle is only fitted with single headlights (the lens unit will be damaged by the heat from the bulb when dipped or main beam headlights are switched on).



Allocation of fuses (depending on equipment level ) (continued)

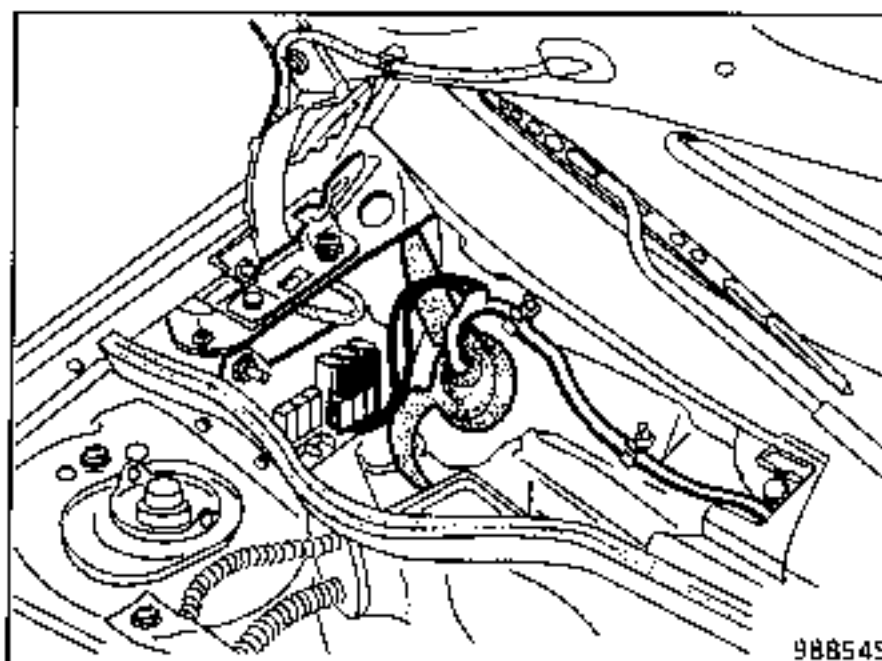
Symbol	Rating	Allocation
	15	Flasher unit
	20	Electric seat adjustment
	20	Sunroof
	25	Electric windows
	15	Windscreen wipers
	15	Heated seats
	25	Driver's seat position memory
	7,5	Heated external rear view mirrors
	20	Central door locking
	15	Front fog lights
COUPE CONSO	30	Consumer cut-out
	15	Reversing lights/ rear screen wiper/ rear screen washer/ heated windscreen
	–	Not used
CDA	–	Not used

**NOTE :** to determine the exact position of the fuses, refer to the vehicle label or the Wiring Diagram Technical Note.



**FUSE / RELAY UNIT (engine side)**

- Unit located in the scuttle panel, battery end.



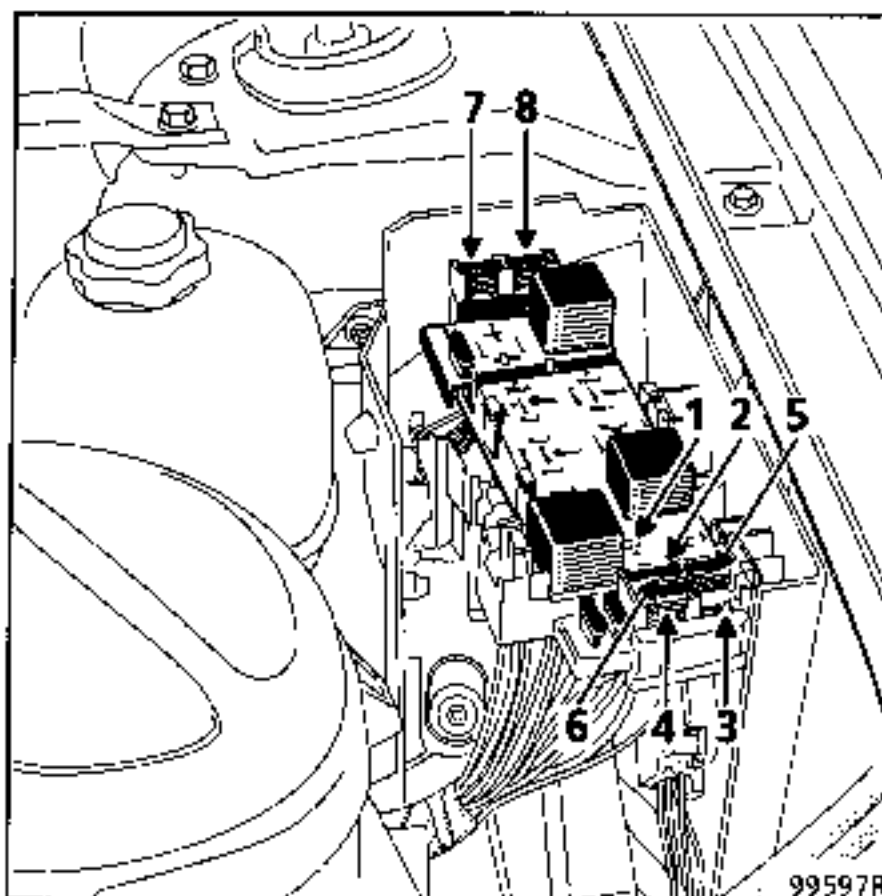
**Allocation of fuses (depending on equipment level)**

Base colour	Rating	Allocation
Brown	30/70	Petrol injection (30A) / diesel preheating (70A)
Black	40	Air conditioning
Green	60	Connection unit feed
Orange	60	Connection unit feed and lights / wipers stalks
Orange	60	Ignition switch and lights / wipers stalks and wiper motor



# FUSE / RELAY UNIT (engine side) (continued)

- Unit located on left hand side of engine compartment



## Allocation of fuses (depending on equipment)

Reference	Rating	Allocation
1	–	Not used
2	40	Air conditioning fan (vehicle with air conditioning)
3	–	Not used
4	7,5	+ after ignition alternator regulator/ speed sensor
5	25	180 Watt cooling fan (vehicle without air conditioning)
6	7,5	+ after ignition injection pump relay/ injection computer
7	5 / 2	+ after ignition automatic transmission/ + after ignition automatic clutch relay
8	5 / 30	Reversing lights (automatic transmission) / automatic clutch pump assembly



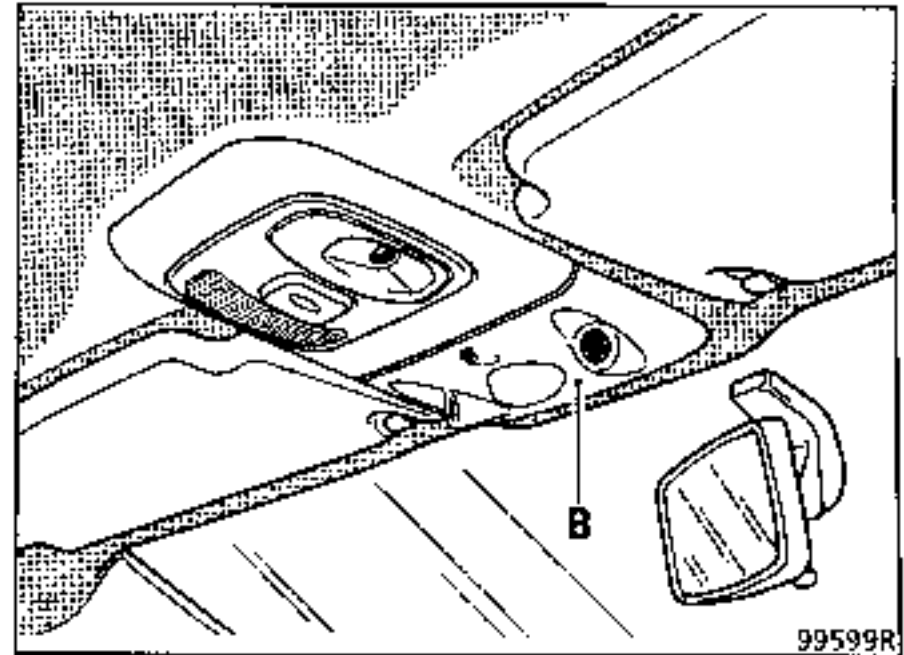
**DESCRIPTION**

The burglar alarm comprises :

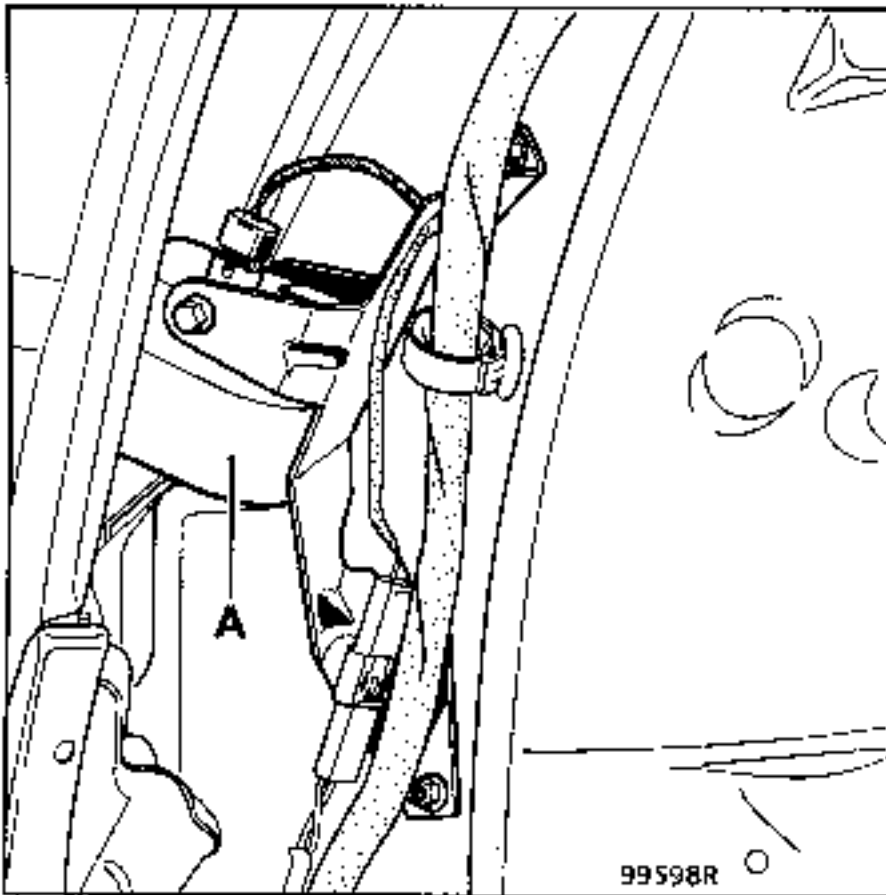
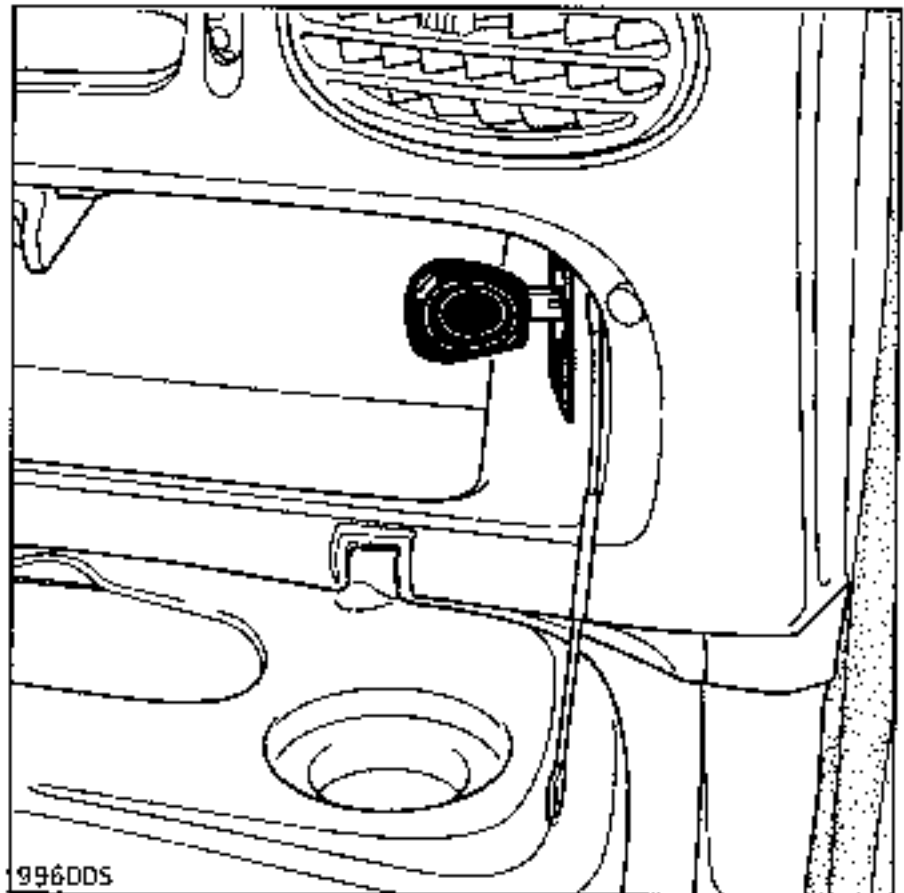
- an auto-fed siren,
- a volumetric detection unit (ultrasound) plus a warning light to show the alarm is set,
- a lock to turn the alarm function on and off,
- a computer which controls the alarm function, integrated into the passenger compartment connection unit.

**LOCATION OF THE COMPONENTS**

The auto-fed siren (A) is mounted on a metal bracket under the front left hand wheel arch.



The lock for turning the alarm function on and off is located on the right hand side of the glovebox. The ignition key is used in the lock (the lock is located on the left hand side of the boot for the A0X).



The volumetric detection unit (B) is located in the roof console with the PLIP receiver and the alarm warning light.

**LEGEND :**

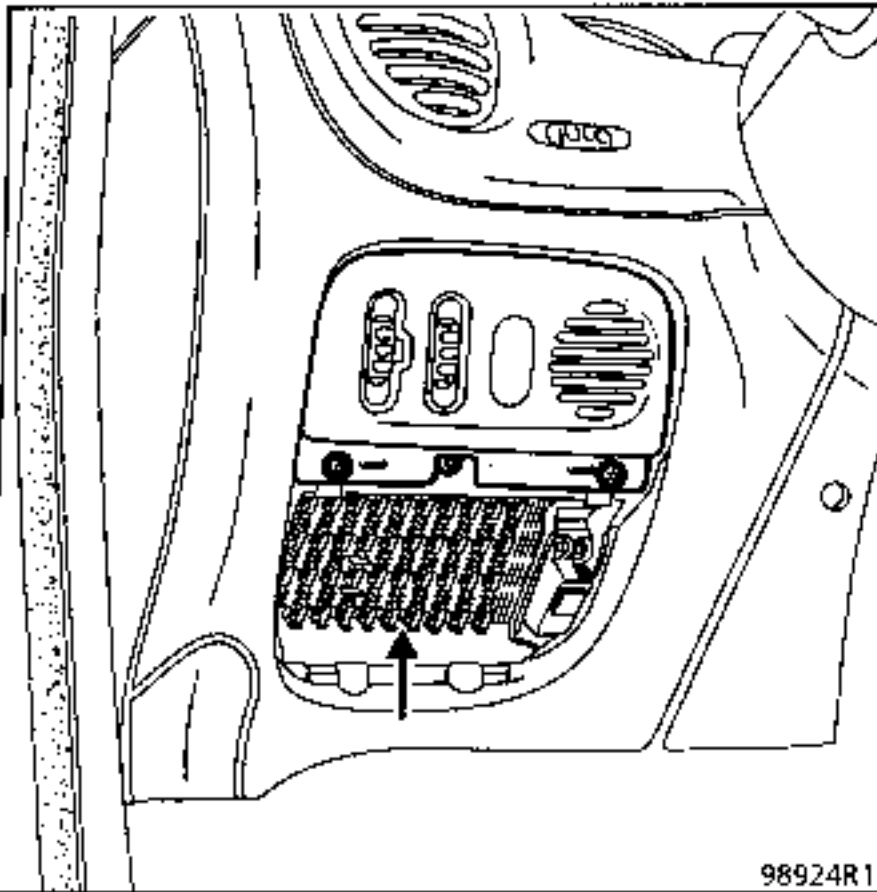
Initial state  
Passenger compartment connection unit

=  
=

Uncoded  
Combined B.I.C./Decoder/Fuse box



The connection unit is located on the left hand side under the dashboard. Located on right hand side for right hand drive vehicles.



## OPERATION

This alarm system provides the vehicle with:

- volumetric protection of the passenger compartment by means of an ultrasound field. Any modification to the interior volume (disruption of the emission and reception of the ultrasonic waves), will trigger the alarm,
- perimetric protection; the alarm unit is connected to the vehicle's opening elements (front and rear doors, boot, bonnet); opening one of these will trigger the alarm immediately.

## ALARM LIGHT AND SOUND SIGNALS

In accordance with current legislation, once the alarm has been triggered, the dipped beam headlights\*, hazard warning lights\* and siren will operate alternately for 30 seconds ( $\pm 5$  seconds). After 30 seconds ( $\pm 5$  s) of silence, the alarm will reset itself again to standby mode.

**NOTE :** after being triggered three times in succession, the alarm will become inactive, but the warning light will continue to flash as if the alarm were still set.

## SETTING THE ALARM

The alarm is set when the doors are locked using the PLIP remote control (using the door key does not set the alarm).

The siren will beep to confirm the alarm has been set. The hazard warning lights\* will also flash twice and the warning light on the roof console will illuminate.

This warning light will remain illuminated for twenty seconds, during which time the sensors assess the passenger compartment volume, then the warning light will begin to flash. The sensors reassess the passenger compartment volume each time the alarm is set to take into account any possible variation in volume (addition of luggage, parcels etc.).

Any change in the passenger compartment volume after the alarm has been set (examples : window broken, foreign body enters the passenger compartment or something moves inside the passenger compartment) will disrupt the emission and reception of the ultrasound field and immediately trigger the alarm.

Also, if one of the opening elements is opened, it "sends" a signal to the passenger compartment connection unit via the switch on the door, boot or bonnet.

\* Depending on country.



The alarm may therefore only operate correctly if all the doors, boot, bonnet and windows and sunroof (depending on equipment) are correctly closed.

**ATTENTION :** an animal left in the vehicle may trigger the alarm when it moves.

If the alarm is triggering incorrectly, check that the driver has not hung an object from the rear view mirror (or anywhere else) which could tilt or move, or has not left the windows or sunroof open. If an object masks the ultrasound system it will not operate correctly.

When setting the system, ensure the hazard warning lights flash\*. If they do not flash, the boot, bonnet or one of the doors is still open. In this case, perimetric protection is not assured.

When the opening element is closed, the hazard warning lights\* will flash to show that the alarm is now correctly set.

#### DEACTIVATING THE ALARM

The alarm deactivates when the PLIP remote control is used to unlock the doors.

"Open" information is sent to the passenger compartment connection unit by the PLIP (see diagram).

Unlocking the doors deactivates the volumetric and perimetric protection systems (this is also the case if the alarm has been triggered).

The deactivation of the alarm is shown by two flashes of the hazard warning lights\* and the extinguishing of the alarm warning light.

**IMPORTANT:** opening the doors using the key will not deactivate the alarm and will not stop it if it is triggered.

The lock in the glovebox prevents or allows the operation of the alarm system (located on the left hand side of the boot for the A0X).

#### OPERATIONAL PERIOD

After 5 weeks continuous standby, the battery may not have enough power to ensure the vehicle's system operates correctly.

#### TESTING THE ALARM

Set the alarm using the PLIP.

Check the hazard warning lights\* flash twice, the alarm warning light illuminates and the siren beeps; otherwise turn the key in the alarm control lock in the glovebox (in the boot for the A0X).

#### PERIMETRIC DETECTION TEST

Set the alarm using the PLIP.

Unlock a door using the key and open it; the alarm should be triggered (dipped headlights\*, hazard warning lights\*, siren operate alternately).

Stop the alarm using the PLIP.

#### VOLUMETRIC DETECTION TEST

Partially open a front or rear window.

Set the alarm using the PLIP and wait for the alarm warning light to flash.

Put your arm through the open window and move it around in the centre of the passenger compartment; the alarm should be triggered (dipped headlights\*, hazard warning lights\*, siren operate alternately).

Stop the alarm using the PLIP.

**NOTE :** the ultrasound sensitivity cannot be adjusted (self-adjusting system).

\* Depending on country.



**REPLACING THE SIREN**

After fitting a new siren, 3 1/2 hours driving time must be allowed for the internal battery to be sufficiently charged to ensure the siren will sound correctly.

**IMPORTANT :** remember to turn the lock to "ON" before returning the vehicle to the customer.

**REPLACING THE CONNECTION UNIT**

If the connection unit has to be replaced, certain functions must be configured using the XR25 depending on the vehicle equipment and the legislation of the country, see section 87.

**CONFIGURATIONS FOR THE ALARM FUNCTION**

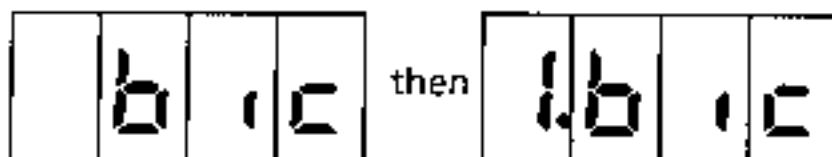
When replacing the connection unit, the following must be configured:

- the alarm function,
- the operation of the alarm according to local legislation.

Connect the XR25 with cassette n° 15 to the vehicle's diagnostic socket and set the ISO selector switch to position S8 (fault finding fiche for passenger compartment connection unit n° 45).

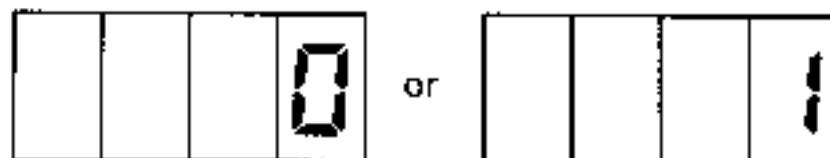
Enter code **D 4 5**

The central display shows:

**CHECKING THE CONFIGURATION OF THE ALARM FUNCTION**

Enter **# 5 2**

The display shows:



the alarm is not configured.



the alarm is configured

**CONFIGURATION OF THE ALARM FUNCTION**

Enter **G 5 2 \* 1 \***

The XR25 beeps to show the command has been registered.

Bargraph 16 left hand side (status side 2/2) should be illuminated.

The alarm function is configured.



**CHECKING THE COUNTRY CONFIGURATION**

Enter

# 5 3

The display shows:

1

indicates programming for France, Arabia, Austria, French Colonies, Spain, Greece, Hungary, Israel, Italy, Japan, Portugal, Morocco-Algeria-Tunisia, Slovenia, Iceland, DAI,

2

indicates programming for Europe, Australia, Belgium, Denmark, Finland, Great Britain, Holland, Ireland, Norway, Poland, Sweden, Taiwan, Czech Republic (future European standard),

3

Indicates programming for Germany,

4

Indicates programming for Switzerland,

5

indicates programming for Belgium, Great Britain, Ireland.

**CHANGING THE COUNTRY CONFIGURATION**

Enter

G 5 3 \*

followed by the country number required and validate with \* (see country number in previous paragraph).

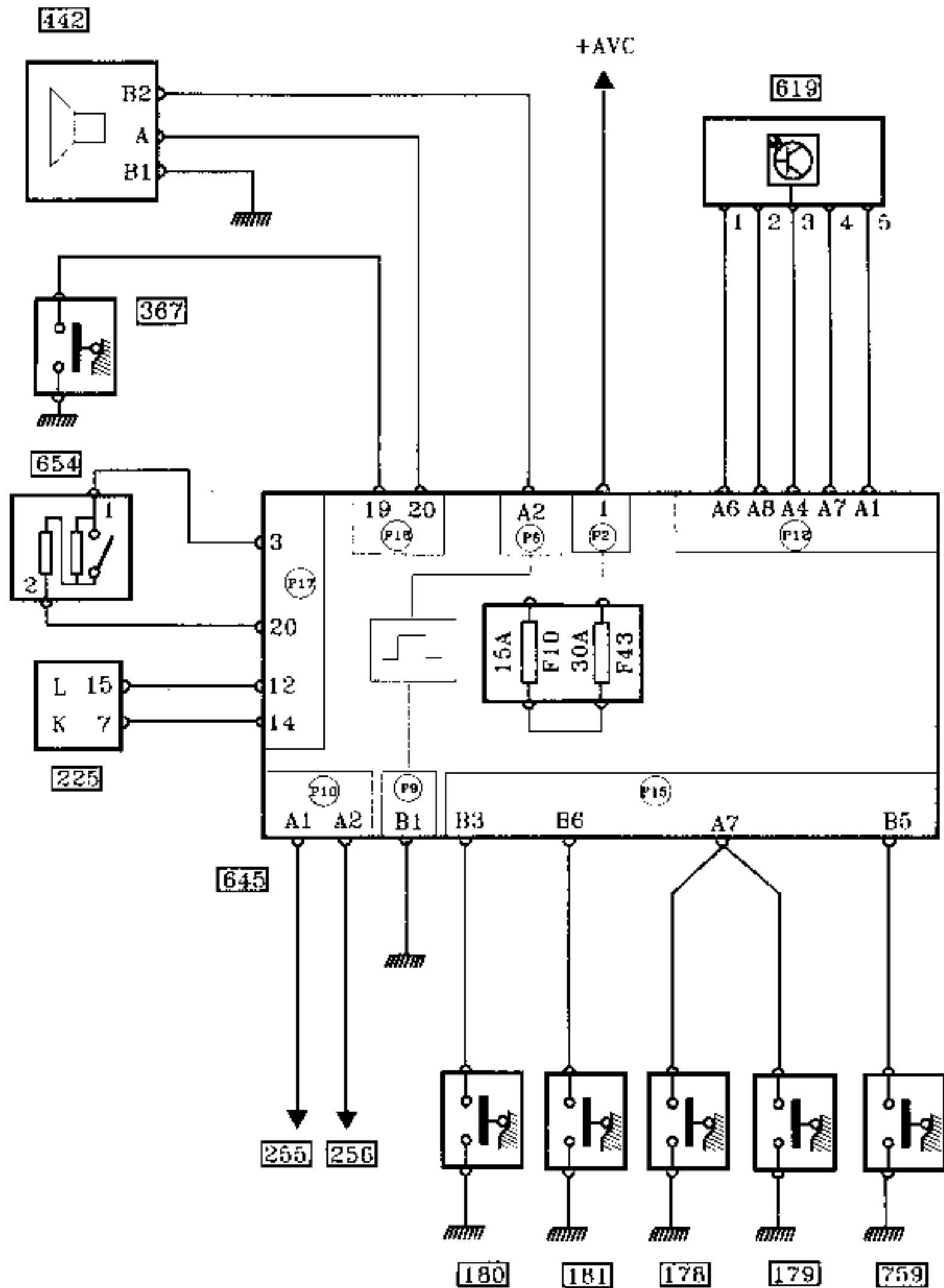
The XR25 will beep to show the command has been registered.

The alarm function has been selected.

**NOTE :** refer to section 87 for the other configurations of the connection unit.



## DIAGRAM





KEY

- 178 Rear right hand door switch
- 179 Rear left hand door switch
- 180 Front left hand door switch
- 181 Front right hand door switch
- 225 Diagnostic socket
- 255 Right hand indicators
- 256 Left hand indicators
- 367 Bonnet switch
- 442 Auto-fed alarm siren
- 619 Infrared receiver / ultrasound plate
- 645 Passenger compartment connection unit
- 654 Alarm lock
- 759 Boot switch

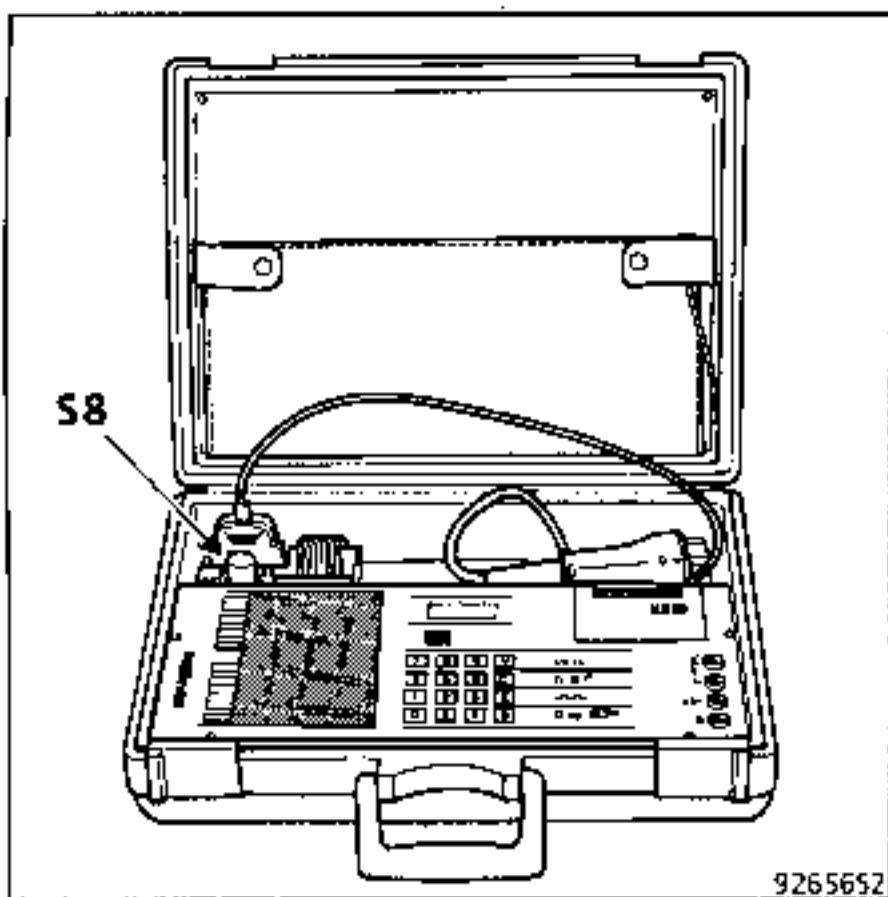


**FAULT FINDING**

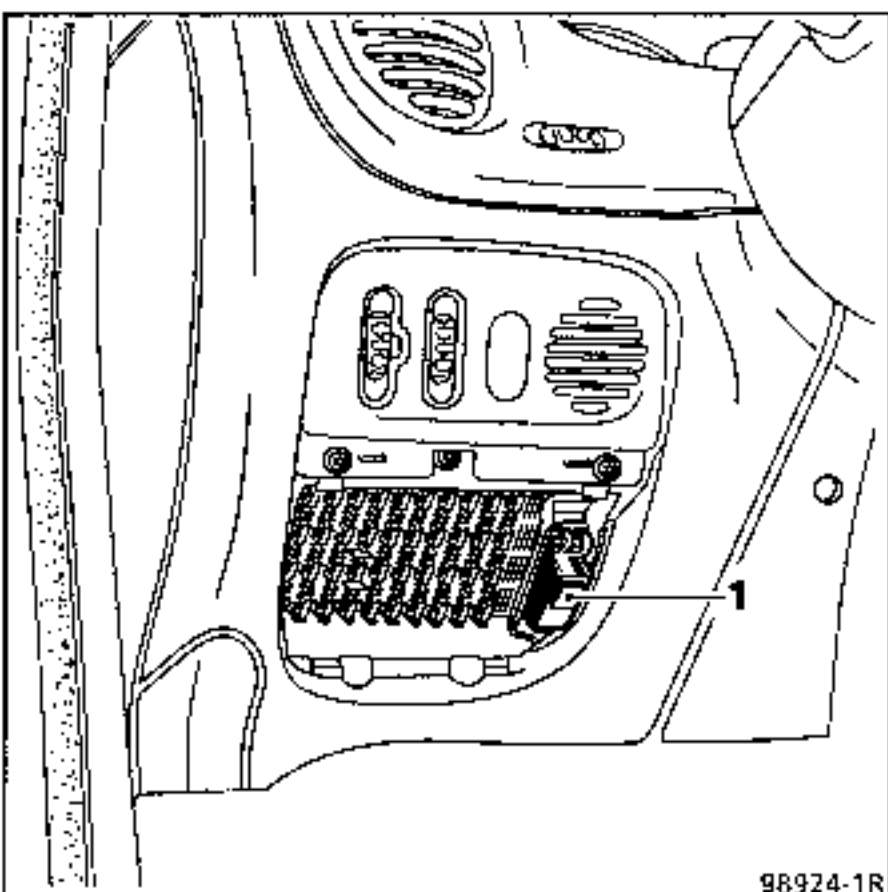
Certain components of the alarm system may be diagnosed using the XR25 with the fault finding fiche for the connection unit.

**CONNECTION**

Use cassette n° 15 and the corresponding fault finding fiche n° 45 (see section 87).



Connect the XR25 to the diagnostic socket (1) located behind the passenger compartment fuse box cover.



Position the ISO selector switch on S8 and enter

**D 4 5**

The display shows:

**b i c** then **l b i c**

**NOTE :** this section will only deal with the bar-graphs, # commands and command modes concerning the alarm.



## FAULT FINDING - INTRODUCTION

### SETTING UP XR25 / PASSENGER COMPARTMENT CONNECTION UNIT DIALOGUE

- Connect the XR25 to the diagnostic socket.
- ISO selector on S8
- Enter **D45**

I.blc

### ERASING THE MEMORY

After repairing the alarm system, on the XR25 wait for the memorised bargraph to flash, then enter G0\*\* to erase the memory.

The memory may also be erased by disconnecting the battery, ignition off, for approximately 30 seconds.



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 45 SIDE 1/2

N°45 1/2		S8		code : D 4 5			read : 1 b 1 c	
1	<input type="checkbox"/>	ILLUM. → CORR. SIDE OF CARD. EXTING. → TURN CARD OVER				CODE PRESENT <input type="checkbox"/>		
2	<input type="checkbox"/>	REAR DEMISTER	INFRA-RED (FLIP)		CONTROL MODE : G... *			
3	<input type="checkbox"/>	LOCKING	UNLOCKING		03 Door locking			
4	<input type="checkbox"/>	REAR SCREEN WASH button	FRONT		04 Door unlocking			
5	<input type="checkbox"/>	OIL PRESSURE	SIDELIGHT		05 Screen wiper slow speed			
6	<input type="checkbox"/>	DIESEL SOL. ACKNOWLEDGEMENT	CODED LINE		06 Screen wiper fast speed			
7	<input type="checkbox"/>	DRIVER'S SIDE WINDOW RISER	WINDSCREEN DEMISTER		07 REAR screen wipe			
8	<input type="checkbox"/>	DESCENT WINDOW RISER button	RISING		08 Lights "on" warning			
9	<input type="checkbox"/>	ALARM LOCKING KEY		★ 28		09 Eng. immobiliser warning light		
10	<input type="checkbox"/>	+ AFTER IGNITION	+ ACCESSORIES		10 Driver's side window descent			
<b>PASS. COMP. FUSE BOX</b> (DEFECTS STATUS) To read side 2/2 : G 02 * Memory del. : G 0 **					11 Driver's side window riser			
					12 Driver's side window riser			
11	<input type="checkbox"/>	LOCKING (press 3s on central switch)	UNLOCKING		13 Ceiling light			
12	<input type="checkbox"/>	WINDSCREEN DEMISTER	REAR DEMISTER		14 Sidelight			
13	<input type="checkbox"/>	EXCESS SPEED	REAR SCREEN WIPER		15 Front fog light			
14	<input type="checkbox"/>	REAR SCREEN WASHER	SCREEN WASHER		16 Rear fog light			
15	<input type="checkbox"/>	RISING Driver's side window riser	DESCENT		17 Headlamp washers			
16	<input type="checkbox"/>	POSITION ACTION ON LIGHT SWITCH	SIDELIGHT		18 LH windscreen demister			
17	<input type="checkbox"/>	REVERSE GEAR	ROAD		19 RH windscreen demister			
18	<input type="checkbox"/>	HAZARD	FLASHING		20 Rear screen demister			
19	<input type="checkbox"/>	FRONT FOG LIGHT Side lights on	REAR FOG LIGHT		25 Sten (stop : G 13 *)			
20	<input type="checkbox"/>	OIL PRESSURE ( ) engine turning		26 Hazard alarm				
					27 Alarm warning light			
					Diesel solenoid mechanical check Test: Switch off ignition, enter G22 * Switch on ignition, valve opens and closes within 30 sec. (audible check)			
					<b>ADDITIONAL CHECKS : #...</b> 01 Vehicle speed km / h 02 Battery voltage V 03 Max. speed advice prior to excess speed warning km per h 04 Screen wipe speed ring position 14 Equipment level : (N2, N3, N4) 30 Type of engine immobiliser 53 Type of alarm			
					List/number of times alarm triggered			
					Help : V 0 Return to diag. mode : D Part No. : G 7 0 *			
					15 ANG			

Bargraphs on a coloured background represent a fault.  
 Bargraphs on a white background represent a status.



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 45 SIDE 2/2

N°45 2/2		read : 2.b 1c	
1	<input type="checkbox"/> EXTING. --> CORRECT SIDE OF CARD. ILLUM. --> TURN CARD OVER	CODE PRESENT <input type="checkbox"/>	
2	<input type="checkbox"/> TIMED WIPER SPEED	SCREEN WIPE SWITCH (depending on equip.)	
3	<input type="checkbox"/> STOP	FIXED FEED STOP <input type="checkbox"/>	
4	<input type="checkbox"/> LOW SPEED	HIGH SPEED <input type="checkbox"/>	
5	<input type="checkbox"/> ← DRIVER'S DOOR OPEN FRONT OR REAR PASSENGER DOOR OPEN →		
6	<input type="checkbox"/> BONNET	LUGGAGE COMP. <input type="checkbox"/>	
7	<input type="checkbox"/> ACTIVE ENGINE IMMOBILISER		
8	<input type="checkbox"/> VOLUMETRIC SENSOR	PERIMETRIC SENSOR <input type="checkbox"/>	
9	<input type="checkbox"/> VEHICLE INTRUSION STATUS	MEMORISED INTRUSION SIREN STATUS <input type="checkbox"/>	
10	<input type="checkbox"/> GEAR ← ALARM KEY POSITION → STOP <input type="checkbox"/>		
PASS. COMP. FUSE BOX (STATUS)		Help : V 0 Return to diag. mode : D Part No. : Q 7 0 9	
To read side 1/2 : G 01 ★			
11	<input type="checkbox"/> SIGNAL RECEIVED (3sec)	SIGNAL CORRECT (3sec) <input type="checkbox"/>	
12	<input type="checkbox"/> LOCKED BY PLIP	CODE RECOGNISED <input type="checkbox"/>	
13	<input type="checkbox"/> CALIBRATION ENDED	VEH LOCKED BY PLIP <input type="checkbox"/>	
14			
15			
16	<input type="checkbox"/> ALARM	ENGINE IMMOBILISER <input type="checkbox"/>	
17	<input type="checkbox"/> HEADLAMP WASHER	EXTREME COLD FOG LIGHTS <input type="checkbox"/>	
18	<input type="checkbox"/> RUNNING -LIGHT	ARABIA EXCESS SPEED <input type="checkbox"/>	
19	<input type="checkbox"/> CEILING LIGHT TIMER	DIESEL <input type="checkbox"/>	
20	<input type="checkbox"/> DEFECT PRESENT		
		L5 ANG	

FI215452

Bargraphs on a coloured background represent a fault.  
Bargraphs on a white background represent a status.

c64010.1



## FAULT FINDING - XR25 FICHE

## REPRESENTATION OF THE BARGRAPHS

## REPRESENTATION OF A FAULT (always on a coloured background)



If illuminated, there is a fault with the product tested; the associated text defines the fault.

## REPRESENTATION OF A STATUS (always on a white background)



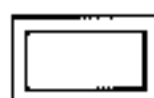
Illuminates when dialogue is established with the computer for the product; if it remains extinguished :

- the dialogue does not exist,
- there is a fault with the XR25, the computer or the line.

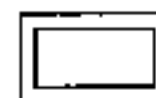
## Engine stopped, ignition on, with no operator action

The status bargraphs on the fiche are represented in the condition that they should be in when the engine is stopped, ignition on, with no operator action.

- If, on the fiche, the bargraph is shown



the XR25 should show



- If, on the fiche, the bargraph is shown



the XR25 should show

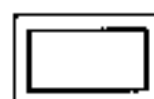


- If, on the fiche, the bargraph is shown



the XR25 should show

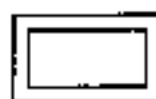
either



or



## Engine running



Extinguished when the function or condition on the fiche is no longer met.



Illuminated when the function or condition on the fiche is met.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

2

**Bargraph 2 RH side illuminated**

Fiche n° 45 side 1/2

**PLIP CIRCUIT**

XR25 aid : CC to earth on track A7 of connector P12 for passenger compartment connection unit

**NOTES**

Check bargraph 16 RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with alarm)

Check the insulation in relation to earth of the wiring between tracks 4 on the infrared receiver and A7 on connector P12 for the passenger compartment connection unit.

Repair the wiring if necessary.

If the fault persists, disconnect the clip on track A7 of connector P12 for the passenger compartment connection unit.

Does bargraph 2 RH side extinguish?

Bargraph 2 RH side does not extinguish.

Replace the passenger compartment connection unit.

Bargraph 2 RH side does extinguish.


Replace the infrared receiver.

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>9</div> 	<div>Bargraph 9 RH side illuminated</div> <div>Fiche n° 45 side 1/2</div> <div><u>ALARM LOCK CIRCUIT</u></div> <div>XR25 aid : *29 = CO.1 CO or CC earth Alarm lock line CC.0 CC + 12 V Alarm lock line</div>
---	---

## NOTES

Check bargraph 16 LH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with alarm)

Check the continuity and insulation from earth and from  $-12\text{ V}$  of the wiring between the 20 track connector P17 for the passenger compartment connection unit tracks:

$\left\{ \begin{array}{l} 20 \\ 3 \end{array} \right.$  and the alarm lock

Replace the 20 track connector P17 for the passenger compartment connection unit and the associated electrical wiring if necessary.

Disconnect the 2 track alarm lock connector.

Measure the resistance between tracks 1 and 2 on the 2 track alarm lock connector.

You should note:  $R \approx 3.6\text{ k}\Omega$  key in position ON  
 $R \approx 1.2\text{ k}\Omega$  key in position OFF

Do you note these resistances?

These resistances are not noted, replace the alarm lock.

These resistances are noted, replace the passenger compartment connection unit.

## AFTER REPAIR

- Erase the memory using G0\*\*.
- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

S

**Bargraph 5 RH side, incorrect illumination**

Fiche n° 45 side 2/2

**FRONT PASSENGER / REAR DOOR OPEN CIRCUIT**

XR25 aid :  $\left. \begin{array}{l} \text{CO} \\ \text{CC earth} \\ \text{CC} + 12 \text{ V} \end{array} \right\}$  on the door switch line for the passenger  
and / or rear doors

**NOTES**

Fault finding by opening and closing the doors.

Check the continuity and insulation in relation to earth and to  $-12 \text{ V}$  of the wiring between connector P15 for the passenger compartment connection unit tracks A7 and B6 and the vehicle earth via the passenger and rear door switches.

Repair the wiring if necessary.

Check the operation of the passenger and rear door switches.

Do the door switches operate correctly?

The switches do not operate correctly, replace the faulty door switch.


The switches operate correctly, replace the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div data-bbox="217 382 237 415">5</div> 	<div data-bbox="479 343 1338 382">Bargraphs 5 LH and RH sides, incorrect illumination</div> <div data-bbox="1540 343 1856 382">Fiche n° 45 side 2/2</div> <div data-bbox="479 404 1094 451"><u>DRIVER'S DOOR OPEN CIRCUIT</u></div> <div data-bbox="479 465 1403 593">XR25 aid : <div data-bbox="701 465 915 593">{ CO CC earth CC + 12 V</div> on driver's door switch line</div>
---	--

**NOTES**

Fault finding by opening and closing the door.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between connector P15 track B3 for the passenger compartment connection unit and the vehicle earth via the driver's door switch.

Repair the wiring if necessary.

Check the operation of the driver's door switch.

Does the door switch operate correctly?

The switch does not operate correctly, replace the driver's door switch.

The switch operates correctly, replace the passenger compartment connection unit.

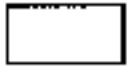
**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6



Bargraph 6 LH side, incorrect illumination

Fiche n° 45 side 2/2

**BONNET CIRCUIT**

XR25 aid : CO  
CC earth  
CC + 12 V

} on the bonnet switch line

**NOTES**

Fault finding by opening and closing the bonnet

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track 19 on connector P16 for the passenger compartment connection unit and the vehicle earth via the bonnet switch.

Replace the 20 track connector P16 for the passenger compartment connection unit and the associated electrical wiring if necessary.

Check the operation of the bonnet switch.

Does the bonnet switch operate correctly?

The switch does not operate correctly, replace the bonnet switch.


The switch operates correctly, replace the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>6</div> 	<div>Bargraph 6 RH side, incorrect illumination</div> <div>Fiche n° 45 side 2/2</div> <div><u>BOOT CIRCUIT</u></div> <div>XR25 aid : CO CC earth CC + 12 V</div> <div>} on the boot switch line</div>
---	---

**NOTES**

Fault finding by opening and closing the boot

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track B5 on connector P15 for the passenger compartment connection unit and the vehicle earth via the boot switch.

Replace the wiring between track B5 on connector P15 for the passenger compartment connection unit and the vehicle earth via the boot switch if necessary.

Check the operation of the boot switch.

Does the boot switch operate correctly?

The switch does not operate correctly, replace the boot switch.

The switch operates correctly, replace the passenger compartment connection unit.

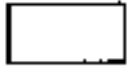
**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

B

**Bargraph 8 LH side, incorrect illumination**

Fiche n° 45 side 2/2

**ALARM CIRCUIT**

XR25 aid : CO } on wiring between { 1 A6 } connector P12 for  
 CC earth } ultrasound sensor { 2 and A8 } pass.connect. unit  
 CC + 12 V } 3 } vehicle electronic earth

**NOTES**

Check that bargraph 16 LH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with alarm). Fault finding with alarm lock in position ON.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between tracks:

ultrasound sensor { 1 A6 } connector P12 for the passenger compartment connection unit  
 { 2 and A8 }  
 { 3 } vehicle electronic earth

Replace the wiring between the ultrasound sensor and connector P12 for the passenger compartment connection unit if necessary.

Check on track A8 of connector P12 for the passenger compartment connection unit for voltage = - 12 V when locking the vehicle using the PLIP.

Is there = + 12 V on track A8 of connector P12 for the passenger compartment connection unit when locking the vehicle using the PLIP?

There is not = + 12 V, replace the passenger compartment connection unit.


There is = + 12 V, replace the ultrasound sensor.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<p>8</p> 	<p><b>Bargraph 8 RH side, incorrect illumination</b> <span style="float: right;">Fiche n° 45 side 2/2</span></p> <p><b><u>ALARM CIRCUIT</u></b></p> <p>XR25 aid : Incorrect operation of opening element switches.</p>
---	--

**NOTES**

Check that bargraph 16 LH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with alarm).

If bargraph 5 LH side and / or bargraph 5 RH side are illuminated, see bargraph 5 LH side and / or bargraph 5 RH side.


If bargraph 6 LH side or bargraph 6 RH side are illuminated, see bargraph 6 LH side or bargraph 6 RH side.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>10</div> 	<div>Bargraph 10 LH side, incorrect illumination</div> <div>Fiche n° 45 side 2/2</div> <div><u>ALARM LOCK CIRCUIT</u></div> <div>XR25 aid : CO CC earth CC + 12 V</div> <div>} on alarm lock line</div>
--	---

**NOTES**

Check bargraph 16 LH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with alarm).  
If bargraph 9 RH side is illuminated on fiche n° 45 side 1/2, deal with bargraph 9 RH side.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between connector P17 for the passenger compartment connection unit tracks 20 and 3 and the alarm lock.

Replace the 20 track connector P17 for the passenger compartment connection unit and the associated electrical wiring if necessary.

Check the operation of the alarm lock.

Does the alarm lock operate correctly?

The lock does not operate correctly, replace the alarm lock.

The lock does operate correctly, replace the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

11

**Bargraphs 11 LH and RH side, incorrect illumination** Fiche n° 45 side 2/2  
PLIP CIRCUIT

XR25 aid :    Bargraph 11 LH side illuminated, infrared signal received by receiver  
                     Bargraph 11 RH side illuminated, signal correct

**NOTES**

If bargraph 2 RH side is illuminated on fiche n° 45 side 1/2, deal with bargraph 2 RH side first

Check if the vehicle doors can be locked and unlocked using the first PLIP. Check using a second PLIP and replace the battery in the first PLIP if necessary.

Check if connector P12 for the passenger compartment connection unit is correctly connected.  
 Clip connector P12 into position correctly if necessary.

Check on the infrared receiver connector for the following voltages:

- = + 12 V before ignition between tracks 5 and 3.
- = + 12 V before ignition between tracks 4 and 3

Do you note these voltages?

YES

Set the XR25 to pulse detection, then check on track 4 of the infrared receiver for a pulse when the PLIP is activated.

Is there a pulse when the PLIP is activated ?

If there is no pulse when the PLIP is activated, replace the infrared receiver.

If there is a pulse when the PLIP is activated, replace the passenger compartment connection unit.

NO

Check on connector P12 for the passenger compartment connection unit for the following voltages:

- = + 12 V before ignition between track A1 and the vehicle earth
- = + 12 V before ignition between track A7 and the vehicle earth

Do you note these voltages?

Voltages not noted, replace the passenger compartment connection unit.

Voltages noted, repair the wiring between the infrared receiver and connector P12 for the passenger compartment connection unit.

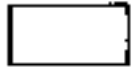
**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

11

**Bargraph 11 RH side remains extinguished**  
**PLIP CIRCUIT.**

Fiche n° 45 side 2/2

XR25 aid : Code no longer synchronised

**NOTES**

Check the keys are correct for the vehicle.

When the PLIP is pressed, bargraph 11 RH side remains extinguished (while bargraph 11 LH side illuminates for approximately 3 seconds before extinguishing) and the doors cannot be locked or unlocked using the PLIP.

There is no synchronisation between the code sent by the PLIP and the code calculated by the passenger compartment connection unit.

Follow the procedure for resynchronising the PLIPs.

**AFTER REPAIR**

- After repairing the immobiliser system, check the operation of the immobiliser system.



## FAULT FINDING - CUSTOMER COMPLAINTS

**NOTES**

Only consult these customer complaints after carrying out a complete check using the XR25.

Alarm cannot be set by the PLIP (ultrasound sensor diode remains extinguished)

Chart 1

Alarm cannot be turned off by PLIP  
(ultrasound sensor diode remains illuminated)

Chart 2

Alarm triggered incorrectly when on stand-by  
(with hazard warning lights and dipped headlights depending on country)

Chart 3

Siren triggered incorrectly  
(without hazard warning lights or dipped headlights depending on country)

Chart 4

Hazard warning lights do not flash when alarm is set

Chart 5

Dipped headlights do not flash when alarm is triggered

Chart 6

Siren does not sound when alarm is triggered  
(with hazard warning lights and dipped headlights operational depending on country)

Chart 7

Alarm lock will not disable alarm function

Chart 8

**Note :** Regulations in certain north European countries prevents use of the hazard warning lights as an indication of setting the alarm and turning it off.  
The dipped headlights may also not be used when the alarm is triggered.



## FAULT FINDING - FAULT CHARTS

## Chart 1

**ALARM CANNOT BE SET BY THE PLIP**  
(ultrasound sensor diode remains extinguished)**NOTES**

On fiche n° 45 side 1/2 : if bargraph 9 RH side is illuminated, see bargraph 9 RH side

Can the vehicle doors be locked  
by the PLIP?

no

See Chart 1A

yes

Check the position of the alarm lock (located  
in glovebox).  
Is the lock in the ON position ?

no

Return the alarm lock to position ON.

yes

Check the continuity and insulation from  
earth and from + 12 V of the wiring between  
track 2 of the ultrasound sensor and track A8  
of connector P12 for the passenger  
compartment connection unit.  
Is the wiring in good condition?

no

Replace the wiring

yes

When the alarm is not set, check that there is  
not - 12 V on track A8 of connector P12 for  
the passenger compartment connection unit.  
Is there + 12 V ?

no

Replace the ultrasound sensor

yes

Replace the passenger compartment  
connection unit.**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

Chart 1A

**ALARM CANNOT BE SET OR TURNED OFF BY THE PLIP****NOTES**

On fiche n° 45 side 2/2, if, when the PLIP is pressed, bargraph 11 LH side illuminates for 3 seconds and bargraph 11 RH side remains extinguished, see chart for bargraph 11 RH side extinguished.  
If bargraph 2 RH side is illuminated, see bargraph 2 RH side.

Check the operation of the PLIP.  
Test using a second PLIP.  
Can the vehicle doors be  
locked or unlocked?

yes

Check the condition of the battery in the first  
PLIP. Replace the battery if necessary. If the  
fault persists, replace the first PLIP.

no

Using the XR25 as a pulse detector, check on  
track 4 of the ultrasound sensor for a pulse  
when the PLIP is pressed.  
Is a pulse noted?

no

Check the condition of the battery in each of  
the 2 PLIPs. Replace the batteries if necessary.  
If the fault persists, replace  
the ultrasound sensor.

yes

Using the XR25 as a pulse detector, check on  
track A7 of connector P12  
for the passenger compartment connection  
unit for a pulse when the PLIP is pressed.  
Is a pulse noted?

no

Replace the wiring between track 1 of the  
ultrasound sensor and track A7 of connector  
P12 for the passenger compartment  
connection unit.

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 2

**ALARM CANNOT BE TURNED OFF BY PLIP**  
(ultrasound sensor diode remains illuminated)**NOTES**

Only use this customer complaint chart after carrying out a thorough check using the XR25.

Can the vehicle doors be  
unlocked by the PLIP?

no

See Chart 1A

yes

Check the continuity and the insulation from  
earth and from + 12 V of the wiring between  
track 2 on the ultrasound sensor and track A8  
of connector P12 for the passenger  
compartment connection unit.  
Is the wiring correct?

no

Replace the wiring

yes

When the alarm is not set, check there is not  
– 12 V on track 2  
of the ultrasound sensor.  
Is there + 12 V?

no

Replace the ultrasound sensor

yes

Replace the passenger compartment  
connection unit.**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 3

**ALARM TRIGGERED INCORRECTLY WHEN ON STANDBY**  
(with hazard warning lights and dipped headlights depending on country)**NOTES**

On fiche n° 45 side 2/2. If bargraph 5LH and / or bargraph 5RH are illuminated, see bargraph 5LH and / or bargraph 5RH. If bargraph 6LH or bargraph 6RH are illuminated, see bargraph 6LH or bargraph 6RH.

Check the number of times the alarm is triggered for each of the opening elements. Connect the XR25. On fiche n° 45 side 2/2, enter #18, #19, ..., #23.  
Does one opening element trigger many incorrect operations of the alarm?

yes

See status bargraph for opening element at fault.

no

Set the alarm and check that the alarm is not triggered when pressing on the opening elements (doors, bonnet, boot).  
Is the alarm triggered?

yes

Check the adjustment of the switch and its condition or the opening element at fault. Adjust or repair.

no

Leave the bonnet open to prevent perimetric protection and set the alarm.  
**Note :** The hazard warning lights will not flash.  
Tap sharply using the flat of your hand on a window.  
Is the alarm triggered?

no

See Chart 4  
"Siren triggered incorrectly"

yes

Check the continuity and insulation in relation to earth and to - 12 V of the wiring between tracks :

ultra sound sensor { 1 A6 connector P12 } passenger comp. connection unit  
2 and A8 connector P12  
3 vehicle earth  
Is the wiring correct?

no

Replace the faulty wiring.

no

Replace the ultrasound sensor. If the fault persists, replace the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 4

**SIREN TRIGGERED INCORRECTLY**  
(without hazard warning lights or dipped headlights depending on country)

## NOTES

None

Measure the frequency with which the siren is triggered.  
With what frequency is it triggered?

Triggered &gt; 30 seconds.

Replace the siren

Triggered several times in 30 seconds.

Check for + 12 V and earth on the siren connector.  
Refer to vehicle wiring diagram.  
Is there + 12 V and earth on the siren connector?

yes

Check for the presence of pulses on track 20 of connector P16 for the passenger compartment connection unit.  
Are there pulses on track 20 of connector P16 for the passenger compartment connection unit?

yes

no

Replace the passenger compartment connection unit.

no

Check the condition of the wiring between the earth on the siren connector and the vehicle earth. Also check between the + 12 V on the siren connector and track 20 of connector P16.

Are there pulses on the siren connector?

yes

no

Replace the siren

Replace the wiring between track 20 on connector P16 for the passenger compartment connection unit and the siren connector.

## AFTER REPAIR

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 5

HAZARD WARNING LIGHTS DO NOT FLASH WHEN ALARM IS SET.  
(Depending on country)

## NOTES

On fiche n° 45 side 2/2. If bargraph 5LH and / or bargraph 5RH are illuminated, see bargraph 5LH and / or bargraph 5RH. If bargraph 6LH or bargraph 6RH are illuminated, see bargraph 6LH or bargraph 6RH.

Check the condition of the 15 A indicators fuse.  
Is it in good condition?

no

Replace the 15A indicators fuse if necessary.

yes

Check the operation of the hazard warning lights by pressing the control button.  
Do they operate correctly?

no

Check the hazard warning lights.

yes

Check the position of the alarm lock.  
Is the alarm lock set to position ON?

no

Set the alarm lock to position ON.

yes

Enter the vehicle and close all opening elements. Check that when the alarm is set there are 2 + 12 V pulses on track A1 of connector P10 for the passenger compartment connection unit. Reset the alarm and repeat the operation on track A2 of connector P10 for the passenger compartment connection unit. Are there 2 + 12 V pulses on tracks A1 and A2 of connector P10 for the passenger compartment connection unit when the alarm is set?

no

Check the type of configuration depending on country. Connect the XR25. On fiche n° 45 side 2/2, enter G53\* to check the alarm configuration type corresponds correctly to the country. If the fault persists, replace the passenger compartment connection unit.

yes

Check the condition of the wiring between tracks A1 and A2 of connector P10 for the passenger compartment connection unit and the dashboard connection (\*).  
Repair the wiring.

(\*) See wiring diagram.

## AFTER REPAIR

After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 6

**DIPPED HEADLIGHTS DO NOT FLASH WHEN ALARM IS SET.**  
(Depending on country)**NOTES**

On fiche n° 45 side 2/2. If bargraph 5LH and / or bargraph 5RH are illuminated, see bargraph 5LH and / or bargraph 5RH. If bargraph 6 LH or bargraph 6 RH are illuminated, see bargraph 6LH or bargraph 6RH.

Check the condition of the 10A left and right hand fuses for the dipped headlights. Are the fuses in good condition?

no

Replace the 10A left and right hand dipped headlight fuses if necessary.

yes

Turn the dipped headlights on and check they operate correctly.  
Do the dipped headlights operate correctly?

no

Check the dipped headlights.

yes

Trigger the alarm and check at outputs B2 and B4 on connector P5 for the passenger compartment connection unit for + 12 V pulses.  
Are there + 12 V pulses?

no

Check the type of configuration depending on country. Connect the XR25. On fiche n° 45 side 2/2, enter G53\* to check the alarm configuration type corresponds correctly to the country. If the fault persists, replace the passenger compartment connection unit.

yes

Check the condition of the wiring between tracks B2 and B4 of connector P5 for the passenger compartment connection unit and the dashboard connection (\*).  
Repair the wiring.

(\*) See wiring diagram.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 7

**SIREN DOES NOT SOUND WHEN ALARM IS TRIGGERED**  
(with hazard warning lights and dipped headlights depending on country)**NOTES**

Only use this customer complaint chart after carrying out a thorough check using the XR25.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between the siren connector and track 20 of connector P16 for the passenger compartment connection unit.  
Is the wiring correct?

no

Replace the connector P16 (type MINI STS), 20 tracks, for the passenger compartment connection unit and the associated wiring.

yes

Set the alarm.  
Are there pulses on track 20 of connector P16 for the passenger compartment connection unit?

no

Replace the passenger compartment connection unit.

yes

Check the condition of the wiring in relation to + 12 V and earth on the siren connector.  
Is the wiring correct?

no

Replace the faulty wiring.

yes

Replace the siren.

**AFTER REPAIR**

- After repair, check the operation of the burglar alarm.



## FAULT FINDING - FAULT CHARTS

## Chart 8

## ALARM LOCK WILL NOT DISABLE ALARM FUNCTION

## NOTES

On fiche n° 45 side 1/2 : If bargraph 9 RH side is illuminated, see bargraph 9 RH side.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between the 20 track connector P17 for the passenger compartment connection unit tracks:

20 } and the alarm lock  
3 }

Is the wiring correct?

no

Replace the 20 track connector P17 for the passenger compartment connection unit and the associated wiring.

yes

Disconnect the alarm lock 2 track connector. Measure the resistance between tracks 1 and 2 on the 2 track alarm lock connector.

You should read:

- $R = 3.6 \text{ k}\Omega$  key in position ON
- $R = 1.2 \text{ k}\Omega$  key in position OFF

Do you note these resistances?

no

Replace the alarm lock

yes

Replace the passenger compartment connection unit.

## AFTER REPAIR




- After repair, check the operation of the burglar alarm.



## CHECKING CONFORMITY

**NOTES**

Only bargraphs concerned with the alarm function are described here.  
If a fault bargraph illuminates, refer to the corresponding fault chart.









Order of operations	Function to be checked	Action	Bargraph	Display and notes
1	Dialogue with XR25	D45 (selector on S8)		<div>bic</div> <div>then</div> <div>l.bic</div> <div>Use fiche n° 45 fault - status side 1/2</div>
2	Interpretation of bargraphs normally illuminated		<div>1</div> <div></div> <div>1</div> <div></div>	<div>extinguished → status test illuminated → fault - status test</div> <div>Code present</div>
3	Conformity of connection unit	G70*	# 14	<div>XXXX</div> <div>Part Number displayed in 3 sequences (77 03 297 184) Level 4</div>
4	Change to status tests	G02*		<div>2.bic</div> <div>Use fiche n° 45 status side 2/2</div>
5	Interpretation of alarm authorisation bargraph  or  Checking alarm function configuration	# 52	<div>16</div> <div></div>	<div>Shows alarm function is configured in connection unit</div> <div>0 → Shows alarm function is not configured in connection unit</div> <div>1 → Shows alarm function is configured in connection unit</div>



## CHECKING CONFORMITY

**NOTES**

(only bargraphs concerned with the alarm function are described here)



Order of operations	Function to be checked	Action	Bargraph	Display and notes
6	Interpretation of bargraphs for alarm lock key position (in glovebox or boot)		<div>10</div> <div></div> <div>10</div> <div></div>	<p>Indicates key is in enable position in lock (ON)</p> <p>Indicates key is in disable position in lock (OFF)</p>
7	Interpretation of bargraphs for activated alarm (activated by PLIP)		<div>8</div> <div></div> <div>8</div> <div></div>	<p>Indicates volumetric protection is active</p> <p>Indicates perimetric protection is active</p>
8	Checking operation of alarm warning light	G27*		Red warning light illuminates for a few seconds (roof console)
9	Checking operation of siren	G25*		Siren triggered 3 × 30 seconds
10	Interpretation of bargraphs for opening elements		<div>5</div> <div></div> <div>5</div> <div></div> <div>6</div> <div></div> <div>6</div> <div></div>	Illuminated if corresponding opening elements are open



## CHECKING CONFORMITY

**NOTES**

(only bargraphs concerned with the alarm function are described here)

Order of operations	Function to be checked	Action	Bargraph	Display and notes
11	<p>Interpretation of bargraphs for intrusion status</p> <p>Trigger sources:</p> <ul style="list-style-type: none"> <li>– passenger or rear door depending on equipment</li> <li>– bonnet</li> <li>– boot</li> <li>– ultrasound</li> <li>– ignition turned on</li> <li>– driver's door</li> </ul>	<p># 18</p> <p># 19</p> <p># 20</p> <p># 21</p> <p># 22</p> <p># 23</p>	<p>8</p>  <p>8</p> 	<p>Illuminates when alarm is triggered</p> <p>Illuminates when siren is triggered</p> <p>X = number of times triggered</p>
12	Checking configuration of the alarm operation depending on country	# 53		See list of countries, page 82-5 (checking country configuration)



The engine immobiliser system is controlled either:

- **by a PLIP with rolling infrared code** for versions fitted with central door locking (known as PLIP engine immobiliser).

The engine immobiliser with rolling infrared code avoids copying (of the infrared code) which could lead to the theft of the vehicle.

The infrared code transmitted by one or other of the vehicle PLIPs will therefore be different each time the PLIP remote control is pressed (rolling code).

The engine immobiliser may be activated either by using the PLIP to lock the doors or automatically (see conditions on page 82-39).

- **by a KEY recognition system** for versions without a PLIP (known as coded key immobiliser system) (transponder system).

A coded electronic chip (which operates without batteries) is included in the head of each vehicle key. When the ignition is turned on, a ring around the ignition switch interrogates and captures the code emitted by the key and transmits it to the decoder unit. If the decoder unit recognises the code, the vehicle may be started. The engine immobiliser is activated a few seconds after removing the key from the ignition switch.

On these vehicles, (PLIP or coded key recognition) activation of the system is shown by the flashing of a red warning light in the centre of the warning lights strip at the top of the instrument panel.

If there is a fault in the engine immobiliser system (PLIP or coded key), an emergency code may be entered using the central door locking button (PLIP) or the code input button (coded key) and the red immobiliser warning light in order to start the vehicle.

This code is given to the breakdown agent (at his request) by the local assistance network (depending on country, example DELTA Assistance telephone 05 05 15 15 for France). This facility is not available in the UK.

**NOTE :** for this generation of immobiliser, the breakdown agent must inform the customer of the confidential code (system activates automatically after turning the ignition off). This is not applicable to the UK.

For reasons of confidentiality, no record of the emergency code number will be delivered with the vehicle.

#### **NOTE:**

These systems maybe fitted to both petrol and diesel vehicles.

Petrol vehicle: the immobiliser function is carried out by the injection computer

Diesel vehicle: the immobiliser function is carried out by a coded solenoid valve (on the injection pump).

#### **Special notes for diesel vehicles:**

**IMPORTANT:** the coded electronic system has "anti-scanning" protection.

If parts are changed between two vehicles, this function must be cancelled by turning the ignition off then turning it on again for more than 10 consecutive seconds to return to normal operation (this function is not cancelled by disconnecting the battery).

#### **LEGEND :**

Initial state	—	Uncoded
Passenger compartment connection unit	=	Combined B.I.C./Decoder/Fuse box

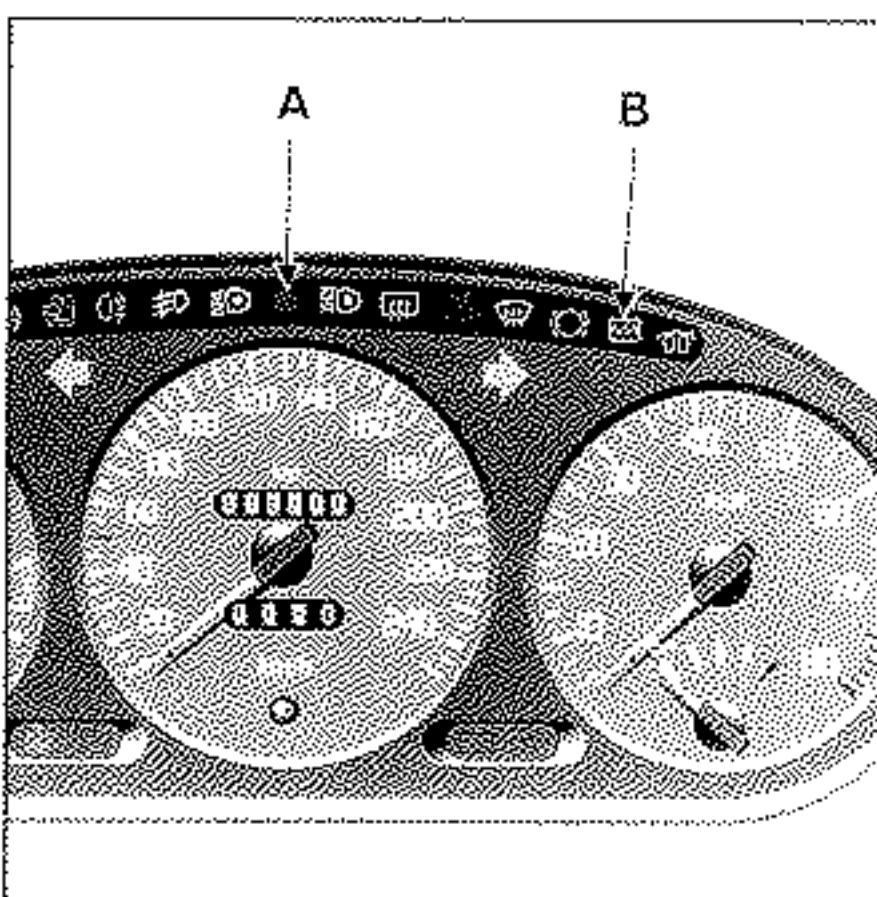


**DESCRIPTION OF THE PLIP ENGINE IMMOBILISER SYSTEM**

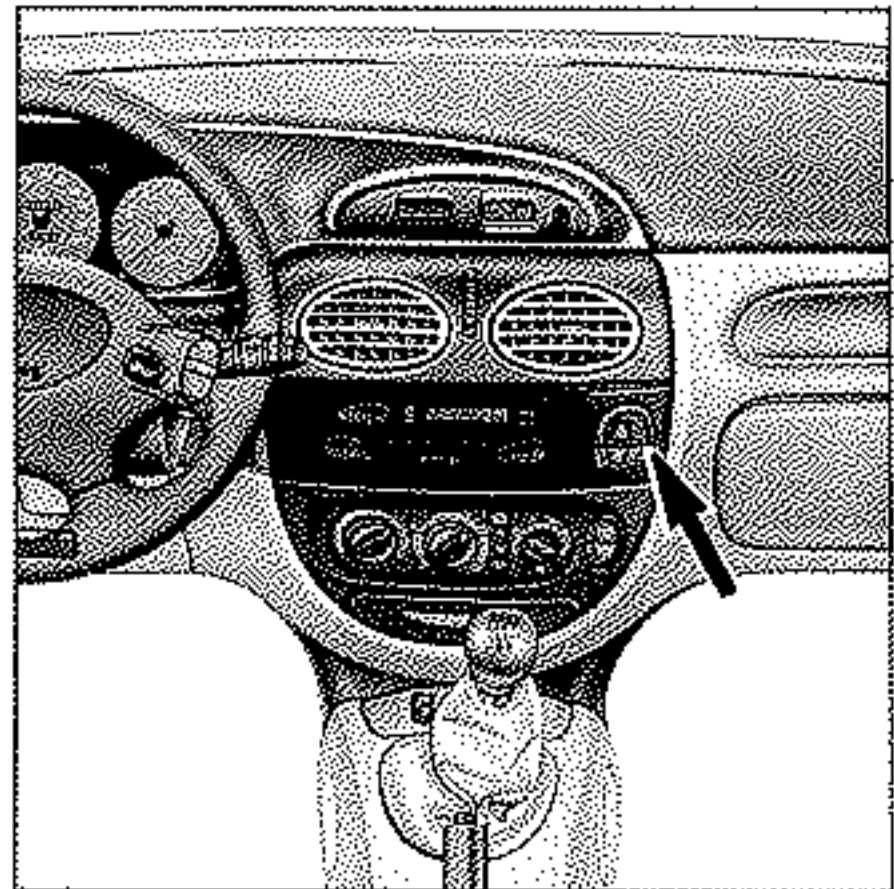
For this system, the engine immobiliser may be activated either when the PLIP is used to lock the doors, or automatically.

The system comprises:

- 2 special matched PLIPs with different rolling codes.
- a red warning light (A) used to :
  - indicate activation of the engine immobiliser system,
  - enter the emergency code,
  - indicate a fault in the system for vehicles fitted with a diesel engine.
- an injection warning light (B) (on petrol vehicles only) which:
  - indicates an injection fault,
  - indicates a fault in the engine immobiliser system when the engine is running (flashes on deceleration and at idle speed).



- a central door locking button also used to enter the emergency code (side is not important),



- a special connection unit which unites most of the smaller computers and relays including the decoder unit.

This unit ensures:

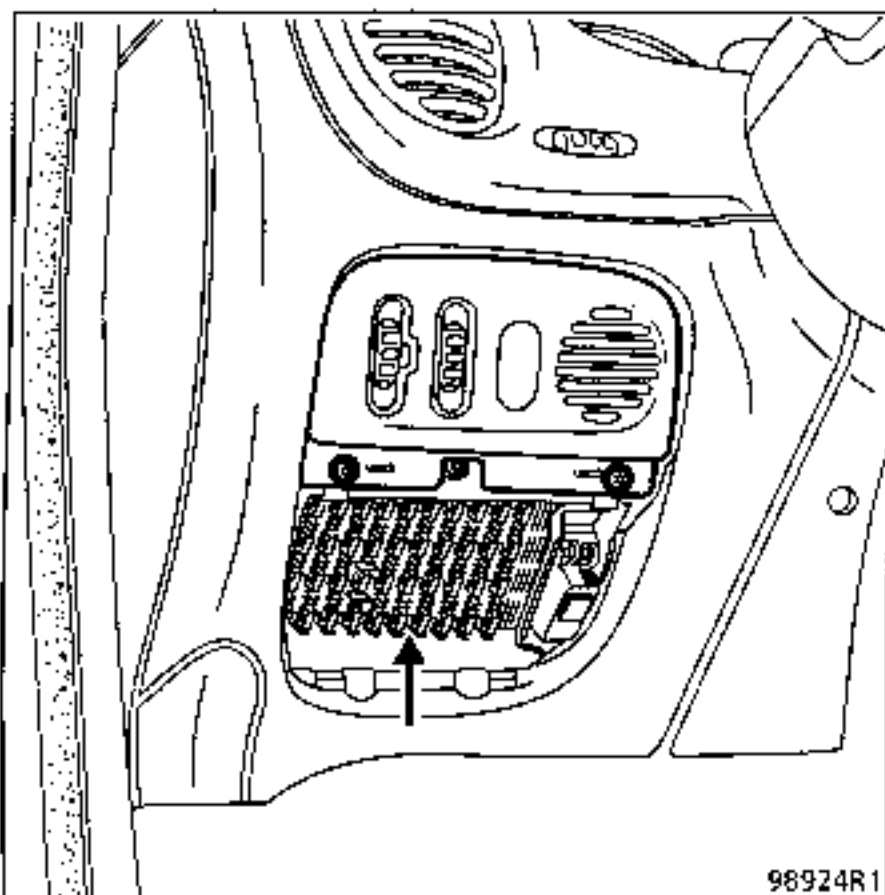
- decoding of the infrared signal from the PLIP,
- management of the engine immobiliser system by the sending of a code to the injection computer (petrol) or to the coded solenoid valve (diesel) to authorise or prevent the vehicle from being started,
- locking or unlocking of the doors and tailgate.

For details on the other functions controlled by the connection unit, refer to section 87.

**NOTE :** the PLIP engine immobiliser system does not operate with base level 1 connection units (Part Number 77 03 297 241 and 77 03 297 181).



The unit is located on the left hand side in the dashboard. It is located on the right hand side for the right hand drive version.



**NOTE :** for information on removing the unit, refer to section 87.

#### **AUTOMATIC (PASSIVE) SETTING OF THE ENGINE IMMOBILISER SYSTEM**

If the vehicle doors have not been locked using the PLIP, the engine immobiliser system will be set automatically (+ after ignition feed absent).

##### **Conditions**

1. If, after turning the ignition off, the front doors remain closed, the engine immobiliser system will be set automatically after 30 minutes (10 minutes for Belgium and Great Britain) if + after ignition feed has not appeared in the meantime.

2. If, after turning the ignition off, one of the front doors is opened, the engine immobiliser system will be set automatically after 10 minutes (approximately 1 minute for Belgium and Great Britain) if + accessories or + after ignition feed has not appeared in the meantime.

The period of 10 minutes (approximately 1 minute for Belgium and Great Britain) starts from when one of the front doors was opened. If one of the front doors was already open when the ignition was turned off, the timed period will begin immediately.

3. The engine immobiliser system will be set automatically after 10 minutes (approximately 1 minute for Belgium and Great Britain) after unlocking the doors using the PLIP if – after ignition feed has not appeared in the meantime.

##### **REMINDER:**

- To start the vehicle after the engine immobiliser system has been set automatically, the doors must be locked then unlocked using the PLIP.
- To start the vehicle after disconnecting the battery (or cutting – before ignition feed to the connection unit), the doors must be unlocked using the PLIP.
- Activation of the engine immobiliser system (other than automatically) is carried out by locking the doors using the PLIP.

**IMPORTANT :** if the battery charge is low, the drop in voltage caused by activation of the starter may reset the engine immobiliser to the set "ON" condition (engine immobilised).

##### **OPERATION**

When the engine immobiliser system is operational (after locking the doors using the PLIP or after automatic setting), the red immobiliser warning light will flash (slow flashing) (set "ON" condition).

When information is received that the doors are being unlocked by the PLIP, the connection unit identifies the infrared code received (rolling code).



If the code is recognised, the system unlocks the doors, extinguishes the red engine immobiliser warning light and when the ignition is turned on, it sends a code to the computer (petrol) or coded solenoid valve (diesel) via the coded line.

At this precise moment, one of several situations may arise:

- The injection computer (petrol) or coded solenoid valve (diesel) has no reference code in its memory :

→ the code sent to it is stored in its memory

- The injection computer (petrol) or coded solenoid valve (diesel) has a reference code in its memory :

→ the code sent to it is compared with the code in its memory.

→ if the two codes match, the computer or the coded solenoid valve unlocks the system.

When the ignition is turned on, the injection warning light (petrol) and the engine immobiliser warning light illuminate for a few seconds then extinguish, showing that the system is operating correctly.

→ if the two codes do not match, the computer (petrol) or the coded solenoid valve (diesel) leaves the system locked to prevent the engine from being started.

When the ignition is turned on, the injection warning light (petrol) illuminates for a few seconds then extinguishes while the red engine immobiliser warning light remains illuminated. The vehicle may not be started.

**NOTE :** all actions on the PLIP will remain without effect if + after ignition or + accessories feed is present.

## REPLACING A PLIP REMOTE CONTROL

### *The PLIP is faulty*

Order a replacement PLIP using the number in the key head (5 characters) and resynchronise the PLIPs (see resynchronisation procedure).

### *The PLIP has been lost*

Order a replacement PLIP using the number in the key head of the 2nd PLIP (5 characters) or on the bar code label (normally attached to the keys when the vehicle is delivered) and resynchronise the PLIPs (see resynchronisation procedure).

In this case, remember to order the number insert for the new PLIP key head.

**NOTE :** if the key head number cannot be located (both PLIPs and bar code lost), the complete kit must be replaced (connection unit and 2 PLIPs, plus injection computer or coded solenoid valve).

**IMPORTANT:** this system cannot operate with three PLIPs (the connection unit can only control 2 different changing codes).



**RESYNCHRONISATION PROCEDURE**

This procedure must be followed when a PLIP has to be replaced or when the PLIP code is no longer within the range of the decoder unit (more than 1 000 consecutive presses on the PLIP not received by the decoder unit).

This procedure realigns the 2 PLIPs with the connection unit (rolling code).

**IMPORTANT:**

To resynchronise the PLIP for a vehicle without engine immobiliser:

- configure the immobiliser function using the XR25 (ISO selector on **D 4 5** S8 code **G 4 6 \* 1 \*** )

Bargraph 16 RH side, status side 2/2 should be illuminated

- resynchronise the PLIPs following the operations below,
- de-configure the immobiliser function using the XR25 (ISO selector **D 4 5** on S8 code **G 4 6 \* 0 \*** )

Bargraph 16 RH side, status side 2/2 should be extinguished

- disconnect the battery to re-initialise the connection unit before turning the ignition on.

**IMPORTANT :** if resynchronisation is carried out for only one PLIP, the other PLIP must be operational, otherwise carry out a new resynchronisation operation with both PLIPs. If resynchronisation is performed twice on the same PLIP, the second PLIP will no longer be operational (operation recommended for when one of the PLIPs has been lost).

To perform this operation, the emergency code must be entered into the vehicle.

The emergency code number should be requested from the local assistance network (depending on country, example DELTA Assistance for France) using the number in the key head (5 characters). For UK, contact Technical Services, Swindon.

**IMPORTANT:** this procedure does not decode the injection computer (petrol) or the coded solenoid valve (diesel) (or the connection unit).

1. The engine immobiliser system must be operational (use the 2nd PLIP or ensure the system has been set automatically), the red engine immobiliser warning light flashes.
2. Turn on the ignition.
3. Enter the emergency code using the central door locking button and its red warning light (see procedure for entering the immobiliser emergency code).
4. Turn off the ignition.
5. Within 10 seconds after turning off the ignition, press and hold the central door locking button for more than 2 seconds (the doors will lock and unlock, the red engine immobiliser warning light will illuminate).

The operator now has 15 seconds (shown by the permanent illumination of the red immobiliser warning light) to perform the following two operations (6 and 7).

6. Press the first PLIP 3 times within 1.5 seconds (the doors will lock and unlock after the 3rd press).

**NOTE :** when resynchronising using a single PLIP, the red engine immobiliser warning light will extinguish approximately 10 seconds after the 3rd press.

7. Press the second PLIP 3 times within 1.5 seconds (the doors will lock and unlock after the 3rd press and the immobiliser warning light will extinguish).

**IMPORTANT:** in order for the infrared code to be correctly transmitted, ensure the PLIP is pointing correctly at the receiver during operations 6 and 7. If the procedure fails, the complete operation must be started again.

8. The procedure is complete, check the operation of the door locking and engine immobiliser systems.



**REPLACING THE CONNECTION UNIT ALONE**  
(without replacing the 2 PLIPs)

When replacing the connection unit, the (rolling) infrared code for the 2 vehicle PLIPs must be programmed (see programming procedure).

**NOTE :** In this case, no operation is carried out on the injection computer or the coded solenoid valve (depending on engine). It retains the same engine immobiliser code.

**IMPORTANT :** when a connection unit has been programmed with the PLIP code, the code cannot be erased and no other code may be memorised in its place.

Certain other functions will need to be configured using the XR25 depending on the vehicle equip-

**CONFIGURATIONS FOR THE ENGINE IMMOBILISER FUNCTION**

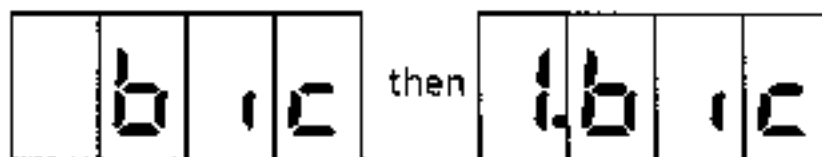
When replacing a connection unit, it is necessary to configure:

- the engine immobiliser function,
- the engine for diesel versions,
- the automatic setting of the system according to local legislation (passive setting).

Connect the XR25 with cassette n° 15 to the vehicle's diagnostic socket and set the ISO selector to S8 (fault finding fiche for passenger compartment connection unit n° 45).

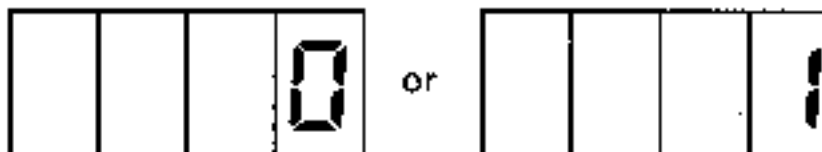
Enter code **D 4 5**

The central display shows:

**CHECKING THE CONFIGURATION OF THE ENGINE IMMOBILISER FUNCTION**

Enter **# 4 6**

The display shows:



shows the engine immobiliser function is not configured.



shows the engine immobiliser function is configured.

**CONFIGURATION FOR THE ENGINE IMMOBILISER FUNCTION**

Enter **G 4 6 \* 1 \***

A beep from the XR25 indicates the operation has been successful.

Bargraph 16 right hand side (status side 2/2) should be illuminated.

The engine immobiliser function is configured.

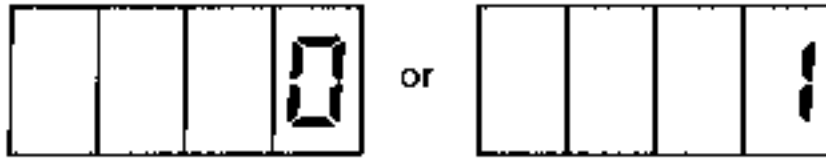


## CHECKING THE ENGINE CONFIGURATION

Enter

**D 4 5**

The display shows:



Indicates that the connection unit is configured for a petrol engine



Indicates that the connection unit is configured for a diesel engine

## CONFIGURATION FOR A DIESEL ENGINE

Enter

**G 4 5 \* 1 \***

A beep from the XR25 indicates the operation has been successful.

Bargraph 19 right hand side (status side 2/2) should be illuminated.

The diesel engine function is configured.

CHECKING THE CONFIGURATION FOR  
AUTOMATIC SETTING

Enter

**# 3 0**

The display shows:



indicates automatic setting after 1 minute (Great Britain and Belgium).

NOTE for UK :

If any other information is displayed, contact Technical Services, Swindon.

ENTERING THE CONFIGURATION FOR  
AUTOMATIC SETTING

Enter

**G 3 0 \***

followed by 3 for the automatic setting and validate with



A beep from the XR25 indicates the operation has been successful.

The automatic setting is now entered.

NOTE : for information on the other configurations for the connection unit, refer to section 87.



**PROGRAMMING PROCEDURE**

For a new connection unit to manage the PLIPs and the engine immobiliser system, the vehicle PLIP code must be programmed into the connection unit.

**NOTE :** if the PLIP code is not programmed (shown by bargraph 12 RH side on fiche n° 45 status side 2/2) the vehicle cannot be started (unless the injection computer or coded solenoid valve are not coded).

1. Ignition off, connect the XR25, set the ISO selector to 58 and enter code

**D 4 5**

Use fault finding fiche n° 45 status side 2/2 after entering command

**G 0 2 \***

2. Check the engine immobiliser function is configured (Bargraph 16 RH side should be illuminated and the engine immobiliser warning light should be flashing), otherwise refer to the immobiliser configurations.

**IMPORTANT :**

- if both PLIPs are to be used for programming, you must leave XR25 fault finding mode by entering

**G 1 3 \***

or by disconnecting the XR25 and waiting ≈ 30 seconds before proceeding to the next operation (if both PLIPs are operational).

- if only one PLIP is to be used for programming (only one available), remain in XR25 fault finding mode (code D45) (only this PLIP will be operational).

3. Press and hold the central door locking button for more than 2 seconds (the side is not important). The doors will lock then unlock and the engine immobiliser warning light will illuminate.

From this moment, the operator has approximately 15 seconds to carry out the following 2 operations (4 and 5).

4. Press the first PLIP 3 times within 1.5 seconds (the doors will lock and unlock after the 3rd press).
5. Press the second PLIP 3 times within 1.5 seconds (the doors will lock and unlock after the 3rd press).

**NOTE :** 3 beeps will be heard when the operation is complete :

- at the end of operation 4 if programming with only one PLIP,
- at the end of operation 5 if programming with two PLIPs.

6. The programming of the 2 PLIPs is complete (Bargraph 12 RH side should be illuminated). The PLIP will be operational but calibration of the immobiliser system is not complete (the immobiliser is however operational). This allows the connection unit to be tested without coding it definitively.

**IMPORTANT :** before returning a connection unit to stores, enter the code

**G 5 4 \* 0 \***

(see paragraph 7), bargraphs 13 RH side and 14 LH side should be extinguished.



7. To complete the procedure, end the calibration by entering code

**G 5 4 \* 1 \***

on the XR25 (Bargraph 13 LH side should illuminate).

The calibration is now complete but the connection unit may still be returned to its initial state as long as the PLIP is not used more than 4 times (Bargraph 13 RH side remains extinguished).

If the connection unit is to be returned to its initial state, enter code

**G 5 4 \* 0 \***

on the XR25 (the connection unit will then be in its initial state). This allows an immobiliser test to be carried out without definitively coding the connection unit.

Bargraphs 13 RH and 14 LH sides should extinguish.

**NOTE :** the first time the ignition is turned on after this operation, the injection computer or the coded solenoid valve which may have been coded will also return to their initial state.

8. Press the PLIP 5 times, bargraph 13 RH side will illuminate, the programming is now complete and final (the connection unit cannot be returned to its initial state).
9. The procedure is complete, check the operation of the door locking and engine immobiliser functions.

**IMPORTANT:** in order for the infrared code to be correctly transmitted, ensure the PLIP is pointing correctly at the receiver during operations 4 and 5. If the procedure fails (the immobiliser warning light extinguishes), the complete operation must be started again.

**NOTE :** The appearance of + after ignition feed will cause the procedure to be terminated. The connection unit will then be in its initial state.

The procedure will fail if the operation is carried out twice with the same PLIP or if the second PLIP is incompatible with the first PLIP. This ensures that the 2 PLIPs are matched.

#### REPLACING A KIT (connection unit plus 2 PLIPs)

If a kit is replaced it will be necessary to:

- Programme the codes of the 2 new PLIPs into the connection unit (and configure it),
- Erase the old code memorised in the injection computer or the coded solenoid valve using the emergency procedure (with the code number corresponding to the old kit - request from local assistance network, example DELTA Assistance for France). For UK, contact Technical Services, Swindon.

**IMPORTANT :** to erase the old code (memorised in the injection computer or coded solenoid valve), follow the procedure described below in the correct order.

The old code memorised in the injection computer or the coded solenoid valve may only be erased with the emergency code (using the number from the old kit) if the connection unit on the vehicle has been programmed with a different code (which is the case in the following procedure).



**NOTE :** if the emergency code is entered when the connection unit has the same code as the injection computer or the coded solenoid valve, the connection unit will not return to its initial state but the vehicle will be able to be started.

1. Remove the connection unit (see section 87).
2. Fit the new connection unit and configure it (see section 87).
3. Programme the codes of the 2 new PLIPs into the connection unit (see programming procedure).  
**Note:** do not turn the ignition on between operations 3 and 4 before the doors have been locked using the PLIP.
4. With the vehicle doors locked by the PLIP, erase the old code in the injection computer or coded solenoid valve by using the emergency procedure and the code number for the old kit (see procedure for entering the emergency code).

**NOTE:** on petrol vehicles, using the XR25, it is possible to check that the injection computer has been de-coded (in injection fault finding).

After connecting the XR25 to the diagnostic socket, use fiche N° 27 or 28 (depending on engine), position the ISO selector on S8 and enter the injection code.

Bargraph 2 RH side (immobiliser) should be illuminated and after entering

**\* 2 2**

the message

**2 d E F**

should be displayed on the XR25.

This indicates that the codes has been erased after entering the emergency code.

If the display shows

**1 d E F**

there is a fault on the coded line. In this case, repair and start the procedure again.

If bargraph 2 RH side (immobiliser) is extinguished and the display shows

**b o n**

(\*22), this indicates that the injection computer code has not been erased. In this case, check the emergency code number is correct, unlock then lock the doors using the PLIP and repeat the emergency procedure.

5. Programme the code for the new kit into the injection computer or the coded solenoid valve:

- unlock the doors using the PLIP,
- turn the ignition on.

**NOTE :** on petrol vehicles, using the XR25 and fault finding fiche n° 27 or 28 (depending on engine), check that the injection computer has been correctly coded. Bargraph 2 RH side (immobiliser) should be extinguished and after entering

**\* 2 2**

the XR25 display should show

**b o n**

The injection computer has been correctly coded.

**NOTE :** for diesel vehicles check that the engine immobiliser warning light extinguishes after 2 seconds.

6. The procedure is complete, check the operation of the door locking and engine immobiliser systems.



## **REPLACING THE INJECTION COMPUTER** (Petrol vehicle)

The injection computer is supplied uncoded. The engine immobiliser code must be programmed in when the computer is fitted.

Carry out the following operations:

- Replace the injection computer
- Unlock the doors with the PLIP.
- Turn the ignition on for a few seconds.
- Lock the doors using the PLIP, the engine immobiliser function is operational.

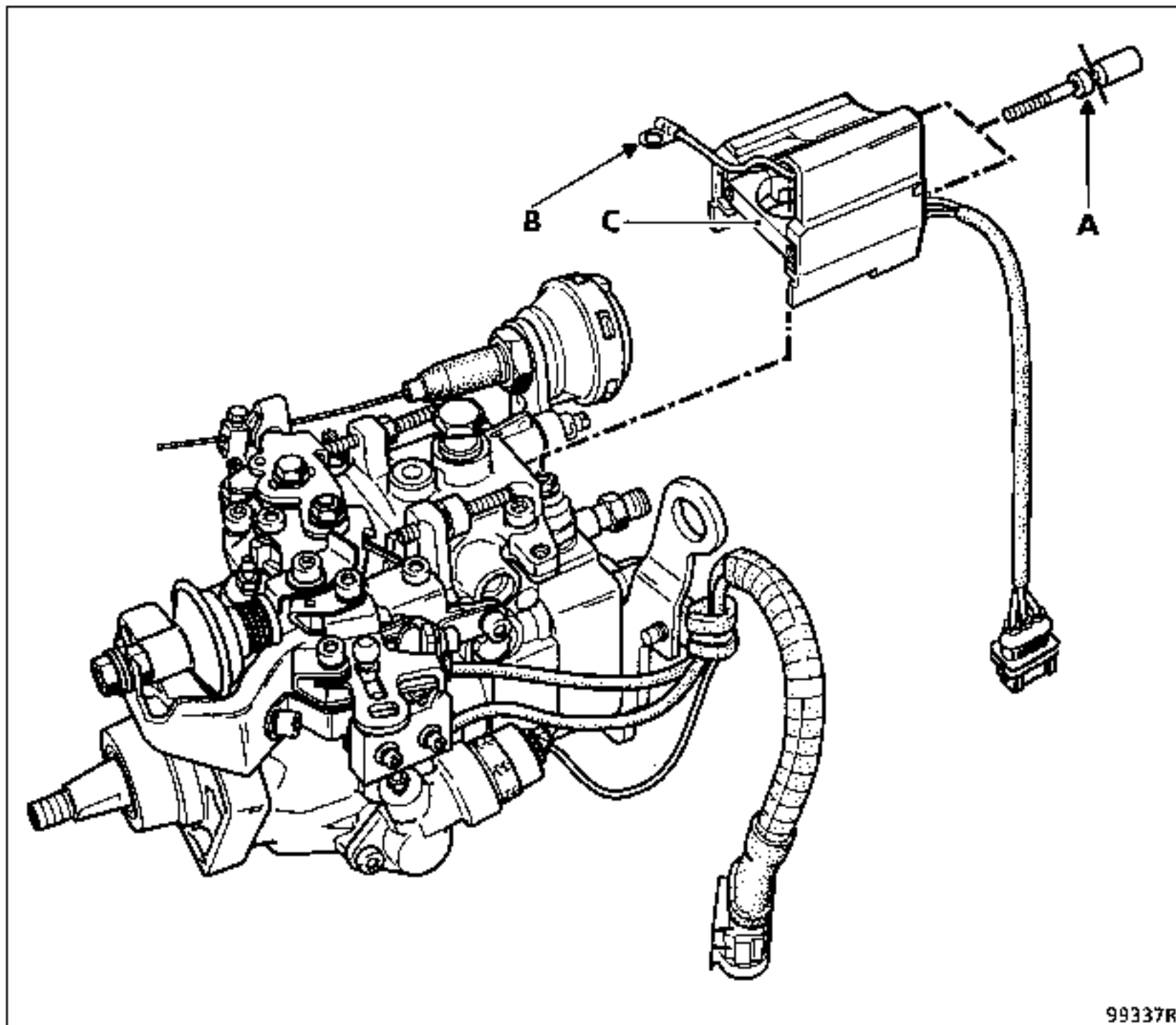
**NOTE :** to check the operation of the system, lock the doors using the PLIP from inside the vehicle (the red engine immobiliser warning light should flash) and then turn the ignition on. The red engine immobiliser warning light should flash more quickly and the vehicle should be prevented from being started.



## REPLACING THE CODED SOLENOID VALVE ELECTRONIC UNIT (Diesel vehicle)

### REMOVAL

Refer to sub-section 13.



99337R



**REFITTING**

Ensure the retaining flange (C) behind the solenoid valve is present.

Connect the electronic unit / solenoid valve connection cable (B) using the nut.

Clip the plastic cover onto the solenoid valve.

Position the electronic unit on the solenoid valve.

Using new shear bolts (A), secure the electronic unit, tightening the bolts in the flange until they shear.

**IMPORTANT :** the solenoid valve electronic unit is supplied uncoded. The engine immobiliser code must be programmed in when the unit is fitted.

Carry out the following operations:

- After fitting the new uncoded electronic unit :
- Unlock the doors with the PLIP.
- Turn the ignition on for a few seconds.
- Lock the doors using the PLIP, the engine immobiliser function is operational.

**NOTE :** to check the operation of the system, lock the doors using the PLIP from inside the vehicle (the red immobiliser warning light will flash) and then turn the ignition on. The red immobiliser warning light should flash more quickly and the vehicle should be prevented from being started.

### SPECIAL NOTES FOR TESTING AN INJECTION COMPUTER OR CODED SOLENOID VALVE (test part)

**IMPORTANT:** if an uncoded injection computer is being tested from stock or an uncoded solenoid valve is used (test part), the connection unit fuse F39 (location n° 25 levels 3 and 4 or n° 37 level 2) **MUST** be removed when the part is fitted (do not refit the fuse as long as the test part is fitted to the vehicle).

Removing the fuse allows the vehicle to be started without running the risk of coding the injection computer or uncoded solenoid valve.

The test may then be carried out.

After the test, if the part is to be returned to stock, remove the part before refitting the fuse.

If the part is to remain on the vehicle, refit the fuse and programme the immobiliser code into the injection computer or uncoded solenoid valve (see replacing an injection computer).

### Checking (petrol vehicle only)

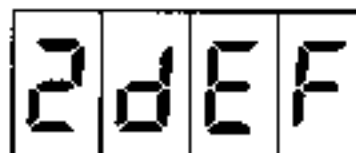
If the test computer is to be returned to stock, it is possible (before it is removed) to check using the XR25 and fiche n° 27 or 28 (depending on engine) that the computer has not been coded during the test (example : incorrect operation).

Connect the XR25, position the ISO selector and enter the injection code.

Bargraph 2 RH side (immobiliser) should be illuminated and after entering



the message



should be displayed on the XR25.

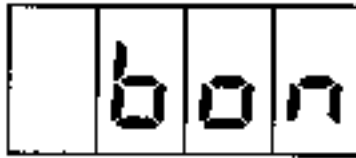


This shows that the injection computer is not coded and may be returned to stock.

If bargraph 2 RH side (immobiliser) is extinguished and after entering



the message



is displayed on the XR25, this shows that the computer has been programmed with the immobiliser code (incorrect operation).

In this case the computer must be returned to its initial state before being returned to stock.

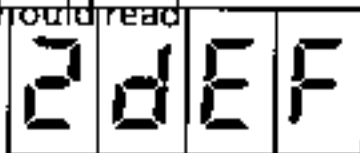
The procedure for decoding the injection computer to its initial state consists of replacing the connection unit on the vehicle with another connection unit with a different code (with its PLIPs) and entering the emergency code for the original connection unit/PLIPs used during the substitution test (emergency code number should be requested from the local assistance network, example DELTA Assistance for France) using the number in the head of the key for the vehicle (For UK, from Technical Services Department).

Ignition off, fit in place of the original connection unit a connection unit coded with a different number (the procedure will not work with an uncoded connection unit or one which has the same code as the injection computer).

Turn the ignition on, the red engine immobiliser warning light will flash (rapid flashing).

Enter the vehicle emergency code (number corresponding to the PLIP number with which the injection computer is coded).

After entering the emergency code, the engine immobiliser warning light will flash again. The XR25 display should read

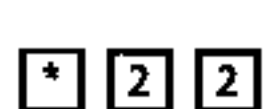
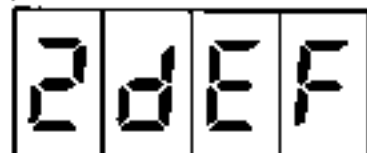


This indicates that the injection computer has been returned to its initial state.

Turn the ignition off, remove the computer which has been returned to its initial state and return it to stock.

Refit the computer and connection unit to the vehicle.

**NOTE:** when checking the injection using the XR25 (fiche n° 27 or 28 depending on engine) during a test with an uncoded computer, bargraph 2 RH side will illuminate

 →  =

uncoded computer.

**Computer borrowed from another vehicle fitted with an engine immobiliser (if available).**

To avoid having to code and decode the injection computer, borrow the following parts from another vehicle with the same specifications:

- injection computer,
- connection unit,
- PLIP.

After the test, return the above parts to the original vehicle.



**SYSTEM FAULT, ENGINE RUNNING****Petrol vehicle**

If a fault in the system is noted by the injection computer when the engine is running, the injection warning light on the instrument panel will flash during deceleration and at idle speed (engine speed less than 1500 rpm).

**IMPORTANT:** In this case, after repair, the fault memorised in the injection computer must be erased by disconnecting the battery (approximately 30 seconds) to allow the engine immobiliser system to operate again.

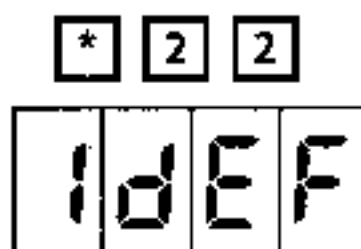
**NOTE :** this fault may be shown by the XR25 (fiche n° 27 or 28 depending on engine).

Connect the XR 25.

Position the ISO selector and enter the injection code

The fault is shown by bargraph 2 RH side.

After entering



on the display indicates a fault on the coded line.

**Diesel vehicle**

If a fault in the system is noted by the connection unit when the engine is running, the red immobiliser warning light (on the instrument panel) will illuminate permanently until the ignition is turned off.

**IMPORTANT:** In this case, after repair, the fault memorised in the coded solenoid valve must be erased by disconnecting the battery (approximately 30 seconds) to allow the engine immobiliser system to operate again.:

- unlock the doors using the PLIP,
- turn the ignition on for 30 seconds,
- turn the ignition off then on again.

**NOTE:** the fault memorised in the connection unit must also be erased using the XR25.

**PROCEDURE FOR ENTERING THE EMERGENCY CODE**

With this immobiliser system, the procedure for entering the emergency code is managed by the connection unit.

The code is entered using the central door locking button and the red engine immobiliser warning light.

The emergency code can only be entered if the engine immobiliser system is active. The red immobiliser warning light must flash when the ignition is turned on (rapid flashing).



After determining the emergency code number (request from the local assistance network, example DELTA Assistance for France) (For UK, contact Technical Services, Swindon), carry out the following operations:

1. ignition off, the red immobiliser warning light should flash (slow flashing),
2. turn the ignition on, the injection warning light (petrol vehicle) illuminates for approximately 3 seconds then extinguishes while the red immobiliser warning light flashes more quickly,
3. press and hold the central door locking button (the side is not important), the red warning light extinguishes,
4. without releasing the button, the warning light will flash very slowly (every 1.5 seconds) to generate a counting sequence.  
Count the number of times the red warning light illuminates and release the button when the value of the 1st figure of the emergency code is reached.
5. press the door locking button again.  
Count the number of times the red warning light illuminates and release the button when the value of the 2nd figure of the emergency code is reached.
6. repeat operation 5 to enter the two remaining emergency code figures.

After entering the 4th emergency code figure:

- if the code is correct, the vehicle may be started.  
The red immobiliser warning light should illuminate for approximately 3 seconds, extinguish for approximately 3 seconds and illuminate again for approximately 30 seconds.

This pattern of illumination will repeat each time the ignition is turned on as long as the vehicle remains unprotected (until approximately 10 minutes after turning the ignition off). This reminds the customer that the vehicle is not protected after entering the manual code.

The vehicle is protected again:

- approximately 10 minutes after turning the ignition off (immobiliser set automatically),
  - after locking the doors using the PLIP,
  - or after disconnecting the battery.
- if the code is incorrect, the engine cannot be started.

The red immobiliser warning light and the injection warning light flash.

Turn the ignition off then repeat the procedure for entering the emergency code.

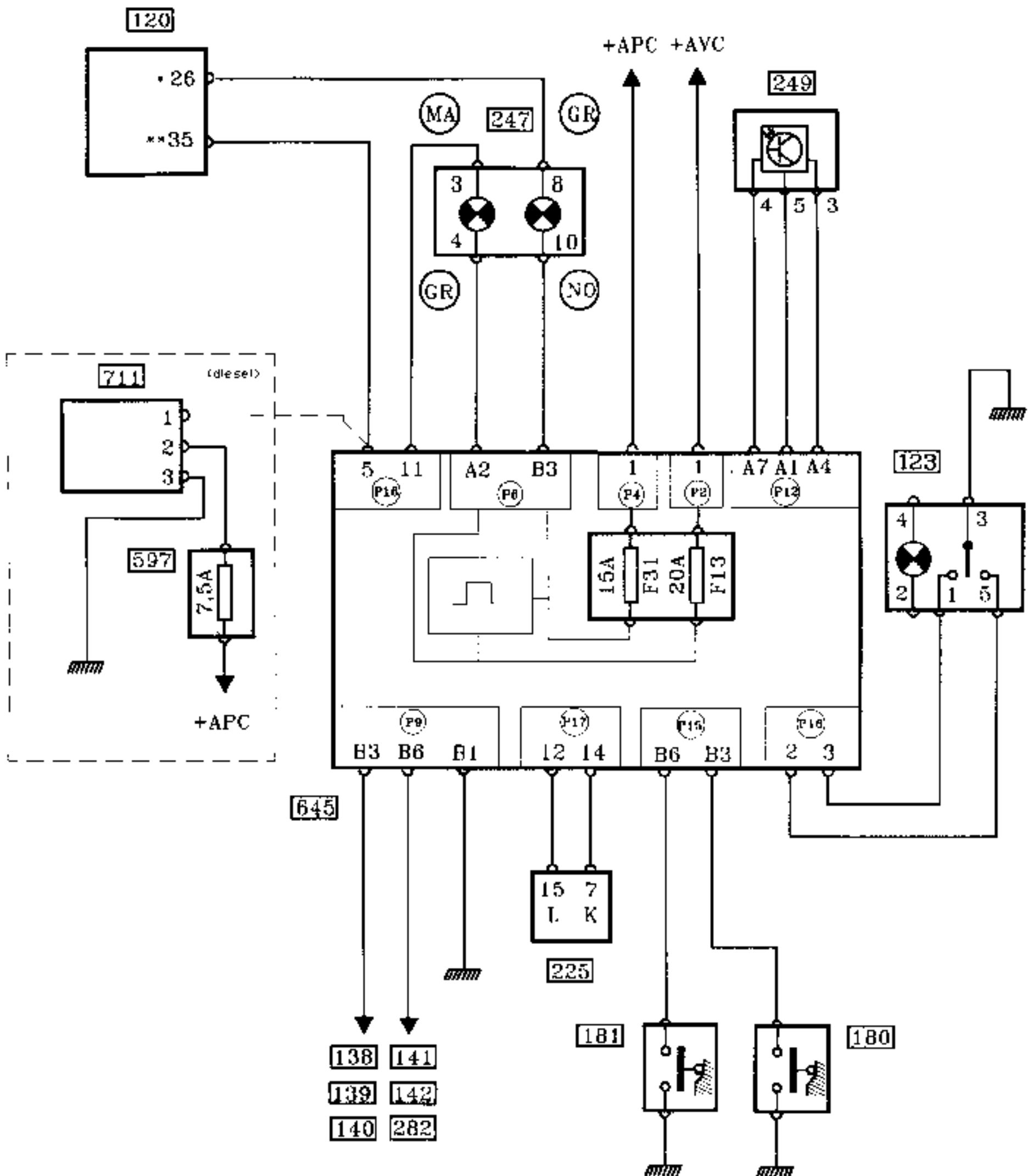
**IMPORTANT:** you may make 3 attempts to enter the code. If, after the third attempt, the code is invalid, you must wait for approximately 15 minutes before making another attempt (the immobiliser warning light will flash at a different speed than normal).

When this period has expired, turn the ignition off and on again and 3 more attempts may be made.

**REMINDER:** This procedure does not return the injection computer or the coded solenoid valve (depending on engine) to their initial states - it only authorises the starting of the vehicle.



Diagram (high specification)





## KEY

120	Injection computer
123	Central door locking button
138	Rear right hand door locking solenoid
139	Rear left hand door locking solenoid
140	Driver's door locking solenoid
141	Passenger's door locking solenoid
142	Boot lid locking solenoid
180	Driver's door switch
181	Passenger's door switch
225	Diagnostic socket
247	Instrument panel
249	Infrared receiver
282	Fuel flap locking solenoid
597	Engine fuse box
645	Passenger compartment connection unit
711	Coded solenoid valve

*	13	for engine E7J
	26	for engines F3P, F3R, F7R
	43	for engine K7M

**	29	for engine E7J
	35	for engines F3P, F3R, F7R
	37	for engine K7M

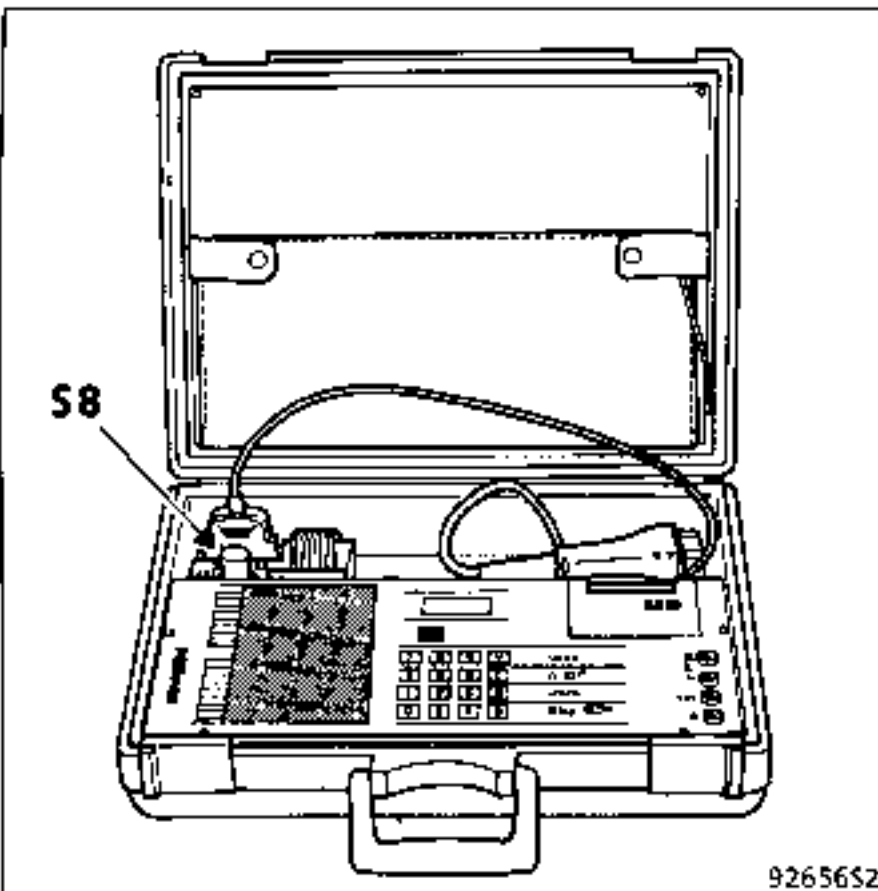


**FAULT FINDING**

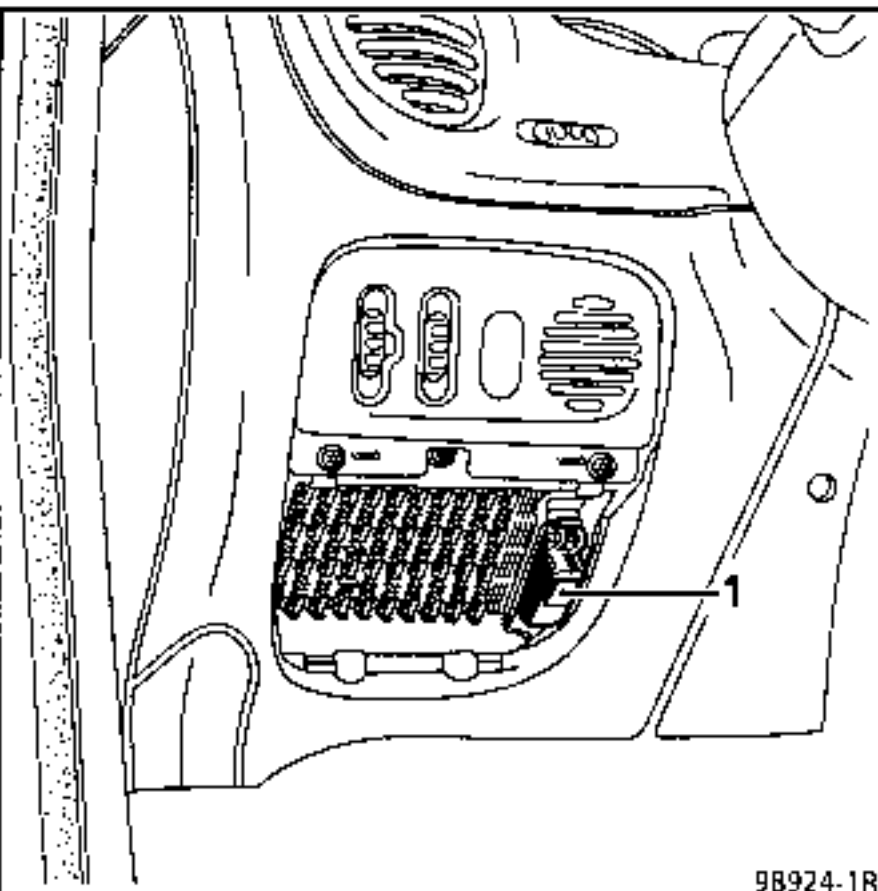
Certain components of the immobiliser may be diagnosed using the XR25 with the fault finding fiche for the connection unit.

