Clio

8 Electrical equipment

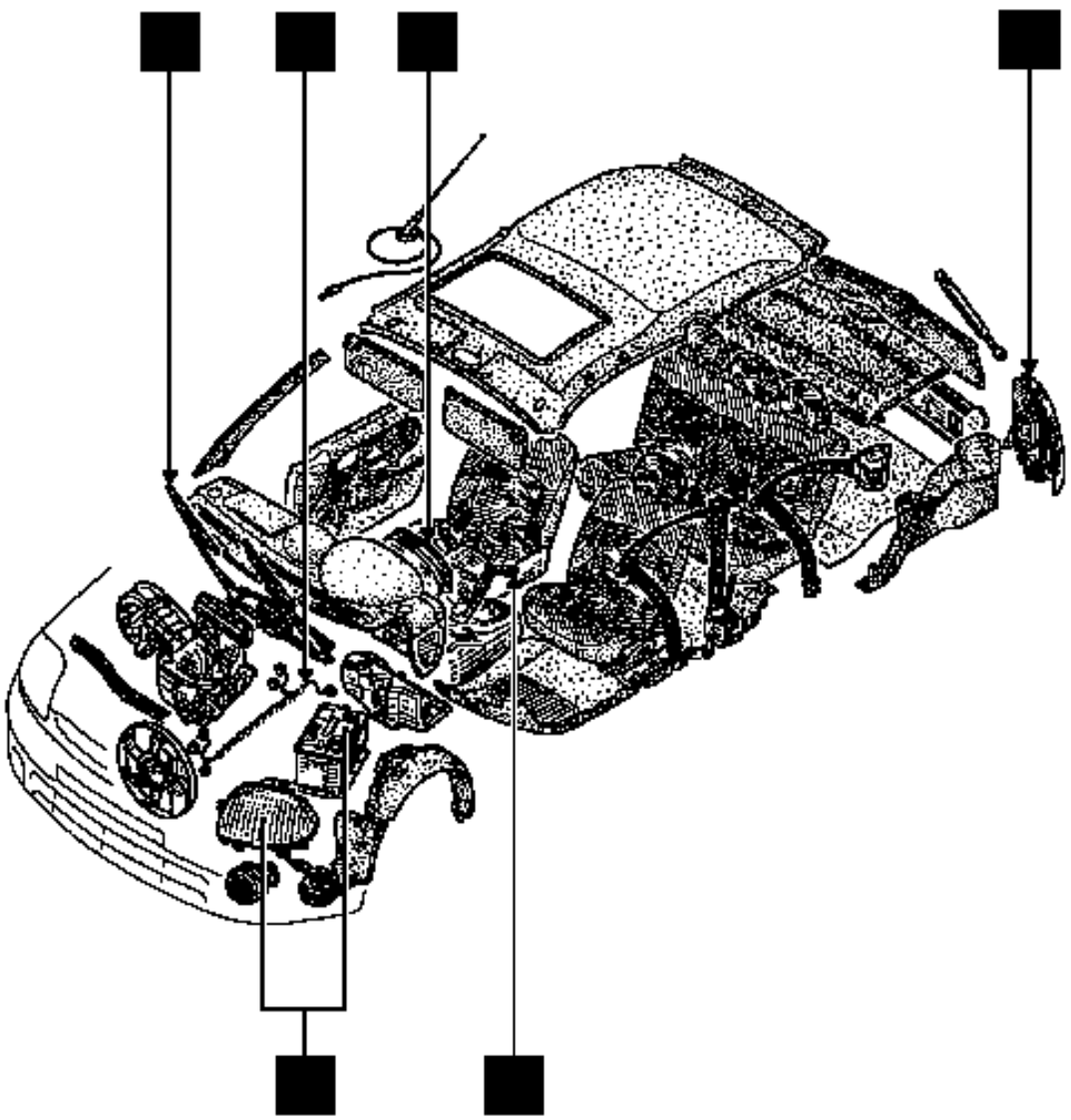
BB0A - BB0C - BB0D - BB0E - CB0A - CB0C - CB0D - CB0E

77 11 197 375 **DECEMBER 1997** **Edition Anglaise**

"The repair methods given by the manufacturer in this document are based on the technical specifications current when it was prepared.

The methods may be modified as a result of changes introduced by the manufacturer in the production of the various component units and accessories from which his vehicles are constructed."

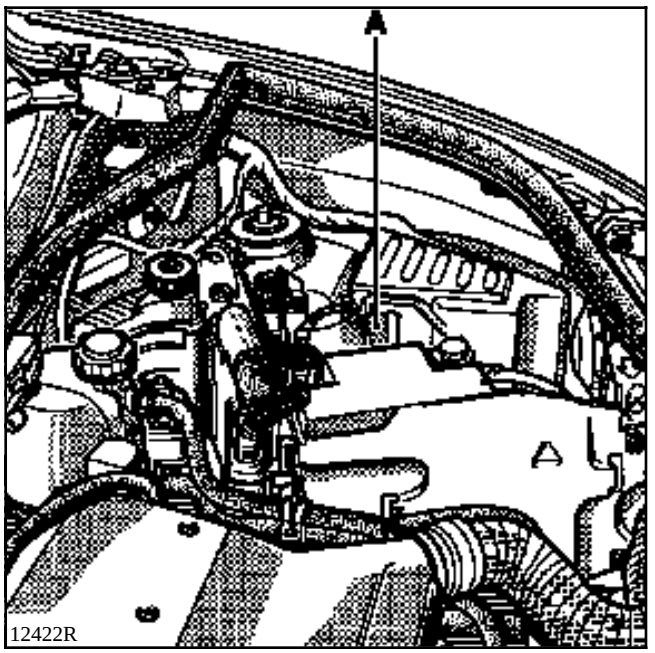
EXPLODED VIEW



Electrical Equipment

Contents

To remove the battery, slacken mounting (A).



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 essential :

- 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

It should be remembered that a battery:

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

1) DANGER = ACID

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

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

- to protect your eyes with goggles,
- to wear anti-acid gloves and clothing.

If acid splashes on to your clothing, rinse all the contaminated areas thoroughly in water. If your eyes are affected, 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 clothing.

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.

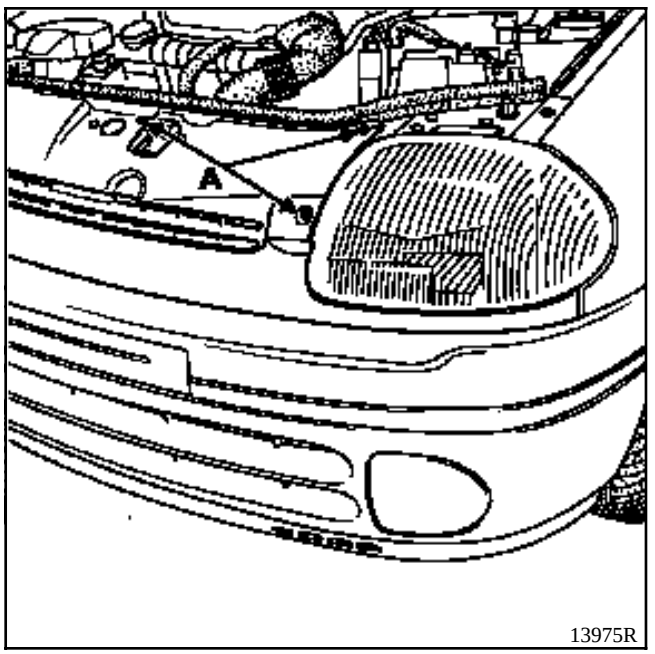
- Check that the "consumers" are switched off, before disconnecting or reconnecting a battery.
- When a battery is being charged in a room, switch off the charger before connecting or disconnecting the battery.
- Do not put any metallic items onto the battery so as not to cause a short circuit across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

NOTE : The lens unit and indicators cannot be separated.

REMOVAL - REFITTING

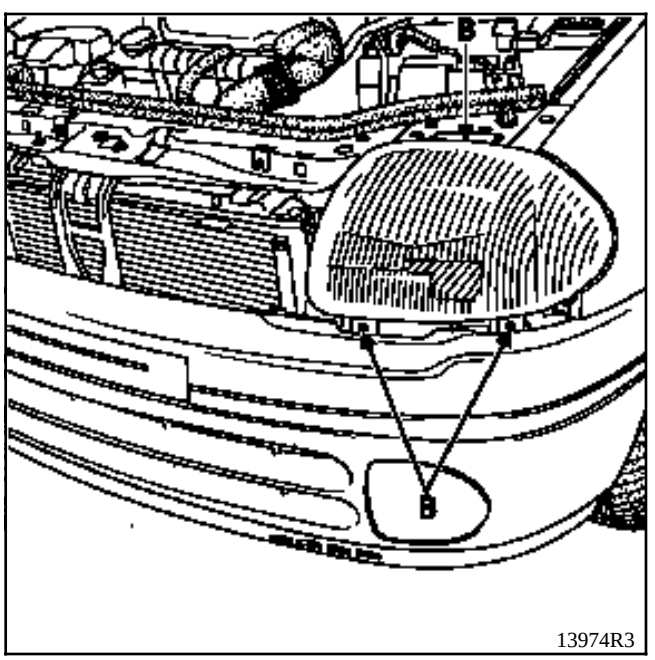
After disconnecting the battery.

Remove:
- the radiator grille by its five bolts (A),



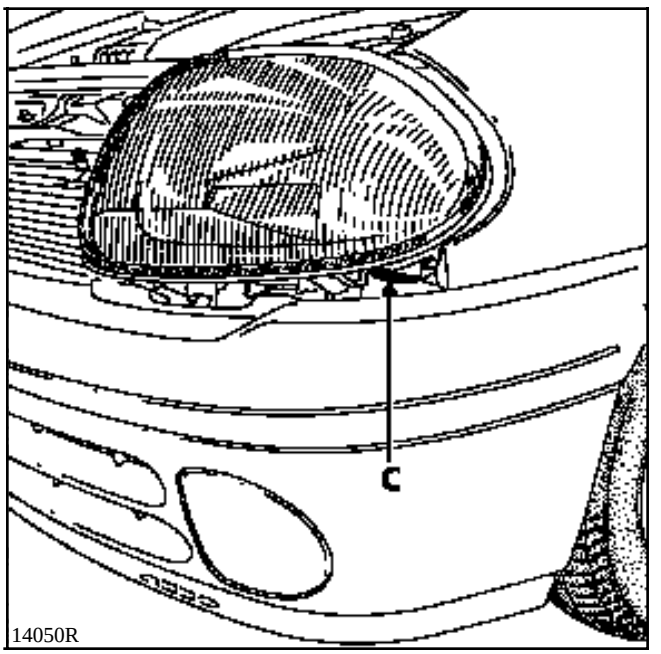
13975R

- the three headlight mounting bolts (B).

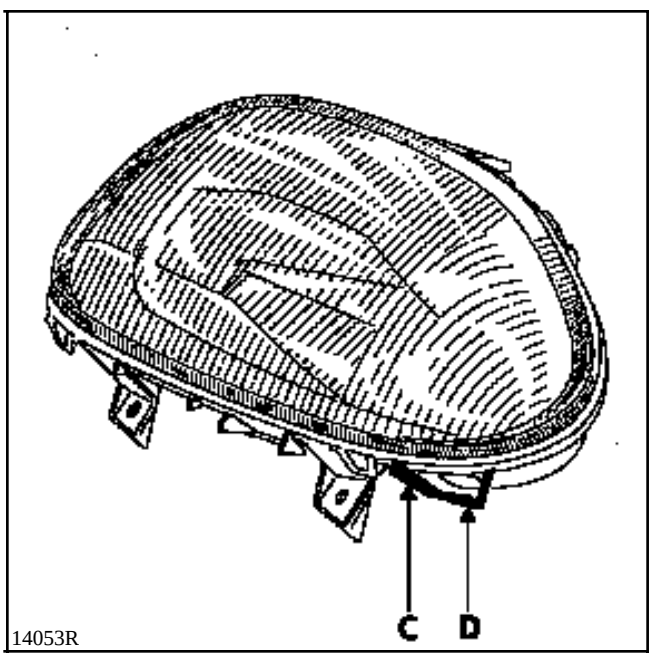


13974R3

To facilitate removal and refitting of the headlight unit, cut bracket (C) using cutting pliers and break off part (D).



14050R



14053R

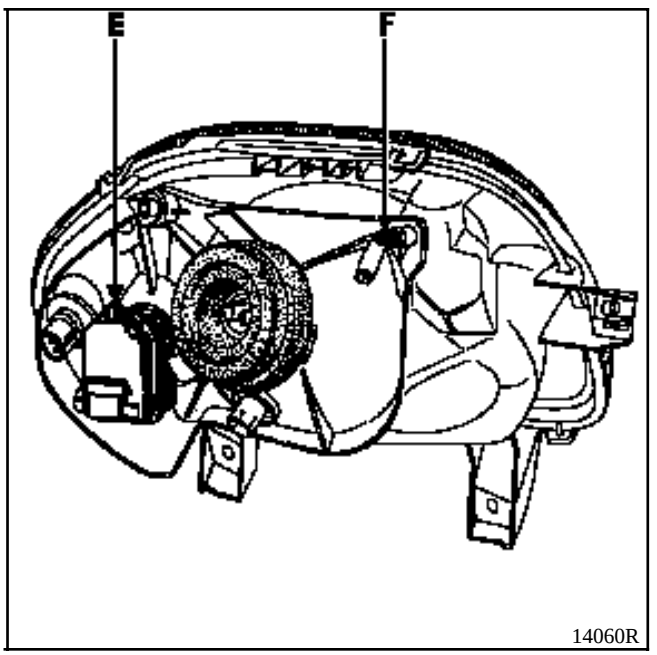
The headlight unit is refitted in the reverse order to removal.

IMPORTANT : These headlights are fitted with plastic lenses. When replacing the dipped headlight / main beam headlight bulb, only used approved H4 bulbs (bulbs sold by SODICAM are approved).

To clean the headlights, use a soft cloth or cotton wool, dampened with soapy water. Alcohol based products may not be used.

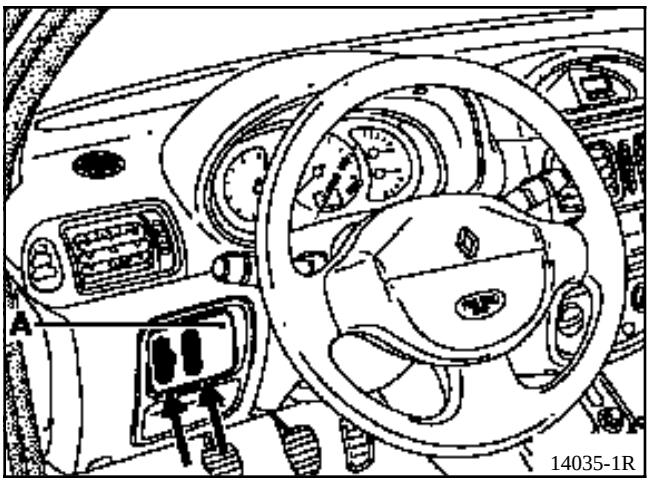
ADJUSTMENT

Ensure the vehicle is unladen and adjust the height using bolt (E) and direction using bolt (F).

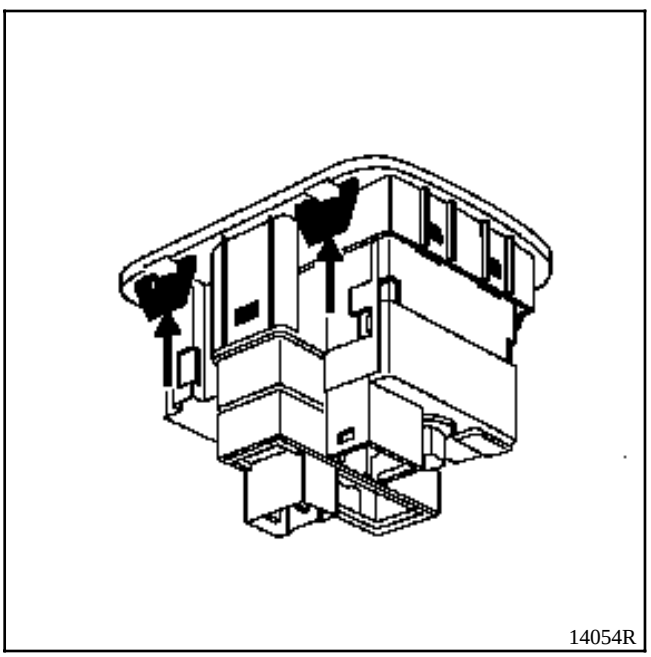


REMOVING - REFITTING OF THE CONTROL

Unclip the control mounting (A) using a small flat blade screwdriver as a lever in the locations shown, taking care to avoid marking the plastic.



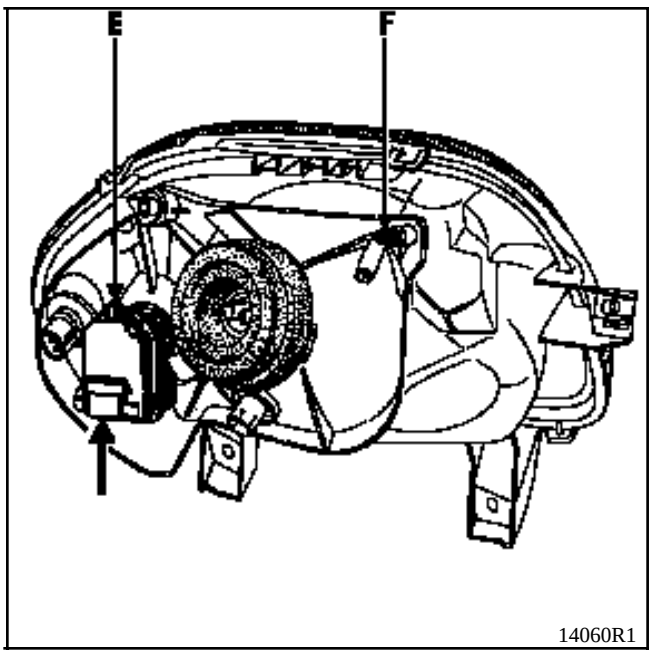
Unclip the remote adjustment control from its mounting.



NOTE : refer to the Wiring Diagram Technical Note for information on connections.

REMOVING - REFITTING THE RECEIVER

Disconnect the remote adjustment receiver connector.



Turn the receiver an eighth of a turn towards the outside of the vehicle and release the lens unit then release the ball joint from the parabola.

SPECIAL NOTES FOR REFITTING

Keep the parabola towards the rear of the lens unit by pulling on the base of the bulb and click the ball joint into position.

Now refit the receiver to the lens unit by turning it an eighth of a turn.

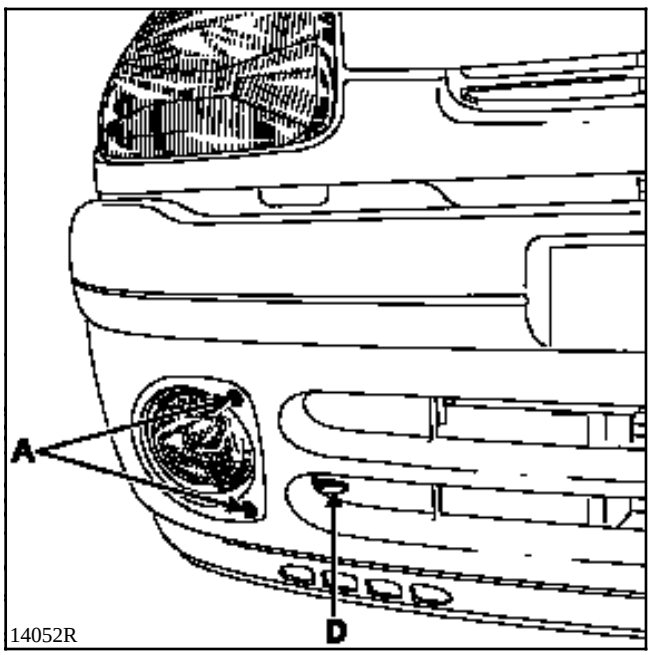
Reconnect the connector.

Set the remote adjustment control to "0" and adjust the headlight:
- bolt (E) for height adjustment,
- bolt (F) for direction adjustment.

For vehicles fitted with front fog lights.

REMOVAL - REFITTING

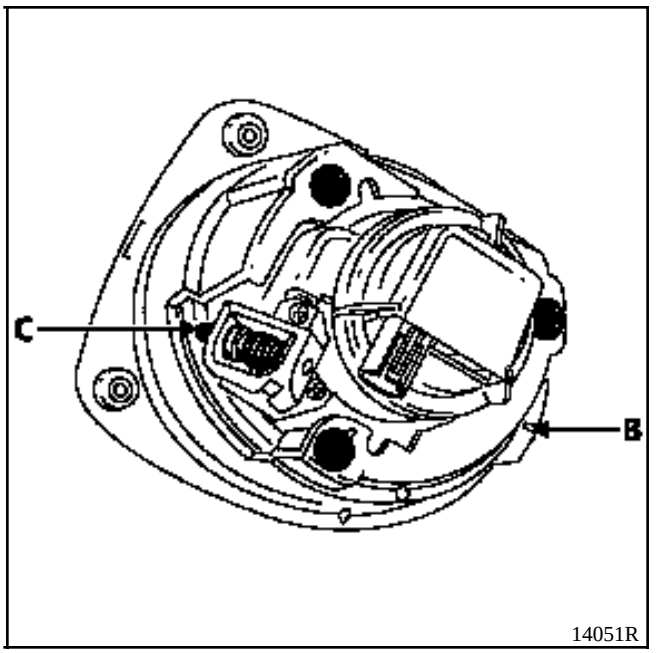
Remove the two mounting bolts (A).



Remove the lens unit towards the front, releasing bracket (B).

Disconnect the connector.

The light is secured to its mounting by three nuts.

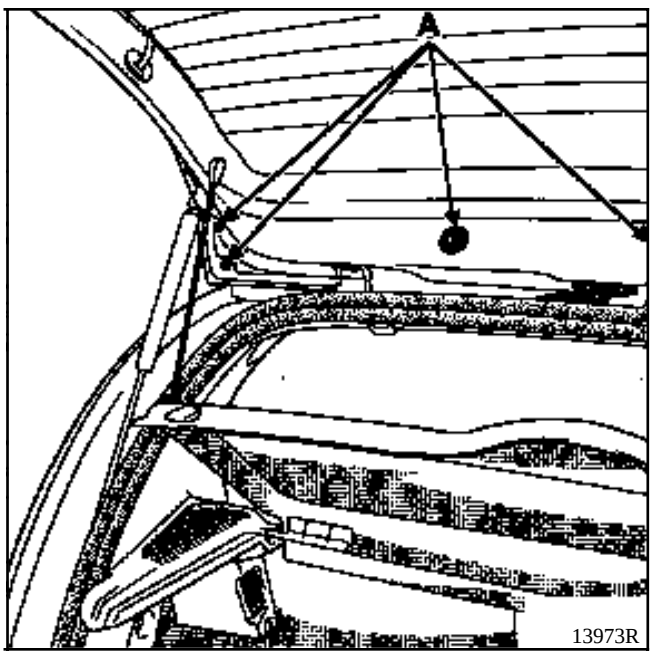


When refitting, adjust the light using bolt (C) via opening (D) with a **6 mm** socket.

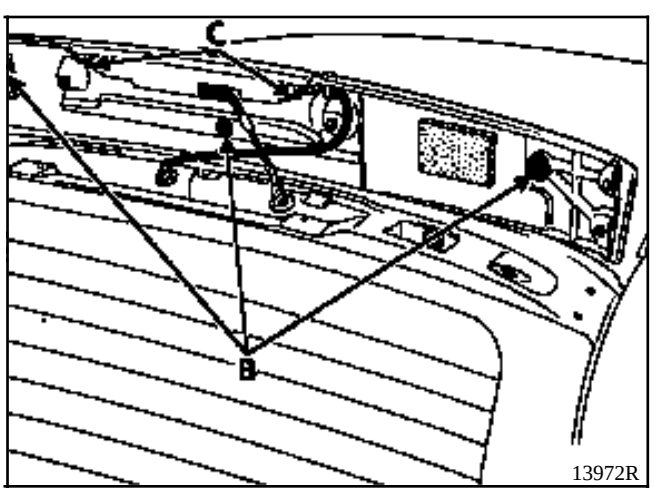
HIGH LEVEL STOP LIGHT

REMOVAL - REFITTING

With the tailgate raised, remove the six bolts (A) retaining the upper strip.



With the tailgate lowered, unclip the upper strip (three clips (B)).



Disconnect the connector and remove the two bolts (C) mounting the light.

NOTE:
The bulbs cannot be removed.
If there is a fault, replace the complete light unit.

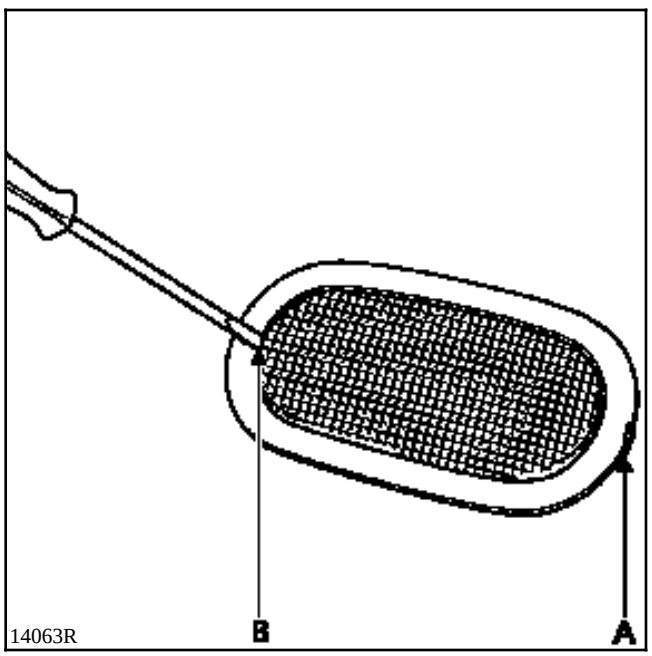
COURTESY LIGHT WITHOUT MAP READING LIGHT

REMOVAL - REFITTING

Unclip the headlining assembly from the roof using a small screwdriver as a lever in lug (A) and disconnect the connector.

Removing the lens

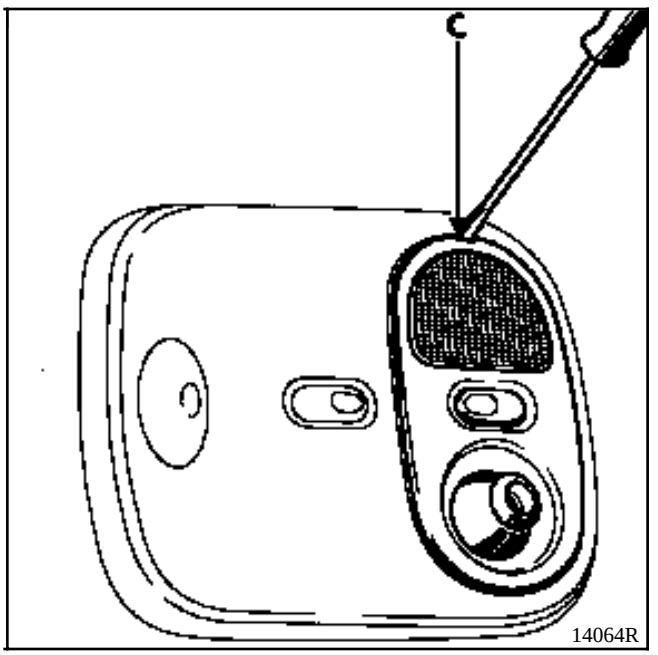
To replace the bulb, unclip the lens using a small screwdriver as a lever (B).



COURTESY LIGHT WITH MAP READING LIGHT

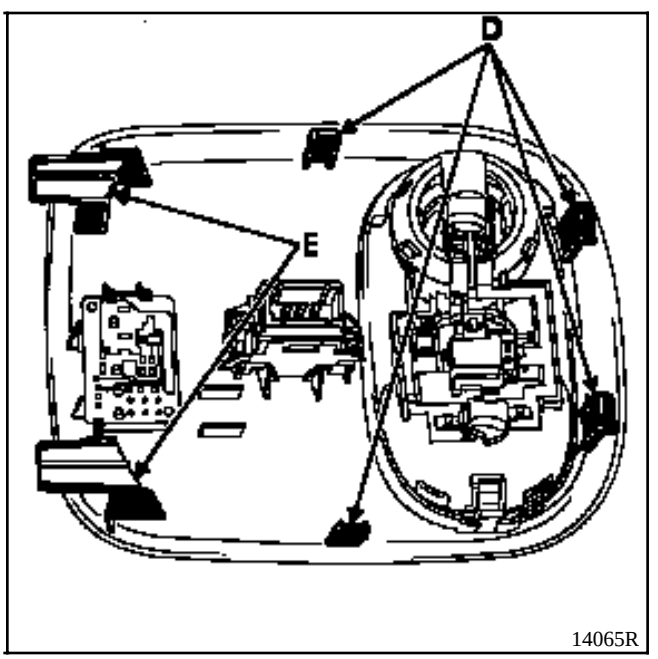
REMOVAL - REFITTING

Unclip the courtesy light mounting assembly using a small screwdriver as a lever in lug (C) and disconnect the connector.



Removing the courtesy light console

The courtesy light console is held in the headlining by four clips (D) and two brackets (E).



FUSE BOX (passenger compartment)

This unit is located in the passenger compartment on the driver's side (at the end of the dashboard).

Allocation of fuses (depending on equipment level).

Symbol	Rating	Description
	15	Air bag / Multi-timer unit (BMT)
	15	Stop lights / Instrument panel / Diagnostic socket
	15	Heated rear screen / AC computer / Rear wiper
	15	Windscreen wipers
	10	ABS
	10	Engine cooling fan assembly / Multi-timer unit / AC computer
	15	Radio / Cigar lighter / Clock
	15	Horn
	10	LH dipped headlight
	10	RH dipped headlight
	10	RH main beam headlight
	10	LH main beam headlight
	20	Not used
	10	Heated rear view mirrors
	20	Front fog lights
	20	Not used
	20	Not used

Allocation of fuses (depending on equipment level) (cont).

Symbol	Rating	Description
MULTI TEMPO	5	Multi-timer unit
	15	Direction indicators
	15	Rear fog light
	10	LH side light
	10	RH side light
	2	Immobiliser antenna ring
	20	Interior lighting / Electric rear view mirrors / Radio / Diagnostic socket / Clock
	30	Heated rear screen
	20	Central door locking
	30	Electric windows
	20	Headlight washers
	30	Heater fan
	20	Heated seats
	20	Sunroof

NOTE : To determine the exact position of the fuses, refer to the vehicle fuse box label or the Technical Note "Wiring Diagrams".

Coded key immobiliser system

GENERAL

The immobiliser is controlled by a key recognition system (known as coded key immobiliser system).

An independently operating coded chip without a battery is integrated into each head of the vehicle keys.

When the ignition is switched on, an antenna ring around the ignition switch interrogates and captures the code from the head of the key and transmits it to the multi-timer unit (BMT).

If the multi-timer unit recognises the code, the engine can be started.

The immobiliser is activated a few seconds after the key is withdrawn from the ignition and this is shown by the flashing of the red immobiliser warning light on the instrument panel.

If there is a fault in the key recognition system, a security code may be entered using the XR25 only.

This code may be communicated to the repair agent (on his request) by the local assistance network (depending on country, for example: Delta Assistance on 0800.05.15.15 for France, NVSR for the UK by fax only).

IMPORTANT: The repair agent must inform the customer that the immobiliser system will reset itself automatically 10 minutes after switching the ignition off.

NOTES

This system may be fitted to petrol or diesel vehicles.

Petrol vehicles: the immobiliser function is carried out by the injection computer.

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

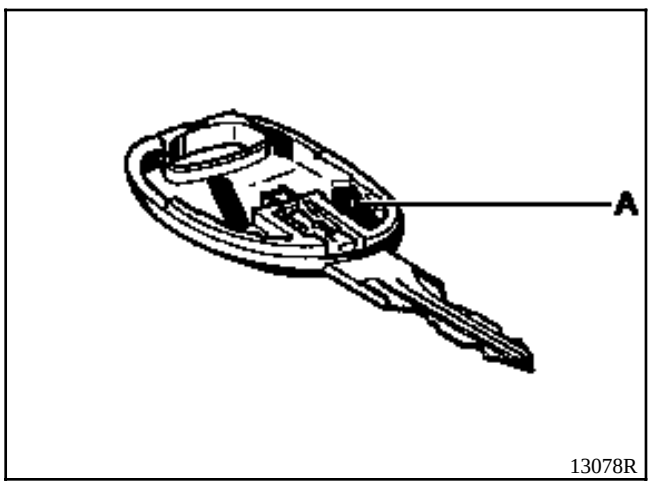
If the vehicle is fitted with a remote control for door locking, this has no effect on the immobiliser system (see section 88).

On these vehicles, the identification number of the key heads contains eight alphanumeric characters, beginning with the letter E or A.

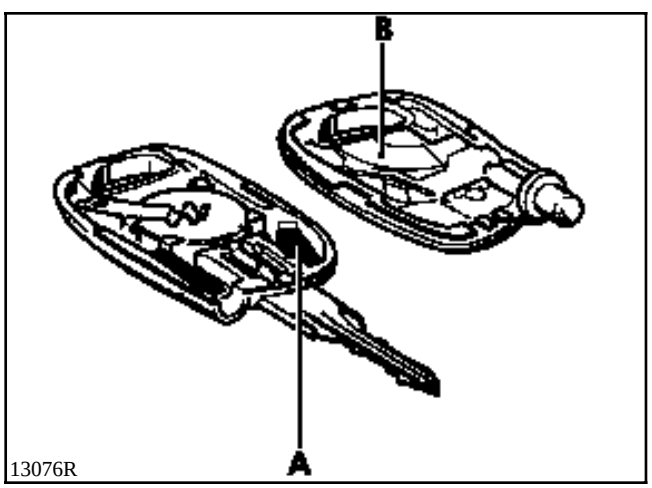
DESCRIPTION

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

The system comprises:
- two key heads fitted with either:
  - a single coded chip for controlling the immobiliser (A),



  - a coded chip (A) for controlling the immobiliser and the electronic unit for the remote control (B) allowing the opening elements to be locked or unlocked (depending on equipment).

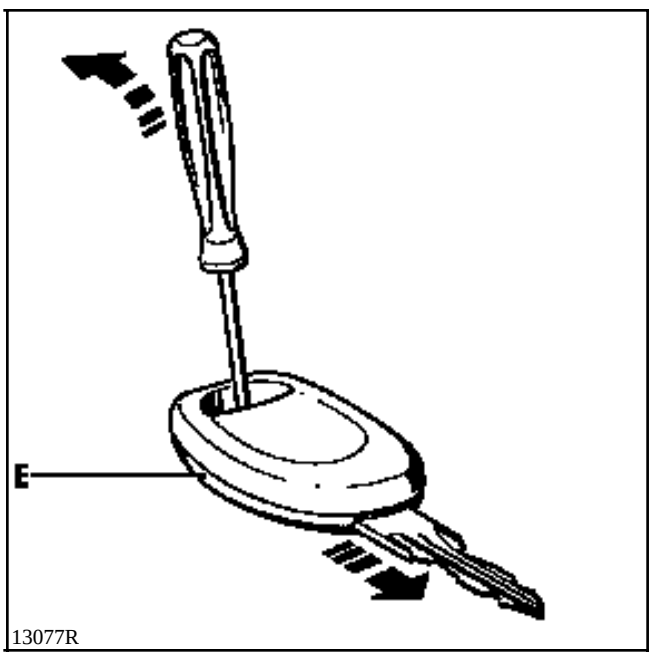


NOTE : To remove the metal insert, move the retaining tab aside before removing it. When refitting, check the insert is correctly clipped into position.

