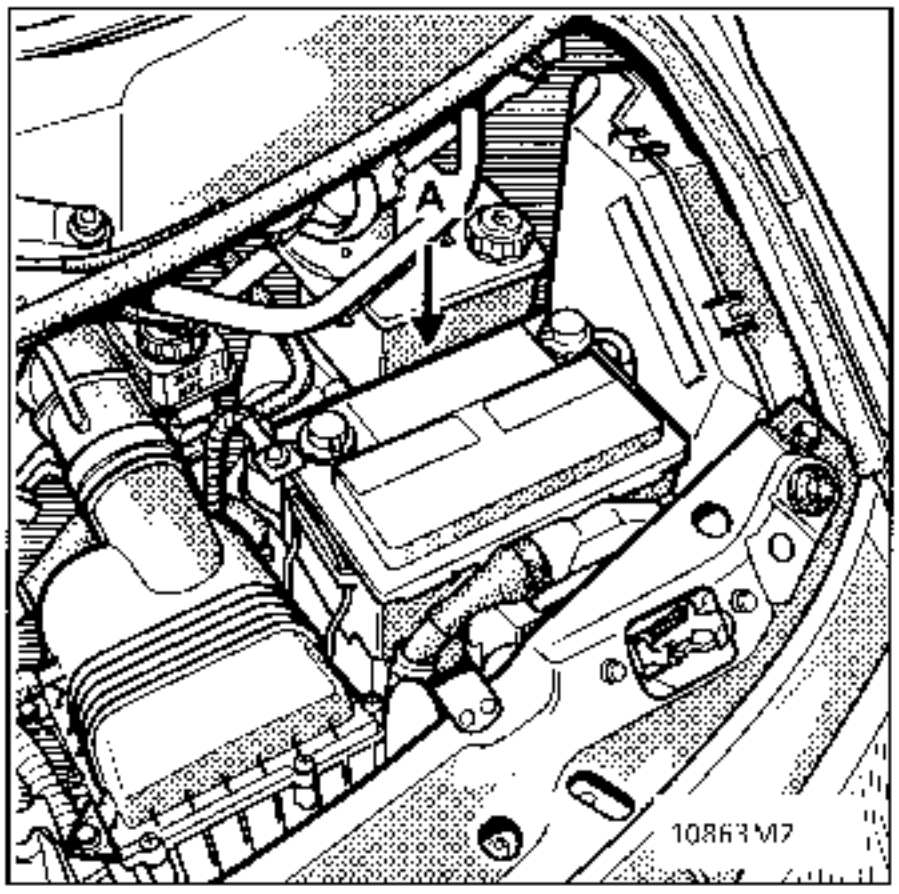
REMOVAL



Disconnect the battery
Remove the battery 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 vital :

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

Batteries with 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.

SPECIAL NOTES ON REFITTING

Grease the terminals before fitting the clips.
Battery mounting (A): 1 daN.m

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.

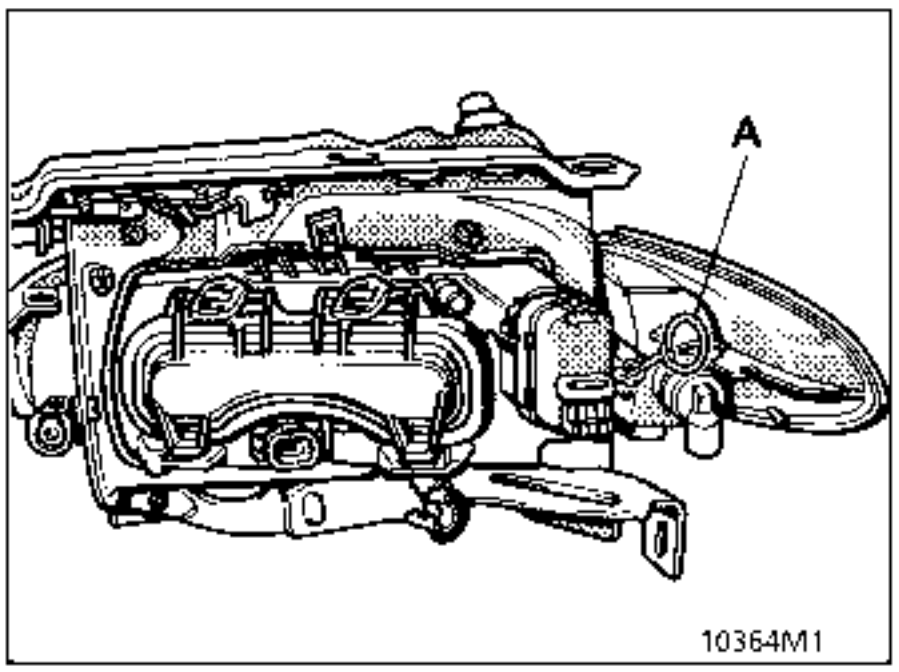
Safeguarding against the danger of explosion, which can be caused by a poorly handled battery, must be taken very seriously. Avoid all risks of sparks.

- 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.

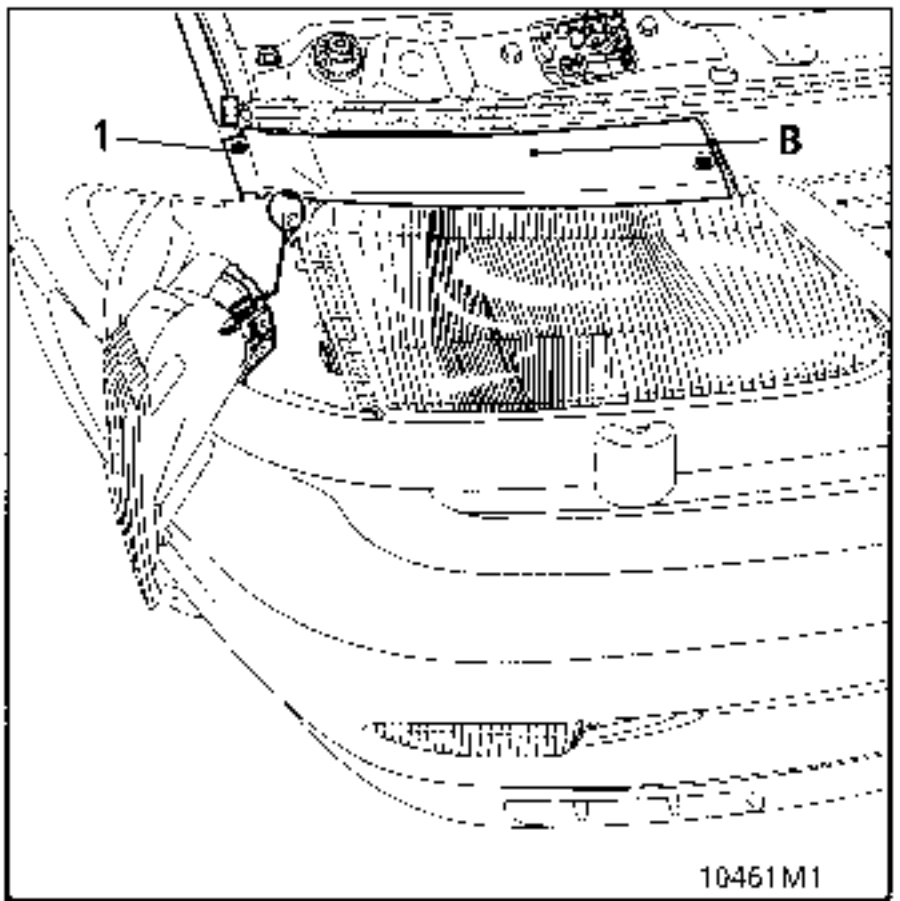
REMOVING - REFITTING

Disconnect:
- the battery,
- the connector or connectors on the lens unit.

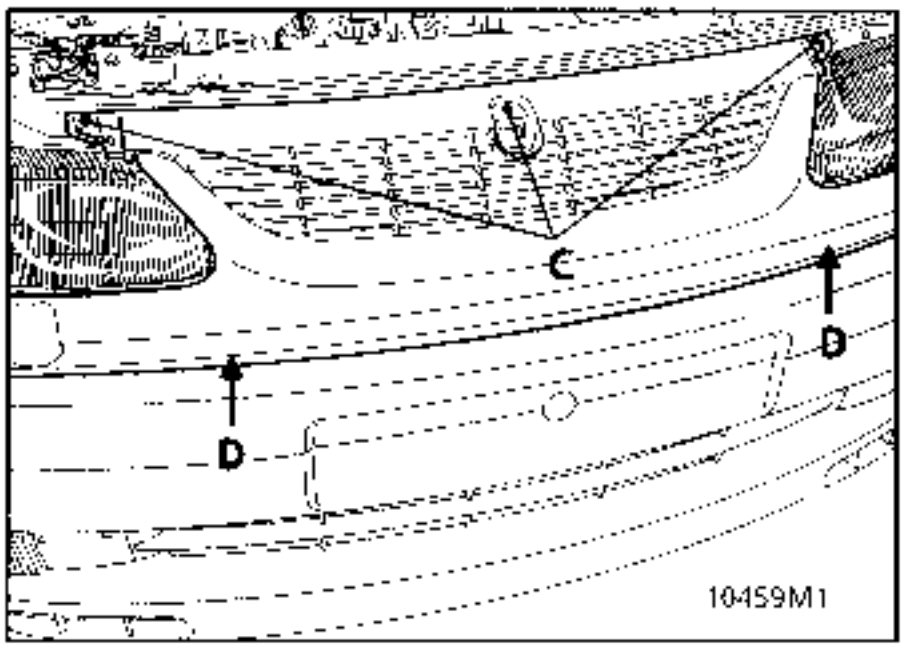
Remove the two direction indicators towards the outside of the vehicle.
To do this, release the retaining spring (A) from its mounting for each of the indicators.



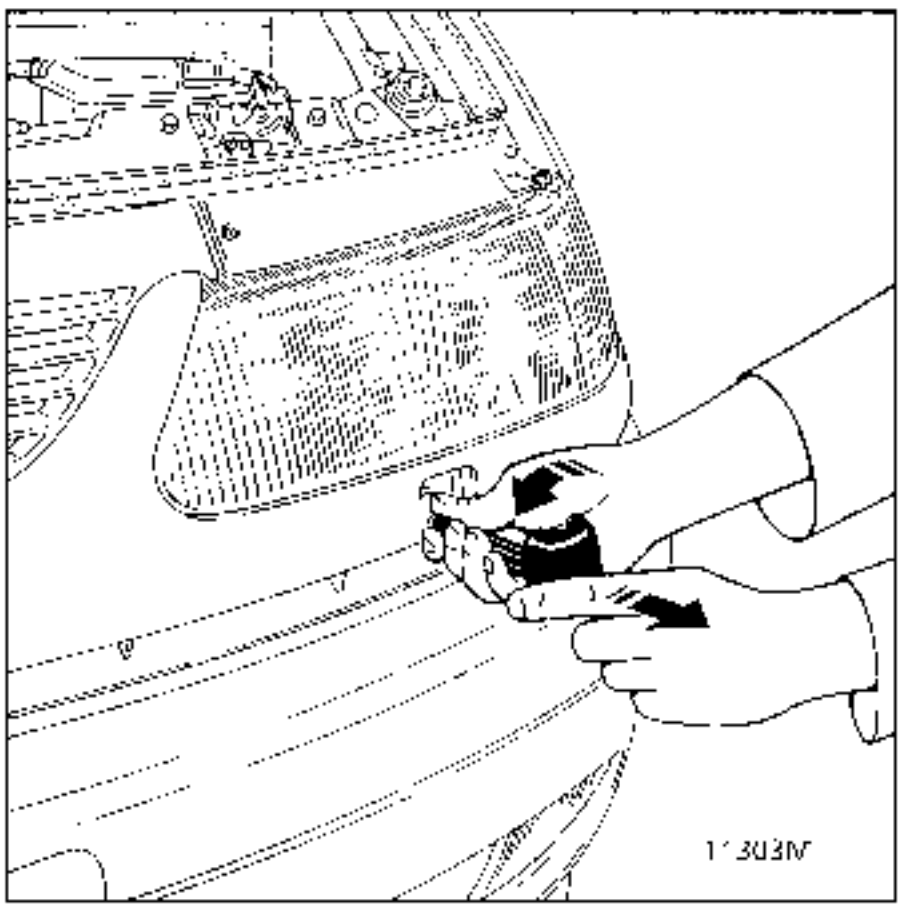
Remove the right and left extensions (B) from the radiator grill.
Release the adhesive tape 2 or 3 cm to gain access to bolt 1.



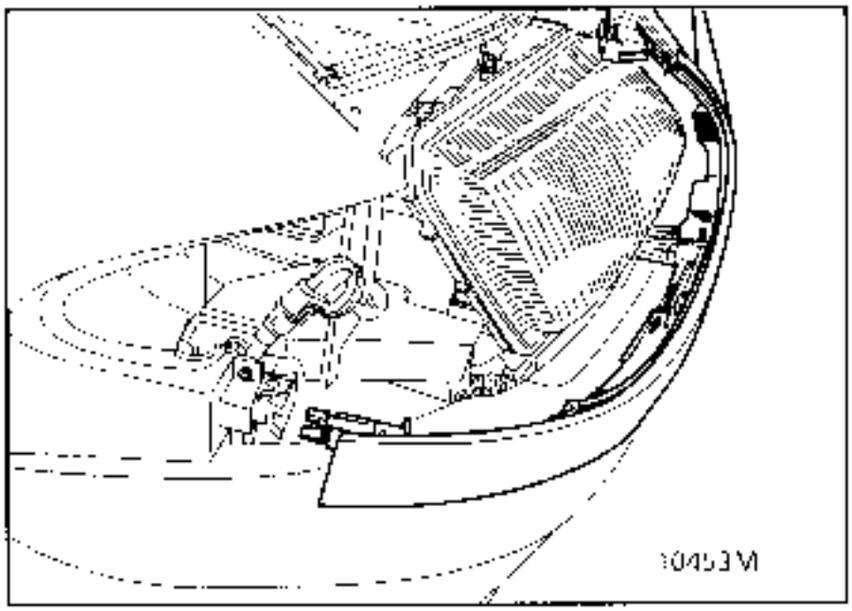
Remove the three upper bolts (C) and the two lower bolts accessible through openings (D) using a Torx screwdriver; these two bolts remain integral with the grille during removal.



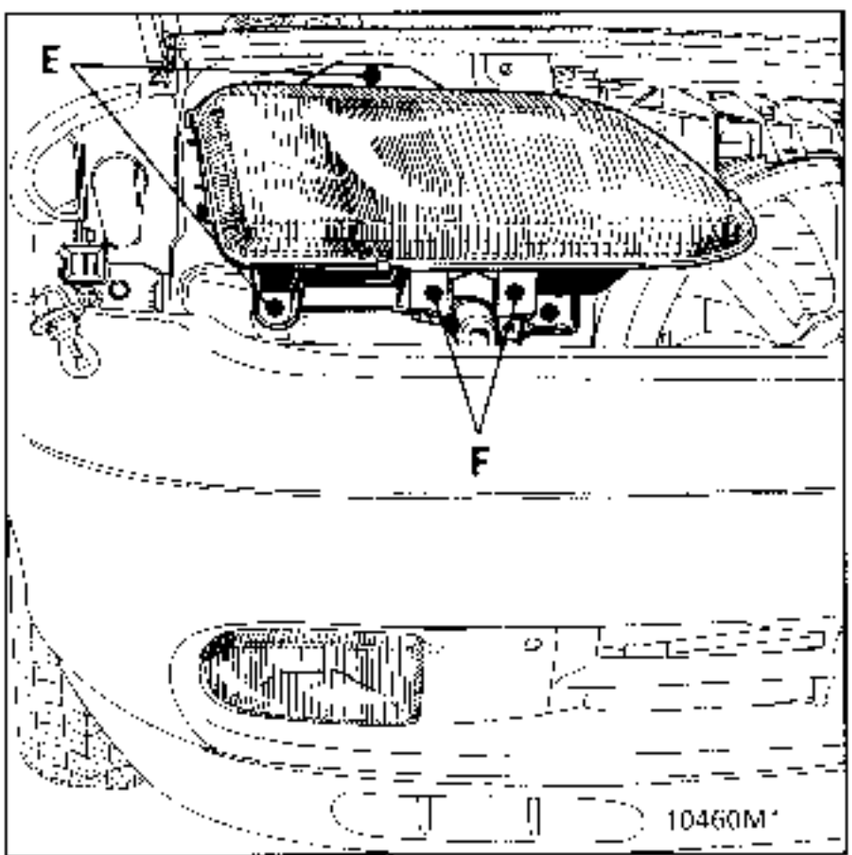
If the vehicle is fitted with a headlight washer, pull the jet and turn it a quarter of a turn to the left to release it from the cylinder.



Unclip the radiator grille at both ends and remove it.

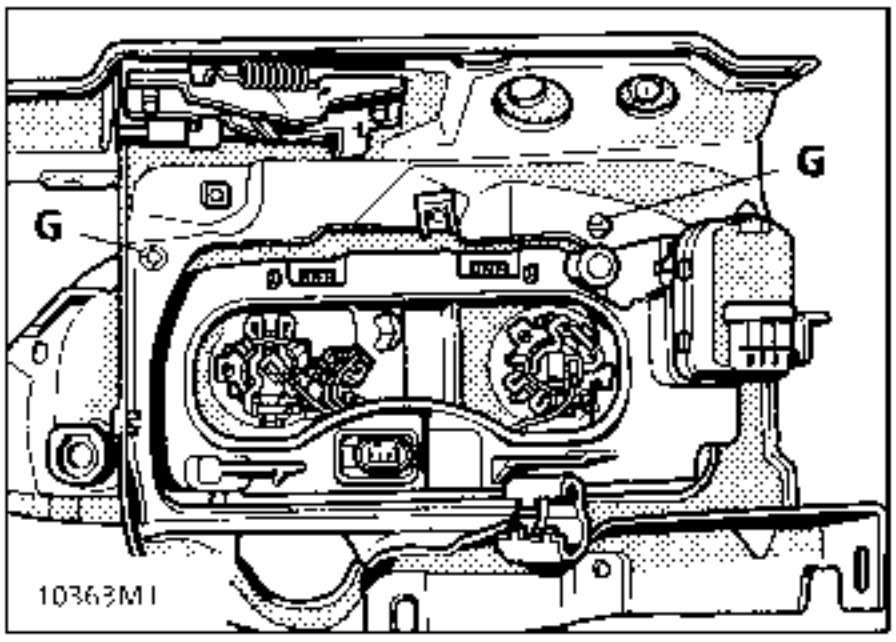


Remove the lens by its two remaining mountings (E), and if fitted with the headlight washer, remove the two mountings (F).



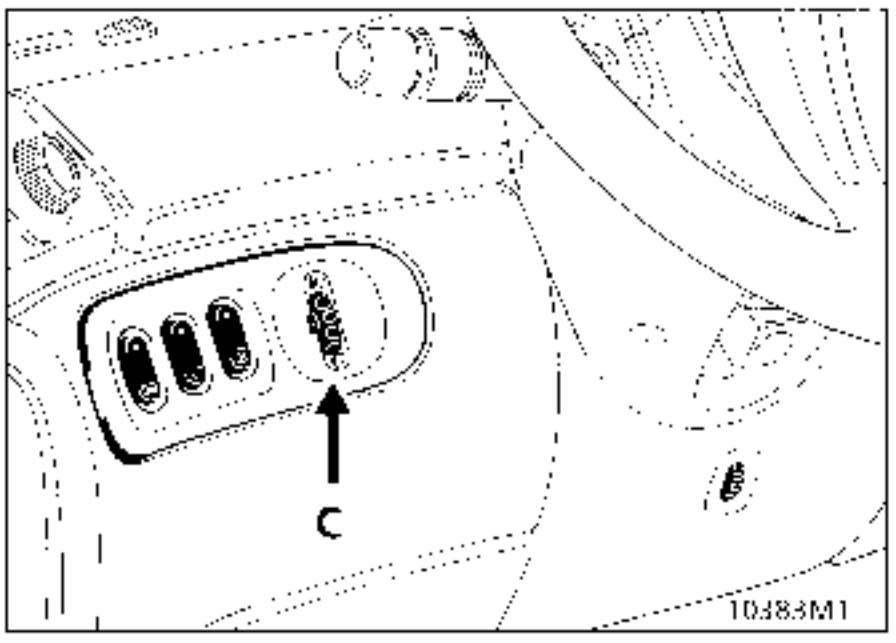
SPECIAL NOTES

Remove the lens unit with the two centring pins (G).

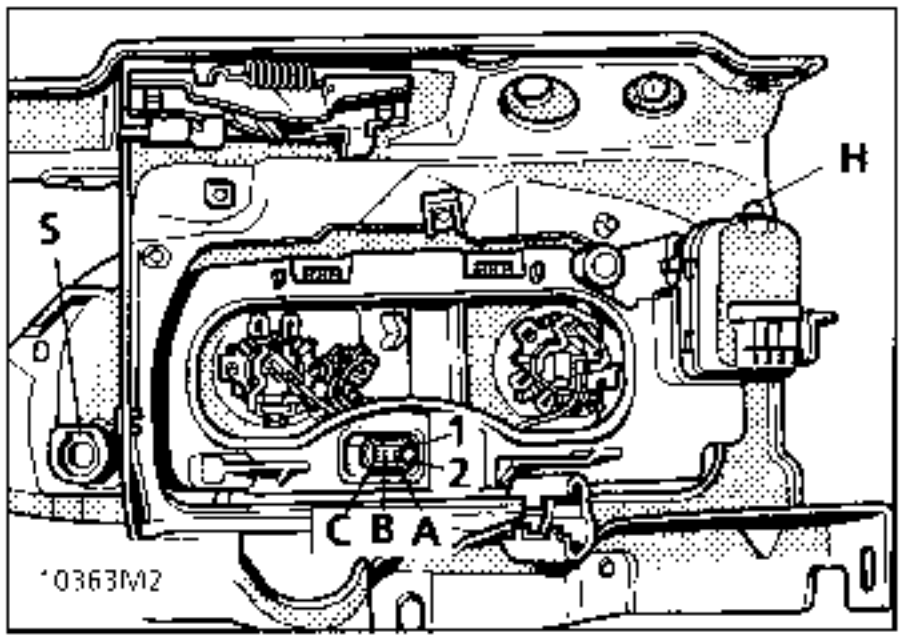


After refitting the lens unit (or units) they must be adjusted.

Adjustment :
Make sure that the vehicle is unladen, set the control (C) to '0'.



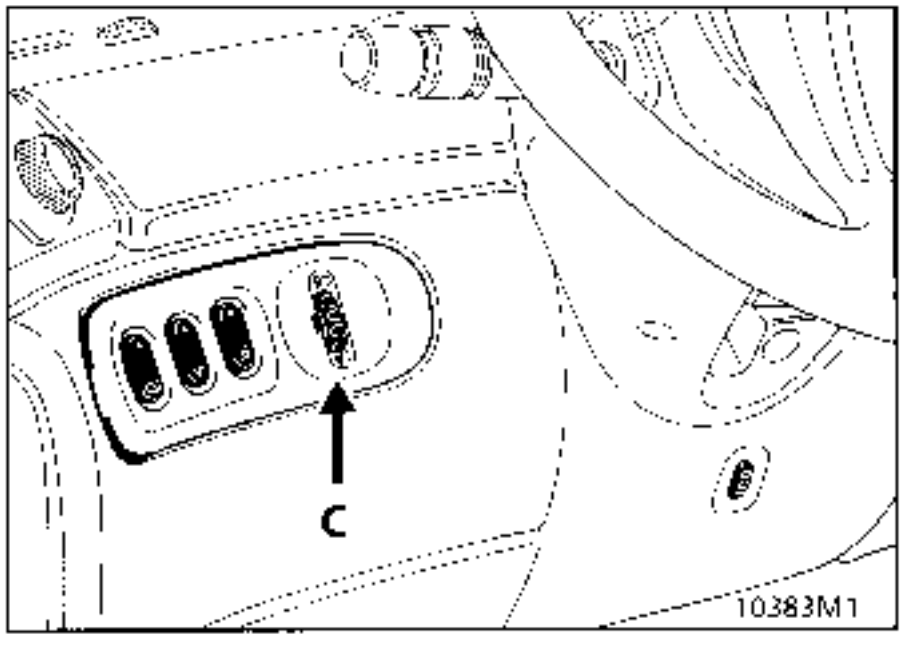
Then proceed to adjust vertically by means of bolt (H) and adjust the direction by means of bolt (S).



CONNECTION

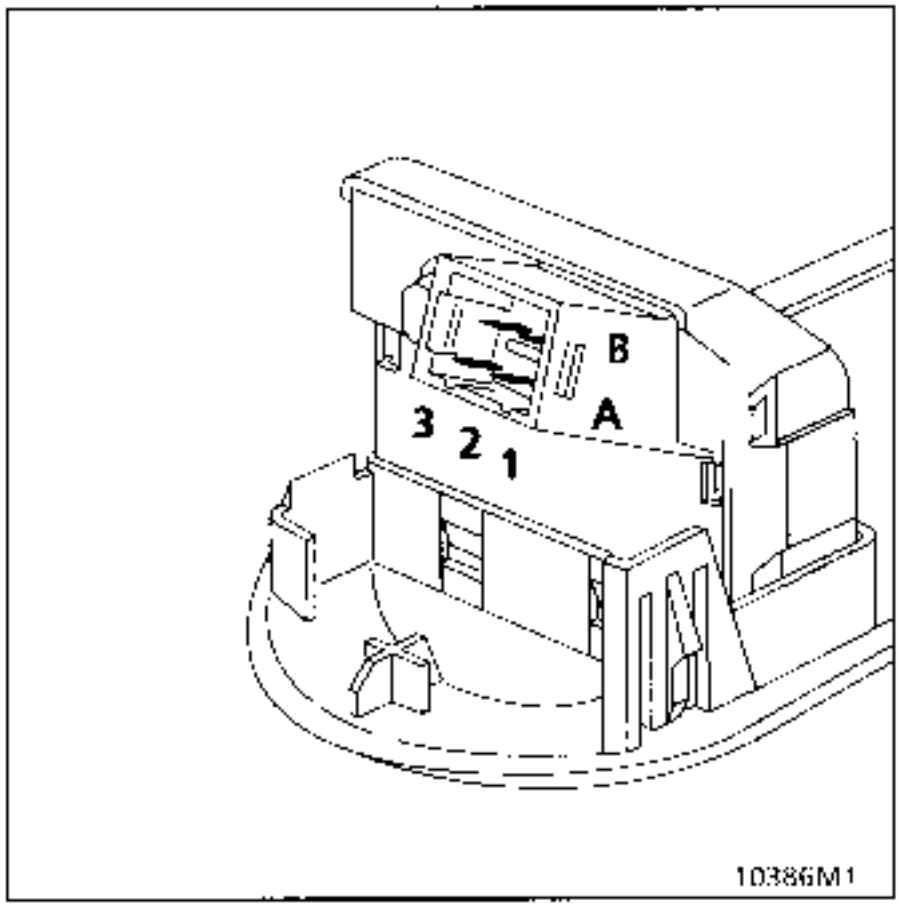
Track	Allocation
A1	Not used
A2	Side light
B1	Earth
B2	Dipped headlight
C1	Not used
C2	Main beam

REMOVAL - REFITTING OF CONTROL



Refit the control box.
Unclip the remote adjustment control (C)
Disconnect the connector

Connection



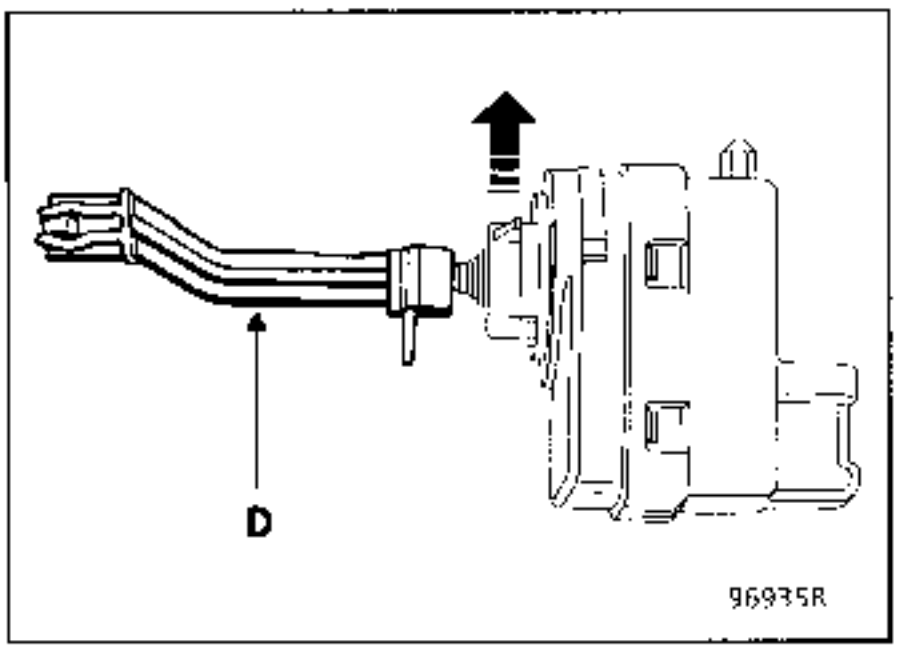
Track	Allocation
A1	Not used
A2	Earth
A3	Remote adjustment control
B1	Dipped headlight
B2	Lighting
B3	Not used

REMOVAL - REFITTING OF THE RECEIVER

On the left side the lens must be removed.

Removal:

Without removing the right lens,
Disconnect the connector.
Turn the remote adjustment receiver an eighth of a turn.
Disconnect the receiver ball joint and the lens by sliding the box upwards to release the ball joint from the connecting lug (D) between the receiver and the headlight parabola.

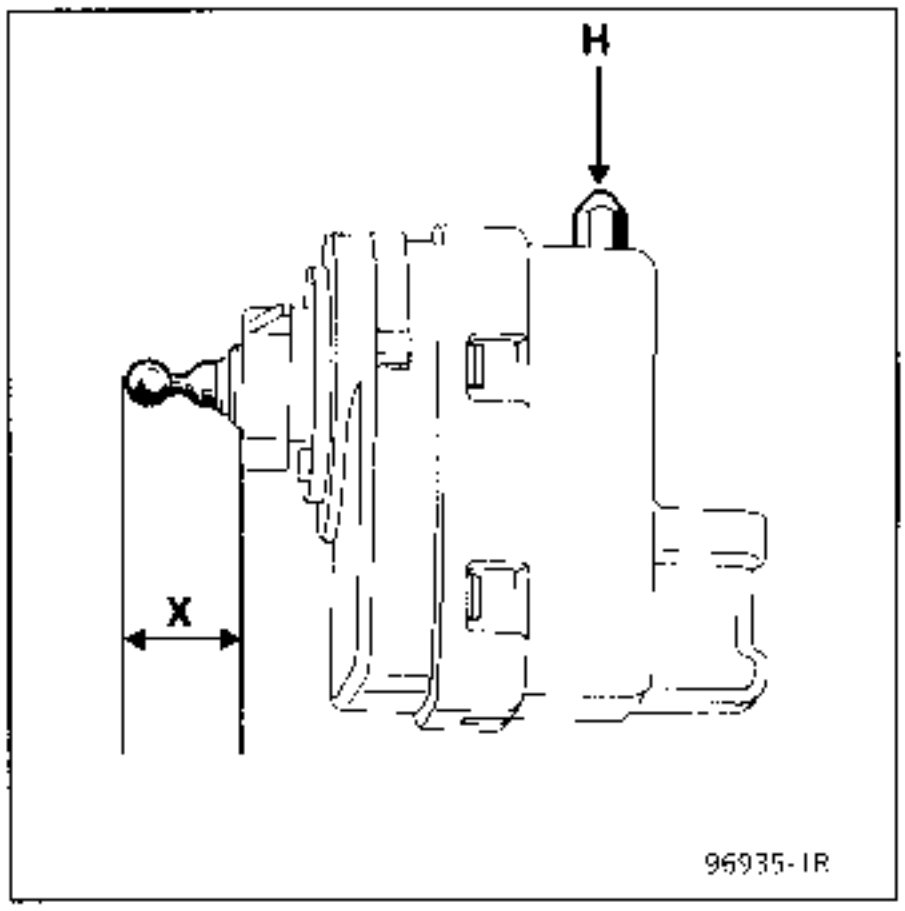


Special notes on refitting

All the remote adjustment receivers are supplied preset to dimension X = 17.5 mm.
For vehicles fitted with "VALEO" headlights the receiver may be mounted directly on the headlight.
For vehicles fitted with "HELLA" headlights dimension X must be increased to 23.5 mm to enable the receiver to be mounted on the headlight.

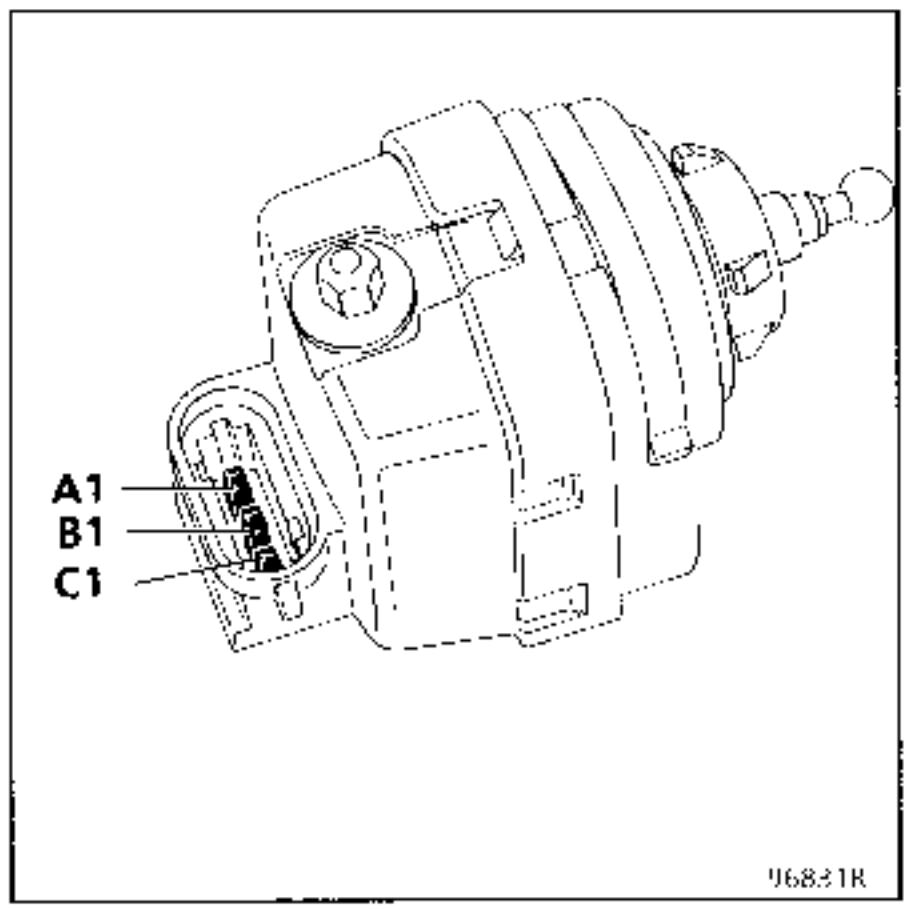
In this case the method used is as follows:
- Connect the receiver connector to the vehicle wiring without fitting it to the headlight.
- Set the control (on the dashboard) to mark 4 to withdraw the rod to its maximum extension.
- Manually adjust the setting with bolt (H) until dimension X = 23.5 mm is obtained.

Remove the protective cap on the bulb connectors behind the lens unit.
Keep the parabola towards the rear of the lens by pulling the base of the bulb and engaging the ball joint in the housing provided for this purpose.



Then replace the entire receiver assembly on the lens, turning it an eighth of a turn.
Adjustment: make sure that the vehicle is unladen , set the control to "0".
Set it as indicated above.

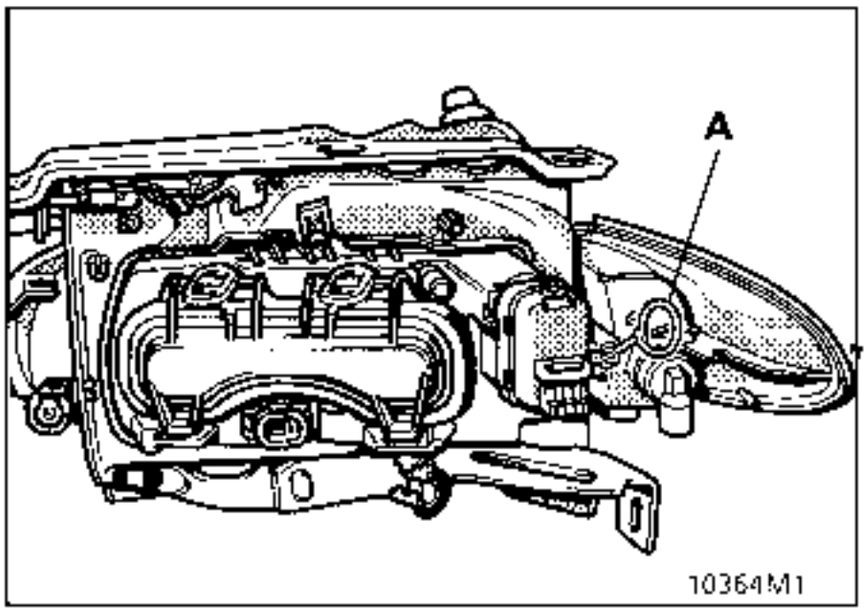
Connection

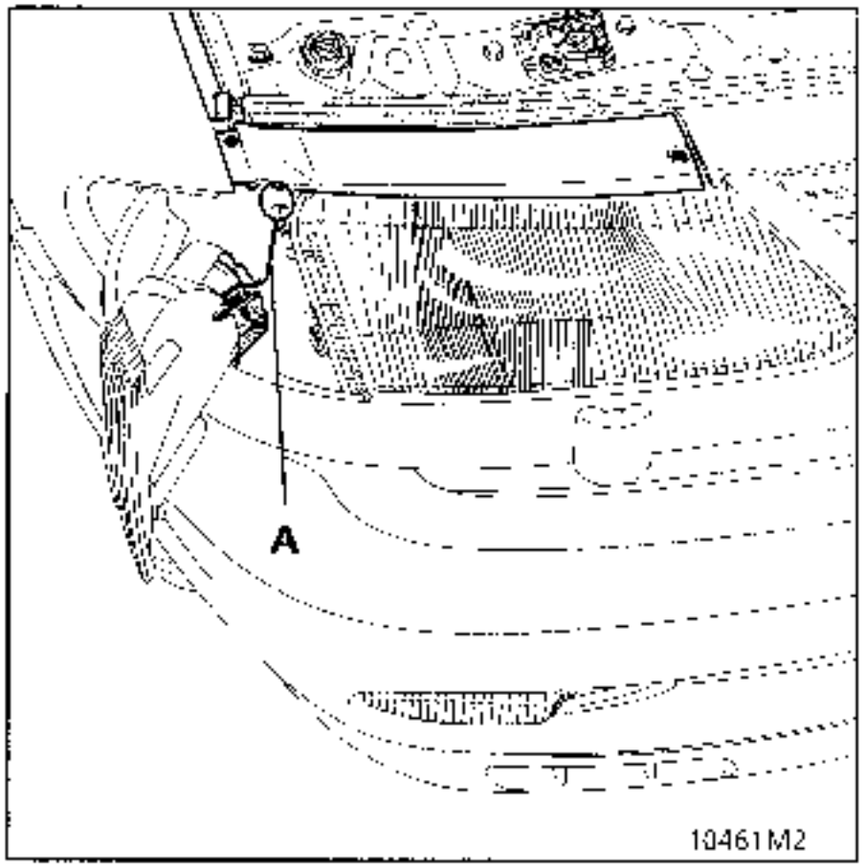


Track	Allocation
A1	Earth
B1	Adjustment control
C1	Dipped headlight information

REMOVAL

Release spring (A).
Remove the indicator by pulling it out.
Remove the bulb holder by turning it a quarter turn.

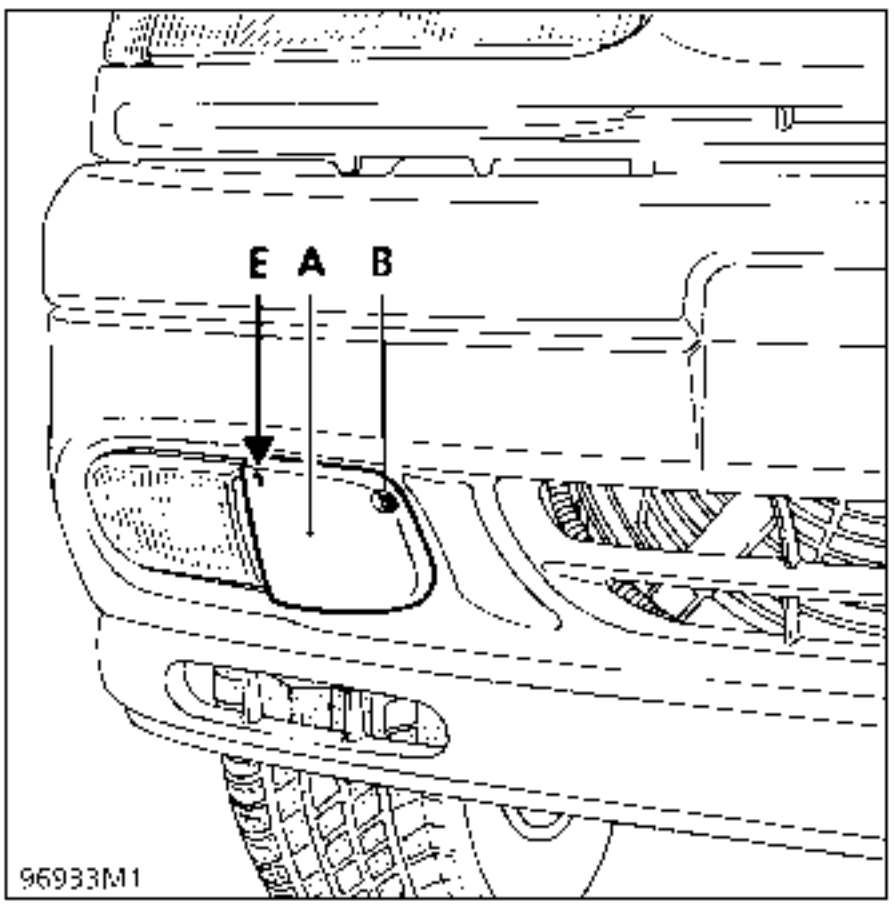




NOTE: To refit, proceed in the reverse order making use, if necessary, of a hook to return spring (A) to its initial position.

For vehicles fitted with front fog lights

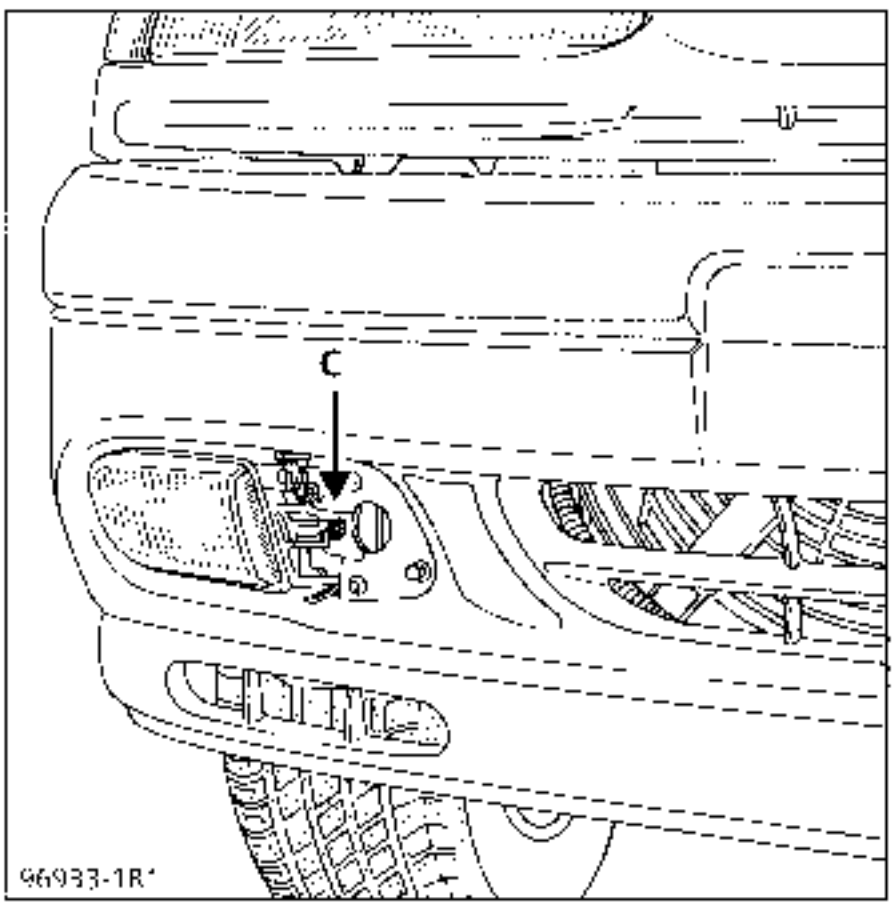
REMOVAL



Remove cover (A) by means of bolt (B).

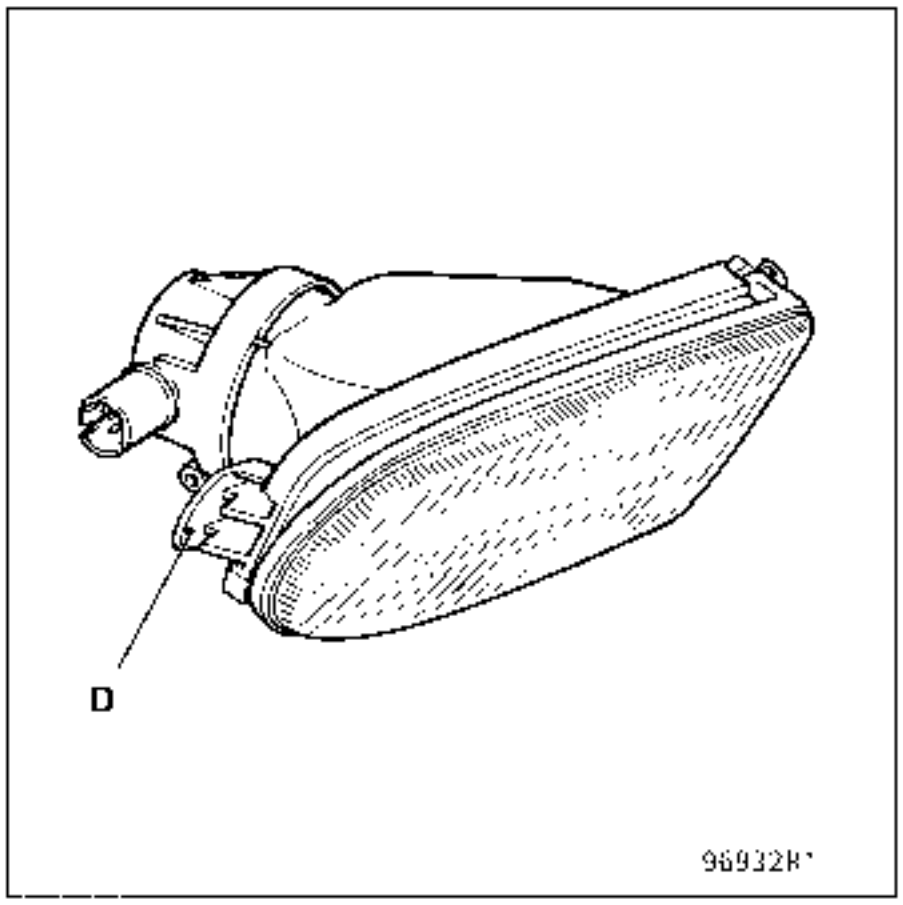
Slacken bolt (C).

Remove the lens unit towards the front by releasing lug (D).



Disconnect the connector.

REFITTING



Replace the fog light by means of lug (D).

Replace fixing bolt (C) and cover (A).

Then proceed to adjust the fog light by means of bolt (E).

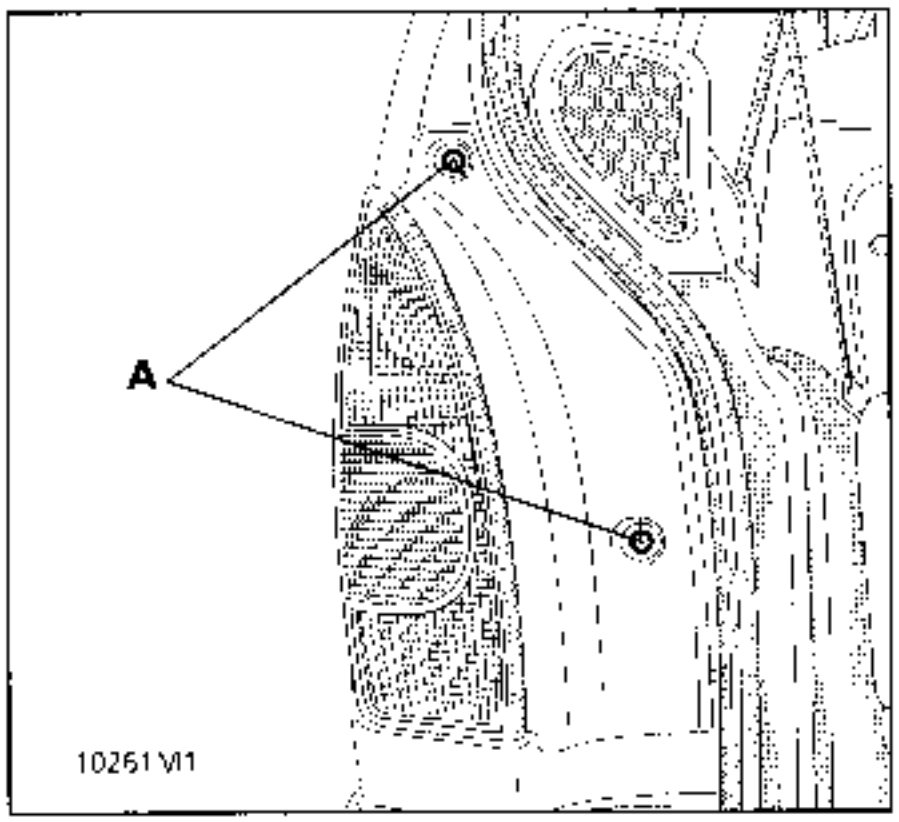
REMOVAL - REFITTING OF REAR LIGHTS

Remove the two mounting bolts (A).

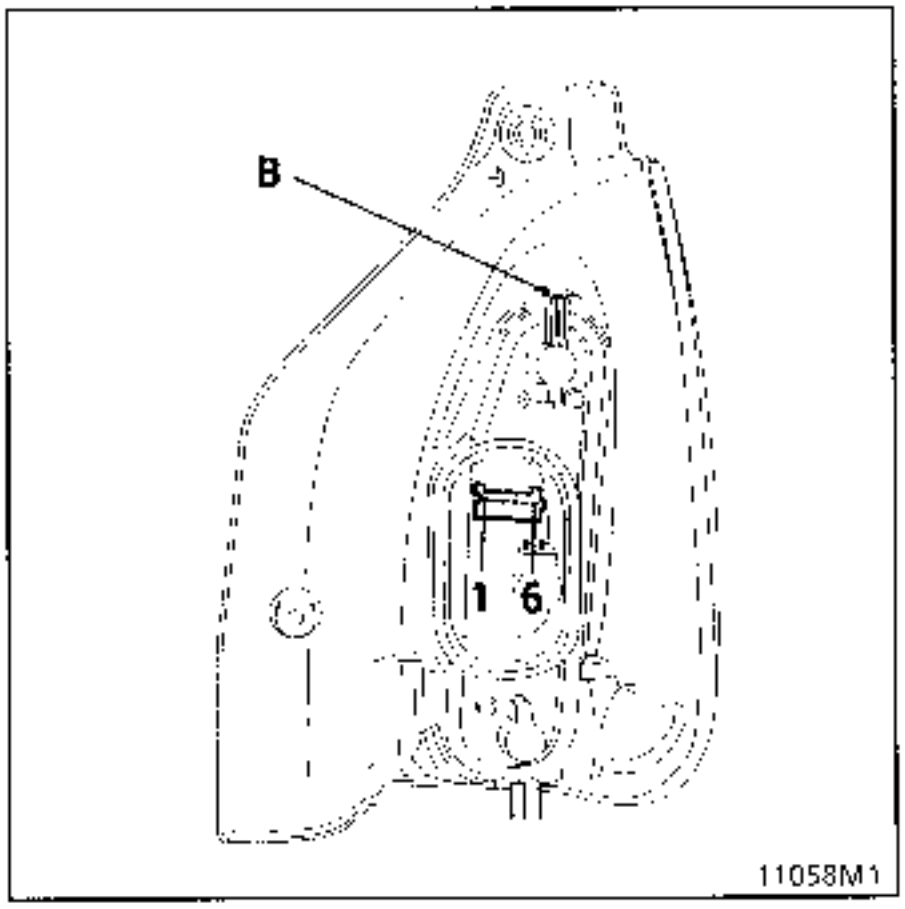
Remove the light towards the outside.