**CONNECTION**

Use cassette n° 15 and the corresponding fault finding fiche n° 45 (see section 87).



Connect the XR25 to the diagnostic socket (1) located behind the passenger compartment fuse cover.



Position the ISO selector on S8 and enter

**D 4 5**

The central display shows:

**b i c** then **1.b i c**

**NOTE :** this sub-section deals with the bargraphs, # commands and command modes for the engine immobiliser only.



## FAULT FINDING - INTRODUCTION

### SETTING UP XR25 / PASSENGER COMPARTMENT CONNECTION UNIT DIALOGUE

- Connect the XR25 to the diagnostic socket.
- ISO selector on S8
- Enter **D45**

**I.blc**

### IDENTIFICATION OF THE IMMOBILISER FAULT BARGRAPH ON THE INJECTION FICHE

To check if the "immobiliser fault" bargraph is illuminated on the injection fiche for the vehicle, use:

- Fiche n° 27 - Code D13 - selector on S8 **9.nJ** for F3R, F7R and K7M Fenix 5 engines .
- Fiche n° 28 - Code D03 - selector on S6 **8.nJ** for E7J Fenix 3.8 engines .

### ERASING THE MEMORY

After repairing the immobiliser system, on the XR25 wait for the fault bargraph to flash, then enter G0\*\* to erase the memory.

The memory may also be erased by disconnecting the battery, ignition off, for approximately 30 seconds.



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 45 SIDE 1/2

N°45 1/2		S8		code : D 4 5		read : 1 b 1 c	
1	<input type="checkbox"/>	ILLUM. → CORR. SIDE OF CARD. EXTING. → TURN CARD OVER				CODE PRESENT <input type="checkbox"/>	
2	<input type="checkbox"/>	REAR DEMISTER	INFRA-RED (PLIP)		CONTROL MODE : G . . *		
3	<input type="checkbox"/>	LOCKING	UNLOCKING		03 Door locking		
4	<input type="checkbox"/>	REAR	SCREEN WASH button	FRONT	04 Door unlocking		
5	<input type="checkbox"/>	OIL PRESSURE	SIDELIGHT		05 Screen wiper slow speed		
6	<input type="checkbox"/>	DIESEL SOL. ACKNOWLEDGEMENT	CODED LINE		06 Screen wiper fast speed		
7	<input type="checkbox"/>	DRIVER'S SIDE WINDOW-RISER	WINDSCREEN DEMISTER		07 REAR screen wipe		
8	<input type="checkbox"/>	DESCENT	WINDOW RISER button	RISING	08 Lights "on" warning		
9	<input type="checkbox"/>	ALARM LOCKING * 29				10 Eng. immobiliser warning light	
10	<input type="checkbox"/>	+ AFTER IGNITION	+ACCESSORIES		11 Driver's side window descent		
<b>PASS. COMP. FUSE BOX</b> (DEFECTS STATUS) To read side 2/2 : G 02 * Memory del. : G 0 **						12 Driver's side window riser	
						14 Ceiling light	
						16 Sidelight	
						17 Front fog light	
						18 Rear fog light	
						19 Headlamp washers	
						20 LH windscreen demister	
						21 RH windscreen demister	
						22 Rear screen demister	
						25 Siren (stop : G 13 *)	
						26 Hazard alarm	
						27 Alarm warning light	
						----- Diesel solenoid mechanical check  Test: Switch off ignition, enter G23 * Switch on ignition, valve opens and closes within 30 sec. (audible check)	
11	<input type="checkbox"/>	LOCKING (press 3s on central switch)	UNLOCKING		<b>ADDITIONAL CHECKS : # . .</b> 01 Vehicle speed km / h 02 Battery voltage V 03 Max. speed advice prior to excess speed warning km per h 04 Screen wipe speed ring position 14 Equipment level : (N2, N3, N4) 30 Type of engine immobiliser 53 Type of alarm		
12	<input type="checkbox"/>	WINDSCREEN DEMISTER	REAR DEMISTER		List/number of times alarm triggered		
13	<input type="checkbox"/>	EXCESS SPEED	ACTIVATING BUTTONS	REAR SCREEN WIPER			
14	<input type="checkbox"/>	REAR SCREEN WASHER	FRONT SCREEN WASHER				
15	<input type="checkbox"/>	RISING	Driver's side window riser	DESCENT			
16	<input type="checkbox"/>	POSITION	ACTION ON LIGHT SWITCH	SIDELIGHT			
17	<input type="checkbox"/>	REVERSE GEAR	ROAD				
18	<input type="checkbox"/>	HAZARD	FLASHING				
19	<input type="checkbox"/>	FRONT FOG LIGHT	Side lights on	REAR FOG LIGHT			
20	<input type="checkbox"/>	OIL PRESSURE ( ) engine turning				Help : V 9 Return to diag. mode : D Part No. : G 7 0 *	

L

15 ANG



































Fi215451

Bargraphs on a coloured background represent a fault.  
 Bargraphs on a white background represent a status.



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 45 SIDE 2/2

<b>N°45 2/2</b>		<b>read : 2, b 1 c</b>	
1	 EXTING. --> CORRECT SIDE OF CARD. ILLUM. --> TURN CARD OVER	CODE PRESENT 	
2	 TIMED WIPER SPEED	SCREEN WIPE SWITCH (depending on equip.)	
3	 STOP	FIXED FEED STOP 	
4	 LOW SPEED	SWITCH POSITION (depending on equip.) HIGH SPEED 	
5	 ← DRIVER'S DOOR OPEN FRONT OR REAR PASSENGER DOOR OPEN →		
6	 BONNET	OPENING ELEMENTS LUGGAGE COMP. 	
7	 ACTIVE ENGINE IMMOBILISER		
8	 VOLUMETRIC SENSOR	PERIMETRIC SENSOR 	
9	 VEHICLE INTRUSION STATUS	ALARM MEMORISED INTRUSION SIREN STATUS 	
10	 GEAR ← ALARM KEY POSITION → STOP 		
<b>PASS. COMP. FUSE BOX</b> (STATUS) To read side 1/2 : G 01 *		Help : V 9 Return to diag. mode : D Part No. : G 70 *	
11	 SIGNAL RECEIVED (3sec)	INFRA-RED (PLIP) SIGNAL CORRECT (3sec) 	
12	 LOCKED BY PLIP	CODE RECOGNISED 	
13	 CALIBRATION ENDED	VEH LOCKED BY PLIP 	
14			
15			
16	 ALARM	ENGINE IMMOBILISER 	
17	 HEADLAMP WASHER	EXTREME COLD FOG LIGHTS 	
18	 RUNNING-LIGHT	WITH CONFIGURATION DEPENDING ON OPTION (SEE MR 87) ARABIA EXCESS SPEED 	
19	 CEILING LIGHT TIMER	DIESEL 	
20	 DEFECT PRESENT see side 1/2		
		<b>15</b> ANG	

FI215452

Bargraphs on a coloured background represent a fault.  
Bargraphs on a white background represent a status.

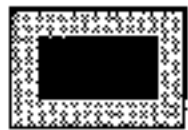
q64030.1



## FAULT FINDING - XR25 FICHE

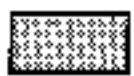
## REPRESENTATION OF THE BARGRAPHS

## REPRESENTATION OF A FAULT (always on a coloured background)



If illuminated, there is a fault with the product tested; the associated text defines the fault.

## REPRESENTATION OF A STATUS (always on a white background)



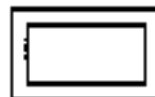
Illuminates when dialogue is established with the computer for the product; if it remains extinguished :

- the dialogue does not exist,
- there is a fault with the XR25, the computer or the line.

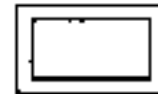
**Engine stopped, ignition on, with no operator action**

The status bargraphs on the fiche are represented in the condition that they should be in when the engine is stopped, ignition on, with no operator action.

- If, on the fiche, the bargraph is shown



the XR25 should show



- If, on the fiche, the bargraph is shown



the XR25 should show

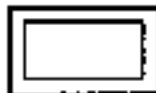


- If, on the fiche, the bargraph is shown

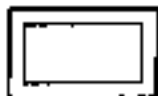


the XR25 should show

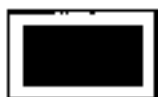
either



or

**Engine running**


Extinguished when the function or condition on the fiche is no longer met.



Illuminated when the function or condition on the fiche is met.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>2</div> 	<b>Bargraph 2 RH side illuminated</b> <div>Fiche n° 45 side 1/2</div> <b><u>PLIP CIRCUIT</u></b> XR25 aid : CC to earth on track A7 of connector P12 for passenger compartment connection unit
---	---

**NOTES**

Check bargraph 16 RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser).

Check the insulation in relation to earth of the wiring between tracks 4 on the infrared receiver and A7 on connector P12 for the passenger compartment connection unit.

Repair the wiring if necessary.

If the fault persists, disconnect the clip on track A7 of connector P12 for the passenger compartment connection unit.

Does bargraph 2 RH side extinguish?

Bargraph 2 RH side does not extinguish.

Replace the passenger compartment connection unit.

Bargraph 2 RH side does extinguish.


Replace the infrared receiver.

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="text-align: center; border: 1px solid black; padding: 5px;">6</div> 	<div style="display: flex; justify-content: space-between;"> <div> <b>Bargraph 6 RH side illuminated</b>  <b>CODED LINE CIRCUIT</b>            XR25 aid :    CO                             CC earth                             CC + 12 V         </div> <div style="font-size: 3em;">}</div> <div>           on the coded line or injection warning light line         </div> </div> <div style="text-align: right;">Fiche n° 45 side 1/2</div>
---	---

**NOTES**

Check that bargraph 16RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser). If bargraph 2RH side is illuminated on injection fiche n° 27 side 1/2 or n° 28, deal with bargraph 2RH side on fiche n° 27 side 1/2 or n° 28

Check that connector P16 for the passenger compartment connection unit is correctly connected.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between tracks:

- connector P16 track 5 for passenger compartment connection unit      { 29 for E7J engines  
37 for K7M engines  
35 for F3R, F7R engines } injection computer
- injection computer      { 13 for E7J engines  
43 for K7M engines  
26 for F3R, F7R engines } and the "injection memory" 5 A fuse

Replace the 20 track connector P16 for the passenger compartment connection unit and the associated wiring if necessary. Replace the 5A "injection memory" fuse if necessary.

If the fault persists, set the XR25 to pulse detection, ignition on, then check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present.

Do you note any pulses?

There are no pulses on track A5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the passenger compartment connection unit.

There are pulses on track A5 of connector P16 for the passenger compartment connection unit, ignition on.


Replace the injection computer.

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="text-align: center;">2</div> 	<div style="text-align: right;">Fiche n° 27 side 1/2</div> <p><b>Bargraph 2 RH side illuminated</b></p> <p><b>IMMOBILISER CIRCUIT</b></p> <p>XR25 aid : *22 = 1.dEF coded line fault 2.dEF code not programmed</p>
<p><b>NOTES</b></p>	<p>Check that bargraph 16RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser)</p>

1.dEF

NOTES

None

Check the continuity and insulation in relation to earth and to + 12 V. of the wiring between track 5 on connector P16 for the passenger compartment connection unit and track

- 37 for K7M engines
  - 35 for F3R and F7R engines
- } on the injection computer

Replace the 20 track connector P16 and the associated wiring if necessary.

If the fault persists, set the XR25 to pulse detection, ignition on, then check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present.

Do you note any pulses?

There are no pulses on track A5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the passenger compartment connection unit.

There are pulses on track A5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the injection computer.

2.dEF

NOTES

None

See procedure for programming the code.

AFTER REPAIR

- Erase the injection computer memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="text-align: center; border-bottom: 1px solid black; padding-bottom: 5px;">2</div> <div style="border: 1px solid black; width: 50px; height: 30px; margin: 5px auto;"></div>	<div style="text-align: right; font-weight: bold;">Fiche n° 28</div> <p><b>Bargraph 2 RH side illuminated</b> <b><u>IMMOBILISER CIRCUIT</u></b></p> <p>XR25 aid : *22 = 1.dEF coded line fault 2.dEF code not programmed 3.dEF coded line fault + code not programmed</p>
---	---

<b>NOTES</b>	Check that bargraph 16RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser)
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<b>1.dEF</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #cccccc; text-align: center; vertical-align: middle; width: 15%;"><b>NOTES</b></td><td style="text-align: center; vertical-align: middle;">None</td></tr> </table>	<b>NOTES</b>	None
<b>NOTES</b>	None		

Check the continuity and insulation in relation to earth and to – 12 V of the wiring between track 5 on connector P16 for the passenger compartment connection unit and track 29 for E7J engines on the injection computer.

Replace the 20 track connector P16 and the associated wiring if necessary.

If the fault persists, set the XR25 to pulse detection, ignition on, then check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present.

Do you note any pulses?

There are no pulses on track A5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the passenger compartment connection unit.

There are pulses on track A5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the injection computer.

<b>2.dEF</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #cccccc; text-align: center; vertical-align: middle; width: 15%;"><b>NOTES</b></td><td style="text-align: center; vertical-align: middle;">None</td></tr> </table>	<b>NOTES</b>	None
<b>NOTES</b>	None		

See procedure for programming the code.

<b>3.dEF</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #cccccc; text-align: center; vertical-align: middle; width: 15%;"><b>NOTES</b></td><td style="text-align: center; vertical-align: middle;">None</td></tr> </table>	<b>NOTES</b>	None
<b>NOTES</b>	None		

Refer to sections 1.dEF and 2.dEF.

<b>AFTER REPAIR</b>	<ul style="list-style-type: none"> <li>- Erase the injection computer memory using G0**.</li> <li>- After repair, check the operation of the immobiliser system.</li> </ul>
---------------------	---



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

11

**Bargraphs 11 LH and RH sides, incorrect illumination** Fiche n° 45 side 2/2  
PLIP CIRCUIT.**XR25 aid :** Bargraph 11 LH side illuminated, infrared signal received by receiver  
Bargraph 11 RH side illuminated, signal correct**NOTES**

If bargraph 2 RH side is illuminated on fiche n° 45 side 1/2, deal with bargraph 2 RH side first

Check if the vehicle doors may be locked and unlocked. Check using a second PLIP and replace the battery in the first PLIP if necessary.

Check if connector P12 for the passenger compartment connection unit is correctly connected.  
Clip connector P12 into position correctly if necessary.

Check on the infrared receiver connector for the following voltages:

- $\approx -12\text{ V}$  before ignition between tracks 5 and 3.
- $\approx +12\text{ V}$  before ignition between tracks 4 and 3

Do you note these voltages?

YES

Set the XR25 to pulse detection, then check on track 4 of the infrared receiver for a pulse when the PLIP is activated.

Is there a pulse when the PLIP is activated ?

If there is no pulse when the PLIP is activated, replace the infrared receiver.

If there is a pulse when the PLIP is activated, replace the passenger compartment connection unit.

NO

Check on connector P12 for the passenger compartment connection unit for the following voltages:

- $\approx +12\text{ V}$  before ignition between track A1 and the vehicle earth
- $\approx +12\text{ V}$  before ignition between track A7 and the vehicle earth

Do you note these voltages?

Voltages not noted, replace the passenger compartment connection unit.

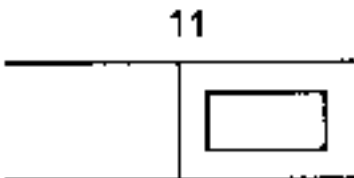
Voltages noted, repair the wiring between the infrared receiver and connector P12 for the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

 <p>Diagram of bargraph 11. The number 11 is at the top. Below it is a horizontal line. Under the line, on the left, is a small square. On the right, there is a larger rectangle with a smaller rectangle inside it, representing the extinguished state.</p>	<p><b>Bargraph 11 RH side remains extinguished</b> <span style="float: right;">Fiche n° 45 side 2/2</span></p> <p><u>PLIP CIRCUIT.</u></p> <p>XR25 aid : Code no longer synchronised</p>
--	--

**NOTES**

Check the keys are correct for the vehicle.

When the PLIP is pressed, bargraph 11 RH side remains extinguished (while bargraph 11 LH side illuminates for approximately 3 seconds before extinguishing) and the doors cannot be locked or unlocked using the PLIP.

There is no synchronisation between the code sent by the PLIP and the code calculated by the passenger compartment connection unit.

Follow the procedure for resynchronising the PLIPs.

**AFTER REPAIR**

- After repairing the immobiliser system, check the operation of the immobiliser system.



FAULT FINDING - CUSTOMER COMPLAINTS

**NOTES**

Only consult these customer complaints after carrying out a complete check using the XR25.

The vehicle will not start: When the ignition is turned on the injection warning light flashes permanently

Chart 1

When the ignition is turned on the injection warning light remains illuminated or does not illuminate

Chart 2

While driving (deceleration) and at idle speed, the injection warning light flashes

Chart 3

When the ignition is turned on the immobiliser warning light remains illuminated or does not illuminate

Chart 4



## FAULT FINDING - FAULT CHARTS

## Chart 1

**THE VEHICLE WILL NOT START:**  
When the ignition is turned on, the injection warning light flashes permanently

## NOTES

On fiche n° 45 side 1/2 : if bargraph 6 RH side is illuminated, see bargraph 6 RH side.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track 5 of connector P16 for the passenger compartment connection unit and track \* on the injection computer.  
Is the wiring correct?

no

Replace the 20 track connector P16,  
and the associate wiring.

yes

Using the XR25 as a pulse detector, ignition on, check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present.  
Are pulses noted?

yes

Replace the  
injection computer

no

Replace the  
passenger  
compartment  
connection unit.

- \* 29 for E7J Fenix 3B engines  
37 for K7M Fenix 5 engines  
35 for F3R and F7R Fenix 5 engines

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

## Chart 2

**WHEN THE IGNITION IS TURNED ON THE INJECTION WARNING LIGHT  
REMAINS ILLUMINATED OR DOES NOT ILLUMINATE****NOTES**

On fiche n° 45 side 1/2 : if bargraph 6 RH side is illuminated, see bargraph 6 RH side.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track \* on the injection computer and the "injection memory" 5A fuse. Are the wiring and the "injection memory" fuse correct?

no

Repair the wiring and replace the "injection memory" 5A fuse if necessary.

yes

Replace the injection computer.

\* 13 for E7J Fenix 3B engines  
43 for K7M Fenix 5 engines  
26 for F3R and F7R Fenix 5 engines

**AFTER REPAIR**

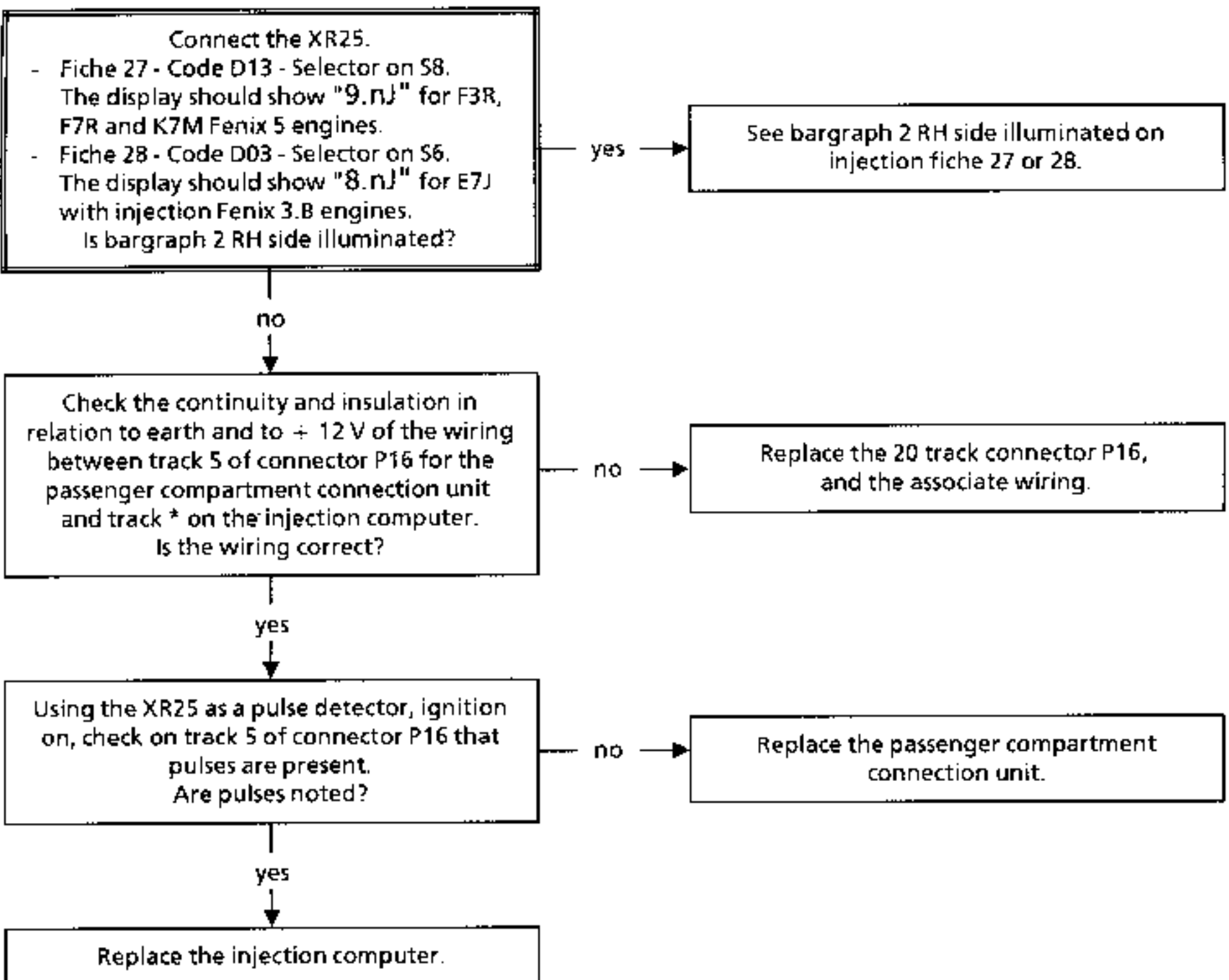
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

<b>Chart 3</b>	<b>WHILE DRIVING (DECELERATION) AND AT IDLE SPEED, THE INJECTION WARNING LIGHT FLASHES</b>
----------------	--

<b>NOTES</b>	Only use this customer complaint chart after carrying out a thorough check using the XR25.
--------------	--



- \* 29 for E7J Fenix 3B engines  
37 for K7M Fenix 5 engines  
35 for F3R and F7R Fenix 5 engines

<b>AFTER REPAIR</b>	- After repair, check the operation of the immobiliser system.
---------------------	--



## FAULT FINDING - FAULT CHARTS

## Chart 4

**WHEN THE IGNITION IS TURNED ON THE IMMOBILISER WARNING LIGHT  
REMAINS ILLUMINATED OR DOES NOT ILLUMINATE****NOTES**

Only use this customer complaint chart after carrying out a thorough check using the XR25.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track 11 of connector P16 for the passenger compartment connection unit and the 5A "passenger compartment connection unit feed" fuse  
Is the wiring correct?

no

Replace the 20 track connector P16 for the passenger compartment connection unit and the associated wiring.  
Replace the 5A "passenger compartment connection unit feed" fuse if necessary.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTRODUCTION

### SETTING UP XR25 / PASSENGER COMPARTMENT CONNECTION UNIT DIALOGUE

- Connect the XR25 to the diagnostic socket.
- ISO selector on S8
- Enter **D45**

I.blc

### ERASING THE MEMORY

After repairing the immobiliser system, on the XR25 wait for the memorised bargraph to flash, then enter **G0\*\*** to erase the memory.

The memory may also be erased by disconnecting the battery, ignition off, for approximately 30 seconds.



## FAULT FINDING - XR25 FICHE



































## PRESENTATION OF FICHE N° 45 SIDE 1/2

N°45 1/2		S8		code : D 4 5		read : 1 b 1 c	
1	<input type="checkbox"/>	ILLUM. --> CORR. SIDE OF CARD. EXTING. --> TURN CARD OVER	CODE PRESENT <input type="checkbox"/>				
2	<input type="checkbox"/>	REAR DEMISTER	INFRA-RED (PLIP)	<input type="checkbox"/>	CONTROL MODE : G . . *		
3	<input type="checkbox"/>	LOCKING	UNLOCKING	<input type="checkbox"/>	03 Door locking		
4	<input type="checkbox"/>	REAR SCREEN WASH button	FRONT	<input type="checkbox"/>	04 Door unlocking		
5	<input type="checkbox"/>	OIL PRESSURE	SIDELIGHT	<input type="checkbox"/>	05 Screen wiper slow speed		
6	<input type="checkbox"/>	DIESEL SOL. ACKNOWLEDGEMENT	CODED LINE	<input type="checkbox"/>	06 Screen wiper fast speed		
7	<input type="checkbox"/>	DRIVER'S SIDE WINDOW RISER	WINDSCREEN DEMISTER	<input type="checkbox"/>	07 REAR screen wipe		
8	<input type="checkbox"/>	DESCENT WINDOW RISER button	RISING	<input type="checkbox"/>	08 Lights "on" warning		
9	<input type="checkbox"/>	ALARM LOCKING KEY *20	<input type="checkbox"/>	10 Eng. immobiliser warning light			
10	<input type="checkbox"/>	+ AFTER IGNITION	+ACCESSORIES	<input type="checkbox"/>	11 Driver's side window descent		
<b>PASS. COMP. FUSE BOX</b> (DEFECTS STATUS) To read side 2/2 : G 02 * Memory del. : G 0 **				12 Driver's side window riser			
				14 Ceiling light			
				16 Sidelight			
				17 Front fog light			
				18 Rear fog light			
				19 Headlamp washers			
				20 LH windscreen demister			
				21 RH windscreen demister			
				22 Rear screen demister			
				25 Siren (stop : G 13 *)			
				26 Hazard alarm			
				27 Alarm warning light			
				Diesel solenoid mechanical check			
				Test: Switch off ignition, enter G23 * Switch on ignition, valve opens and closes within 30 sec. (audible check)			
11	<input type="checkbox"/>	LOCKING (press 3s on central switch)	UNLOCKING	<input type="checkbox"/>	ADDITIONAL CHECKS : # . .		
12	<input type="checkbox"/>	WINDSCREEN DEMISTER	REAR DEMISTER	<input type="checkbox"/>	01 Vehicle speed km / h		
13	<input type="checkbox"/>	EXCESS SPEED	REAR SCREEN WIPER	<input type="checkbox"/>	02 Battery voltage V		
14	<input type="checkbox"/>	REAR SCREEN WASHER	FRONT SCREEN WASHER	<input type="checkbox"/>	03 Max. speed advice prior to excess speed warning km per h		
15	<input type="checkbox"/>	RISING Driver's side window riser	DESCENT	<input type="checkbox"/>	04 Screen wipe speed ring position		
16	<input type="checkbox"/>	POSITION ACTION ON LIGHT SWITCH	SIDELIGHT	<input type="checkbox"/>	14 Equipment level : (N2, N3, N4)		
17	<input type="checkbox"/>	REVERSE GEAR	ROAD	<input type="checkbox"/>	30 Type of engine immobiliser		
18	<input type="checkbox"/>	HAZARD	FLASHING	<input type="checkbox"/>	53 Type of alarm		
19	<input type="checkbox"/>	FRONT FOG LIGHT Side lights on	REAR FOG LIGHT	<input type="checkbox"/>	List/number of times alarm triggered		
20	<input type="checkbox"/>	OIL PRESSURE ( ) engine turning	<input type="checkbox"/>	Help : Y 9 Return to diag. mode : D Part No. : G 7 0 *			
				15 ANG			



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 45 SIDE 2/2

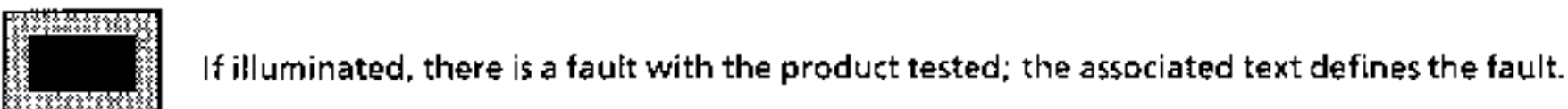
<b>N°45 2/2</b>		<b>read : 2, b 1c</b>	
1	 EXTING. → CORRECT SIDE OF CARD. ILLUM. → TURN CARD OVER	CODE PRESENT 	
2	 TIMED WIPER SPEED	SCREEN WIPE SWITCH (depending on equip.)	
3	 STOP	FIXED FEED STOP 	
4	 LOW SPEED	HIGH SPEED 	
5	 ← DRIVER'S DOOR OPEN FRONT OR REAR PASSENGER DOOR OPEN →		
6	 BONNET	LUGGAGE COMP. 	
7	 ACTIVE ENGINE IMMOBILISER		
8	 VOLUMETRIC SENSOR	PERIMETRIC SENSOR 	
9	 VEHICLE INTRUSION STATUS	MEMORISED INTRUSION SIREN STATUS 	
10	 GEAR ← ALARM KEY POSITION → STOP 		
<b>PASS. COMP. FUSE BOX</b> (STATUS) To read side 1/2 : G 01 *		Help : V 9 Return to diag. mode : D Part No. : G 7 0 *	
11	 SIGNAL RECEIVED (3sec)	SIGNAL CORRECT (3sec) 	
12	 LOCKED BY PLIP	CODE RECOGNISED 	
13	 CALIBRATION ENDED	VEH LOCKED BY PLIP 	
14			
15			
16	 ALARM	ENGINE IMMOBILISER 	
17	 HEADLAMP WASHER	EXTREME COLD FOG LIGHTS 	
18	 RUNNING -LIGHT	ARABIA EXCESS SPEED 	
19	 CEILING LIGHT TIMER	DIESEL 	
20	 DEFECT PRESENT see side 1/2		
		<b>15 ANG</b>	



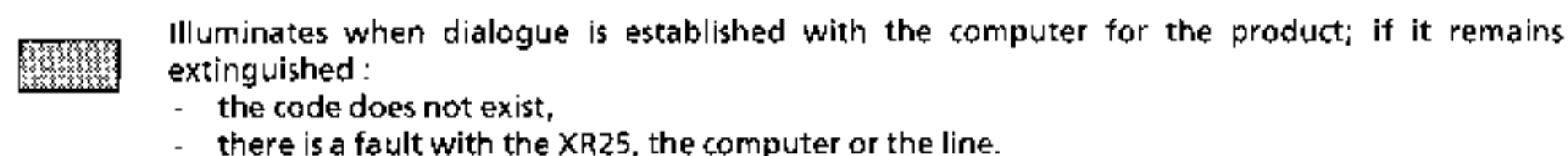
## FAULT FINDING - XR25 FICHE

## REPRESENTATION OF THE BARGRAPHS

## REPRESENTATION OF A FAULT (always on a coloured background)



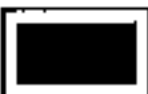






## REPRESENTATION OF A STATUS (always on a white background)

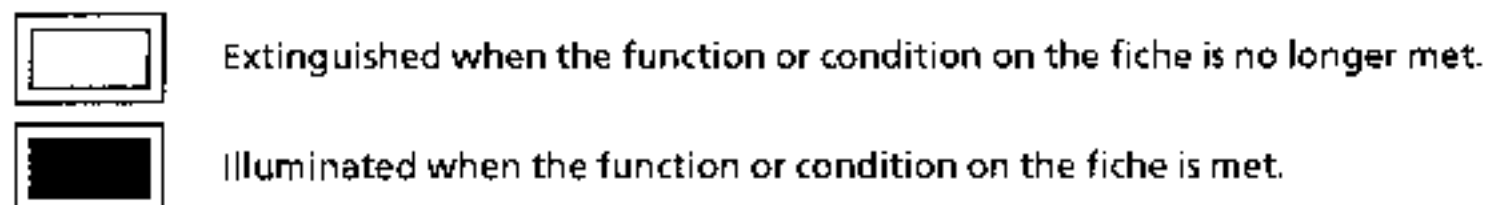


## Engine stopped, ignition on, with no operator action

The status bargraphs on the fiche are represented in the condition that they should be in when the engine is stopped, ignition on, with no operator action.


- |   |  |                      |   |
|---|--|----------------------|---|
| - If, on the fiche, the bargraph is shown |  | the XR25 should show |  |
| - If, on the fiche, the bargraph is shown |  | the XR25 should show |  |
| - If, on the fiche, the bargraph is shown |  | the XR25 should show |   |
- either  or 

## Engine running





## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>2</div> 	<b>Bargraph 2 RH side illuminated</b> <div>Fiche n° 45 side 1/2</div> <b><u>PLIP CIRCUIT</u></b> XR25 aid : CC to earth on track A7 of connector P12 for passenger compartment connection unit
--	---

**NOTES**

Check bargraph 16 RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser).

Check the insulation in relation to earth of the wiring between tracks 4 on the infrared receiver and A7 on connector P12 for the passenger compartment connection unit.

Repair the wiring if necessary.

If the fault persists, disconnect the clip on track A7 of connector P12 for the passenger compartment connection unit.

Does bargraph 2 RH side extinguish?

Bargraph 2 RH side does not extinguish.

Replace the passenger compartment connection unit.

Bargraph 2 RH side does extinguish.

Replace the infrared receiver.

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6

**Bargraphs 6 LH and 6 RH side illuminated**

Fiche n° 45 side 1/2

**CODED LINE CIRCUIT AND DIESEL SOLENOID VALVE CLEARANCE**

XR25 aid: Coded line fault

**NOTES**

Check that bargraph 16RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser).

Check the condition of the wiring between:

3 track coded solenoid valve connector

{	1	5 of connector P16 - passenger compartment connection unit
	2 and	S6 of the engine connection unit
	3	vehicle earth MH via wire joint BA.

Replace the faulty wiring if necessary.

Set the XR25 to pulse detection, ignition on, then check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present.

Do you note any pulses?

There are no pulses on track 5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the passenger compartment connection unit.

There are pulses on track 5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the coded solenoid valve.

**AFTER REPAIR**

- Wait approximately 1 minute for the bargraphs to flash, then enter G0\*\* to erase the memory.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6

**Bargraph 6 LH side illuminated**

Fiche n° 45 side 1/2

**DIESEL SOLENOID VALVE CLEARANCE CIRCUIT**

XR25 aid: No diesel solenoid valve acquittal

**NOTES**

Check that bargraph 16RH side is illuminated on fiche n° 45 side 2/2 (vehicle fitted with engine immobiliser).

Check the condition of the wiring between track 3 of the 3 track coded solenoid valve connector and the vehicle earth.

Replace the wiring if necessary.

Set the XR25 to pulse detection, ignition on, then check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present.

Do you note any pulses?

There are no pulses on track 5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the passenger compartment connection unit.

There are pulses on track 5 of connector P16 for the passenger compartment connection unit, ignition on.

Replace the coded solenoid valve.

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

11

**Bargraphs 11 LH and RH sides, incorrect illumination** Fiche n° 45 side 2/2  
PLIP CIRCUIT.XR25 aid : Bargraph 11 LH side illuminated, infrared signal received by receiver  
Bargraph 11 RH side illuminated, signal correct**NOTES**

If bargraph 2 RH side is illuminated on fiche n° 45 side 1/2, deal with bargraph 2 RH side first

Check if the vehicle doors may be locked and unlocked. Check using a second PLIP and replace the battery in the first PLIP if necessary.

Check if connector P12 for the passenger compartment connection unit is correctly connected.  
Clip connector P12 into position correctly if necessary.

Check on the infrared receiver connector for the following voltages:

- = + 12 V before ignition between tracks 5 and 3.
- = + 12 V before ignition between tracks 4 and 3

Do you note these voltages?

YES

Set the XR25 to pulse detection, then check on track 4 of the infrared receiver for a pulse when the PLIP is activated.

Is there a pulse when the PLIP is activated ?

If there is no pulse when the PLIP is activated, replace the infrared receiver.

If there is a pulse when the PLIP is activated, replace the passenger compartment connection unit.

NO

Check on connector P12 for the passenger compartment connection unit for the following voltages:

- = + 12 V before ignition between track A1 and the vehicle earth
- = + 12 V before ignition between track A7 and the vehicle earth

Do you note these voltages?

Voltages not noted, replace the passenger compartment connection unit.

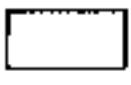
Voltages noted, repair the wiring between the infrared receiver and connector P12 for the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div data-bbox="201 438 252 480">11</div> <div data-bbox="241 523 372 608"></div>	<div data-bbox="469 401 1338 517"><b>Bargraph 11 RH side remains extinguished</b> <u>PLIP CIRCUIT.</u></div> <div data-bbox="1540 410 1862 449">Fiche n° 45 side 2/2</div> <div data-bbox="469 540 1185 582">XR25 aid : Code no longer synchronised</div>
--	---

<b>NOTES</b>	Check the keys are correct for the vehicle.
--------------	---

When the PLIP is pressed, bargraph 11 RH side remains extinguished (while bargraph 11 LH side illuminates for approximately 3 seconds before extinguishing) and the doors cannot be locked or unlocked using the PLIP.

There is no synchronisation between the code sent by the PLIP and the code calculated by the passenger compartment connection unit.

Follow the procedure for resynchronising the PLIPs.

**AFTER REPAIR**

- After repairing the immobiliser system, check the operation of the immobiliser system.



FAULT FINDING - CUSTOMER COMPLAINTS

**NOTES**

Only consult these customer complaints after carrying out a complete check using the XR25.

When the ignition is turned on, the immobiliser warning light illuminates for 3 seconds, extinguishes for 13 seconds, then remains illuminated until the ignition is turned off (the vehicle may or may not be able to be started)

Chart 1

When the ignition is turned on, the immobiliser warning light illuminates for 3 seconds, then extinguishes, but the vehicle cannot be started

Chart 2

When the ignition is turned on, the immobiliser warning light remains illuminated for longer than approximately 3 seconds or does not illuminate

Chart 3

When the ignition is turned on, the immobiliser warning light flashes permanently

Chart 4



## FAULT FINDING - FAULT CHARTS

## Chart 1

When the ignition is turned on, the immobiliser warning light illuminates for 3 seconds, extinguishes for 13 seconds, then remains illuminated until the ignition is turned off (the vehicle may or may not be able to be started)

## NOTES

On fiche n° 45 side 2/2 : if bargraph 6 RH and LH sides are illuminated, see bargraph 6 RH and LH sides.

Check the condition of the wiring between the 3 track coded solenoid valve connector

- 1 5 on connector P16 of the passenger compartment connection unit
- 2 and 3 S6 on the engine connection unit vehicle earth MH via wire joint BA

Is the wiring correct?

no

Replace the faulty wiring

yes

Using the XR25 as a pulse detector, ignition on, check on track 5 of connector P16 for the passenger compartment connection unit that pulses are present. Are pulses noted?

no

Replace the passenger compartment connection unit.

yes

Replace the coded solenoid valve

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

## Chart 2

When the ignition is turned on, the immobiliser warning light illuminates for 3 seconds, then extinguishes, but the vehicle cannot be started

## NOTES

Check on fiche n° 45 side 1/2 : bargraph 6 LH and RH sides are extinguished

Connect the XR25.

Fiche n° 45 side 1/2 - code D45 - selector on S8.

The display should show "I.blc".

Mechanically test the coded solenoid valve:

- Ignition off, enter G23\*.
- Turn the ignition on. The valve should open and close several times in 30 seconds (audible test).

Does the valve open and close several times in 30 seconds ?

no

Replace the coded solenoid valve

yes

The coded solenoid valve is correct.  
Check for another incident such as blocked fuel filter, fuel tank empty, insufficient engine compression, etc.

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

**Chart 3**

When the ignition is turned on, the immobiliser warning light remains illuminated for longer than 3 seconds approximately or does not illuminate

**NOTES**

Only use this customer complaint chart after carrying out a thorough check using the XR25.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track 11 of connector P16 for the passenger compartment connection unit and the 5A "passenger compartment connection unit feed" fuse  
Is the wiring correct?

no

Replace the 20 track connector P16 for the passenger compartment connection unit and the associated wiring.  
Replace the 5A "passenger compartment connection unit feed" fuse if necessary.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

**Chart 4**

When the ignition is turned on, the immobiliser warning light flashes permanently

**NOTES**

On fiche n° 45 side 1/2 : if bargraph 6 LH side is illuminated, see bargraph 6 LH side.

Using the XR25 as a pulse detector, ignition on, check on track 5 of connector P16 of the passenger compartment connection unit that pulses are present.  
Are pulses noted?

no

Replace the passenger compartment connection unit.

yes

Replace the coded solenoid valve

**AFTER REPAIR**




- After repair, check the operation of the immobiliser system.



## CHECKING CONFORMITY







**NOTES**

Only bargraphs concerned with the immobiliser function are described here.  
If a fault bargraph illuminates, refer to the corresponding fault chart.

Order of operations	Function to be checked	Action	Bargraph	Display and notes
1	Dialogue with XR25	D45 (selector on 58)		<div>bic</div> <div>I.bic</div> <p>then</p> <p>Use fiche n° 45 fault - status side 1/2</p>
2	Interpretation of bargraphs normally illuminated		<div>1</div> <div></div> <div>1</div> <div></div>	<p>extinguished → status test illuminated → fault - status test</p> <p>Code present</p>
3	Conformity of connection unit	G70*		<div>X X X</div> <p>Part Number displayed in 3 sequences</p>
4	Change to status tests	G02*		<div>2.bic</div> <p>Use fiche n° 45 status side 2/2</p>
5	Interpretation of "starting authorisation" bargraph or Checking immobiliser function configuration	# 46	<div>16</div> <div></div>	<p>Shows immobiliser function is configured in connection unit</p> <p>0 → Shows immobiliser function is not configured in connection unit</p> <p>1 → Shows immobiliser function is configured in connection unit</p>






## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
6	Interpretation of "diesel configuration" bargraph  or  Checking engine configuration	# 45	<div>19</div> 	<p>Indicates connection unit is configured for a diesel engine.</p> <p>0 → Indicates connection unit is configured for a petrol engine</p> <p>1 → Indicates connection unit is configured for a diesel engine</p>
7	Interpretation of "signal received" bargraph		<div>11</div> 	<p>Should illuminate when the PLIP is pressed</p> <p>Indicates the connection unit has received the infrared signal</p>
8	Interpretation of "correct signal received" bargraph		<div>11</div> 	<p>Should illuminate when the PLIP is pressed</p> <p>Indicates the connection unit has received the correct infrared signal</p>
9	Interpretation of "locked by PLIP" bargraph		<div>12</div> 	<p>Illuminates when the doors are locked by the PLIP</p>
10	Interpretation of "code programmed" bargraph		<div>12</div> 	<p>Illuminates when the connection unit has been programmed with the code for the 2 PLIPs.</p>
11	Interpretation of "calibration complete" bargraph		<div>13</div> 	<p>Illuminates when calibration of the immobiliser system is complete (after entering code G54*1* on the XR25 during programming).</p>



## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
12	Interpretation of "programming definitive" bargraph		<div>13</div> 	Illuminates when programming is definitively completed (> 5 presses of PLIP after calibration)
13	Interpretation of "immobiliser active" bargraph		<div>7</div> 	Indicates the immobiliser is active (after locking the doors using the PLIP or 10 minutes after turning the ignition off)
14	Interpretation of "faults present" bargraph		<div>20</div> 	Shows a fault is stored in the connection unit (see fault bargraph on other side) and the corresponding fault chart
15	Checking the automatic setting configuration	#30		3 → indicates automatic setting after 1 minute

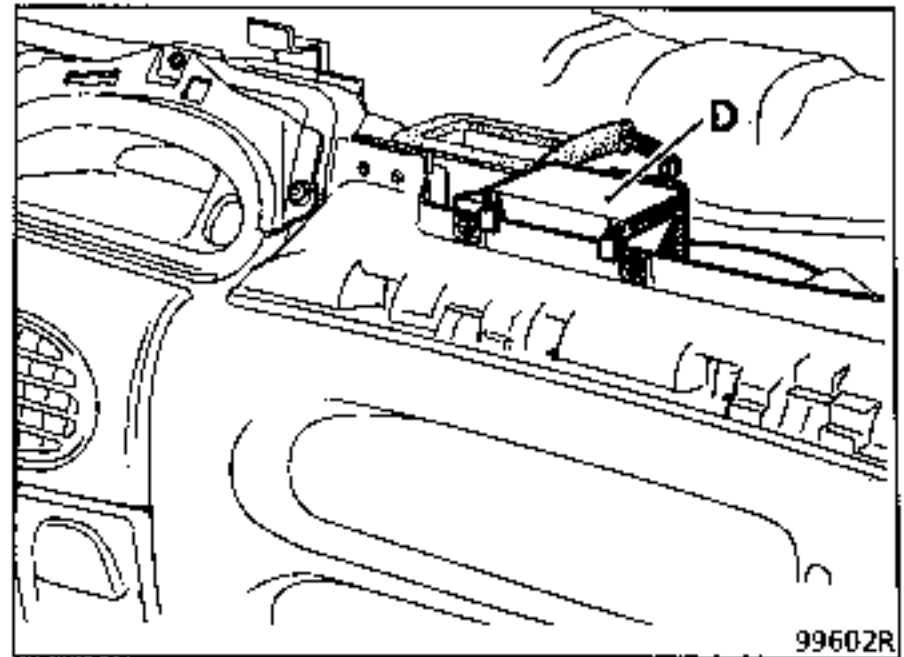


**DESCRIPTION OF THE CODED KEY ENGINE IMMOBILISER SYSTEM**

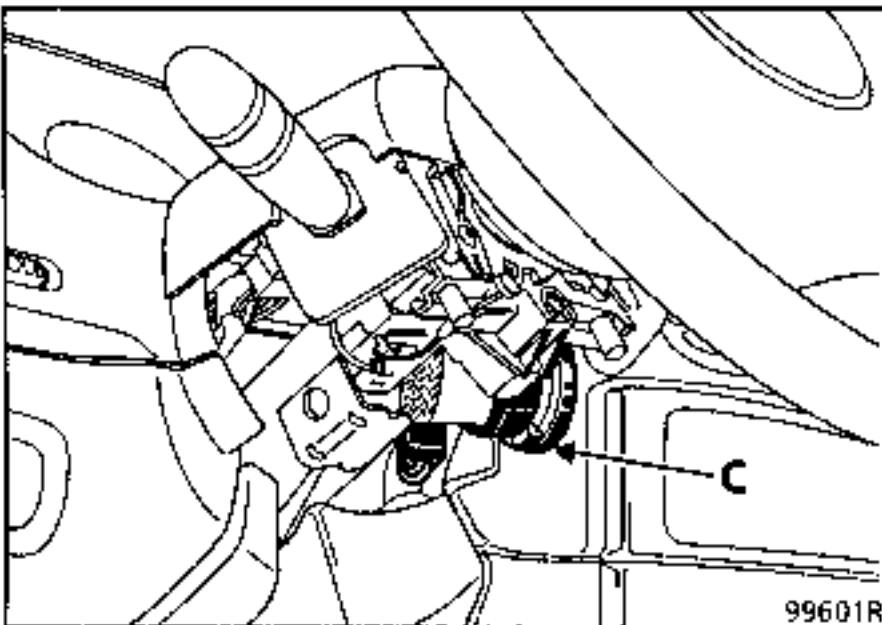
With this system the engine immobiliser is activated 10 seconds after turning the + after ignition feed off (shown by the flashing of the red engine immobiliser warning light).

The system comprises:

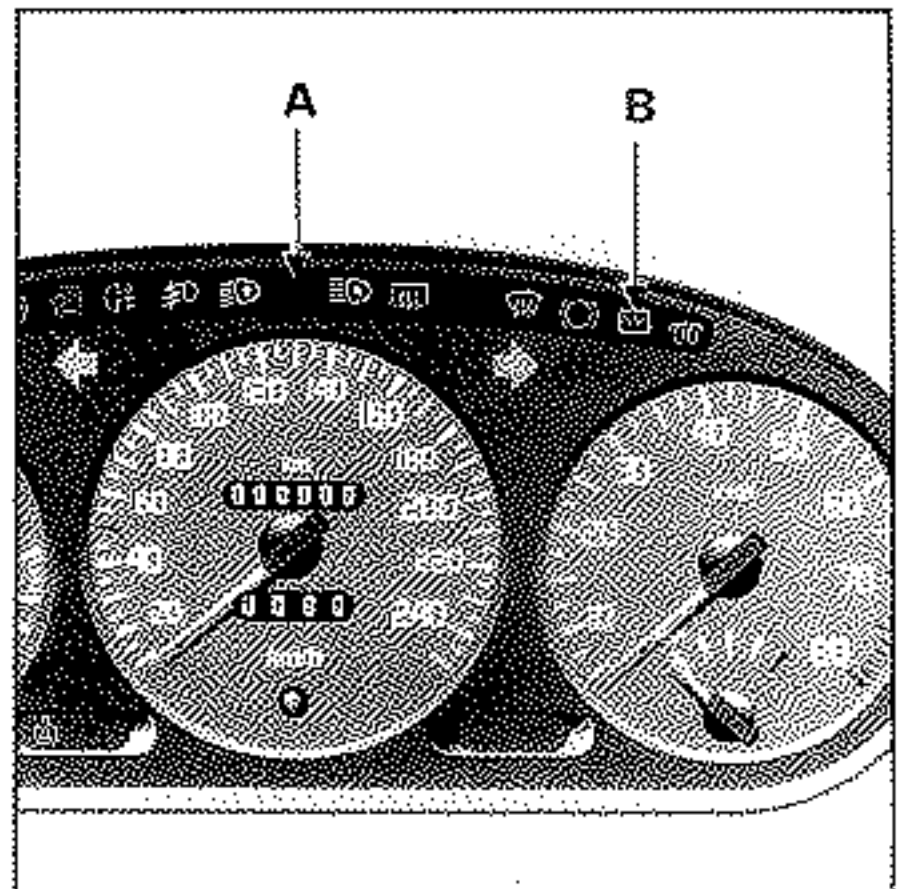
- 2 special matched key heads with a coded chip,
- a receiving ring (C) located around the ignition switch, with an electronic unit which transmits the key code to the decoder unit (D),



- a red immobiliser warning light (A) used to :
  - indicate activation of the engine immobiliser system,
  - enter the emergency code,
  - indicate a fault in the system for vehicles fitted with a diesel engine.
- an injection warning light (B) (on petrol vehicles only) which indicates an injection fault or indicates a fault in the engine immobiliser system when the engine is running (flashes on deceleration and at idle speed),



- a decoder unit (D) located under the upper section of the dashboard which has the following functions:
  - decoding of the key signal from the receiving ring,
  - management of the engine immobiliser system by the sending of a code to the injection computer (petrol) or to the coded solenoid valve (diesel) to authorise the vehicle to be started



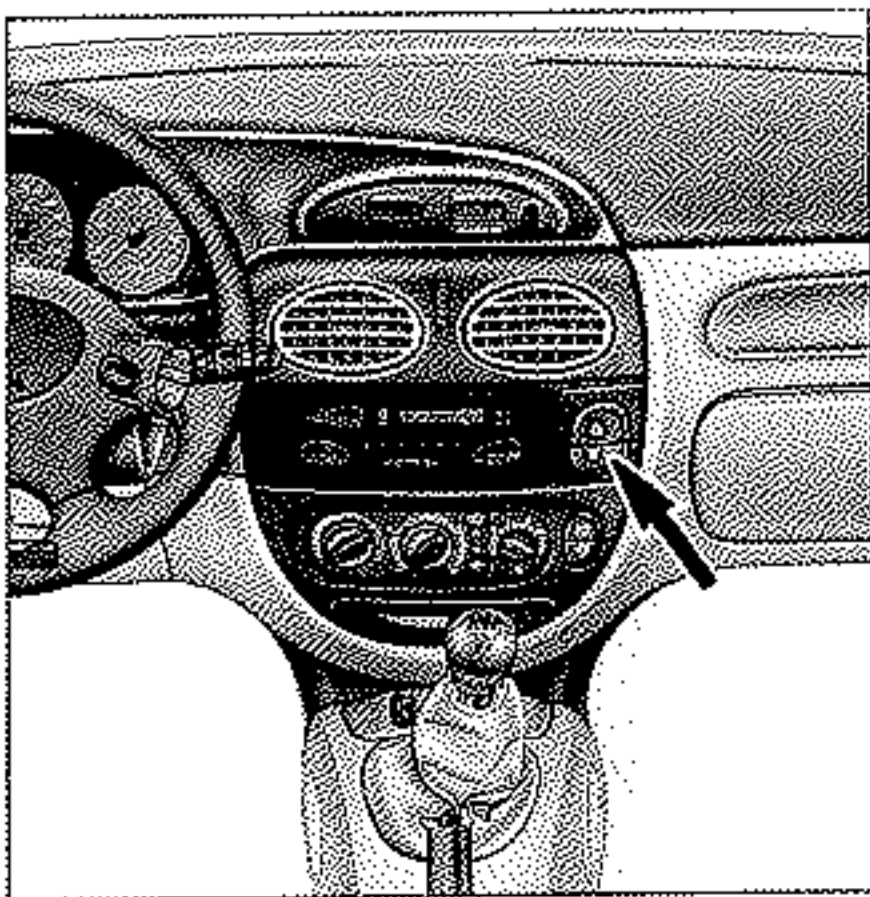


- a button for entering the emergency code.

**NOTE :** if there is a fault with this button (contact permanently made) and this fault persists while the ignition is turned on 20 times the warning light will illuminate for 3 seconds then 20 seconds each time the ignition is turned on thereafter.

This fault may be seen using the XR25 (see bargraph interpretation page 82-141).

After repair, erase the memory by disconnecting the battery for approximately 30 seconds (or use the XR25 if the bargraph is flashing).



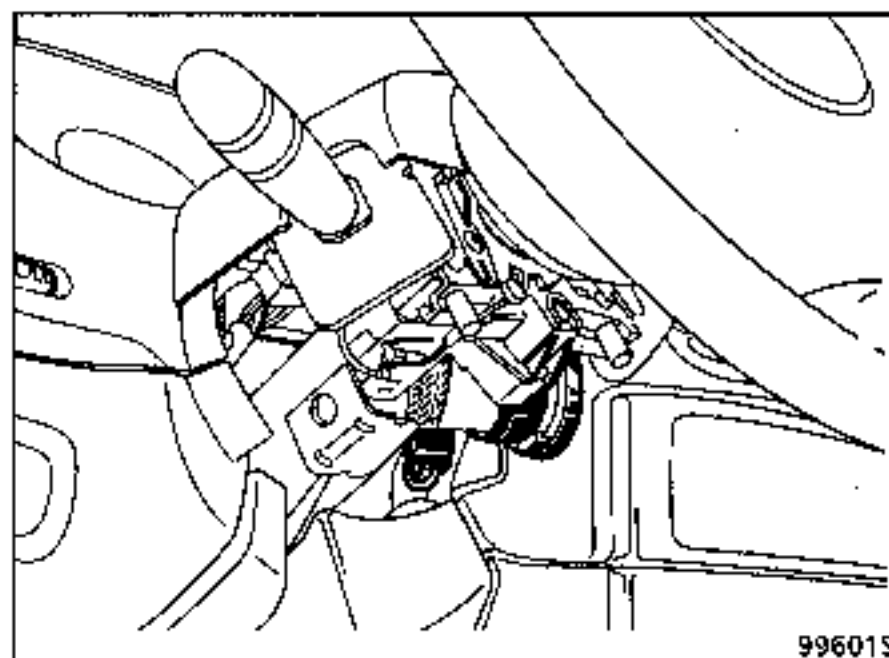
#### REMOVING - REFITTING THE RECEIVING RING

Remove the lower half cowling - 3 bolts.

Disconnect the connector for the ring.

After moving the mounting tab to one side slightly, turn the ring clockwise ( $\approx 1/8$ th of a turn) and release it.

When refitting, ensure the ring is correctly clipped back into position and the wiring is correctly positioned.



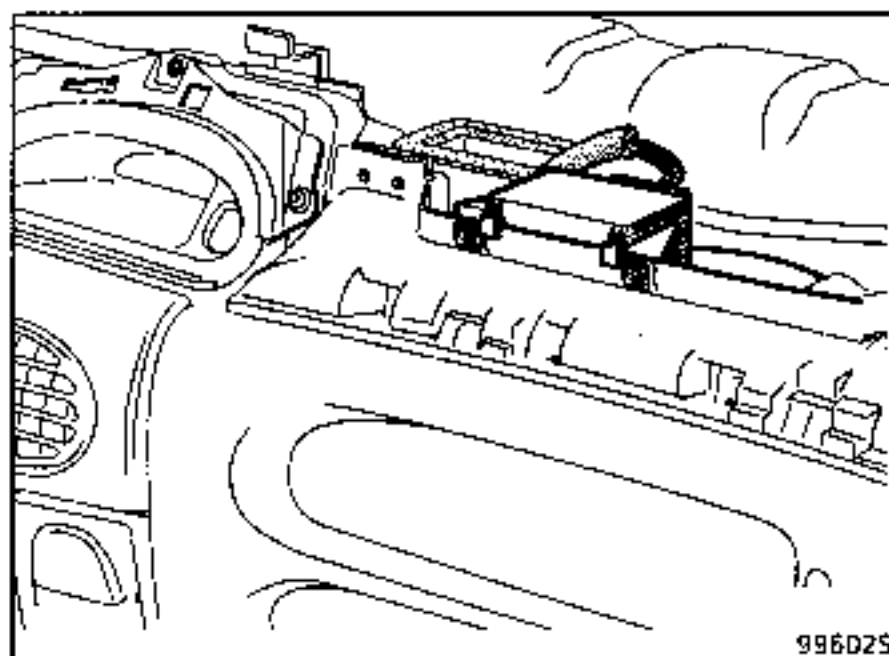
**NOTE :** This ring is not coded.

#### REMOVING - REFITTING THE DECODER UNIT

Remove the upper section of the dashboard

Disconnect the 15 track decoder unit connector.

Remove the decoder unit - 2 bolts.



When refitting, ensure the connector is clipped in properly and the clips are present on the unit mounting brackets.



**OPERATION**

When the immobiliser system is activated (approximately 10 seconds after cutting + after ignition feed), the red immobiliser warning light flashes (slow flashing; 1 flash / second).

After turning the ignition on, the receiving ring analyses the code from the key and transmits it to the decoder unit.

If the code is recognised by the decoder unit, it sends a code to the injection computer (petrol) or the coded solenoid valve (diesel) via the coded line and extinguishes the red immobiliser warning light (after approximately 3 seconds).

At this precise moment, one of several situations may arise:

- The injection computer (petrol) or coded solenoid valve (diesel) has no reference code in its memory :
  - the code sent to it is stored in its memory
- The injection computer (petrol) or coded solenoid valve (diesel) has a reference code in its memory :
  - the code sent to it is compared with the code in its memory,
  - if the two codes match, the computer (petrol) or the coded solenoid valve (diesel) unlocks the system and the engine may be started.  
When the ignition is turned on, the injection warning light (petrol) and the immobiliser warning light illuminate for a few seconds then extinguish, showing that the system is operating correctly.

- if the two codes do not match, the system remains locked to prevent the engine from being started.

When the ignition is turned on, the injection warning light (petrol) illuminates for a few seconds then extinguishes while the red engine immobiliser warning light flashes (rapid flashing). The vehicle may not be started.

**NOTE :** to ensure the system operates correctly, no objects (eg. : keyrings) should be allowed to come between the key and the ring.

**ATTENTION :** when the vehicle battery has a low charge, the drop in voltage caused by operating the starter may set the immobiliser. If the voltage is less than 6 volts, the engine cannot be started, even by pushing the vehicle.



## REPLACING A KEY HEAD

The coded chip in the key head is faulty:

- order a replacement key using the number in the faulty key head (alphanumeric characters),
- if the customer requires the fault to be repaired immediately (2nd key unavailable) a complete kit may be fitted to the vehicle (decoder unit plus two key heads) (see replacing a complete kit).

The key has been lost:

- Order a replacement key using the number in the key head of the 2nd key or on the bar code label (normally attached to the keys when the vehicle is delivered).  
In this case, remember to order the metal number insert for the new key head.

**IMPORTANT:** Do not touch the key head chip when taking note of the number in the key head. Any key which has been touched must be replaced.

**NOTE :** if the key head number cannot be located (both keys and bar code lost), the complete kit must be replaced (decoder unit and 2 keys, plus injection computer or coded solenoid valve).

## REPLACING THE DECODER UNIT ALONE

A new decoder unit is not coded. Once fitted to the vehicle, the codes of both keys must be programmed so that it is operational (see programming procedure).

**IMPORTANT :** if the customer has not left the second key, the decoder unit may be programmed using just one key and the XR25.

Before carrying out the programming procedure:

- connect the XR25 to the vehicle,
- set the ISO selector switch to S8 and enter code D38 (coded key engine immobiliser system),
- enter G05\* and proceed with programming using one key.

**NOTE :** if the decoder unit alone is replaced, no operation is carried out on the injection computer or the coded solenoid valve. It retains the same engine immobiliser code.

**IMPORTANT:** when a decoder unit has been programmed with the key code, the code cannot be erased and no other code may be memorised in its place.

## SPECIAL NOTES

On diesel vehicles the decoder unit is identical to the decoder unit for a petrol immobiliser system.

When replacing, the new part must be configured for "diesel" using the XR25.

This configuration allows the decoder unit to control the operation of the coded solenoid valve correctly (shown by the immobiliser warning light) (see diesel configuration).



**PROGRAMMING PROCEDURE**

This procedure may only be carried out once by the decoder unit. As long as this procedure has not been carried out, the vehicle cannot be started (unless the injection computer or solenoid valve is not coded).

The procedure may be carried out:

- with both keys if a kit is being fitted (which permits verification that the keys are matched).

**NOTE :** the procedure will not work if the same key is used twice or if the keys are not matched.

- with a single key if the decoder unit alone is being replaced, using the XR25 (where the customer has not left both keys with the workshop).

The XR25 may be used for this procedure but is not vital (except for programming using a single key, see replacement of the decoder unit alone).

1. Connect the XR25 to the vehicle, set the ISO selector switch to S8 and enter code D38 (fault finding fiche 38); bargraph 19 right hand side should be illuminated (decoder unit uncoded).
2. Using the first key, switch the ignition on (but do not start the engine). After approximately 2 seconds, bargraphs 18 and 19 LH side illuminate. From this moment you have 30 seconds to carry out the following operation.
3. Switch off and replace the first key with the second key. Switch the ignition on (but do not start the engine). After approximately 2 seconds, bargraphs 19 LH and RH sides extinguish.
4. Switch the ignition off and then on for a few seconds without starting the engine. This will send the code to the injection computer or the coded solenoid valve.

5. Check the engine immobiliser system is operating correctly:

- ignition off for more than 10 seconds, the red immobiliser warning light should flash (slow flashing). Bargraph 10 left hand side should be illuminated. The vehicle should not be able to be started using other keys.

**NOTE :** to simulate prevention from starting, before turning the ignition on, wait for the red warning light to flash (slow flashing). Then enter G04\* (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates). When the ignition is turned on the red immobiliser warning light should flash (rapid flashing) and the vehicle should be prevented from starting.

6. The procedure is complete. After turning the ignition off and on again (for more than 2 seconds), check that the vehicle can be started.

**NOTE :** if the programming procedure fails, wait for bargraph 19 left hand side to extinguish before starting again to programme with both keys.

**Diesel configuration**

On diesel vehicles the decoder unit must be configured to "diesel" using the XR25.

1. With the XR25 connected (ISO selector on S8) enter code D38 (fiche n° 38), bargraphs 1 right and 2 right hand side should be illuminated.
2. Ignition off, enter code

**G 2 2 \* 2 \***

bargraphs 3 right hand side and 9 left hand side should illuminate. The configuration has been carried out.



## REPLACING A KIT (decoder unit plus 2 keys)

If a kit is replaced it will be necessary to:

- Programme the codes of the 2 new keys in the new decoder unit (supplied uncoded).
- Erase the old code in the injection computer or the solenoid valve using the emergency procedure (the code number for the old kit should be requested from the local assistance network, example **DELTA Assistance** for France) (For UK contact Technical Services, Swindon).

**IMPORTANT:** to erase the old code (memorised in the injection computer or the coded solenoid valve), the procedure described below must be followed in the correct order.

The code in the injection computer or the coded solenoid valve cannot be erased with the emergency code (using the number for the old kit) unless the decoder unit fitted to the vehicle has been programmed with a different code (which is the case in the following procedure).

**NOTE :** if the emergency code is entered when the decoder unit has the same code as the injection computer or the coded solenoid valve, it will not be decoded.

1. Fit the metal inserts from the old keys into the new key heads.
2. Note the number of one of the old keys to obtain the emergency code number.
3. Remove the decoder unit (see page 82-88) ignition off.
4. Fit the new decoder unit, ignition off.

5. Programme the codes of the 2 new keys in the decoder unit (supplied uncoded) (see programming procedure and configuration for diesel engine).

6. Erase the old code memorised in the injection computer or coded solenoid valve by using the emergency procedure and the code number for the old kit (see procedure for entering the emergency code).

**NOTE :** the emergency code may only be entered when the immobiliser is active. The red immobiliser warning light should flash when the ignition is turned on (rapid flashing). To activate the immobiliser in this case the XR25 must be used (fault finding fiche n° 38).

Before turning the ignition on enter G04\* (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates) and wait for approximately 10 seconds.

When the ignition is turned on the red immobiliser warning light should flash (rapid flashing).

The emergency code may now be entered.



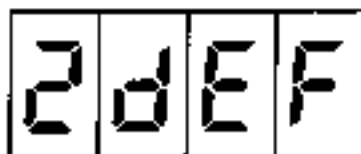
**NOTE:** on petrol vehicles, use the XR25 to check that the injection computer has been correctly decoded (in injection fault finding).

Use fiche n° 27 or 28 (depending on engine), and enter the injection code in the XR25:

- bargraph 2 right hand side (immobiliser) should be illuminated and after entering

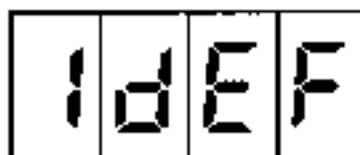


the message



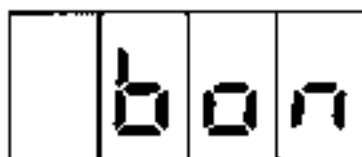
should be displayed on the XR25. The code has been erased.

- if the display shows



there is a fault on the coded line. In this case, repair and repeat the procedure.

- if bargraph 2 right hand side (immobiliser) is extinguished and the display shows



(\*22), this shows that the injection computer code has not been erased. In this case check the conformity of the emergency code and repeat the procedure.

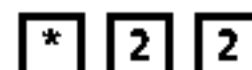
7. Programme the immobiliser code for the new kit into the injection computer or the coded solenoid valve.

Turn the ignition off and on again for a few seconds without starting the engine.

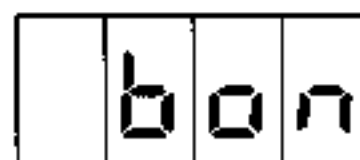
**NOTE :** using the XR25 , it is possible to check that the injection computer has been programmed with the new code (in injection fault finding) :

- bargraph 2 right hand side (immobiliser) should be extinguished (fault finding fiche n° 27 or 28 depending on engine)

- after entering

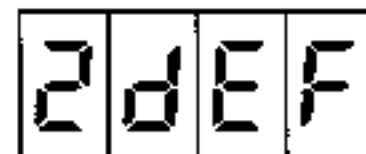


the display should show



In this case the computer has been correctly coded.

If the display shows



the injection computer is still not coded.

**NOTE :** for diesel vehicles, check the immobiliser warning light extinguishes after 2 seconds.



8. Check the operation of the immobiliser system:

- ignition off, the red immobiliser warning light should flash (slow flashing). The vehicle should not be able to be started using other keys.

**NOTE :** starting prevention should be able to be checked using the XR25:

- use diagnostic fiche n° 38 and enter code **D 3 8** on the XR25,
- ignition off, enter **G 0 4 \*** (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates) and wait for approximately 10 seconds.
- when the ignition is turned on the red immobiliser warning light should flash (rapid flashing) and the vehicle should not be able to be started.

9. The procedure is complete. After turning the ignition off and on again, check the vehicle can be started.

### REPLACING THE INJECTION COMPUTER (Petrol vehicle)

The injection computer is supplied uncoded. The engine immobiliser code must be programmed in when the computer is fitted.

Carry out the following operations:

- Turn the ignition on using the vehicle's coded key for a few seconds,
- Turn the ignition off, the immobiliser will be activated approximately 10 seconds afterwards (immobiliser warning light flashes).

**NOTE :** starting prevention should be able to be checked using the XR25:

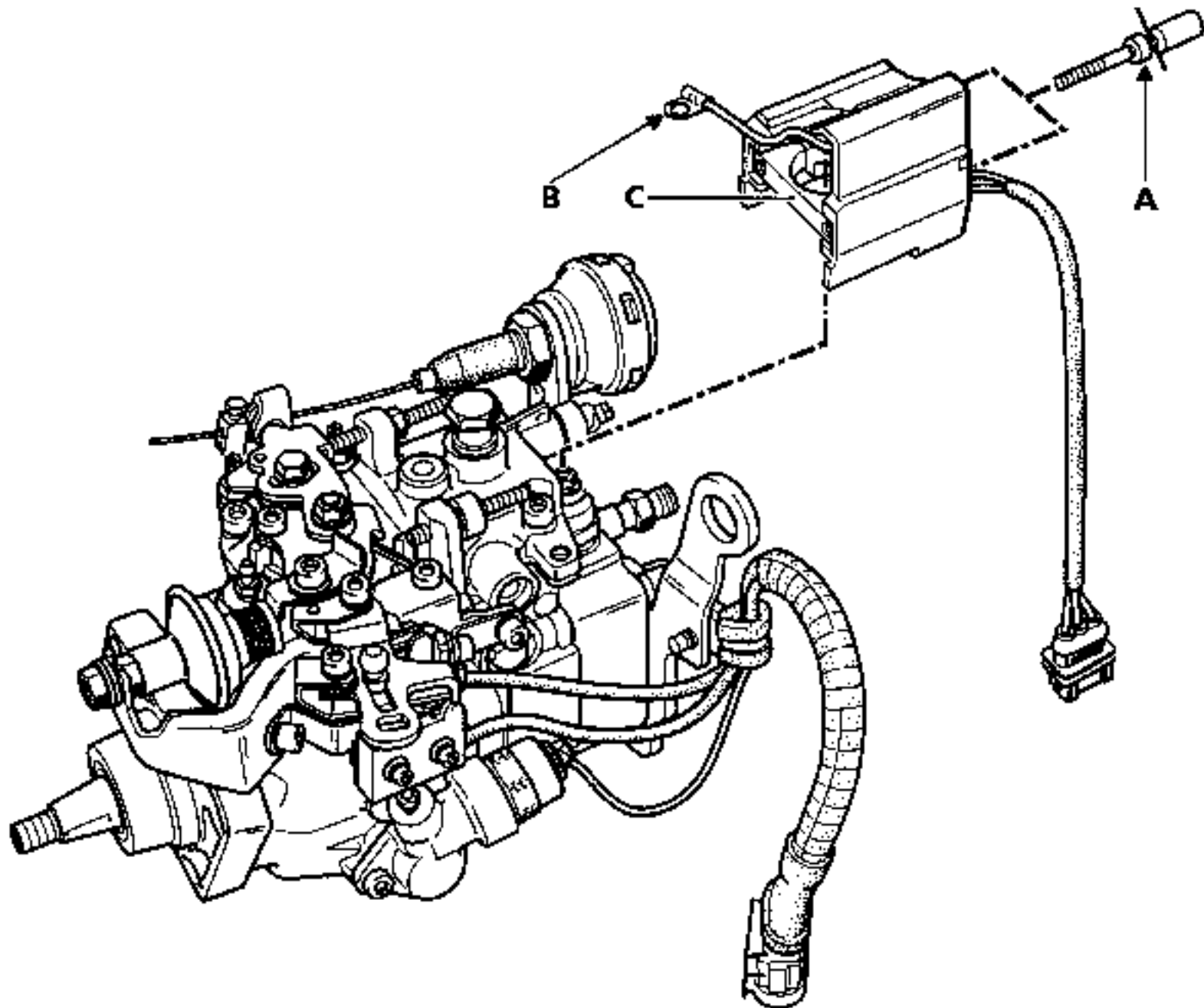
- use diagnostic fiche n° 38, enter code **D 3 8** on the XR25,
- ignition off, enter **G 0 4 \*** (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates)
- when the ignition is turned on the red immobiliser warning light should flash (rapid flashing) and the vehicle should not be able to be started.



REPLACING THE CODED SOLENOID VALVE ELECTRONIC UNIT (Diesel vehicle)

REMOVAL

Refer to sub-section 13.



99337R



## REFITTING

Ensure the retaining flange (C) behind the solenoid valve is present.

Connect the electronic unit / solenoid valve connection cable (B) using the nut.

Clip the plastic cover onto the solenoid valve.

Position the electronic unit on the solenoid valve.

Using new shear bolts (A), secure the electronic unit, tightening the bolts in the flange until they shear.

**IMPORTANT :** the solenoid valve electronic unit is supplied uncoded. The engine immobiliser code must be programmed in when the unit is fitted.

Carry out the following operations:

- Turn the ignition on using the coded key for the vehicle,
- Turn the ignition off, the immobiliser will be activated approximately 10 seconds afterwards (immobiliser warning light flashes).

**NOTE :** starting prevention should be able to be checked using the XR25:

- use diagnostic fiche n° 38 and enter code

**D 3 8** on the XR25

- ignition off, enter **G 0 4 \*** (forced protection mode) on the XR25 (bar-graph 8 right hand side illuminates),

- when the ignition is turned on the red immobiliser warning light should flash (rapid flashing) and the vehicle should not be able to be started.

**SPECIAL NOTES FOR TESTING AN INJECTION COMPUTER OR A CODED SOLENOID VALVE (Test part)**

**IMPORTANT:** if an uncoded injection computer or solenoid valve is being tested from stock (test part), the feed fuse for the connection unit F39 (location n° 25 levels 3 and 4, location n° 37 level 2) **MUST** be removed before the test part is fitted (do not refit the fuse while the test part is still fitted to the vehicle).

Removing the fuse allows the vehicle to be started without running the risk of coding the injection computer or coded solenoid valve.

The test may then be carried out.

After the test, if the part is to be returned to stock, remove the part before refitting the fuse.

If the part is to remain on the vehicle, refit the fuse and programme the immobiliser code in the injection computer or coded solenoid valve (see replacing an injection computer or coded solenoid valve).

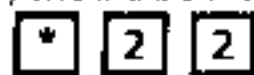


**Checking (petrol vehicle only)**

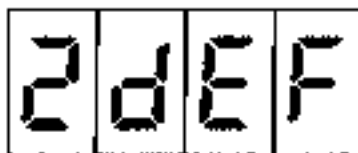
If the test computer is to be returned to stock, it is possible (before it is removed) to check using the XR25 and fiche n° 27 or 28 (depending on engine) that the computer has not been coded during the test (example : incorrect operation).

Connect the XR25, position the ISO selector and enter the injection code.

Bargraph 2 RH side (immobiliser) should be illuminated and after entering



the message



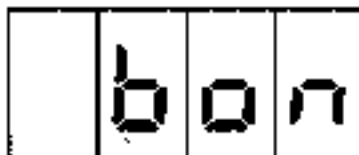
should be displayed on the XR25.

This shows that the injection computer is not coded and may be returned to stock.

If bargraph 2 RH side (immobiliser) is extinguished and after entering



the message



is displayed on the XR25, this shows that the computer has been programmed with the immobiliser code (incorrect operation).

In this case the computer must be returned to its initial state before being returned to stock.

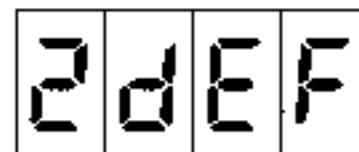
The procedure for decoding the injection computer consists of replacing the connection unit on the vehicle with another connection unit with a different code (with its PLIPs) and entering the emergency code for the vehicle (emergency code number should be requested from the local assistance network, example DELTA Assistance for France) using the number in the head of the key for the vehicle. (For UK, contact Technical Services, Swindon).

Ignition off, fit in place of the original decoder unit on the vehicle a decoder unit coded with a different number (the procedure will not work with an uncoded decoder unit or one which has the same code as the injection computer).

Turn the ignition on, the red engine immobiliser warning light will flash (rapid flashing).

Enter the vehicle emergency code (number corresponding to the original key number).

After entering the emergency code, the red engine immobiliser warning light will flash again. The XR25 display should read

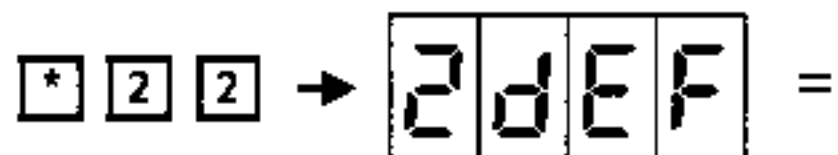


This indicates that the injection computer has been decoded.

Turn the ignition off, remove the decoded computer and return it to stock.

Refit the computer and decoder unit to the vehicle.

**NOTE:** when checking the injection using the XR25 (fiche n° 27 or 28 depending on engine) during a test with an uncoded computer, bargraph 2 RH side will illuminate



uncoded computer.



**Computer borrowed from another vehicle fitted with an engine immobiliser (if available).**

To avoid having to code and decode the injection computer, borrow the following parts from another vehicle with the same specifications:

- injection computer,
- decoder unit,
- key heads.

After the test, return the above parts to the original vehicle.

### SYSTEM FAULT, ENGINE RUNNING

#### Petrol vehicle

If a fault in the system is noted by the injection computer when the engine is running, the injection warning light on the instrument panel will flash during deceleration and at idle speed (engine speed less than 1500 rpm).

**IMPORTANT:** In this case, after repair, the fault memorised in the injection computer must be erased by disconnecting the battery (approximately 30 seconds) to allow the engine immobiliser system to operate again.

**NOTE :** this fault may be shown by the XR25 (fiche n° 27 or 28 depending on engine).

Connect the XR 25.

Position the ISO selector and enter the injection code.

The fault is shown by bargraph 2 RH side.

After entering

★ 2 2

the message

1 d E F

on the display indicates a fault on the coded line.

#### Diesel vehicle

If a fault in the system is noted by the decoder unit when the engine is running, the red immobiliser warning light (on the instrument panel) will illuminate permanently until the ignition is turned off.

**IMPORTANT:** In this case, after repair, the fault memorised in the decoder unit must be erased by disconnecting the battery (approximately 30 seconds) to allow the engine immobiliser system to operate again.

**NOTE :** this fault may be shown using the XR25 by fault finding for the decoder unit (fiche n° 38).

Connect the XR25.

Set the ISO selector to S8 and enter code

D 3 8

The fault is shown by bargraph 6 RH side or LH side.



**PROCEDURE FOR ENTERING THE EMERGENCY CODE**

With this immobiliser system, the procedure for entering the emergency code is managed by the decoder unit.

The code is entered using the code input button (see page 82-88) and the red engine immobiliser warning light.

The emergency code can only be entered if the engine immobiliser system is active. The red immobiliser warning light must flash when the ignition is turned on (rapid flashing).

After determining the emergency code number (request from the local assistance network, example **DELTA Assistance** for France) (For UK, contact Technical Services, Swindon), carry out the following operations:

1. ignition off, the red immobiliser warning light should flash (slow flashing),
2. turn the ignition on, the injection warning light (petrol vehicle) illuminates for approximately 3 seconds then extinguishes while the red immobiliser warning light flashes more quickly,
3. press and hold the code input button (the side is not important), the red warning light extinguishes,
4. without releasing the button, the warning light will flash very slowly (every 1.5 seconds) to generate a counting sequence.  
Count the number of times the red warning light illuminates and release the button when the value of the 1st figure of the emergency code is reached.
5. press the code input button again.  
Count the number of times the red warning light illuminates and release the button when the value of the 2nd figure of the emergency code is reached.

6. repeat operation 5 to enter the two remaining emergency code figures.

After entering the 4th emergency code figure:

- if the code is correct, the vehicle may be started.

The red immobiliser warning light should illuminate for approximately 3 seconds, extinguish for approximately 3 seconds and illuminate again for approximately 30 seconds.

This pattern of illumination will repeat each time the ignition is turned on as long as the vehicle remains unprotected (until approximately 10 minutes after turning the ignition off). This reminds the customer that the vehicle is no longer protected.

The vehicle is protected again either:

- approximately 10 minutes after turning the ignition off (immobiliser set automatically),
- or after disconnecting the battery.

- if the code is incorrect, the engine cannot be started.

The red immobiliser warning light and the injection warning light (petrol vehicle) flash.

Turn the ignition off then repeat the procedure for entering the emergency code.

**IMPORTANT:** you may make 3 attempts to enter the code. If, after the third attempt, the code is invalid, you must wait for approximately 15 minutes before making another attempt.

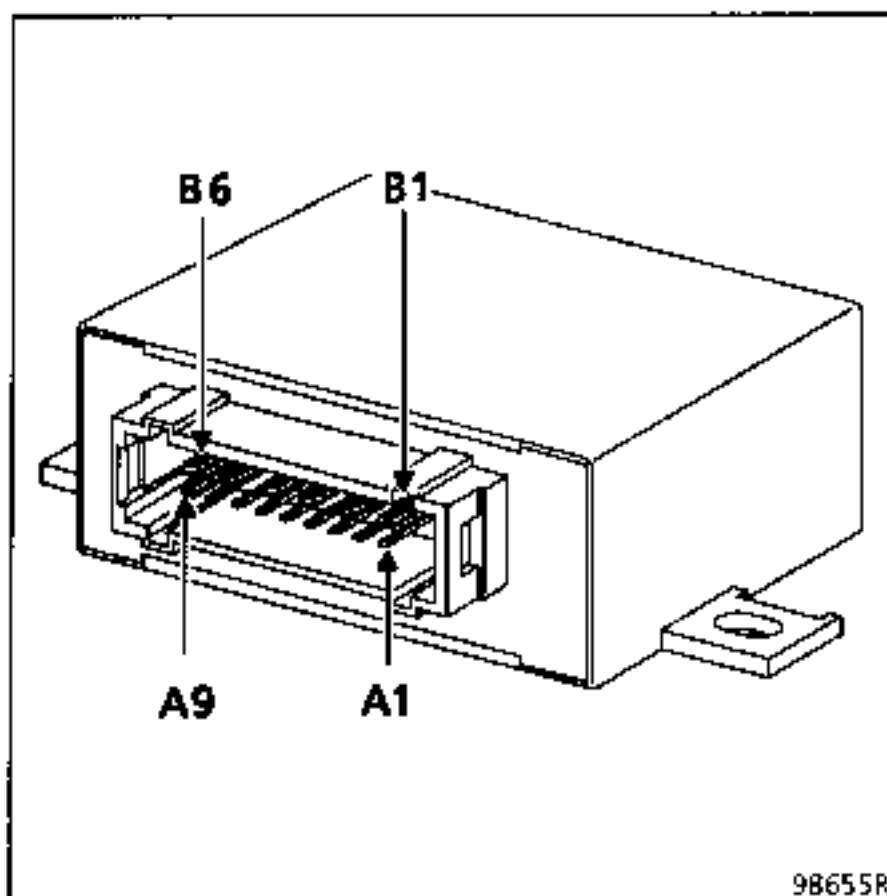
When this period has expired, turn the ignition off and on again and 3 more attempts may be made.

**NOTE :** the code may be entered when the ignition is on using the XR25 (command G40\*)

**REMINDER:** This procedure does not decode the injection computer or the coded solenoid valve (depending on engine) - it only authorises the starting of the vehicle.



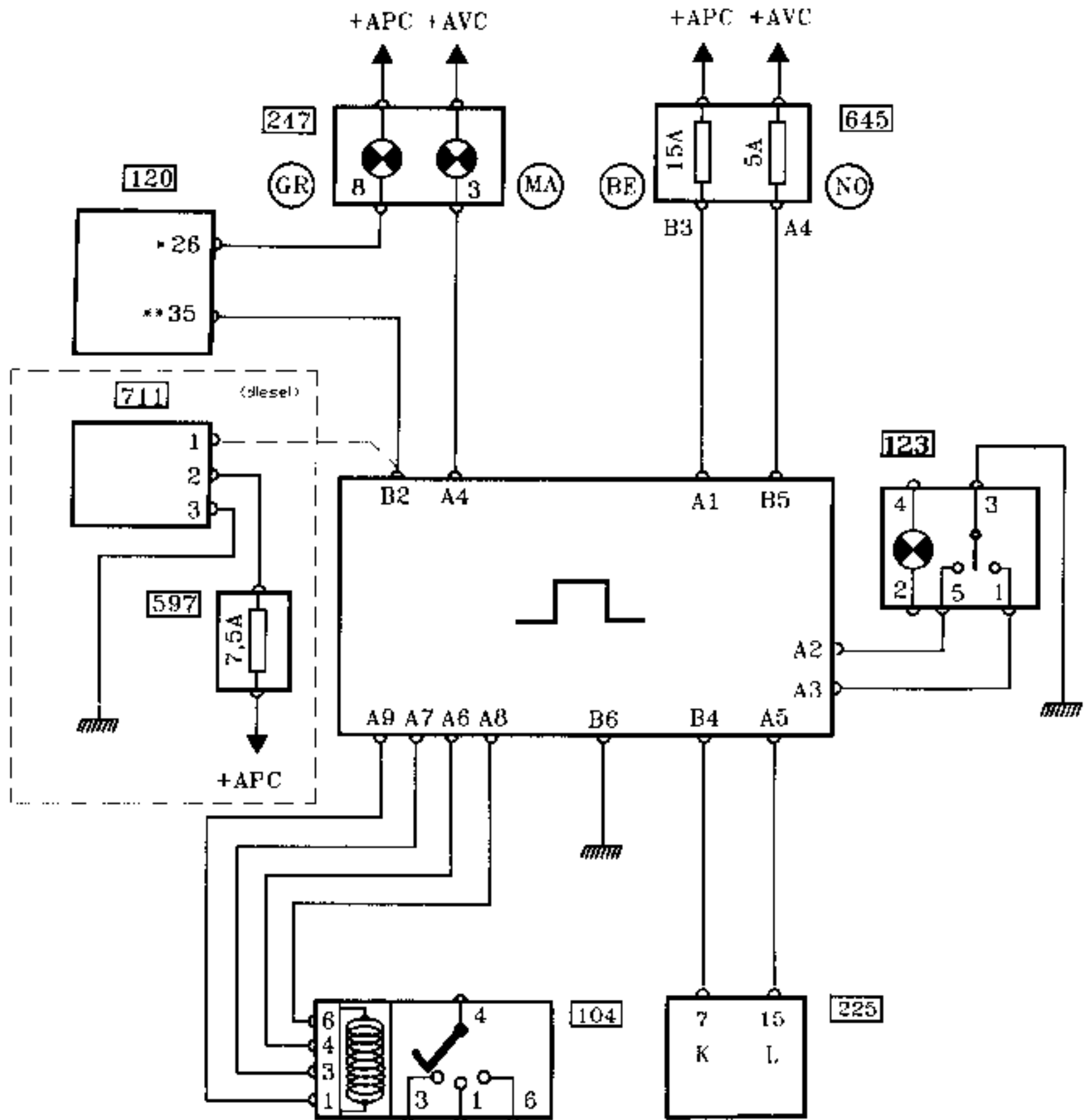
## DECODER UNIT CONNECTIONS



Track	Allocation
A1	+ after ignition
A2	Emergency code input button
A3	Emergency code input button
A4	Red immobiliser warning light
A5	Diagnostic socket information (line L)
A6	Ring/ decoder unit coded line
A7	Ring interrogation
A8	Ring earth
A9	Ring feed
B1	Not used
B2	Coded information to injection computer or coded solenoid valve
B3	Not used
B4	Diagnostic socket information (line K)
B5	– before ignition
B6	Earth



DIAGRAM





**KEY**

104	Ignition switch (receiving ring)
120	Injection computer
123	Emergency code input button
225	Diagnostic socket
247	Instrument panel
597	Engine connection unit
711	Coded solenoid valve

*	13	for engine E7J
	26	for engines F3P, F3R, F7R
	43	for engine K7M

**	29	for engine E7J
	35	for engines F3P, F3R, F7R
	37	for engine K7M

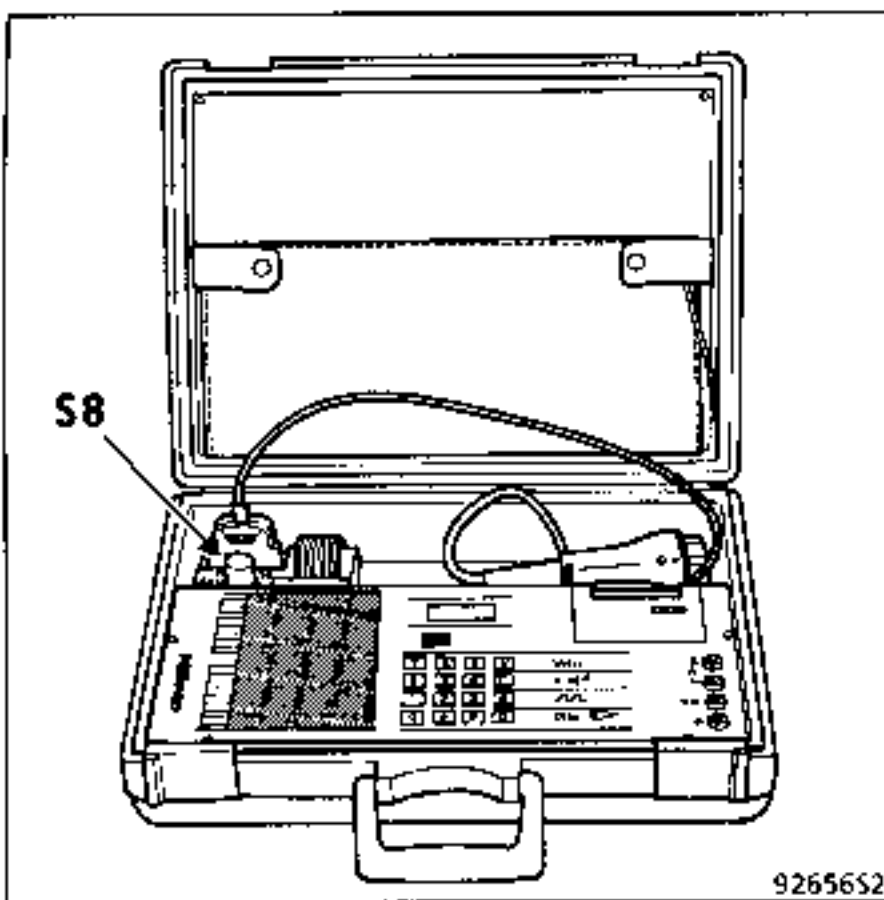


## FAULT FINDING

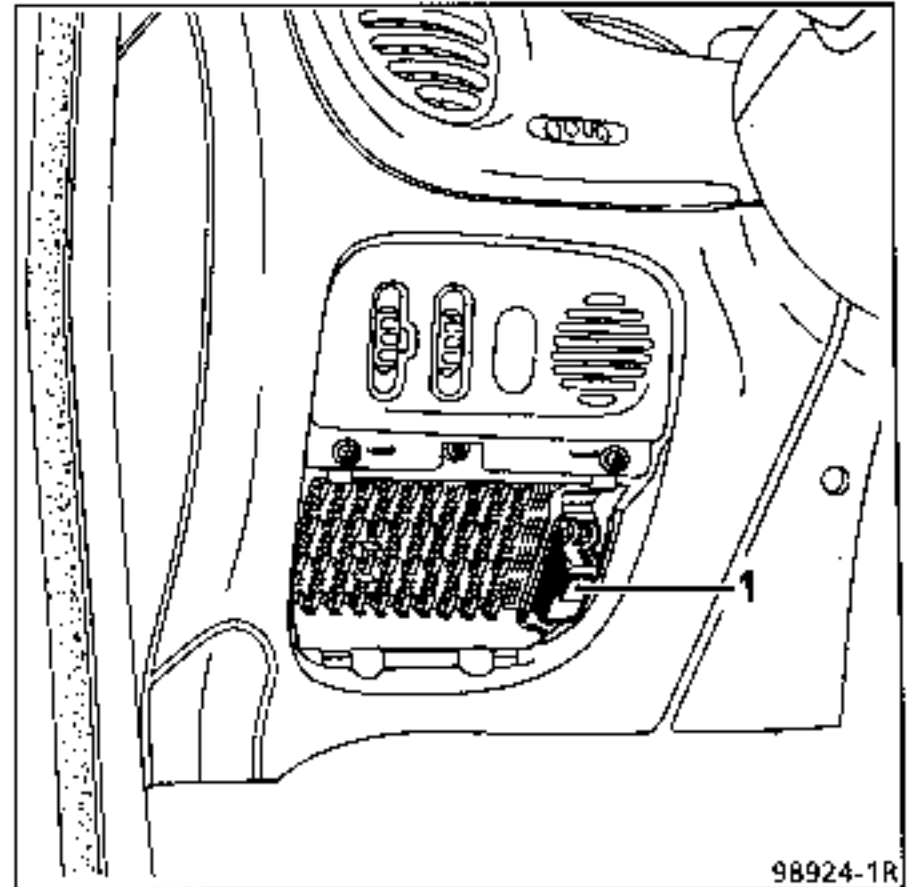
Certain faults of the immobiliser system may be diagnosed using the XR25.

## CONNECTION

Use cassette n° 15 and the corresponding fault finding fiche n° 38.



Connect the XR25 to the diagnostic socket (1) located behind the passenger compartment fuse cover.



Position the ISO selector on S8 and enter

**D 3 8**

The central display shows:

**CLE** then **ICLE**



## FAULT FINDING - INTRODUCTION

## SETTING UP XR25 / DECODER UNIT DIALOGUE

- Connect the XR25 to the diagnostic socket.
- ISO selector on S8
- Enter **D38**

**I.cLE**

## IDENTIFICATION OF THE IMMOBILISER FAULT BARGRAPH ON THE INJECTION FICHE

To check if the "immobiliser fault" bargraph is illuminated on the injection fiche for the vehicle, use:

- Fiche n° 28 - Code D03 - selector on S6

**8.nJ**

for E7J Fenix 3.B engines

- Fiche n° 27 - Code 13 - selector on S8

**9.nJ**

for F3P, F3R and K7M Fenix engines

## ERASING THE MEMORY

After repairing the immobiliser system, on the XR25 wait for the fault bargraph to flash, then enter G0\*\* to erase the memory.

The memory may also be erased by disconnecting the battery, ignition off, for approximately 30 seconds.

## ENTERING THE DATE OF AN AFTER SALES OPERATION

After repairing and verifying the operation of the engine immobiliser system, enter the date of the after sales operation using G72\*.



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 38

† N° 38		S8		code : D 3 8		read : I.cLE	
1					CODE PRESENT		<input type="checkbox"/>
2	<input type="checkbox"/>	ENG. IMMOBILISER 1	COMPUTER CONFIGURATION (FIXED DISPLAY)		ENG. IMMOBILISER 2		<input type="checkbox"/>
3					CODED DIESEL SOLENOID (SOL)		<input type="checkbox"/>
4	<input type="checkbox"/>	WARN. LIGHT OPERATION (LED) ENG. IMMOBILISER 1 ONLY					
5	<input type="checkbox"/>	+ AFTER IGNITION PRESENT		FEED RING CC EARTH			<input type="checkbox"/>
6	<input type="checkbox"/>	DIESEL SOL. ACKNOWLEDGEMENT		CODED LINE		★ 26	<input type="checkbox"/>
7	<input type="checkbox"/>	KEY INTERROGATION (CC)		LED WARN. LIGHT		★ 27	<input type="checkbox"/>
8	<input type="checkbox"/>	SOL. TEST MODE SET		PROTECT MODE SET			<input type="checkbox"/>
9	<input type="checkbox"/>	IF <input type="checkbox"/> CHECK IF <input type="checkbox"/> NO CHECK		REREAD DIESEL SOL. ACKNOWLEDGEMENT			<input type="checkbox"/>
10	<input type="checkbox"/>	ACTIVE ENG. IMMOBILISER		CODED LINE REREAD FAULT			<input type="checkbox"/>

<b>ENGINE IMMOBILISER (KEY)</b> Memory del. : G 0 ★ ★ End of test : G 13 ★		<b>CONTROL MOD : G. ★</b> 01: Diesel sol. mechanical check only if line 3 RH and line 6 RH / LH Test : Switch off ignition, enter : G01 ★ Switch on ignition again. Valve will open and shut for 30 secs. (listen to check). 72: Writ. after-sales date 73: Read after-sales date Part No. : G70 ★	
11	KEY PRESENT		<input type="checkbox"/>
12	KEY CODE	→ RECEIVED	<input type="checkbox"/>
13		→ VALIDATED	<input type="checkbox"/>
14	12 AND 13 CAN ONLY BE INTERPRETED IF + AFTER IGN. PRESENT (5 L <input type="checkbox"/> )		
15			
16			
17	<input type="checkbox"/>	*MANUAL MODE* BUTTON PRESSED	BUTTON FAULT <input type="checkbox"/>
18	<input type="checkbox"/>	TESTING FIRST KEY	
19	<input type="checkbox"/>	TESTING AUTHORISED	TESTING NOT PERFORMED <input type="checkbox"/>
20			XR25 MEMORY 0 <input type="checkbox"/>

15 ANG

FI21538

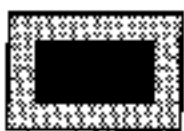
Bargraphs on a coloured background represent a fault.  
 Bargraphs on a white background represent a status.



## FAULT FINDING - XR25 FICHE

### REPRESENTATION OF THE BARGRAPHS

#### REPRESENTATION OF A FAULT (always on a coloured background)



If illuminated, there is a fault with the product tested; the associated text defines the fault.

#### REPRESENTATION OF A STATUS (always on a white background)



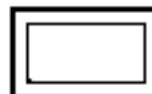
Illuminates when dialogue is established with the computer for the product; if it remains extinguished :

- the dialogue does not exist,
- there is a fault with the XR25, the computer or the line.

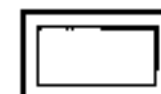
#### Engine stopped, ignition on, with no operator action

The status bargraphs on the fiche are represented in the condition that they should be in when the engine is stopped, ignition on, with no operator action.

- If, on the fiche, the bargraph is shown



the XR25 should show



- If, on the fiche, the bargraph is shown



the XR25 should show



- If, on the fiche, the bargraph is shown



the XR25 should show

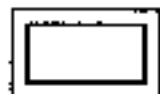
either



or



#### Engine running



Extinguished when the function or condition on the fiche is no longer met.



Illuminated when the function or condition on the fiche is met.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6 - 10

**Bargraph 6 RH side and / or 10 RH side illuminated**

Fiche n° 38

**CODED LINE CIRCUIT**

XR25 aid : \*26 = CC.1 CC + 12 V on the coded line  
              \*26 = CO.0 CO or CC earth for the coded line

**NOTES**

If bargraph 2RH side is illuminated on injection fiche n° 28, deal with bargraph 2 RH side on fiche n° 28.

If bargraph 2RH side is illuminated on injection fiche n° 27 side 1/2, see bargraph 2 RH side.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track B2 on the decoder unit and track

29 for E7J engines	} on the injection computer
37 for K7M engines	
35 for F3R and F7R engines	

Repair the wiring if necessary.

Set the XR25 to pulse detection, ignition on, then check on track B2 of the decoder unit that pulses are present.

Do you note any pulses?

There are no pulses on track B2 of the decoder unit, ignition on.

Replace the decoder unit.

There are pulses on track B2 of the decoder unit, ignition on.


Replace the injection computer.

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>7</div> 	<b>Bargraph 7 LH side illuminated</b> <span style="float: right;">Fiche n° 38</span> <b><u>KEY INTERROGATION CIRCUIT (CC)</u></b> XR25 aid : CC to earth on line A7 of the decoder unit
---	---

**NOTES**

None

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track A7 of the decoder unit and track 3 on the ring.

Repair the wiring if necessary.

Set the XR25 to pulse detection, then check on track A7 of the decoder unit that a pulse is present when + after ignition feed is supplied.

Do you note any pulse on track A7 of the decoder unit when + after ignition feed is supplied.?

There is no pulse on track A7 of the decoder unit when + after ignition feed is supplied.

Replace the decoder unit

There is a pulse on track A7 of the decoder unit when + after ignition feed is supplied.


Replace the ring

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>7</div> 	<div>Bargraph 7 RH side illuminated <span style="float: right;">Fiche n° 38</span></div> <div><u>IMMOBILISER WARNING LIGHT CIRCUIT</u></div> <div>XR25 aid :    *27 = CC.1    CC + 12 V on the immobiliser warning light line                   *27 = CO.0    CO or CC earth on the immobiliser warning light line</div>
---	--

## NOTES

None

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track A4 of the decoder unit and the immobiliser warning light diode.

Repair the wiring if necessary.

Test the immobiliser warning light diode output.

Turn the ignition off, start command G02\* and set the XR25 to pulse detection to check that on track A4 of the decoder unit, pulses are present (4 Hz).

Are pulses present?

There are no pulses.

Replace the decoder unit.

There are pulses.


Replace the immobiliser warning light diode.

## AFTER REPAIR

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div data-bbox="201 438 252 480">17</div> <div data-bbox="241 523 372 608"></div>	<div data-bbox="463 395 1128 452"><b>Bargraph 17 RH side illuminated</b></div> <div data-bbox="1673 395 1864 452">Fiche n° 38</div> <div data-bbox="463 466 826 523"><u><b>BUTTON CIRCUIT</b></u></div> <div data-bbox="463 523 1512 664">XR25 aid : <div data-bbox="685 523 907 664">CO CC earth CC + 12 V</div> } on the central locking button line</div>
--	--

<b>NOTES</b>	None
--------------	------

<p>Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track A2 of the decoder unit and the central door locking button</p> <p>Repair the wiring.</p>
<p>Check the central door locking button is not jammed.</p> <p>Repair the central locking button if necessary and disconnect the battery for approximately 30 seconds to erase the memory.</p>
<p>If the fault persists, replace the decoder unit.</p>

<b>AFTER REPAIR</b>	<ul style="list-style-type: none"><li>- Erase the memory using G0**.</li><li>- After repair, check the operation of the immobiliser system.</li></ul>
---------------------	---



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>2</div> <div><div></div><div></div></div>	<div>Bargraph 2 RH side illuminated</div> <div>Fiche n° 27 side 1/2</div> <div><u>IMMOBILISER CIRCUIT</u></div> <div>XR25 aid : *22 = 1.dEF coded line fault</div> <div>2.dEF code not programmed</div>
--	---

<b>NOTES</b>	None
--------------	------

1.dEF	<b>NOTES</b>	None
-------	--------------	------

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track B2 of the decoder unit and track  
37 for K7M engines  
35 for F3R and F7R engines } on the injection computer

Repair the wiring if necessary.

Set the XR25 to pulse detection, ignition on, then check on track B2 of the decoder unit that pulses are present.

Do you note any pulses?

There are no pulses on track B2 of the decoder unit, ignition on.

Replace the decoder unit.

There are pulses on track B2 of the decoder unit, ignition on.

Replace the injection computer.


2.dEF	<b>NOTES</b>	None
-------	--------------	------

See procedure for programming the code.

<b>AFTER REPAIR</b>	<ul style="list-style-type: none"><li>- Erase the memory of the injection computer using G0**.</li><li>- After repair, check the operation of the immobiliser system.</li></ul>
---------------------	---



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>2</div> 	<div>Bargraph 2 RH side illuminated</div> <div>Fiche n° 28</div> <div><u>IMMOBILISER CIRCUIT</u></div> <div>XR25 aid : *22 = 1.dEF coded line fault</div> <div>2.dEF code not programmed</div> <div>3.dEF coded line fault + code not programmed</div>
--	--

<b>NOTES</b>	None
--------------	------

1.dEF	<table><tr><td><b>NOTES</b></td><td>None</td></tr></table>	<b>NOTES</b>	None
<b>NOTES</b>	None		

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track B2 on the decoder unit and track 29 on the injection computer.

Repair the wiring if necessary.

Set the XR25 to pulse detection, ignition on, then check on track B2 of the decoder unit that pulses are present.

Do you note any pulses?

There are no pulses on track B2 of the decoder unit, ignition on.

Replace the decoder unit.

There are pulses on track B2 of the decoder unit, ignition on.

Replace the injection computer.

2.dEF	<table><tr><td><b>NOTES</b></td><td>None</td></tr></table>	<b>NOTES</b>	None
<b>NOTES</b>	None		

See the procedure for programming the code.


3.dEF	<table><tr><td><b>NOTES</b></td><td>None</td></tr></table>	<b>NOTES</b>	None
<b>NOTES</b>	None		

Refer to sections 1.dEF and 2.dEF.

<b>AFTER REPAIR</b>	<ul style="list-style-type: none"><li>- Erase the memory of the injection computer using G0**.</li><li>- After repair, check the operation of the immobiliser system.</li></ul>
---------------------	---



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div data-bbox="217 446 237 480">3</div> 	<p><b>Bargraph 3 RH side illuminated</b> <span style="float: right;">Fiche n° 38</span></p> <p><b><u>DECODER UNIT CONFIGURATION</u></b></p> <p>XR25 aid : Incorrect decoder unit configuration</p>
---	--

**NOTES**

Check that bargraph 2RH side is illuminated: if bargraph 2 RH side is extinguished, fit the correct decoder unit Part Number.  
Bargraph 3RH side is extinguished: configuration for petrol  
Bargraph 3RH side is illuminated: configuration for diesel

Reconfigure the decoder unit correctly using the XR25.


On fiche n° 38 : Command G22\* 1\* (1 : petrol / 2 : diesel).

**AFTER REPAIR**

- Check on fiche n° 38, that bargraph 3 RH side is extinguished.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>5</div> 	<b>Bargraph 5 LH side remains extinguished, ignition on</b> <b>+ AFTER IGNITION FEED CIRCUIT</b> XR25 aid: No + after ignition feed
---	---

Fiche n° 38

**NOTES**

Check the condition of the battery.

Check the condition of the wiring between track A1 on the decoder unit and track B3 on connector P6 for the passenger compartment connection unit.

Repair the faulty wiring if necessary.

Ignition on, check for voltage = + 12 V + after ignition on track A1 of the decoder unit.

Is there = + 12 V + after ignition?

There is not = + 12 V + after ignition feed on track A1 of the decoder unit, ignition on.

Refer to fault finding for the passenger compartment connection unit.

There is = + 12 V + after ignition feed on track A1 of the decoder unit, ignition on.

Replace the decoder unit.

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>11-12-13</div> <div><div></div><div></div></div>	<div>Bargraphs 11 RH, 12 RH and 13 RH sides extinguished when ignition turned on</div> <div>Fiche n° 38</div> <div>KEY INTERROGATION CIRCUIT</div> <div>XR25 aid : Ring / decoder unit communication</div>
---	--

## NOTES

On fiche n° 38, if bargraph 7 LH side is illuminated, see bargraph 7 LH side  
Wait 10 seconds before the ignition is turned on each time.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between tracks:

Decoder unit  $\left\{ \begin{array}{ll} \text{A6} & 4 \\ \text{A7 and 3} & \\ \text{A8} & 6 \\ \text{A9} & 1 \end{array} \right\}$  ring

Replace the faulty wiring if necessary.

On the XR25, enter G07\* (ring feed) and wait 10 seconds before turning the ignition on.

Is "bon" displayed on the XR25 when the ignition is turned on.

YES

Replace the ring

NO

Check the condition of the wiring on tracks B5 and B6 of the decoder unit.

Is the wiring in good condition?

If the wiring is in poor condition, replace it.

If the wiring is in good condition, replace the decoder unit.

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



FAULT FINDING - CUSTOMER COMPLAINTS

**NOTES**

Only consult these customer complaints after carrying out a complete check using the XR25.

When the ignition is turned on, the injection warning light flashes, remains illuminated or does not illuminate (the vehicle may or may not be able to be started)

Chart 1

When the ignition is turned on, the immobiliser warning light flashes (the vehicle may not be started)

Chart 2

When the ignition is turned on, the immobiliser warning light remains illuminated for more than approximately 3 seconds or does not illuminate

Chart 3

While driving (deceleration) and at idle speed, the injection warning light flashes

Chart 4



## FAULT FINDING - FAULT CHARTS

## Chart 1

When the ignition is turned on, the injection warning light flashes, remains illuminated or does not illuminate (the vehicle may or may not be able to be started)

## NOTES

On fiche n° 28 : If bargraph 2RH is illuminated, see bargraph 2RH. On fiche n° 38 : if bargraph 6RH and bargraph 10RH are illuminated, see bargraph 6RH and bargraph 10RH. If bargraph 7LH is illuminated, see bargraph 7LH. If bargraph 11RH, bargraph 12RH and bargraph 13RH are extinguished when ignition is turned on, see bargraph 11RH, bargraph 12RH, bargraph 13RH

Check the key recognition function.  
Try to start the vehicle with the 2nd key.  
Can the vehicle be started?

yes

Repair or replace the 1st key

no

Turn on + after ignition with the key.  
Is the key recognised?  
(on fiche n° 38, is bargraph 10 LH side  
extinguished?)

no

See Chart 2.

yes

Check the continuity and insulation in  
relation to earth and to + 12 volts of the  
wiring between track A6 of the decoder unit  
and track 4 on the ring.  
Is the wiring correct?

no

Repair the wiring.

yes

Using the XR25 as a pulse detector, ignition  
on, check on track B2 of the decoder  
unit that pulses are present.  
Are pulses noted?

yes

Replace the  
injection computer

no

Replace the  
decoder unit

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

## Chart 2

When the ignition is turned on, the immobiliser warning light flashes (the vehicle may not be started)

## NOTES

On fiche n° 38 : if bargraph 7LH side is illuminated, see bargraph 7LH side.  
if bargraph 5LH side remains extinguished when ignition turned on, see bargraph 5LH side.