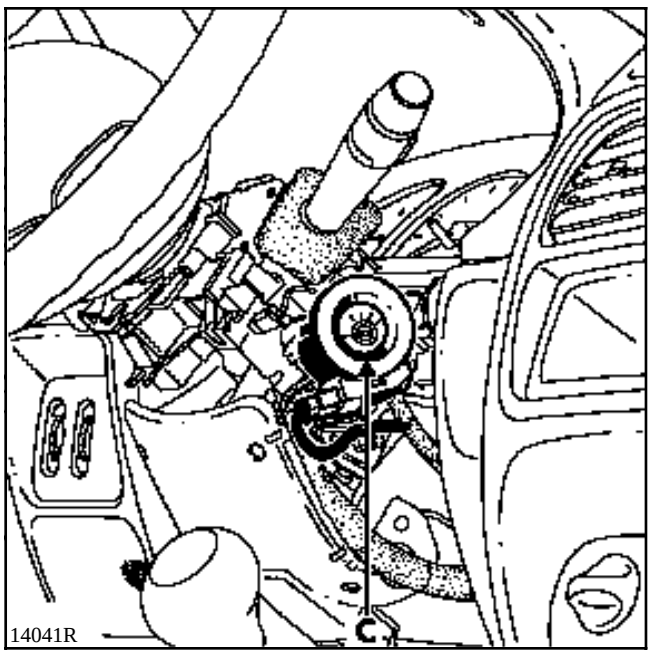
Opening a key head

Place the key head on a table with the metal insert facing downwards.

Use a small screwdriver as a lever as shown below, ensuring that the end of the screwdriver is placed on the lower section (E) of the key head. This allows the upper section to slide off the lower section.



- An antenna ring (C) around the ignition switch, with an electronic unit which transmits the key code to the multi-timer unit (D).

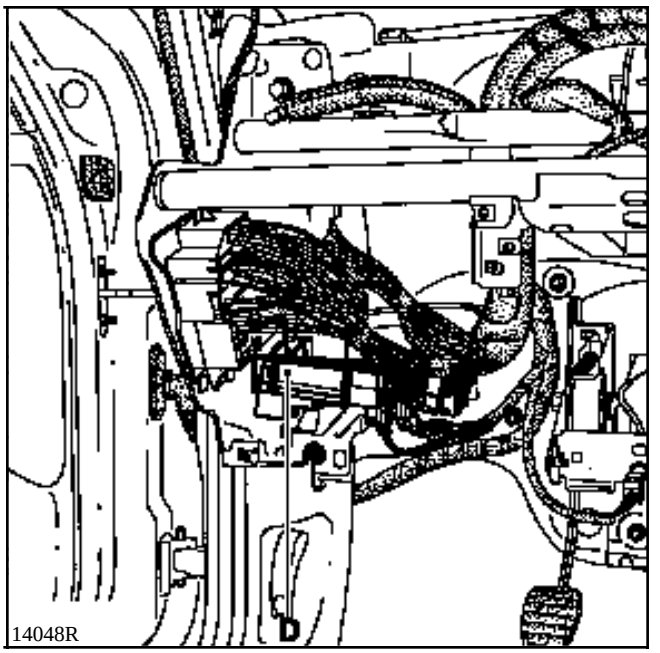


NOTE : This antenna ring is not coded.

REMOVAL - REFITTING

Remove the half cowlings from under the steering wheel, release the antenna ring from the ignition switch and disconnect its connector.

- A multi-timer unit (BMT) (D) in the dashboard on the left hand side.



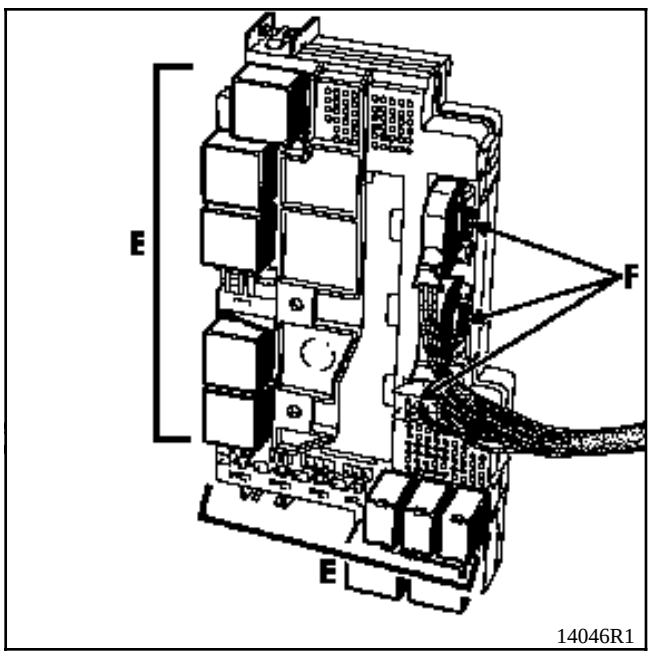
This multi-timer unit includes most of the functions of the smaller computers, including the immobiliser decoder unit.

It therefore has the following functions, among others:
- decoding of the key signal from the antenna ring,
- management of the engine immobiliser system by the sending of a code to the injection computer (petrol) or coded solenoid valve (diesel) to authorise the vehicle to be started
- operation of the red immobiliser warning light,
- locking and unlocking of the opening elements (depending on version),
- timed illumination of the courtesy light (vehicle fitted with a door locking remote control).

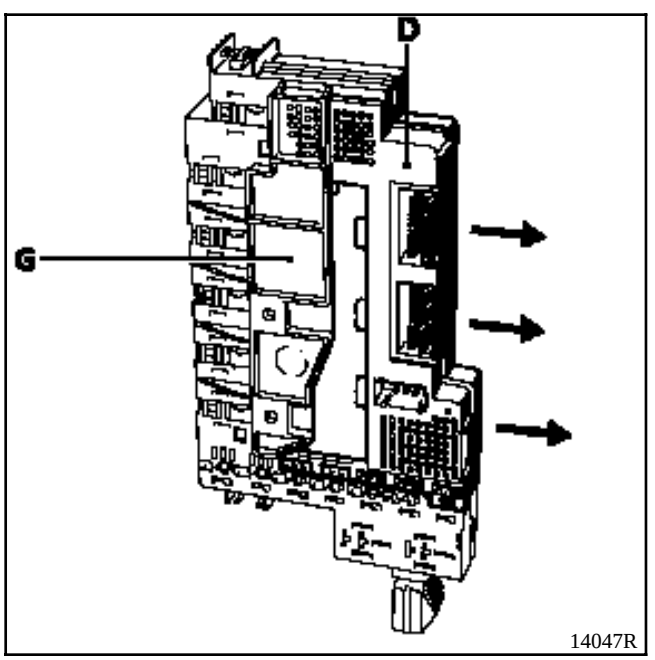
NOTE : refer to section 87 for information on the other functions controlled by the multi-timer unit.

Removal - Refitting

From under the dashboard on the left hand side:
- remove the relays (E) (depending on equipment) noting their locations,
- disconnect the connectors (F),



- release the multi-timer unit (D) and its mounting (G) as shown below.



- A red immobiliser warning light on the instrument panel used to :
  - indicate activation of the engine immobiliser system,
  - signal a fault in the system for vehicles with a coded solenoid valve (diesel) or non-recognition of the key,
  - signal entry into the door locking remote control resynchronisation mode (depending on equipment).

- An injection warning light (petrol vehicle) which indicates a fault in the:
  - injection,
  - engine immobiliser system when the engine is running (flashes during deceleration and at idle speed).

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 switching the ignition on, the antenna ring analyses the code from the key and transmits it to the multi-timer unit (BMT).

If the code is not recognised by the multi-timer unit, the injection warning light (petrol) illuminates for a few seconds and extinguishes while the red immobiliser warning light flashes (rapid flashing).

If the code is recognised by the multi-timer unit, it sends a code to the injection computer (petrol) or 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 the 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 unlocks the injection system (petrol) or coded solenoid valve (diesel) and the engine may be started.

    When the ignition is switched on, the injection warning light (petrol) and the immobiliser warning light illuminate for 3 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 switched on, the injection warning light flashes (petrol) and the red engine immobiliser warning light illuminates permanently then extinguishes or the red immobiliser warning light remains illuminated permanently (diesel) indicating that the coded solenoid valve has not recognised the code.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 antenna ring.

IMPORTANT: 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 too low, the engine cannot be started, even by pushing the vehicle.

REPLACING A KEY HEAD

The coded chip in the key head or the remote control (depending on equipment) is faulty :

- order a replacement key head using the number in the faulty key head (eight alphanumeric characters beginning with the letter E or A). If the key head is from a remote control type key, carry out a resynchronisation operation.
  IMPORTANT: The resynchronisation procedure differs depending on if the multi-timer unit has been replaced or not (see specific or simple resynchronisation procedure in section 88).

- if the customer requires the fault to be repaired immediately (2nd key unavailable) a complete kit may be fitted to the vehicle (multi-timer unit plus two key heads) (see replacing a complete kit).

The key has been lost:

- order a replacement key head using the number in the key head of the 2nd key (eight alphanumeric characters beginning with the letter E or A) or on the 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. If the key head is from a remote control type key, carry out a resynchronisation operation.
  IMPORTANT: The resynchronisation procedure differs depending on if the multi-timer unit has been replaced or not (see specific or simple resynchronisation procedure in section 88).

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

NOTE: if the key head number cannot be located (both keys lost together with the label), the complete kit must be replaced (multi-timer unit, plus 2 transponder keys, plus injection computer or coded solenoid valve electronic unit).

REPLACING THE MULTI-TIMER UNIT (BMT) ALONE

A new multi-timer 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).

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

IMPORTANT: when a multi-timer 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

Diesel vehicles

On these vehicles, the multi-timer unit is identical to the multi-timer unit of a petrol immobiliser system. When replacing it the new "diesel" part must be configured by means of the XR25 test kit. This configuration will enable the multi-timer unit to check that the coded solenoid valve is operating correctly (indicated by the immobiliser warning light) (see diesel configuration).

Vehicles fitted with a remote control

After replacing the multi-timer unit carry out a resynchronisation operation (see simple resynchronisation procedure, section 88).

PROGRAMMING PROCEDURE

The procedure is carried out using one key.

The XR25 must be used for this procedure to lock the key programming.

1. Ignition off, connection the XR25 to the vehicle and set the selector to S8.

Enter code D 5 6 (fiche n° 56), bargraphs **19 RH** and **19 LH** must be illuminated (programming not carried out). If both of these bargraphs are not illuminated, replace the multi-timer unit (this unit has already been used).

2. With one of the keys switch the ignition on for approximately 2 seconds (without starting the engine). Bargraph **18 LH** illuminates and bargraph **19 LH** extinguishes.
The red immobiliser warning light flashes.

3. Switch the ignition off and start command **G60*** to lock the programming. The red immobiliser warning light should flash (slow flashing). Bargraphs **19 RH** and **18 LH** should be extinguished.

4. Switch the ignition on for a few seconds (without starting the engine) to send the code to the injection computer or the coded solenoid valve.

5. Check the immobiliser system operates correctly with both keys.

Ignition off, the red immobiliser warning light should flash 10 seconds after switching the ignition off (slow flashing). Bargraph **10 LH** should be illuminated. The vehicle should not start when other keys are used.

NOTE : to simulate prevention from starting, before switching the ignition on, wait for the red warning light to flash slowly.

Enter G 0 4 * on the XR25, ignition still off (bargraph **9 LH** illuminates).
Switch the ignition on, the red immobiliser warning light should flash more quickly and the vehicle should be impossible to start.

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

Diesel configuration

On diesel vehicles the multi-timer unit must be configured in "diesel" using the XR25.

1. Ignition off, XR25 connected (ISO selector on **S8**).

Enter code D 5 6 (fiche n° 56), bargraph **1 RH** must be illuminated.

2. Enter programming mode

G 2 2 * 2 *

Bargraph **3 RH** must illuminate.
The configuration is complete.

REPLACING A KIT
(multi-timer unit plus two key heads)

If a kit is replaced it will be necessary to:
- programme the codes of the 2 new keys in the new multi-timer unit (supplied uncoded).
- erase the old code in the injection computer or coded solenoid valve using the security procedure (the code number for the old kit should be requested from the local assistance network, example **Delta Assistance** for France, NVSR for the UK by fax only)

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

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

NOTE : if the security code is entered when the multi-timer unit has the same code as the injection computer, or 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 security code number.

3. Remove the multi-timer unit with the ignition off.

4. Fit the new multi-timer unit, ignition off.

5. Connect the XR25, setting the ISO selector to S8.

Enter code D 5 6

Bargraphs **19 RH** and **19 LH** must be illuminated (programming not carried out).

6. **W**ith one of the keys switch the ignition on for approximately 2 seconds (without starting the engine). Bargraph **18 LH** illuminates and bargraph **19 LH** extinguishes.
The red immobiliser warning light flashes rapidly.

7. Switch the ignition off and start command **G60*** to lock the programming.
- the red immobiliser warning light should flash (slow flashing)
- bargraphs **19 RH** and **18 LH** should be extinguished.

8. Switch the ignition on for a few seconds, check that the red immobiliser warning light is illuminated permanently (diesel) or that the injection warning light is flashing (petrol).

9. Switch the ignition on for more than 10 consecutive seconds.

10. Switch the ignition off and wait for the red immobiliser warning light to flash slowly.

Enter command G 0 4 *

with the ignition still off (bargraph **9 LH** illuminates).

Switch the ignition on, the red immobiliser warning light flashes more rapidly.

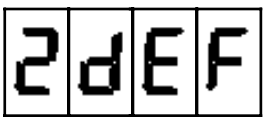
Follow the procedure for entering the security code (see procedure for entering the security code), using the code number corresponding to the old kit. This erases the old code memorised in the injection computer or the coded solenoid valve.

The XR25 should display "Fin" when the code has been entered.

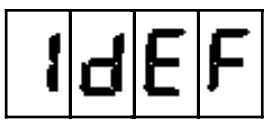
NOTE: On petrol vehicles use the XR25 to check that the injection computer has been correctly decoded (in injection fault finding).

Connect the XR25 to the diagnostic socket , position the ISO selector and enter the injection code : bargraph **2 RH side** (immobiliser) should be illuminated.

After entering 

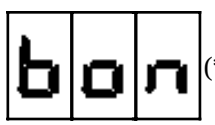
the message 

should appear on the display on the XR25. The erasure is complete.

- If the display shows 

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

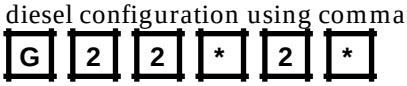
- If bargraph **2 RH side** (immobiliser) is extinguished,

  and the display shows 

(*22),

  this shows that the injection computer code has not been erased. In this case check the conformity of the security code and repeat the procedure.

11. Switch the ignition off and on again for a few seconds without starting the engine to programme the immobiliser code for the new kit in the injection computer or coded solenoid valve. The red warning light should illuminate for 3 seconds then extinguish.

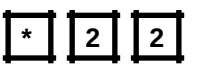
For diesel :
Ignition off, configure the multi-timer unit to "diesel" (see diesel configuration using command 

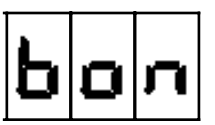
)

Bargraph **3 RH** should illuminate; the configuration is complete.

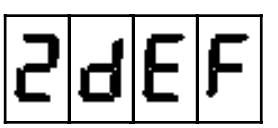
NOTE

- **petrol vehicles:** Using the XR25, check the injection computer has been programmed with the code. Bargraph **2 RH** (immobiliser) should be extinguished.

  After entering 

  the display should show 

  The injection computer has been correctly coded.

  If the display shows 

  the injection computer is still uncoded.

- **diesel vehicles:** When the ignition is switched on, check the immobiliser warning light extinguishes after 3 seconds.

12. Check the immobiliser system operates correctly with both keys.
Switch the ignition on and check that the red warning light illuminates for 3 seconds then extinguishes and that the vehicle can be started.

NOTE : starting prevention can be checked using the XR25:

- Ignition off, wait for the warning light to flash (slow flashing)

Enter G 0 4 *

- Switch the ignition on and check the vehicle cannot be started and that the red warning light flashes (rapid flashing).

13. The procedure is complete. After turning the ignition off and on again (for more than 2 seconds), check the vehicle can be started and erase all faults present in the multi-timer unit.

Vehicles fitted with a remote control

After replacing the kit carry out a resynchronisation operation (see simple resynchronisation procedure, section 88).

REPLACING THE INJECTION COMPUTER OR CODED SOLENOID VALVE

The injection computer and coded solenoid valve are supplied uncoded. The engine immobiliser code must be programmed in when they are fitted.

It is sufficient to carry out the following operations:
- switch the ignition on, without starting the engine, using the vehicle's coded key for a few seconds,
- switch the ignition off, the immobiliser will be activated approximately 10 seconds afterwards (red immobiliser warning light flashes).

NOTE : starting prevention can be checked using the XR25:

- Ignition off, wait for the warning light to flash (slow flashing)

Enter G 0 4 *

ignition still off (bargraph **9 LH** illuminates).

- Switch the ignition on, the red immobiliser warning light should flash more quickly and the vehicle should be impossible to start.

NOTE : For removal - refitting information, refer to the corresponding section (13 or 17).

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 multi-timer unit **MUST NOT** be supplied during the operation.

If the multi-timer unit is supplied, switching the ignition on causes a coded signal to be sent from the multi-timer unit to the injection computer or coded solenoid valve (and the code is then programmed).

To avoid memorising a code which could make the injection computer or coded solenoid valve electronic unit unusable after the test, the fuse (+ before ignition feed) for the multi-timer unit must be removed (fuse showing the "multi-tempo" symbol). This prevents the coded signal being sent when the ignition is switched on (the computer or the coded solenoid valve electronic unit remains uncoded).

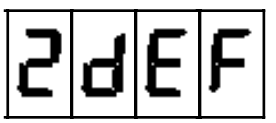
For petrol vehicles, the computer used for the test **MUST** have the same Part Number as the original computer on the vehicle (test computer may be damaged).

Checking (on 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 that the computer has not been coded during the test (example : incorrect operation).

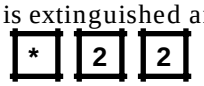
Connect the XR25 to the diagnostic socket. Position the ISO selector and enter the injection code: bargraph **2 RH** (immobiliser) should be illuminated.

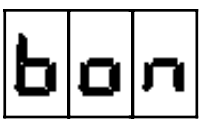
After entering 

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** (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 decoded before being returned to stock.

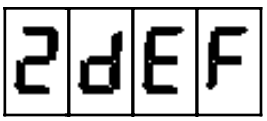
The procedure for decoding consists of replacing the multi-timer unit on the vehicle with another multi-timer unit with a different code (with its key head) and entering the security code for the vehicle (security code number should be requested from the local assistance network, example **DELTA Assistance** for France, NVSR for the UK by fax only) using the number in the head of the key for the vehicle.

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

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

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

After entering the security code, the red warning light will flash again.

The XR25 display should show 

(in injection fault finding). This indicates that the injection computer has been decoded.

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

Refit the computer and multi-timer unit to the vehicle.

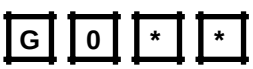
NOTE : When testing the injection using the XR25 on a vehicle without an immobiliser, bargraph **2 RH side** will illuminate (*22 = 2 def = computer not coded). This is normal.

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 and the multi-timer unit must be erased by entering command



on the XR25 or by disconnecting the battery (approximately 30 seconds) to allow the engine immobiliser system to operate again.

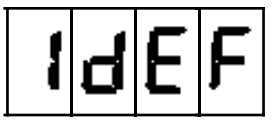
NOTE: If the injection warning light flashes on deceleration or at idle speed, the vehicle will not be able to be started again after switching off the ignition until the fault has been repaired.

NOTE : this fault may be shown by the XR25 (in injection fault finding).

Connect the XR25 and enter the injection code.

The fault is shown by bargraph **2 RH side**.

After entering 

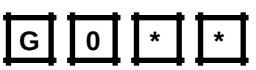
the message 

on the XR25 display indicates a fault on the coded line.

Diesel vehicle

If a system fault is detected by the multi-timer unit when the engine is running, the red immobiliser warning light will illuminate permanently until the ignition is switched off.

IMPORTANT: In this case, after repair, the fault memorised in the multi-timer unit must be erased by entering command



on the XR25 to allow the engine immobiliser system to operate again.

NOTE: this fault may be shown by the XR25 using fault finding for the multi-timer unit (fiche no. 56).

Connect the XR25.

Set the ISO selector to S8.

Enter code 

The fault may be shown by bargraph **6 RH or LH side.**

PROCEDURE FOR ENTERING THE SECURITY CODE

With this immobiliser system, the procedure for entering the security code is managed by the multi-timer unit.

The code is entered using the XR25 only.

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

After determining the security code number (request from the local assistance network, example **DELTA Assistance** for France, NVSR for the UK by fax only) , carry out the following operations:

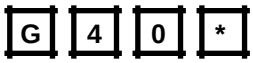
1. Ignition off, the red engine immobiliser warning light should flash (slow flashing).

2. Switch the ignition on, the injection warning light (petrol vehicle) illuminates for approximately 3 seconds then extinguishes, while the red immobiliser warning light should flash more quickly.

3. Connect the XR25 to the vehicle and set the ISO selector on S8.

Enter code 

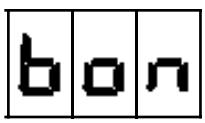
Bargraph **10 LH** should be illuminated (fault finding fiche n° 56).

4. Enter mode 

on the XR25 then the security code number

and validate using 

- **If the code is correct**

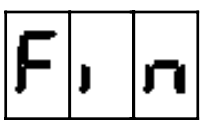


is displayed.

Bargraph **10 LH** extinguishes.
The engine may be started.

The vehicle is protected once more :
- approximately 10 minutes after switching the ignition off (automatically),
- after disconnecting the battery.

- **If the code is incorrect**



is displayed.

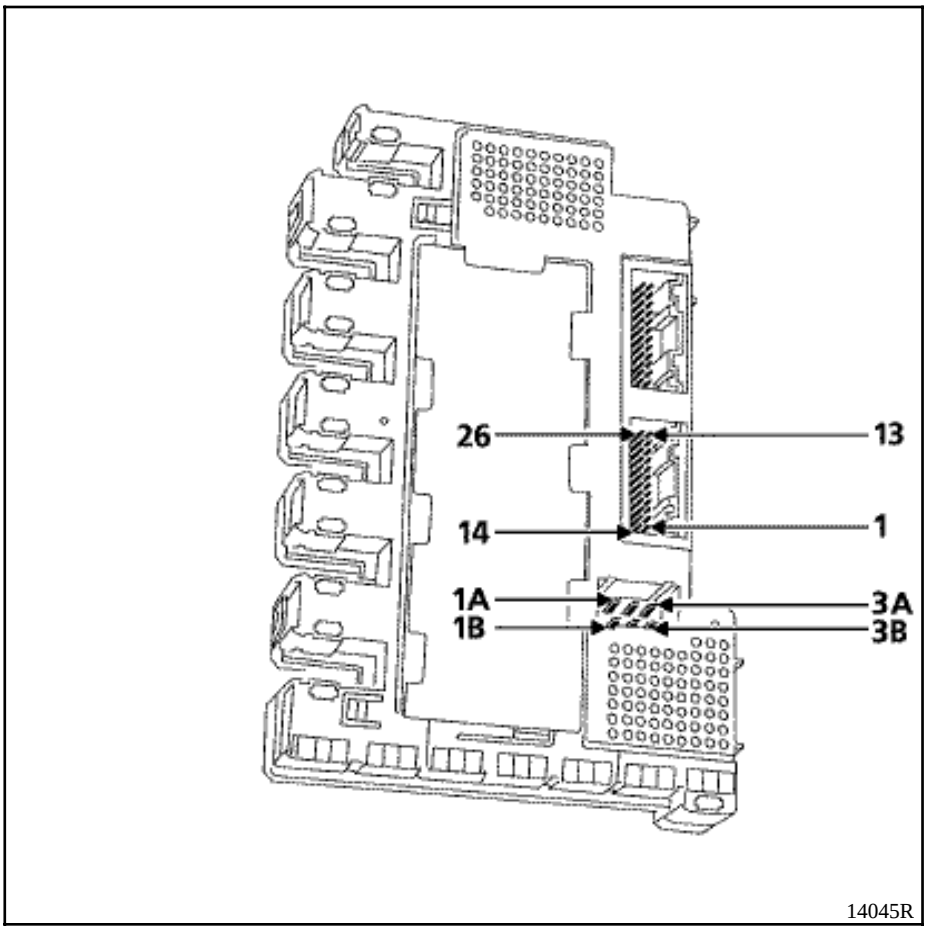
Bargraph **10 LH** remains illuminated.
The engine cannot be started.
The red immobiliser warning light and the injection warning light (depending on version) flash.
Switch the ignition off, then repeat the procedure for entering the code.

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, switch the ignition off and on again and 3 more attempts may be made.

NOTE : This procedure does not decode the injection computer or coded solenoid valve (depending on the type of engine)- it only authorises the starting of the vehicle.

REMINDER : The ignition must be switched off and on again between attempts to enter the code.

MULTI-TIMER UNIT CONNECTIONS (BMT) (immobiliser function only)



26 track yellow connector

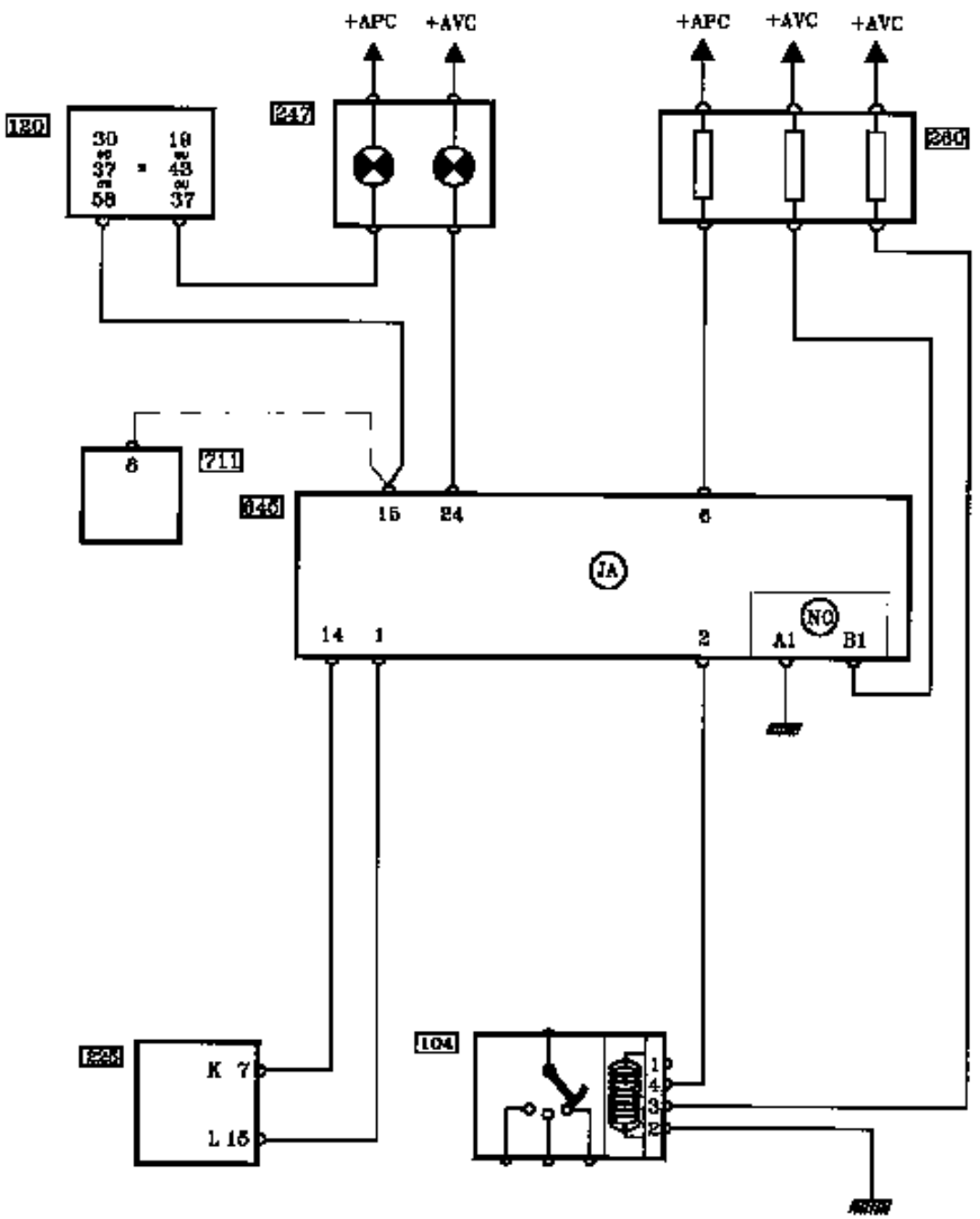
Track	Allocation
1	Diagnostic socket information (line L)
2	Antenna ring coded connection
6	+ after ignition
14	Diagnostic socket information (line K)
15	Coded information to injection computer or coded solenoid valve
24	Red immobiliser warning light

6 track black connector

Track	Allocation
A1	Earth
B1	+ before ignition

NOTE : for allocation of the other multi-timer unit tracks, refer to section 87.

DIAGRAM



PRO13934

KEY

104 Ignition switch

120 Injection computer

225 Diagnostic socket

247 Injection warning light and red immobiliser warning light on instrument panel

260 Passenger compartment fuse box

645 Multi-timer unit (BMT)

711 Coded solenoid valve

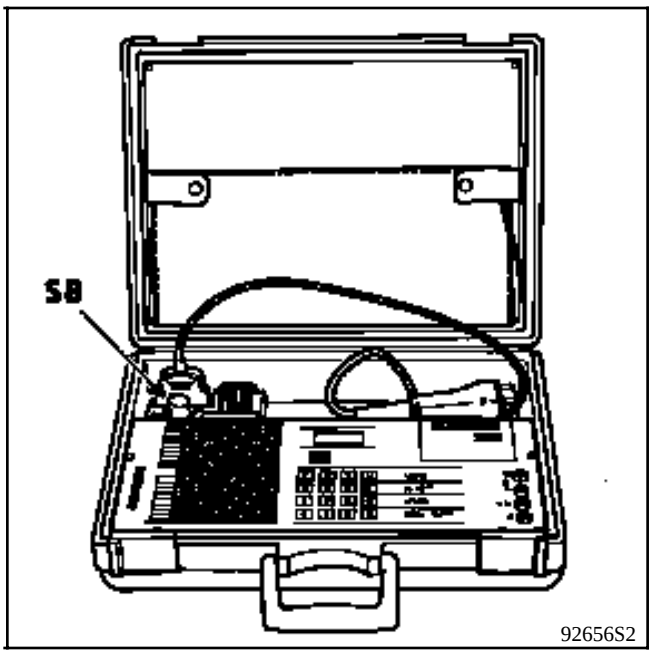
* Depending on engine

FAULT FINDING

If this immobiliser system is faulty, fault finding may be carried out using the XR25.

CONNECTION

Use the current cassette and the corresponding fault finding fiche no° 56.



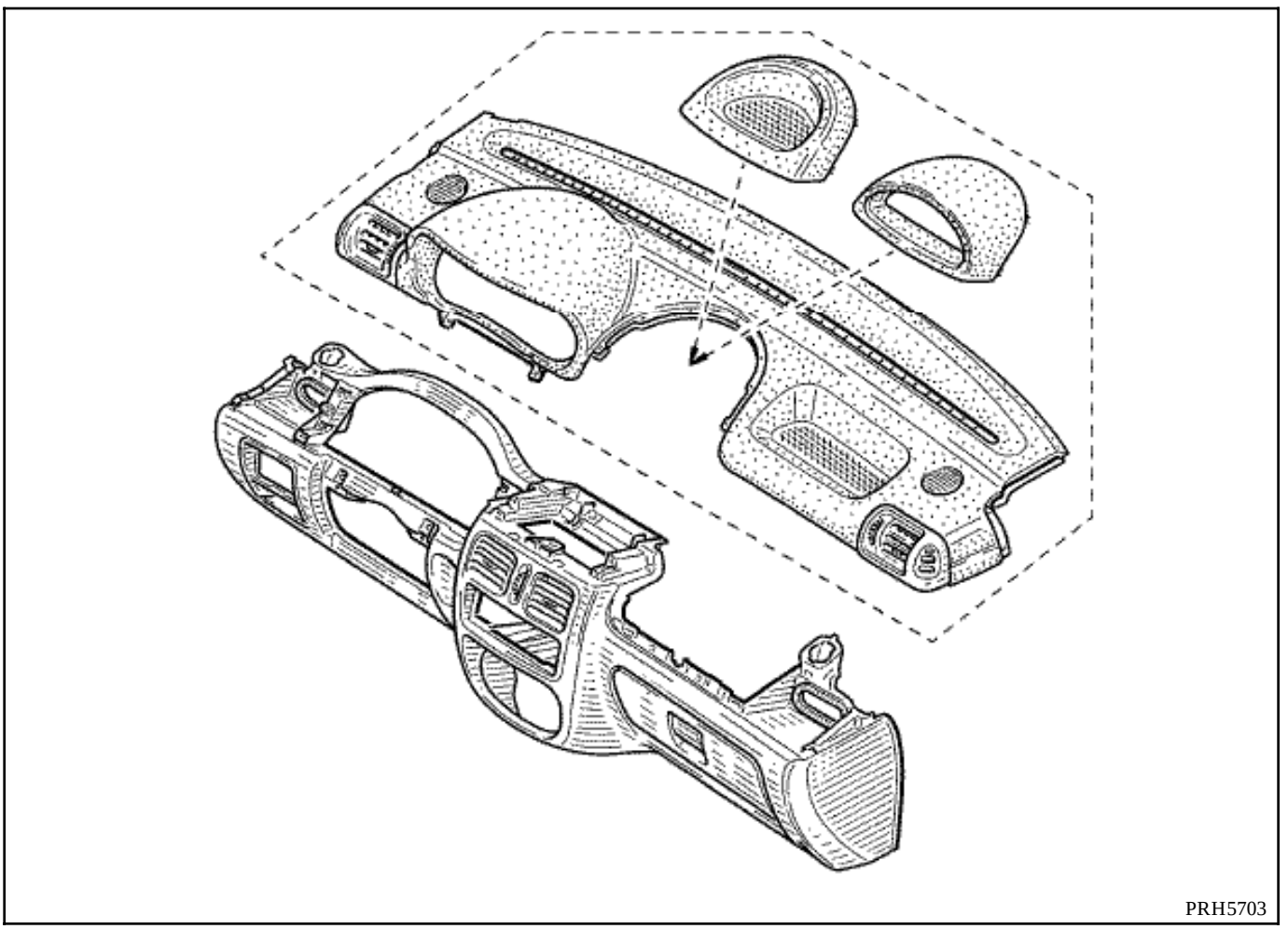
Connect the XR25 to the diagnostic socket.

Position the ISO selector on S8.

Enter the code for the immobiliser system **D56**.

NOTE : For information on the interpretation of the bargraphs, the fault charts, checking conformity and additional tests, refer to the fault finding section.

TIGHTENING TORQUES (in daN.m)	
Universal joint eccentric bolt	**2.5**
Steering wheel bolt	**4.5**
Steering column mounting nuts	**2**
Air bag cushion mounting bolts	**0.5**



PRH5703

To remove the dashboard, the steering column must be removed beforehand.

To remove it, use the following method.

REMOVAL

IMPORTANT : all operations on the air bag and pretensioner systems must be carried out by qualified staff having received the appropriate training.