Disconnect the connector.

To gain access to the bulbs unclip the bulb holder by pressing tab (B).



CONNECTION



Rear left connection

Track	Allocation
1	Earth
2	Reversing light
3	Earth
4	Stop light
5	Side light
6	Indicator

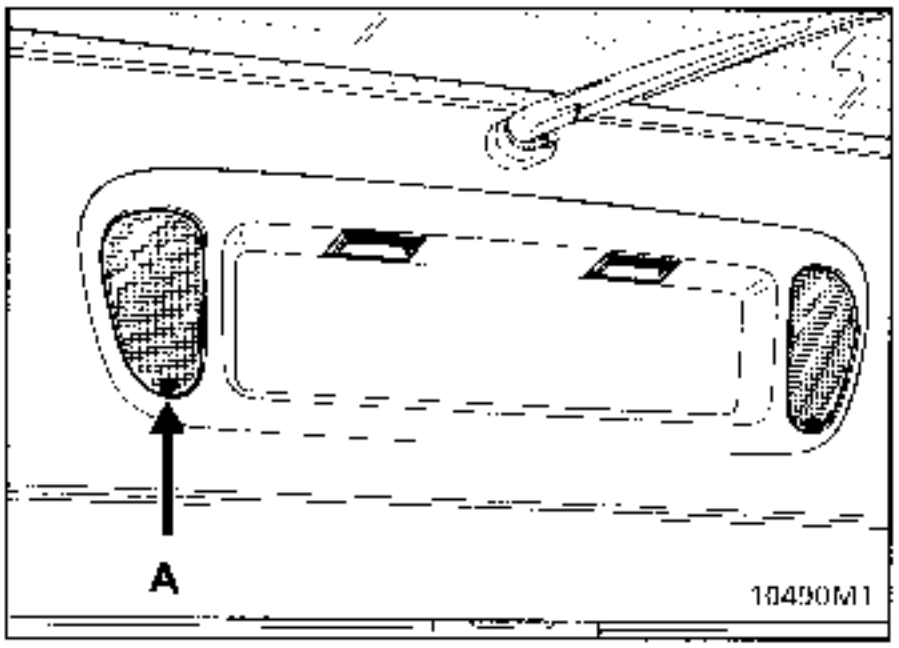
Rear right connection

Track	Allocation
1	Indicator
2	Stop light
3	Side light
4	Earth
5	Reversing light
6	Earth

N.B. To replace the bulbs remove the light.

REMOVAL - REFITTING OF TAILGATE FOG LIGHT

Remove the cap from the bolt
Remove: bolt (A)
Remove the light.
Disconnect the connector.
To gain access to the bulb turn the bulb holder.

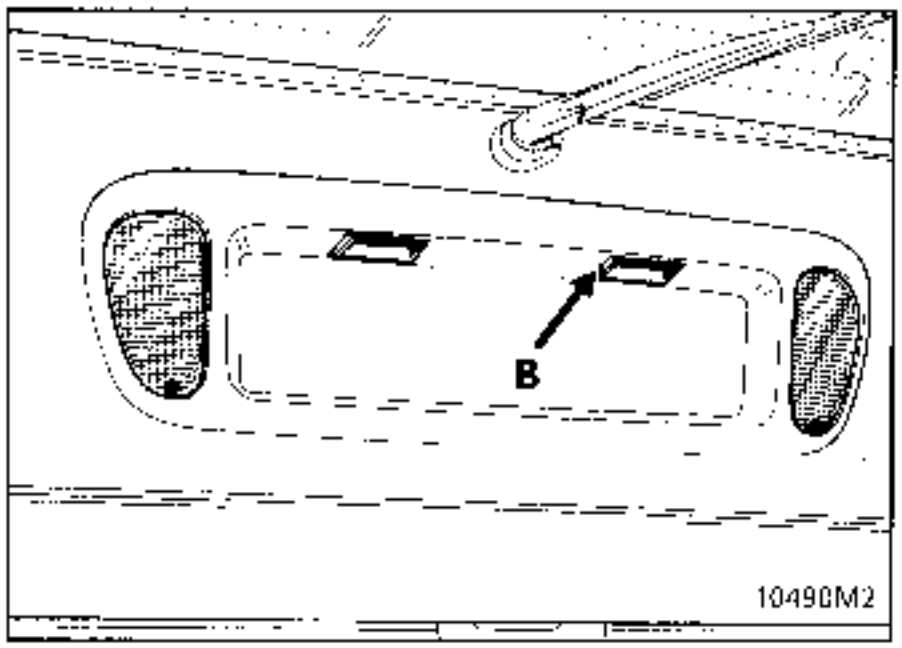


CONNECTION

Track	Allocation
1	Fog light earth
2	Fog light

REMOVAL - REFITTING OF NUMBER PLATE LIGHT

Unclip by sliding a small screwdriver into slot (B) to press the tab.
Disconnect the connector.
To gain access to the bulb, unclip the bulb holder.

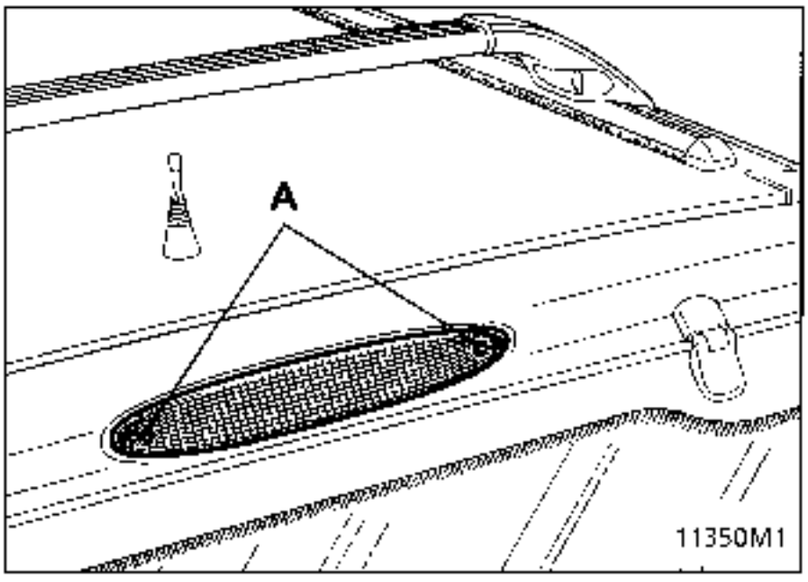


CONNECTION

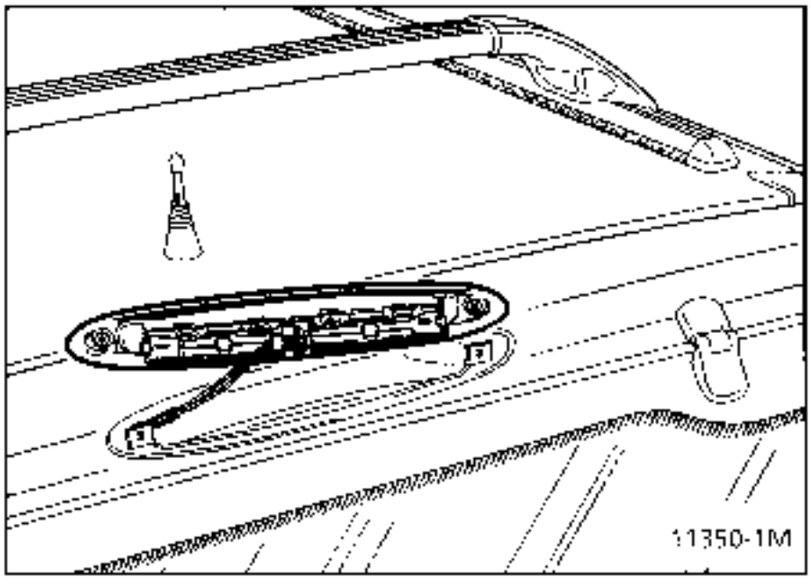
Track	Allocation
1	Number plate light
2	Earth

REMOVAL - REFITTING OF HIGH LEVEL STOP LIGHT

Remove bolts (A).

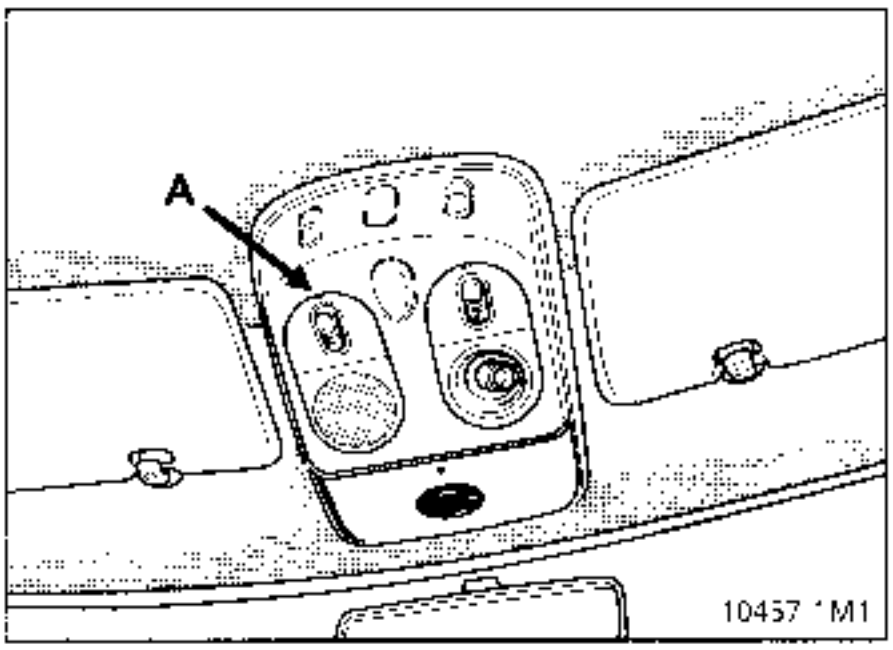


Remove the light.
Disconnect the light connector.
To gain access to the bulbs unclip the bulb holder by pressing both ends.



Track	Allocation
1	Earth
2	Stop light

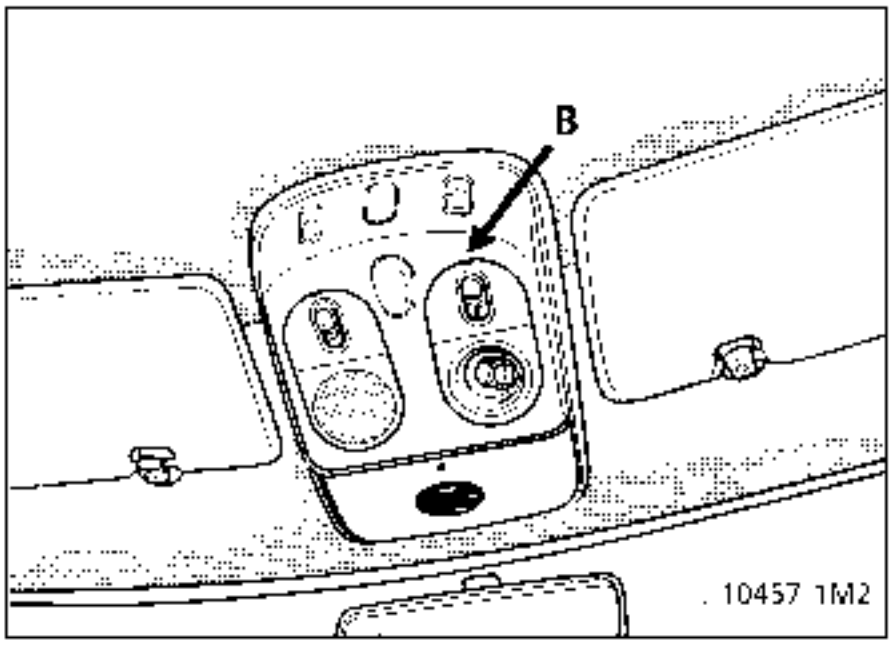
Central courtesy light



REMOVAL

Unclip the lens support and switch by sliding a small screwdriver into slot (A) to press the tab.

Map reading light



REMOVAL

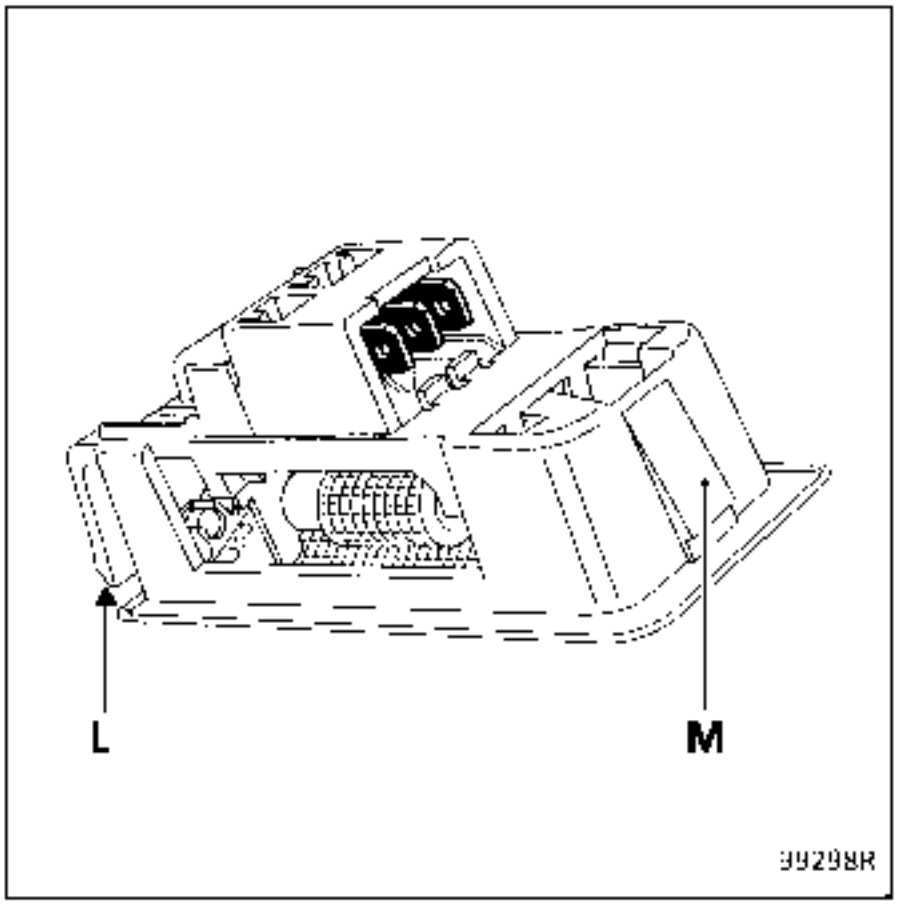
Unclip the map reading light support and switch by sliding a small screwdriver into slot (B) to press the tab.

REAR SEAT COURTESY LIGHT

REMOVAL

To remove the back of the courtesy light press tabs (L) by sliding a small flat screwdriver into the slots provided for this purpose.

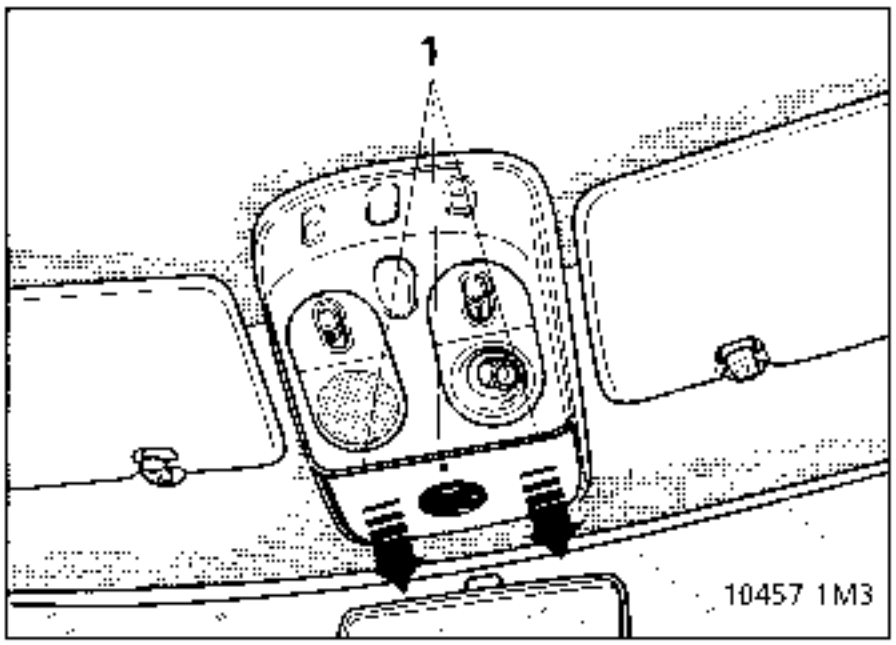
Then remove catch (M) at the front of the courtesy light and disconnect the connector.



Roof console

REMOVAL

Unclip towards the front the plastic cap on the roof console supporting the infrared receiver to release the three catches (1).

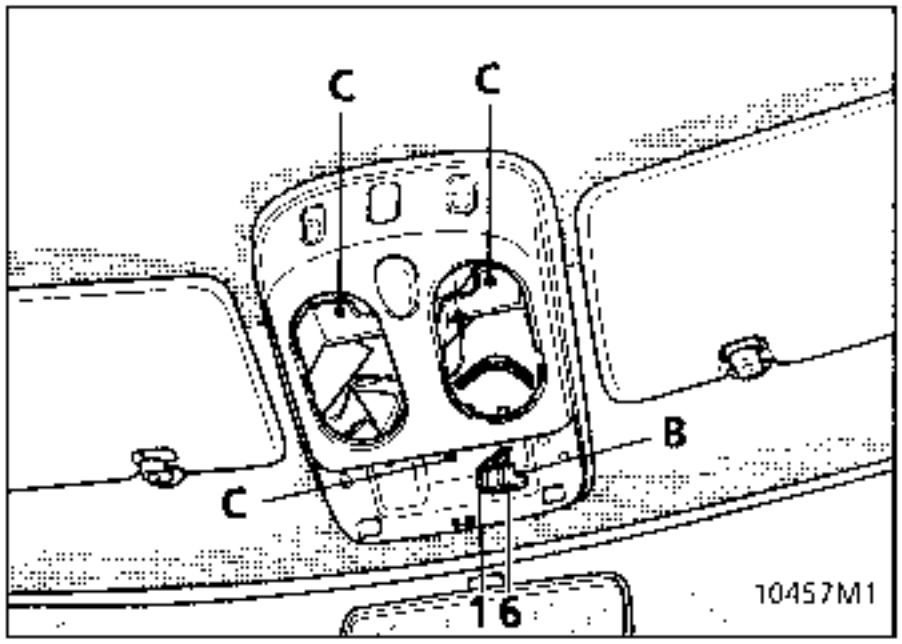


Disconnect connector (B) and remove the cap.

Remove:

- The courtesy light
- The map reading light
- The torx bolts (C)

Disconnect the various connectors.

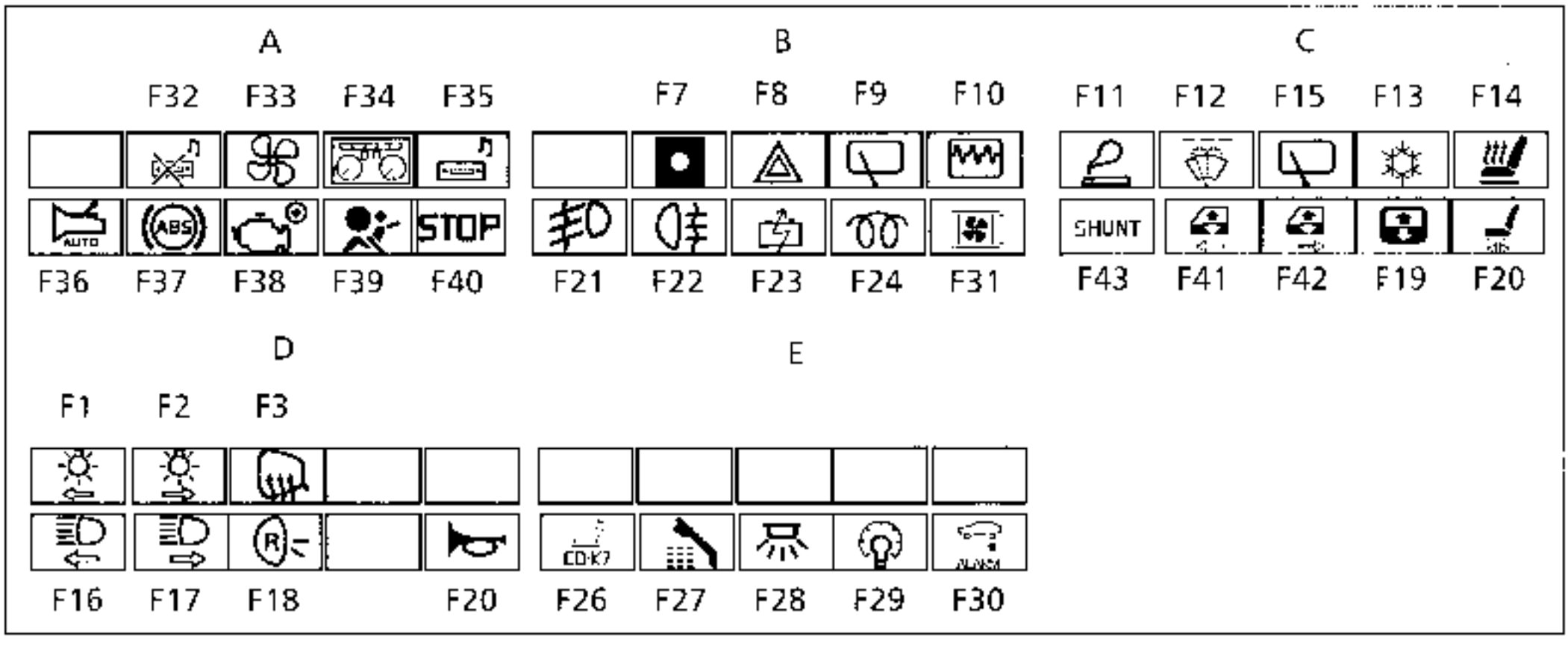


Connection of connector B
(full specification version)

Track	Allocation
1	Not used
2	+ Battery
3	Earth
4	Infrared receiver output
5	+ infrared receiver feed
6	Standby warning light

FUSE BOX (passenger compartment)

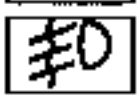
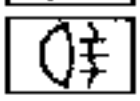
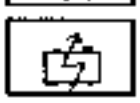
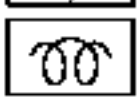
This unit is located on the passenger side.



Fuse allocation (according to equipment level) module A

Symbols	Amps	Description
		Not used
	15	Radio pre-equipment
	7.5	Heater fan
	5	Instrument panel/transponder unit
	5	Standard radio
AUTO	5	Automatic transmission
ABS	7.5	A.B.S.
	30	Petrol injection/diesel after-ignition
	15	Airbag/transponder unit/instrument panel
STOP	20	Stop lights/hazard warning lights/cruise control switch/pneumatic suspension

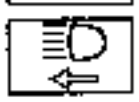
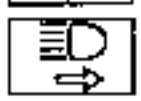
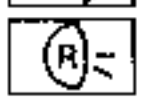
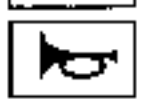
Allocation of fuses (according to equipment level) module A

Symbols	Amps	Allocation
		Not used
	15	Immobiliser/air conditioning compressor/central locking
	15	Hazard warning lights
	25	Park position/rear screen wiper
	3	· before ignition injection
	15	Front fog lights
	10	Rear fog lights
		Consumer cutout shunt
	15	+ diesel unit before-ignition
	15	Pressostat control

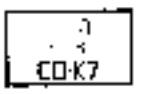
Allocation of fuses (according to equipment level) module C

Symbols	Amps	Allocation
	15	Cigar lighter
	25	Front and rear wiper/front wiper park position
	25	Front and rear wiper: front timer
	7.5	Air conditioning relay control/reversing lights/low adherence switch
		/telephone
	20	Heated seats
SHUNT		After-ignition shunt
	30	Front and rear left electric window/one-touch unit, front driver's electric window
	30	Front and rear right electric windows
	10	Sunroof
	25	Electric front seat

Allocation of fuses (according to equipment level) module D

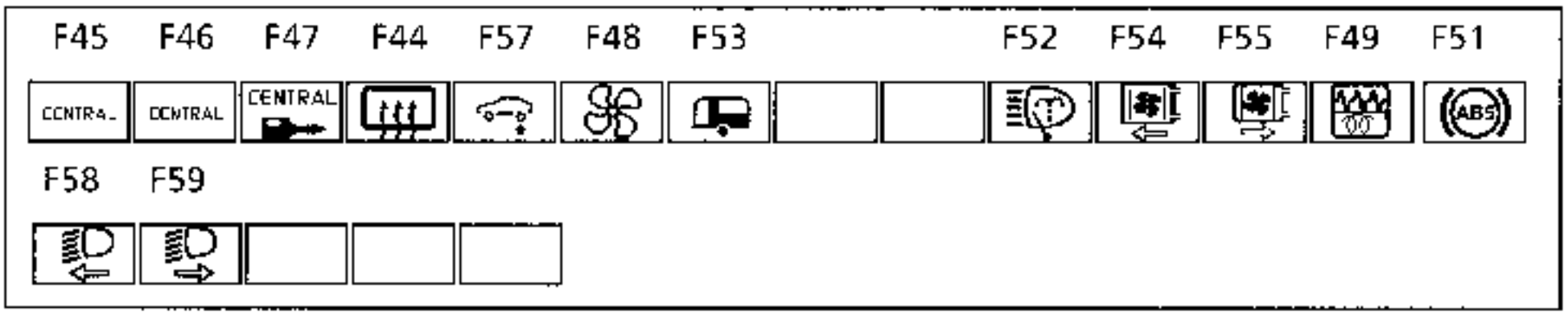
Symbols	Amps	Allocation
	10	Left side light
	10	Right side light
	7.5	Right and left heated rear view mirror
		Not used
		Not used
	15	Left main beam headlights
	15	Right main beam headlights
	7.5	Reversing light
		Not used
	20	Horn

Allocation of fuses (according to equipment level) module E

Symbols	Amps	Allocation
		Not used
		Not used
		Not used
		Not used
		Not used
	3	Compact disk reader and cassette reader
	10	Radio phone
	10	Interior lighting
	20	Lighting rheostat/radio pre-equipment/rear view mirror control
	5/15	Pneumatic suspension/(Alarm unit, right-hand drive)

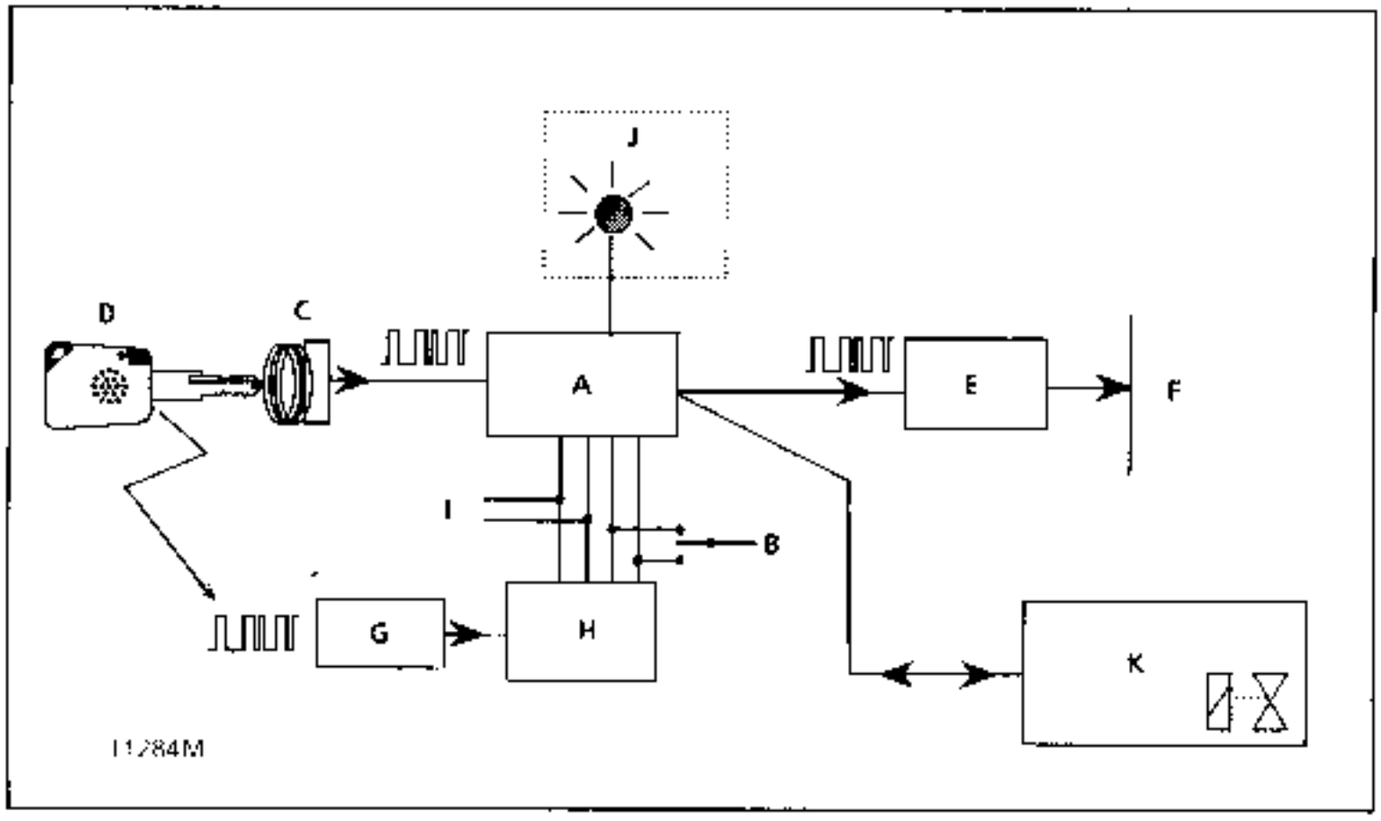
FUSE BOX (engine side)

This box is located in the engine compartment on the left hand wheel arch.



Allocation of the fuses (according to equipment level)

Symbols	Amps	Allocation
CENTRAL	60	+ Passenger compartment
CENTRAL	60	+ Passenger compartment
CENTRAL	60	+ Passenger compartment
	40	Heated rear screen
	40	Self levelling suspension
	50	Heater fan
	60	+ Trailer
		Not used
		Not used
	40	Headlight washers
	40	Left cooling fan
	40	Right cooling fan
	30/70	Petrol injection (30A). Diesel preheating (70A)
ABS	60	A.B.S
	15	Left dipped headlight
	15	Right dipped headlight



Operation of the coded KEY and PLIP systems.

• PLIP docoder unit:
- It manages theunlocking and locking of the doors and lighting of the passenger compartment.

• Coded KEY decoder unit:
- It manages the engine immobiliser system.

IMPORTANT :

For the PLIP resynchronisation procedure see Chapter 88 (infrared remote control).

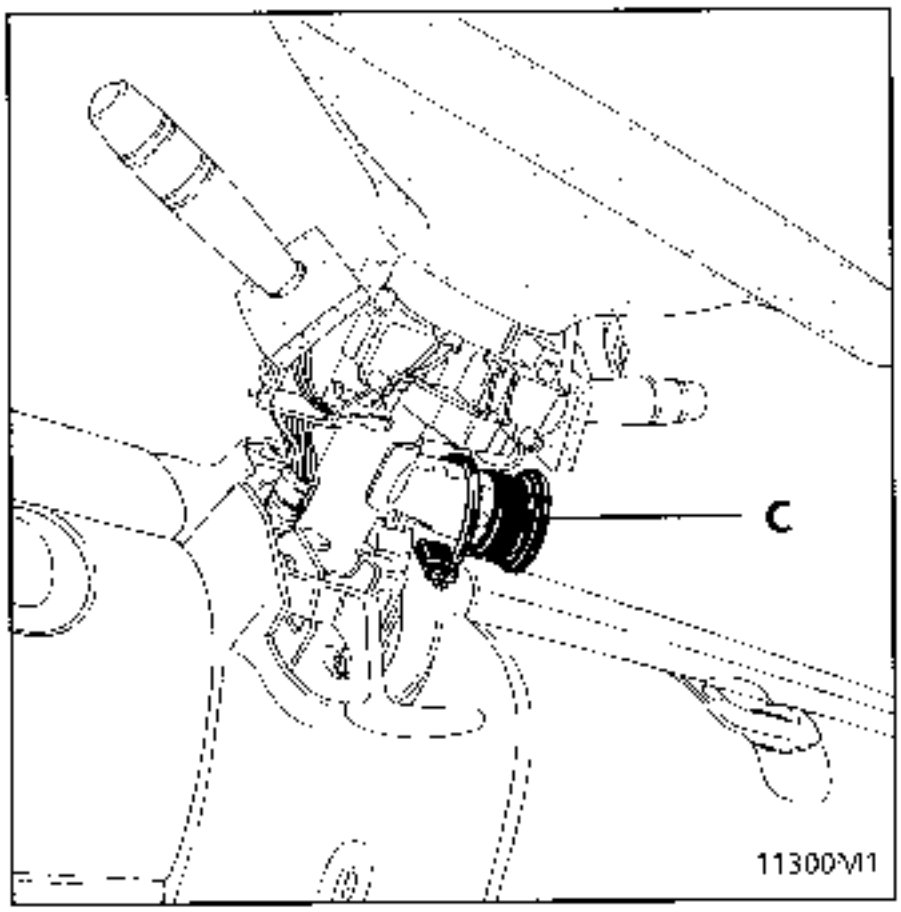
A → Coded KEY decoder unit
B → Central door locking button (C.P.E.)
C → Ring
D → Dual function key
E → Injection computer (petrol)
F → Fuel pump, injectors, ignition
G → PLIP receiver
H → PLIP decoder unit
I → Diagnostic socket
J → Immobiliser warning light on roof console
K → Coded solenoid valve (diesel)

DESCRIPTION OF THE CODED KEY ENGINE IMMOBILISER SYSTEM

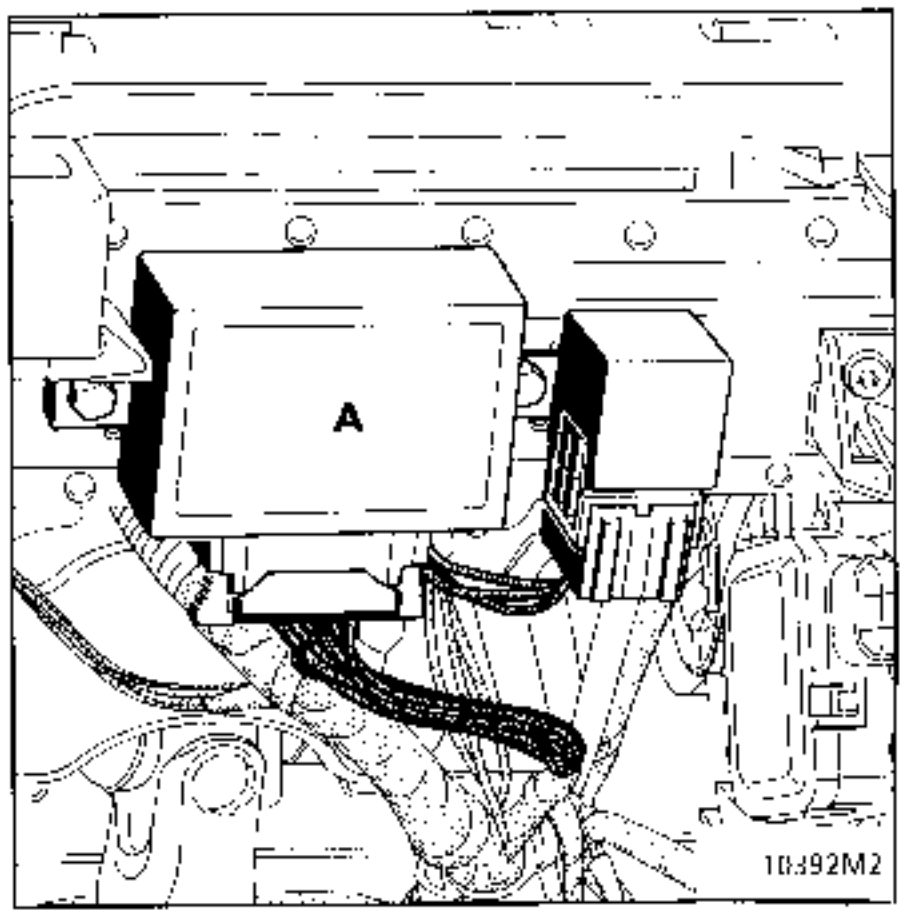
With this system the engine immobiliser is activated 10 seconds after turning the + after ignition feed off (shown by the flashing of the red engine immobiliser warning light).

The system comprises:

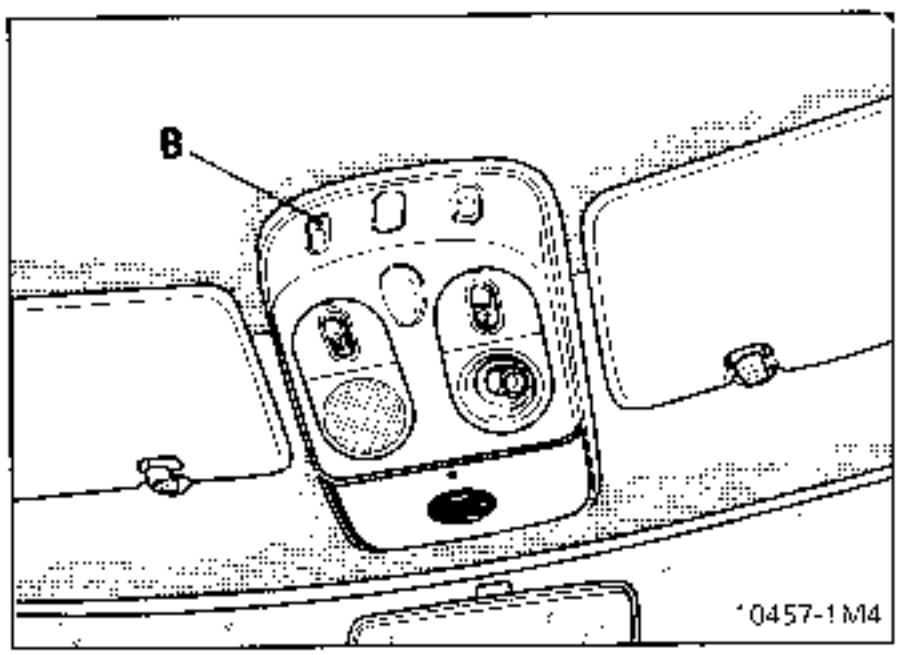
- 2 special matched key heads with a coded chip,
- a ring (C) located around the ignition switch, with an electronic unit which transmits the key code to the KEY decoder unit (A).



- a KEY decoder unit (A) located under the upper half of the dashboard, which has the following functions:
  - decoding of the key signal from the 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.



- a red immobiliser warning light on the roof console, used to:
  - indicate activation of the engine immobiliser system,
  - enter the emergency code,
  - indicate a fault in the system.
- the central door locking button (B) enabling the emergency code to be re-entered (C.P.E.).

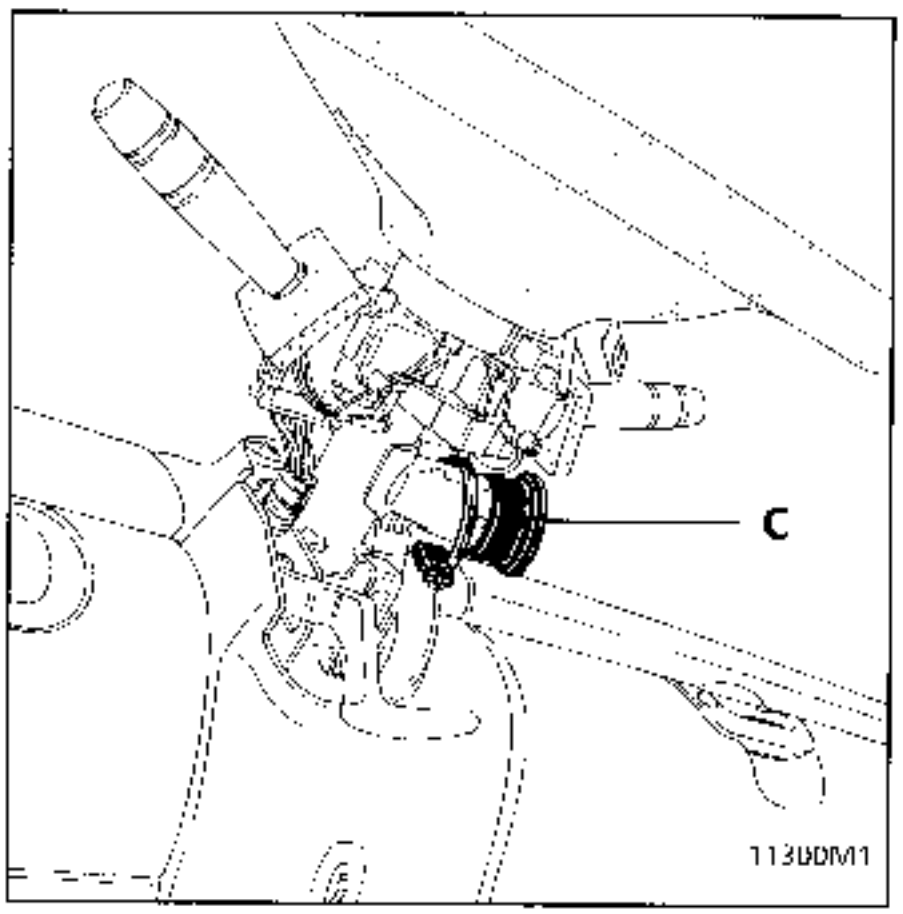


REMOVAL - REFITTING THE RING (C)
Disconnect the battery
Without removing the steering wheel
Remove:
- The radio satellite (if fitted).
- The lower 5 screw half-cowling.
  The upper 2-screw half-cowling
  (to gain access to the 2 screws turn the steering wheel a quarter turn to the right and left).

Disconnect the connector for the ring.

After moving the mounting tab to one side, turn the ring clockwise (= 8th of a turn) and release it.

When refitting, ensure the ring (C) is correctly clipped back into position and is correctly located, and that the wiring is correctly connected.

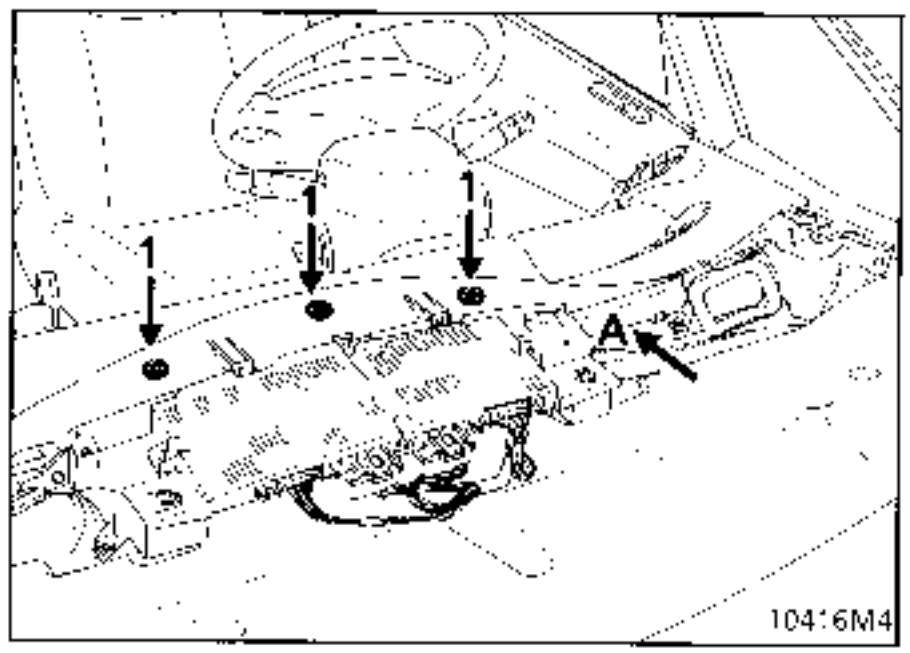


NOTE: this ring is not coded

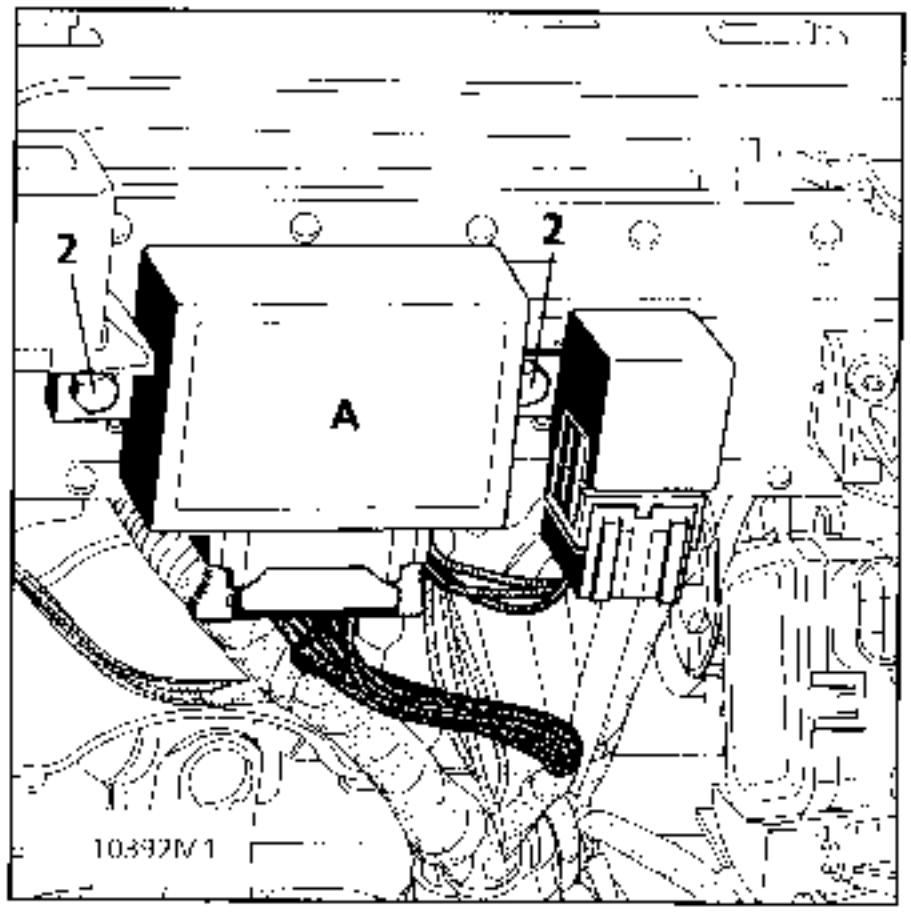
REMOVAL - REFITTING OF DECODER UNIT

Remove: The speaker grilles by hand. Start with the stop on the air vent side.
Slacken the three mountings of each speaker support.
Disconnect the speakers and remove them.
Lift off the dashboard panel, starting in the corner, and pull vertically to unclip the three mountings (1).

Move the air duct to one side to to reach the KEY decoder unit (A).
Disconnect the 15-track connector from the KEY decoder unit.



Remove the two bolts (2) from the KEY decoder unit (A).



When retting, ensure that the 15-track connector is correctly clipped.
Check that the three clips (1) are present.

OPERATION

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

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

If the code is recognised by the KEY decoder 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 turned on, the immobiliser warning light illuminates for a few seconds then extinguishes, showing that the system is operating correctly.

  • if the two codes do not match, the system remains locked to prevent the engine from being started.
    When the ignition is turned on, the red engine immobiliser warning light flashes (rapid flashing).
    The vehicle may not be started.

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

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 less than 6 volts, the engine cannot be started, even by pushing the vehicle.

REPLACING A KEY HEAD

The coded chip in the key head is faulty:

- order a replacement key head using the number in the faulty key head (alphanumeric characters),

- if the customer requires the fault to be repaired immediately (2nd key unavailable) a complete kit may be fitted to the vehicle (key decoder unit plus two key heads plus PLIP decoder unit) (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 or on the bar code label (normally attached to the keys when the vehicle is delivered).
  In this case, remember to order the metal number insert for the new key head.

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

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

REPLACING THE KEY DECODER UNIT ALONE

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

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

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

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

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

SPECIAL NOTES

On diesel vehicles the KEY decoder unit is identical to the decoder 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 decoder unit to check that the coded solenoid valve is operating correctly (indicated by the immobiliser warning light) (see diesel configuration).

PROGRAMMING PROCEDURE

This procedure may only be carried out once by the KEY decoder unit. As long as this procedure has not been carried out, the vehicle cannot be started.

The procedure may be carried out:
- with both keys if a kit is being fitted (which permits verification that the keys are matched).

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

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

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

1. Connect the XR25 to the vehicle, set the ISO selector switch to S8 and enter code D38 (fault finding fiche 38); bargraph 19 right hand side should be illuminated (KEY decoder unit uncoded).

2. Using the first key, switch the ignition on for approximately 2 seconds (but do not start the engine). Bargraphs 18 and 19 LH side illuminate. From this moment you have 30 seconds to carry out the following operation.

3. Switch the ignition on (but do not start the engine) for approximately 2 seconds with the 2nd key. Bargraphs 19 LH and RH sides extinguish.

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

5. Check the engine immobiliser system is operating correctly:
   - ignition off, the red immobiliser warning light should flash (slow flashing). Bargraph 10 left hand side should be illuminated. The vehicle should not be able to be started using other keys.

   NOTE : to simulate prevention from starting, before turning the ignition on, enter **G04*** (forced protection mode) on the XR25 (bargraph **8 right hand side** illuminates) and wait for approximately 10 seconds. When the ignition is turned on the red immobiliser warning light should flash (rapid flashing) and the vehicle should be prevented from starting.

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

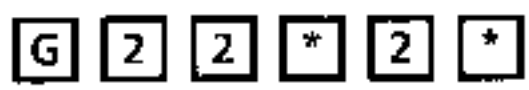
   NOTE : if the programming procedure fails, wait for bargraph 19 left hand side to extinguish before starting again to programme with both keys.

Diesel configuration

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

1. With the XR25 connected (ISO selector on **S8**) enter the code **D38** (fiche no. **38**), right hand bargraphs 1 and 2 must be illuminated.

2. Enter the code



bargraphs 3 right and 9 left hand side must illuminate. The configuration is complete.

REPLACING A KIT (key decoder unit plus 2 key heads, and PLIP decoder unit)

If a kit is replaced it will be necessary to:

- programme the codes of the 2 new keys in the new decoder unit (supplied uncoded).
- erase the old code in the injection computer or solenoid valve using the emergency procedure (the code number for the old kit should be requested from the local assistance network.

IMPORTANT: to erase the old code (memorised in the injection computer or coded solenoid valve), 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 emergency code (using the number for the old kit) unless the KEY decoder unit fitted to the vehicle has been programmed with a different code (which is the case in the following procedure).

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

1. Fit the metal inserts from the old keys into the new key heads.
2. Note the number of one of the old keys to obtain the emergency code number.
3. Remove the KEY decoder unit (see page 82-3), ignition off.
4. Fit the new KEY decoder unit, ignition off.
5. Programme the codes of the 2 new keys in the KEY decoder unit (supplied uncoded) (see programming procedure and configuration procedure for diesel engines.).
6. Erase the old code memorised in the injection computer or coded solenoid valve by using the emergency procedure and the code number for the old kit (see procedure for entering the emergency code).