Check the key recognition function.  
Try to start the vehicle with the 2nd key.  
Can the vehicle be started?

yes

Repair or replace the 1st key

no

Is the ring correctly fitted on the ignition switch?

no

Refit the ring into position

yes

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between tracks:

decoder unit	{	A6	4	}	ring
		A7	3		
		A8	6		
		A9	1		

Is the wiring correct?

no

Repair the wiring

yes

Wait 10 seconds before turning on + after ignition feed. Is there a signal on track A6 of the decoder unit?  
(on fiche n° 38, is bargraph 11 RH side illuminated?)

no

See bargraphs 11 RH, 12 RH and 13 RH sides extinguished when ignition turned on.

yes

A

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

Chart 2  
CONT

A

On the XR25, enter G07\*  
(ring feed) and wait 10 seconds before  
turning the ignition on.  
Is "bon" displayed on the XR25 when the  
ignition is turned on?

yes

Replace the ring

no

Check the condition of the wiring on tracks  
B5 and B6 of the decoder unit.  
Is the wiring in good condition?

yes

Replace the  
decoder unit

no

Repair the wiring

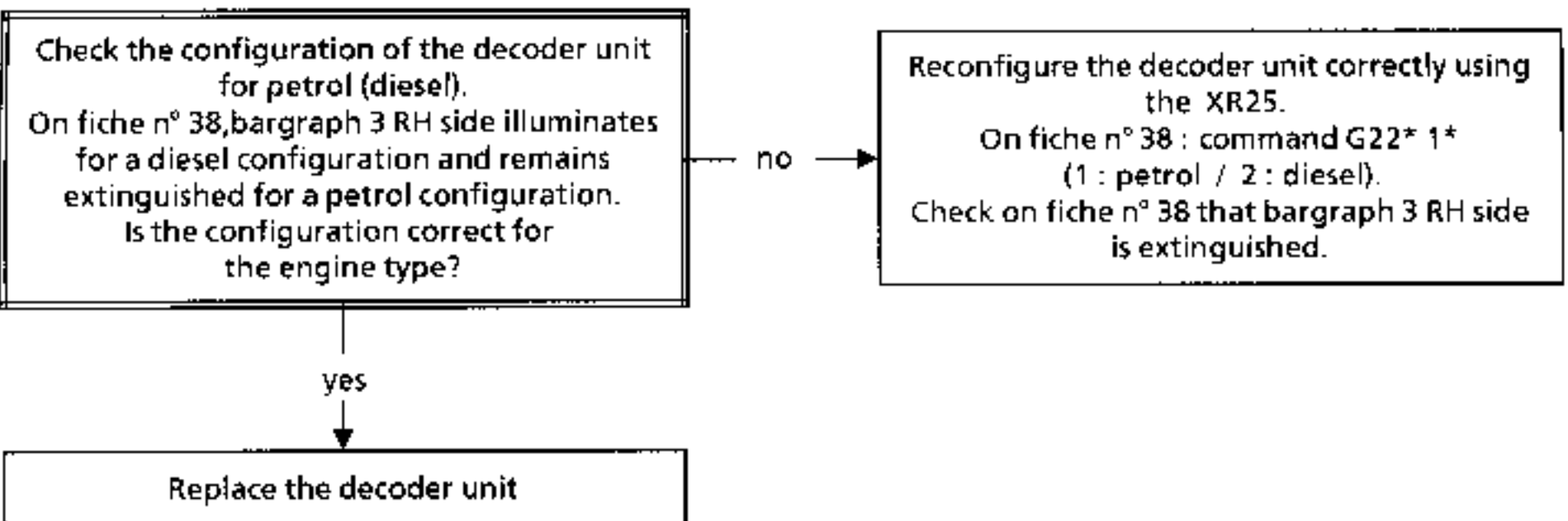
## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

<b>Chart 3</b>	When the ignition is turned on, the immobiliser warning light remains illuminated for more than approximately 3 seconds or does not illuminate
<b>NOTES</b>	On fiche n° 38 : if bargraph 7RH side is illuminated, see bargraph 7RH side if bargraph 3RH side is illuminated, see bargraph 3RH side



<b>AFTER REPAIR</b>	After repair, check the operation of the immobiliser system.
---------------------	--



## FAULT FINDING - FAULT CHARTS

## Chart 4

While driving (deceleration) and at idle speed, the injection warning light flashes

## NOTES

Only use this customer complaint chart after carrying out a thorough check using the XR25.

Connect the XR25.  
Fiche 28 for E7J engines  
Fiche 27 for K7M, F3R and F7R engines  
Is bargraph 2 RH side illuminated?

yes →

See bargraph 2 RH side illuminated for injection fiche 28 for E7J engines.  
See bargraph 2 RH side illuminated for injection fiche 27 side 1/2 for K7M, F3R and F7R engines.

no  
↓

Replace the injection computer.

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTRODUCTION

### SETTING UP XR25 / DECODER UNIT DIALOGUE

- Connect the XR25 to the diagnostic socket.
- ISO selector on S8
- Enter **D38**

I.cLE

### ERASING THE MEMORY

After repairing the immobiliser system, on the XR25 wait for the fault bargraph to flash, then enter G0\*\* to erase the memory.

The memory may also be erased by disconnecting the battery, ignition off, for approximately 30 seconds.

### ENTERING THE DATE OF AN AFTER SALES OPERATION

After repairing and verifying the operation of the engine immobiliser system, enter the date of the after sales operation using G72\*.



## FAULT FINDING - XR25 FICHE

## PRESENTATION OF FICHE N° 38

N° 38		S8		code : 0 3 8		read : 1.cLE	
1						CODE PRESENT	<input type="checkbox"/>
2	<input type="checkbox"/>	ENG. IMMOBILISER 1	COMPUTER CONFIGURATION (FIXED DISPLAY)		ENG. IMMOBILISER 2	<input type="checkbox"/>	
3						CODED DIESEL SOLENOID (SOL)	<input type="checkbox"/>
4	<input type="checkbox"/>	WARN. LIGHT OPERATION (LED) ENG. IMMOBILISER 1 ONLY					
5	<input type="checkbox"/>	+ AFTER IGNITION PRESENT			FEED RING GO EARTH	<input type="checkbox"/>	
6	<input type="checkbox"/>	DIESEL SOL. ACKNOWLEDGEMENT			CODED LINE * 20	<input type="checkbox"/>	
7	<input type="checkbox"/>	KEY INTERROGATION (CC)			LED WARN. LIGHT * 27	<input type="checkbox"/>	
8	<input type="checkbox"/>	SOL. TEST MODE SET			PROTECT MODE SET	<input type="checkbox"/>	
9	<input type="checkbox"/>	IF <input type="checkbox"/> CHECK IF <input type="checkbox"/> NO CHECK			REREAD DIESEL SOL. ACKNOWLEDGEMENT	<input type="checkbox"/>	
10	<input type="checkbox"/>	ACTIVE ENG. IMMOBILISER			CODED LINE REREAD FAULT	<input type="checkbox"/>	
<h2>ENGINE IMMOBILISER (KEY)</h2> <p>Memory del. : G 0 * *</p> <p>End of test : G 1 3 *</p>							
11						KEY PRESENT	<input type="checkbox"/>
12	KEY CODE					RECEIVED	<input type="checkbox"/>
13						VALIDATED	<input type="checkbox"/>
14	12 AND 13 CAN ONLY BE INTERPRETED IF + AFTER IGN. PRESENT (5 L <input type="checkbox"/> )						
15							
16							
17	<input type="checkbox"/>	"MANUAL MODE" BUTTON PRESSED			BUTTON FAULT	<input type="checkbox"/>	
18	<input type="checkbox"/>	TESTING FIRST KEY					
19	<input type="checkbox"/>	TESTING AUTHORISED			TESTING NOT PERFORMED	<input type="checkbox"/>	
20						XR25 MEMORY	<input type="checkbox"/>
15 ANG							

**CONTROL MOD : G. \***

01 Diesel sol. mechanical check  
only if line 3 RH ☐  
and line 6 RH / LH ☐

**Test :** Switch off ignition, enter : 001 \*  
Switch on ignition again. Valve  
will open and shut for 30 secs.  
(listen to check).

72 Writ. after-sales date  
73 Read after-sales date

**Part No. : G70 \***

Bargraphs on a coloured background represent a fault.  
Bargraphs on a white background represent a status.

FI21538



## FAULT FINDING - XR25 FICHE

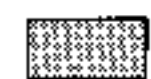
### REPRESENTATION OF THE BARGRAPHS

#### REPRESENTATION OF A FAULT (always on a coloured background)



If illuminated, there is a fault with the product tested; the associated text defines the fault.

#### REPRESENTATION OF A STATUS (always on a white background)



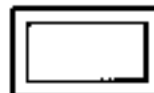
Illuminates when dialogue is established with the computer for the product; if it remains extinguished :

- the dialogue does not exist,
- there is a fault with the XR25, the computer or the line.

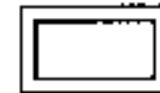
#### Engine stopped, ignition on, with no operator action

The status bargraphs on the fiche are represented in the condition that they should be in when the engine is stopped, ignition on, with no operator action.

- If, on the fiche, the bargraph is shown



the XR25 should show



- If, on the fiche, the bargraph is shown



the XR25 should show

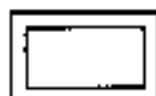


- If, on the fiche, the bargraph is shown



the XR25 should show

either



or



#### Engine running




Extinguished when the function or condition on the fiche is no longer met.



Illuminated when the function or condition on the fiche is met.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>5</div> 	<b>Bargraph 5 RH side illuminated</b> <b><u>RING FEED CIRCUIT</u></b> XR25 aid : CC earth on ring feed	Fiche n° 38
--	--	-------------

<b>NOTES</b>	None
--------------	------

Check the condition of the wiring between track A9 on the decoder unit and track 1 on the ring.  
Replace the wiring if necessary.

On the XR25, enter G07\* (ring feed ) and wait 10 seconds before turning the ignition on.  
Is "bon" displayed on the XR25 when the ignition is turned on.

YES

Replace the ring

NO

Check the condition of the wiring on tracks B5 and B6 of the decoder unit.

If the wiring is in poor condition, replace it.


If the wiring is in good condition, replace the decoder unit.

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>6</div> 	<div>Bargraph 6 LH side illuminated <span style="float: right;">Fiche n° 38</span></div> <div><u>DIESEL SOLENOID CLEARANCE CIRCUIT</u></div> <div>XR25 aid : No diesel solenoid clearance</div>
---	---

**NOTES**

Before dealing with bargraph 6LH, check that bargraph 6RH is extinguished : if bargraph 6RH is illuminated, deal with bargraph 6RH.  
If bargraph 6LH flashes, check the condition of the battery.

Set the XR25 to pulse detection, ignition on, then check on track B2 of the decoder unit that pulses are present.

Ignition on, if there are no pulses on track B2 of the decoder unit, replace the decoder unit.

Turn the ignition off then on again.

Check that bargraph 9 RH side is permanently illuminated (wait more than 30 seconds).

Is bargraph 9 RH side permanently illuminated?

YES

Replace the decoder unit.

NO

Replace the coded solenoid valve

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6

**Bargraph 6 RH side illuminated**

Fiche n° 38

**CODED LINE CIRCUIT**

XR25 aid :   \*26 = CO.0   CO or CC earth for the coded line  
              \*26 = CO.1   CC + 12 V on the coded line

**NOTES**

None

Check the condition of the wiring between:

coded solenoid 3 track connector	{	1	B2 on decoder unit via dashboard / engine connector
		2 and	S6 of engine connection unit
		3	vehicle earth MH via splice BA.

Replace the faulty wiring if necessary.

Set the XR25 to pulse detection, ignition on, then check on track B2 of the decoder unit that pulses are present.

Do you note any pulses?

There are no pulses on track B2 of the decoder unit, ignition on.

Replace the decoder unit.

There are pulses on track B2 of the decoder unit, ignition on.


Replace the coded solenoid valve.

**AFTER REPAIR**

- Wait ≈ 1 minute for the bargraphs to flash then erase the memory using G0\*\*.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<p>7</p> 	<p><b>Bargraph 7 LH side illuminated</b> <span style="float: right;">Fiche n° 38</span></p> <p><b><u>KEY INTERROGATION CIRCUIT (CC)</u></b></p> <p>XR25 aid : CC to earth on line A7 of the decoder unit</p>
---	--

**NOTES**

Wait 10 seconds before turning the ignition on each time.

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track A7 of the decoder unit and track 3 on the ring.

Also check the wiring for tracks A1, B5 and B6 on the decoder unit.

Repair the wiring if necessary.

Set the XR25 to pulse detection, then check on track A7 of the decoder unit that a pulse is present when + after ignition feed is supplied.

Do you note any pulse on track A7 of the decoder unit when + after ignition feed is supplied.?

There is no pulse on track A7 of the decoder unit when + after ignition feed is supplied.

Replace the decoder unit

There is a pulse on track A7 of the decoder unit when + after ignition feed is supplied.


Replace the ring

**AFTER REPAIR**

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>7</div> 	<div>Bargraph 7 RH side illuminated <span style="float: right;">Fiche n° 38</span></div> <div><u>IMMOBILISER WARNING LIGHT CIRCUIT</u></div> <div>XR25 aid :   *27 = CC.1   CC + 12 V on the immobiliser warning light line                   *27 = CO.0   CO or CC earth on the immobiliser warning light line</div>
---	---

## NOTES

None

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track A4 of the decoder unit and the immobiliser warning light diode.

Repair the wiring if necessary.

Test the immobiliser warning light diode output.

Turn the ignition off, start command G02\* and set the XR25 to pulse detection to check that on track A4 of the decoder unit, pulses are present (4 Hz).

Are pulses present?

There are no pulses.

Replace the decoder unit.

There are pulses.


Replace the immobiliser warning light diode.

## AFTER REPAIR

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>17</div> 	<div>Bargraph 17 RH side illuminated</div> <div>Fiche n° 38</div> <div><u>BUTTON CIRCUIT</u></div> <div>XR25 aid : <div><div>CO</div><div>CC earth</div><div>CC + 12 V</div></div> } on the central locking button line</div>
---	---

## NOTES

None

Check the continuity and insulation in relation to earth and to + 12 V of the wiring between track A2 of the decoder unit and the central door locking button

Repair the wiring.

Check the central door locking button is not jammed.

Repair the central locking button if necessary and disconnect the battery for approximately 30 seconds to erase the memory.


If the fault persists, replace the decoder unit.

## AFTER REPAIR

- Erase the memory using G0\*\*.
- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div data-bbox="217 438 237 475">3</div> 	<p><b>Bargraph 3 RH side illuminated</b> <span style="float: right;">Fiche n° 38</span></p> <p><b><u>DECODER UNIT CONFIGURATION</u></b></p> <p>XR25 aid : Incorrect decoder unit configuration</p>
---	--

**NOTES**

Check that bargraph 2RH side is illuminated: if bargraph 2 RH side is extinguished, fit the correct decoder unit Part Number.

Bargraph 3RH side is extinguished: configuration for petrol

Bargraph 3RH side is illuminated: configuration for diesel

Reconfigure the decoder unit correctly using the XR25.

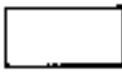
On fiche n° 38 : Command G22\* 1\* (1 : petrol / 2 : diesel).

**AFTER REPAIR**

- Check on fiche n° 38, that bargraph 3 RH side is illuminated.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>5</div> <div></div>	<b>Bargraph 5 LH side remains extinguished, ignition on</b> <b>+ AFTER IGNITION FEED CIRCUIT</b> XR25 aid: No + after ignition feed
--	---

Fiche n° 38

## NOTES

Check the condition of the battery.

Check the condition of the wiring between track A1 on the decoder unit and track B3 on connector P6 for the passenger compartment connection unit.

Repair the faulty wiring if necessary.

Ignition on, check for voltage  $\approx +12\text{ V}$  + after ignition on track A1 of the decoder unit.

Is there  $\approx +12\text{ V}$  + after ignition?

There is not  $\approx +12\text{ V}$  + after ignition feed on track A1 of the decoder unit, ignition on.

Refer to fault finding for the passenger compartment connection unit.

There is  $\approx -12\text{ V}$  + after ignition feed on track A1 of the decoder unit, ignition on.

Replace the decoder unit.

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPH5

<div>11-12-13</div> <div><div></div><div></div></div>	<div>Bargraphs 11 RH, 12 RH and 13 RH sides extinguished when ignition turned on</div> <div>Fiche n° 38</div> <div><u>KEY INTERROGATION CIRCUIT</u></div> <div>XR25 aid : Ring / decoder unit communication</div>
---	---

## NOTES

On fiche n° 38, if bargraph 7 LH side is illuminated, see bargraph 7 LH side  
Wait 10 seconds before the ignition is turned on each time.

Check the continuity and insulation in relation to earth and to – 12 V of the wiring between tracks:

Decoder unit  $\left\{ \begin{array}{ll} \text{A6} & 4 \\ \text{A7 and 3} & \\ \text{A8} & 6 \\ \text{A9} & 1 \end{array} \right\}$  ring

Replace the faulty wiring if necessary.

On the XR25, enter G07\* (ring feed) and wait 10 seconds before turning the ignition on.

Is "bon" displayed on the XR25 when the ignition is turned on.

YES

Replace the ring

NO

Check the condition of the wiring on tracks B5 and B6 of the decoder unit.

Is the wiring in good condition?

If the wiring is in poor condition, replace it.

If the wiring is in good condition, replace the decoder unit.

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



FAULT FINDING - CUSTOMER COMPLAINTS

**NOTES**

Only consult these customer complaints after carrying out a complete check using the XR25.

When the ignition is turned on, the immobiliser warning light flashes (the vehicle may not be started)

Chart 1

The immobiliser warning light illuminates for more than 30 seconds ignition on (the immobiliser warning light illuminates as soon as the ignition is turned on, in the 16 seconds following turning the ignition on or the immobiliser warning light illuminates for more than 30 seconds ignition on).

Chart 2

When the ignition is turned on, the immobiliser warning light illuminates for 3 seconds then extinguishes but the vehicle cannot be started.

Chart 3



## FAULT FINDING - FAULT CHARTS

## Chart 1

When the ignition is turned on, the immobiliser warning light flashes (the vehicle may not be started)

## NOTES

If bargraph 6LH is illuminated on fiche n° 38, see bargraph 6LH.  
If bargraph 7LH is illuminated on fiche n° 38, see bargraph 7LH.  
Check the battery voltage is greater than 6 Volts.

Check the key recognition function.  
Try to start the vehicle with the 2nd key.  
Can the vehicle be started?

yes

Repair or replace the 1st key

no

Connect the XR25.  
Fiche n° 38 - Code D38 - ISO selector on 58.  
The display should show "I.CLE".  
When the ignition is turned on, is bargraph 5 LH side illuminated?

no

See bargraph 5 LH side remains extinguished, ignition on.

no

Is the ring correctly fitted on the ignition switch?

no

Refit the ring into position

yes

Check the condition of the wiring between tracks:

decoder unit	{	A6	and	4	}	ring
		A7		3		
		A8		6		
		A9		1		

Is the wiring correct?

no

Repair the wiring.

yes

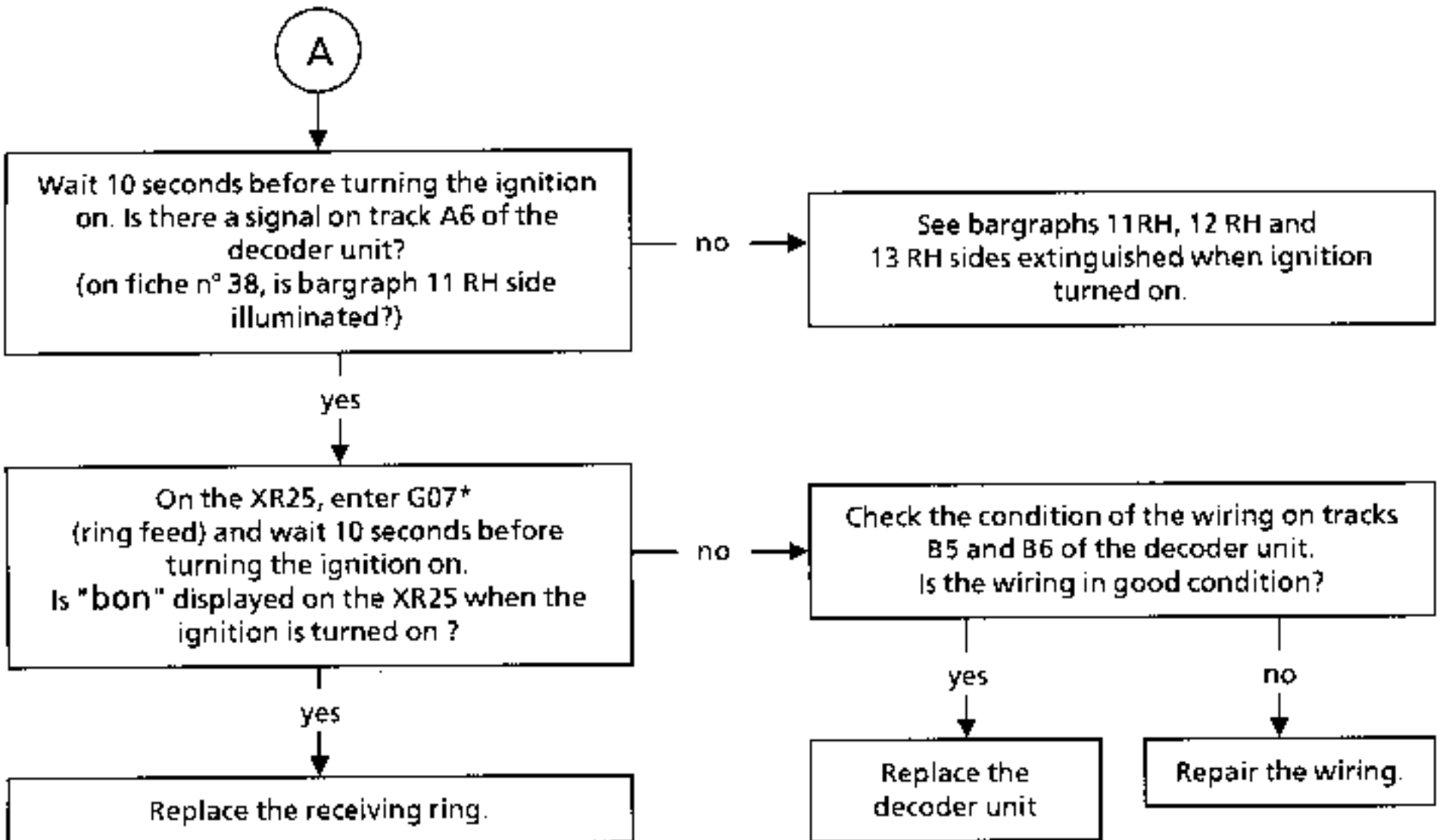
A

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

Chart 1  
CONT

## AFTER REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

## Chart 2

The immobiliser warning light illuminates for more than 30 seconds ignition on (the immobiliser warning light illuminates as soon as the ignition is turned on, in the 16 seconds following turning the ignition on or the immobiliser warning light illuminates for more than 30 seconds ignition on).

## NOTES

If bargraph 6LH and and bargraph 6RH side are illuminated on fiche n° 38, see bargraph 6LH and bargraph 6 RH side.

Check the condition of the wiring between the coded solenoid valve 3 track connector

- 1 B2 on the decoder unit
- 2 and S6 on the engine connection unit
- 3 vehicle earth MH via splice BA

Is the wiring in good condition?

no

Replace the faulty wiring then wait for more than 32 seconds to erase the fault.

yes

Using the XR25 as a pulse detector, ignition on, check on track B2 of the decoder unit for pulses.  
Are pulses noted?

no

Replace the decoder unit

yes

Check the configuration of the decoder unit for petrol (diesel).  
On fiche n° 38, bargraph 3 RH side illuminates for a diesel configuration and remains extinguished for a petrol configuration.  
Is the configuration correct for the engine type?

no

Reconfigure the decoder unit correctly using the XR25.  
On fiche n° 38 : command G22\* 1\* (1 : petrol / 2 : diesel).  
Check on fiche n° 38 that bargraph 3 RH side is illuminated.

yes

A

## AFTER REPARATION

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

Chart 2  
SUITE

A

Connect the XR25.

Fiche n° 38 - Code D38 - ISO selector on 58.

The display should show "I.cLE".

mechanically test the coded solenoid valve:

- Ignition off, enter G01\*.
- Turn the ignition on again. The valve should open and close several times in 30 seconds (audible test).

Does the valve open and close during the 30 second period and is acquittal sent (bargraph 9 RH side illuminated on fiche n° 38 ignition on)?

no

Replace the coded solenoid valve

yes

The coded solenoid valve is correct.  
See diesel engine tuning (fuel filter blocked, fuel tank empty, engine compression insufficient, ...).

AFTER  
REPAIR

- After repair, check the operation of the immobiliser system.



## FAULT FINDING - FAULT CHARTS

**Chart 3**

When the ignition is turned on, the immobiliser warning light illuminates for 3 seconds then extinguishes but the vehicle cannot be started.

**NOTES**

None.

Connect the XR25.

Fiche n° 38 - Code D38 - ISO selector on S8.

The display should show "I.CLE".

mechanically test the coded solenoid valve:

- Ignition off, enter G01\*.
- Turn the ignition on again. The valve should open and close several times in 30 seconds (audible test).

Does the valve open and close during the 30 second period and is acquittal sent (bargraph 9 RH side illuminated on fiche n° 38 ignition on)?

yes

The coded solenoid valve is correct.  
See diesel engine tuning (fuel filter blocked, fuel tank empty, engine compression insufficient, ...).

no

Remove the coded electronic unit from the solenoid valve. Check the condition of the solenoid valve. Ignition off, connect + 12 V to the solenoid valve. Try to start the engine.  
Does the engine start?

yes

Replace the coded solenoid valve electronic unit

no



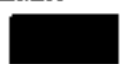



Replace the solenoid valve

**AFTER REPAIR**

- After repair, check the operation of the immobiliser system.








## CHECKING CONFORMITY

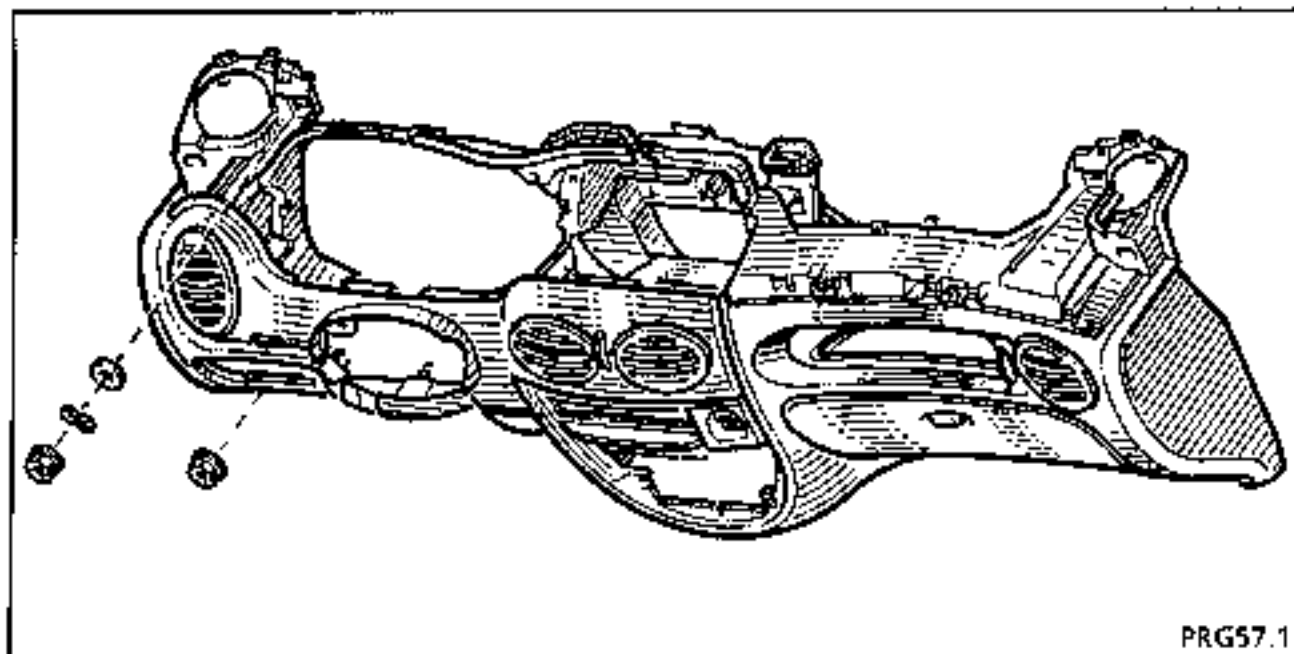
Order of operations	Function to be checked	Action	Bargraph	Display and notes
1	Dialogue with XR25	D38 (selector on 58)		<div>CLE</div> <div>I.CLE</div> <p>then</p> <p>Use fiche n° 38</p>
2	Interpretation of bargraphs normally illuminated		<div>1</div> <div></div> <div>2</div> <div></div>	<p>Code present</p> <p>2nd generation immobiliser system</p>
3	Conformity of decoder unit	G70*		<div>XXX</div> <p>Part Number displayed in 3 sequences</p>
4	Interpretation of bargraph "diesel configuration"		<div>3</div> <div></div> <div>9</div> <div></div>	<p>Illuminated shows that the decoder unit is configured for a diesel engine</p>
5	Interpretation of bargraph "+ after ignition"		<div>5</div> <div></div>	<p>Illuminated shows + after ignition feed present</p>
6	Interpretation of bargraph "diesel solenoid equipment reading"		<div>9</div> <div></div>	<p>Illuminates when ignition is turned on for diesel vehicle (vehicle no longer protected)</p>



## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
7	Interpretation of bargraph "immobiliser active"		<p>10</p> 	Illuminated shows immobiliser active (red immobiliser warning light flashes)
8	Interpretation of bargraph "key present"		<p>11</p> 	Illuminates when ignition is turned on if a coded key is used. This bargraph remains illuminated when the ignition is turned off - ignore.
9	Interpretation of bargraph "key code received"		<p>12</p> 	Illuminates when ignition is turned on if a coded key of the correct format is used. This bargraph remains illuminated when the ignition is turned off - ignore.
10	Interpretation of bargraph "key code valid"		<p>13</p> 	Illuminates when ignition is turned on if a coded key of the correct format with the correct code is used (key corresponding to the vehicle). This bargraph remains illuminated when the ignition is turned off - ignore.
11	Interpretation of bargraph "manual mode button pressed"		<p>17</p> 	Illuminates when the emergency code input button is pressed (the side is not important)





## REMOVING THE STEERING WHEEL WITH AIRBAG

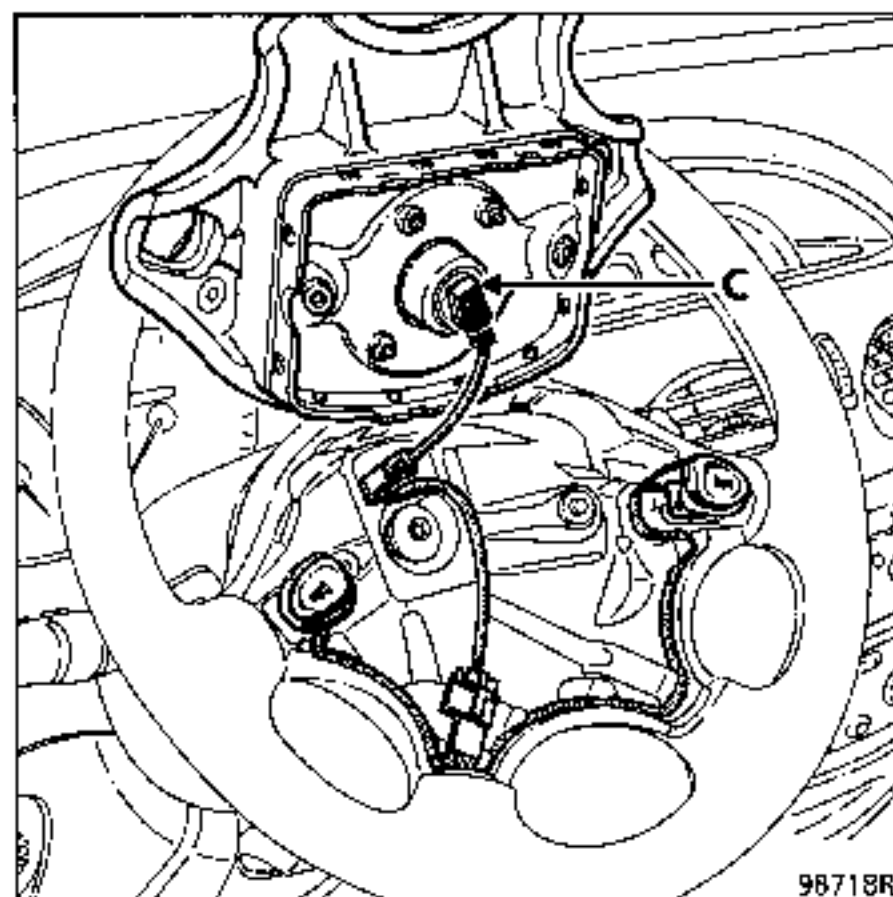
Disconnect the battery

**ATTENTION:** pyrotechnic systems (airbag and pretensioners) must not be handled near to a heat source or a flame; they may be accidentally triggered.

**IMPORTANT:** when removing the steering wheel, the airbag connector (C) **MUST** be disconnected. The airbag is fitted with a connector which is short-circuited when it is disconnected so as to prevent accidental triggering.

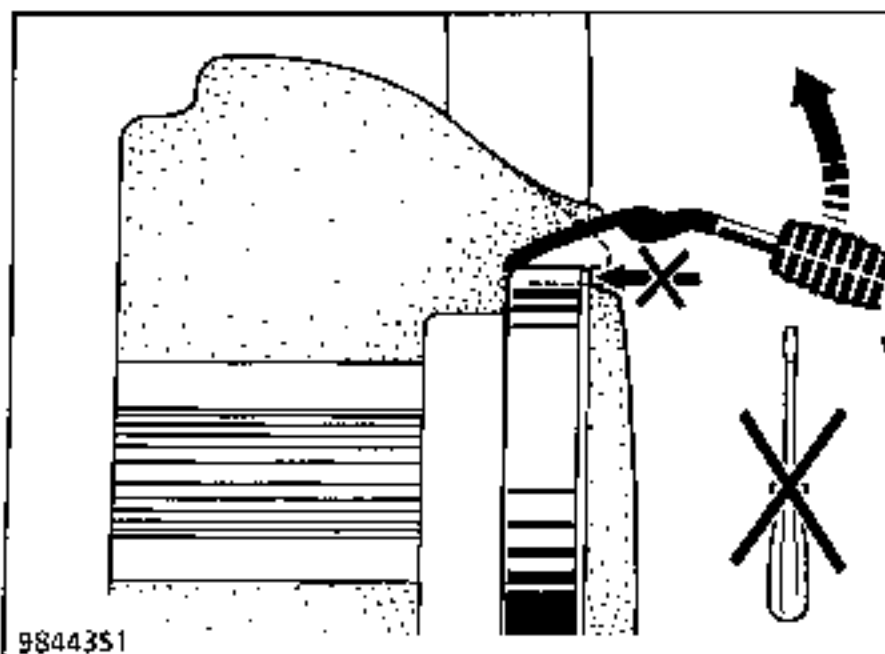
Remove:

- the airbag through its two star bolts (tightening torque 0.5 daN.m) located behind the steering wheel and disconnect its connector (C),
- the horn connector if fitted,
- the steering wheel bolt,
- the steering wheel after having noted its position with respect to the steering column (for refitting).



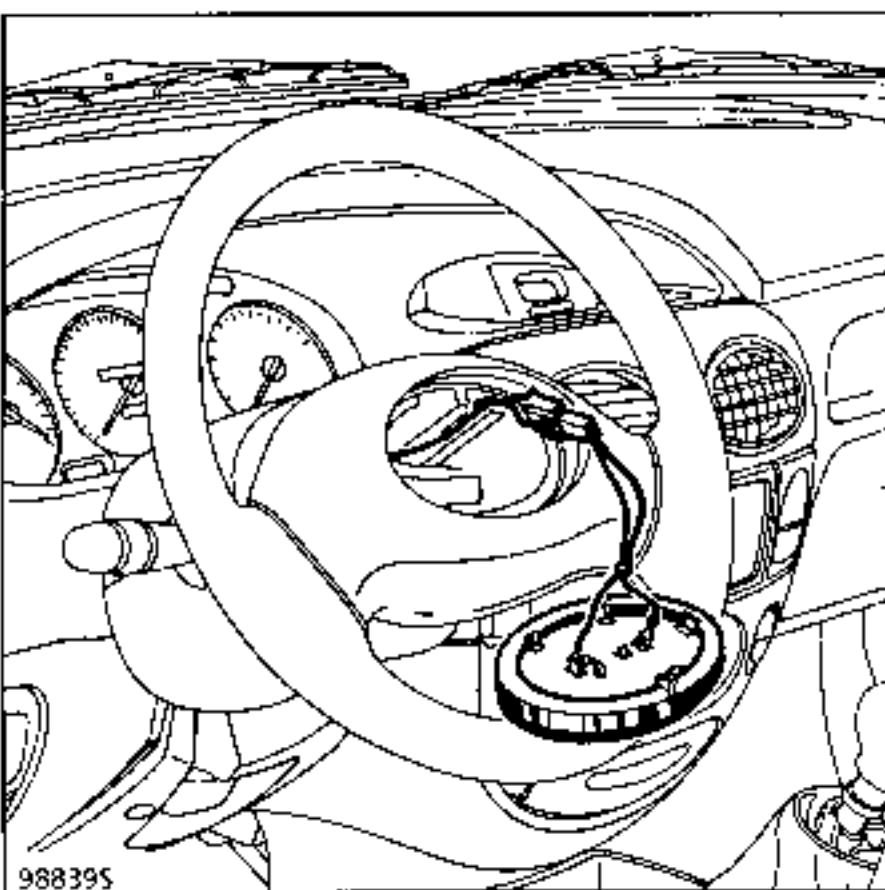


## REMOVING THE STEERING WHEEL (WITHOUT AIR BAG)



In the middle, move the steering wheel foam away so that the tool FACOM D115 can be positioned correctly.

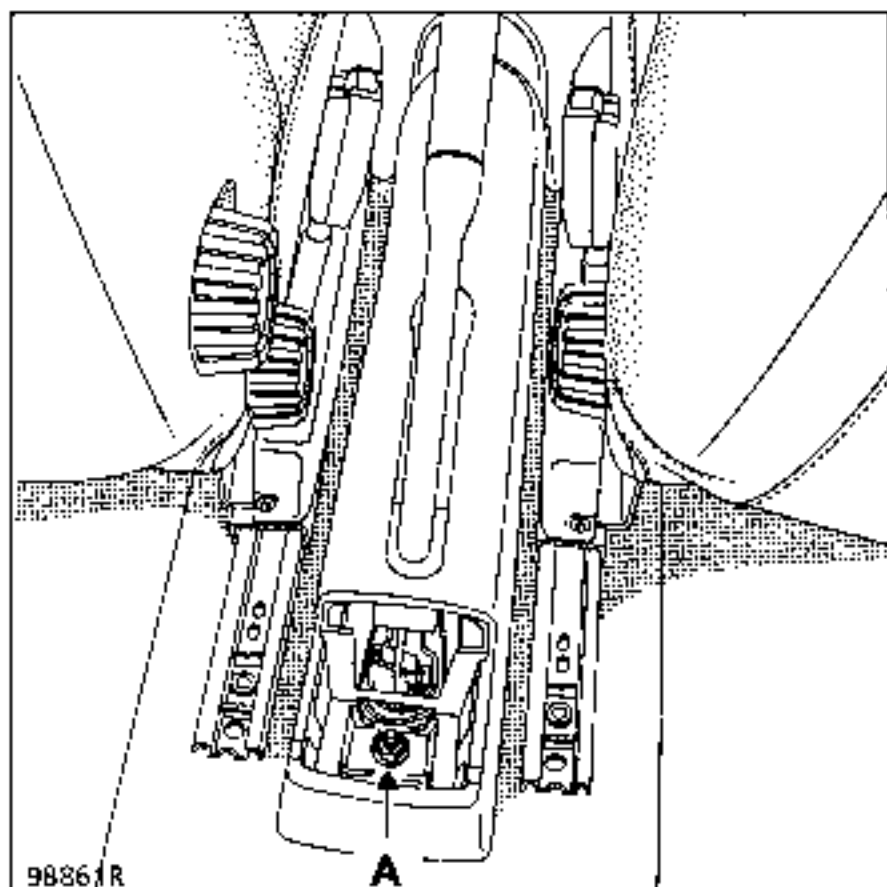
Remove the assembly.



Disconnect the horn assembly and remove it.

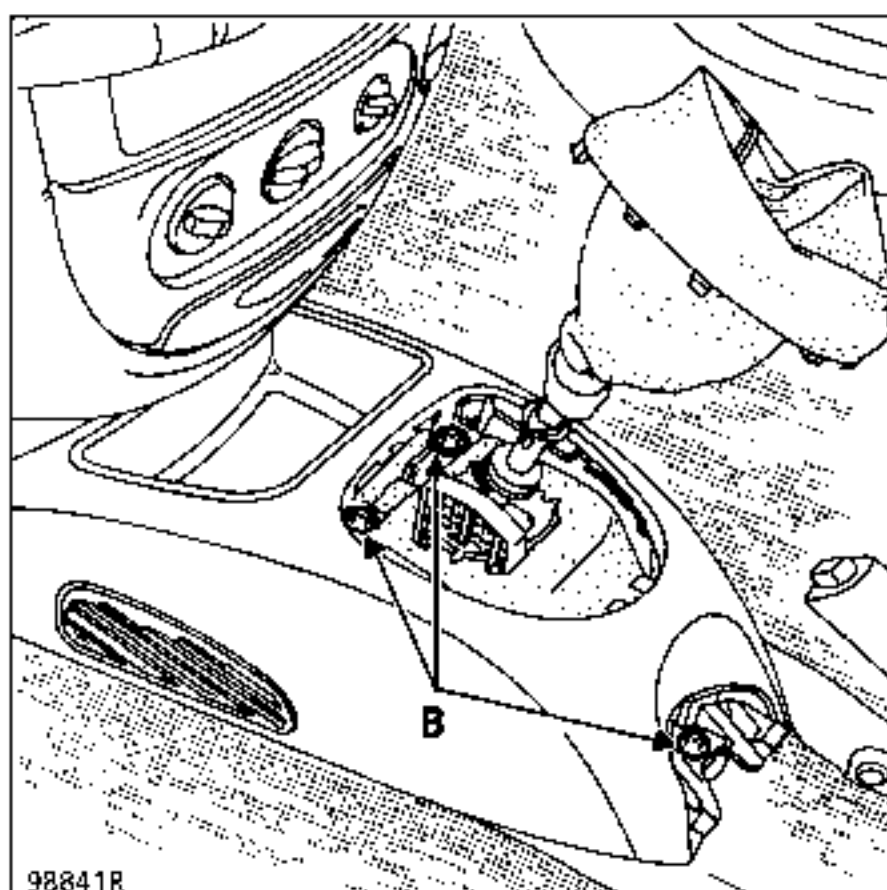
Remove the steering wheel bolt.

## REMOVING THE CONSOLE



Remove:

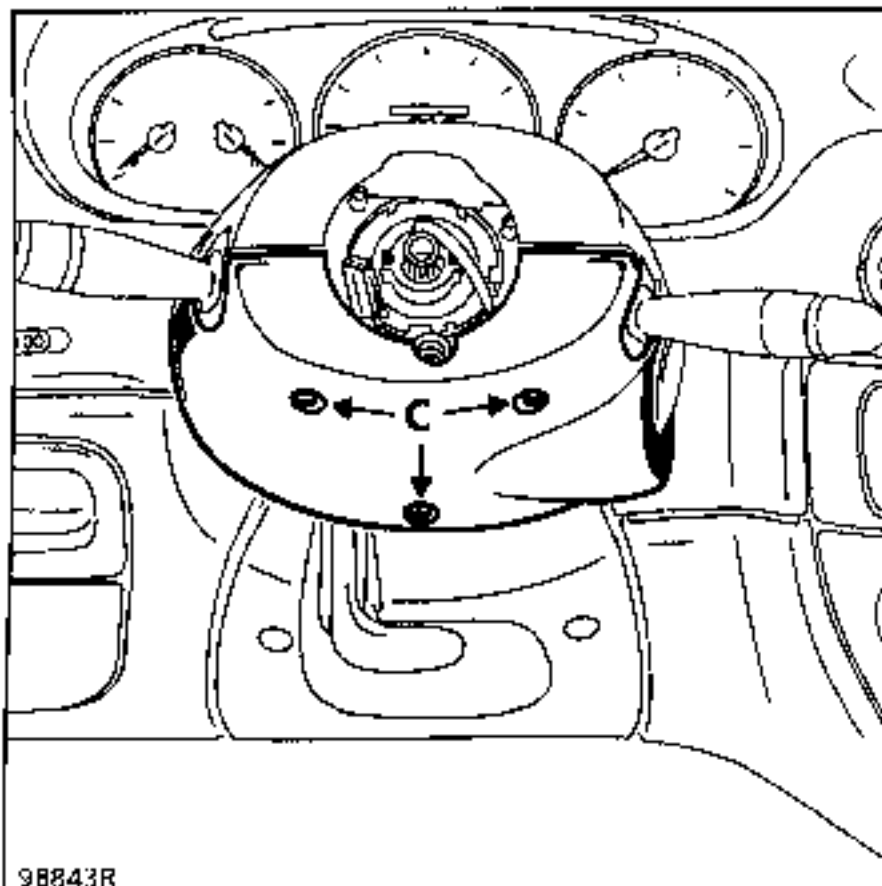
- the rear ashtray,
- the nut (A).



Unclip the gaiter from the gear lever.

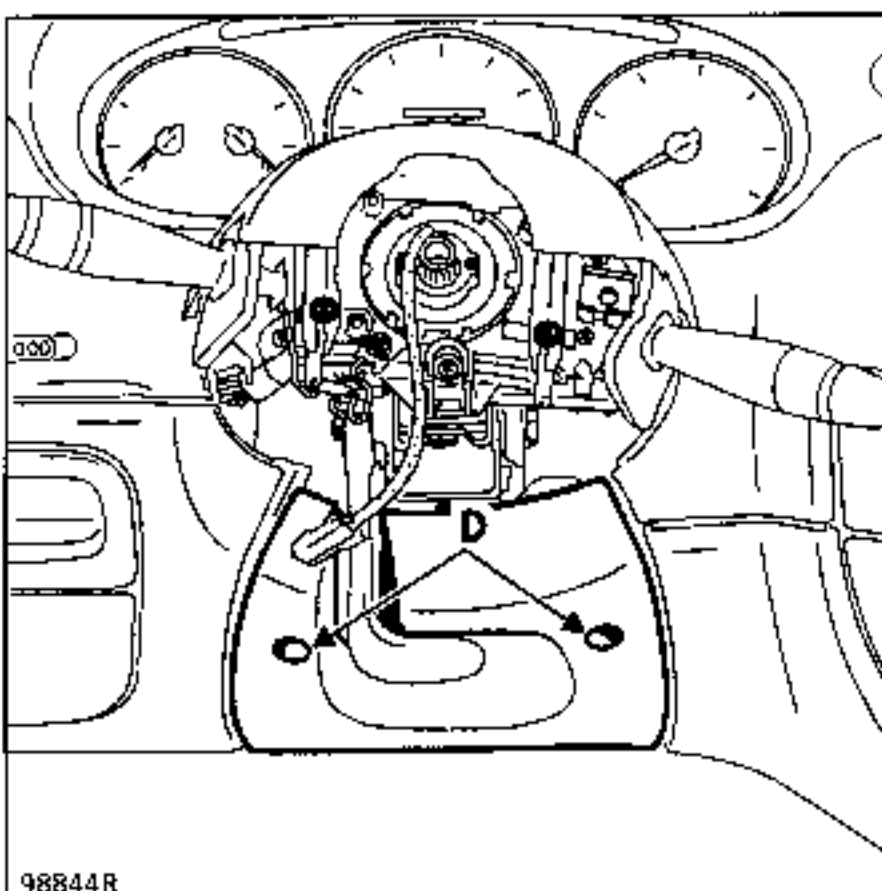
Remove the three bolts (B).





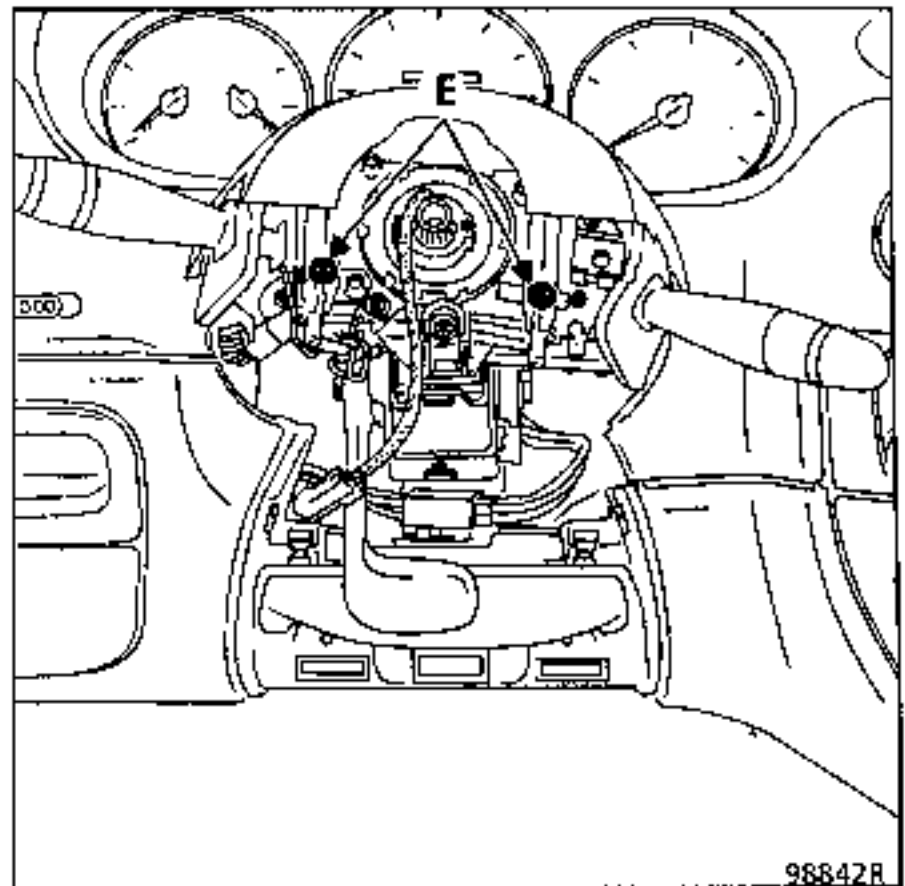
98843R

- Remove :
- the half cowling under the steering wheel by removing the three bolts (C),



98844R

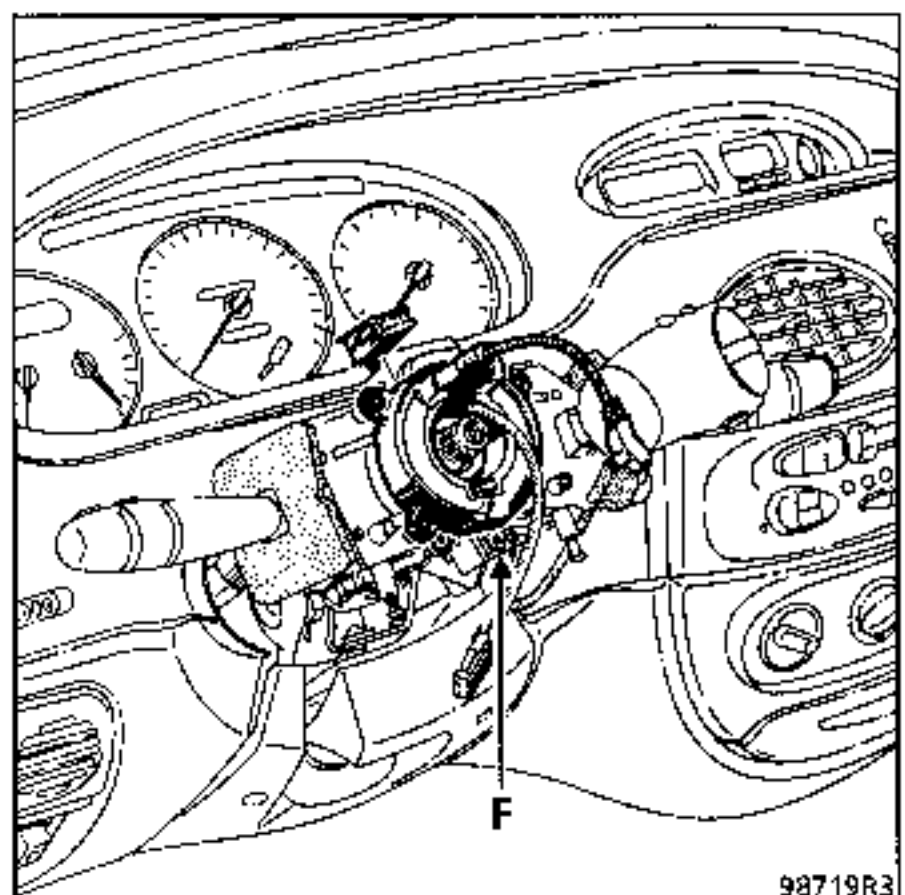
- the lower cover of the steering column, two bolts (D),



98842R

- the upper half cowling, two bolts (E).

Slacken the bolt (F) in order to remove the stalk/rotary switch assembly under the steering wheel (if an airbag is fitted).



98719R3

Disconnect the connectors from the windscreen wiper and light stalks as well as the connector on the rotary switch under the steering wheel (if an airbag is fitted).



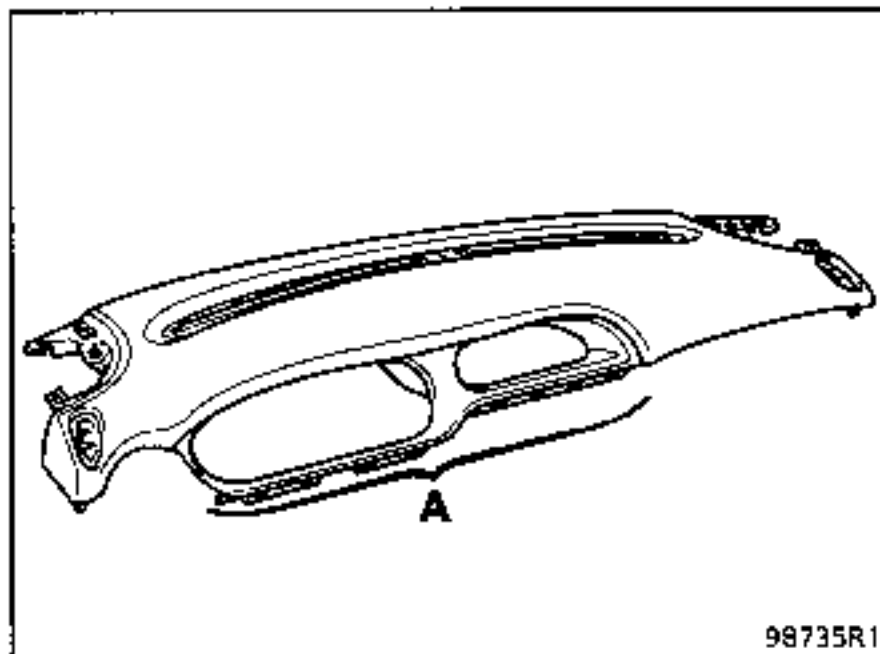
**SPECIAL FEATURE OF THE ROTARY SWITCH UNDER THE STEERING WHEEL**

This provides the electrical link between the steering column and steering wheel.

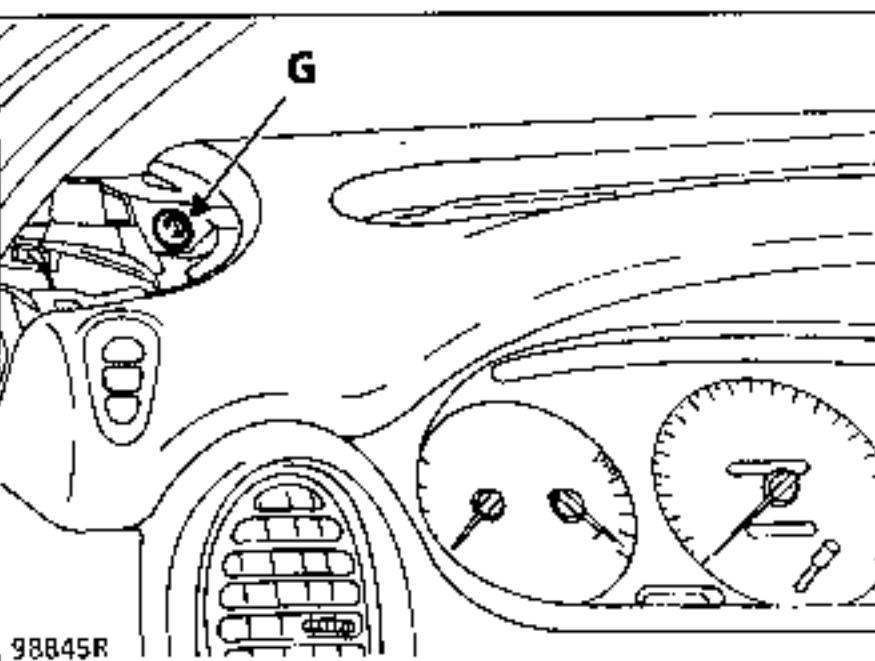
It consists of a strip with conductive tracks (airbag) and has a sufficient length to allow the steering wheel to rotate 2.5 times (full lock plus safety margin) in each direction.

When removing it, its position must be noted:

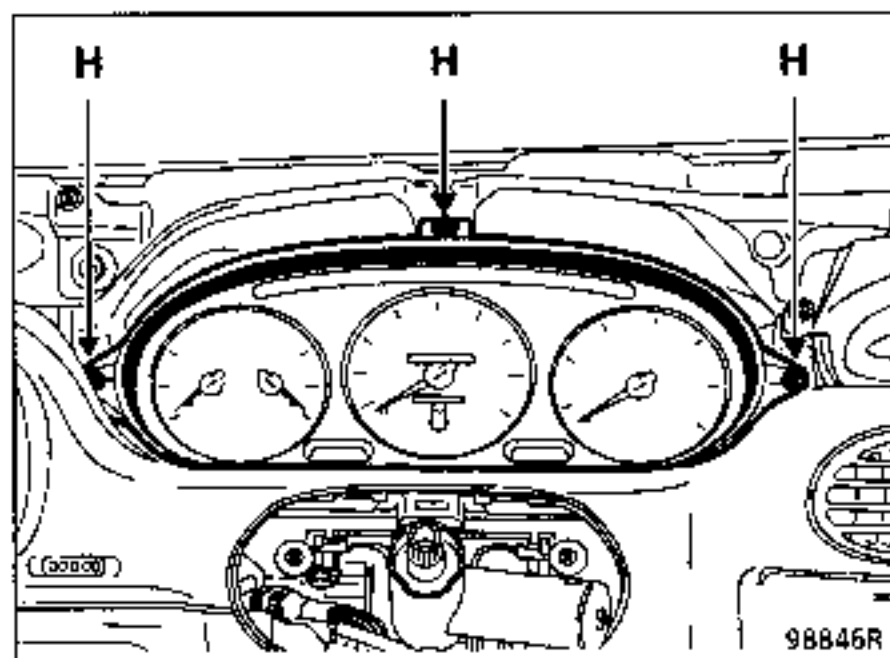
- either by checking that the wheels are straight during removal so that the strip can be positioned in the middle,
- or by securing the rotor of the rotary switch with adhesive tape.



Undip part (A) lifting it by hand and release the upper part.

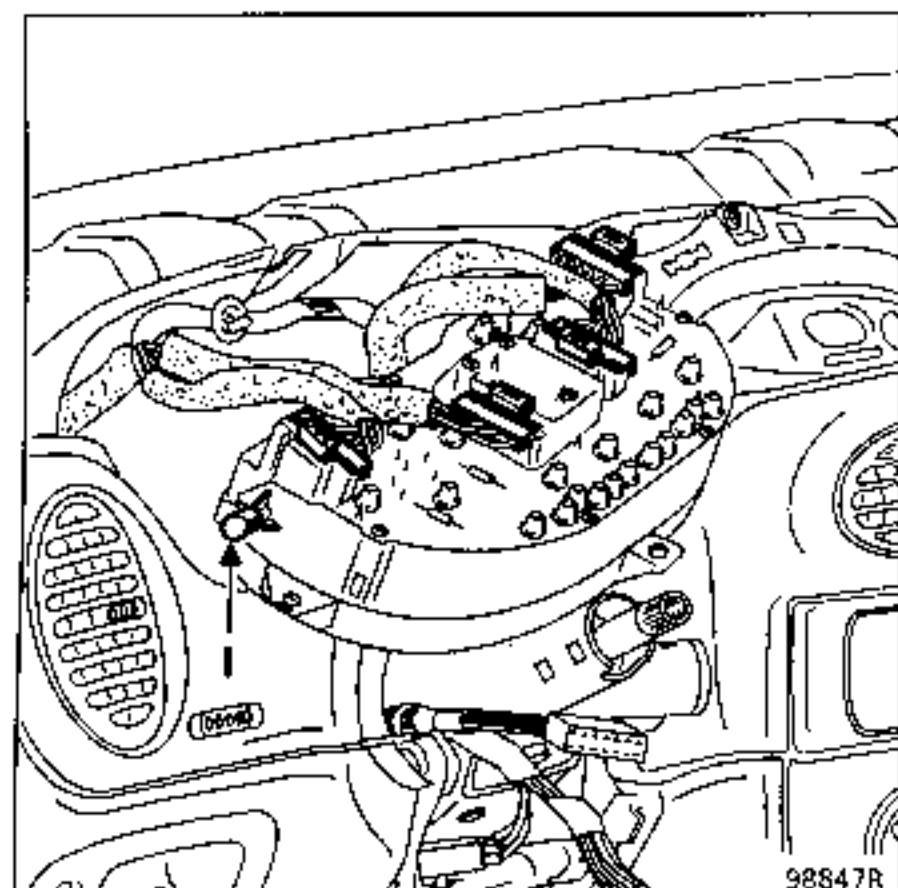
**REMOVING THE UPPER PART OF THE DASHBOARD**

Remove the loud speaker grilles then the upper mounting bolts (G).

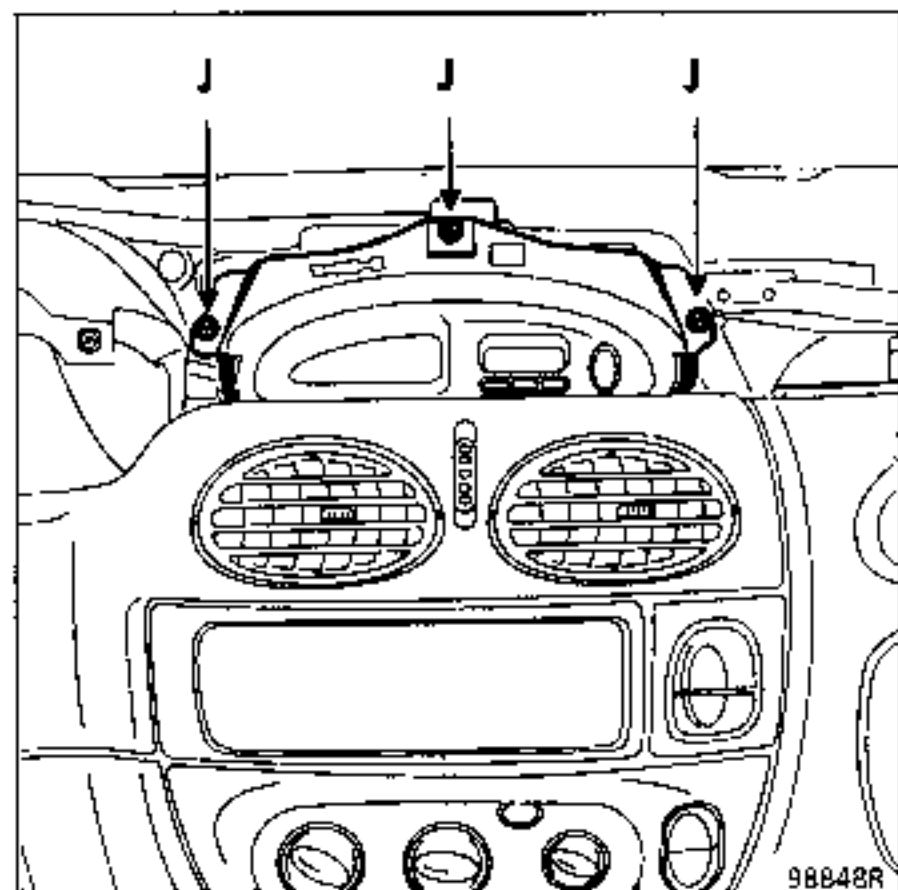


Remove the instrument panel, three bolts (H).



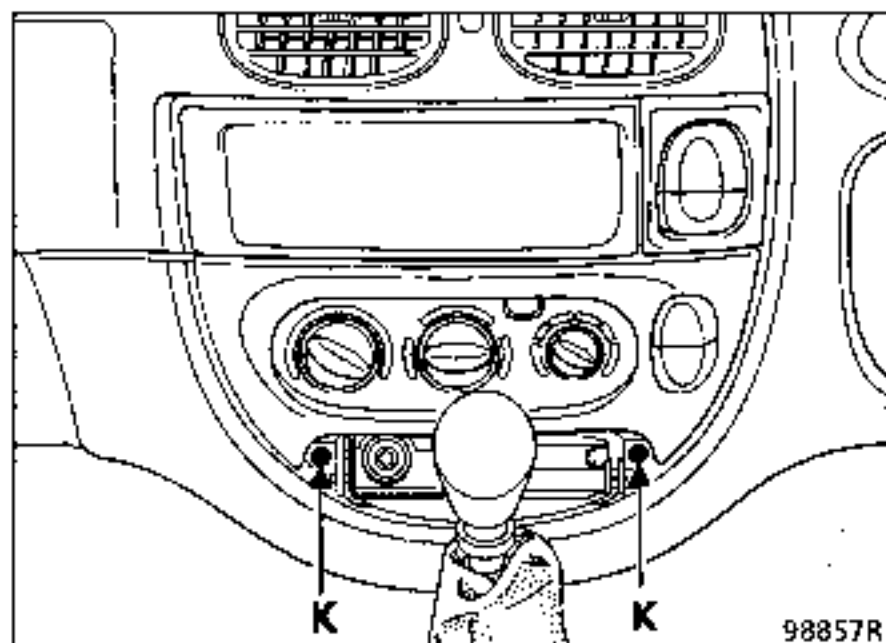


Disconnect the instrument panel. Ensure that the small rubber wedges (I) are kept and repositioned.

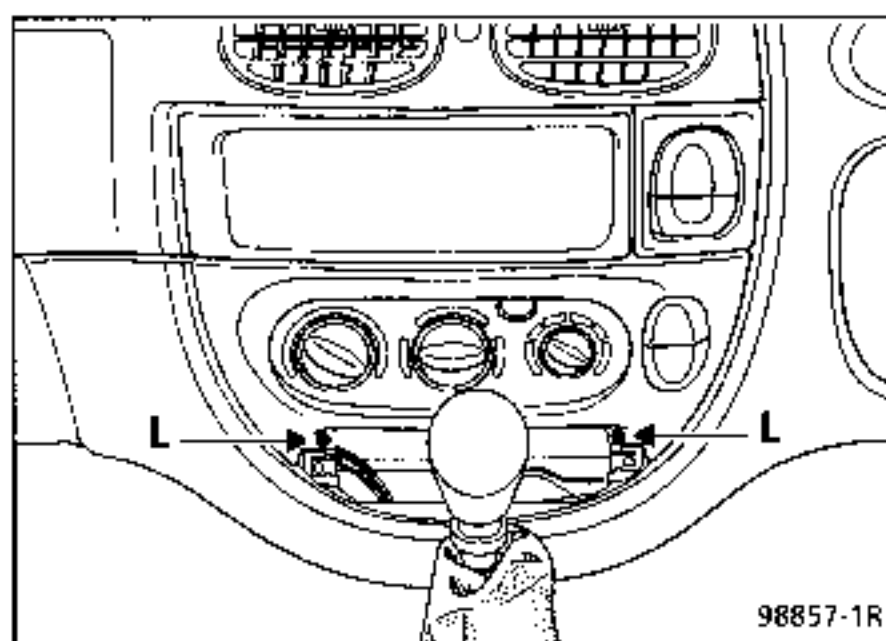


Remove the clock, three bolts (J).

Disconnect the connectors.



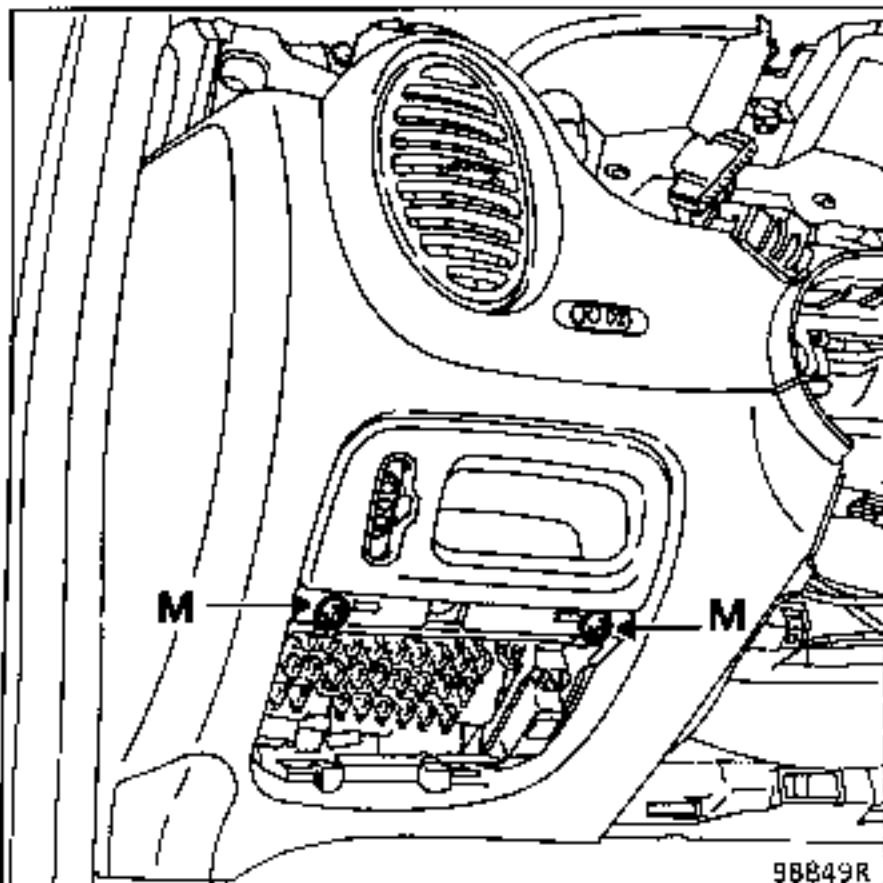
Remove the ashtray support, two bolts (K).



Remove the heating control panel, two bolts (L).

Disconnect the control connectors.

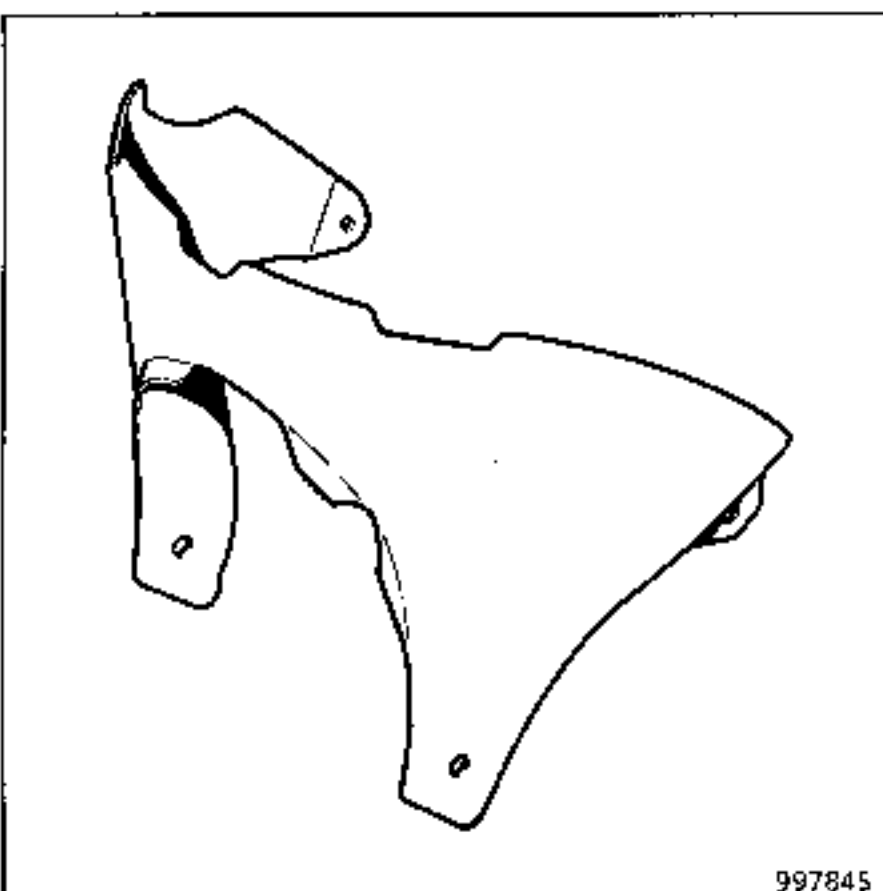




98849R

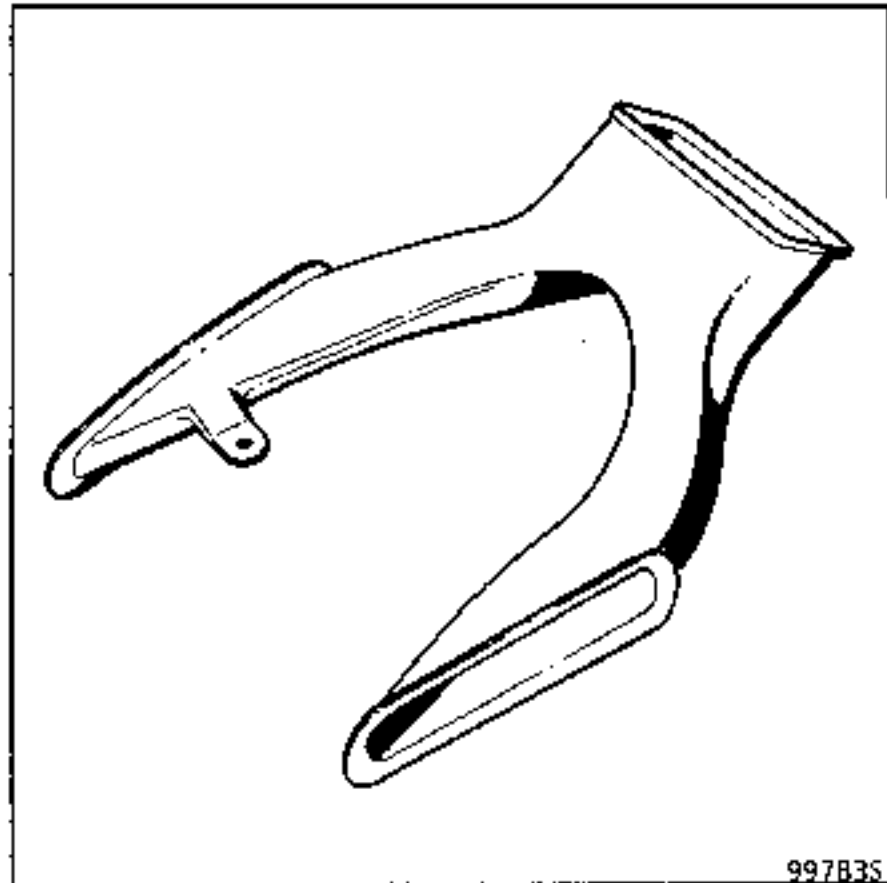
Remove the headlight adjustment mounting unit,  
two bolts (M).

Disconnect the connector.



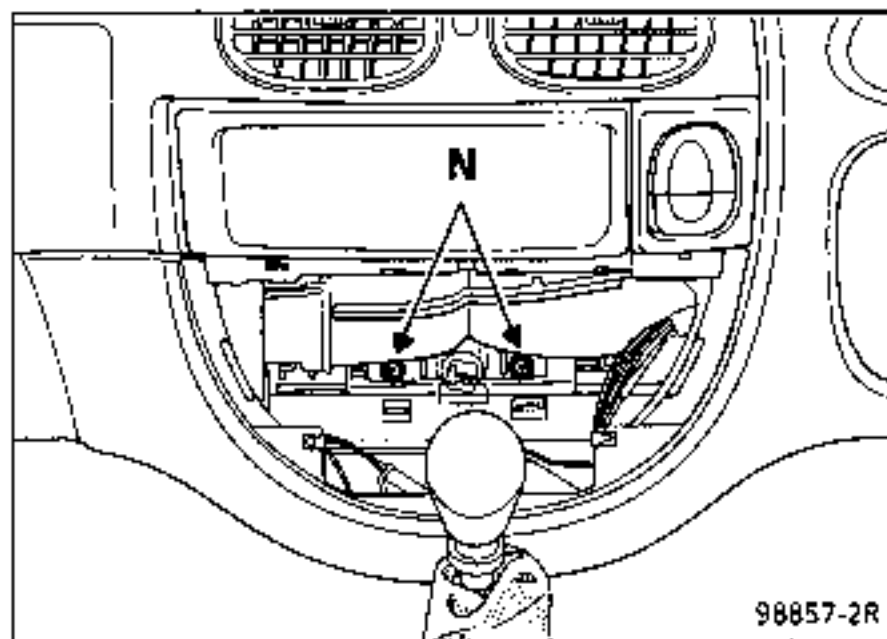
997845

Remove :  
– the lower console cover, four clips,



997835

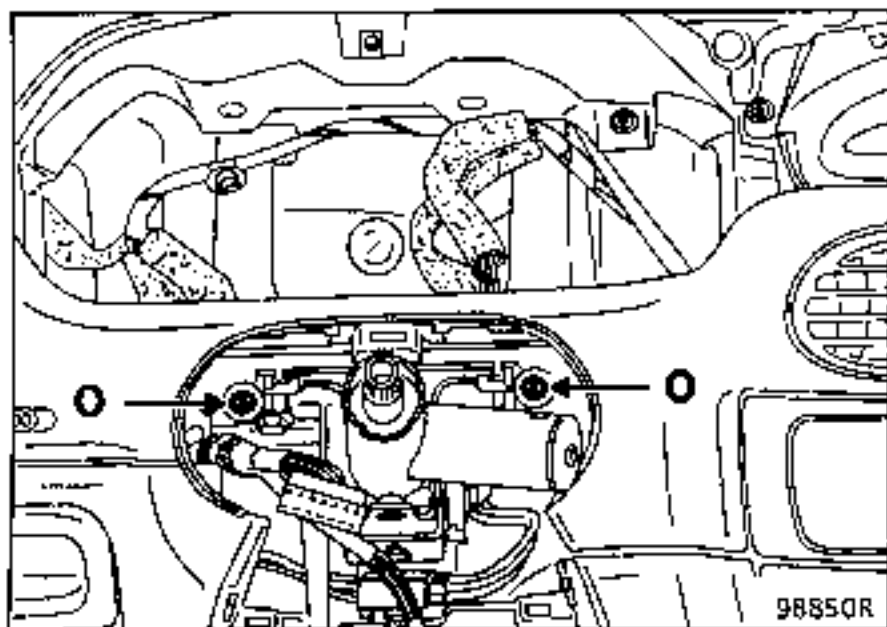
– the heating duct,



98857-2R

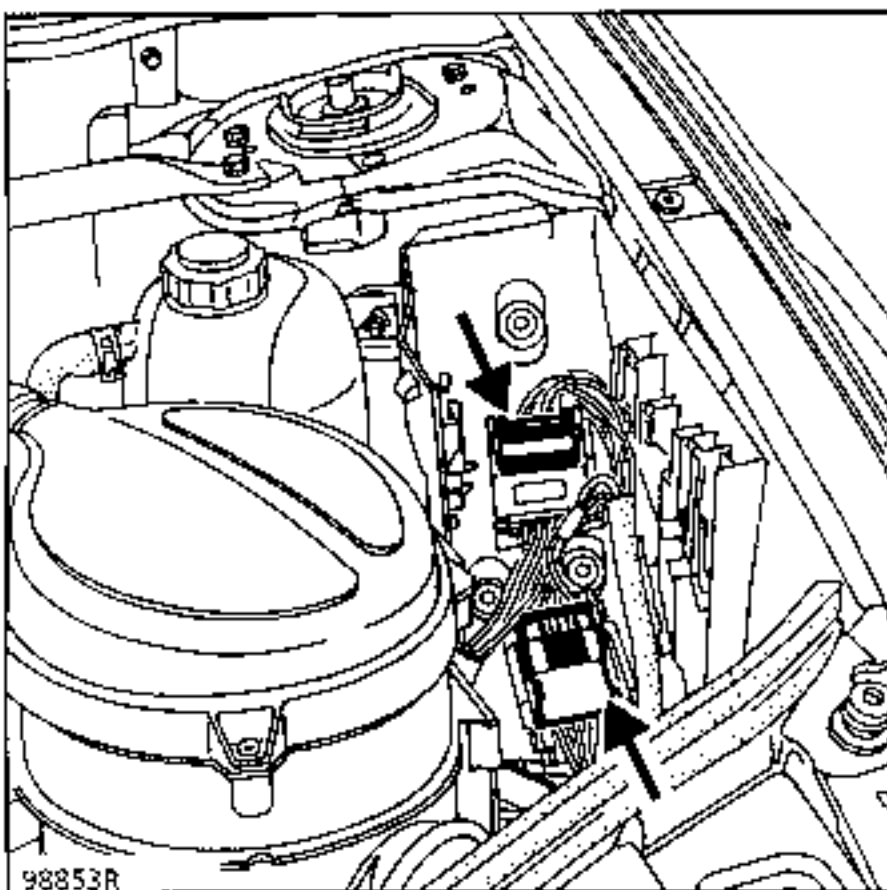
– the dashboard mountings on the heating unit,  
two bolts (N),





- the dashboard mountings on the steering column sleeve, two bolts (O).

In the engine compartment, in the left hand side housing



Disconnect the engine wiring connectors.

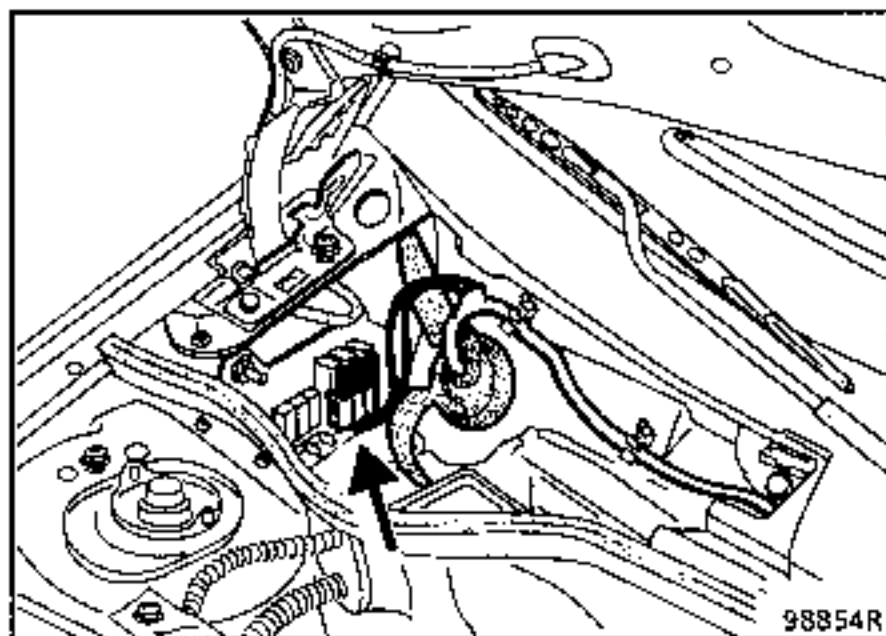
Remove the front left hand mudguard.

Unclip the wiring cable clips.

Disconnect the wing indicator repeater.

Pass the harness wiring loom into the passenger compartment.

In the scuttle panel



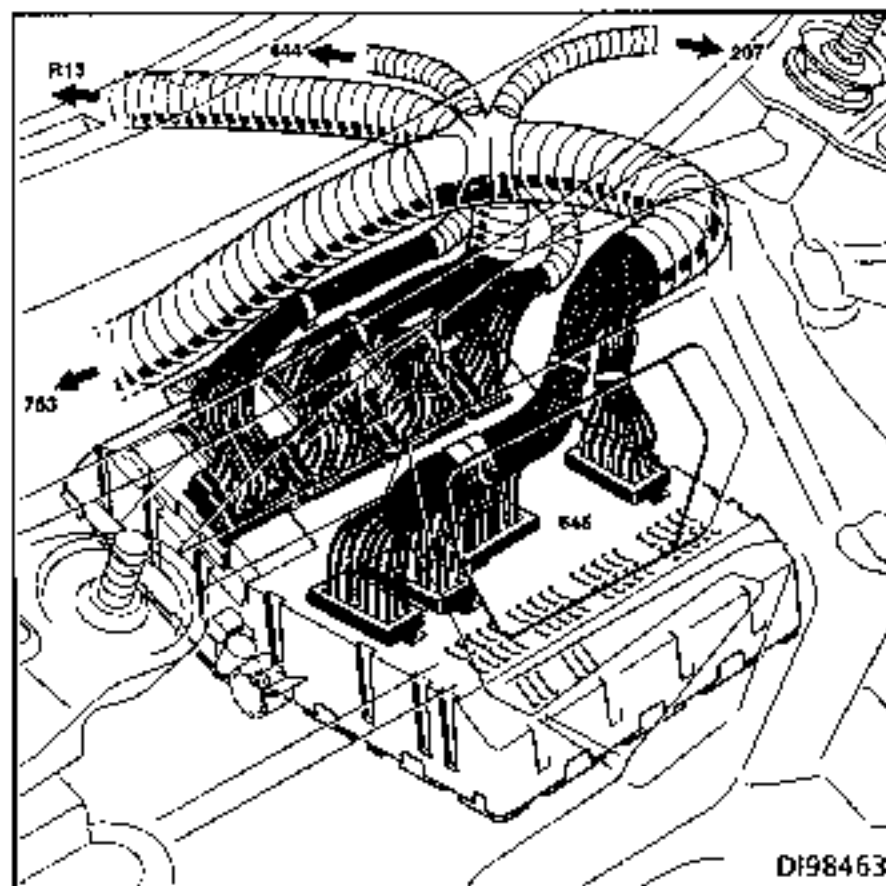
Remove :

- the right hand scuttle panel grille,
- the battery.

Disconnect the fuse mountings.

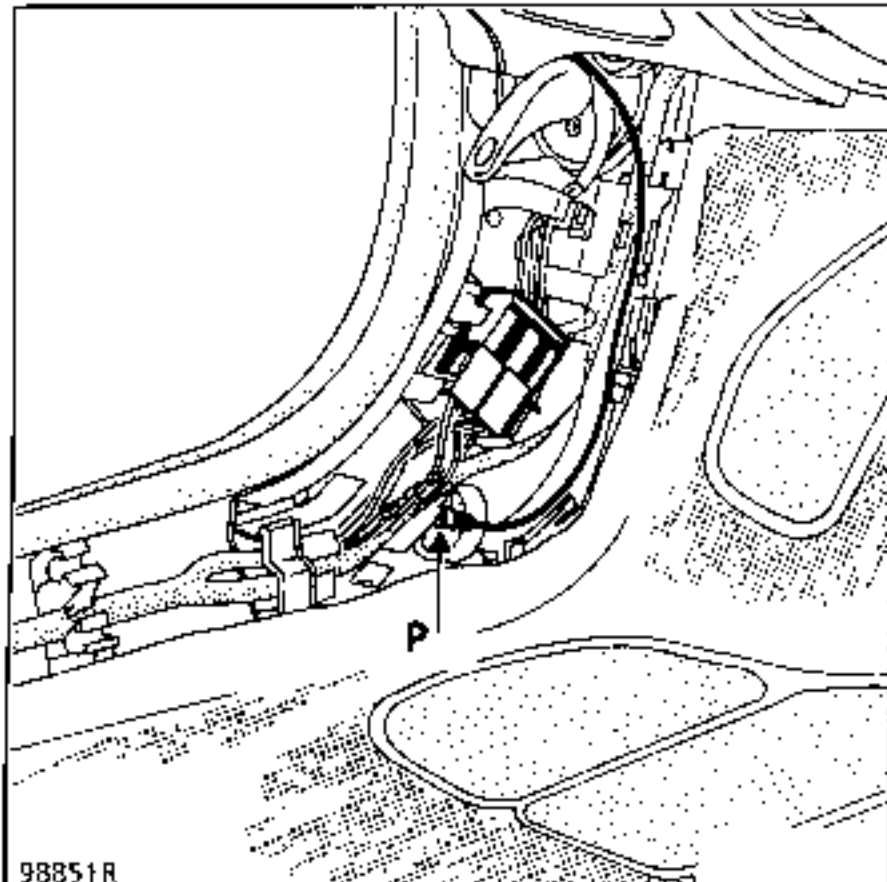
Disconnect the connectors from the wiper motor and fan motor.

Pass the wiring loom into the passenger compartment.



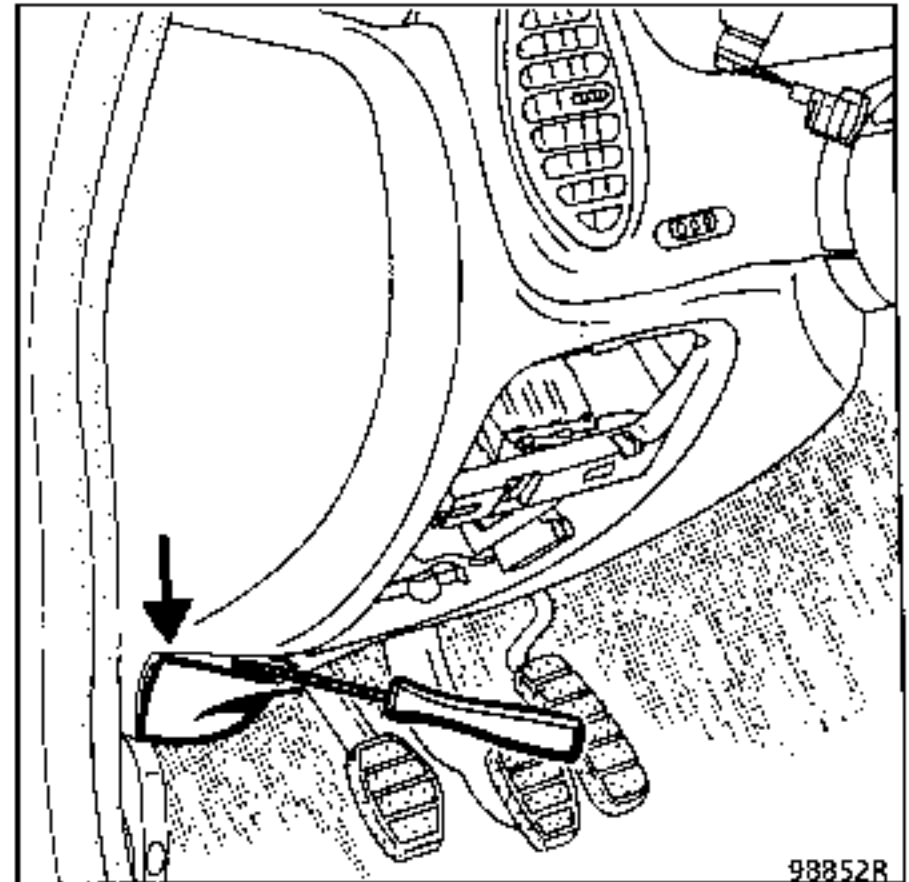
Disconnect the connectors under the fuse box and the ignition switch connector then remove the steering column.



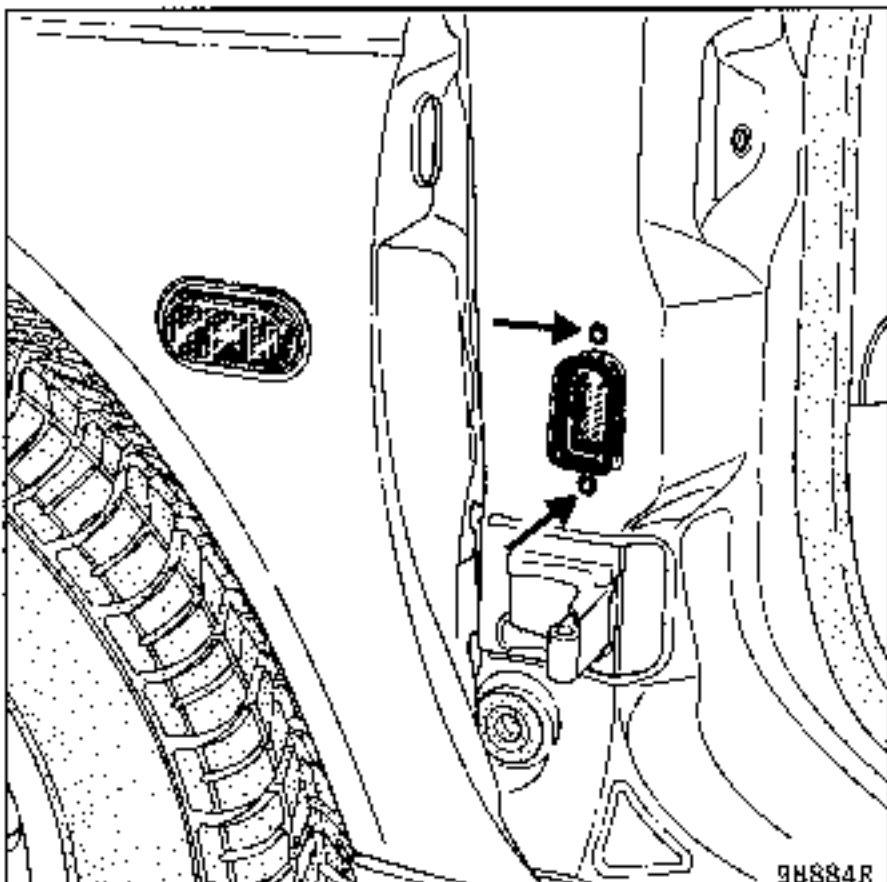


Remove the trim from the left hand and right hand inner sills and the windscreen pillar.

Disconnect the wiring loom and remove the earth wire bolts (P).

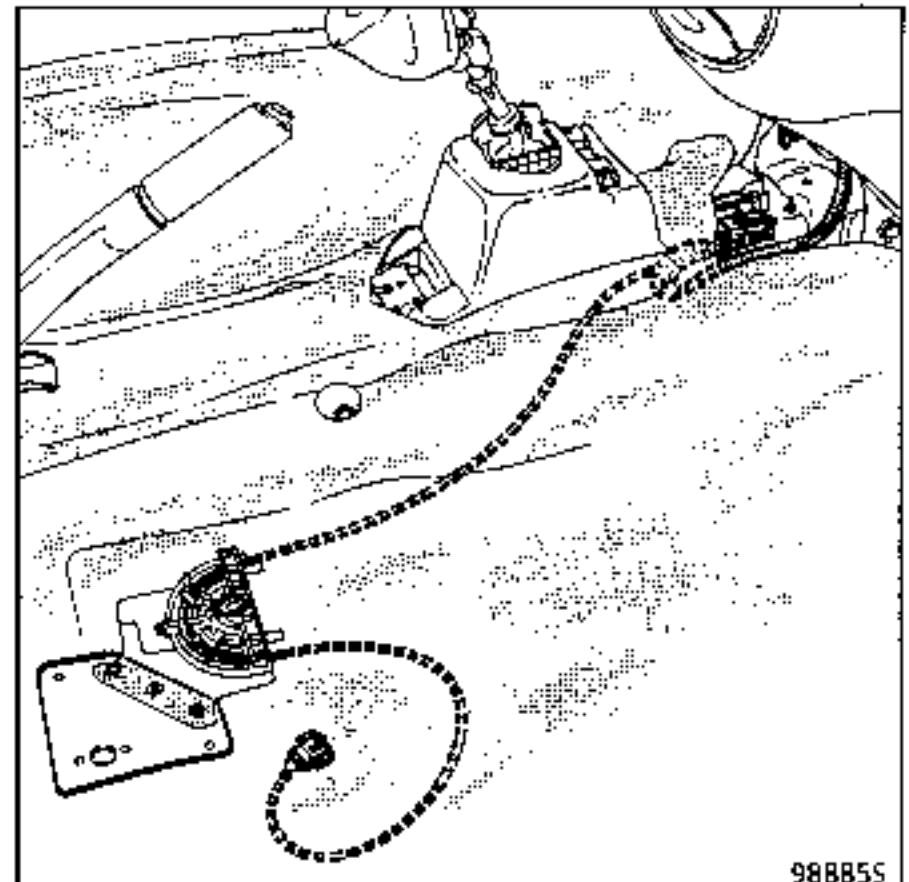


- the two lower blanking plugs,
- the front seats.



Remove :

- the two bolts from the front door wiring connectors, pass the wiring loom into the passenger compartment,

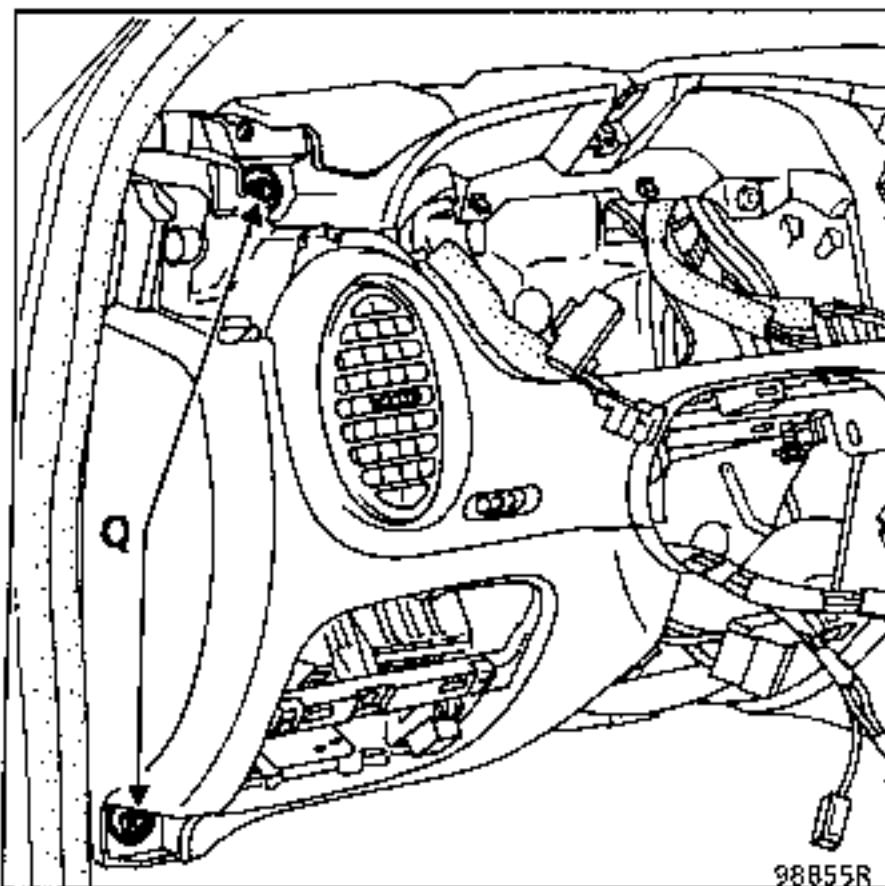


Disconnect the wiring looms of the seatbelt pretensioners.

Remove the wiring loom.

Disconnect the connector (1) from the airbag electronic unit.





Remove the four dashboard mounting nuts (Q).

Remove the dashboard with care (two people).

Note, and if possible position, the various mountings and clips for the wiring looms to facilitate refitting.

## REFITTING

When refitting, the wiring looms must be passed through in the correct places to ensure that the dashboard is correctly centred.

## SPECIAL NOTE FOR REFITTING THE STEERING WHEEL WITH AIRBAG

Check that the rotary switch is correctly positioned under the steering wheel (see page 83-4).

Any doubt about the correct centring of this part means that the method described in section 88 "driver's airbag" will have to be applied.

Renew the steering wheel bolt every time it is removed (pre-glued bolt) for steering wheels fitted with airbags.

Comply with the tightening torque (4.5 daN.m).

**IMPORTANT:** before reconnecting the driver's airbag, the system operating test procedure must be carried out:

- check that the airbag warning light on the instrument panel illuminates when the ignition is turned on,
- connect a dummy ignition module to the driver's airbag connector and check that the warning light extinguishes,
- switch the ignition off, connect the airbag in place of the dummy ignition module and bolt the airbag to the steering wheel,
- switch the ignition on, check that the warning light illuminates for 3 seconds when the ignition is switched on then extinguishes and remains extinguished.

If the warning light does not work as described above, refer to the "fault finding" section and check the system using the XRBAG (Elé. 1288) (see section 88).

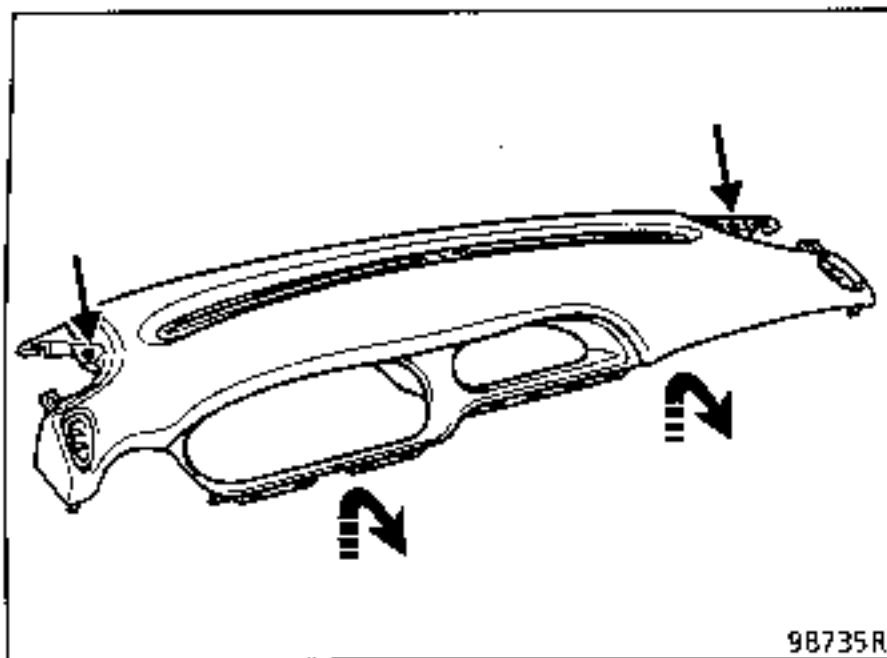


## REMOVAL - REFITTING

Disconnect the battery.

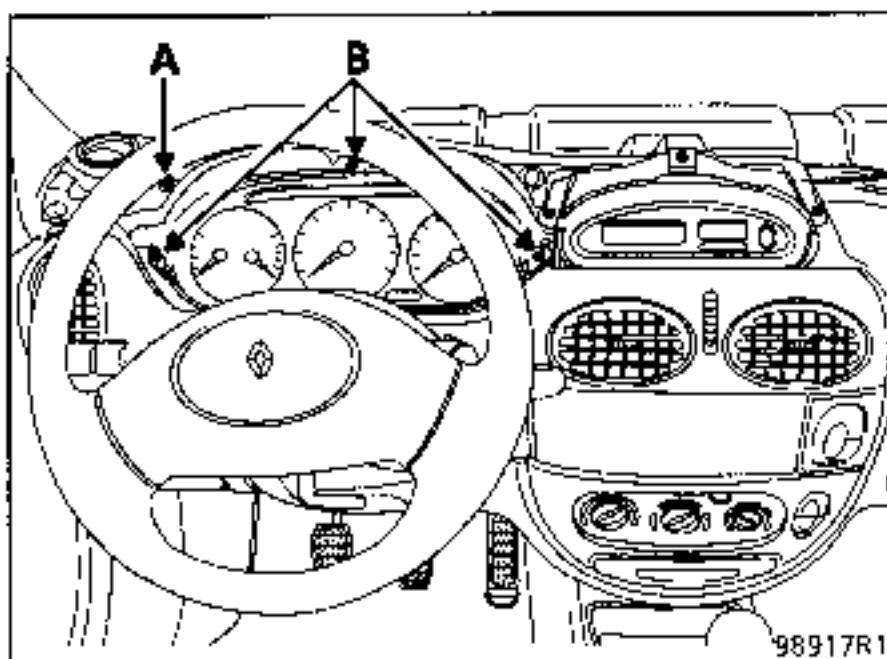
Remove :

- the loud speaker grilles (on top of the dashboard),
- the upper part of the dashboard.



To do this:

- slacken the mounting bolts (A),
- unclip the upper part on the front,
- lift it and release towards the front,



- Remove the 3 mounting bolts (B) from the instrument panel,
- Release the instrument panel and disconnect the connector,
- Remove the instrument panel.

## SPECIAL NOTES FOR REFITTING

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

Clip the connectors together correctly.

Check that the information given by the instrument panel is correct.

## DISMANTLING

The instrument panel may not be dismantled under any circumstances.

It must be replaced if a fault occurs.

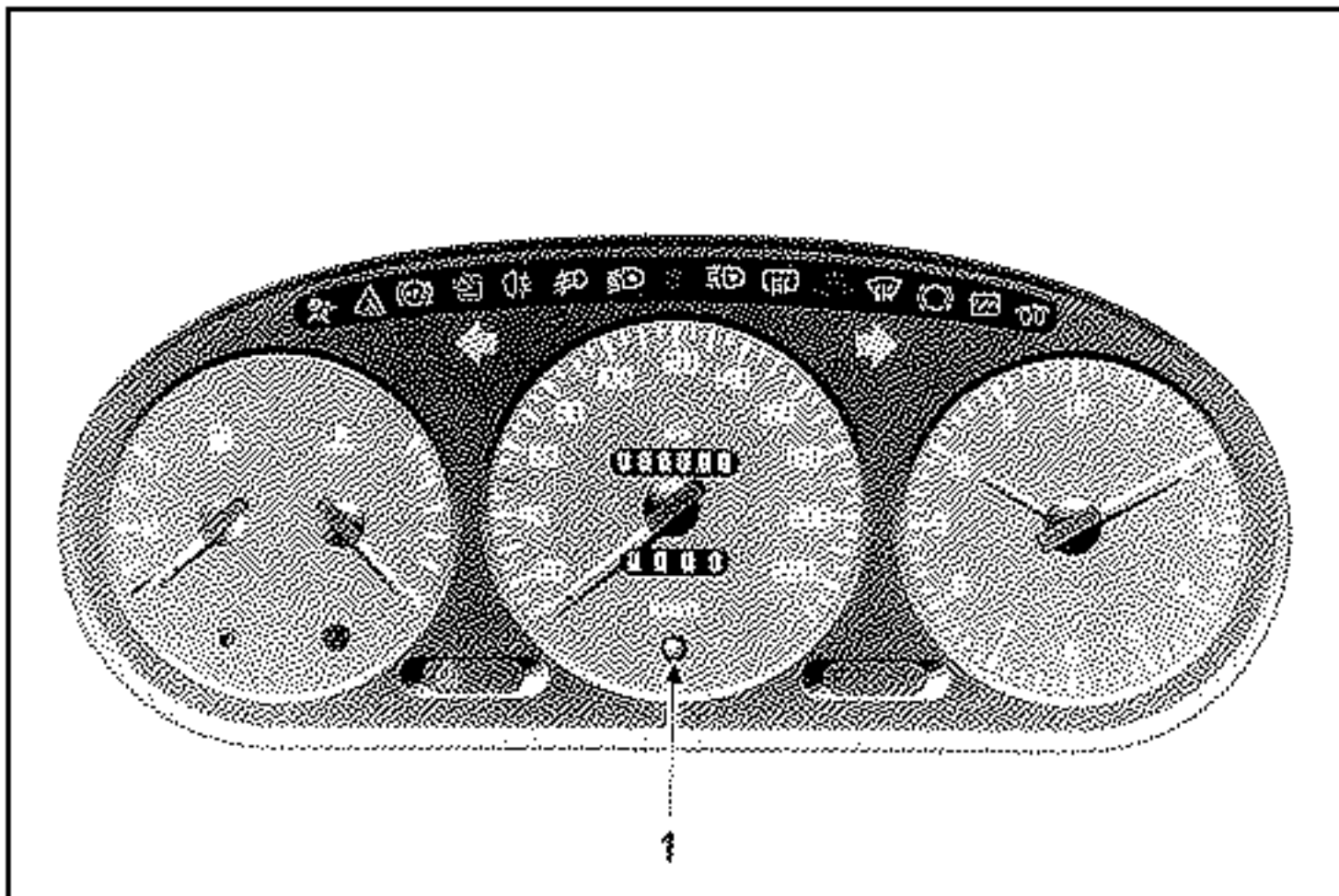
NOTE: only the transparent plastic cover can be replaced.



## DESCRIPTION

## Instrument panel with clock

- electronic speedometer,
- analogue clock (with hands),
- engine coolant temperature indicator,
- fuel gauge,
- warning lights.



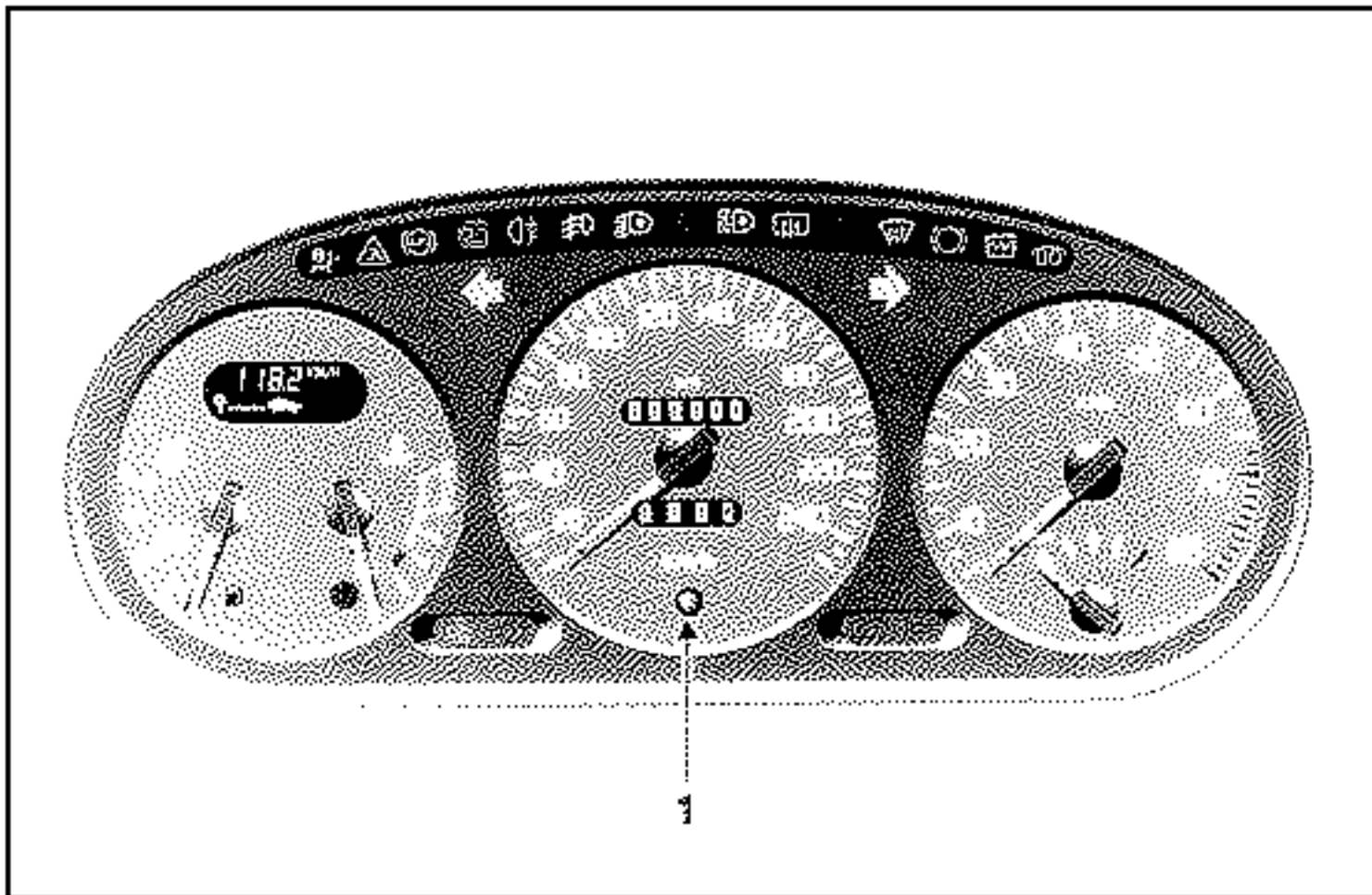
- 1 Trip reset button  
Time setting knob (rotation)



## DESCRIPTION

## Instrument panel with rev counter

- electronic speedometer,
- rev counter with specific integrated circuit,
- combined engine oil level/coolant temperature indicator or coolant temperature only,
- fuel gauge,
- warning lights.