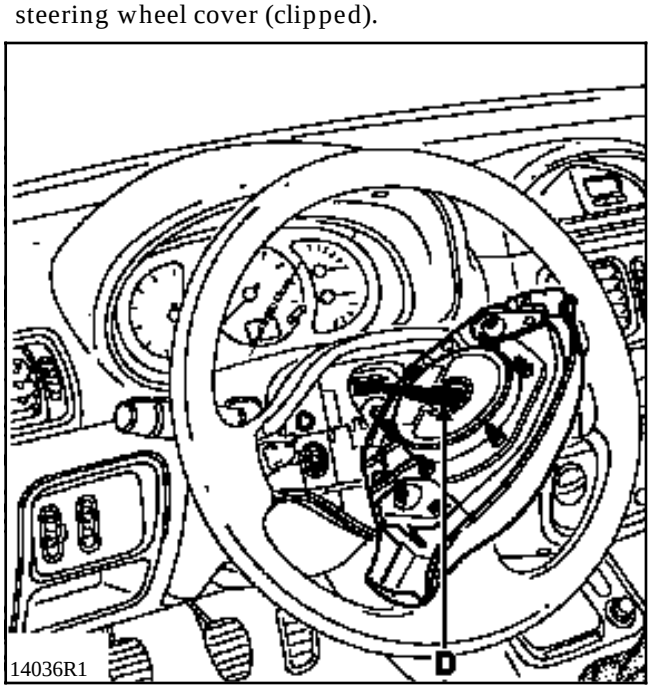
IMPORTANT: it is forbidden to handle pyrotechnic systems (air bag and pretensioners) near to a source of heat or a flame - they may be triggered.

IMPORTANT : whenever the steering wheel is removed, the air bag connector (D) must be disconnected. The air bag has a connector which short circuits when it is disconnected to prevent incorrect triggering.

Disconnect the battery.

Vehicles fitted with an air bag: remove the driver's air bag cushion by the two Torx bolts (**T30**) (tightening torque : **0.5 daN.m**) located behind the steering wheel and disconnect the connector (D).

Vehicles without an air bag: remove the central steering wheel cover (clipped).



Remove:
- the steering wheel bolt,
- the steering wheel after setting the wheels straight,
- the half cowlings (three screws).

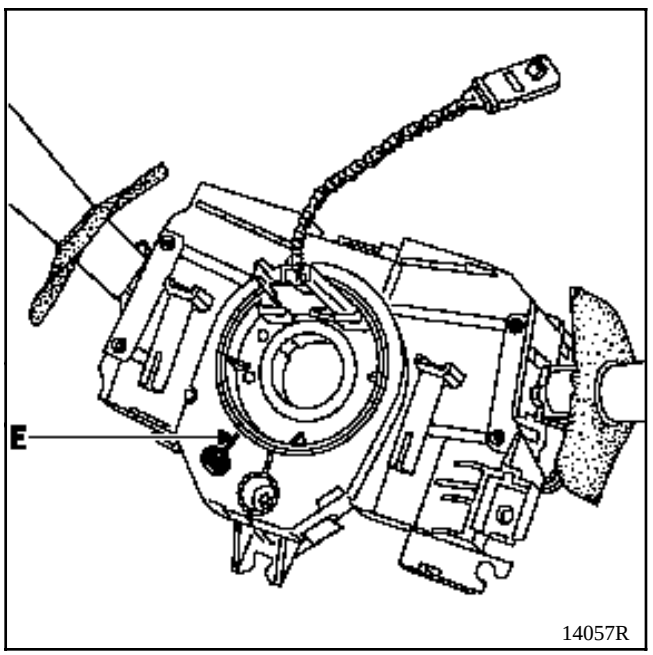
Disconnect the control stalks (wipers and lights) and the rotary switch connector (vehicles fitted with an air bag).

Special notes for vehicles fitted with an air bag

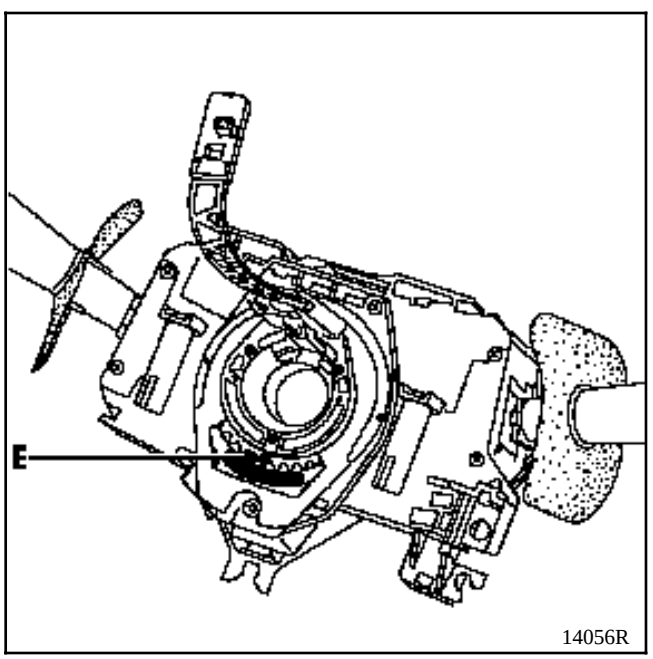
Before removing the assembly it is vital to note the position of the rotary switch:

- by ensuring that the wheels are straight on removal so that the strip may be positioned in the centre,
- by checking that the reference mark "**0**" on the rotary switch is correctly positioned opposite the fixed marker (E).

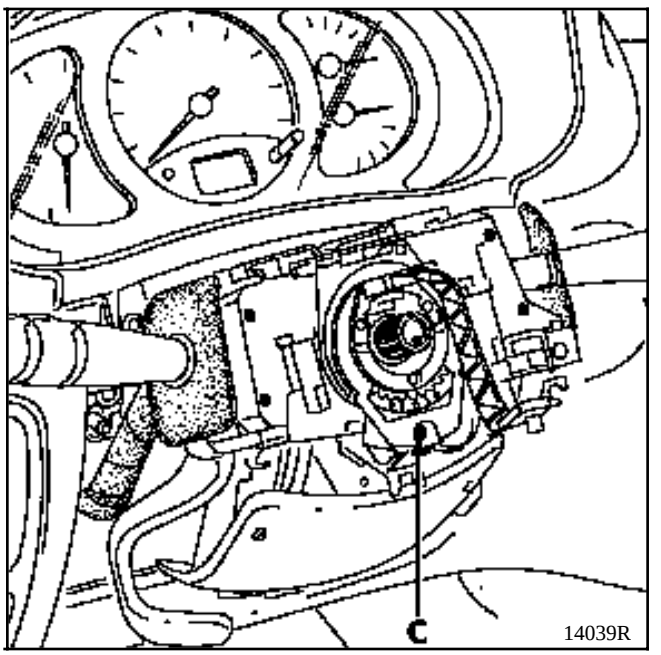
VALEO ASSEMBLY



LUCAS ASSEMBLY

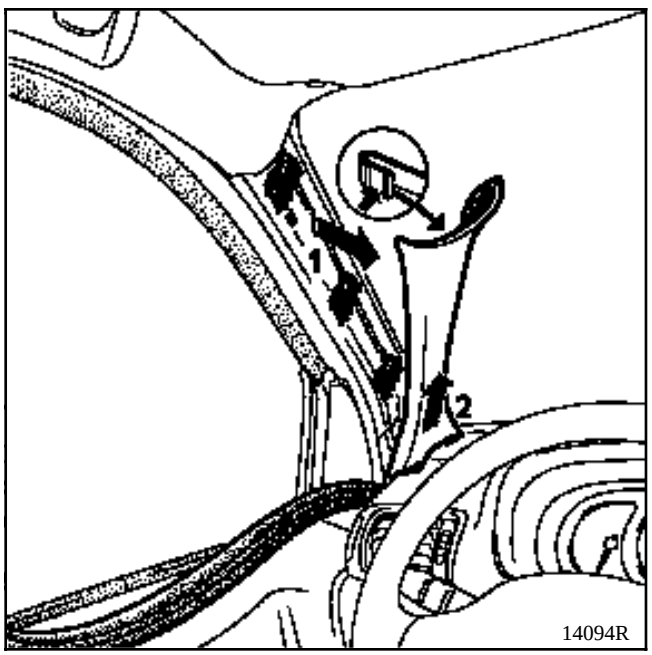


Slacken screw (C) then tap the screwdriver sharply to release the cone then remove the assembly from the steering column.

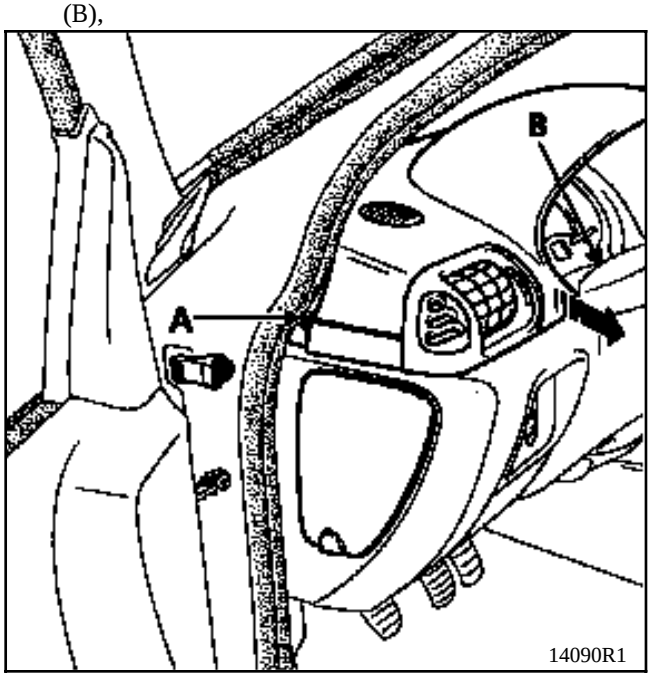


Remove the visor; to do this:

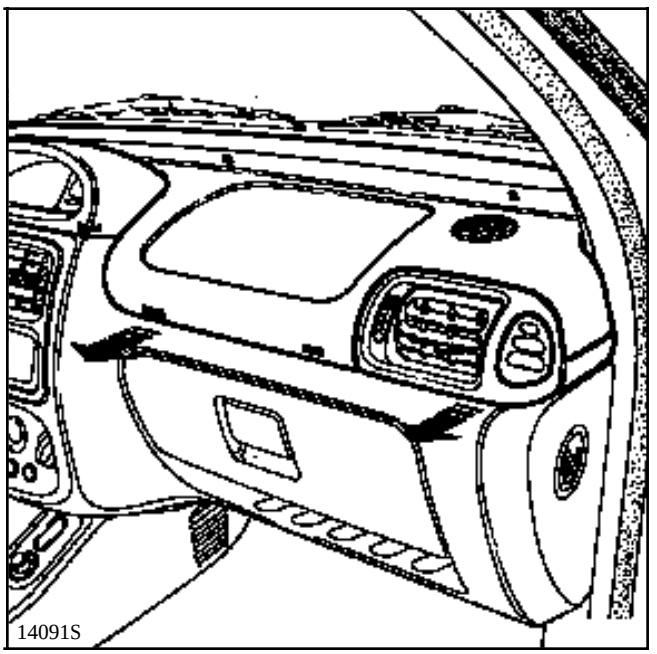
- first remove the windscreen pillar trims; to do this, release the trim far enough so that the upper clip may be pressed, then move the pillar trim (1) to one side and release it from the visor (2),



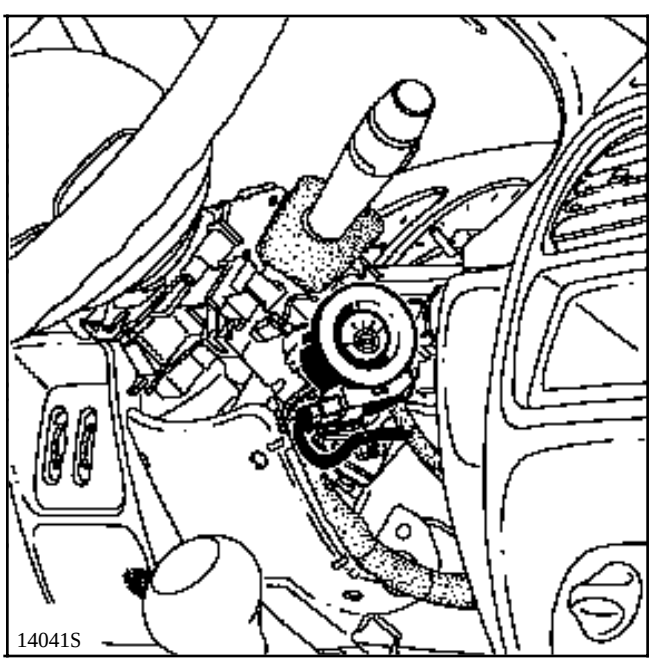
- the two side screws (A),
- the two screws under the instrument panel (B),



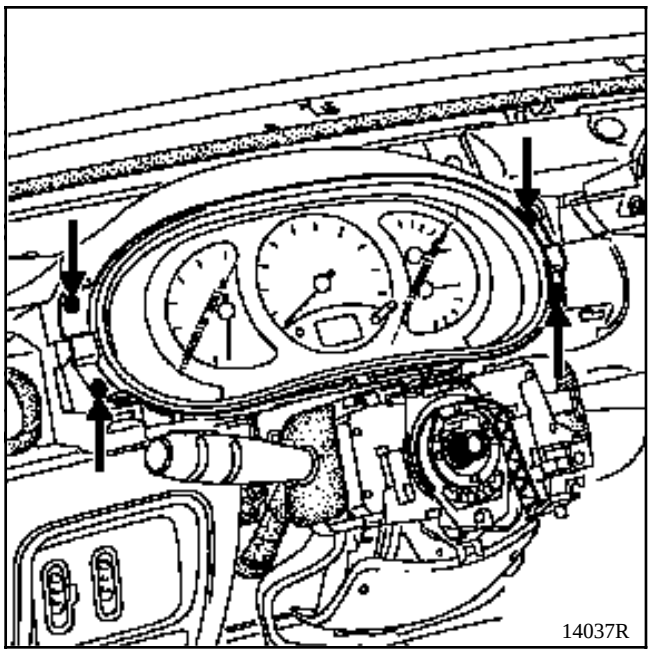
- the three screws at the top (near the windscreen) and remove the visor completely as shown in the diagrams.



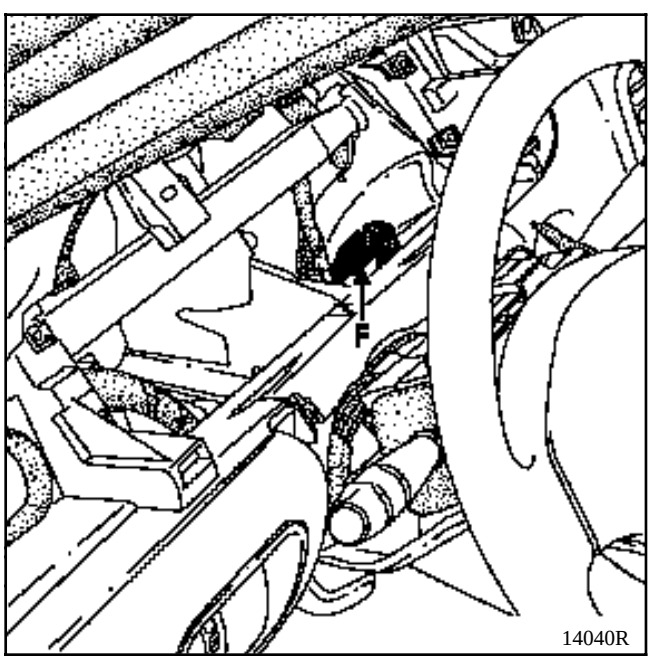
Remove the immobiliser antenna ring from the ignition switch.



Remove the instrument panel (four screws) and disconnect the connectors.



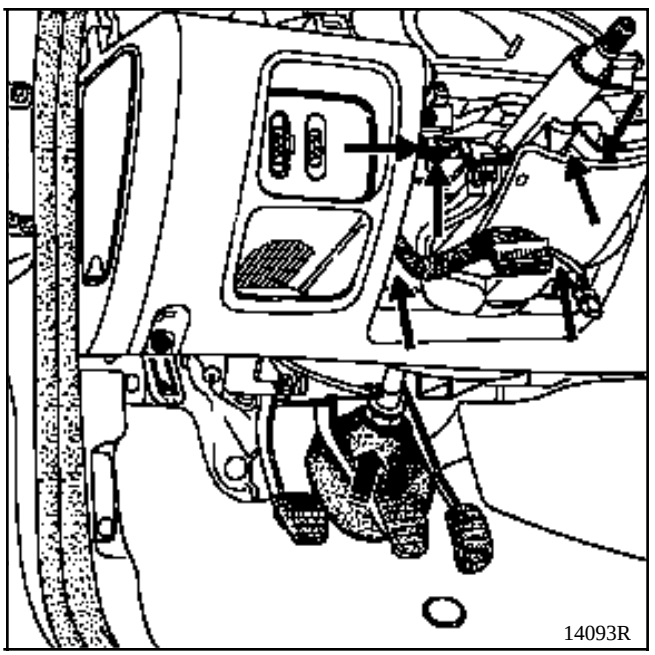
Disconnect the connector for the ignition switch (F).



In the engine compartment, remove:

- the air inlet sleeve,
- the mounting nuts for the expansion bottle and move it so the steering column universal joint may be reached.

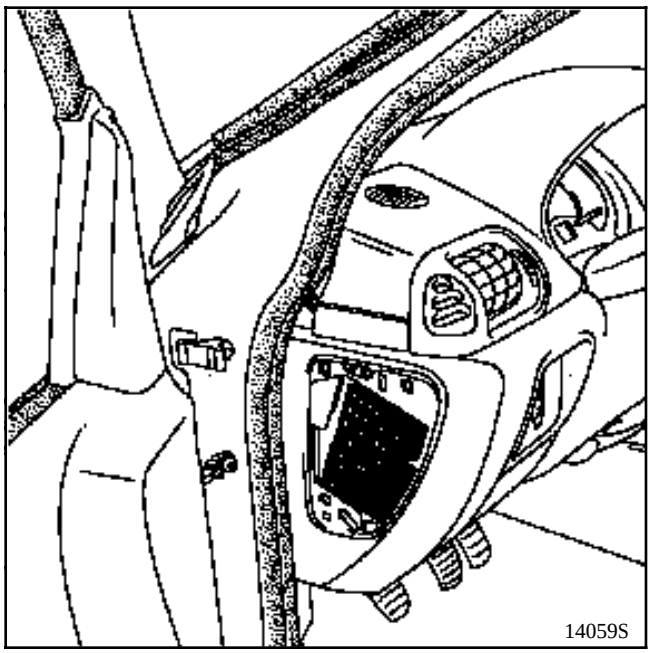
Remove the universal joint eccentric bolt.



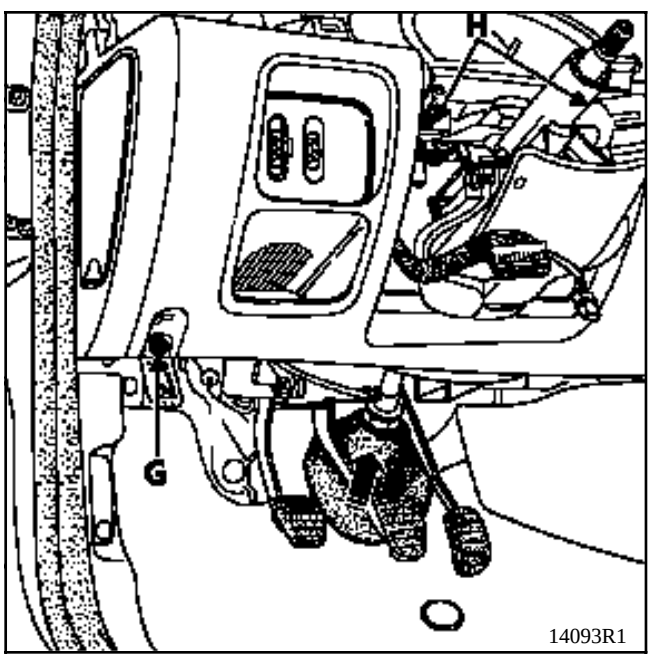
Remove the six bolts mounting the steering column and pull on the bulkhead gaiter.

Remove the steering column.

Remove the fuse box access cover.

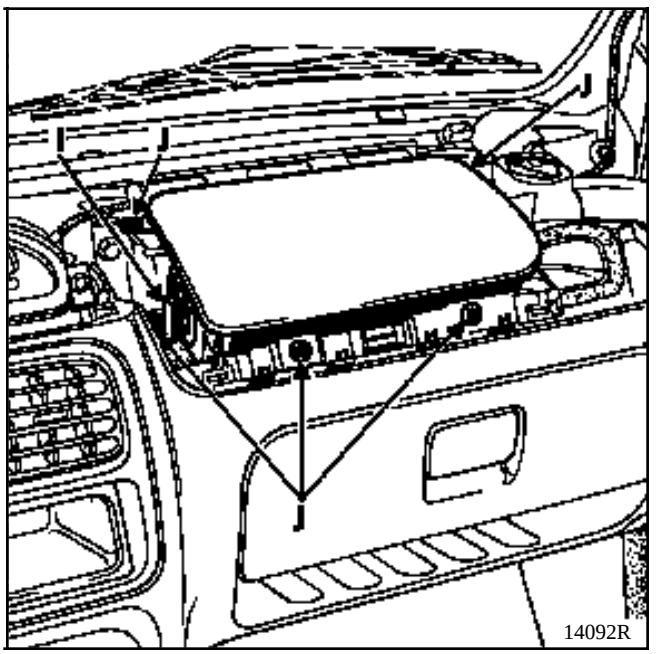


Remove:
- the lower mounting screws (G),
- the mounting screws (H).



REMOVING THE PASSENGER AIR BAG CUSHION
(depending on equipment)

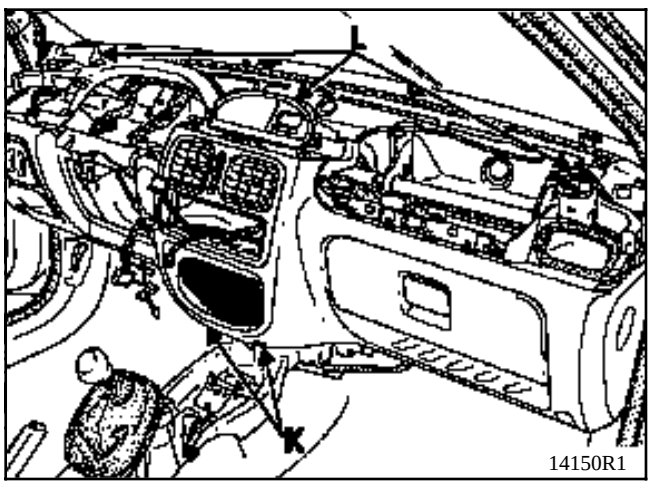
Disconnect connector (I) and remove the cushion mounting screws (J).



Remove the two mounting screws (K) for the heating control unit and unclip it from its location in the dashboard.

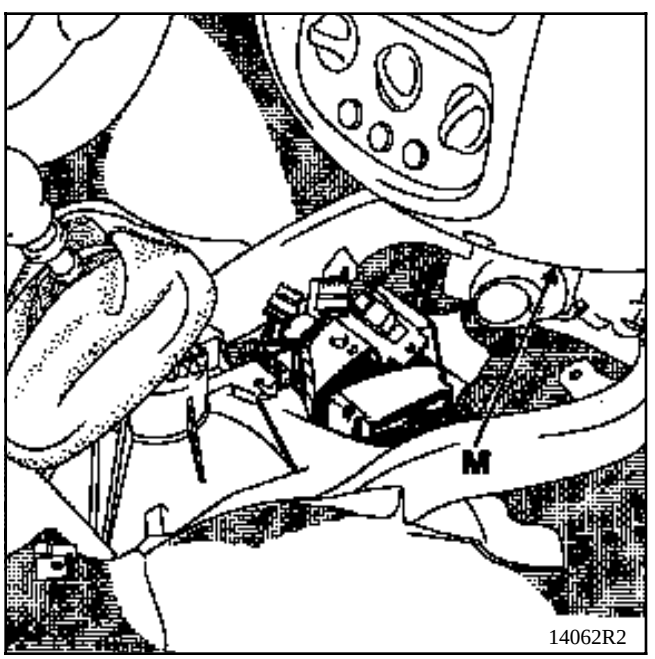
Remove:
- the three upper mounting screws (L) of the dashboard,
- the radio.

Disconnect the central display feed connector (if fitted).



14150R1

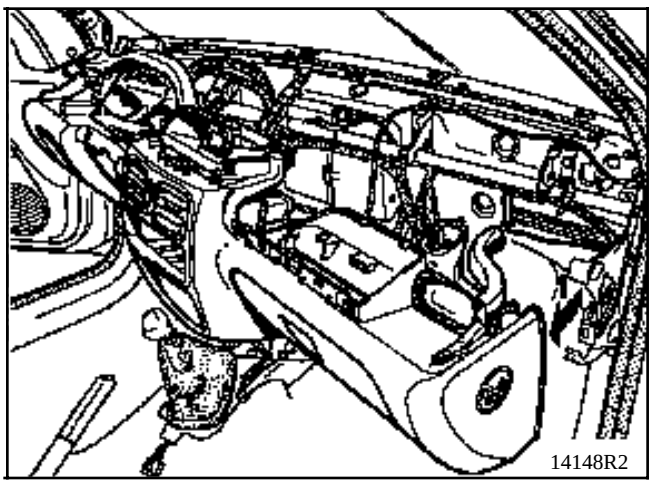
Remove the mounting screw (M).



14062R2

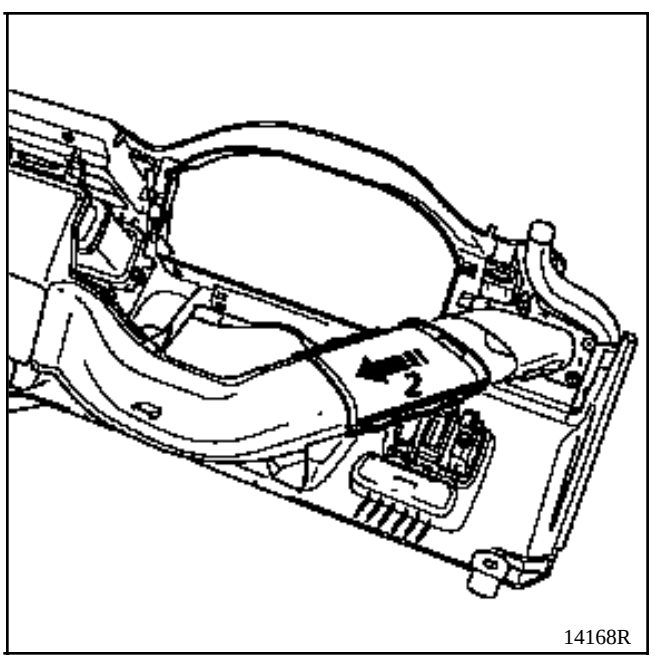
Gently lift the dashboard to release the retaining pins at the mounting bolts (L).

Move the dashboard out on the right hand side (1).


14148R2

Slide the sleeve (2) so that the left hand side of the dashboard may be moved out.

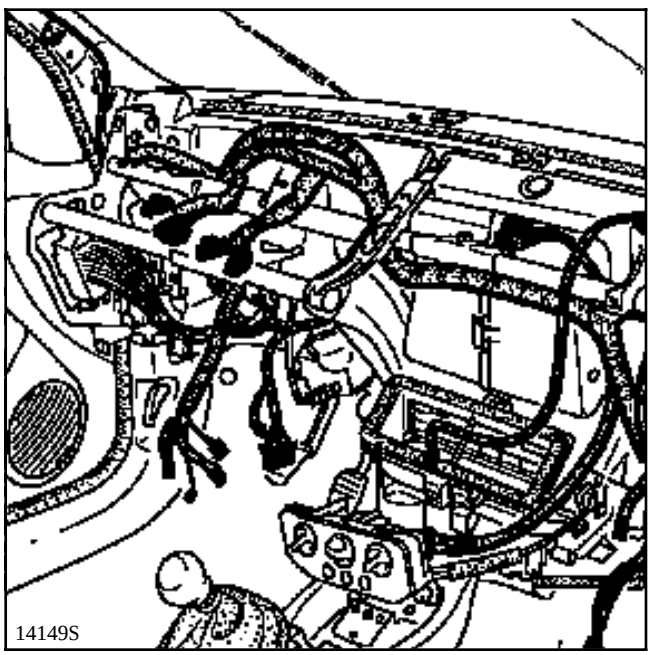
NOTE : this sleeve passes behind the metal heater casing; slide it as shown in the diagram below to allow the dashboard to be released from the heater casing.



14168R

Remove the dashboard from the passenger compartment (two persons required).

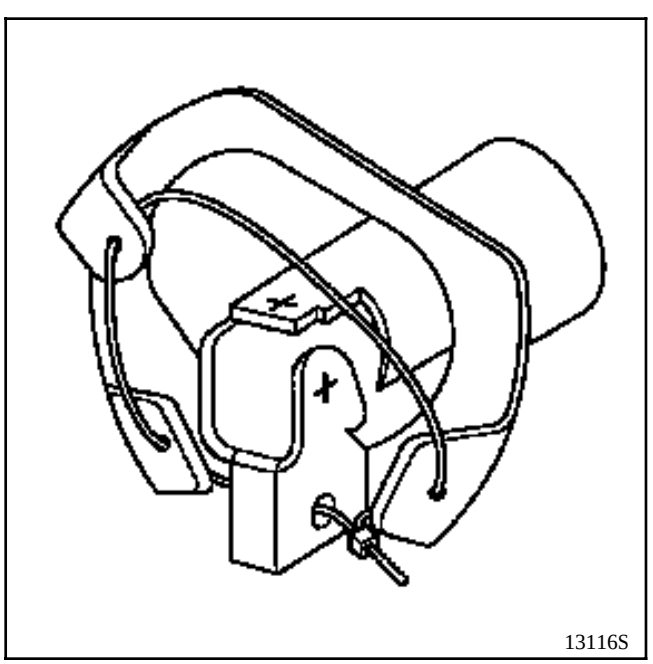
NOTE : when replacing a body or dashboard wiring loom, refit the wiring loom so that it runs under the dashboard as shown in the diagram below.


14149S

REFITTING

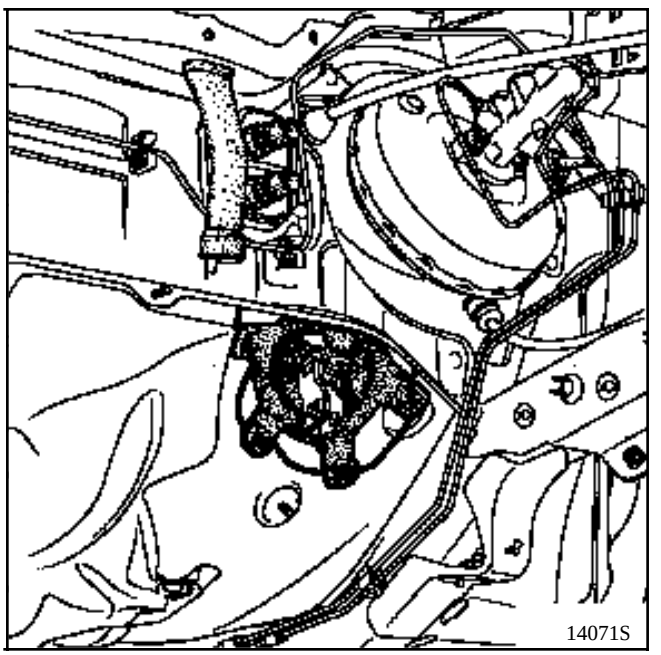
Refit the dashboard and the heater control unit.

Fit the steering column; follow the appropriate recommendations.


13116S

Fit the gaiter onto the bulkhead, having first connected the wings of the gaiter to the universal joint using string.

Pull on the tab, cut the string to fit the gaiter.


14071S

Refitting is then the reverse of removal.

Check that all the connectors are correctly reconnected.

SPECIAL NOTES FOR REFITTING

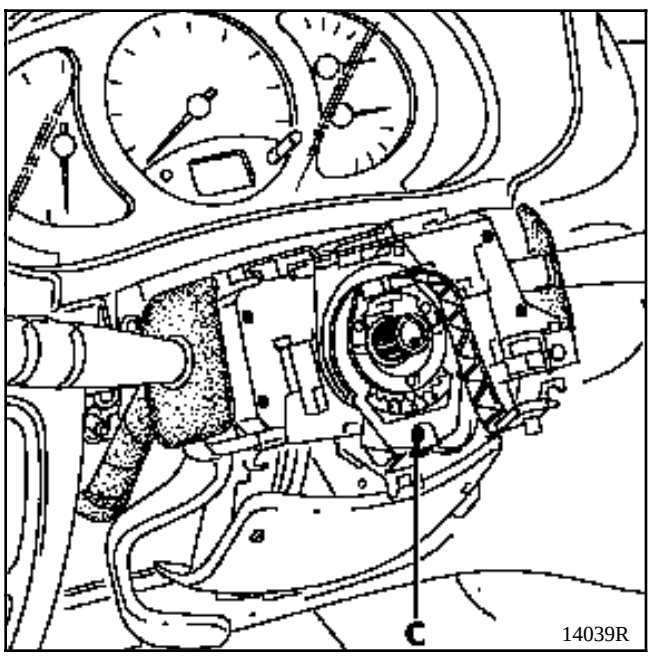
Ensure that the wheels are still straight.

Check that the rotary switch is correctly positioned by checking that the reference mark "**0**" on the rotary switch is opposite the fixed mark (E), (vehicles fitted with air bag).

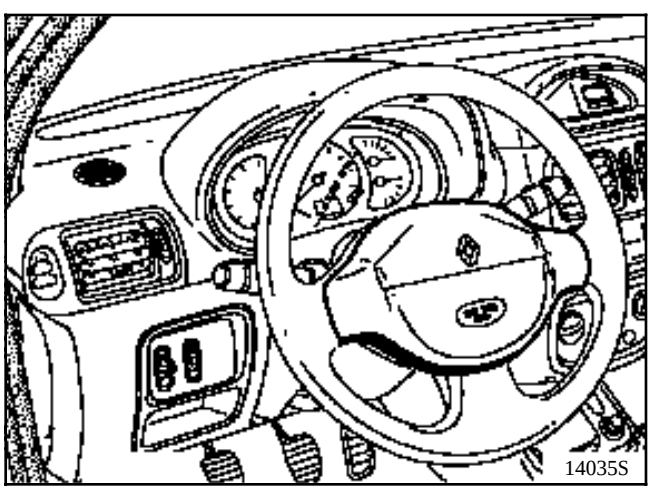
Fit the assembly onto the steering column and connect the various connectors.

Carry out the rest of the refitting operations and only lock screw (C) once the two half cowlings have been refitted, so that the control stalks can be fitted in alignment with the instrument panel and the dashboard.

This operation is made easier by an opening in the lower half cowling to give access to screw (C).



Renew the steering wheel bolt each time it is removed (pre-bonded bolt).
Observe the correct tightening torque (**4.5 daN.m**).



SPECIAL NOTES FOR VEHICLES FITTED WITH AN AIR BAG

IMPORTANT : before reconnecting the driver's air bag cushion, the procedure for checking operation of the system must be applied:
- check that the air bag warning light is illuminated on the instrument panel when the ignition is on,
- connect a dummy ignition module to the driver's air bag cushion connector and check that the warning light extinguishes,
- switch off the ignition, connect the air bag cushion in place of the dummy ignition module and secure the cushion to the steering wheel (tightening torque **0.5 daN.m**),
- switch on the ignition, 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 operate as described above, refer to the section "**Fault finding**" and test the system using the **XRBAG** (**Elé. 1288**).