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

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

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

The emergency code may now be entered.

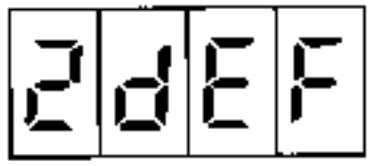
NOTE: On petrol vehicles use the XR25 to check that the injection computer has been correctly decoded (in injection fault finding).

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

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

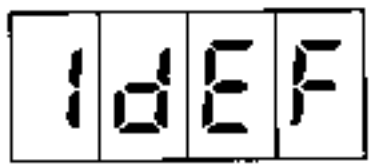
[*] [2] [2]

the message



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

– if the display shows



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

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

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

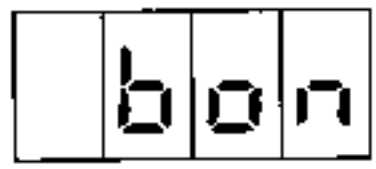
7. Programme the immobiliser code for the new kit into the injection computer or coded solenoid valve.
Turn the ignition off and on again for a few seconds without starting the engine.

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

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

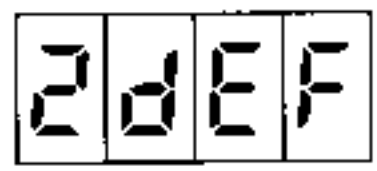
[*] [2] [2]

the display should show



In this case the injection computer has been correctly coded.

If the display shows



the injection computer is still not coded.

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

8. Check the operation of the immobiliser system:

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

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

- use diagnostic fiche n° 38 and enter code **D** **3** **8** using the XR25,

- ignition off, enter **G** **0** **4** *****

  (forced protection mode) on the XR25 (bar-graph 8 right hand side illuminates) and wait for approximately 10 seconds.

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

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

NOTE: To replace and programme the PLIP decoder unit see section 88.

REPLACING THE INJECTION COMPUTER (petrol vehicle)

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

It is sufficient to carry out the followoing operations:

- turn the ignition on using the vehicle's coded key for a few seconds,

- turn the ignition off, the immobiliser will be activated approximately 10 seconds afterwards (immobiliser warning light flashes).

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

- use diagnostic fiche n° 38 and code **D** **3** **8** on XR25,

- ignition off, enter **G** **0** **4** *****

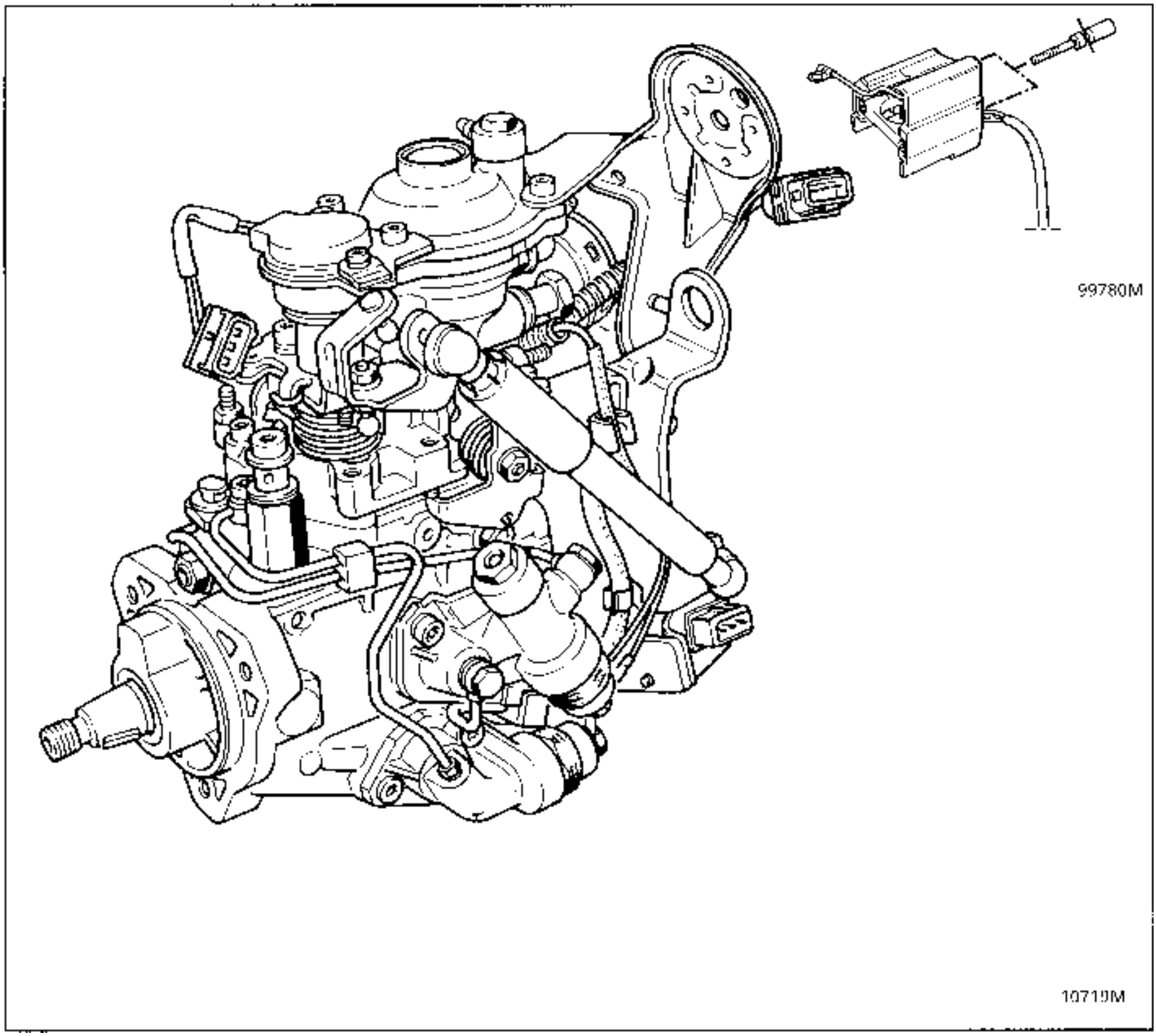
  (forced protection mode) on the XR25 (bar-graph 8 right hand side illuminates)s.

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

REPLACING THE ELECTRONICS OF THE CODED SOLENOID VALVE (Diesel vehicle)

REMOVAL

Refer to sub section 13.



REFITTING

Make sure that the retaining flange behind the solenoid valve is present.

Connect the electronics / solenoid valve connection wire by means of its nut.

Clip the plastic cap to the solenoid valve.

Position the electronics section on the solenoid valve.

Using new shear bolts, secure the electronics section by tightening the bolts in the flange until they break.

IMPORTANT: the electronics of the solenoid valve are supplied uncoded. It will therefore be necessary to programme into them the immobiliser system code when it is fitted.

It is sufficient to carry out the following operations:

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

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

- use diagnostic fiche n° 38 and code

  D 3 8

- ignition off, enter G 0 4 *

  (forced protection mode) on the XR25 (bar graph 8 right hand side illuminates)

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

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

IMPORTANT: if an uncoded injection computer or solenoid valve is being tested from stock (test part), the feed fuse 

for the passenger compartment connection unit **MUST** be removed before the test part is fitted (do not refit the fuse while the test part is still fitted to the vehicle).

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

The test may then be carried out.

After the test, if the part is to be returned to stock, the part must be removed before refitting the passenger compartment connection unit feed fuse.

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

Checking (on petrol vehicle only)

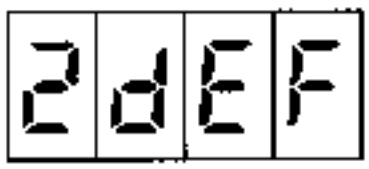
If the test computer is to be returned to stock, it is possible (before it is removed) to check using the XR25 and fiche no° 27 or 28 (depending on engine) that the computer has not been coded during the test (example : incorrect operation).

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

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

[*] [2] [2]

the message



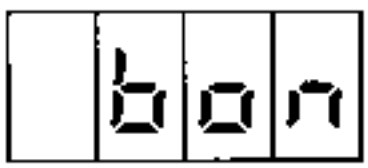
should be displayed on the XR25.

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

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

[*] [2] [2]

the message



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

In this case the computer must be decoded before being returned to stock.

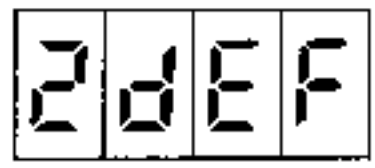
The procedure for decoding the injection computer consists of replacing the KEY decoder unit on the vehicle with another KEY decoder unit with a different code (with its keys) and entering the emergency code for the vehicle (emergency code number should be requested from the local assistance network, example **DELTA Assistance** for France) using the number in the head of the key for the vehicle.

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

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

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

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



This indicates that the injection computer has been decoded.

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

Refit the computer and decoder unit to the vehicle.

NOTE: when checking the injection using the XR25 (fiche no° 27 or 28, depending on engine) during a test with an uncoded computer, bargraph 2 RH side will illuminate

[*] [2] [2] → 

=

uncoded computer.

SYSTEM FAULT, ENGINE RUNNING
Petrol vehicle

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

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

NOTE : this fault may be shown by the XR25 (fiche no° 27 or 28, depending on engine).

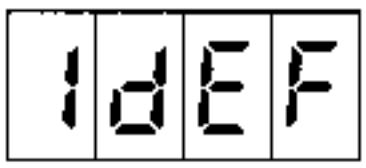
Connect the XR 25.

Position the ISO selector and enter the injection code.

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

After entering

the message



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

Diesel vehicle

If a system fault is detected by the decoder unit when the engine is running, the red immobiliser warning light (on the roof console) will illuminate permanently until the ignition is switched off.

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

NOTE: this fault may be shown by the XR25 and by the diagnostic of the decoder unit (fiche no. 38).

Connect the XR25.

Set the ISO selector to 58 and enter the code

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

PROCEDURE FOR ENTERING THE EMERGENCY CODE

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

The code is entered using the XR25 or the central door locking button (CPE) and the red engine immobiliser warning light.

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

After determining the emergency code number (request from the local assistance network), carry out the following operations:

- Using the XR25

- use fiche **no. 38** and enter the code

[D] [3] [8] on the XR25,

– ignition off, enter [G] [0] [4] [*]

(forced protection mode) on the XR25 (bargraph **8 RH side** is illuminated),

- when the ignition is switched on the red immobiliser warning light must flash (rapid flas hing) and it must be impossible to start the vehicle.

– Enter [G] [4] [0] [*]

– Enter the emergency code, followed by [*]

The code [B] [O] [N] must be read

The red immobiliser warning light must illuminate permanently for approximately 3 seconds, extinguish for approximatley 3 seconds and must illuminate permanently again for approximately 30 seconds.

Using the CPE (central door locking button)

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

2. Turn the ignition on, the red immobiliser warning light flashes more quickly,

3. Press and hold the CPE key (it does not matter which side), the red warning light extinguishes,

4. Without releasing the key, the warning light will flash very slowly (every 1.5 seconds) to generate a counting sequence.
   Count the number of times the red warning light illuminates and release the key when the value of the 1st figure of the emergency code is reached.

5. Press the key again.
   Count the number of times the red warning light illuminates and release the key when the value of the 2nd figure of the emergency code is reached.

6. Repeat operation 5 to enter the two remaining emergency code figures.

After entering the 4th figure of the fault code:

- if the code is correct it is possible to start the engine.

  The red immobiliser warning light should illuminate for approximately 3 seconds, extinguish for approximately 3 seconds, then illuminate for approximately 30 seconds.

  This warning light illumination cycle will repeat whenever the ignition is switched on and as long as the vehicle is unprotected (up to approximately 10 minutes after the ignition is switched off). This serves to remind the customer that his vehicle is no longer protected.

  The vehicle will again be protected either:
  - approximately 10 minutes after the ignition is switched off (automatic starting), or
  - after the battery is disconnected.

- if the code is incorrect, the engine cannot be started.

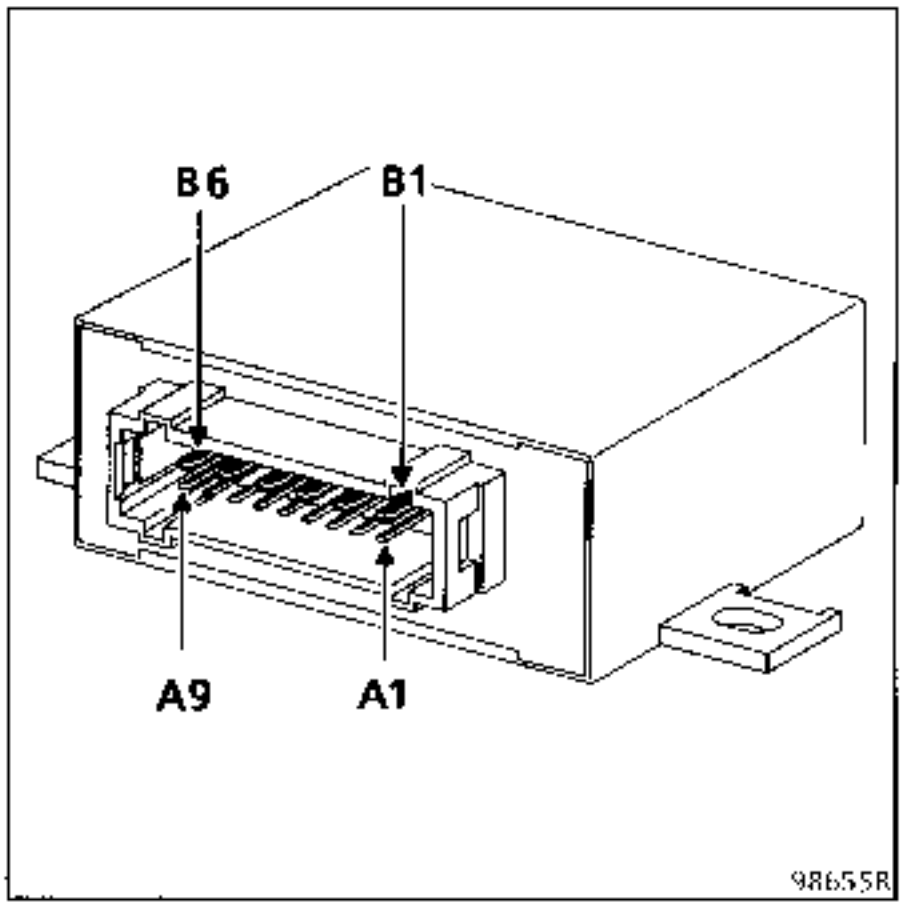
The red immobiliser warning light flashes.

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

IMPORTANT: you may make 3 attempts to enter the code. If, after the third attempt, the code is invalid, you must wait for approximately 15 minutes before making another attempt.
When this period has expired, turn the ignition off and on again and 3 more attempts may be made.

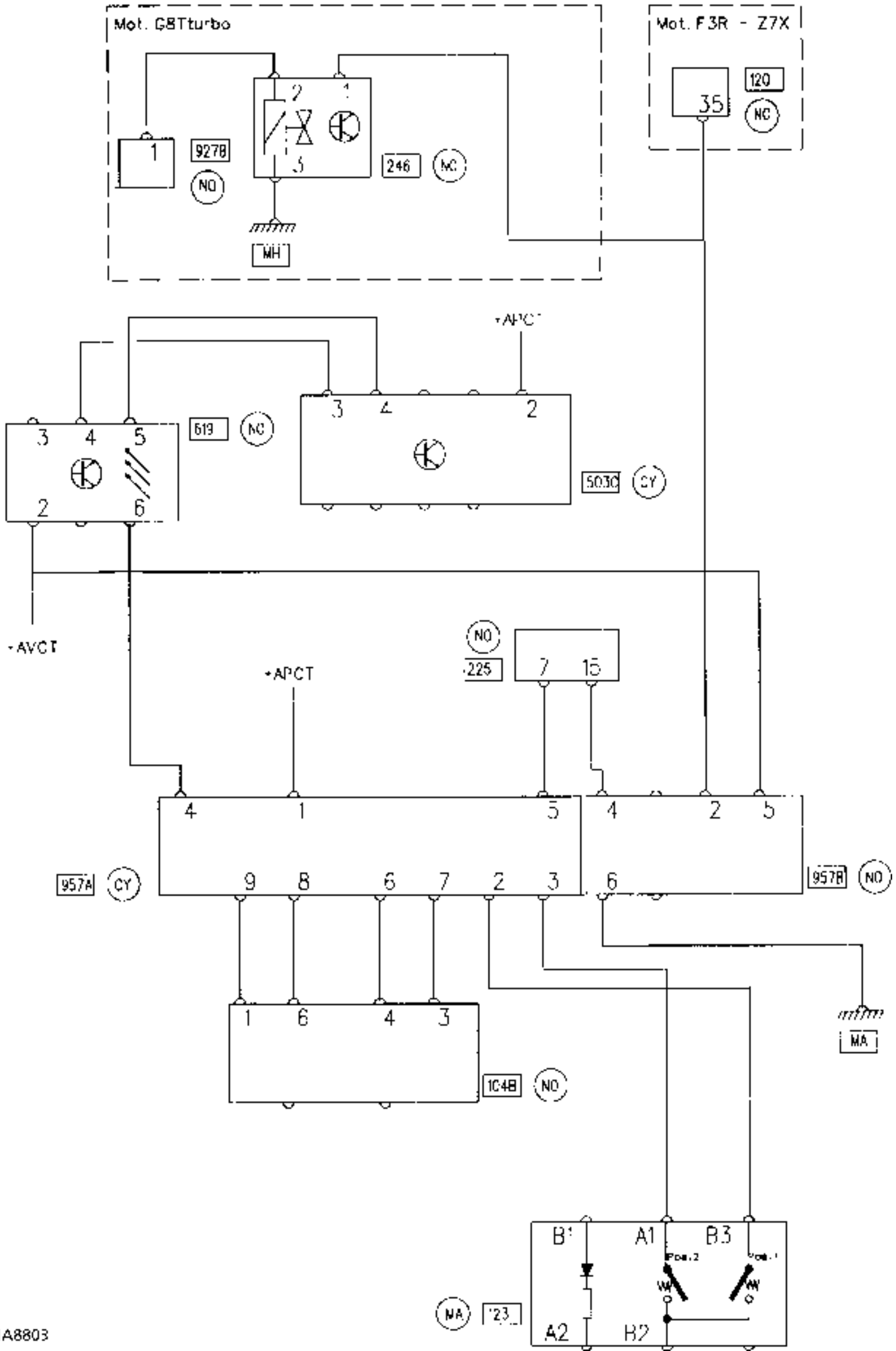
REMINDER: This procedure does not decode the injection computer or coded solenoid valve (depending on the type of engine)- it only authorises the starting of the vehicle.

DECODER UNIT CONNECTIONS



Track	Allocation
A1	+ after ignition
A2	Emergency code entry key
A3	Emergency code entry key
A4	Red immobiliser warning light
A5	Diagnostic socket information (line L)
A6	Ring/ decoder unit coded line
A7	Ring interrogation
A8	Ring earth
A9	Ring feed
B1	Not used
B2	Coded information to injection computer or coded solenoid valve
B3	Not used
B4	Diagnostic socket information (line K)
B5	- before ignition
B6	Earth

DIAGRAM



PRMMA8803

KEY

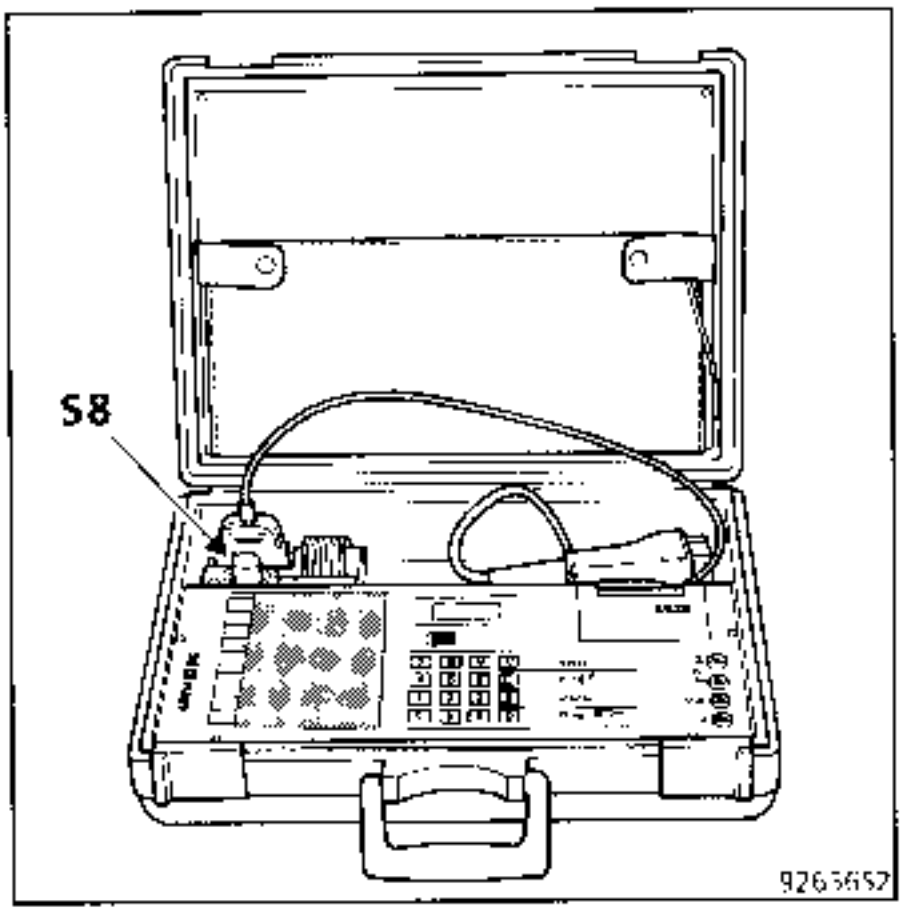
104 Ignition switch (ring)
120 Injection computer
123 Emergency code entry key
225 Diagnostic socket
246 Coded solenoid valve
619 Infrared remote control board
957 Coded key immobiliser unit

FAULT FINDING

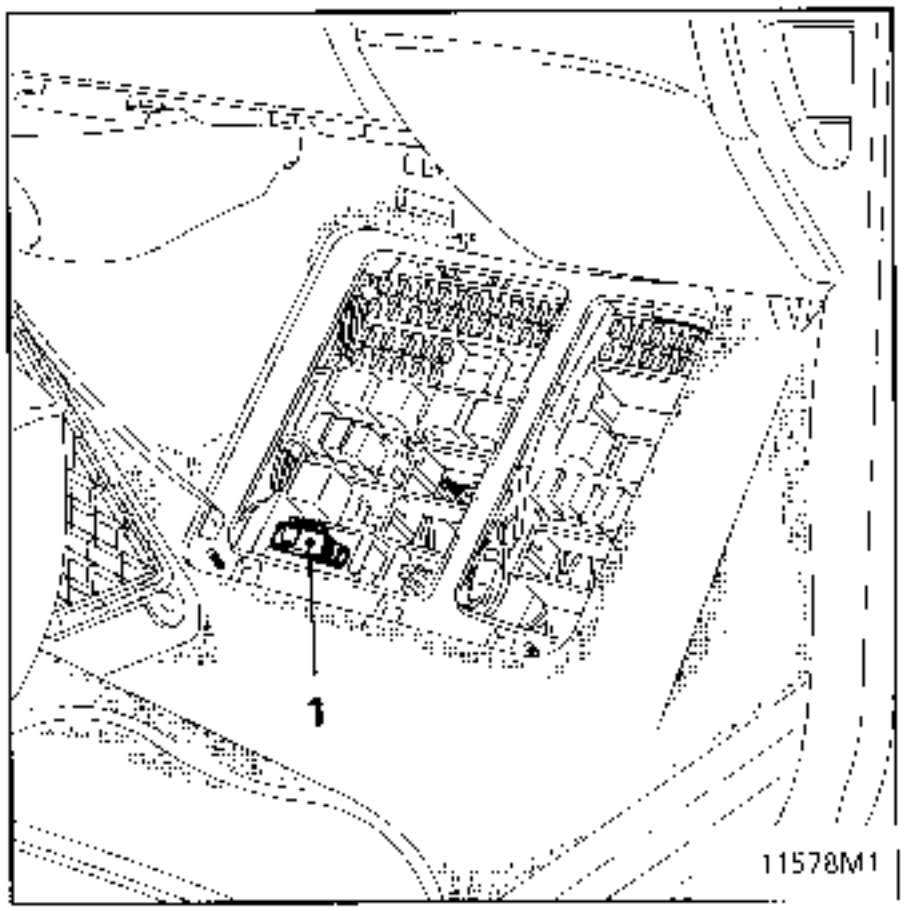
If this system is faulty, fault finding may be carried out using the XR25.

CONNECTION

Use the latest cassette and the corresponding fiche no° 38.



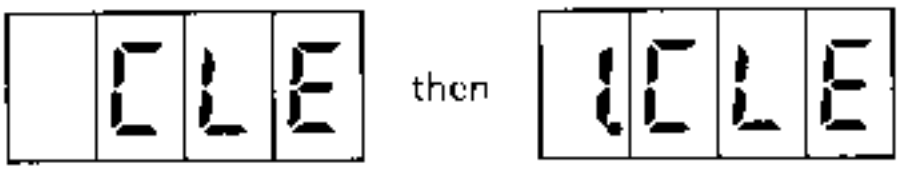
Connect the XR25 to the diagnostic socket (1) located behind the passenger compartment fuse cover under the passenger foot rest.

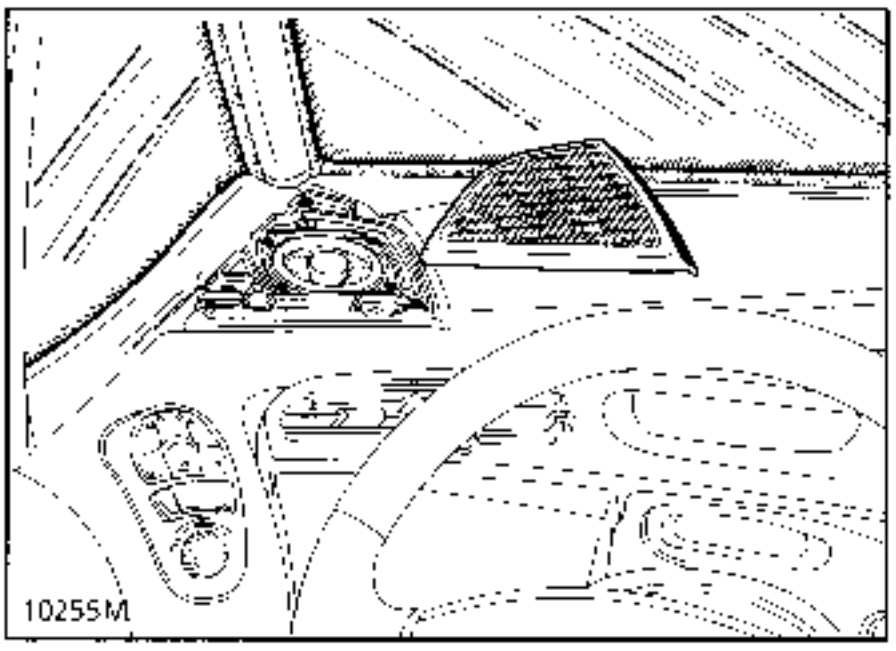


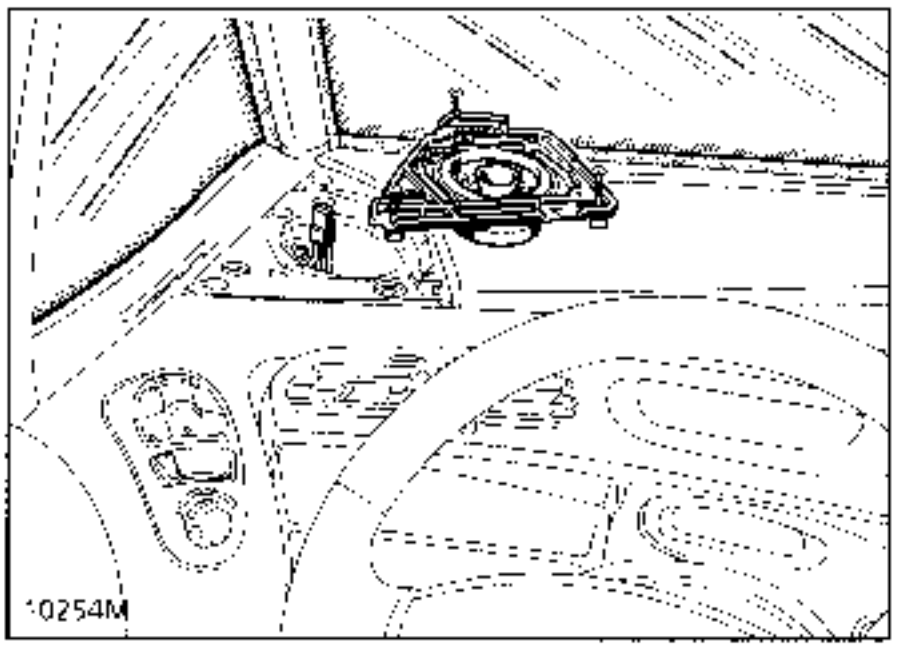
Position the ISO selector on S8 and enter

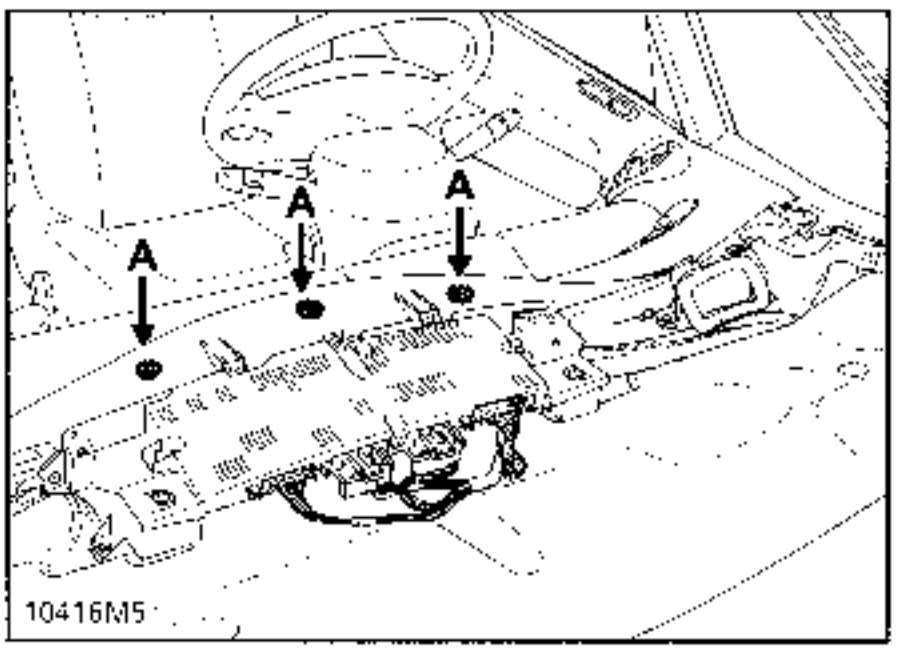
D 3 8

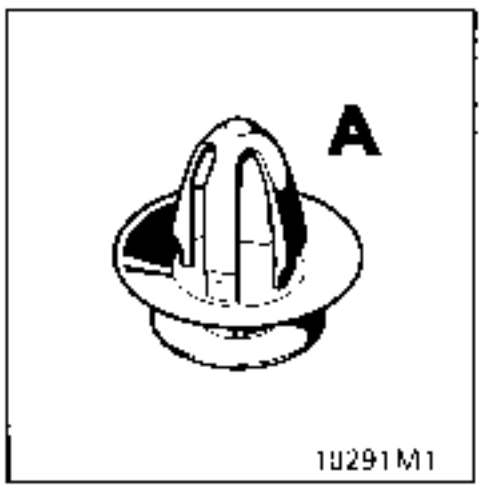
On the central display read:











REMOVAL: Instrument panel

OPERATION

Unclip the speaker grilles by hand, starting with the edge on the air vent side.

Slacken the three mountings on each speaker support.

Disconnect the speakers and remove them.

On V6 automatic transmission move the A.T. lever to position "2".

Lift the dashboard cover, starting in the corner, and pull vertically to unclip the three mountings (A).

Remove the top section of the dashboard, pulling it to the rear.

Slacken the five mountings and disconnect the instrument panel.

REFITTING

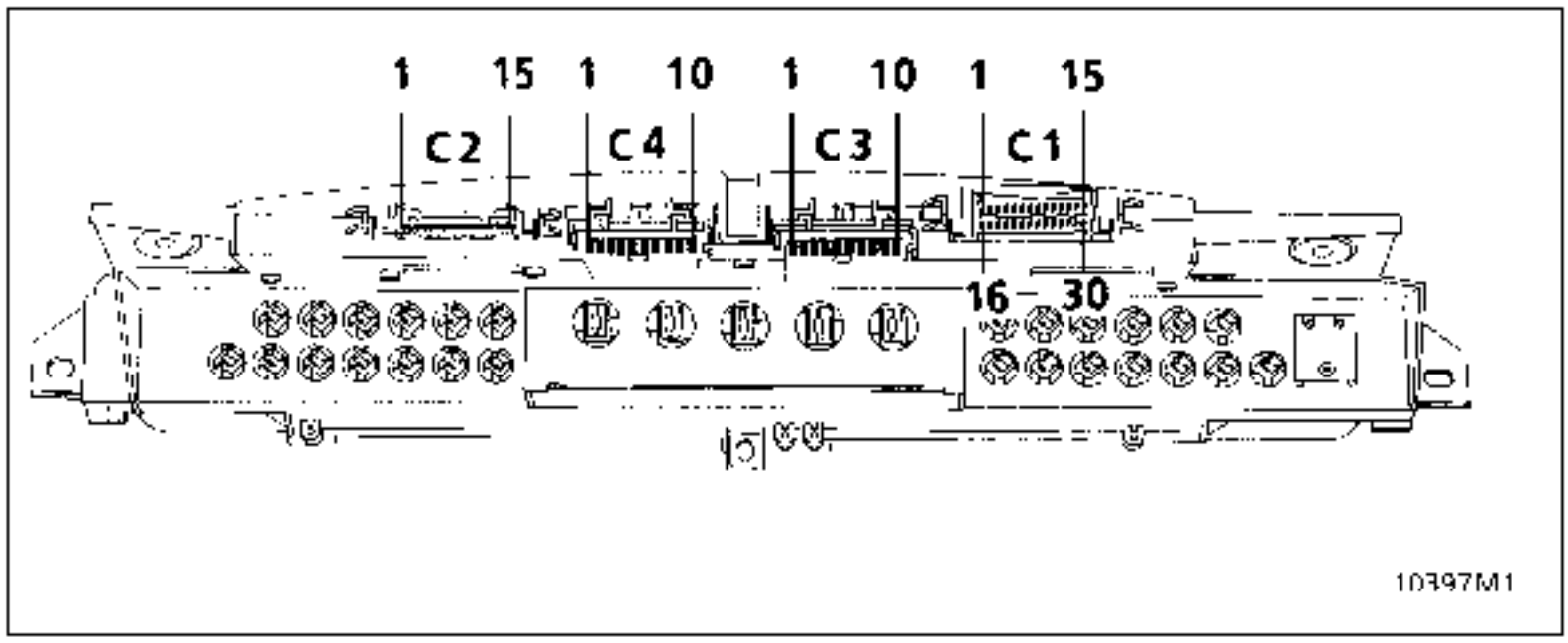
Check that the three clips (A) are present.

Refitting is the reverse of removal.

Check radio operation.

EQUIPMENT LEVEL E1, E2 and E3

CONNECTION



Connector C1 from 1 to 15 (brown/white)

1 – Battery.

2 + After ignition airbag

3 – Accessories .

4 Oil level sensor information.

5 Timing (or oil level) earth.

6 Line H diagnostic information.

7 Not used.

8 Line K diagnostic information.

9 Outside temperature connection*.

10 Outside temperature sensor information*.

11 Fuel level information.

12 Gauge information connection.

13 ADAC sequence.

14 Not used.

15 + Instrument panel lighting by rheostat.

***Except E1.**

Connector C1 from 16 to 30 (brown/black)

16 Electronic earth.

17 LH door switch passenger compartment lighting.

18 · RH side light.

19 Coolant temperature warning light.

20 Radio/satellite control link*.

21 Radio/satellite control link*.

22 Radio/satellite control link*.

23 Radio/satellite control link*.

24 Radio/satellite control link*.

25 Radio/satellite control link*.

26 Speed information.

27 Fuel flow information*.

28 T.D.C. information.

29 Coolant temperature information.

30 + Instrument panel lighting.

CONNECTION (contd.)

Connector C2 (Green/white)

1 Not used.

2 Battery charge warning light.

3 A.B.S. warning light.*.

4 Self-levelling suspension fault warning light*.

5 Nivocode brake information warning light.

6 Oil pressure warning light.

7 Brake pad wear warning light.

8 AT fault warning light*.

9 Injection fault warning light.

10 Coolant temperature warning light.

11 Fan assembly fuse test information warning light.

12 Preheating warning light.

13 Airbag fault warning light.

14 Not used.

15 Not used.

***Except E1.**

Connector C3 (Black)

1 + LH dipped headlight.

2 + RH dipped headlight.

3 - rear fog light.

4 + front fog light.

5 Electronic earth.

6 + After ignition airbag fuse.

7 Not used.

8 Not used.

9 Not used.

10 Charge warning light connection.

Connector C4 (Brown)

1 + After ignition airbag fuse.

2 Self-levelling suspension fault warning light*.

3 Handbrake information warning light.

4 Heated seat warning light*.

5 A.B.S. warning light.

6 Nivocode information warning light.

7 RH indicator feed warning light.

8 Not used.

9 LH indicator feed warning light.

10 + LH main beam headlight.

***Except E1.**

EQUIPMENT LEVEL E1.

Reference		colour
1	Front fog lights	green
2	Rear fog light	amber
3	Side lights	green
4	Dipped headlights	green
5	Main beam headlights	blue
6	LH indicator	green
7	Not used	
8	Reserved	red
9	Catalytic converter overheating	red
10	Battery charge	red
11	Minimum fuel level	amber
12	Minimum oil level	amber
13	Minimum oil pressure	red
14	RH indicator	green
15	Nivocode	red
16	A.B.S.	red
17	Heated seats	amber
18	Handbrake	red
19	Self-levelling suspension (C.O.A.)	amber
20	Brake pad wear	amber
21	Electrical fault (injection or A.T.)	amber
22	Maximum coolant temperature	red
23	Diesel preheating	amber
24	Airbag	amber

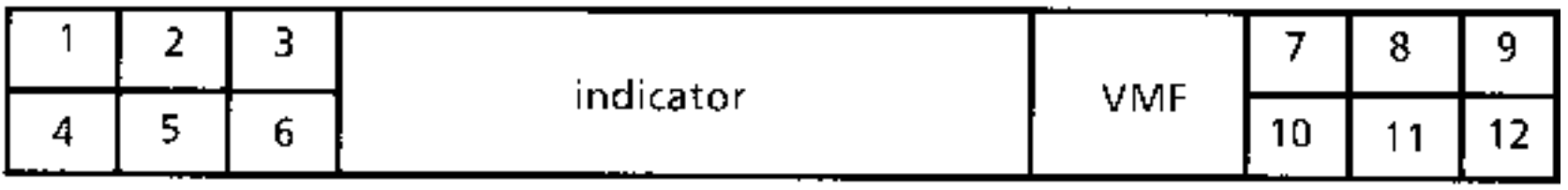
EQUIPMENT LEVEL E1.

reference		colour
25	Reserved	
26	Reserved	

DISPLAY:

Digital display of speed in km/h or MPH
- Digital display of total distance on provision of + after ignition feed
- Display of fuel level in the form of a bargraph
  Display of the stopped engine oil level or coolant temperature.
  (20 seconds after switching on the + after ignition with the
  engine running) in the form of a bargraph.
- Permanent clock display.

EQUIPMENT LEVELS E2 and E3



reference		colour	V.M.F	
			STOP	SERVICE
1	Dipped headlights (codes)	green		
2	Main beam headlights (headlights)	blue		
3	LH indicator	green		
4	Side lights	green		
5	Rear fog light	amber		
6	Front fog lights	green		
7	RH indicator	green		
8	Nivocode (brake fault)	red	X	
9	A.B.S.	red	X	
10	Self-levelling suspension (COA)	amber		X
11	Handbrake	red		
12	Heated seats	amber		

V.M.F.: Multi-function warning light

EQUIPMENT LEVELS E2 and E3

refer-ence		colour	V.M.F	
			STOP	SERVICE
V.M.F.	Maximum coolant temperature	red	X	
V.M.F.	Catalytic converter overheating (petrol)	red	X	
V.M.F.	Battery charge	red	X	
V.M.F.	Low oil pressure	red	X	
V.M.F.	Brake pad wear	amber		X
V.M.F.	Electronic fault (A.T. + injection)	amber		X
V.M.F.	Fuel low	amber		
V.M.F.	Diesel preheating	amber		
V.M.F.	Low oil level	amber		
V.M.F.	Air bag/pretensioner	amber		X
V.M.F.	Outside temperature and clock (permanent display except message in V.M.F.)	amber		
V.M.F.	Radio information	amber		
V.M.F.	Only when engine stalled	red		

DISPLAY:

- Digital display of speed in Km/h or MPH
- Display of fuel level in the form of a bargraph
- Display of the stopped engine oil level or coolant temperature. (20 seconds after providing the + after ignition feed and with engine running) in the form of a bargraph.
- ADAC zone display:
  - Trip total in miles/kilometres
  - Average speed
  - Average consumption
  - Instantaneous consumption (not UK)
  - Estimated fuel range
- Radio display
- General constant total display in miles/kilometres.

V.M.F. = Multi-function warning light.

OPERATION

An on-board computer is integrated in the instrument panel and all the electronic functions are performed in it by a microprocessor.

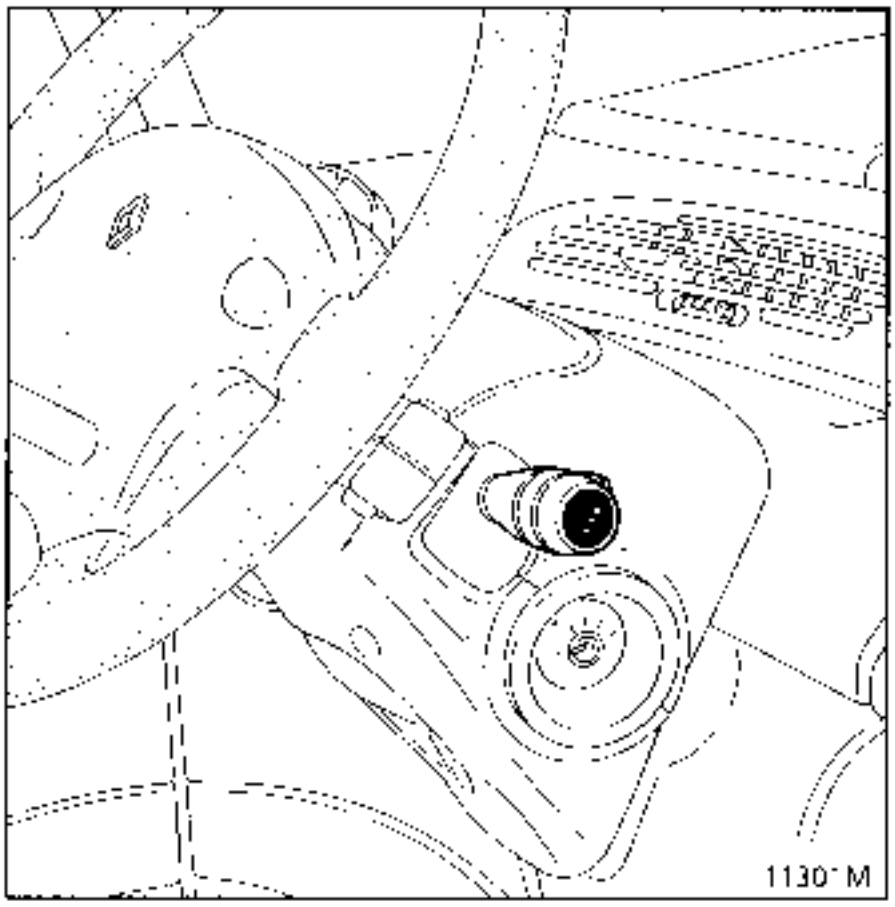
The latter receives the signals via a protective and shaping circuit, then transmits the information to the display on the instrument panel.

The microprocessor also performs the diagnostic function.

ADAC button: At the end of the windscreen wiper stalk.

- With the + after ignition press the Reset key for about 2 seconds:
  Reset memories.

- With the + after ignition press the Reset key briefly:
  Information displayed on the display in sequence.



ADAC button:

- With + accessory feed, press the Reset key for approximately 2 seconds:
  Flashing of the speed units and coolant temperature bargraph.
  If the M key on the clock is pressed whilst these are flashing, the units on the speedo are changed (Km/h or MPH), and if key H is pressed the coolant temperature function is cancelled.

The on-board computer performs the following specific functions:

- travel parameter management,
- management of remaining miles/kilometres and low fuel warning light,
  diagnostic sequence.

Management of travel parameters

The loop of the on-board computer consists of 5 types of display.

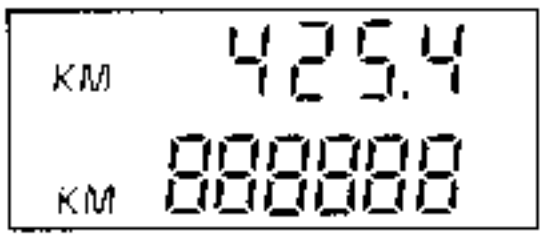
When the ignition is switched on the display called is that which appeared when the ignition was last switched off.

These display changes are made by briefly pressing the button at the end of the windscreen wiper stalk.

NOTE: pressing the key for a long time (more than 2 seconds) resets the on-board computer.

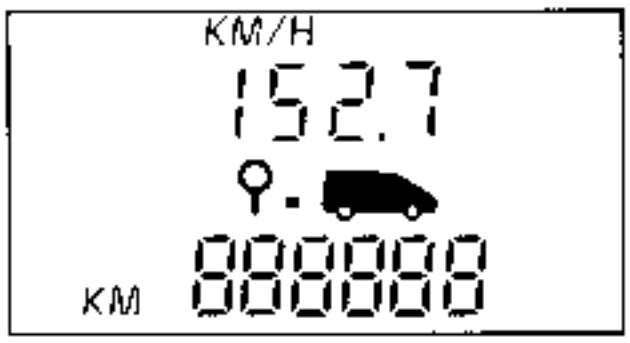
The information arrives consecutively on the liquid crystal display as follows:

- **distance driven (in km or in M*)** since the last reset



maximum distance: 9999 km or M*

- **average speed ** (in km/h or in MPH*)** since last reset

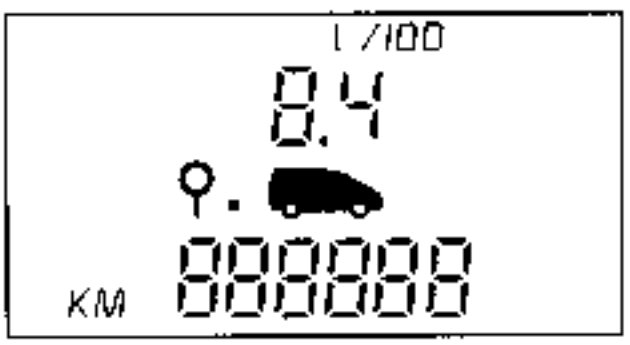


It is displayed after 400 metres or 0.2 mile* have been driven.

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.

- **average consumption ** (in litres/100 km or MPG*)** since the last reset

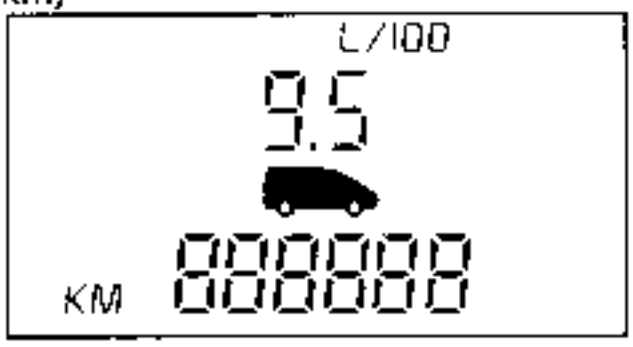


It is not displayed until 400 metres or 0.2 mile* have been covered.

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

* English version
** Except diesel version

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



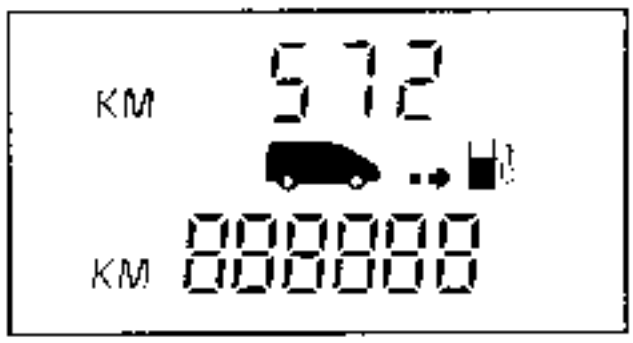
It is not displayed until the vehicle speed exceeds 25 km/h.

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 English version.

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



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*

Description of the combined warning and alarm functions.

When the + accessory feed is switched on the unit turns on and then measures the oil level, at which point a timing period of one minute is initiated. The clock and outside temperature are displayed on the V.M.F. (multi function warning light) and the radio, depending on option. If the radio is off the "Off" state of the radio is displayed.

When the I after ignition feed is turned on, the functions of the combined unit are then validated and the information which must appear on the indicator is displayed.

Management of fuel and the associated alarm warning light

The fuel volume function performs the following operations:

- acquisition of the sender information,
- calculation of the fuel volume to be displayed
- conversion of the fuel volume to a 9-level bar-graph

Fuel low

The fuel low procedure is initiated as soon as the quantity of fuel remaining in the tank is approximately 8.5 litres.

When the fuel volume becomes insufficient, the "fuel level" warning symbol is displayed and alternates with the "service" symbol.

Resetting of the on-board computer

The computer is reset by pressing the button at the end of the windscreen wiper stalk for a long time, whatever the current display.

Any exceeding of the maximum capacity of a displayed value is equivalent to a function reset.

The travel parameters are stored in a memory.

Consequently battery disconnection in no way alters these parameters.

DIAGNOSTICS

Faultfinding

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

estimated fuel range
average consumption
instantaneous consumption (not UK)

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

If the first segment and the pictogram of the pump flash, this indicates an error in the sender information for **over 100 consecutive seconds**.
If this fault occurs do not reset until the + after ignition has been switched on.

In addition to signalling a fault by flashing of the display, **the on-board computer stores the fault in a memory.**

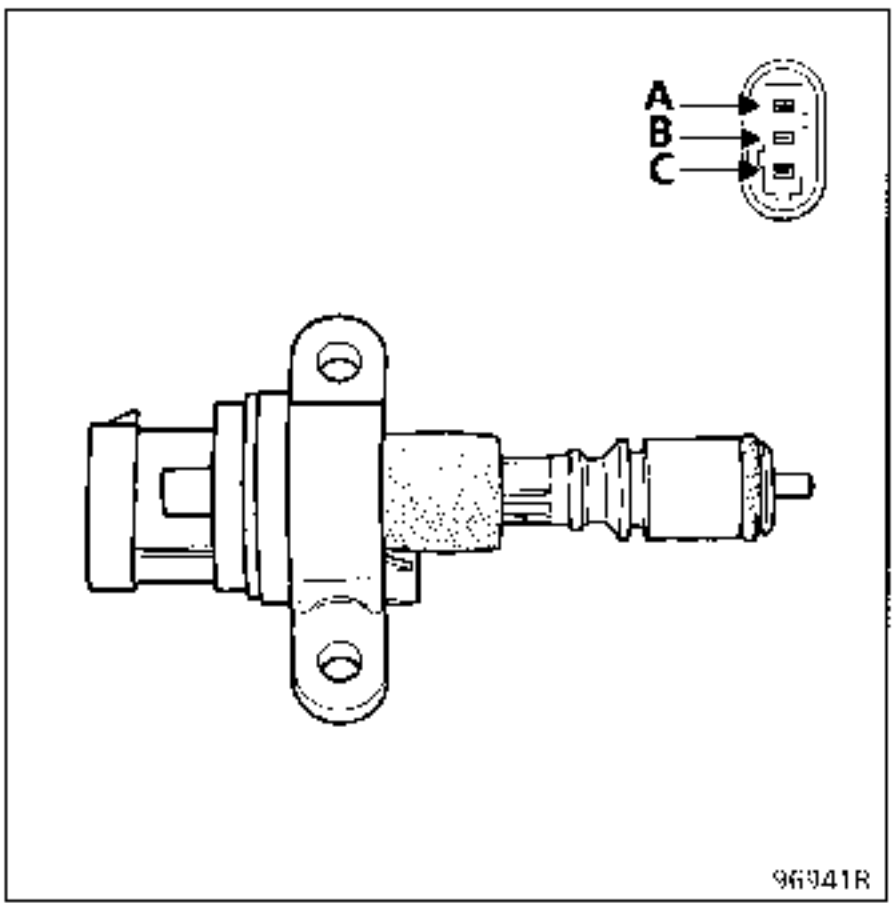
SPEED INFORMATION

GBT Turbo and Z7X engines

The instrument panel receives the vehicle speed information from an electronic Hall effect sensor.