1 Trip reset button



## OPERATION

### Special note

When a combined coolant temperature and oil level indicator is fitted to the instrument panel, the indicator is of logometric type controlled by an electronic card which receives information from:

- a coolant temperature thermistor,
- a hot wire oil sensor.

On some engines, the oil level function is associated to a warning light on the instrument panel which, controlled by the electronic card, illuminates when the oil level reaches the minimum permitted level.

When the ignition is switched on, the oil level scale is illuminated on the instrument panel and the needle moves.

After approximately 30 seconds the scale extinguishes and the needle then displays the coolant temperature.

### Fault finding

If the scale of the combined indicator does not illuminate when the ignition is switched on, this means that the oil level sensor is faulty (disconnected or short circuited). The coolant temperature is then displayed directly.

If the needle falls back to zero and does not rise although the engine is running, this means that the engine coolant temperature information is not being received.

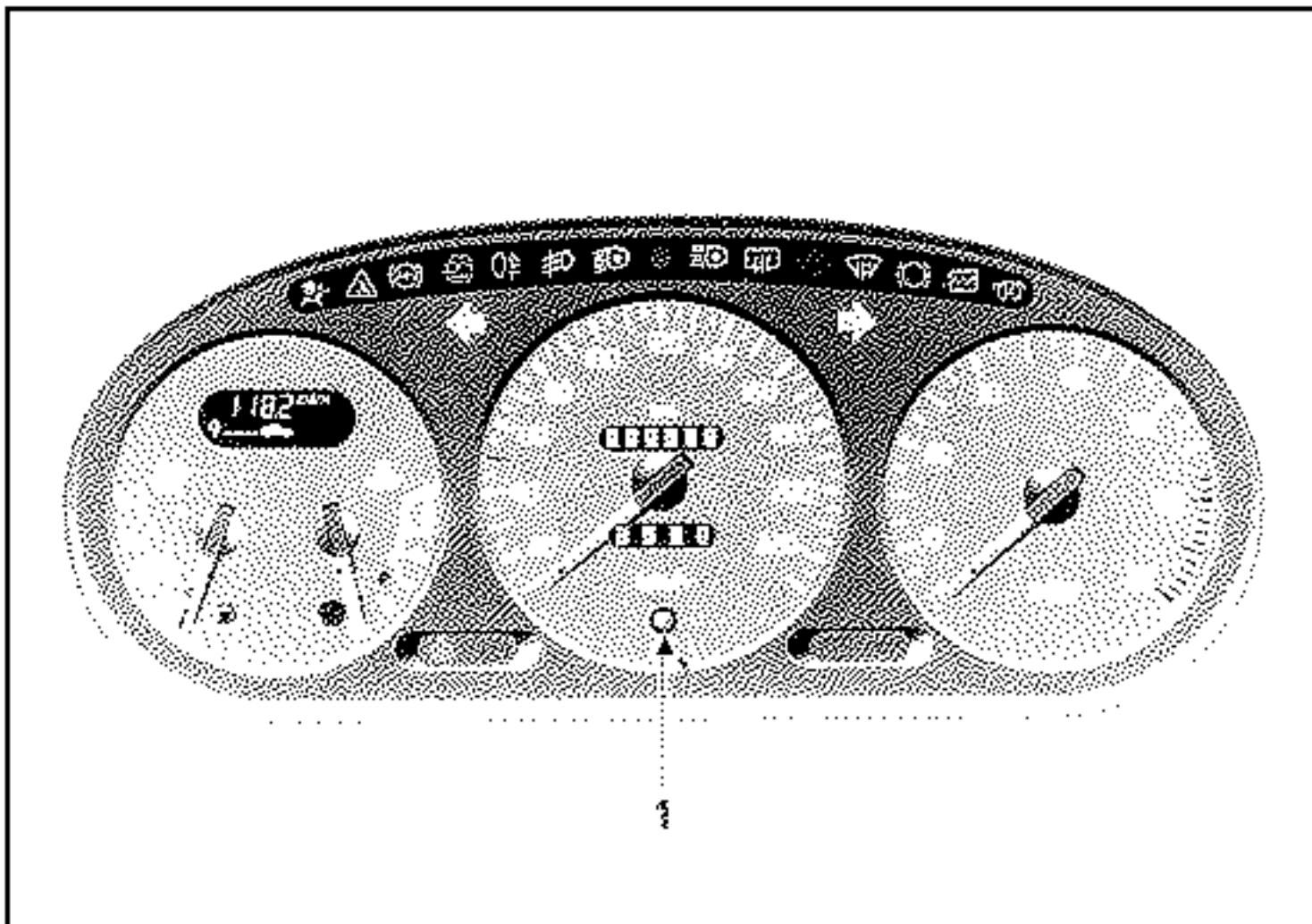
If, on the other hand, the needle moves to the maximum level after 30 seconds, this means that the coolant temperature sensor is short circuited.

For more information, refer to the "fault finding" section.



## DESCRIPTION

- electronic speedometer,
- electronic mileometer,
- electronic rev counter,
- combined oil level / engine coolant temperature indicator,
- on-board computer,
- fuel gauge,
- warning lights.



- 1 Trip reset button



## OPERATION

This instrument panel is outwardly different from the previous ones since it has a liquid crystal display in the left hand dial.

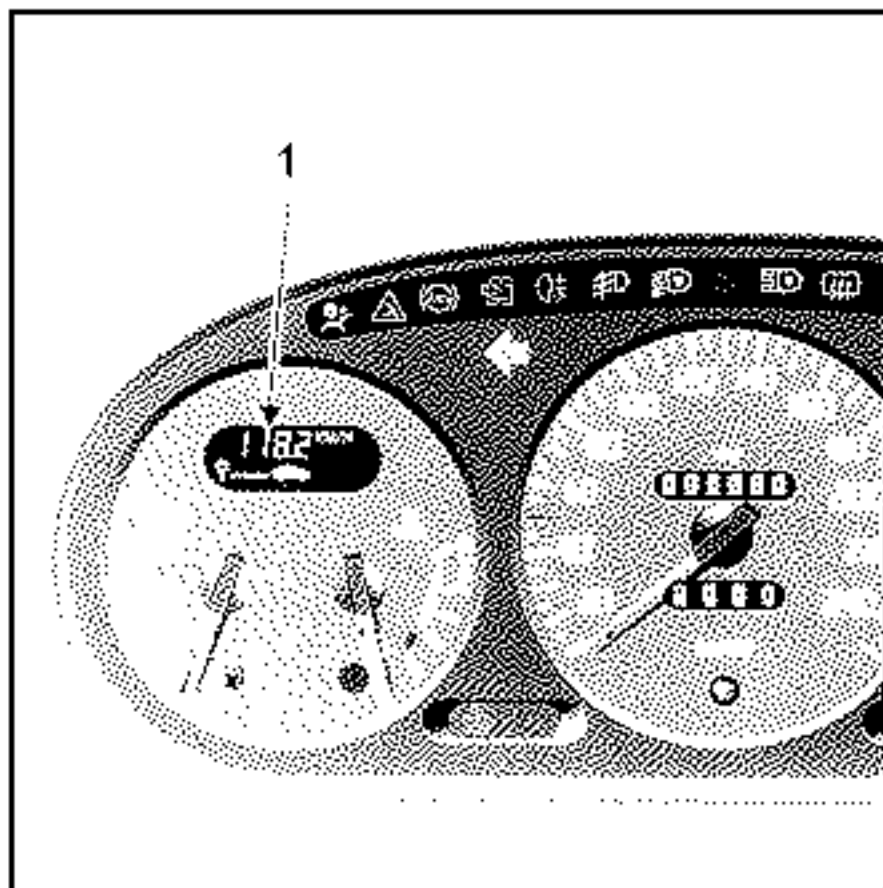
In this version, an on-board computer is integrated into the instrument panel and all the electronic functions are performed by a microprocessor.

The microprocessor receives the signals through a protecting and filtering circuit then transmits the information to the following three instrument panel indicators:

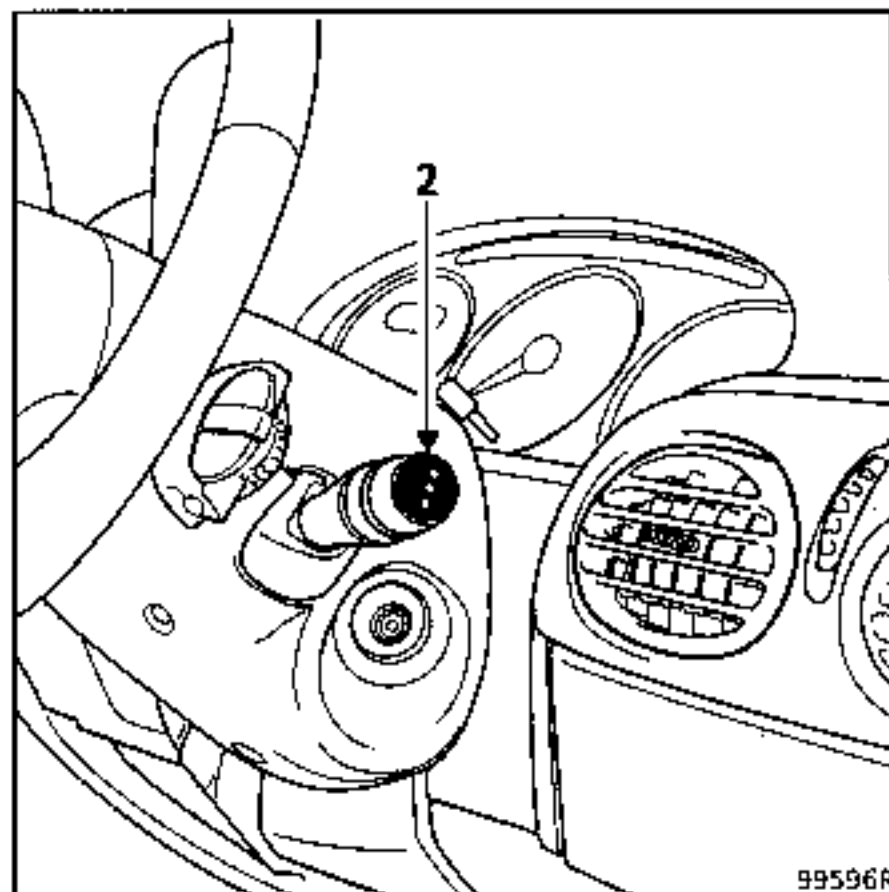
- speedometer,
- rev counter,
- fuel gauge,

as well as the to the liquid crystal display of the on-board computer.

The microprocessor also performs the diagnostic function.



- 1 On-board computer
- 2 Reset button/ reset memories / scroll through information on display



The on-board computer provides the following specific functions:

- management of journey parameters,
- management of the fuel logometer and the associated warning light,
- diagnostic sequence.

### Management of journey parameters

The on-board computer loop consists of 6 types of display.

When the ignition is switched on, the display given is that which was being displayed when the ignition was previously switched off.

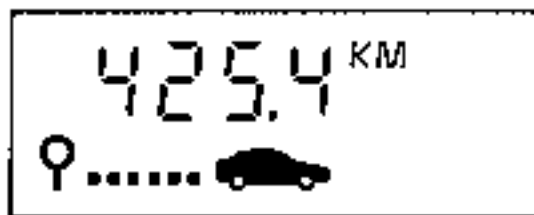
The display can be changed by briefly pressing the button (2) at the end of the windscreen wiper stalk.

**NOTE:** a long press (more than 2 seconds) resets the on-board computer (refer to the paragraph concerned below).



The information arrives successively on the liquid crystal display as follows:

- **distance travelled (in km or in Miles\*)**  
since the last Reset



max. distance: 9999 km or Miles\*

- **average speed (in km/h or in MPH\*)**  
since the last Reset



This will be displayed after travelling 400 metres or 0.2 mile\*.

It is obtained by dividing the distance travelled by the time elapsed since the last Reset.

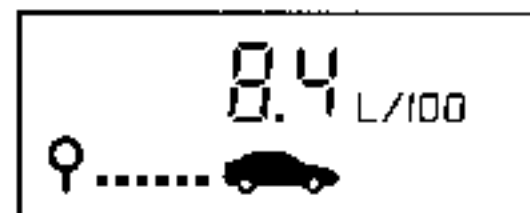
The time base is internal to the on-board computer.

- **amount of fuel consumed \*\* (in litres or in Gallons\*)** since the last Reset



max. capacity : 999 litres or Gallons\*

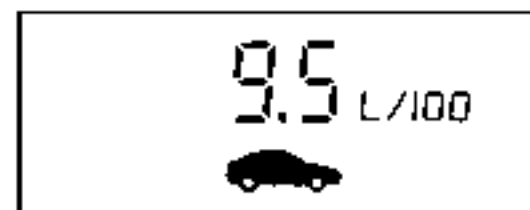
- **average consumption \*\* (in litres/100 km or MPG\*)** since the last Reset



This will be displayed after having travelled 400 metres or 0.2 mile\*.

This takes into account the distance travelled and the fuel consumed since the last Reset.

- **instantaneous consumption \*\* (in litres/100 km)**



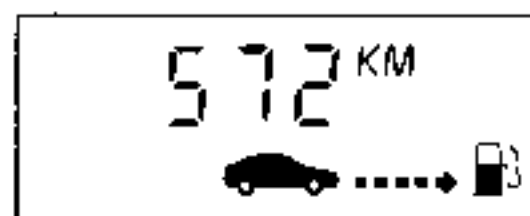
This is only displayed for vehicle speeds greater than 15 mph (25 km/h).

In addition, this value cannot exceed 29.9 litres/100 km.

If no flow pulse is received for at least 1 second and if the speed is greater than 15 mph (25 km/h) it will display 0 litres/100.

**NOTE:** this function is not available on the English version.

- **estimated range with remaining fuel \*\* (in km or in Miles\*)**



This is only displayed after having travelled 400 metres or 0.2 mile\*.

This is the potential distance which can be travelled by taking into account the distance travelled, the amount of fuel in the fuel tank and the fuel consumed.

Max. capacity: 9999 km or Miles\*

\* English version

\*\* Except diesel version



### Management of the fuel logometer and the associated warning light

The amount of fuel function performs the following operations:

- acquisition of the gauge information,
- calculation of the amount of fuel to be displayed on the logometer,
- conversion of the amount of fuel in one stage of the logometer with low or high compensation depending on the amount of fuel except when the ignition is switched on and during the fault finding sequence when the information given by the gauge is displayed directly without compensation.

### Minimum fuel

The minimum fuel procedure is triggered when the quantity of fuel in the tank reaches 6 litres.

The electronic circuit on the instrument panel illuminates the associated warning light.

The display of the range value is then replaced by dashes.

**ATTENTION:** if one of the displays flashes, refer to the Fault Finding sequence.

### Resetting the on-board computer

The on-board computer is reset to zero by pressing the button (2) on the end of the windscreen wiper stalk for a long time, whatever is currently being displayed.

The functions will be reset to zero if the maximum capacity of a value is exceeded.

The journey parameters are stored in a memory.

Consequently, disconnecting the battery will not affect these parameters.

## FAULT FINDING

### Detecting faults

The on-board computer has been designed to detect faults which may affect the information given by the displays or indicators.

If the indications

- fuel consumed
- fuel range
- average consumption
- instantaneous consumption

are replaced on the display by flashing dashes, this means that there has been a fault in the flow information for more than 16 consecutive kilometres.

If only the fuel range information is replaced by flashing dashes and if the minimum fuel light illuminates, this means that there has been a gauge information fault for more than 100 consecutive seconds. If the fault disappears, the minimum fuel warning light extinguishes and the fuel level indicator needle rises again.

If addition to a fault being signalled by the display flashing or a malfunction in the receiver needle, the on-board computer stores the fault.

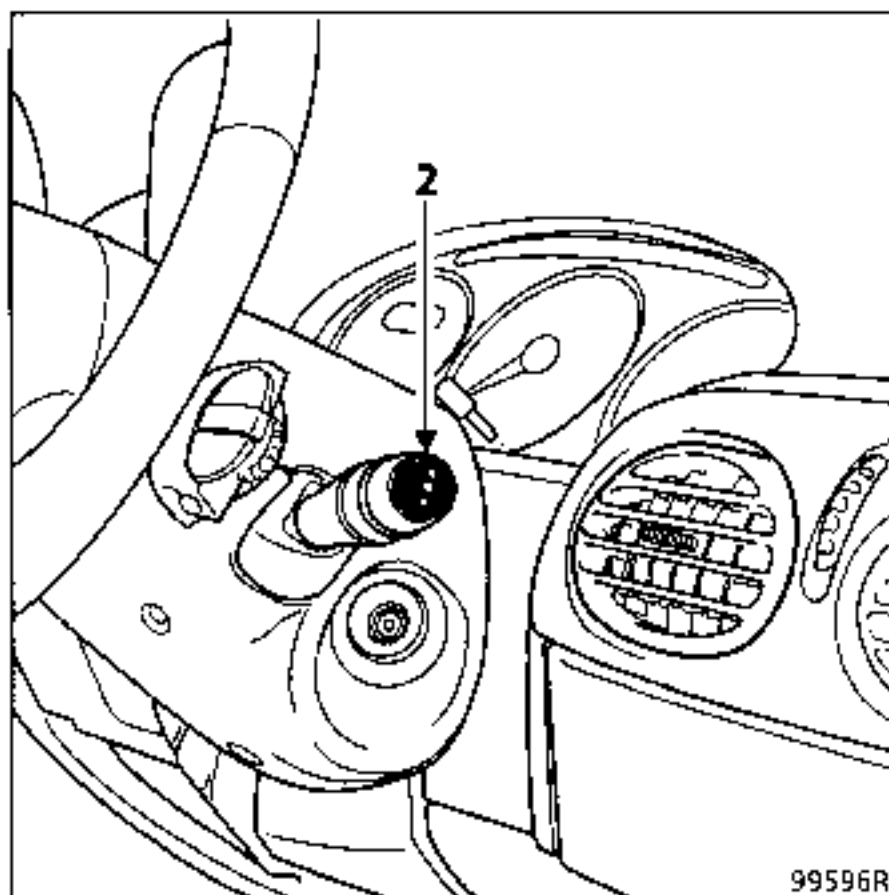


In these various cases, the fault finding sequence must be performed in order to display these memorised sensor faults.

The microprocessor on this instrument panel has a program for testing:

- the various segments of the liquid crystal display,
- the sensors it uses (fuel gauge, flow information).

#### Accessing the fault finding sequence



Keep the Reset/Scroll button (2) on the end of the windscreen wiper stalk pressed down and switch the ignition on, without the engine running

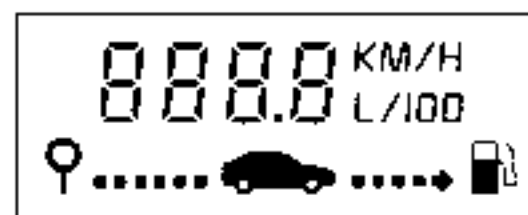
#### Fault finding sequence loop

This consists of 5 different displays which appear successively as indicated below.

Switching from one display to another is performed by short presses (less than 2 seconds) on button (2) at the end of the windscreen wiper stalk.

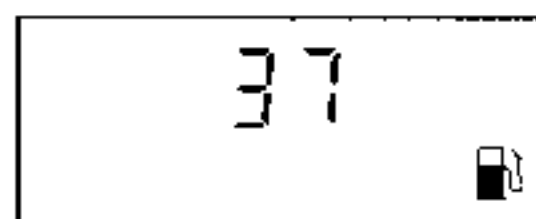
**NOTE:** during this phase, the needle receivers (indicators) operate as normal.

#### ● Testing the liquid crystal display



All segments of the liquid crystal display are illuminated.

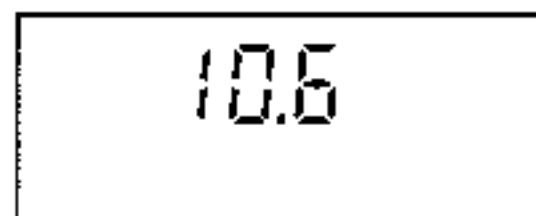
#### ● Quantity of fuel remaining in the tank



- Gauge resistance less than or equal to 280 Ohms, the corresponding amount of fuel is displayed.
- Gauge resistance greater than 280 Ohms and less than 352 Ohms (reserve), 5 litres is displayed and the warning light illuminates.
- Gauge resistance greater than 352 Ohms (gauge in open circuit), 2 dashes are displayed.

This quantity is expressed in litres even on the English version.

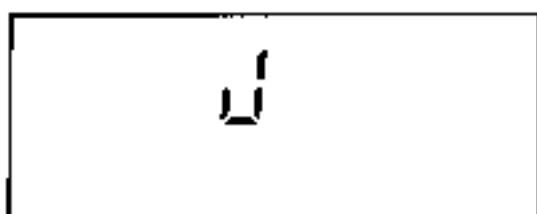
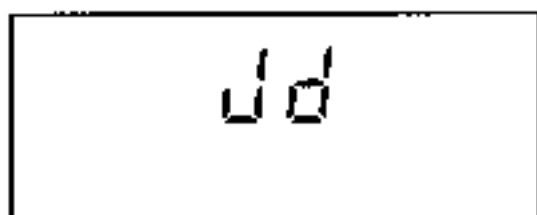
#### ● Instantaneous flow in litre/hour (engine running)





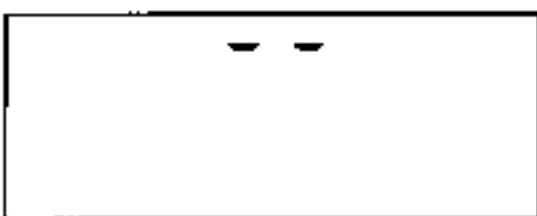
- Displaying memorised faults

- displaying all faults



\*

- display with no faults



\*

### Signification

#### 1<sup>st</sup> digit :

- J : fuel gauge fault detected (disconnected for 100 seconds)
- : no fuel gauge fault detected

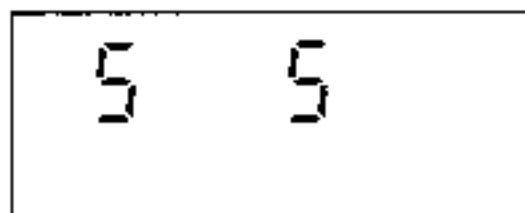
**NOTE:** the gauge is considered to be correct again when the information it provides is coherent for 3 consecutive seconds.

The amount of fuel remaining in the tank is coherent again but the temporary fault is still memorised (presence of the letter J).

#### 2<sup>nd</sup> digit :

- d : flowmeter fault detected for more than 16 kilometres
- : no flowmeter fault detected

- Software version



Displays the on-board computer's software version number.

### Resetting the sensor fault indications and exiting the fault finding sequence

The fault finding sequence is exited by pressing the Reset/Scroll button on the end of the windscreen wiper stalk for more than 2 seconds, which erases all the memorised faults and resets all journey parameters.

Switching off the ignition exits the fault finding sequence but the faults remain memorised.

**NOTE:** memorised faults can also be erased by disconnecting the battery.

\* Diesel version



## FAULT FINDING

**SPEEDOMETER DOES NOT WORKS AND FALSE  
DISPLAYS ON THE ON-BOARD COMPUTER AND  
MILEOMETER**

Check:

- the connection of the sensor cable on the gearbox,
- the connector on the sensor,
- + after ignition supply on track A1 and earth at track B2 on the sensor connector.

faulty

Repair.

correct

Use the XR 25 test kit as a pulse generator (e.g.: G2) on track B1 of the sensor connector. Does the speedometer needle move?

yes

Replace the sensor

no

Check the continuity and the insulation of the speed information line:

- between track B1 of the sensor connector and track B4 of the black module of connection R34, NOTE: for K7M engines, (without automatic clutch) between track B1 of the sensor connector and track 12 of the injection computer. Then between track 12 and track B4 on the black module of connection R34.
- between track B4 on the black module of connection R34 and track 1 of the black connector of the panel, after having disconnected :
  - the radio display connector,
  - the white module of the blue roller holder P15 on the lower part of the connection unit

correct

Check that the instrument panel connector and its pins are in good condition.

correct

faulty

Repair

Replace the instrument panel

faulty

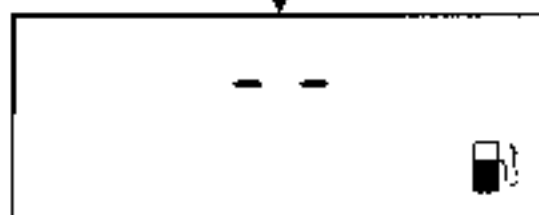
Repair



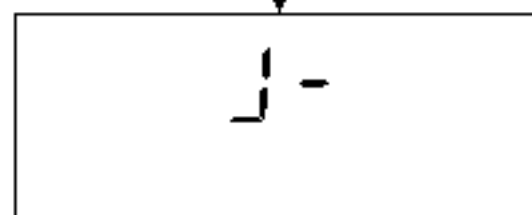
## FAULT FINDING

FLASHING DASHES APPEARING INSTEAD OF THE  
RANGE

Switch to fault finding sequence

Keep the ADAC reset/start signal/scroll button on the end of the  
windscreen wiper stalk pressed down and switch on the ignition.Press briefly on the button at the end of the  
windscreen wiper stalk to select the desired display.

and

Amount of fuel remaining in the tank.  
Minimum fuel warning light illuminates.

Gauge fault detected.

Break in gauge information.

Check that the gauge is correctly connected and  
the terminals and wires in the connector are in  
good condition.

correct

faulty

Ignition on, connect the wires of tracks  
A1 and B1 of the gauge connector.  
Does the ADAC indicate the full tank value?

yes

no

Check the gauge and  
replace if necessary.

A

Repair.  
Is the information given by  
the ADAC correct?

yes

Correct

no



## FAULT FINDING

A

Check the condition of the following connectors as well as their connections:

- clear connector of the instrument panel,
- white connector of the P16 roller holder (black) located in the upper part of the passenger compartment connection unit,
- clear and black connectors of the rear left hand / P15 connection unit connection (blue) located in the lower part of the passenger compartment connection unit.

correct

faulty

Connect track B1 of the gauge connector to the vehicle earth.  
Is the information given by the ADAC correct?

Repair.  
Is the information given by the ADAC correct?

no

yes

yes

Correct

Check the continuity of the 0 Volt line of the gauge between track A1 of the gauge connector and track A9 of the clear connector of the P15 connection (blue) on the connection unit.

Check the continuity of the "gauge information" line between track B1 of the gauge connector and track B4 of the black connector of the P15 connection (blue) on the connection unit.

correct

faulty

faulty

correct

Repair.  
Is the information given by the ADAC correct?

no

yes

no

Correct

Check the continuity of the 0 Volt line of the gauge through the passenger compartment connection unit between track A9 of the clear connector and track 10 of the white connector of the P16 roller holder (black).

Check the continuity of the "gauge information" line through the passenger compartment connection unit between track B4 of the black connector and track 6 of the white connector of the P16 roller holder (black).

correct

faulty

faulty

correct

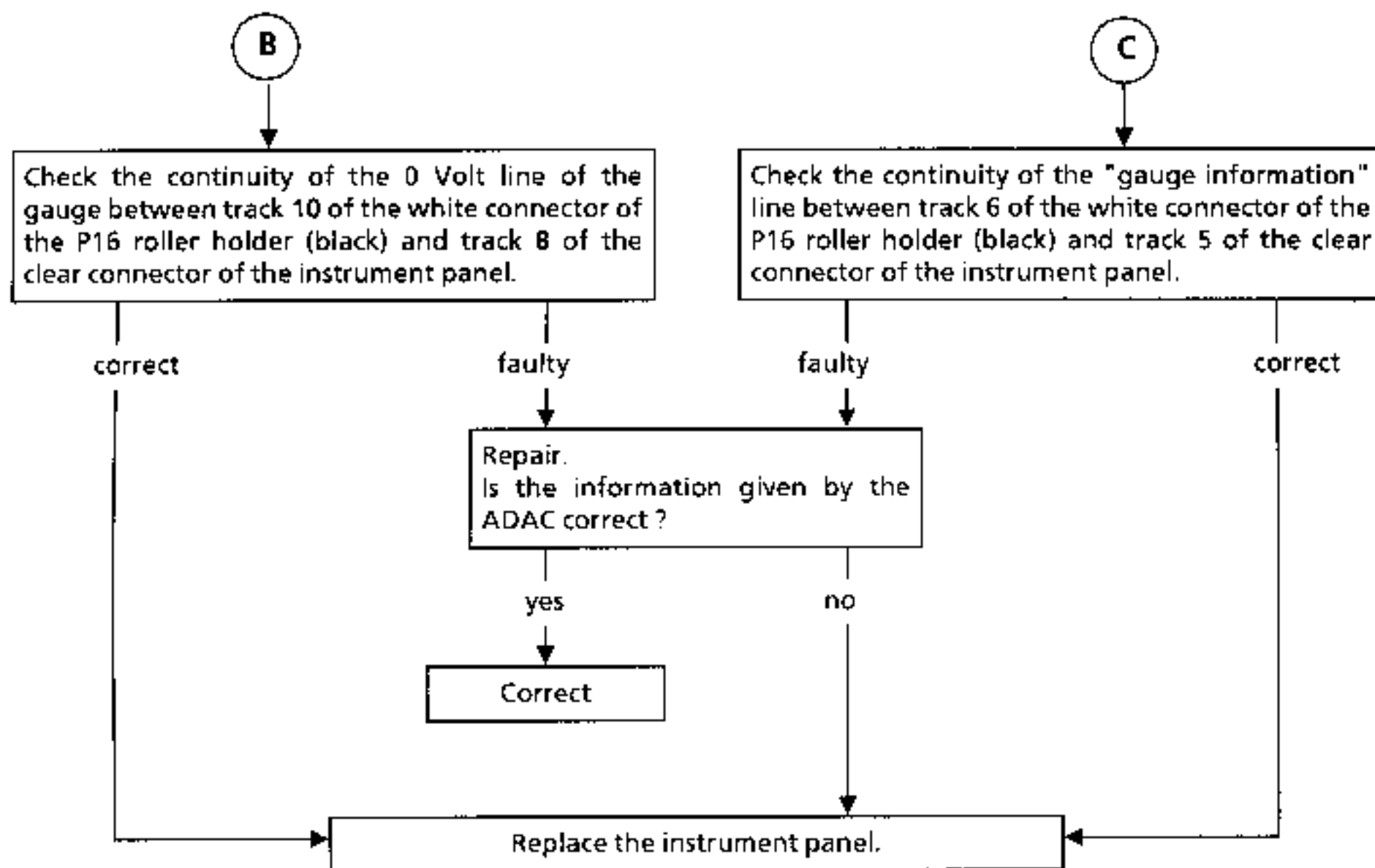
B

Replace the passenger compartment connection unit

C



## FAULT FINDING





## FAULT FINDING

FLASHING DASHES SOMETIMES APPEARING  
INSTEAD OF THE RANGE

Switch to fault finding sequence

Keep the ADAC reset/start signal/scroll button on the end of the  
windscreen wiper stalk pressed down and switch on the ignition.

Press briefly on the button at the end of the  
windscreen wiper stalk to select the desired display.

37



and

J-

The value displayed (quantity of fuel remaining)  
must be a translation of the gauge resistance R.

If  $280\ \Omega < R < 352\ \Omega$  (reserve), 5 is displayed and  
the warning light illuminates.

Gauge fault detected.

Temporary fault.  
Gauge information fault for more than 100 conse-  
cutive seconds.

Follow the method described above (page 83-21).



## FAULT FINDING

NO FUEL LEVEL INFORMATION ON NEEDLE  
RECEIVER (TANK NOT EMPTY) AND RANGE VALUE  
DISPLAYED

Check that the clear connector of the instrument  
panel is correctly connected and check the condi-  
tion of the connector terminals and wires .

correct

faulty

Repair.  
Does the indicator needle move?

no

yes

Replace the instrument panel

Correct



## FAULT FINDING

## FAULTY RANGE READING

Switch to fault finding sequence

Keep the ADAC reset/start signal/scroll button on the end of the windscreen wiper stalk pressed down and switch on the ignition.

Press briefly on the button at the end of the windscreen wiper stalk to select the desired display.

58



Maximum fuel level displayed although tank is not full.

--

No gauge fault detected

Gauge information short-circuit.

Disconnect the gauge.  
Is the information given by the ADAC correct ?

yes

no

Replace the gauge

yes

Check the insulation of track B1 of the gauge connector with respect to earth (Wiring side). Is it correct?

no

Connector disconnected, check the insulation with respect to earth of track B4 on the black connector of the P15 connection (blue) located in the lower part of the passenger compartment connection unit. Is it correct?

yes

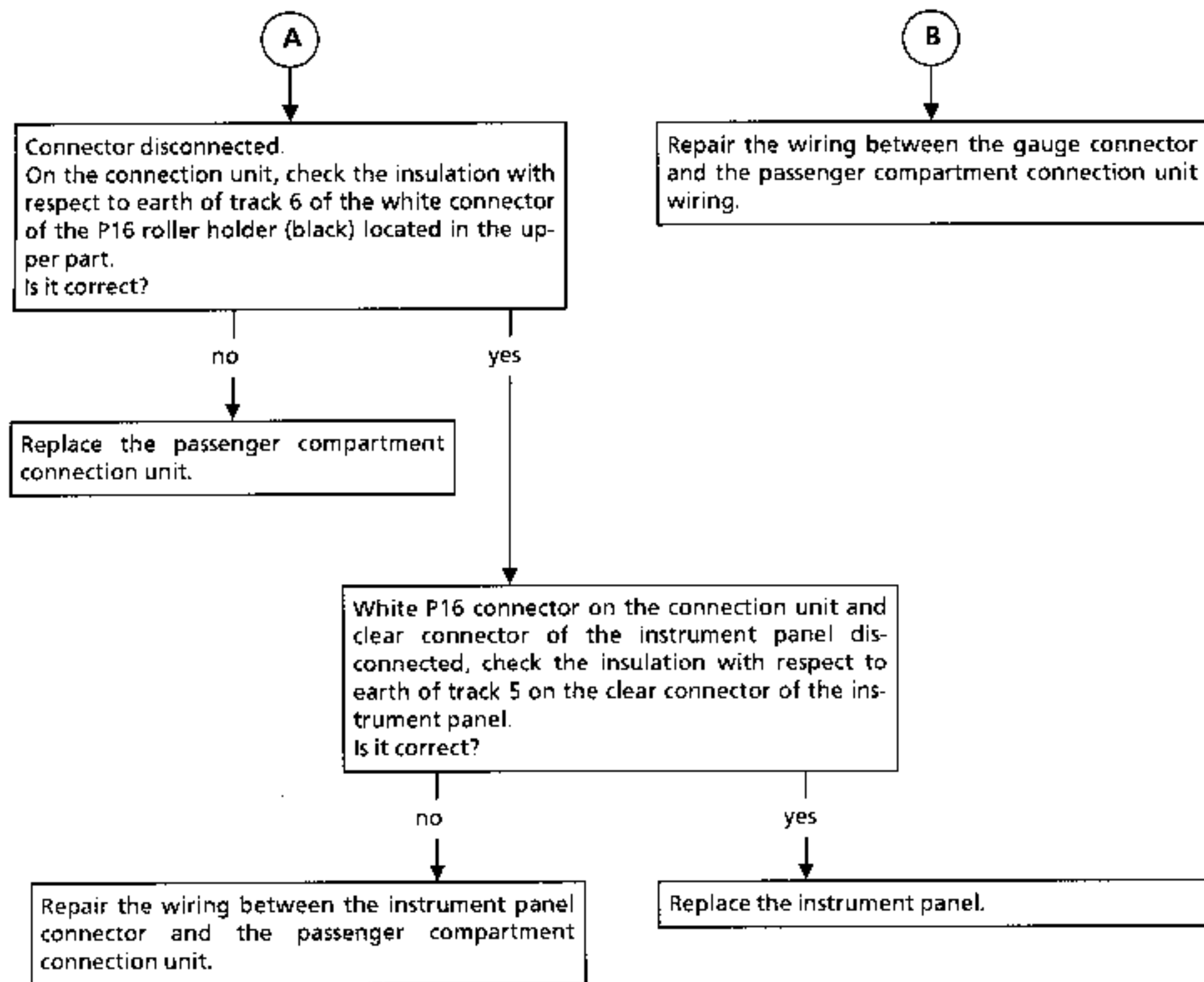
no

A

B

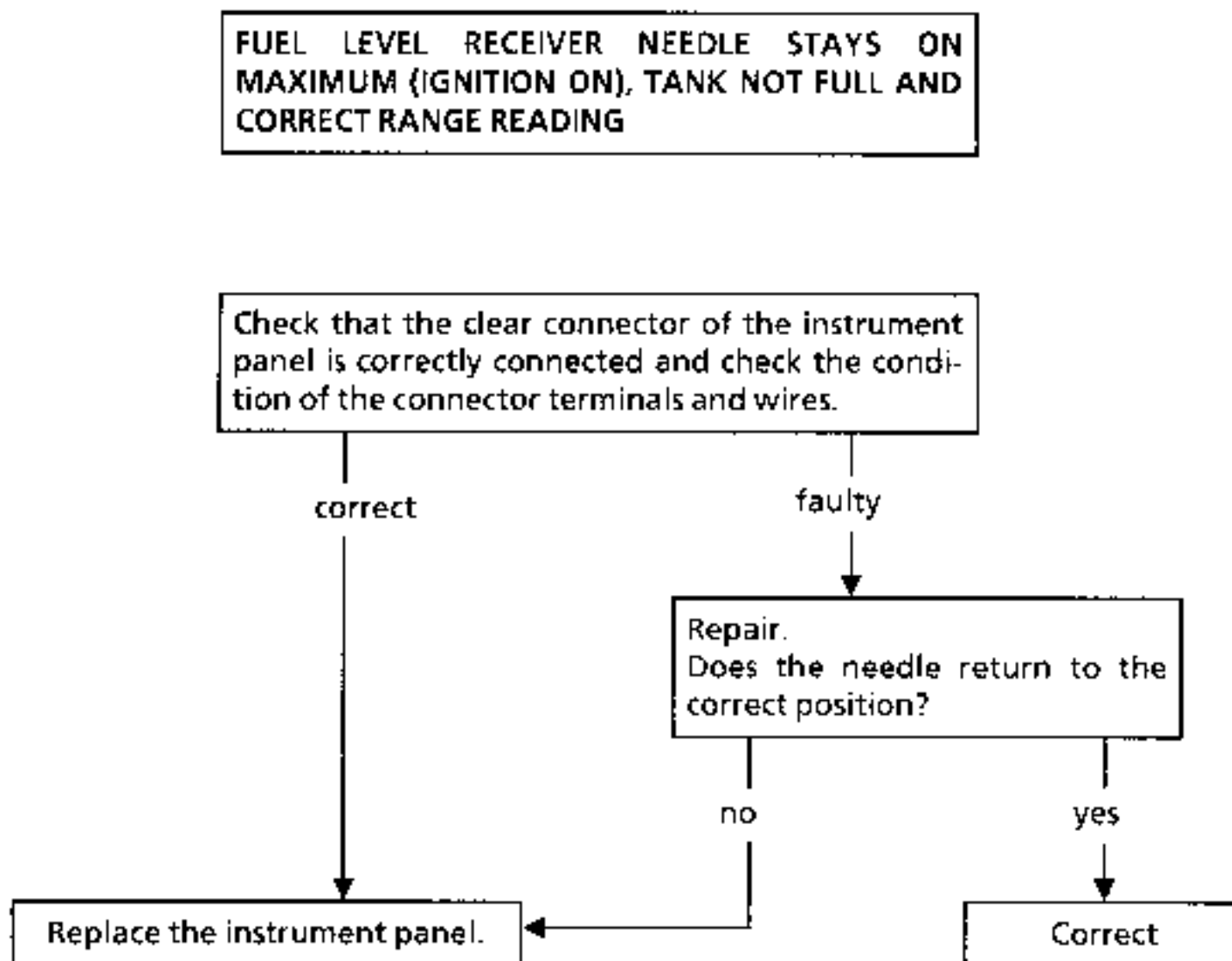


## FAULT FINDING





## FAULT FINDING





## FAULT FINDING

SEVERAL FUNCTIONS REPLACED BY FLASHING  
DASHES \*

Switch to fault finding sequence

Keep the ADAC reset/start signal/scroll button on the end of the  
windscreen wiper stalk pressed down and switch on the ignition.Press briefly on the button at the end of the  
windscreen wiper stalk to select the desired display.

Engine running

0.0

and

- d

Instantaneous flow in litres/hour.

Flow information fault detected.

Break in flow information.

Check the condition of the connector on the injection  
computer as well as the clear connector on  
the instrument panel and their connection.Check the continuity and insulation of the flow in-  
formation line between the injection computer  
track 13 (F engines) or track 50 (K engine) and  
track D2 on the blue module of connection R34  
(dashboard/engine) then between track D2 and  
track 4 of the clear connector on the instrument  
panel.

\* Except diesel.



## FAULT FINDING

SEVERAL FUNCTIONS REPLACED BY FLASHING  
DASHES\*

Switch to fault finding sequence

Keep the ADAC reset/start signal/scroll button on the end of the windscreen wiper stalk pressed down and switch on the ignition.

Press briefly on the button at the end of the windscreen wiper stalk to select the desired display.

Engine running

10.6

and

- d

Instantaneous flow in litres/hour.

Flow information fault detected.

Temporary fault. Flow information fault for more than 16 consecutive kilometres.

Check the condition of the connector on the injection computer as well as the clear connector on the instrument panel and their connection.

Check the continuity and insulation of the flow information line between the injection computer track 13 (F engines) or track 50 (K engine) and track D2 on the blue module of connection R34 (dashboard/engine) then between track D2 and track 4 of the clear connector on the instrument panel.

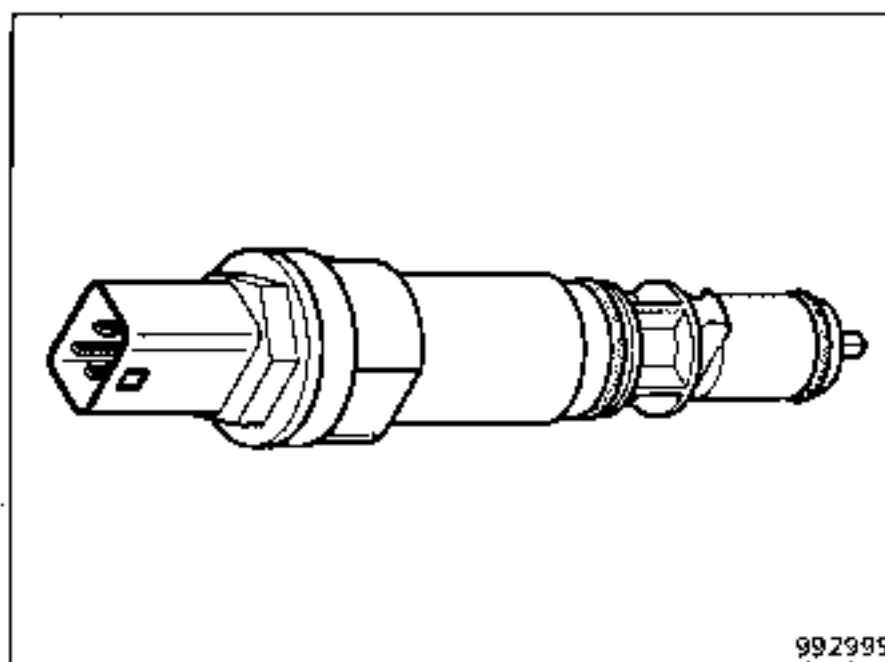
\* Except diesel.



**SPEED INFORMATION**

The instrument panel (speedometer, mileometer and ADAC) receive the vehicle speed information from an electronic Hall effect sensor.

This information is also sent to some electronic units (injection computer).

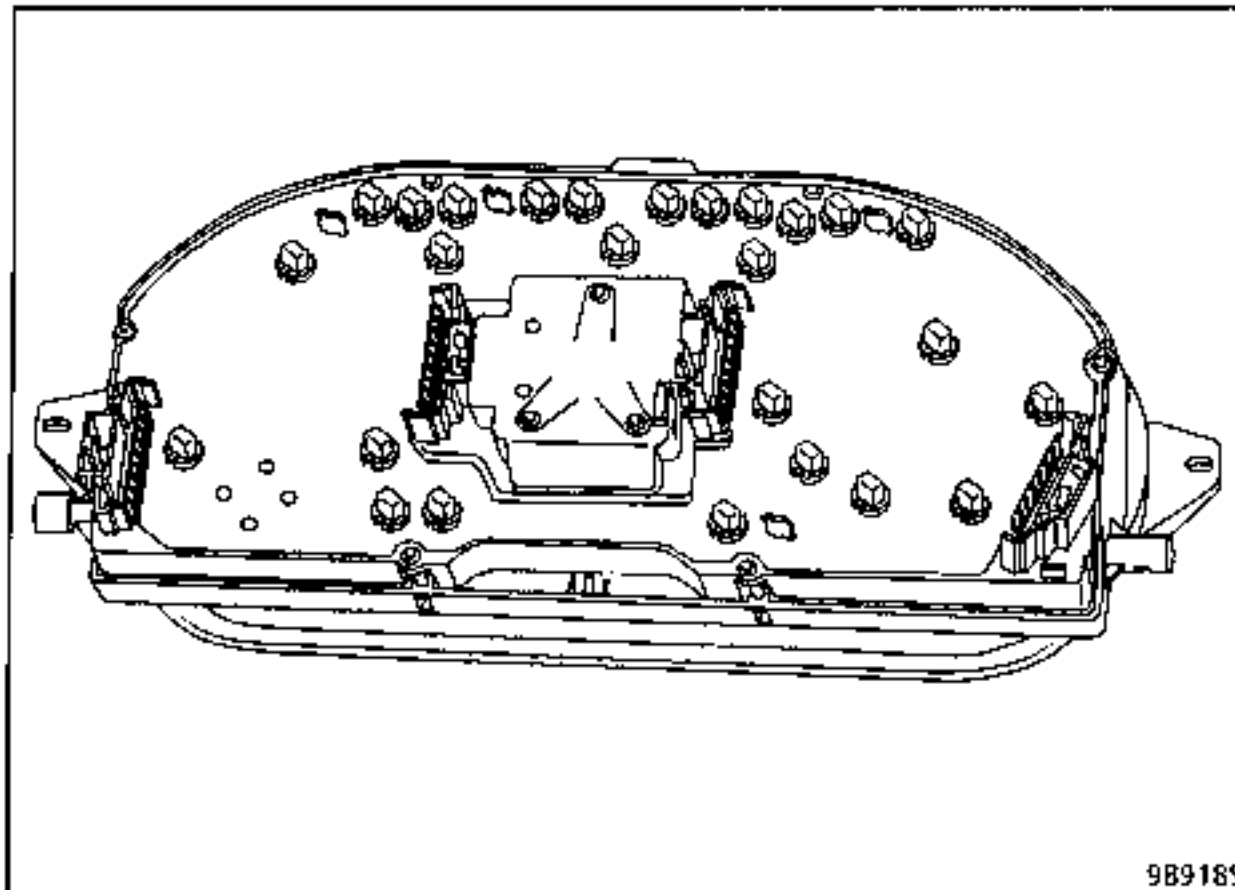
**CONNECTION**

Track	Allocation
A	+ 12 volts after ignition
B1	Vehicle speed information
B2	Earth

\* For vehicles fitted with an instrument panel with ADAC



## CONNECTION (in more detail)



## Connector A (clear)

Track	Allocation
1	+ after ignition
2	Instrument panel lighting
3	Earth
4	Fuel flow information
5	Fuel gauge information
6	Coolant temperature warning light
7	Fuel level warning light
8	Fuel gauge earth
9	+ oil level sensor
10	– oil level sensor

## Connector B (brown)

Track	Allocation
1	Handbrake tell-tale and nivocode tell-tale
2	ADAC reset / scroll
3	Engine immobiliser warning light
4	Airbag warning light
5	Not used
6	ABS warning light
7	Screen wash minimum level warning light
8	Left hand indicator tell-tale
9	Rear fog lights tell-tale
10	Front fog lights tell-tale



**Connector C (black)**

<b>Track</b>	<b>Allocation</b>
1	Speed information
2	Dipped beam headlights tell-tale
3	Main beam headlights tell-tale
4	Right hand indicator tell-tale
5	Earth
6	Heated rear screen tell-tale
7	Catalytic converter fault warning light
8	Heated windscreen tell-tale
9	Brake pad wear warning light
10	+ after ignition

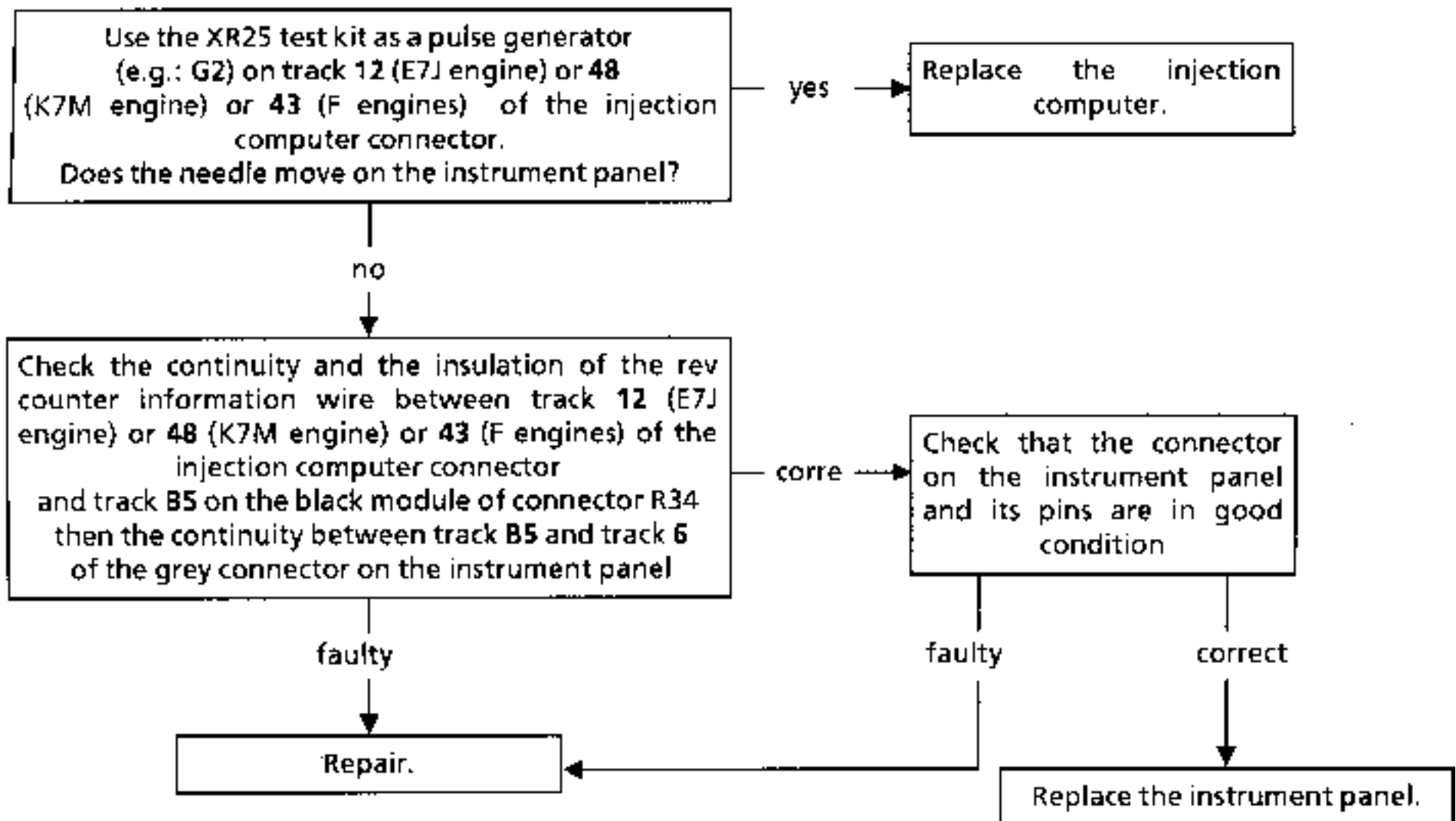
**Connector D (grey)**

<b>Track</b>	<b>Allocation</b>
1	Coolant temperature indicator
2	Oil pressure warning light
3	Battery charge warning light
4	1 before ignition
5	Not used
6	Rev counter
7	Electronic fault warning light (various computers)
8	Electronic fault warning light (various computers)
9	Not used
10	Preheating warning light



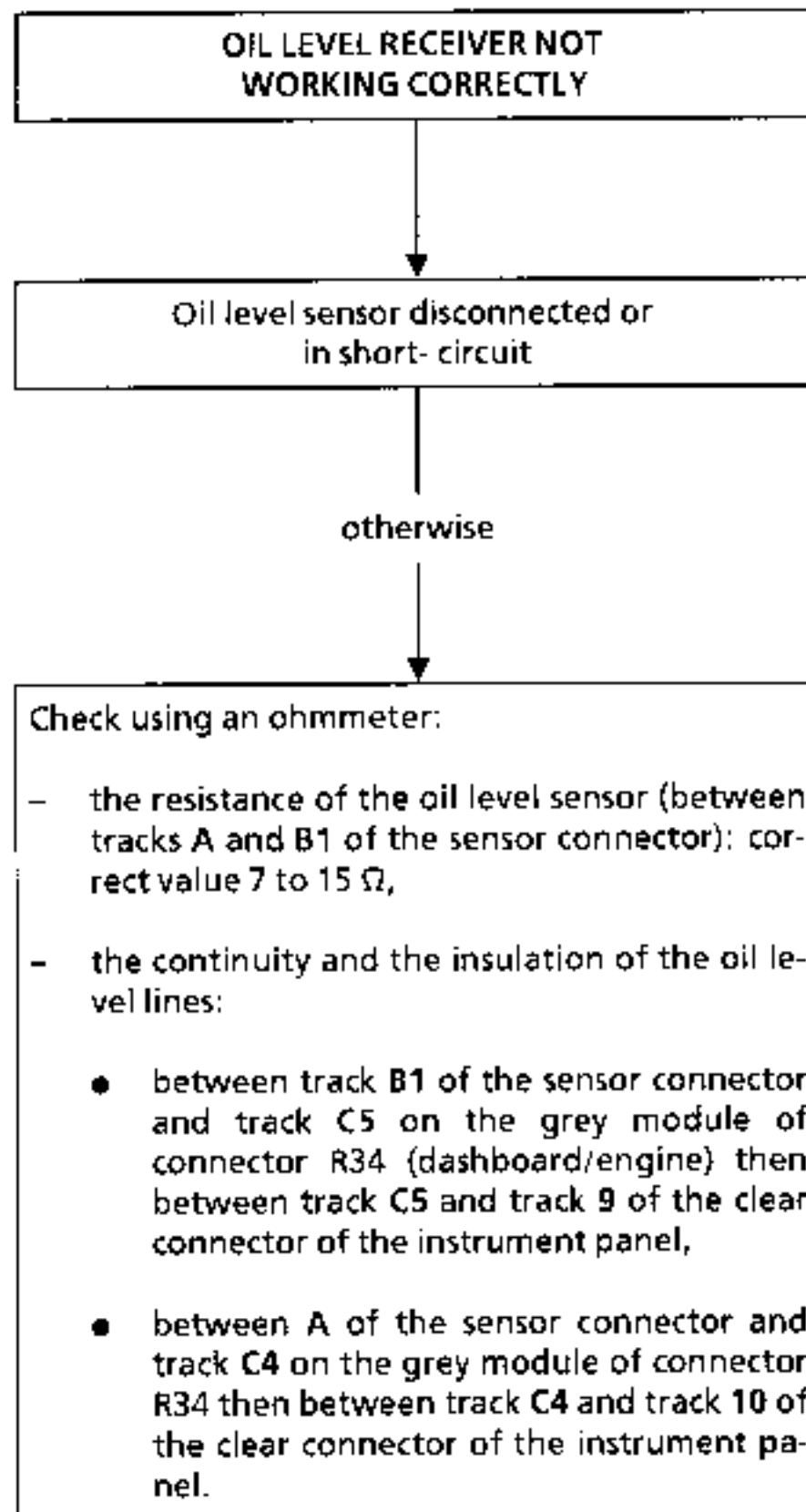
## FAULT FINDING

## REV COUNTER DOES NOT WORK



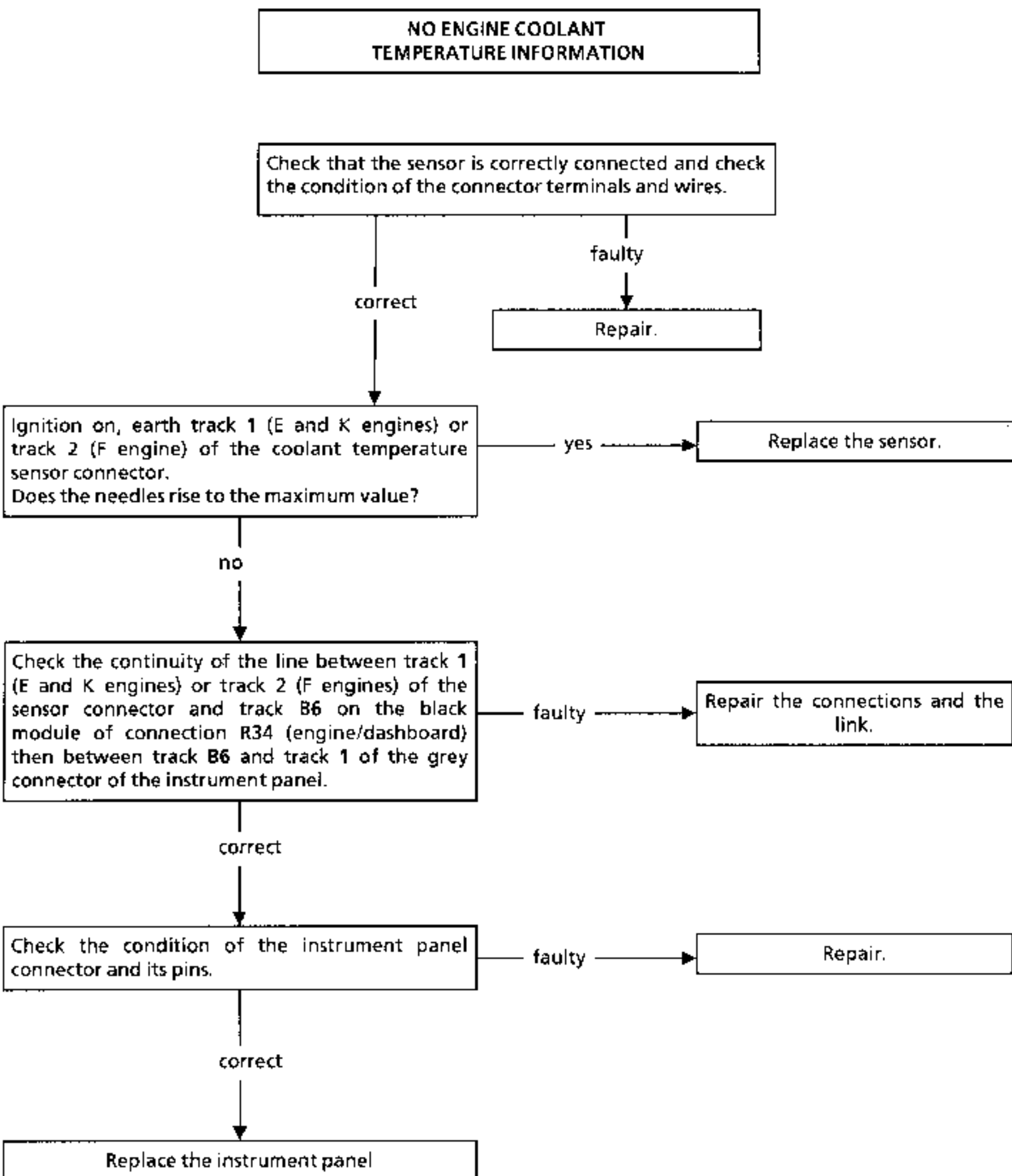


## FAULT FINDING





FAULT FINDING





## FAULT FINDING

THE ENGINE COOLANT TEMPERATURE  
NEEDLE STAYS ON MAXIMUM (IGNITION ON),  
ENGINE COLD

Short circuit of the coolant temperature sensor  
through earth.

Check that the sensor is correctly connected and  
check the condition of the connector terminals and  
the wires.

correct

faulty

Ignition on, disconnect the connector on the coolant  
temperature sensor. Does the needle return to the  
cold engine position?

Repair.

yes

no

Replace the sensor.

Check the insulation of the line between track 1 (E  
and K engines) or track 2 (F engines) of the sensor  
connector and track B6 on the black module of  
connection R34 (engine/dashboard) then between  
track B6 and track 1 of the grey connector on the  
instrument panel

faulty

correct

Repair the connections and the  
link.

Check the condition of the instrument panel  
connector and its pins.

faulty

Repair.

correct

Replace the instrument panel



SPECIAL TOOLING	
Mot. 1264-01	Wrench for removing gauge nut
Mot. 1265 or Mot. 1265-01	Pliers for removing quick release unions

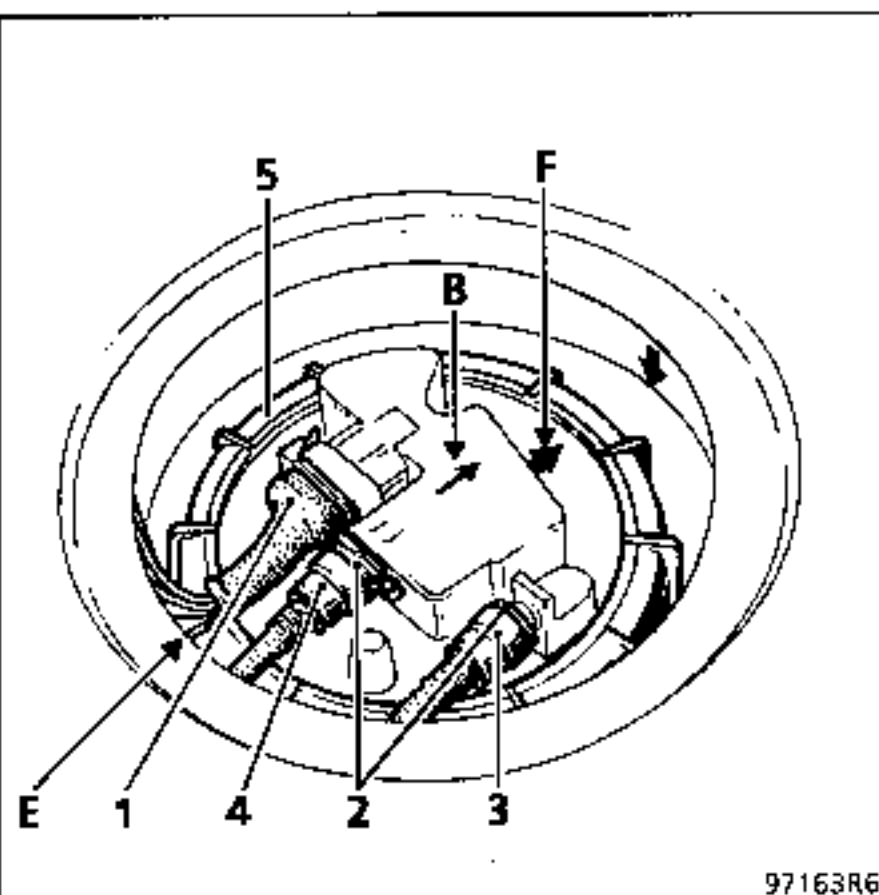
**IMPORTANT:**

Before working on the fuel level sender unit, the following precautions must be observed:

- Do not smoke.
- Keep all flames or incandescent materials away from the working area.

**REMOVING THE SENDER-GAUGE ASSEMBLY**

The sender-gauge assembly can be removed through the flap located under the rear seat and does not require the tank to be removed.



Disconnect the battery.

Lift the rear seat.

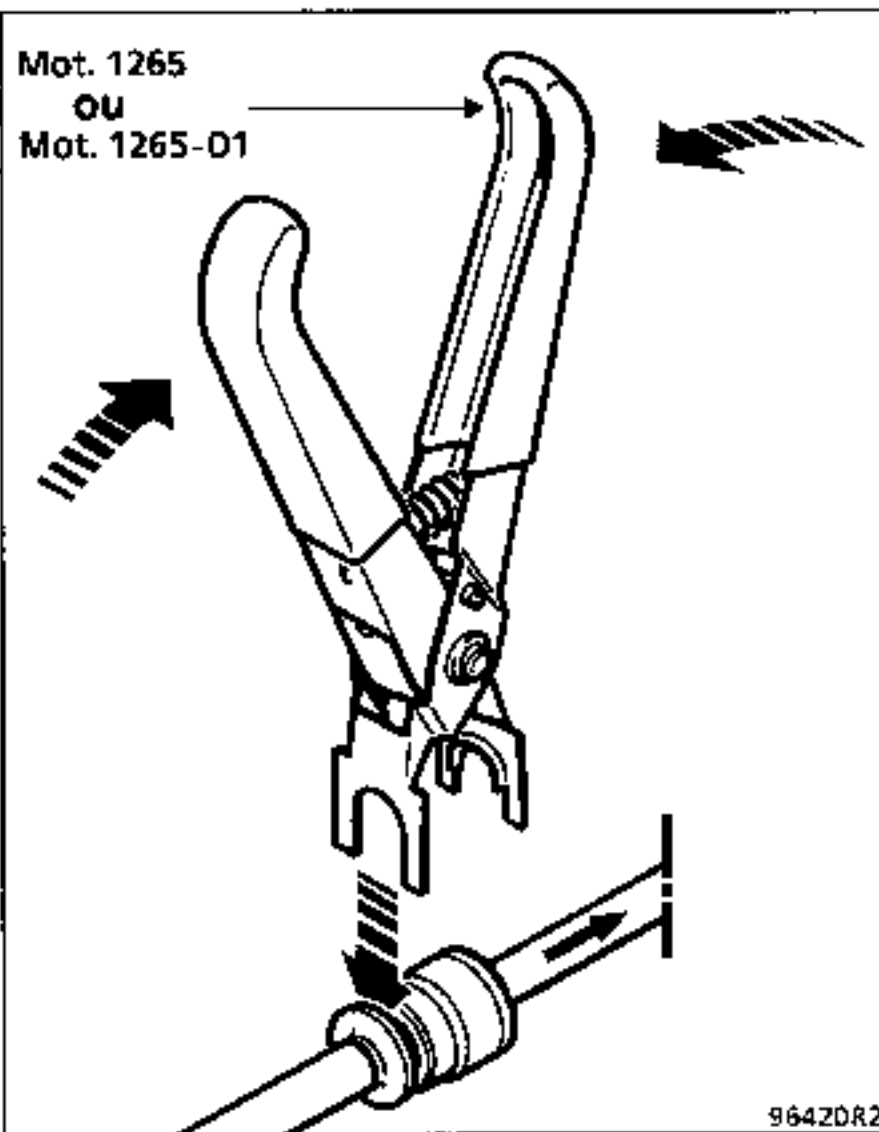
Remove the plastic cover from the fuel gauge.

Disconnect the electrical connector (1).

Release the clips (2).

Then disconnect the fuel supply pipe (3) (identified by a green quick release union) and the fuel return pipe (4) (identified by a red quick release union) using the special pliers Mot. 1265 or Mot. 1265-01.

**ATTENTION :** when removing the pipes, fuel may splash out due to the residual pressure. Use protective covers.





Release the connector and the pipes on the gauge side.

Remove the mounting nut (5) from the sender-gauge assembly using tool Mot. 1264-01.

Release the nut, remove the tool, slacken the nut by hand and remove it.

Remove the sender-gauge assembly.

**NOTE:** if several hours are to elapse between removing and refitting the sender-gauge assembly, replace the nut onto the tank to prevent distortion.

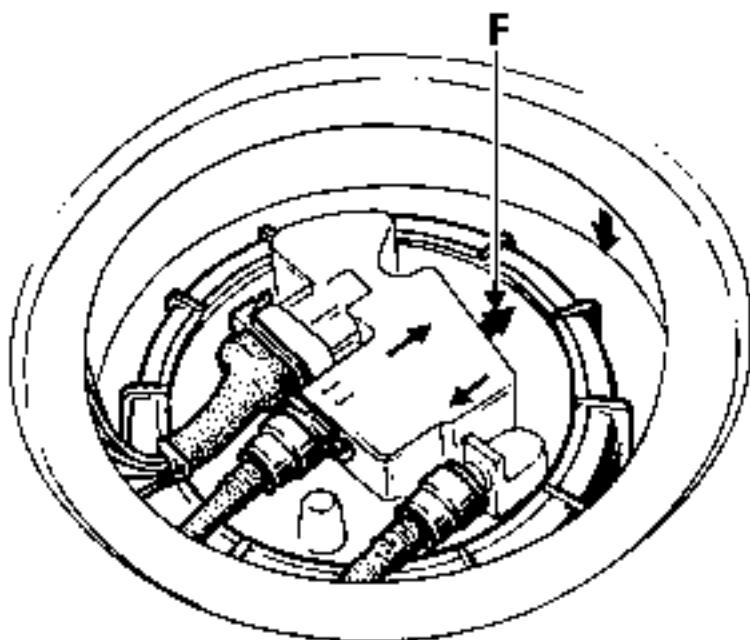
### REFITTING THE SENDER-Gauge ASSEMBLY

#### Special features

Check that the seal is not damaged and renew it if necessary.

Replace the seal on the tank before fitting the assembly.

Refit the sender-gauge assembly onto the tank, rotating it so that it lines up with the reference arrow (F) along the longitudinal axis of the vehicle facing backwards.



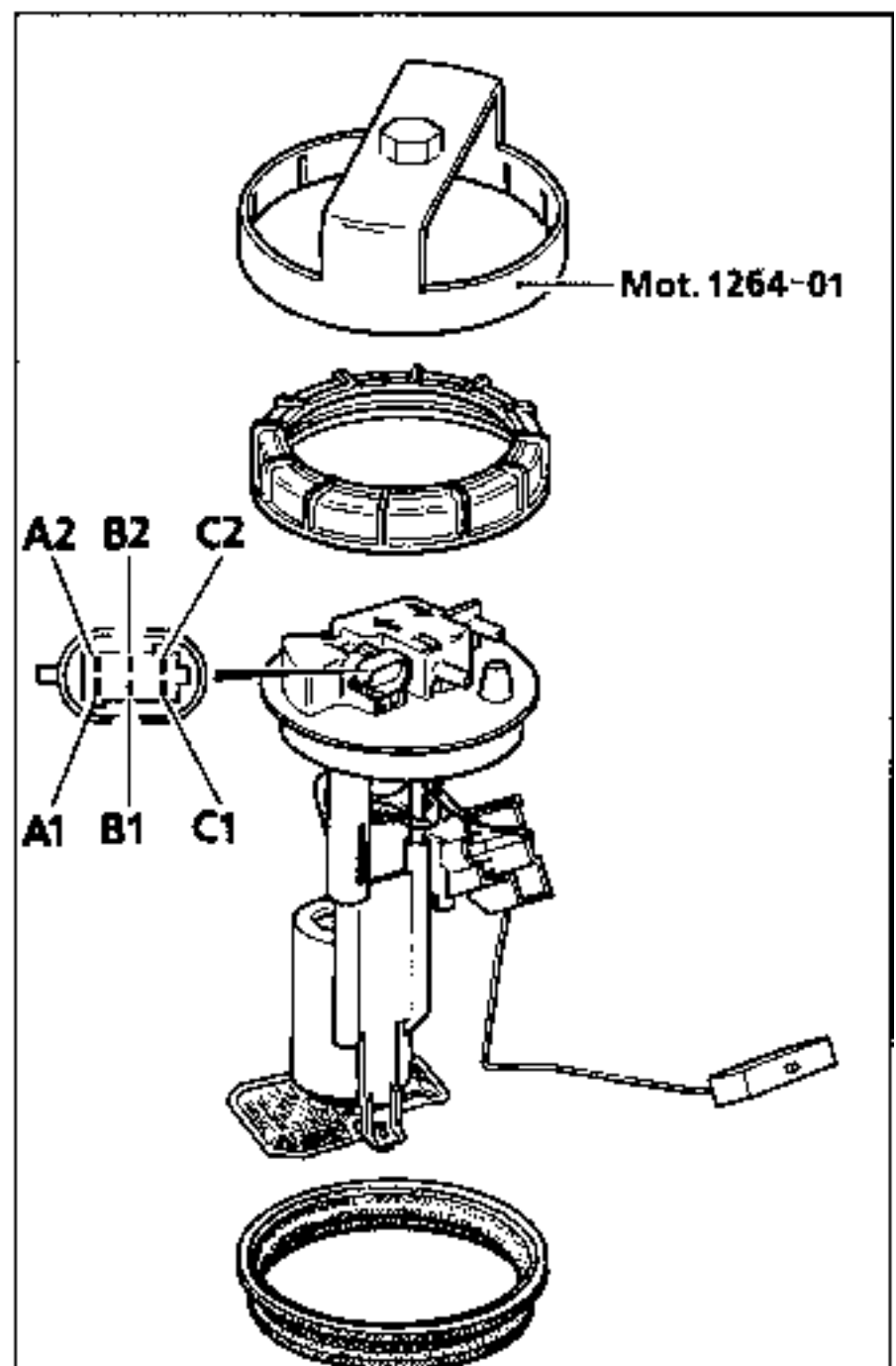
97163R7

Tighten the mounting nut of the sender-gauge assembly to a torque of 3.5 daN.m using tool Mot. 1264-01 whilst holding the gauge to prevent it from rotating.

Ensure that the connector is clipped in correctly and that the quick release unions are correctly clipped on the pipes (presence of 2 O-rings).

Reconnect the battery.

### CONNECTION



97162R1



## CONNECTION

Track	Allocation
A1	Earth
A2	Fuel level warning light
B1	Gauge information to instrument panel
B2	Not used
C1	+ Pump
C2	- Pump

### Check

Indication	Value between terminals A1 and B1 (in $\Omega$ )
4/4	7 maximum
3/4	$54.5 \pm 7$
1/2	$98 \pm 10$
1/4	$155 \pm 16$
Minimum level	$300 \pm 20$

Check that the resistance varies by moving the float.

Indication	Height H (in mm)
4/4	161
3/4	142
1/2	120
1/4	100
Minimum level	23

### Measuring the height H

With the gauge removed, place it on a flat surface. H is the height measured between the float pin and the work surface.

**NOTE:** all these values are given for information only.



## OPERATION

The sensor consists of a filament with a high resistivity coefficient. A wire with a current passing through it does not have the same thermal conductivity when immersed in a liquid as it does in air.

After a certain time, a difference in voltage at the sensor terminals is obtained depending on the depth to which the filament is immersed. This voltage difference is recorded by an electronic card which then sends this information to the level indicator.

When the ignition is switched on, the oil level scale illuminates and the needle moves.

After approximately 30 seconds, the scale extinguishes and the needle then indicates the coolant temperature.

## FAULT FINDING

If the scale on the combined indicator does not illuminate when the ignition is switched on, this means that the oil level sensor is faulty (disconnected or short-circuited). The coolant temperature is displayed straight away.

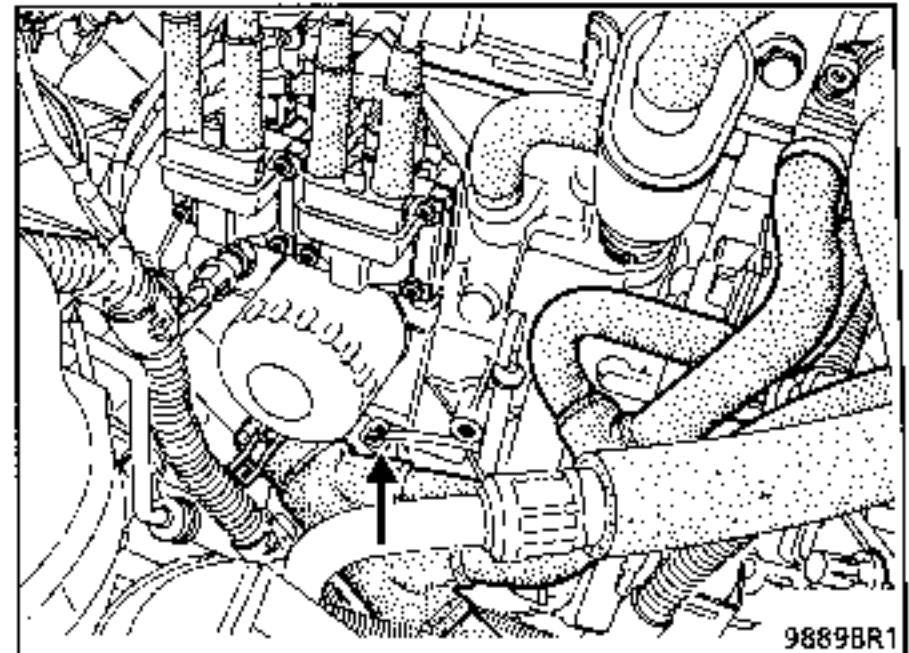
**NOTE:** where the oil level function is associated to a minimum level warning light (depending on the engine), this light will illuminate if there is a fault (short circuit or open circuit).

## CHECK

See fault finding page 83-35 "oil level receiver not working correctly".

## LOCATION

### F engines





## OPERATION

A thermistor transmits a variation in resistance to the receiver as a function of the temperature of the coolant and an overheating switch illuminates the warning light on the instrument panel if the temperature reaches 115° C.

## SPECIAL NOTE

When the instrument panel is fitted with a combined coolant temperature and oil level indicator, when the ignition is switched on, the oil level scale illuminates and the needle moves.

After approximately 30 seconds, the scale extinguishes and the needle then indicates the coolant temperature.

## FAULT FINDING

Refer to the "instrument panel fault finding" section.

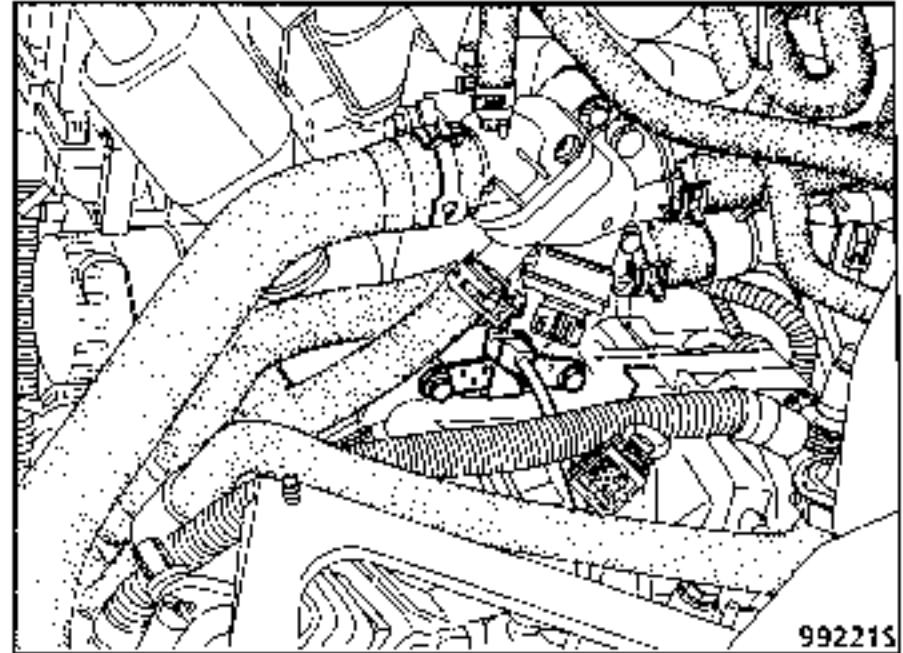
## CHECK

Connect an ohmmeter between track 1 (K and E engines) or track 2 (F engines) of the sensor and vehicle earth.

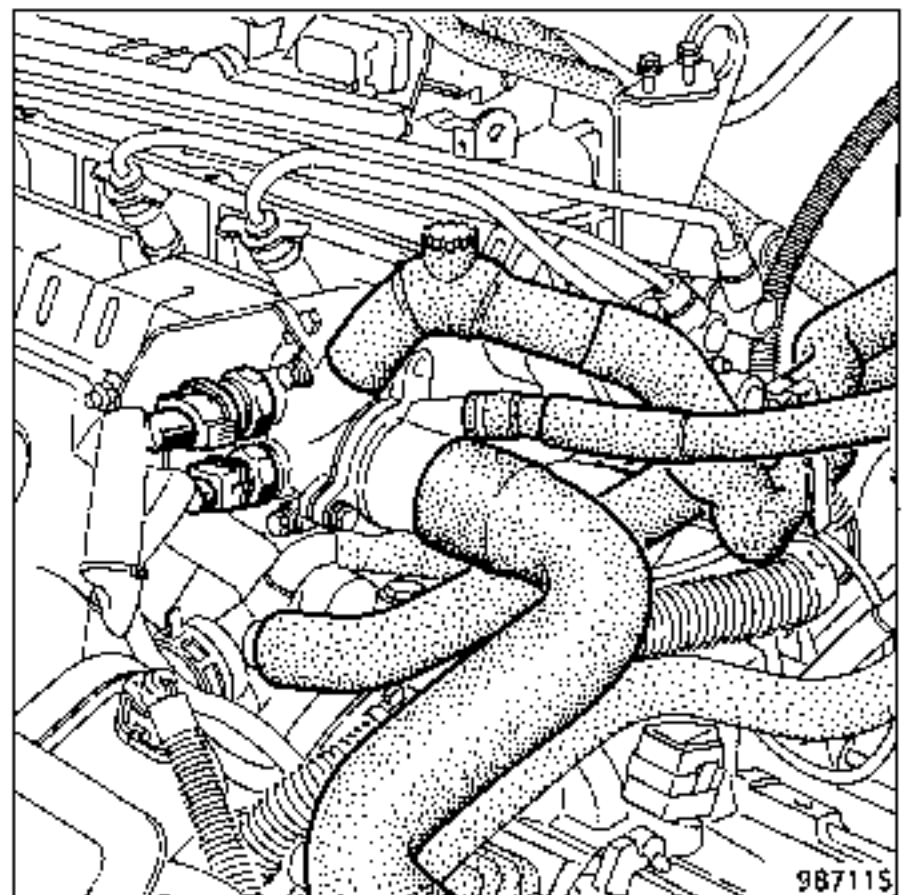
Correct value: 60 to 1 250  $\Omega$ .

## LOCATION

### F engines



### E and K engines





**REMOVAL - REFITTING**

Disconnect the battery.

Make sure the wheels are straight

Remove the steering wheel and the 2 half cowlings according to the method described in the "removing the dashboard" section (see chapter 83).

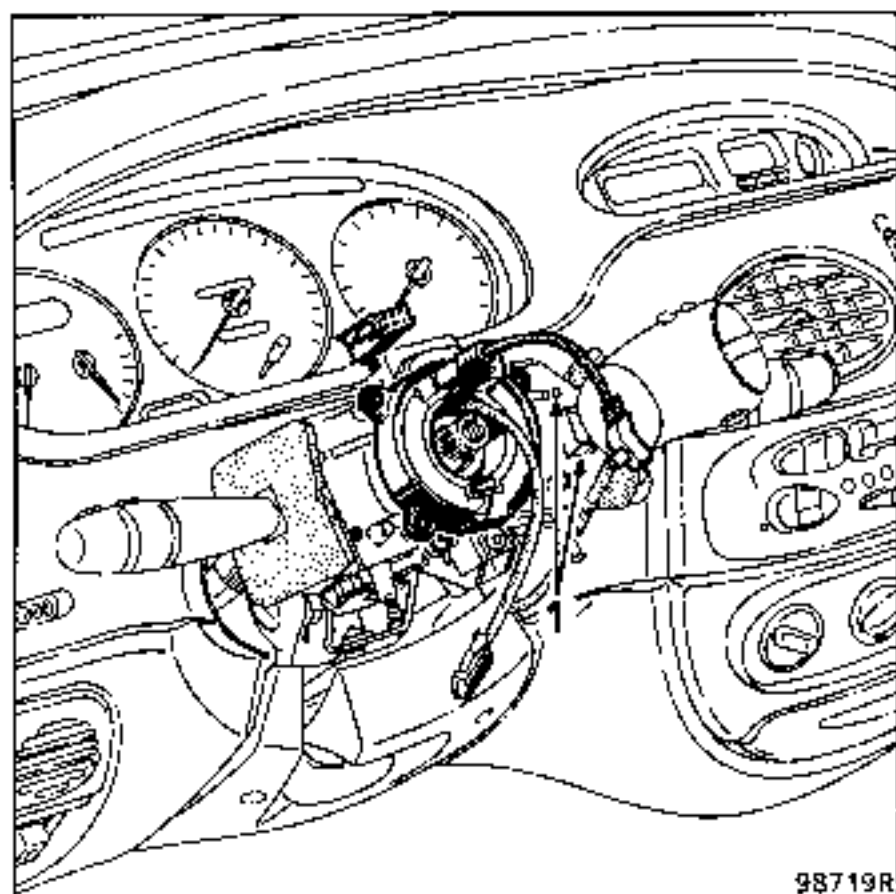
**ATTENTION:** ensure that the specific instructions for removing a steering wheel fitted with an airbag are complied with.

Disconnect the connector from the wiper stalk.

Remove the 2 bolts (1) and slide the stalk to the right to release it.

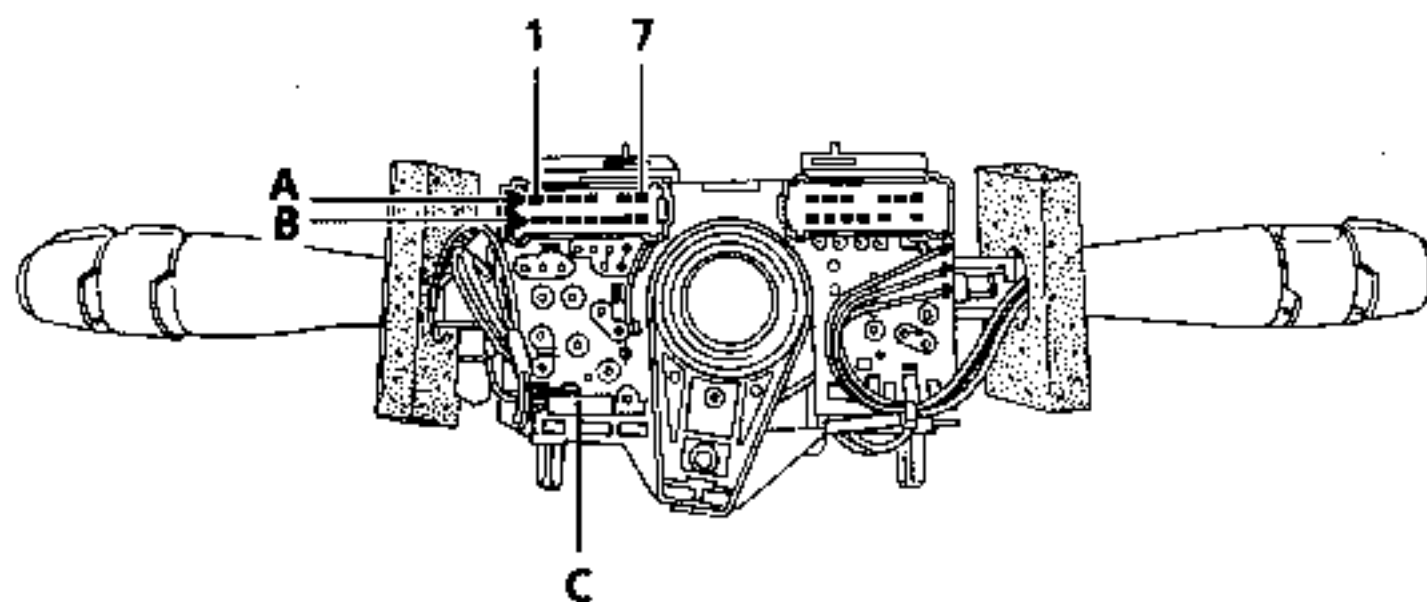
**NOTE:** for vehicles fitted with airbags, comply with the instructions given in the section "notes for refitting a steering wheel with airbag..." of chapter 83; as well as:

- ensure that the wheels are always straight,
- check that the rotary switch is always immobilised before being refitted.  
If this is not the case, follow the centring method described in chapter 88 "driver's airbag".
- replace the steering wheel bolt (pre-glued bolts).





CONNECTION (in more detail)



96944R

Track	Allocation
A1	Front wiper timer
A2	High speed wipe
A3	Slow speed wipe
A4	Front washer pump
A5	Not used
A6	Front wiper park
A7	+ after ignition windscreen wipers
B1	Rear washer pump
B2	Rear wiper timer
B3	Not used
B4	+ after ignition rear screen wiper
B5	ADAC scroll earth
B6	Not used
B7	ADAC scroll / trip reset

NOTE:

- The wiper timer rheostat can be tested between tracks A1 and A7. Positions :

rest	≈	10 kΩ
1 <sup>st</sup> notch	≈	8 kΩ
2 <sup>nd</sup> notch	≈	5 kΩ
3 <sup>rd</sup> notch	≈	2.5 kΩ
4 <sup>th</sup> notch	≈	0 Ω

- Check that the 2 track connector is correctly connected (C).
- Refer to the special operating notes on the front and rear wipers in section 85.



## REMOVAL

Disconnect the battery.

Make sure the wheels are straight

Remove the steering wheel and the 2 half cowlings according to the method described in the "removing the dashboard" section (see chapter 83).

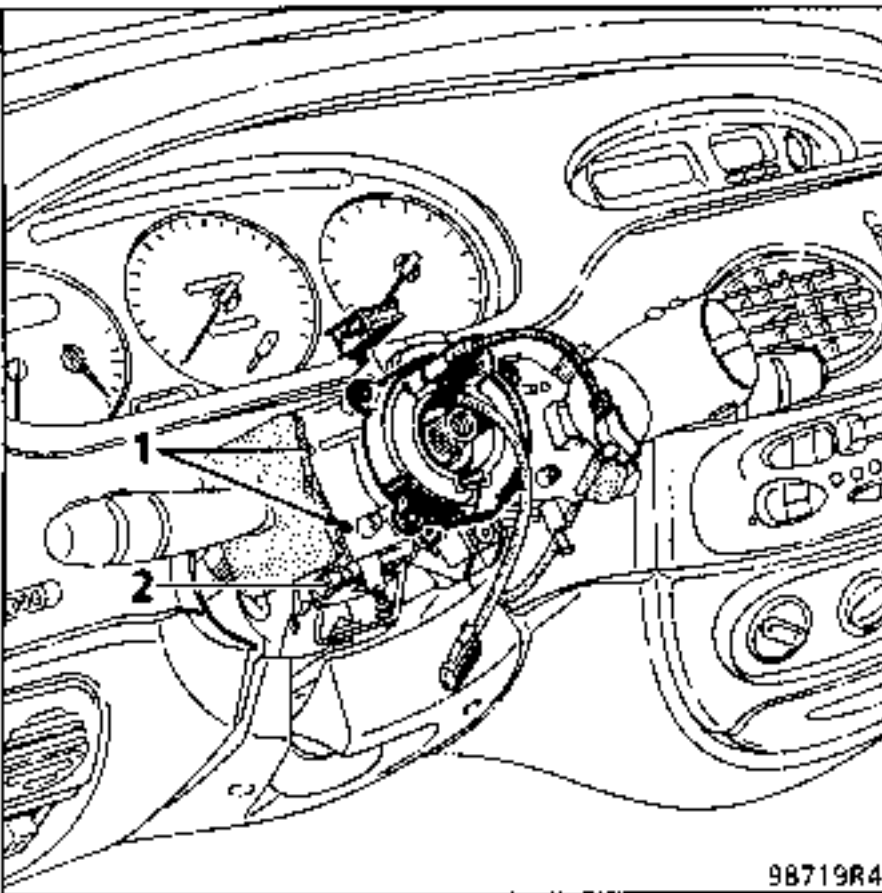
**ATTENTION:** ensure that the specific instructions for removing a steering wheel fitted with an airbag are complied with.

Disconnect the connector from the lights stalk and the 2 clips (2) of the horn (under the stalk).

Remove the 2 bolts (1) from the stalk and slide it to the left to release it.

**NOTE:** for vehicles fitted with airbags, comply with the instructions given in the section "notes for refitting a steering wheel with airbag..." of chapter 83; as well as:

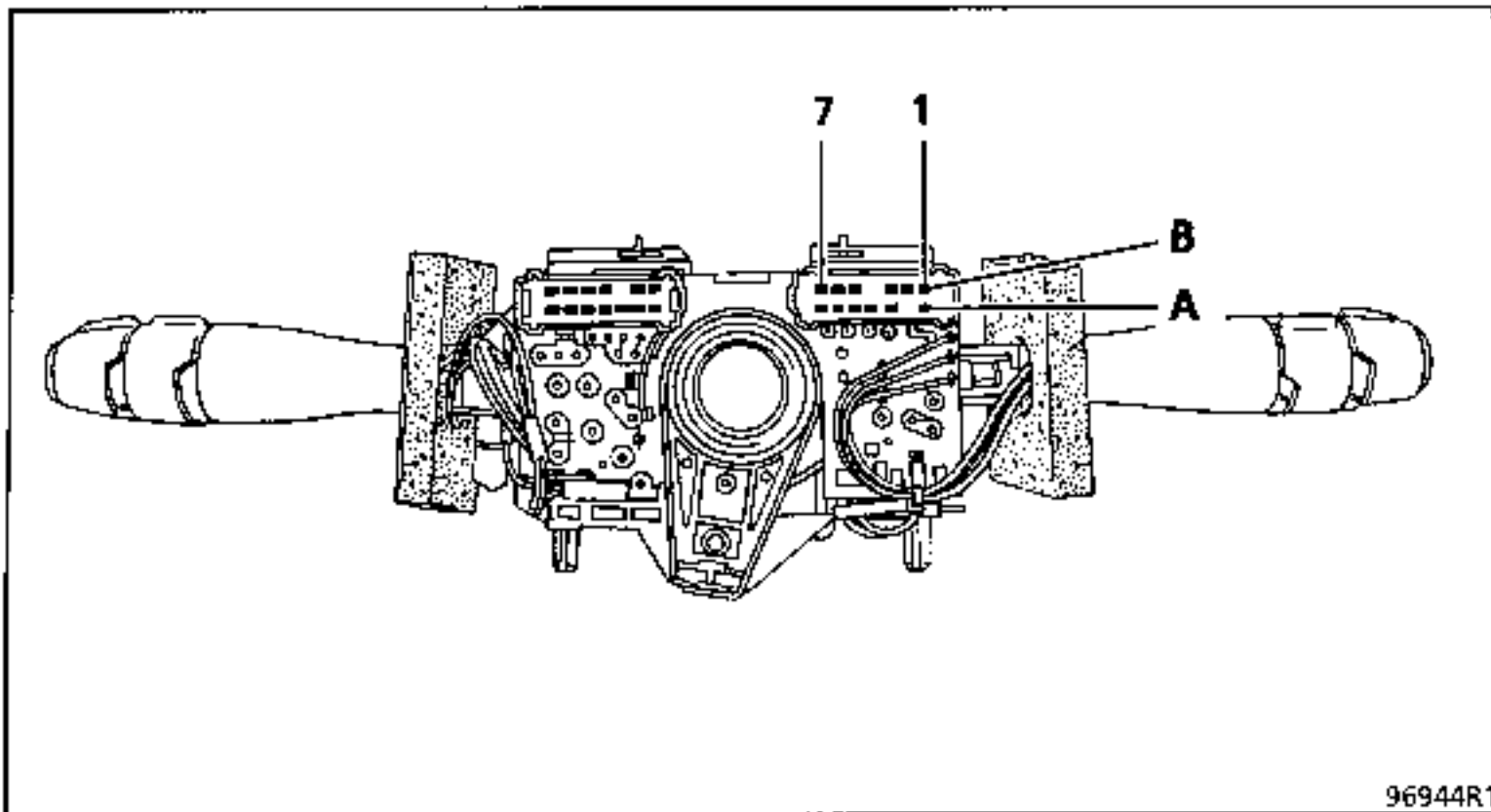
- ensure that the wheels are always straight,
- check that the rotary switch is always immobilised before being refitted.  
If this is not the case, follow the centring method described in chapter 88 "driver's airbag".
- replace the steering wheel bolt (pre-glued bolts).



98719R4



CONNECTION {in more detail}



Track	Allocation
A1	Front fog lights
A2	Not used
A3	Rear fog light
A4	Horn
A5	Right hand indicators
A6	Flasher unit
A7	Left hand indicators
B1	Side lights
B2	+ before ignition side lights
B3	+ before ignition dipped beam headlights
B4	Not used
B5	Dipped beam headlights
B6	+ before ignition main beam headlights
B7	Main beam headlights



**REMOVAL - REFITTING**

Disconnect the battery and straighten the wheels.

Remove the steering wheel and the 2 half cowlings in accordance with the method described in the "removing the dashboard" section (see chapter 83).

Disconnect:

- the lights stalk connector,
- the wiper stalk connector,
- the rotary switch connector under the steering wheel (if fitted with an airbag).

Before removing the assembly, the position of the rotary switch under the steering wheel must be noted :

- either by ensuring that the wheels are straight before removing in order to position the strip in the centre,
- or by securing the rotor of the rotary switch with adhesive tape.

Slacken the bolt (F) then hit the screwdriver firmly to release the cone.

**Special notes for refitting**

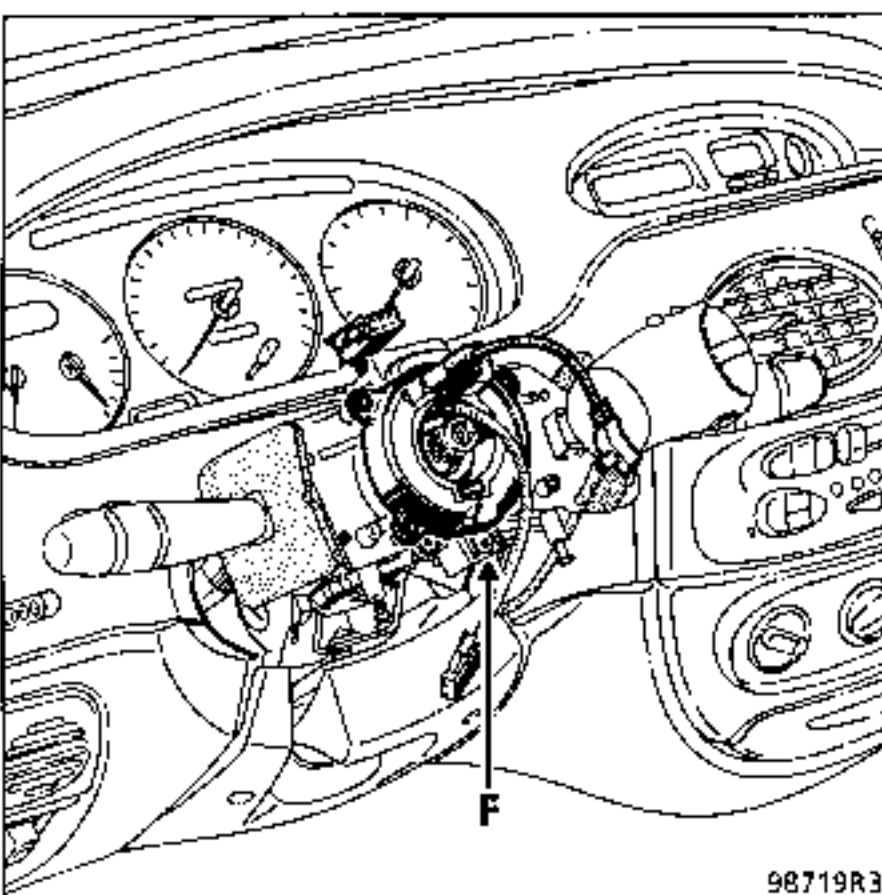
Fit the mounting complete with its components as far as possible onto the steering column.

Refit the remaining components and only lock the bolt (F) when the 2 half cowlings have been refitted in order to align the stalks with the instrument panel and the dashboard.

This operation is made easier due to a cut-out which provides access to the bolt (F) in the lower half cowling.

For vehicles fitted with airbags, comply with the instructions given in the section "notes for refitting a steering wheel with airbag..." of chapter 83; as well as:

- ensure that the wheels are always straight,
- check that the rotary switch is always immobilised before being refitted.  
If this is not the case, follow the centring method described in chapter 88 "driver's airbag"
- replace the steering wheel bolt (pre-glued bolts).



Remove the mounting with the stalks and separate the components (if the mounting is being replaced).



This provides the electrical connection between the steering column and the steering wheel.

It consists of a strip with conductive tracks (airbag) and has a sufficient length to allow the steering wheel to rotate 2.5 times (full lock plus safety margin) in each direction.

## REMOVAL - REFITTING

**ATTENTION:** pyrotechnic systems (airbags and pretensioners) must not be handled near to a heat source or flame; they may be accidentally triggered.

**IMPORTANT :** when removing the steering wheel, the airbag connector (C) **MUST** be disconnected. The airbag is fitted with a connector which is short-circuited when it is disconnected so as to prevent accidental triggering.

Remove:

- the airbag by means of its 2 star bolts (e.g. Torx 30) (tightening torque 0.5 daN.m) located behind the steering wheel and disconnect the connector (C).

- the horn connector, if fitted,
- the steering wheel bolt,
- the steering wheel after having positioned the wheels in a straight line,
- the lower half cowling by slackening its three mountings,
- the upper half cowling by slackening its 2 mountings.

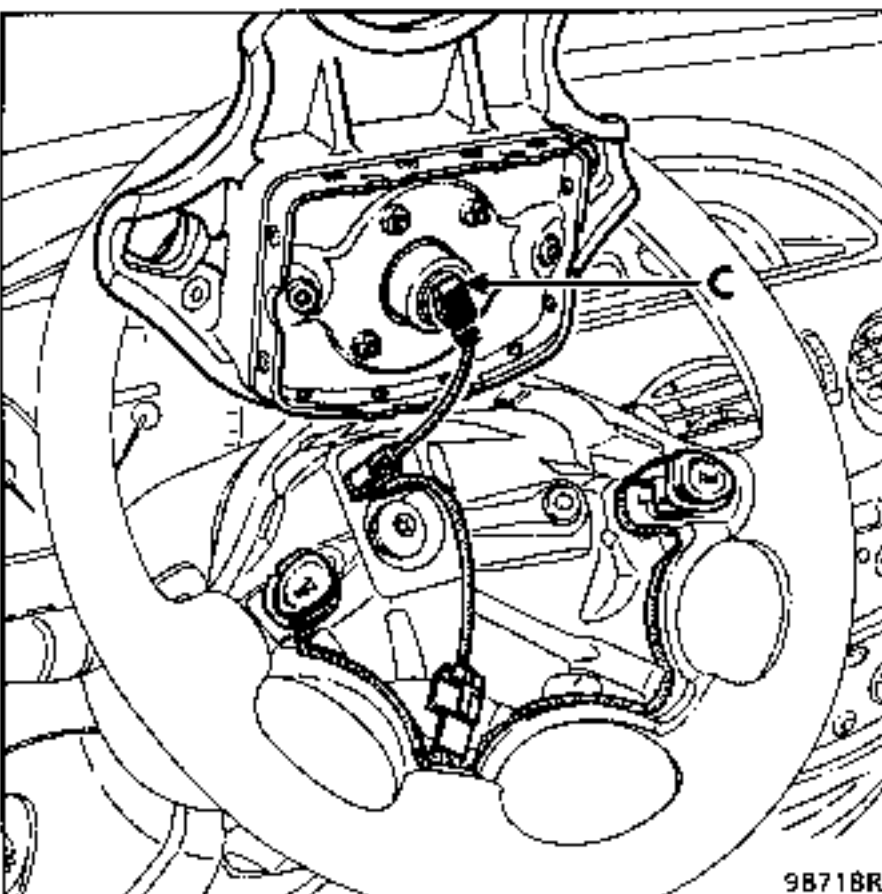
Slacken the 3 mountings (A) of the rotary switch under the steering wheel.

Before removing, its position must be noted:

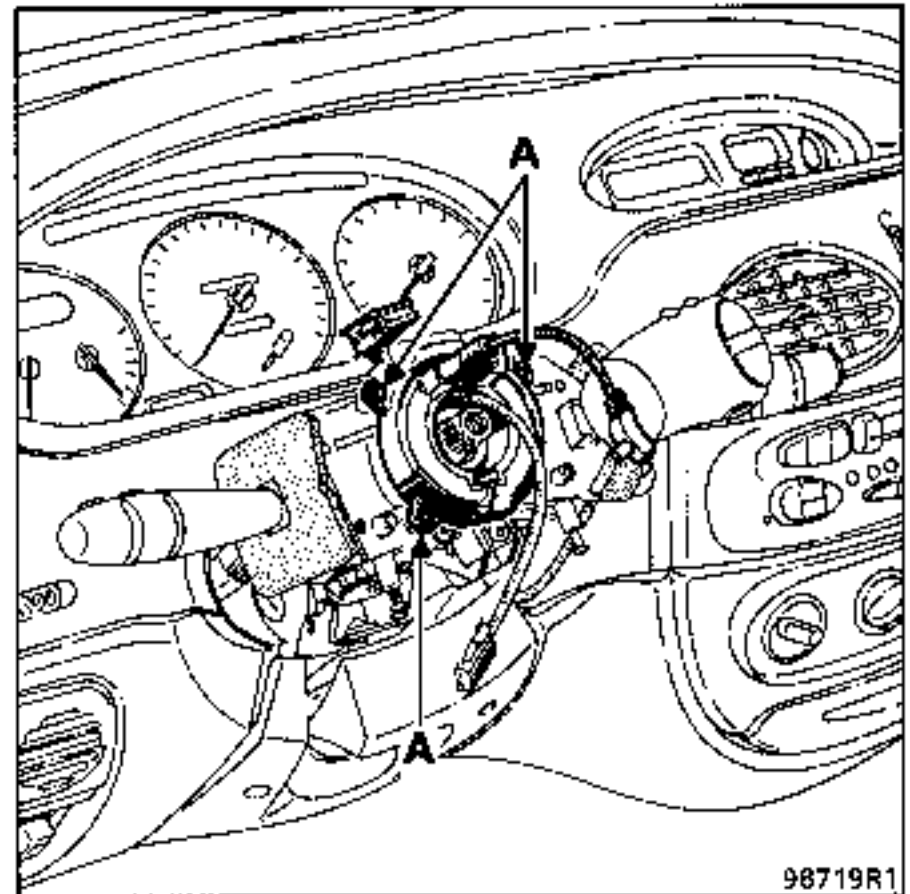
- either by ensuring that the wheels are straight before removing in order to position the strip in the centre,
- or by securing the rotor of the rotary switch with adhesive tape.

If being replaced, the new part will be delivered centred, held in place by an adhesive label which will tear the first time the steering wheel is turned (to be fitted with wheels straight).

Disconnect the 4 track connector.



98718R



98719R1



### Special notes for refitting

Ensure that the wheels are always straight.

Check that the rotary switch is still immobilised before refitting.

If it is not, follow the centring method described in chapter 88 "driver's airbag".

Fit a new steering wheel bolt every time it is removed (pre-glued bolt).

Ensure the correct tightening torque is used (4.5 daN.m).

**IMPORTANT:** before reconnecting the driver's airbag, the system operating test procedure must be carried out:

- check that the airbag warning light on the instrument panel illuminates when the ignition is turned on,
- connect a dummy ignition module to the driver's airbag connector and check that the warning light extinguishes,
- switch off the ignition, connect the airbag in place of the dummy ignition module and bolt the airbag to the steering wheel,
- switch the ignition on, and check that the warning light illuminates for 3 seconds when the ignition switch is switched on then extinguishes and remains extinguished.

If the warning light does not work as described above, refer to the "fault finding" section and check that system using the XRBAG (Elé. 1288).

**ATTENTION:** failure to comply with these instructions may result in the systems not working properly and may even cause them to be triggered accidentally.



## REMOVAL - REFITTING

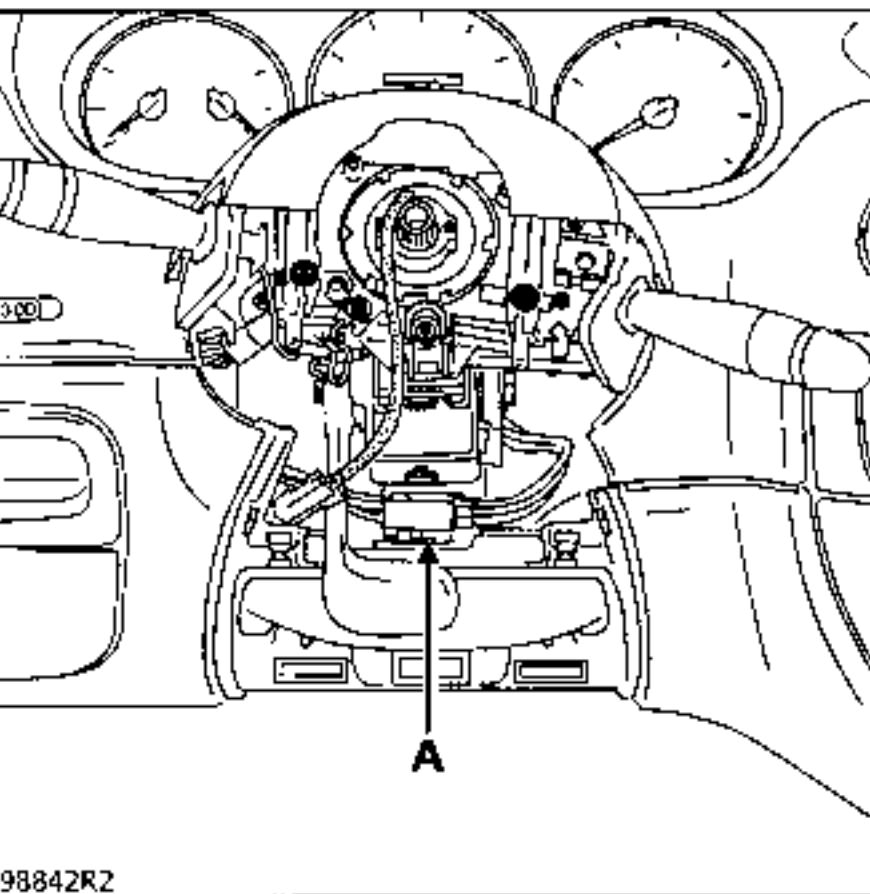
Disconnect the battery.