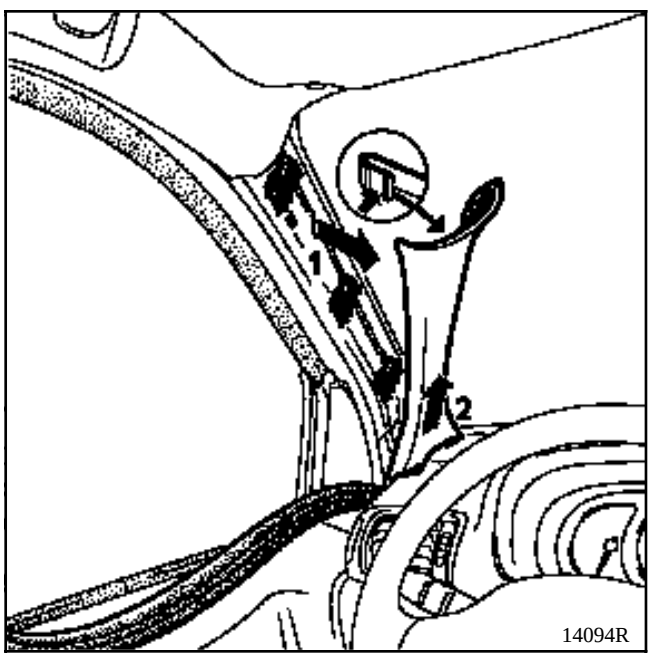
IMPORTANT: if these instructions are not followed exactly, the systems may not operate normally and may even be incorrectly triggered.

REMOVAL - REFITTING

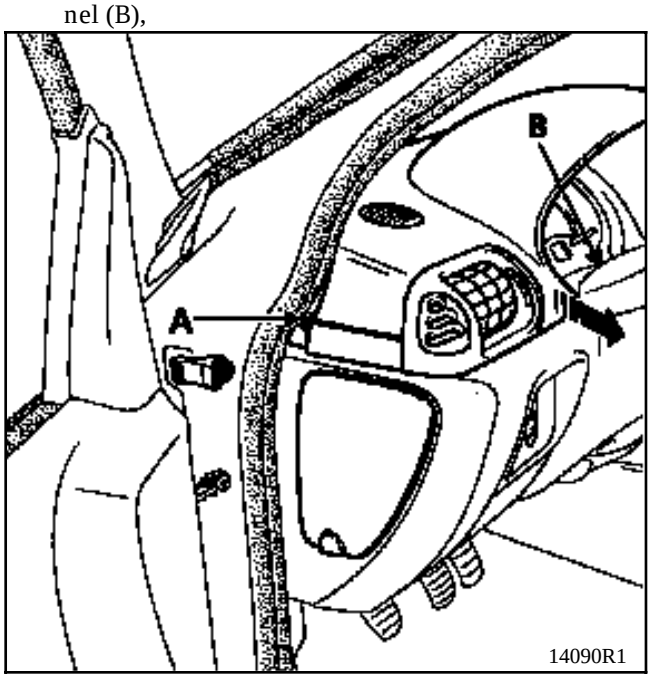
Disconnect the battery.

Remove the half-cowlings (three bolts).

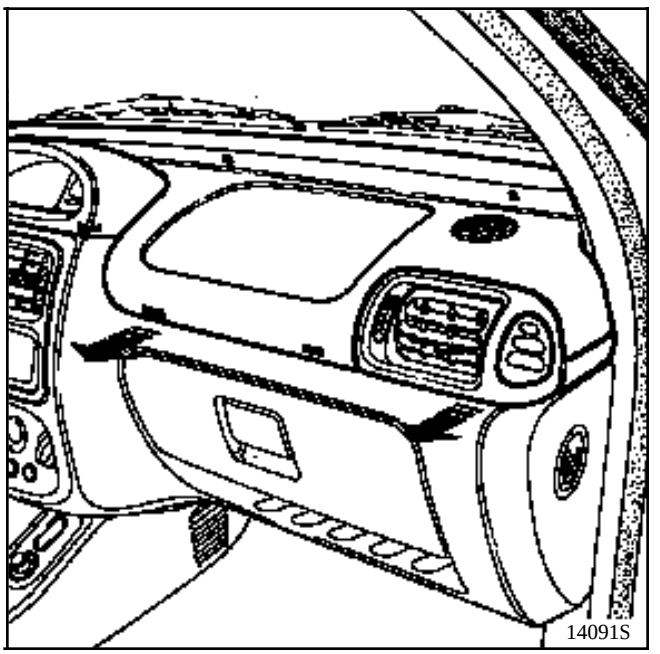
Remove the visor, to do this:
- first remove the windscreen pillar trims; to do this, release the trim sufficiently far so that the upper clip may be pressed, then move the trim to one side (1) and release it from the visor (2).



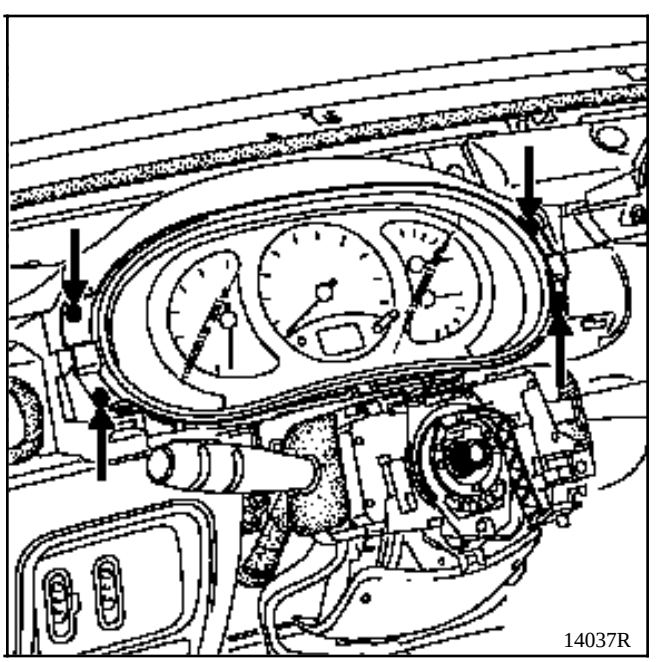
- remove the two side screws (A),
- remove the 2 screws under the instrument panel (B),



- remove the three screws at the top (near the windscreen) and completely remove the visor as shown on the diagrams.



Remove the instrument panel (4 screws), disconnecting the connectors.



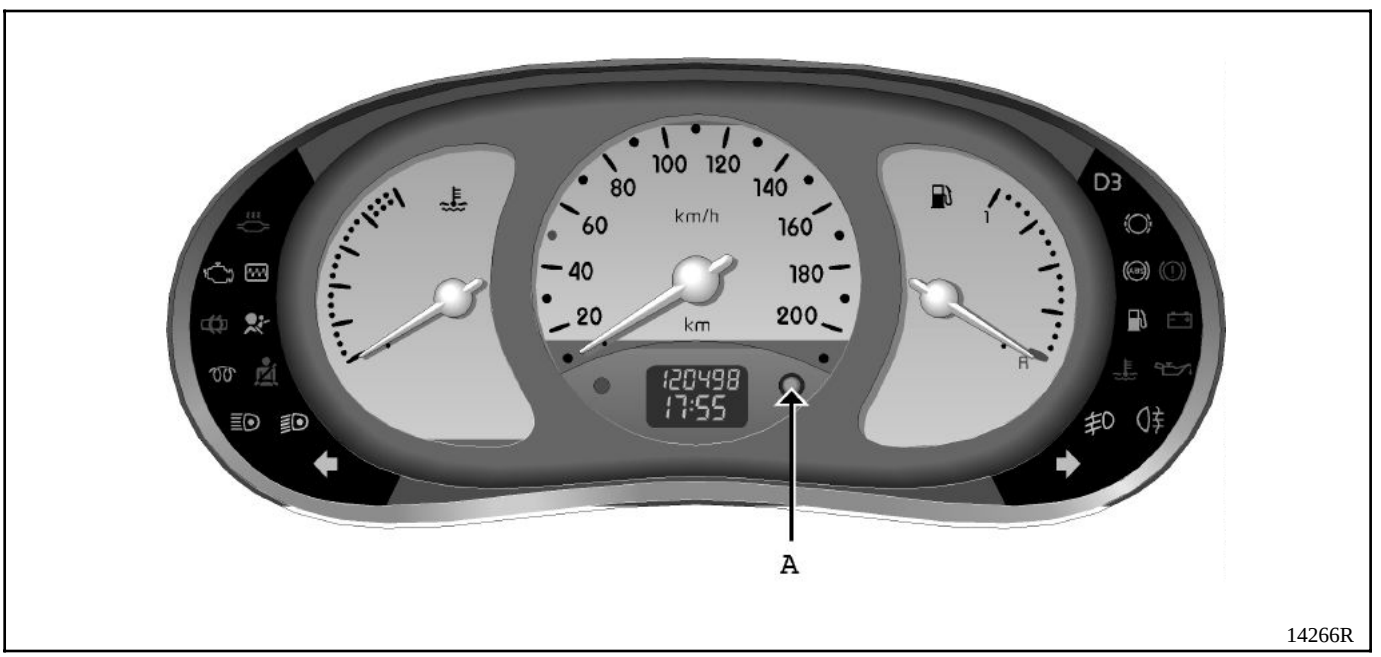
NOTE : the steering wheel does not need to be removed.

DESCRIPTION

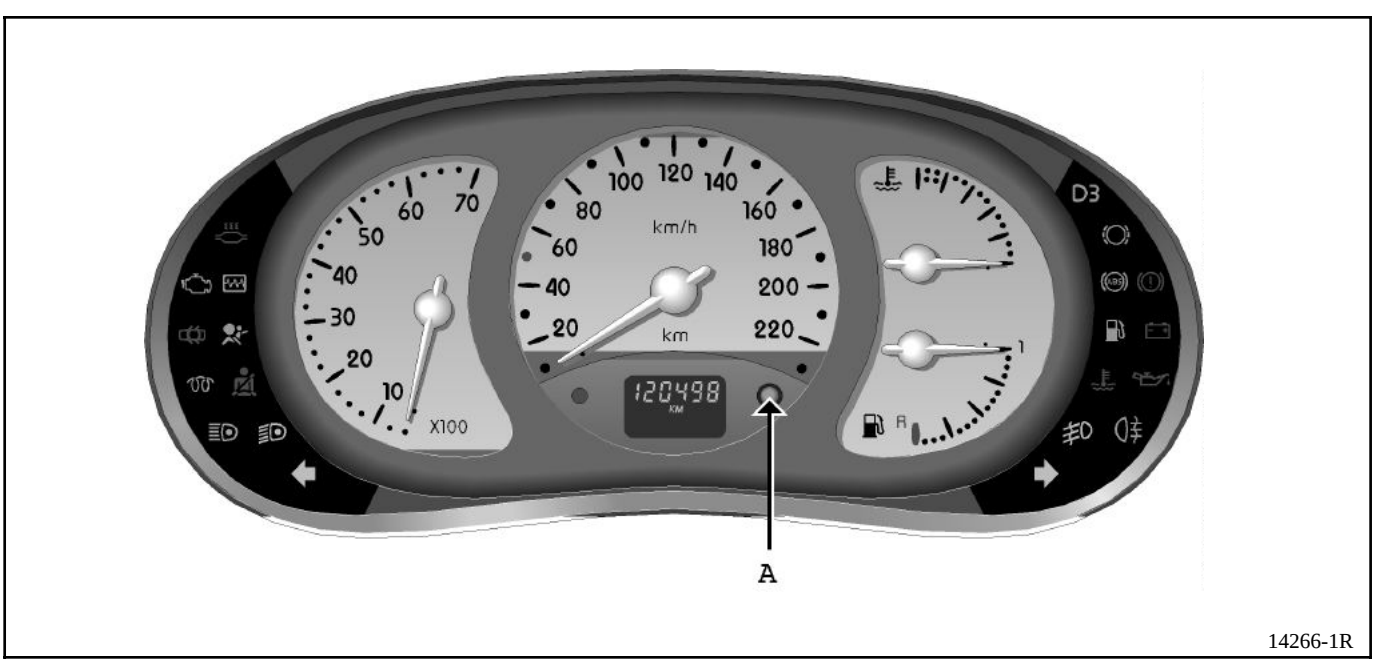
- electronic speedometer.
- display of general and trip mileometers, clock and oil level (depending on version).
- coolant temperature gauge.
- fuel gauge.
- warning lights.
- rev counter (depending on version).

NOTE: on this instrument panel, only the glass may be replaced. If there is a fault with the other components, the complete instrument panel must be renewed.

Without rev counter



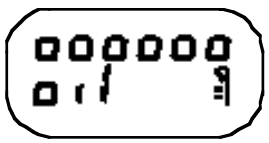
With rev counter



OPERATION OF THE DISPLAY

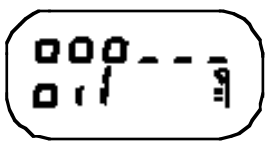
- **Oil level (depending on version)**

  This function is displayed when the ignition is switched on or after starting the engine for approximately **30 seconds**.



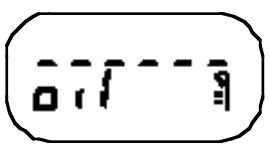
13141S

The "blocks" displayed indicate the oil level. They disappear as the oil level decreases and are replaced by dashes.



13141S

When the oil level reaches a minimum, the dashes and the word "**oil**" flash.



13141S

NOTE :

- Under normal operating conditions, the oil level is only measured if the ignition has been off for more than one minute; otherwise the old value is displayed once more.

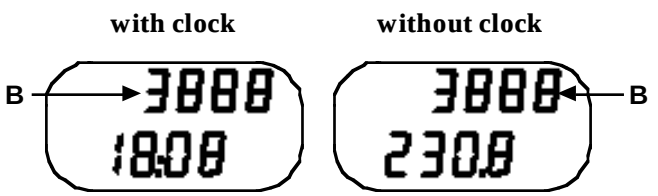
  If a fault is detected, however, the display goes directly to the mileometer function when the ignition is switched on.

- It is normal for the oil level to not always be the same. Various parameters may affect it:
  - parking on a slope,
  - too short a wait between running the engine for short periods (especially when the oil is cold).

- **General mileometer (B)**

  If the vehicle has the oil level function, the general mileometer is displayed **30 seconds** after switching on the ignition (after the oil level information has been displayed).

  If the vehicle does not have the oil level function, the general mileometer is displayed as soon as the ignition is switched on.



14267S

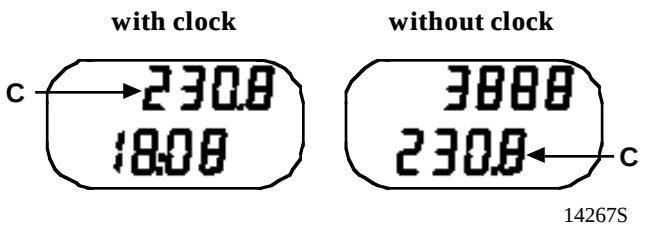
- **Trip mileometer (C)**

  If the vehicle has a clock integrated into the display, the trip mileometer function is displayed instead of the general mileometer when button (A) is briefly pressed.

  The function is reset to zero by pressing and holding button (A).

  If the vehicle does not have the clock function integrated into the display, the trip mileometer is displayed below the general mileometer.

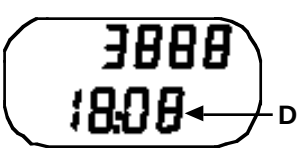
  The function is reset to zero by pressing button (A).



14267S

- **Clock (depending on version) (D)**

  Depending on the vehicle equipment, the clock may be integrated into the instrument panel display.
  The time is displayed at the same time as the general mileometer function.



14267S

  The clock is set by turning button (A) an eighth of a turn to select the figure to be changed, then pressing the same button to validate.

DESCRIPTION

- display of general and trip mileometers, clock and oil level (depending on version).
- coolant temperature gauge.
- fuel gauge.
- warning lights.
- rev counter (depending on version).

NOTE: on this instrument panel, only the glass may be replaced. If there is a fault with the other components, the complete instrument panel must be renewed.

14266-2R

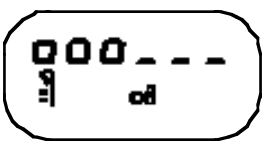
OPERATION OF THE DISPLAY

- **Oil level**

  This function is displayed when the ignition is switched on or after starting the engine for approximately **30 seconds**.

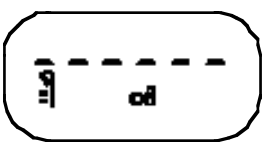
13141S

The "blocks" displayed indicate the oil level. They disappear as the oil level decreases and are replaced by dashes.



13141S

When the oil level reaches a minimum, the dashes and the word "**oil**" flash.



13141S

NOTE :

- Under normal operating conditions, the oil level is only measured if the ignition has been off for more than one minute; otherwise the old value is displayed once more.

  If a fault is detected, however, the display goes directly to the mileometer function when the ignition is switched on.

- It is normal for the oil level to not always be the same. Various parameters may affect it:
  - parking on a slope,
  - too short a wait between running the engine for short periods (especially when the oil is cold).

- **General mileometer**
  The general mileometer is displayed **30 seconds** after switching on the ignition (after the oil level information has been displayed).

13141S

- **Trip mileometer**

  The trip mileometer is displayed in place of the general mileometer following pressing of the button on the end of the wiper stalk (ADAC button).

  The function is reset to zero by pressing button (A).

13141S

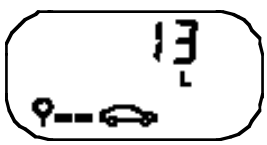
- **On-board computer (ADAC)**

  The various sequences of the on board computer are displayed in place of the mileometers by pressing the end of the wiper stalk (**ADAC** button).

  The system is reset by pressing button (A).

  The on board computer information is shown successively on the display after the trip mileometer as follows:

  - **Fuel consumed** (in **L** or **G***) since the last Reset



13141S

  Maximum capacity: **999 litres** or **gallons***.

  - **Average consumption ** (in litres/100 km or MPG*)** since the last Reset

13141S

  It is not displayed until **400 metres or 0.2 mile*** have been covered.

  It allows for the distance driven and the fuel consumed since the last Reset.

* English version.

- **Current consumption ** (in litres/100 km)**

13141S

It is not displayed until the vehicle speed exceeds **25 km/h.**

However, this value cannot exceed **29.9 litres/100 km.**

If there is no flow pulse for at least 1 second, and if the speed exceeds **25 km/h, 0 litres/100** will be displayed.

NOTE: this function does not exist in the UK version.

- **Estimated range with the remaining fuel ** (in km or M*)**

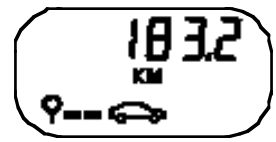
13141S

It is not displayed until **400 metres or 0.2 mile** have been driven*.

This is the potential range obtained allowing for the distance driven, the quantity of fuel remaining in the tank and the fuel consumed.

Maximum capacity: **9999 km or M***

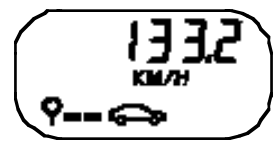
- **Distance driven (in km or in M*)** since the last Reset



13141S

Maximum distance: **9999 km or M***

- **Average speed ** (in km/h or in MPH*)** since last Reset



13141S

It is displayed after **400 metres or 0.2 mile*** have been driven.

It is obtained by dividing the distance driven by the time which has elapsed since the last reset.

The time base is inside the on-board computer.

* UK version.

- **Fault finding**

  - **Detecting faults**

    The on-board computer has been designed to detect faults which may affect the indications given by the display or the indicators.

    If the indications :
    - fuel consumed,
    - estimated fuel range,
    - average consumption,
    - current consumption,

    are replaced by the display of flashing dashes, this indicates a fault in the flow information for more than **10 consecutivemiles (16 Km).**

    If just the estimated fuel range is replaced by flashing dashes and the low fuel warning light illuminates, there has been a sender unit information fault for over **100 consecutive seconds.** If the fault disappears, the low fuel warning light extinguishes and the fuel gauge needle moves up again (unless the fuel level is at the minimum).

    In addition to signalling a fault by flashing of the display or incorrect operation of a needle gauge, the on-board computer stores the fault in a memory.

    In these various cases a diagnostic sequence may be used to visualise the sensor faults stored.

    The on-board computer has a test programme (diagnostic sequence) :
    - for the various segments of the display,
    - for the sensors used (tank sender, flow information).

  - **Diagnostic sequence**

    To start the diagnostic sequence, press and hold the **ADAC** button at the end of the wiper stalk and switch on the ignition without starting the engine.

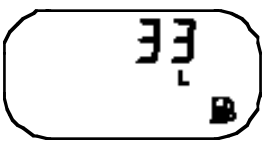
  - The **liquid crystal display** test appears.

13141S

    All the segments on the liquid crystal display should be illuminated.

    To go on to the next test, press the **ADAC** button.

  - The **amount of fuel remaining in the tank** appears.

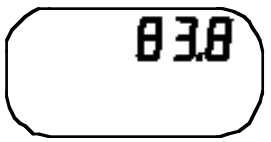


13141S

    The value displayed corresponds to the amount of fuel remaining in the fuel tank in litres (even for the English version).

    To go on to the next test, press the **ADAC** button.

- The **fuel flow** in litres / hour appears (engine running).

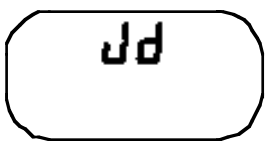


13141S

The value should be displayed when the engine is running.

To go on to the next test, press the **ADAC** button.

- Display of memorised faults.



13141S

If the letter "**J**" is displayed, a fault has been detected in the tank sender unit (disconnected for over **100 seconds**).

If the letter "**d**" is displayed, a flowmeter fault has been detected for more than **10miles (16 Km)**.

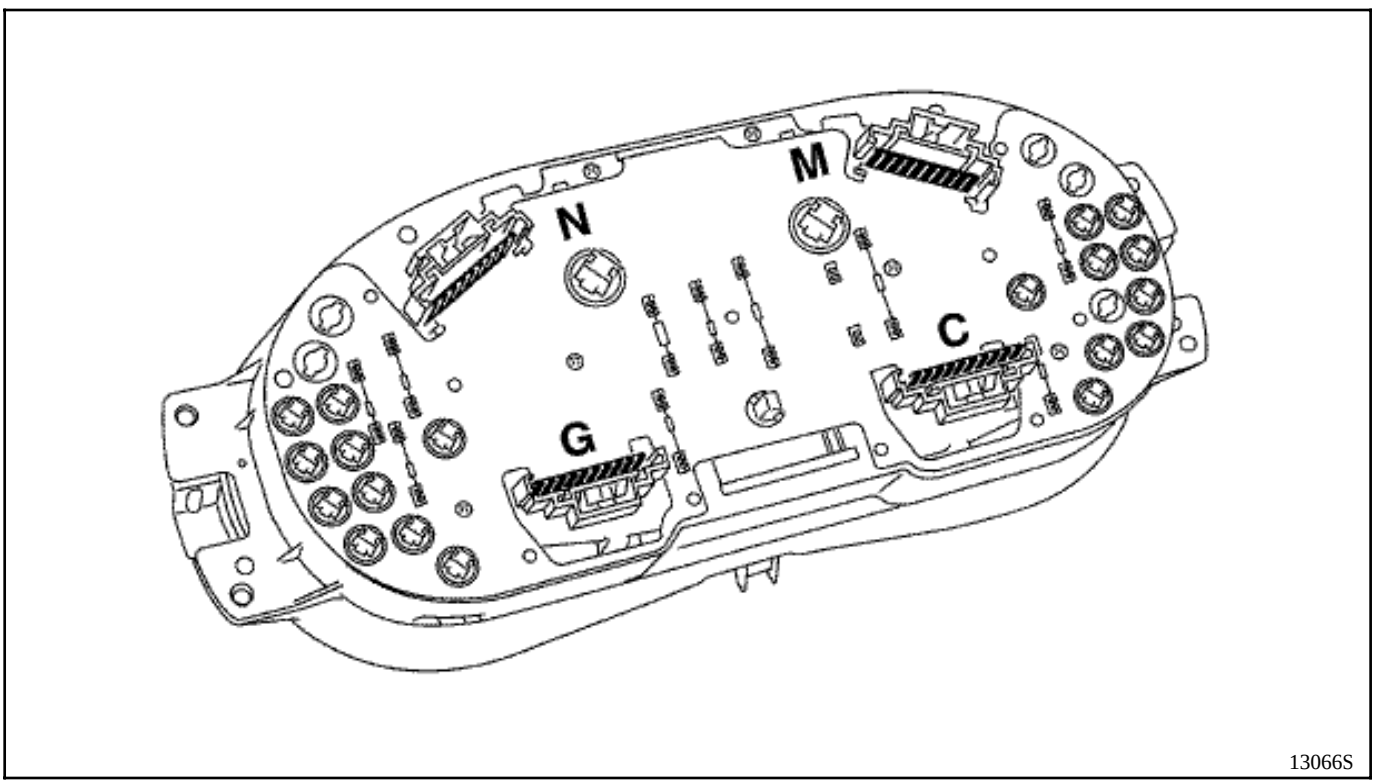
If just two dashes are displayed, no fault has been detected.

- **Resetting and leaving the diagnostic sequence**

To leave the diagnostic sequence, press button (A). This erases all memorised faults and resets the on-board computer sequences to zero.

To leave the diagnostic sequence without erasing the faults in the memory, just turn off the ignition.

CONNECTION (fullest version)



Connector C (clear)

Track	Allocation
1	LH indicator tell-tale
2	Dipped headlights tell-tale
3	Main beam headlights tell-tale
4	Driver's seat belt warning light
5	Preheating warning light
6	Air bag warning light
7	Opening elements warning light
8	+ side lights
9	Coolant temperature gauge
10	- lighting via rheostat or shunt

Connector M (brown)

Track	Allocation
1	Fuel gauge earth
2	Fuel level indicator
3	+ before ignition feed
4	ADAC button
5	Not used
6	AT, injection fault warning light
7	Not used
8	Not used
9	Not used
10	+ after ignition feed

Connector N (black)

Track	Allocation
1	D3 warning light (AT)
2	Brake pad wear warning light
3	ABS warning light
4	Handbrake / brake fluid level warning light (nivocode)
5	Red immobiliser warning light
6	Flowmeter information (ADAC)
7	Rev counter information
8	Vehicle speed information
9	Oil tank sender unit
10	Oil tank sender unit

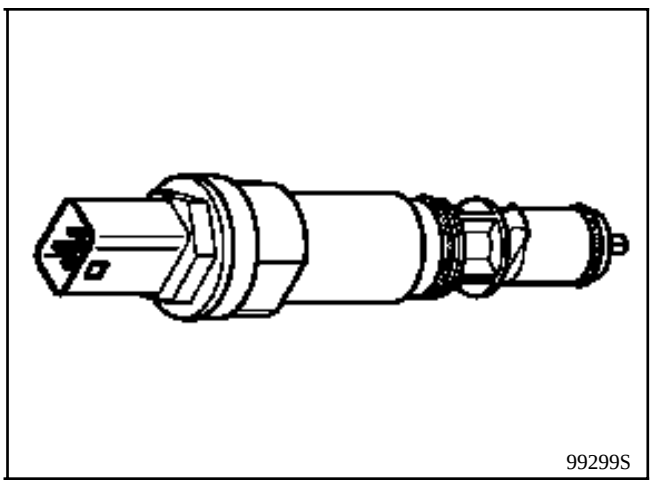
Connector G (grey)

Track	Allocation
1	Earth
2	Not used
3	Not used
4	Not used
5	Coolant temperature warning light
6	Oil pressure warning light
7	Battery charge warning light
8	Rear fog light warning light
9	Front fog lights warning light
10	RH indicator tell-tale

SPEED INFORMATION

The instrument panel (speedo, mileometers and **ADAC***) receive vehicle speed information via an electronic sensor.

This information is also used by certain computers (injection).



CONNECTION

Track	Allocation
A	+ after ignition feed
B1	Vehicle speed information
B2	Earth

* For vehicles with ADAC.

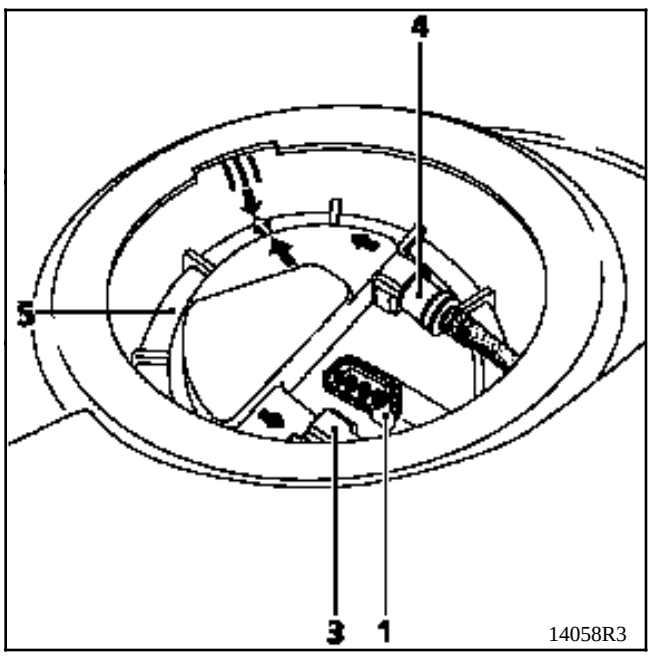
SPECIAL TOOLING REQUIRED
Mot. 1397 Wrench for removing sender unit nut

IMPORTANT :

During any operation on the fuel tank sender unit you must observe the following precautions:
- **Do not smoke.**
- **Keep all flames or incandescent objects away from the working area.**

REMOVAL OF THE PUMP - SENDER ASSEMBLY

The pump and sender unit assembly may be removed through the inspection cover under the rear bench seat. The fuel tank does not have to be removed.



Disconnect the battery.

Lift the rear bench seat.

Remove the pump and sender unit plastic cover.

Disconnect the electrical connector (1).

Then disconnect the fuel supply pipe (3) (green marking on the quick-release union) and the fuel return pipe (4) (red marking on the quick-release union).

IMPORTANT: When the pipes are removed, fuel may be splashed out due to the residual pressure in the pipes. Take appropriate precautions.

Disconnect the connector and the pipes on the sender unit side.

Remove the mounting nut (5) of the pump and sender unit using tool **Mot. 1397**.

Slacken the nut, remove the tool, unscrew the nut by hand and remove it.

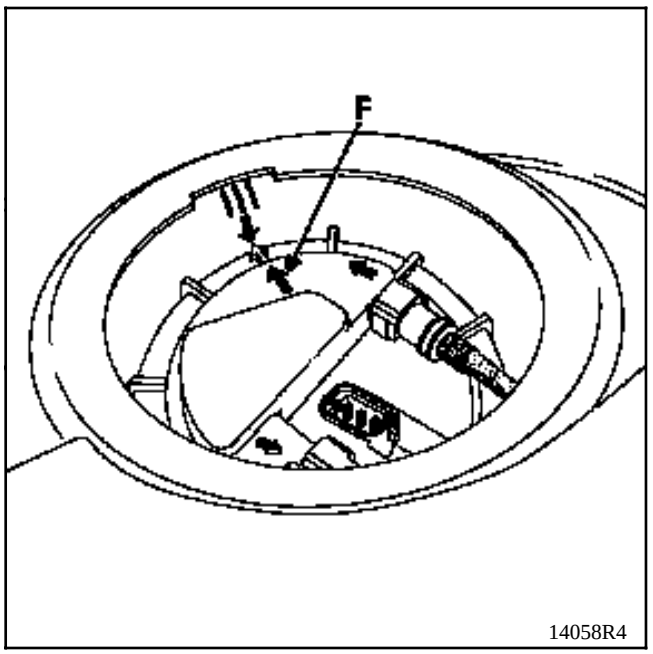
Remove the pump and sender unit assembly.

NOTE : If several hours may pass between removing and refitting the pump and sender unit assembly, refit the nut to the fuel tank to prevent it from distorting.

REFITTING OF THE PUMP AND SENDER UNIT ASSEMBLY

Special notes

Replace the seal.
Position the pump and sender unit assembly (arrow (F) must be opposite the reference mark on the fuel tank).



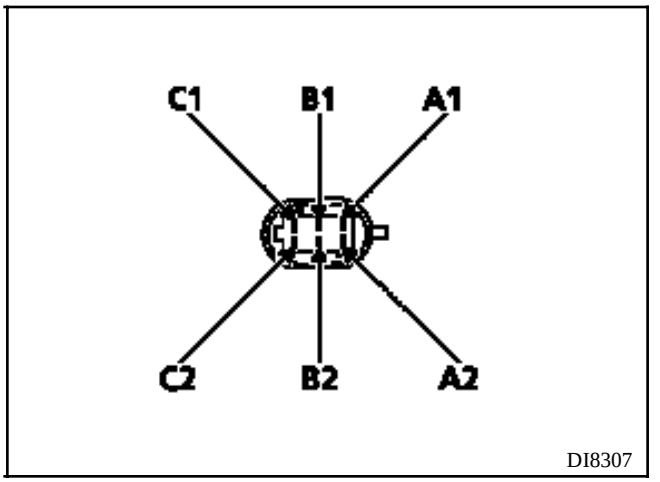
Fit the nut and tighten it (the nut is correctly tightened when the moulded reference mark on the nut is opposite the mark on the fuel tank using tool **Mot. 1397**).

Clip the fuel pipes back into position.

Reconnect the electrical connector.

Refit the plastic cover.

CONNECTION



Track	Allocation
A1	- fuel gauge
A2	Not used
B1	Fuel level information
B2	Not used
C1	+ Fuel pump (petrol)
C2	- Fuel pump (petrol)

Checking

Check the resistance varies when the float is moved.

Height (in mm)	Value between tracks A1 and B1 (in Ω)
164	3.5 ± 3.5
143	61 ± 7
125	84
110	110 ± 10
81	190 ± 16
52	280 ± 20
47	310 ± 10

Measuring the height (in mm)

Sender unit removed, set it on a flat surface. The height must be measured between the float pin and the work surface.

NOTE : these values are given for information only.

OPERATION

The sensor consists of a wire with a high coefficient of resistance. When a current passes through the wire it does not have the same thermal conductivity when it is immersed in a liquid as when it is in the open air.

After a fixed time a voltage difference is obtained at the sensor terminals depending on the depth of immersion of the wire. This voltage difference is recorded by the instrument panel electronic unit which manages the level display function and also controls the "low oil level" warning on the central display.

When the ignition is switched on, the central display shows the oil level in a series of "blocks" for approximately **30 seconds**, before returning to displaying the trip mileometer and total mileometer functions.

NOTE : Pressing the trip mileometer reset button on the instrument panel while the oil level is displayed will display the mileometer function.

NOTE: if a short circuit or an open circuit is detected when the oil level is measured, the display changes to the mileometer function straight away.

CHECKING

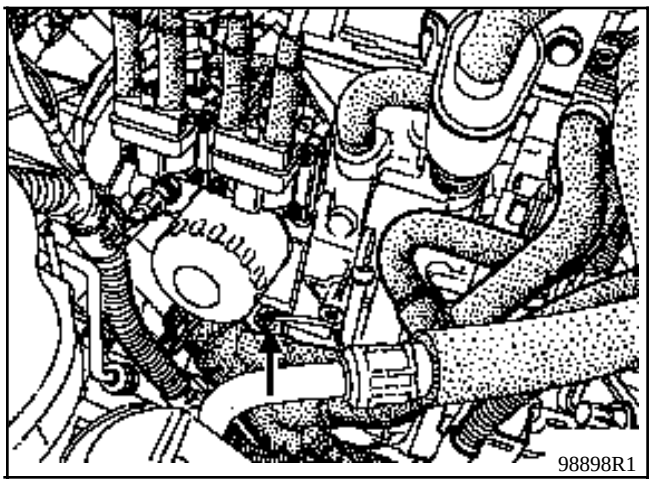
The sensor resistance must be between **6** and **20 ohms**.