This information is also intended for certain electronic units (injection computer, etc.).

CONNECTION

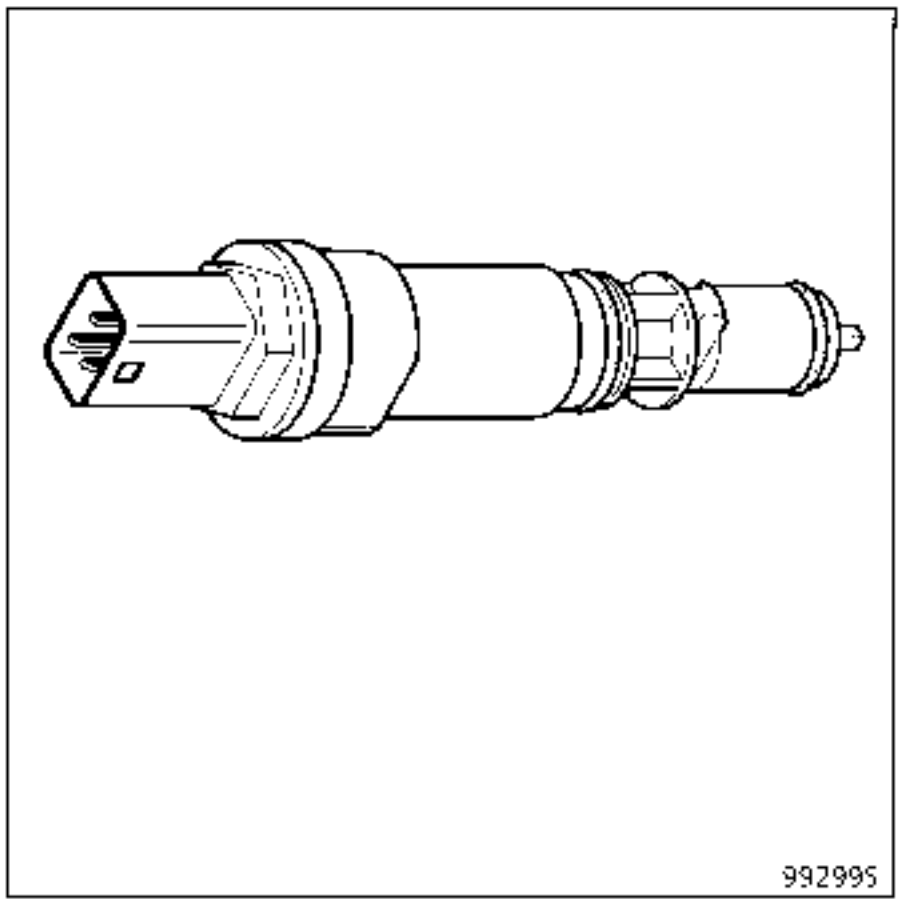


Track	Allocation
A	+ 12 V after ignition
B	Vehicle speed information
C	Earth

SPEED INFORMATION

F3R engine

CONNECTION



Track	Allocation
A	+ 12 V after ignition
B1	Vehicle speed information
B2	Earth

REMOVAL

It is strictly forbidden to repair this instrument panel.

If a fault occurs it must be replaced.

NOTE: If the instrument panel is replaced the parameters must be set. If not, the speed information will flash until it is set.

Method of setting parameters

Ignition switched on and the engine not running:

- Connect the XR 25 to the diagnostic socket equipped with the latest cassette and set the selector to S8.
- Enter the code

- The following appears on the central display :

- **Set according to whether LH or RH drive and engine type**

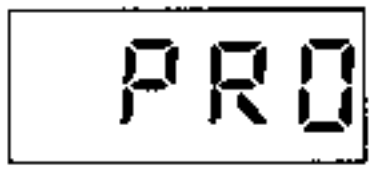
LH drive:

4 cylinders (F3R) enter G10*1*
6 cylinders (27X) enter G109*2*
Diesel (G8Tturbo) enter G10*3*

RH drive:

4 cylinders (F3R) enter G10*4*
6 cylinders (27X) enter G10*5*
Diesel (G8Tturbo) enter G10*6*

The following appears on the central display:



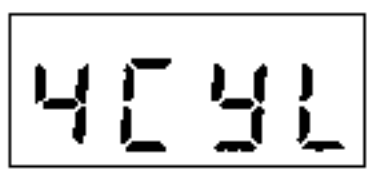
Checking the setting:

Type of engine E = petrol
D — diesel

Number of cylinders 4 or 6

The following appears on the central display:

Example :



Equipment level E1, E2 and E3

SPECIAL TOOLING REQUIRED	
Mot. 1397	Wrench for removing sender unit nut
Mot. 1265	Pliers for removing quick-release unions

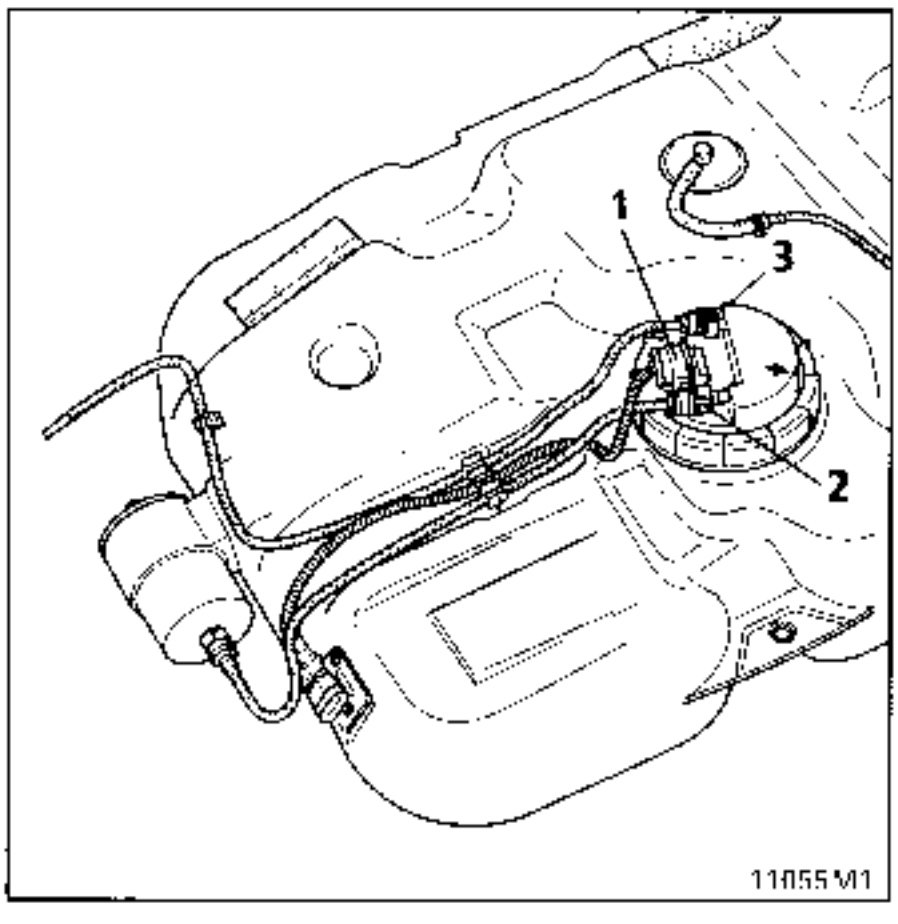
IMPORTANT

During any operation on the fuel level sensor you must take the following precautions:

- Do not smoke.

- Keep all flames or incandescent objects away from the working area.

REMOVAL OF THE PUMP - SENDER ASSEMBLY



Disconnect the battery.

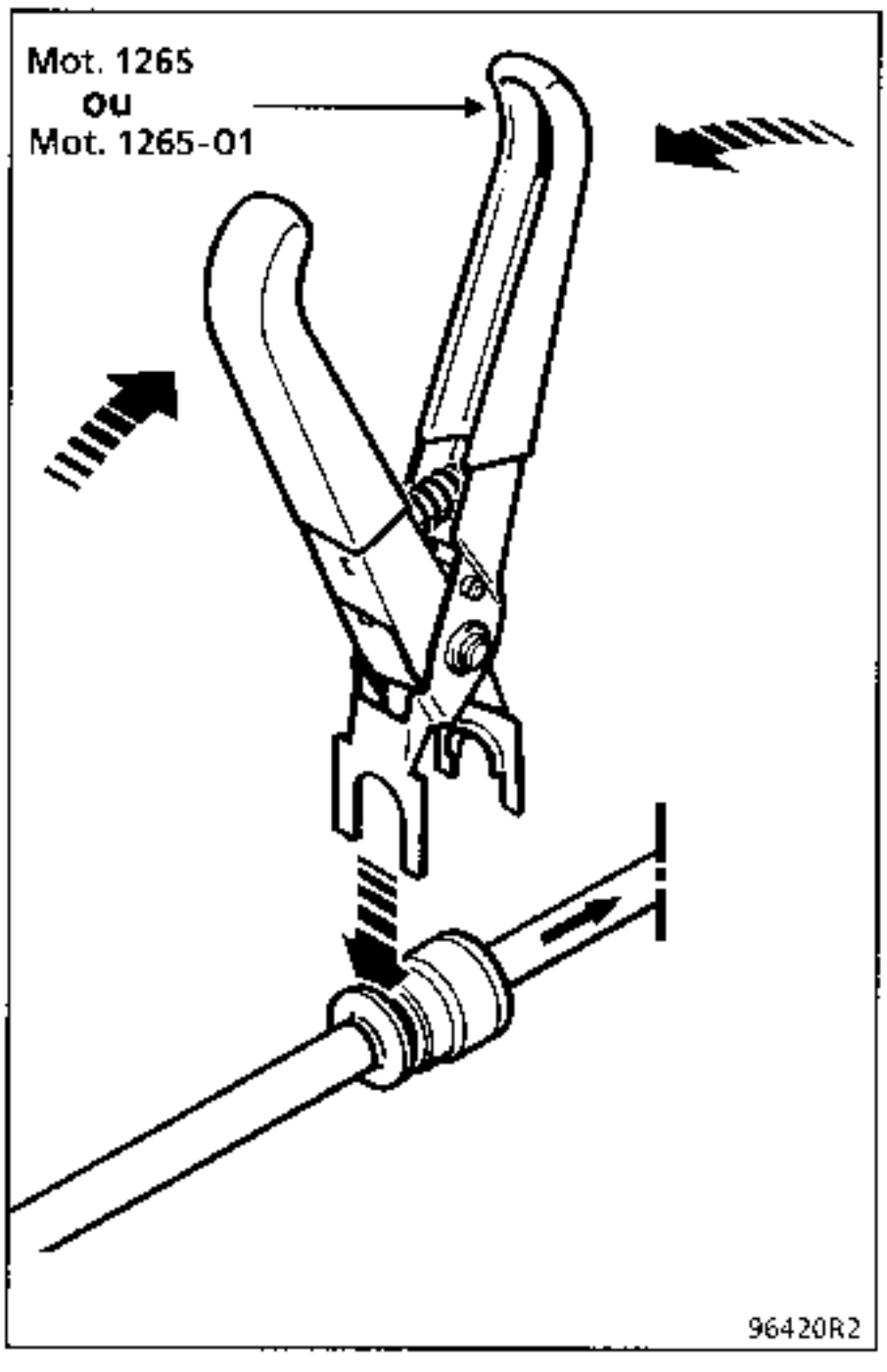
Remove the fuel tank.

Disconnect the electrical connector (1).

Then disconnect the fuel supply pipe (2) (green marking on the quick-release union) and the fuel return pipe (3) (red marking on the quick-release union) using the special pliers **Mot. 1265** or **Mot. 1265-01.**

NOTE: if you observe the presence of a plastic ring, used for factory assembly, level with the quick-release union, it must be removed before disconnecting the pipe.

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



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

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

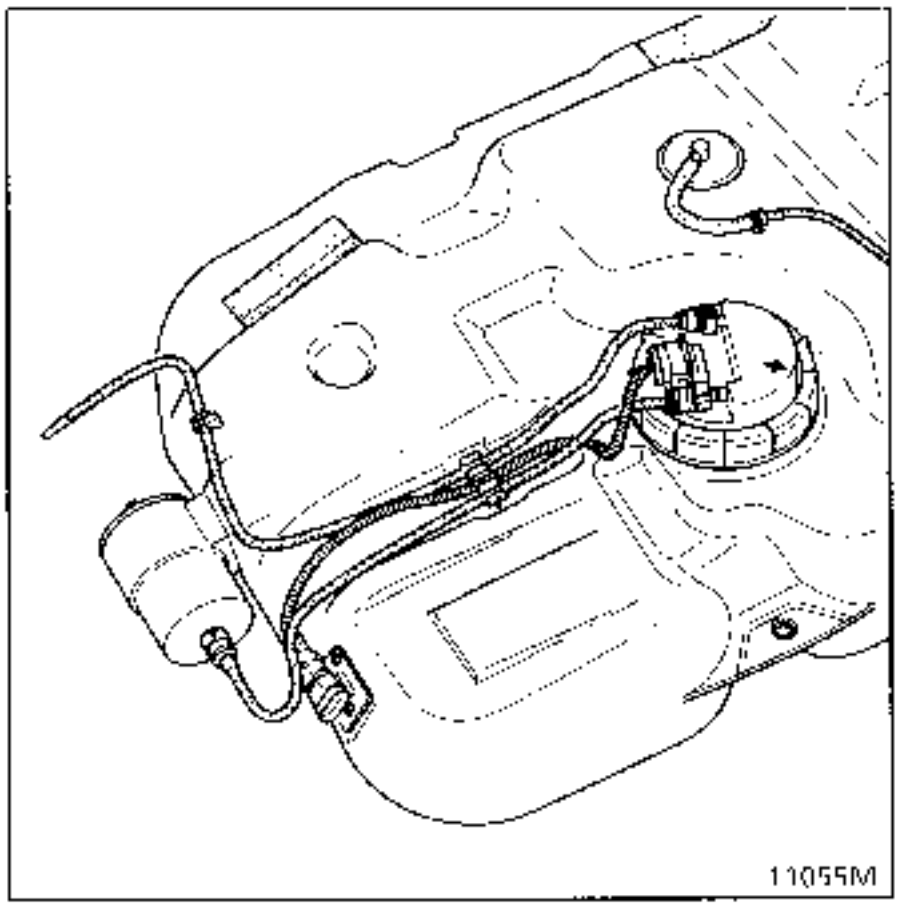
Remove the pump and sender unit assembly.

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
Check that the seal is in good condition and replace it if necessary.

Fit the seal on the fuel tank first before fitting the assembly.
Refit the pump and sender unit assembly in the fuel tank by aligning it so that the indexing arrow is positioned opposite the lug on the sender unit opening.

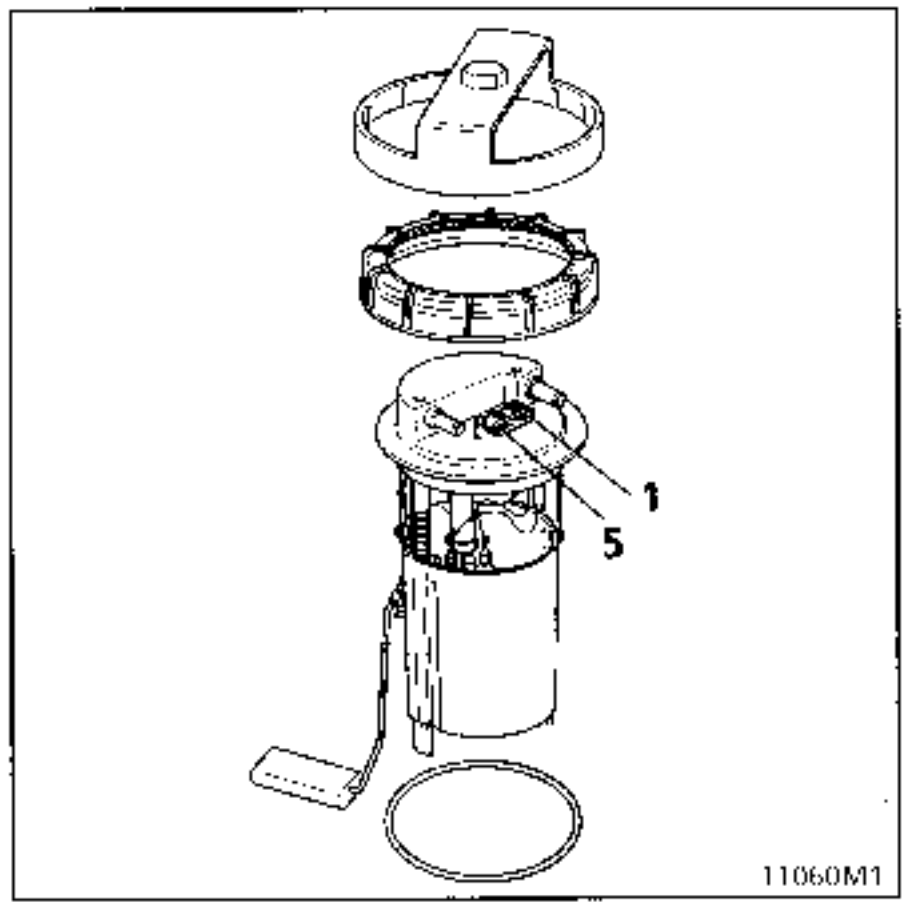


Tighten the mounting nut on the pump and sender unit assembly to a torque of **3.5 daN.m** using the tool **Mot. 1397**, holding the sender unit to prevent it from rotating.

Make sure that the connector is firmly locked and that the quick-release unions are securely clipped on (with 2 O-ring seals)

Reconnect the battery

PETROL CONNECTION



Track	Allocation
1	Sender unit information to instrument panel
2	– Pump
3	Not used
4	– pump
5	Earth

DIESEL CONNECTION

Track	Allocation
1	Sender unit information to instrument panel
2	Not used
3	Not used
4	Not used
5	Earth

Checking

Indication	Value between terminals 1 and 5 (in Ω)
4/4	30 ±3
3/4	100 ± 8
1/2	223.5 ± 10
1/4	331 ± 10
Low fuel	385 ±

Indication	Height H (in mm)
4/4	186
3/4	140
1/2	93.5
1/4	46.5
Low fuel	28

Measurement of height H

With the sender unit removed, place it on a flat surface. H is the height measured between the axis of the float and the working surface.

NOTE : all these values are given for information only.

OPERATION

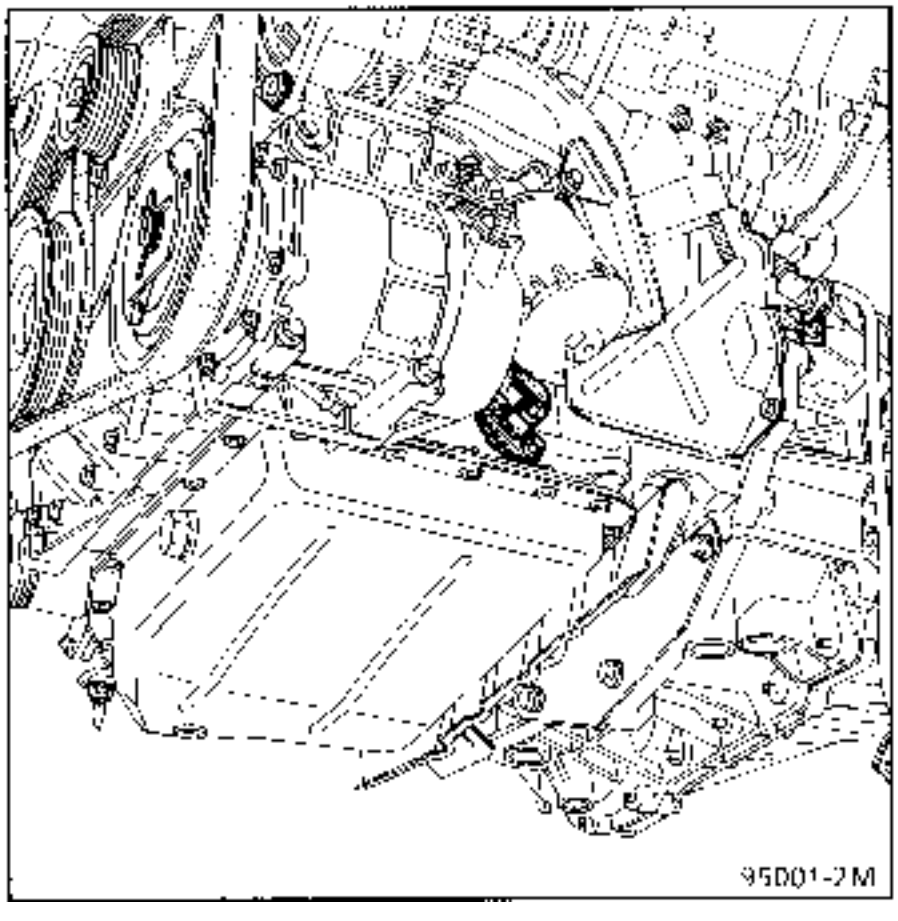
Oil level function:

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

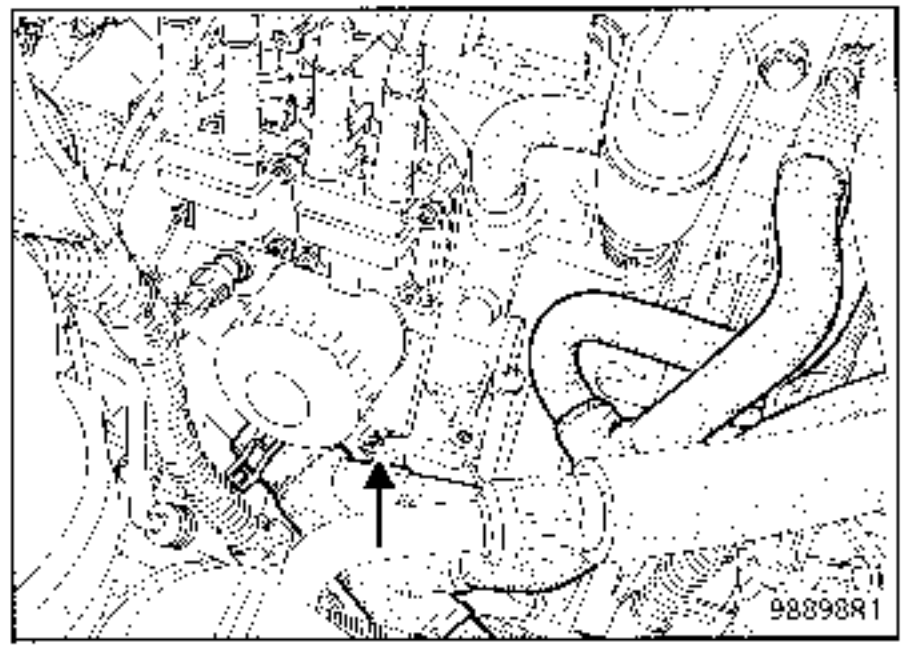
After a fixed time a voltage difference is obtained at the sensor terminals depending on the depth of immersion of the wire. This voltage difference is recorded by the electronic unit which transmits this information to the level gauge.

When the engine is running and if the oil pressure is sufficient, the pressure switch cuts off the warning light circuit. This also has the effect of blocking the electronic unit and therefore deletes the oil level indication.

Z engine



F engine



CHECKING

- Oil level sensor

  Connect an ohmmeter to the sensor terminals (channels **A** and **B1** on the F engine sensor).

  Correct value: 7 to 15 Ω

- Oil temperature sensor

  Connect an ohmmeter to the sensor terminals (tracks **A** and **B1** on the F engine sensor).

  Correct value: 40 to 2000 Ω

OPERATION

A thermistor transmits a variation in resistance to a receiver, depending on the coolant temperature, and a threshold overshoot switch illuminates the warning light on the instrument panel when the temperature reaches **115°C**

CHECKING

Connect an ohmmeter between track 1 on the sensor and vehicle earth.

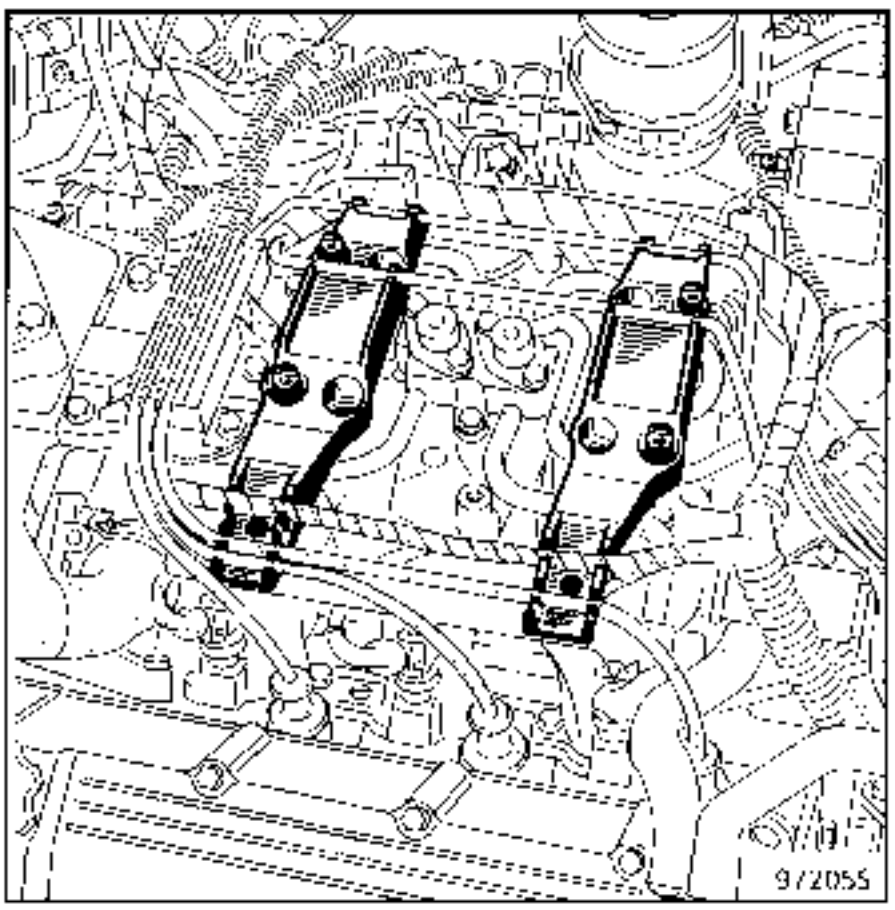
Correct value: 60 to 1,250 Ω

To carry out the check:

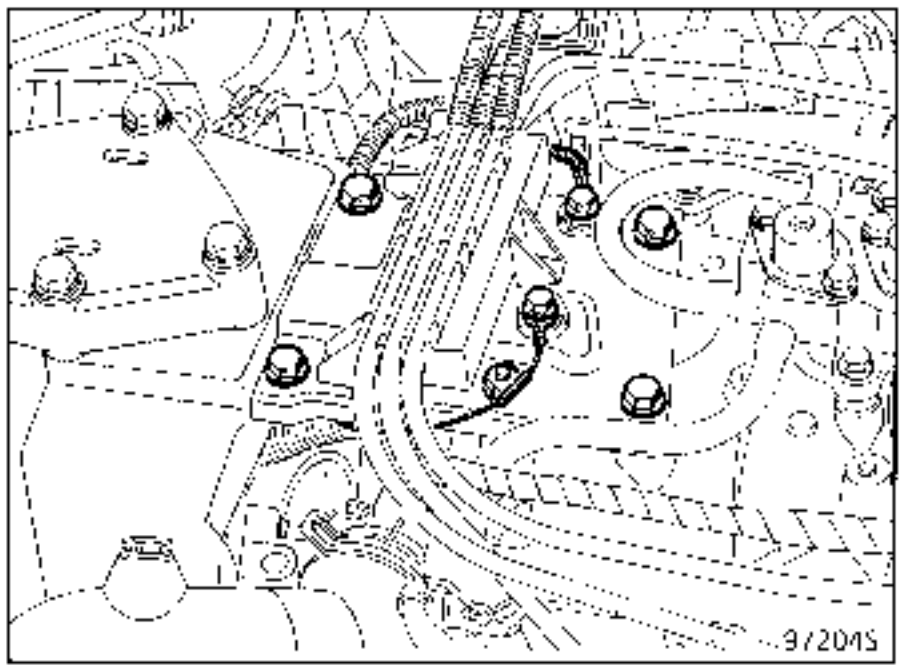
• Z engine

Remove:

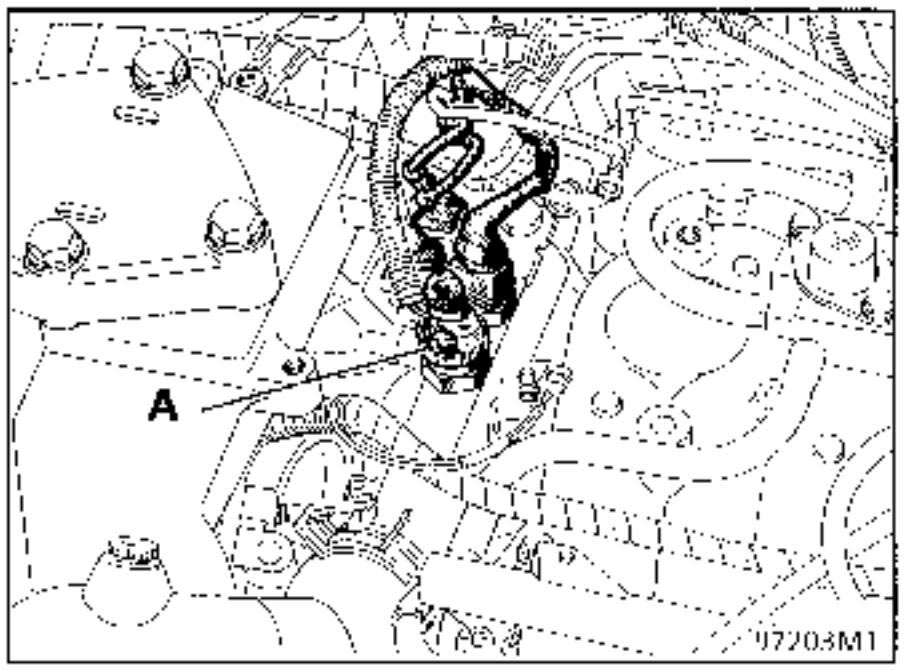
- The engine cap (plastic)
- The two mountings.



- The high voltage wire mounting.

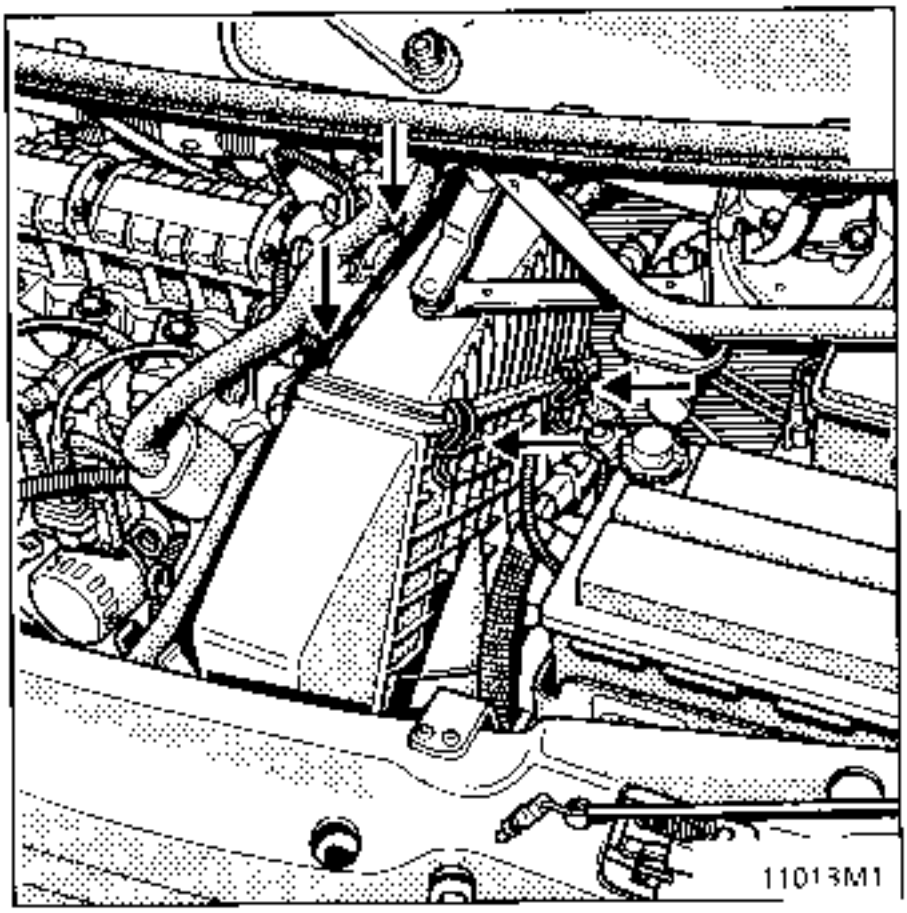


Disconnect the sensor connector (A).

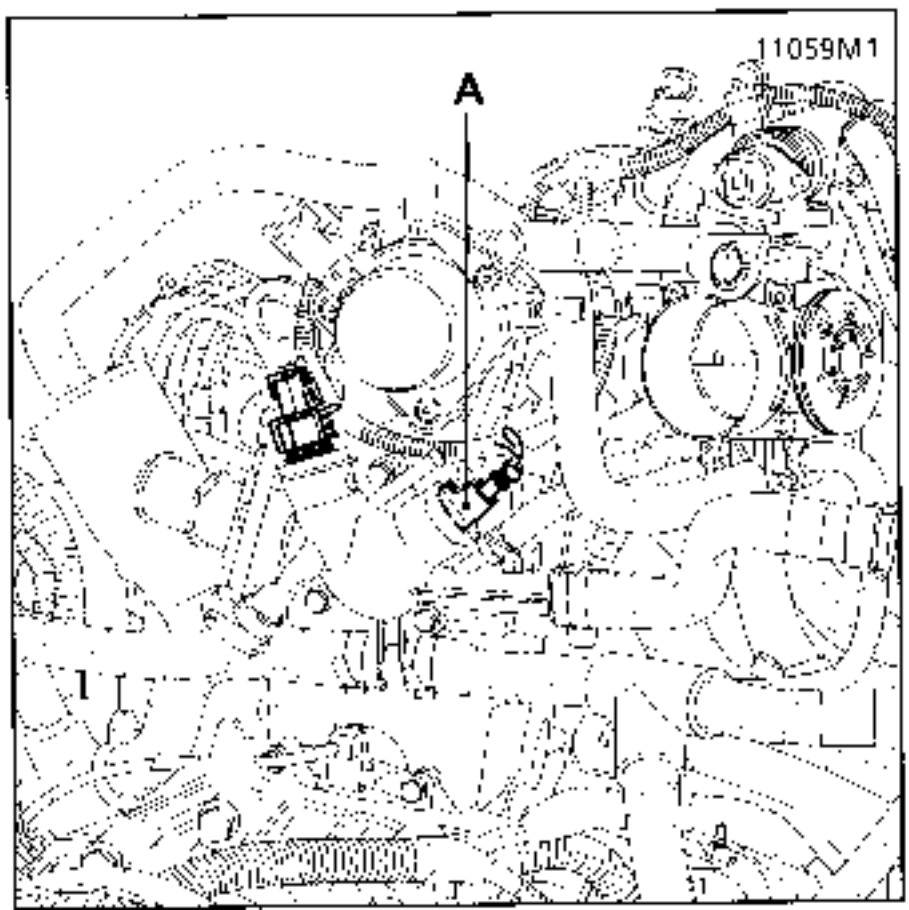


- **F engine**

Remove the top of the air filter after having opened the 4 retaining hooks, slackened the retaining clip and removed the 2 pipes.



Disconnect the sensor connector (A).



GENERAL

Description:

The purpose of the cruise control is to maintain the vehicle at a constant speed without having to keep one's foot on the accelerator.

There is no limiting effect.
It only operates from 28 mph (45 km/h) onwards.
It consists of three sections:

1) A pneumatic section comprising:

   A vacuum pump provided with a solenoid control valve.

   A safety solenoid valve.

- A control lever acting on a flexible diaphragm on the throttle control.

2) An electronic section comprising:

- The cruise control computer, which compares the actual speed of the vehicle with the speed desired by the driver.

3) A control and safety section comprising:

- The cruise control on/off switch.

- The switches on the steering wheel enabling the control to be operated and cancelled.

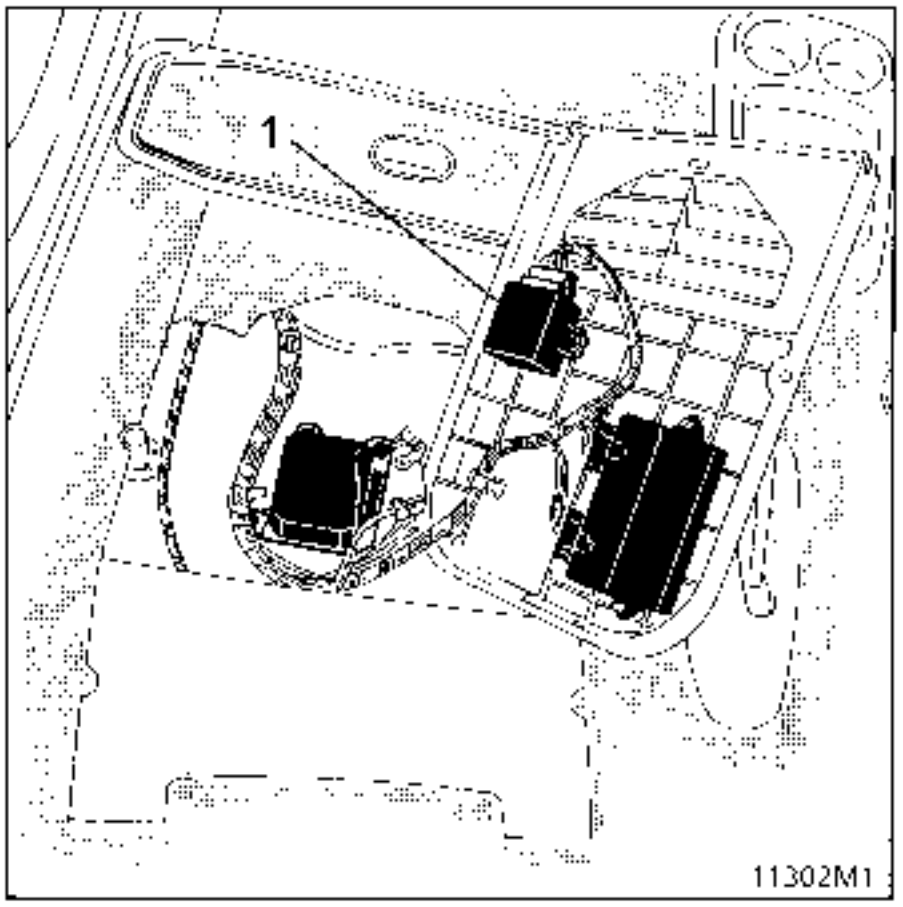
- The stop and clutch switches which cancel the effect of the control when either of these pedals is touched.

Location of the components:

- **Cruise control computer (1)**

The unit is located under the driver's seat. To reach it, remove the seat and the plastic cover by removing the 2 bolts.

- **NOTE:**
  To remove the seat it is necessary to deactivate the airbag/pretensioner system (see section 88).

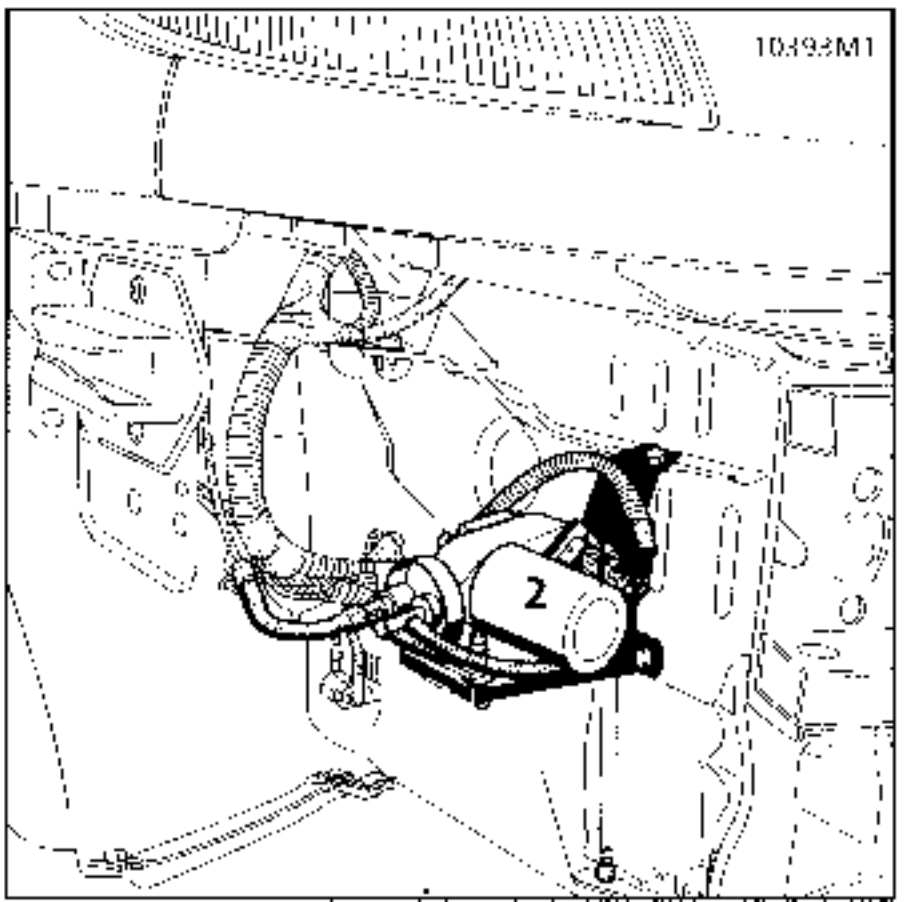


- **The vacuum pump and the safety solenoid valve (2)**

These are located behind the bumper under the RH front headlight.

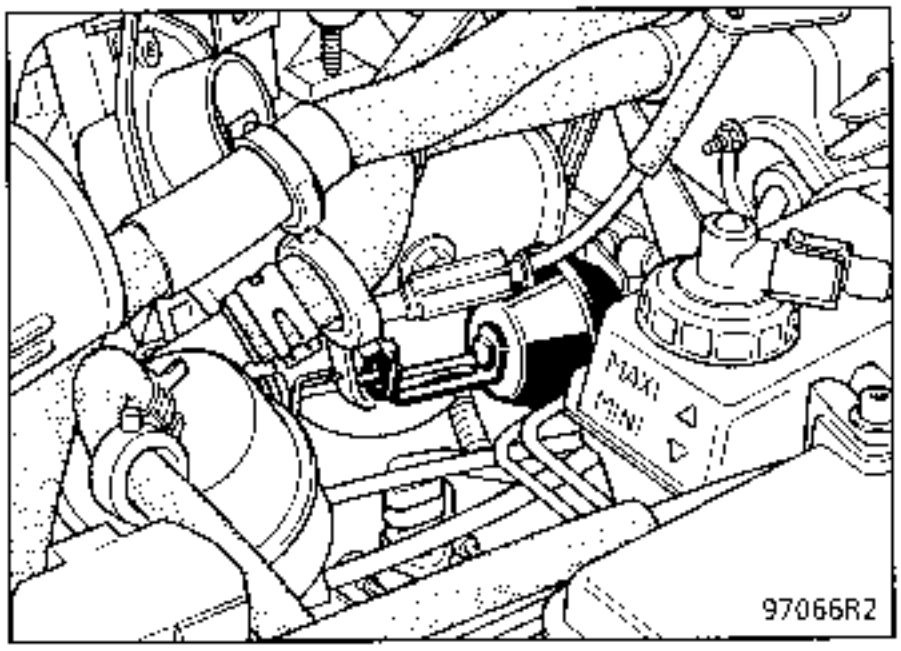
Remove:
- The bumper (see section on body).

- The pump assembly / solenoid valve (2 bolts).



Diaphragm unit (3)

This is located on a metal mounting secured to the rear cylinder head (on the gearbox side).



The lever pulls the throttle control parallel with the accelerator control.

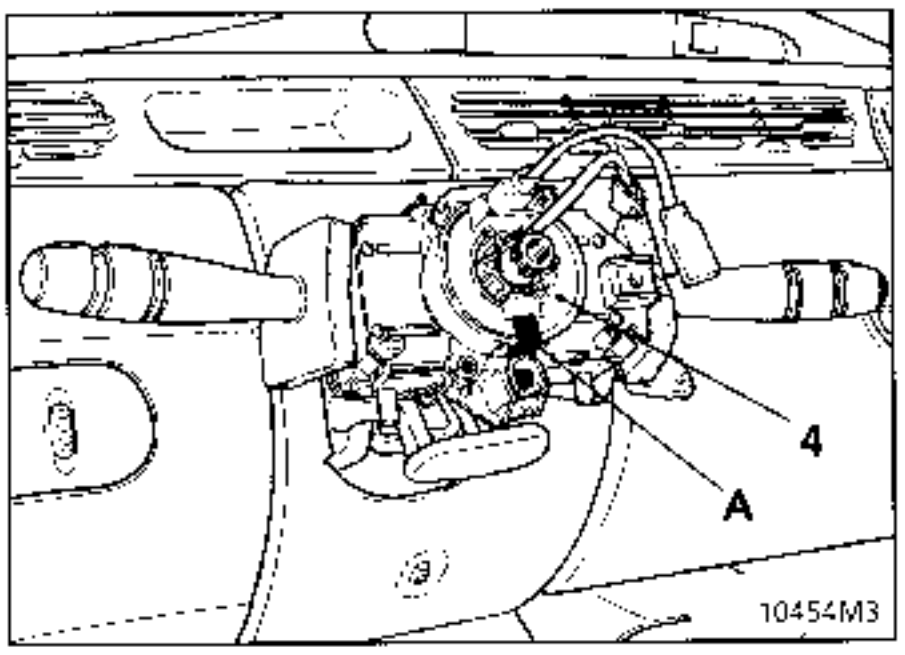
The installation does not obstruct the accelerator foot control, particularly during the control period.

Due to its own weight the pedal follows all the lever movements, thus enabling the driver to accelerate the vehicle himself at any time should he so wish.

- **The rotary switch (4)**

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

It consists of a strip of 4 conductor tracks (cruise control and airbag) whose length is designed to allow 2.5 turns of the steering wheel (steering lock plus safety margin) on each side.



IMPORTANT

To remove the steering wheel it is necessary to de-activate the airbag/pretensioner system (see section 88).

When removing the steering wheel it is essential to mark its position, either:

- By ensuring that the wheels are straight at the time of removal so that the length of the strip can be properly centered.

-- By immobilising the mobile section of the switch with adhesive tape (A).

Special notes for refitting

Steering wheel tightening torque: 4.5 daN.m.
Airbag tightening torque: 0.5 daN.m.

Make sure that the wheels are still straight.

Check that the rotary switch is still immobilised before refitting.
If this is not the case, follow the centering method described in section 88 "driver's airbag".

Once the rotary switch is correctly positioned it is essential to remove the adhesive tape (A).

In the case of replacement the new part is supplied centred by means of an adhesive label which is torn off at the first turn of the steering wheel (to be fitted with the wheels straight).

NOTE: If the rotary switch has moved during the operation, follow the centering method described in section 88 airbag/pretensioner.

IMPORTANT: Take care to ensure the correct routing for the wiring for the AIRBAG, the horn and the cruise control, if fitted.

Refit the steering wheel and renew the pre-bonded bolt, paying attention to its tightening torque (4.5 daN.m).

Reconnect the airbag cushion and secure it to the steering wheel, tightening torque (0.5 daNm).

IMPORTANT:

When everything has been refitted:

- Using the XR25 check that there is no fault on the system.
- If one or more bargraphs are illuminated signalling a fault, consult the section entitled "faultfinding".
- If everything is correct, unlock the airbag/pretensioner computer

  with the command G 8 1 *
- Check that bargraph 14 LH side on the XR25 is no longer illuminated.

IMPORTANT: Failure to follow these instructions could result in preventing the systems from operating normally and may even cause them to trigger accidentally.

- **The switches on the steering wheel**

Left hand switch :

Its function:

– V⃗ + Pressing for the first time stores the instantaneous speed. Subsequent presses allow acceleration in steps, continuous pressing provides constant acceleration

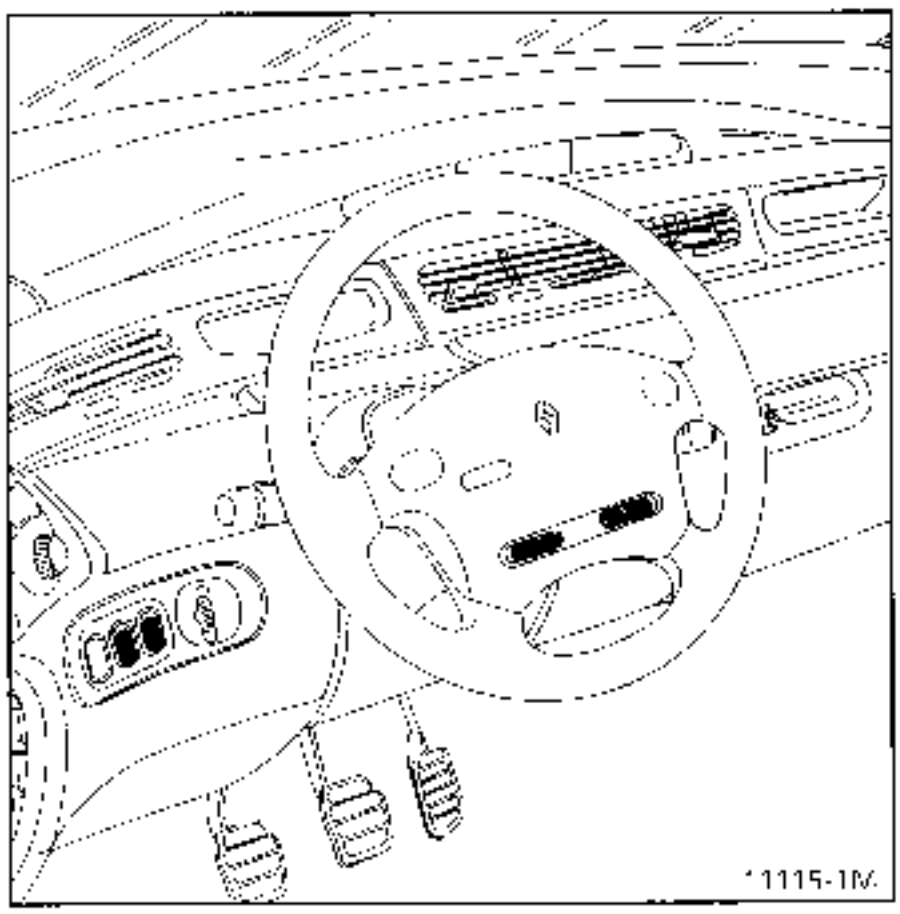
– V⃗ - Pressing for the first time stores the instantaneous speed. Subsequent presses allow deceleration in steps, continuous pressing provides constant deceleration.