Straighten the wheels.

Remove the steering wheel, the 2 half cowlings and the steering column cover in accordance with the method described in the section "removing the dashboard" in chapter 83.

Remove the plastic trim around the ignition switch.

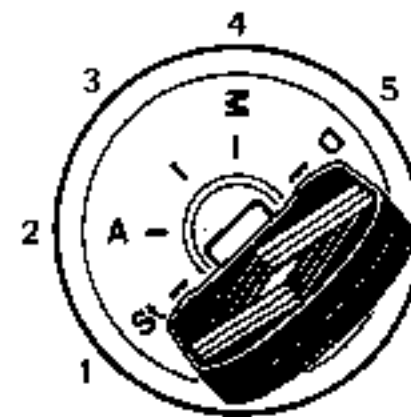
Release the switch connector from its mounting at (A) after having pivoted and disconnected it.



Remove the bolt from the ignition switch.

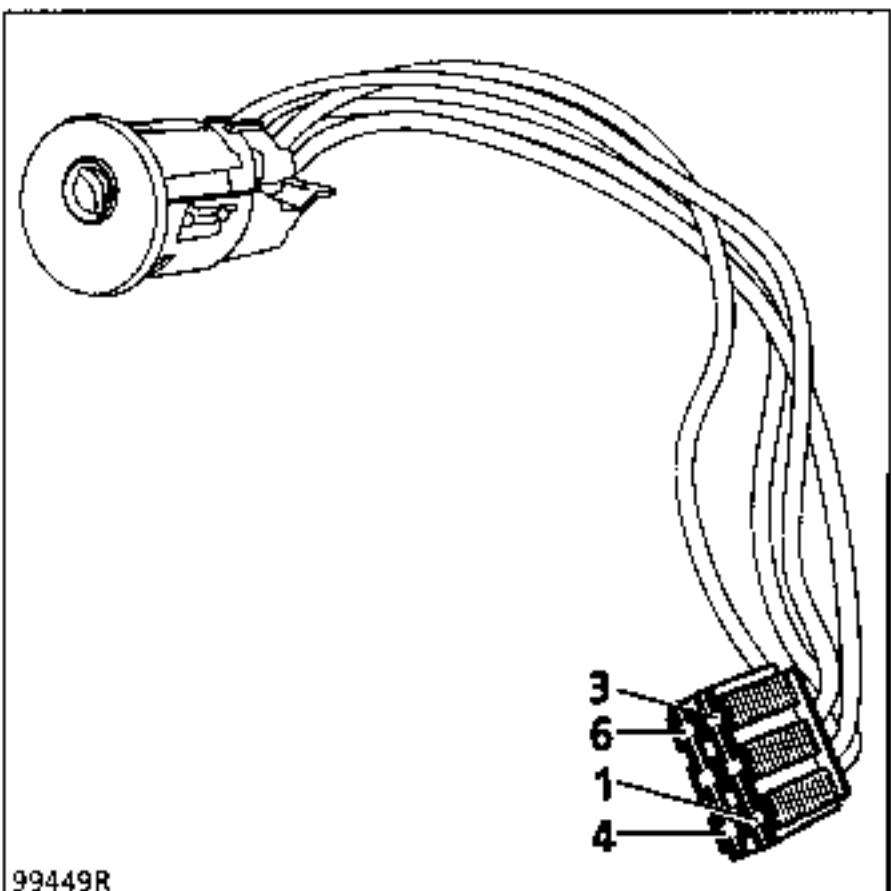
Put the ignition key in position (3).

Press the retainer lug and release the ignition switch with its wiring.



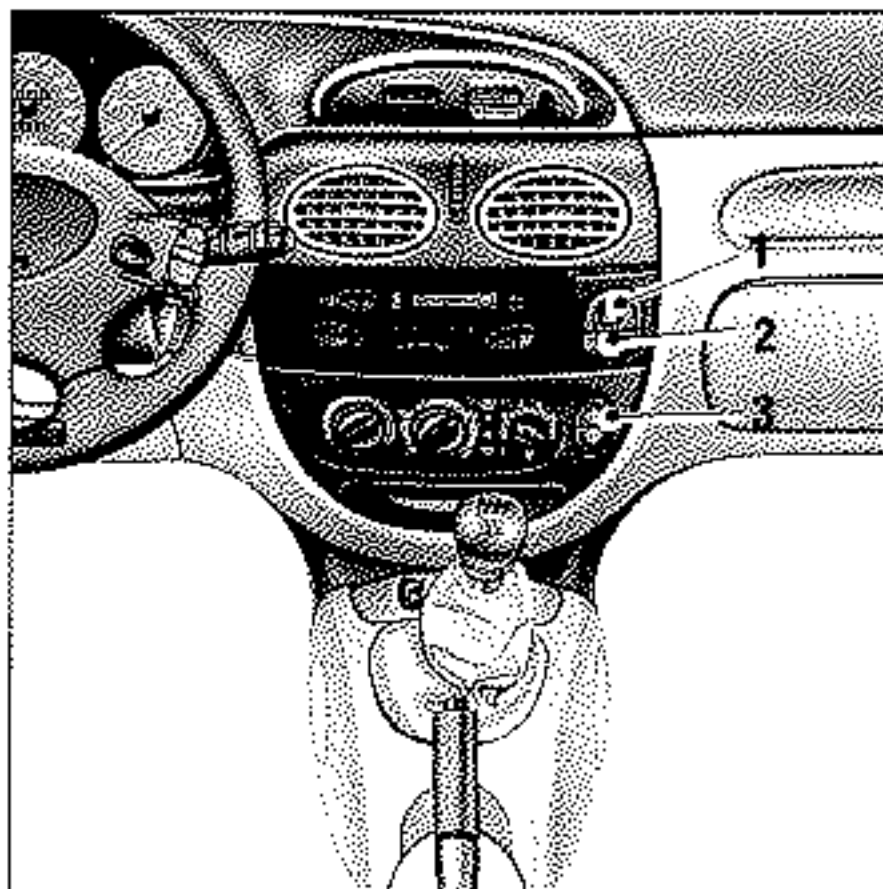
When refitting, ensure that the wiring is correctly routed.

## CONNECTION



Track	Allocation
1	+ after ignition
3	Accessories (5 mm <sup>2</sup> )
4	1 before ignition
6	Starter





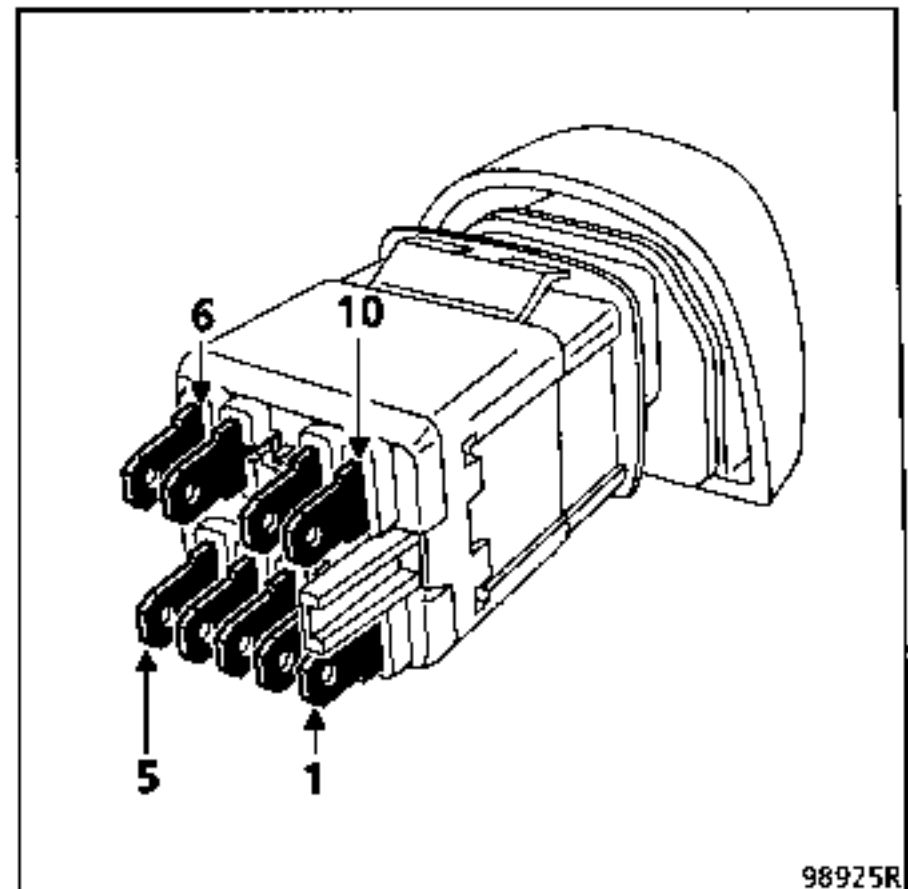
- 1 Hazard warning lights switch
- 2 Door locking switch
- 3 Heated rear screen and heated windscreen switch (depending on equipment)

### REMOVING THE SWITCHES

To access the connectors of these switches more easily, the air conditioning control panel must be removed.

To do this, refer to the section "removing the dashboard" in chapter 83.

### HAZARD WARNING LIGHTS SWITCH

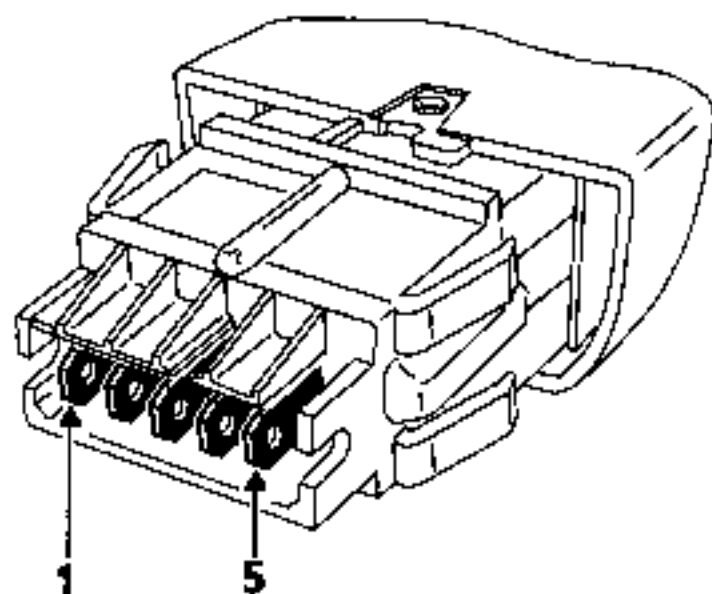


98925R

Track	Allocation
1	Left hand indicator
2	Right hand indicator
3	Earth
4	+ before ignition (BIC)
5	Not used
6	Earth
7	Lighting
9	Not used
10	Central output



## DOOR LOCKING SWITCH



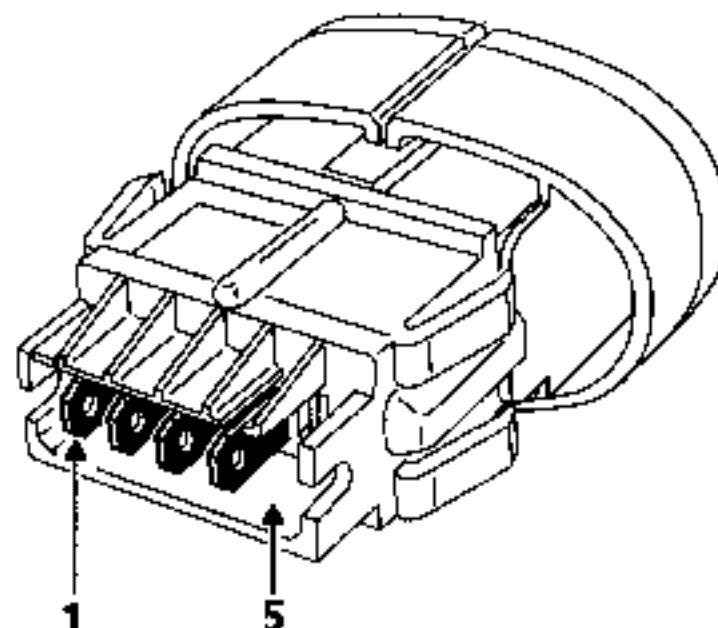
98930R

### CONNECTION

Track	Allocation
1	Lock command CPE *
2	+ Lighting
3	Earth
4	Earth
5	Open command CPE *

\* Electric door locking.

## HEATED REAR SCREEN AND HEATED WINDSCREEN SWITCH



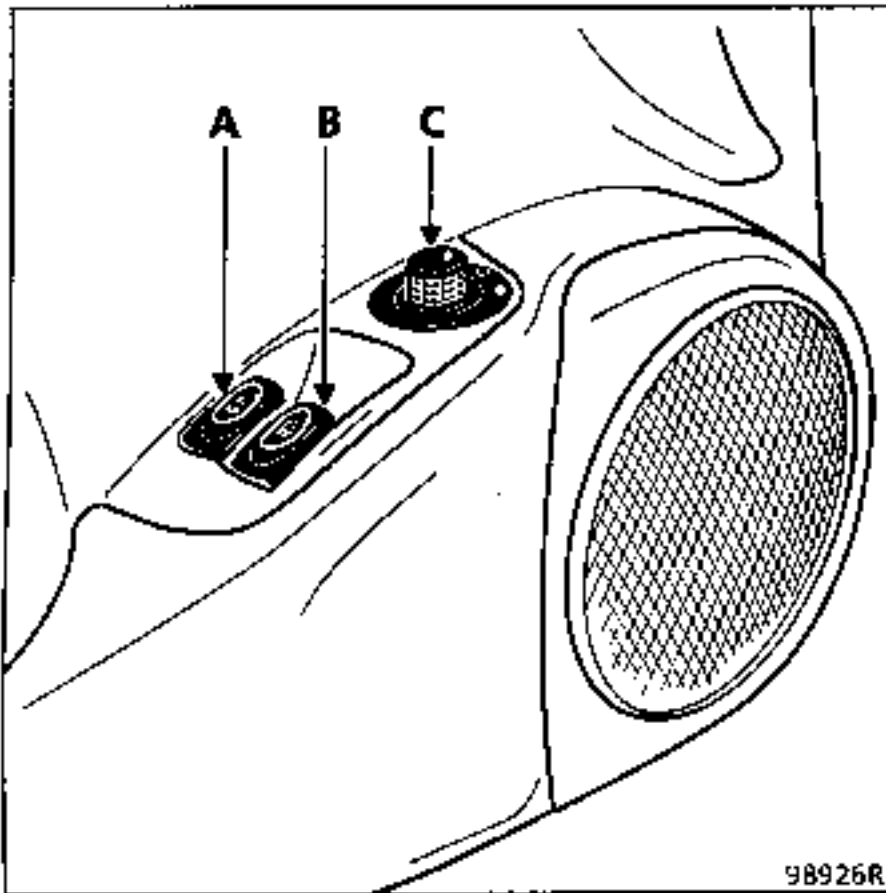
98929R

### CONNECTION

Track	Allocation
1	Heated rear screen control
2	Lighting
3	Earth
4	Lighting earth
5	Heated windscreen control (if fitted)



### ELBOW REST PLATE (in more detail)



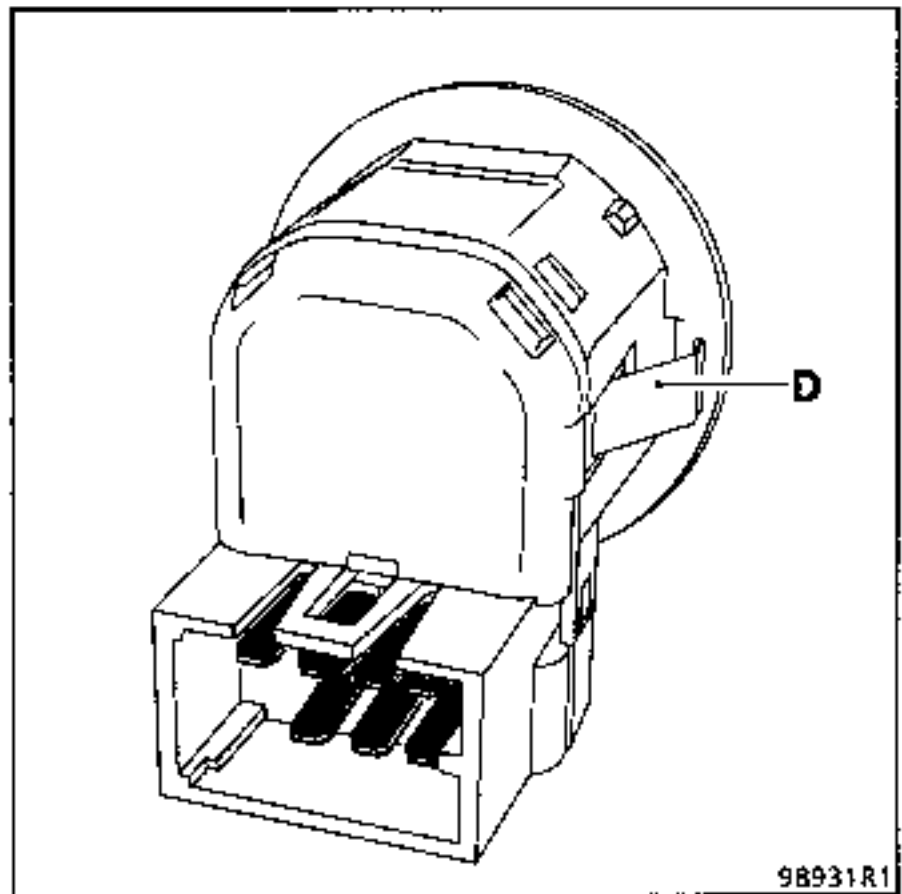
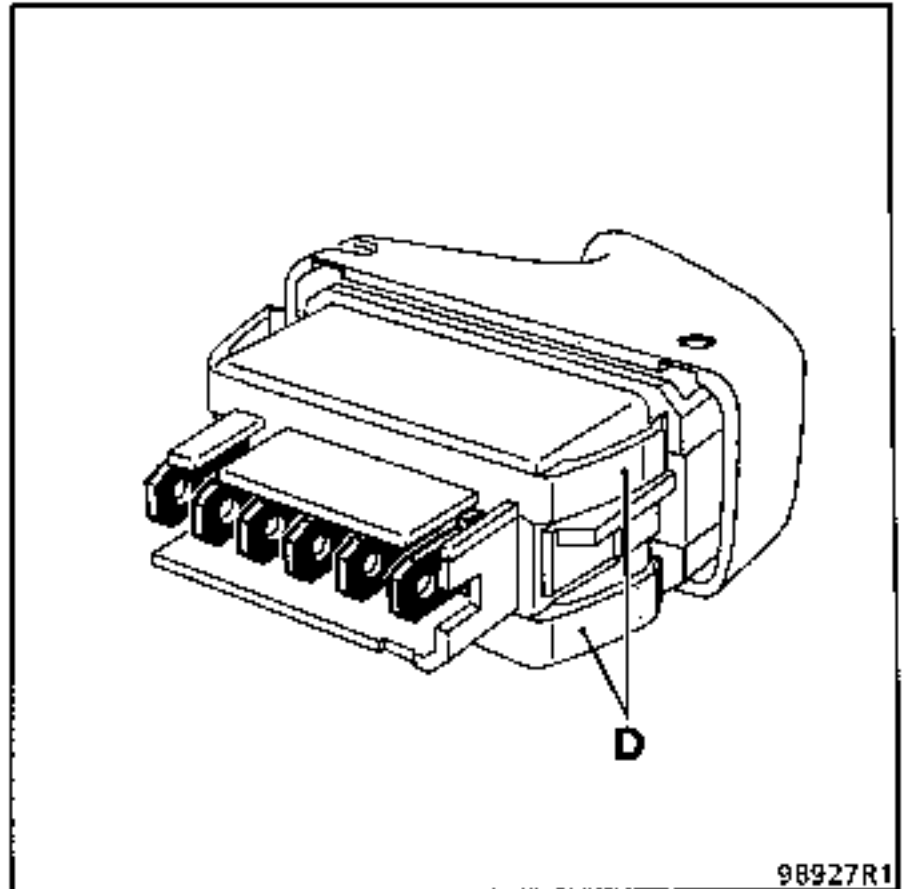
- A Driver's window control switch
- B Passenger's window control switch
- C Electric door mirror control

### REMOVING THE SWITCHES

The elbow rest plate is integral with the door panel. It therefore has to be removed in order to access the various switches (see method in chapter 72).

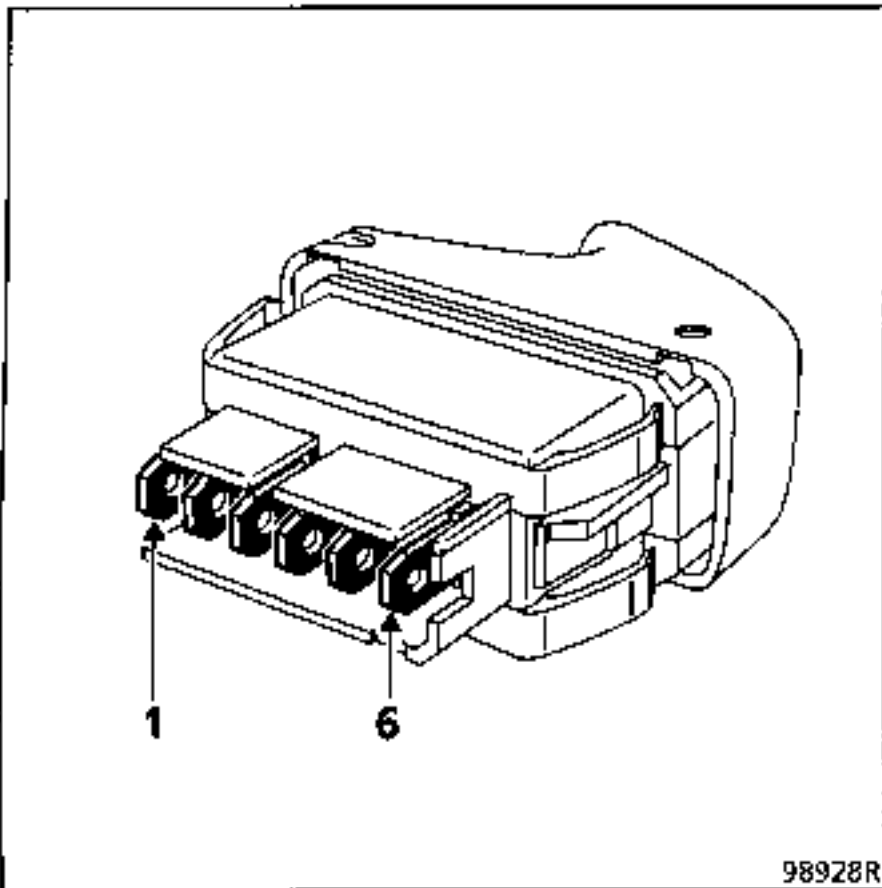
Remove the switches by pressing the lugs (D) after having noted their positions.

**NOTE:** an inscription on each unit shows the colour of the connector to which it is connected.





### DRIVER'S ONE TOUCH WINDOW SWITCH (A)

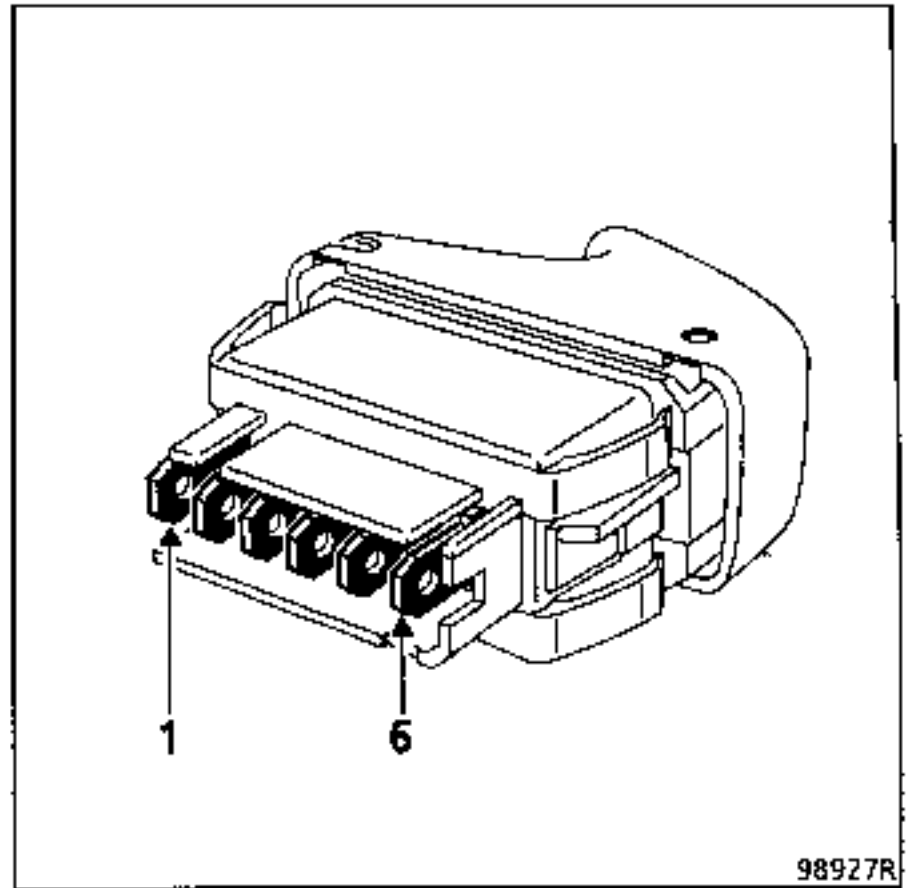


#### CONNECTION

Red connector

Track	Allocation
1	+ lighting
2	One touch window raise
3	Not used
4	Earth
5	Not used
6	One touch window lower

### PASSENGER'S WINDOW SWITCH ON DRIVER'S DOOR (B)



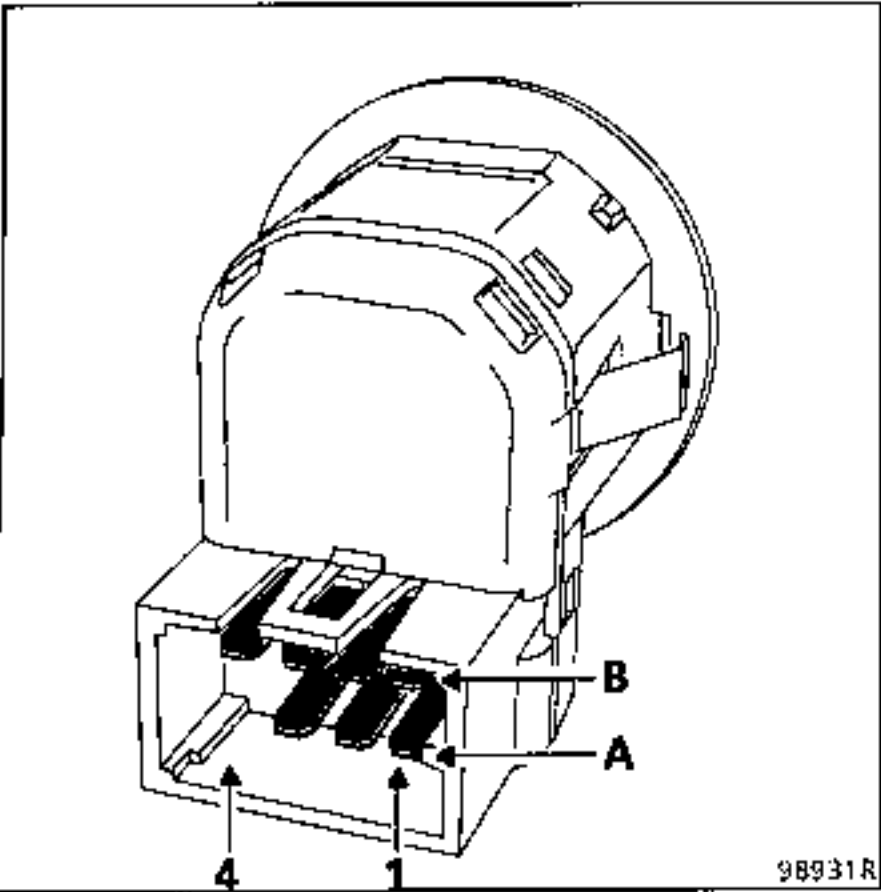
#### CONNECTION

Brown switch

Track	Allocation
1	+ lighting
2	+ or - motor
3	+ after ignition
4	Earth
5	+ after ignition
6	+ or - motor



DOOR MIRROR CONTROL (C)



Control position	Outputs				
	B4	B2	B1	A1	A3
Right hand door mirror { ↑ ↓ ← →	-	+			
	+	-			
	-		+		
	+		-		
Left hand door mirror { ↑ ↓ ← →	-				+
	+				-
	-			+	
	+			-	

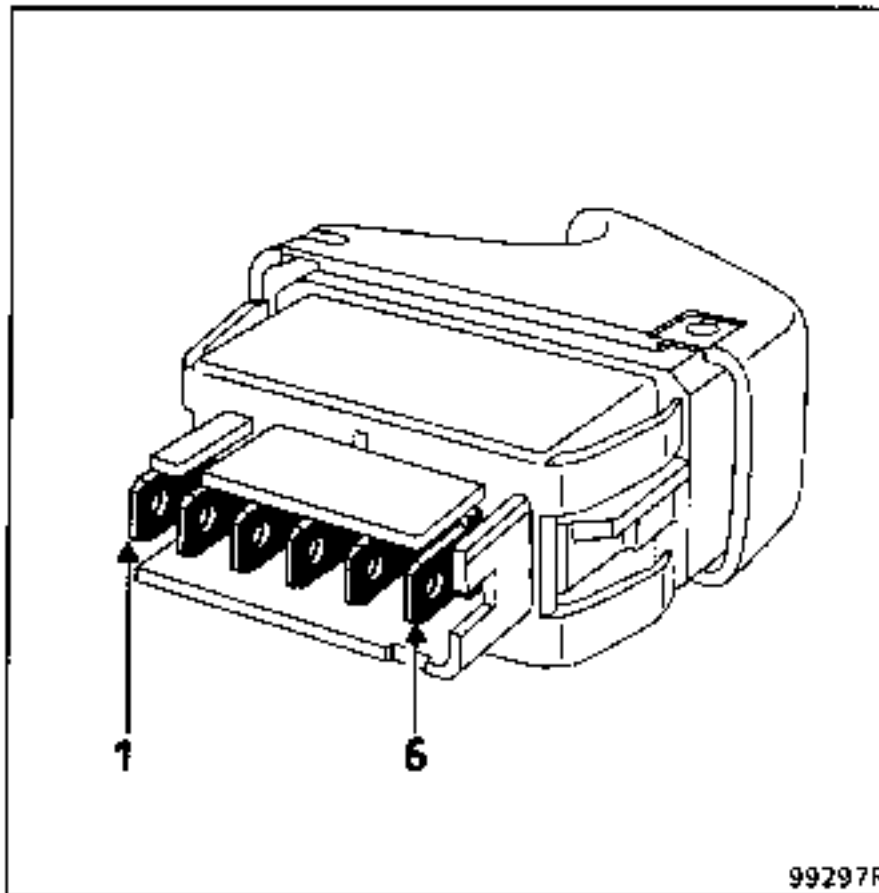
NOTE: this switch does not have night illumination.

CONNECTION

Track	Allocation
A1	Left/right orientation driver's door mirror
A2	Earth
A3	Up/down orientation driver's door mirror
A4	Not used
B1	Left/right orientation passenger's door mirror
B2	Up/down orientation passenger's door mirror
B3	+ before ignition
B4	Common door mirrors



PASSENGER'S WINDOW SWITCH ON  
PASSENGER'S DOOR



99297R

CONNECTION

Track	Allocation
1	+ lighting
2	Motor supply
3	+ or - motor
4	Earth
5	+ or - motor
6	Motor supply



## SUNROOF SWITCH

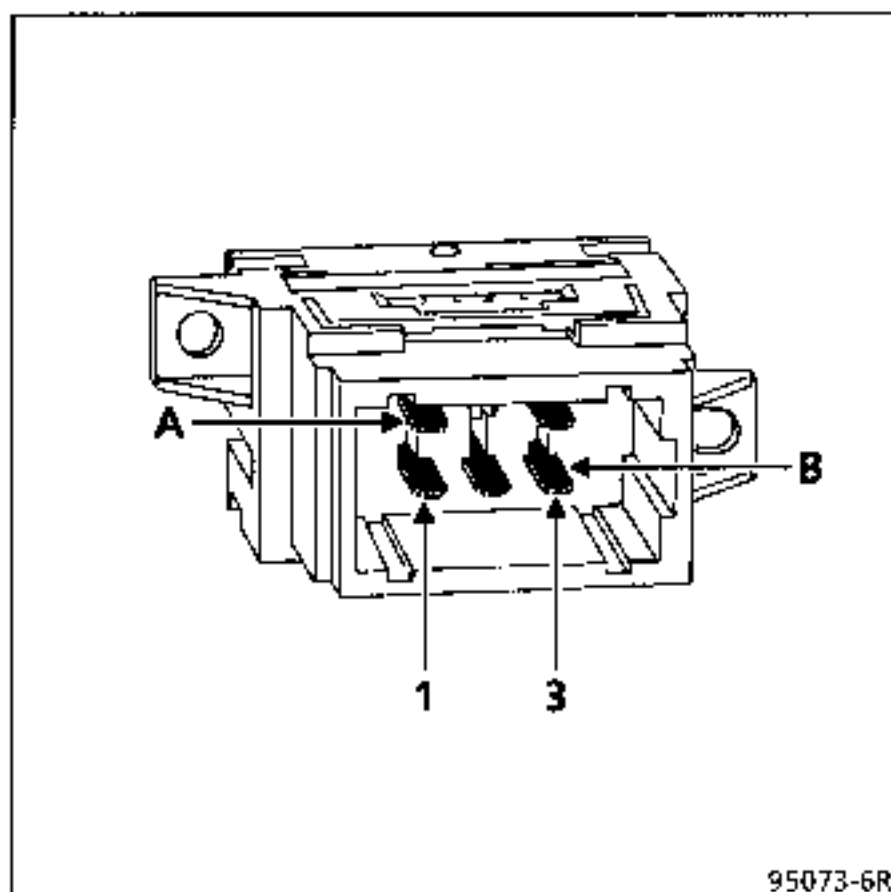
### REMOVAL

To remove this switch, the roof console has to be removed.

To do this, follow the method described in the "Roof" section of chapter 81.

Disconnect the connector.

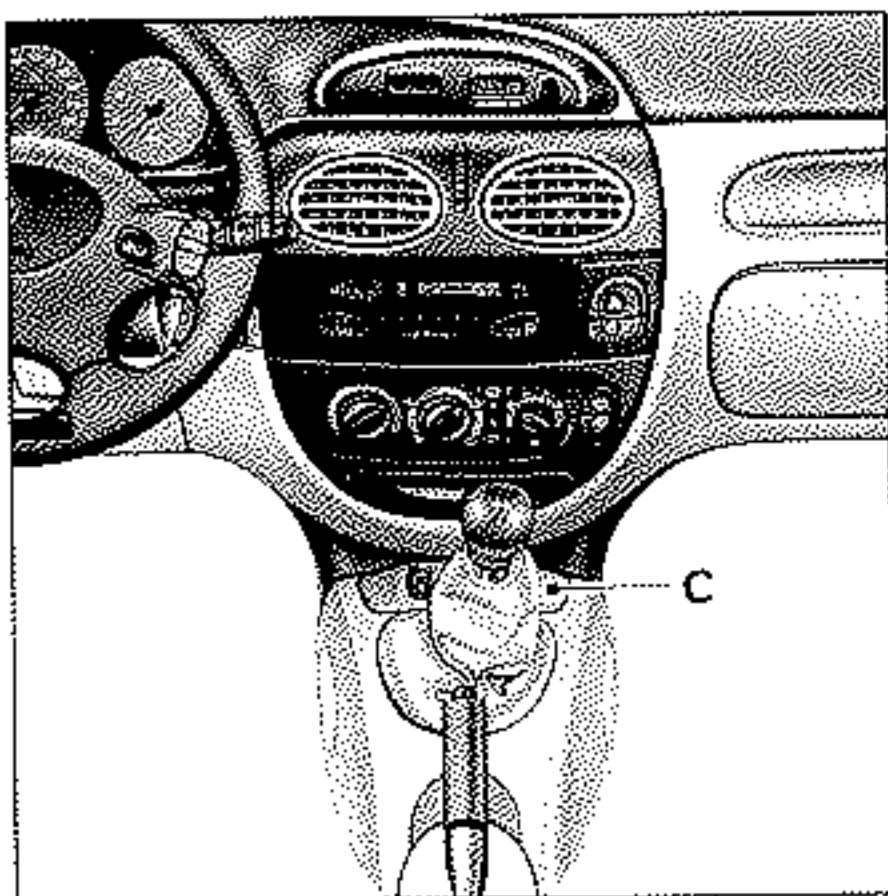
Then slacken the 2 switch mountings.



### CONNECTION

Track	Allocation
A1	Sunroof motor and relay
A2	Not used
A3	Tilt supply
B1	Slide supply
B2	Earth
B3	Motor through relay





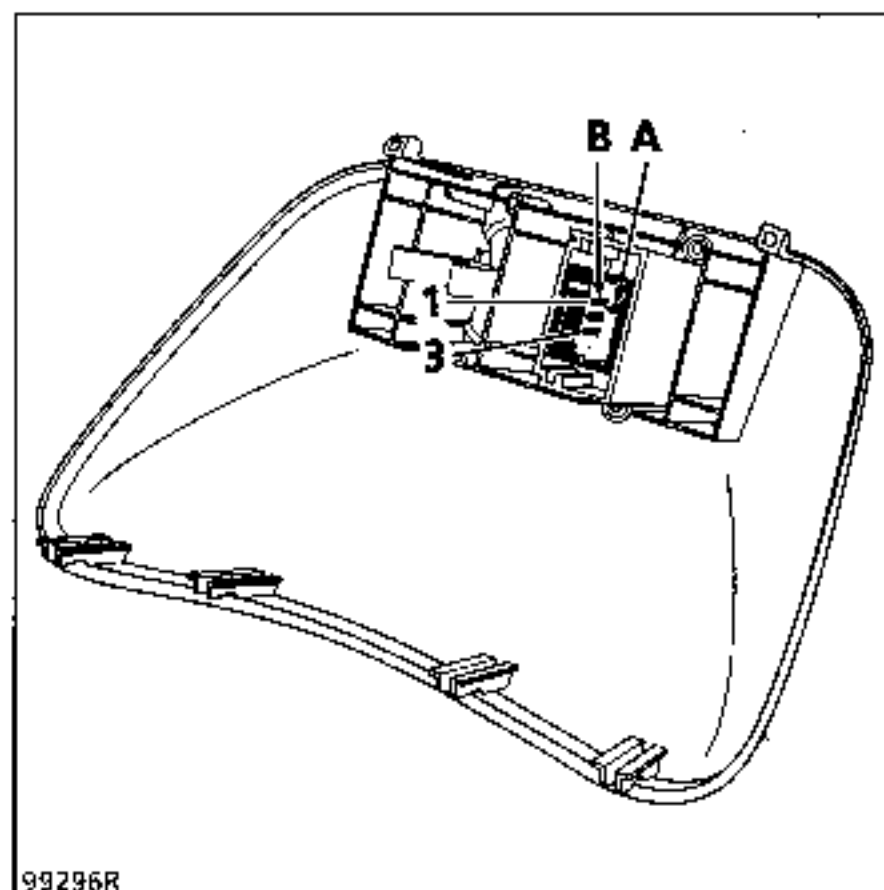
## CHILDPROOFING SWITCH

This prevents the rear windows being operated.

## REMOVAL

To remove this switch, unclip the switch mounting plate (C) located on the front of the gear lever console.

Slacken the 2 switch mountings.



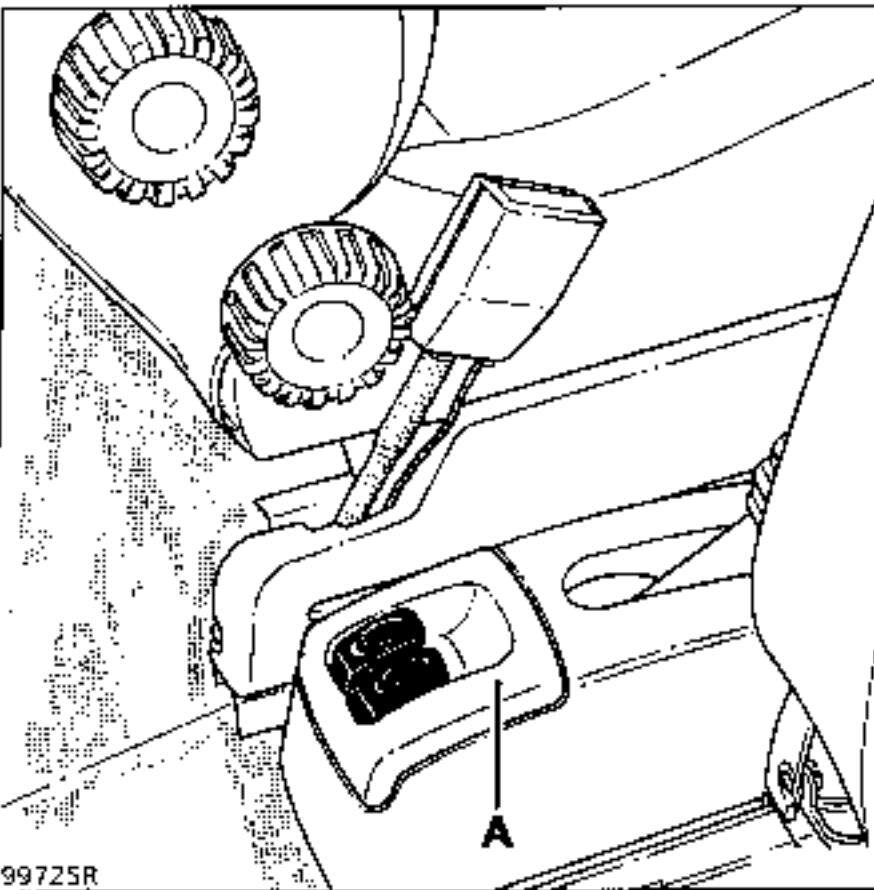
99296R

## CONNECTION

Track	Allocation
A1	+ after ignition
A2	Not used
A3	Not used
B1	+ lighting
B2	Earth
B3	Rear windows lock



## REAR WINDOW SWITCHES



## REMOVAL

Unclip the switch mounting plate (A) from the centre unit.

Disconnect the connectors.

Remove the switches, after having noted their positions, by pressing the 4 lugs (B).

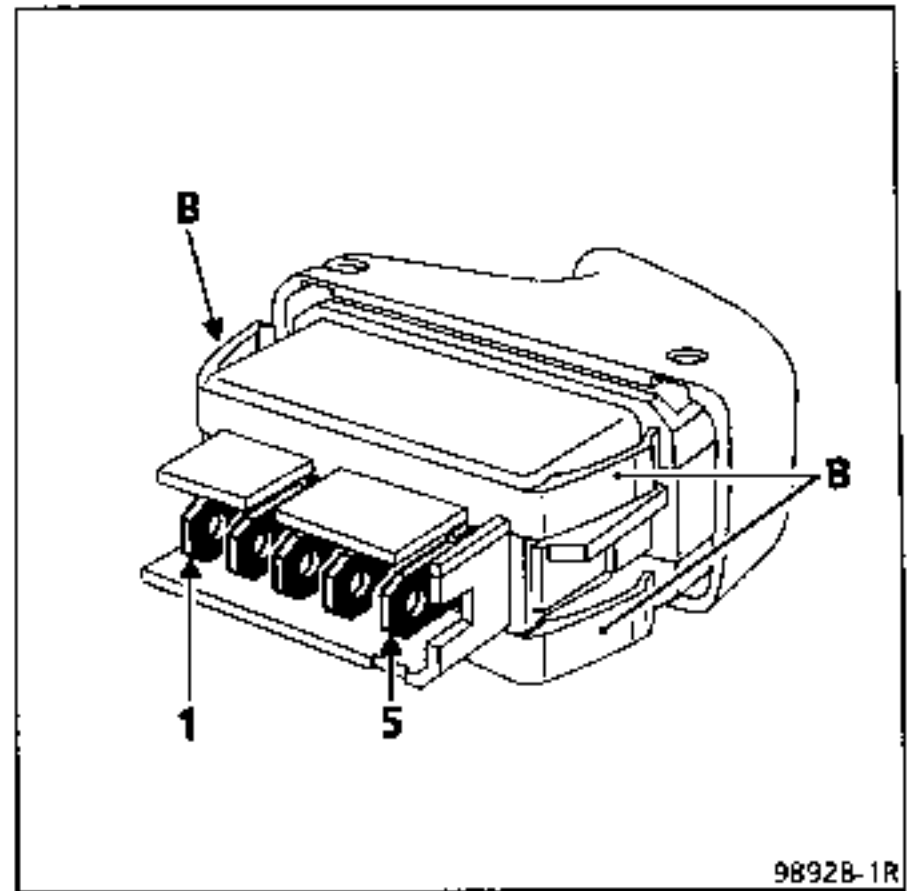
**NOTE:** an inscription on each unit shows the colour of the connector to which it is connected.

In addition, a foolproofing device on the lugs means that each unit can be correctly clipped into its mounting plate.

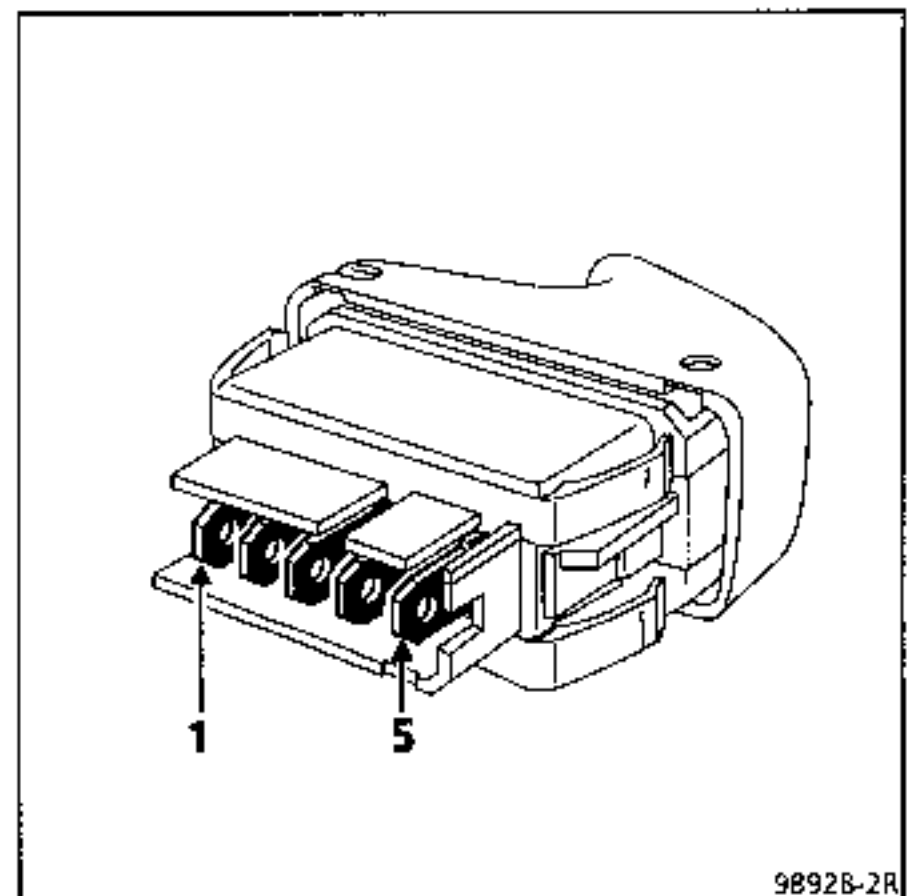
## CONNECTION

Track	Allocation
1	Raise
2	Earth
3	+ after ignition
4	+ lighting
5	Lower

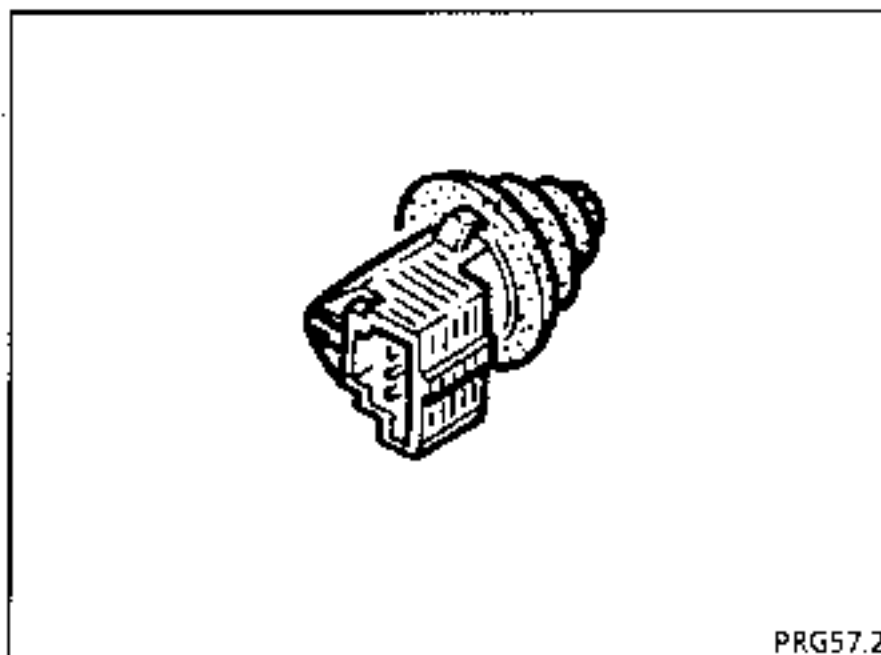
## Right hand window switch (grey connector)



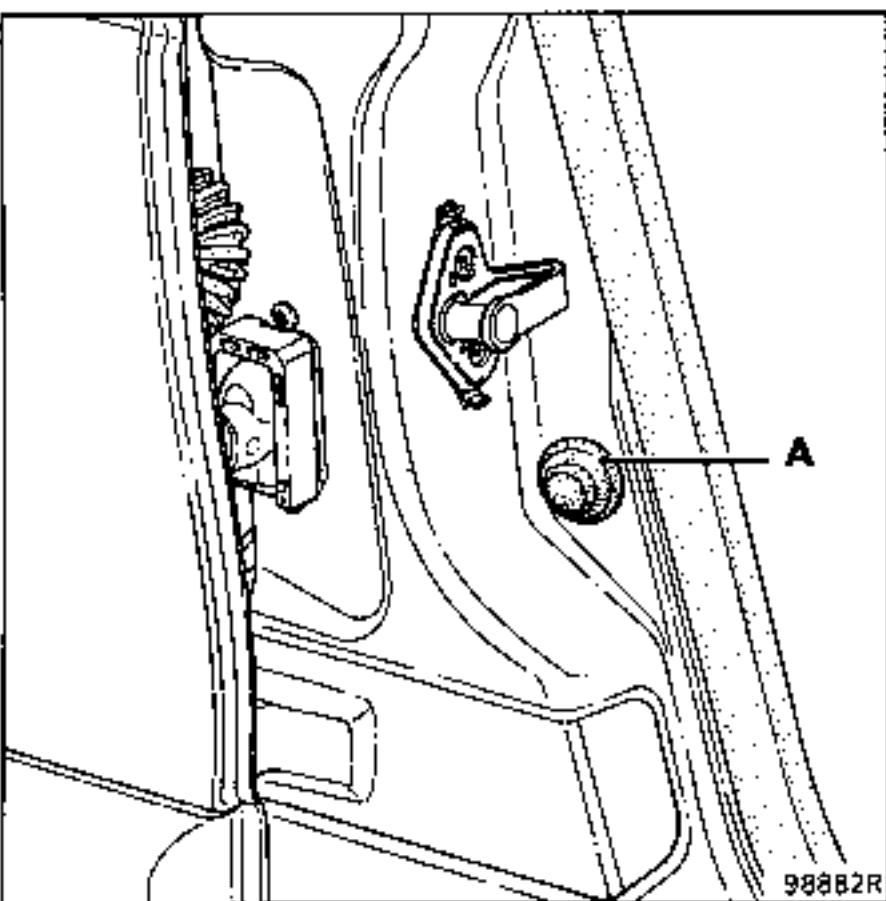
## Left hand window switch (green connector)



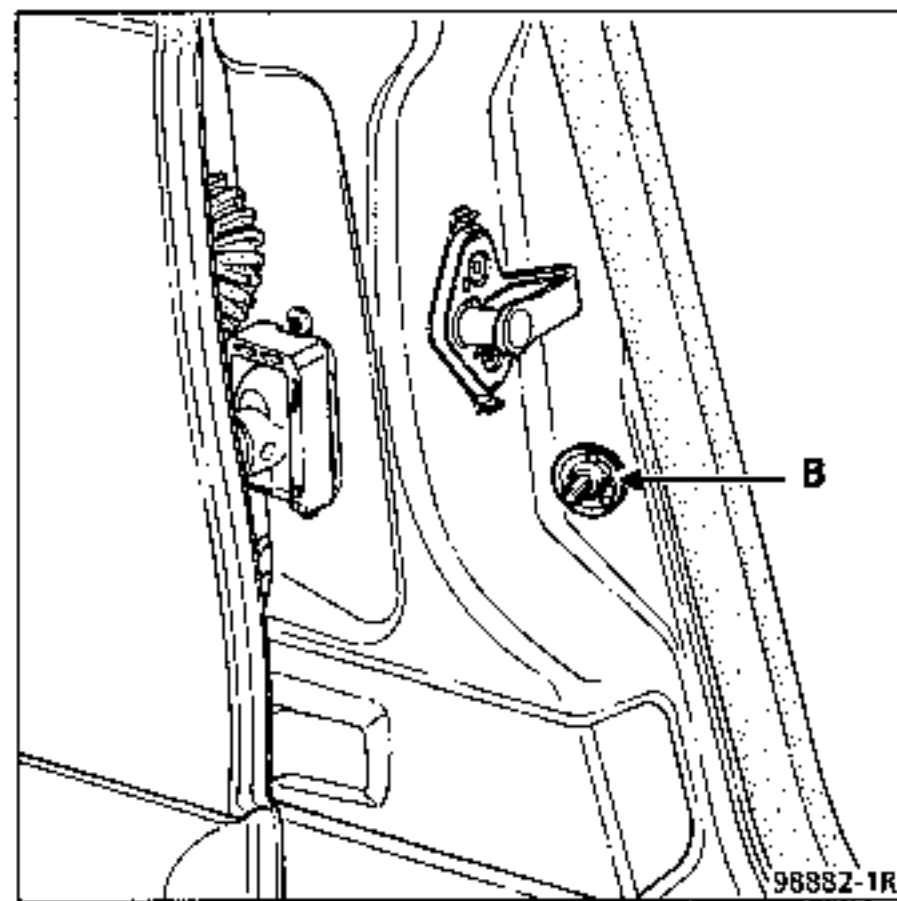




## REMOVAL



Remove the rubber seal (A).



Rotate the reference mark (B) towards the rear of the vehicle, unclip the first lug, then rotate the mark downwards and remove the switch.



## REMOVAL

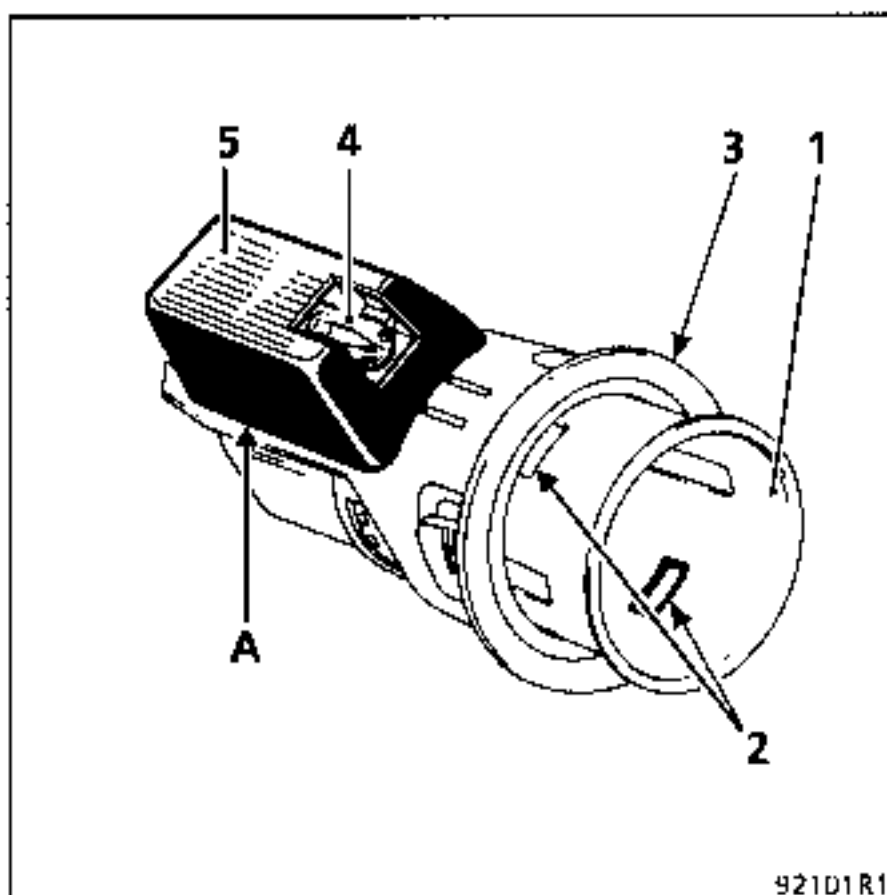
Ignition off, remove the ashtray.

Remove the ashtray mounting plate by slackening the two bolts.

Remove the heating element of the cigar lighter.

Disconnect the connector and the single filament.

To remove the body of the cigar lighter (1), push on the rear of the body whilst unclipping the two lugs (2).



Remove the plastic lighting surround (3) by pushing on the back.

NOTE: to remove the light bulb (4), remove the cigar lighter completely and unclip the screen (5) at (A) then remove the bulb.

Track	Allocation
1	Earth
3	+ after ignition

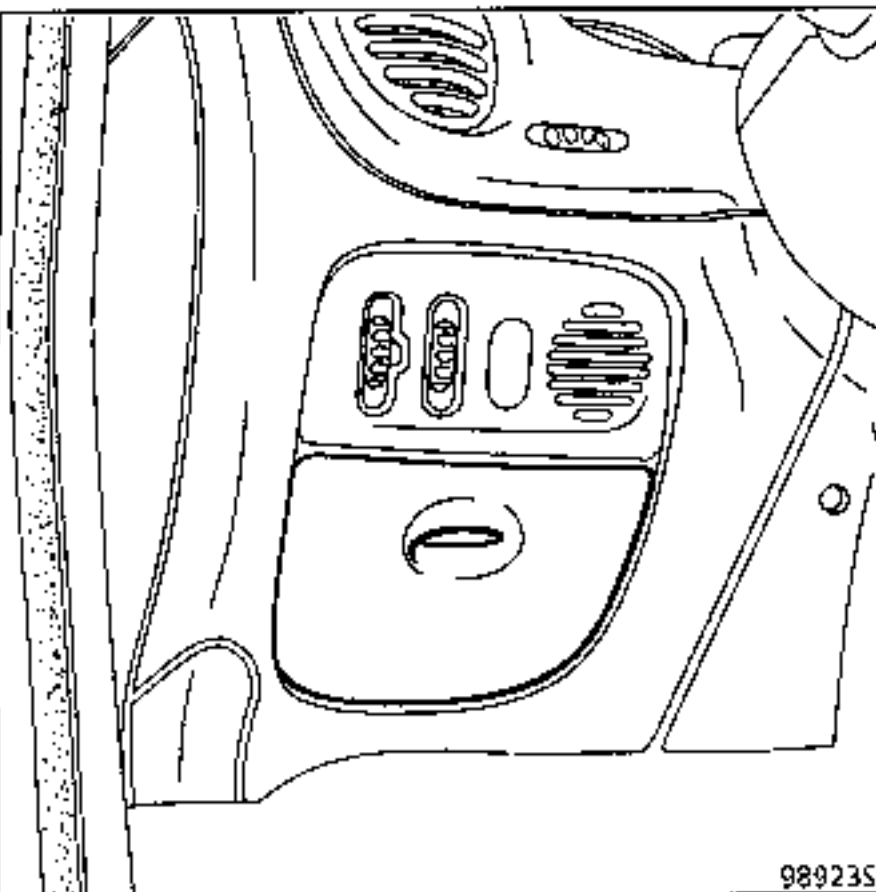
Single filament : + lighting.



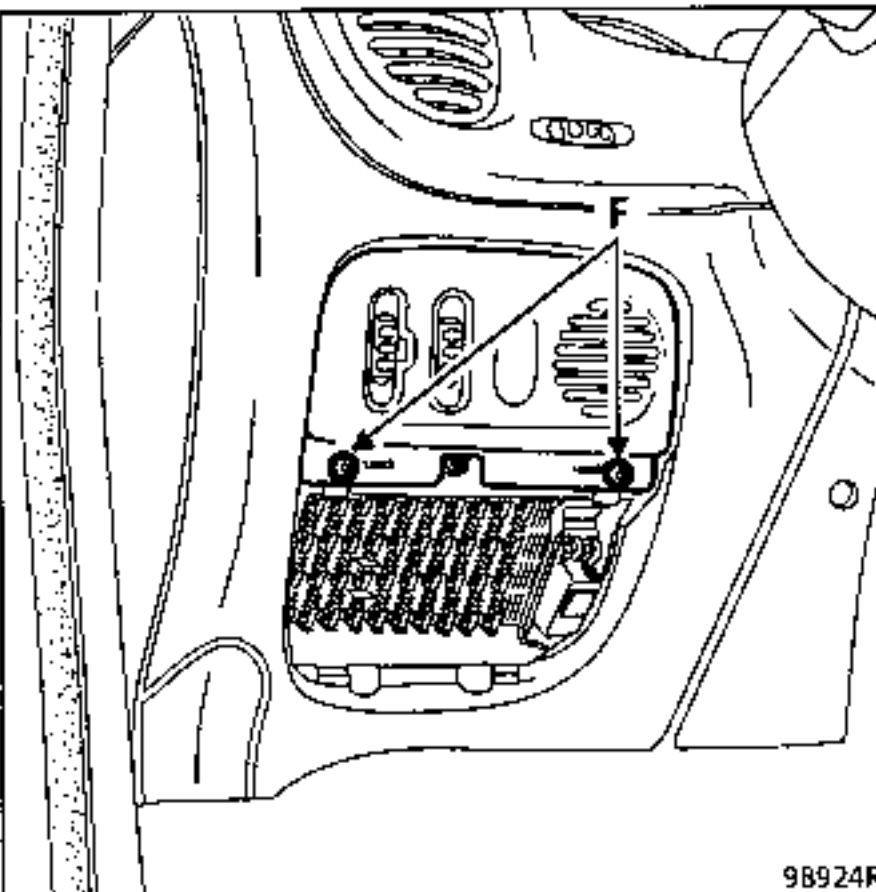
## REMOVAL - REFITTING

Disconnect the battery.

Remove the access cover of the passenger compartment fuses.

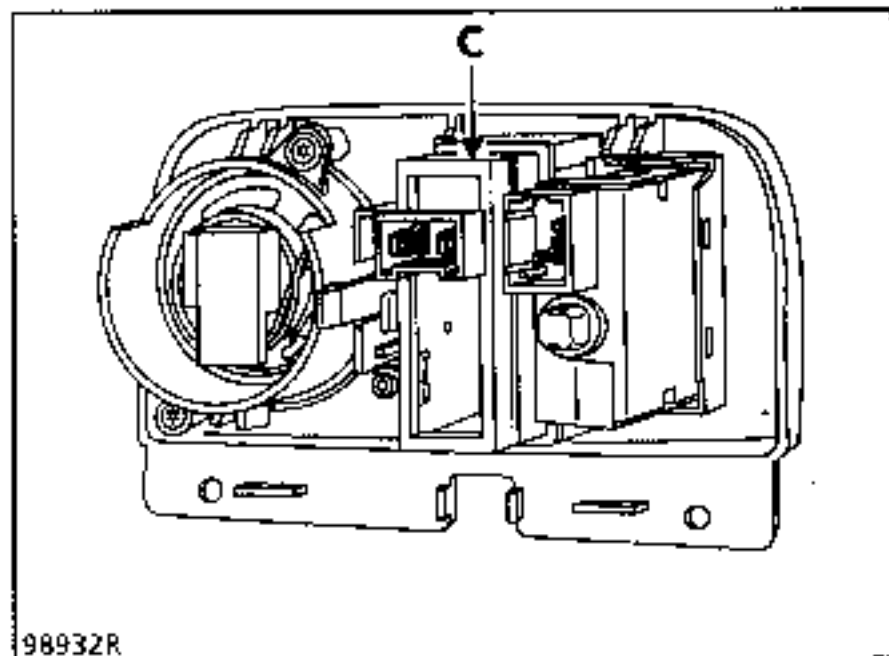


Slacken the 2 mountings (F) of the beam adjustment control and lighting rheostat support plate.



Remove the plate and disconnect the connectors (depending on equipment).

Unclip the rheostat (C) from the support plate.





## REMOVAL - REFITTING

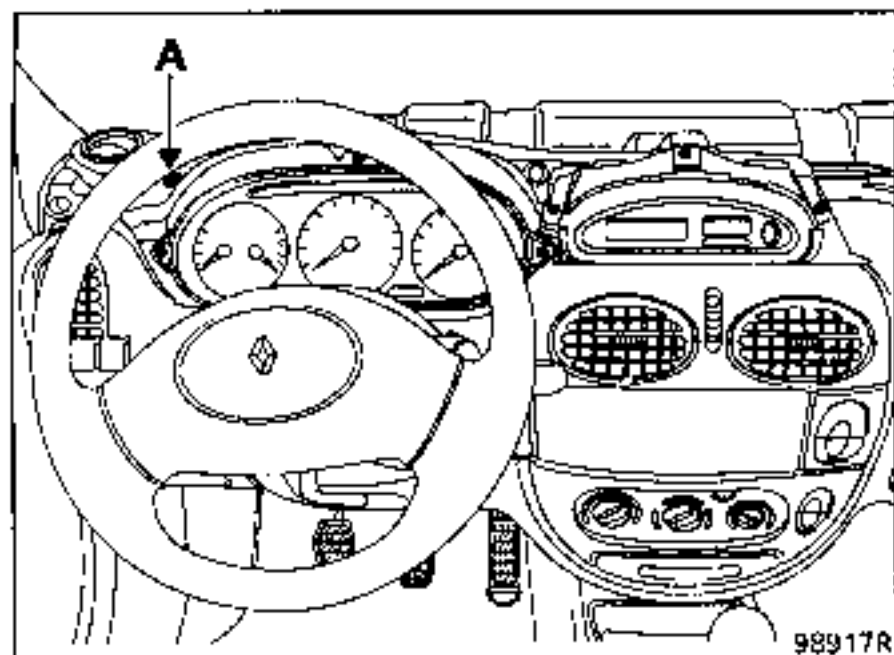
Disconnect the battery.

Remove:

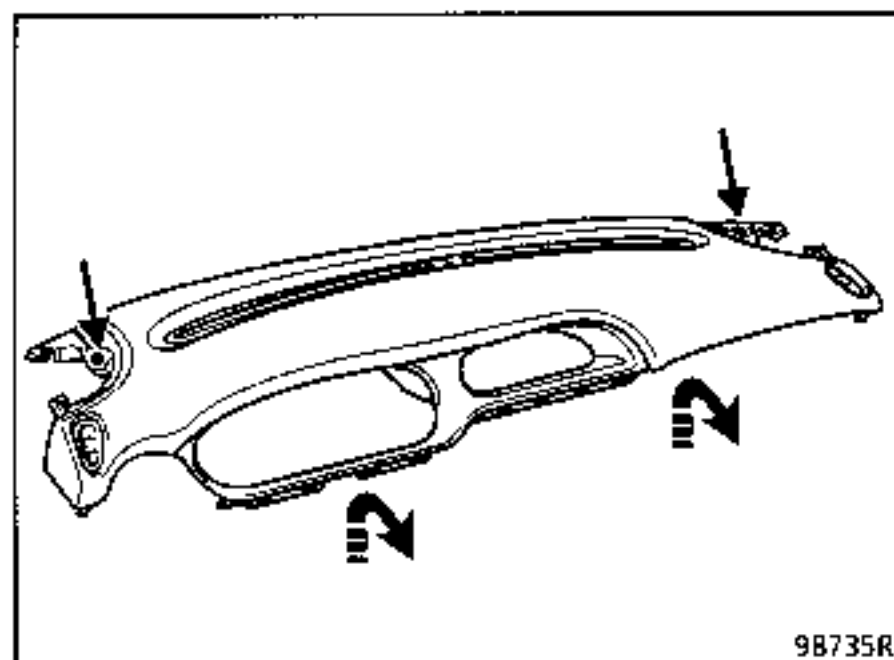
- the loud speaker grilles (on top of the dashboard),
- the upper part of the dashboard.

To do this:

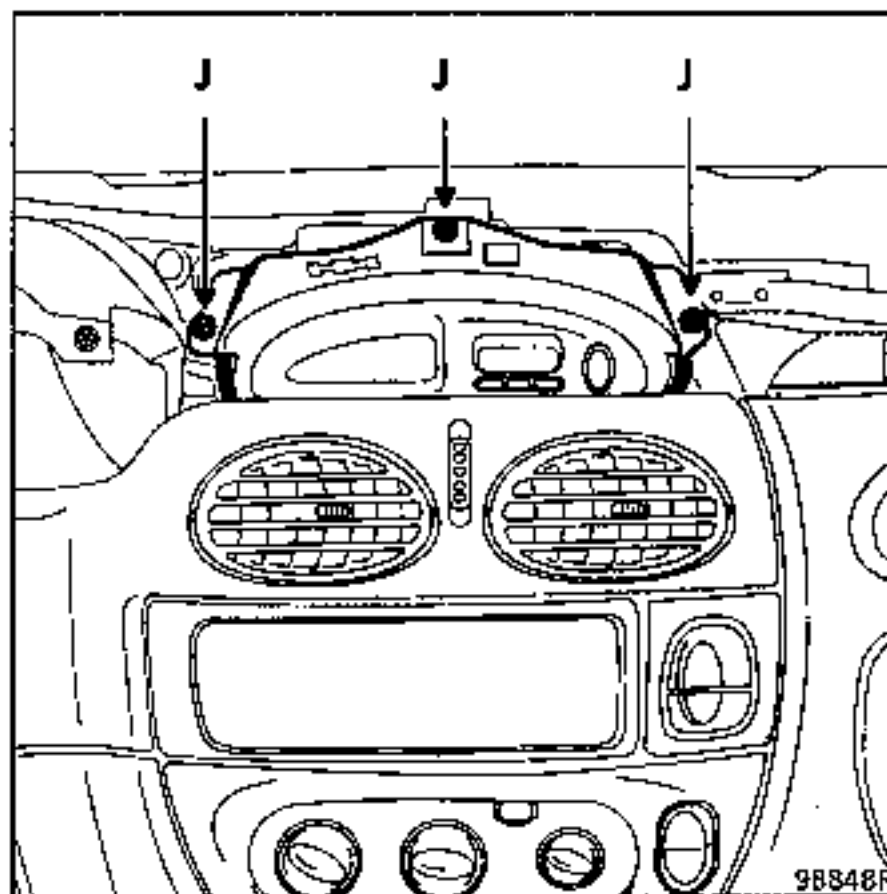
- slacken the 2 mountings (A),



- unclip the upper part on the front,
- lift it and remove it forwards.



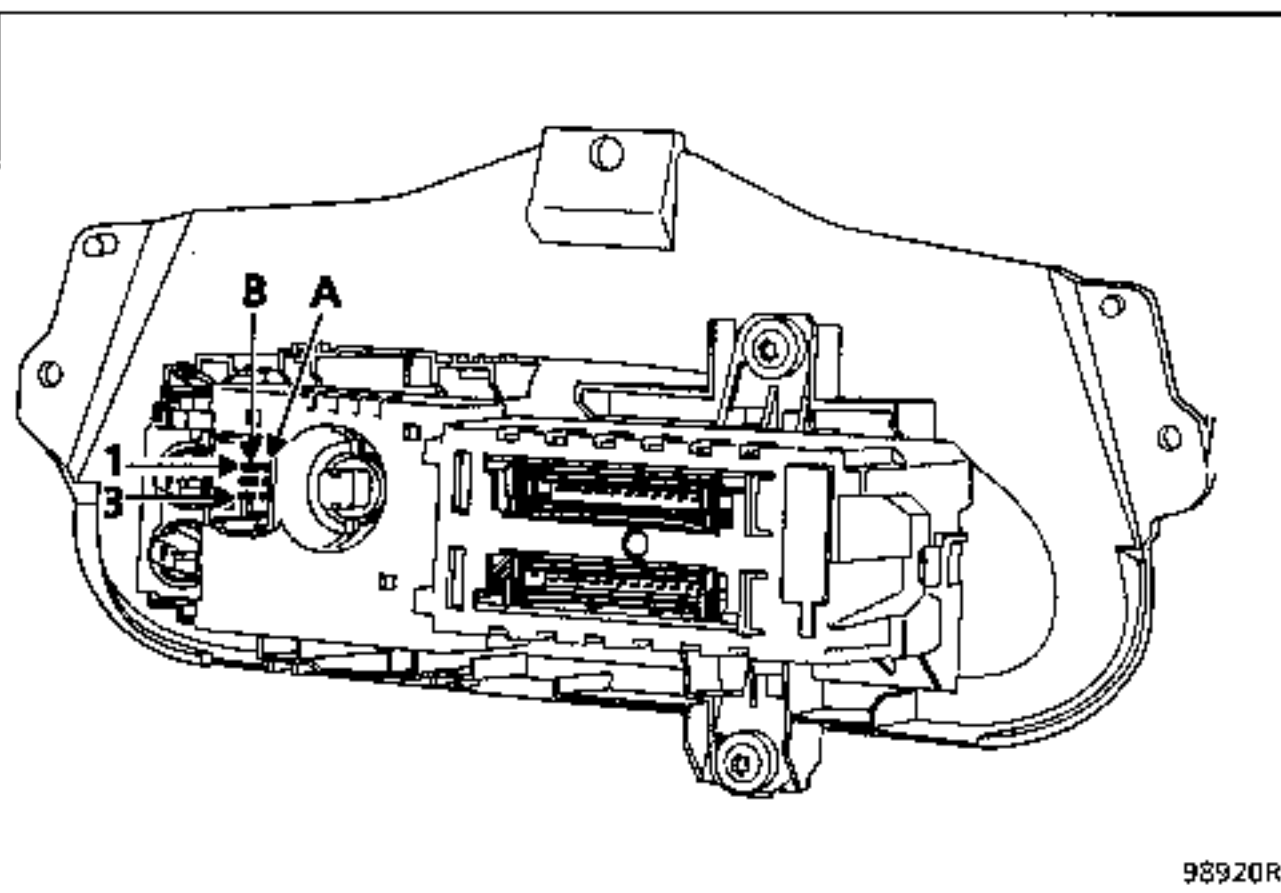
- the 3 mounting bolts (J) of the display unit and release it



Unclip the clock module from the mounting (display unit).



CONNECTION (in more detail)



Track	Allocation
A1	Exterior temperature sensor
A2	+ Day - night lighting through relay
A3	+ lighting
B1	+ before ignition
B2	Earth
B3	+ Accessories



**SPECIAL TOOLING REQUIRED**

<b>Elé. 1294-01</b> Tool for removing wiper arm holders
---

**FRONT WIPERS AUTOMATIC OPERATION****Special operating notes**

During normal use, the front wipers operate at intermittent, slow or high speed.

Under certain conditions and depending on the equipment of the vehicle, the connection unit will operate the front wipers.

When driving, when a wiper speed is selected, stopping the vehicle will reduce the wiper speed to the next slowest speed:

- from continuous high speed to continuous slow speed,
- from continuous slow speed to intermittent wipe.

When the vehicle starts to move, the wipe speed returns to the original speed.

**NOTE:**

- operating the stalk takes priority and therefore cancels the automatic operation,
- automatic operation is not active if slow or fast speed is selected when the vehicle is stationary.

**SPECIAL NOTES:**

- if a large force is exerted on the wiper arm (e.g.: at high speed,...) when operating at high speed, the electronic connection unit automatically switches to the slow speed in order to improve wiping in certain climatic conditions,
- if the wiper mechanism seizes (e.g.: frozen windscreen, ...) the system automatically cuts its supply.

**Fault finding**

For fault finding, refer to chapter 87 (fault finding using the XR25 and the connection unit).



## REMOVING THE MECHANISM/MOTOR ASSEMBLY (not including removing the heating devices, see following pages depending on equipment)

Ensure that the motor is in the park position.

Disconnect the battery.

Note the wiper arm park position.

Remove:

- the nut covers from the wiper arms,
- the mounting nuts for the wiper arms (A).

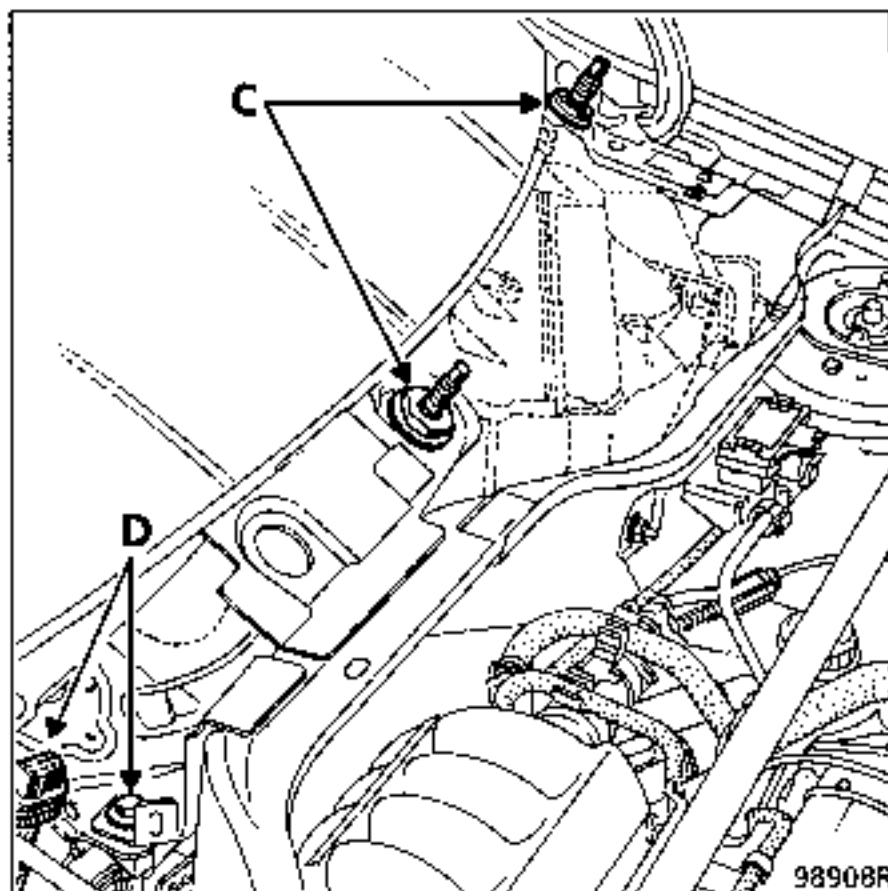
Remove the wiper arms from their pins using the special tool Elé. 1294-01 as stated in Technical Note 2280.

Open the bonnet.

Remove:

- the seal (B),
- the three mounting bolts (A) of the two scuttle panel grilles,

- the scuttle panel grilles towards the front to release them from the windscreen,
- the two sealing plugs and nuts (C) from the wiper arm pins,



- the two wiper mechanism mounting bolts (D) after having disconnected the motor.

Remove the wiper motor/mechanism assembly.

## REFITTING

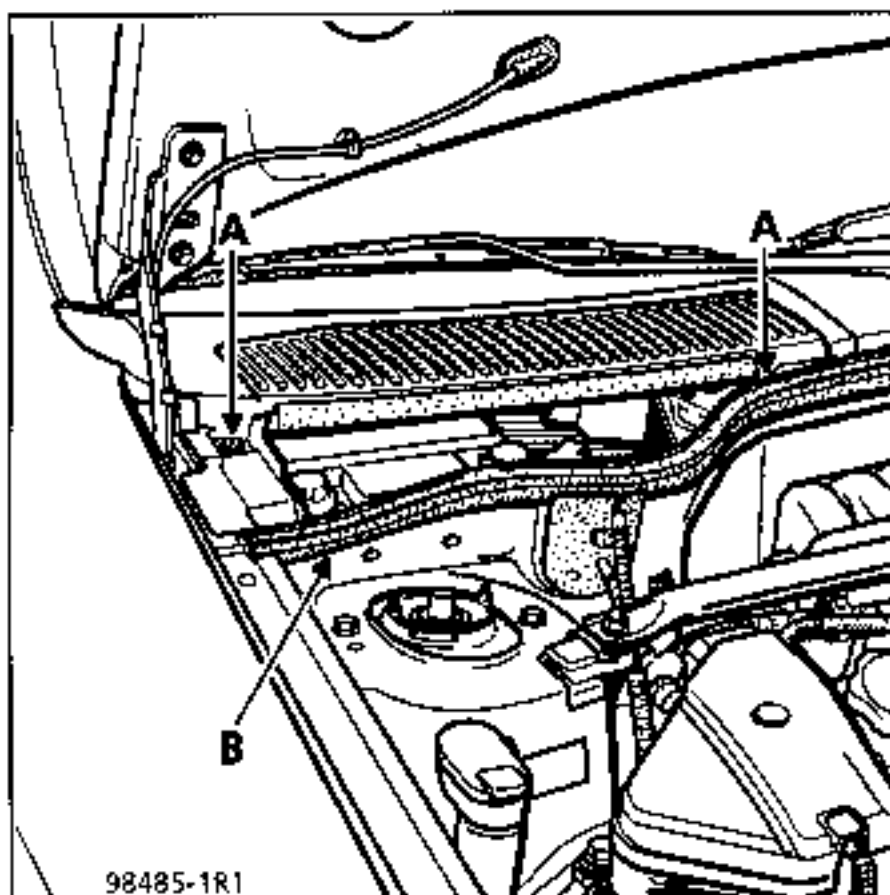
Reconnect the connector after having refitted the mechanism.

Check that the motor is in the park position before refitting the wiper arms.

Clean the splines on the wiper arm pins using a wire brush.

Refit the wiper arms.

Fit new nuts and tighten to a torque of 2.2 daN.m ( $\pm 20\%$ ) using a torque wrench.





# **SPECIAL NOTES FOR VEHICLES FITTED WITH STANDARD VENTILATION**

For vehicles fitted with heating and standard ventilation, the heating fan unit has to be removed in order to access the wiper mechanism.

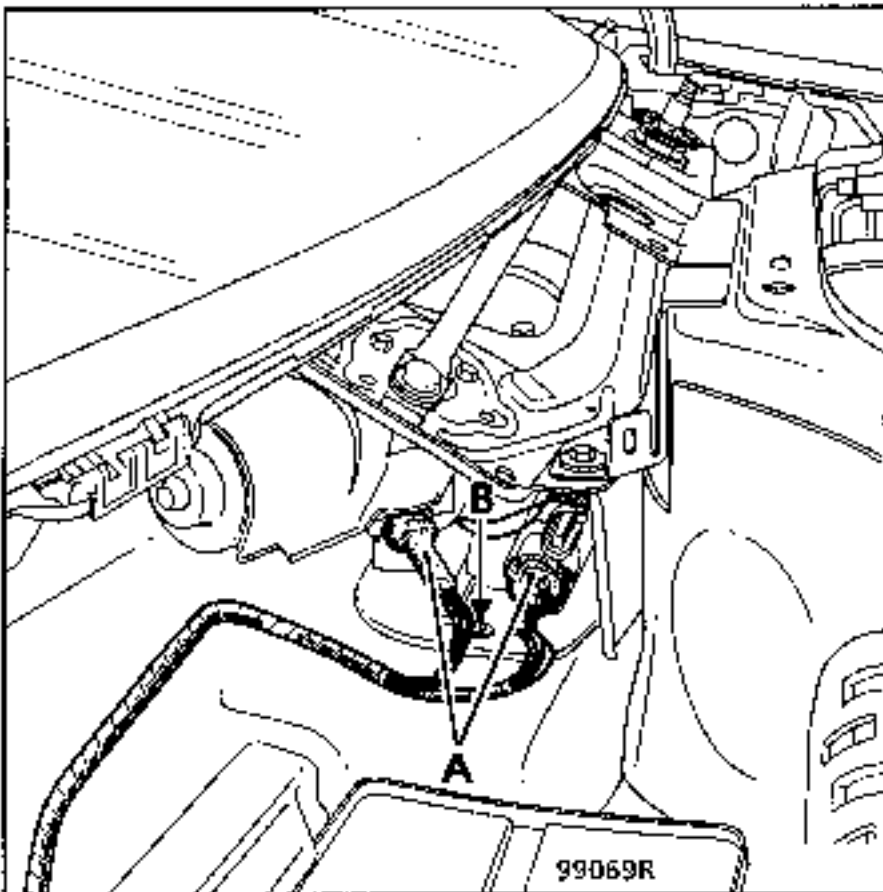
Below is the method for the heating section in addition to removing the wiper mechanism given previously.

## **REMOVAL**

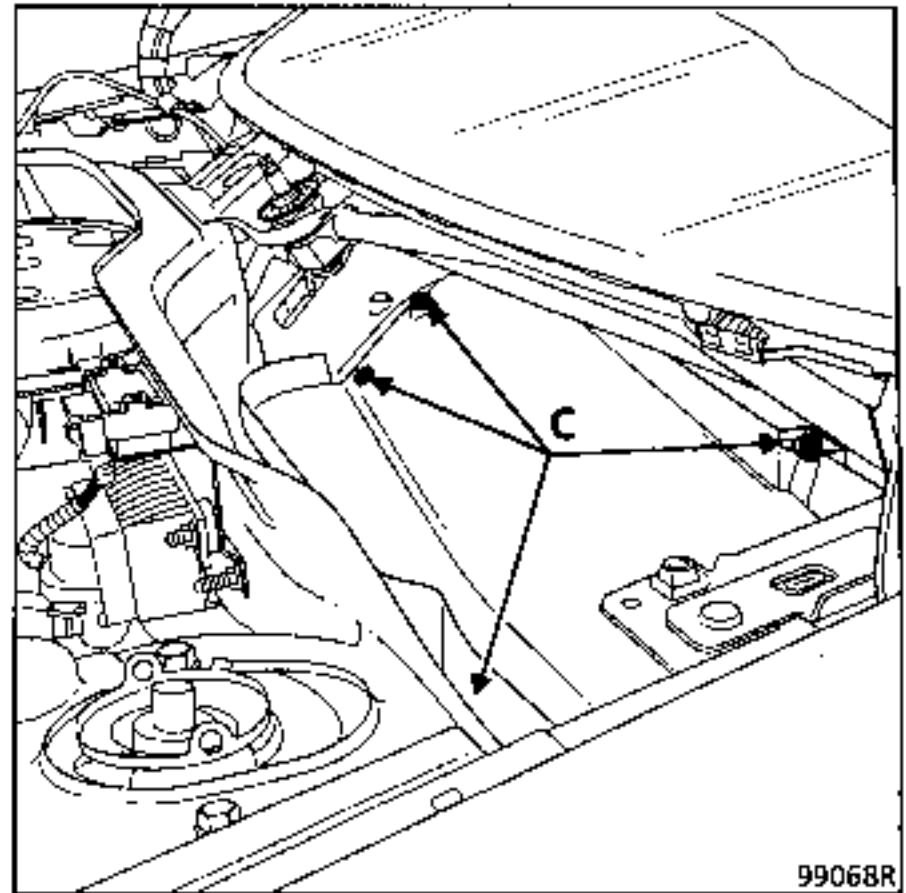
The fan unit is removed after having removed the upper seal of the scuttle panel, the exterior air inlet grille and the wiper arms.

Disconnect the battery.

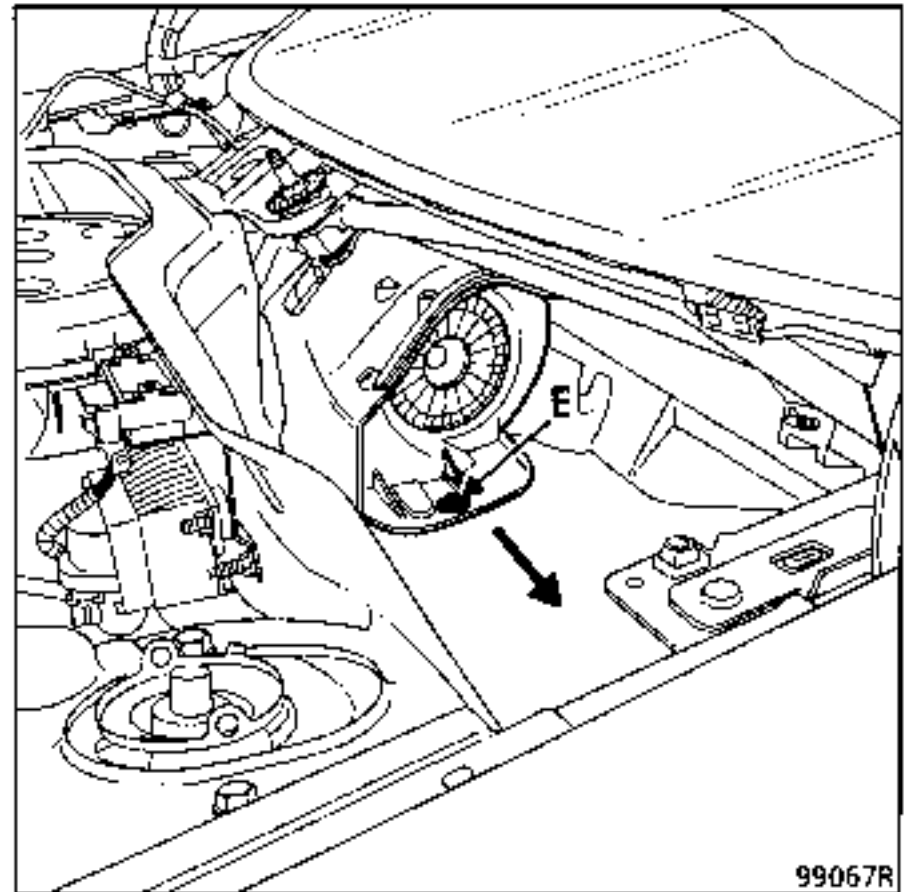
Remove the supply connectors (A) and the mounting bolt (B).



Remove:  
– the water deflector and mountings (C),



– the mounting bolt (E).



Remove the fan unit in the direction shown.

## **REFITTING**

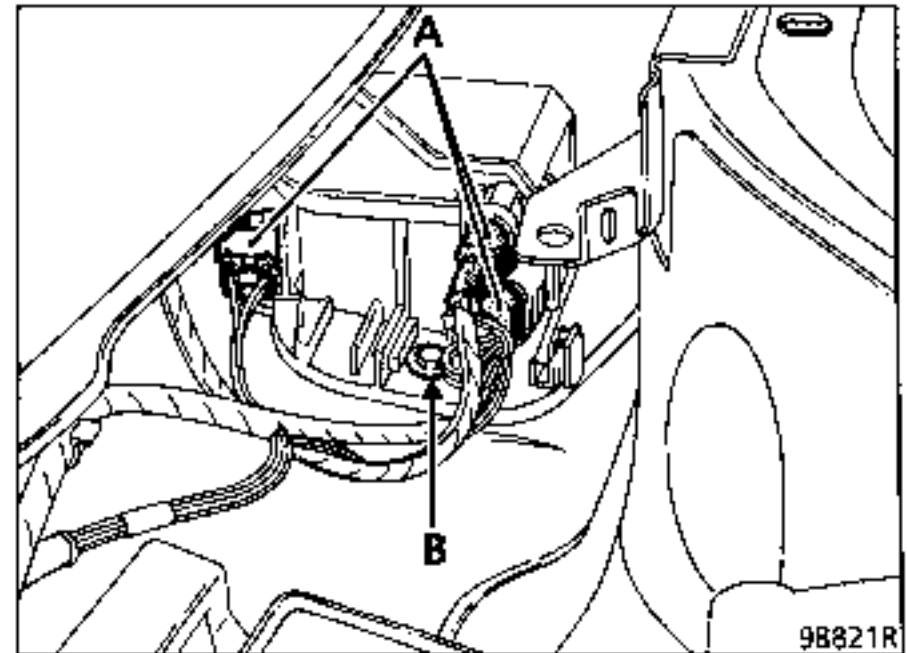
Check the condition of the seal.

Refitting is the reverse of removal.

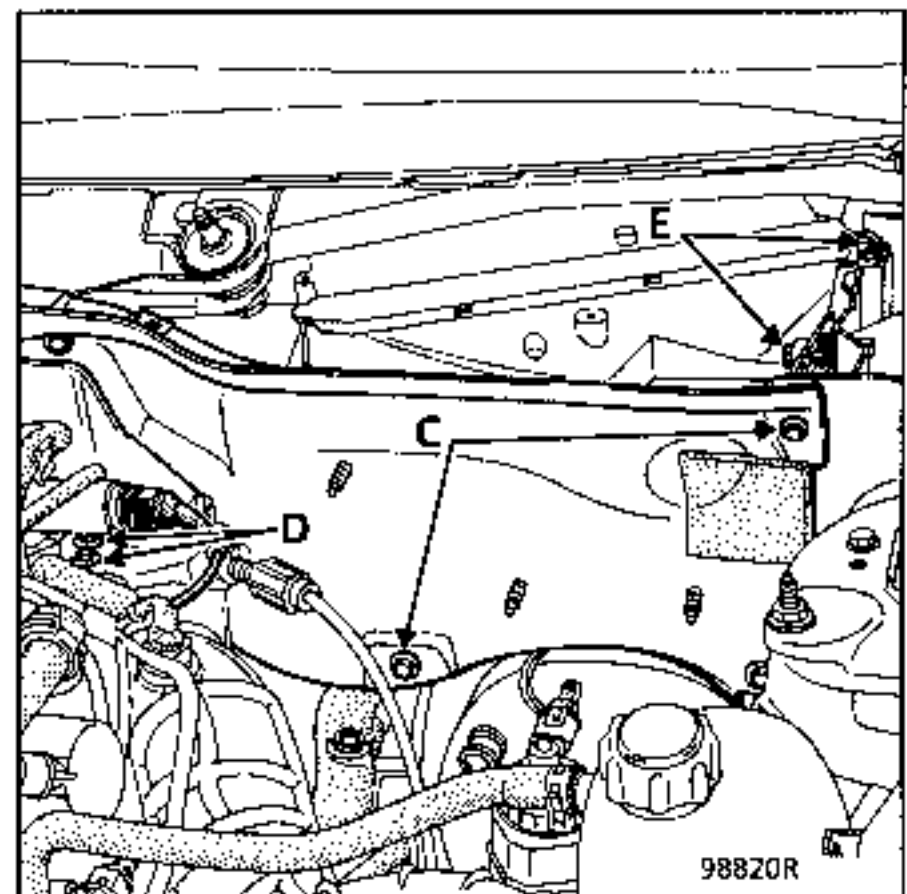


# **SPECIAL NOTES FOR VEHICLES FITTED WITH RECYCLED HEATING OR AIR CONDITIONING**

For vehicles fitted with heating and recycling or air conditioning, either the heating unit or the evaporator unit, located on the left hand side of the scuttle panel, has to be removed in order to access the wiper mechanism.



- the acoustic tie-rod between the shock absorber turrets,
- the ignition power module or the preheating unit (depending on engine),
- the four mounting bolts of the heat shield,
- the scuttle panel partition (C) (5 bolts) (the bolt located behind the heat shield is to be removed first).



Below is the method for the air conditioning part in addition to removing the wiper mechanism given previously.

## **1st CASE: REMOVING THE AIR RECYCLING DEVICE**

Disconnect the supply connectors (A).

Remove:

- the mounting bolt (B) of the passenger compartment fan unit,



# Special notes depending on the engine

## • E7J

Remove the air filter.  
Protect the inlet opening.  
Remove the air filter on top of the engine.

## • K7M

Remove the throttle body (4 bolts) + wiring.  
Remove the air filter from its housing.  
Remove the throttle body on top of the engine.

## • F3R

Remove the accelerator control cable mounting and the switches (D).

## • F8Q

Remove:  
– the breather hose mounting bracket,  
– the preheating unit mounting plate.  
Unclip the solenoid valve connectors.  
Remove the solenoid valve pipe.

Remove:

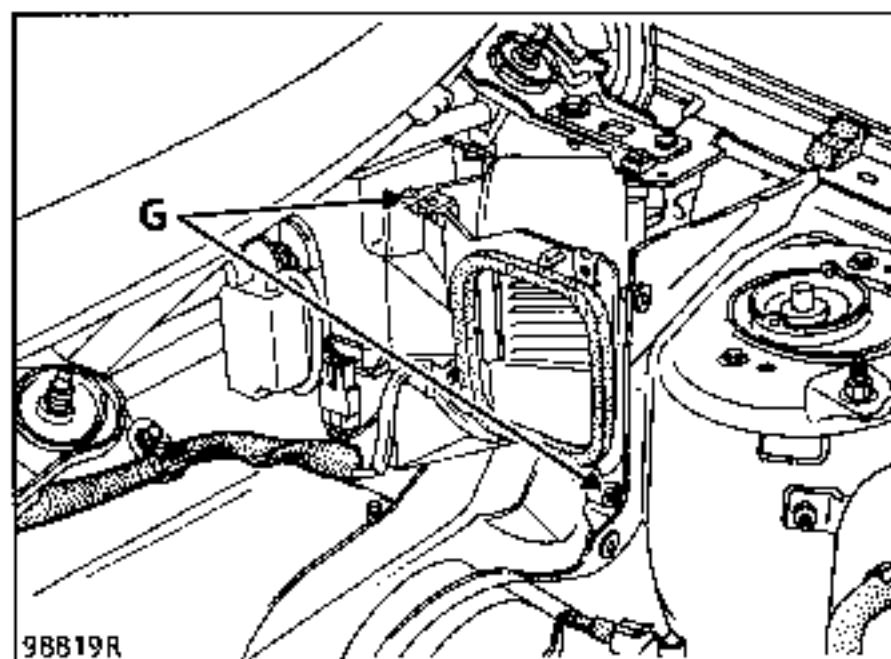
- the water deflector on the intermediate unit (bolt F),

- the mountings (E) of the intermediate unit assembly (2 bolts).

Remove the intermediate unit by releasing the nose piece.

Remove it from the two centring pieces of the fan unit.

Remove the fan unit mountings (G) (2 bolts).

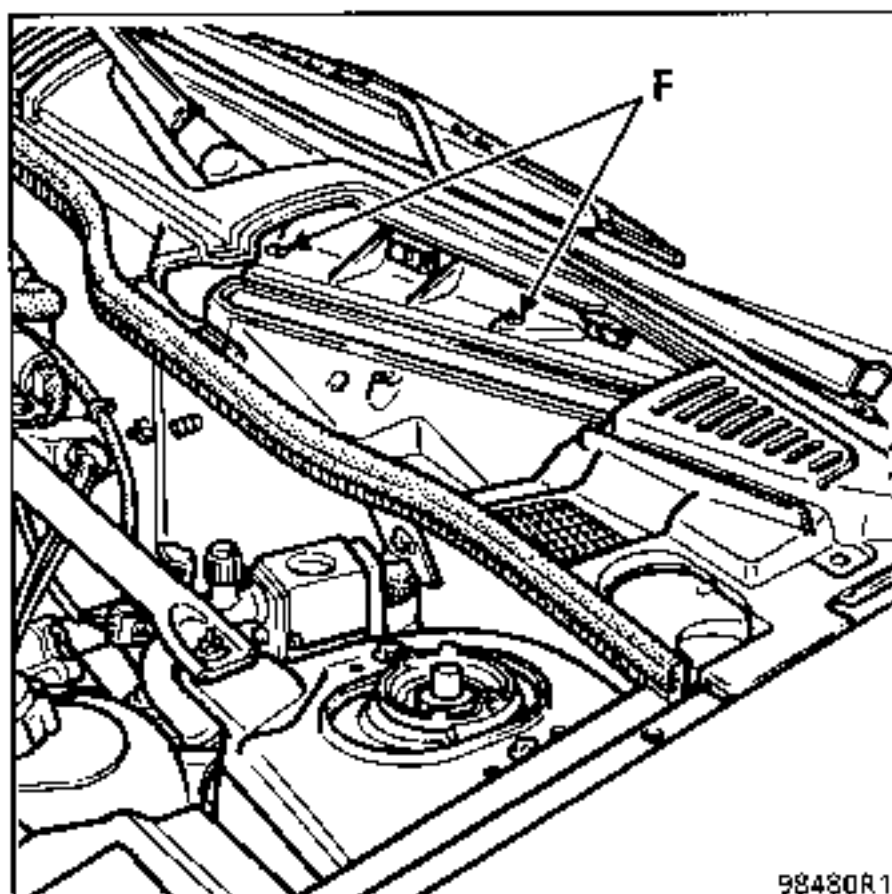
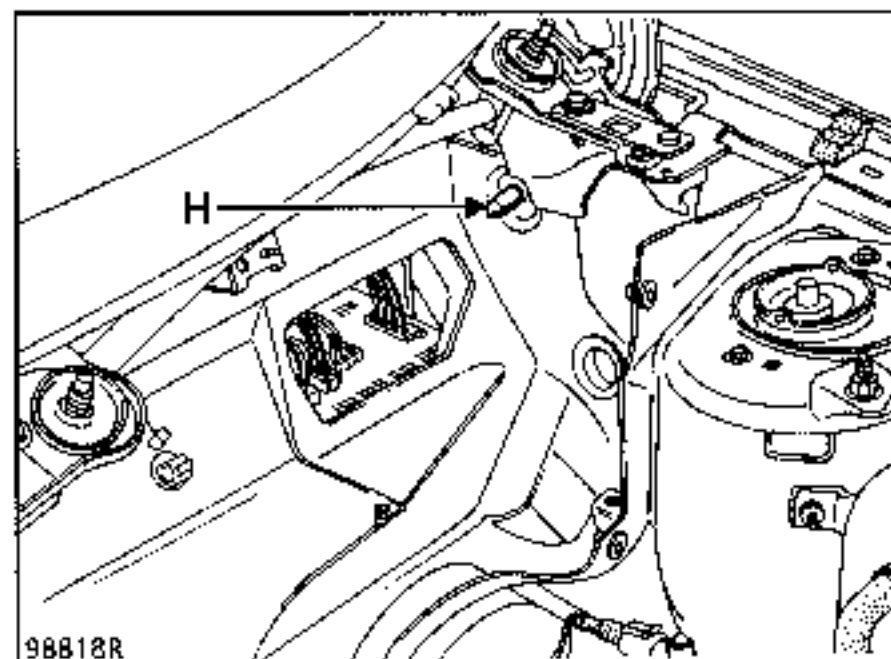


Remove the fan unit supply cable.

## REFITTING

Check the condition of the seals.

Position the fan unit on the centring piece (H) then tighten the bolts (G).





## 2nd CASE: REMOVING THE EVAPORATOR UNIT

### Special notes

The operations to be carried out to remove the evaporator unit from vehicles fitted with air conditioning are the same as the 1<sup>st</sup> case.

The only additional operations are the bleeding and filling of the coolant circuit (refer to chapter 62 of section 6 air conditioning).

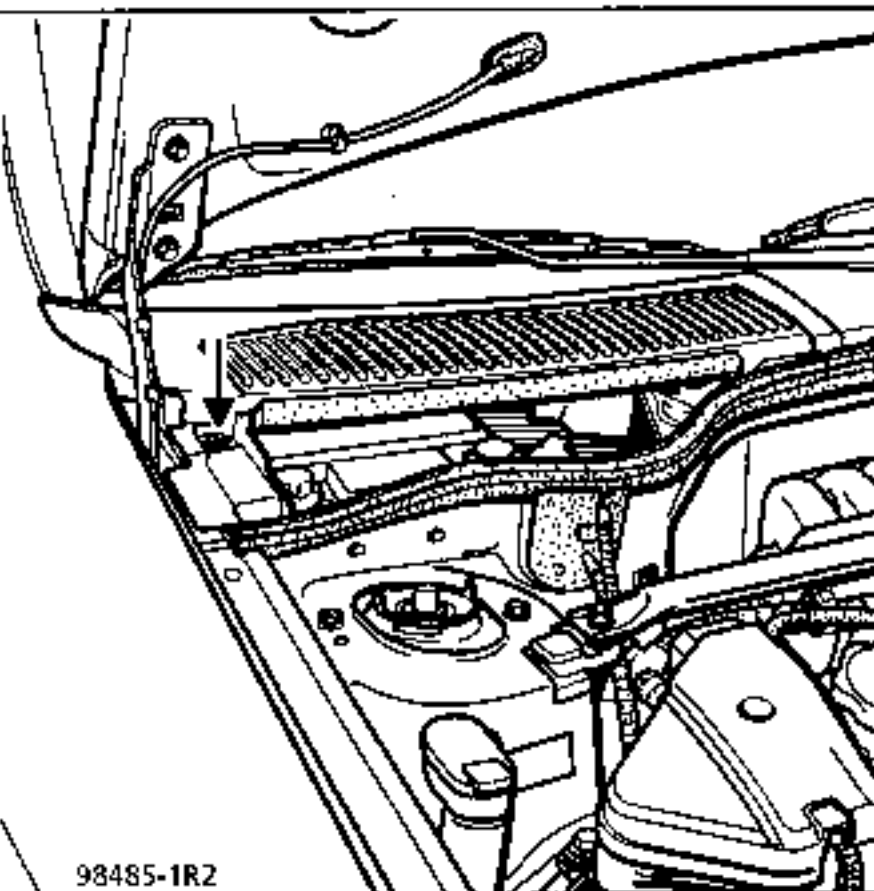
### REMOVING THE MOTOR ONLY

Ensure that the motor is in the park position.

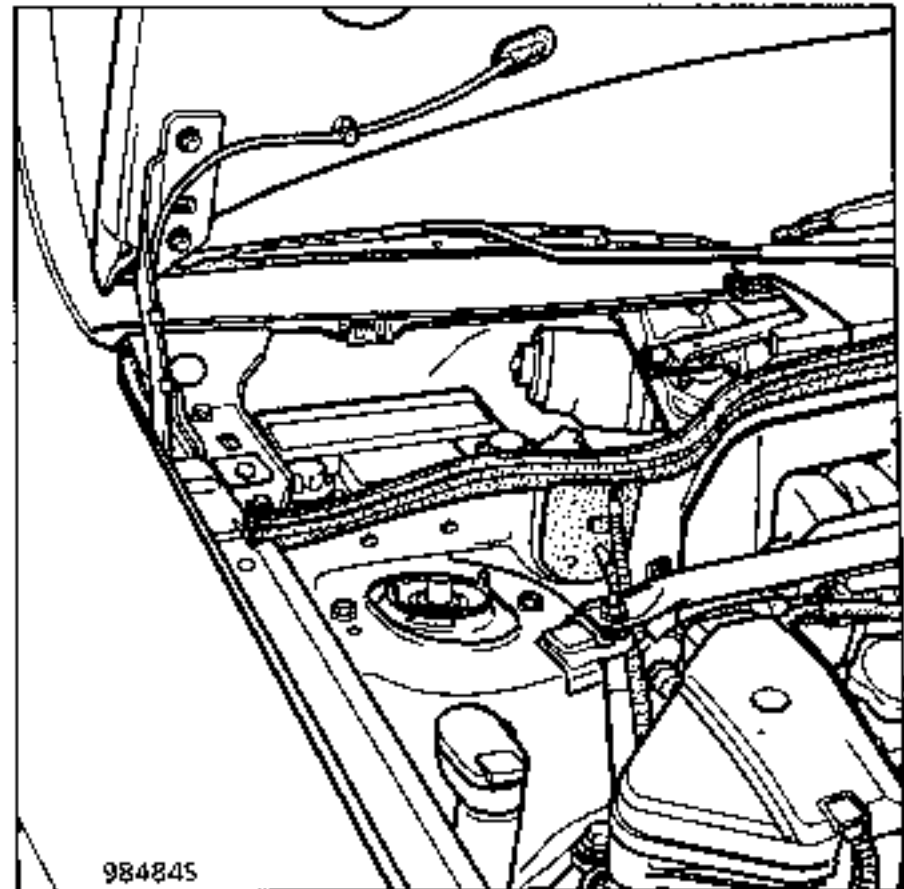
Disconnect the battery.

Remove:

- the half scuttle grille (1 bolt) on the right hand side,



- the nut from the motor shaft and remove the linkage after having noted its position,
- the 3 motor mounting bolts.

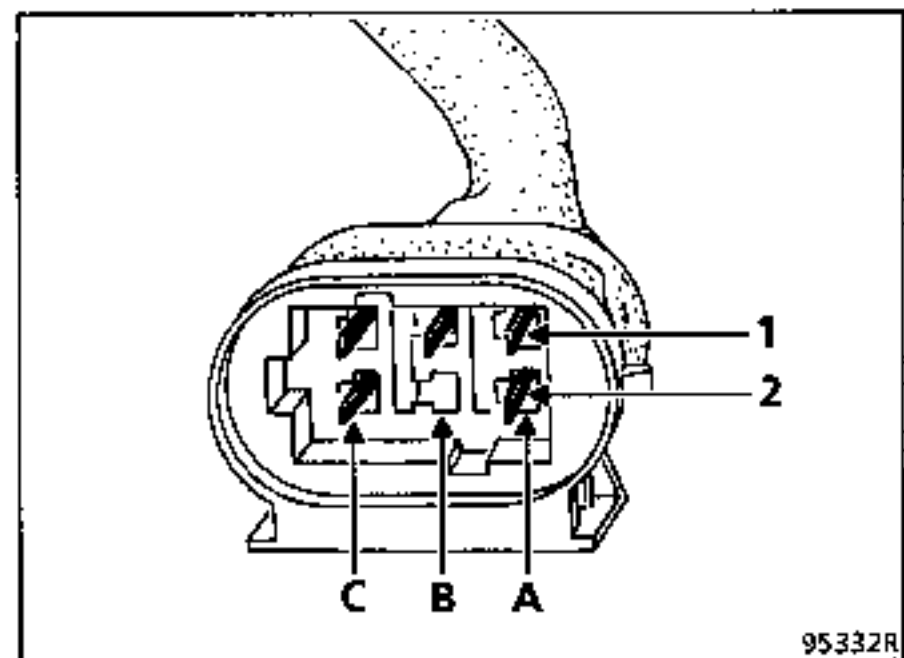


Remove the motor after having disconnected it.

### REFITTING THE MOTOR

Reposition the motor on the mark made during removal.

### CONNECTION



Track	Allocation
A1	Slow speed
A2	Park
B1	High speed
B2	Not used
C1	+ park
C2	Earth



## REAR WIPER AUTOMATIC OPERATION

### Special operating notes

During normal use, the rear wiper operates at an intermittent speed.

Under certain conditions and depending on the equipment of the vehicle, the connection unit will operate the rear wiper.

This function will be automatically triggered if:

- reverse gear is engaged and,
- the front wipers are working (intermittent, slow or high speed).

**NOTE:** if the wiper is activated whilst the heated rear screen is operating, the heated rear screen timer will be extended by approximately 5 minutes.

### Fault finding

For fault finding, refer to chapter 87 (fault finding using the XR25 and the connection unit).