The sensor is deemed to be in short circuit for a value lower than **4 ohms**.

The sensor is deemed to be in open circuit for a value higher than **22 ohms**.

LOCATION

Example : F engine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OPERATION

A thermistor transmits a variation in resistance to a receiver, depending on the coolant temperature, and a thermal switch illuminates the warning light on the instrument panel when the temperature reaches **118°C.**

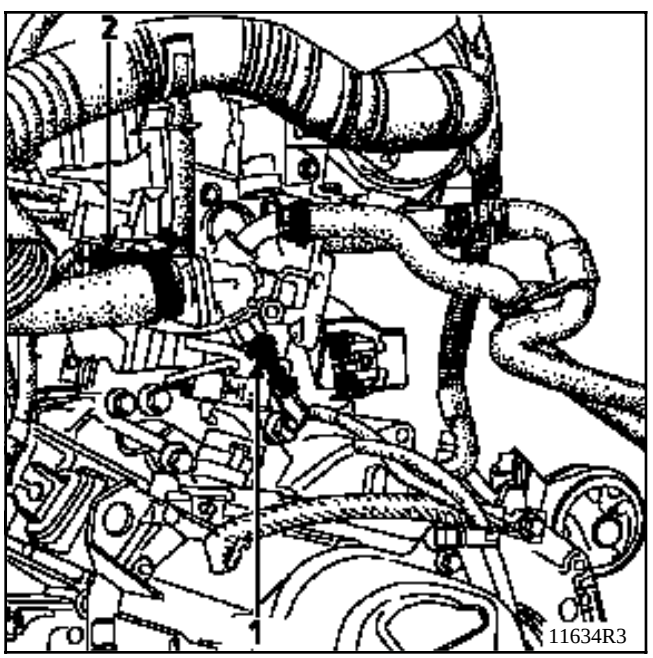
CHECKING

Connect an ohmmeter between track 1 (K and E engines) or track 2 (F engine) on the sensor and vehicle earth.

Correct value : **160 to 1 250** Ω.

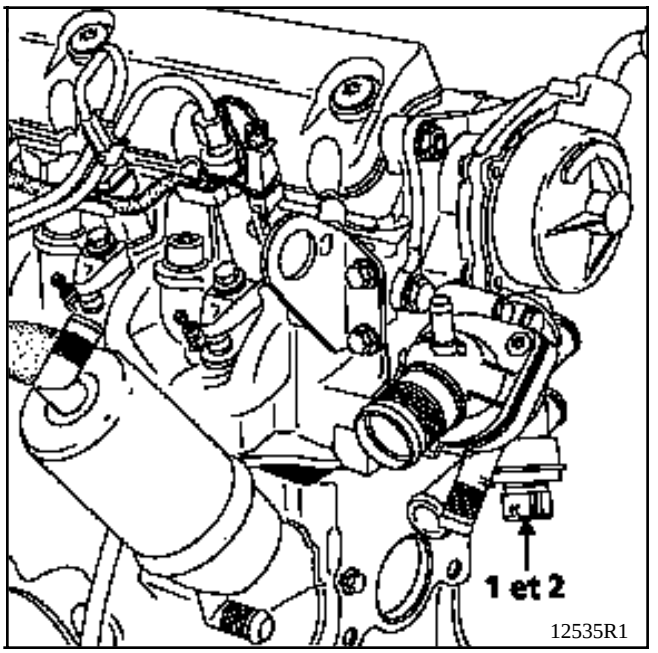
LOCATION

D engine

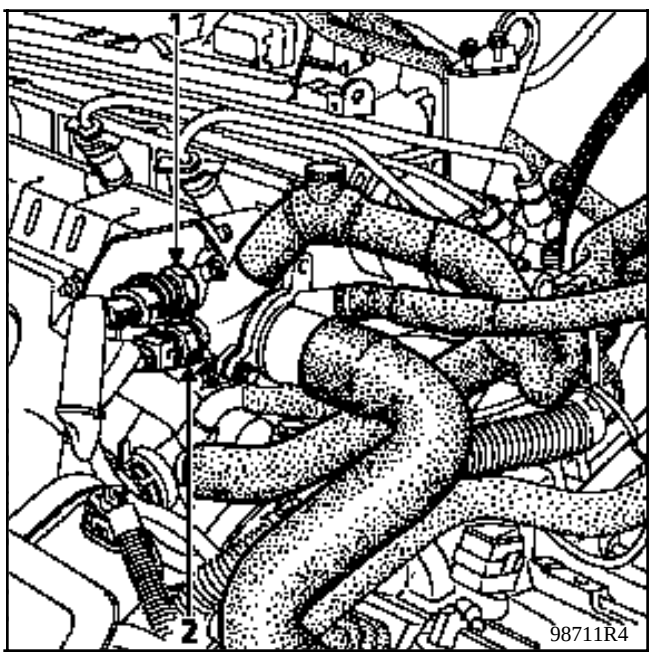


1 Warning light switch
2 Gauge sensor

F engine



E engine



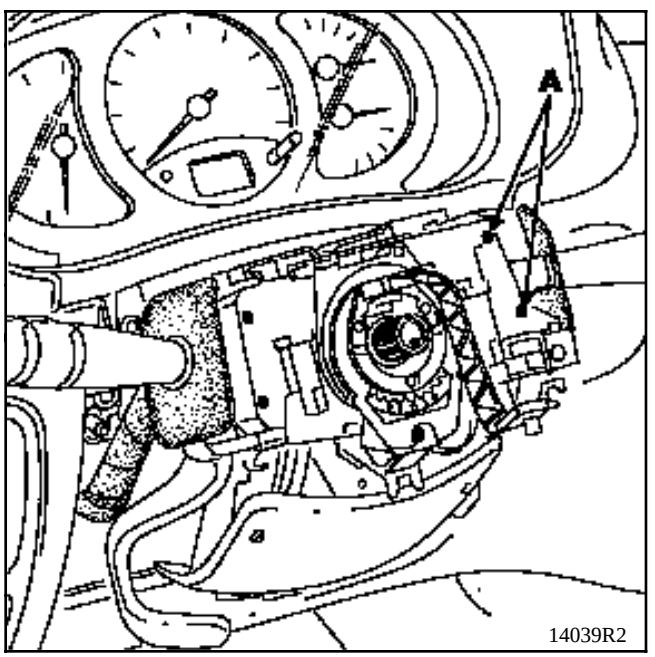
REMOVAL - REFITTING

Disconnect the battery.

Remove the half cowlings under the steering wheel.

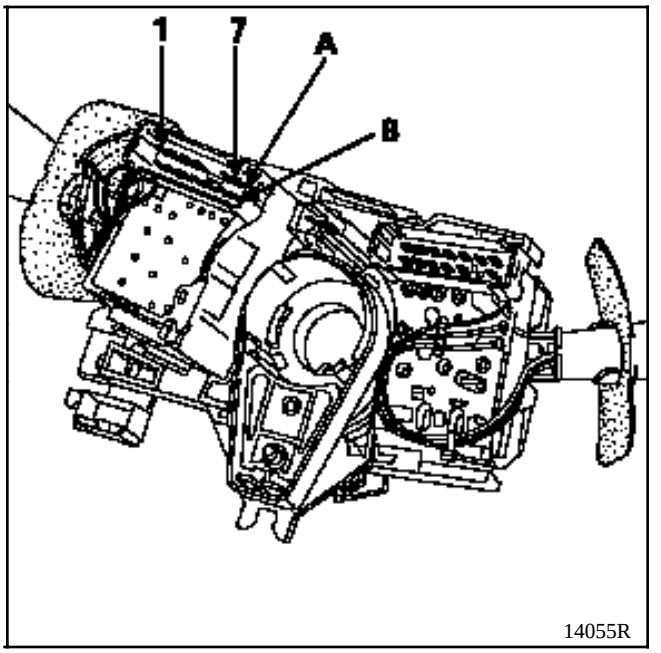
Release the immobiliser antenna ring from the ignition switch.

Remove the two mounting screws (A) for the wiper stalk.
Release the stalk from its mounting and disconnect the connector.



NOTE : the steering wheel does not have to be removed.

CONNECTION



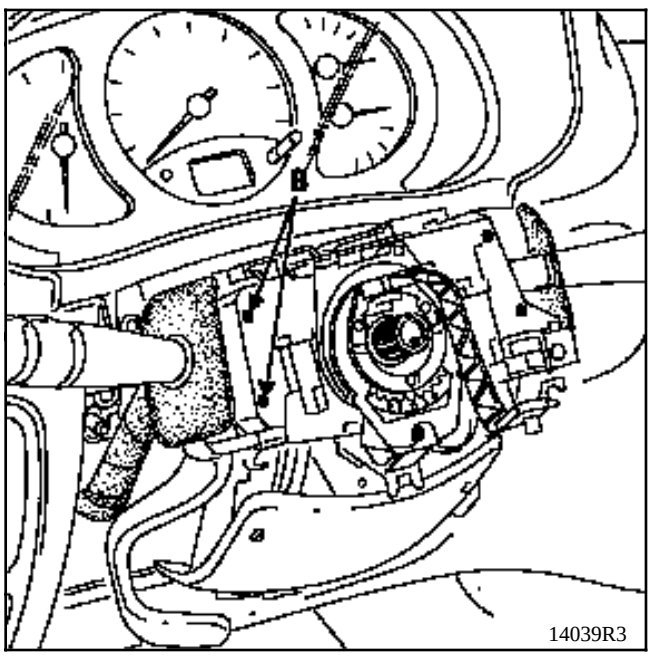
Track	Allocation
A1	Intermittent
A2	Wiper fast speed
A3	Wiper slow speed
A4	Front washer pump
A5	Not used
A6	Front timer
A7	+ after ignition, front wiper
B1	Rear washer pump
B2	Rear timer
B3	Not used
B4	+ after ignition, rear wiper
B5	Earth
B6	Not used
B7	ADAC button (depending on equipment)

REMOVAL - REFITTING

Disconnect the battery.

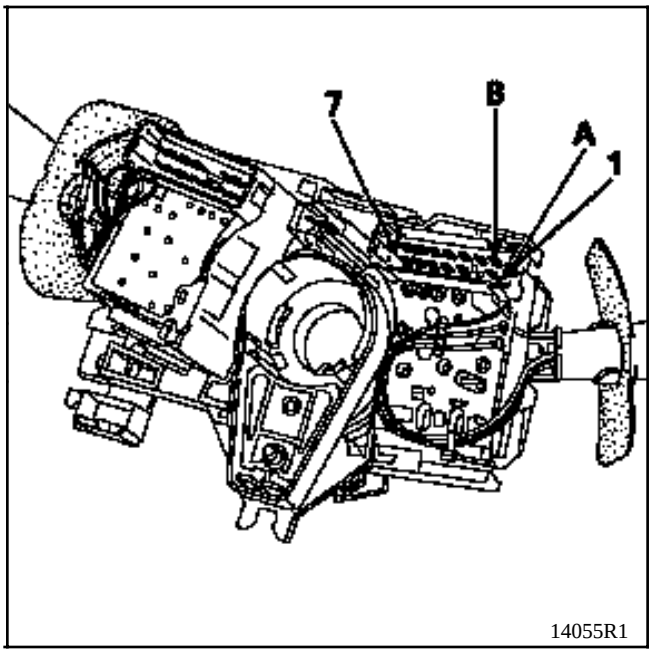
Remove the half cowlings under the steering wheel.

Remove the two mounting screws (B) for the lights stalk.
Release the stalk from its mounting and disconnect the connector.



NOTE : the steering wheel does not have to be removed.

CONNECTION



Track	Allocation
A1	Front fog lights
A2	Not used
A3	Rear fog light
A4	Horn
A5	Right hand indicators
A6	Central flasher unit
A7	Left hand indicators
B1	Side lights
B2	+ before ignition
B3	+ before ignition
B4	Not used
B5	Dipped headlights
B6	+ before ignition
B7	Main beam headlights

- **Special notes for vehicles with an air bag**

The stalk mounting and the rotary switch are a single part (cannot be separated).

The rotary switch ensures the electrical connection between the steering column and the steering wheel.

The switch has a strip with conductive tracks (air bag) of a length enough to guarantee **2.5 turns** of the steering wheel (steering lock plus safety margin) to each side.

REMOVAL - REFITTING

IMPORTANT: pyrotechnic systems (air bags and pretensioners) must not be handled near to a heat source or flame - they may be triggered.

IMPORTANT: whenever the steering wheel is removed, the air bag connector (D) **MUST** be disconnected. The air bag is fitted with a connector which short circuits when it is disconnected to avoid any incorrect triggering.

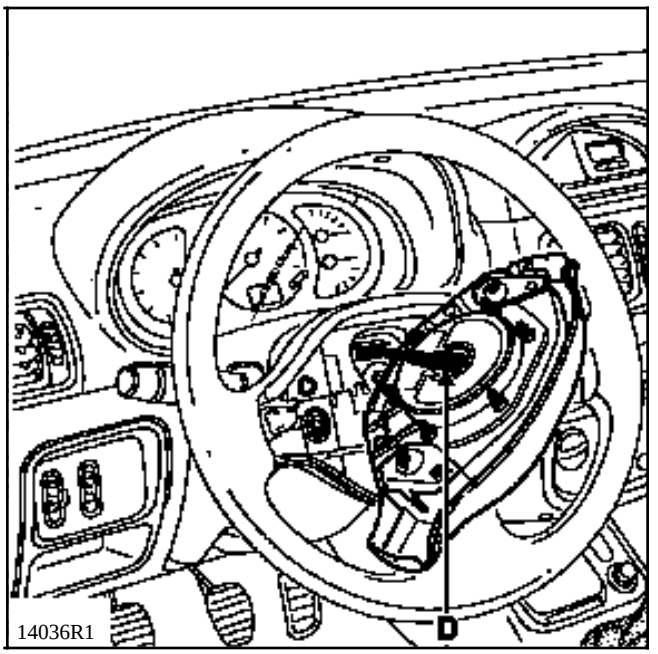
Disconnect the battery.

- **Vehicle without an air bag :**

Remove the central steering wheel cover.

- **Vehicle with an air bag:**

Remove the driver's air bag cushion by the two Torx bolts (**T30**) located behind the steering wheel and disconnect the connector (D),



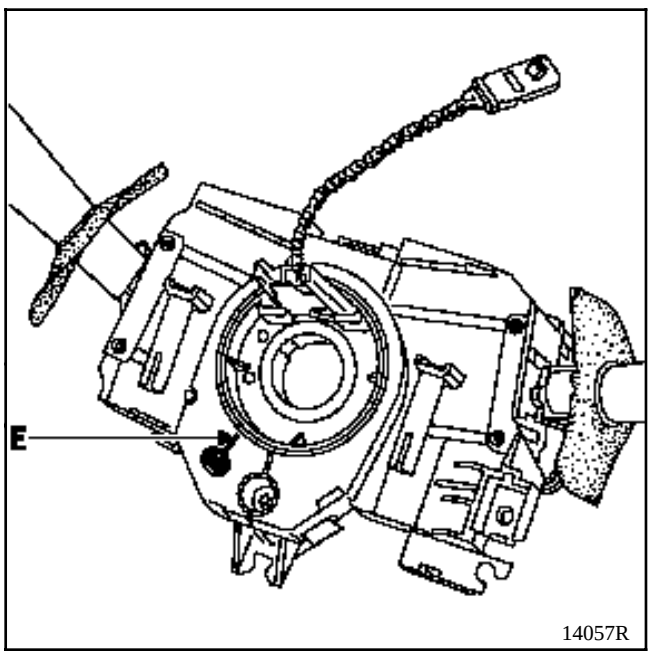
Remove:
- the steering wheel bolt,
- the steering wheel after setting the wheels straight,
- the half cowlings (three bolts).

Disconnect the control stalks (wipers and lights) and the rotary switch connector (vehicle with air bag).

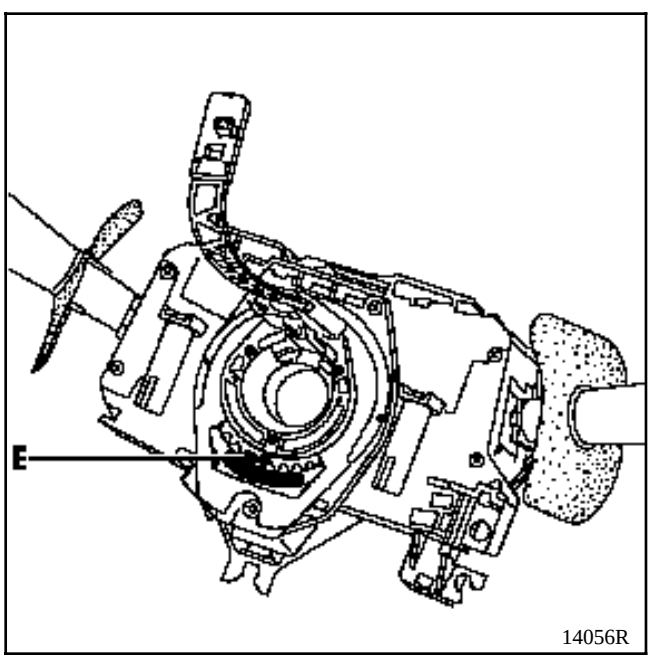
Before removing the assembly, the position of the rotary switch MUST be noted :

- either by ensuring the wheels are straight when removing it so that the strip may be positioned centrally,
- or by checking that the "**0**" mark on the rotary switch is in line with the fixed reference mark (E).

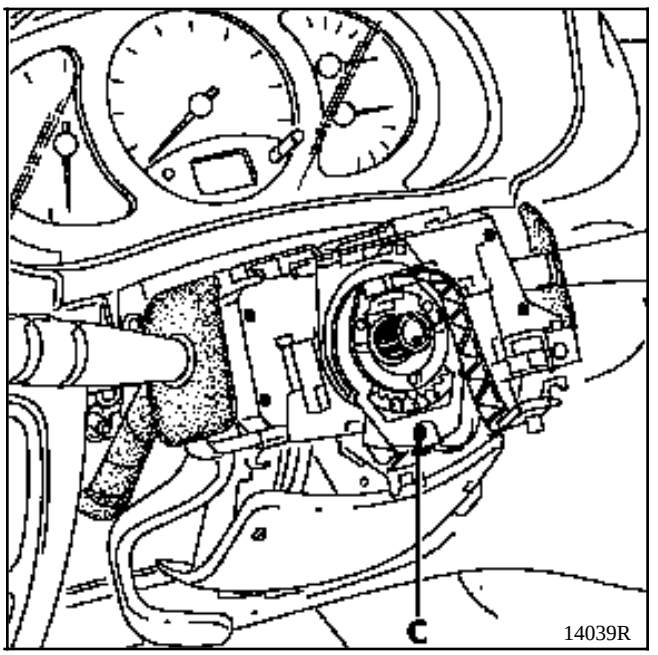
VALEO ASSEMBLY



LUCAS ASSEMBLY



Slacken the screw (C) then tap sharply on the screwdriver to release the cone and remove the assembly from the steering column.



SPECIAL NOTES FOR REFITTING

Ensure that the wheels are still straight.

Check that the rotary switch is correctly positioned by checking that the "**0**" mark of the rotary switch is pointing to the fixed reference mark (E).

Position the assembly on the steering column and connect the various connectors.

Carry out the rest of the refitting procedure and do not lock bolt (C) until the half cowlings are back in place, so that the stalks are correctly aligned in the instrument panel and the dashboard.

This operation is made easier by the hole cut in the lower half cowling which allows access to the screw (C).

Renew the steering wheel bolt each time it is removed (pre-bonded bolt).

Observe the correct tightening torque (**4.5 daN.m**).

IMPORTANT : Before reconnecting the driver's air bag cushion, check to see if the system is operating correctly as follows:

- check the air bag warning light on the instrument panel is illuminated when the ignition is on,
- connect a dummy ignition module to the driver's air bag connector and check that the warning light extinguishes,
- switch the ignition off, connect the air bag cushion in place of the dummy ignition module and secure the cushion to the steering wheel (tightening torque **0.5 daN.m**),
- switch the ignition on. Check the warning light illuminates for **three seconds** when the ignition is switched on then extinguishes and remains extinguished.

If the warning light does not operate as described above, refer to the fault finding section and check the system using the **XRBAG** (**Elé. 1288**)

IMPORTANT : if these instructions are not followed exactly the system may not operate normally and could even be triggered incorrectly.

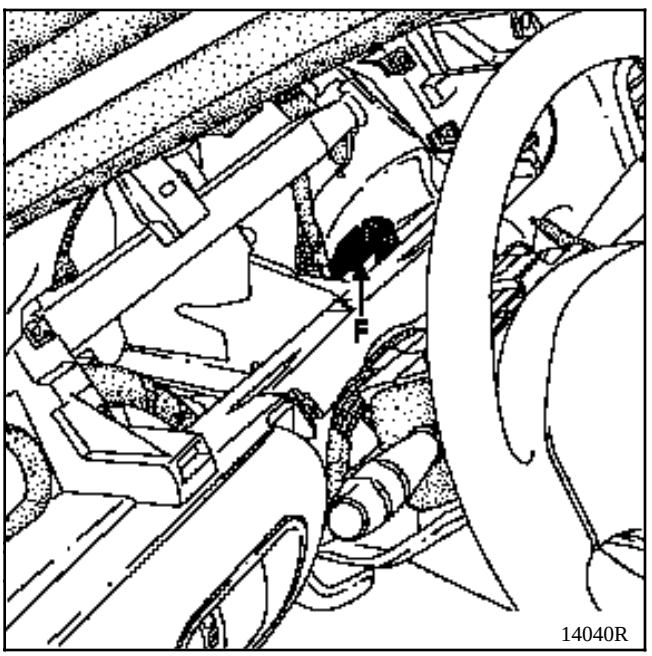
REMOVAL - REFITTING

Disconnect the battery.

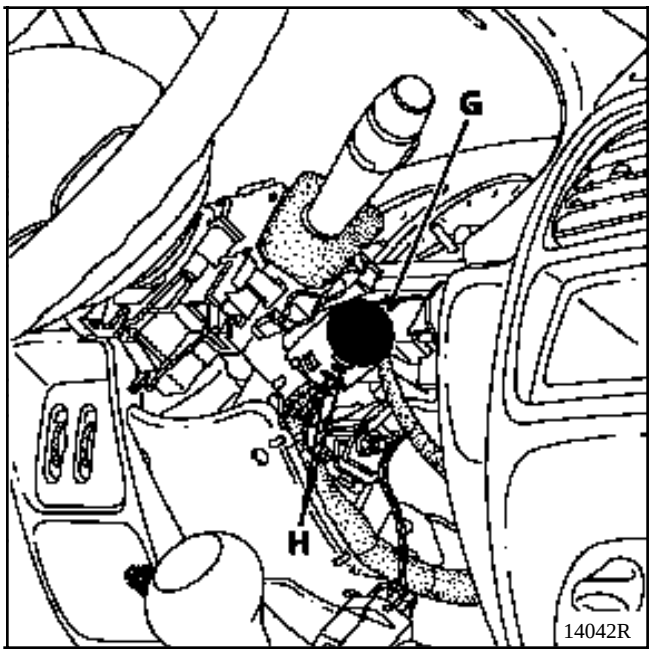
Set the wheels straight.

Remove:
- the half cowlings,
- the instrument panel visor,
- the instrument panel,
- the antenna ring (immobiliser) from the ignition switch.

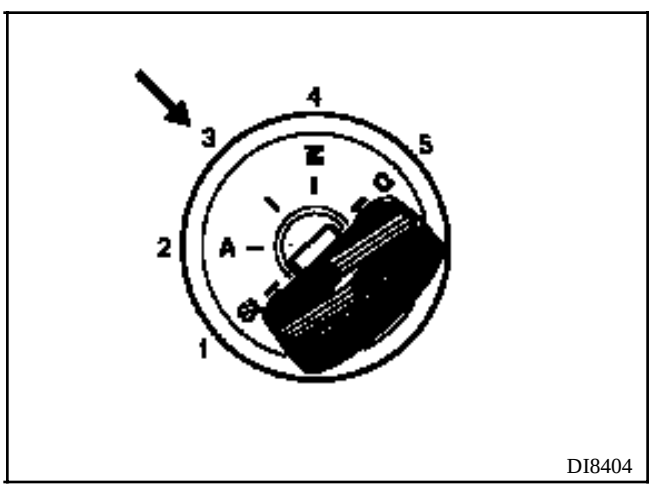
Disconnect the ignition switch connector (F).



Remove bolt (G) from the ignition switch.



Position the ignition key in position 3 and press retaining lugs (H) while releasing the switch.



SPECIAL TOOLING REQUIRED	
Elé. 1294-01	**Wiper arm removing tool**

REMOVAL OF THE WIPER MECHANISM WITH MOTOR

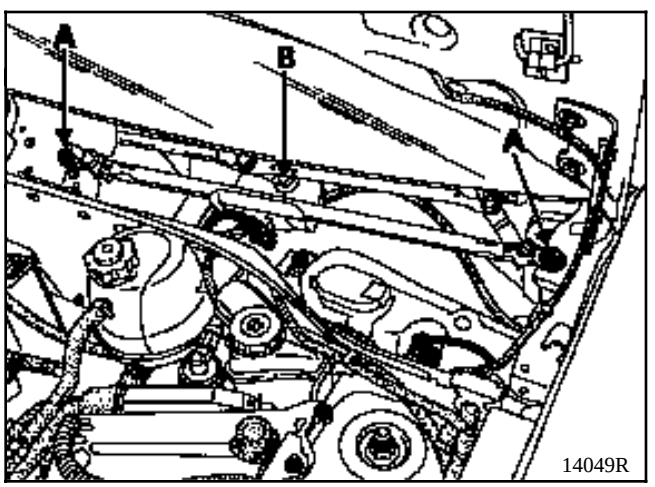
Make sure that the wiper motor is in the park position.

Disconnect the battery.

Note the position of the wiper arms.

Open the bonnet.

Remove:
- the wiper arms using tool **Elé. 1294-01**,
- the scuttle panel grille seal,
- the scuttle panel grille after removing the two mounting clips (by pressing in the centre).



Disconnect the motor.

Remove the two mechanism mounting bolts (A) and release it from its retaining point at the rear.

REMOVING THE MOTOR

After removing the mechanism / motor assembly, remove:
- the motor shaft nut (B) and release the linkage after noting its position,
- the three motor mountings.

SPECIAL NOTES FOR REFITTING

Refit the linkage to the motor on the mark made during removal.

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, locating the blade on the marks made on removal.

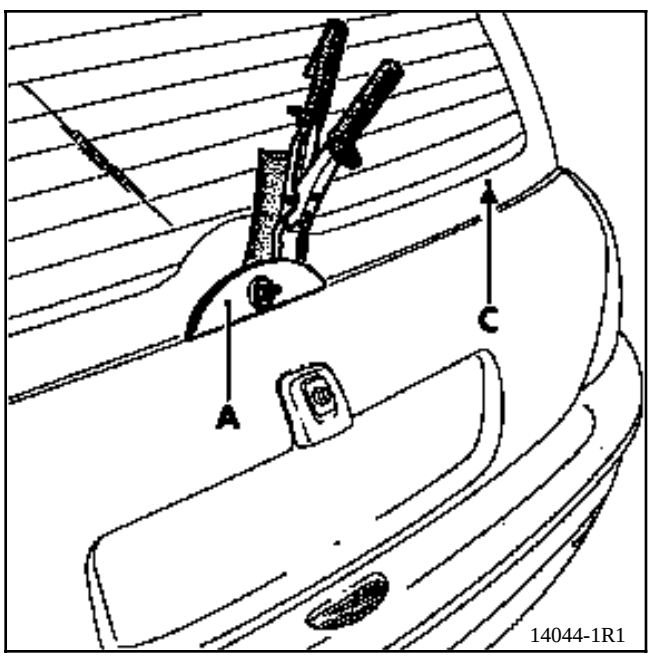
Fit new nuts and torque tighten to **1.8 daN.m (**± **15 %)** using a torque wrench.

REMOVING THE MOTOR

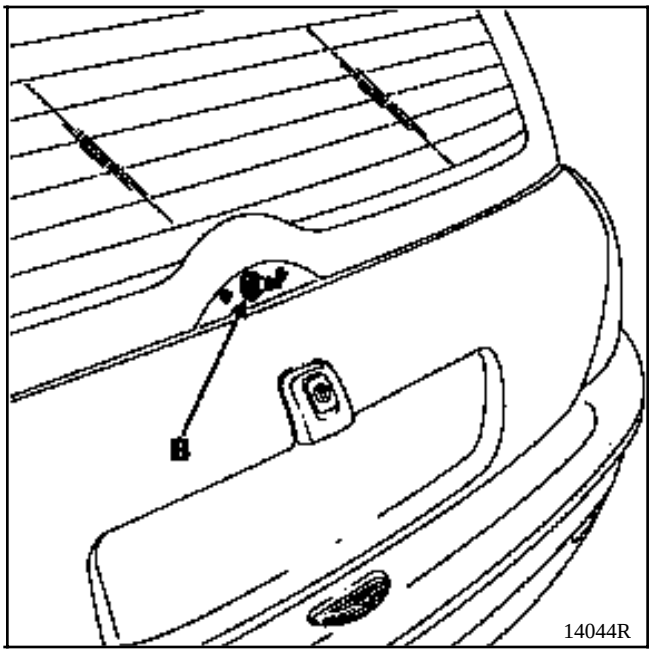
Make sure that the wiper motor is in the park position.

Disconnect the battery.
The park position for the wiper arm is marked by point (C) on the rear screen.

Remove:
- the wiper arm mounting nut,
- the wiper arm from its pin using special tool **Elé. 1294-01**,
- cover (A) using the unclipping tool,



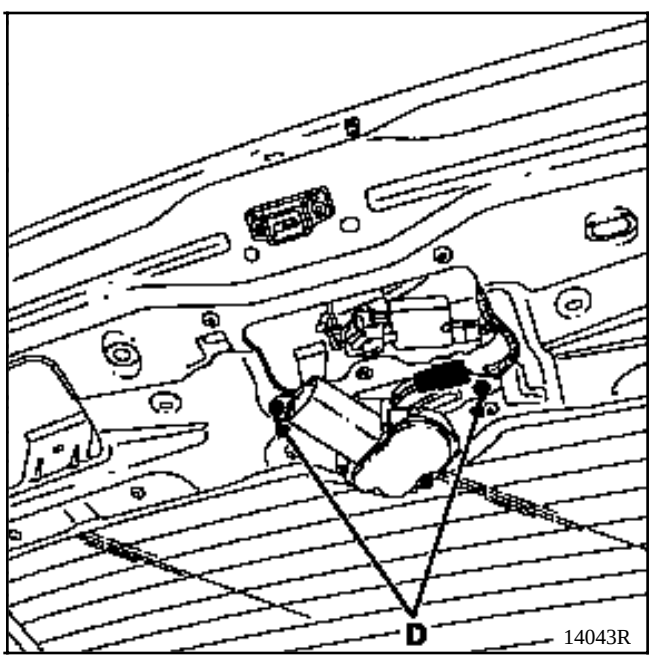
- the motor shaft nut (B),



- the lining on the tailgate (clips and screws).

Disconnect the wiper motor connector.

Remove the two bolts (D) mounting the motor and release it.



SPECIAL NOTES FOR REFITTING

Check that the motor is in the park position before refitting the wiper arm.

Clean the splines on the wiper arm pin using a wire brush.

Refit the wiper arm, locating the blade on the mark (C) on the rear screen.

Fit a new nut and torque tighten to **1 daN.m (**± **20 %)** using a torque wrench.

This vehicle is fitted with a bidirectional electric pump which feeds fluid from the same reservoir to both the front and rear screen washers according to the electrical feed to the two track connector (D).

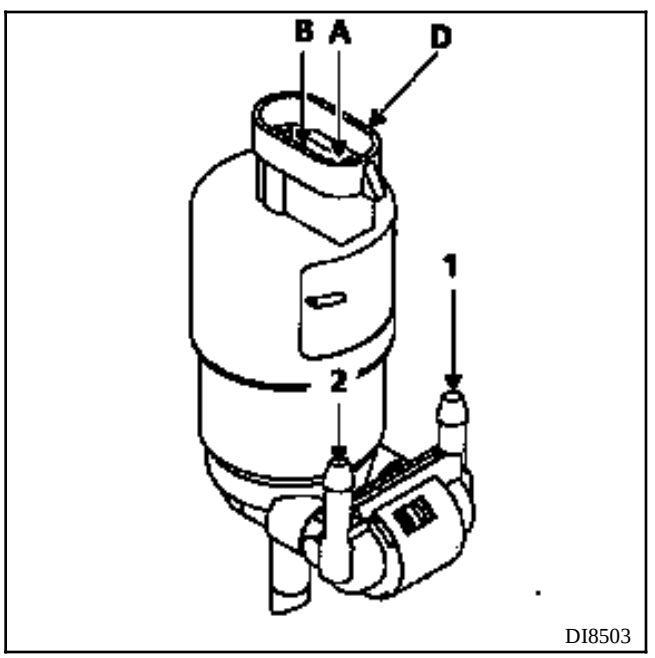
Two cases may be considered:

Track	Feed
A	+ 12 Volts
B	Earth

The pipe is fed via the black end piece (1); the front windscreen washer operates.

Track	Feed
A	Earth
B	+ 12 Volts

The pipe is fed via the white end piece (2); the rear screen washer operates.



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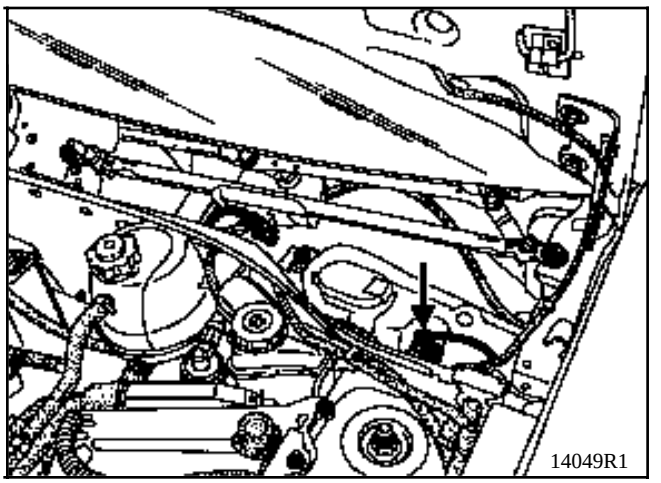
REMOVAL - REFITTING

To reach the washer pump it is necessary to remove:
- the wiper arms using tool **Elé. 1294-01** after noting their positions,
- the scuttle panel grille seal,
- the scuttle panel grille after removing the two mounting clips (by pressing in the centre).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When removing the washer pump, mark the two pipes before disconnecting them.

Special notes for refitting

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.