Right hand switch:

Its function:

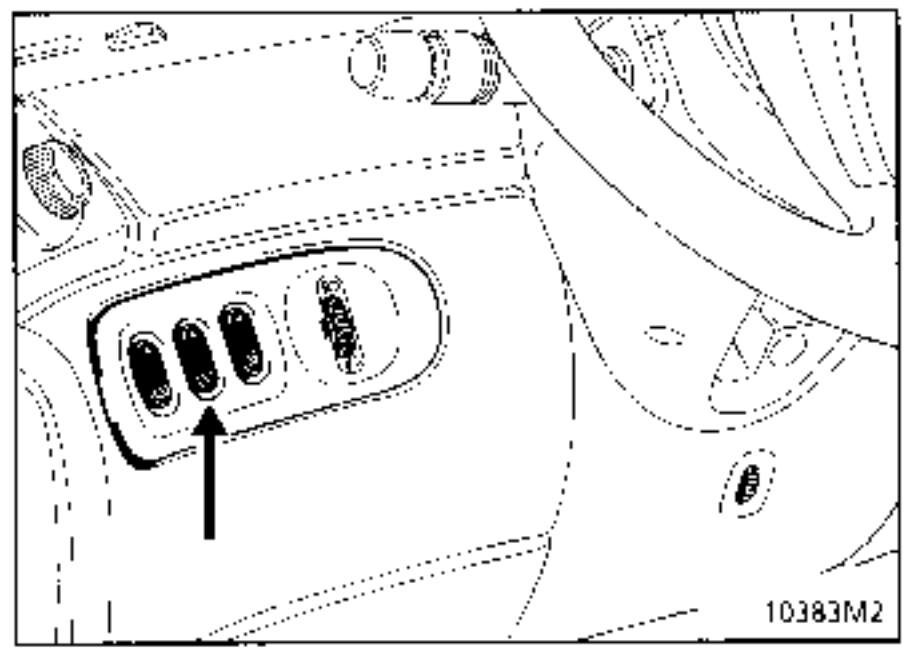
- Pressing twice enables the stored speed to be cancelled or recalled, if present.

IMPORTANT : To remove the steering wheel it is necessary to de-activate the airbag/pretensioner system (see section 88).



- **The on-off switch.**

This is located on the side of the instrument panel. The on warning light is incorporated in it.



Operation:

Once the ignition is switched on, the + after ignition feeds the cruise control switch.

Once ignition has been turned on, the + after ignition feeds the cruise control unit on track 11, as well as the stop and clutch switches.

The electronics in the cruise control unit take into account 2 parameters:

1) The actual speed of the vehicle, by means of the speed sensor.

2) Storing of the desired speed on track 6 of the cruise control unit.

This information, which is continuously compared, enables the vacuum pump to be controlled so that low pressure is generated at the pneumatic lever acting on the throttle control.

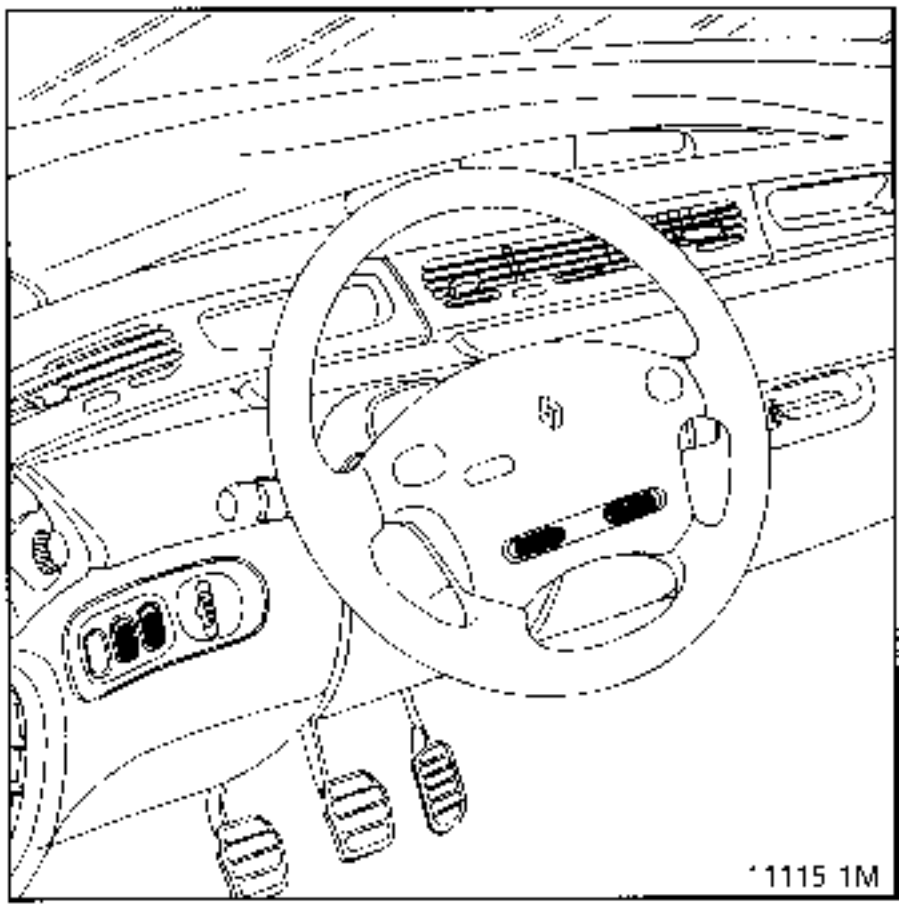
The stability of the vehicle speed (regulated speed) is provided by the earth control of the vacuum pump or regulating solenoid valve incorporated in the vacuum pump.

NOTE: the safety solenoid valve enables the circuit to bleed when its earth is suppressed. This earth, enabling the solenoid valve to operate, is not supplied by the cruise control unit until at least a speed of 28 mph (45 km/h) has been reached.

Regulation:

After the cruise control switch has been actuated, and the vehicle is travelling at a stabilised speed (exceeding 28 mph (45 km/h)), press the right hand switch. The voltage on track 6 of the unit (5 volts) passes through a 100 Ω resistor.

The regulated speed is stored and the driver can take his foot off the accelerator pedal.



From this point onwards, if you press the left hand switch on side A (V ⟶) you can increase the regulated speed and also accelerate with your foot. You then press the right hand switch the moment the desired speed is reached in order to store that speed.

NOTE:
It is always possible to exceed the stored speed by pressing the accelerator.

By taking your foot off the pedal the vehicle will return to its regulated speed. A regulated speed is continuously stored from 28 mph (45 km/h) onwards.

Safety:

Safety is guaranteed by means of:

- 2 stop switches.

When you press the brake pedal the + power supply of the safety circuit of the cruise control unit (extending from track 11 to track 3) is interrupted, as is the + power supply of the safety solenoid valve and the vacuum pump. The electronics in the unit cuts out the earth on track 12 supplying track 3 of the safety solenoid valve, and the pneumatic circuit bleeds; the speed of the vehicle is no longer regulated. The other stop switch also transmits + information (stop) to the control unit on track 7, supplementary to the first switch, to provide a double level of safety.

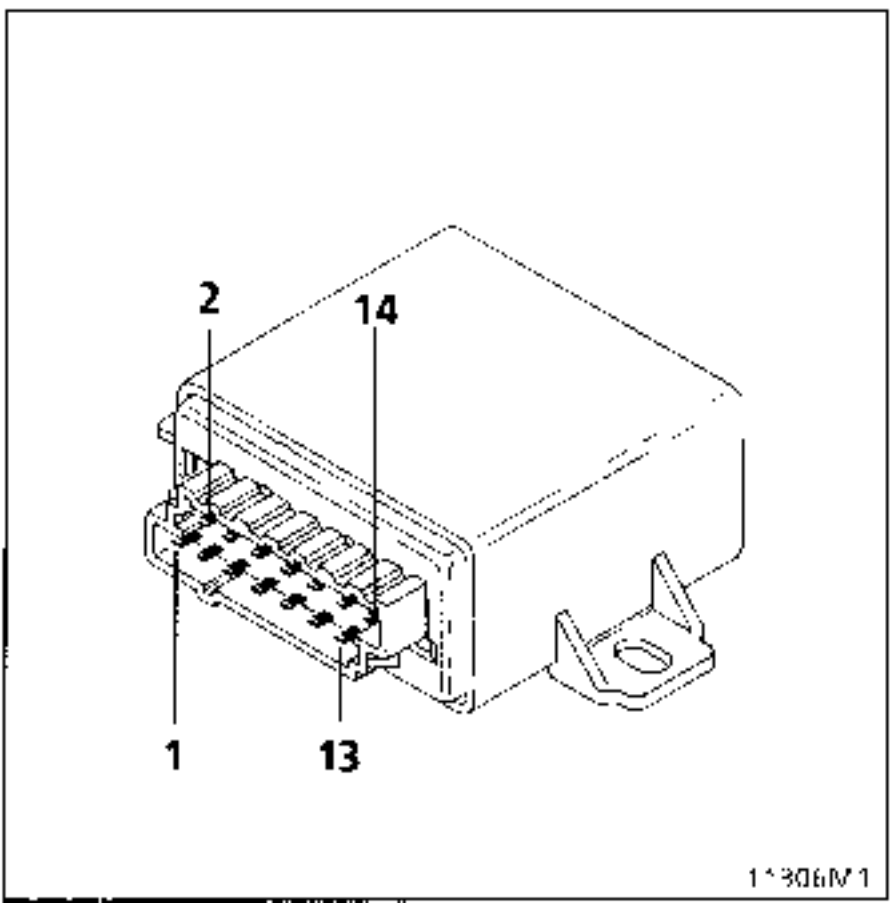
The right hand switch on the steering wheel (on either side), serves to interrupt the speed regulation at any time by directly earthing track 6 of the control unit.

The electronics in the unit cuts:
- The earth on track 7 supplying track 3 of the safety solenoid valve.
  The earth on track 12 supplying the regulating solenoid valve incorporated in the vacuum pump.

However, the regulated speed remains stored in all these safety cases.
To recall the speed press the right hand switch on the steering wheel. The voltage on track 6 of the unit (5 volts) passes through a resistance of 330 Ω.

NOTE: cutting off the power supply to the cruise control by means of the on/off switch, or by turning off the ignition, cancels the stored regulated speed.

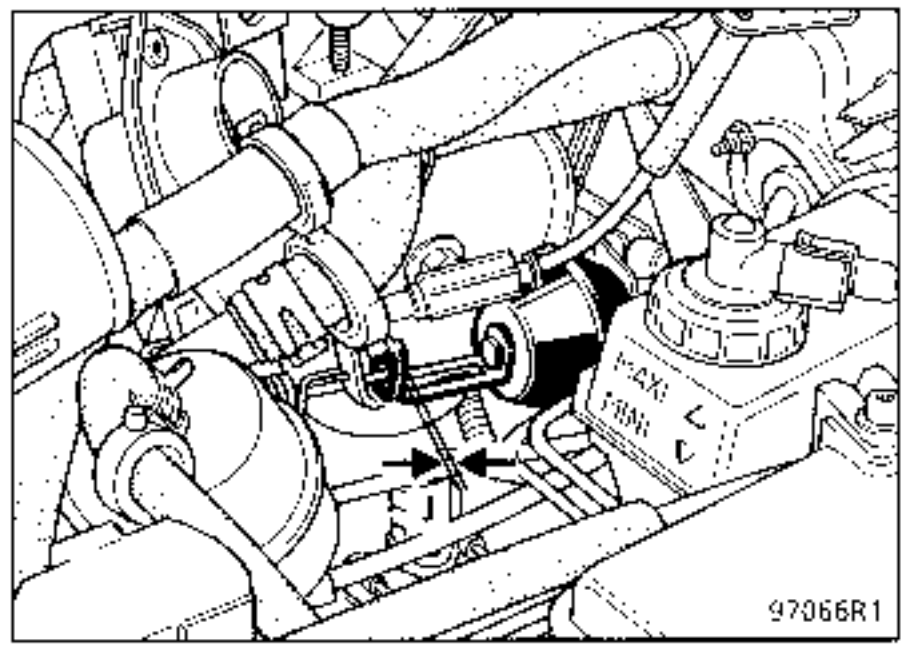
Connection of the unit



1 Power supply to the unit/stop switch
2 Starter relay control
3 Brake information
4 Not used
5 Unit programming control return
6 Cruise control programming command
7 + stop lights
8 L line
9 Acceleration information
10 Electronic earth
11 - power supply to cruise control
12 Deceleration information
13 Speed information
14 K line

ADJUSTMENT OF MECHANICAL CONTROL

With the lever in the rest position and the throttle control in the idling position, the maximum safety clearance (J) must be 1.5 mm.



Z engine

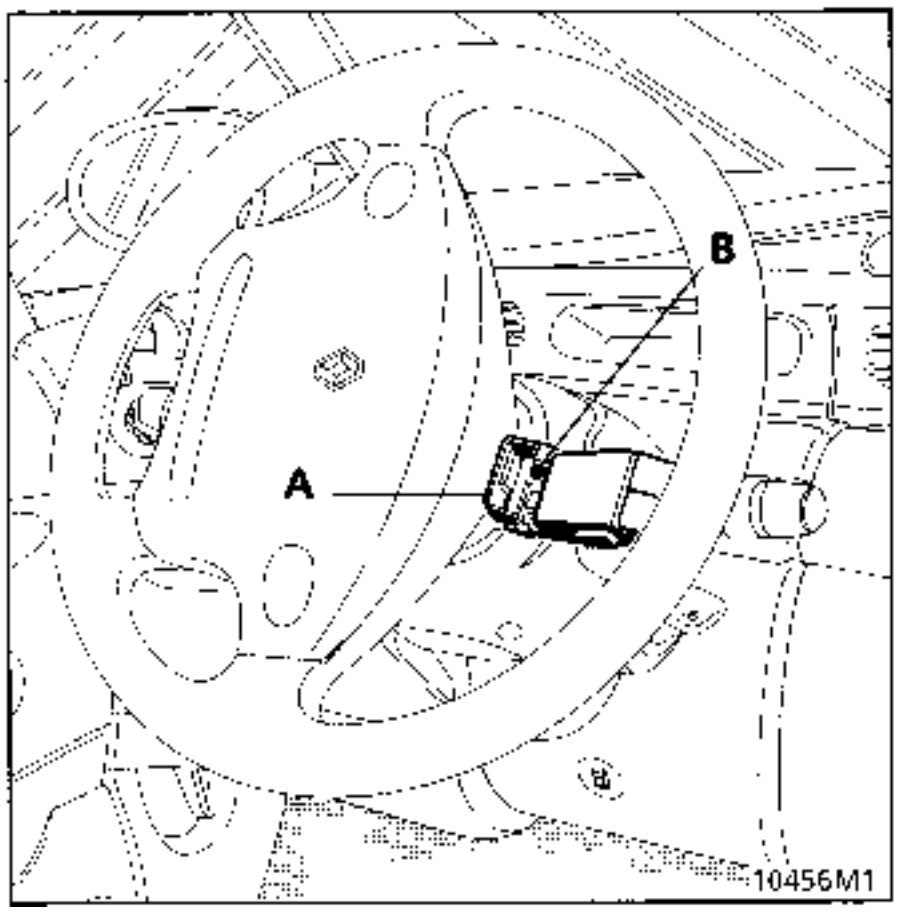
Slacken the lock nut.
Adjust the clearance (J) by altering the length of the rod by screwing or unscrewing it.
Then retighten the lock nut.

REMOVAL

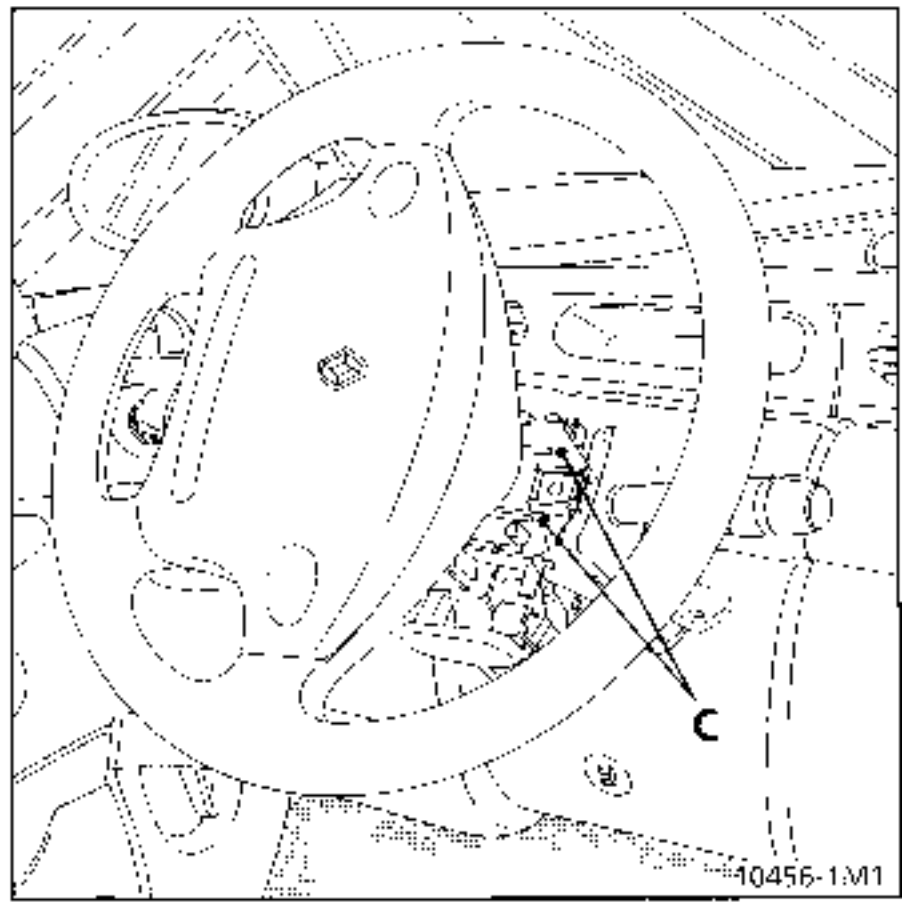
Disconnect the battery.

Without removing the steering wheel.

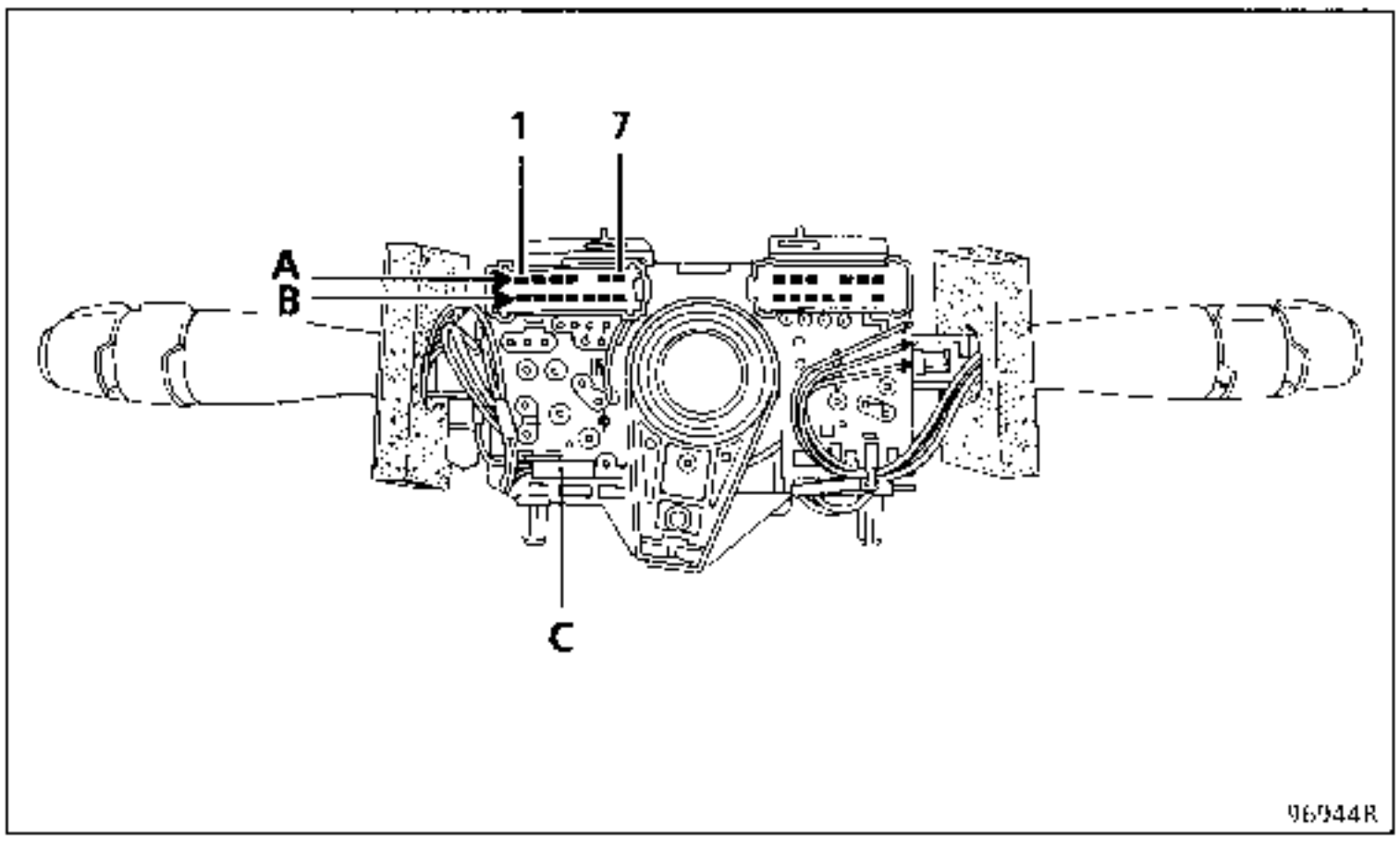
Remove:
The radio satellite (if fitted) by lifting up the cap (A) to reach the screw (B).
The 5 screws retaining the lower half cowling.
The 2 screws retaining the upper half cowling; to reach the 2 screws rotate the steering wheel 1/4 turn to the right and left.



Disconnect the connector from the windscreen wiper stalk.
Remove the two screws (C) and slide the stalk to the right to release it.



CONNECTIONS (full specification)



Track	Allocation
A1	Front timer
A2	Front wiper fast speed
A3	Front wiper slow speed
A4	Front screen washer pump
A5	Not used
A6	Front wiper park
A7	I front wiper after-ignition
B1	Rear screen washer pump
B2	Rear timer
B3	Not used
B4	Not used
B5	Earth
B6	Not used
B7	ADAC sequence

NOTE: It is possible to check the windscreen wiper timing rheostat between tracks A1 and A7

Positions : Rest ≈ 10 KΩ
1st notch ≈ 8 KΩ
2nd notch ≈ 5 KΩ
3rd notch ≈ 2.5 KΩ
4th notch ≈ 0 Ω

Check for correct connection of the 2-track connector (C)

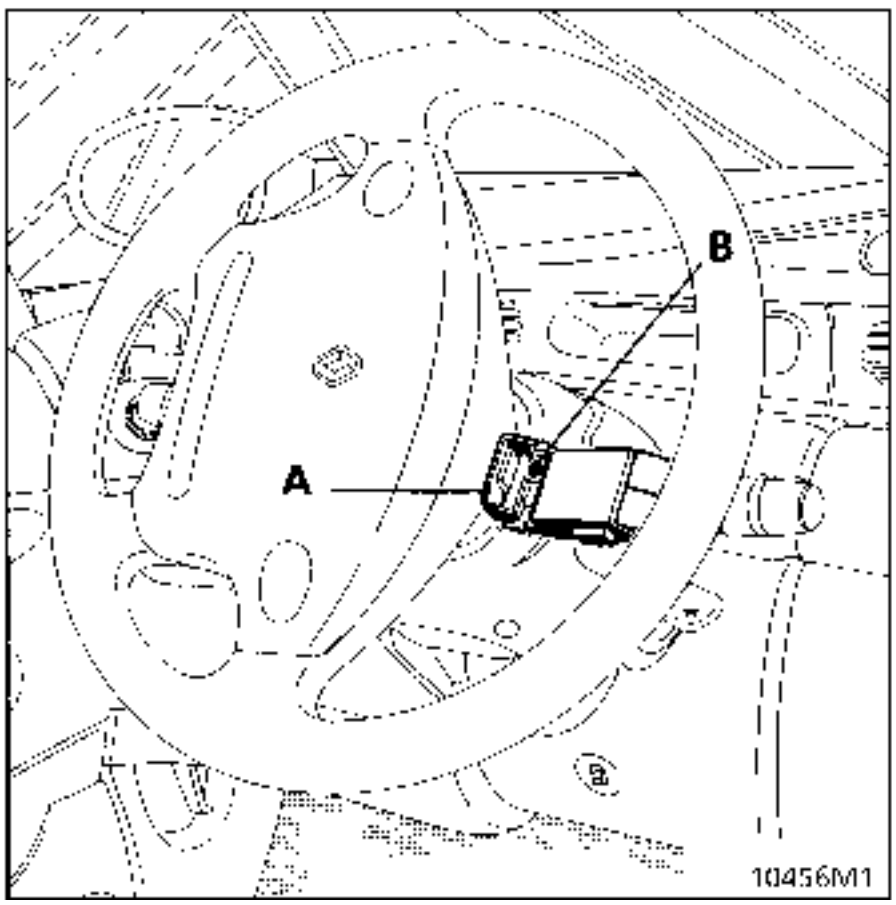
REMOVAL

Disconnect the battery.

Without removing the steering wheel.

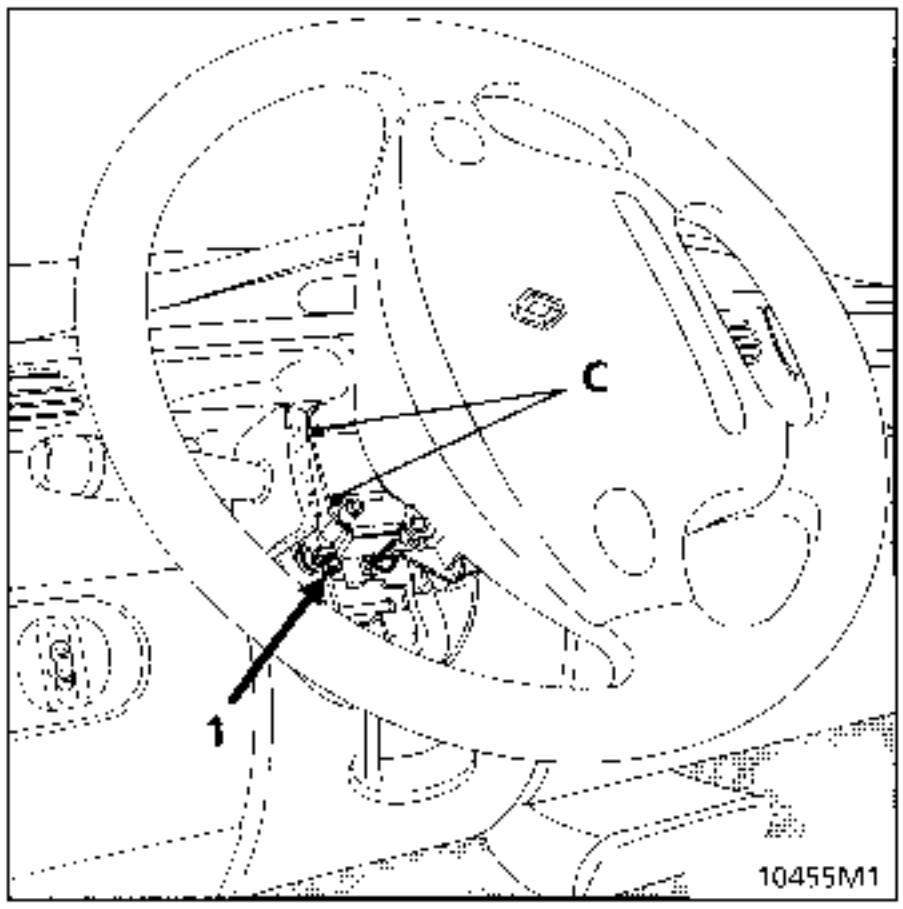
Remove:

The radio satellite (if fitted) by lifting up the cap (A) to reach the screw (B).
The 5 screws retaining the lower half cowling.
The 2 screws retaining the upper half cowling; to reach the 2 screws rotate the steering wheel 1/4 turn to the right and left.

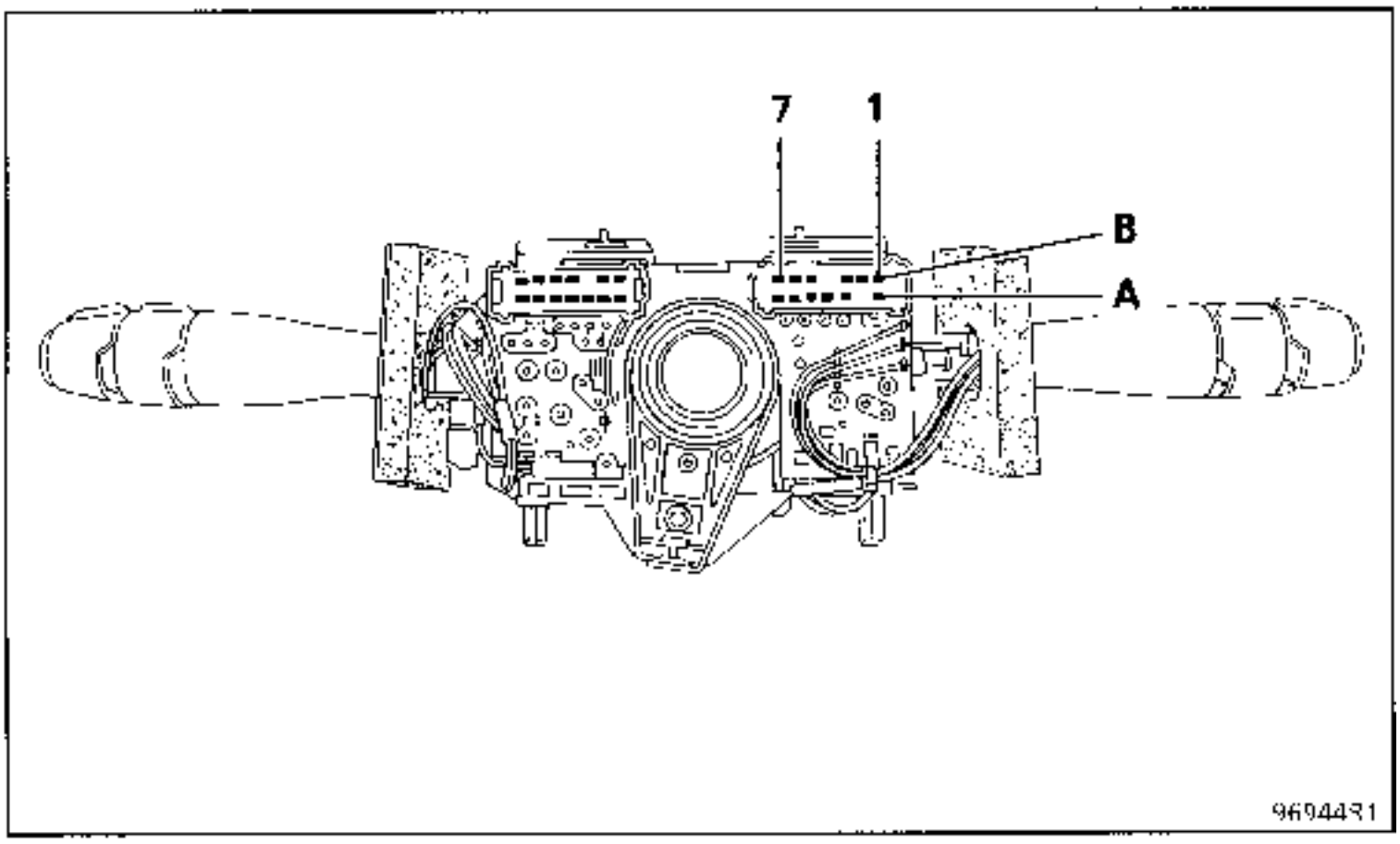


Disconnect the lights stalk connector and the 2 clips (1) from the horn (under the stalk).

Remove the two retaining screws (C) from the stalk and slide it to the left to release it.



CONNECTIONS (full specification)



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

This makes the electrical connection between the steering column and the steering wheel.
It consists of a strip of conductor tracks (cruise control and airbag) whose length is designed to guarantee 2.5 steering wheel turns (steering lock plus safety margin) on each side.

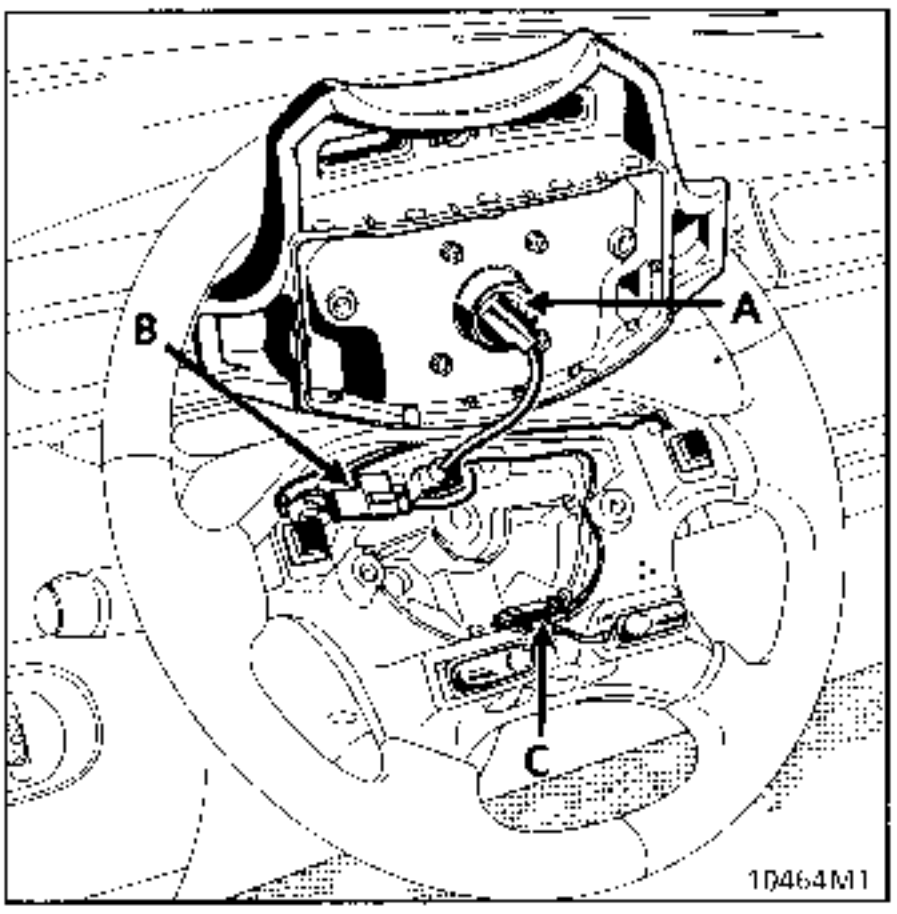
REMOVAL - REFITTING

N.B.: It is not permitted to operate the pyrotechnic systems (airbags and pretensioners) near a source of heat or flame as there is a risk of triggering.

N.B.: To remove the steering wheel the airbag/pretensioner system must be de-activated (see Chapter 88).

Disconnect the battery:

Remove:
- the airbag cushion by removing the 2 TORX screws (e.g. 30 TORX) (**tightening torque 0.5 daNm**) located behind the steering wheel, and disconnect its connector (A).
- the horn connector (B).
- the cruise control connector (C).
- the steering wheel bolt.
- the steering wheel after straightening the wheels.



- the radio satellite (if fitted).
- the lower half cowling by removing its 5 retaining screws.
- the upper half cowling by removing its 2 retaining screws.

During removal it is essential to mark its position either:

- by making sure that the wheels are straight at the time of removal so that the length of the strip can be positioned in the centre, or,

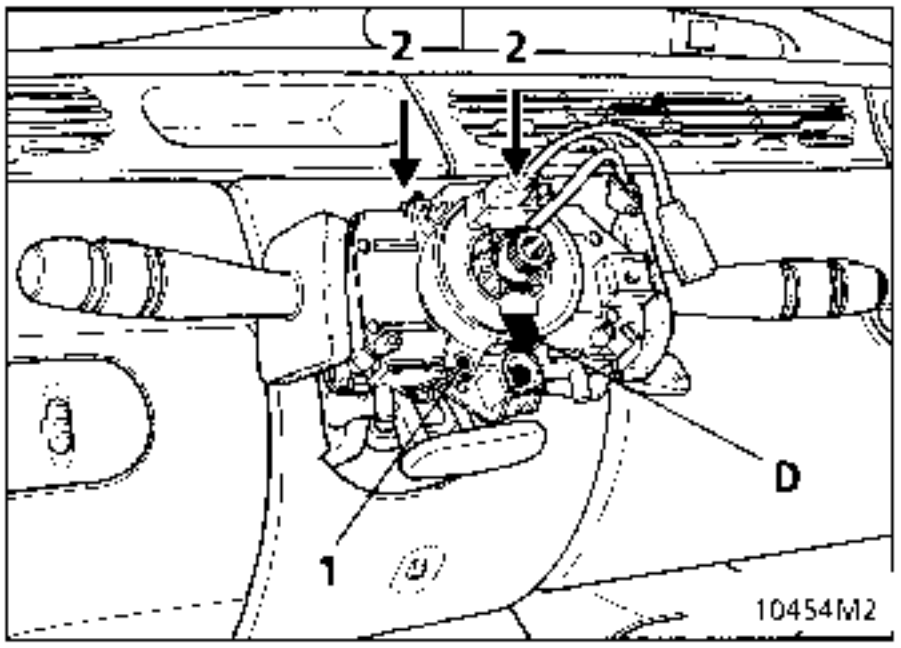
- immobilising the rotary switch rotor with adhesive tape (**D**).

Slacken the mounting (**1**) of the rotary switch and remove it by pressing the two upper tabs (**2**).

Disconnect the 4-track connector.

If it is to be replaced, the new part is supplied centred and retained by an adhesive label which is torn off when the steering wheel is first turned.

NOTE:
If there is any doubt about the position of the rotary switch, follow the centering method described in Section 88, airbag/pretensioner.



Special notes on refitting

Steering wheel tightening torque: 4.5 daN.m.
Airbag tightening torque: 0.5 daN.m.

Make sure that the wheels are still straight.

Check that the rotary switch is still immobilised before refitting it.
If this is not the case, follow the centering method described in Section 88, airbag/pretensioner.

When the rotary switch is in position it is essential to remove the adhesive **(A)**.

If it is to be replaced, the new part is supplied centred and retained by an adhesive label which is torn off when the steering wheel is turned for the first time (to be fitted with wheels straight).

IMPORTANT: Take care to ensure that the airbag, horn and cruise control wires are correctly routed if fitted.

Renew the steering wheel bolt after each removal (pre-bonded bolt).

IMPORTANT:

When everything has been refitted:

- Check that there is no fault in the system using the XR25.
- If one or more bargraphs are illuminated signalling a fault, consult the section on "fault-finding".
- If everything is correct, unlock the airbag/pretensioner computer

  by the command G 8 1 *
- Check that bargraph 14 on the left hand side of the XR25 has extinguished.

N.B.: failure to follow these instructions could disrupt the normal operation of the systems and even result in their untimely triggering.

REMOVAL - REFITTING:

N.B.: To remove the steering wheel the airbag/ pretensioner system must be de-activated (see section 88).

Disconnect the battery.

Straighten the wheels.

Remove:
-the steering wheel, the two half cowlings and the radio satellite (if fitted), following the method described in the chapter "Removing the dashboard" (see section 57).

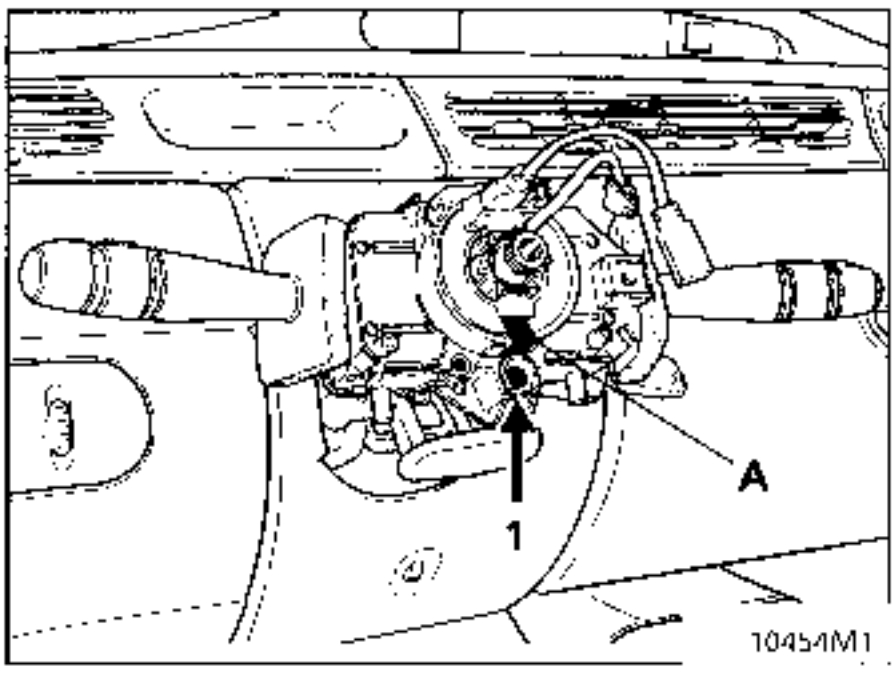
Disconnect:
- the light stalk connector
- the windscreen wiper stalk connector
- the rotary switch connector
- the two horn clips.

Before removing the assembly it is essential to mark the position of the rotary switch,

- by making sure that the wheels are straight at the time of removal so that the length of the strip is positioned in the centre,

- by immobilising the rotary switch rotor with adhesive tape (A).

Slacken screw (1), then tapping on the screwdriver with a quick blow to release the cone.



Remove the mounting with the stalks and separate the elements (if the mounting is to be replaced).

Special notes on refitting

Steering wheel tightening torque: 4.5 daN.m.
Airbag tightening torque: 0.5 daN.m.

Engage the mounting, fitted with its elements, as far as the stop on the steering column.

Carry out the remainder of the refitting operation and do not lock the screw (1) until the two half cowlings have been refitted, to enable the stalks to be aligned with the dashboard and instrument panel.

This operation is facilitated by a slot providing access to screw (1) in the lower half cowling.

NOTE: When refitting the steering wheel/airbag, follow the instructions given in the paragraph entitled "special notes on refitting the steering wheel/airbag" in section 88; among other things:

- make sure that the wheels are still straight.

- check that the rotary switch is still immobilised before refitting it.
  If this is not the case, follow the centering method described in section 88, driver's airbag/pretensioner.

When the rotary switch is in position it is essential to remove the adhesive (A).

Renew the steering wheel bolt after each removal (pre-bonded bolt).

IMPORTANT:

When everything has been refitted:

- Check that there is no fault in the system using the XR25.

- If one or more bargraphs are illuminated si gnalling a fault, consult the section on "fault-finding".

- If everything is correct, unlock the air-bag/pretensioner computer

  by the command **G 8 1 ***

- Check that bargraph 14 on the left hand side of the XR25 has extinguished.

REMOVAL - REFITTING

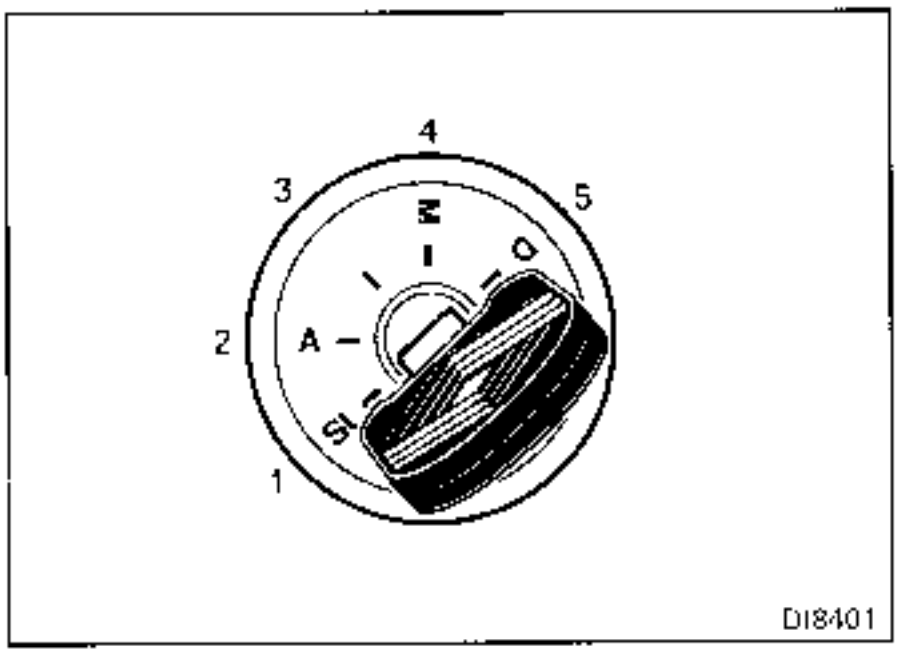
Disconnect the battery.

Remove:
The switch mounting
The side console
The radio satellite (if fitted).
The two half cowlings.
The steering surround cover.
The console under the steering wheel, following the method described in section 83 "Removal of the dashboard".

Remove:

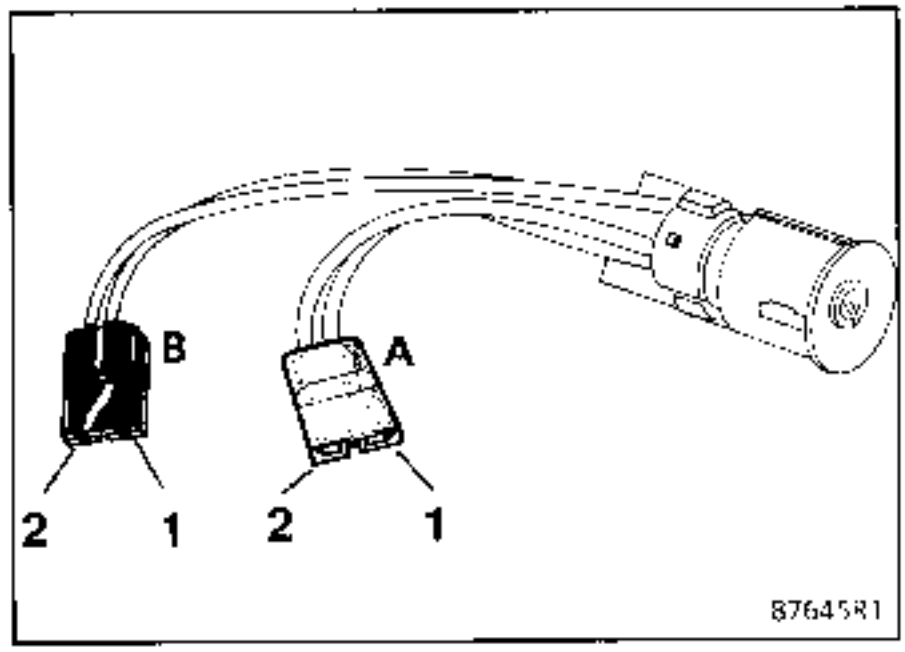
the immobiliser ring.

Disconnect:
the lighting rheostat connector.
the two connectors A and B of the ignition switch.
Remove the bolt from the ignition switch.
Put the ignition key in position (3).
Press the retaining clip and remove the ignition switch.



When refitting ensure the wiring is correctly routed.

CONNECTIONS



Black connector (B)

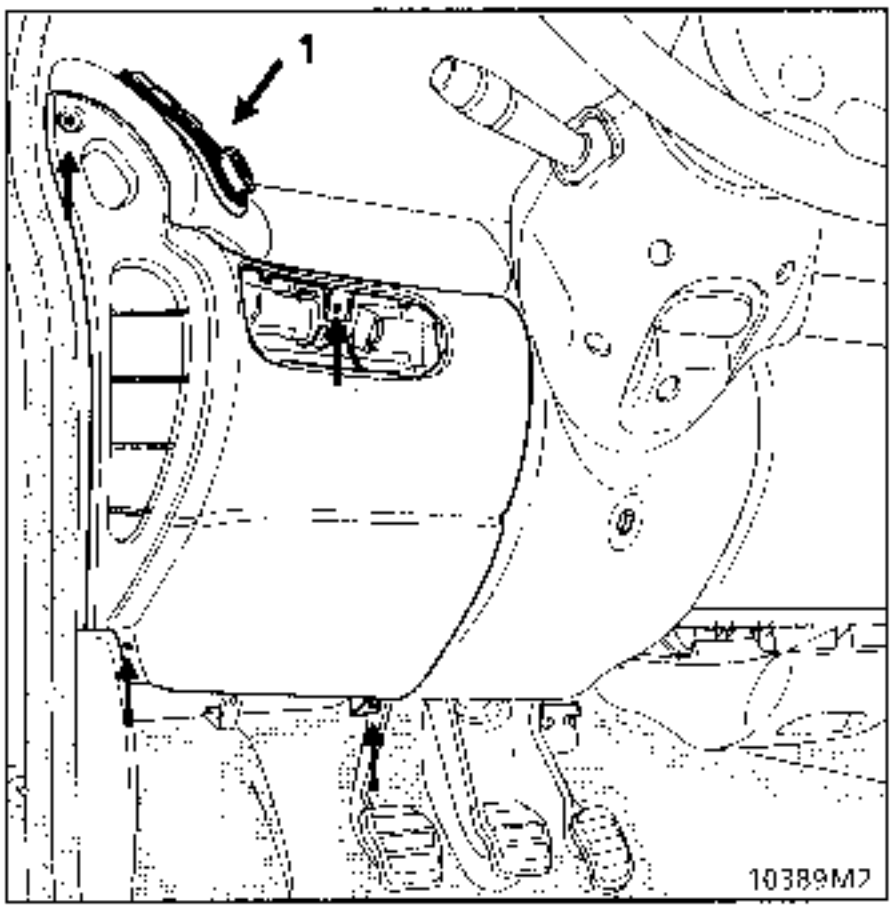
Track	Allocation
1	+before ignition
2	Starter

Grey connector (A)

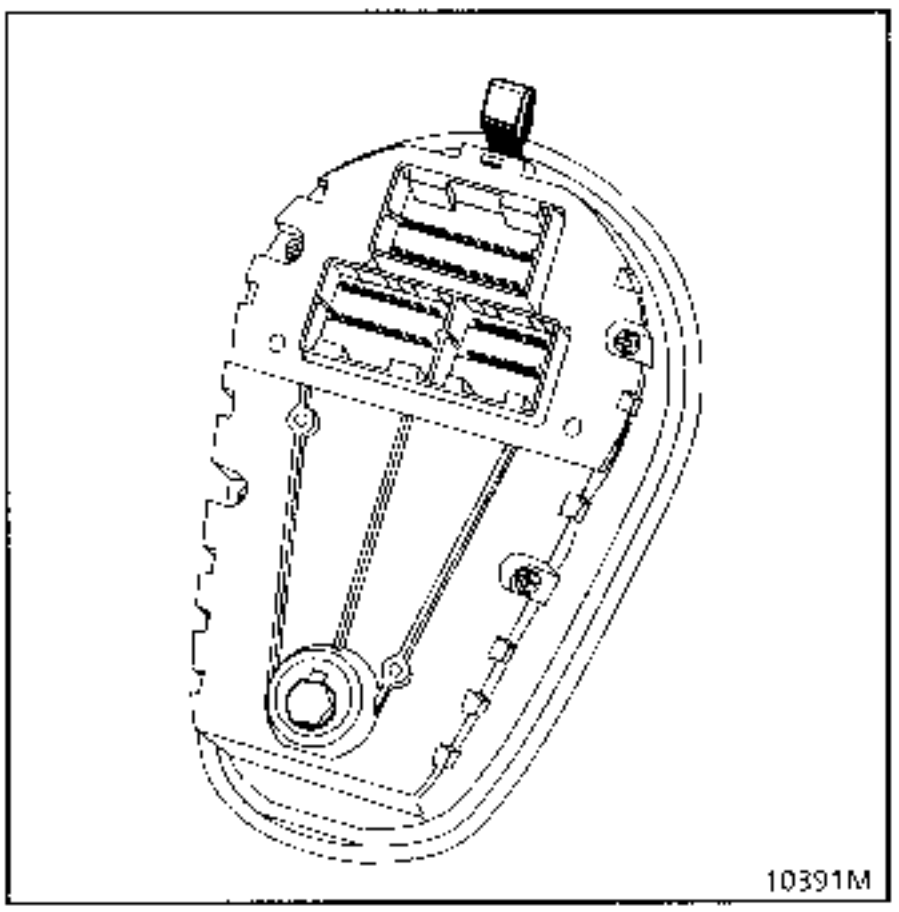
Track	Allocation
1	Accessories
2	after ignition

Removal:

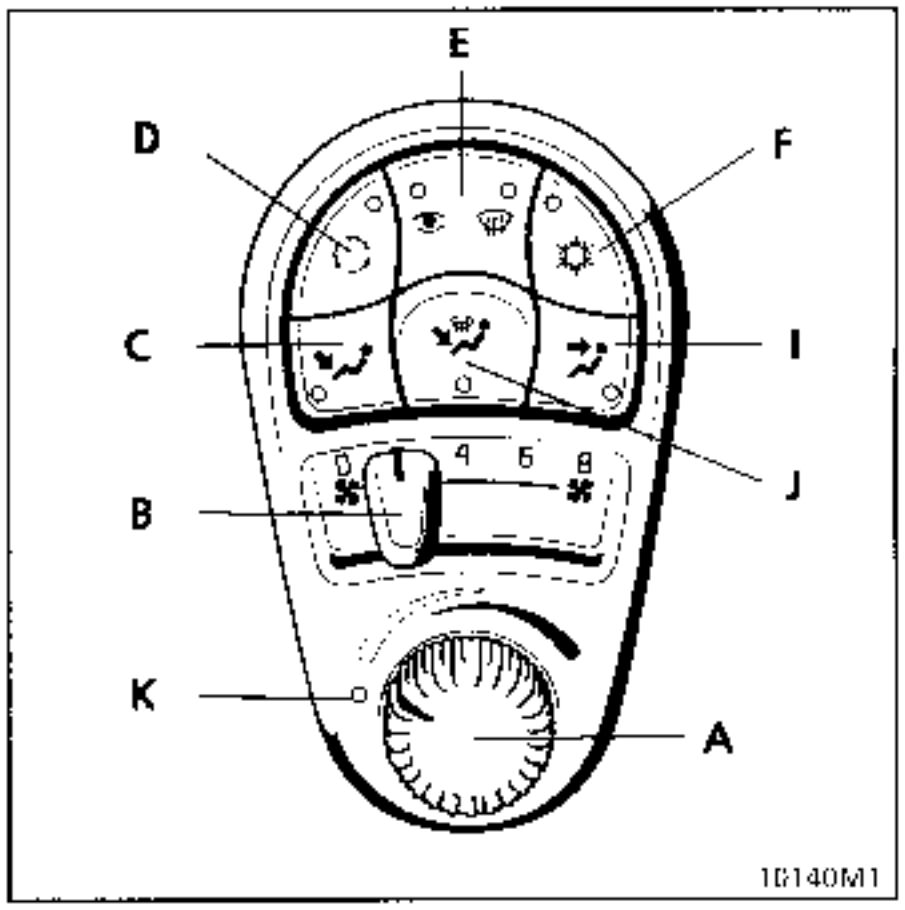
- The switch mounting and disconnect it
  The **4** mounting screws



- The air-conditioning control (1), an 8 hexagonal bolt
- Disconnect the control connectors



When replacing the air-conditioning control or removing it, validation must be carried out.