## REMOVING THE MOTOR MECHANISM ASSEMBLY

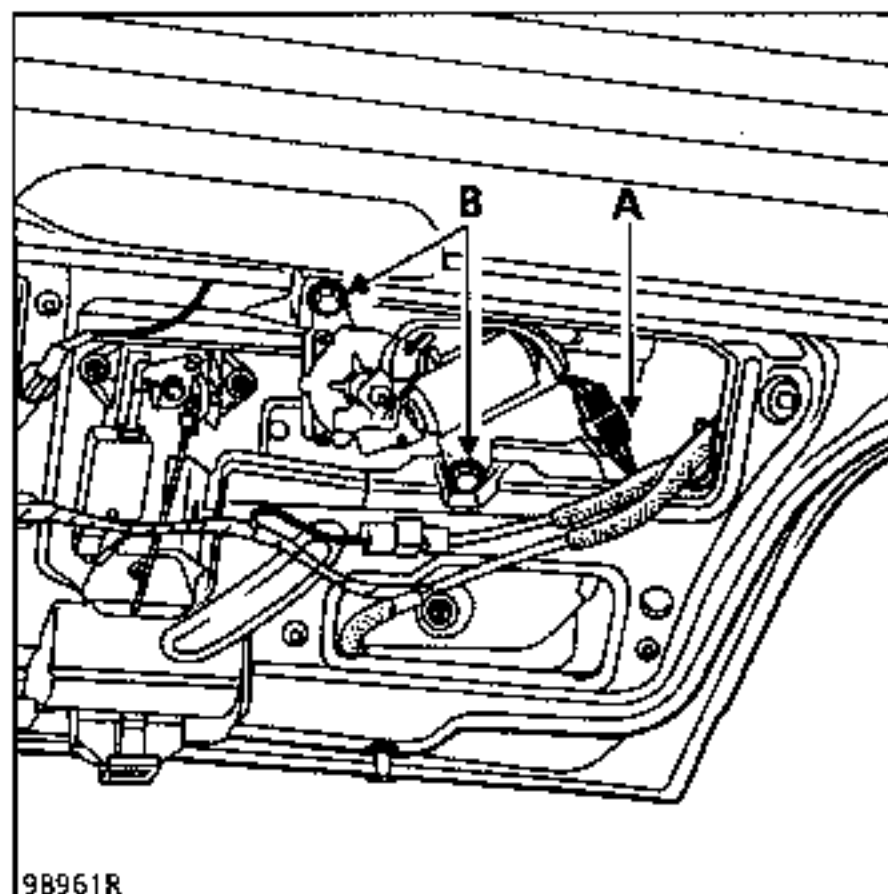
Disconnect the battery.

Remove:

- the mounting nut for the wiper arm
- the wiper arm from its shaft using the special tool Elé. 1294-01,
- the wiper arm shaft cover then its central nut and spacer (tightening torque 0.9 daN.m),
- the trim inside the tailgate by its three bolts.

Disconnect the connector (A) of the rear wiper.

Remove the mounting bolts (B) of the motor mechanism assembly.



## REFITTING THE MOTOR MECHANISM ASSEMBLY

Ensure that the motor is in the park position before refitting the wiper arm by placing the wiper on the upper left reference mark of the rear screen.

Use a new nut and tighten it to a torque of 1.2 daN.m ( $\pm 20\%$ ).

## CONNECTION

Track	Allocation
1	Rear wiper
2	Earth
3	+ after ignition



## REMOVING THE MOTOR

Remove:

- the motor mechanism assembly in accordance with the previously described method,
- the nut from the motor shaft.

Remove the linkage after having noted its position.

Remove the three motor mounting bolts.

Remove the motor.

## REFITTING THE MOTOR

Reposition the drive linkage opposite the reference mark made during removal.



## OPERATING PRINCIPLE

This consists of a two-way electric pump which allows fluid from the same bottle to be supplied either to the front screen wash or to the rear screen wash depending on the electrical supply of the two tracks of the connector (E).

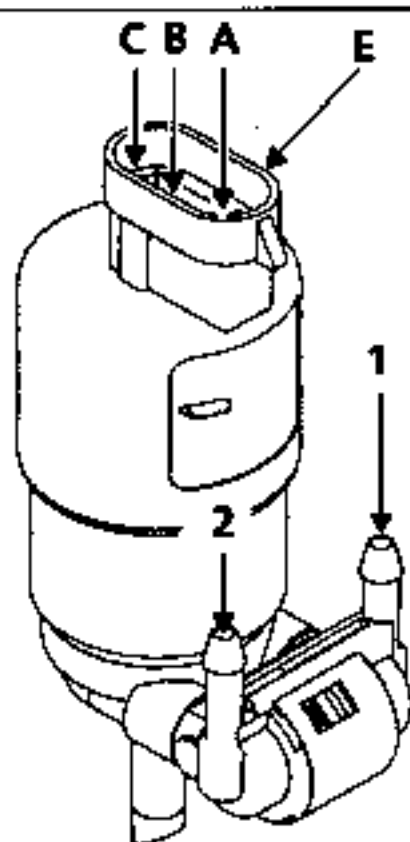
There are two possible cases:

Track	Allocation
A	+
B	-
C	Not used

The pipe is supplied through the white end piece (1), the front screen wash operates.

Track	Allocation
A	--
B	+
C	Not used

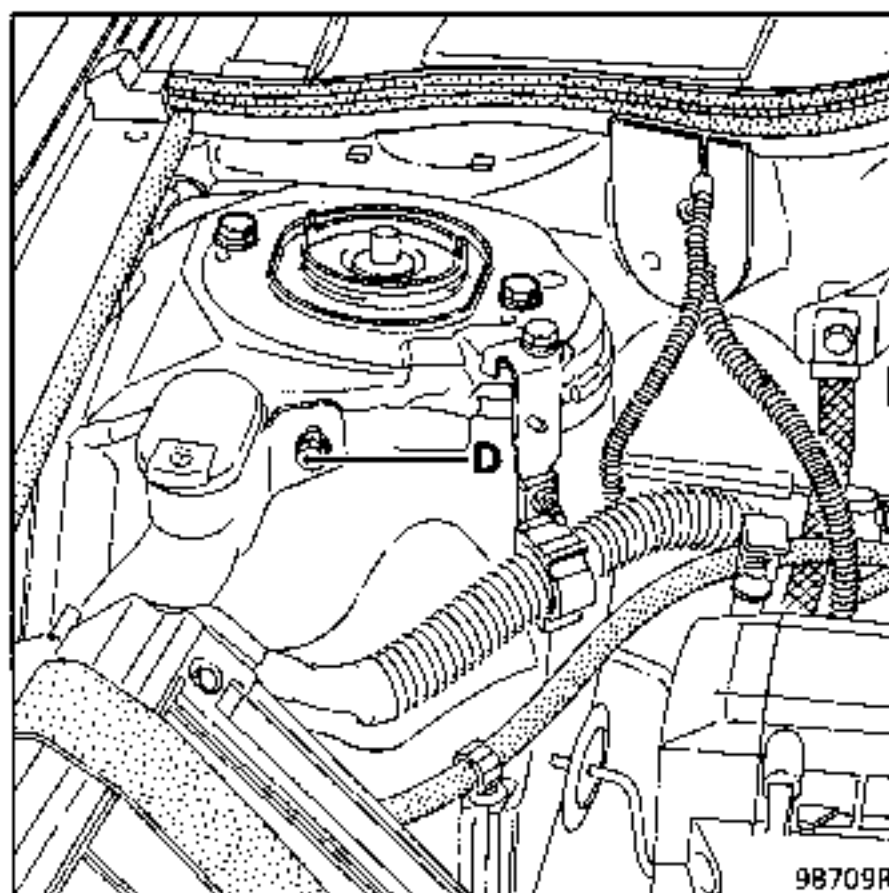
The pipe is supplied through the black end piece (2), the rear screen wash operates.



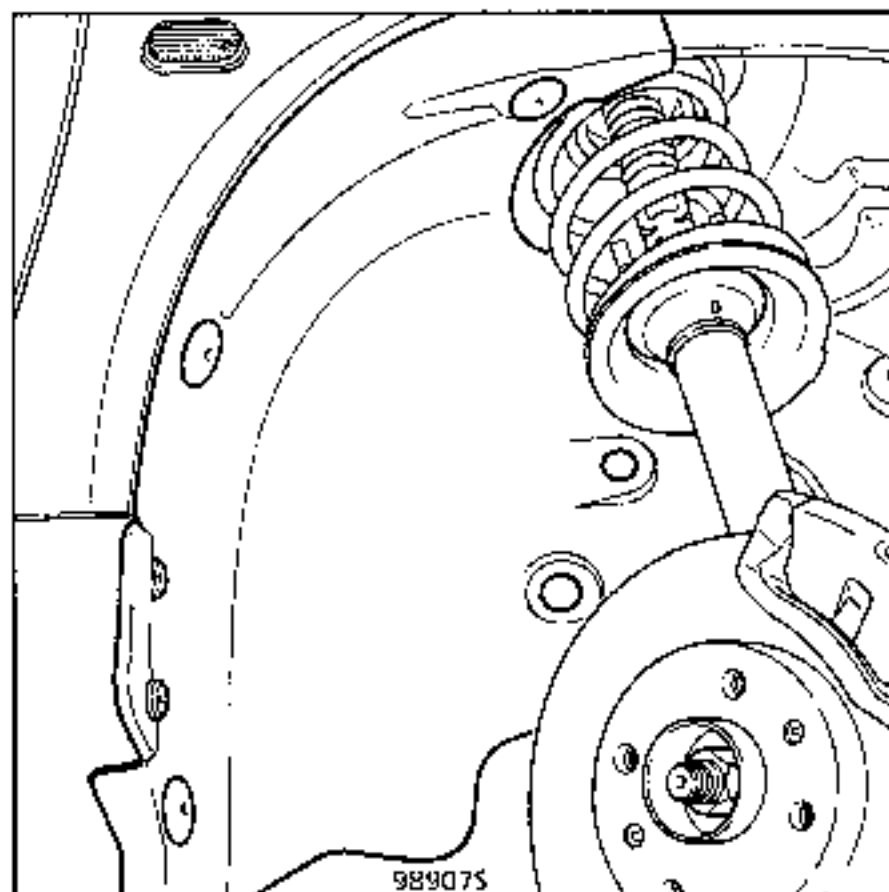
## REMOVING THE SCREEN WASH BOTTLE

Remove:

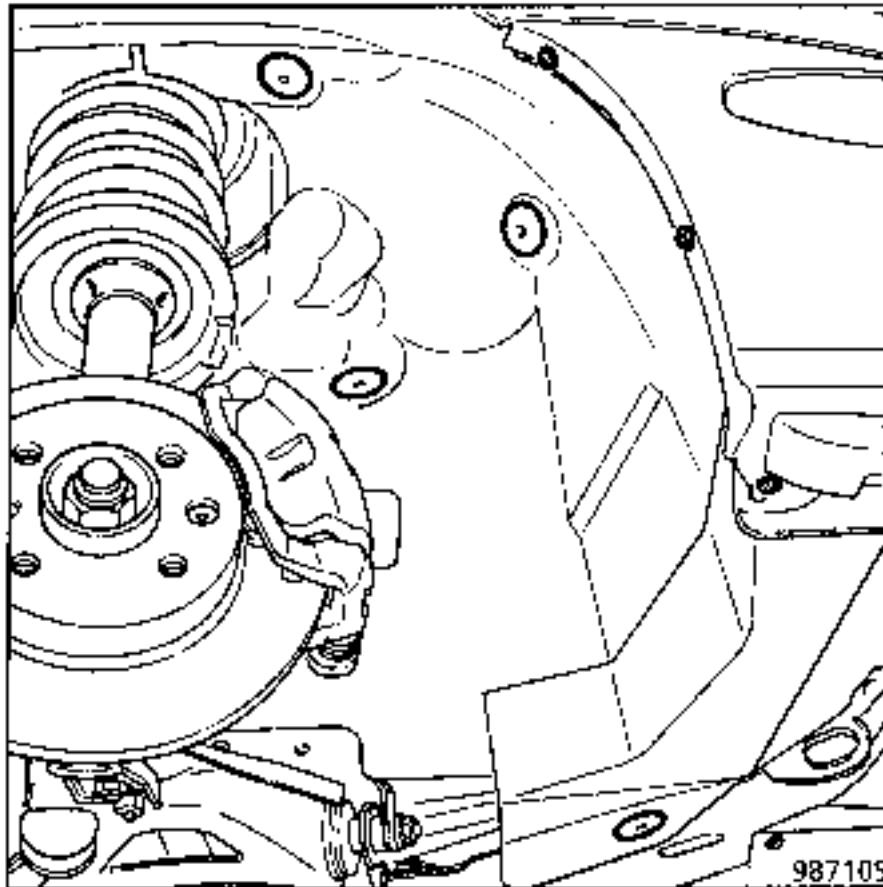
- the bottle filler neck by the nut (D),



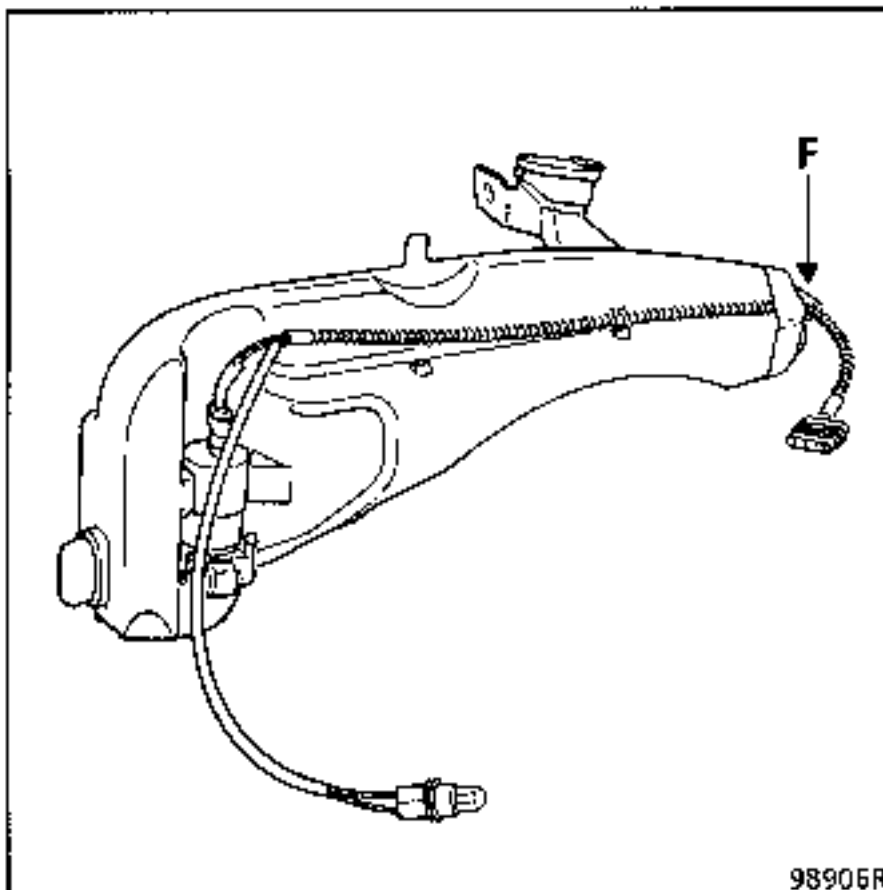
- the front right hand wheel,
- the two protectors under the wing.







Remove the screen wash bottle from its mounting (F) after having disconnected its wiring.

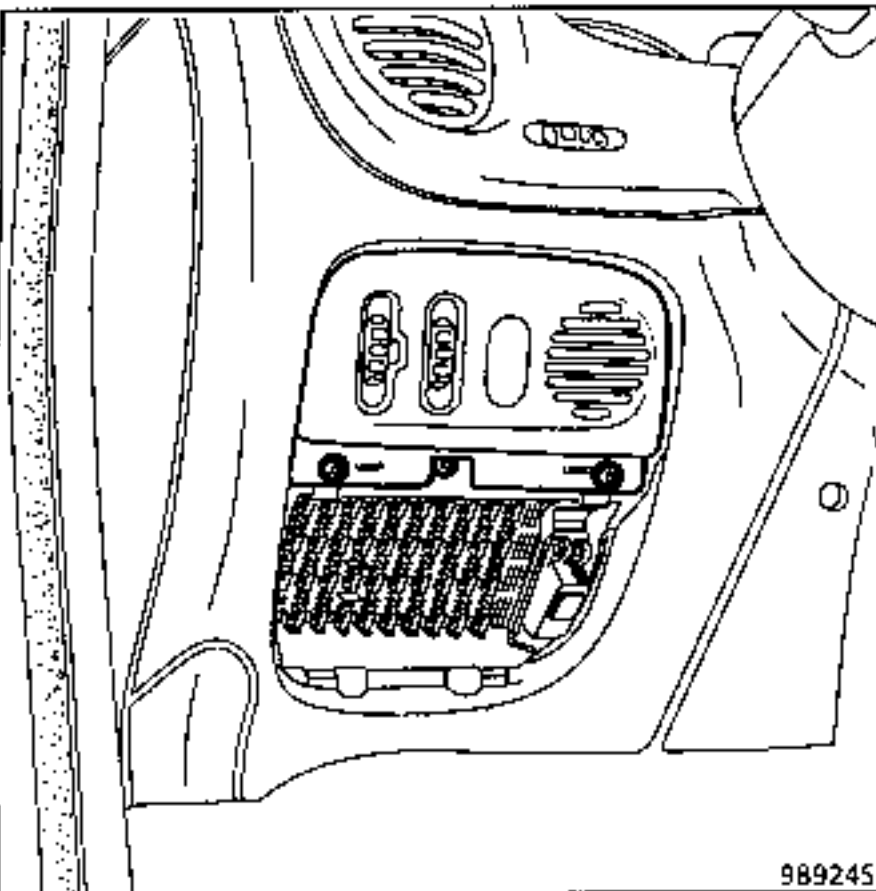


**ATTENTION:** when removing, disconnect the pump making sure that the two front and rear screen wash pipes are distinguished.



**GENERAL**

This unit is located at the bottom of the dashboard on the driver's side.



The connection unit groups together many of the small electronic units and relays in the same, single part.

This unit cannot be dismantled but fault finding may be carried out using the XR25 test kit (except level 1 basic models).

It can be identified:

- either by its Part Number on the label located above the fuses or read using the XR25 test kit, ISO selector on S8, code D45, G70\* (except level 1 unit),
- or by its equipment level (2-3-4) read using the XR25 test kit, ISO selector on S8 code D45, #14 (except level 1 unit).

As standard, 7 different models of connection unit are fitted to vehicles depending on their equipment:

- 1 basic model without options  
Part Number 77 03 297 241 (level 1).

- 2 basic model with ABS or front fog lights option  
Part Number 77 03 297 181 (level 1).
- 3 a model, Part Number 77 03 297 242 (#14 level 2), which can manage:
  - the lights on reminder buzzer,
  - electric central door locking,
  - the PLIP,
  - the engine immobiliser,
  - the dual headlights,
  - the rear accessories socket,
  - fault finding using the XR25 test kit.
- 4 a model, Part Number 77 03 297 182 (#14 level 2), which can manage in addition to Part Number 77 03 297 242 :
  - ABS,
  - front fog lights.
- 5 a model, Part Number 77 03 297 243 (#14 level 3), which can manage in addition to Part Number 77 03 297 242 :
  - front fog lights,
  - adjustable front wiper speed,
  - front wiper operation depending on the vehicle speed,
  - rear wiper operation which operates as a function of the front wipers and reverse gear,
  - driver's one touch electric window (engine running),
  - passenger's electric window,
  - courtesy light with timer,
  - heated rear screen, where the operation depends on whether the engine is running,
  - heated rear view mirror.
- 6 a model, Part Number 77 03 297 183 (#14 level 3), which can manage in addition to Part Number 77 03 297 243 :
  - ABS,
  - variable shock absorbing,
  - self levelling suspension,
  - sunroof,
  - heated windscreen,
  - heated rear screen which operates as a function of the heated windscreen,
  - speed warning.



- 7 a high specification model, Part Number 77 03 297 184 (#14 level 4), which can manage in addition to Part Number 77 03 297 183 :
- the operation of the front fog lights which are programmable depending on the legislation in each country,
  - the operation of the rear fog light which is programmable depending on the legislation of the country,
  - the rear electric windows,
  - the alarm,
  - the headlight washers,
  - front heated seats,
  - front electric seats.

As for spare parts, only the following Part Numbers are available:

- |                                       |  |
|---------------------------------------|--|
| <b>77 03 297 181</b><br>(level 1)     | for vehicles which were originally fitted with units:<br>Part Numbers 77 03 297 241 and<br>77 03 297 181.              |
| <b>77 03 297 182</b><br>(#14 level 2) | for vehicles which were originally fitted with units:<br>Part Numbers 77 03 297 242 and<br>77 03 297 182.              |
| <b>77 03 297 184</b><br>(#14 level 4) | for vehicles which were originally fitted with units:<br>Part Numbers 77 03 297 243<br>77 03 297 183<br>77 03 297 184. |

**IMPORTANT:** when replacing the connection unit, some functions will have to be configured using the XR25 test kit, depending on the vehicle equipment and the legislation of the country.

For vehicles fitted with a PLIP, the infrared code (changing) of the 2 PLIPs will also have to be programmed into the connection unit (see programming procedure chapter 82).

**ATTENTION:** if the vehicle is fitted with an engine immobiliser, it will be impossible to start the engine if the programming procedure has not been carried out (except if the injection computer or solenoid valve is not coded).

On vehicles fitted with dual headlights, replace fuse n° 34 (F45) to keep the sidelights illuminated in the lights on position. Do not put a fuse in this position for vehicles with single headlights (overheats).



## CONNECTION UNIT CONFIGURATION

- Standard connection units (level 1),  
Part Numbers 77 03 297 241 and  
77 03 297 181  
cannot be configured.
- On medium specification connection units  
(#14 level 2 and 3),  
Part Numbers 77 03 297 242,  
77 03 297 182,  
77 03 297 243 and  
77 03 297 183,  
only the engine immobiliser functions, immo-  
biliser type (petrol or diesel) and the courtesy  
light timer can be configured using the XR25  
test kit as a function of the vehicle equipment.
- On high specification connection units (#14  
level 4),  
Part Number 7703 297 184  
all the following functions can be configured  
depending on the vehicle equipment and the  
legislation in the country:

Functions which can be configured	Identifi- cation n°
● engine immobiliser	46
● diesel engine immobiliser	45
● courtesy light timer	47
● front fog lights	
extreme cold countries	48
● Arabia	
(overspeed warning)	49
● running lights *	50
● headlight washers	51
● alarm	52
● alarm system (depending on country)	53

**NOTE:** the configured functions can be displayed  
on the diagnostic fiche bargraphs on the 2/2 sta-  
tus side.

(\*) Dipped headlights operate after the engine  
has been switched on (for certain countries).

It should be noted that not complying with the  
connection unit programming as a function of the  
current legislation in the country of origin of the  
vehicle may lead to the vehicle owner being pro-  
secuted.

It is therefore essential that the connection unit  
programming is complied with.



**CHECKING THE CONFIGURATION**

Connect the XR25 test kit fitted with cassette n° 15 to the vehicle's diagnostic socket and put the ISO switch on S8.

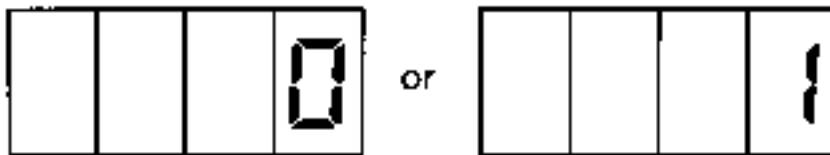
Enter the code **D 4 5**

The following will appear on the central display:



Enter **#** followed by the identification n° of the desired function (see previous page).

The following will appear on the display:



**0** indicates that the function is not activated.

**1** indicates that the function is activated.

**NOTE:** new connection units are delivered un-configured (configured to 0).

**Special note:** the alarm function (depending on country) can be read with **# 5 3**

**1** indicates programming for France, Arabia, Austria, French Colonies, Spain, Greece, Hungary, Israel, Italy, Japan, Portugal, Morocco, Algeria and Tunisia, Slovenia, Iceland, DAi,

**2** indicates programming for the future European standard or Australia, Belgium, Denmark, Finland, Great Britain, Holland, Ireland, Norway, Poland, Sweden, Taiwan, Czech Republic

**3** indicates programming for Germany,

**4** indicates programming for Switzerland,



## CHANGING THE CONFIGURATION

Connect the XR25 test kit fitted with cassette n° 15 to the vehicle's diagnostic socket and put the ISO switch on 58.

Enter the code **D 4 5**

The following will appear on the central display:

**b i c** then **l b i c**

Enter **G**  
followed by the identification n° of the desired function on page 87-3 then type **\***

then **1** to configure,

or **0** to unconfigure,

and validate using the **\***

The beep from the test kit indicates that the operation has been accepted.

Check that the configured function operates correctly.

Special note: the alarm function (depending on country) can be configured by:

	<b>G</b>	<b>5</b>	<b>3</b>	<b>*</b>	<b>1</b>	<b>*</b>
or	<b>G</b>	<b>5</b>	<b>3</b>	<b>*</b>	<b>2</b>	<b>*</b>
or	<b>G</b>	<b>5</b>	<b>3</b>	<b>*</b>	<b>3</b>	<b>*</b>
or	<b>G</b>	<b>5</b>	<b>3</b>	<b>*</b>	<b>4</b>	<b>*</b>
or	<b>G</b>	<b>5</b>	<b>3</b>	<b>*</b>	<b>5</b>	<b>*</b>

**1** indicates programming for France, Arabia, Austria, French Colonies, Spain, Greece, Hungary, Israel, Italy, Japan, Portugal, Morocco, Algeria and Tunisia, Slovenia, Iceland, DAI,

**2** indicates programming for the future European standard or Australia, Belgium, Denmark, Finland, Great Britain, Holland, Ireland, Norway, Poland, Sweden, Taiwan, Czech Republic

**3** indicates programming for Germany,

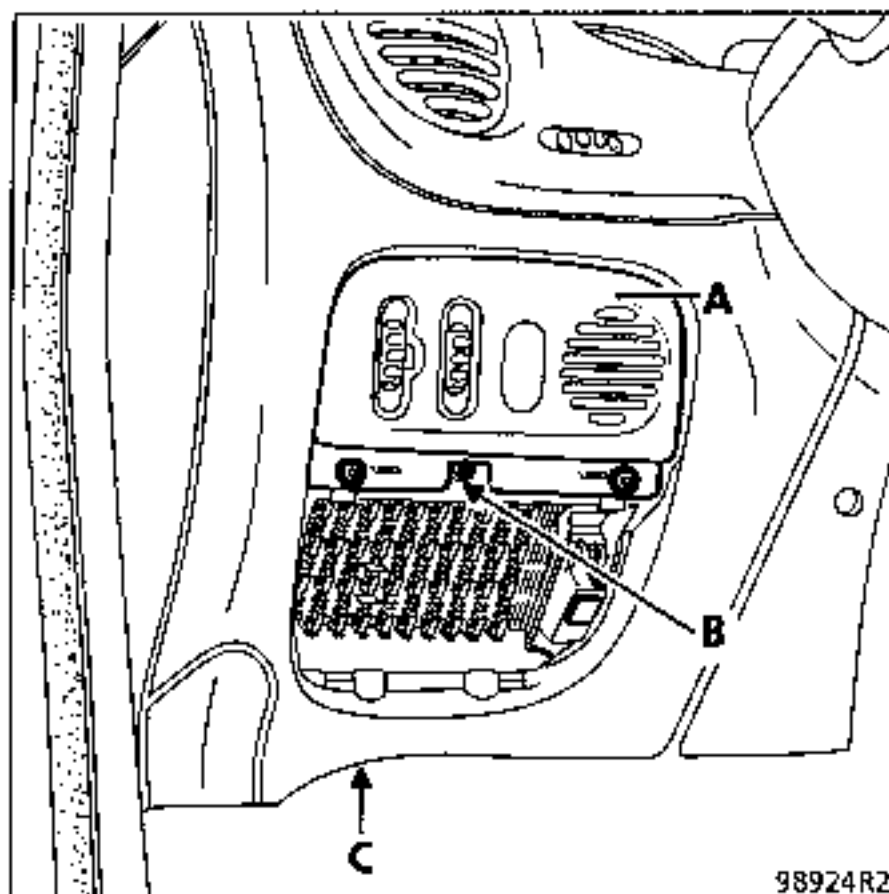
**4** indicates programming for Switzerland,



## REMOVAL - REFITTING

Remove:

- the fuse cover,
- part (A) (2 bolts),
- the mounting bolts (B) of the connection unit,
- the plastic wiring retaining lug (C) under the unit by squeezing the 2 plastic tabs together.



Disconnect the four connectors under the connection unit.

Unclip the unit from its two side mountings by pushing it towards the front of the vehicle and removing from underneath the dashboard.

Remove the plastic protector.

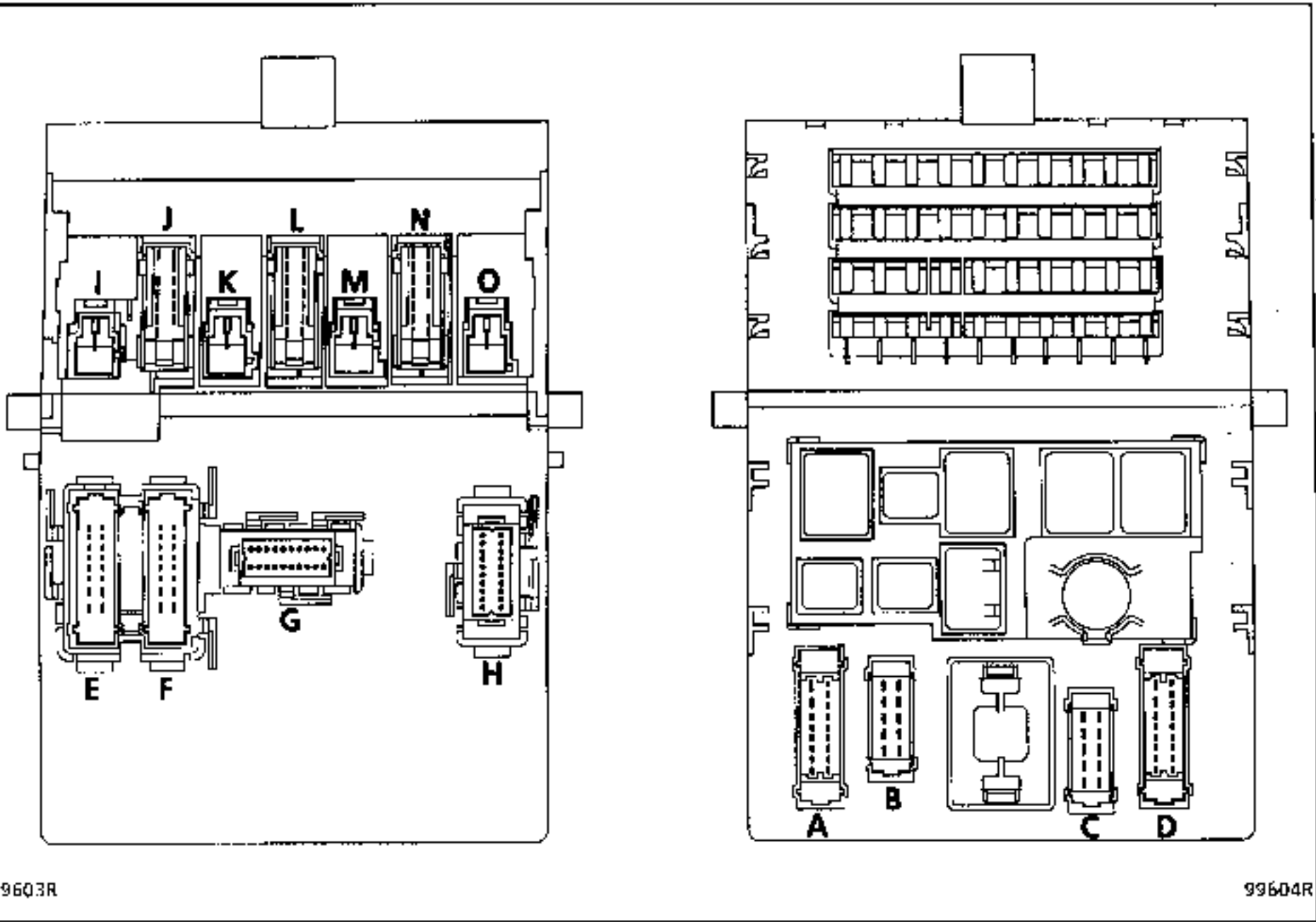
Disconnect the connectors on top of the unit.

Refitting is the reverse of removal.

**IMPORTANT:** remember to refit the plastic protector when refitting.



CONNECTION



A BLUE CONNECTOR 17 TRACKS  
 (REAR WIRING P15)

Track	Allocation
A1	Not used
A2	Not used
A3	Rear fog light
A4	Not used
A5	Rear courtesy light
A6	Not used
A7	Rear door switches
A8	- minimum fuel level warning light

Track	Allocation
A9	Fuel gauge earth
B1	+ before ignition, courtesy light
B2	Not used
B3	Front left door switch
B4	Fuel level information
B5	Boot switch
B6	Front right door switch
B7	Not used
B8	Handbrake switch



**B BLACK CONNECTOR 10 TRACKS  
(REAR WIRING P13)**

Track	Allocation
A1	+ central door unlocking
A2	+ central door locking
A3	Not used
A4	Rear wiper
A5	Not used
B1	Not used
B2	Right hand side lights
B3	Left hand side lights
B4	Reversing lights
B5	Brake lights

**D GREY CONNECTOR 17 TRACKS  
(PEDAL WIRING P12)**

Track	Allocation
A1	Infrared receiver supply
A2	+ before ignition, courtesy light
A3	Not used
A4	Earth
A5	Not used
A6	Ultrasound detector information
A7	Infrared receiver return
A8	Ultrasound supply
A9	Courtesy light supply through door switches
B1	+ after ignition, sunroof
B2	Not used
B3	Not used
B4	Not used
B5	Not used
B6	Not used
B7	Not used
B8	Not used

**C BLUE CONNECTOR 10 TRACKS  
(PEDAL WIRING P14)**

Track	Allocation
A1	+ after ignition brake fuse
A2	Brake fluid level
A3	Not used
A4	Not used
A5	Not used
B1	Earth
B2	Not used
B3	Not used
B4	Brake lights switch
B5	Stop information



**E BLACK CONNECTOR 16 TRACKS  
(DASHBOARD WIRING P10)**

Track	Allocation
A1	Left hand indicator
A2	Right hand indicator
A3	Not used
A4	Not used
A5	Not used
A6	Not used
A7	Not used
A8	Not used
B1	Driver's window lower
B2	Driver's window raise
B3	Not used
B4	Not used
B5	Not used
B6	Not used
B7	Not used
B8	Not used

**F WHITE CONNECTOR 16 TRACKS  
(DASHBOARD WIRING P9)**

Track	Allocation
A1	Indicator feed
A2	Front wiper high speed to motor
A3	Front wiper high speed control
A4	Front wiper timer
A5	Front wiper slow speed control
A6	Front wiper slow speed to motor
A7	Electronic earth
A8	Front wiper park
B1	Earth
B2	Front fog lights control
B3	+ Door locking
B4	Right hand side lights
B5	Reversing lights control
B6	+ Door unlocking
B7	Left hand side lights
B8	Rear fog light



**G BLUE CONNECTOR 20 TRACKS  
(DASHBOARD WIRING P17)**

Track	Allocation
1	Door unlock information
2	Not used
3	Alarm control
4	Heated windscreen control
5	Left hand heated windscreen feed
6	Right hand heated windscreen feed
7	Not used
8	Not used
9	Not used
10	Vehicle speed information
11	Rear wiper timer
12	Diagnostic line L
13	Heated windscreen activation information
14	Diagnostic line K
15	Front washer pump
16	Rear washer pump
17	Stop information
18	Not used
19	Stop lights
20	Alarm control

**H BLACK CONNECTOR 20 TRACKS  
(DASHBOARD WIRING P16)**

Track	Allocation
1	Door open warning light
2	Door unlock command
3	Door lock command
4	Oil pressure warning light
5	Immobiliser coded line
6	Fuel level information
7	Not used
8	Low brake fluid warning light
9	Low fuel level warning light
10	Fuel gauge earth
11	Red immobiliser warning light
12	Heated rear screen control
13	Hazard warning lights information
14	Overspeed damper feed
15	One touch window raise control
16	One touch window lower control
17	Front wiper slow speed
18	Not used
19	Bonnet switch
20	Siren feed



**I GREY CONNECTOR + AFTER IGNITION  
(DASHBOARD WIRING P4)****J BLACK CONNECTOR 14 TRACKS  
(DASHBOARD WIRING P7)****K BLACK CONNECTOR + BEFORE IGNITION  
(DASHBOARD WIRING P1)****L BLUE CONNECTOR 14 TRACKS  
(DASHBOARD WIRING P6)**

Track	Allocation
A1	+ after ignition passenger electric seat
A2	+ accessories feed for heating
A3	+ after ignition passenger electric seat
A4	+ before ignition memories
A5	Rear fog light control
A6	+ after ignition front wiper
A7	Not used
B1	+ before ignition memorised seat
B2	Not used
B3	- after ignition passenger electric window
B4	- accessories feed for engine cooling fan assembly
B5	Not used
B6	Not used
B7	Rear electric window authorisation

Track	Allocation
A1	+ after ignition heated seats
A2	+ before ignition memories
A3	Rear view mirror de-icing
A4	+ after ignition ABS
A5	Dual headlights dipped beam control
A6	Single headlights dipped beam control
A7	Front fog lights
B1	- after ignition heated seats
B2	+ accessories feed for radio
B3	+ after ignition stop
B4	- after ignition heated rear screen
B5	- after ignition heated rear screen
B6	- after ignition self levelling suspension
B7	- side lights



**M BLUE CONNECTOR + ACCESSORIES**  
(DASHBOARD WIRING P3)

**N WHITE CONNECTOR 14 TRACKS**  
(DASHBOARD WIRING P5)

Track	Allocation
A1	Horn control
A2	Horn
A3	Right hand main beam headlights
A4	Main beam headlights control
A5	+ before ignition front wiper park
A6	+ after ignition rear right hand electric window
A7	Headlight washer pump
B1	Left hand main beam headlights
B2	Right hand dipped headlights
B3	+ after ignition rear left hand electric window
B4	Left hand dipped headlights
B5	Left hand dipped headlights information
B6	Heated rear screen warning light
B7	Heated rear screen

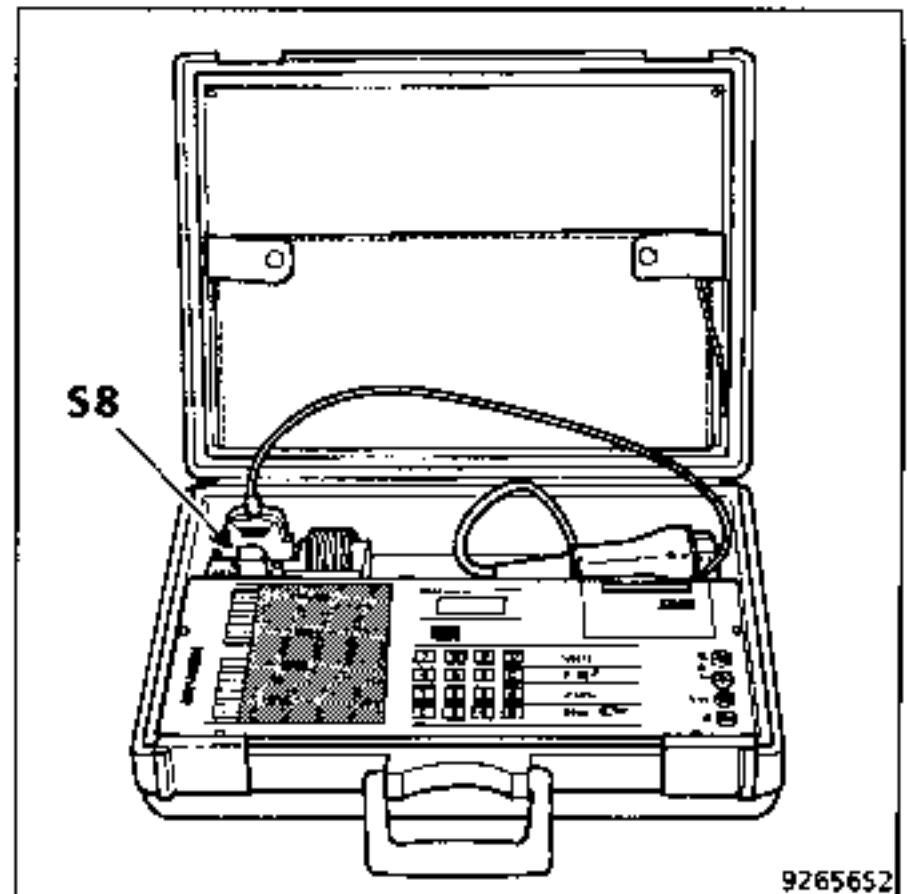
**O WHITE CONNECTOR + BEFORE IGNITION**  
(DASHBOARD WIRING P2)

#### FAULT FINDING

If there is a fault with one of the functions managed by the connection unit, fault finding may be carried out using the XR25 (except for basic model level 1).

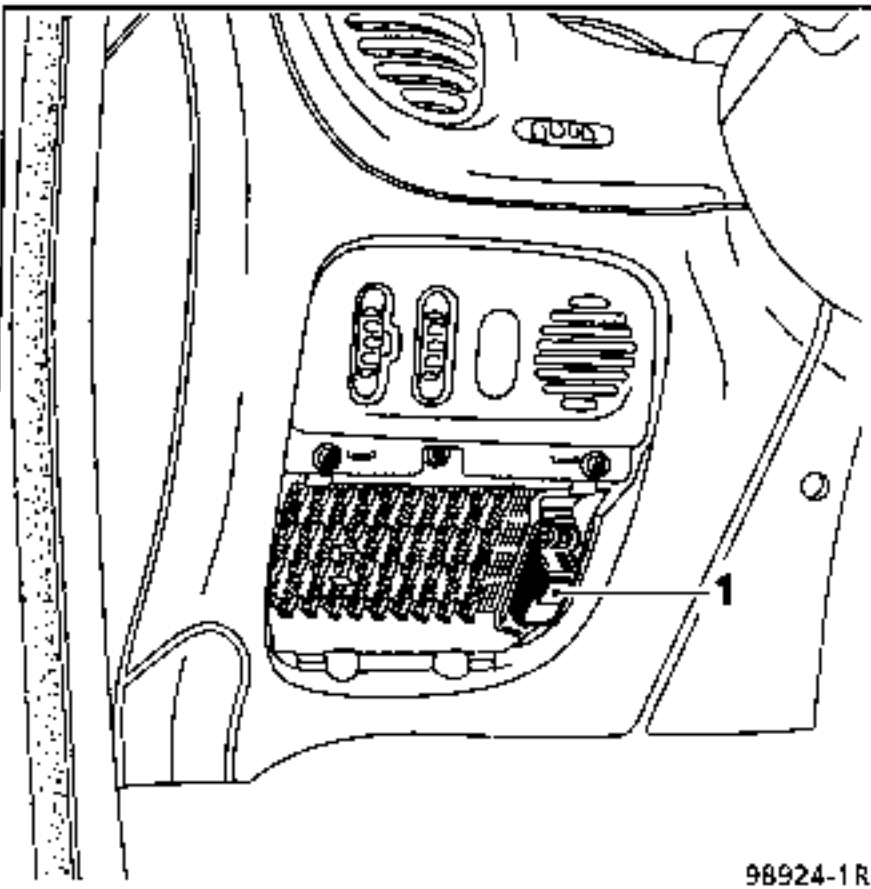
#### CONNECTION

Use cassette n° 15 and the corresponding fault finding fiche n° 45.





Connect the XR25 to the diagnostic socket 1 located behind the passenger compartment fuse box cover.



Set the ISO selector to 58 and enter:

**D 4 5**

The display shows:

**b i c** then **1 b i c**

## IDENTIFICATION OF THE CONNECTION UNIT

The identification of the connection unit does not involve a diagnostic code, but reads the Part Number of the unit directly, after dialogue with the computer has been established.

Enter

**G 7 0 \***

and read the Part Number shown on the XR25 display:

7	7	0	3
	X	X	X
	X	X	X

The number is shown in three sections. Each section is displayed for approximately 2 seconds. The display is repeated twice.

**NOTE :** the equipment level corresponding to the connection unit may be shown by entering

**# 1 4** (level 2, 3 or 4)



## ERASING THE MEMORY

Following an operation on the system, the memory of the unit can be erased using code

**G 0 \* \***

(erasing faults memorised in fault finding mode

**D 4 5**

ISO selector on position 58, enter

**G 0 \* \*** ).

This operation does not erase the memory of other equipment on the vehicle.

**IMPORTANT:** the bargraphs, # commands and command modes for the alarm and engine immobiliser are dealt with in their respective chapters (see section 82).

**IMPORTANT :** for all tests or measurements carried out on the 20 track connectors P16 and P17, you must use bornier Elé. 1371. Any other tooling (pin, wire etc) should not be used as the connector may be permanently damaged.

Bornier Elé. 1371 allows:

- checking of continuities. To do this, simply connect the bornier to the passenger compartment connection unit, or to the vehicle wiring as for a conventional bornier.
- measurement of voltages, frequencies etc. To do this connect the bornier in series between the passenger compartment connection unit and the vehicle wiring.

The two connectors P16 and P17 on the bornier may be used at the same time.



## FAULT FINDING - INTRODUCTION

### ANNOTATION

In the fault finding information for the passenger compartment connection unit which follows, annotations of the type **P16-4** or **P6-B7** will be found.

These annotations correspond to the tracks connected to the passenger compartment connection unit.

Example : **P16-4** corresponds to track 4 on connector **P16** of the passenger compartment connection unit,  
**P6-B7** corresponds to track B7 on connector **P6** of the passenger compartment connection unit.



## FAULT FINDING - XR25 FICHE

N°45 1/2		S8 code : <b>D 4 5</b> read : <b>1 b 1 c</b>	
1	ILLUM. --> CORR. SIDE OF CARD. EXTING. --> TURN CARD OVER	CODE PRESENT	
2	REAR DEMISTER      INFRA-RED (FLIP)	CONTROL MODE : G . . *	
3	LOCKING      UNLOCKING	03 Door locking	
4	REAR      SCREEN WASH      FRONT button	04 Door unlocking	
5	OIL PRESSURE      SIDELIGHT	05 Screen wiper slow speed	
6	DESEL SOL.      CODED ACKNOWLEDGEMENT      LINE	06 Screen wiper fast speed	
7	DRIVER'S SIDE      WINDSCREEN WINDOW RISER      DEMISTER	07 REAR screen wipe	
8	DESCENT      WINDOW RISER      RISING button	08 Lights 'on' warning	
9	ALARM LOCKING *20 KEY	10 Eng. immobiliser warning light	
10	+ AFTER IGNITION      +ACCESSORIES	11 Driver's side window descent	
<b>PASS. COMP. FUSE BOX</b> (DEFECTS STATUS) To read side 2/2 : G 02 * Memory del. : G 0 **		12 Driver's side window riser	
		14 Ceiling light	
		16 Sidelight	
		17 Front fog light	
		18 Rear fog light	
		19 Headlamp washers	
		20 LH windscreen demister	
		21 RH windscreen demister	
		22 Rear screen demister	
		25 Biren (stop : G 13 *)	
		26 Hazard alarm	
		27 Alarm warning light	
		Diesel solenoid mechanical check	
		Test: Switch off ignition, enter G23 * Switch on ignition, valve opens and closes within 30 sec. (audible check)	
11	LOCKING      UNLOCKING (press 3s on central switch)	ADDITIONAL CHECKS : *	
12	WINDSCREEN DEMISTER      REAR DEMISTER	01 Vehicle speed      km / h	
13	EXCESS SPEED      REAR SCREEN ACTIVATING      WIPER	02 Battery voltage      V	
14	REAR      SCREEN WASHER      FRONT BUTTONS      SCREEN WASHER	03 Max. speed advice prior to excess speed warning km per h	
15	RISING      Driver's side window riser      DESCENT	04 Screen wipe speed ring position	
16	POSITION      ACTION ON LIGHT SWITCH      SIDELIGHT	14 Equipment level : (N2, N3, N4)	
17	REVERSE GEAR      ROAD	30 Type of engine immobiliser	
18	HAZARD      FLASHING	53 Type of alarm	
19	FRONT FOG LIGHT      Side lights on      REAR FOG LIGHT	List/number of times alarm triggered	
20	OIL PRESSURE ( ) engine turning	Help : V 9	
		Return to disp. mode : D	
		Part No. : G 7 0 *	
		15 ANG	

FI215451

NOTE : Enter G02\* for the other side of the fiche.



## FAULT FINDING - XR25 FICHE

N°45 22		read : 2.6 1c	
1	<input type="checkbox"/> EXTING. --> CORRECT SIDE OF CARD. ILLUM. --> TURN CARD OVER	CODE PRESENT <input type="checkbox"/>	
2	<input type="checkbox"/> TIMED WIPER SPEED	SCREEN WIPE SWITCH (depending on equip.)	
3	<input type="checkbox"/> STOP	FIXED FEED STOP <input type="checkbox"/>	
4	<input type="checkbox"/> LOW SPEED	HIGH SPEED <input type="checkbox"/>	
5	<input type="checkbox"/> ← DRIVER'S DOOR OPEN FRONT OR REAR PASSENGER DOOR OPEN →		
6	<input type="checkbox"/> BONNET	LUGGAGE COMP. <input type="checkbox"/>	
7	<input type="checkbox"/> ACTIVE ENGINE IMMOBILISER		
8	<input type="checkbox"/> VOLUMETRIC SENSOR	PERIMETRIC SENSOR <input type="checkbox"/>	
9	<input type="checkbox"/> VEHICLE INTRUSION STATUS	MEMORISED INTRUSION SIREN STATUS <input type="checkbox"/>	
10	<input type="checkbox"/> GEAR ← ALARM KEY POSITION → STOP <input type="checkbox"/>		
PASS. COMP. FUSE BOX (STATUS)		Help : V.9 Return to diag. mode : D Part No. : G 70 *	
To read side 1/2 : G 01 *			
11	<input type="checkbox"/> SIGNAL RECEIVED (3sec)	SIGNAL CORRECT (3sec) <input type="checkbox"/>	
12	<input type="checkbox"/> LOCKED BY PLIP	CODE RECOGNISED <input type="checkbox"/>	
13	<input type="checkbox"/> CALIBRATION ENDED	VEH LOCKED BY PLIP <input type="checkbox"/>	
14			
15			
16	<input type="checkbox"/> ALARM	ENGINE IMMOBILISER <input type="checkbox"/>	
17	<input type="checkbox"/> HEADLAMP WASHER	EXTREME COLD FOG LIGHTS <input type="checkbox"/>	
18	<input type="checkbox"/> RUNNING LIGHT	ARABIA EXCESS SPEED <input type="checkbox"/>	
19	<input type="checkbox"/> CEILING LIGHT TIMER	DIESEL <input type="checkbox"/>	
20	<input type="checkbox"/> DEFECT PRESENT		
		13 ANG	

FI215452

NOTE : Enter G01\* for the other side of the fiche.



## FAULT FINDING - XR25 FICHE

## REPRESENTATION OF THE BARGRAPHS



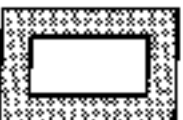
Illuminates when dialogue is established with the computer for the product; if it remains extinguished :

- the code does not exist,
- there is a fault with the XR25, the computer or the line.

## REPRESENTATION OF A FAULT (always on a coloured background)



If illuminated, there is a fault with the product tested; the associated text defines the fault.



If extinguished, indicates a fault has not been detected for the product tested.

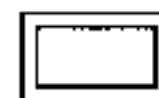
## REPRESENTATION OF A STATUS(always on a white background)

The status bargraphs on the fiche are represented in the condition that they should be in when the engine is stopped, ignition on, with no operator action.

- If, on the fiche, the bargraph is shown



the XR25 should show



- If, on the fiche, the bargraph is shown



the XR25 should show

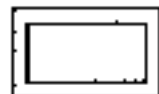


- If, on the fiche, the bargraph is shown



the XR25 should show

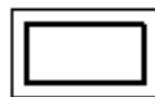
either



or



## Engine running



Extinguished when the function or condition on the fiche is no longer met.



Illuminated when the function or condition on the fiche is met.

## V9 FUNCTION

Fiche n° 45 side 1/2 and side 2/2 is a generic fiche for all passenger compartment connection units except for equipment level 1 (77 03 297 241 and 77 03 297 181).

The various passenger compartment connection units do not use all the bargraphs. To determine which bargraphs are used by a particular passenger compartment connection unit, after establishing dialogue, press keys V and 9 at the same time. The bargraphs concerned will illuminate:

- fixed, for non-memorisable fault bargraphs or status bargraphs,
- flashing for memorisable fault bargraphs.

To return to the fault finding mode, press D.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

02

Bargraph 2 LH side illuminated

Fiche n° 45 side 1/2

Heated rear screen control circuit**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Disconnect connector P16  
and turn the ignition on.  
Is bargraph 2 LH side flashing?

no

Replace the passenger compartment  
connection unit.

yes

The line P16-12 or the heated rear screen  
switch are in short circuit to earth.  
Check and ensure the insulation from earth of  
the heated rear screen switch and connection  
P16-12.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

02

Bargraph 2 RH side illuminated

Fiche n° 45 side 1/2

PLIP circuit**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Disconnect clip P12-A7.  
Does bargraph 2 RH side flash?

no

Replace the passenger compartment  
connection unit.

yes

The line P12-A7 or the PLIP receiver are in  
short circuit to earth.  
Check and ensure the insulation from earth  
of the line P12-A7.  
Replace the PLIP receiver if necessary.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

03

Bargraph 3 RH or LH side illuminated

Fiche n° 45 side 1/2

Door locking and unlocking switch on dashboard**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Disconnect connector P16.  
Does bargraph 3 LH side  
or 3 RH side flash?

no

Replace the passenger compartment  
connection unit.

yes

The line P16-3 (locking) or P16-2 (unlocking )  
or the locking / unlocking switch are in short  
circuit to earth.  
Check and ensure the insulation from earth of  
the locking / unlocking switch on the  
dashboard and connection P16-3 or P16-2.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

04

**Bargraph 4 RH or LH side illuminated**

Fiche n° 45 side 1/2

Front and rear washer control circuit**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

From the washer stalk connector, disconnect clip B1 if bargraph 4 LH side is illuminated or clip A4 if bargraph 4 RH side is illuminated.  
Are bargraphs 4 RH side or 4 LH side now flashing?

no

There is a short circuit to + 12 volts on the circuit. Check and ensure insulation from + 12 volts :

- for the line P17-15/A4 (Bargraph 4 RH side) or P17-16/B1 (Bargraph 4 LH side),
- for the connections for the washer pump B1 (stalk) / B1 (washer pump) and A4 (stalk) / A1 (washer pump) depending on bargraph illuminated.

If, after the repair the bargraph is still illuminated, replace the passenger compartment connection unit.

yes

The wiper control stalk is in short circuit to + 12 volts.  
Replace the wiper control stalk.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

05

Bargraph 5 LH side illuminated

Fiche n° 45 side 1/2

Oil pressure sensor circuit**NOTES**

If the engine has just been turned off, wait 20 seconds before turning the ignition on.

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Disconnect connector P16, connect bornier Elé 1371 on the wiring side and check for an earth when the ignition is on on terminal P16-4. Is there an earth?

no

The line P16-4/oil pressure sensor is cut. Check and ensure the continuity of the line, the correct condition of the sensor and the correct earth for the sensor.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.

Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

05

Bargraph 5 RH side illuminated

Fiche n° 45 side 1/2

Dipped beam headlights circuit**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Turn the sidelights on.  
Is bargraph 16 LH side illuminated?

no

Turn the side lights on and check for a voltage  
on terminal P6-B7.  
Is there at least 6 volts ?

yes

yes

no

The line is cut either :

- on the line P6-B7/lights stalk (track B1),
  - on the lights stalk,
  - on the connection - lights stalk/ fuse n° 8 in scuttle panel fuse holder.
- Repair the line or replace the lights stalk.

Disconnect clip P6-B7 and shunt pins  
B7 and B2.  
Does bargraph 16 LH side illuminate?

yes

no

Ensure correct  
contact  
P6-B7

Replace the  
passenger  
compartment  
connection unit.

Turn the side lights off. Does bargraph 16 LH  
side remain illuminated?

yes

Refer to the chart for bargraph  
16 LH side.

no


A

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

05	
	
CONT	

A

Without turning the dipped headlights on,  
is bargraph 16 RH side illuminated?

yes

Refer to the chart for bargraph  
16 RH side.

no

Without turning the main beam headlights  
on, is bargraph 17 RH side illuminated?

yes

Refer to the chart for bargraph  
17 RH side.

no

End of fault finding

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

07

**Bargraph 7 LH side illuminated**

Fiche n° 45 side 1/2

Driver's window power circuit**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Check fuse F18.  
Is it blown?

yes

Replace fuse F18.  
Does it blow again?

yes

Disconnect clips P10-B1 and P10-B2 and  
reconnect the connector.  
Replace fuse F18.  
Does it blow again?

yes

no

There is a short circuit to earth on  
the power circuit. Check and  
ensure the insulation from earth of  
lines :

- P10-B1/1 (driver's window motor),
- P10-B2/2 (driver's window motor),
- the condition of the driver's window motor (disconnect it completely).

Replace the passenger compartment  
connection unit.

Replace the passenger compartment  
connection unit.

no

Check on terminal P10-B1,  
for 12 volts when the switch is used to open  
the window.  
Is there 12 volts ?

yes

A

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

07	
	
CONT	

A

Check on terminal P10-B2,  
for 12 volts when the switch is used to close  
the window.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit.

yes

The line is cut.

Check and ensure the continuity of the lines:

- P10-B1/1 (driver's window motor),
- P10-B2/2 (driver's window motor),
- the condition of the driver's window motor (disconnect it completely).

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

07

**Bargraph 7 RH side illuminated**

Fiche n° 45 side 1/2



Heated windscreen control circuit

**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Disconnect the connector for the heated windscreen.  
Does bargraph 7 RH side flash?

no

There is a short circuit to earth on the line.  
Check and ensure the insulation from earth of the line P17-4/switch. If bargraph 7 RH side is still illuminated, replace the passenger compartment connection unit.

yes

The heated screen switch is in short circuit to earth.  
Replace the switch.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

08

Bargraph 8 LH side or 8 RH side illuminated

Fiche n° 45 side 1/2

Window control circuit**NOTES**

**Bargraph flashing:** If the customer has not complained of a fault with the system specified in the title, enter G0\*\*. If the customer has complained about a fault in this system, look for a way of making the bargraph illuminate permanently by trying different operating configurations. Only deal with the fault if the bargraph illuminates permanently.

Disconnect connector P16.  
Are bargraphs 8 LH side or 8 RH side flashing?

no

Replace the passenger compartment  
connection unit.

yes

The line P16-16 (Bargraph 8 LH side)  
or P16-15 (Bargraph 8RH side) or the window  
switch is in short circuit to earth.  
Check and ensure the insulation from earth  
for the switch and connections P16-16 and  
P16-15 depending on the fault.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

10

Bargraph 10 LH side does not illuminate  
or is permanently illuminated

Fiche n° 45 side 1/2

+ after ignition feed circuit

## NOTES

None

Bargraph 10 LH side does not illuminate

Put the ignition key in position + after ignition. Check for 12 volts on terminal P4 of the passenger compartment connection unit.  
Is there 12 volts ?

no

The line P4/battery is cut.  
Check the continuity:

- of the battery / ignition switch connection,
- the condition of fuse n° 7 on the fuse holder in the scuttle panel,
- of the ignition switch,
- of the ignition switch / passenger compartment connection unit connection (P4).

yes

Check the cleanliness and contact of the pin and clip P4. If the bargraph does not illuminate, replace the passenger compartment connection unit.

Bargraph 10 LH side illuminates permanently

Disconnect connector P4 and check bargraph 10 LH side.  
Is it still illuminated?

no

The line P4 / ignition switch is in short circuit to 12 volts.

Check the insulation from + 12 volts :

- of the ignition switch,
- of the ignition switch / passenger compartment connection unit connection (P4).

yes

Replace the passenger compartment connection unit.

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

10

**Bargraph 10 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

+ accessories circuit**NOTES**

None

**Bargraph 10 RH side does not illuminate**

Turn the key to the first notch of the ignition switch.

Check for 12 volts on terminal P3 of the passenger compartment connection unit.  
Is there 12 volts ?

no

The line P3 / battery is cut.

Check the continuity:

- of the battery / ignition switch connection,
- the condition of fuse n° 7 on the fuse holder in the scuttle panel,
- of the ignition switch,
- of the ignition switch / passenger compartment connection unit connection (P3).

yes

Check the cleanliness and contact of the pin and clip P3. If bargraph 10 RH side does not illuminate, replace the passenger compartment connection unit.

**Bargraph 10 RH side illuminates permanently**Disconnect connector P3 and check bargraph 10 RH side.  
Is it still illuminated?

no

The line P3 / ignition switch is in short circuit to 12 volts.

Check the insulation from – 12 volts :

- of the ignition switch,
- of the ignition switch / passenger compartment connection unit connection (P3).


yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>11</div> 	<div>Bargraph 11 LH side does not illuminate or is permanently illuminated</div> <div>Fiche n° 45 side 1/2</div> <div><u>Door locking circuit on dashboard</u></div>
--	--

<b>NOTES</b>	None
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**Bargraph 11 LH side does not illuminate**

Connect bornier Elé 1371 to connector P16 for the passenger compartment connection unit.  
Turn the ignition on. Shunt contact 3 of bornier Elé. 1371 and earth.  
Does bargraph 11 LH side (1/2) illuminate?

no

Replace the passenger compartment connection unit.

yes

The line P16-3 is cut between earth and the passenger compartment connection unit.

Check:

- the condition of the dashboard door locking / unlocking switch,
- the switch/ earth connection,
- the switch / P16-3 connection.

**Bargraph 11 LH side illuminates permanently**

Disconnect connector P16.  
Does bargraph 11 LH side (1/2) extinguish?

no

Replace the passenger compartment connection unit.

yes

The line P16-3 or the locking / unlocking switch is in short circuit to earth.  
Check and ensure the insulation from earth for the dashboard locking/ unlocking switch and connection P16-3.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPH5

11

**Bargraph 11 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Dashboard door unlocking circuit**NOTES**

None

**Bargraph 11 RH side does not illuminate**

Connect bornier Elé 1371 to connector P16 for  
the passenger compartment connection unit.  
Turn the ignition on. Shunt contact 2 of  
bornier Elé. 1371 and earth.  
Does bargraph 11 RH side (1/2) illuminate?

no

**Replace the passenger compartment  
connection unit.**

yes

The line P16-2 is cut between earth and the  
passenger compartment connection unit.

Check:

- the condition of the dashboard door  
locking / unlocking switch,
- the switch/ earth connection,
- the switch / P16-2 connection.

**Bargraph 11 RH side illuminates permanently**

Disconnect connector P16.  
Does bargraph 11 RH side (1/2) extinguish?

no

**Replace the passenger compartment  
connection unit.**

yes

The line P16-2 or the locking / unlocking  
switch is in short circuit to earth.  
Check and ensure the insulation from earth  
for the dashboard locking/ unlocking switch  
and connection P16-2.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

12

**Bargraph 12 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Heated windscreen switch circuit**NOTES**

None

**Bargraph 12 LH side does not illuminate**

Disconnect connector P17, connect bornier Elé. 1371 and check for an earth on terminal P17-4 when the heated windscreen switch is pressed. Is there an earth?

yes →

Disconnect bornier Elé. 1371 and reconnect connector P17.  
Move the heated windscreen switch and check bargraph 12 LH side.  
Does it illuminate?

yes ↓

End of fault finding

no ↓

Replace the  
passenger  
compartment  
connection unit.

no ↓

The line P17-4 / heated windscreen switch is cut. Check:

- the continuity of connection P17-4 / heated windscreen switch,
- the condition of the switch,
- the switch / earth connection.

**Bargraph 12 LH side illuminates permanently**

Disconnect the connector for the heated windscreen switch and check for an earth at the switch end without pressing the switch. Is there an earth?

no →

Using bornier Elé. 1371, check and ensure the insulation from earth and the other tracks on connector P17 for line P17-14 /switch. Is bargraph 12 LH side still illuminated?

yes ↓

Replace the  
passenger  
compartment  
connection unit.

no ↓

End of fault  
finding

yes ↓

Replace the heated windscreen switch.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

12

**Bargraph 12 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Heated rear screen switch circuit**NOTES**

None

**Bargraph 12 RH side does not illuminate**

Disconnect connector P16, connect bornier  
Elé. 1371 and check for an earth on terminal  
P16-12 when the heated rear screen switch is  
pressed. Is there an earth?

yes →

Disconnect bornier Elé. 1371 and reconnect  
connector P16.  
Move the heated rear screen switch and check  
bargraph 12 RH side. Does it illuminate?

yes ↓

End of fault finding

no ↓

Replace the  
passenger  
compartment  
connection unit.

no ↓

The line P16-12 / passenger compartment  
connection unit is cut. Check:

- the continuity of connection P16-12 /  
heated rear screen switch,
- the condition of the switch,
- the switch / earth connection.

**Bargraph 12 RH side illuminates permanently**

Disconnect the connector for the heated rear  
screen switch and check for an earth at the  
switch end without pressing the switch.  
Is there an earth?

no →

Using bornier Elé. 1371, check and ensure the  
insulation from earth and the other tracks on  
connector P16 for line P16-12 /switch. Is  
bargraph 12 RH side still illuminated?

yes ↓

Replace the  
passenger  
compartment  
connection unit.

no ↓

End of fault  
finding

yes ↓

Replace the heated rear screen switch.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

13

**Bargraph 13 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Overspeed alarm circuit**NOTES**

None

**Bargraph 13 LH side does not illuminate**Check fuse F31.  
Is it blown?

yes

Replace fuse F31. Turn + after ignition feed  
on. Does the fuse blow again?

yes

no

End of fault finding

Disconnect clip P6-B3 and reconnect the  
connector. Replace fuse F31. Does the fuse  
blow again?

yes

no

Replace the passenger  
compartment connection unit.Reconnect clip P6-B3 and disconnect  
connector P16. Replace fuse F31. Does the  
fuse blow again?

yes

no

Replace the passenger  
compartment connection unit.

There is a short circuit to earth on the line.  
Check and ensure the insulation from earth  
for lines :

- P6-B3/B2 (overspeed switch),
- P16-14/B3 (overspeed switch),
- the condition of the overspeed switch.


If the fuse blows again, replace the passenger  
compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

13	
	
CONT	

Bargraph 13 LH side does not illuminate (cont)

A

Check on terminal P6-B3, for 12 volts when  
+ after ignition feed is supplied.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit.

yes

Connect bornier Elé. 1371 in series and check  
at terminal P16-14 for 12 volts when the  
switch is activated with + after ignition feed  
present. Is there 12 volts ?

no

The line is cut.  
Check and ensure the continuity of the lines:  
- P6-B3/B2 (overspeed switch),  
- P16-14/B3 (overspeed switch),  
- the condition of the overspeed switch.

yes

Replace the passenger compartment  
connection unit.

Bargraph 13 LH side illuminates permanently

Disconnect connector P16.  
Does bargraph 13 LH side extinguish?

yes

There is a short circuit to + 12 volts on the  
line.  
Check and insure the insulation from + 12  
volts on the line :  
- P16-14/B3 (overspeed switch),  
- the condition of the overspeed switch.  
If bargraph 13 LH side is still illuminated,  
replace the passenger compartment  
connection unit.

no

Replace the passenger compartment  
connection unit

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc ...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

13

**Bargraph 13 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Timed rear wiper circuit**NOTES**

Bargraph 10 LH side should be illuminated otherwise first consult the chart for bargraph 10 LH side.

**Le Bargraph 13 RH side does not illuminate**

Does the washer operate when the control is pressed?

yes

Connect bornier **Elé. 1371** to P17.  
Turn the ignition on.  
Shunt pins P17-11 and P6-B5.  
Does bargraph 13 RH side illuminate?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and connection B2/P17-11  
and repair.

no

Has fuse F36 blown?

no

Disconnect clip P6-B5, reconnect connector  
P6. Is there 12 volts with + after ignition on  
pin P6-B5 of the passenger compartment  
connection unit?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and connection stalk  
B4 / P6-B5 and repair.

yes

Replace the F36 blown fuse. Move just the  
rear screen timed wiper switch. Does the fuse  
blow again?

yes

no

A

B

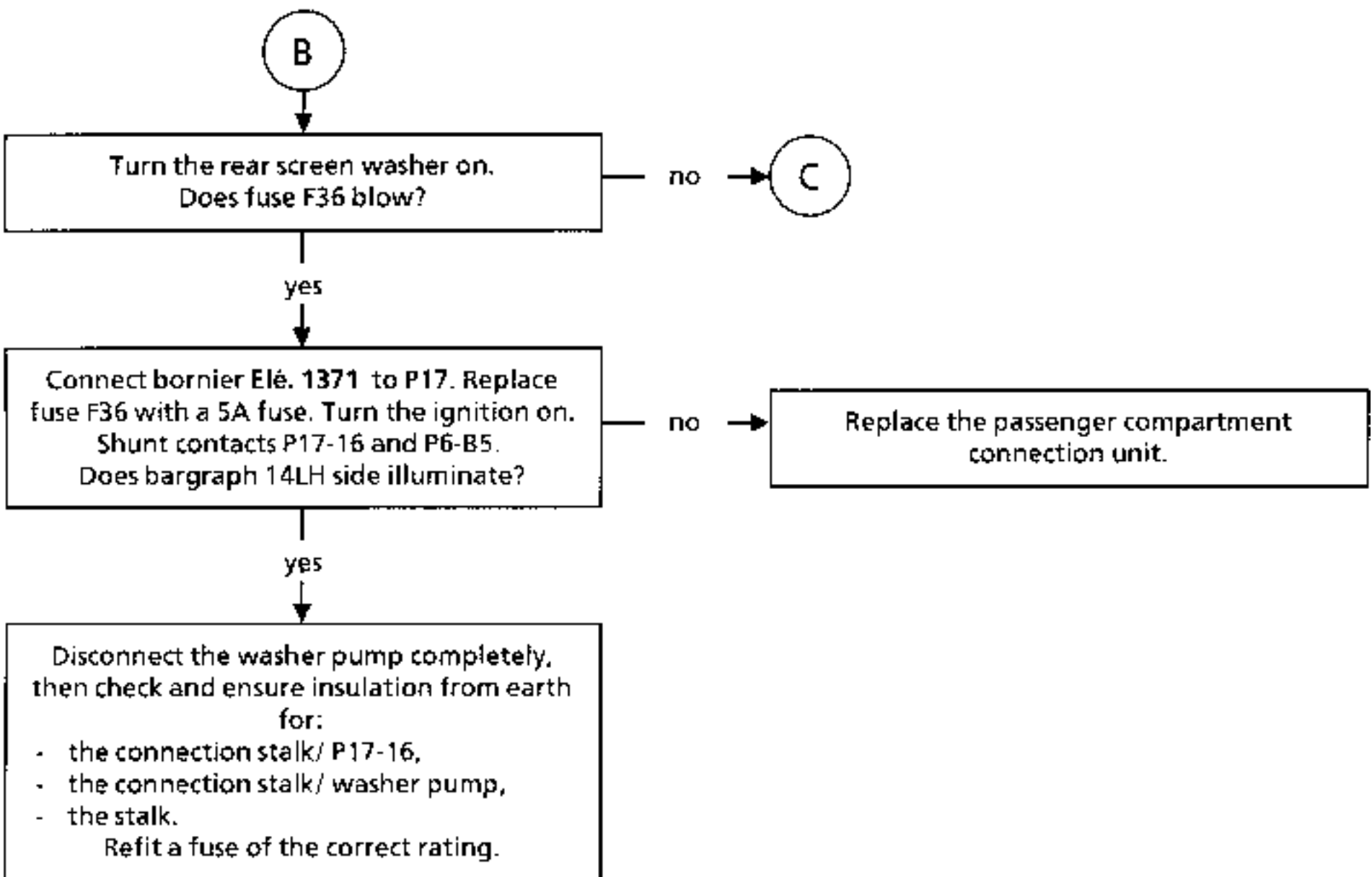
**AFTER REPAIR**Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

13	
CONT 1	

Bargraph 13 RH side does not illuminate (cont)

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS



Bargraph 13 RH side does not illuminate (cont)

A

Disconnect clips P6-B4 and P6-B5, reconnect the connector, replace the fuse. Does the fuse blow again?

yes

Replace the passenger compartment connection unit.

no

Connect bornier Elé. 1371 to P17. Replace fuse F36 with a 5A fuse. Turn the ignition on. Shunt contacts P17-11 and P6-B5. Does bargraph 13 RH (1/2) side illuminate?

yes

Replace the passenger compartment connection unit.

no

There is a short circuit to earth either:

- on the line P6-B5/stalk,
- on the stalk,
- on the line stalk/P17-11,
- on the line P6-B4/rear wiper motor.

Check and ensure these components are insulated from earth.  
Refit a correctly rated fuse F36.

C

Connect bornier Elé. 1371 to P17. Replace fuse F36 with a 5A fuse. Turn the ignition on. Shunt contacts P17-15 and P6-B5. Does bargraph 14 RH (1/2) side illuminate?

yes

Replace the passenger compartment connection unit.

no

Disconnect the washer pump then check and ensure insulation from earth for :

- the connection stalk/ P17-15,
- the connection stalk/washer pump,
- the stalk.

Refit a fuse of the correct rating.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

13



CONT 3

Bargraph 13 RH side illuminates permanently

Disconnect clip B2 on the stalk connector.  
Does bargraph 13 RH side remain  
illuminated?

no

Replace the stalk.

yes

Using bornier Elé. 1371,  
check and insure the insulation of track  
P17-11 in relation to + 12 volts  
and the other tracks on connector P17.  
Replace the passenger compartment  
connection unit if the insulation is correct.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

14

Bargraph 14 LH side does not illuminate  
or is permanently illuminated

Fiche n° 45 side 1/2

Rear washer circuit**NOTES**

Bargraph 10 LH side should be illuminated otherwise first consult the chart for bargraph 10 LH side.

Bargraph 14 LH side does not illuminate

Does the rear washer operate?

yes

Connect bornier Elé. 1371 to P17.

Turn the ignition on.

Shunt pins P17-16 and P6-B5.

Does bargraph 14 LH side illuminate ?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and the connection B1/P17-16  
and repair.

Is fuse F36 blown?

no

Disconnect clip P6-B5, reconnect connector  
P6. Is there 12 volts with + after ignition on  
pin P6-B5 of the passenger compartment  
connection unit ?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and the connection stalk  
B4 / P6-B5 and repair.Replace the F36 blown fuse. Move just the  
rear screen washer switch. Does the fuse blow  
again?

yes

no

B

A

**AFTER REPAIR**

Enter G0\*\* to erase the memory.

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

14



CONT 1

Bargraph 14 LH side does not illuminate (cont)

A

Turn the rear wiper on.  
Does fuse F36 blow?

no

C

yes

Connect bornier Elé. 1371 to P17. Replace  
fuse F36 with a 5A fuse. Turn the ignition on.  
Shunt contacts P17-11 and P6-B5.  
Does bargraph 13 RH side illuminate?

no

Replace the passenger compartment  
connection unit.

yes

Disconnect the wiper motor completely, then  
check and ensure insulation from earth for:

- the connection stalk/ P17-11,
- the connection stalk/ rear wiper motor,
- the stalk.

Refit a fuse of the correct rating.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

14	
	
CONT 2	

Bargraph 14 LH side does not illuminate (cont)

B

Disconnect clips P6-B5 and P6-B4, reconnect the connector, replace the fuse.  
Does the fuse blow again?

yes

Replace the passenger compartment connection unit.

no

Connect bornier Elé. 1371 to P17 for the passenger compartment connection unit. Replace fuse F36 with a 5A fuse. Turn the ignition on. Shunt contacts P17-16 and P6-B5. Does bargraph 14 LH (1/2) side illuminate?

yes

Replace the passenger compartment connection unit.

There is a short circuit to earth either:

- on the stalk
- on the line stalk (B1) / P17-16.
- on the line stalk (B1) / washer pump
- on the line P6-B4/rear wiper motor.

Check and ensure these components are insulated from earth.  
Refit a correctly rated fuse F36.

C

Connect bornier Elé. 1371 to P17. Replace fuse F36 with a 5A fuse. Turn the ignition on. Shunt contacts P17-15 and P6-B5. Does bargraph 14 RH (1/2) side illuminate?

yes

no

Replace the passenger compartment connection unit.

Disconnect the washer pump then check and ensure insulation from earth for :

- the connection stalk/ P17-15,
- the connection stalk/washer pump,
- the stalk.

Refit a fuse F36 of the correct rating.

## AFTER REPAIR

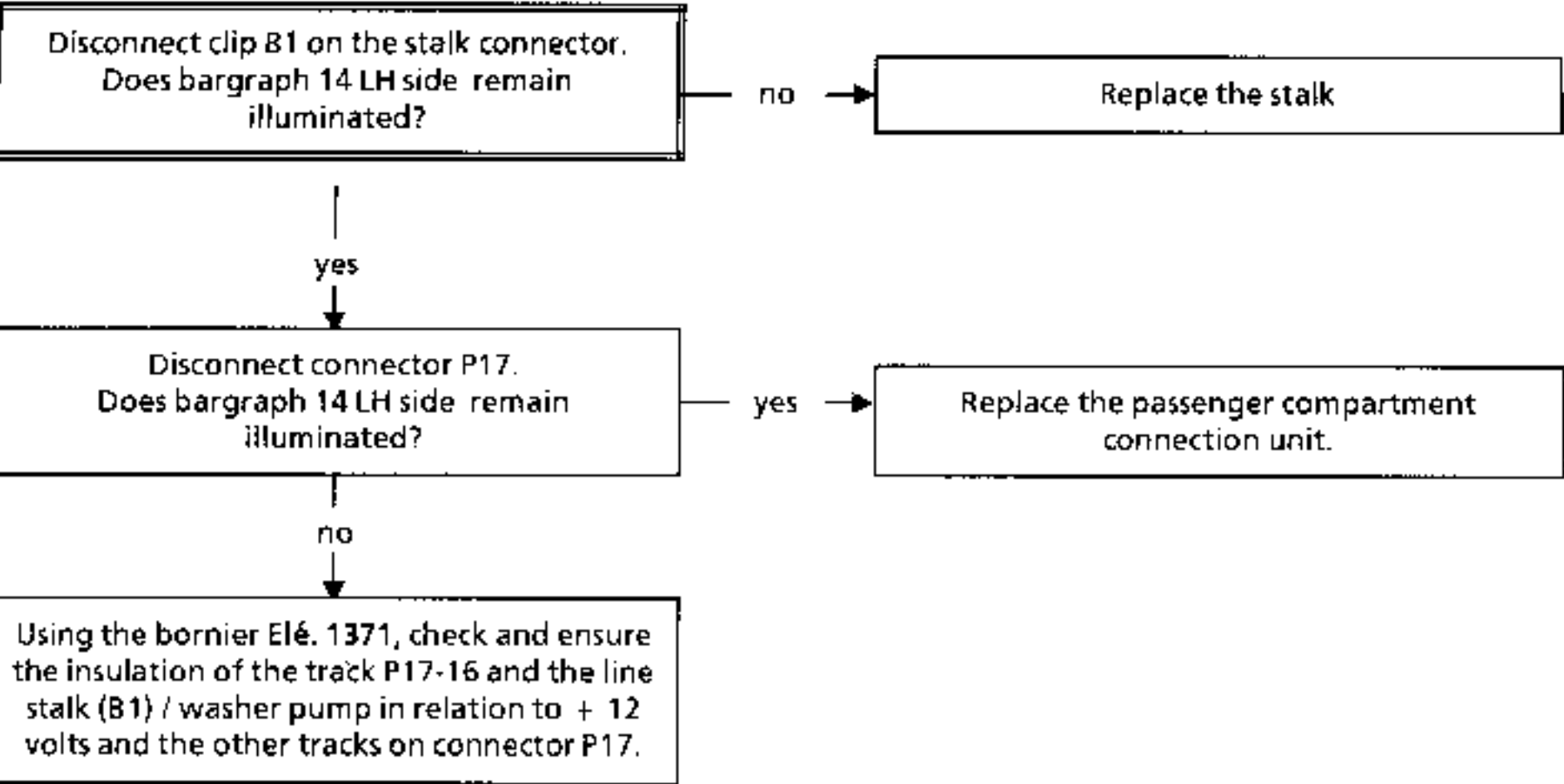
Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS



Bargraph 14 LH side illuminates permanently



AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

14

**Bargraph 14 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Front washer circuit**NOTES**

Bargraph 10 LH side should be illuminated otherwise first consult the chart for bargraph 10 LH side.

**Bargraph 14 RH side does not illuminate**

Does the front washer operate?

yes

Connect bornier Elé. 1371 to P17.  
Turn the ignition on.  
Shunt pins P17-15 and P6-B5.  
Does bargraph 14 RH side illuminate ?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and the connection  
A4 / P17-15 and repair.

Is fuse F36 blown?

no

Disconnect clip P6-B5, reconnect connector  
P6. Is there 12 volts with + after ignition on  
pin P6-B5 of the passenger compartment  
connection unit ?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and the connection stalk -  
B4 / P6-B5 and repair.Replace the F36 blown fuse. Move just the  
front washer stalk. Does the fuse blow again?

yes

no

B

A

**AFTER REPAIR**Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

14



CONT 1

Bargraph 14 RH side does not illuminate (cont)

A

Turn the rear wipers on.  
Does fuse F36 blow?

no

C

yes

Connect bornier Elé. 1371 to P17. Replace  
fuse F36 with a 5A fuse. Turn the ignition on.  
Shunt contacts P17-11 and P6-B5.  
Does bargraph 13 RH side illuminate?

no

Replace the passenger compartment  
connection unit.

yes

Disconnect the wiper motor completely, then  
check and ensure insulation from earth for:

- the connection stalk/ P17-11,
- the connection stalk/ rear wiper motor,
- the stalk.

Refit a fuse of the correct rating.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS



Bargraph 14 RH side does not illuminate (cont)



Disconnect clips P6-B4 and P6-B5, reconnect the connector, replace the fuse.  
Does the fuse blow again?

yes

no

Replace the passenger compartment connection unit.

Connect bornier Elé. 1371 to P17 for the passenger compartment connection unit. Replace fuse F36 with a 5A fuse. Turn the ignition on. Shunt contacts P17-15 and P6-B5. Does bargraph 14 RH (1/2) side illuminate?

yes

no

Replace the passenger compartment connection unit.

There is a short circuit to earth either:

- on the stalk,
- on the line stalk A4/P17-15,
- on the line stalk (A4) / washer pump

Check and ensure these components are insulated from earth.  
Refit a correctly rated fuse F36.



Turn the rear washer on.  
Does fuse F36 blow?

yes

Connect bornier Elé. 1371 to P17 for the passenger compartment connection unit. Replace fuse F36 with a 5A fuse. Turn the ignition on. Shunt contacts P17-16 and P6-B5. Does bargraph 14 LH (1/2) side illuminate?

yes

no

Replace the passenger compartment connection unit.

Check and ensure the insulation from earth:

- of the line stalk/ P17-16,
- of the line stalk/ washer pump,
- of the stalk.

Refit a correctly rated fuse F36.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS



Bargraph 14 RH side illuminates permanently

Disconnect clip A4 for the connector  
on the stalk.  
Does Bargraph 14 RH side remain  
illuminated?

no

Replace the stalk

yes

Using the bornier Elé. 1371, check and ensure  
the insulation of track P17-15 and the line  
stalk (A4) / washer pump in relation to + 12  
volts and the other tracks on connector P17. If  
bargraph 14 RH side is still illuminated,  
replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

15

**Bargraph 15 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Front window raise control circuit**NOTES**

None

**Bargraph 15 LH side does not illuminate**

Connect bornier Elé. 1371 to connector P16 of  
the passenger compartment connection unit.  
Turn the ignition on. Shunt pin 15 on the  
bornier Elé. 1371 and earth.  
Does bargraph 15 LH side (1/2) illuminate ?

no

**Replace the passenger compartment  
connection unit.**

yes

The line P16-15 is cut between earth and the  
passenger compartment connection unit.

Check:

- the condition of the window switch,
- the window switch / earth connection,
- the continuity of the connection window  
switch / passenger compartment connection  
unit.

**Bargraph 15 LH side illuminates permanently**

Disconnect connector P16.  
Does bargraph 15 LH side (1/2) extinguish?

no

**Replace the passenger compartment  
connection unit.**

yes

The line P16-15 or the window switch is in  
short circuit to earth.  
Check and ensure the insulation from earth of  
the window switch and connection P16-15.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPH5

15

**Bargraph 15 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Front window lower control circuit**NOTES**

None

**Bargraph 15 RH side does not illuminate**

Connect bornier Elé. 1371 to connector P16  
of the passenger compartment connection  
unit. Turn the ignition on.

Shunt pin 16 on the interface and earth.  
Does bargraph 15 RH side (1/2) illuminate ?

no

Replace the passenger compartment  
connection unit.

yes

The line P16-16 is cut between earth and the  
passenger compartment connection unit.

**Check:**

- the condition of the window switch,
- the window switch / earth connection,
- the continuity of the connection window  
switch / passenger compartment connection  
unit.

**Bargraph 15 RH side illuminates permanently**

Disconnect connector P16.

Does bargraph 15 RH side (1/2) extinguish?

no

Replace the passenger compartment  
connection unit.

yes

The line P16-16 or the window switch is in  
short circuit to earth.

Check and ensure the insulation from earth of  
the window switch and connection P16-16.


**AFTER REPAIR**

Enter G0\*\* to erase the memory.

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="text-align: center;">16</div> 	<b>Bargraph 16 LH side does not illuminate or is permanently illuminated</b>  <div style="text-align: right;">Fiche n° 45 side 1/2</div> <div style="text-align: center;"><u>Side lights circuit</u></div>
--	--

<b>NOTES</b>	None
--------------	------

Is bargraph 16 LH side illuminated permanently with no action at the side lights stalk ?

yes

Disconnect clip P6-B7,  
reconnect connector P6.  
Is bargraph 16 LH side still illuminated?

yes

Replace the passenger  
compartment connection unit.

no

There is a short circuit to + 12 V either:  
- on the line P6-B7 / side lights stalk,  
- on the side lights stalk.  
Repair the line or replace the side lights stalk.

no

When the side lights stalk is moved, is there 12 volts on terminal P6-B7 ?

yes

Disconnect clip P6-B7 and with + after ignition feed present, shunt pin B7 and track B3 of connector P6.  
Does bargraph 16 LH side illuminate ?

yes

Ensure good contact  
P6-B7.

no

Replace the  
passenger  
compartment  
connection unit.

no

The line is cut either:

- on the line P6-B7 / side lights stalk,
  - on the side lights stalk,
  - on the connection side lights stalk/ fuse n° 8 on the fuse holder in the scuttle panel.
- There could be a short circuit to earth which would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the lights stalk.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

16

**Bargraph 16 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Dipped headlights circuit**NOTES**

None

Is bargraph 16 RH side illuminated  
permanently with no action at the  
dipped headlights stalk ?

yes →

Disconnect clip P6-A6, reconnect connector  
P6. Is bargraph 16 RH side  
still illuminated?

yes ↓

Replace the passenger  
compartment connection unit.

no ↓

There is a short circuit to + 12 V either:  
- on the line P6-A6 / dipped headlights stalk,  
- on the dipped headlights stalk.  
Repair the line or replace the dipped  
headlights stalk.

no ↓

When the dipped headlights stalk is moved, is  
there 12 volts on terminal P6-A6 ?

yes →

Disconnect clip P6-A6, shunt pin A6 and track  
B3 of connector P6.  
Does bargraph 16 RH side illuminate ?

yes ↓

Ensure good  
contact  
P6-A6.

no ↓

Replace the  
passenger  
compartment  
connection unit.

no ↓

The line is cut either:

- on the line P6-A6 / dipped headlights stalk,
- on the dipped headlights stalk,
- on the connection dipped headlights stalk/ fuse n° 7 on the fuse holder in the scuttle panel.

There could be a short circuit to earth which  
would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the lights stalk.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

17

**Bargraph 17 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Reversing lights circuit**NOTES**

None

Is bargraph 17 LH side illuminated  
permanently without being  
in reverse gear?

no

Is fuse F36 for a manual gearbox or fuse F40  
for an automatic transmission blown?

yes

A

yes

Is the vehicle fitted with a manual gearbox or  
an automatic transmission?

automatic

B

manual

C

Disconnect clip P13-B4, reconnect connector  
P13. Is bargraph 17 LH side  
still illuminated?

no

There is a short circuit to + 12 V either:  
- on the line P13-B4 / reversing lights  
switch LH side ,  
- on the line P13-B4 / reversing lights  
switch RH side .  
Repair the faulty line.

yes

Disconnect clip P9-B5, reconnect connector  
P9. Is bargraph 17 LH side  
still illuminated?

no

There is a short circuit to + 12 V either:  
- on the manual gearbox or automatic  
transmission reverse gear switch,  
- on the line reverse gear switch/ P9-B5.  
Repair the faulty line.

yes

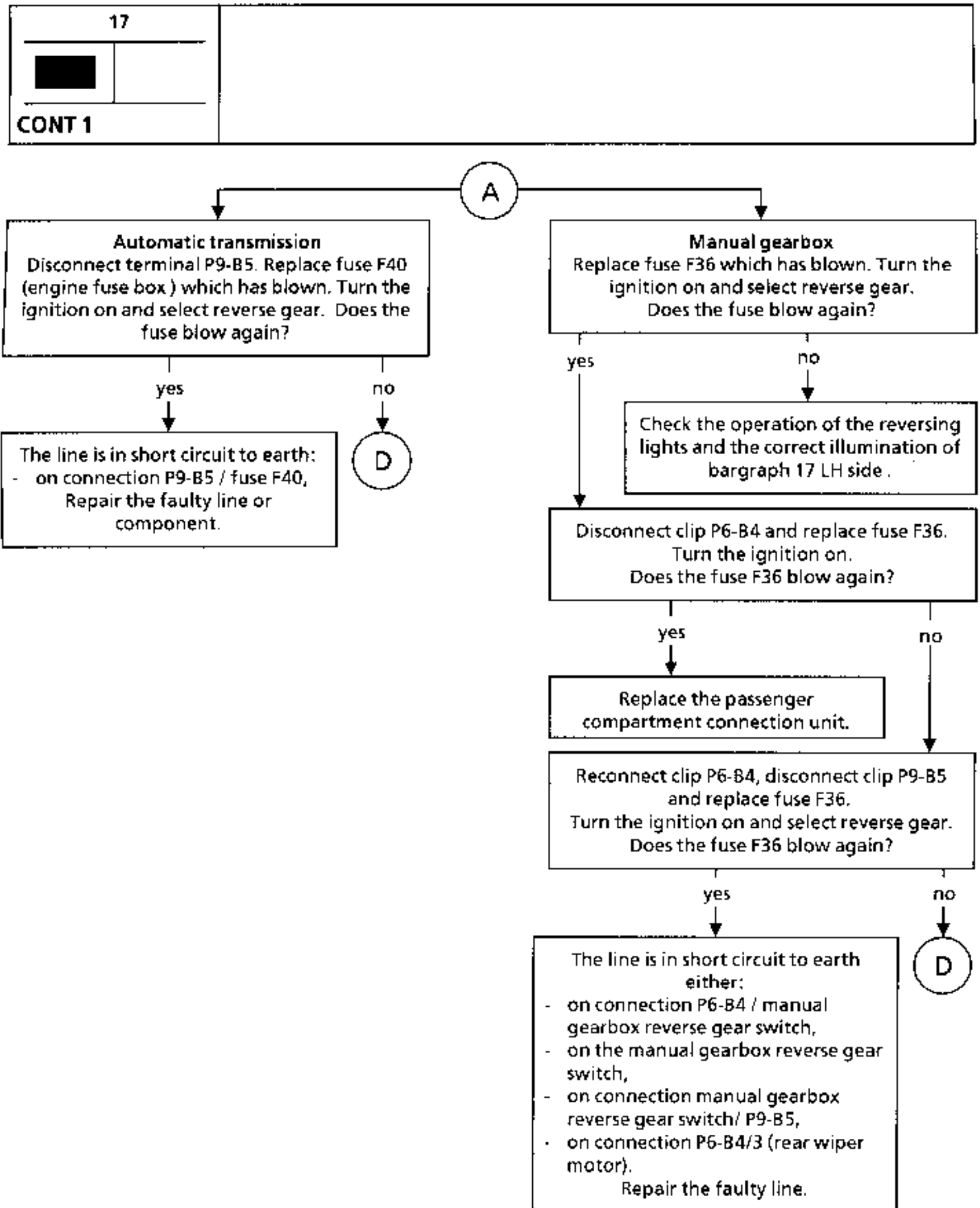
Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

17	
	
CONT 2	

B

For the automatic transmission, in reverse gear, is there 12 Volts on terminal P9-B5 ?

no

The line is cut between the automatic transmission and terminal P9-B5. Repair the faulty line (see fuse F40 in the engine fuse box).

yes

Disconnect clip P9-B5 and shunt pin B5 and track A4 on connector P13 (operate the rear wiper during this test).  
Does bargraph 17 RH side illuminate ?

no

Replace the passenger compartment connection unit.

yes


Ensure good contact P9-B5.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

17	
	
CONT 3	

C

For the manual gearbox,  
is there 12 volts on terminal P6-B4 ?

no

Replace the passenger compartment  
connection unit.

yes

Turn the ignition on, in reverse gear, is there  
12 Volts at terminal P9-B5?

no

The line is cut either:

- on connection P6-B4 / manual gearbox  
reverse gear switch,
- on the manual gearbox reverse gear  
switch,
- on connection manual gearbox reverse  
gear switch/ P9-B5.

Repair the faulty line.

yes

Disconnect clip P9-B5 and shunt pin B5 and  
track A4 on connector P13 (operate the rear  
wiper during the test).  
Does bargraph 17 RH side illuminate ?

no

Replace the passenger compartment  
connection unit.

yes


Ensure good contact P9-B5.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

17  CONT 4	
--	--

D

Reconnect P9-B5.  
Disconnect clip P13-B4 and replace the fuse  
F40 for automatic transmission or fuse F36 for  
manual gearbox.  
Turn the ignition on and select reverse gear.  
Does fuse F40 for automatic transmission or  
fuse F36 for manual gearbox blow again ?

no

The line is in short circuit to earth either :  
- on line P13-B4 / reversing lights LH side ,  
- on P13-B4 / reversing lights RH side .

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

17

**Bargraph 17 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Main beam headlights**NOTES**

None

Is bargraph 17 RH side illuminated  
permanently with no action at the  
main beam headlights stalk ?

yes

Disconnect clip P5-A4,  
reconnect connector P5.  
Is bargraph 17 RH side still illuminated?

yes

Replace le passenger compartment  
connection unit.

no

There is a short circuit to + 12 V either:  
- on the line P5-A4 / main beam stalk,  
- on the main beam stalk.  
Repair the line or replace the lights stalk.

no

When the main beam head lights stalk is  
moved, is there 12 volts on terminal P5-A4 ?

yes

Disconnect clip P5-A4 and shunt pin A4 and  
track A3 on connector P5.  
Does bargraph 17 RH side illuminate ?

yes

Ensure good contact  
P5-A4.

no

Replace the  
passenger  
compartment  
connection unit.

no

The line is cut either :

- on line P5-A4 / main beam stalk,
  - on the main beam stalk,
  - on the connection main beam stalk / fuse  
n° 8 on the fuse holder in the scuttle panel.
- There could be a short circuit to earth which  
would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the lights stalk.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

18

**Bargraph 18 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Hazard warning lights circuit**NOTES**

None

Is bargraph 18 LH side illuminated  
permanently with no action at the  
hazard warning lights switch?

no

Fit bornier Elé. 1371 in series to P16.  
When the hazard warning lights switch is  
pressed is there an earth at terminal P16-13 ?

yes

no

Replace the passenger  
compartment connection unit

The line is cut either:

- on line P16-13 / warning lights switch,
- on the warning lights switch,
- on the connection warning lights switch/earth.

There could be a short circuit to – 12 volts  
which could destroy the switch or the line. In  
this case check the insulation of the line.  
Repair the line or replace the warning lights  
switch.

Disconnect the connector for the warning  
lights switch. Is bargraph 18 LH side  
still illuminated?

no

There is a short circuit to earth on the  
warning lights switch. Replace the warning  
lights switch.

yes

Using bornier Elé. 1371, check and ensure the  
insulation of the connection P16-13 / warning  
lights switch. Reconnect the assembly. Is  
bargraph 18 LH side still illuminated?

no

End of fault finding

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

18

Bargraph 18 RH side does not illuminate

Fiche n° 45 side 1/2

Hazard warning lights, indicators and alarm circuit

## NOTES

None

Has fuse F37 blown?

no

Disconnect clip P9-A1, reconnect connector P9. Is there at least 6 volts with + after ignition feed and 0 volt without + after ignition feed on pin P9-A1 of the passenger compartment connection unit ?

yes

no

Replace the passenger compartment connection unit.

Is there a voltage on clip P9-A1, wiring side?

yes

no

The line is cut between the clip P9-A1 and the warning lights and indicator control stalk. Repair the faulty line.

There is a short circuit to + 12 volts either:

- on line P9-A1 / indicators stalk,
- on the indicators stalk,
- on the lines to the various bulbs if bargraph 18 RH side remains extinguished for indicators on the LH side or RH side.

Replace fuse F37 which has blown. Operate the indicators and hazard warning lights. Does the fuse blow again?

yes

no

Check the operation of the warning lights and the indicators and bargraphs 18 LH side and RH side.

Disconnect clips P9-A1, P10-A1 and P10-A2 reconnect the connector, replace the fuse. Activate the alarm if fitted and enter G08\* on the XR25. Does the fuse blow again?

yes

no

Replace the passenger compartment connection unit.

Check, on the wiring side, while operating the indicators and warning lights, the insulation from earth:

- of line P9-A1/A6 (passenger compartment connection unit/indicators stalk),
  - of the indicators stalk,
  - of the lines between the indicators stalk and the various bulbs, warning lights and hazard warning lights switch
- Repair any faulty components.

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

19

**Bargraph 19 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Front fog lights circuit**NOTES**

None

Enter V9 on the XR25 and check which  
bargraphs illuminate.  
Is bargraph 19 LH side illuminated?

no

Consult the customer complaints section to  
diagnose the fault.

yes

Is bargraph 19 LH side permanently  
illuminated with no action on the fog lights  
stalk?

yes

Disconnect clip P9-B2,  
reconnect connector P9. Is bargraph 19 LH  
side still illuminated?

yes

Replace the passenger  
compartment connection unit.

no

There is a short circuit to + 12 V either:  
- on line P9-B2 / fog lights stalk,  
- on the fog lights stalk.  
Repair the line or replace the fog lights stalk.

no

When the fog lights stalk is moved, is there at  
least 6 volts  
at terminal P9-B2 ?

yes

Disconnect clip P9-B2,  
and with + after ignition feed, shunt pin B2  
and track P6-B3.  
Does bargraph 19 LH side illuminate ?

yes

Ensure good  
contact  
P9-B2.

no

Replace the  
passenger  
compartment  
connection unit.

no

The line is cut either:

- on line P9-B2 / fog lights stalk,
  - on the fog lights stalk.
- There could be a short circuit to earth which  
would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the lights stalk.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

19

Bargraph 19 RH side does not illuminate  
or is permanently illuminated

Fiche n° 45 side 1/2

Rear fog light circuit

## NOTES

None

Enter V9 on the XR25 and check which  
bargraphs illuminate.  
Is bargraph 19 RH side illuminated?

no

Consult the customer complaints section to  
diagnose the fault.

yes

Is bargraph 19 RH side permanently  
illuminated with no action on the rear fog  
light stalk?

yes

Disconnect clip P7-A5,  
reconnect connector P7. Is bargraph 19 RH  
side still illuminated?

yes

Replace the passenger compartment  
connection unit.

no

There is a short circuit to – 12 V either:  
- on line P7-A5 / rear fog light stalk,  
- on the rear fog light stalk.  
Repair the line or replace the lights stalk.

no

When the rear fog light stalk is moved, is  
there at least 6 volts  
at terminal P7-A5 ?

yes

Disconnect clip P7-A5 and with + after  
ignition feed, shunt pin A5 and track P6-B3.  
Does bargraph 19 RH side illuminate ?

yes

Ensure good  
contact  
P7-A5.

no

Replace the  
passenger  
compartment  
connection unit.

yes

The line is cut either :  
- on line P7-A5 / rear fog light stalk.  
- on the rear fog light stalk.  
There could be a short circuit to earth which  
would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the lights stalk.

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

20

**Bargraph 20 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 1/2

Oil pressure warning light circuit**NOTES**

If bargraph 5 LH side is also illuminated, refer to the chart for bargraph 5LH side first.

**Bargraph 20 RH side does not illuminate**

Connect bornier Elé. 1371 in series with P16.  
Ignition on, check for an earth at terminal  
P16-4.  
Is there an earth?

no

The oil pressure switch line is cut. Check /  
ensure continuity of the line P16-4 / oil  
pressure switch.

yes

Replace the passenger compartment  
connection unit.

**Bargraph 20 RH side illuminates permanently**

Disconnect connector P16.  
Does bargraph 20 RH side extinguish?

no

Replace the passenger compartment  
connection unit.

yes

There is a short circuit to earth on the line. Check / ensure insulation from earth of connections:

- P16-4 / oil pressure warning light,
- P16-4 / oil pressure switch and the oil pressure switch.

If fuse F31 has blown, check / ensure the insulation from earth of the connections:

- P6B3 /splice, heated windscreen warning light/ passenger heated windscreen relay, passenger heated windscreen relay/ driver's heated windscreen relay, driver's heated windscreen relay/ oil pressure warning light and the condition of the 2 heated windscreen relays, the heated windscreen warning light and the oil pressure warning light.

Fit a new fuse F31.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

02

**Bargraph 2 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 2/2

Timed wiper circuit (equipment level N2)**NOTES**

Bargraph 10 LH side 1/2 should be illuminated otherwise first consult the chart for this bargraph 10 LH side.

**Bargraph 2 LH side does not illuminate**When the control is operated, does the wiper  
operate at slow speed?

yes

Connect bornier Elé. 1371 to P16 on the  
passenger compartment connection unit.  
Turn the ignition on. Shunt tabs  
P16-17 and P7-A6.  
Does bargraph 2 LH side illuminate ?

yes

no

The line is cut between  
the stalk and the  
passenger  
compartment  
connection unit.  
Check the stalk and  
connection A1/P16-17  
and repair.Replace the  
passenger  
compartment  
connection unit.

no

Has fuse F30 blown?

no

yes

Replace the fuse F30 which has blown.  
Operate the timed wiper stalk.  
Does the fuse blow again?

yes

no

A

B

Disconnect clips P7-A6 and P7-A7,  
reconnect connector P7.  
Is there 12 volts with +, after ignition feed at  
pins P7-A6 and P7-A7 on the passenger  
compartment connection unit ?

yes

no

Replace the passenger  
compartment connection unit.The line is cut between the passenger compartment  
connection unit and the stalk. Check and repair if  
necessary:

- the stalk,
- the connection stalk track A7 / P7-A6,
- the wiper motor,
- the connection wiper motor track C1 / P7-A7.

**AFTER REPAIR**Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

02

CONT 1

Bargraph 2 LH side does not illuminate (cont)

A

Disconnect clip P7-A6, reconnect the connector, Replace the fuse.  
Does the fuse blow again?

yes

Disconnect clip P7-A7, reconnect the connector, replace the fuse.  
Does the fuse blow again?

yes

Replace the passenger compartment connection unit.

no

There is a short circuit to earth on line P7-A7 / wiper motor.

no

Connect bornier Elé. 1371 to the passenger compartment connection unit. Replace fuse F30 with a 5A fuse. Turn the ignition on. Shunt pins P16-17 and P7-A6. Does bargraph 2 LH side (2/2) illuminate?

no

Replace the passenger compartment connection unit.

yes

There is a short circuit to earth either:

- on the line P7-A6/stalk,
- on the stalk between A7 and A1,
- on the line stalk/P16-17,
- on the line P9-A4,
- on the stalk between A6 and A3,
- on the line A3/P9-A5,
- on the internal connection P9-A5/P9-A6,
- on the line P9-A6/A1,
- on the motor.

Disconnect the motor to check the insulation. Check and insure insulation from earth for these components. If fuse F30 blows again, replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

02



CONT 2

Le Bargraph 2 LH side does not illuminate (cont)

B

Turn the wipers on slow speed. Does fuse F30  
blow?

no

Turn the wipers on fast speed. Does fuse F30  
blow?

yes

yes

no

Check and ensure insulation from earth:

- for the stalk connections,
- stalk / P9-A5,
- P9-A6/A1 (motor).

End of fault finding

Check and ensure insulation from earth:

- for the stalk connections,
- stalk / P9-A3,
- P9-A2/B1 (motor).

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

02



CONT 3

Bargraph 2 LH side illuminates permanently

Disconnect clip A1 from the  
stalk connector.  
Is bargraph 2 LH side still illuminated?

no

Replace the stalk

yes

Disconnect connector P16.  
Is bargraph 2 LH side still illuminated?

no

Using Elé. 1371, check and ensure the  
insulation of the line P16-17 from – 12 volts  
and the other lines on connector P16.

yes


Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>03</div> <div></div>	<div>Bargraph 3 LH side does not illuminate or is permanently illuminated</div> <div>Fiche n° 45 side 2/2</div> <div><u>Front wiper park information</u></div>
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NOTES	None
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Bargraphs 4 LH side or 4 RH side, side 2/2 should also show faults  
(no illumination or permanent illumination).  
Consult the charts for these bargraphs.

AFTER REPAIR	<div>Enter G0** to erase the memory.</div> <div>Reset the instruments (clock, radio, etc...).</div>
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## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

03

**Bargraph 3 RH side does not illuminate**

Fiche n° 45 side 2/2

Front wiper park circuit**NOTES**

Bargraph 10 LH side 1/2 should be illuminated otherwise first consult the chart for this bargraph 10 LH side.

**Bargraph 3 RH side does not illuminate**

Is the vehicle fitted with variable wiping?

no

Consult the customer complaint charts.

yes

Disconnect clip P9-A8. Check, with + after ignition feed present, for 12 volts on terminal P9-A8 at the passenger compartment connection unit end. Is there 12 volts?

no

Replace the passenger compartment connection unit.

yes

Operate the wiper and check at terminal A2 on the motor for an earth when the wiper passes the park position. Is there an earth?

no

The motor park position switch is faulty.

yes

The line is cut.  
Check and ensure the continuity of the line P9-A8/A2 (motor).**AFTER REPAIR**Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

04

**Bargraph 4 LH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 2/2

Front wiper slow speed circuit**NOTES**

None

Enter V9 on the XR25 and check which  
bargraphs illuminate.  
Is bargraph 4 LH side, side 2/2 illuminated?

no

Consult the customer complaints section to  
diagnose the fault.

yes

Is bargraph 4 LH side permanently  
illuminated with no action on the wiper  
stalk?

no

In the slow speed wiper position, is there an  
earth at terminal P9-A5 ?

yes

Replace the passenger  
compartment connection unit.

no

The line is cut, either:

- on the line P9-A5/A3 (wiper stalk),
- on the wiper stalk.

There may be a short circuit to + 12 volts  
which would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the stalk.

yes

Disconnect clip P9-A5,  
reconnect connector P9.  
Is bargraph 4 LH side, side 2/2  
still illuminated?

no

There is a short circuit to earth either:

- on the line P9-A5/A3 (wiper stalk),
- on the wiper stalk.

Repair the line or replace the stalk.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

04

**Bargraph 4 RH side does not illuminate  
or is permanently illuminated**

Fiche n° 45 side 2/2

Front wiper fast speed circuit**NOTES**

None

Enter V9 on the XR25 and check which  
bargraphs illuminate.  
Is bargraph 4RH side, side 2/2 illuminated?

no

Consult the customer complaints section to  
diagnose the fault.

yes

Is bargraph 4 RH side permanently  
illuminated with no action on the wiper  
stalk?

no

In the fast speed wiper position, is there an  
earth at terminal P9-A3 ?

yes

Replace the passenger  
compartment connection unit.

no

The line is cut between either:

- the line P9-A3/A2 (wiper stalk),
- the wiper stalk.

There may be a short circuit to + 12 volts  
which would destroy the stalk or the line.  
In this case check the insulation of the line.  
Repair the line or replace the stalk.

yes

Disconnect clip P9-A3,  
reconnect connector P9.  
Is bargraph 4RH side, side 2/2 still  
illuminated?

no

There is a short circuit to earth either:

- on the line P9-A3/A2 (wiper stalk),
- on the wiper stalk.

Repair the line or replace the stalk.