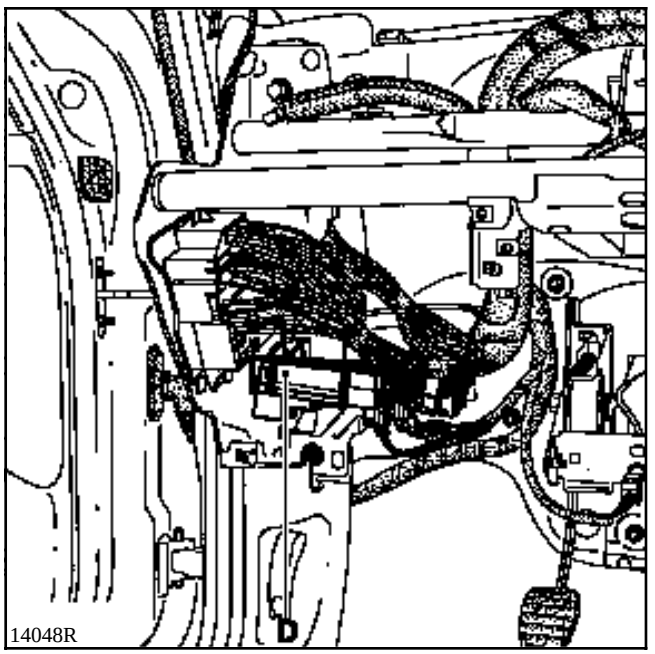
Refit the wiper arms, locating the blade on the marks made on removal.

Fit new nuts and torque tighten to **1.8 daN.m (± 15 %)** using a torque wrench.

Multi-timer unit (BMT)

GENERAL

This unit is located in the dashboard on the left hand side (D).



The multi-timer unit is a unit containing the electrical control part of certain items of electrical equipment on the vehicle.

Fault finding may be carried out using the **XR25** (diagnostic fiche N° **56** or **57** code **D56**).

As standard, four models of multi-timer unit are fitted to vehicles, depending on their equipment.

They may be identified by their part numbers or equipment levels (**1**, **2**, **3**, **4**) read by the **XR25** (**ISO** selector on **S8**, code **D56 # 14**).

1) Basic model, no option (level 1)
Part Number **77 00 411 318** controlling :
- the indicators and hazard warning lights,
- the front and rear wipers,
- the courtesy light (without timer),
- the lights on reminder buzzer,
- the immobiliser.

2) Basic model, with options (level 2)
Part Number **77 00 411 319** controlling, in addition to the previous version:
- the central door locking with remote control,
- the front electric windows,
- the courtesy light timer (one bulb).

3) High specification model, no option (level 3)
Part Number **77 00 411 322** controlling, in addition to the previous version:
- the variable front wiper timing,
- the one-touch front electric windows,
- the opening element closure warning light,
- the rear wiper in reverse gear.

4) High specification model, with options (level 4)
Part Number **77 00 411 321** controlling, in addition to the previous version:
- the running lights* (extreme cold),
- the headlight washers (extreme cold),
- the overspeed warning (Arabia),
- the courtesy light timer (three bulbs),
- the door sill lighting timer (two bulbs).

* dipped headlights and sidelights illuminated after starting the engine (running lights).

In exchange, only the following part numbers are available:
- **77 00 411 319** (level **2**) for vehicles originally fitted with a unit of part number **77 00 411 318** and **77 00 411 319**,
- **77 00 411 321** (level **4**) for vehicles originally fitted with a unit of part number **77 00 411 322** and **77 00 411 321**.

NOTE: the level **4** unit may be fitted to the complete range.

IMPORTANT :
- When replacing a multi-timer unit, the functions corresponding to the vehicle equipment level or country's legislation must be configured using the **XR25**.
- If a level **3** or level **4** multi-timer unit is fitted to a vehicle normally fitted with a level **1** or level **2** unit, the function"**front wiper timing**" must not be configured, otherwise the front wipers will not operate.

IMPORTANT: the vehicle will not be able to be started if the immobiliser programming procedure has to been carried out (unless the injection computer or the solenoid valve is not coded).

REPLACING A MULTI-TIMER UNIT

When replacing a multi-timer unit, programming and configuration must be carried out corresponding with the vehicle equipment level.

1) Basic model, no option (level 1)
Part Number **77 00 411 318**
Programme:
- the immobiliser.

Configuration :
- the engine (petrol or diesel).

2) Basic model, with options (level 2)
Part Number **77 00 411 319**
Programme:
- the immobiliser,
- the remote control.

Configuration :
- the engine (petrol or diesel),
- the remote control for infrared or radio-frequency (depending on equipment).

3) High specification model, no option (level 3)
Part Number **77 00 411 322**
Programme:
- the immobiliser,
- the remote control.

Configuration :
- the variable front wiper timer,
- the engine (petrol or diesel),
- the remote control for infrared or radio-frequency (depending on equipment).

4) High specification model, with options (level 4) Part Number **77 00 411 321**
Programme:
- the immobiliser,
- the remote control.

Configuration :
- the variable front wiper timer,
- the overspeed warning (Arabia),
- the running lights*,
- the engine (petrol or diesel),
- the remote control for infrared or radio-frequency (depending on equipment).

* dipped headlights and sidelights illuminated after starting the engine (extreme cold).

NOTE : for programming refer to section **82** for the immobiliser and section **88** for the remote control.

If the programming of the multi-timer unit is not carried out correctly, according to the legislation in force in the country of origin of the vehicle, the owner may be subject to legal proceedings.
It is therefore vital to ensure that the multi-timer unit programming is carried out correctly.

Checking the configuration

The configurable functions may be shown using **XR25** and fiche n° **57** by means of bargraphs **2** RH side , **4** LH side and **4** RH side .

Changing the configuration

Configurable functions	Configuration No.
- Variable front wiper timing	44
- Overspeed warning (Arabia)	45
- Running lights	46

Using **XR25** (fiche n° **57**) ;

enter code **D** **5** **6**

enter command mode

G followed by the configuration number for the required function (see table above) then enter

***** then **1** to configure

or **0** to de-configure

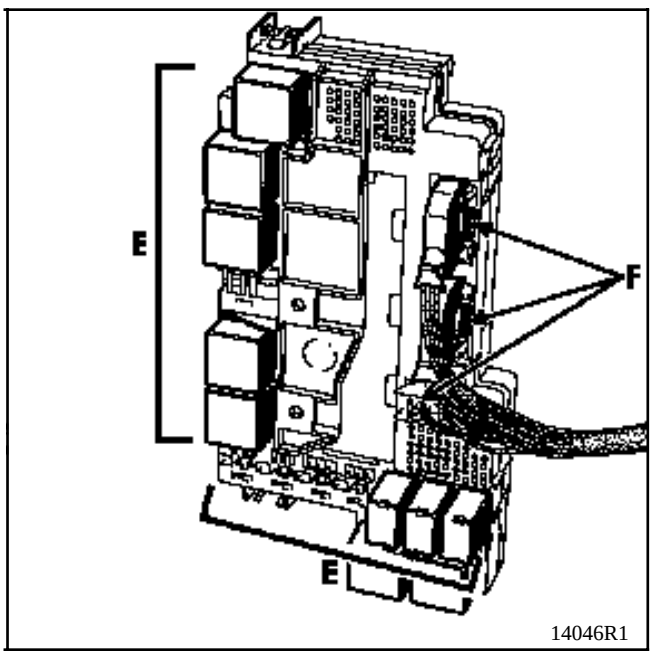
and validate using *****

Check the configuration has been accepted using diagnostic fiche n° **57** (bargraphs **2** RH side, **4** LH side or **4** RH side) and check the configured function operates correctly.

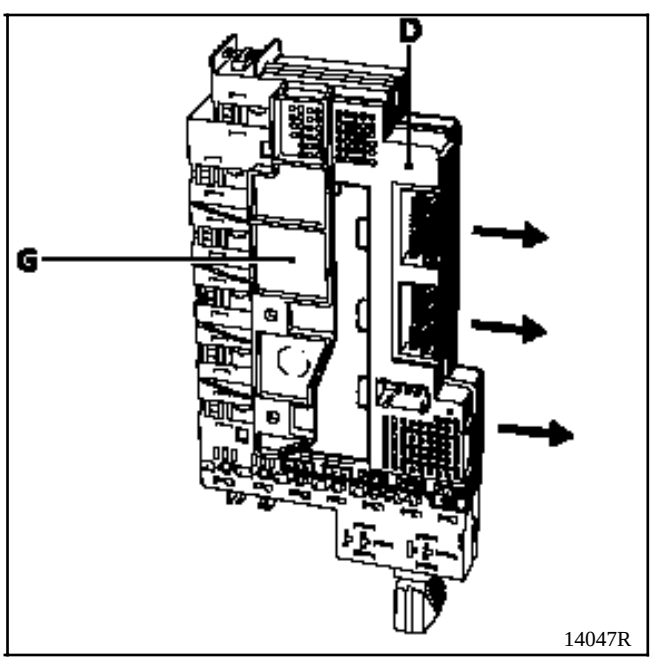
NOTE : for configurations for the immobiliser refer to section **82** and for the remote control (infrared or radio-frequency) refer to section **88**.

REMOVAL - REFITTING

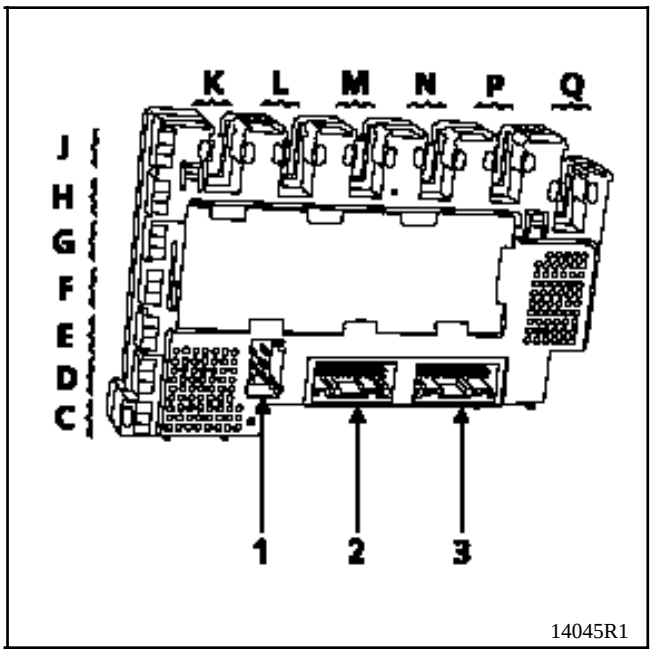
On the driver's side, from below the dashboard:
- remove the relays (E) marking their locations,
- disconnect the connectors (F),



- remove the multi-timer unit (D) from its mounting (G) as shown below.



MULTI-TIMER UNIT CONNECTIONS



1 - Black 6 track connector

Track	Allocation
A1	Electronic earth
A2	Not used
A3	Central flasher unit feed
B1	+ before ignition feed
B2	Not used
B3	One-touch electric window earth (depending on equipment)

2 - Yellow 26 track connector

Track	Allocation
1	Diagnostic line L
2	Immobiliser antenna ring coded connection
3	Windscreen washer control
4	Rear wiper timer control
5	+ accessories feed
6	+ after ignition feed
7	+ central door locking control
8	Not used
9	Not used
10	+ front wiper park
11	Infrared signal return
12	Not used
13	Front door switches
14	Diagnostic line K
15	Coded information to injection computer or solenoid valve (immobiliser)
16	Rear screen washer control
17	Side lights information
18	Front wiper slow speed
19	+ rear wiper park
20	Oil pressure information
21	Not used
22	+ central door unlocking control
23	Hazard warning lights control
24	Red immobiliser warning light
25	Not used
26	Front courtesy light control

3 - Blue 26 track connector (depending on equipment)

Track	Allocation
1	Driver’s one-touch window raise control
2	Driver’s one-touch window lower control
3	Reversing lights information
4	Not used
5	Main beam headlights information (extreme cold)
6	Dipped beam headlights information (extreme cold)
7	Headlight washers control
8	Not used
9	Speed information
10	Overspeed information control (Arabia)
11	Not used
12	Not used
13	Not used
14	Door open information
15	Not used
16	Rear door switches
17	Door sill lighting control
18	Not used
19	Not used
20	Not used
21	Not used
22	Not used
23	Not used
24	Not used
25	Not used
26	Not used

C - Indicator relay control

D - One-touch driver's electric window raise relay control

E - One-touch driver's electric window lower relay control

F - Not used

G - Running lights* relay control - side lights

H - Running lights* relay control - dipped headlights

J - Not used

K - Front wiper relay control

L - Rear wiper relay control

M - Not used

N - Central door locking relay control

P - Central door unlocking relay control

Q - + after ignition feed to electric windows relay control

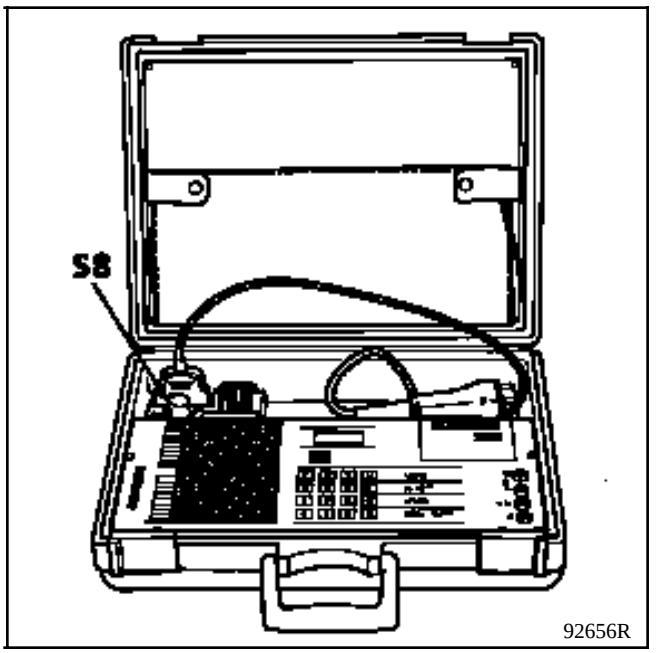
* dipped headlights and sidelights illuminated after starting the engine (extreme cold).

FAULT FINDING

If there is a fault in one of the functions managed by the multi-timer unit, fault finding may be carried out using the **XR25**.

Connection

Use the current cassette and the corresponding diagnostic fiche n° **56** or **57**.



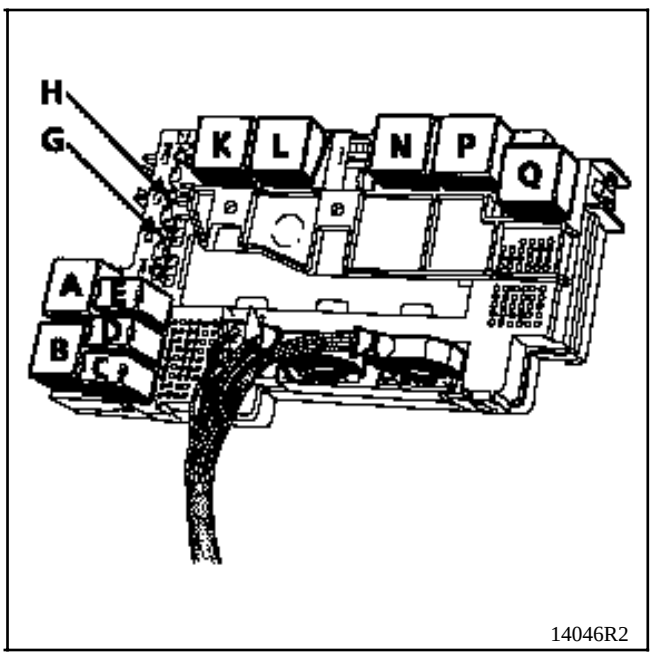
Connect the XR25 to the diagnostic socket.

Put the **ISO** selector on **S8**.

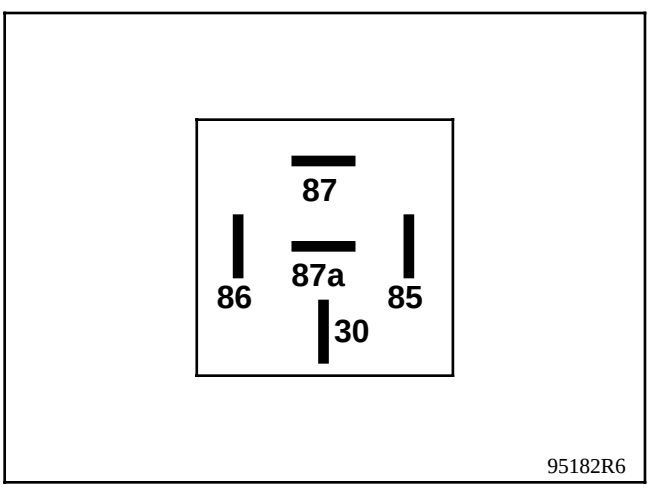
Enter the special fault finding code for the multi-timer unit **D56**.

NOTE : Refer to the fault finding section for information on interpretation of the bargraphs, fault charts, checking conformity and additional tests.

CONNECTION OF THE RELAYS



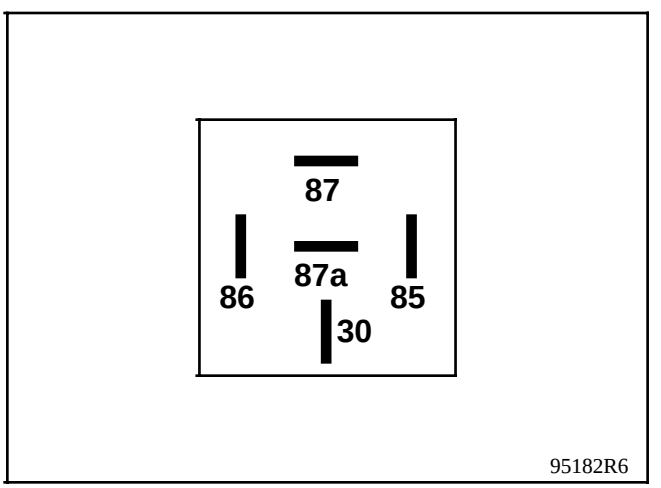
A - Front fog lights relay



Track	Allocation
1 or 86	+ relay control
2 or 85	Earth
3 or 30	+ before ignition feed
4 or 87a	Not used
5 or 87	Front fog lights

NOTE : the track number is taken from the relay.

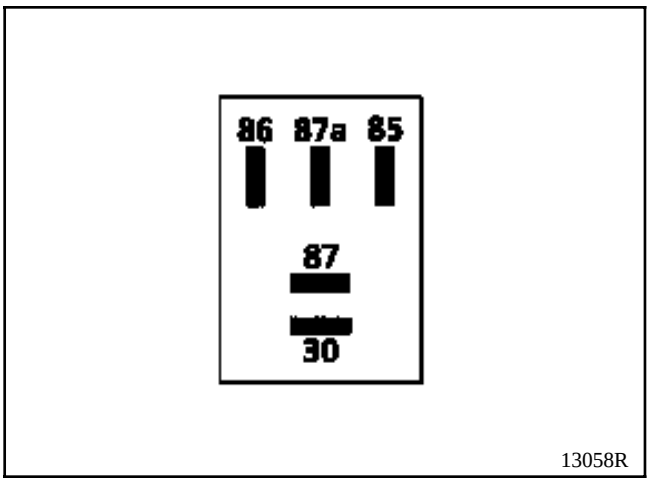
B - Heated rear screen relay



Track	Allocation
1 or 86	+ after ignition feed
2 or 85	- heater control
3 or 30	+ before ignition feed
4 or 87a	Not used
5 or 87	Rear screen

NOTE : the track number is taken from the relay.

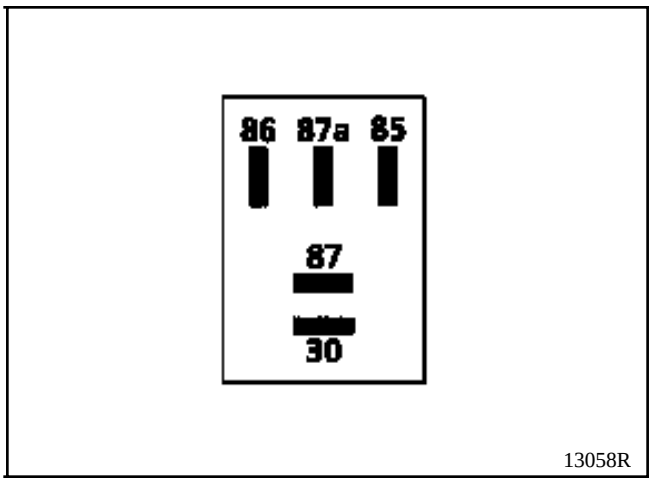
C - Indicators relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- relay control
3 or 30	Indicators
4 or 87a	Not used
5 or 87	+ before ignition feed

NOTE : the track number is taken from the relay.

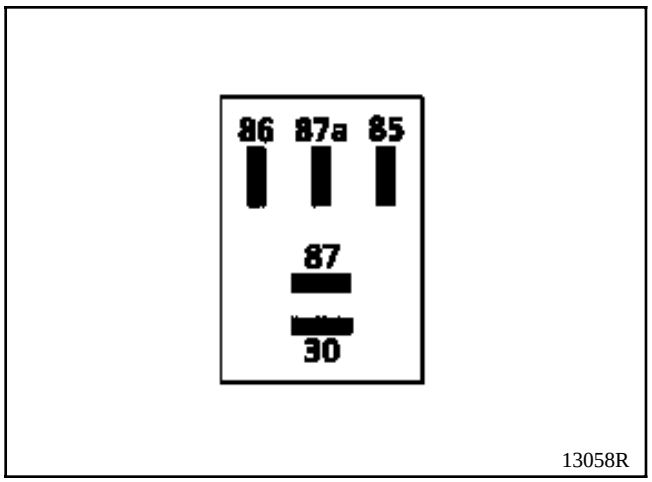
D - Driver's one-touch electric window raise relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- electric window control
3 or 30	Driver's electric window motor
4 or 87a	Not used
5 or 87	+ before ignition feed

NOTE : the track number is taken from the relay.

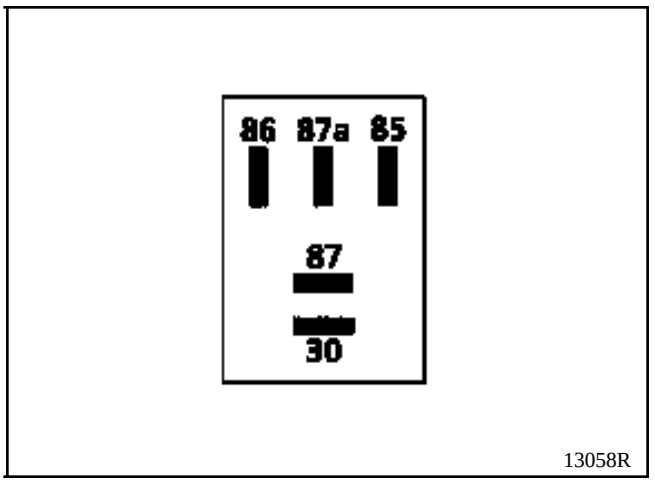
E - Driver's one-touch electric window lower relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- electric window control
3 or 30	Driver's electric window motor
4 or 87a	Not used
5 or 87	+ before ignition feed

NOTE : the track number is taken from the relay.

G - Running lights* - side lights relay

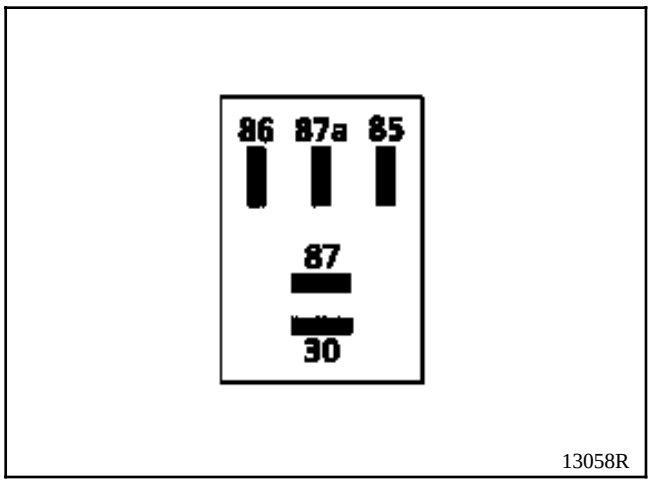


Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- side lights control
3 or 30	+ before ignition feed
4 or 87a	Not used
5 or 87	Side lights

NOTE : the track number is taken from the relay.

(*) dipped headlights and sidelights illuminated after starting the engine (extreme cold).

H - Running lights* - dipped headlights relay

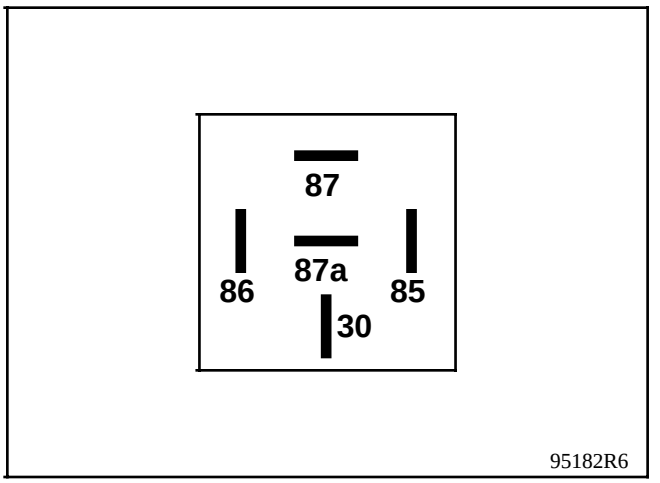


Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- dipped headlights control
3 or 30	+ before ignition feed
4 or 87a	Not used
5 or 87	Dipped headlights

NOTE : the track number is taken from the relay.

(*) dipped headlights and sidelights illuminated after starting the engine (extreme cold).

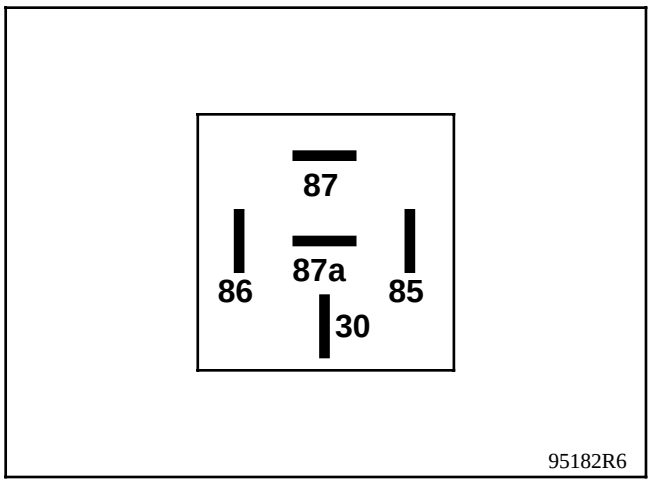
K - Front wiper relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- front wiper control
3 or 30	+timer
4 or 87a	Front wiper
5 or 87	+ after ignition feed

NOTE : the track number is taken from the relay.

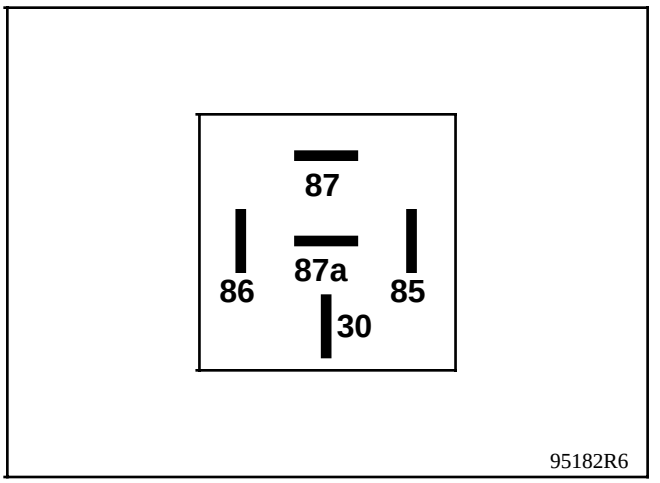
L - Rear wiper relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- rear wiper control
3 or 30	Rear wiper
4 or 87a	Earth
5 or 87	+ after ignition feed

NOTE : the track number is taken from the relay.

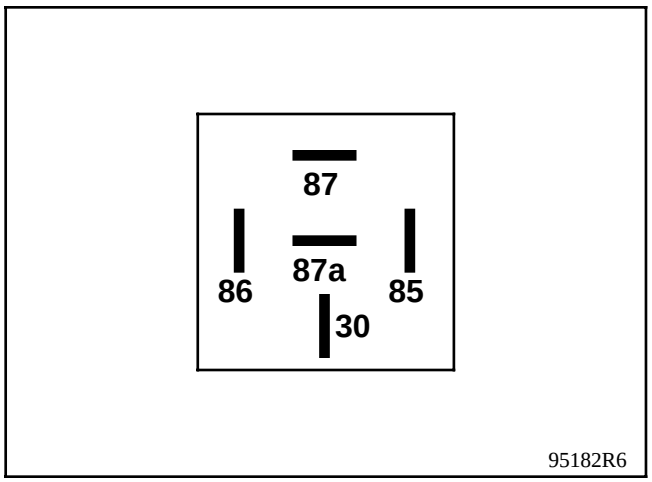
N - Central door locking relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- door lock control
3 or 30	Electric door motors
4 or 87a	Earth
5 or 87	+ before ignition feed

NOTE : the track number is taken from the relay.

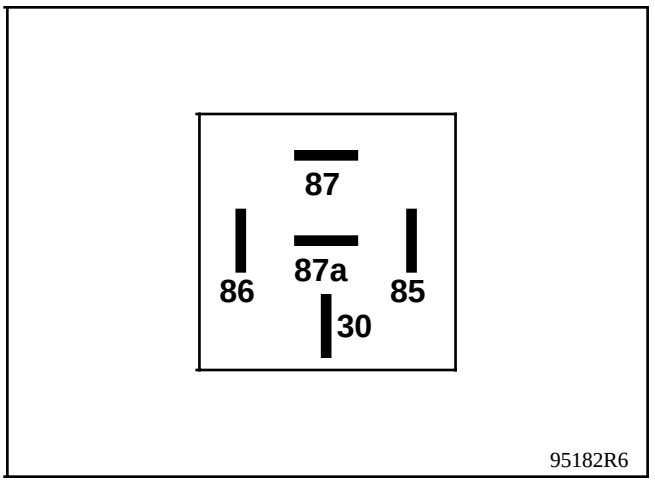
P - Central door unlocking relay



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- door unlock control
3 or 30	Door lock motors
4 or 87a	Earth
5 or 87	+ before ignition feed

NOTE : the track number is taken from the relay.

Q - After ignition relay (electric windows)



Track	Allocation
1 or 86	+ before ignition feed
2 or 85	- relay control (ignition switched on)
3 or 30	+ before ignition feed
4 or 87a	Not used
5 or 87	+ after ignition feed via relay (electric window feed)

NOTE : the track number is taken from the relay.

The heating element applied to the inner face of the window may be accidentally cut, making the heated rear screen inefficient.

The exact point of the break may be determined by means of a voltmeter.

It is possible to repair such faults by applying the heated rear screen varnish sold under Part Number **77 01 421 135** (**2 g** pack).

DETERMINING THE EXACT BREAK POINT WITH A VOLTMETER.

Switch on the ignition.

Switch on the heated rear screen feed.

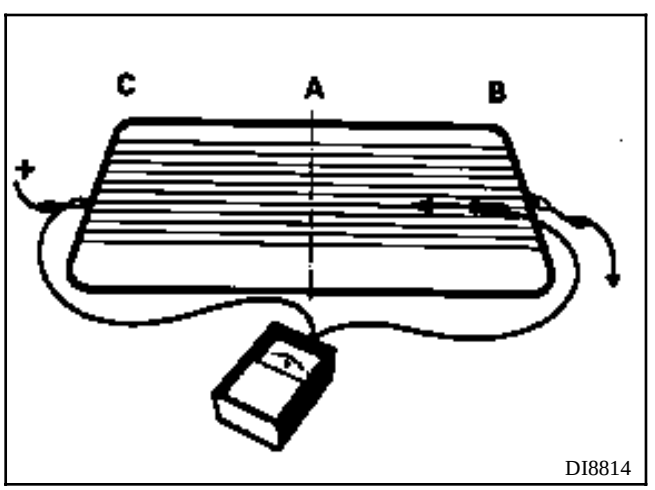
DETECTION BETWEEN LINES B AND A

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

Place the - lead of the voltmeter on an element on the - terminal side of the rear screen (line B). A voltage approximately equal to battery voltage must be obtained.

Move the - lead towards line A (arrow): the voltage drops progressively.

If the voltage drops quickly the element is cut at that point (carry out this operation for each element).



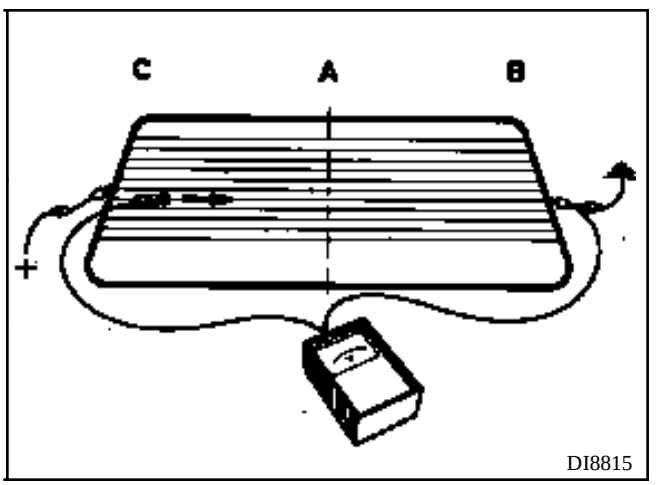
DETECTION BETWEEN LINES C AND A

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

Place the + wire of the voltmeter on an element on the + terminal side of the rear screen (line C); essentially a voltage equal to the battery voltage must be obtained.

Move the + wire towards line A (arrow); the voltage drops progressively.

If the voltage drops quickly, the element must be cut at this point (carry out this operation for each element).



REPAIR OF THE ELEMENT

Clean the section to be treated locally to remove all dust or grease, preferably using alcohol or a glass cleaner, and wipe with a clean, dry cloth.

To obtain a regular line during the repair, apply scotch adhesive tape on either side of the section to be repaired, leaving the conducting line free.

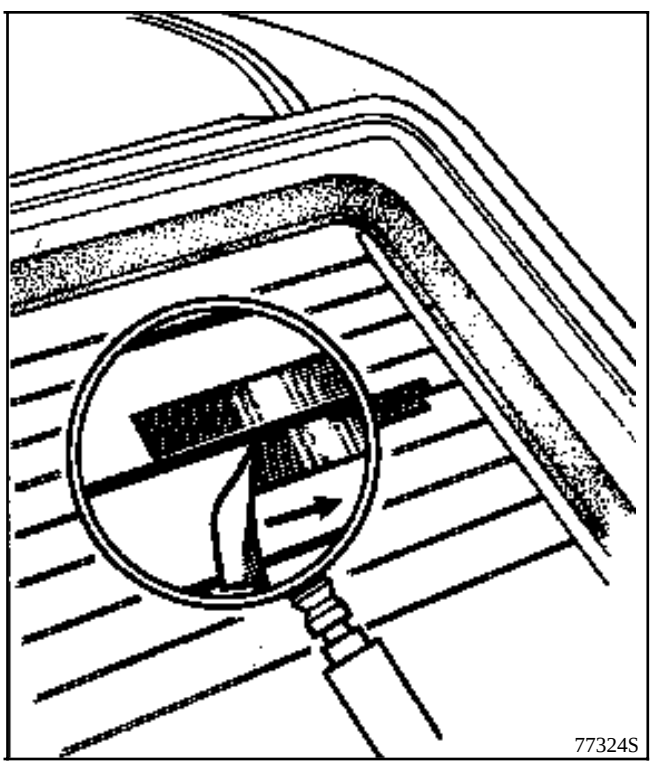
Before applying the varnish, shake the bottle to prevent the deposit of silver particles on the bottom of the bottle.