- **Procedure:**

Ignition switched off:

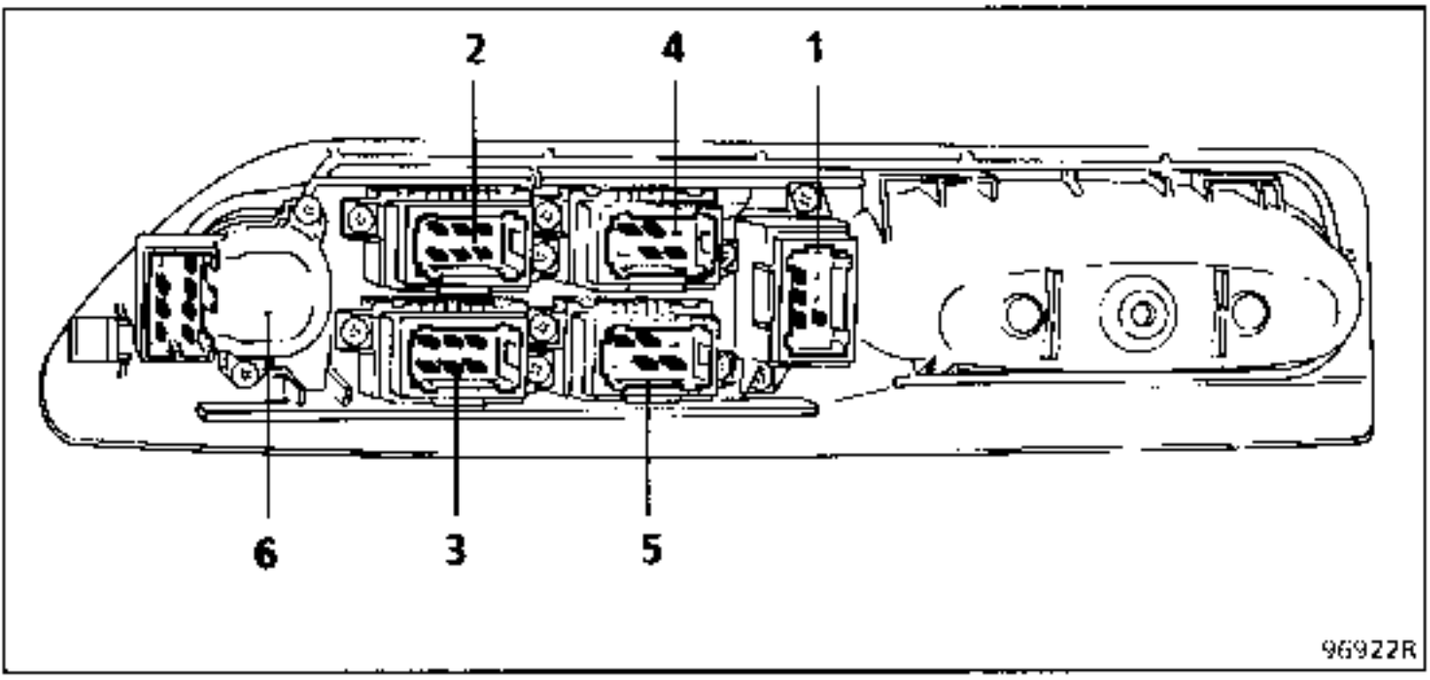
- Turn the control (A) to cold (button turned to the left as far as it will go).
- Air flow control (B) set to 0 (stop).
  Press demist (E) and the bi-level button (J), keep the buttons depressed, then switch on the ignition.
- The warning light (K) flashes . As soon as the warning light flashes release pressure on the buttons.

  Once the setting has been completed and is **correct** the warning light (K) and the warning light for the button (I) are permanently illuminated.

- **Once the setting has been completed but it is incorrect**, the warning lights for the buttons (C, J and I) are permanently illuminated **(See fault finding section).**

- For principle of operation see sections 61 and 62.
- For connection see electrical note.

Elbow rest plate (full specification)



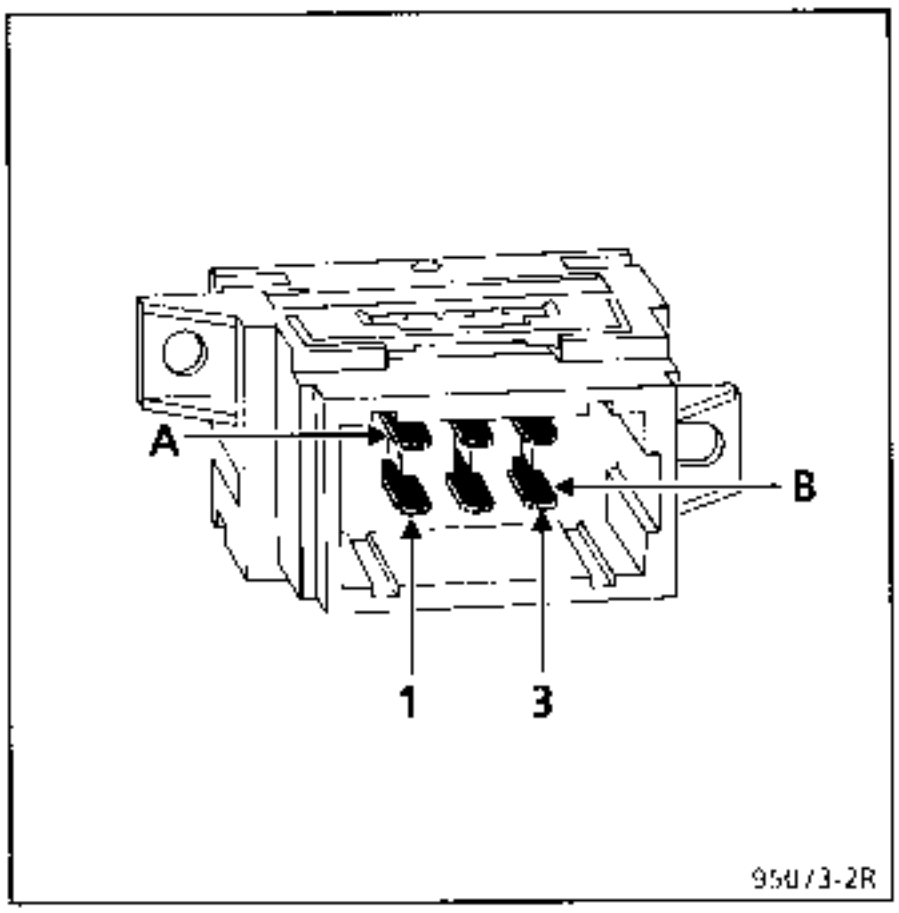
1 - child safety switch
2 - driver's electric window switch
3 - passenger electric window switch
4 left rear electric window switch
5 - right rear electric window switch
6 - electric rear view mirror control

Removal of switches

After the elbow rest plate is removed (see method in section 72), remove the two mounting bolts of the switch concerned.

Child safety switch

This blocks the operation of the rear electric windows

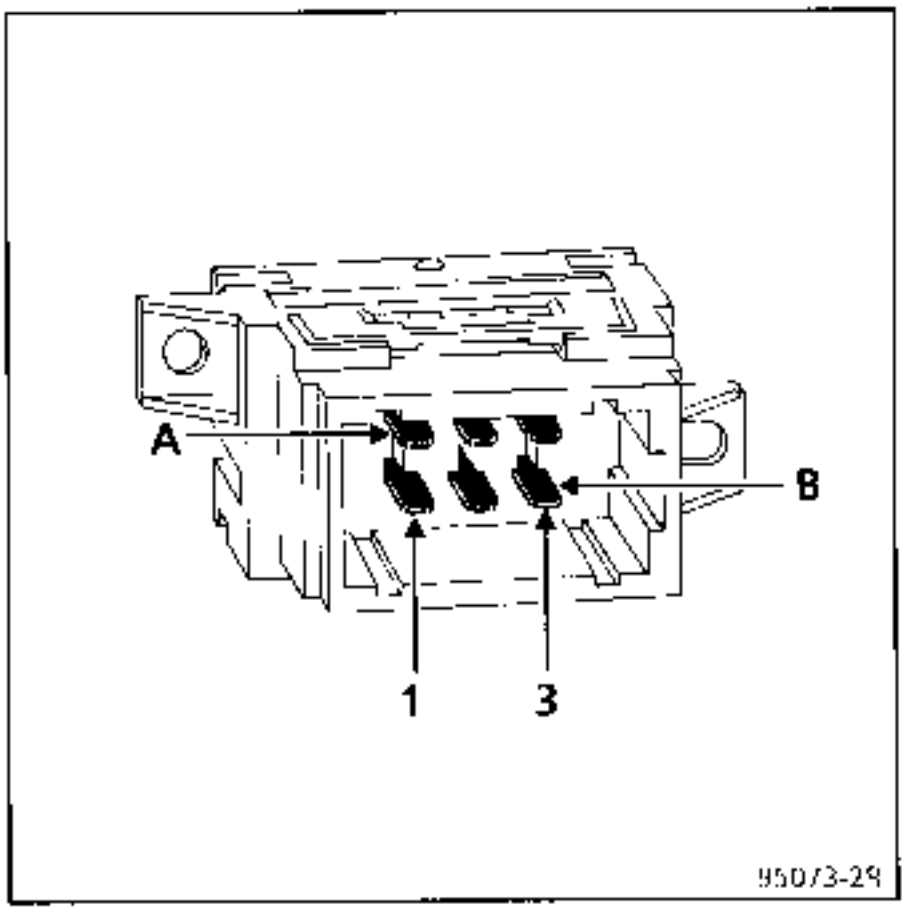


CONNECTION
NO connector

Track	Allocation
A1	Not used
A2	Lighting
A3	Rear electric window lock
B1	Earth
B2	Not used
B3	Not used

The switch lighting is not repairable.

Driver's electric window one-touch switch

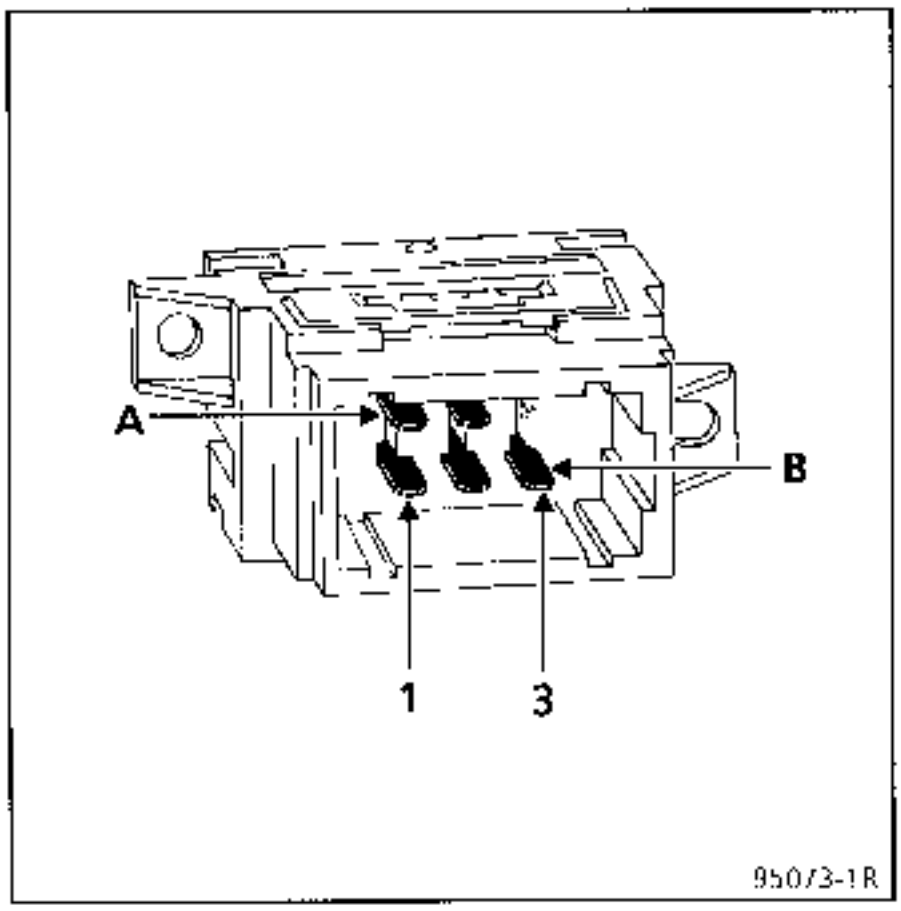


CONNECTION
MA connector

Track	Allocation
A1	– lighting
A2	Normal lowering
A3	One-touch lowering
B1	One-touch raising
B2	Normal raising
B3	Earth

The switch lighting is not repairable

Passenger electric window switch on driver's door.

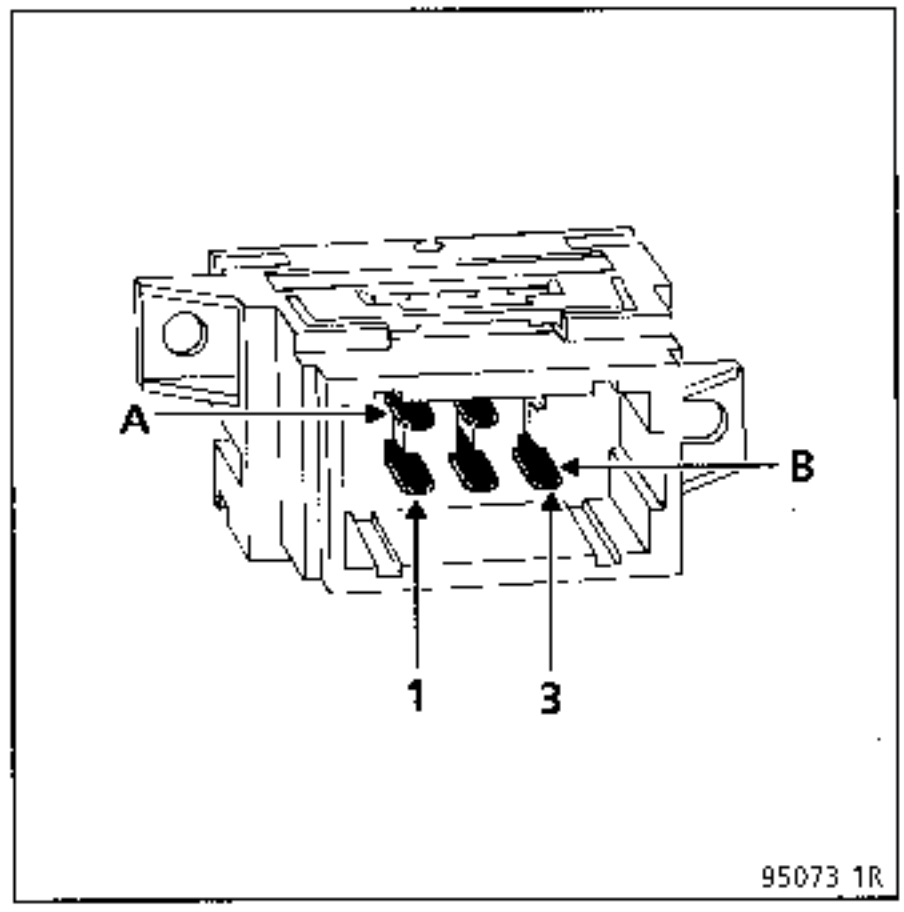


CONNECTION
CY connector

Track	Allocation
A1	– or - motor
A2	· lighting
B1	+ after ignition
B2	Earth
B3	ı or - motor

The switch lighting is not repairable.

Left rear electric window switch on driver's door.

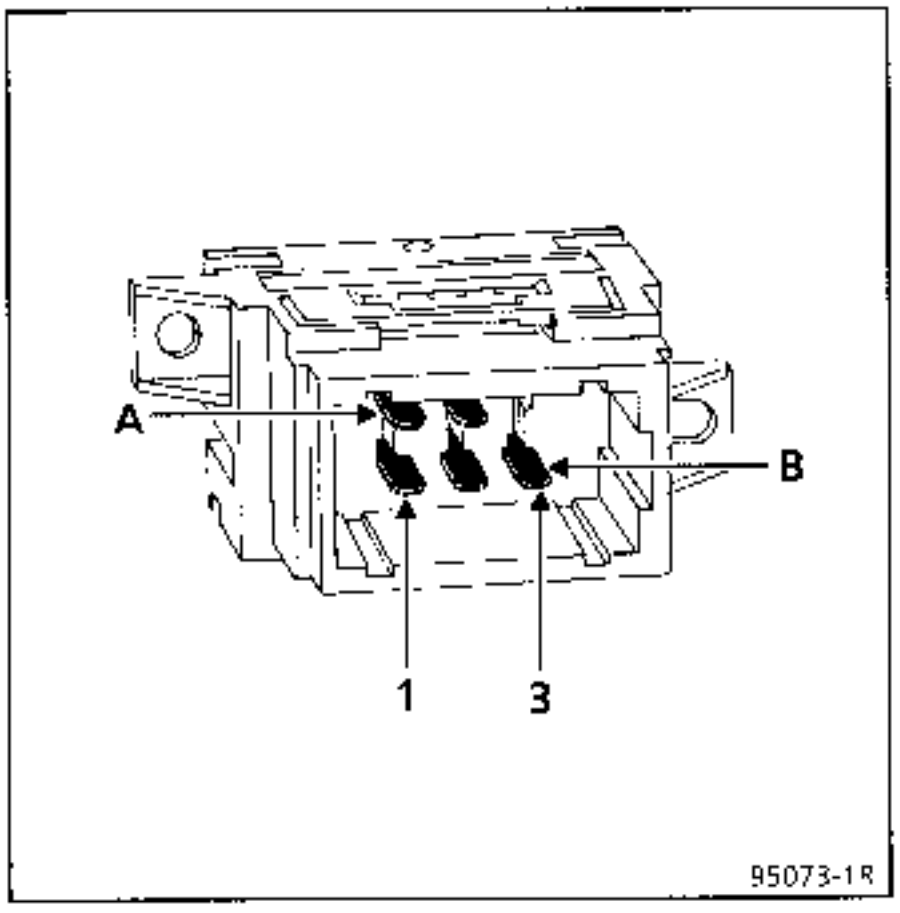


CONNECTION
BE connector

Track	Allocation
A1	ı or - motor
A2	+ lighting
B1	+ after ignition
B2	Earth
B3	+ or - motor

The switch lighting is not repairable.

Right rear electric window switch on driver's door

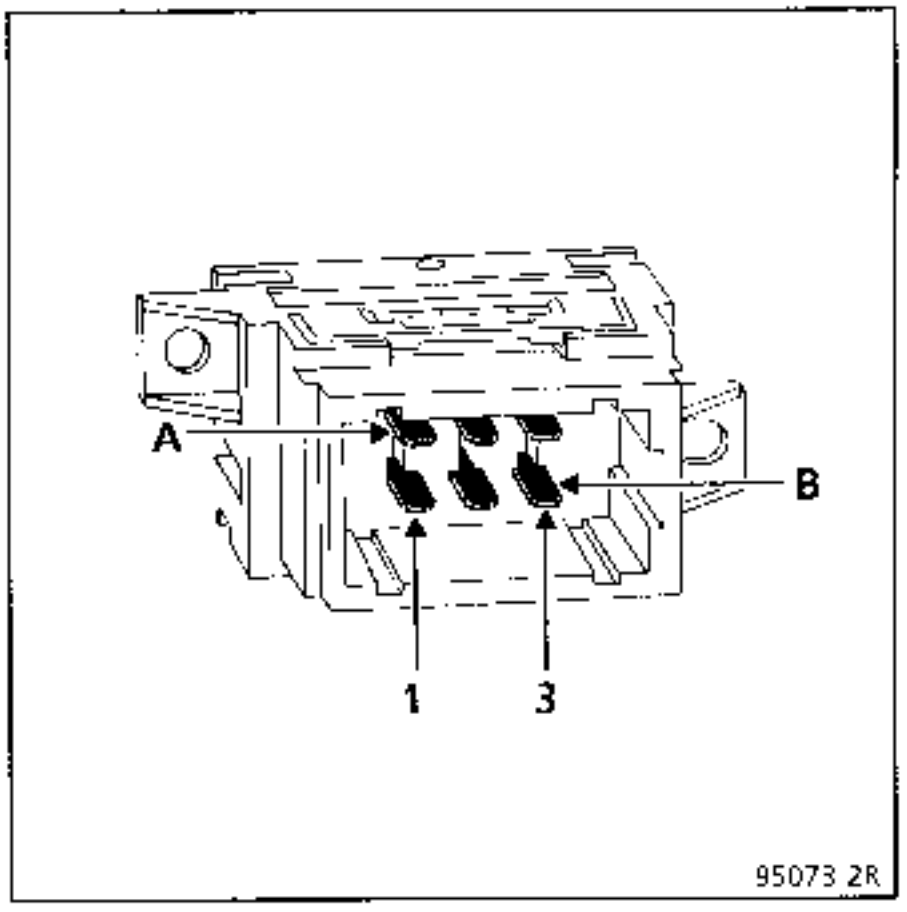


CONNECTION
GR connector

Track	Allocation
A1	+ or - motor
A2	+ lighting
B1	+ after ignition
B2	Earth
B3	+ or - motor

The switch lighting is not repairable.

Rear electric window switch on rear doors

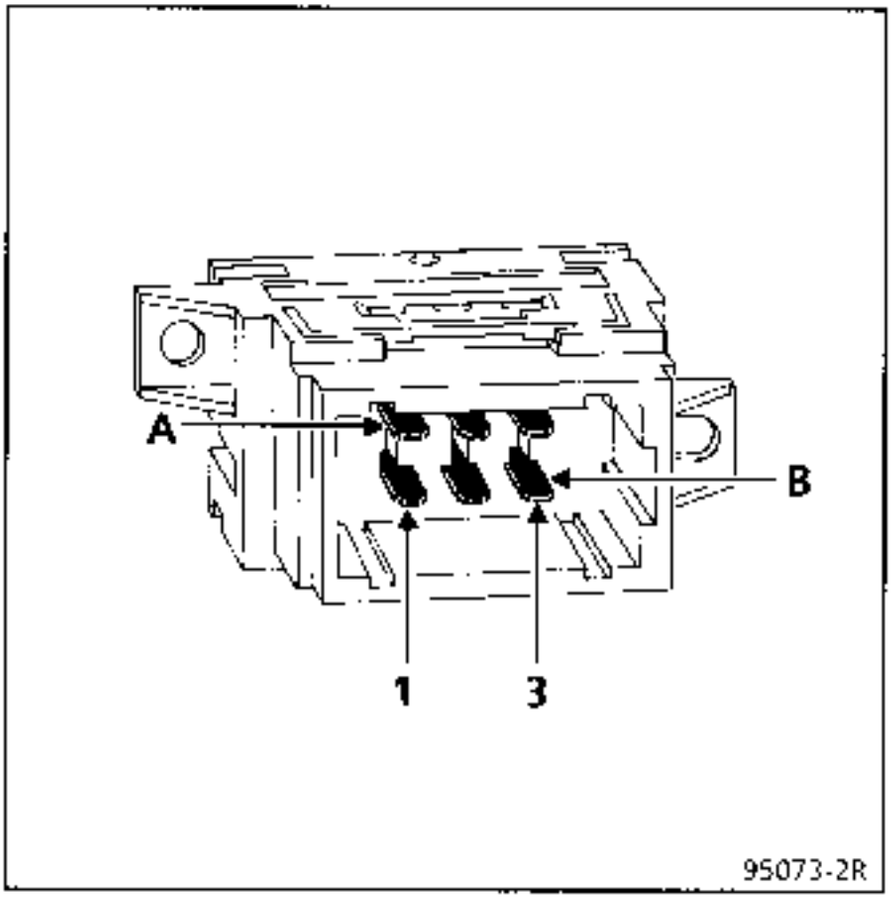


CONNECTION
RG connector

Track	Allocation
A1	Motor feed
A2	+ Lighting
A3	+ or motor
B1	+ or - motor
B2	Locking relay earth
B3	Motor feed

The switch lighting is not repairable.

Passenger electric window switch on passenger door

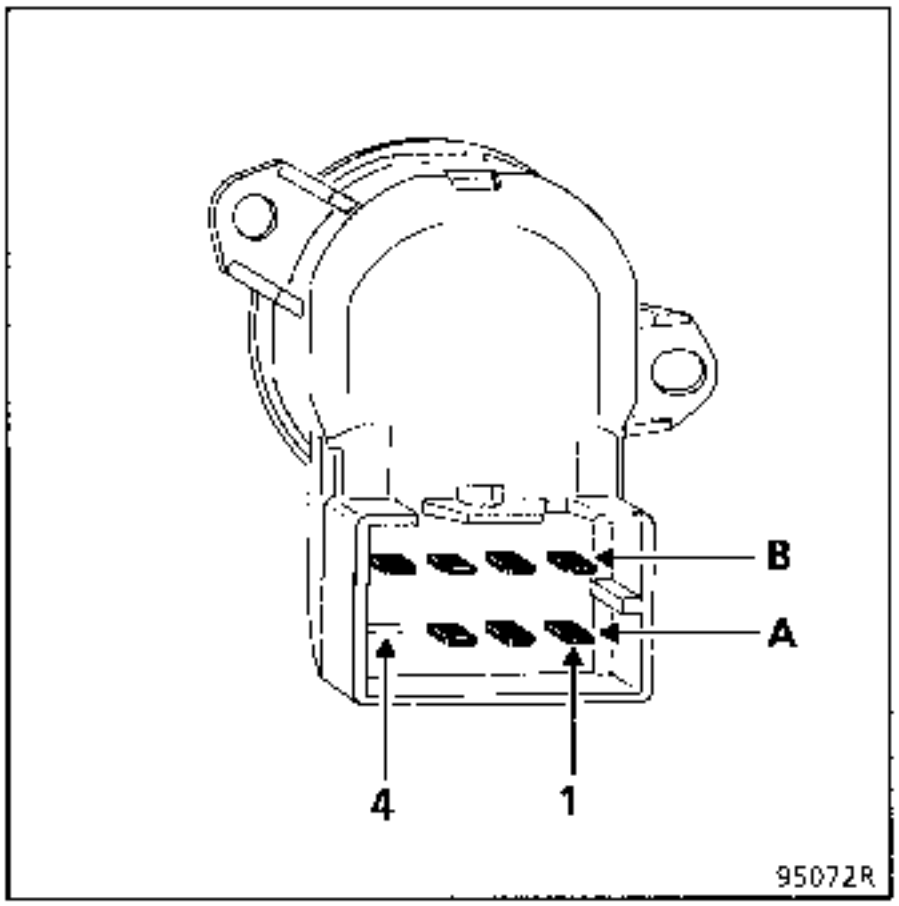


CONNECTION
RG connector

Track	Allocation
A1	Motor feed
A2	+ Lighting
A3	+ or - motor
B1	+ or - motor
B2	Earth
B3	Motor feed

The switch lighting is not repairable.

Rear view mirror control



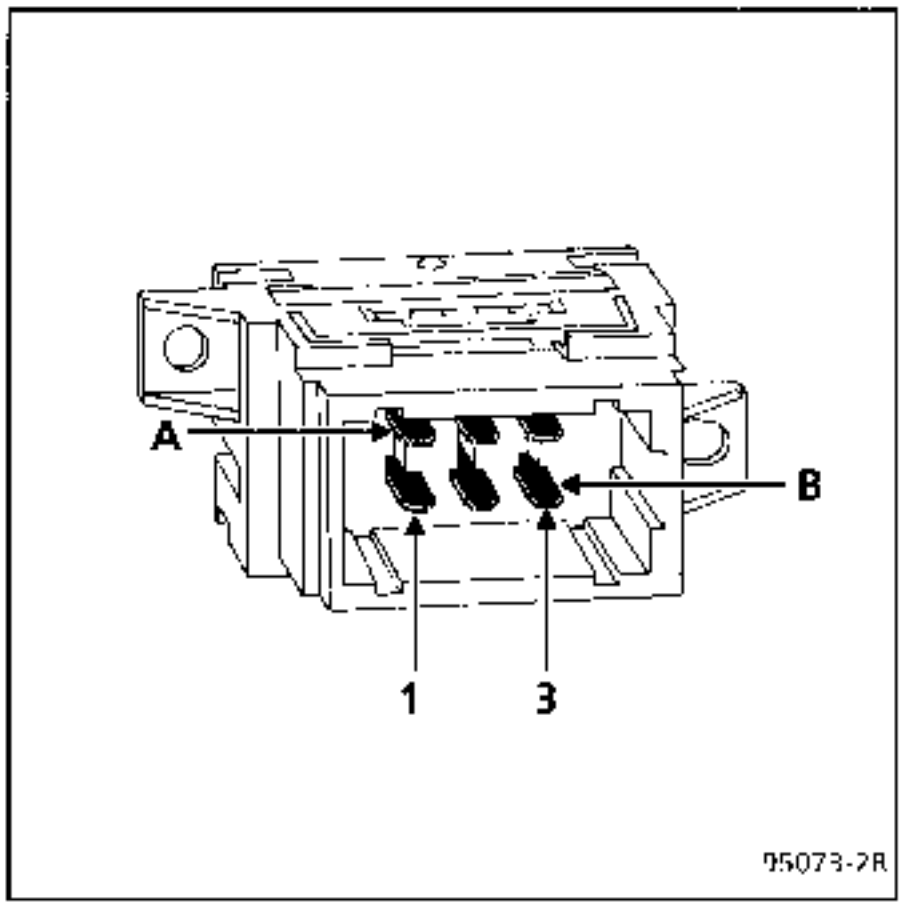
Control position		Outputs				
		B4	B2	B1	A1	A3
Left rear view mirror	↑	−	+			
	↓	+	−			
	←	−		+		
	→	+		−		
Right rear view mirror	↑	−				+
	↓	+				−
	←	−			+	
	→				−	

N.B.: This switch has no night lighting.

CONNECTION
NO connector

Track	Allocation
A1	Right/left adjustment of passenger's rear view mirror
A2	− before ignition
A3	Up/down adjustment of passenger's rear view mirror
A4	Not used
B1	Right /left adjustment of driver's rear view mirror
B2	Up/down adjustment of driver's rear view mirror
B3	Earth
B4	Rear view mirror common

Sunroof switch

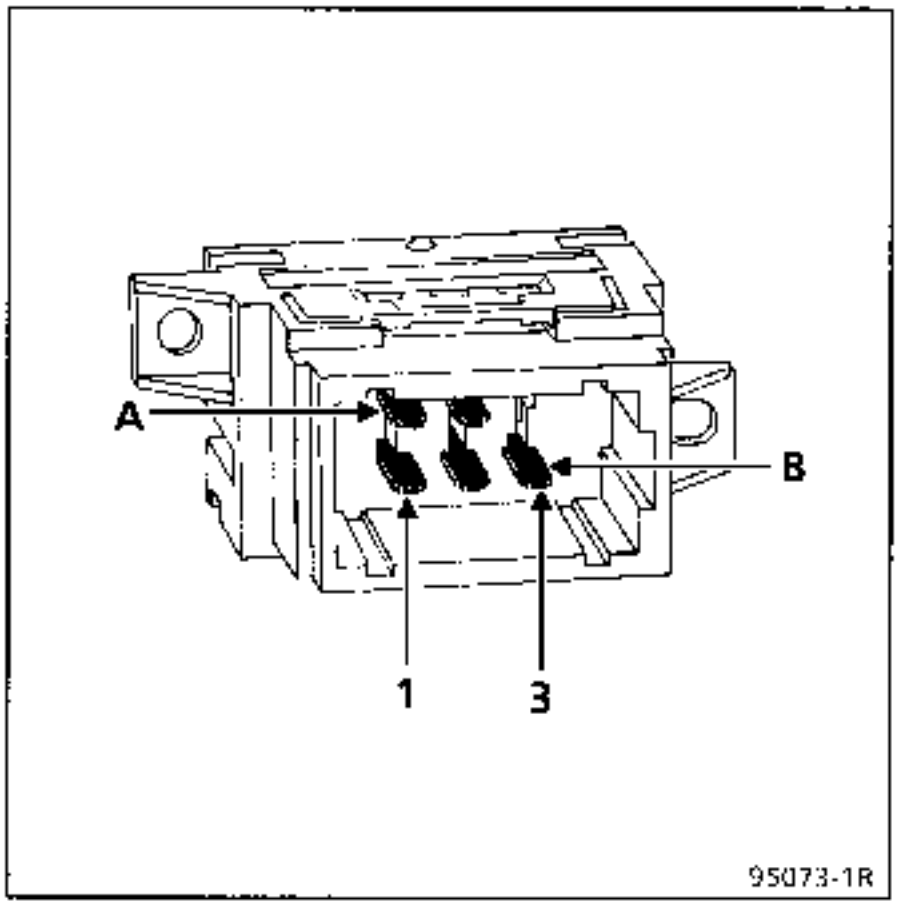


CONNECTION

Track	Allocation
A1	Sunroof motor and relay
A2	Switch lighting
A3	Not used
B1	– after ignition
B2	Earth
B3	Relay motor

The switch lighting is not repairable.

Central locking switch

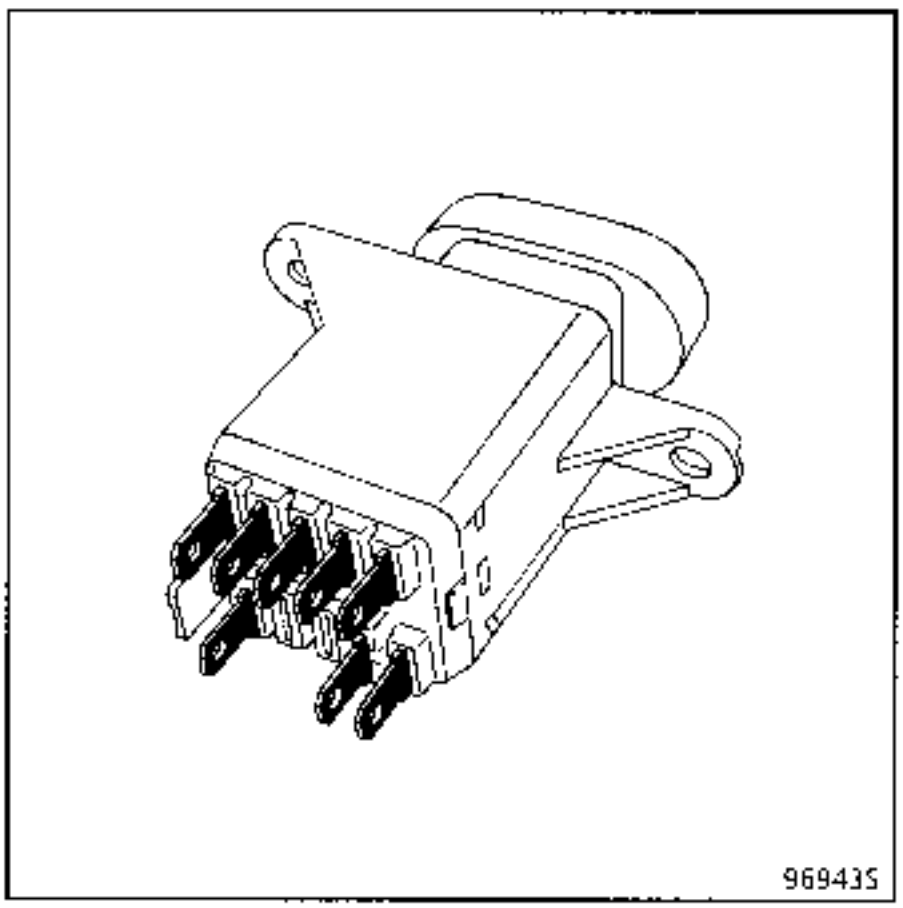


CONNECTION
MA connector

Track	Allocation
A1	Central locking open control
A2	Earth
B1	+ lighting
B2	Earth
B3	Central locking close control

The switch lighting is not repairable

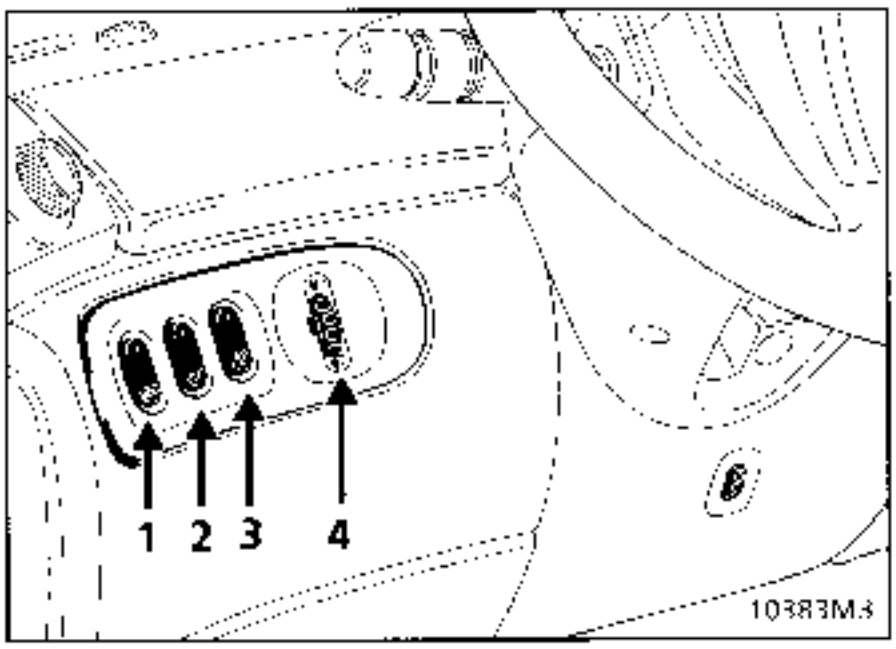
Hazard warning light switch



CONNECTION
CY connector

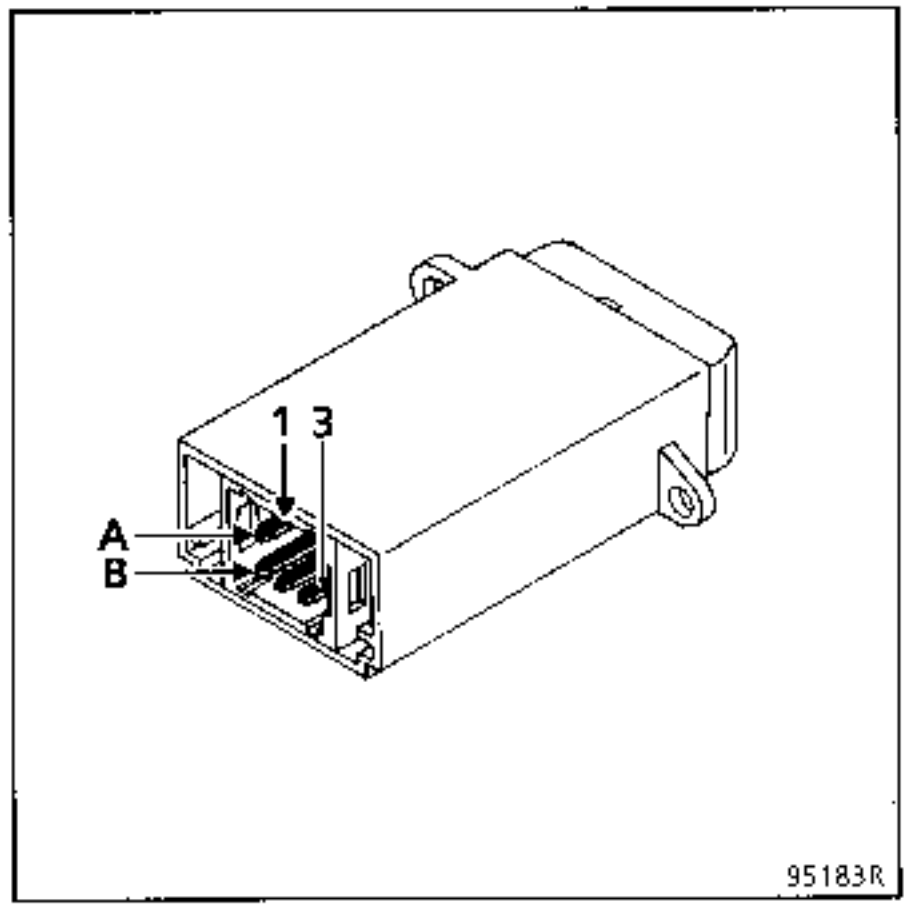
Track	Allocation
1	Left indicators
2	Right indicators
3	Earth
4	+ before ignition
5	+ after ignition
6	Warning light
7	+ lighting
10	Central output

Module on dashboard



1) Heated rear screen one touch switch.
2) Cruise control switch
3) Low adherence A.T. switch
4) Remote headlight adjustment control

Cruise control switch

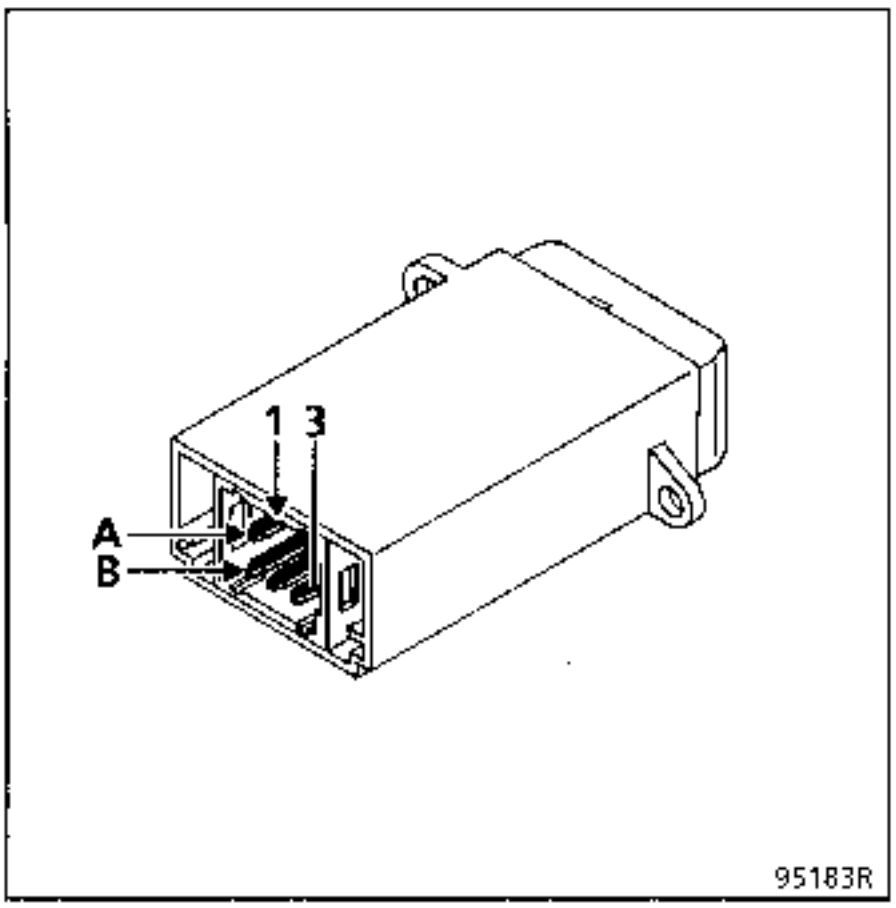


CONNECTION

Track	Allocation
A1	Earth
B1	+ lighting
B2	+ after ignition
B3	Cruise control feed

The switch lighting is not repairable.

Low adherence A.T. switch



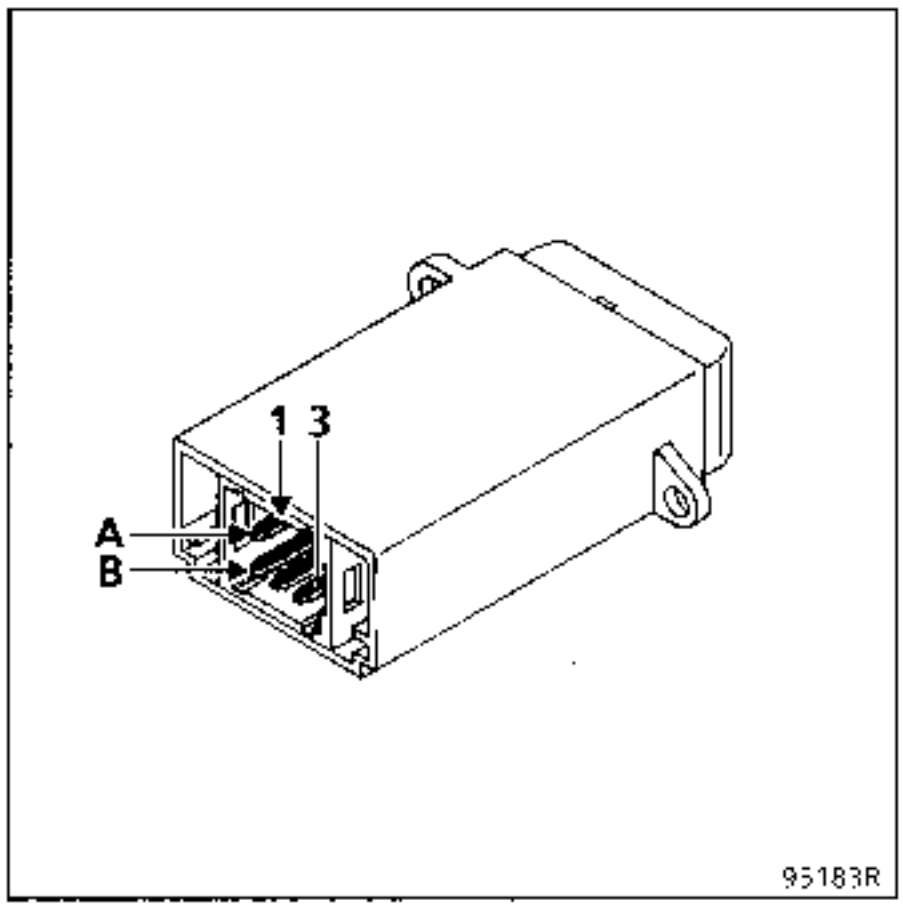
CONNECTION

Track	Allocation
A1	+ lighting
B1	Earth
B2	Computer
B3	+ after ignition

The switch lighting is not repairable.

When to use:
When driving on ground with low adherence (snow, ice, etc.).
By pressing this switch the vehicle must be started in 2nd gear whatever the position of the lever.

One touch heated rear screen switch

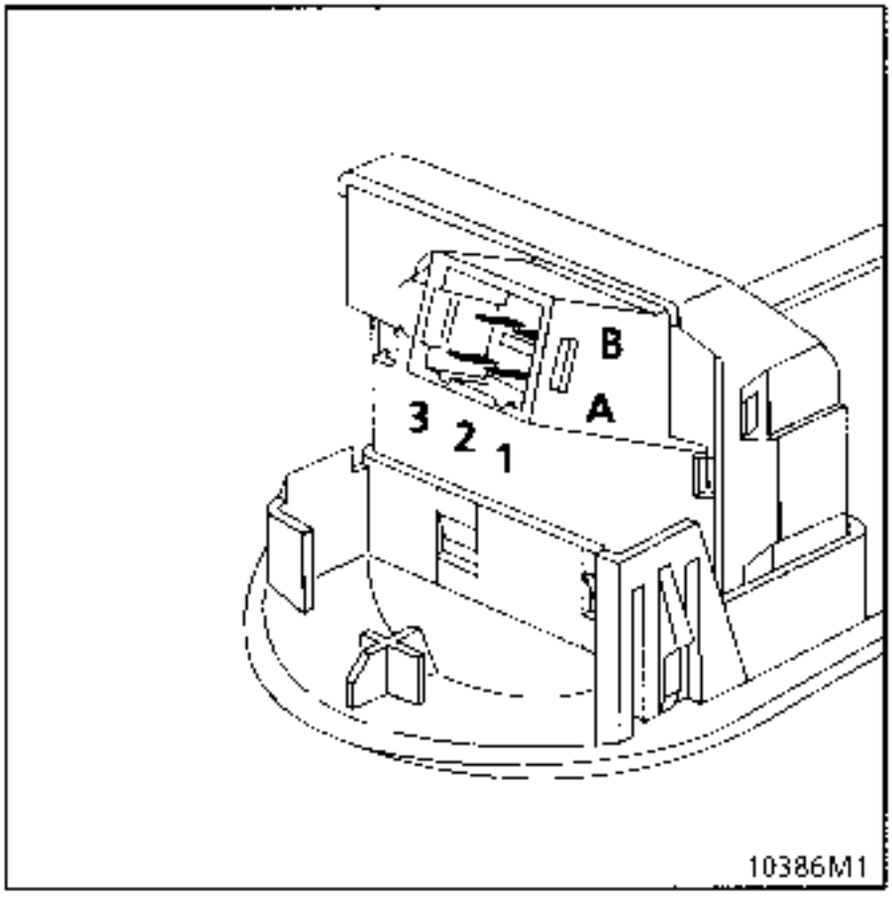


CONNECTION

Track	Allocation
A1	+ lighting
B1	Earth
B2	Demister control
B3	+ after ignition

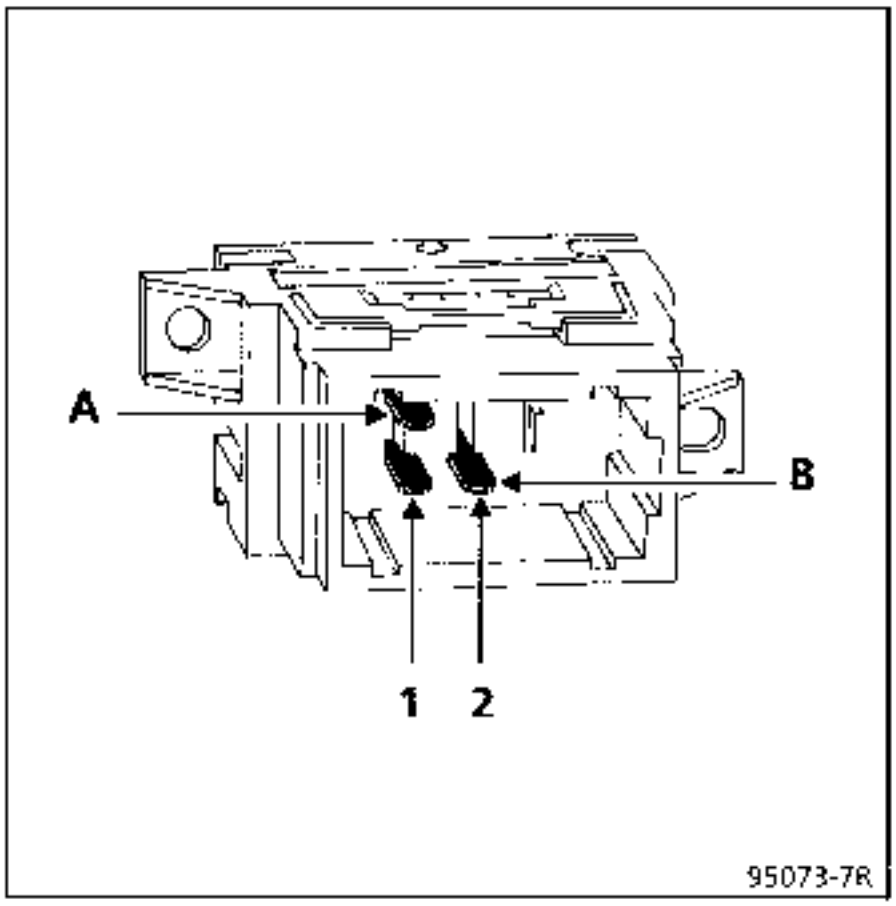
The switch lighting is not repairable.