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

11

**Bargraphs 11 RH side and LH side  
do not illuminate**

Fiche n° 45 side 2/2

PLIP circuit**NOTES**

None

**Is fault bargraph 2 RH side (side 1/2)  
illuminated?**

yes

See chart for bargraph 2 RH side  
(side 1/2).

no

**Check the voltage at terminal P12-A1  
of the passenger compartment connection  
unit. Is there 12 volts ?**

no

**Replace the passenger compartment  
connection unit.**

yes

**Check the voltage at terminal P12-A7.  
Is there a voltage?**

no

**Replace the passenger compartment  
connection unit.**

yes

**Check the voltage at terminal 4  
of the PLIP sensor.  
Is there a voltage?**

no

**Repair the line P12-A7/4  
for the PLIP sensor.**

yes

**Check for an earth at terminal P12-A4.  
Is there an earth?**

no

**Replace the passenger compartment  
connection unit.**

yes

A

**AFTER REPAIR**Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS



A

Check for an earth on terminal 3 of the PLIP sensor.  
Is there an earth?

no

Repair the line P12-A4/3  
(PLIP sensor) (line connected to ceiling).

yes

Check the illumination of bargraph 11 LH side  
when the PLIP is pressed using a key which  
does operate on another vehicle.  
Does bargraph 11 LH side illuminate?

yes

The original key is faulty.

no

Use the XR25 to check for a frequency on  
terminal P12-A7  
when the PLIP is pressed.  
Is a frequency noted?

yes

Replace the passenger compartment  
connection unit.

no

Use the XR25 to check for a frequency at  
terminal 4 of the PLIP sensor when the PLIP is  
pressed.  
Is a frequency noted?

yes

Repair the line P12-A7/4  
(PLIP sensor).

no

Replace the PLIP sensor

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - CUSTOMER COMPLAINTS

**NOTES**

Only consult these customer complaint charts after checking:

- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
- or dialogue with the XR25 fiche 45 is possible but command V9 does not illuminate all the bargraphs for the system at fault (Passenger compartment connection unit 77 03 297 242, 77 03 297 182, 77 03 297 243 and 77 03 297 183).
- or dialogue with the XR25 fiche 45 is possible, the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

**FAULT WITH SEVERAL FUNCTIONS**

— Total breakdown or fault with several electrical and electronic functions

Chart 1

**FAULT WITH STARTING AND STOPPING THE VEHICLE ENGINE**

— When the ignition is turned on, the instrument panel instruments do not operate and the vehicle will not start

Chart 2

— When the ignition is turned off after driving, the engine continues to run

Chart 3

**FAULT WITH COMPONENTS OPERATING WITH + ACCESSORIES FEED**

— The passenger compartment fan, the radio, the cigar lighter, the clock and the instrument panel lighting do not operate

Chart 4

— The passenger compartment fan, the radio, the cigar lighter, the clock and the instrument panel lighting operate when the ignition is not turned on

Chart 5

**LIGHTS FAULTS****Vehicle which may be diagnosed using fiche N° 45**

— Loss of one or more functions

Chart 6

— Loss of dual headlight function

Chart 7

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

— Loss of one or more functions

Chart 6

**REVERSING LIGHTS FAULT****Vehicle which may be diagnosed using fiche N° 45**

— Loss of reversing lights function

Chart 8

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

— Loss of or permanent operation of reversing lights

Chart 9



## FAULT FINDING - CUSTOMER COMPLAINTS

**DIRECTION INDICATORS FAULT****Vehicle which may be diagnosed using fiche n° 45**

- Permanent operation of right or left hand indicator
- Loss of indicator function for alarm
- Indicators flash too quickly

Chart 10

Chart 11

Chart 12

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

- Loss of indicator and hazard warning lights functions
- Indicators flash too quickly

Chart 13

Chart 12

**HAZARD WARNING LIGHTS FAULT****Vehicle which may be diagnosed using fiche N° 45**

- Loss of hazard warning lights function but bargraph 18 LH side is illuminated

Chart 14

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

- Loss of hazard warning lights function

Chart 15

**FRONT FOG LIGHTS FAULT****Vehicle which may be diagnosed using fiche N° 45**

- Loss of or permanent operation of function

Chart 16

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

- Loss of function
- Permanent operation

Chart 17

Chart 18



## FAULT FINDING - CUSTOMER COMPLAINTS

**REAR FOG LIGHT FAULT****Vehicle which may be diagnosed using fiche N° 45**

Loss of or permanent operation of function

Chart 19

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

Loss of function

Chart 20

Permanent operation

Chart 21

**FRONT WIPERS FAULT****Vehicle which may be diagnosed using fiche n° 45**Speeds operate incorrectly (slow, fast or intermittent,  
all functions or individual ones)

Chart 22

Loss of or incorrect operation of intermittent function

Chart 23

Loss of park function

Chart 24

Loss of wiper speed / vehicle speed function

Chart 25

**Vehicle which cannot be diagnosed using fiche n° 45 (test impossible or only partial)**Speeds operate incorrectly (slow, fast or intermittent,  
all functions or individual ones)

Chart 26

Loss of or incorrect operation of intermittent function

Chart 27

Loss of park function

Chart 28

**REAR WIPER FAULT****Vehicle which may be diagnosed using fiche N° 45**

Loss of wiper function

Chart 29

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

Loss of or permanent operation of rear wiper function

Chart 30

**HEADLIGHT WASHERS FAULT**

Loss of function

Chart 31



## FAULT FINDING - CUSTOMER COMPLAINTS

**HEATED WINDSCREEN FAULT**

- Loss of or permanent operation of driver's side function
- Loss of or permanent operation of passenger's side function

Chart 32

Chart 33

**HEATED REAR SCREEN AND EXTERNAL REAR VIEW MIRRORS DE-ICING FAULT****Vehicle which may be diagnosed using fiche N° 45**

- Loss of or permanent operation of function

Chart 34

**Vehicle which cannot be diagnosed using fiche N° 45 (test impossible or only partial)**

- Loss of or permanent operation of rear wiper

Chart 35

**CENTRAL DOOR LOCKING SWITCH FAULT**

- Loss of function for all opening elements
- Loss of function for front doors
- Loss of function for all opening elements except front doors

Chart 36

Chart 37

Chart 38

**PASSENGER ELECTRIC WINDOW FAULT**

- Loss of function

Chart 39

**OVERSPEED OPTION FAULT**

- Loss of overspeed function

Chart 40

**LIGHTS ON REMINDER BUZZER FAULT**

- Loss of lights on reminder buzzer function

Chart 41

**FAULT WITH LIGHTS ON REMINDER BUZZER OR OVERSPEED WARNING**

- Loss of buzzer function

Chart 42



## FAULT FINDING - FAULT CHARTS

## Chart 1

Fault with several functions  
Total breakdown or fault with several  
electrical and electronic functions

## NOTES

Only consult this customer complaint chart after checking that :  
- either dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181).  
- or dialogue with the XR25 fiche 45 is possible, the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Check the condition of the fuses:

- n° 6 on scuttle panel fuse holder,
- n° 7 on scuttle panel fuse holder,
- n° 8 on scuttle panel fuse holder,
- F39 on passenger compartment fuse holder,
- F43 on passenger compartment fuse holder.

Replace the faulty fuse.  
Does the fault persist?

no

End of fault finding

yes

Check the condition of the connections:

- connector P1 for the passenger compartment connection unit/ fuse n° 6 on scuttle panel fuse holder,
- connector P2 for the passenger compartment connection unit/ fuse n° 8 on scuttle panel fuse holder,
- line from connector P3 to passenger compartment connection unit,
- line from connector P4 to passenger compartment connection unit

Repair the faulty connection.

## AFTER REPAIR

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 2

Fault with starting and stopping the vehicle engine  
When the ignition is turned on, the instrument panel instruments do not operate and the vehicle will not start

## NOTES

Only consult this customer complaint chart after checking that dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181). Check the condition of the battery.

Put the key in the + after ignition position.  
Check for 12 volts on terminal P4 of the  
passenger compartment connection unit  
Is there 12 volts ?

no →

The line P4/battery is cut.

Check the continuity:

- of the connection battery/ ignition switch,
- the condition of fuse n° 7 on the scuttle panel fuse holder,
- the ignition switch,
- the connection ignition switch / passenger compartment connection unit (P4).

yes ↓

Check the cleanliness and correct contact of  
the pin and clip P4. If the fault persists,  
replace the passenger compartment  
connection unit

## AFTER REPAIR

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 3

Fault with starting and stopping the vehicle engine  
When the ignition is turned off after driving,  
the engine continues to run

## NOTES

Only consult this customer complaint chart after checking that dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181). Check the condition of the battery.

Disconnect connector P4 and check the voltage on pin P4 of the passenger compartment connection unit  
Is there 12 volts ?

no

The line P4 / ignition switch is in short circuit to 12 volts.

- Check the insulation from + 12 volts :
- of the ignition switch,
  - of the connection ignition switch/ passenger compartment connection unit (P4).

yes

Replace the passenger compartment connection unit

## AFTER REPAIR

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

<b>Chart 4</b>	<u>Fault with components operating with + accessories feed</u> <u>The passenger compartment fan, the radio, the cigar lighter, the clock and the instrument panel lighting do not operate</u>
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<b>NOTES</b>	Only consult this customer complaint chart after checking that dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181).
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Put the key at the first notch on the ignition switch.  
Check for 12 volts at terminal P3 of the passenger compartment connection unit  
Is there 12 volts ?

yes →

Check the cleanliness and correct contact of the pin and clip P3. If the fault persists, replace the passenger compartment connection unit

no ↓

The line P3 / battery is cut.  
Check the continuity:

- of the connection battery/ignition switch,
- the condition of fuse n° 7 on the scuttle panel fuse holder,
- of the ignition switch,
- of the connection ignition switch/passenger compartment connection unit(P3).

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 5

Fault with components operating with + accessories feed  
The passenger compartment fan, the radio, the cigar lighter, the clock and the instrument panel lighting operate when the ignition is not turned on

## NOTES

Only consult this customer complaint chart after checking that dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181).

Disconnect connector P3 and check pin P3 of the passenger compartment connection unit  
Is there 12 volts, ignition off?

no

The line P3 / ignition switch is in short circuit to 12 volts.

- Check the insulation from + 12 volts :
- of the ignition switch,
  - of the connection ignition switch/ passenger compartment connection unit (P3).

yes

Replace the passenger compartment connection unit

## AFTER REPAIR

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 6

Lights faults  
Loss of one or more functions**NOTES**

Only consult these customer complaint charts after checking:

- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
- or dialogue with the XR25 fiche 45 is possible but command V9 does not illuminate all the bargraphs for the system at fault (Passenger compartment connection unit 77 03 297 242, 77 03 297 182, 77 03 297 243 and 77 03 297 183).
- or dialogue with the XR25 fiche 45 is possible, the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

As a general measure, check the condition of the fuses concerned F3, F4, F5, F6, F25, F26 and F45 and the condition of the various bulbs. Then check that 12 volts is present at the inputs for the passenger compartment connection unit feeding the lights, ie:

- side lights on, 12 volts on P6-B7,
- dipped headlights on, 12 volts on P6-B7, P6-A5, P6-A6,
- main headlights on, 12 volts on P6-B7, P6-A5, P5-A4

Are these feeds correct?

no →

Check the lights stalk, the connecting wires for the lights stalk / passenger compartment connection unit, the feed to the lights stalk.

yes ↓

A

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 6  
CONT

A

Check if 12 volts is present at the lights outputs on the passenger compartment connection unit when the lights stalk is in the positions side lights on, dipped headlights on and then main beam headlights on, ie:

- front right side light: fuse F4 and track P9-B4,
- front left side light: fuse F3 and track P9-B7,
- rear right side light: fuse F4 and track P13-B2,
- rear left side light: fuse F3 and track P13-B3,
- Front right dipped headlight: fuse F26 and track P5-B2,
- Front left dipped headlight: fuse F25 and track P5-B4,
- front right main headlight: fuse F5 and track P5-A3,
- front left main headlight: fuse F6 and track P5-B1,
- caravan connection.

Is the output feed correct?

yes

Check the condition of the wiring between the passenger compartment connection unit and the faulty component.

no

Has one or more of fuses (F4, F5, F6, F25, F26 and F45) blown?

yes

no

Replace the passenger compartment connection unit

Check and ensure the insulation from earth for the lines with blown fuses. Note that line P9-B4 feeds several components, in particular lighting for the switches for :

- hazard warning lights,
- de-icing,
- sunroof,
- electric windows,
- etc...

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 7

Lights faults  
Loss of dual headlight function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Check fuse F45.  
Has it blown?

no

Turn the main beam headlights on  
and check for 12 volts at  
terminal P6-A5.  
Is there 12 volts ?

yes

Replace the passenger  
compartment connection unit

no

The line is cut. Check and ensure the  
continuity for the following components:

- P6-A5/B4 (lights stalk),
- lights stalk.

Replace the fuse F45.  
Does it blow again?

no

End of fault finding

yes

Disconnect clips P6-A5 and P6-A6 and  
reconnect connector P6.  
Replace the fuse. Does it blow again?

no

There is a short circuit to earth on the line.  
Check the insulation from earth:

- of line P6-A5/B4 (lights stalk),
- of line P6-A6/B5 (lights stalk),
- of the lights stalk,
- of the feed wire at B2 on the lights stalk.

yes

Replace the passenger compartment  
connection unit

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 8

Reversing lights fault  
Loss of reversing lights function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Select reverse gear and check for 12 volts on terminal P13-B4.  
Is there 12 volts ?

no

Replace the passenger compartment connection unit

yes

The line is cut.  
Check and ensure the continuity of the connection P13-B4 / left and right hand reversing lights.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 9

Reversing lights fault  
Loss of or permanent operation of reversing lights**NOTES**

Only consult these customer complaint charts after checking:

- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
- or command V9 does not illuminate all the bargraphs for the system at fault

Are the reversing lights illuminated permanently, without reverse gear being selected?

no

There is a loss of reversing lights function. Has fuse F36 for manual gearbox or fuse F40 for automatic transmission blown?

yes

A

no

Is the vehicle fitted with a manual gearbox or automatic transmission?

automatic

manual

B

C

Disconnect clip P13-B4,  
reconnect connector P13.  
Are the reversing lights still illuminated?

no

There is a short circuit to + 12 V either:

- on line P13-B4 / left hand reversing light,
- on line P13-B4 / right hand reversing light.

Repair the faulty line.

yes

Disconnect clip P9-B5,  
reconnect connector P9.  
Are the reversing lights still illuminated?

no

There is a short circuit to + 12 V either:

- on the reverse gear switch for the automatic transmission or manual gearbox,
- on the connection reverse gear switch/ P9-B5.

Repair the faulty line.

yes

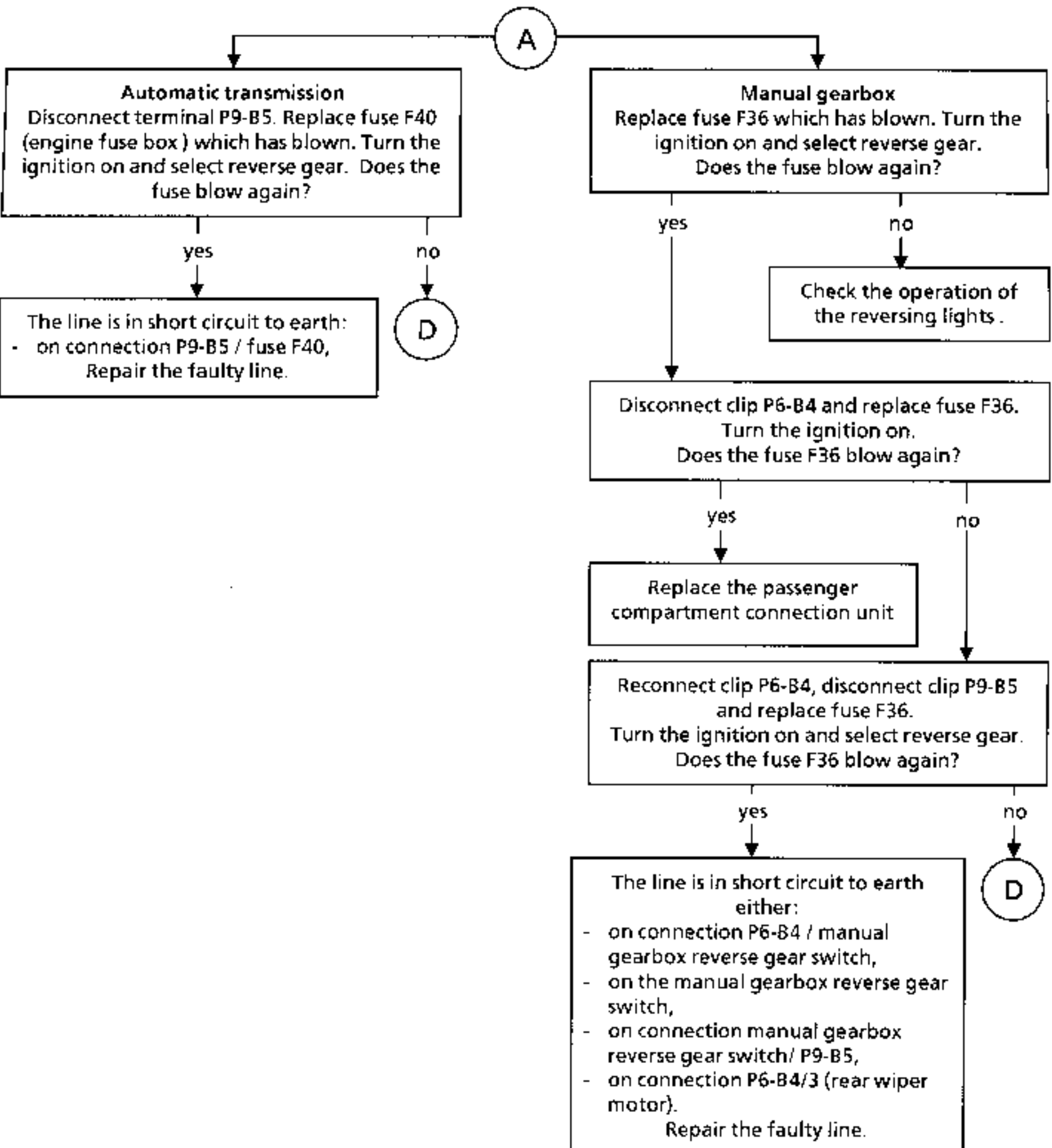
Replace the passenger compartment  
connection unit

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 9  
CONT 1**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 9**  
**CONT 2****B**

For the automatic transmission, in reverse gear, is there 12 Volts on terminal P9-B5 ?

no

The line is cut between the automatic transmission and terminal P9-B5. Repair the faulty line (see fuse F40 in the engine fuse box).

yes

Check the voltage at terminal P13-B4.  
Is there 12 Volts?

no

Replace the passenger compartment connection unit

yes

The line is cut. Check:

- the continuity of the connection P13-B4 / reversing lights,
- the condition of the reversing lights,
- the correct earth for the reversing lights.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 9**  
**CONT 3**

C

For the manual gearbox,  
is there 12 volts on terminal P6-B4 ?

no

Replace the passenger compartment  
connection unit

yes

Turn the ignition on, in reverse gear,  
is there 12 Volts at  
terminal P9-B5?

no

The line is cut either:

- on connection P6-B4 / manual gearbox reverse gear switch,
- on the manual gearbox reverse gear switch,
- on connection manual gearbox reverse gear switch/ P9-B5.

Repair the faulty line.

yes

Check the voltage at terminal P13-B4.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit

yes

The line is cut. Check:

- the continuity of connection P13-B4 / reversing lights,
- the condition of the reversing lights,
- the correct earth for the reversing lights.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 9**  
**CONT 4**

D

Reconnect P9-B5.

Disconnect clip P13-B4 and replace the fuse F40 for automatic transmission or fuse F36 for manual gearbox.

Turn the ignition on and select reverse gear. Does fuse F40 for automatic transmission or fuse F36 for manual gearbox blow again ?

no

The line is in short circuit to earth either :

- on line P13-B4 / reversing lights LH side ,
- on P13-B4 / reversing lights RH side

yes

Replace the passenger compartment connection unit

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 10

Direction indicators fault  
Permanent operation of right or left hand indicator**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Does the left hand indicator operate permanently and constantly?

yes

Disconnect clip P10-A1,  
reconnect connector P10.  
Does the left hand indicator still operate permanently and constantly?

yes

Replace the passenger  
compartment connection unit.

no

There is a short circuit to + 12 V on one of the following lines:

- P10-A1 / left hand indicator warning light,
- left hand indicator warning light/ A7 (indicator stalk),
- indicator stalk.

no

The right hand indicator operates permanently and constantly. Disconnect clip P10-A2, reconnect connector P10.  
Does the right hand indicator still operate permanently and constantly?

yes

Replace the passenger  
compartment connection unit.

no

There is a short circuit to + 12 V on one of the following lines:

- P10-A2 / right hand indicator warning light,
- right hand indicator warning light/ A5 (indicator stalk),
- indicator stalk.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 11

Direction indicators fault  
Loss of indicator function for alarm**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Is there loss of left hand indicator function for alarm?

yes

Check for 12 volts at terminal P10-A1 when the doors are locked with the PLIP. Is there 12 volts?

yes

Replace the passenger compartment connection unit.

no

Does the left hand indicator illuminate when the doors are locked with the PLIP?

yes

There is an open circuit on the line left hand indicator/ indicator stalk.

no

There is an open circuit on the line P10-A1 / left hand indicator warning light.

no

There is loss of right hand indicator function for alarm. Check for 12 volts at terminal P10-A2 when the doors are locked with the PLIP. Is there 12 volts?

yes

Replace the passenger compartment connection unit.

no

Does the right hand indicator illuminate when the doors are locked with the PLIP?

yes

There is an open circuit on the line right hand indicator/ indicator stalk.

no

There is an open circuit on the line P10-A2 / right hand indicator warning light.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 12

Direction indicators fault  
Indicators flash too quickly**NOTES**

Only consult these customer complaint charts after checking:  
- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),  
or dialogue with the XR25 fiche 45 is possible, the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Check the power and condition of each of the indicator bulbs  
(front, rear, sides, caravan)  
and their earth.  
Is the flashing still too fast?

no

End of fault finding

yes

Check and ensure the continuity of each  
connection between indicator bulb/  
passenger compartment connection unit.  
Is the flashing still too fast?

no

End of fault finding

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 13

Direction indicators fault  
Loss of indicator and hazard warning lights function**NOTES**

Only consult these customer complaint charts after checking that dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),

Has fuse F37 blown?

yes

Replace the blown fuse F37. Operate the indicators and hazard warning lights.  
Does the fuse blow again?

yes

no

Check the operation of the indicators and hazard warning lights.

Disconnect clip P9-A1, reconnect the connector, replace the fuse.  
Does the fuse blow again?

yes

no

Replace the passenger compartment connection unit.

Check, on the wiring side, while operating the indicators and hazard warning lights, the insulation from earth:

- of line P9-A1/A6 (passenger compartment connection unit/indicator stalk),
- of the indicator stalk,
- of the lines between the indicator stalk and the various bulbs, warning lights and the hazard warning light switch.

Repair the faulty components.

no

Disconnect clip P9-A1, reconnect connector P9. Is there at least 6 volts with + after ignition feed present and 0 volt without + after ignition feed at pin P9-A1 on the passenger compartment connection bornier?

yes

no

Replace the passenger compartment connection unit.

Is there a voltage on clip P9-A1, wiring end?

yes

no

The line is cut between the clip P9-A1 and the indicator stalk and the hazard warning lights switch.  
Repair the faulty line.

There is a short circuit to + 12 volts either:

- on line P9-A1 / indicator stalk,
- on the indicator stalk,
- on the lines to the various bulbs.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 14

Hazard warning lights fault  
Loss of hazard warning lights function but bargraph 18 LH side is illuminated

## NOTES

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Check for a voltage on terminal 10 of the hazard warning lights switch.  
Is there at least 6 volts ?

yes

Replace the hazard warning lights switch.

no

The connection hazard warning lights switch/ passenger compartment connection unit is cut.

Check and ensure connection P9-A1 on the passenger compartment connection unit, connection P9-A1/10 (hazard warning lights switch), connection 10 on the hazard warning lights switch.

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 15

Hazard warning lights fault  
Loss of hazard warning lights function**NOTES**

Only consult these customer complaint charts after checking that dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),

Check the noise from the passenger compartment connection unit. Does it click like a timer relay?

yes

Disconnect the connector for the hazard warning lights switch. Does the passenger compartment connection unit still click like a timer relay?

yes

There is a short circuit to earth on the hazard warning lights switch. Replace the hazard warning lights switch.

Using bornier Elé. 1371, check and ensure the insulation from earth of connection P16-13 / hazard warning lights switch. Reconnect the assembly. Does the passenger compartment connection unit still click like a timer relay?

yes

Replace the passenger compartment connection unit.

no

End of fault finding

no

Connect bornier Elé. 1371 in series to P16. When the hazard warning lights switch is operated, is there an earth at terminal P16-13 ?

yes

Replace the passenger compartment connection unit

no

The line is cut either:

- on the line P16-13 / 4 for the hazard warning lights switch,
- on the hazard warning lights switch,
- on connection hazard warning lights switch / earth.

There may be a short circuit to + 12 volts which could destroy the switch or the line. Check the insulation of the line. Repair the line or replace the hazard warning lights switch.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 16

Front fog lights fault  
Loss of or permanent operation of function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

**Loss of front fog lights function**

Check fuse F14.  
Is it blown?

no

Turn the side lights on and check at terminal  
P6-A7 for 12 volts when the front  
fog lights stalk is operated.  
Is there 12 volts ?

yes

no

Replace fuse F14.  
Does it blow again?

Replace the passenger  
compartment connection unit.

yes

no

End of fault finding.

Disconnect clip P6-A7  
and reconnect the connector.  
Replace fuse F14.  
Does it blow again?

The line is cut.

Check and ensure the continuity of the lines:

- P6-A7 / front fog lights,
- the condition of the bulbs,
- the right and left hand fog lights are correctly earthed.

yes

no

Replace the passenger  
compartment connection unit.

There is a short circuit to earth on the line.  
Check and ensure the insulation from earth  
for the line:

- P6-A7 / left and right hand front fog lights,
- P6-A7 / front fog lights warning light,
- the condition of the fog lights bulbs,
- the condition of the front fog lights warning light.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 16**  
**CONT****Permanent operation of the front fog lights**

Disconnect clip P6-A7,  
and reconnect the connector.  
Is there still permanent operation of the  
front fog lights?

no →

Replace the passenger compartment  
connection unit.

yes ↓

A connection is in short circuit to + 12 volts.  
Check and ensure insulation from + 12 volts  
for the lines:

- P6-A7 / front fog lights
- P6-A7 / front fog lights warning light

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 17

Front fog lights fault  
Loss of function**NOTES**

Only consult these customer complaint charts after checking:

- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
- or command V9 does not illuminate all the bargraphs for the system at fault

Check the fuse F14.  
Is it blown?

yes

Replace fuse F14.  
Does it blow again?

yes

Disconnect clip P6-A7 and reconnect the  
connector. Replace fuse F14.  
Does it blow again?

yes

Replace the passenger  
compartment connection unit.

There is a short circuit to earth on the line.  
Check and ensure the insulation from earth of  
the line:

- P6-A7 / left and right hand front fog lights,
- P6-A7 / front fog lights warning light,
- the condition of the fog light bulbs
- the condition of the front fog lights  
warning light.

no

Turn the side lights on and check at terminal  
P6-A7 for 12 volts when the front  
fog lights stalk is operated.  
Is there 12 volts ?

yes

The line is cut.  
Check and ensure the continuity  
of lines:

- P6-A7 / front fog lights,
- the condition of the bulbs,
- the right and left hand fog  
lights are correctly earthed

no

When the fog lights stalk is operated is there  
12 volts at terminal P9-B2 ?

yes

Replace the passenger  
compartment connection unit.

no

The line is cut:

- on line P9-B2 / fog lights stalk,
- on the fog lights stalk.

There may be a short circuit to earth which  
could destroy the stalk or the line. Check the  
insulation of the line. Repair the line or  
replace the fog lights stalk.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 18

Front fog lights fault  
Permanent operation

## NOTES

Only consult these customer complaint charts after checking:

- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
- or command V9 does not illuminate all the bargraphs for the system at fault

Disconnect clip P6-A7 and reconnect the connector. Is there still permanent operation of the front fog lights?

yes

A connection is in short circuit to + 12 volts.  
Check and ensure the insulation from + 12 volts of lines:

- P6-A7 / front fog lights,
- P6-A7 / front fog lights warning light.

no

Disconnect clip P9-B2,  
reconnect connector P9.  
Are the front fog lights still illuminated?

no

There is a short circuit to + 12 V either:

- on the line P9-B2 / fog lights stalk,
- on the fog lights stalk.

Repair the line or replace the fog lights stalk.

yes

Replace the passenger compartment  
connection unit.

## AFTER REPAIR

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 19

Rear fog light fault  
Loss of or permanent operation of function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

**Loss of rear fog light function**

Check fuse F8.  
Is it blown?

yes

Replace fuse F8.  
Does it blow again?

yes

Disconnect clips P15-A3 and P9-B8. Reconnect  
the connector. Replace fuse F8.  
Does it blow again?

yes

Replace the passenger  
compartment connection unit.

no

There is a short circuit to earth on the line.  
Check and ensure the insulation from earth of  
the line.

- P15-A3 / rear fog light,
- P9-B8 / rear fog light warning light,
- the condition of the rear fog light bulb,
- the condition of the rear fog light  
warning light bulb.

no

Check at terminal P15-A3,  
for 12 volts when the rear fog  
light stalk is operated.  
Is there 12 volts ?

yes

no

Replace the passenger  
compartment connection unit.

The line is cut. Check and ensure:

- the continuity of the line P15-A3 / rear fog light,
- the condition of the bulb,
- the correct earth for the rear fog light.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 19**  
**CONT****Permanent operation of the rear fog light**

Disconnect clips P15-A3 and P9-B8 and  
reconnect the connectors.  
Is there still permanent operation of the rear  
fog light?

no →

Replace the passenger compartment  
connection unit.

yes  
↓

A connection is in short circuit to + 12 volts.  
Check and ensure the insulation from + 12  
volts for the lines:

- P15-A3 / rear fog light,
- P9-B8 / rear fog light warning light.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 20

Rear fog light fault  
Loss of function**NOTES**

Only consult these customer complaint charts after checking:  
- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),  
- or command V9 does not illuminate all the bargraphs for the system at fault

Check fuse F8.  
Is it blown?

no

A

yes

Replace fuse F8.  
Does it blow again?

no

End of fault finding.

yes

Disconnect clips P15-A3 and P9-B8  
and reconnect the connector.  
Replace fuse F8.  
Does it blow again?

no

There is a short circuit to earth on one of the  
lines. Check and ensure the insulation from  
earth of the lines:

- P15-A3 / left hand rear fog light,
- P9-B8 / rear fog light warning light,
- the condition of the rear fog light bulb,
- the condition of the rear fog light warning light bulb.

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 20  
CONT

A

Check at terminal P15-A3, for 12 volts when the rear fog light stalk is operated.  
Is there 12 volts ?

yes

The line is cut. Check and ensure the continuity of the lines:

- P15-A3 / rear fog light,
- the condition of the bulb,
- the correct earth for the bulb.

no

When the fog light stalk is operated, is there 12 volts at terminal P7-A5 ?

yes

Replace the passenger compartment connection unit.

no

The line is cut either:

- on line P7-A5 / fog light stalk,
- on the stalk.

There may be a short circuit to earth which could destroy the stalk or the line. Check the insulation of the line.  
Repair the line or replace the stalk.

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 21

Rear fog light fault  
Permanent operation**NOTES**

Only consult these customer complaint charts after checking:

- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
- or command V9 does not illuminate all the bargraphs for the system at fault

Disconnect clips P15-A3 and P9-B8 and reconnect the connector. Is there still permanent operation of the rear fog light ?

yes →

A connection is in short circuit to + 12 volts.  
Check and ensure insulation from + 12 volts for lines:

- P15-A3 / rear fog light,
- P9-B8 / rear fog light warning light.

no ↓

Disconnect clip P7-A5, reconnect connector P7.  
Is the rear fog light still illuminated?

no →

There is a short circuit to + 12 V either:  
- on line P7-A5 / fog light stalk,  
- on the fog light stalk.  
Repair the line or replace the stalk.

yes ↓

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 22

Front wipers fault  
Speeds operate incorrectly  
(slow, fast or intermittent, all functions or individual ones)

## NOTES

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Does the vehicle have adjustable timed wiping?

no

See Chart 26.

yes

Is there a total loss of wiper functions?  
(intermittent, slow and fast speed)

no

A

yes

Turn the intermittent wipers on  
and check #04. Is it 255?

no

B

yes

Check for an earth at terminal P7-A6.  
Is there an earth?

no

Replace the passenger compartment  
connection unit.

yes

A line is cut. Check and ensure the continuity  
for the following components:

- P7-A6 / A7 (wiper stalk),
- wiper stalk.

## AFTER REPAIR

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 22  
CONT 1

A

Has the wiper slow speed  
function been lost?

no

The fast speed wiper function has been lost.  
Turn the fast speed wipers on and check for  
an earth on terminal P9-A3.  
Is there an earth ?

yes

Replace the passenger  
compartment connection unit.

no

The line is cut. Check and ensure the  
continuity for the following components:  
- P9-A3 / A2 (wiper stalk).

Turn the slow speed wipers on and check for  
an earth on terminal P9-A5.  
Is there an earth ?

no

The line is cut. Check and ensure the  
continuity for the following components:  
- P9-A5 / A3 (wiper stalk).  
- wiper stalk.

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 22  
CONT 2

B

Check fuse F30.  
Is it blown?

no

Check:  
- for an earth at terminal C2 on the motor,  
- the condition of the motor (after  
completely disconnecting it).  
If the assembly is correct, replace the  
passenger compartment connection unit.

yes

Replace fuse F30.  
Turn the slow wipers on again.  
Does the fuse blow again?

no

Disconnect clip P9-A2  
and turn the fast speed wipers on.  
Does the fuse blow?

yes

yes

no

Disconnect clip P9-A6, replace fuse F30 and  
turn the slow speed wipers on. Does the fuse  
blow again?

Replace the passenger compartment  
connection unit

yes

no

Replace the passenger  
compartment connection unit.

The line P9-A2 / motor is in short circuit to  
earth.

Check and ensure insulation from earth :  
- for line P9-A2 / motor,  
- for the motor (after disconnecting  
it completely).

The line P9-A6 / motor is in short circuit to  
earth.

Check and ensure insulation from earth for:

- the line P9-A6 / A1 (motor),
- the motor (after disconnecting it  
completely).

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 23

Front wipers fault  
Loss of or incorrect operation of intermittent function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Does the vehicle have adjustable timed wiping?

no

See Chart 27.

yes

Set the wipers to minimum intermittent operation and check #04.  
Is it 255 ?

no

Your customer complaint is not complete.  
Check if the wipers are operating correctly.

yes

Connect the bornier and check the resistance of the line P7-A6 / P16-17.  
Is it between 0  $\Omega$  and 12 K $\Omega$  ?

no

A line is cut.  
Check and ensure the continuity of the line P16-17/A1 (wiper stalk) and the resistance between A1 and A7 on the wiper stalk in the intermittent position.  
Replace the stalk if it is faulty.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 24

Front wipers fault  
Loss of park function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Stop the wipers and check, with – after ignition feed present, for 12 volts at terminal P9-A8.  
Is there 12 volts ?

yes →

A component or connection may be faulty.  
Check and ensure the continuity of the following lines:

- P9-A8 / P9-A4 : replace the passenger compartment connection unit if there is a fault
- A3/A6 on the wiper stalk: replace the wiper stalk if there is a fault
- P9-A4 / A6 (wiper stalk).

no ↓

Check for 12 volts at terminal P7-A7.  
Is there 12 volts ?

no →

Replace the passenger compartment connection unit.

yes ↓

The line is cut. Check and ensure the continuity of the following lines:

- C1 / A2 (on motor) : replace the motor if it is faulty,
- P7-A7 / C1 (motor),
- P9-A8 / A2 (motor).

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 25

Fault with wiper speed / vehicle speed function  
Loss of function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Does the vehicle have petrol injection?

no

Connect bornier Elé. 1371 in series with P17. Put the vehicle on a 2 post lift with the wheels free to turn and the vehicle ready to drive. Using the XR25, enter G and connect to Vin, check for a frequency at terminal P17-10. Is there a frequency?

yes

Replace the passenger compartment connection unit.

no

There is no vehicle speed information. Check fuse F29, the speed sensor, and the line connecting to P17-10.

yes

Enter injection fault finding and check if the vehicle speed bargraph or #18 shows vehicle speed information  
Is vehicle speed information given?

no

Disconnect connector P17. Is vehicle speed information shown for injection?

yes

Replace the passenger compartment connection unit.

no

There is a short circuit on the line. Check:

- the insulation of line P17-10 in relation to the other lines of connector P17,
- the insulation from 12 volts and earth of line P17-10 / speed sensor and the connections between the sensor/ all other systems using vehicle speed information (injection, automatic clutch, automatic transmission),
- the condition of the speed sensor.

yes

Connect bornier Elé. 1371 in series with P17. Put the vehicle on a 2 post lift with the wheels free to turn and the vehicle ready to drive. Using the XR25, enter G and connect to Vin, check for a frequency at terminal P17-10. Is there a frequency?

yes

Replace the passenger compartment connection unit.

no

There is no vehicle speed information. Check fuse F29, the speed sensor, and the line connecting to P17-10.

**AFTER REPAIR**

Enter G0\*\* to erase the memory.  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 26

Front wipers fault  
Speeds operate incorrectly  
(slow, fast or intermittent, all functions or individual ones)

## NOTES

Only consult this customer complaint chart after checking that :  
 - either dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181).  
 - or command V9 does not illuminate all the bargraphs for the system at fault

Check the front wipers function. Is the system completely inoperational ?

yes

Has fuse F30 blown?

no

Ignition on, check the voltage on terminals P7-A6 and P7-A7. Is there 12 volts ?

yes

Check for an earth at terminal C2 of the front wiper motor connector. Is there an earth?

yes

Ignition on, wipers on slow speed, check the voltage at terminal A1 of the motor. Is there 12 volts ?

no

Ignition on, wipers on slow speed, check the voltage at terminal A7 on the stalk. Is there 12 volts ?

yes

The stalk is faulty

no

Is the fault just for intermittent operation?

yes

See Chart 27

no

B

A

no

Replace the passenger compartment connection unit.

no

Repair the motor earth

yes

The motor is faulty

no

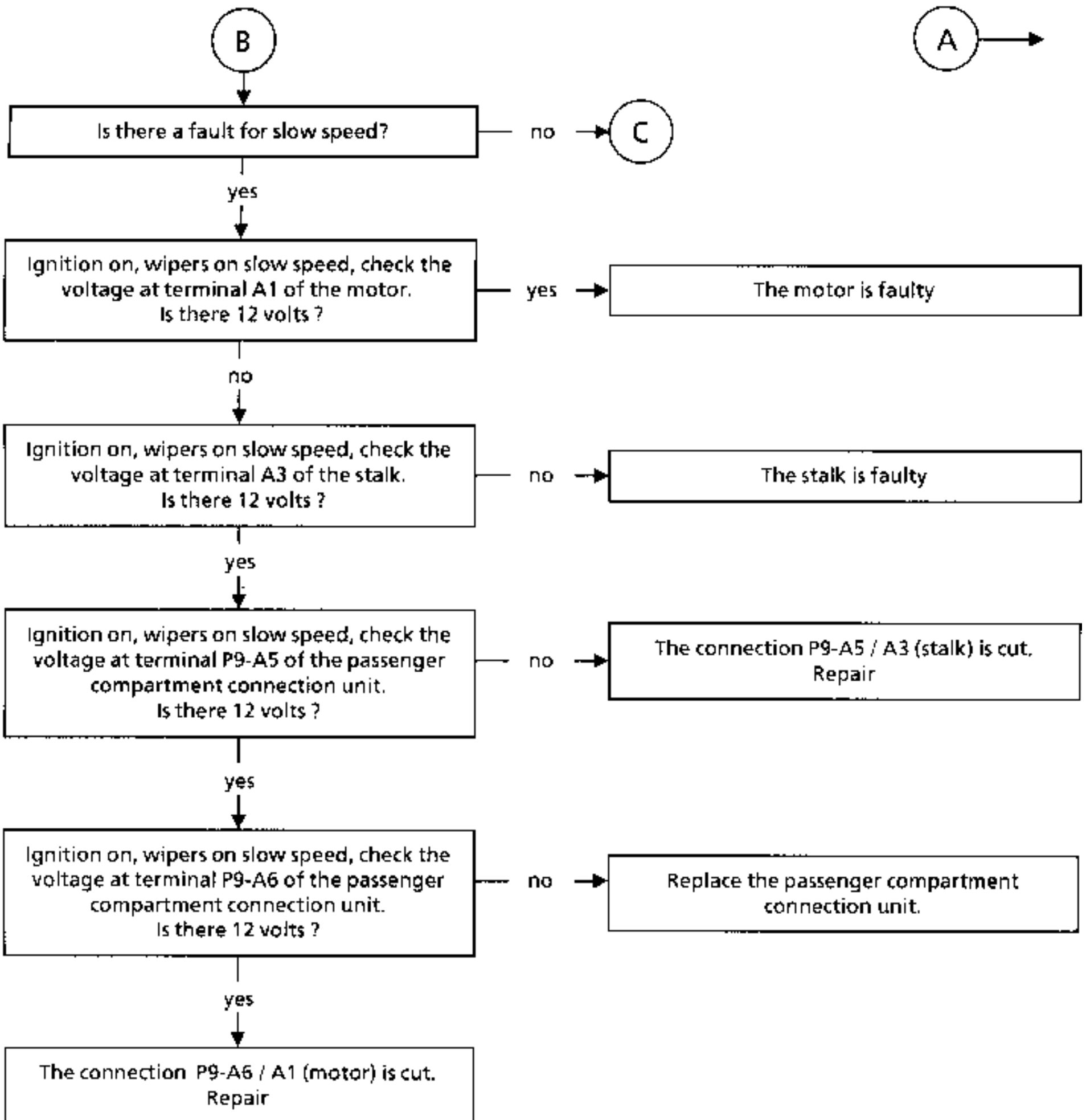
The connection P7-A6 / A7 (stalk) is cut. Repair.

## AFTER REPAIR

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 26  
CONT 1**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 26**  
**CONT 2****C****A** →

There is a fault for fast speed operation.  
Ignition on, wipers on fast speed, check the  
voltage at terminal B1 on the motor.  
Is there 12 volts ?

yes →

The motor is faulty.

no ↓

Ignition on, wipers on fast speed, check the  
voltage at terminal A2 on the stalk.  
Is there 12 volts ?

no →

The stalk is faulty.

yes ↓

Ignition on, wipers on fast speed, check the  
voltage at terminal P9-A3 on the passenger  
compartment connection unit.  
Is there 12 volts ?

no →

The connection P9-A3 / A2 (stalk) is cut.  
Repair.

yes ↓

Ignition on, wipers on fast speed, check the  
voltage at terminal P9-A2 on the passenger  
compartment connection unit.  
Is there 12 volts ?

no →

Replace the passenger compartment  
connection unit.

yes ↓

The connection P9-A2 / B1 (motor) is cut.  
Repair.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 26  
CONT 3

A

Replace the blown fuse F30.  
Set the wipers to intermittent speed.  
Does the fuse blow again?

yes

E

no

Set the wipers to slow speed. Does fuse F30  
blow?

yes

Check / ensure insulation from earth:

- of connections A3 (stalk) / P9-A5, P9-A6/A1 (motor), repair if necessary,
- for the stalk,
- of connections P9-A5 / P9-A6, replace the passenger compartment connection unit if there is a fault
- the motor, replace it if there is a fault

no

Set the wipers to fast speed. Does fuse F30  
blow?

no

The wipers are operating correctly.

yes

Check / ensure insulation from earth:

- of connections A2 (stalk) / P9-A3, P9-A2/B1 (motor), repair if necessary,
- for the stalk,
- connections P9-A3 / P9-A2, replace the passenger compartment connection unit if there is a fault
- the motor, replace it if there is a fault

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 26  
CONT 4

E

Disconnect clip P7-A6,  
reconnect the connector, replace the fuse.  
Does the fuse blow again?

no

There is a short circuit to earth.  
Connect the bornier to P16 wiring side,  
disconnect the wiper motor and check the  
insulation from earth of:

- the line P7-A6/stalk,
  - the stalk between A7 and A1,
  - the line A1 (stalk) / P16-17,
  - the line P9-A4/A6 (stalk),
  - the stalk between A6 and A3,
  - the line A3 (stalk) / P9-A5,
  - the internal connection P9-A5 / P9-A6 (if  
there is a fault, replace the passenger  
compartment connection unit),
  - the line P9-A6/A1,
  - the wiper motor,
- Repair the faulty components.  
If fuse F30 blows again, replace the passenger  
compartment connection unit.

yes

Disconnect clip P7-A7,  
reconnect the connector, replace the fuse.  
Does the fuse blow again?

no

There is a short circuit to earth on line  
P7-A7 / wiper motor.

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 27

Front wipers fault  
Loss of or permanent operation of intermittent function**NOTES**

Only consult this customer complaint chart after checking that :  
- either dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181).  
- or command V9 does not illuminate all the bargraphs for the system at fault

## Loss of intermittent wiper function

Do the wipers operate at slow speed?

yes

Connect bornier Elé. 1371 in series to P16 of the passenger compartment connection unit. Ignition on, turn the wipers to intermittent operation. Check for 12 Volts at terminal P16-17. Is there 12 volts ?

yes

Replace the passenger compartment connection unit.

no

The line is cut between the stalk and the passenger compartment connection unit. Check the stalk and the connection A1/P16-17 and repair.

no

See Chart 26.

## Permanent operation of intermittent wiper function

Disconnect clip A1 for the front wiper stalk and reconnect the connector. Does the wiper still operate intermittently?

yes

Using bornier Elé. 1371, check the insulation from + 12 volts and the other tracks on P16 for connection P16-17/A1 (stalk). Repair and replace the passenger compartment connection unit if the fault persists.

no

The stalk is in short circuit to + 12 volts. Replace the stalk.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 28

Front wipers fault  
Loss of park function**NOTES**

Only consult this customer complaint chart after checking that :

- either dialogue with the XR25 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181).
- or command V9 does not illuminate all the bargraphs for the system at fault

Check the voltage at P7-A7.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit.

yes

Stop the wiper in the centre of the  
windscreen by using the park and check for  
12 volts at terminal P9-A8.  
Is there 12 volts ?

no

The motor park switch is faulty.

yes

Check the voltage at P9-A4.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit.

yes

Check the voltage at P9-A5.  
Is there 12 volts ?

no

Check the lines:

- P9-A4/A6 (stalk),
- P9-A5 / A3 (stalk),
- and the stalk.

yes

Check the voltage at P9-A6.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit.

yes

The line is cut.  
Check and ensure the continuity of the line  
P9-A6/A1 (motor) and the condition of the  
motor (disconnect it completely).

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 29

Rear wiper fault  
Loss of rear wiper function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Operate the rear wiper and check for 12 volts  
at terminals P13-A4 and P6-B4.  
Is there 12 volts ?

no

Replace the passenger compartment  
connection unit.

yes

The line is cut between earth and the  
passenger compartment connection unit.

Check :

- the connection 2 (rear wiper motor/earth),
- P13-A4/1 (motor),
- P6-B4/3 (motor),
- the condition of the wiper motor after  
disconnecting it.

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 30

Rear wiper fault  
Loss of or permanent operation of wiper function**NOTES**

Only consult these customer complaint charts after checking:  
- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),  
- or command V9 does not illuminate all the bargraphs for the system at fault

**Loss of rear wiper function**

Does the rear washer operate?

no

A

yes

Turn the rear wiper on and check the voltage  
at terminal P13-A4.  
Is there 12 volts ?

no

Turn the rear wiper / washer on and check the  
voltage at terminal B2  
on the rear wiper stalk.  
Is there 12 volts ?

yes

Replace the rear wiper stalk.

no

The line is cut between terminal P13-A4  
and earth. Check:

- the connection P13 -A4 / rear wiper motor
- the correct earth for the motor,
- the condition of the motor (test with motor disconnected).

The line is cut.  
Check the continuity of the line P17-11/B2  
(rear wiper stalk).  
If the continuity is correct,  
replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 30**  
**CONT 1**

Loss of rear wiper function (cont)

A

Has fuse F36 blown?

yes

B

no

Is there 12 volts with + after ignition feed  
present at pin P6-B5 of the passenger  
compartment connection unit?

no

Replace the passenger compartment  
connection unit.

yes

The line is cut between the stalk and the  
passenger compartment connection unit.  
Check the stalk and connection P6-B5/B4  
(stalk) and repair.**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 30**  
**CONT 2****Loss of rear wiper function (cont)****B**

Disconnect clips P6-B4 and P13-A4.  
Reconnect connectors P6 and P13.  
Operate the rear wiper.  
Does fuse F36 blow ?

no

Check / ensure the insulation from earth for  
the connections:

- P13-A4 / rear wiper motor,
  - P6-B4 / rear wiper motor
- and the motor  
(disconnect the motor completely).

yes

Connect bornier Elé. 1371 to P17 at the  
passenger compartment connection unit end.  
Replace fuse F36. Turn the ignition on. Shunt  
contact P17-11 and pin P6-B4.  
Does the fuse blow?

no

Check / ensure the insulation from earth for  
the connections:

- P6-B5/B4 (stalk),
  - rear wiper stalk,
  - B2 (stalk) / P17-11,
  - B1 (stalk) / P17-16,
  - B1 (stalk) / washer pump,
  - A4 (stalk) / P17-15,
  - A4 (stalk) / washer pump,
- and the washer pump  
(disconnect the pump completely).

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



FAULT FINDING - FAULT CHARTS

**Chart 30**  
**CONT 3**

Permanent operation of the rear wiper

Without operating the rear wiper stalk, check the voltage at terminal B2 of the rear wiper stalk. Is there 12 volts ?

no

Replace the passenger compartment connection unit.

yes

The line is in short circuit to + 12 volts. Check the insulation from + 12 volts for the stalk on line P17-11/B2.

If the insulation is correct, replace the passenger compartment connection unit.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 31

Headlight washers fault  
Loss of function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Check fuse F12.  
Is it blown?

no

Turn the dipped headlights on and check at terminal P5-A7, for 12 volts when the front washer stalk is activated. (Important: the headlight washer action is very quick. Repeat the action several times in succession).  
Is there 12 volts ?

yes

no

Replace the passenger compartment connection unit.

The line is cut. Check and ensure :

- continuity of the line P5-A7 / headlight washer pump,
- the correct earth for the headlight washer pump,
- the condition of the headlight washer pump, after disconnecting it completely.

Replace fuse F12.  
Does it blow again?

no

End of fault finding

yes

Disconnect clip P5-A7 and reconnect the connector. Replace fuse F12.  
Does it blow again?

no

There is a short circuit to earth on the line.  
Check and ensure:

- insulation from earth for the line P5-A7 / headlight washer pump,
- the condition of the headlight washer pump, after disconnecting it completely.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 32

Heated windscreen fault  
Loss of or permanent operation of driver's side function

## NOTES

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Does the driver's side heated windscreen remain permanently on?

yes

Disconnect P17, connect bornier Elé. 1371 to the passenger compartment connection unit only and check for an earth at terminal P17-5.  
With no action at the heated windscreen switch, is there an earth?

yes

Replace the passenger compartment connection unit.

no

There is a short circuit to earth on the line.  
Check and ensure:

- the insulation from earth and from the other tracks on connector P17-5/1 of the heated windscreen relay, driver's side,
- the condition of the heated windscreen relay, driver's side.

no

There is a loss of function for the driver's side heated windscreen. Disconnect P17, connect bornier Elé. 1371 in series and operate the heated windscreen switch. Engine running check for an earth at terminal P17-5.  
Is there an earth?

yes

no

Replace the passenger compartment connection unit.

The line is cut  
Check and ensure:

- continuity of the line P17-5/1 for the heated windscreen relay, driver's side
- the condition of the heated windscreen relay, driver's side.

## AFTER REPAIR

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 33

Heated windscreen fault  
Loss of or permanent operation of passenger's side function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Does the passenger's side heated windscreen remain permanently on?

yes

Disconnect P17, connect bornier Elé. 1371 to the passenger compartment connection unit only and check for an earth at terminal P17-6.  
With no action at the heated windscreen switch, is there an earth?

yes

Replace the passenger compartment connection unit.

no

There is a short circuit to earth on the line.  
Check and ensure:

- the insulation from earth and from the other tracks on connector P17 and line P17-6/6 for the heated windscreen relay, passenger's side,
- the condition of the heated windscreen relay, passenger's side.

no

There is a loss of function for the passenger's side heated windscreen. Disconnect P17, connect bornier Elé. 1371 in series and operate the heated windscreen switch.  
Engine running check for an earth at terminal P17-6.  
Is there an earth?

yes

no

Replace the passenger compartment connection unit.

The line is cut  
Check and ensure:

- continuity of the line P17-6/6 for the heated windscreen relay, passenger's side
- the condition of the heated windscreen relay, passenger's side.

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 34

Heated rear screen and external rear view mirrors de-icing fault  
Loss of or permanent operation of function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

**Loss of heated rear screen function**

Check fuse F1.  
Has it blown?

yes

Replace fuse F1.  
Does it blow again?

yes

Disconnect clips P5-B6, P5-B7  
and reconnect the connectors.  
Replace fuse F1.  
Does it blow again?

yes

Replace the passenger  
compartment connection unit.

no

There is a short circuit to earth on the line.  
Check and ensure the insulation from earth of  
the lines :

- P5-B7 / + terminal of heated screen wiring
- P5-B6 / heated screen warning light,
- the condition of the heated screen wiring,
- the condition of the heated screen warning light.

no

Check at terminals P5-B6, P5-B7 **engine**  
**running for alternating 12 volts ^**  
and 0 volt when the heated rear screen switch  
is pressed several times in succession.  
Do you note this alternating voltage?

yes

no

Replace the passenger  
compartment connection unit.

The line is cut. Check and ensure the  
continuity of the lines:

- P5-B7 / + terminal of heated screen wiring,
- P5-B6 / heated screen warning light,
- the condition of the heated screen wiring,
- the condition of the heated screen warning light,
- the earth wire for the heated screen wiring,
- the earth wire for the heated screen warning light.

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 34**  
**CONT****Permanent operation of heated rear screen**

Disconnect clips P5-B6, P5-B7 and P6-A3 and reconnect the connectors.

Is there still permanent operation of the heated rear screen or the warning light or the heated external rear view mirrors ?

no →

Replace the passenger compartment connection unit.

yes ↓

A connection is in short circuit to + 12 volts. Check and ensure the insulation from + 12 volts of lines:

- P5-B7 / + terminal of heated rear screen wiring,
- P5-B6 / heated rear screen warning light,
- P6-A3/10 driver's side heated external rear view mirror,
- P6-A3/10 passenger's side heated external rear view mirror.

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 35

Heated rear screen fault  
Loss of or permanent operation of function**NOTES**

- Only consult these customer complaint charts after checking:
- dialogue with the XR25 fiche 45 is impossible (low specification vehicle and passenger compartment connection unit Part No. 77 03 297 241 or 77 03 297 181),
  - or command V9 does not illuminate all the bargraphs for the system at fault

## Loss of heated rear screen function

Check fuse F1.  
Has it blown?

no

When pressing the heated rear screen switch,  
check for an earth at terminal 1 on the switch.  
Do you note this earth?

yes

no

Repair the connection with earth  
or replace the switch.

yes

Replace fuse F1.  
Does it blow again?

yes

no

End of fault finding

Disconnect clips P5-B6, P5-B7  
and reconnect the connectors.  
Replace fuse F1.  
Does it blow again?

yes

no

Replace the passenger  
compartment connection unit.

Check at terminals P5-B6, P5-B7, engine  
running, for alternating 12 volts  
and 0 volt when the heated rear screen switch  
is pressed several times in succession.  
Do you note this alternating voltage?

yes

no



The line is cut. Check and ensure the  
continuity of lines :

- P5-B7 / + terminal of heated screen wiring,
- P5-B6 / heated screen warning light,
- the condition of the heated screen wiring,
- the condition of the heated screen warning light,
- the earth wire for the heated screen wiring,
- the earth wire for the heated screen warning light.

There is a short circuit to earth on the line. Check and ensure the insulation from earth of the lines:

- P5-B7 / + terminal of heated screen wiring,
- P5-B6 / heated screen warning light,
- the condition of the heated screen wiring,
- the condition of the heated screen warning light,

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

**Chart 35**  
**CONT****Loss of heated rear screen function (cont)****A**

Connect bornier in series to P16 and check for an earth at terminal P16-12 when the switch is pressed. Is there an earth?

no

The line is cut. Repair the connection P16-12/1 (switch):

yes

Replace the passenger compartment connection unit.

**Permanent operation of the heated rear screen**

Without pressing the heated rear screen switch, check at terminal 1 of the switch. Is there an earth?

yes

Check separately the insulation from earth for :

- the switch track 1,
- the switch line track 1 / P16-12 using bornier Elé. 1371.

Replace the passenger compartment connection unit if both tests are correct.

no

Disconnect clips P5-B6, P5-B7 and reconnect the connector. Is there 12 volts at terminals P5-B6 and P5-B7, passenger compartment connection unit end.

no

A connection is in short circuit to + 12 volts. Check and ensure the insulation from + 12 volts of the lines :

- P5-B7 / + terminal of heated rear screen wiring,
- P5-B6 / heated rear screen warning light.

yes

Replace the passenger compartment connection unit.

**AFTER REPAIR**

Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 36

Central door locking switch fault  
Loss of function for all opening elements**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Has fuse F13 blown?

no

A

yes

Replace fuse F13.  
Does it blow again?

no

End of fault finding

yes

no

Disconnect clips  
P9-B3, P9-B6, P13-A1, P13-A2.  
Replace fuse F13 and operate the PLIP.  
Does fuse F13 blow again?

A line is in short circuit to earth.  
Check the insulation for each line from  
terminals P9-B3, P9-B6, P13-A1, P13-A2  
and the motors  
(disconnect the motors completely to check  
their condition).

yes

Replace the passenger compartment  
connection unit.**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 36  
CONT

A

Connect bornier Elé. 1371 to connector P16 of the passenger compartment connection unit.

Turn the ignition on.

- Shunt contact 2 of bornier Elé. 1371 and earth, the opening elements should unlock.
- Shunt contact 3 of bornier Elé. 1371 and earth, the doors should lock.

Is the locking and unlocking performed for these tests?

no

Replace the passenger compartment connection unit.

yes

Lines P16-2 and P16-3 are cut between earth and the passenger compartment connection unit. Check:

- the condition of the dashboard central locking switch,
- the connection between the switch and earth,
- the connection switch track 5 / P16-2,
- the connection switch track 1 / P16-3.

## AFTER REPAIR

Enter GO\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 37

Central door locking switch fault  
Loss of function for front doors**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Disconnect clips P9-B3 and P9-B6 and check when the PLIP is pressed for an alternating + 12 volts and earth on these terminals, passenger compartment connection unit end.  
Is there an alternating + 12 Volts and earth?

no →

Replace the passenger compartment connection unit.

yes ↓

If the two front doors are faulty, check the connection to the passenger compartment connection unit.

If one of the front doors is faulty, check the continuity:

For the front left hand door:

- P9-B6/3 (front left hand door motor)
- P9-B3/1 (front left hand door motor)
- front left hand door motor (disconnect the motor completely for the test).

For the front right hand door:

- P9-B6/3 (front right hand door motor)
- P9-B3/1 (front right hand door motor),
- front right hand door motor (disconnect the motor completely for the test).

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 38

Central door locking switch fault  
Loss of function for all opening elements except front doors

## NOTES

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Disconnect clips P13-A1 and P13-A2 and check when the PLIP is pressed for an alternating + 12 volts and earth on these terminals, passenger compartment connection unit end.  
Is there an alternating + 12 Volts and earth?

no

Replace the passenger compartment connection unit.

yes

If all opening elements except the two front doors are faulty, check:

- the connection to the passenger compartment connection unit P13-A1 and P13-A2,
- the continuity of lines P13-A1 and P13-A2 / motors for the opening elements (except front door motors).

If only certain opening elements are faulty, check:

- the continuity of lines connecting the motor for the opening element at fault and tracks P13-A1 and P13-A2,
- the motor for the opening element at fault (disconnect the motor completely for the test).

## AFTER REPAIR

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 39

Passenger electric window fault  
Loss of function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Check fuse F19.  
Has it blown?

yes

Replace fuse F19.  
Does it blow again?

yes

no

End of fault finding

Disconnect clip P7-B3  
and reconnect the connector.  
Replace fuse F19.  
Does it blow again?

yes

no

Replace the passenger  
compartment connection unit.

There is a short circuit to earth on the line.  
Check and ensure insulation from earth for  
the line :

- P7-B3 / passenger window switch,
- the condition of the driver's side switch,
- the connections driver's side switch/  
passenger side,
- the connections passenger switch/ window  
motor,
- the condition of the passenger window  
motor (disconnect the motor completely  
for the test).

no

Check at terminal P7-B3,  
for 12 volts with + after ignition feed  
present.  
Is there 12 volts ?

yes

no

Replace the passenger  
compartment connection unit.

The line is cut.

Check and ensure the continuity of lines :

- P7-B3 / passenger window switch,
- the condition of the driver's side switch,
- the connections driver's side switch/  
passenger side,
- the connections passenger switch/ window  
motor,
- the condition of the passenger window  
motor (disconnect the motor completely  
for the test).

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 40

Overspeed option fault  
Loss of overspeed function**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Is the vehicle fitted with  
petrol injection?

no

A

yes

Enter injection fault finding and check if the  
vehicle speed bargraph or #18 shows vehicle  
speed information.  
Is vehicle speed information shown?

yes

A

no

Disconnect connector P17.  
Is vehicle speed information shown for  
injection?

no

There is a short circuit on the line. Check:

- the insulation of the line P17-10 in relation to the other lines on connector P17,
- the insulation from 12 volts and from earth of line P17-10 / speed sensor
- the connections between the speed sensor/ all other systems using vehicle speed information (injection, automatic clutch, automatic transmission),
- the condition of the speed sensor.

yes

Replace the passenger compartment  
connection unit.

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

Chart 40  
CONT

A

Connect bornier **Elé. 1371** in series to **P17**. Put the vehicle on a lift with the wheels free to turn. Using the **XR25**, enter **G** and connect to **Vin**, check for a frequency at terminal **P17-10**. Is there a frequency?

no

There is no speed information.  
Check :

- fuse **F29**,
- the speed sensor,
- the line connected to **P17-10**.

yes

Replace the passenger compartment connection unit.

## AFTER REPAIR

Enter **G0\*\*** to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 41

Lights on reminder buzzer fault  
Loss of lights on reminder buzzer function

## NOTES

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

Turn the dipped headlights on and check bargraph 5 RH side (side 1/2) which should be extinguished and check bargraphs 16 LH and RH sides (side 1/2) which should be illuminated.  
Are these 3 bargraphs correct?

no

Consult the charts for the incorrect bargraph(s), beginning with 5 RH side (side 1/2) if this is faulty.

yes

Check the bargraphs 5 LH and RH sides are correctly illuminated (side 2/2) when the driver's door is open.  
Are bargraphs 5 LH and RH side (side 2/2) illuminated?

no

Consult the charts for bargraphs 5 LH and RH sides (side 2/2).

yes

Replace the passenger compartment connection unit.

## AFTER REPAIR

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - FAULT CHARTS

## Chart 42

Fault with lights on reminder buzzer or overspeed warning  
Loss of buzzer function

**NOTES**

Only consult this customer complaint chart after checking using the XR25 that the fault bargraphs are extinguished and the status bargraphs illuminate correctly.

On the XR25,  
enter command mode G09\*.  
Does the buzzer sound?

no

Replace the passenger compartment  
connection unit.

yes

Check the system which should trigger the  
buzzer (depending on equipment: overspeed  
warning, lights on reminder system).

**AFTER REPAIR**

Enter G0\*\* to erase the memory  
Reset the instruments (clock, radio, etc...).



## FAULT FINDING - AID

For all tests or measurements made on the MINI AXID 20 track connectors P16 and P17, bornier Elé. 1371 must be used. Using any other tool (pin, wire, etc...) may permanently damage the connector and is prohibited.

Bornier Elé. 1371 is used to :





- check continuities. To do this, simply connect the bornier to the passenger compartment connection unit or the the vehicle wiring as a conventional bornier ,
- measure voltages, frequencies, etc... To do this connect the bornier in series between the passenger compartment connection unit and the vehicle wiring.

The two MINI AXID connectors on the bornier may be used simultaneously.











CHECKING CONFORMITY

<b>NOTES</b>	If a fault bargraph illuminates, refer to the corresponding fault finding chart.
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Order of operations	Function to be checked	Action	Bargraph	Display and notes
1	Dialogue with XR25	D45 (ISO selector on S8)		<div>bic</div> <div>then</div> <div>l.bic</div> <div>Use fiche n° 45 status test side 1/2</div>
2	Interpretation of bargraphs normally illuminated		<div>1</div> <div></div> <div>1</div> <div></div>	<div>illuminated→ fault test</div> <div>l.bic</div> <div>extinguished→ status test 2/2</div> <div>2.bic</div> <div>Code present</div>
3	Conformity of connection unit	G70*		<div>XXXX</div> <div>Displays Part Number in 3 sequences</div>
4	Interpretation of + after ignition bargraphs		<div>10</div> <div></div>	Indicates connection unit is receiving + after ignition feed
5	Interpretation of accessories bargraph		<div>10</div> <div></div>	Indicates connection unit is receiving + after ignition feed













## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
6	Testing control buttons		11 	Illuminates when central door locking button is pressed to lock (press > 2 seconds)
			11 	Illuminates when central door locking button is pressed to unlock (press > 2 seconds)
			12 	Illuminates when heated windscreen button pressed (press > 2 seconds)
			12 	Illuminates when heated rear screen button pressed (press > 2 seconds)
			13 	Illuminated when overspeed buzzer button pressed (press > 2 seconds)
			13 	Illuminated when rear wiper activated (ignition on)
			14 	Illuminated when rear washer activated (ignition on)
			14 	Illuminated when front washer activated (ignition on)



## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
6	Testing control buttons ( cont)		<p>15</p>  <p>15</p> 	<p>Illuminated when driver's window raise button pressed (press &gt; 2 seconds)</p> <p>Illuminated when driver's window lower button pressed (press &gt; 2 seconds)</p>
7	Interpretation of lights control bargraphs		<p>16</p>  <p>16</p>  <p>17</p>  <p>17</p>  <p>18</p>  <p>18</p>  <p>19</p>  <p>19</p> 	<p>Illuminated side lights on</p> <p>Illuminated dipped headlights on (level 4)</p> <p>Illuminated in reverse gear (ignition on)</p> <p>Illuminated main beam headlights on (level 4)</p> <p>Illuminated hazard warning lights on</p> <p>Illuminated indicators on (ignition on)</p> <p>Illuminated front fog lights on</p> <p>Illuminated rear fog light on (level 4)</p>












## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
8	Interpretation of oil pressure warning light bargraphs		<div>20</div> <div> <div></div> <div></div> </div>	Illuminated engine running (oil pressure information)
9	Change to status test	G02*		<div>2 bic</div> <div>Use fiche n° 45 status side 2/2</div>
10	Interpretation of wiper bargraphs	# 04	<div>2</div> <div> <div></div> <div></div> </div> <div>3</div> <div> <div></div> <div></div> </div> <div>3</div> <div> <div></div> <div></div> </div> <div>4</div> <div> <div></div> <div></div> </div> <div>4</div> <div> <div></div> <div></div> </div>	<div>Illuminated intermittent position (L2 only)</div> <div>Check intermittent positions for L3 and L4 using # 04</div> <div>0 → ≈ 174 Ω</div> <div>1 → ≈ 159 Ω</div> <div>2 → ≈ 137 Ω</div> <div>3 → ≈ 102 Ω</div> <div>4 → ≈ 38 Ω</div> <div>Illuminated for park position # 04 → &gt; 240 Ω</div> <div>Illuminated when wipers are not in park position (may flash when wipers operating)</div> <div>Illuminated for slow speed # 04 → between 48 and 90 Ω</div> <div>Illuminated for fast speed # 04 → between 210 and 239 Ω</div>











## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
11	Interpretation of opening element bargraphs		<div>5</div> <div></div> <div>5</div> <div></div> <div>6</div> <div></div> <div>6</div> <div></div>	Illuminated if corresponding opening elements are open (depending on equipment)
12	Interpretation of immobiliser active bargraph		<div>7</div> <div></div>	Illuminated immobiliser active (red immobiliser warning light flashing)
13	Interpretation of "alarm" bargraphs (alarm activated by PLIP - level 4)		<div>8</div> <div></div> <div>8</div> <div></div> <div>9</div> <div></div> <div>9</div> <div></div>	<p>Indicates volumetric protection is active</p> <p>Indicates perimetric protection is active</p> <p>Illuminates if alarm has been triggered (the siren may be silent depending on local legislation)</p> <p>Illuminates if alarm has been triggered (siren sounding)</p>












## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
14	Interpretation of "alarm key position" bargraphs (level 4)		<p>10</p> 	Indicates alarm key is in position ON
			<p>10</p> 	Indicates alarm key is in position OFF
15	Interpretation of "PLIP command" bargraphs		<p>11</p> 	Indicates connection unit receives an infrared signal
			<p>11</p> 	Indicates connection unit receives a correct infrared signal
			<p>12</p> 	Indicates the doors are locked by the PLIP
			<p>12</p> 	Indicates the connection unit has been programmed with an infrared code
			<p>13</p> 	Indicates the infrared code calibration (programming) has been validated
			<p>13</p> 	Indicates the programming has been memorised and definitively locked in the connection unit



## CHECKING CONFORMITY

Order of operations	Function to be checked	Action	Bargraph	Display and notes
16	Interpretation of bargraphs for options and configurations depending on equipment		<div>16</div> <div></div> <div>16</div> <div></div> <div>17</div> <div></div> <div>17</div> <div></div> <div>18</div> <div></div> <div>18</div> <div></div> <div>19</div> <div></div> <div>19</div> <div></div>	<p>Illuminated alarm configured</p> <p>Illuminated immobiliser configured</p> <p>Illuminated headlight washers configured</p> <p>Illuminated extreme cold fog lights configured</p> <p>Illuminated running lights configured</p> <p>Illuminated overspeed buzzer configured for Arabia # 03 → threshold speed (overspeed all countries)</p> <p>Illuminated courtesy light timed period configured</p> <p>Illuminated if diesel configured (immobiliser)</p>
17	Interpretation of fault present bargraph		<div>20</div> <div></div>	<p>Illuminated if a fault has been memorised in the connection unit (see fault finding fiche, fault side) after entering G01* then corresponding fault chart</p>



## DESCRIPTION

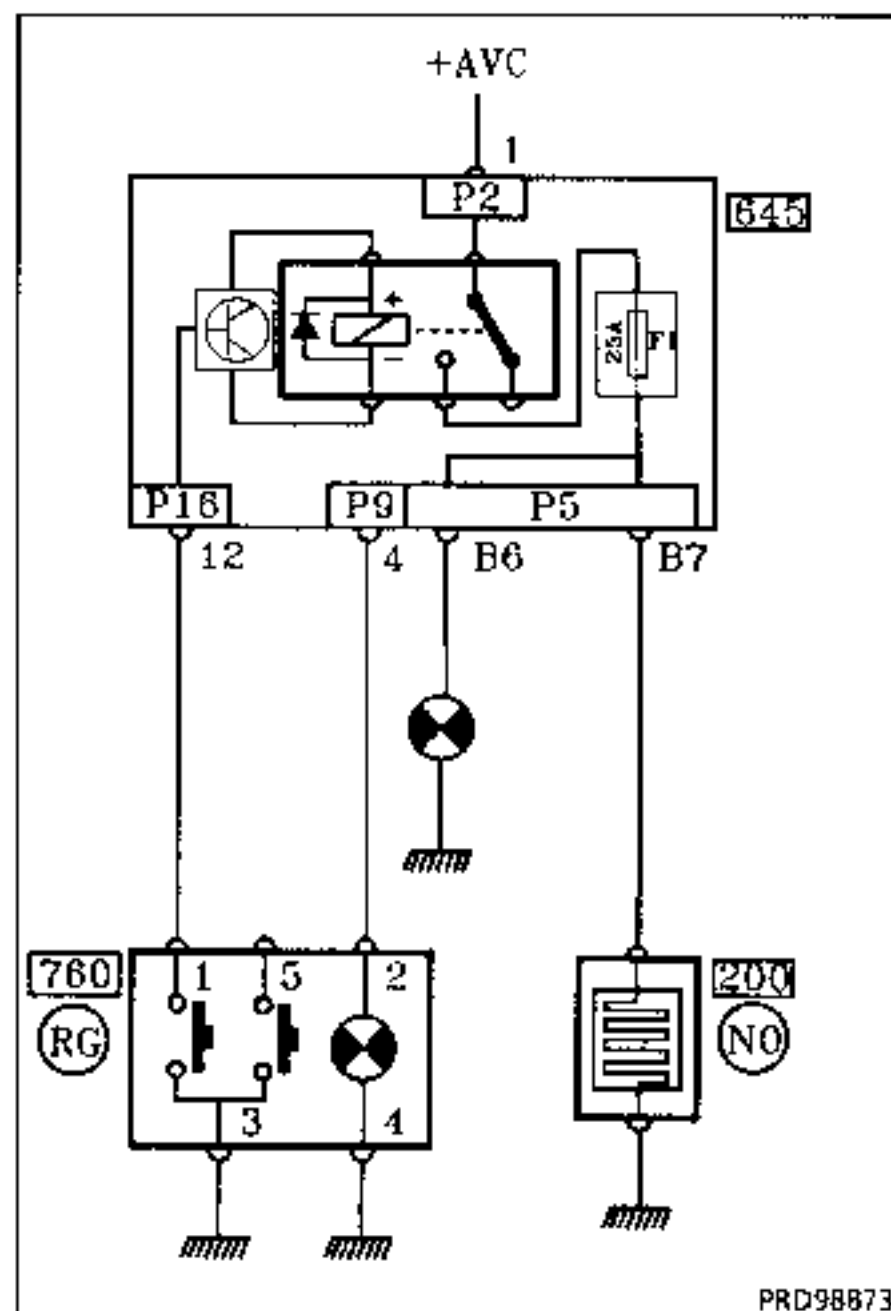
This system allows electrical de-icing of the rear screen using a de-icing grid applied to the inner face of the window.

The system is turned on by key (1) located at the side of the heating control panel.

The heated screen operates for a period of 15 minutes and is authorised, ignition on, for E1 vehicles, or when the engine is running for E2 and E3 vehicles.

The heated screen may be turned off before the 15 minute period has expired by pressing key (1).

This connection unit has the heated rear screen timer relay coil control. The + before ignition feed waiting at track 1 (connector P2) can now cross the relay plate and appear again at B7 and B6 (connector P5) to feed the heated screen and the instrument panel warning light.



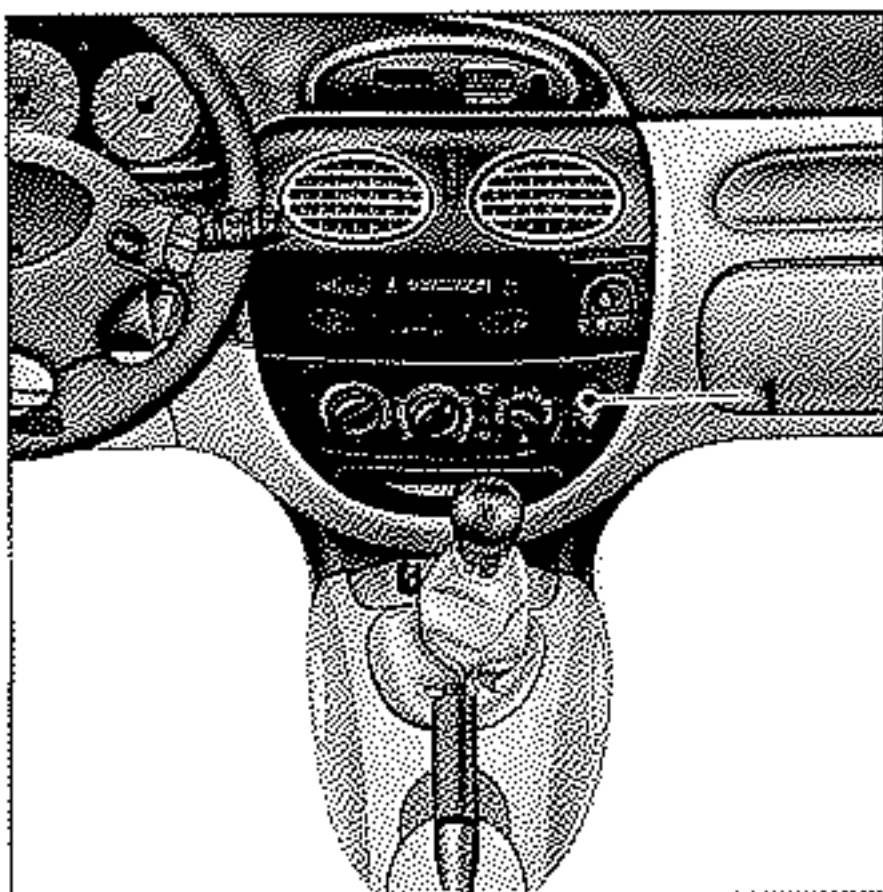
+ AVC	+ before ignition
645	Passenger compartment connection unit
760	Heated rear screen control
200	Heated rear screen

## FAULT FINDING

For fault finding, refer to section 87 - fault finding using the XR25 for the connection unit.

## OPERATION

By pressing key (1), the switch for the heated rear screen sends an earth via track 1 to track 12 (connector P16) of the connection unit 645.





The heated grid applied to the inner face of the rear screen may be accidentally cut, making the part of the circuit damaged inoperative.

The exact location of the break may be determined using a voltmeter.

These breaks may be repaired using the heated screen repair varnish sold under Part Number 77 01 421 135 (2 g pack).

#### DETERMINING THE EXACT LOCATION OF THE BREAK WITH A VOLTMETER

Turn the ignition on.

Turn the heated rear screen on.

#### DETECTION BETWEEN LINES B AND A

Connect the + lead from the voltmeter to the + feed terminal of the screen.

Position the - lead from the voltmeter on a filament on the - terminal side of the screen (line B), a voltage approximating to battery voltage should be read.

Move the - lead towards line A (arrow) : the voltage should drop progressively.

If the voltage drops sharply, the filament is broken at this point (repeat this operation for each filament).

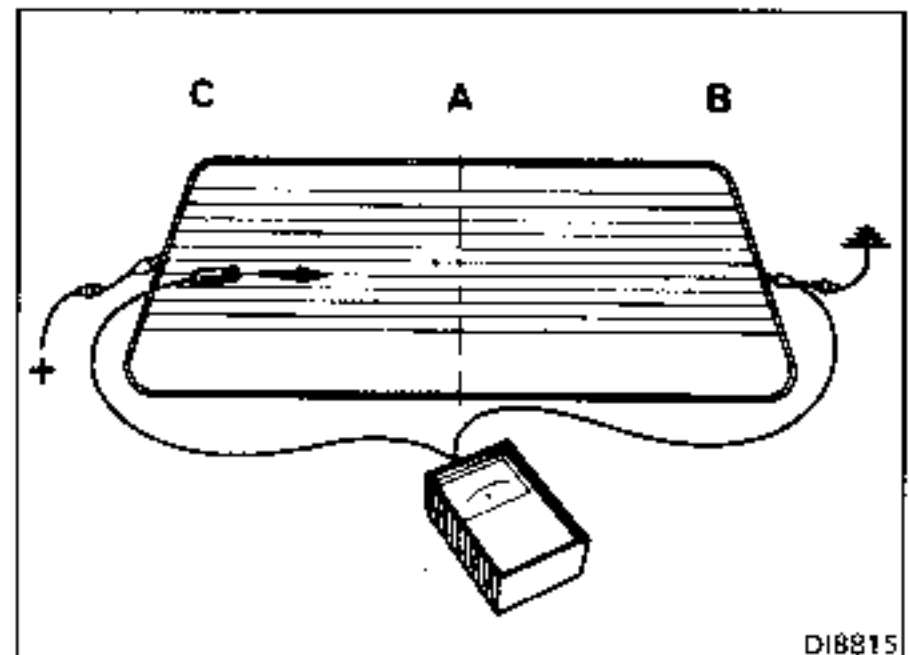
#### DETECTION BETWEEN LINES C AND A

Connect the - lead from the voltmeter to the - feed terminal of the screen.

Position the + lead from the voltmeter on a filament on the + terminal side of the screen (line C), a voltage approximating to battery voltage should be read.

Move the + lead towards line A (arrow) : the voltage should drop progressively.

If the voltage drops sharply, the filament is broken at this point (repeat this operation for each filament).



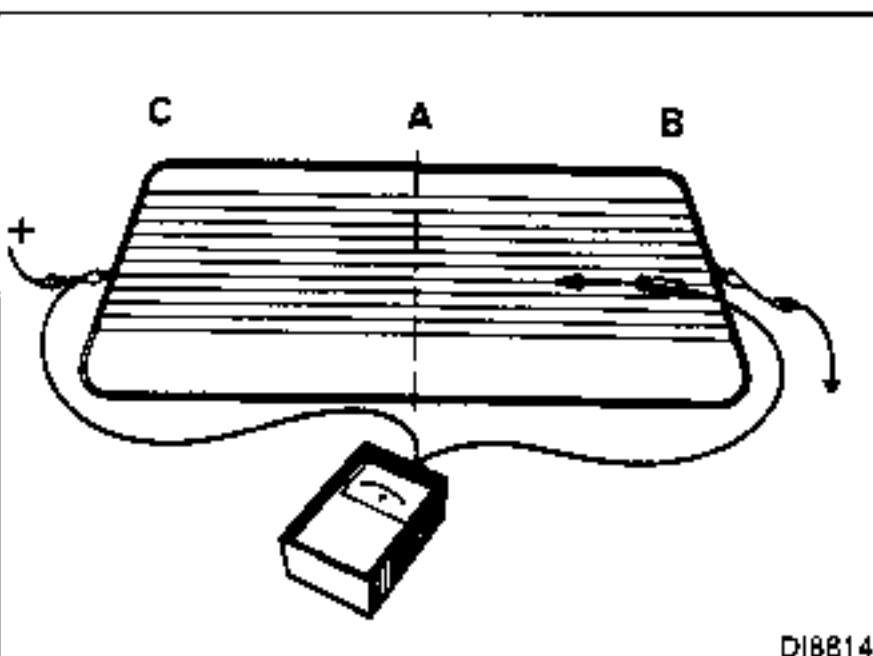
D18815

#### REPAIRING THE FILAMENT

Clean the area around the part to be repaired to remove any dust or grease. Use alcohol or a glass cleaner then wipe with a clean, dry cloth.

To obtain a regular line when repairing, apply a strip of adhesive tape on each side of the filament, leaving the conductive filament bare.

Before using the varnish, shake the bottle to prevent particles of silver being left in the bottom of the bottle.



D18814

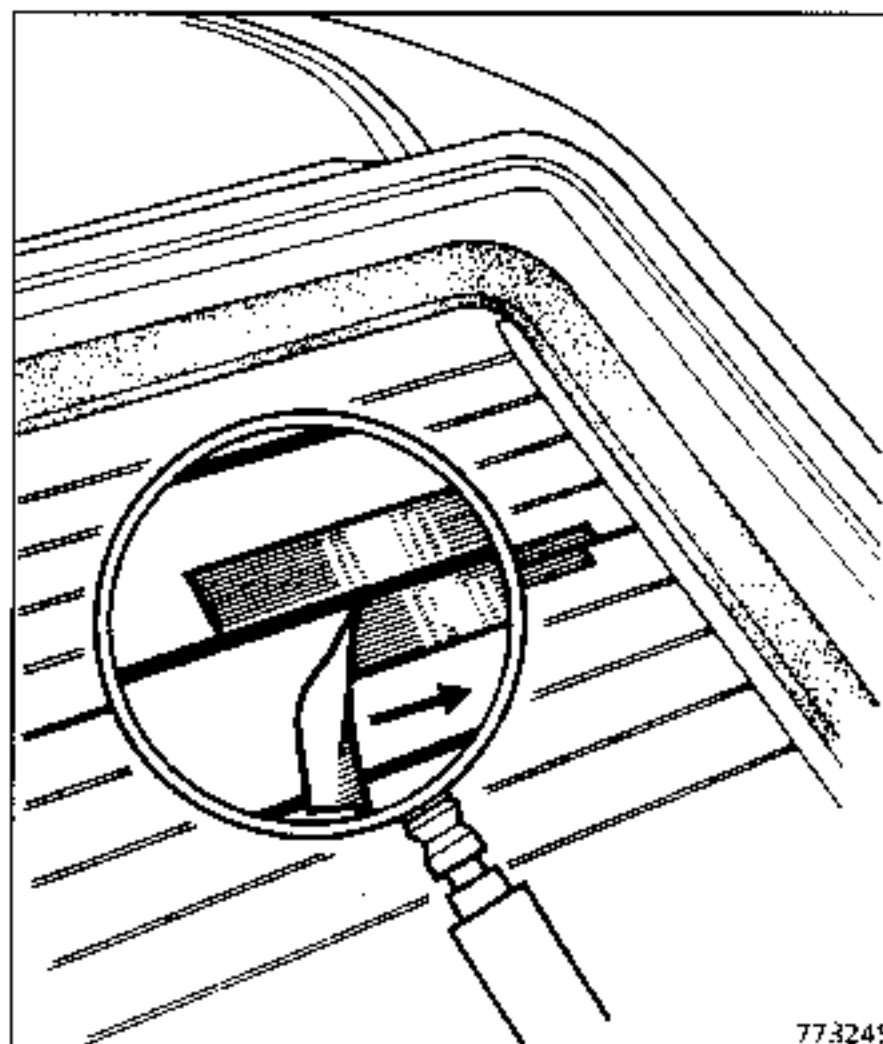


## REPAIRING

Using a small paintbrush, repair the break ensuring a sufficient thickness of varnish is applied. If successive layers are applied, allow each layer enough time to dry and do not apply more than three layers.

If the repair is rounded, a knife or razor blade may be used to scrape off the excess, but only after several hours when the product has hardened correctly.

The adhesive tape used as a guide may only be removed approximately one hour after the varnish has been applied. The tape should be pulled away at right angles to the filament as shown in the diagram (arrow). Varnish applied at an ambient temperature of 20°C will be dry in 3 hours. If the ambient temperature is lower, the varnish will take slightly longer to dry.

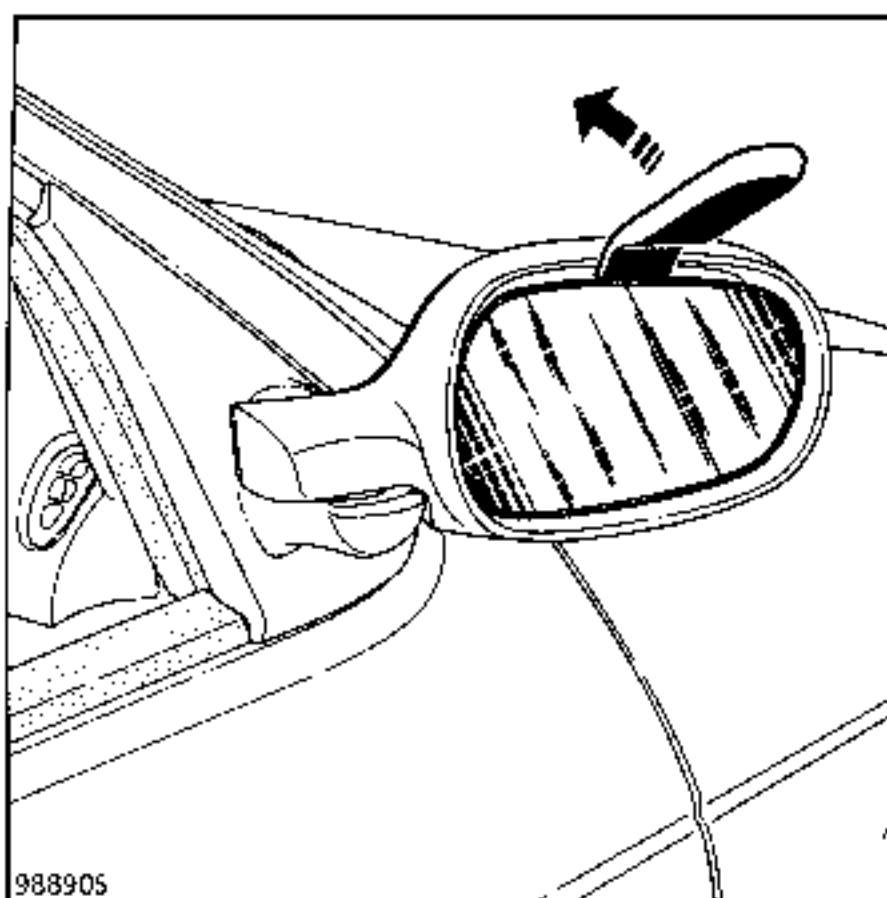




## HEATED REAR VIEW MIRRORS

### DESCRIPTION

This system allows rapid de-icing of the rear view mirrors (depending on option) using an internal network between the mirror glass and the plastic mounting.



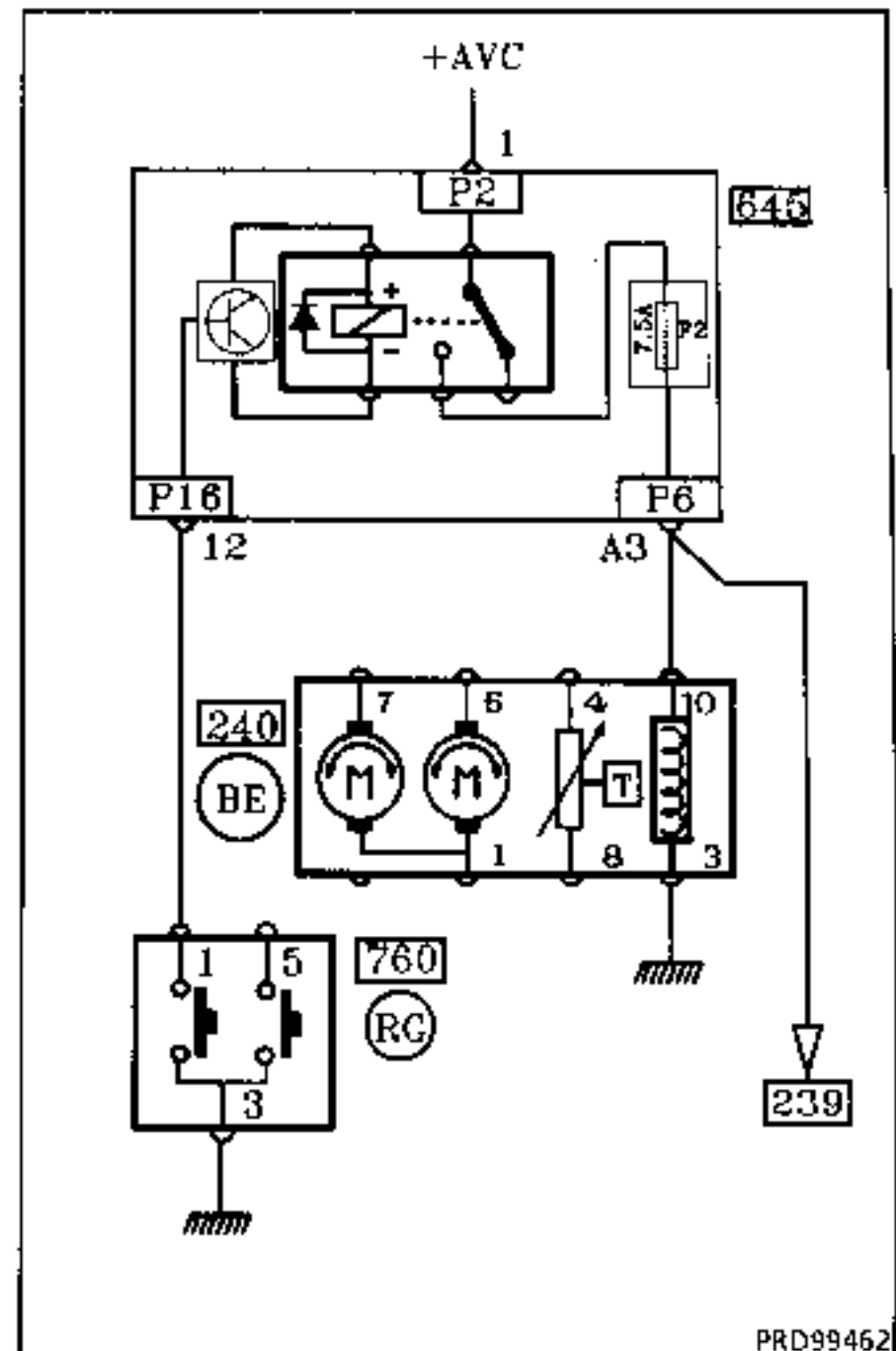
### OPERATION

The system is turned on by turning on the heated rear screen function using the key on the side of the heater control panel.

De-icing of the rear view mirrors is linked to the operation of the heated rear screen. The de-icing function for the rear view mirrors is therefore timed according to the same criteria.

The left and right hand mirrors are fed in parallel to the rear screen via track A3 (connector P6) of the passenger compartment connection unit.

### DIAGRAM



+ AVC	+ before ignition
645	Passenger compartment connection unit
240	Passenger electric mirror
239	Driver electric mirror

### OPERATING FAULTS

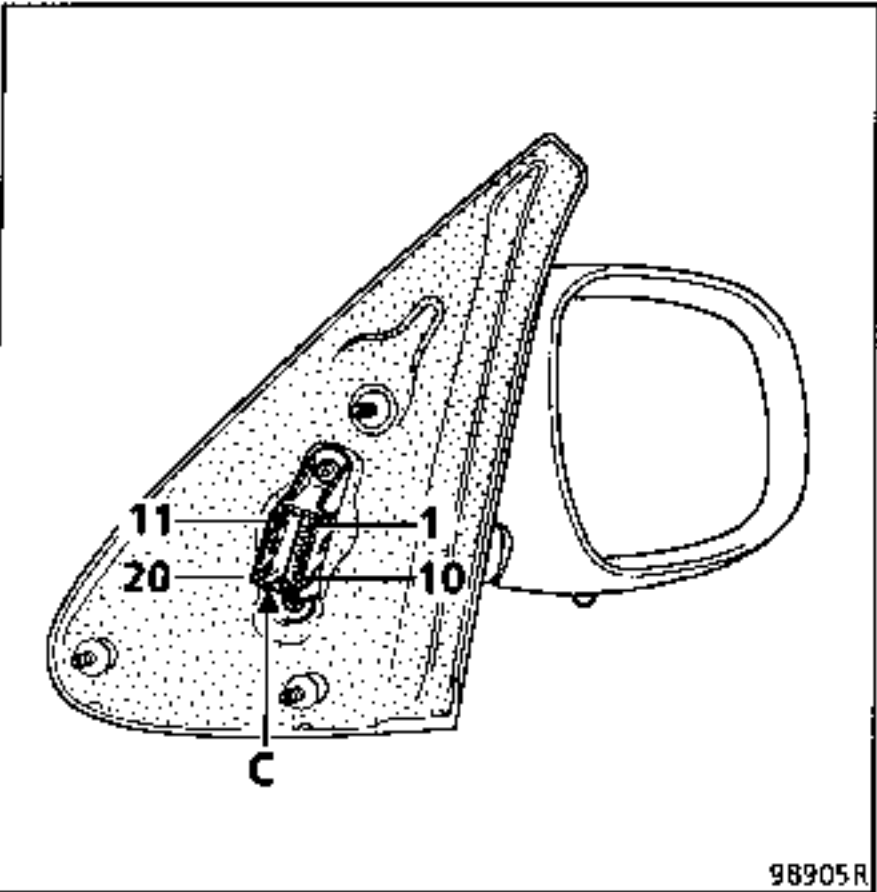
Check:

- the condition of the 7.5 A fuse,
- the connection of the mirror glass,
- the insulation and continuity of the line (see wiring diagram).

**NOTE :** if necessary, when replacing the mirror glass, refer to the explanations given in section 56.



CONNECTIONS ON WIRING SIDE



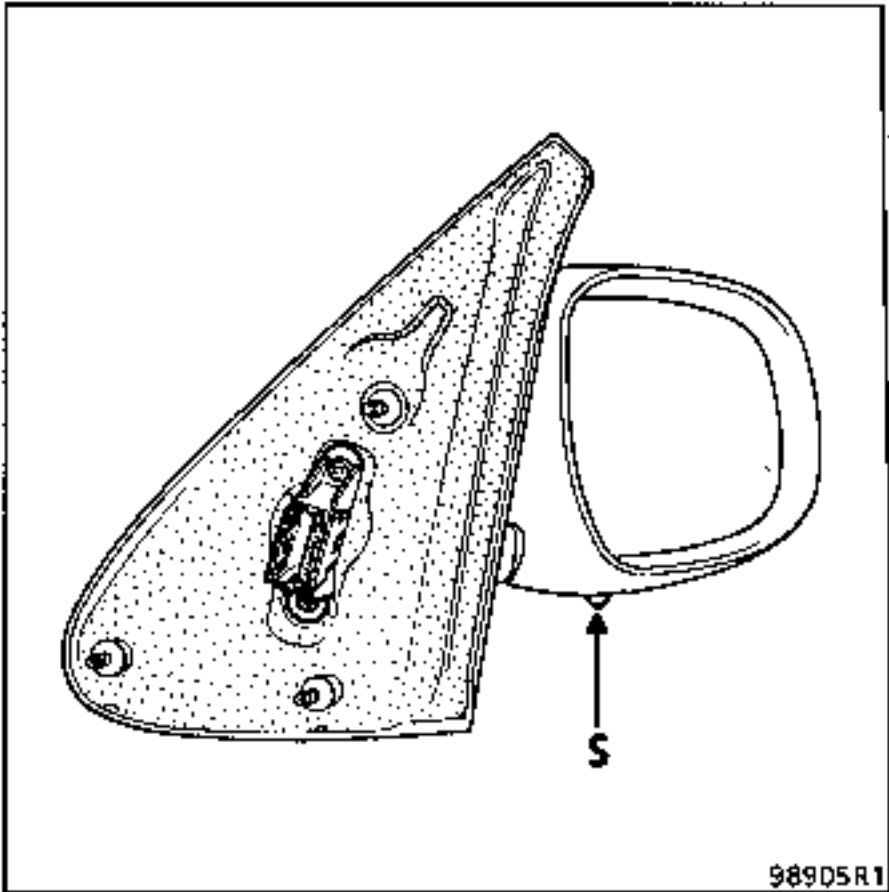
BLUE MODULE CONNECTOR C (passenger)  
or  
WHITE MODULE CONNECTOR C (driver)

Track	Allocation
1	Rear view mirror earth
2	Not used
3	External temperature sensor earth (passenger side only)
4	External temperature sensor information (passenger side only)
5	Not used
6	Mirror up / down orientation
7	Mirror left / right orientation
8	Mirror motors common
9	Not used
10	+ after ignition heated rear view mirrors

YELLOW MODULE CONNECTOR C (not used)

EXTERNAL TEMPERATURE SENSOR

The sensor (S) is located in the rear view mirror, on the passenger side.

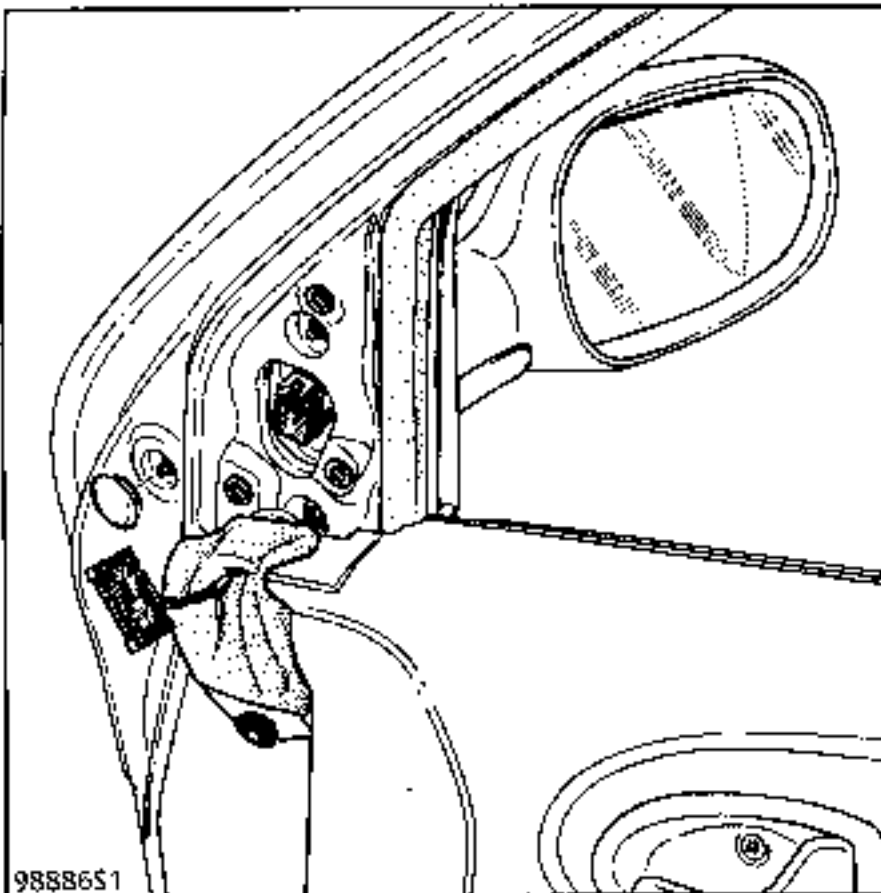




The sensor is checked using an ohmmeter between tracks 3 and 4 of connector (C) on the mirror side.

To reach mirror connector (C) :

- unclip the inner lining with care,
- unclip the connector foam cover.



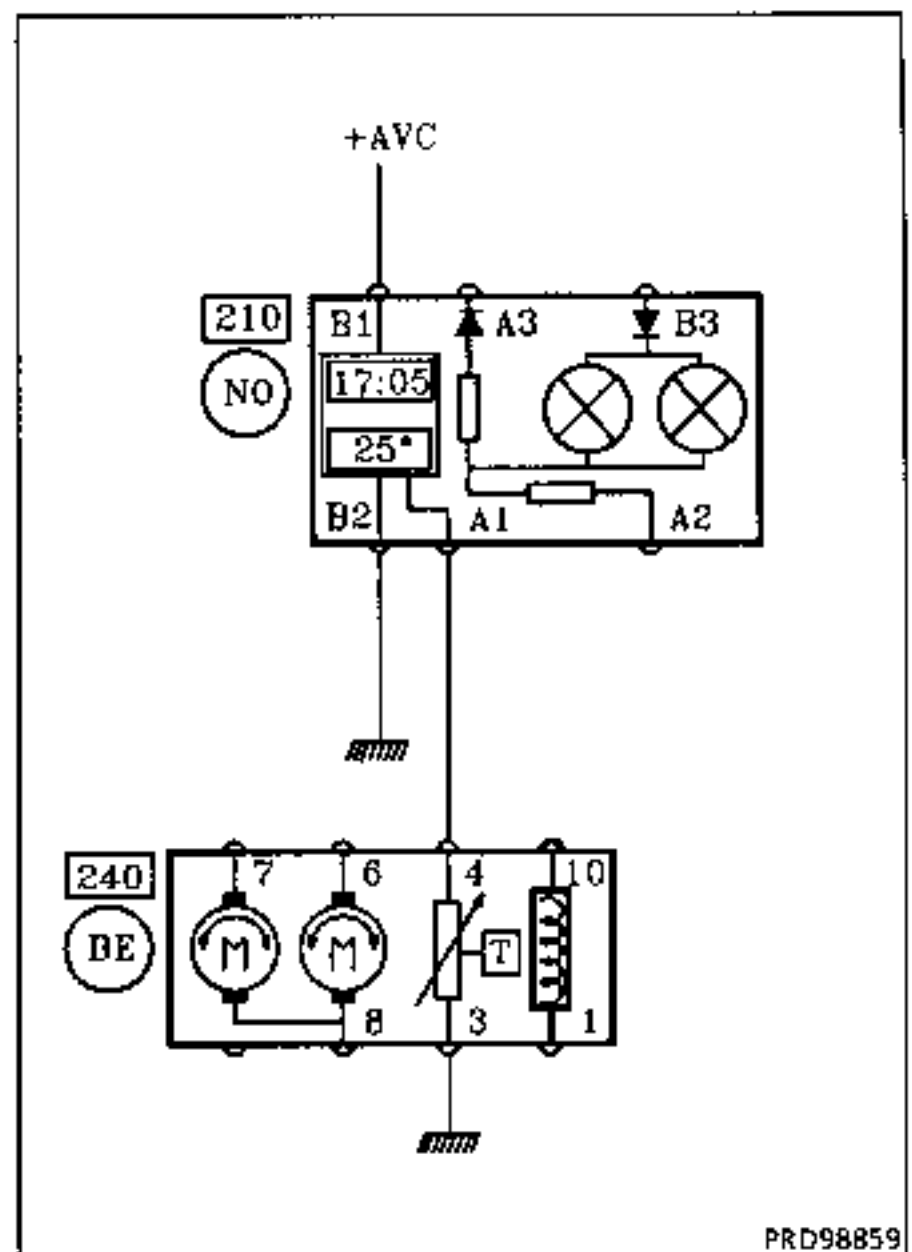
The correct values are:

Approximate environment temperature (°C)	Sensor electrical resistance (ohms)	
	Minimum	Maximum
between 0 and 5	5400	6200
between 6 and 10	4400	5400
between 11 and 15	3700	4400
between 16 and 20	3000	3700
between 21 and 25	2500	3000
between 26 and 30	2100	2500
between 31 and 35	1700	2100
between 36 and 40	1450	1700

## OPERATING FAULTS

- The external temperature display shows - 40°C : the sensor is disconnected or the wiring is broken.
- The external temperature display shows + 80°C : the sensor or its wiring is in short circuit.
- The external temperature sensor shows an incorrect value: replace the sensor.

## DIAGRAM

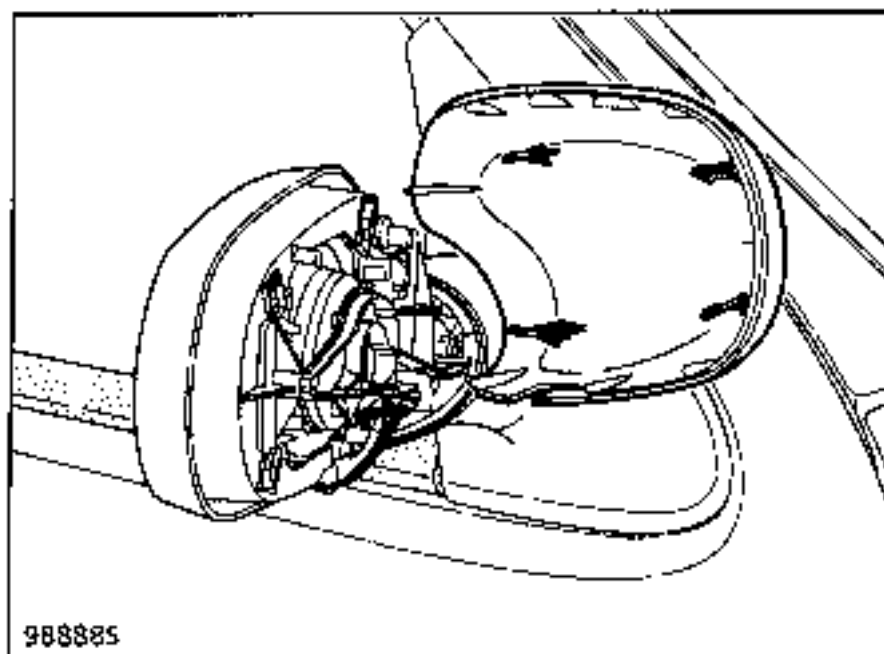


- + AVC + before ignition
- 210 Clock
- 240 Passenger electric rear view mirror

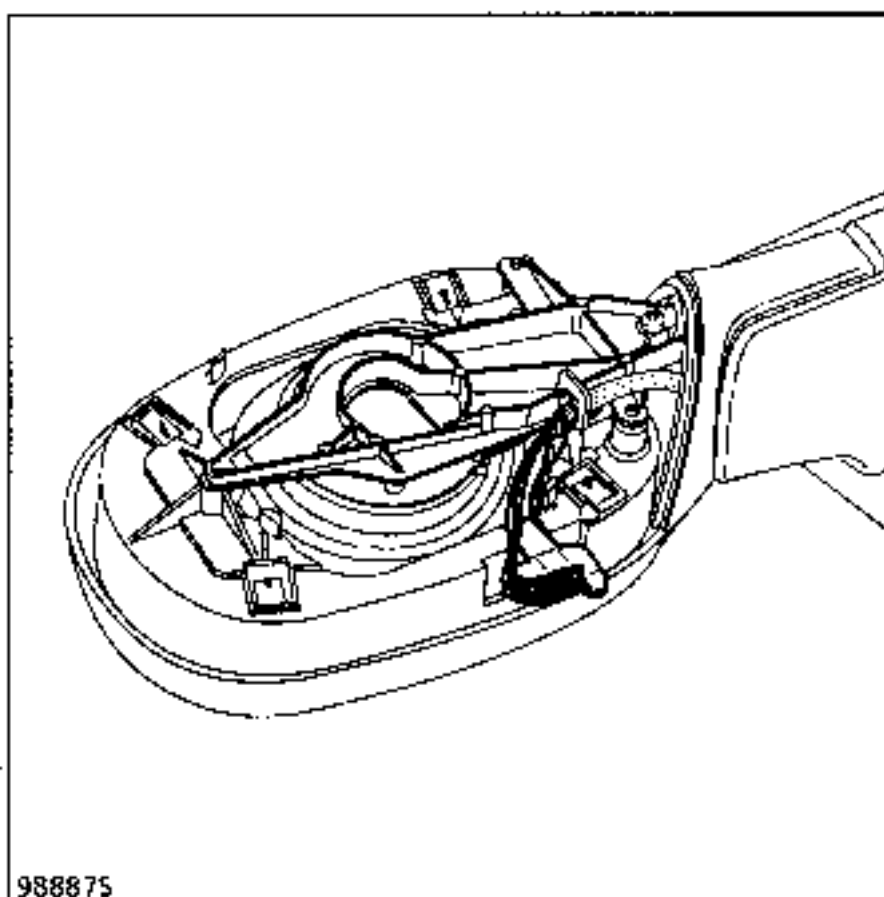


## REPLACING THE SENSOR

Unclip the mirror shell.



Remove the sensor from its housing.



Cut the feed wires for the sensor after marking them.

Replace the sensor and connect the wires using heat shrink sleeving (refer to Technical Note 8039 for information on using the sleeving).



## GENERAL

These vehicles are fitted with a remote control with changing infrared code (PLIP) (vehicle with or without engine immobiliser).

This system avoids copying of the infrared code which could lead to the doors being opened or the vehicle being stolen (for vehicles fitted with an engine immobiliser).

The code from one or other of the vehicle PLIPs will therefore be different each time the remote control is pressed (changing code).

When replacing a PLIP, a resynchronisation procedure must therefore be carried out to reset the PLIPs to the passenger compartment connection unit (see section 82 PLIP engine immobiliser).

## DESCRIPTION

### The infrared remote control (PLIP)

The infrared remote control (PLIP) is integral in the vehicle key.

It may be replaced independently of the key, by ordering it using the number in the key head (label).

In this case both PLIPs will require resynchronisation (see procedure in section 82).

**IMPORTANT:** the infrared remote control will not operate if:

- a neon walkman or a portable computer (with screen open) is operating in the vehicle,
- there is a succession of PLIP commands close to each other (antiscanning),
- 1 after ignition feed appears.

### The infrared receiver

This is located in the roof console.

It receives the infrared code from the PLIP and transmits it to the passenger compartment connection unit.

On vehicles fitted with an alarm, the ultrasound sensors are part of the infrared receiver.

The infrared receiver (with or without ultrasound sensors) may be replaced independently of the PLIPs and the passenger compartment connection unit (it is not coded).

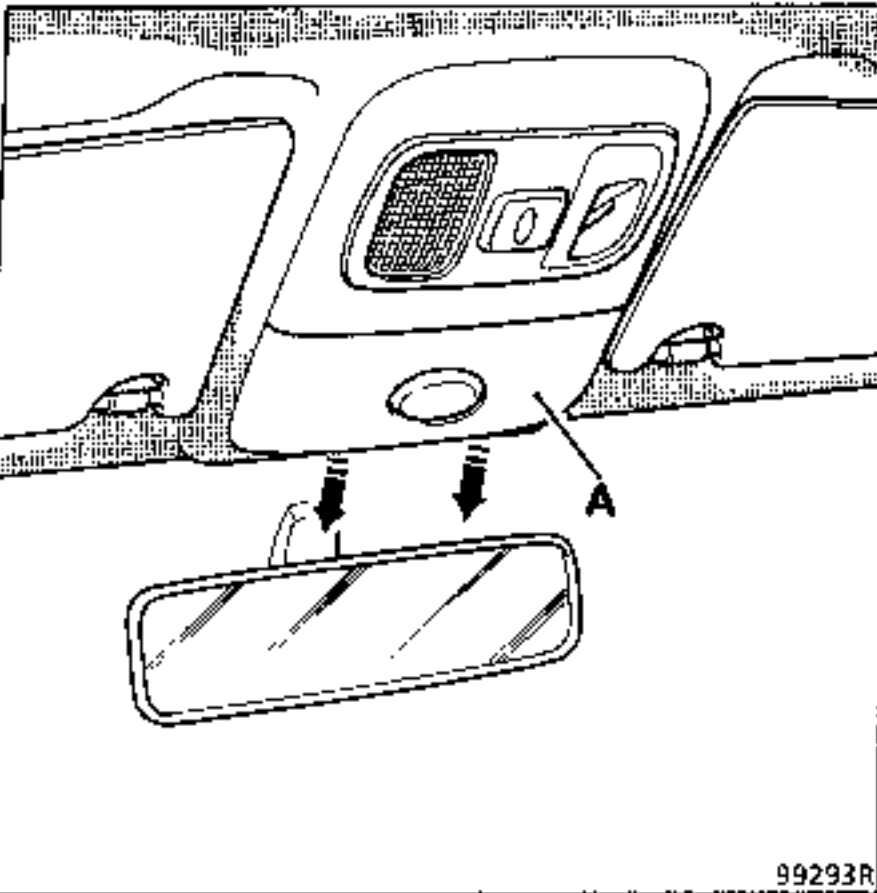


## REMOVAL

Slide mounting (A) towards the front of the vehicle.

Disconnect the connector.

Remove the assembly.