REPAIR

Using a small brush proceed to carry out the repair, applying a sufficiently thick coat. Where successive coats are applied allow drying time between each coat. Do not repeat the operation more than three times.

However, if there is a run it will be possible to eliminate it using the point of a knife or razor blade once the product is sufficiently hardened (after several hours).

The adhesive tape acting as a guide must not be removed for one hour after application. The tape must be torn off perpendicularly to the resistance in the direction of the arrow. The varnish, applied at an ambient temperature of **20°C**, is completely dry in three hours. At a lower temperature the drying time should be slightly increased.



GENERAL

These vehicles are equipped with an infrared or radio frequency remote control with rolling code, which prevents the code from being copied.

When a transmitter is replaced it will therefore be necessary to resynchronise it so that the transmitters are returned to phase with the multi-timer unit (**BMT**).

This remote control is only used for locking and unlocking the opening elements (it has no effect on the immobiliser).

IMPORTANT: this system cannot operate with three remote controls (the multi-timer unit can only manage two different rolling codes).

THE TRANSMITTER (PLIP)

Replacing or adding a remote control without replacing the multi-timer unit.

Order a spare key head using the number in the head of one of the old keys or the label normally attached to the keys when the vehicle is delivered (eight alphanumeric characters).

If a key is being added or has been lost, remember to order the insert with the key number.

Carry out the special resynchronisation procedure using the XR25.
This procedure resets the remote control into sequence with the multi-timer unit (rolling code) and should only be used if the multi-timer unit is not being replaced.

1. Ignition off, connect the XR25 (ISO selector on S8, code **D56**).
For vehicles fitted with a radio frequency remote control, go to point 2.

For vehicles fitted with an infrared remote control, enter command mode **G04*** (forced protection mode) then switch the ignition on again and enter the vehicle's security code (see procedure in section 82).

2. Switch the ignition off and enter command mode **G32***.

From this moment, the operator has **10 seconds** to carry out the next operation.

NOTE: The **10 seconds** are shown by the illumination of the red immobiliser warning light and bargraph **17 LH** on the XR25(code **D56**, fiche n° 56).

3. Press the remote control twice (the doors lock and unlock and the red warning light extinguishes).

NOTE :
- When replacing a key head, resynchronisation of the second remote control (if fitted) is not always necessary.
  Check that the second control operates, otherwise resynchronise it.

- If both remote controls (if fitted) are desynchronised, two resynchronisation procedures will have to be carried out (one for each remote control).

IMPORTANT: To ensure that the infrared code is correctly transmitted it is essential to direct the transmitter correctly towards the receiver. If the procedure fails it will be necessary to restart from the beginning (infrared remote control only).

4. The procedure is complete - check that the doors lock correctly.

Simple resynchronisation procedure

This procedure allows the remote controls to be reset with the multi-timer unit (rolling code).

This procedure is used:
- when the remote control code no longer lies within the reception range of the multi-timer unit (over **1,000** consecutive presses on the remote control, away from the vehicle).
- when replacing a multi-timer unit alone (new multi-timer unit),
- when replacing a remote control if the multi-timer unit is new (replacing a kit).

REMINDER: when replacing or adding a remote control without replacing the multi-timer unit, refer to "**Replacing or adding a remote control without replacing the multi-timer unit**" (specific resynchronisation procedure).

Ignition off:

1. Press and hold the central door locking button for a few seconds until the doors lock and unlock.
From this moment, the operator has **10 seconds** to carry out the next operation.

NOTE: The **10 seconds** are shown by the illumination of the red immobiliser warning light and bargraph **17 LH** on the XR25(code **D56**, fiche n° 56).

2. Press the remote control twice (the doors lock and unlock and the red warning light extinguishes.

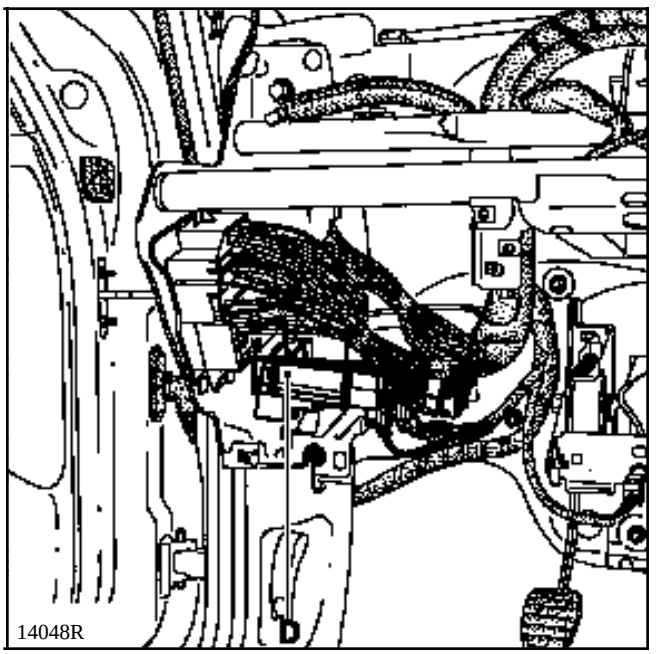
NOTE : If both remote controls (if fitted) are desynchronised, two resynchronisation procedures will have to be carried out (one for each remote control).

IMPORTANT: To ensure that the infrared code is correctly transmitted it is essential to direct the transmitter correctly towards the receiver. If the procedure fails it will be necessary to restart from the beginning (infrared remote control only).

3. The procedure is complete - check that the doors lock correctly.

THE MULTI-TIMER UNIT

The multi-timer unit (**BMT**) (D) is located in the dashboard on the left hand side.

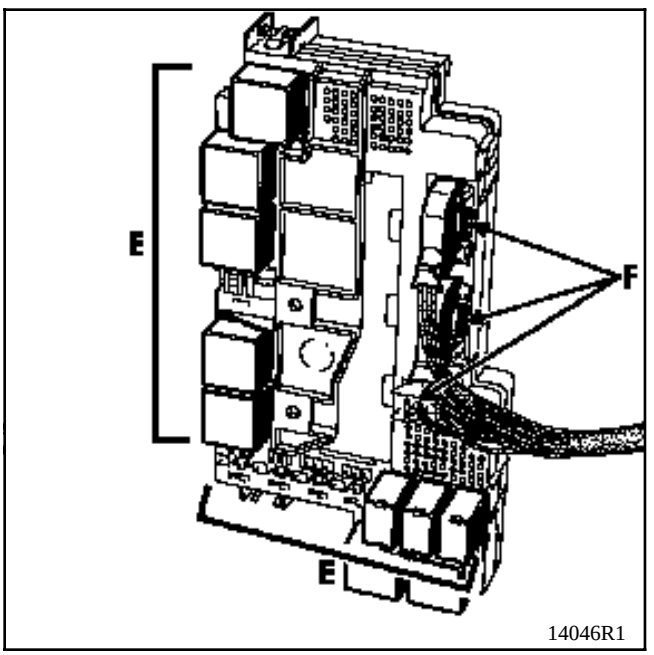


This multi-timer unit includes most of the functions of the smaller computers, including the electric unlocking and locking for the doors.

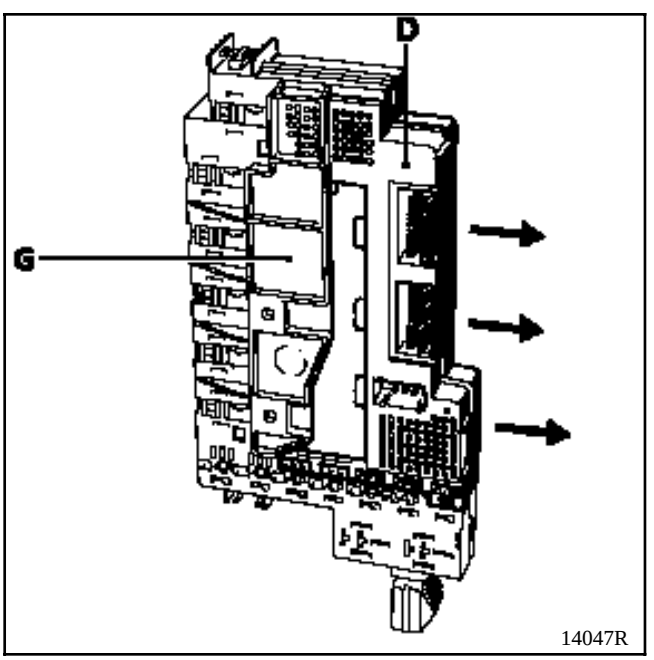
NOTE : refer to section 87 for information on the

REMOVAL - REFITTING

From under the dashboard on the driver's side:
- remove the relays (E) (depending on equipment) noting their locations,
- disconnect the connectors (F),



- release the multi-timer unit (D) and its mounting (G) as shown below.



REPLACEMENT

When replacing a multi-timer unit it is necessary to configure:
- the remote control (depending on equipment) to infrared (**G84*1*** bargraph **2 RH side** illuminated) or radio frequency (**G84*2*** bargraph **2 RH side** extinguished) using the XR25 (fiche n° **56**),
- the functions corresponding to the vehicle's equipment level or country's legislation using the **XR25**. Refer to the configuration and programming information in section **87**.

IMPORTANT:). the engine will not start if the immobiliser programming procedure has not been carried out (unless the injection computer or the solenoid valve is not coded). See section **82**.

NOTE : fault finding for the multi-timer unit may be carried out using the **XR25** (diagnostic fiches n° **56** and **57** code **D56**).

REMOTE CONTROL RECEIVER

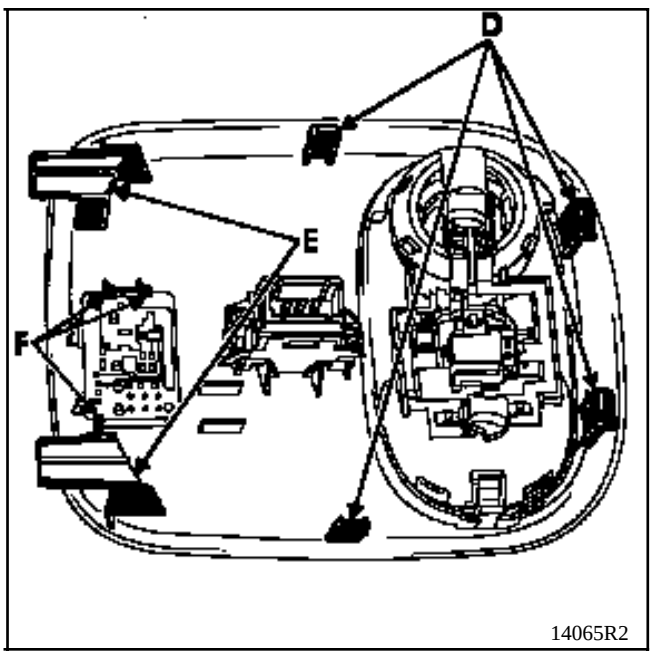
This is located in the courtesy light console.

It receives the remote control code and transmits it to the multi-timer unit. Its function is to amplify the signal.

The remote control receiver is replaced independently of the transmitter and the multi-timer unit (it is not coded).

REMOVAL - REFITTING

The courtesy light console is held in the headlining by four clips (D) and two brackets (E).



To remove the receiver and its printed circuit board, gently separate the tabs (F).

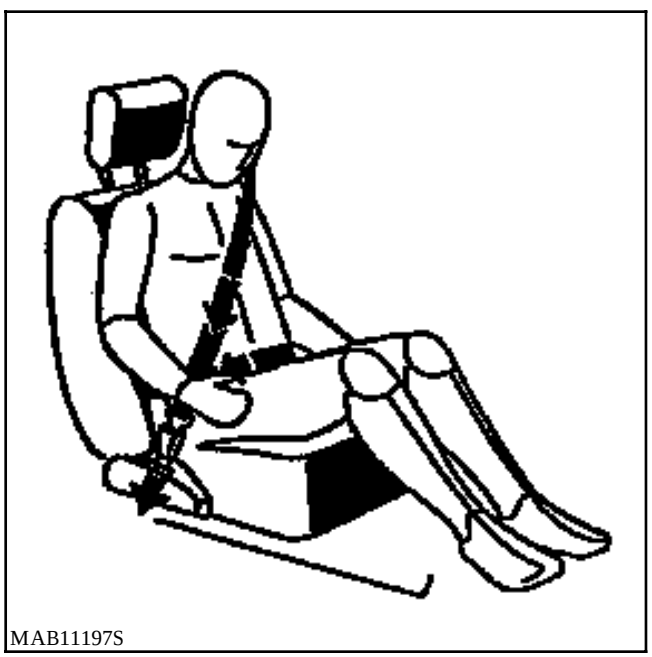
GENERAL

All work on the air bag and pretensioner systems must be carried out by qualified personnel who have received the proper training.

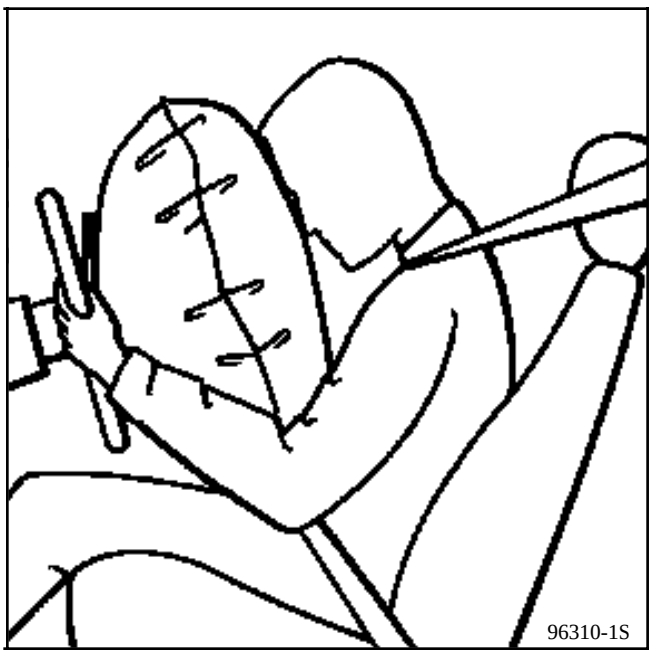
There are 3 safety systems which supplement the seat belt.

If a frontal impact is sufficiently strong, the electronic unit controlling these systems triggers:

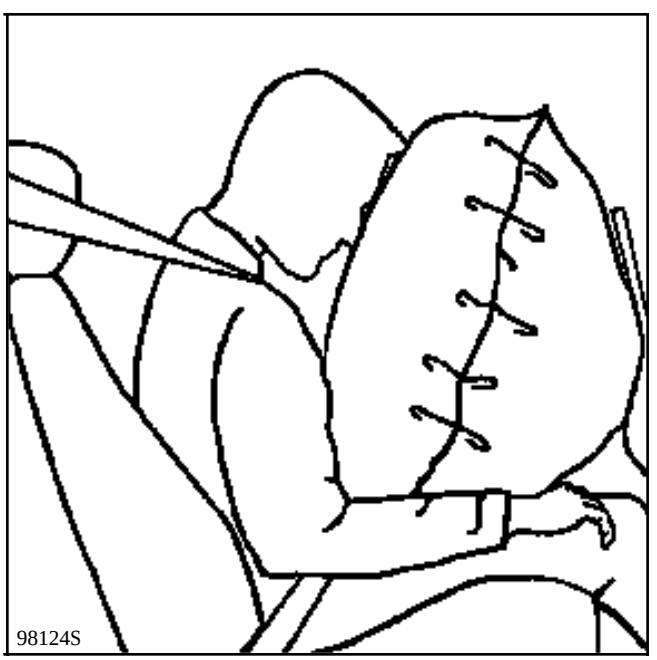
- **The pretensioners** which restrict the seat belt movement for the front seats so that they are pressed against the body.


MAB11197S

- **The air bag cushion** which inflates from the centre of the steering wheel to protect the driver's head.


96310-1S

- **The air bag module** which inflates from the dashboard to protect the front passenger's head.


98124S

FUNCTION AND OPERATION OF THE AIR BAGS AND PRETENSIONERS

1) Function

In the event of an accident, the air bag prevents the head striking the steering wheel or dashboard.

It also reduces the maximum acceleration of the head, by absorption.

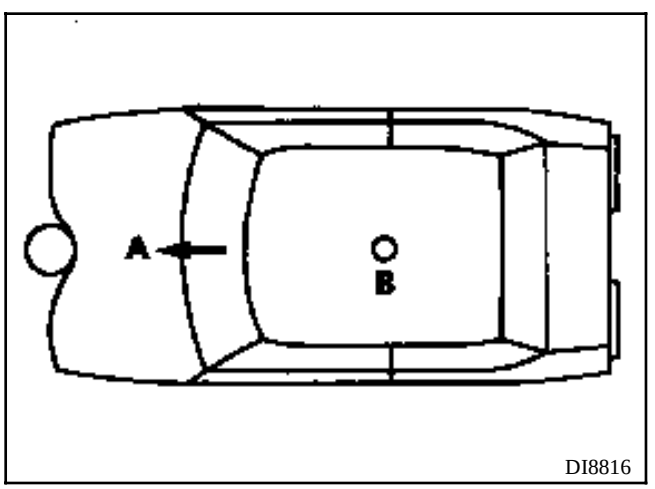
2) Trigger threshold

Generally speaking, there are four different basic situations.

1) FRONTAL IMPACT AGAINST A *RIGID* OBSTACLE

The trigger speed depends on the obstacle's surface. The softer the surface, the higher the speed.

The pretensioner **generally** triggers at a lower speed than the air bag.

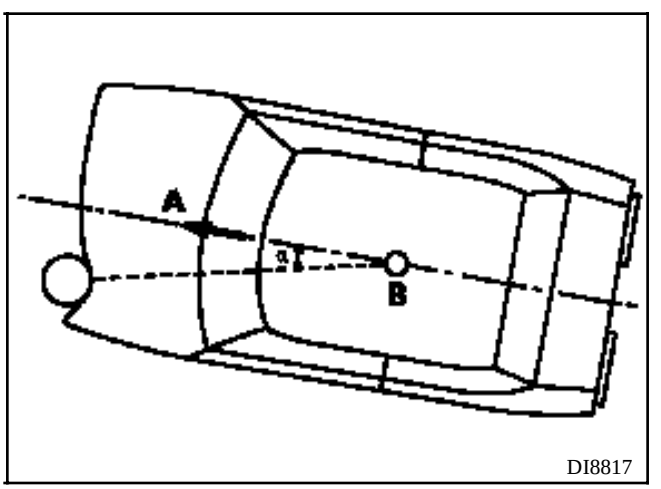


A Direction of travel
B Centre of gravity

2) OFFSET IMPACT AGAINST A *RIGID* OBSTACLE

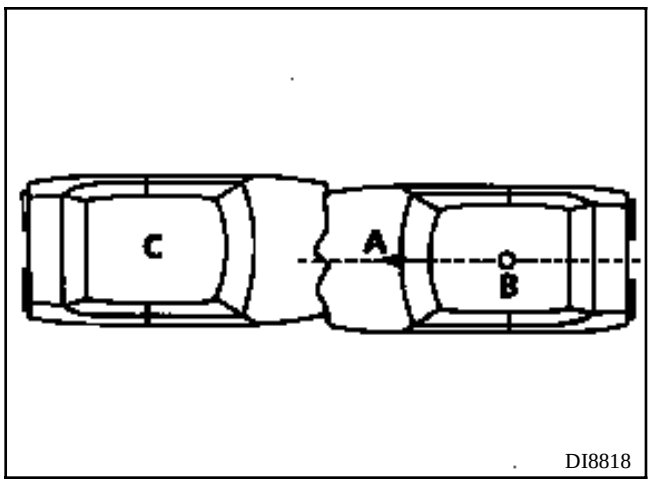
In this case, the air bag trigger speed depends on the angle of impact α.

The greater the angle, the higher the vehicle speed for triggering.



3) FRONTAL IMPACT AGAINST A FLEXIBLE OBSTACLE

The air bag trigger speed depends in this case on the degree of flexibility of the bodywork of the vehicle hit.
The more flexible the other vehicle, the higher the trigger speed (for vehicles of equal flexibility and 100 % contact, the speed is higher than 40 km / h) *(relative speed)*.

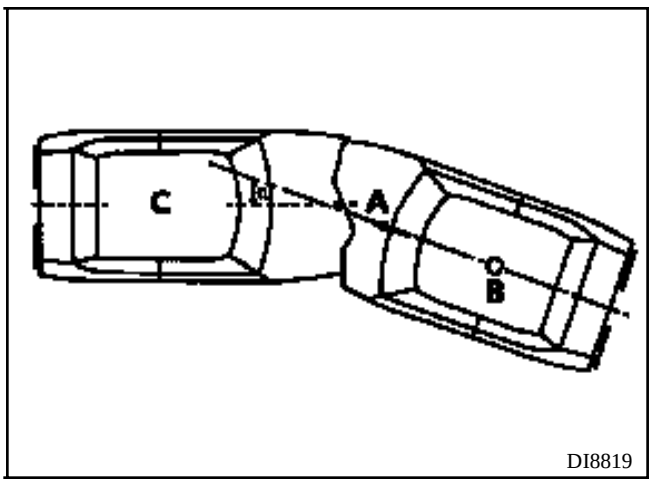


A Direction of travel
B Centre of gravity
C Immobilised vehicle

4) OFFSET IMPACT AGAINST A FLEXIBLE OBSTACLE

Here the air bag trigger speed depends on the angle of impact α and the flexibility of the vehicle hit **in the direction of travel.**

The vehicle speed for air bag triggering is greater when the angle of impact α is greater and the flexibility of the vehicle hit is high.



5) SUMMARY AND CONCLUSION

- The air bag only reacts to deceleration **in the direction of driving**. A side impact or the vehicle rolling over **cannot** trigger the air bag.

- The vehicle's projectile energy is transformed into deformation energy of the front part of the vehicle. Deceleration is greater when the deformation of the vehicle hit is less, meaning that the air bag will trigger much earlier.

- The minimum speed at which the air bag is triggered is greater when the angle of impact α is large (see above).

- If, in a frontal impact, there is no deformation at the front pillars, or engine - gearbox - sub-frame impact, the fact that the air bag was not triggered **cannot** be considered as a fault since the trigger speed may not have been reached.

- The pretensioners always trigger at a lower speed than the air bag.

- Experience has shown that the impact speeds given by customers are often not correct. Their reactions are generally reduced by shock: there is almost always confusion between the cruising speed before the impact and the actual speed of the impact which is thankfully much lower in most cases.

Various vehicle configurations are possible:

Vehicle fitted with:

- pretensioners and driver's air bag,

- pretensioners and driver's air bag and passenger's air bag.

NOTE :

- A vehicle fitted with a driver's air bag will be identified by a label in the bottom corner of the windscreen on the driver's side, and by the word "Air bag" in the centre of the steering wheel.
- If a passenger air bag is fitted, a second label is located in the lower corner of the windscreen on the passenger side and the word "Air bag" is located on the dashboard on the same side.

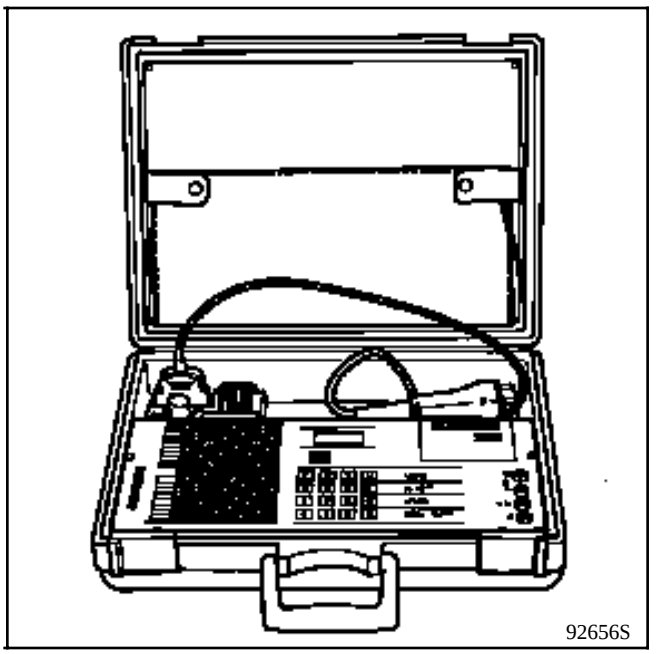
Each time the windscreen is replaced, remember to fit the labels showing that the vehicle is fitted with air bags.

These labels are available in a kit **Part Number : 77 01 205 442**.

SPECIAL TOOLING

PRESENTATION

XR25

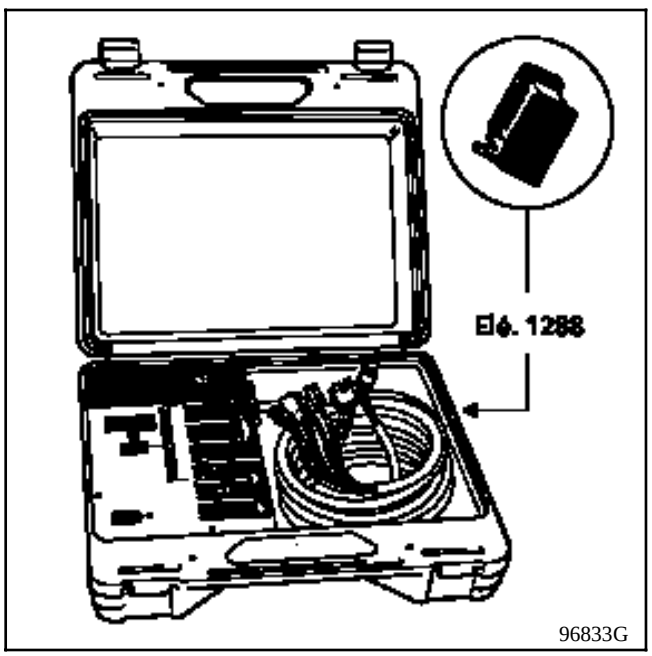


Fault finding for the computer may be carried out using the **XR25** (fiche **n° 48**).

This enables computer faults or faulty lines to be detected in the system (see section on fault finding).

NOTE: before each operation an auxiliary function (**G80***) enables the ignition lines to be deactivated to prevent the risk of triggering the pyrotechnic gas generators.

XRBAG TEST UNIT (Elé. 1288)

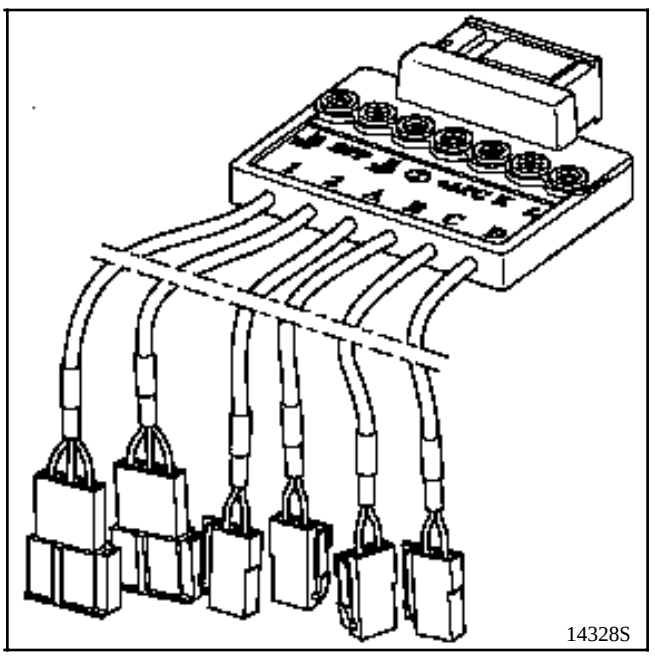


This unit is a tool specifically designed for testing and fault finding on air bag devices and seat belt pretensioners.

It enables electrical measurements to be carried out on the different lines in the systems (see "fault finding" section).

IMPORTANT: It is not permitted to carry out measurements on these systems with an ohmmeter or any other electrical measuring instrument: there is a risk of triggering due to the operating current of the instrument.

XRBAG 30-TRACK ADAPTER



This adaptor is connected instead of the computer.

It enables all the ignition lines to be checked by means of the XRBAG, the supply voltage of the computer to be measured, and the air bag warning light on the instrument panel to be illuminated.

Terminals also enable the continuity checks to be carried out on the diagnostic lines, the warning light lines and the feed to the computer (see section on fault finding).

Identification of the output wiring from the adapter

1 : XRBAG connection
2 : Not used
A : Driver's air bag lines
B : Passenger's air bag lines
C : Passenger's pretensioner lines
D : Driver's pretensioner lines

DUMMY AIR BAG IGNITION MODULE

A dummy air bag ignition module housed in a small red box is supplied in the case containing the XRBAG test kit.

It has the same electrical characteristics as a real ignition module and its purpose is to replace the air bag cushion or pretensioner when it is being checked for faults.

Contact your After Sales Head Office for further information.

DESTRUCTION UNIT

To avoid all possible risks of an accident the pyrotechnic gas generators in the air bags and seat belt pretensioners must be triggered before the vehicle or the individual part is scrapped.

It is **ESSENTIAL** to use the tool **Ele. 1287** for this purpose.

Refer to the section entitled "Destruction procedure".

IMPORTANT: Do not trigger pretensioners which must be returned under warranty for a stalk problem. This makes analysis by the supplier impossible.
Return the part in the packaging of the new part.

OPERATION OF THE PRETENSIONERS AND AIR BAG(S)

When the ignition is switched on, the warning light for these systems illuminates for a few seconds then extinguishes.

The computer is then on standby and monitors vehicle deceleration using a signal from two integral electronic decelerometers.

In the event of a frontal impact of sufficient force, one of the decelerometers simultaneously triggers the pyrotechnic generators for the two seat belt pretensioners.

Under the effect of the gas generated by the system, a piston is displaced in its cylinder, carrying with it a cable connected to the corresponding central catch which retracts the seat belt (see section "**Pretensioners**").

If the frontal impact is more severe, the second electronic decelerometer triggers the ignition of the pyrotechnic gas generators which inflate the driver and passenger air bags (depending on equipment).

These systems will not be triggered in the event of:
- a side impact,
- a rear impact.

When it is triggered the pyrotechnic gas generator produces an explosion combined with light smoke.

IMPORTANT : these systems must be checked using the **XRBAG** following:
- an accident when they were not triggered,
- a theft or attempted theft of the vehicle,
- before a used vehicle is sold.

WARNING LIGHT ON THE INSTRUMENT PANEL

This warning light monitors the pretensioners and air bags, for the driver and passenger.

It should illuminate for a few seconds when the ignition is switched on, then extinguish (and remain extinguished).

If it does not illuminate when the ignition is switched on, or illuminates when the vehicle is being driven, there is a fault in the system (see fault finding section).

COMPUTER

One type of computer is fitted to these vehicles.

It must be configured depending on the vehicle equipment (see configuration).

These computers have:
- two electronic decelerometers,
- an ignition circuit for the different pyrotechnic systems,
- a power reserve,
- a diagnostic and detected fault storage circuit
- a control circuit for the warning light on the instrument panel,
- a K - L communication interface via the diagnostic socket.

IMPORTANT

Before removing the computer:

Lock the computer using the XR25 and command **G80*** (ISO selector on **S8** code **D49** fiche **n° 48**).

When this function is active, all the trigger lines are inhibited, the air bag warning light on the instrument panel and bargraph **11 and 16 LH** on the XR25 illuminate (new computers are supplied in this condition).

NOTE : after triggering, the computer locks itself automatically.

When refitting, mount the computer on the vehicle before reconnecting its connector (tightening torque : **0.8 daN.m**).

The arrow on the computer must point towards the front of the vehicle.

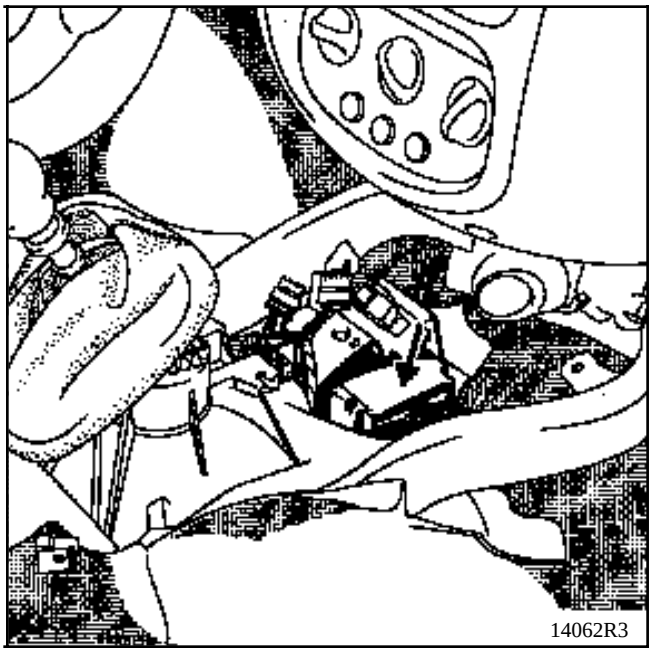
After connecting the connector, carry out a check using the **XR25**.

If everything is correct, unlock the computer using command **G81***.

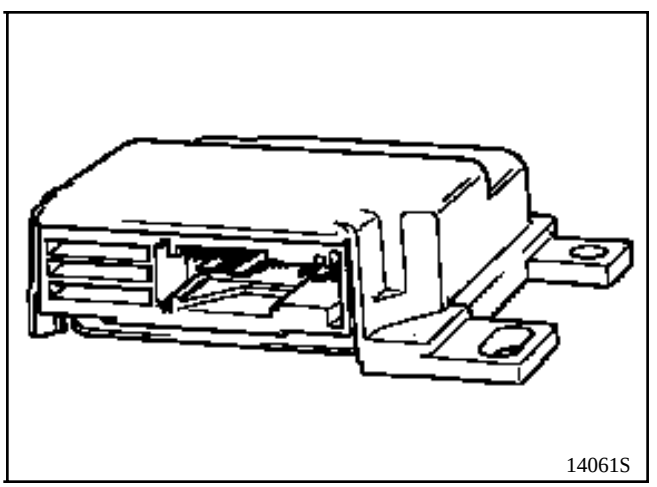
Otherwise refer to the section "**Fault finding**".

Location of the computer

It is located on the tunnel in the central console.


14062R3

Computer removed


14061S

Special notes for replacement

This type of computer will accept a maximum of three triggerings. It is therefore not necessary to systematically replace the computer each time the air bag(s) or pretensioners are triggered.

If triggering does take place, the air bag warning light on the instrument panel illuminates and the computer locks automatically.

Using the **XR25** (diagnostic fiche n° **48**), the triggering may be visualised by the illumination of bargraphs **11 RH side** and **16 LH side**.

If bargraph **1 LH side** is not illuminated:
- replace any triggered or faulty parts,
- check there are no faults present using the **XR25** (diagnostic fiche n° **48**).

When everything is correct, unlock the computer using command **G81*** ; the system is operational again (bargraph **11 RH side** and **16 LH side** extinguish).

If bargraph **1 LH side** is also illuminated, this indicates either:
- that the computer has triggered the pretensioners alone or the pretensioners and air bag(s) three times(s),
- that there is an internal fault in the computer.

In this case, replace the computer.

When fitting the new computer, it must be mounted on the vehicle before connecting its connector (tightening torque : **0.8 daN.m**).

The arrow on the computer must point towards the front of the vehicle.

After connecting the computer connector, carry out a check using the **XR25** and configure the computer if there is no passenger air bag.

If everything is correct, unlock the computer using command **G81*** (bargraph **16 LH side** extinguishes).

Configuration

New computers are supplied configured for "**passenger air bag**".

If the vehicle does not have a passenger air bag, the computer will need to be configured to "without a passenger air bag".