Remote headlight adjustment control



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

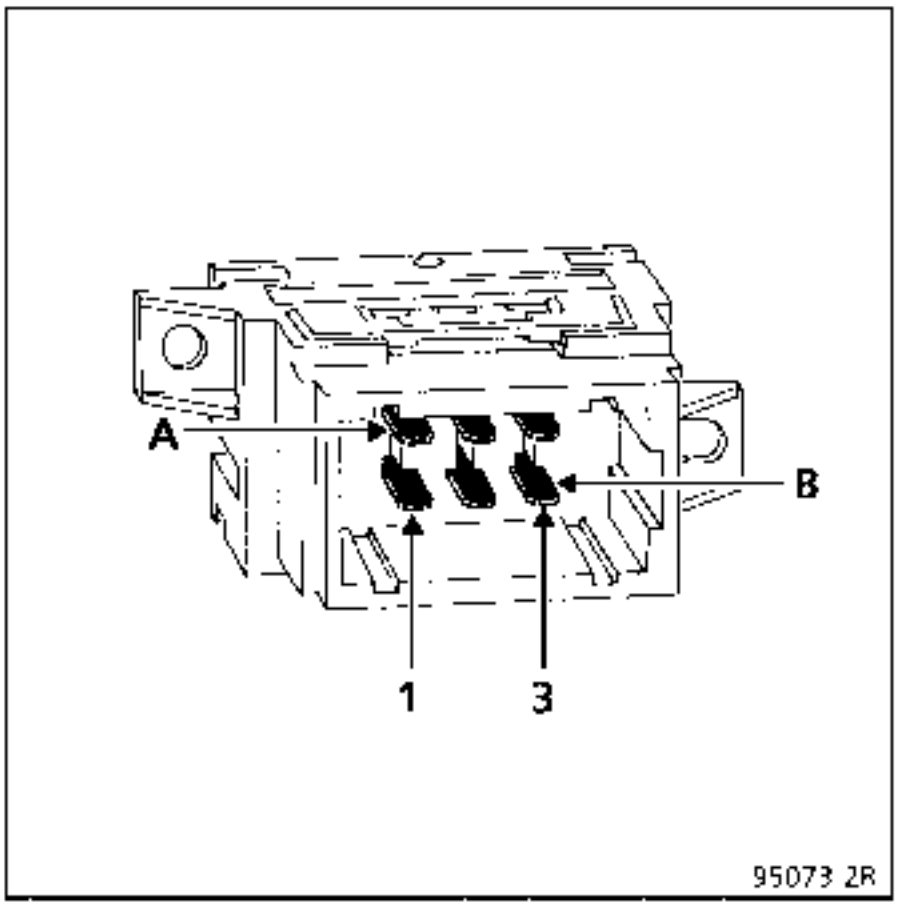
Heated seat switch



CONNECTION

Track	Allocation
A1	Earth
B1	Heated seat warning light
B2	Heated fabric element switch

Electric seat feed switch

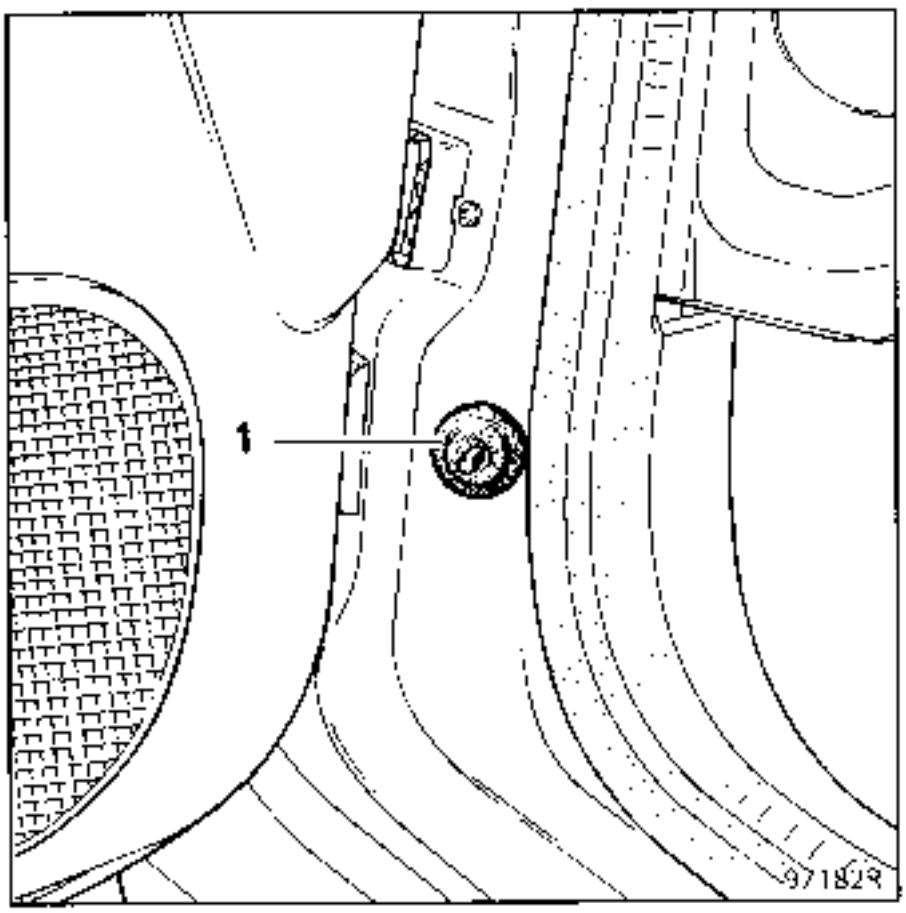


CONNECTION

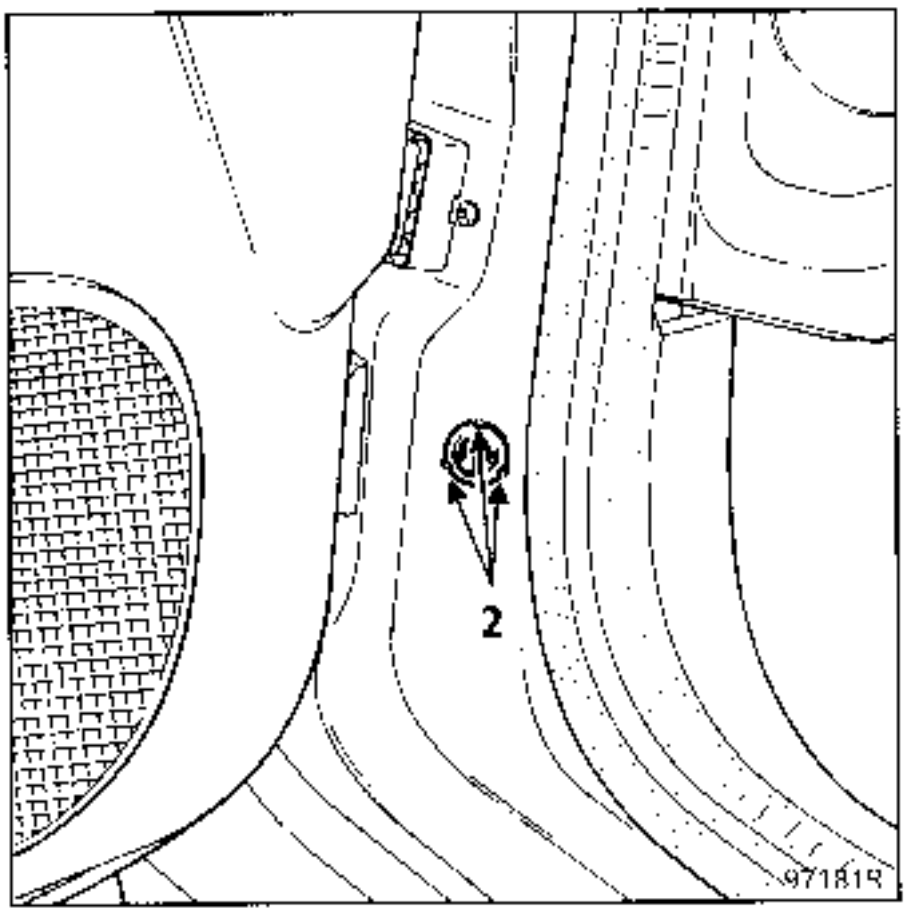
Track	Allocation
A1	– After ignition
A2	Not used
A3	– seat
B1	Not used
B2	Earth
B3	Heating warning light

REMOVAL - REFITTING

Remove the rubber seal (1)



Turn the three slots (2) of the switch so that they are opposite those on the body.
Insert a metal rod (e.g. a rivet) in each of these slots.



Remove the switch using a screwdriver.

REMOVAL

Ignition switched off.

Unclip the lower cover plate.

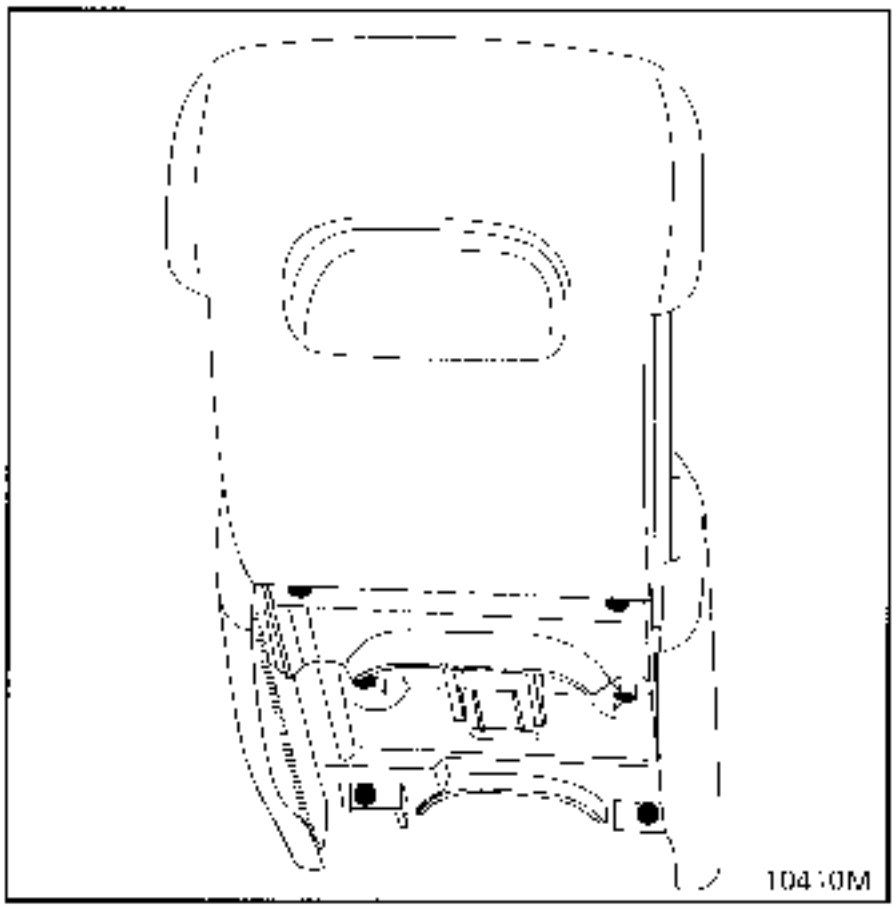
Remove the ashtray mounting by its four screws.

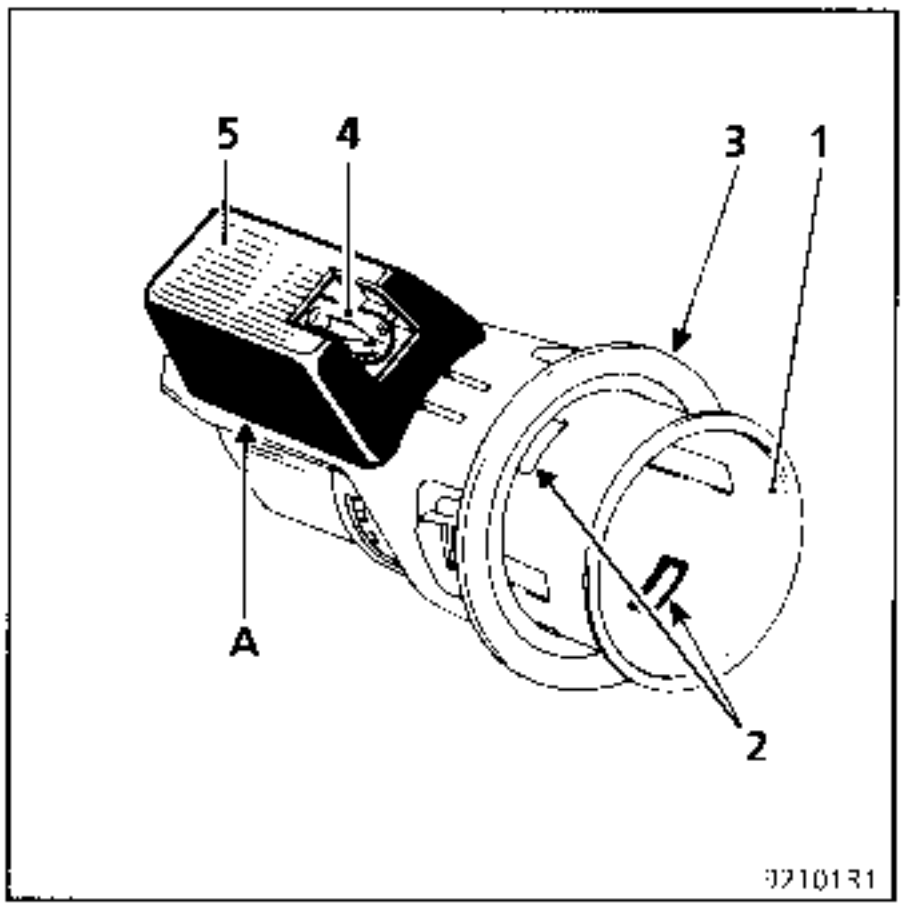
Remove the front by two screws.

Disconnect the connectors.

Remove the cigar lighter heating element.

To remove the cigar lighter body(1) pull the body whilst unclipping the two lugs (2).





Remove the plastic lighting surround (3).

NOTE: To replace the bulb (4) remove the cigar lighter completely and unclip the cover (5) at point (A), then remove the bulb.

CONNECTION

Track	Allocation
1	Earth
3	− after ignition

Single wire: + lighting

REMOVAL - REFITTING

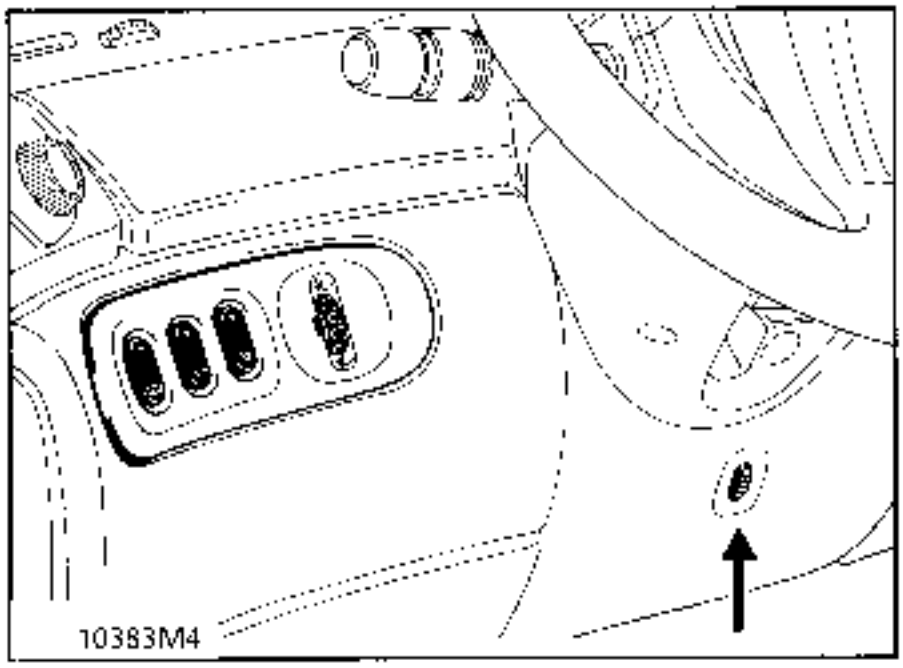
Disconnect the battery.

Without removing the steering wheel
Remove:

- The lower and upper steering wheel half-cowlings and the radio satellite (if fitted)
- The left hand side lower bracket
- The upper fabric cover
- The central lower console, following the method described in the section on "Removal of dashboard" (see section 57)

Disconnect the rheostat

Remove the two screws and release the rheostat from the console.



Track	Allocation
1	Dashboard instruments
2	+ battery
3	+ control
4	Earth
5	Warning light
6	Instrument panel

CLOCK

The clock cannot be removed from the instrument panel .

SPECIAL TOOLING REQUIRED
ELE. 1294-01 Wiper arm removing tool

Tightening torque:

- the four bolts (B) **1 daN.m**
- the nuts (C) **1.5 daN.m**
- the wiper arms **3.2 daNm**

REMOVAL OF THE WIPER MECHANISM WITH MOTOR

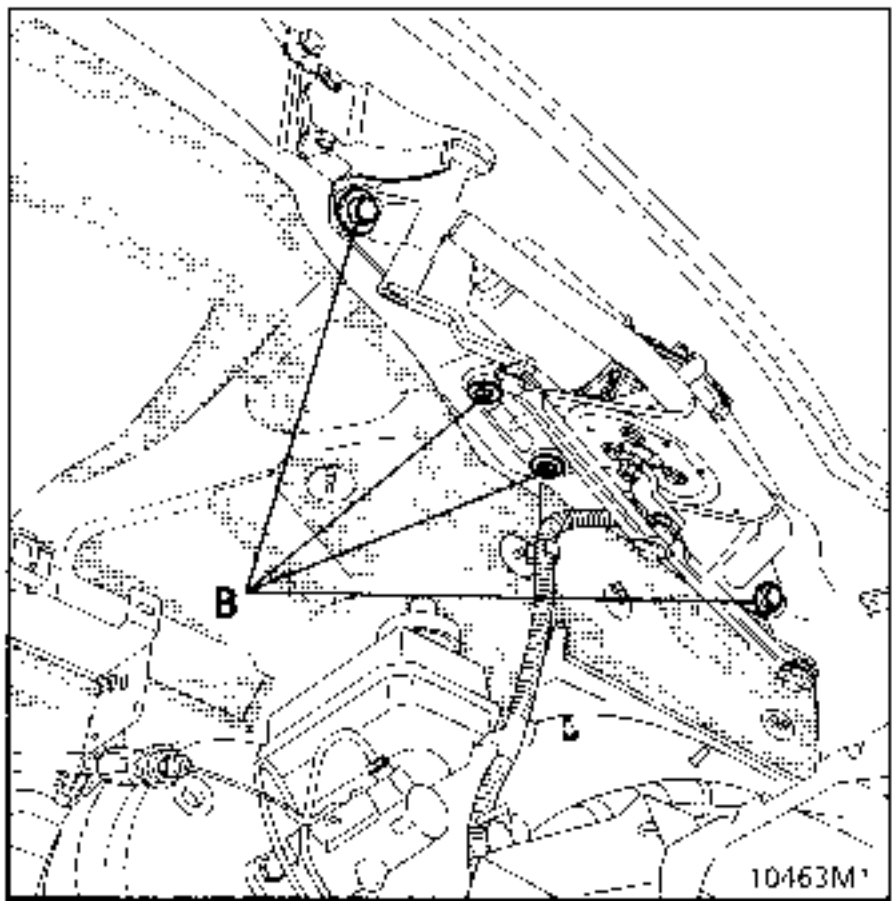
Make sure that the wiper motor is in the park position.
Open the bonnet.

Disconnect the battery.

Remove: the mounting nuts of the two wiper arms.

Release the wiper arms from their pins using the **ELE 1294-01** tool.

Removal and refitting: Of scuttle panel grille (see section 42).

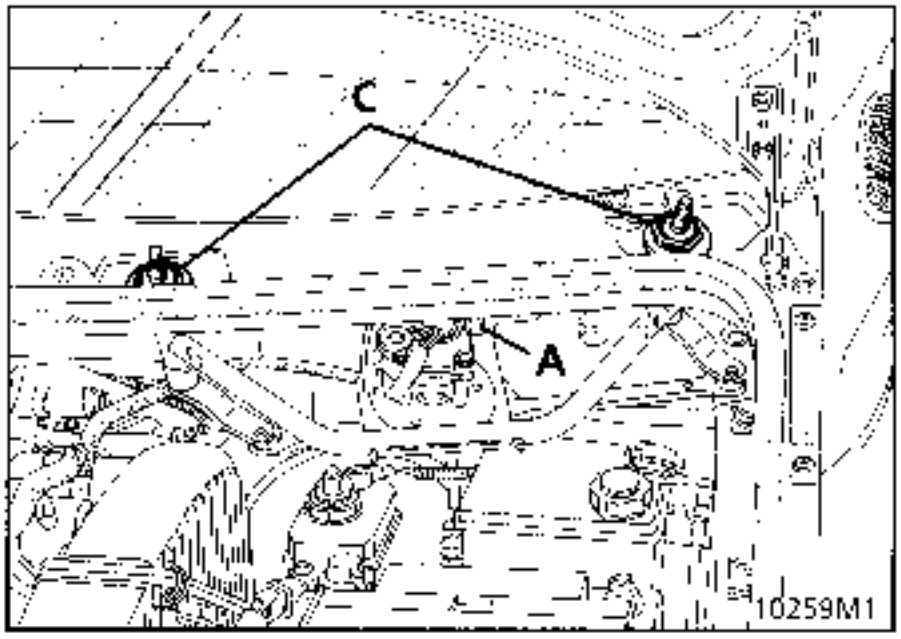


Release the scuttle panel grille on the motor side.

Disconnect the windscreen washer jet pipe.

Remove the scuttle panel grille.
Disconnect the connector (A) of the front windscreen wiper.

Remove the four mounting bolts (B) from the wiper mechanism with motor.
Remove the nuts (C) from the windscreen wiper pins (dowel of diameter 36).



REFITTING

The mechanism: reconnect the connector (A).

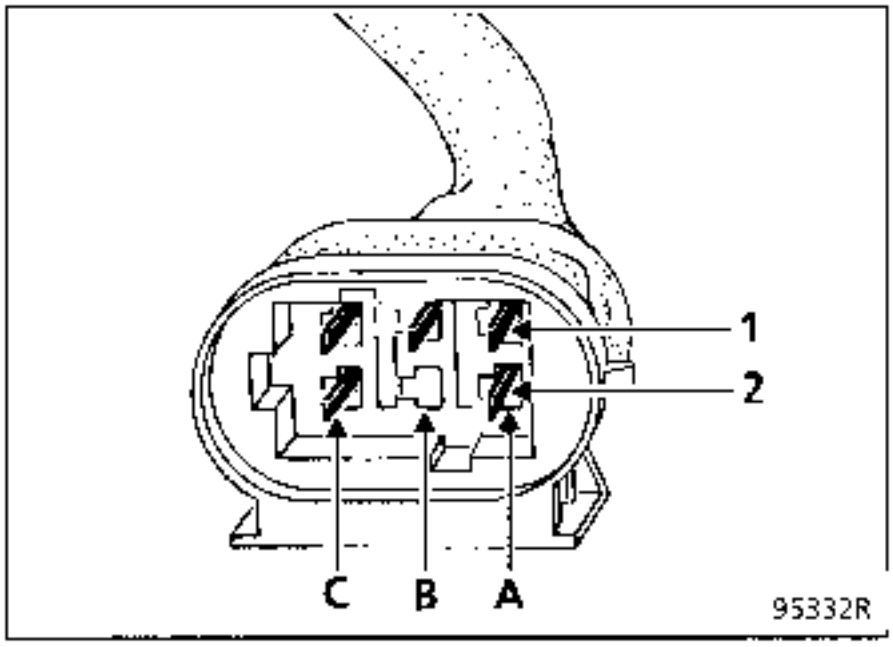
Check that the motor is in the park position before refitting the wiper arms. To do this reconnect the battery and move the windscreen wiper control to the park position.

Clean the splines on the wiper arm pins using a metal brush.

Refit the wiper arms by locating the blade on the marks on the edge of the windscreen.

Fit the new nuts for mounting the wiper arms and tighten to a torque of **3.2 daNm** with a torque wrench.

CONNECTION



Track	Allocation
A1	Slow
A2	Park
B1	Fast
B2	Not used
C1	+ park
C2	Earth

NOTE: the number of the tracks used is taken from the connector on the side of the unit.

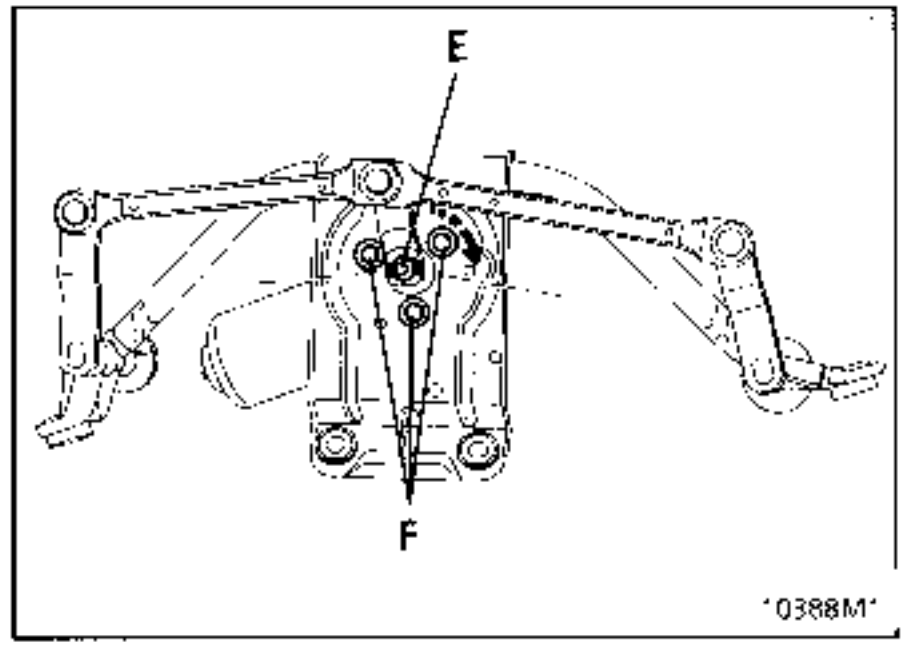
REMOVING THE MOTOR

Remove:
- the wiper mechanism, with its motor, by the method described above
- the nut from the motor shaft (E) and release the drive bar after marking its position.
- the three motor mounting bolts (F).

Release the motor.
Unclip the connector from the mounting.

REFITTING THE MOTOR

Secure the connector to its mounting.
Secure the motor to the plate.
N.B. Make sure that the wiring is correctly routed.
Replace the drive bar opposite the mark you made when disassembling.



Tightening torque:

-	**Motor shaft nut**	**0.8 daN.m.**
-	**Wiper arm nut**	**1.2 daN.m.**
-	**Bolt (B)**	**1 daN.m.**

REMOVING THE WIPER ASSEMBLY WITH MOTOR

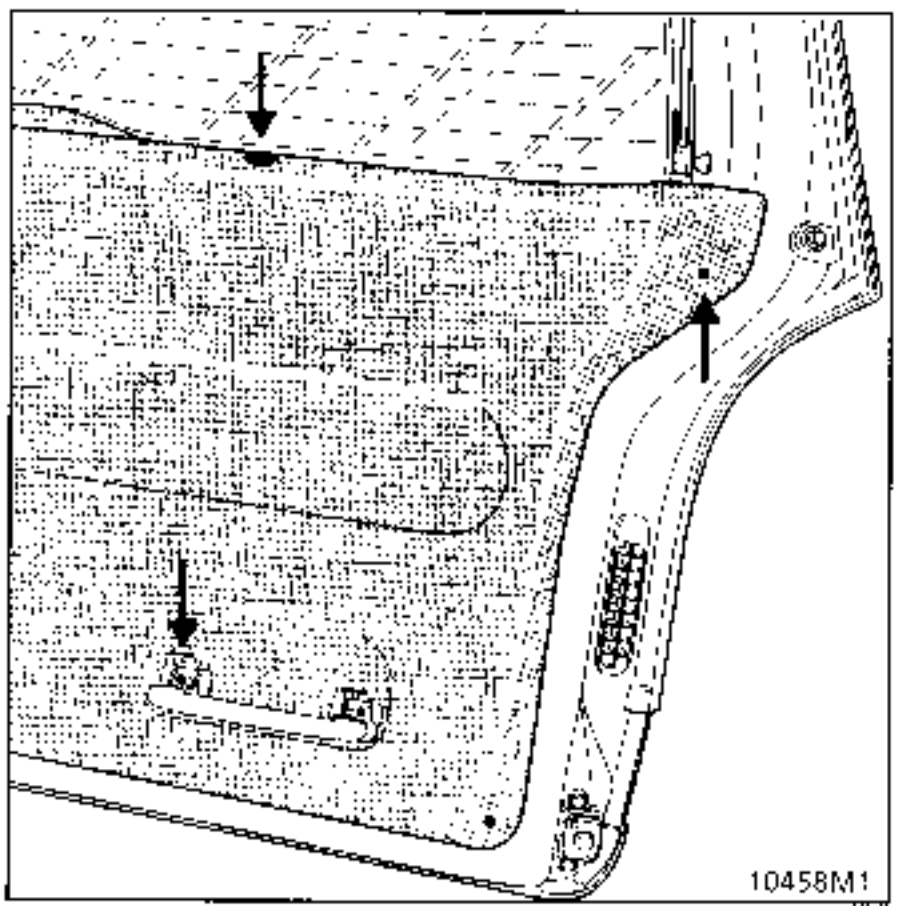
Disconnect the battery.

Remove:
- the mounting nut from the wiper arm.
- the wiper arm from its pin using the special tool **ELE 1294-01.**

Disconnect the screen washer pipe.
Remove the screen wiper pin cover , followed by its central nut and its spacer.
- the motor shaft nut.

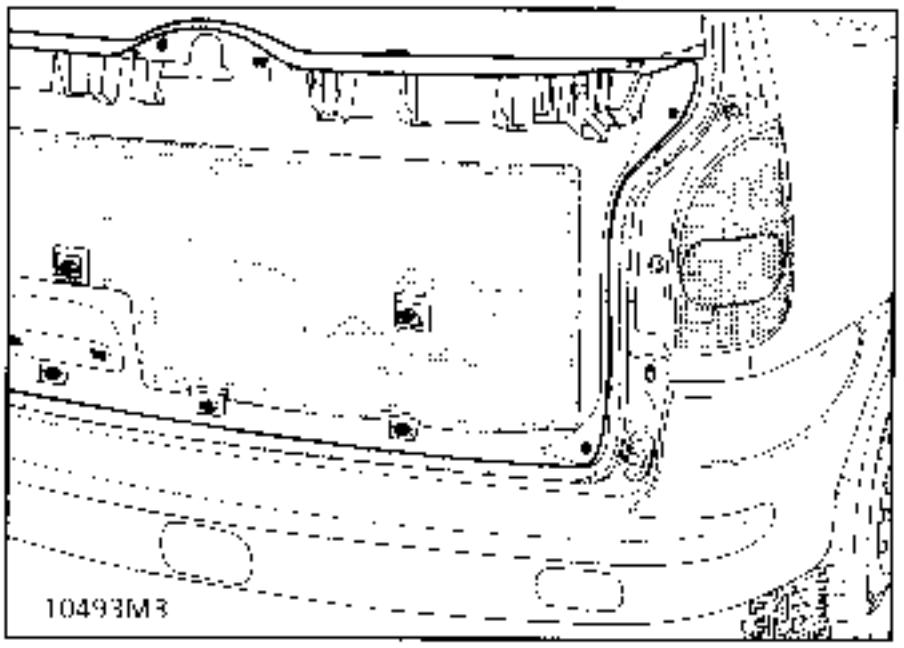
N.B. If the vehicle is fitted with an opening rear screen: Open the opening rear screen.

Remove: Unclip the wiper trim
- The 2 upper mountings.
- The handle (2 bolts).
- The four corner mounting bolts for the trim.

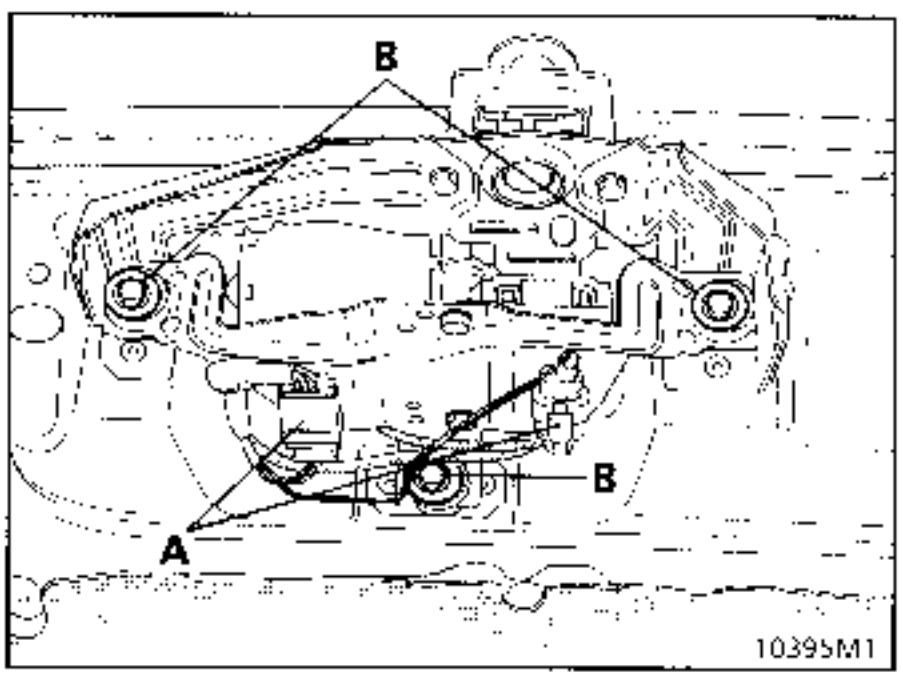


- The fog lights to gain access to the trim mountings.

Release the 3 clips.
Lift and remove the lining.



Disconnect the connector or connectors (A) from the rear screen wiper.
Remove the three mounting bolts (B) from the wiper mechanism assembly with motor.



REFITTING THE WIPER MECHANISM WITH MOTOR

Make sure that the motor is in the park position before refitting the wiper arm:

- Without the opening rear screen, position the wiper arm on the mark on the screen (marking symbol O).
- With opening rear screen, position the wiper arm on the parking stop.

CONNECTION with opening rear screen

Track	Allocation
A1	+ before ignition
A2	Not used
A3	Earth
B1	Intermittent
B2	Windscreen washer pump
B3	Open screen detection switch

Rear opening screen: the timer is integrated in the motor.

CONNECTION without rear opening screen

Track	Allocation
A1	+ before ignition
A2	Not used
A3	Earth
B1	Intermittent
B2	Windscreen washer pump
B3	Not used

The timer is secured to the rear screen wiper motor plate.

Operating principle

This is 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 three-track connector (E).

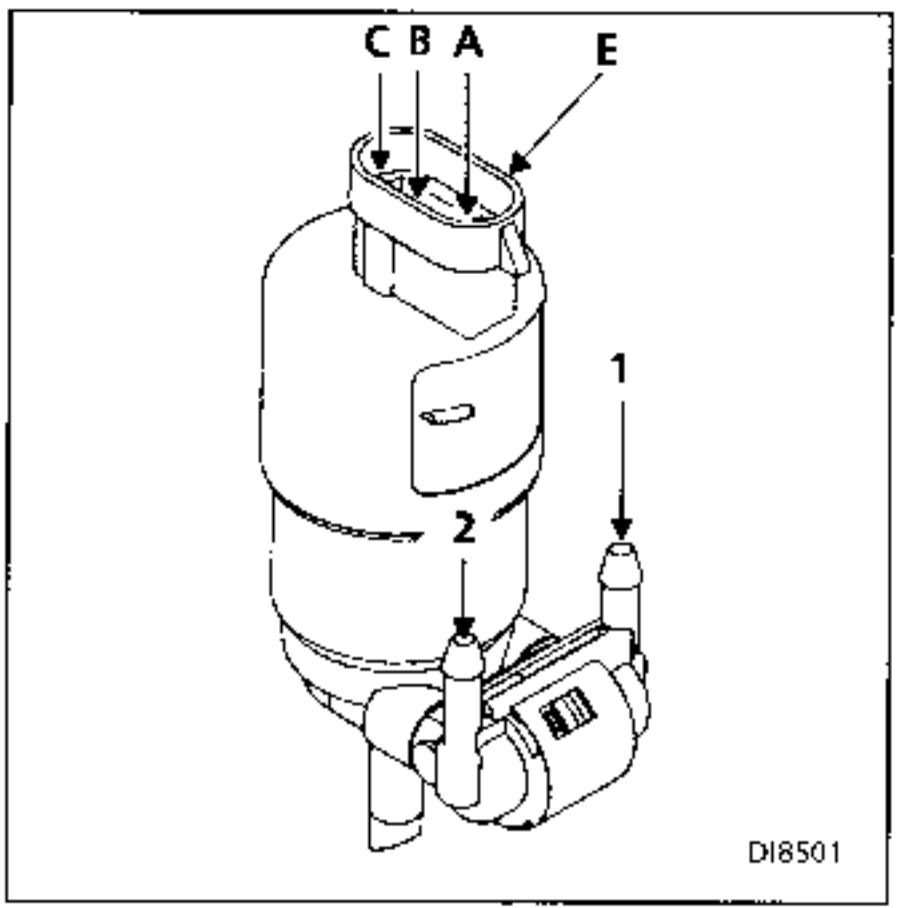
Two cases may be considered:

Track	Feed
A	+
B	–
C	Not used

The pipes are fed via the white end piece (1) whilst the front windscreen washer is in operation.

Track	Feed
A	–
B	+
C	Not used

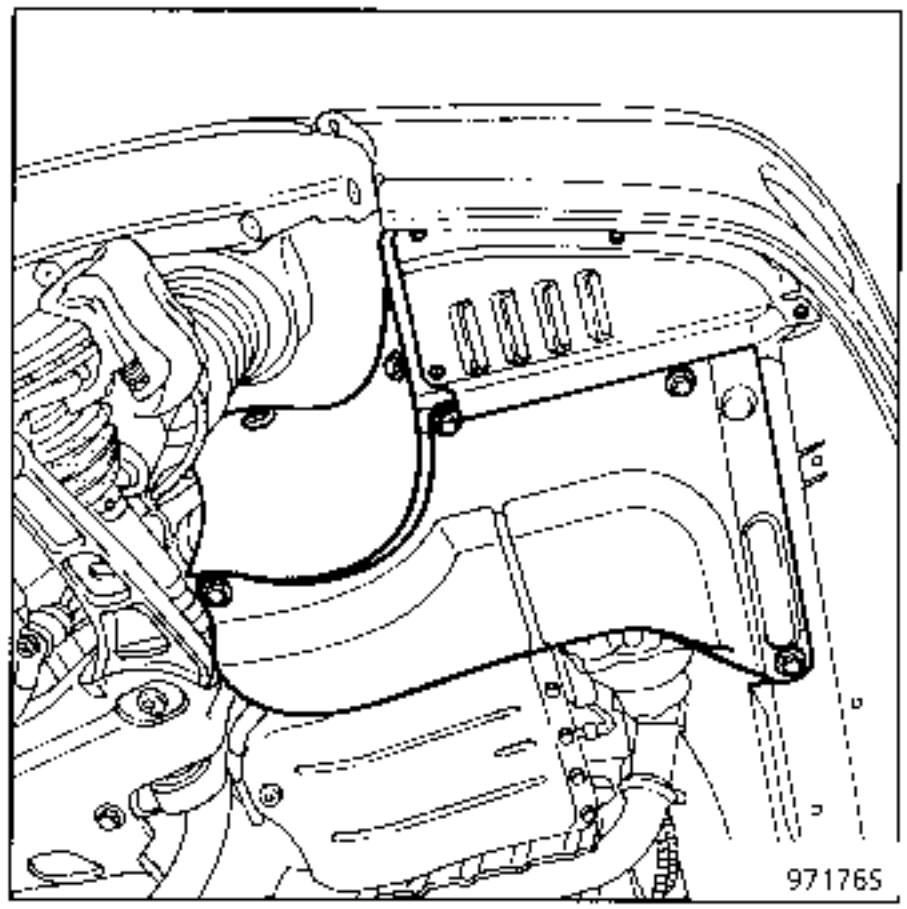
The pipes are fed via the black end piece (2) whilst the rear screen washer is in operation.



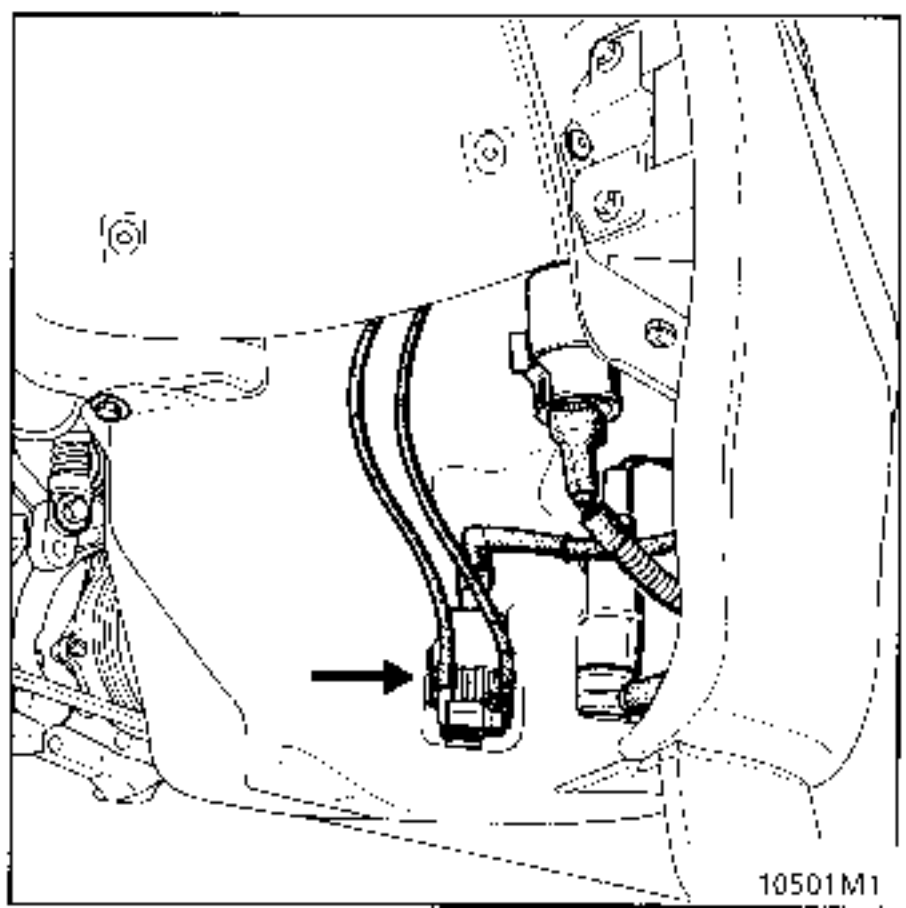
REMOVING THE ELECTRIC WASHER PUMP

Remove the engine undertray with extension.

Disconnect the connector.

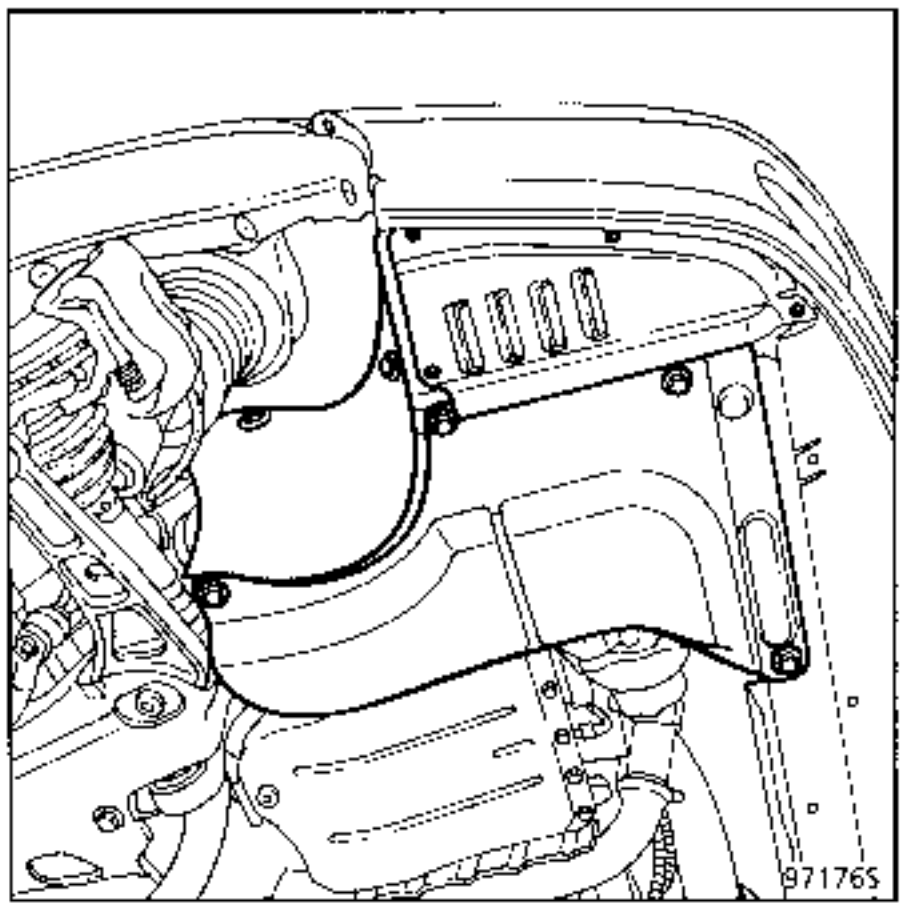


N.B.: when removing, disconnect the pump making sure that the two front and rear screen washer pipes are clearly marked.

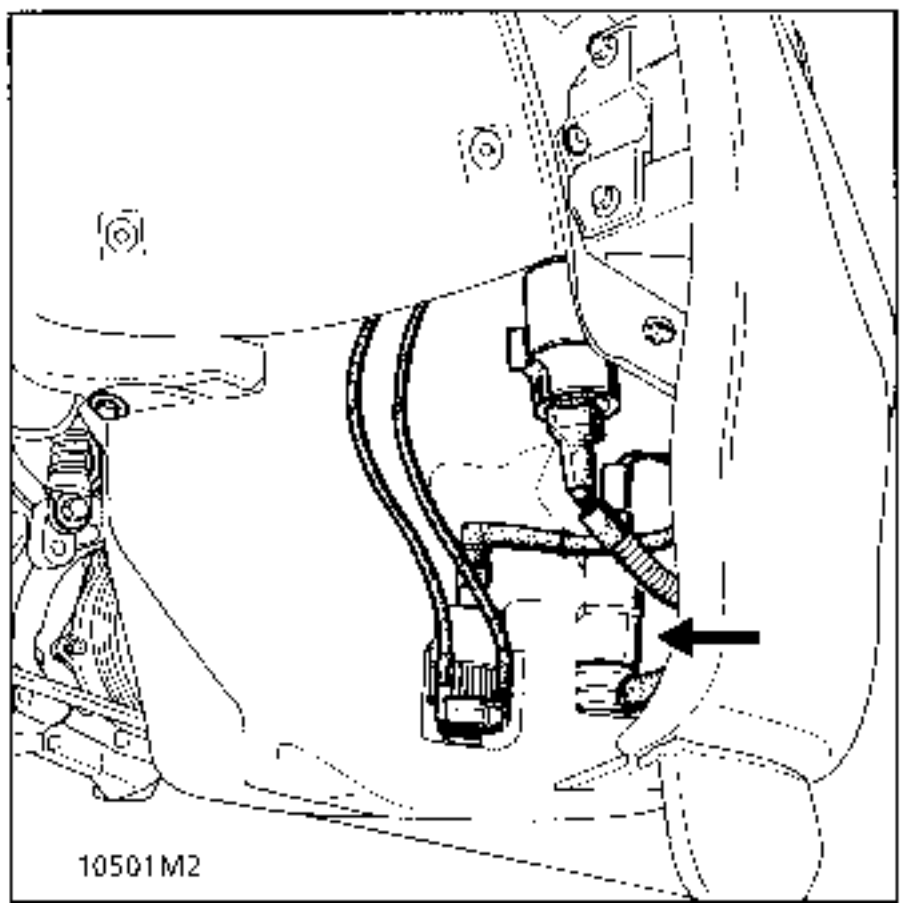


REMOVING THE ELECTRIC HEADLIGHT WASHER PUMP

Remove the engine undertray, with extension.