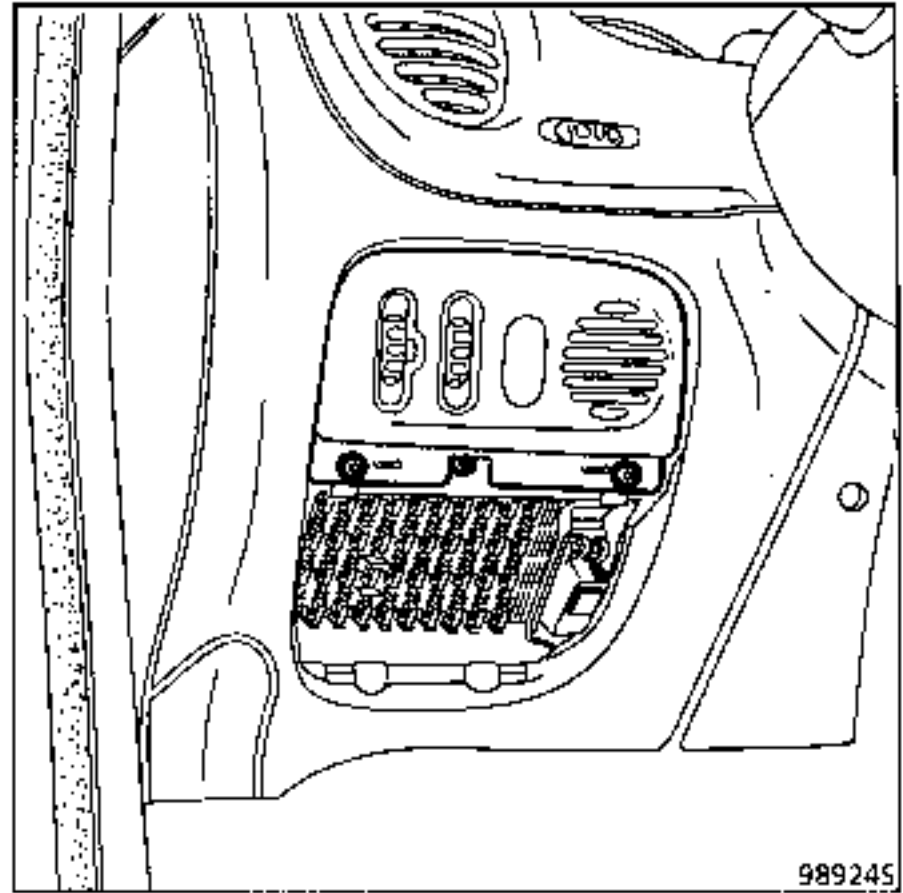
## CONNECTION

Track	Allocation
1	Ultrasound detection information
2	Ultrasound feed
3	Earth
4	Infrared receiver return
5	Infrared receiver feed
6	Not used

## The passenger compartment connection unit

This unit includes most of the smaller computers including the decoder unit. It cannot be disassembled.

It is located on the left hand side under the dashboard.



For information on removing the unit, replacing it, fault finding and programming the unit, refer to section 87.



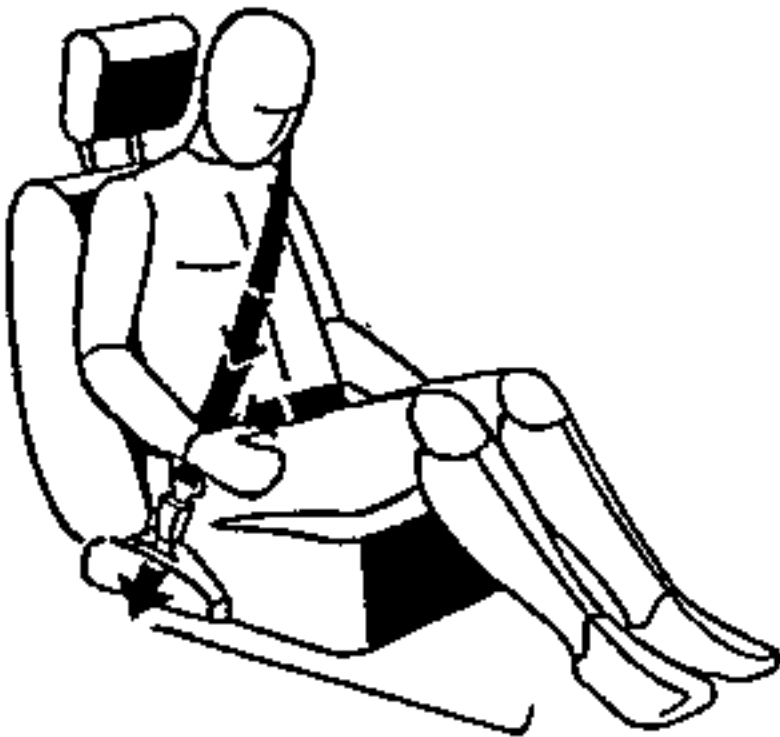
## A - GENERAL

**IMPORTANT:** All operations on the airbag and pretensioner systems must be carried out by qualified, trained personnel.

There are 3 complementary safety systems to the seat belts.

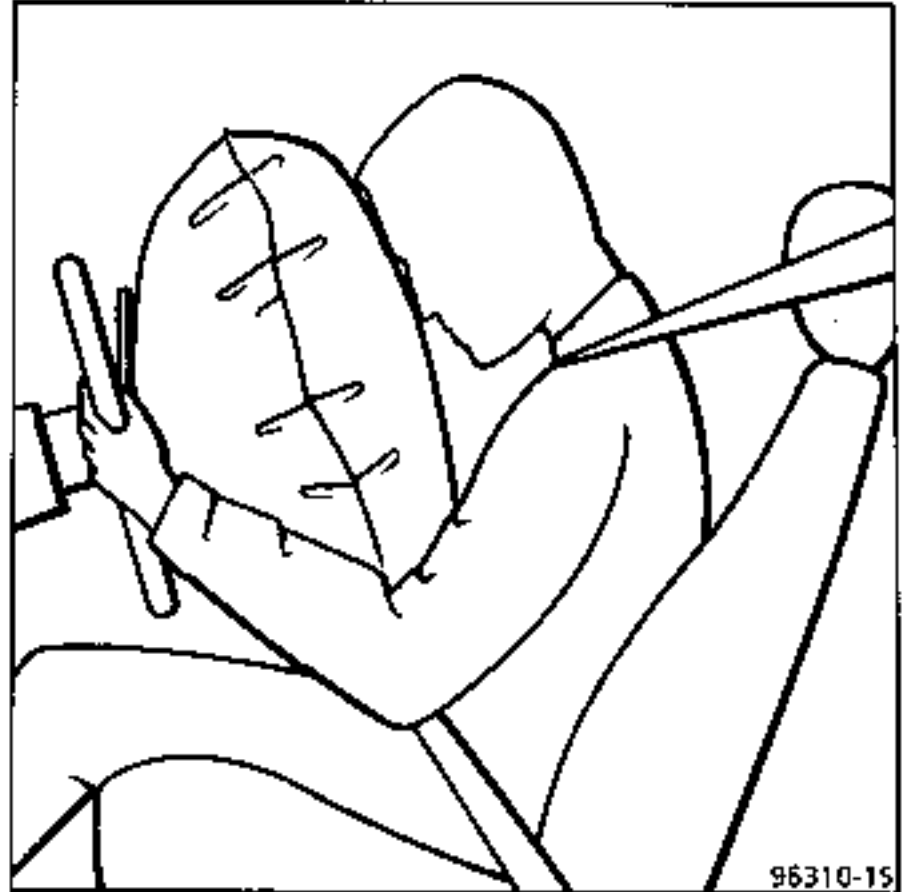
In the event of a frontal impact of sufficiently high force, the computer managing these systems triggers:

- The pretensioners which tighten the seat belts for the front seats, flattening them against the body.



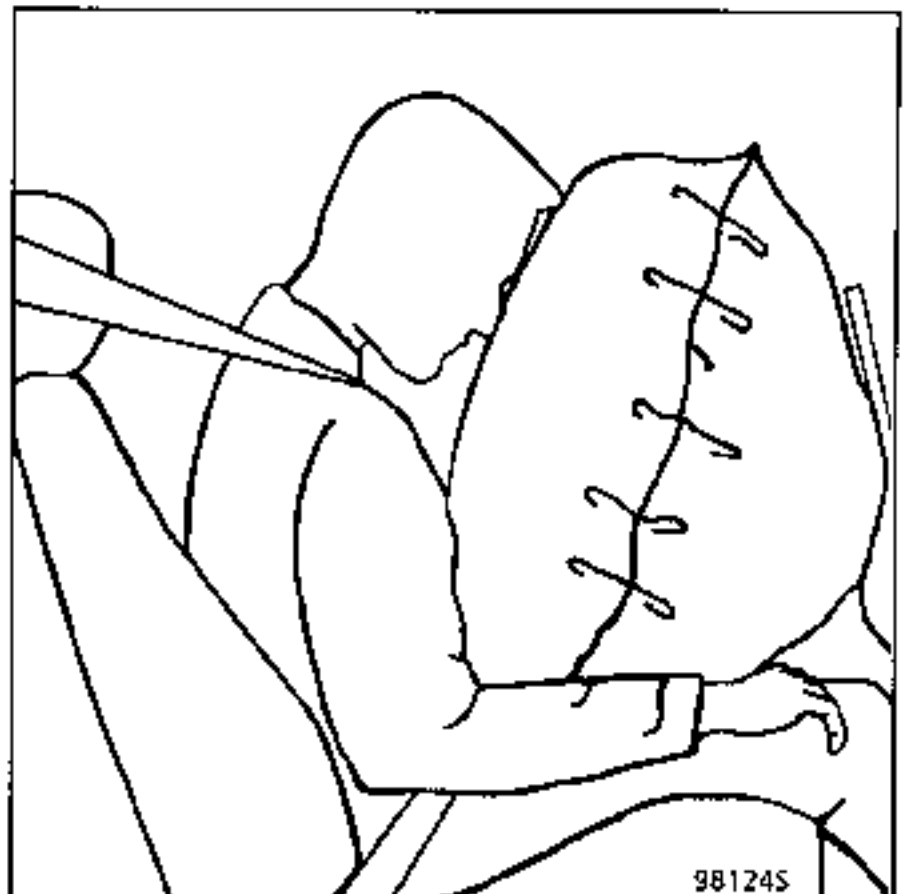
MAB111975

- The airbag cushion which inflates from the centre of the steering wheel to protect the driver's head.



96310-15

- The airbag module which inflates from the dashboard to protect the head of the front passenger.



98124S



Various vehicle configurations are possible:

Vehicle equipped with:

- Pretensioners only.
- Pretensions and driver's airbag.
- Pretensions and driver's airbag and passenger's airbag.

**NOTE:**

- A vehicle fitted with a driver's airbag may be identified by a label applied in the lower corner of the windscreen on the driver's side and the term "Airbag" in the centre of the steering wheel.
- If a passenger airbag is fitted, a second label is applied in the lower corner of the windscreen on the passenger side and the term "Airbag" is marked on the dashboard on the passenger side (see passenger airbag chapter).

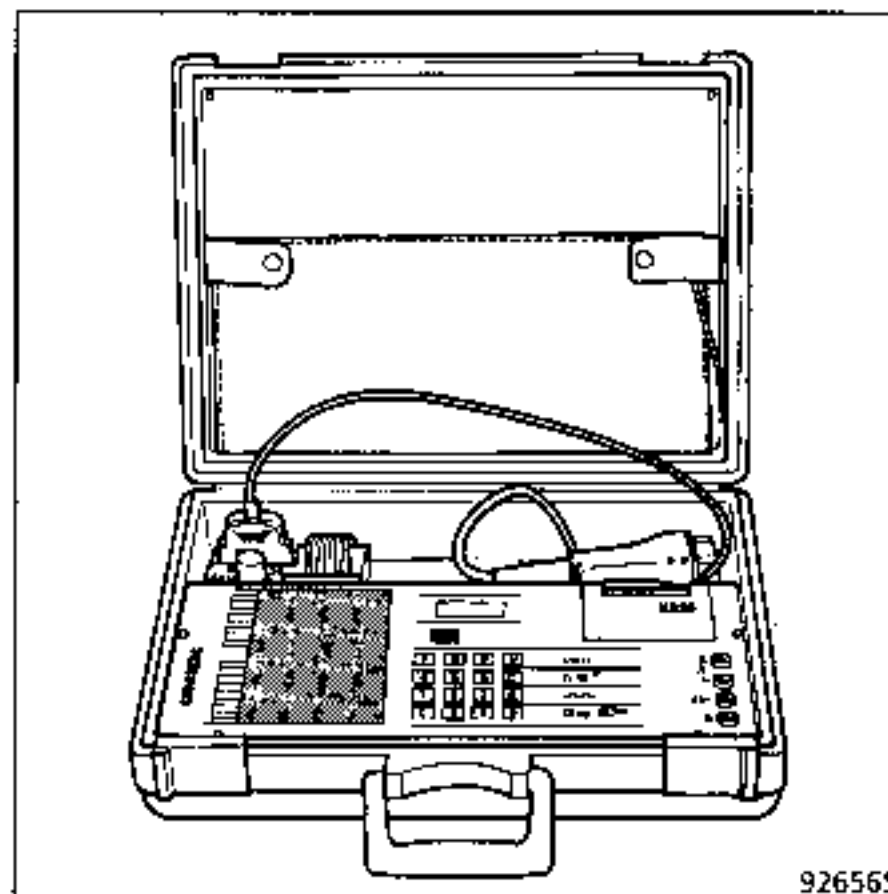
If the windscreen is replaced, remember to replace the labels showing that the vehicle is fitted with airbags.

All of these labels are available as a set under the Part Number:  
77 01 204 830.

**B - SPECIAL TOOLING**

**PRESENTATION**

**XR25 Test kit**



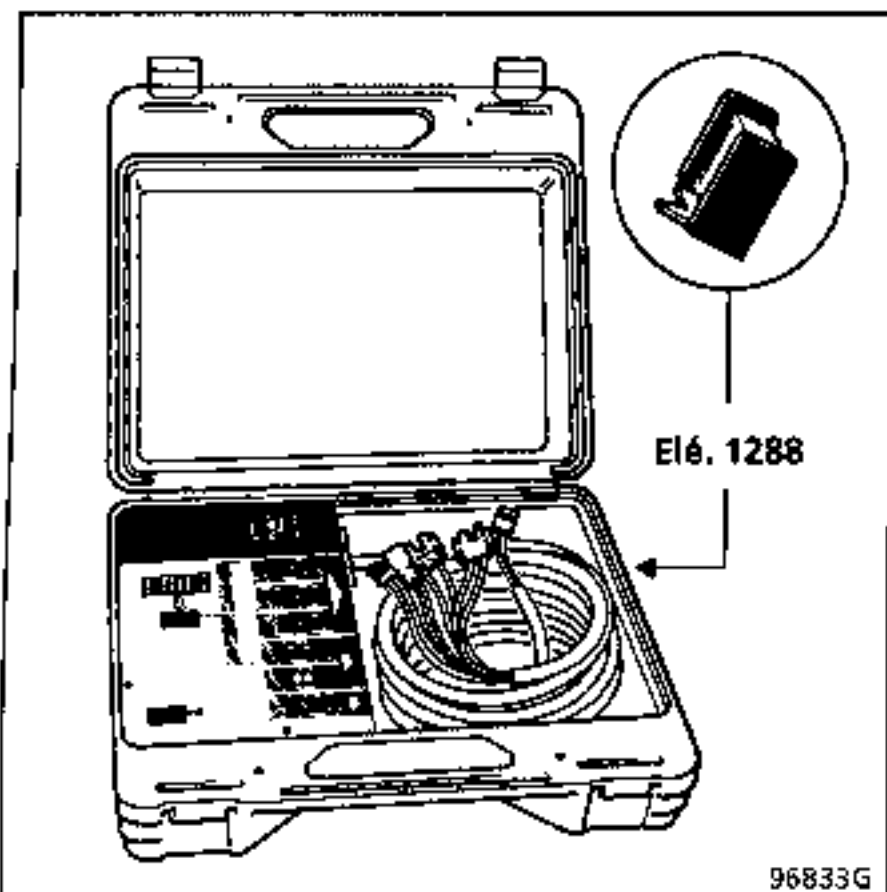
With the new 30 track electronic units complete with lines K and L, fault finding can be performed using the XR25 test kit (except for vehicles only fitted with pretensioners).

This allows computer faults or faulty system lines to be detected.

**NOTE:** before each operation, an additional function allows the trigger lines to be de-activated to avoid any risk of triggering the pyrotechnic gas generators (see fault finding section).



### XR BAG TEST KIT (Elé. 1288)

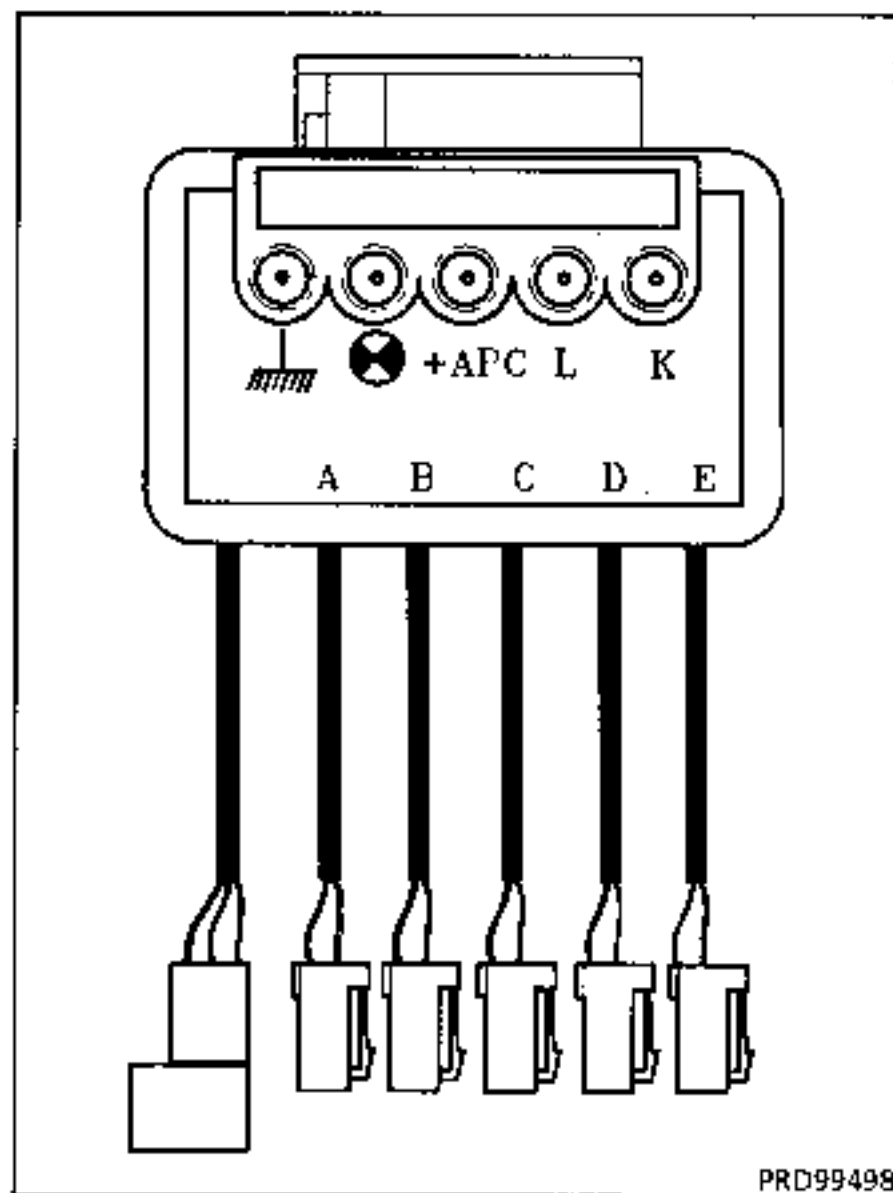


This test kit is a specific tool which has been designed to test and carry out fault finding on airbag and seat belt pretensioner units.

It allows electrical measurements to be taken on the various lines of the system.

**IMPORTANT:** measurements must not be taken on these system using an ohmmeter or another electrical measuring device: the operating current of the device may cause the systems to trigger (refer to "Fault finding" chapter).

### XR BAG 30 TRACK ADAPTER



This bornier is connected instead of and in the place of the electronic unit fitted with a unique 30 track connector.

Using the XR BAG, it allows all the triggering lines to be checked, the supply voltage to the electronic unit to be measured and the illumination of the airbag warning light on the instrument panel to be forced.

Terminals also allow continuity checks to be carried out on the fault finding lines, the warning light and the supply to the electronic unit.



### **AIRBAG DUMMY IGNITION MODULE**

A dummy ignition module in a small red box is supplied with the XRBAG tool.

It has the same electrical specifications as a real ignition module and is used to replace the airbag cushion during fault finding to avoid discharge of the batteries when the unit is being removed from the vehicle, in the case of an "autonomous" airbag in the steering wheel.

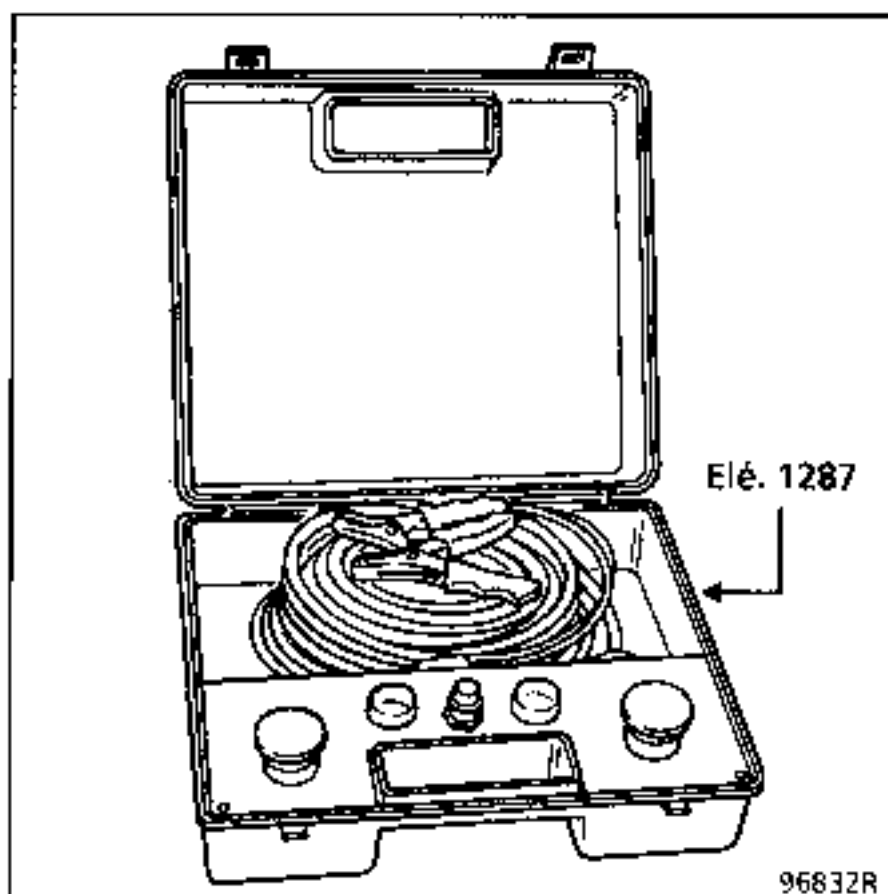
Two dummy ignition modules are required for testing the passenger airbag.

Refer to your After Sales Head Office for further information.

### **DESTRUCTION EQUIPMENT**

In order to avoid any risk of an accident the pyrotechnic gas generators for the airbags and pretensioners must be triggered before the vehicle or the part is scrapped.

**Special tool Elé. 1287 MUST be used.**



Refer to the section "Destruction procedure" in the Airbag section.



## C - CENTRAL COMPUTER

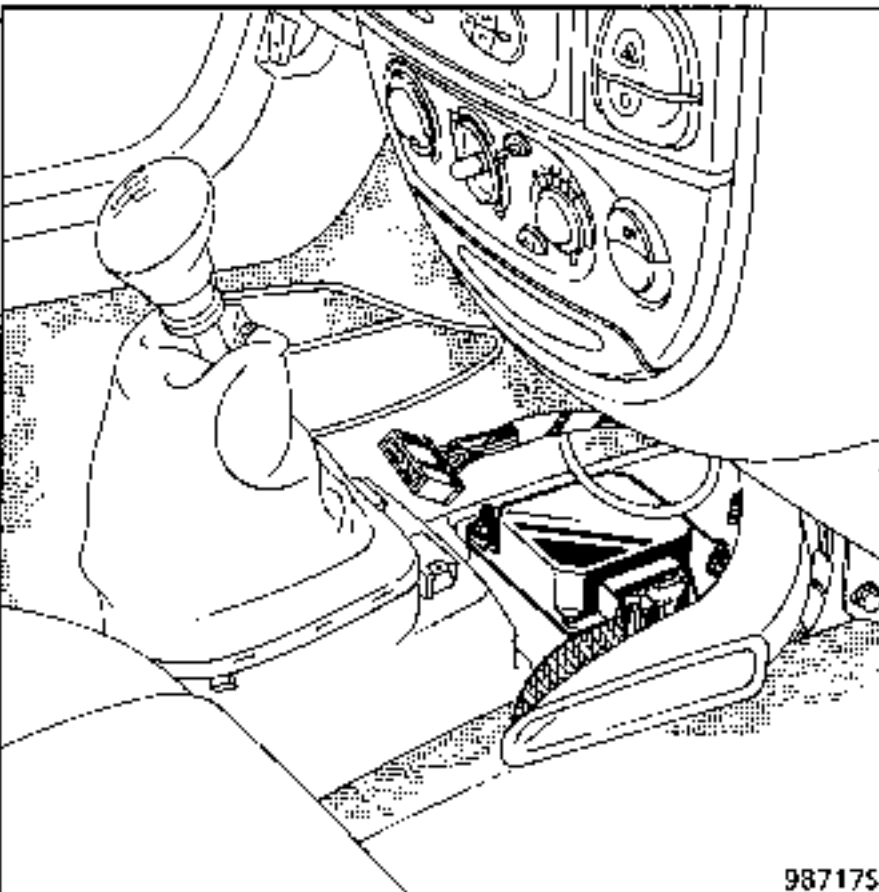
This is located on the tunnel in the central console.

### IMPORTANT

Before removing the computer:

- Turn the ignition off.
- Remove the fuse (see wiring diagram section "Allocation of fuses") and wait for 5 minutes for the reserve capacity in the computer to discharge for pretensioners only, otherwise with airbag(s), wait for 2 seconds for the computer to discharge automatically.
- Disconnect the computer connector to avoid all risk of triggering the system.
- Ensure that no one is in the passenger compartment during the complete operation on the computer.

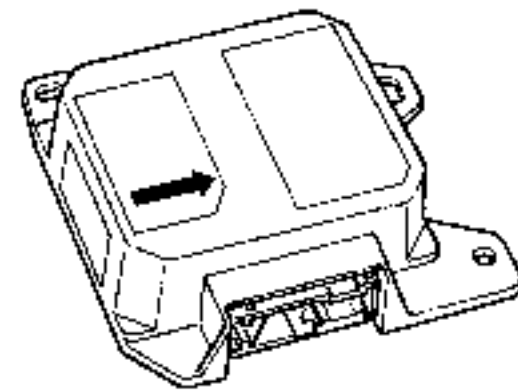
To access the computer, remove the central console.



It contains:

- an electro-mechanical safety sensor,
- a decelerometer for the airbags,

- an ignition circuit for the various pyrotechnic systems,
- an energy reserve,
- a circuit for fault finding and for storing detected faults,
- a circuit for controlling the warning light on the instrument panel,
- a K - L communications interfaces through the diagnostic socket.



### ATTENTION :

- the computer must be replaced if the seat belt pretensioners and airbags have been triggered. Certain components lose their nominal specifications after the trigger energy has passed through them.
- when replacing a pretensioner and airbag computer, it must be unlocked with the XR25 test kit before it is operated (see fault finding section "interpretation of bargraph n° 14").

**IMPORTANT:** When refitting the computer, it must be secured to the vehicle before the connectors are reconnected. The arrow on the computer must be pointing forwards (tightening torque 0.4 daN.m).



## CONNECTION

One 30 track connector

Track	Allocation
1	+ driver's pretensioner signal
2	– driver's pretensioner signal
3	+ passenger's pretensioner signal
4	– passenger's pretensioner signal
5	+ after ignition
6*	+ passenger airbag signal (line 1)
7*	– passenger airbag signal (line 1)
8	Warning light
9	Earth
10*	+ driver's airbag signal
11*	– driver's airbag signal
12	"K" diagnostic line
13*	– passenger airbag signal (line 2)
14*	– passenger airbag signal (line 2)
15	"L" diagnostic line
16	Shunt
17	
18	Shunt
19	
20	Not used
21	Shunt
22	
23	Not used
24	Not used
25	Shunt
26	
27	Not used
28	Shunt
29	
30	Not used

\* depending on equipment

## NOTE:

- The 30 track connector of the computer short circuits the various triggering lines when it is disconnected. In effect, shunts located opposite each pretensioner or airbag line prevent these systems triggering accidentally (due to the aerial effect, for example).

- The feed to the computer and ignition modules is normally provided by the vehicle's battery.

Nevertheless, an energy reserve capacity is included in the computer in case the battery is disconnected at the beginning of an impact.

## IMPORTANT:

- when an operation is carried out under the vehicle (exhaust, bodywork, etc.), do not use a hammer or transfer impact forces to the floor of the vehicle without removing the airbag / pretensioner fuse and waiting 5 minutes for the reserve capacity to discharge (see section "Allocation of fuses" wiring diagram technical note). With airbag function(s) wait for 2 seconds for the unit to discharge automatically.
- when fitting an after-sales electrical accessory (speaker, alarm or any device which may generate a magnetic field), it must not be placed near to the airbag and pretensioner computer.

## OPERATIONS ON THE TRIGGERING WIRING


If a fault is found on one of the wires, the component must be replaced and not repaired.

The wiring or connectors of this safety device are not designed to be repaired in the normal way.

**IMPORTANT:** when fitting new wiring, check that it is not damaged and that it is clean.



## OPERATION WITH AIRBAG AND PRETENSIONER EQUIPMENT

When the ignition is turned on, the airbag warning light  illuminates for a few

seconds then extinguishes.

The computer is then in stand-by mode and monitors vehicle decelerations as recorded by the integrated decelerometer,

In the event of a frontal impact of sufficient force, the pyrotechnic generators of the two seat belt pretensioners are triggered simultaneously after receiving confirmation of the impact by the electro-mechanical safety sensor.

Under the force of the gas generated by the system, a piston is moved in a cylinder, pulling a cable connected to a corresponding central buckle which retracts the seat belt (see pretensioners section).

If the frontal impact is greater, the decelerometer, through the impact confirmation by the electro-mechanical safety sensor, triggers the ignition modules of the pyrotechnic gas generators which inflate the driver and passenger airbag.

These systems will not trigger in the event of:

- a side impact,
- a rear impact.

When triggered, a pyrotechnic gas generator produces an explosion and a small amount of smoke.

**NOTE:** with pretensioners only, the computer only has one sensor (electro-mechanical) and operates like 1<sup>st</sup> generation computers.

## INSTRUMENT PANEL WARNING LIGHT



This warning light is used for the pretensioners and airbags except for vehicles fitted with pretensioners only.

When the ignition is turned on, it should illuminate for a few seconds, then extinguish (and remain extinguished). If it does not illuminate when the ignition is turned on or if it illuminates when the vehicle is moving, there is a fault in the system (see "Fault finding").

**IMPORTANT :** the system **MUST** must be checked using the **XR BAG** tool following:

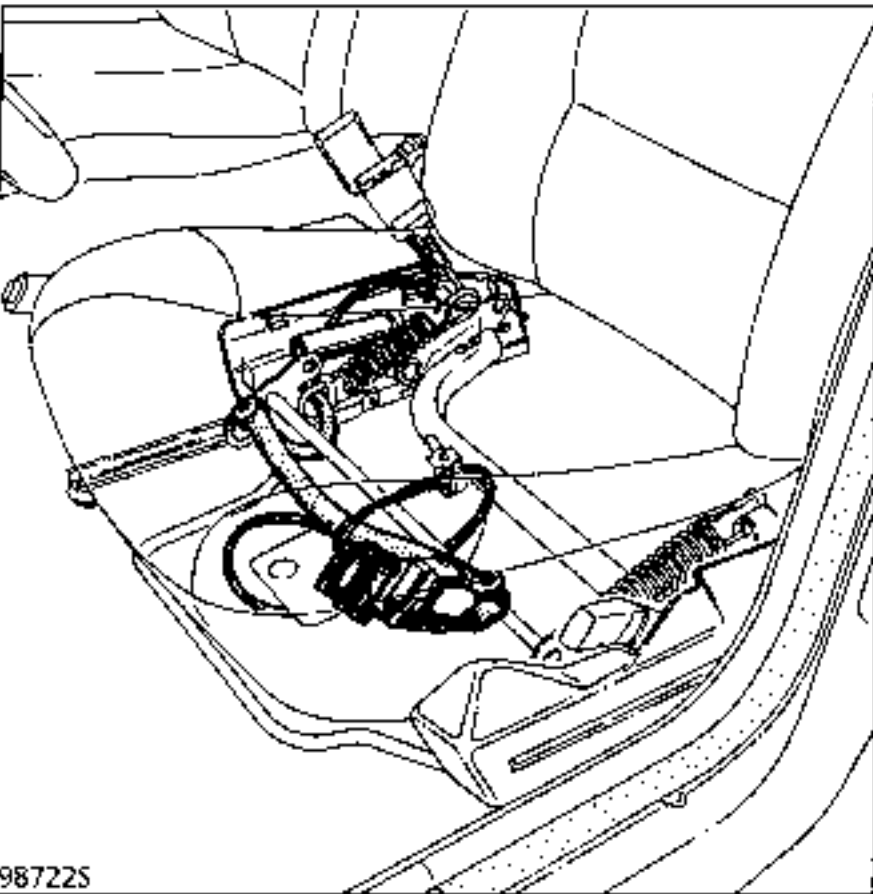
- an accident which did not cause the system to trigger,
- an attempted theft or actual theft of the vehicle.
- before selling a second hand car.



## D - SEAT BELT PRETENSIONERS

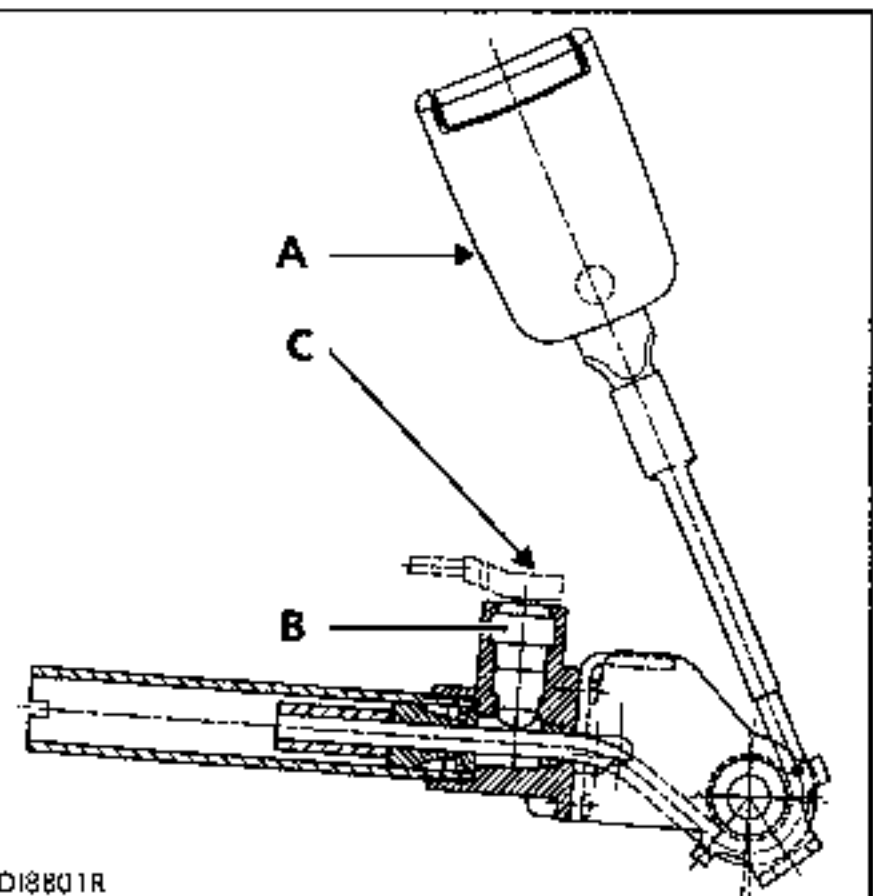
### DESCRIPTION

These are mounted on the side of the front seats.

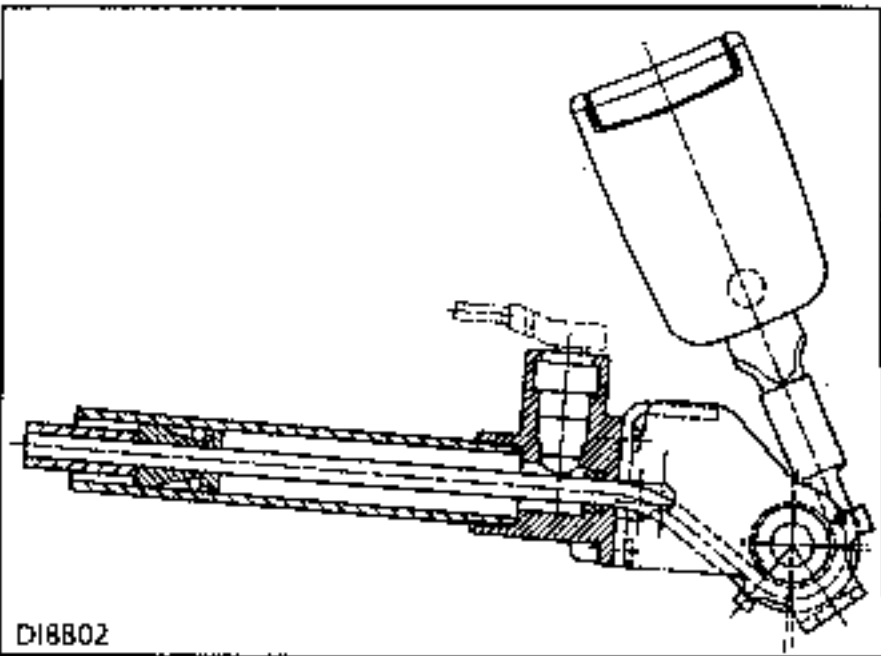


A pretensioner includes:

- a special seat belt catch (A),
- a pyrotechnic gas generator and ignition module (B).

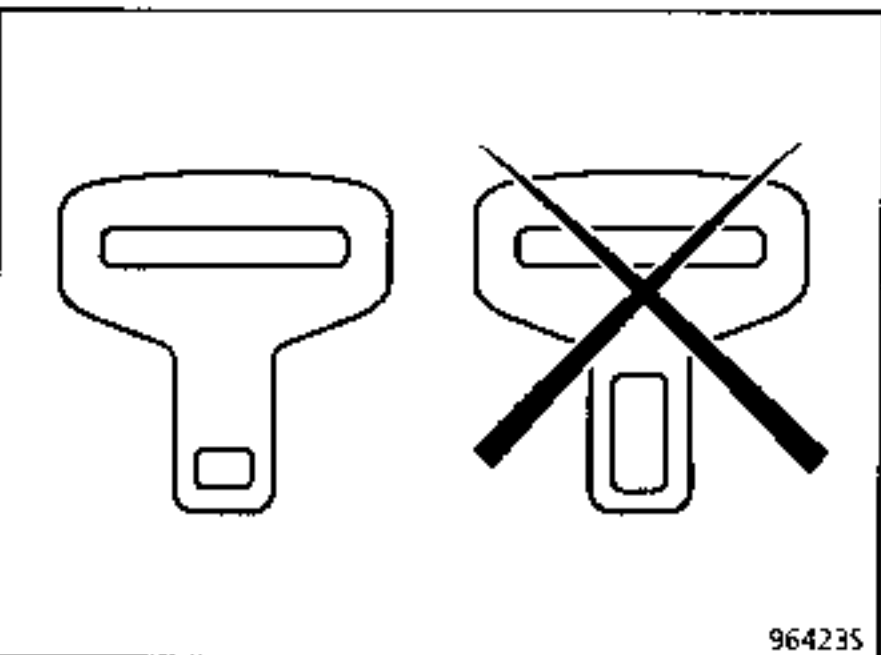


When triggered, the system retracts the catch by up to 70 mm (maximum).



The components of the pretensioner cannot be separated.

**IMPORTANT:** the pretensioner catches must be used with seat belts having buckles with small openings.



### SEAT BELTS

If the seat belt pretensioners have been triggered, the front seat belt or belts must be replaced if they were in use at the time of the impact (if in any doubt, replace the seat belt). The physical forces applied to the catch affect the inertia reel and may have damaged the reel mechanism.



## REMOVAL

**IMPORTANT:** the pyrotechnic systems (pretensioners) must not be handled near to a heat source or flame - there is a risk that they may be triggered.

Remove:

- the violet pretensioner connector located under the front seat,
- the seat (4 mounting bolts under the body),
- the pretensioner assembly, after having removed its protective trim.

**IMPORTANT:** before scrapping a non-triggered pretensioner it **MUST** be destroyed in accordance with the method for destruction (see section "Destruction procedure" in the Airbag section).

## REFITTING

Ensure the wiring is correctly routed and secured under the seat.

## Special notes

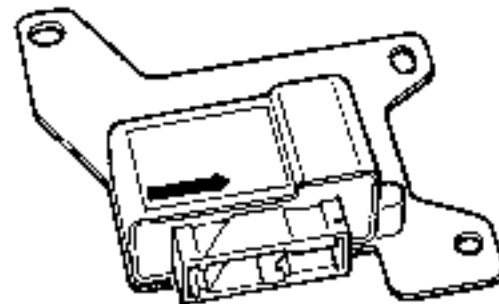
The seat belt stalk on the driver's side is fitted with an electrical contact which allows a warning light on the instrument panel to be illuminated if the seat belt is not buckled.

**IMPORTANT:**

- before reconnecting the pretensioners (violet connector under the seat), check the condition of the assembly using the test tool XRBAG (Elé. 1288) for both pretensioners (see section "Fault finding"),
- on the pretensioners side, ensure the white connector (D) is fully clipped in (firmly clipped).

**REMINDER:** if the pretensioners have been triggered, the computer **MUST** be replaced.

Computer without airbag



987155



## E - DRIVER'S "CENTRAL" AIRBAG

### DESCRIPTION

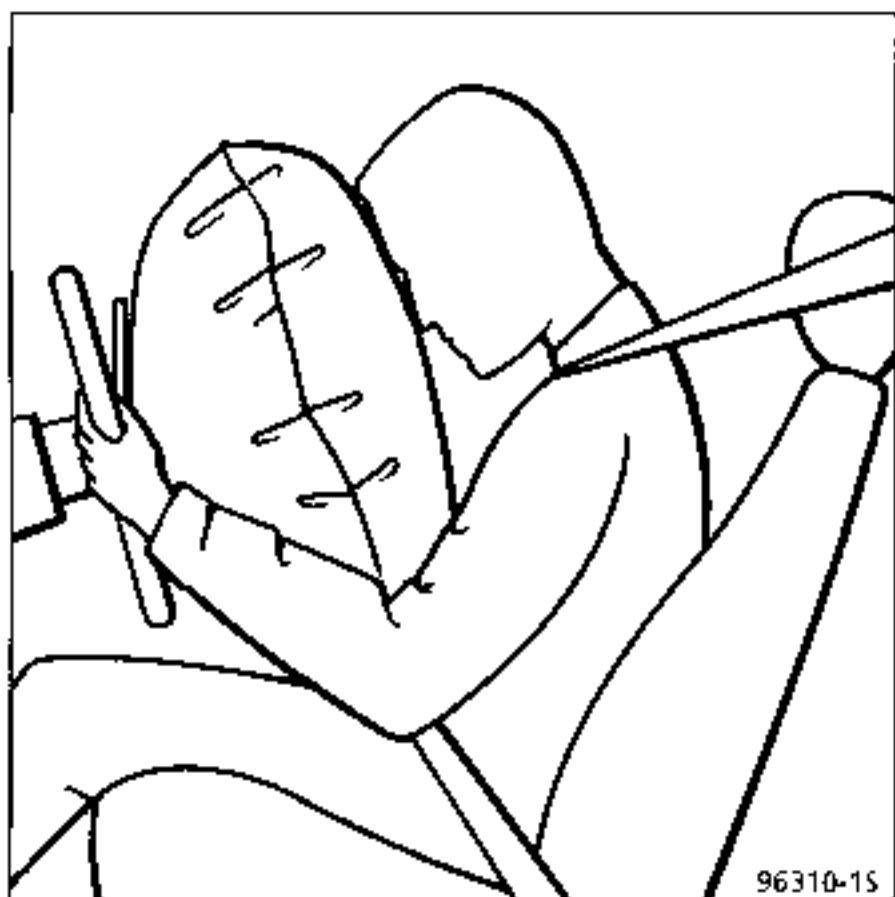
It is located in the steering wheel cushion.

It comprises :


- an inflatable cushion,
- a pyrotechnic gas generator with ignition module.

These components cannot be separated.

Two models of steering wheel (2 or 4 spokes) can be fitted with an airbag.



**NOTE:** when the airbag inflates, the steering wheel cover is torn.

The warning light  on the instrument panel checks that the driver's airbag is working correctly.

**NOTE:** this system is operational after the ignition has been turned on. A vehicle fitted with a driver's airbag may be identified by a label applied in the lower corner of the windscreen on the driver's side and the term "Airbag" in the centre of the steering wheel.

If the windscreen is replaced, remember to replace the labels showing that the vehicle is fitted with airbags (available as a set under the Part Number 77 01 204 830).

## AIRBAG, STEERING WHEEL AND ROTARY SWITCH

### REMOVAL

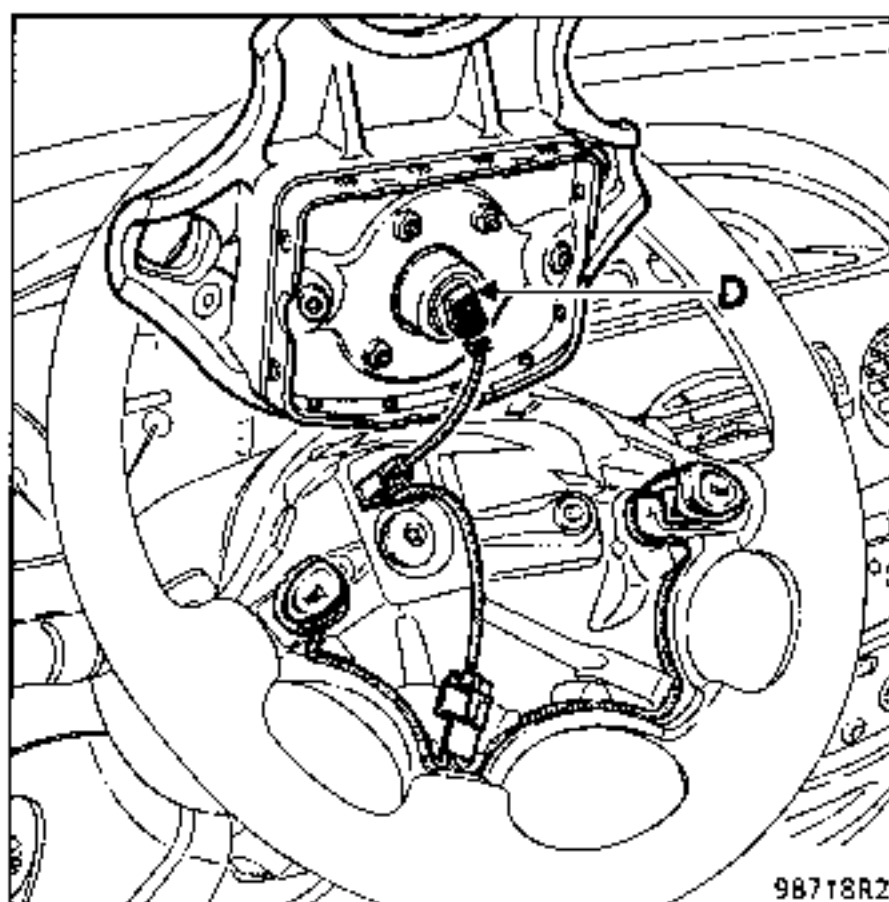
**IMPORTANT:** the pyrotechnic systems (airbag and pretensioners) must not be handled near a heat source or a flame ; they may be triggered.

**IMPORTANT:** when the steering wheel is removed, the airbag connector (D) **MUST** be disconnected .

The airbag has a connector which short circuits when it is disconnected to avoid accidental triggering of the system.

Remove:

- the airbag cushion by the 2 bolts (eg. Torx 30) (tightening torque 0.5 daN.m) located behind the steering wheel and disconnect the connection (D),



- the horn connector, if fitted,
- the steering wheel bolt,
- the steering wheel after positioning the wheels straight.



**IMPORTANT:** before scrapping a non-triggered airbag cushion it **MUST** be destroyed in accordance with the method for destruction (see chapter "Destruction procedure" of the airbags section: destroying the part removed from the vehicle).

### SPECIAL NOTES FOR THE ROTARY SWITCH UNDER THE STEERING WHEEL

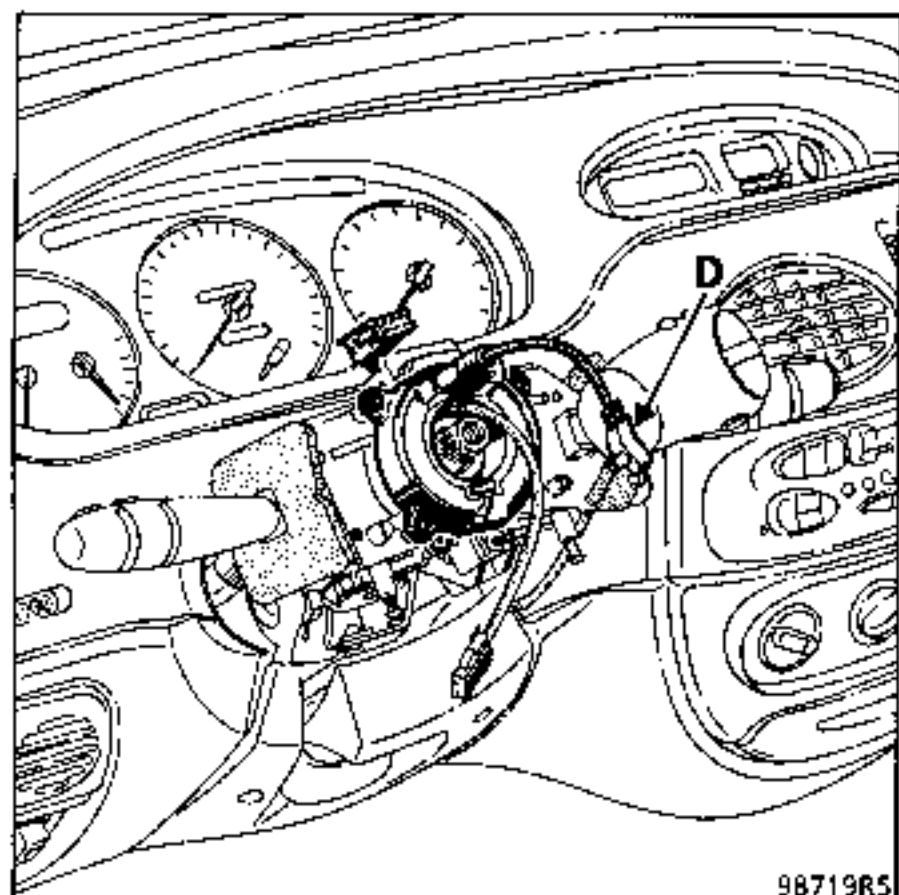
This switch ensures the electrical connection between the steering column and the steering wheel.

It comprises a strip with conducting tracks (airbag) which are long enough to allow the steering wheel to be rotated 2.5 times (full lock plus an extra amount for safety) to each side.

### REMOVAL

When removing, its position must be noted, either:

- by ensuring the wheels are straight when the switch is removed so that the strip is positioned in the centre,
- or by immobilising the rotor of the rotary switch with adhesive tape.



98719R5

If the switch is renewed, the new part is supplied ready centred. It is held in position by a label which tears when the steering wheel is moved for the first time (fit with the wheels straight).

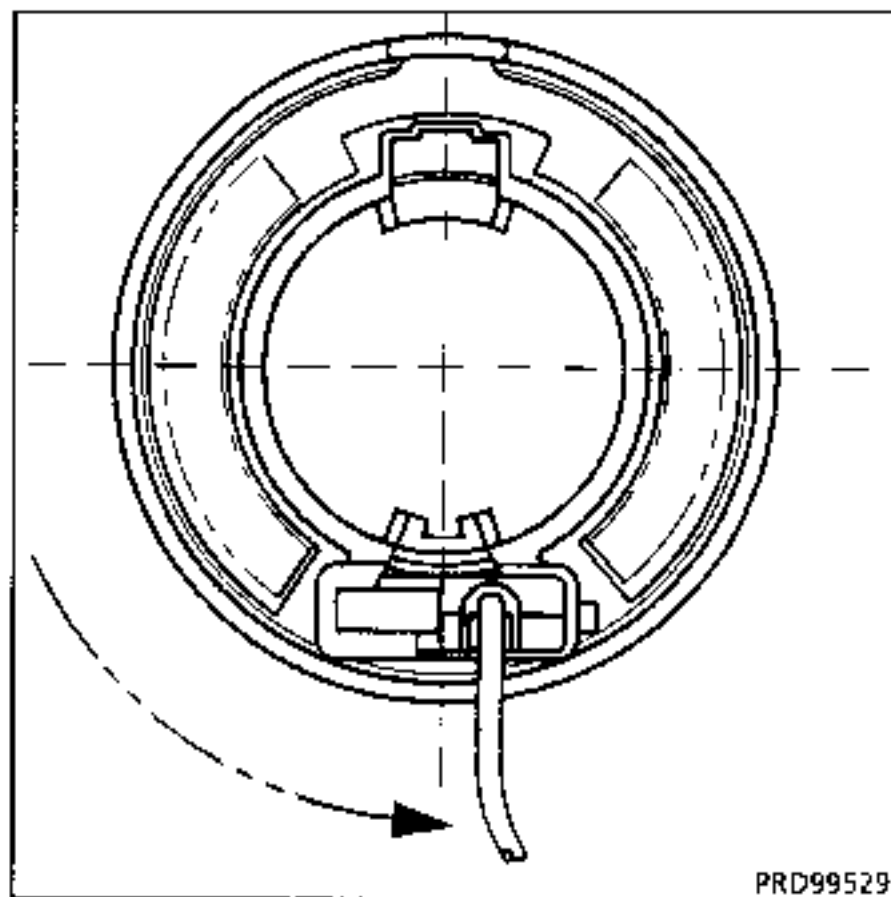
### REFITTING

Ensure the wheels are still straight.

Ensure the rotary switch is still immobilised before refitting.

If this is not the case, following the centring method described below:

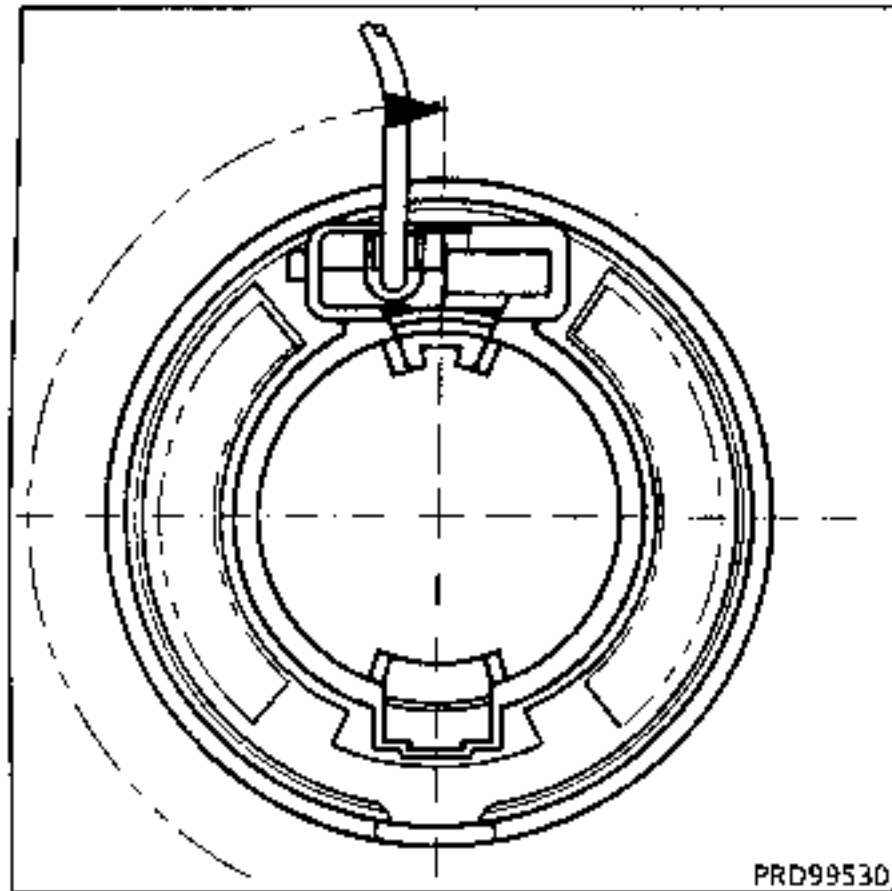
- turn the upper part of the rotary switch in an anti-clockwise direction. It will become difficult to turn as it reaches the extreme position, as shown below (do not force).



PRD99529



- then turn the upper part slightly in a clockwise direction and check that the rotary switch is in the position shown below,



- once again turn the part in a clockwise direction through two complete revolutions and, once this has been done, check that the rotary switch is in the position described above.

Refit the steering wheel and renew the pre-bonded nut, observing the correct tightening torque (4.5 daN.m).

### SPECIAL CASES

When operations to remove the steering, engine, transmission... require the rack and steering column to be disconnected:

→ the steering wheel must be immobilised using a "steering wheel locking" tool.

**IMPORTANT:** to avoid destroying the rotary switch under the steering wheel, the steering wheel **MUST** be kept in the locked position throughout the whole operation.

Any doubts about whether the steering wheel is correctly centred means that it has to be removed, after having carried out the previously described centring method.

**REMINDER:** in this case, only qualified, trained personnel can carry out work on the airbag.



**IMPORTANT:** before reconnecting the driver's airbag, the system operation must be checked:

- check that the airbag warning light on the instrument panel illuminates when the ignition is turned on,
- connect a dummy ignition module to the driver's airbag cushion connector and check that the warning light extinguishes,
- turn off the ignition, connect the airbag cushion in the place of the dummy ignition module. Ensure the connector (D) is correctly clipped in (firmly clipped in),
- screw the airbag cushion onto the steering wheel (tightening torque 0.5 daN.m)
- turn on this ignition, check that the warning light illuminates for 3 seconds when the ignition is turned on then extinguishes and remains extinguished.

If the warning light does not operate as described above, refer to the section "Fault finding" and check the system using the XRBAG tool (Elé. 1288) or the XR25 test kit.

**IMPORTANT:**  
If these procedures are not correctly observed the systems may not operate correctly or may be accidentally triggered.

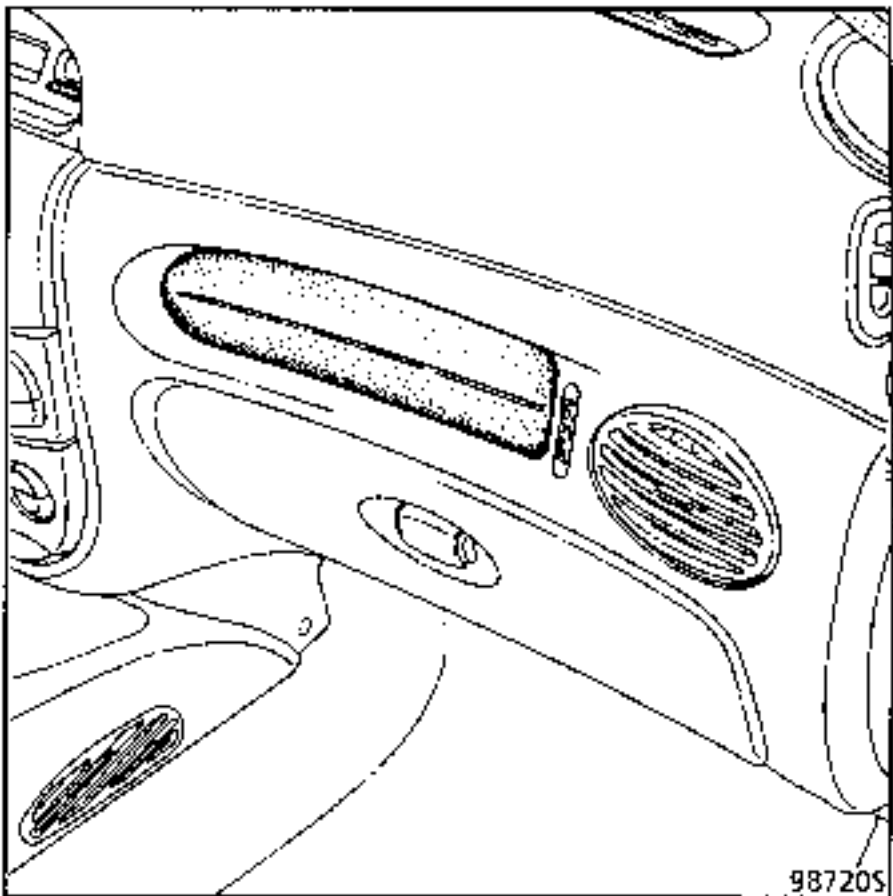
## F - PASSENGER AIRBAG MODULE

### DESCRIPTION

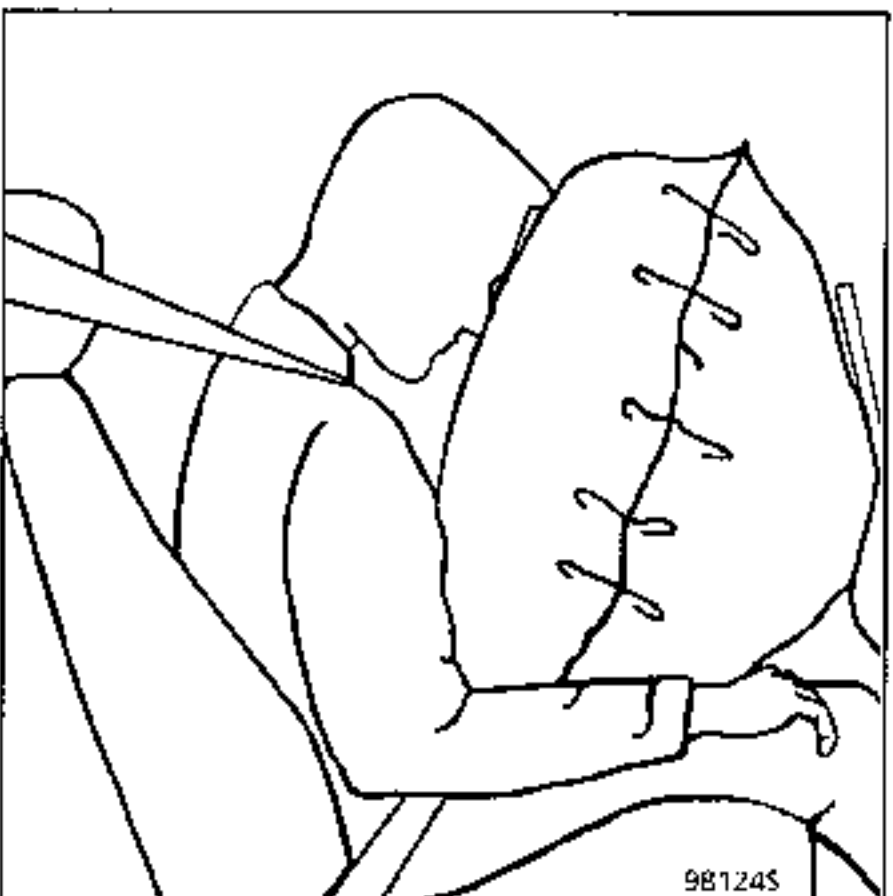
This is located in the dashboard, opposite the front passenger.

It comprises:

- an inflatable cushion,
- two pyrotechnic gas generators with ignition modules.



The components of the module cannot be separated.





**NOTE:** when the airbag inflates, it opens the plastic pocket of the passenger airbag module.

The warning light  on the instrument panel shows the correct operation of the passenger airbags and pretensioners.

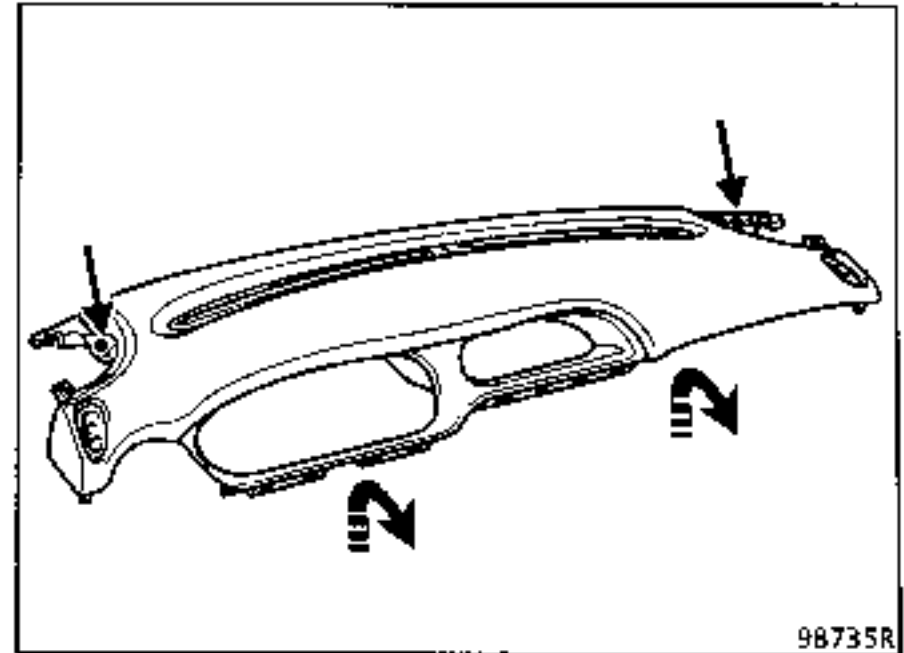
**NOTE:** this system is operational after the ignition has been turned on. A vehicle fitted with a passenger airbag may be identified by a label applied in the lower corner on the passenger side of the windscreen and the term "Airbag" on the same side of the dashboard. Two other labels on the front door window and on the side of the dashboard state that it is forbidden to put a child's seat in the front passenger seat. Likewise, the passenger must not put his feet or attach objects by gluing or drilling to the dashboard (refer to the vehicle handbook).

If the windscreen is replaced, remember to replace the labels showing that the vehicle is fitted with airbags (available as a set, Part Number 77 01 204 830).

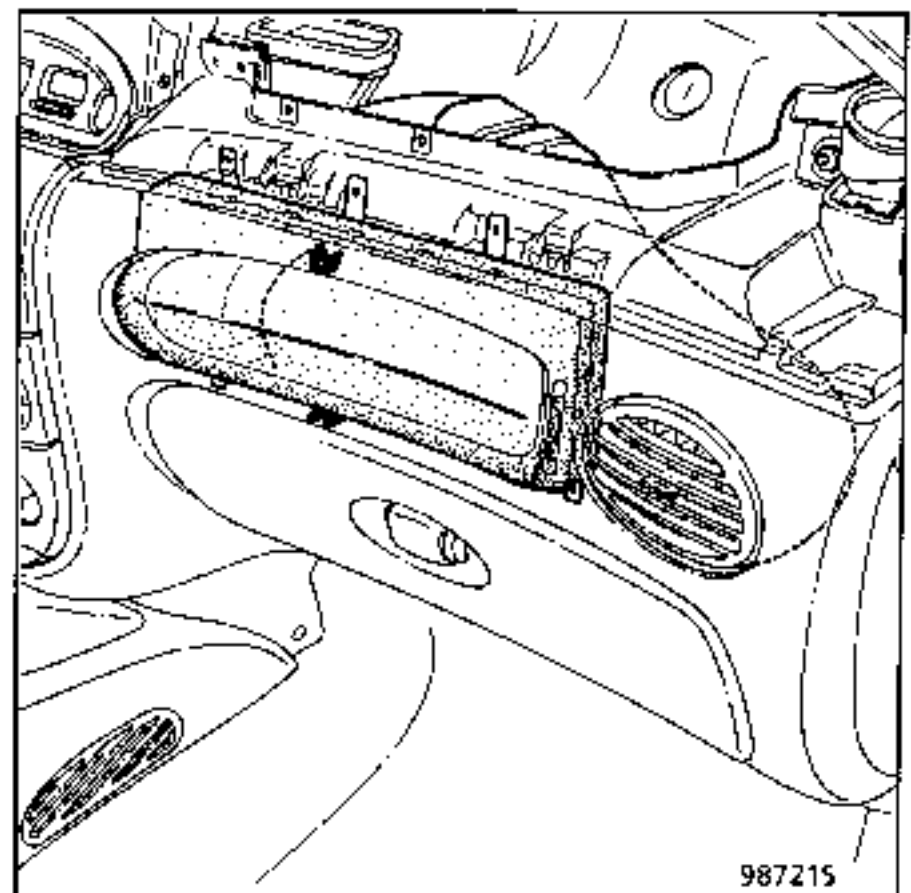
#### OPERATIONS TO BE CARRIED OUT DURING FAULT FINDING IN ORDER TO GAIN ACCESS TO THE PASSENGER AIRBAG IGNITION MODULES.

Remove:

- the 2 loud speaker grilles on the dashboard,
- the upper part of the dashboard (2 bolts),



- the two hot air ducts to facilitate access to the passenger airbag module wiring connections.



Check the two ignition modules with the XRBAG test kit as described in the fault finding section.



### REPLACING THE PASSENGER AIRBAG MODULE

To remove the passenger airbag, the dashboard has to be removed (see section 83).

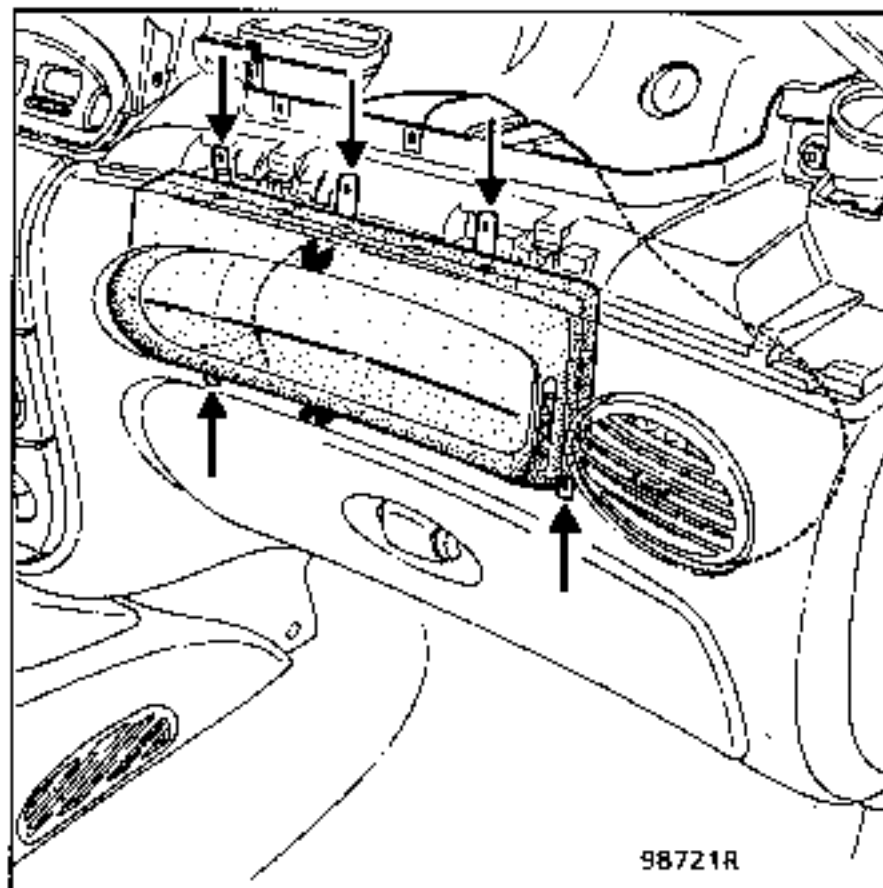
**IMPORTANT:** when a passenger airbag module is triggered, the distortion and damage caused to the mountings means that the dashboard has to be systematically replaced.

**IMPORTANT:** before scrapping a non-triggered airbag cushion it **MUST** be destroyed in accordance with the method for driver's airbag all types: "destroying the part removed from the vehicle".

### REFITTING

**IMPORTANT:** the safety instructions **MUST** be complied with when refitting or replacing the passenger airbag module. If these procedures are not correctly observed the systems may not operate correctly and may even present a risk to the vehicle occupants.

**IMPORTANT:** work in the reverse order to removal, ensuring that the correct tightening torque is used for the 5 module mounting bolts (0.2 daN.m).



Replace the dashboard



**IMPORTANT:** before reconnecting the passenger airbag module, the system operation must be checked:

- Check that the airbag warning light on the instrument panel illuminates when the ignition is on.
- Connect a dummy ignition module (Elé. 1288) to each of the two passenger airbag module connectors and check that the warning light extinguishes. The second dummy ignition module is distributed at the same time as the update of the XRBAG test kit instruction manual or can be ordered from the After Sales Department.
- Disconnect and then successively reconnect each of the 2 dummy ignition modules and check that the passenger airbag fault is recognised by the computer.
- Turn the ignition off, connect the passenger airbag ignition modules in the place of the two dummy ignition modules.
- Turn the ignition on again and check that the warning light illuminates for 3 seconds when the ignition is turned on and the extinguishes and remains extinguished.

If the warning light does not operate as described above, refer to the section "Fault finding" and check the system using the XRBAG tool (Elé. 1288) or the XR25 test kit.



## **FAULT FINDING - INTRODUCTION**

### **CONDITIONS FOR APPLYING THE CHECKS DEFINED IN THIS FAULT FINDING SECTION**

The checks defined in this fault finding section are only to be applied if the fault bargraph is permanently illuminated, showing that the fault is present on the vehicle at the time of checking. Only a computer fault requires the computer to be replaced, whether the bargraph is illuminated permanently or flashing.

If the fault is not present but simply memorised, the bargraph flashes and carrying out the checks recommended in the fault finding section will not allow the reason why the fault was memorised to be located. In this case, only the wiring and the connections of the faulty component should be checked (the wiring in question can be used in the fault finding mode in order to try and illuminate the bargraph permanently).

### **SPECIAL TOOLING REQUIRED FOR WORKING ON AIRBAG AND SEAT BELT PRETENSIONER SYSTEMS**

- XR25 test kit (with cassette N° 15 minimum).
- XRBAG test kit with update N° 3 (with the new measuring wire and its adapters as well as the 30 track adapter for working on the computer wiring).

## **REMINDERS**

Never take measurements on airbag and pretensioner triggering lines with a device other than the XRBAG.

Before using a dummy ignition module, check that its resistance is between 1.8 and 2.5 ohms.

The XR25 test kit can only be used to carry out fault finding operations on computers with the airbag function. Computers with the "pretensioner" function should be checked with the XRBAG and in accordance with the checks described in the fault finding section.

The ignition has to be turned off and then turned on again so that the warning light extinguishes after the fault memory has been erased using the command G0\*\*.



## FAULT FINDING - XR25 FICHE

N° 40		S8	code : D 4 9	read : 1A6
1	<input type="checkbox"/> COMPUTER	CODE PRESENT <input type="checkbox"/>		
2	<input type="checkbox"/> * 02 FEED VOLTAGE			
3				
4				
5	<input type="checkbox"/> * 06 RESISTANCE	DRIVER'S AIRBAG CIRCUIT	INSULATION * 25	<input type="checkbox"/>
6	<input type="checkbox"/> * 08 LINE 1 RESISTANCE	PASSENGER AIRBAG CIRCUIT	LINE 2 RESISTANCE * 26	<input type="checkbox"/>
7			LINES 1 OR 2 INSULATION * 27	<input type="checkbox"/>
8	<input type="checkbox"/> * 09 DEFECT IN LINE ON DRIVER'S SIDE	PRE-TENSIONER CIRCUITS	DEFECT IN LINE ON PASSENGER SIDE * 28	<input type="checkbox"/>
9			LINE INSULATION * 29	<input type="checkbox"/>
10	<input type="checkbox"/> SHORT CIRCUIT LEAKAGE AT +12V	FAULTY WARNING LIGHT CIRCUIT	CIRCUIT OPEN LEAKAGE AT 0V	<input type="checkbox"/>

## AIRBAG PRETENSIONERS

Memory del. : G 0 ★★  
End of test : G 1 3 ★

11				
12				
13	Computer STATUS			
14	<input type="checkbox"/>	( <input type="checkbox"/> )	COMPUTER LOCKED	
15				
16	COMPUTER CONFIGURATION (fixed display)			
17	<input type="checkbox"/>	( <input type="checkbox"/> )	WITH PASSENGER AIRBAG	
18	<input type="checkbox"/>	WITH SEATBELT PRETENSIONERS		
19	<input type="checkbox"/>	WITH DRIVER'S SIDE AIRBAG		
20				

### ADDITIONAL CHECKS

01 Computer feed v.

CONTROL MODE : G ... \*

72 Writ. after-sales date  
73 Read. after-sales date

Help : V 9  
Return to diag. mode : 0  
Part No. : G 7 0 ★



## FAULT FINDING - XR25 FICHE

### REPRESENTATION OF THE BARGRAPHS

#### REPRESENTATION OF A FAULT (always on a coloured background)

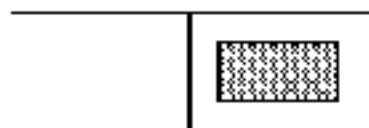


If illuminated, there is a fault with the product tested. The associated text defines the fault.

This bargraph can be:

- |                           |                               |
|---------------------------|-------------------------------|
| - Permanently illuminated | : fault present               |
| - Flashing                | : fault memorised.            |
| - Extinguished            | : fault absent or not tested. |

#### REPRESENTATION OF A STATUS (always on a white background)



Bargraph always located at the top on the right.

Illuminates when dialogue is established with the computer for the product.

If it remains extinguished:

- the code does not exist,
- there is a fault on the tool, the computer or the XR25 / computer link.

The following representation of the bargraphs shows their initial status:

Initial status: (ignition on, engine stopped, no operator action).

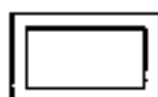


or



Undefined

is illuminated if the function or condition on the fiches is met.



Extinguished



Illuminated

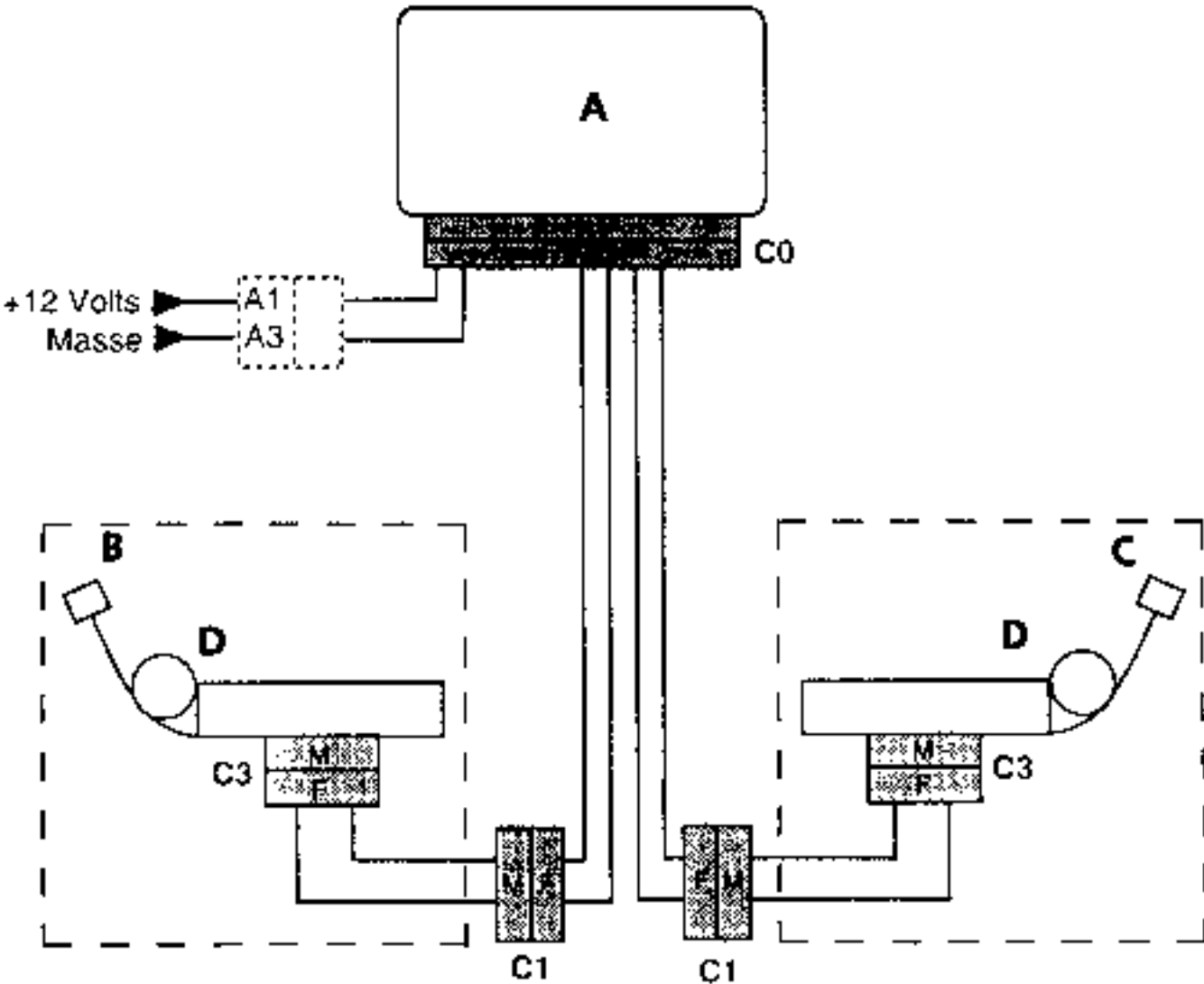
extinguishes when the function or condition on the fiches is no longer met.

### ADDITIONAL INFORMATION

Some bargraphs have a \*. The \* command, when the bargraph is illuminated, allows additional information about the type of fault or current status to be displayed.



FAULT FINDING - XRBAG FICHE



DI8811

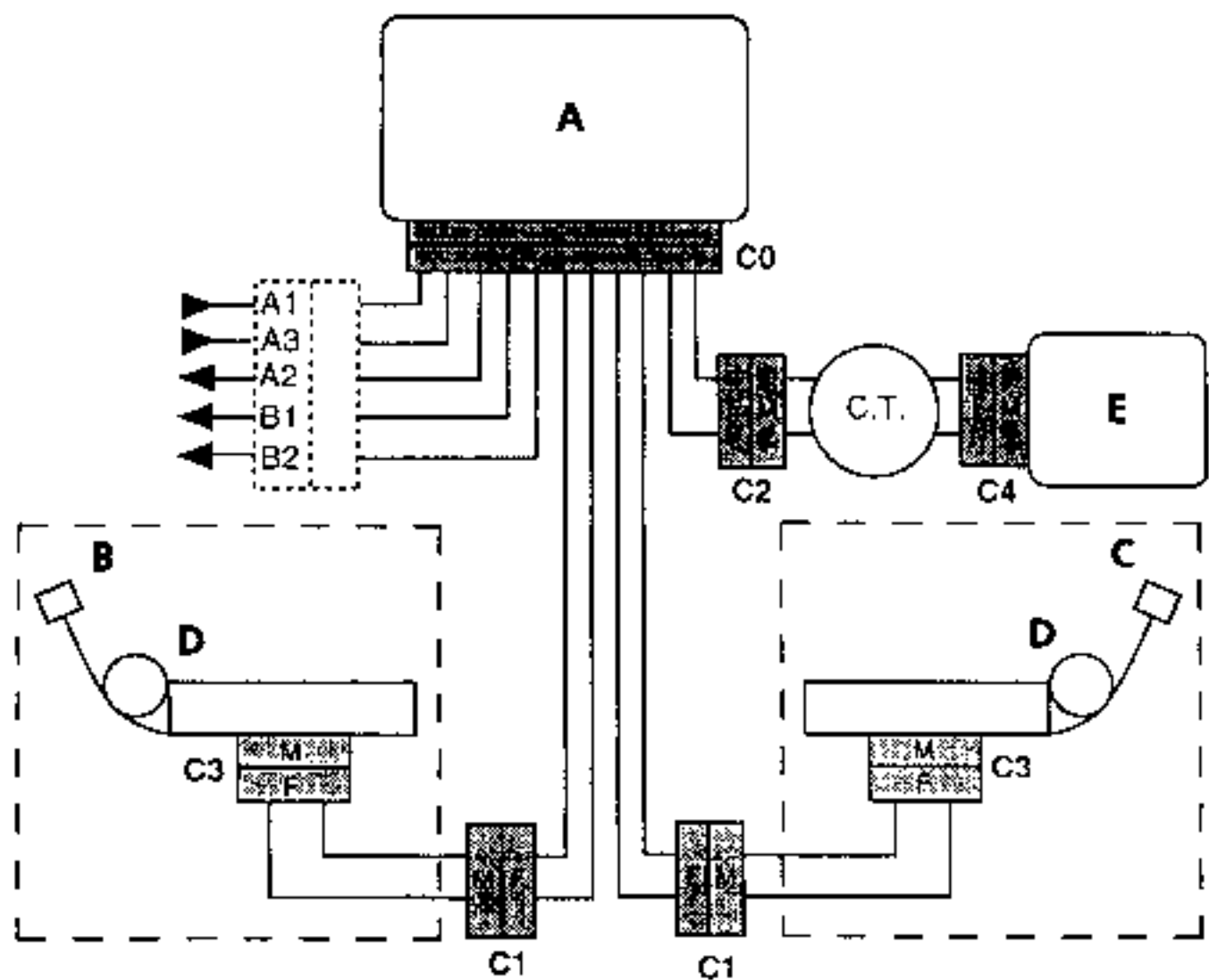
- A Independent computer
- B To the left hand seat
- C To the right hand seat
- D Pretensioner

PRETENSIONERS	
Measuring point	Correct value
C0, C1 and C3	1.6 to 4.6 ohms

Correct insulation value:  
display  $\geq 100.h$  or 9999 flashing



**FAULT FINDING - XRBAG FICHE**



D48812

- A Central computer
- B To left hand seat
- C To right hand seat
- D Pretensioner
- CT Rotary switch
- A1 + 12 Volts
- A3 Earth
- A2 Warning light
- B1 } Diagnostic socket
- B2 }

AIRBAG	
Measuring point	Correct value
C0, C2 and C4	2 to 9.4 ohms

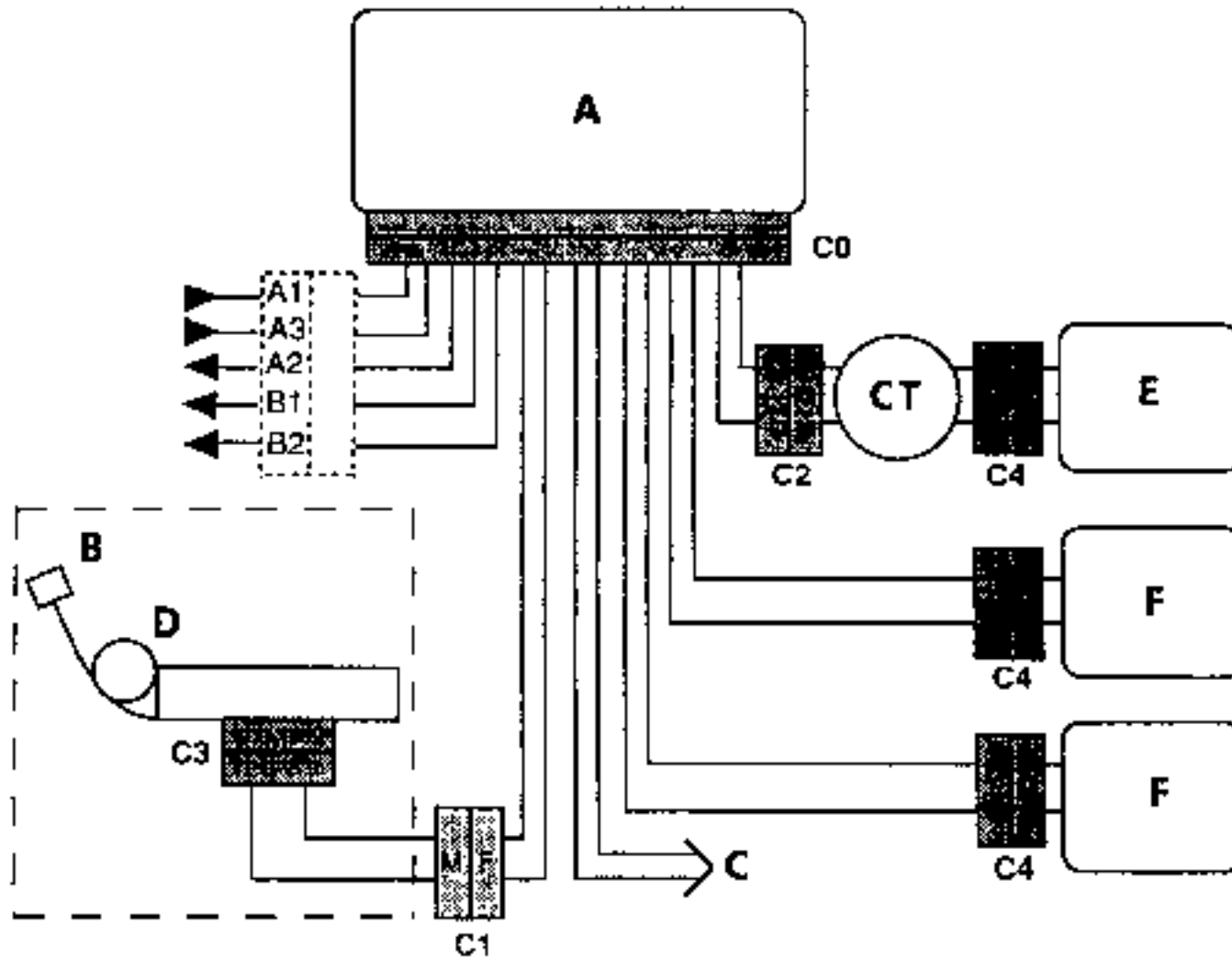
  

PRETENSIONERS	
Measuring point	Correct value
C0, C1 and C3	1.6 to 4.6 ohms

Correct insulation value:  
display  $\geq 100.h$  or 9999 flashing



**FAULT FINDING - XRBAG FICHE**



DI8813

- A Central computer
- B To left hand seat
- C To right hand seat
- D Pretensioner
- E Driver's airbag ignition module
- F Passenger airbag ignition module
- CT Rotary switch
- A1 +12 Volts
- A3 Earth
- A2 Warning light
- B1 } Diagnostic socket
- B2 }

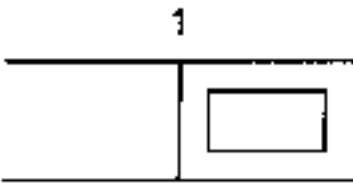
	AIRBAG	
	Measuring point	Correct value
Driver	C0, C2 and C4	2 to 9.4 ohms
Passenger	C0 and C4	1.6 to 4.6 ohms

PRETENSIONERS	
Measuring point	Correct value
C0, C1 and C3	1.6 to 4.6 ohms

Correct insulation value:  
display  $\geq 100.h$  or 9999 flashing



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

	<b>Bargraph 1 RH side extinguished</b> <u>Code present</u>	Fiche n° 49
--	---	-------------

### NOTES

Computers which only manage the seat belt pretensioner function cannot be tested with the XR25 (to be tested using the XRBAG).

Check that the XR25 test kit is not the cause of the fault by trying to communicate with a computer on another vehicle.

Check that the ISO switch is in position S8, that you are using the latest version of the XR25 cassette and the correct access code.

Check the battery voltage and carry out the necessary operations to obtain a correct voltage (10.5 volts < U battery < 16 volts).

Check that there is a suitable airbag fuse in the passenger compartment connection unit (7.5 amps).

Check the connection of the computer connector and check the condition of its wiring.

Check that the computer is correctly fed:

- disconnect the airbag computer and fit the 30 track adapter of the XRBAG,
- check that there is a correct + after ignition feed between the terminals labelled earth and -- after ignition.

Check that the diagnostic socket is correctly fed:

- before ignition on track 16,
- earth on track 5.

Check the continuity and insulation of the diagnostic socket / airbag computer connection lines:

- between the terminal labelled L and track 15 of the diagnostic socket,
- between the terminal labelled K and track 7 of the diagnostic socket.


If dialogue is still not established after these various checks, renew the airbag computer (refer to the "help" section for this operation).

### AFTER REPAIR

When communication has been established, deal with any illuminated fault bargraphs.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>1</div> 	<b>Bargraph 1 LH side permanently illuminated or flashing</b> <u>Computer</u>	Fiche n° 49
---	--	-------------

<b>NOTES</b>	None
--------------	------

Renew the airbag computer (refer to the "help" section for this operation).

<b>AFTER REPAIR</b>	None
---------------------	------



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 60px;"> <div style="text-align: center; margin-bottom: 5px;">2</div> <div style="background-color: black; width: 40px; height: 20px; margin: 0 auto;"></div> </div>	<b>Bargraph 2 LH side permanently illuminated</b> <span style="float: right;">Fiche n° 49</span> <b>Feed voltage</b> XR25 aid:    *02 :    1.dEF : Voltage too low 2.dEF : Voltage too high 3.dEF : Too many micro-cuts dEF : Cumulative between the other 3 faults
---	--

<b>NOTES</b>	Use the XRBAG 30 track adapter to work on the computer connector.
--------------	---

<b>1.dEF - 2.dEF</b>	<b>NOTES</b>	None
----------------------	--------------	------

Carry out the required operations to obtain a correct computer feed voltage:  
 $10.5 \text{ volts} + 0.1 < \text{correct voltage} < 16 \text{ volts} \pm 0.1$ .

- check the battery charge,
- check the charging circuit,
- check the condition and the tightness of the battery terminals,
- check the computer earth.

<b>3.dEF</b>	<b>NOTES</b>	None
--------------	--------------	------

For a micro-cut fault, check the computer feed lines:

- condition of the connection on the computer and the R34 connection,
- condition of the computer earth (track 9 of the 30 track connector),
- condition / position of the fuse,
- condition and tightening of the battery terminals.

<b>dEF</b>	<b>NOTES</b>	None
------------	--------------	------

The display **dEF** on the test kit shows that at least 2 of the 3 faults declared by the display **1.dEF**, **2.dEF** and **3.dEF** are memorised (with the bargraph flashing).

Operation:

- check the battery charge,
- check the charging circuit,
- check the condition and the tightness of the battery terminals,
- condition of the wiring on the computer and the R34 connection,
- condition of the computer earth,
- condition / position of fuse.

<b>AFTER REPAIR</b>	Erase the computer's memory using the command GO**
---------------------	--



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="text-align: center;">5</div> <div style="border: 1px solid black; width: 50px; height: 50px; margin: 10px auto;"></div>	<p><b>Bargraph 5 LH side permanently illuminated</b></p> <p><u>Driver's airbag line resistance</u></p> <p>XR25 aid:    *05 :    CC : Short circuit           CO : Open circuit</p>	<p>Fiche n° 49</p>
---	--	--------------------

<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
--------------	---

Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and remove the 2 mounting bolts on the steering wheel cushion.  
Check that it is correctly connected.

Disconnect the steering wheel cushion and connect a dummy ignition module to the ignition module connector. Turn the ignition on and test with the XR25 test kit.  
Renew the airbag cushion if the fault has been memorised (fault no longer declared present).

Ignition off, disconnect then reconnect the rotary switch connector under the steering wheel. Check the wiring if bargraph 5 LH side is flashing.

The XRBAG tool must be used to measure the resistance at point C2 of the driver's airbag circuit. If the value obtained is not correct, renew the rotary switch under the steering wheel.

Reconnect the rotary switch under the steering wheel, disconnect the computer connector and fit the 30 track adapter.

The XRBAG tool must be used to measure the resistance on the adapter cable labelled B.

If the value obtained is not correct, check the wiring on the 30 track connector (tracks 10 and 11) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).  
Reconnect the driver's airbag ignition module and secure the cushion to the steering wheel.

**AFTER REPAIR** Erase the computer's memory using the command GO\*\* then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*. Destroy the airbag cushion if it has been renewed (tool Elé. 1287).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="margin-bottom: 10px;"><b>5</b></div>	<p><b>Bargraph 5 RH side permanently illuminated</b></p> <p><u><b>Driver's airbag line insulation</b></u></p> <p>XR25 aid:    *25 : CC.1 : Short circuit to 12 volts                               CC.0 : Short circuit to earth</p>	Fiche n° 49
--	--	-------------

<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
--------------	---

Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and remove the 2 airbag cushion mounting bolts.  
Check the condition of the triggering cable.

The XRBAG tool must be using to measure the insulation in a manner appropriate to the type of fault at point C2 of the driver's airbag circuit.  
If the value obtained is not correct, renew the rotary switch under the steering wheel.

Reconnect the rotary switch under the steering wheel, disconnect the computer connector and fit the 30 track adapter.

The XRBAG tool must be used to measure the insulation in a manner appropriate to the type of fault of the adapter cable labelled B.

If the value obtained is not correct, check the wiring of the 30 track connector (tracks 10 and 11) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).

**Reconnect the ignition module of the driver's airbag and secure the cushion to the steering wheel.**

**AFTER REPAIR** Erase the computer's memory using the command GO\*\* then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*. Destroy the airbag cushion if it has been renewed (tool Elé. 1287).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6	<p><b>Bargraph 6 LH side permanently illuminated</b></p> <p><u>Passenger airbag line 1 resistance</u></p> <p>XR25 aid:    *06 : CC : Short circuit                      CO : Open circuit</p>	Fiche n° 49
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<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
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Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and remove the top of the dashboard to access the passenger airbag module.  
Check that the 2 ignition modules are correctly connected.

Disconnect the LH ignition module of the passenger airbag module and connect a dummy ignition module to the ignition module connector.  
Turn the ignition on and test using the XR25 test kit.  
Renew the passenger airbag module if the fault is now memorised (fault no longer declared present).

Disconnect the computer connector and fit the 30 track adapter.  
The XRBAG tool must be used to measure the resistance of the adapter cable labelled C.  
If the value obtained is not correct, check the wiring on the 30 track connector (tracks 6 and 7) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).  
Reconnect the passenger airbag ignition module.

**AFTER REPAIR**

Erase the computer's memory using the command GO\*\* then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*.

Destroy the passenger airbag module if it has been renewed (tool Elé. 1287).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

6	<p><b>Bargraph 6 RH side permanently illuminated</b></p> <p><u>Passenger airbag line 2 resistance</u></p> <p>XR25 aid:    *26 : CC : Short circuit                      CO : Open circuit</p>	Fiche n° 49
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<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
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Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and remove the top of the dashboard to access the passenger airbag module.  
Check that the 2 ignition modules are correctly connected.

Disconnect the RH ignition module of the passenger airbag module and connect a dummy ignition module to the ignition module connector.

Turn the ignition on and test using the XR25 test kit.

Renew the passenger airbag module if the fault is now memorised (fault no longer declared present).

Disconnect the computer connector and fit the 30 track adapter.

The XRBAG tool must be used to measure the resistance of the adapter cable labelled A.

If the value obtained is not correct, check the wiring on the 30 track connector (tracks 13 and 14) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).

Reconnect the passenger airbag ignition module.

<b>AFTER REPAIR</b>	<p>Erase the computer's memory using the command GO** then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81*.</p> <p>Destroy the passenger airbag module if it has been renewed (tool Elé. 1287).</p>
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## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

7	<p><b>Bargraph 7 RH side permanently illuminated</b></p> <p><b><u>Passenger airbag line 1 or 2 insulation</u></b></p> <p>XR25 aid:    *27 : CC.1 : Short circuit to 12 volts                               CC.0 : Short circuit to earth</p>	Fiche n° 49
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<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
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Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and remove the top of the dashboard to access the passenger airbag module.  
Check the condition of the 2 triggering cables.

Disconnect the computer connector and fit the 30 track adapter.  
The XRBAG tool must be used to measure the insulation depending on the fault type on the adapter cables labelled A and C.  
If one of the values is not correct, check the wiring on the 30 track connector (tracks 13 and 14 for cable A and 6 / 7 for cable C) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).  
Reconnect the passenger airbag ignition modules.

**AFTER REPAIR**

Erase the computer's memory using the command GO\*\* then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*.

Destroy the passenger airbag module if it has been renewed (tool Elé. 1287).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

8	<p><b>Bargraph 8 LH side permanently illuminated</b></p> <p><u>Driver's pretensioner line resistance</u></p> <p>XR25 aid:    *08 :   CC : Short circuit                      CO : Open circuit</p>	Fiche n° 49
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<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
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Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and check that the driver's pretensioner ignition module is correctly connected.

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Disconnect the ignition module of the driver's pretensioner and connect a dummy ignition module to the ignition module connector.  
Turn the ignition on and test using the XR25 test kit.  
Renew the driver's pretensioner if the fault is now memorised (fault no longer declared present).

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The XRBAG tool must be used to measure the resistance at point C1 (seat connector) of the driver's pretensioner line.  
If the value obtained is not correct, renew the wiring between points C1 and C3 (seat wiring).

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Disconnect the computer connector and fit the 30 track adapter.  
The XRBAG tool must be used to measure the resistance of the adapter cable labelled E.  
If the value obtained is not correct, check the wiring on the 30 track connector (tracks 1 and 2) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).

Reconnect the driver's pretensioner ignition module.

<b>AFTER REPAIR</b>	Erase the computer's memory using the command GO** then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81*. Destroy the pretensioners if they have been renewed (tool Elé. 1287).
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### FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

8	<p><b>Bargraph 8 RH side permanently illuminated</b></p> <p><u>Passenger pretensioner line resistance</u></p> <p>XR25 aid:    *28 : CC : Short circuit                      CO : Open circuit</p>	Fiche n° 49
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<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
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Lock the computer using the command G80\* on the XR25 test kit.  
Turn the ignition off and check that the passenger pretensioner ignition module is correctly connected.

Disconnect the **passenger pretensioner** ignition module and connect a dummy ignition module to the ignition module connector.

Turn the ignition on and test using the XR25 test kit.

Renew the **passenger pretensioner** if the fault is now memorised (fault no longer declared present).

The XRBAG tool must be used to measure the resistance at point C1 (seat connector) of the passenger pretensioner line.  
If the value obtained is not correct, renew the wiring between points C1 and C3 (seat wiring).

Disconnect the computer connector and fit the 30 track adapter.  
The XRBAG tool must be used to measure the resistance of the adapter cable labelled D.  
If the value obtained is not correct, check the wiring on the 30 track connector (tracks 3 and 4) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).

Reconnect the **passenger pretensioner ignition module**.

**AFTER REPAIR** Erase the computer's memory using the command GO\*\* then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*.  
Destroy the pretensioners if they have been renewed (tool Elé. 1287).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

9	<p><b>Bargraph 9 RH side permanently illuminated</b></p> <p><b>Fiche n° 49</b></p> <p><u>Pretensioner lines insulation</u></p> <p>XR25 aid:    *29 : CC.1 : Short circuit to 12 volts                        CC.0 : Short circuit to earth</p>
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<b>NOTES</b>	Never take measurements on the triggering lines with a device other than the XRBAG.
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Lock the computer using the command G80\* on the XR25 test kit.  
Disconnect the driver's pretensioner ignition module and connect a dummy ignition module to the ignition module connectors.  
Turn the ignition on and test using the XR25 test kit.  
If the fault is now memorised (fault no longer declared present), check the condition of the seat wiring.  
Renew the driver's pretensioner if the wiring is not faulty.  
Then carry out the same operation on the passenger pretensioner (if there is no fault on the driver's side).

The XRBAG tool must be used to measure the insulation depending on the fault type at point C1 (seat connector) of the driver's pretensioner line.  
If the value obtained is not correct, renew the wiring between points C1 and C3 (seat wiring).  
Then carry out the same operation on the passenger pretensioner (if there is no fault on the driver's side).

Disconnect the computer connector and fit the 30 track adapter.  
The XRBAG tool must be used to measure the insulation depending on the fault type on the adapter cables labelled D (passenger) and E (driver).  
If one of the values obtained is not correct, check the wiring on the 30 track connector (tracks 3 / 4 for cable D and 1/2 for cable E) and renew the wiring if necessary.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).  
Reconnect the seat belt pretensioner ignition modules.

**AFTER REPAIR** Erase the computer's memory using the command GO\*\* then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*.

Destroy the pretensioner(s) if it (they) has (have) been replaced (tool Elé. 1287).



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 80px;"> <div style="text-align: center; margin-bottom: 5px;">10</div> <div style="background-color: black; width: 40px; height: 20px; margin: 0 auto;"></div> </div>	<p><b>Bargraph 10 LH side permanently illuminated</b></p> <p><u>Short circuit or insulation to 12 volts of the warning light</u></p>	Fiche n° 49
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### NOTES

Use the XRBAG 30 track adapter to work on the computer connector.

Lock the computer using the command G80\* on the XR25 test kit.  
 Check the condition of the warning light bulb.  
 Ensure that it is insulated with respect to the 12 volts of the link between the warning light and track 8 of the 30 track connector.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).

### AFTER REPAIR

Erase the computer's memory using the command GO\*\* then turn the ignition off.  
 Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81\*.



## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">10</div> <div style="border: 1px solid black; width: 50px; height: 30px; background-color: black; margin: 0 auto;"></div>	<b>Bargraph 10 RH side permanently illuminated</b> <u>Open circuit or insulation to earth of the warning light line</u>	Fiche n° 49
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<b>NOTES</b>	Use the XRBAG 30 track adapter to work on the computer connector.
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***Warning light extinguished  
with after ignition***

<b>NOTES</b>	None
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Lock the computer using the command G80\* on the XR25 test kit.  
 Check the condition of the warning light bulb.  
 Check the continuity of the link between the warning light and track 8 of the 30 track connector.  
 Check that there is 12 volts at the warning light.

If the tests carried out have not allowed the fault to be located, disconnect the computer connector and fit the XRBAG 30 track adapter. Use the XRBAG in it instrument panel warning light operating test function using the grey wire on the adapter.  
 If the warning light can be illuminated with the XRBAG, renew the airbag computer (refer to the "help" section for this operation).  
 If the warning light cannot be operated, carry out the tests described previously.

***Warning light illuminated  
with after ignition***

<b>NOTES</b>	None
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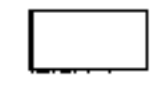
Lock the computer using the command G80\* on the XR25 test kit.  
 Check the insulation with respect to earth of the link between the warning light and track 8 of the 30 track connector.

If the tests carried out have not allowed the fault to be located, renew the airbag computer (refer to the "help" section for this operation).

<b>AFTER REPAIR</b>	Erase the computer's memory using the command GO** then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81*.
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## FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<p>14</p> 	<p><b>Bargraph 14 LH side</b></p> <p><u>Computer locked</u></p>	Fiche n° 49
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<b>NOTES</b>	None
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This bargraph 14 LH side allows the locked status of the computer to be displayed. When it is illuminated, all the triggering lines are inhibited, preventing the airbags and seat belt pretensioners from firing.

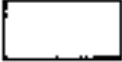
This bargraph is normally illuminated in 2 cases :

- the computer is new (it is sold locked),
- the computer locking command of the the XR25 test kit has been used when working on the vehicle (G80\*).

<b>AFTER REPAIR</b>	<p>Erase the computer's memory using the command GO** then turn the ignition off. Carry out another test using the XR25 test kit, and, if there are no faults, unlock the computer using the command G81*.</p>
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FAULT FINDING - INTERPRETATION OF XR25 BARGRAPHS

<div>17-18-19</div> <div>  </div>	<div>Bargraphs 17, 18 and 19 LH side</div> <div><u>Computer configuration</u></div> <div style="text-align: right;">Fiche n° 49</div>
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<b>NOTES</b>	None
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Bargraphs 17, 18 and 19 LH side allow the configuration of the computer to be displayed and to check that it is the correct one for the vehicle.

<b>AFTER REPAIR</b>	<div>Erase the computer's memory using the command GO** then turn the ignition off.</div> <div>Redo the test using the XR25 test kit.</div>
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**FAULT FINDING - CHECKING CONFORMITY**

**NOTES**

Only carry out this conformity check after a complete check using the XR25 test kit.

Order of operations	Function to be checked	Action	Bargraph	Display and notes
1	Dialogue with XR25	D49 (ISO selector on S8)		<div style="border: 1px solid black; padding: 2px; display: inline-block;">1.Ab</div>
2	Computer conformity	#02		XA0 (X64) : <div style="border: 1px solid black; padding: 2px; display: inline-block;">7</div>
3	Computer configuration			Check that the computer configuration defined by these 3 bargraphs corresponds to the vehicle equipment.
4	Operation of warning light - computer initialisation check	Ignition turned on	<div style="text-align: center;">17 / 18 / 19</div> <div style="display: flex; justify-content: space-around; border-top: 1px solid black; border-bottom: 1px solid black;"> <div style="width: 40px; height: 20px; background-color: black;"></div> <div style="width: 40px; height: 20px; background-color: white;"></div> </div>	Warning light illuminated for 3 seconds with ignition turned on (refer to fault finding if it remains illuminated or does not illuminate).



**FAULT FINDING - CHECKING CONFORMITY**

Checking the seat belt pretensioner circuits on a  
computer without the airbag function

**NOTES**

None

Ignition off, disconnect the computer connector and fit the XRBAG 30 track adapter.  
Turn the ignition on and check the feed voltage of the computer between terminals labelled earth and + after ignition.  
Perform the necessary operations to ensure a voltage between 10.5 volts and 16 volts.

The XRBAG tool must be used to measure the resistance and perform leakage tests to the positive and earth on the adapter cables labelled D and E.  
If the values obtained on both circuits are correct, there are no faults on the seat belt pretensioner circuits. Reconnect the computer.  
If one of the values obtained is not correct, check the wiring on the 30 track connector (tracks 3 / 4 for cable D and 1/2 for cable E) and renew the wiring if necessary.

The XRBAG tool must be used to measure the resistance and perform leakage tests to the positive and earth at point C1 of the faulty pretensioner (cable D: passenger and E: driver).  
If all the values are correct, renew the wiring between points C0 and C1, then redo the test on the adapter to check the repair.

The XRBAG tool must be used to measure the resistance and perform leakage tests to the positive and earth at point C3 (pretensioner ignition module).  
If all the values obtained are correct, renew the wiring between points C1 and C3 (seat wiring), then redo the test on the adapter to check the repair.  
If one of the values is not correct at C3, renew the seat belt pretensioner, then redo the test on the adapter to check the repair.

**AFTER REPAIR**

Destroy the pretensioner(s) if it (they) has (have) been renewed (tool Elé. 1287).



## FAULT FINDING - HELP

### RENEWING THE COMPUTER

Airbag computers are sold locked to prevent any risk of them triggering accidentally (all triggering lines are inhibited). This operating mode is signalled by the warning light on the instrument panel being illuminated.

When renewing an airbag computer, follow this procedure :

- ensure the ignition is off,
- replace the computer,
- test using the XR25 test kit,
- unlock the computer using the command G81\*, only if no faults are declared by the test kit.