Using the **XR25** (fiche n° **48**), enter command **G20*0*** (bargraph **19 LH side** should extinguish).

To reconfigure the computer to "with a passenger air bag", enter command **G20*1*** (bargraph **19 LH side** should illuminate).

If the computer configuration does not correspond to the vehicle equipment, the air bag warning light remains illuminated.

NOTE : The computer and ignition modules are normally fed from the vehicle battery.

A reserve capacity is however included in the computer in case the battery is disconnected at the start of the impact.

IMPORTANT

- When carrying out an operation under the vehicle (exhaust, bodywork, etc.), do not use a hammer or transmit impacts to the floor without having removed the air bag fuse and waited **2 seconds** for the computer reserve capacity to discharge automatically (see fuse allocation).
- When fitting an electrical accessory in After Sales, (speaker, alarm unit or any equipment which may create a magnetic field), it must not be located near the air bag and pretensioner computer.

Connection

NOTE: the **30 track** computer connector short circuits the various trigger lines as soon as it is disconnected. Shunts located opposite each line for the pretensioners or air bags avoid incorrect triggering of these systems (by aerial effect for example).

30 track yellow connector
(fullest version)

Track	Allocation
1	+ driver's pretensioner
2	- driver's pretensioner
3	+passenger's pretensioner
4	-passenger's pretensioner
5	+ after ignition
6	Earth
7	Air bag warning light on instrument panel
8	Not used
9	Diagnostic line K
10	+ driver's air bag
11	- driver's air bag
12	Not used
13	+ passenger's air bag
14	- passenger's air bag
15	Not used
16	Shunt
17	Shunt
18	Shunt
19	Shunt
20	Earth
21	Shunt
22	Shunt
23	Diagnostic line L
24	Not used
25	Shunt
26	Shunt
27	Not used
28	Shunt
29	Shunt
30	Not used

OPERATIONS ON THE TRIGGER LINES

If a fault is noted on one of these lines, the component must be renewed and not repaired.

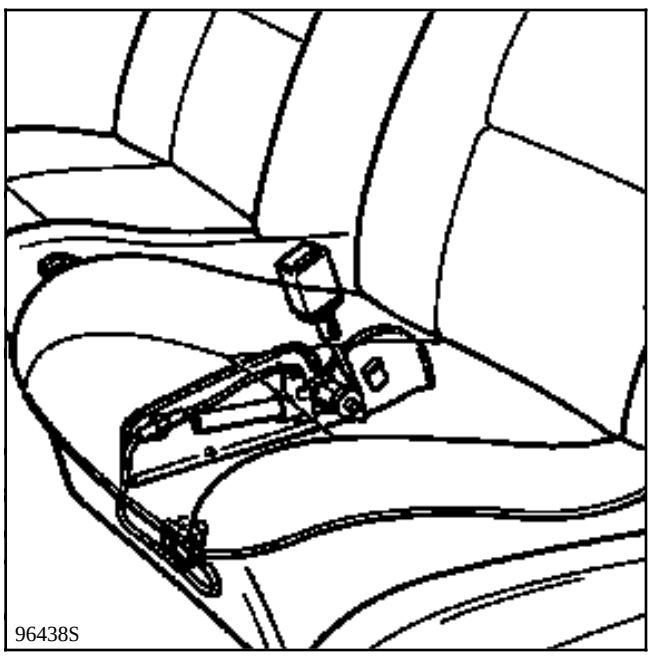
This safety equipment cannot be subjected to any conventional wiring or connector repair operations.

IMPORTANT: When fitting the new wiring, ensure it is not in danger of being cut or rubbed and that the original wiring cleanliness is respected.

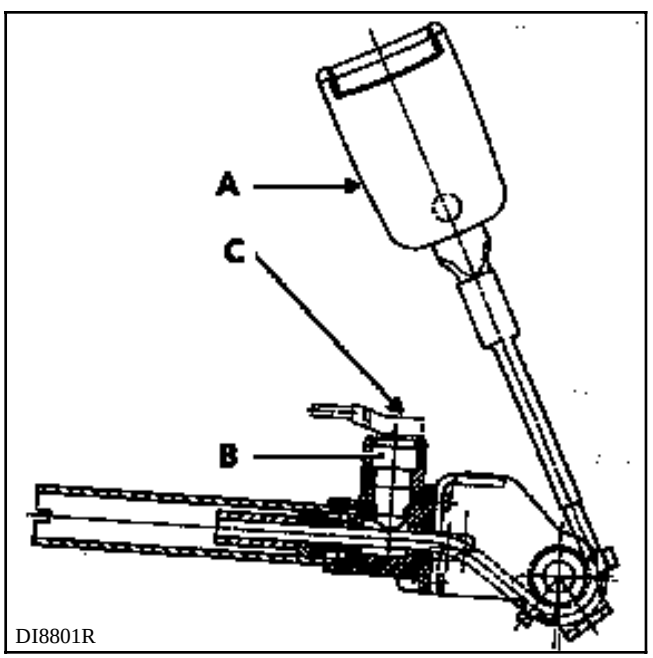
SEAT BELT PRETENSIONERS

DESCRIPTION

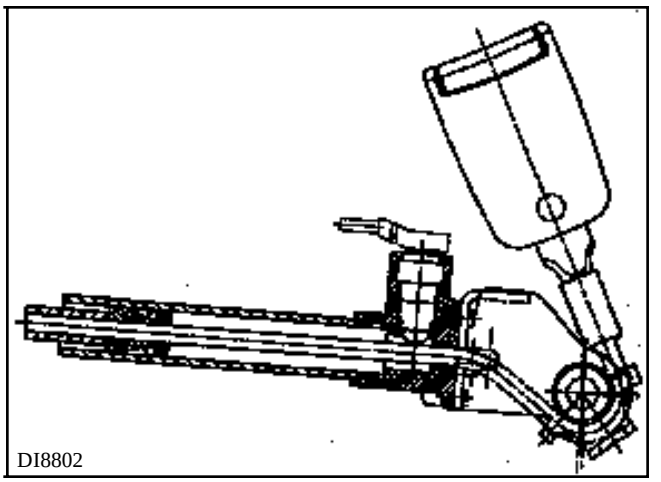
They are mounted on the side of the front seats.



A pretensioner includes:
- a special seat belt catch (A),
- a pyrotechnic gas generator and ignition module (B).



When it is triggered the system is able to retract the catch by up to **70 mm** (maximum).



The components of the pretensioner cannot be separated.

NOTE : this system is operational after the ignition has been switched on.

REMOVAL

IMPORTANT: The pyrotechnic systems (pretensioners or air bags) must not be handled near a heat source or flame; there is a risk of triggering.

IMPORTANT

Before removing a pretensioner, lock the computer using the **XR25** with command **G80*** (**ISO** selector on **S8** code **D49**).

When this function is activated, all the trigger lines are inhibited, the air bag warning light on the instrument panel and bargraphs **11** and **16 LH side** on the **XR25** illuminate (diagnostic fiche n° **48**).

NOTE : after triggering, the computer locks automatically.

Remove:
- the pretensioner connector under the front seat,
- the pretensioner assembly, after removing its protective trim.

IMPORTANT : before scrapping a non-triggered pretensioner it **MUST** be destroyed in accordance with the method for destruction (except for parts returned under warranty) (see section "Destruction procedure").

REFITTING

Ensure that the wiring is correctly routed and the wiring mounting points are correct under the seat.
NOTE : pretensioner end, ensure connector (C) is clipped in fully.

IMPORTANT

After replacing the faulty parts and reconnecting the connectors, carry out a check using the **XR25** (fiche n° **48**).

If everything is correct, unlock the computer using command **G81***.

Otherwise refer to the section "**Fault finding**".

REMINDER: This type of computer will accept a maximum of three triggerings. It is therefore not necessary to systematically replace the computer each time the air bag(s) or pretensioners are triggered (see "Computer").

SEAT BELTS

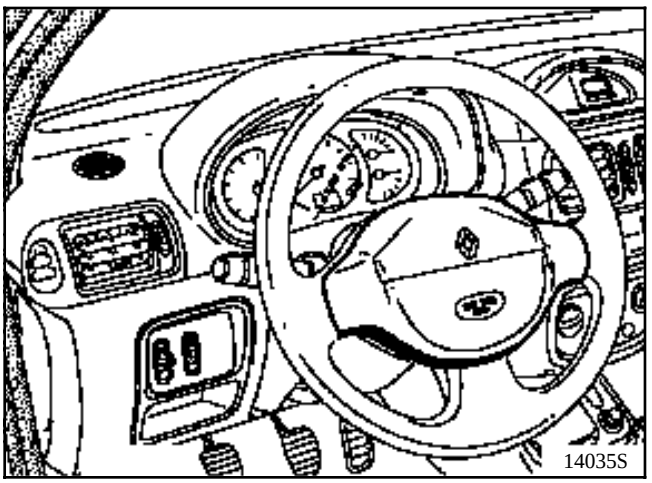
When the pretensioners are triggered the front seat belt or belts must be systematically replaced if they were worn during the pretensioning (if there is any doubt about wearing the belt it must be replaced).

The physical stresses exerted on the catch are transmitted to the inertia reel and may damage its mechanism.

DRIVER'S AIR BAG

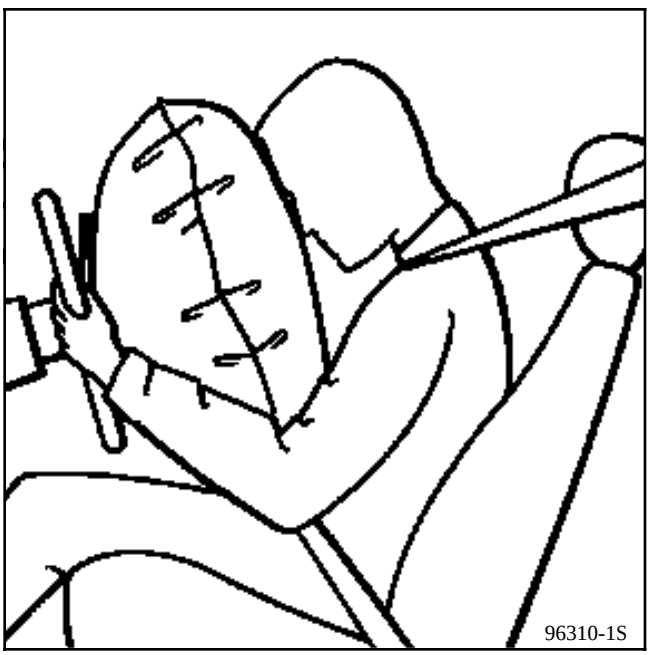
DESCRIPTION

It is located in the steering wheel cushion.



It comprises:
- an inflatable cushion,
- a pyrotechnic gas generator and ignition module.

These components cannot be separated.



When the air bag inflates, the steering wheel cover is torn.

NOTE : this system is operational after the ignition has been switched on.

REMINDER:

- A vehicle fitted with a driver's air bag will be identified by a label in the bottom corner of the windscreen on the driver's side, and by the word "Air bag" in the centre of the steering wheel.
- If a passenger air bag is fitted, a second label is located in the lower corner of the windscreen on the passenger side and the word "Air bag" is located on the dashboard on the same side.

Each time the windscreen is replaced, remember to fit the labels showing that the vehicle is fitted with air bags.

These labels are available in a kit **Part Number : 77 01 205 442**.

REMOVAL

IMPORTANT: The pyrotechnic systems (pretensioners or air bags) must not be handled near a heat source or flame; there is a risk of triggering.

IMPORTANT : If the steering wheel is removed, the air bag connector **MUST** be disconnected (D) .

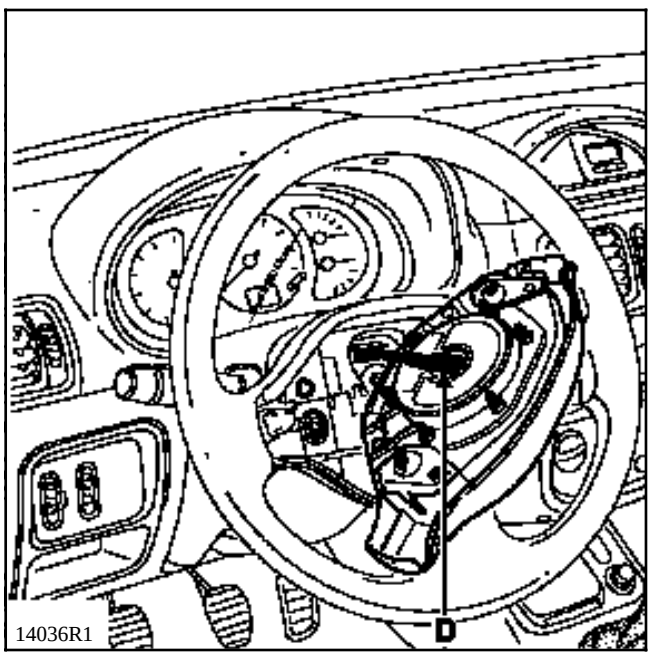
The air bag connector short circuits when it is disconnected to prevent incorrect triggering.

IMPORTANT : Before removing an air bag cushion, lock the computer using the **XR25** with command **G80*** (**ISO** selector on **S8** code **D49**).

When this function is activated, all the trigger lines are inhibited, the air bag warning light on the instrument panel and bargraphs **11** and **16 LH side** on the **XR25** illuminate (diagnostic fiche n° **48**).

NOTE : after triggering, the computer locks automatically.

Remove the air bag cushion by its two Torx bolts located behind the steering wheel and disconnect connector (D).



IMPORTANT : before scrapping a non-triggered air bag cushion it **MUST** be destroyed in accordance with the method for destruction, see section "Destruction procedure".

REFITTING

Reconnect the air bag cushion and secure it to the steering wheel (tightening torque : **0.5 daN.m**).

NOTE : cushion end, ensure connector (D) is securely connected.

IMPORTANT

After refitting everything, carry out a check using the **XR25** (fiche n° **48**).

If everything is correct, unlock the computer using command **G81***.

Otherwise refer to the section "**Fault finding**".

REMINDER: This type of computer will accept a maximum of three triggerings. It is therefore not necessary to systematically replace the computer each time the air bag(s) or pretensioners are triggered (see "Computer").

THE ROTARY SWITCH

This makes the electrical connection between the steering column and the steering wheel.

It consists of a strip of conductor tracks (air bag) whose length is designed to guarantee **2.5 steering wheel turns** (steering lock plus safety margin) on each side.

REMOVAL

IMPORTANT: The pyrotechnic systems (pretensioners or air bags) must not be handled near a heat source or flame; there is a risk of triggering.

IMPORTANT : If the steering wheel is removed, the air bag connector **MUST** be disconnected (D) .

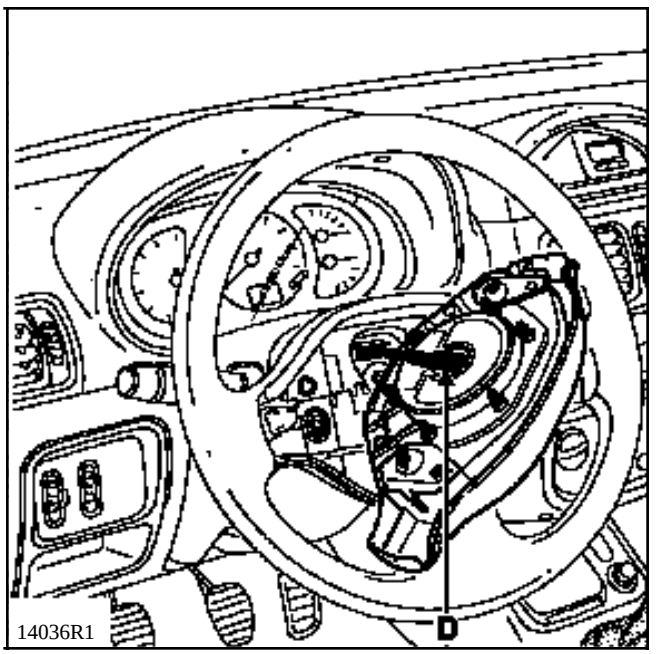
The air bag connector short circuits when it is disconnected to prevent incorrect triggering.

IMPORTANT : Before removing an air bag cushion, lock the computer using the **XR25** with command **G80*** (**ISO** selector on **S8** code **D49**).

When this function is activated, all the trigger lines are inhibited, the air bag warning light on the instrument panel and bargraphs **11** and **16 LH side** on the **XR25** illuminate (diagnostic fiche n° **48**).

NOTE : after triggering, the computer locks automatically.

Remove:
- the air bag cushion by its two Torx bolts located behind the steering wheel and disconnect connector (D),



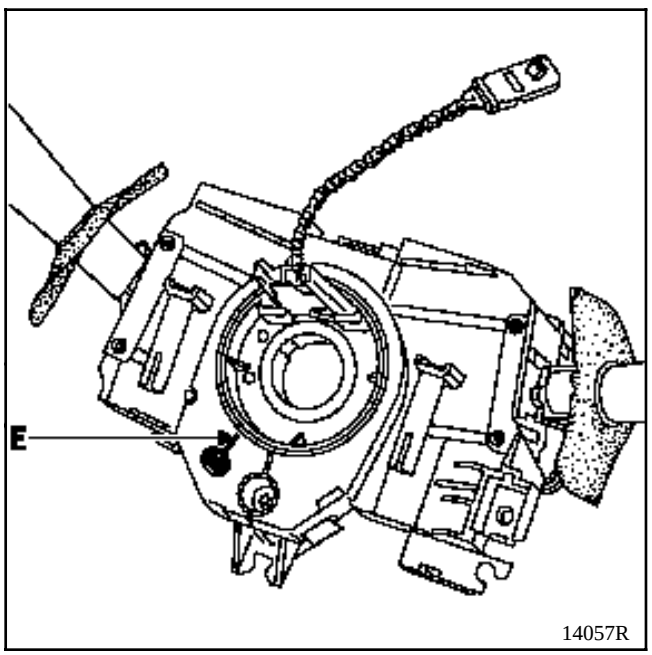
- the steering wheel bolt,
- the steering wheel after straightening the wheels,
- the half cowlings (three screws).

Disconnect the control stalks (wipers and lights) and the rotary switch connector.

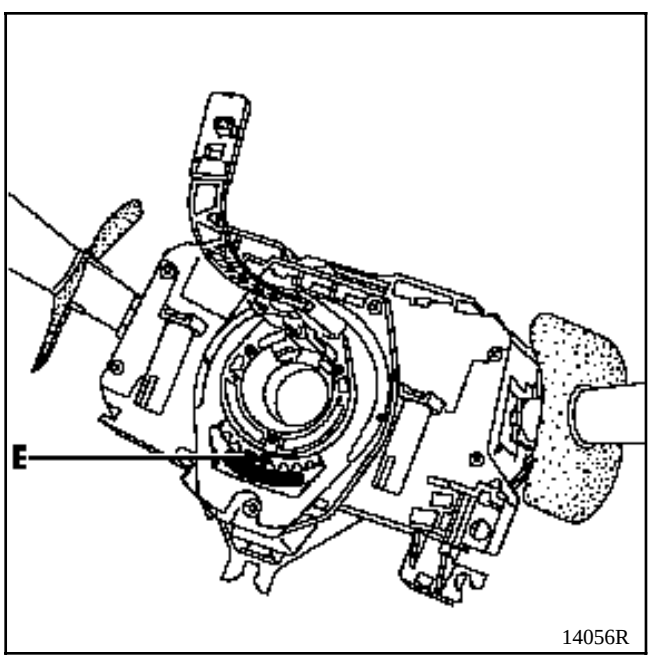
Before removing the assembly, the position of the rotary switch MUST be noted :

- by ensuring the wheels are straight when removing it so that the strip may be positioned centrally,
- by checking that the "**0**" mark on the rotary switch is in line with the fixed reference mark (E).

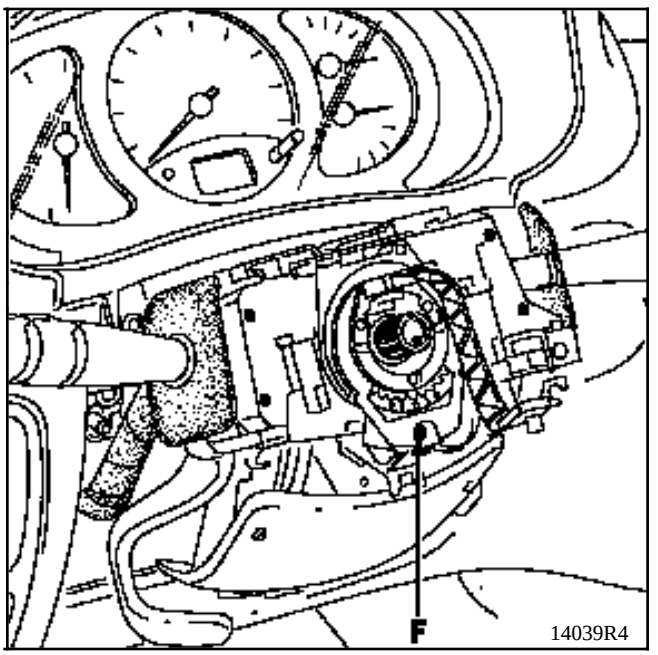
VALEO ASSEMBLY



LUCAS ASSEMBLY



Slacken screw (F) then tap sharply on the screwdriver to release the cone and remove the assembly from the steering column.



REFITTING

Ensure that the wheels are still straight.

Check that the rotary switch is correctly positioned by checking that the "**0**" mark of the rotary switch is pointing to the fixed reference mark (E).

IMPORTANT:
If these procedures are not correctly observed the systems may not operate correctly or may be accidentally triggered.

Position the assembly on the steering column and connect the various connectors.

Carry out the rest of the refitting procedure and do not lock screw (F) until the half cowlings are back in place, so that the stalks are correctly aligned in the instrument panel and the dashboard.

This operation is made easier by the hole cut in the lower half cowling which allows access to the screw (F).

Renew the steering wheel bolt each time it is removed (pre-bonded bolt) and observe the correct tightening torque (**4.5 daN.m**).

Reconnect the air bag cushion and secure it to the steering wheel (tightening torque : **0.5 daN.m**).

NOTE : cushion end, ensure connector (D) is securely connected.

IMPORTANT

- **T**o avoid destroying the rotary switch under the steering wheel it is IMPORTANT to maintain the fixed position of the steering wheel throughout the operation.
- If there is any doubt about its correct centring the steering wheel must be removed to check.
- In the case of an operation to remove the steering, the engine, the transmission components..., where the steering rack and the steering column are separated, the steering wheel must be immobilised using a "**steering wheel locking tool**".

IMPORTANT

After refitting everything, carry out a check using the **XR25** (fiche n° **48**).

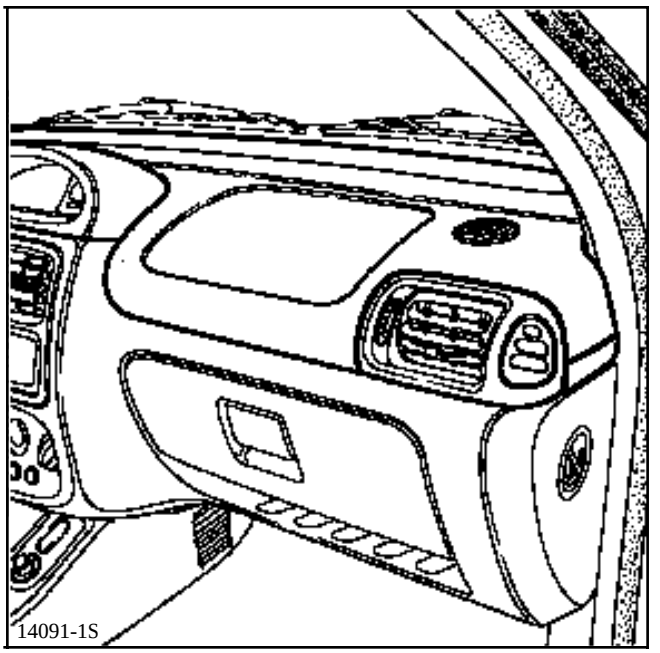
If everything is correct, unlock the computer using command **G81***.

Otherwise refer to the section "**Fault finding**".

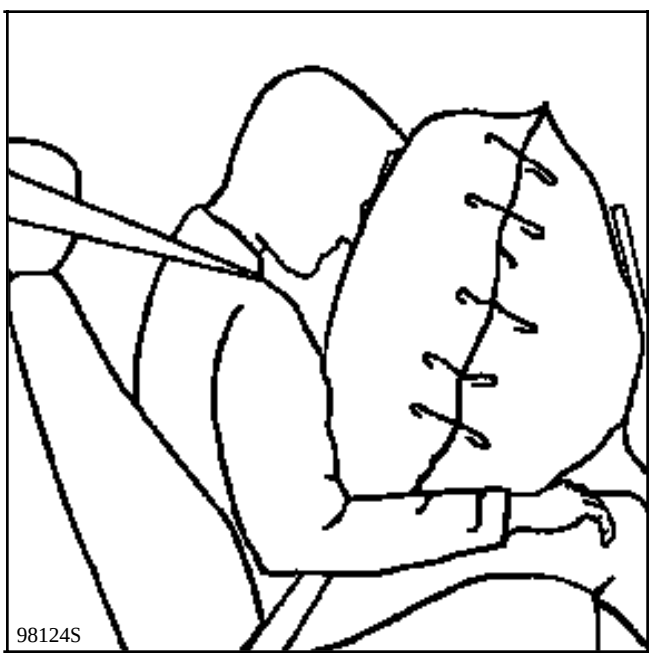
PASSENGER AIR BAG MODULE

DESCRIPTION

It is located in the dashboard, opposite the front seat passenger.


14091-1S

It comprises:
- an inflatable cushion,
- a pyrotechnic gas generator and ignition module.


98124S

The components of the air bag module cannot be separated.

NOTE : this system is operational after the ignition has been switched on.

REMINDER:

- A vehicle fitted with a driver's air bag will be identified by a label in the bottom corner of the windscreen on the driver's side, and by the word "Air bag" in the centre of the steering wheel.
- If a passenger air bag is fitted, a second label is located in the lower corner of the windscreen on the passenger side and the word "Air bag" is located on the dashboard on the same side.

Each time the windscreen is replaced, remember to fit the labels showing that the vehicle is fitted with air bags.

These labels are available in a kit **Part Number : 77 01 205 442**.

Accessibility of the ignition module

To reach the passenger air bag ignition module, the upper part of the dashboard must be removed.

REMINDER: the ignition module must be checked using the **XRBAG** as described in the section "**fault finding**".

REMOVAL

IMPORTANT: The pyrotechnic systems (pretensioners or air bags) must not be handled near a heat source or flame; there is a risk of triggering.

IMPORTANT

Before removing a passenger air bag module, lock the computer using the **XR25** with command **G80*** (**ISO** selector on **S8** code **D49**).

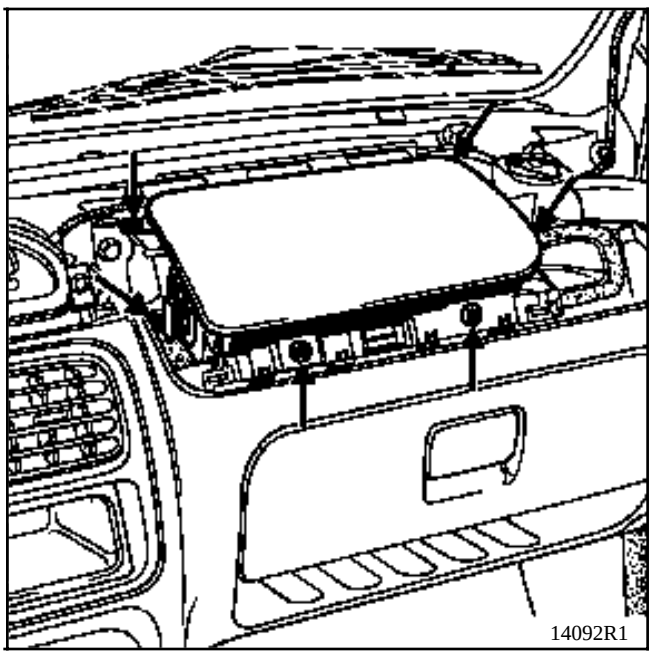
When this function is activated, all the trigger lines are inhibited, the air bag warning light on the instrument panel and bargraphs **11** and **16 LH side** on the **XR25** illuminate (diagnostic fiche n° **48**).

NOTE : after triggering, the computer locks automatically.

To remove the passenger air bag module, the upper part of the dashboard must be removed.

Remove:
- the windscreen pillar trims,
- the half cowlings under the steering wheel,
- the mounting screws for the upper part of the dashboard and release it (for more details, refer to section **83**),
- disconnect the ignition module.

The passenger air bag module is mounted by six screws.



IMPORTANT : when the passenger air bag module is triggered, the damage to the mountings (micro-cracks) means that the dashboard metal cross member must be systematically renewed.

IMPORTANT : before scrapping a non-triggered air bag it **MUST** be destroyed in accordance with the method for destruction, see section "Destruction procedure".

REFITTING

IMPORTANT: The following safety advice **MUST** be followed when refitting or replacing a passenger air bag module.

If these instructions are not followed the system may not operate normally and could even cause a risk for the vehicle occupants.

Refitting is the reverse of removal.

IMPORTANT

- Remember to remove all foreign bodies (bolts, clips) when fitting the air bag module.
- Reconnect the passenger air bag module and secure it (tightening torque : **0.6 daN.m**).
- Module end, ensure the connector is fully clipped in.
- Renew the "After sales tamperproof system " label with a blue After Sales label sold in kit Part Number **77 01 205 356** across the air bag module connector.
- After refitting everything, carry out a check using the **XR25** (fiche n° **48**).
- If everything is correct, unlock the computer using command **G81***.

Otherwise refer to the section "**Fault finding**".

REMINDER: This type of computer will accept a maximum of three triggerings. It is therefore not necessary to systematically replace the computer each time the air bag(s) or pretensioners are triggered (see "Computer").

DESTRUCTION PROCEDURE

In order to avoid any risk of an accident, the pyrotechnic gas generators must be triggered before the vehicle is scrapped or the part is scrapped.

Tool **Elé. 1287** must be used for this.

PRETENSIONERS

I**MPORTANT:** Do not trigger pretensioners which must be returned under warranty for a stalk problem. This makes analysis by the supplier impossible.
Return the part in the packaging of the new part.

Destruction of the part fitted to the vehicle

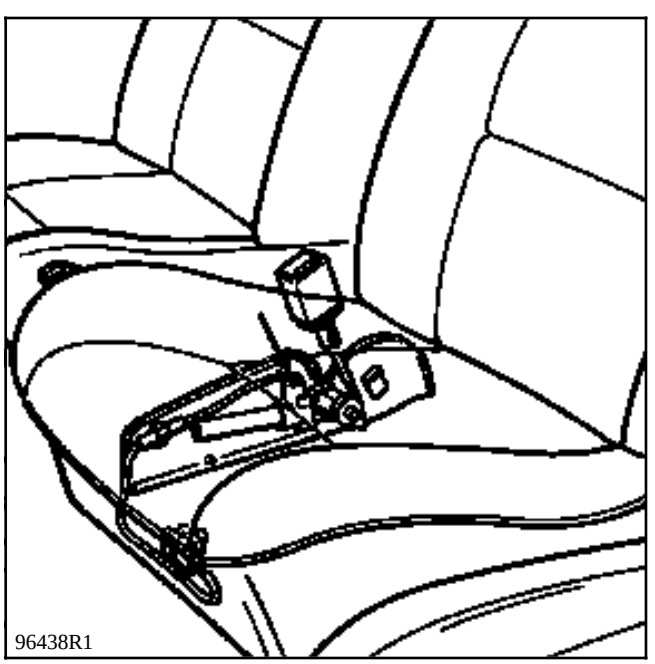
Move the vehicle outside the workshop.

Connect the destruction tool to the pretensioner after removing the seat runner cover.

Unroll the wiring of the tool so you are sufficiently far away from the vehicle (approximately **10 metres**) when the device is triggered.

Connect the two feed wires on the tool to a battery.

After checking that there is no-one nearby, carry out the destruction of the pretensioner by pressing the two buttons on the tool at the same time.


96438R1

NOTE : if the pretensioner cannot be triggered (ignition module faulty), return the part in the packaging from the new component to ITG (Service 0429). **<u>For UK Market</u> : return to COMEX, Swindon.**

Destruction of the part removed from the vehicle

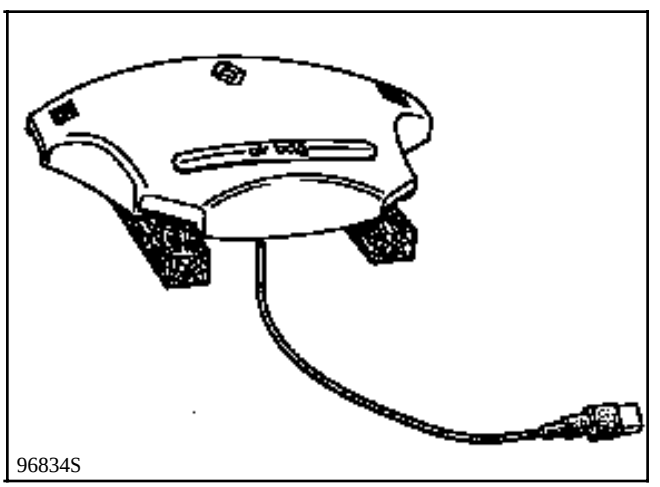
Proceed in the same manner as for the driver's air bag using a stack of old tyres (see below).

DRIVER'S AIR BAG

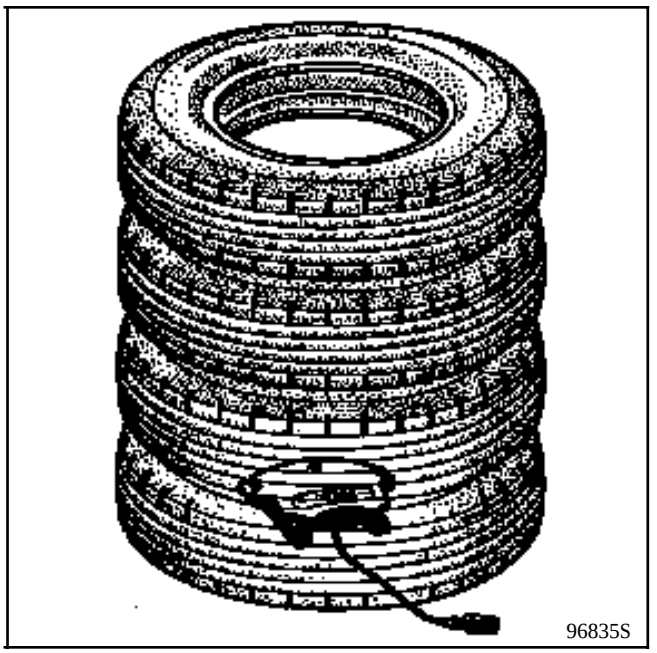
Destruction of the part removed from the vehicle

Carry out the operation outside of the workshop.

After connecting the appropriate wiring, set the air bag cushion on 2 blocks of wood to avoid damaging the connector against the ground.


96834S

Cover the assembly with a stack of 4 old tyres.



Unroll the wiring of the tool so you are sufficiently far away from the vehicle (approximately **10 metres**) when the device is triggered and connect it to the air bag cushion wiring.

Connect the two feed wires on the tool to a battery.

After checking that there is no-one nearby, carry out the destruction of the air bag by pressing the two buttons on the tool at the same time.

NOTE : if the air bag cannot be triggered (ignition module faulty), return the part in the packaging from the new component to ITG (Service 0429).
For UK Market : return to COMEX, Swindon.

PASSENGER AIR BAG

Destruction of the part removed from the vehicle

Proceed in the same manner as for the driver's air bag using a stack of old tyres (see above).