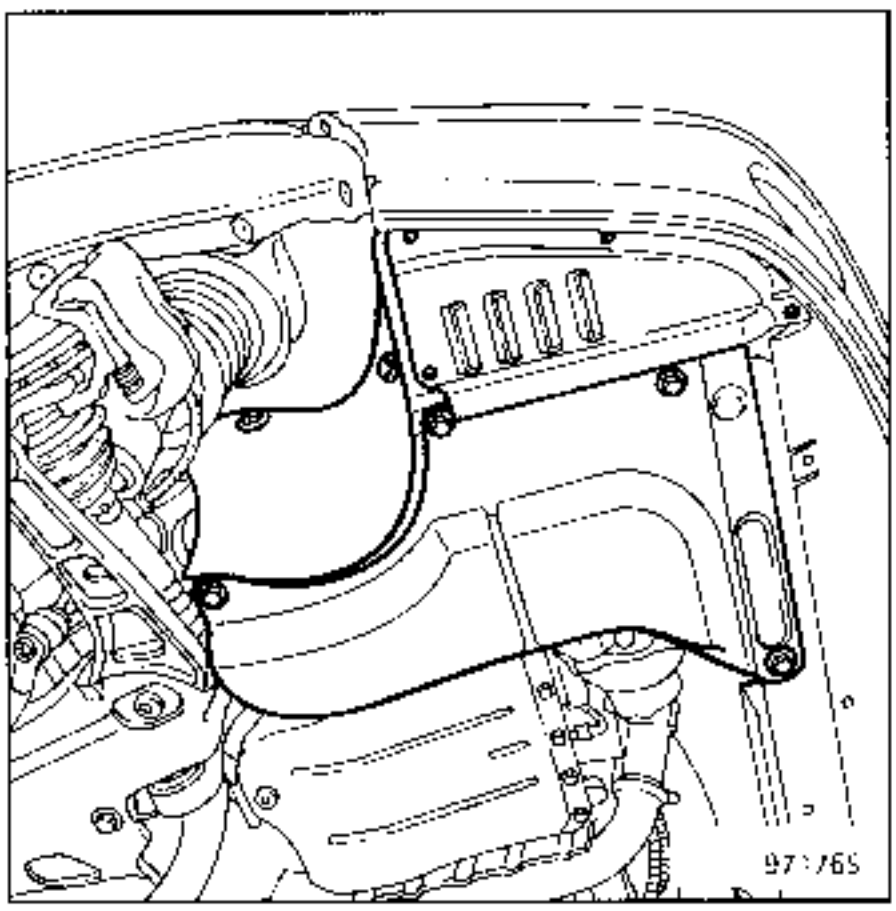
Disconnect:
- the connector
- the pipe.



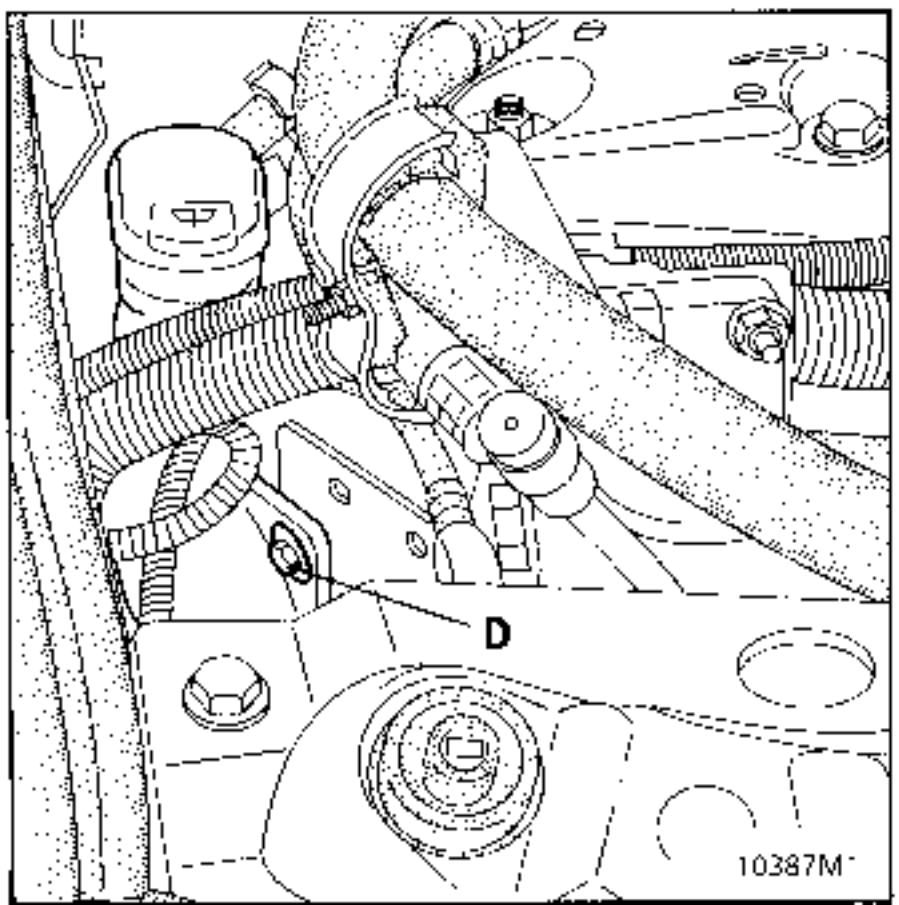
REMOVING THE WINDSCREEN WASHER BOTTLE

Remove the engine undertray, with extension.

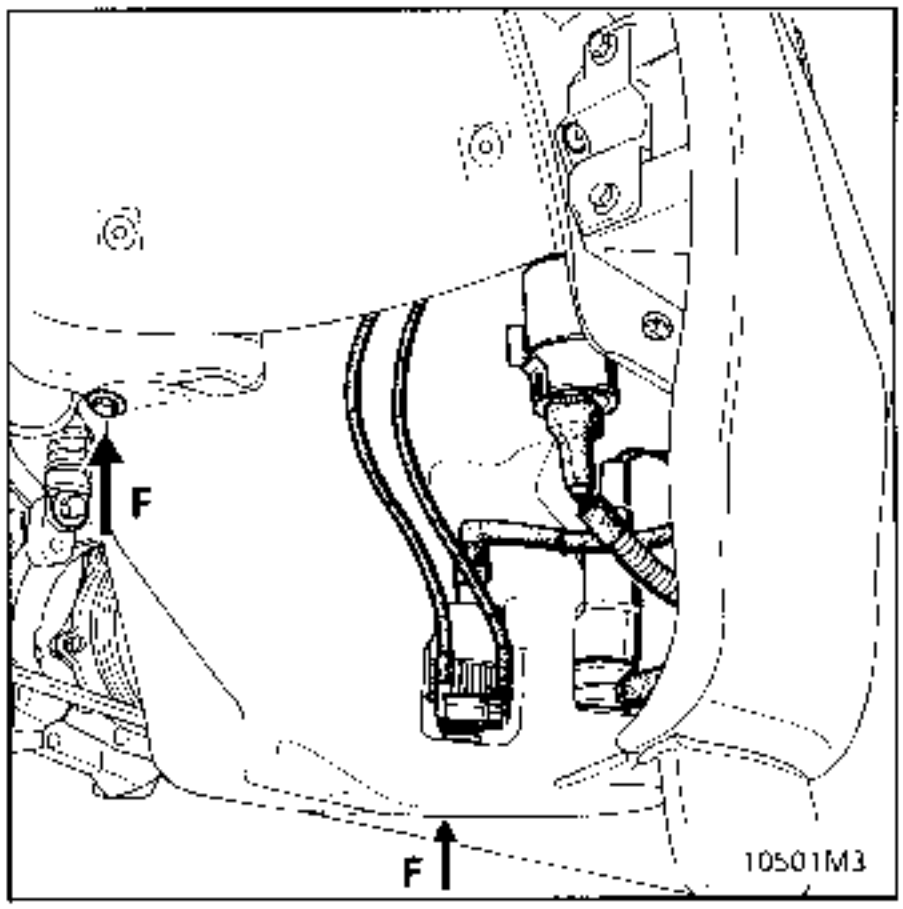
Disconnect:
The connectors
The pipes.



Remove: The filler neck from the bottle by slackening the nut (D).

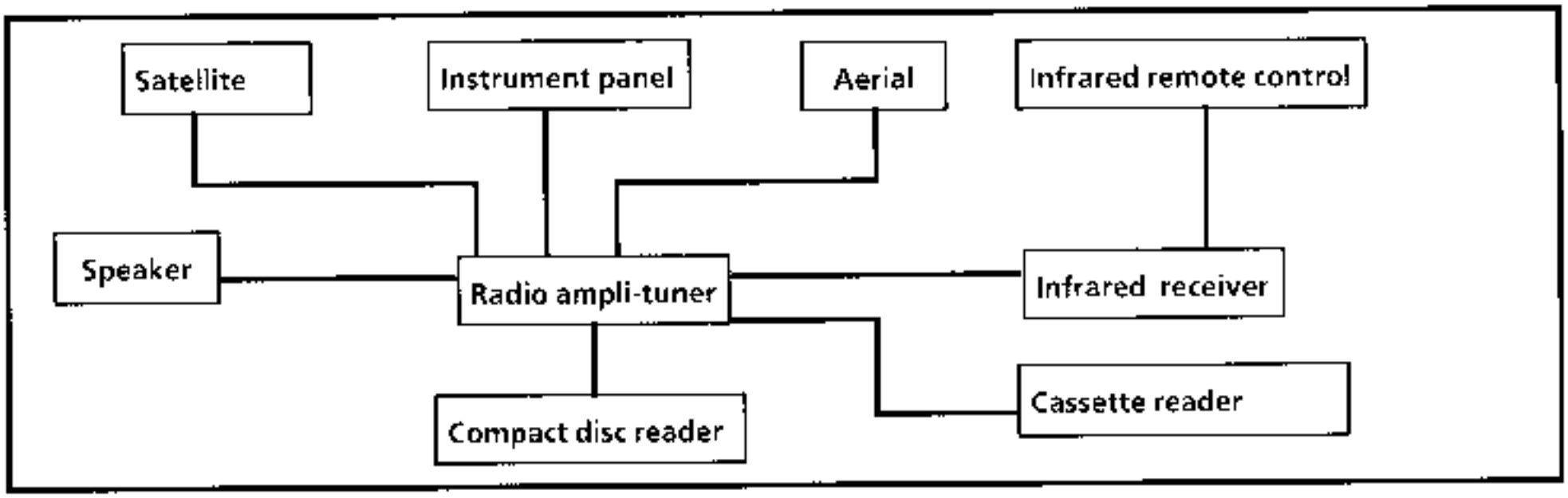


Remove the windscreen washer bottle by slackening its mounting (F) or its two mountings (F) for vehicles fitted with a headlight washer, after disconnecting its wiring.

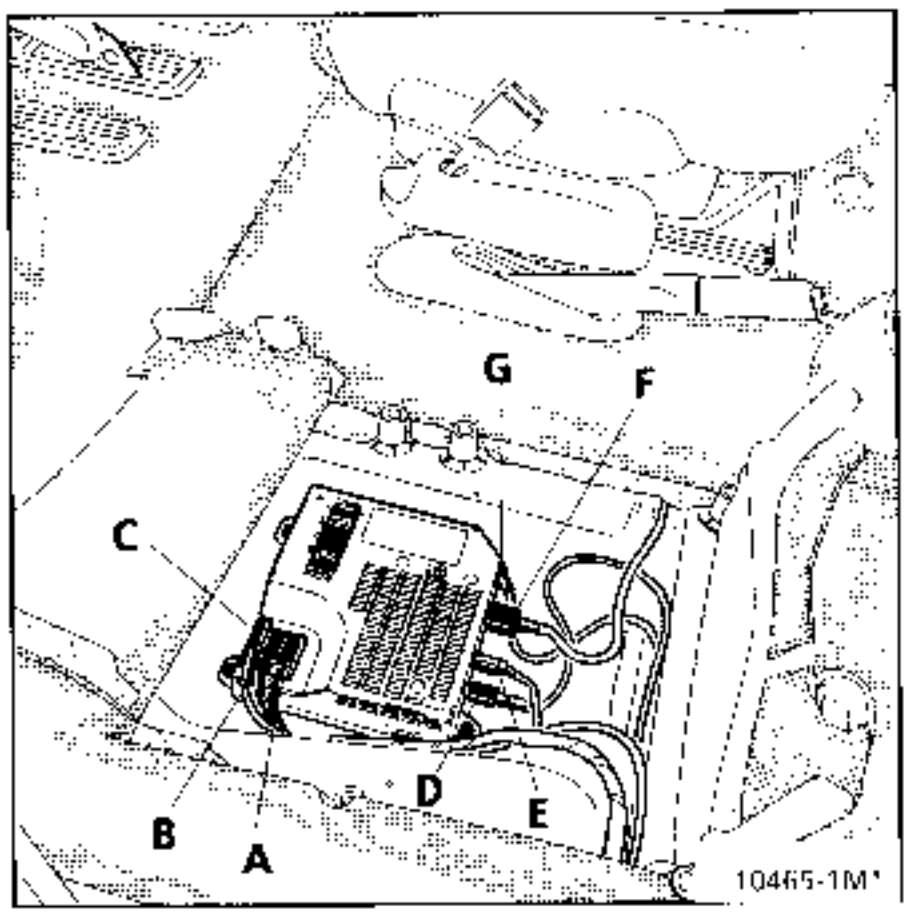


NOTE: when removing, disconnect the pump or pumps making sure that the two front and rear screen washer pipes are clearly marked.

DIAGRAM OF THE RADIO



Connection of the ampli-tuner



A: Feed to ampli-tuner
B: Speaker
C: Satellite
D: Instrument panel connection
E: Cassette reader connection
F: Compact disc reader connection
G: Aerial

INSTALLATION AND REMOVAL OF THE VARIOUS MECHANISMS

REMOVING THE AMPLI-TUNER LOCATED UNDER THE DRIVER'S SEAT

Remove:

The driver's seat.
Remove the floor carpet
The plastic protective cover (2 bolts)
Disconnect and remove the ampli tuner (3 bolts)

IMPORTANT

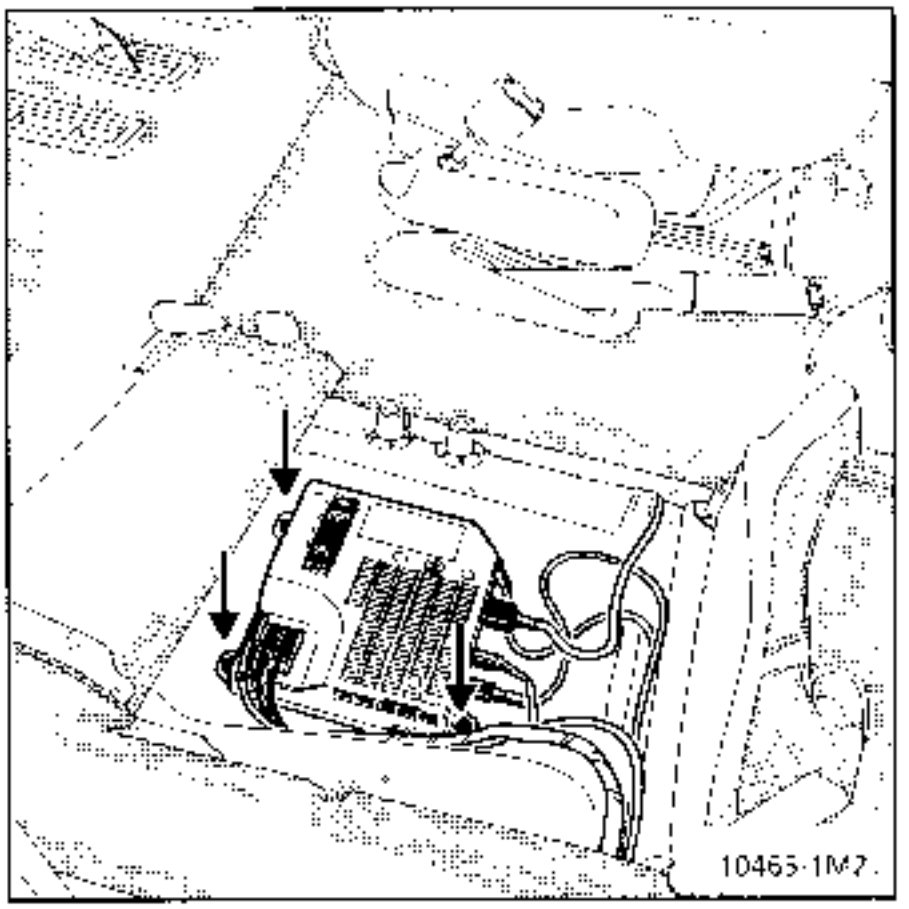
- Before removing the seat, and to avoid untimely release of the airbag or the pretensioners during the operation:
- Connect the XR25 to the vehicle
- Switch on the ignition
- Use fiche no. 49 **(ISO selector on S8 code)**

enter the code. D 4 9

Lock the airbag/pretensioner computer by means of the XR25

with the command G 8 0 *

- When this function is activated all the ignition lines are inhibited and the left hand bargraph 14 of the XR25 is illuminated.
- Wait 2 seconds for the airbag / pretensioner unit to discharge automatically.
- Switch off the ignition.



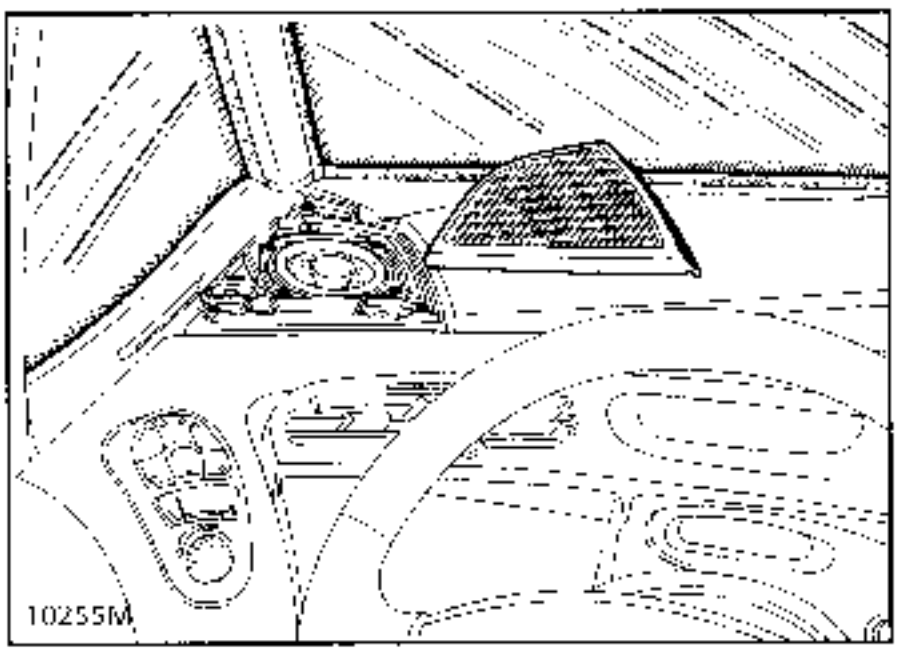
IMPORTANT :

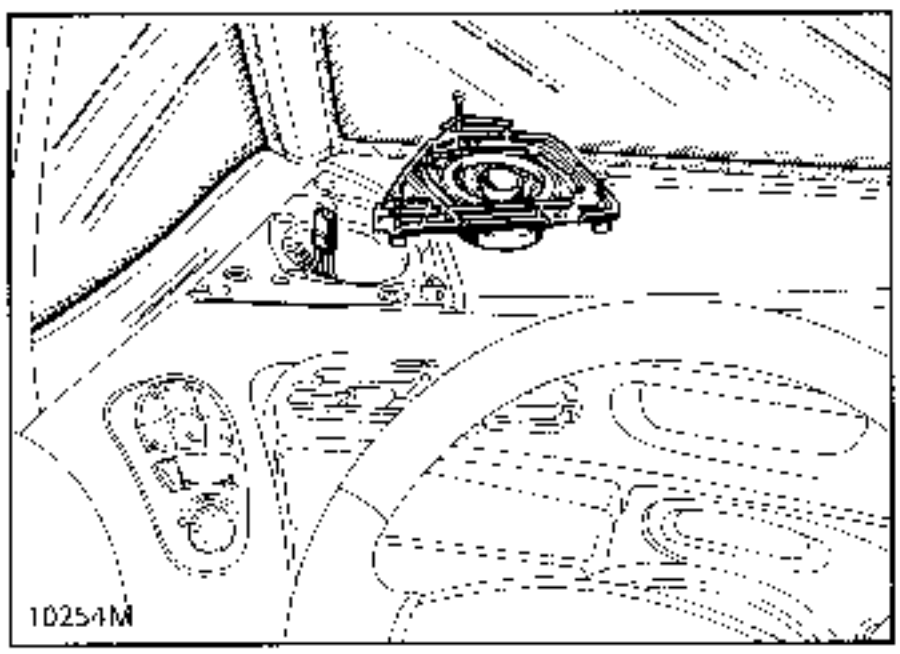
- **When replacing the seat:**
- Reconnect the connectors
- on the pretensioner side, clip the white connector as far as it will go (tight clipping).
- Carry out an inspection using the XR25. If everything is OK unlock the computer

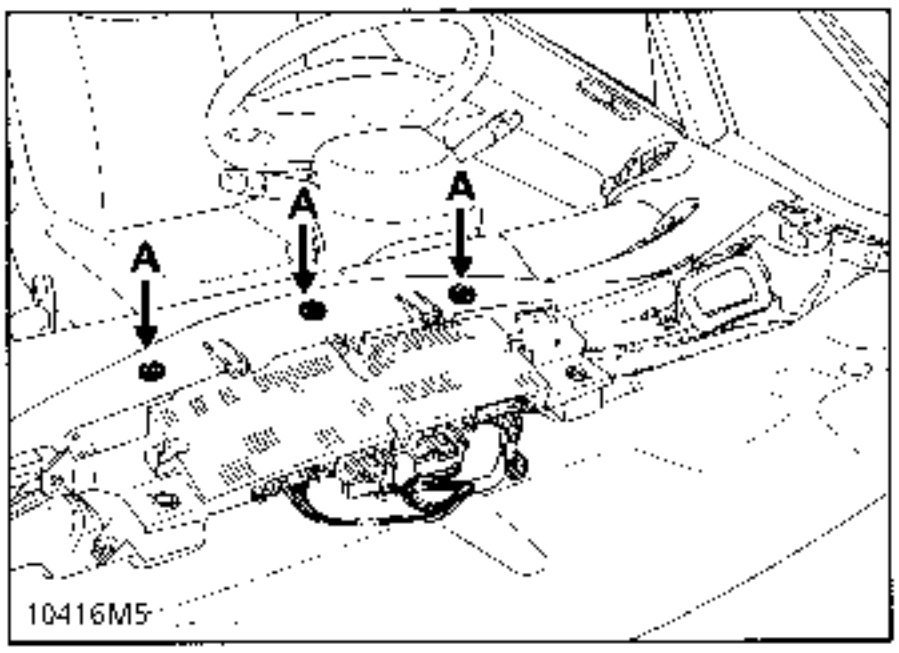
with the command G 8 1 *

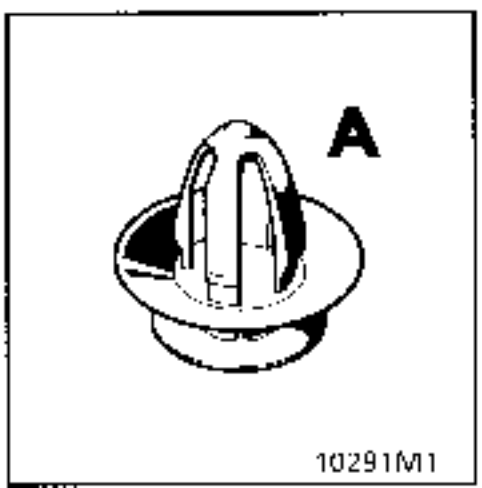
- Check that bargraph 14 LH side has extinguished.

NOTE : failure to follow these instructions could cause a system malfunction and even untimely triggering of the systems.









- The radio information display is integrated in the instrument panel.

REMOVAL

Unclip the speaker grilles by hand, starting with the edge on the air vent side.

Slacken the three mounting screws on each speaker.

Disconnect the speakers and remove them.

On V6 automatic transmission move the A.T. lever to position "2".

Raise the dashboard cover starting in the corner, and pull vertically to unclip the three mountings (A).

Remove the top section of the dashboard by pulling to the rear.

Slacken the five mounting screws from the instrument panel.

Disconnect the instrument panel.

REFITTING

Check that the three clips (A) are present.

Refitting is the reverse of removal.

Check for correct radio operation.

REMOVING THE CASSETTE READER IN THE CENTRAL STORAGE COMPARTMENT

Remove:

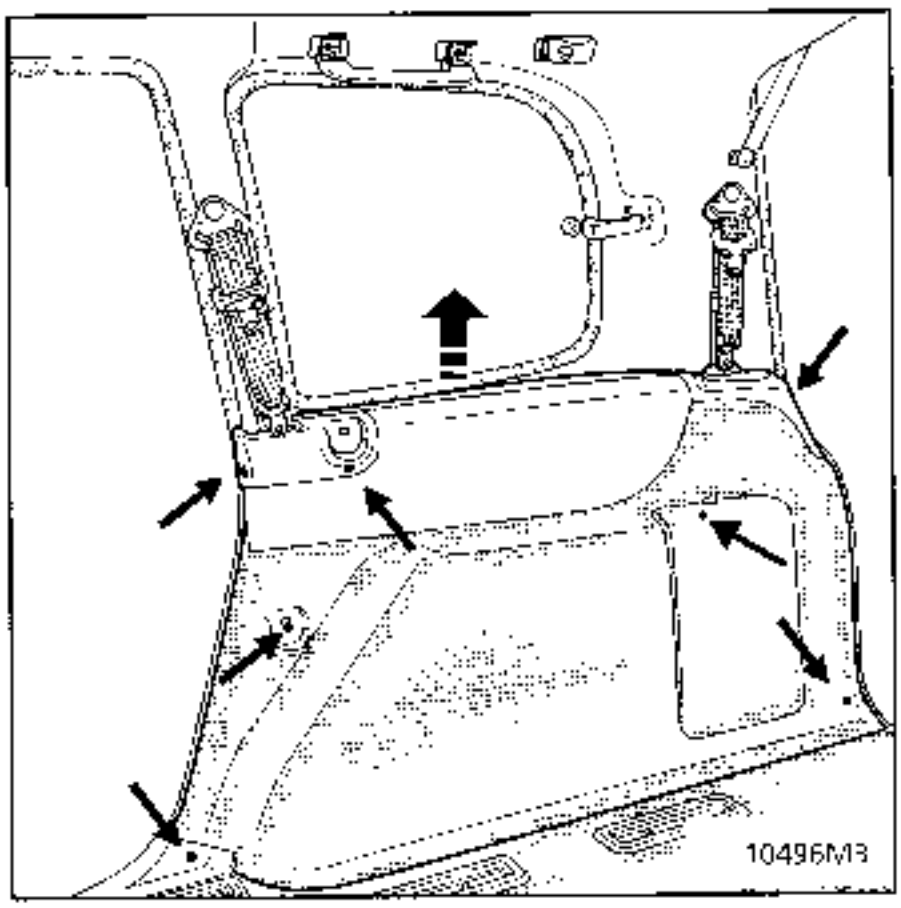
The cassette reader (2 keys).

The box side (2 clips).

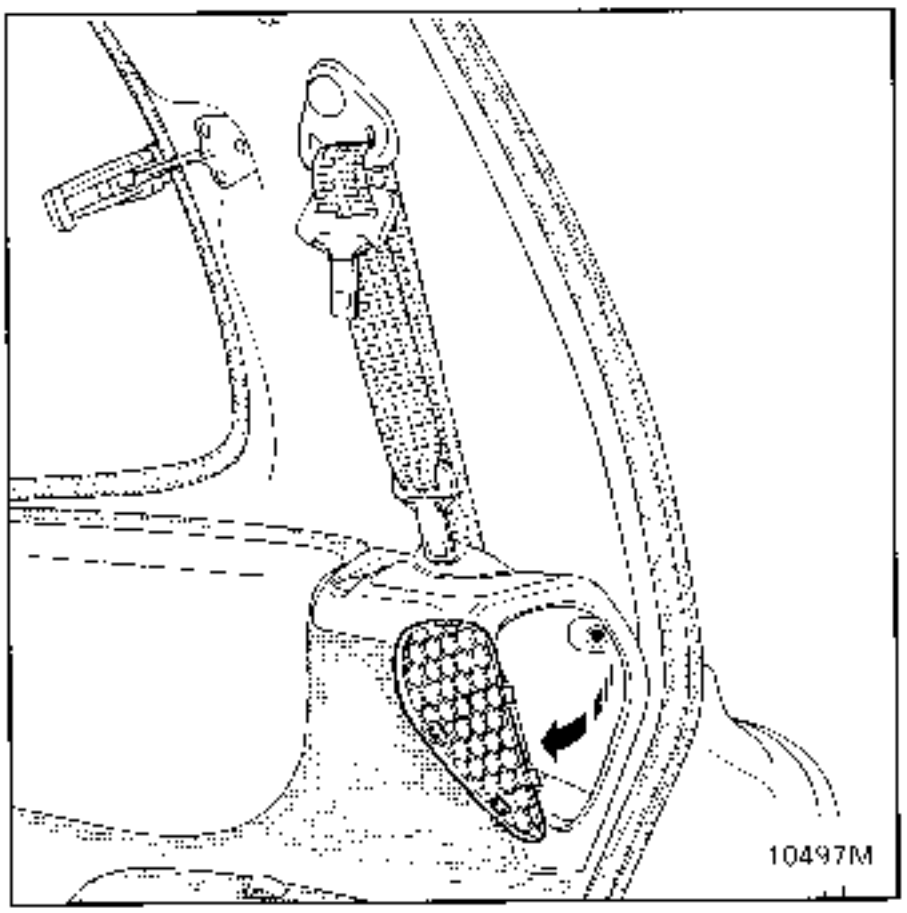
Disconnect the electrical connections.

REMOVING THE COMPACT DISC READER LOCATED IN THE LEFT HAND REAR WHEEL ARCH

Remove the mounting bolts from the left hand rear wheel arch.



The rear upper mounting bolt from the trim after unclipping the grille using a small screwdriver.



Lift up the entire trim to remove the 4 plastic upper retaining clips.

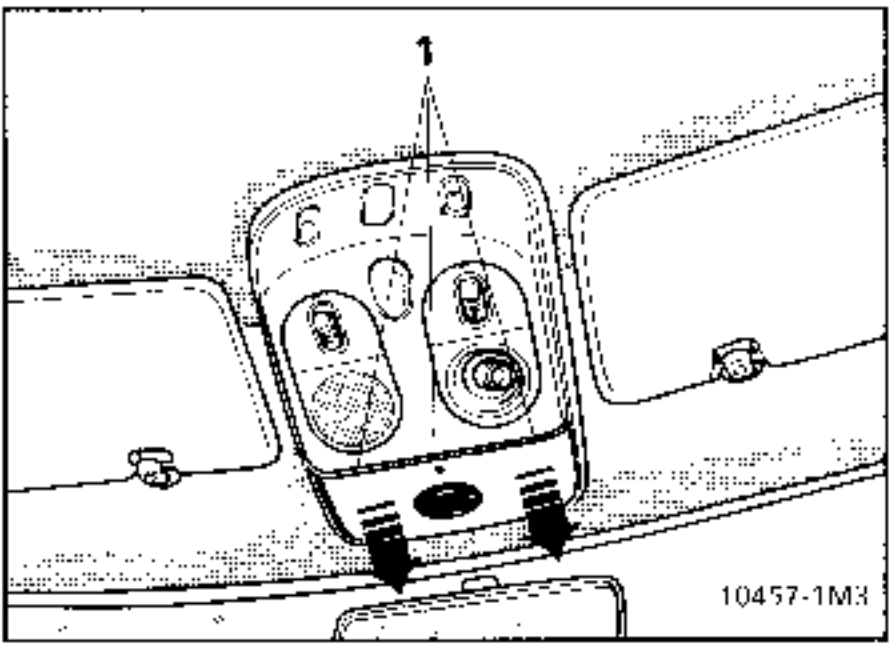
Remove the compact disc reader from its mounting.

Disconnect the electrical connections.

REMOVING THE INFRARED RECEIVER LOCATED IN THE ROOF CONSOLE

Removal:

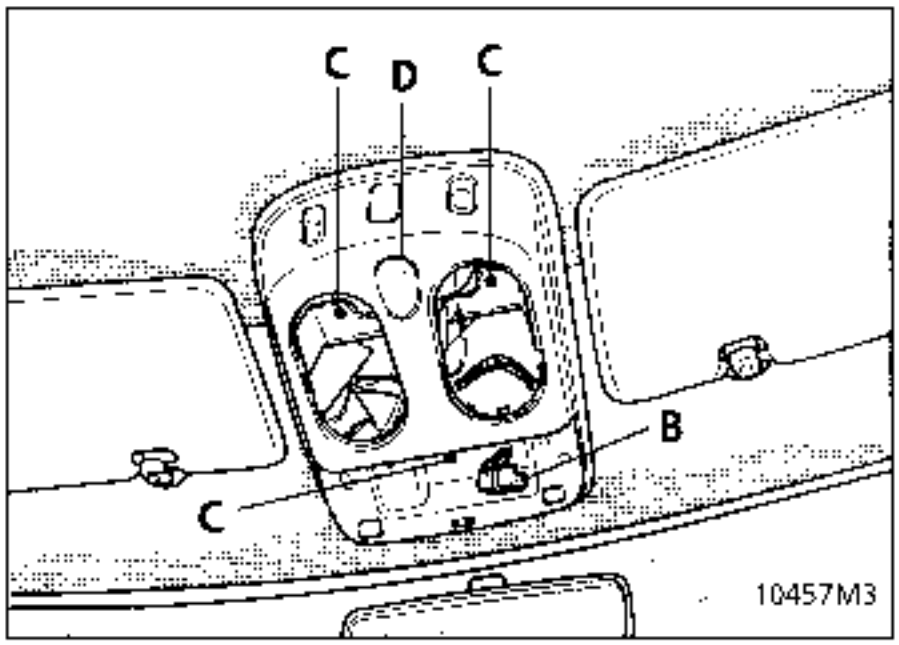
Unclip the plastic cover of the roof console supporting the infrared receiver by pushing it forward to release the three notches (1).



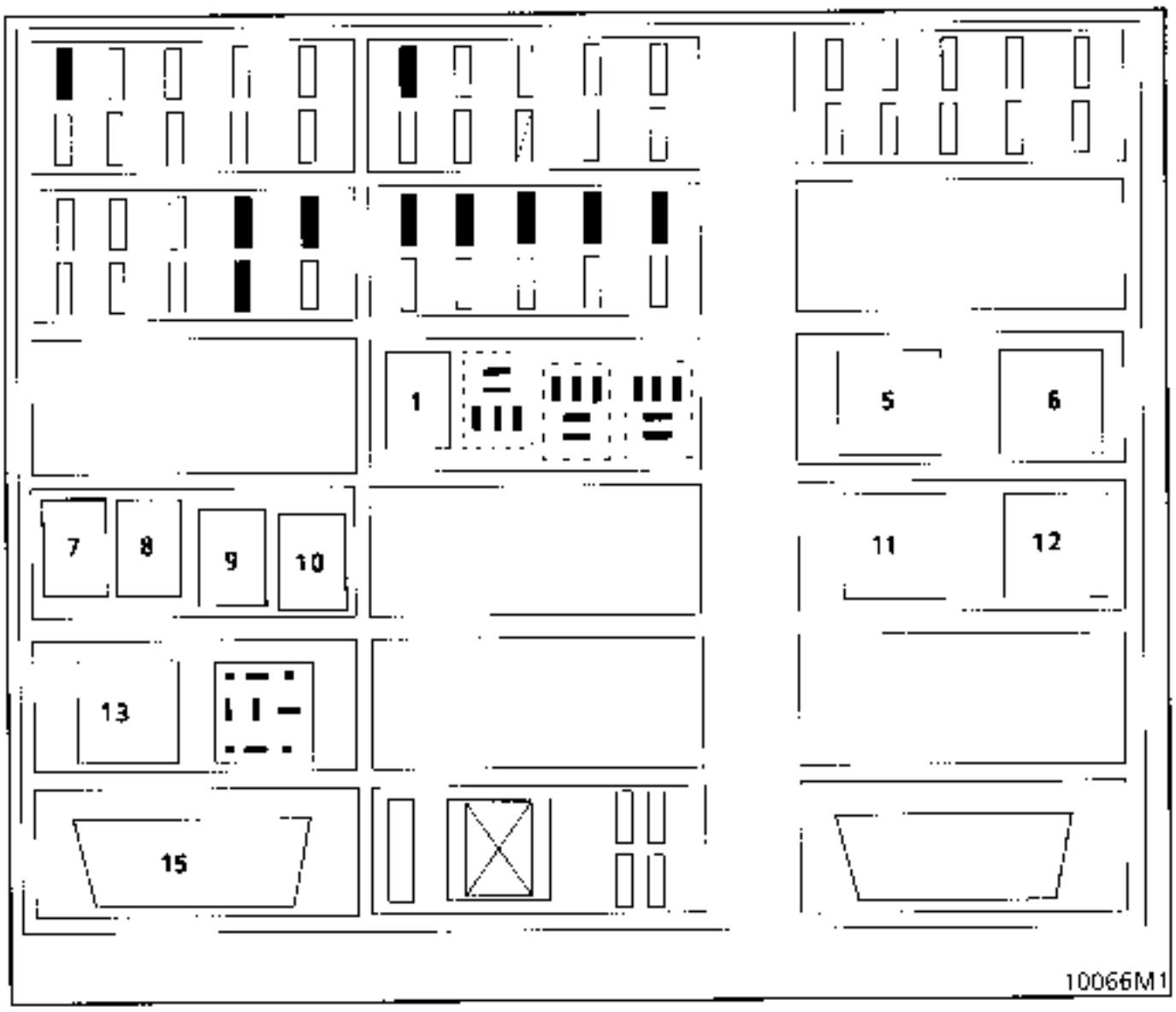
Disconnect the connector (B) and remove the cover.

Remove:
- The courtesy light
- The map reading light
- The TORX bolts (C)

Disconnect the various connectors.



Remove the infrared receiver (D), 3 bolts.



COMPLETE UNIT
This unit is located at the bottom of the dashboard on the floor on the passenger side. To reach it lift the carpet and open the fuse box cover.

IMPORTANT: After working on the connection unit check that the cover is tightly secured.

The relays:

1 Air-conditioning control relay.
2 Not used.
3 Not used
4 Not used
5 Rear electric window lock relay (child safety)
6 Rear screen demist relay
7 Rear fog light relay.
8 Rear courtesy light control
9 0 volt after PLIP relay
10 Front fog lights relay.
11. – after-ignition relay.
12. – after-ignition relay.
13. Front screen wiper timer relay.
14. Not used.
15. Diagnostic socket.

Running light: Dipped headlights operating after switching on the engine. (For certain countries).
Relays 5, 6, 11, 12 are conventional relays.

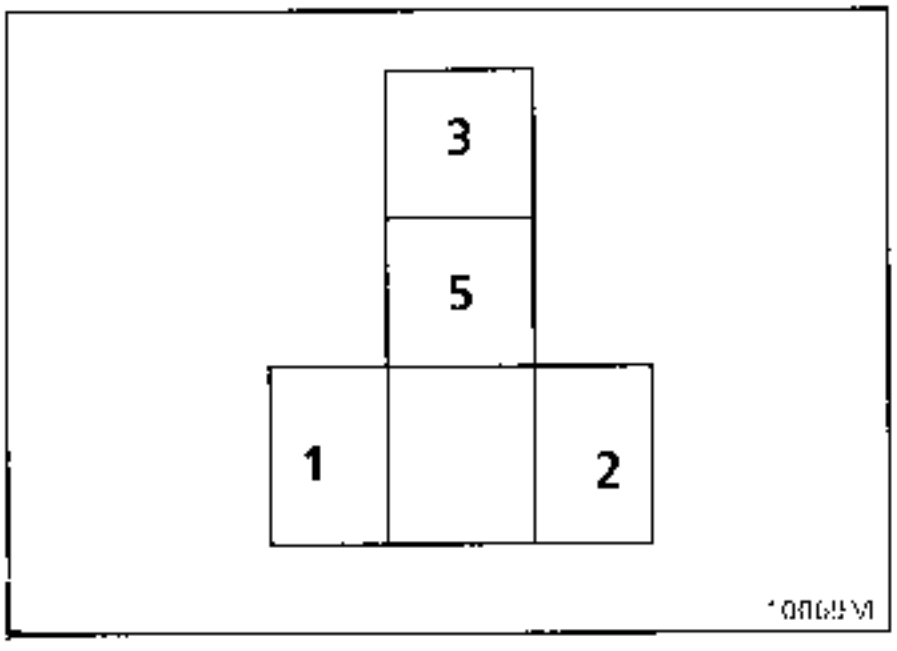
The connectors are secured to the passenger compartment connection unit.

Connector CY

Track	Allocation
A1	ı protected before ignition, pass. comp.
A2	ı protected before ignition, pass. comp
A3	ı horn
A4	ı lighting
A5	+ dipped headlights
A6	+ main beam headlights
B1	+ protected cigar lighter
B2	ı front screen wiper timer
B3	+ front screen wiper fast
B4	+ front screen wiper slow
B5	+ central indicators warning light
B6	Electronic earth
C1	· protected RH side light
C2	+ front screen washer pump or - front screen washer pump
C3	− intermittent front screen wiper slow
C4	+ front fog lights relay control
C5	- ADAC sequence
C6	- rear demist control
C7	Left hand indicator feed
C8	- boot lighting/front courtesy light switch
C9	- passenger compartment lighting/PLIP relay
D1	- air-conditioning/control panel relay
D2	Fast idle information
D3	Air-conditioning shutoff information, by sensor for diesel or by the injection computer for petrol
D4	Information on air-conditioning off to automatic transmission computer
D5	Regulator programming control
D6	Regulator programming return
D7	Low adherence control
D8	Eco/perf selector switch
D9	Not used.

Connector NO

Track	Allocation
A1	+ after ignition front screen wiper
A2	+ heating control
A3	ı after ignition heated rear screen
A4	Earth
A5	Right indicator feed
A6	+ after ignition screen wiper/ protected horn
B1	+ front fog lights relay
B2	+ front screen washer pump
B3	+ rear screen wipe timer
B4	ı demist relay control/control panel
B5	+ radio memory
B6	+ compact disc and cassette reader
B7	+ driver's position lighting
B8	ı instrument panel lighting
B9	Not used
C1	+ protected before ignition, PLIP unit
C2	
C3	+ after ignition airbag
C4	Coded information to petrol injection unit or diesel solenoid valve
C5	Diagnostic information
C6	Diagnostic information
C7	+ central door locking close control
C8	+ central door locking open control
C9	Immobiliser warning light control
	- flasher unit

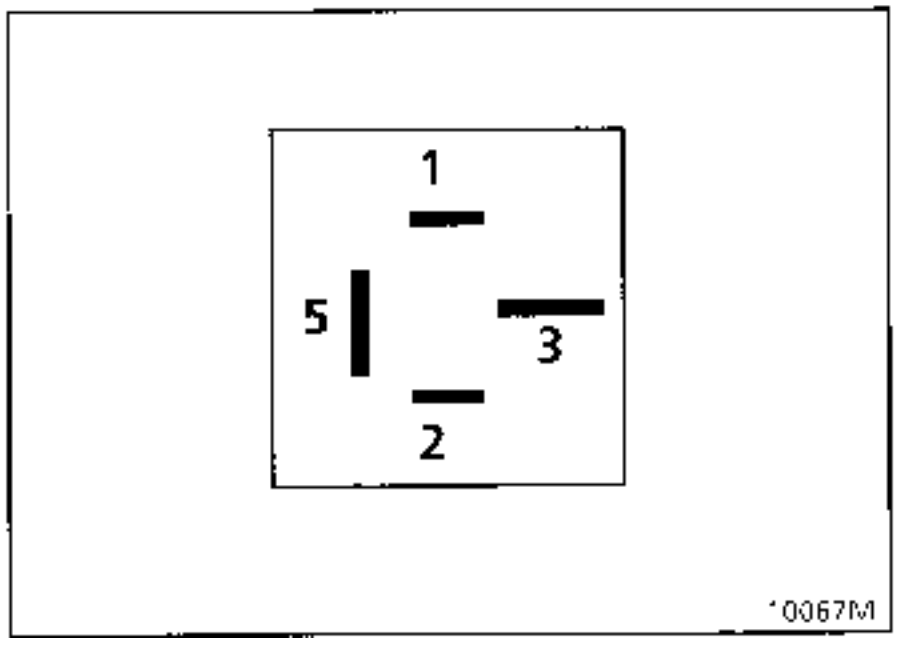


CONNECTION

Track	Allocation
1	– Protected after-ignition
2	Earth.
3	– Protected before ignition
5	Magnetic clutch.

NOTE: the number of the tracks used is taken from the connection on the component side.

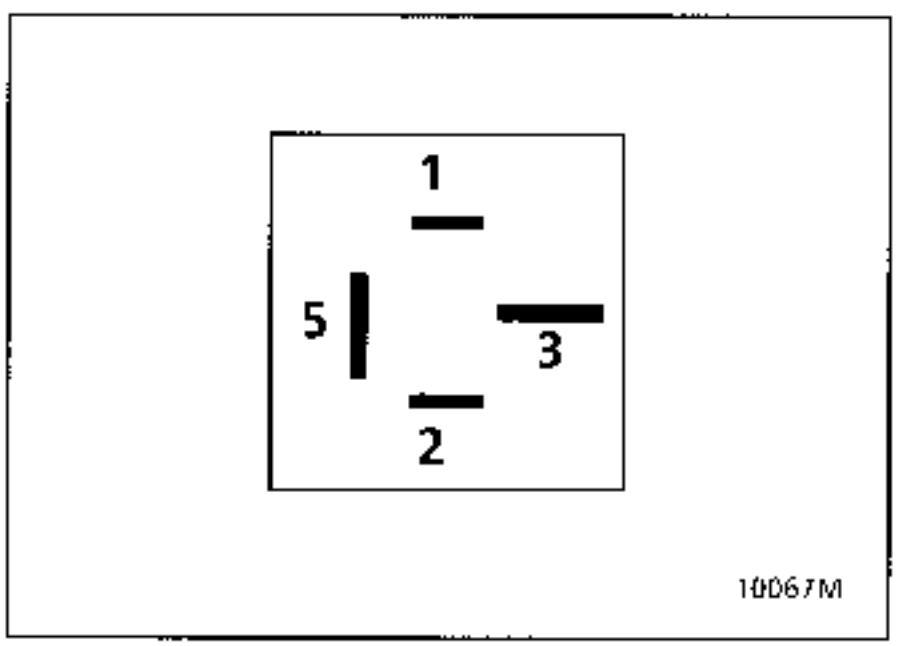
Child safety relay



CONNECTION

Track	Allocation
1	+ Protected after ignition
2	Child safety locking switch.
3	Earth.
5	Rear electric window switch.

NOTE: the number of the tracks used is taken from the connection on the component side.

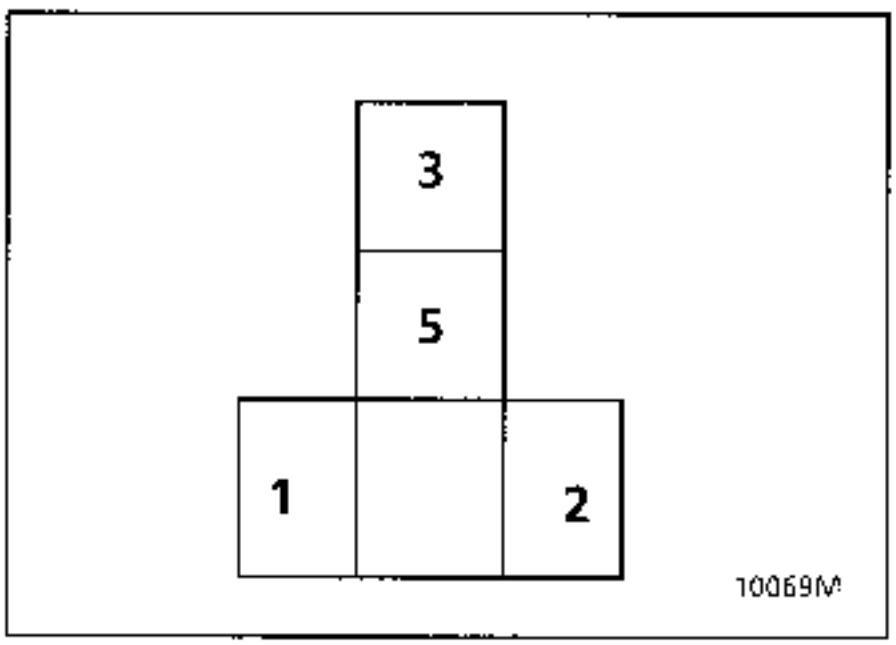


CONNECTION

Track	Allocation
1	- After ignition
2	Earth.
3	- Protected before ignition
5	Heated rear screen.

NOTE: the number of the tracks used is taken from the connection on the component side.

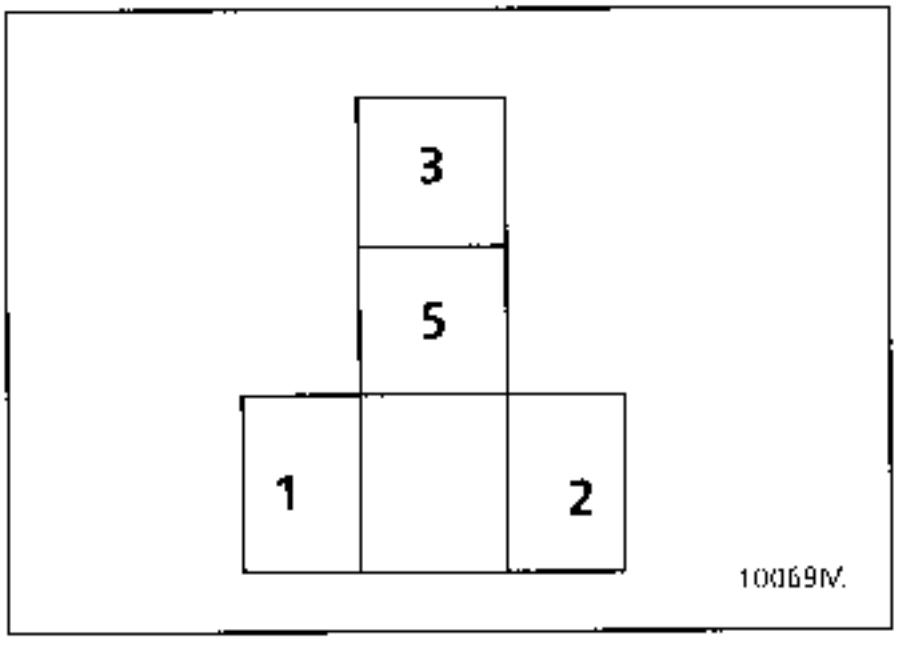
Rear fog light relay



CONNECTION

Track	Allocation
1	+ switch control.
2	Earth.
3	+ Protected before ignition
5	RH rear fog light and/or
	LH rear fog light.

NOTE: the number of the tracks used is taken from the connection on the component side.

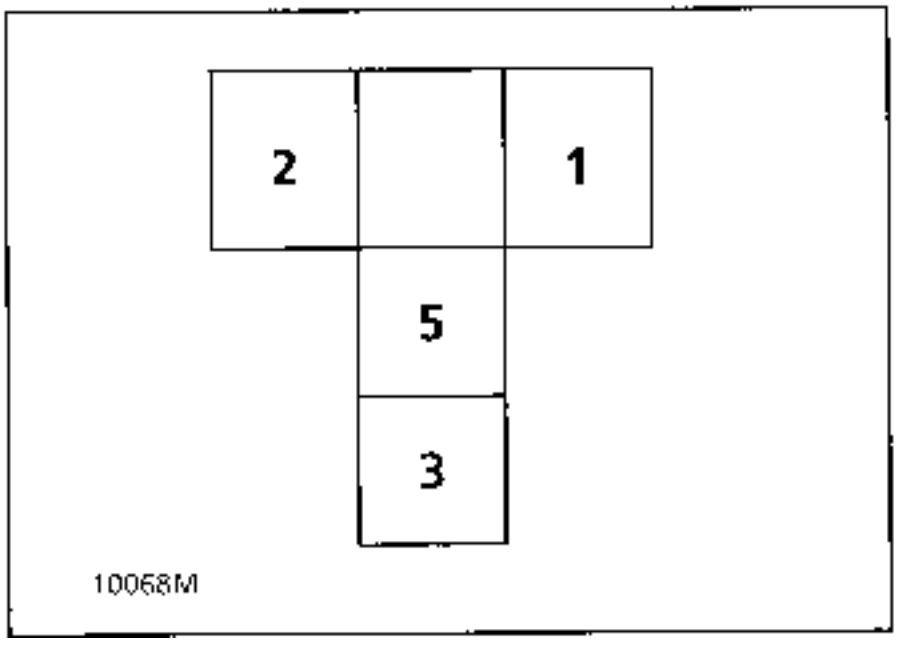


CONNECTION

Track	Allocation
1	+ Protected before ignition
2	Earth via door switch
3	Earth.
5	Rear passenger compartment lighting

NOTE: the number of the tracks used is taken from the connection on the component side.

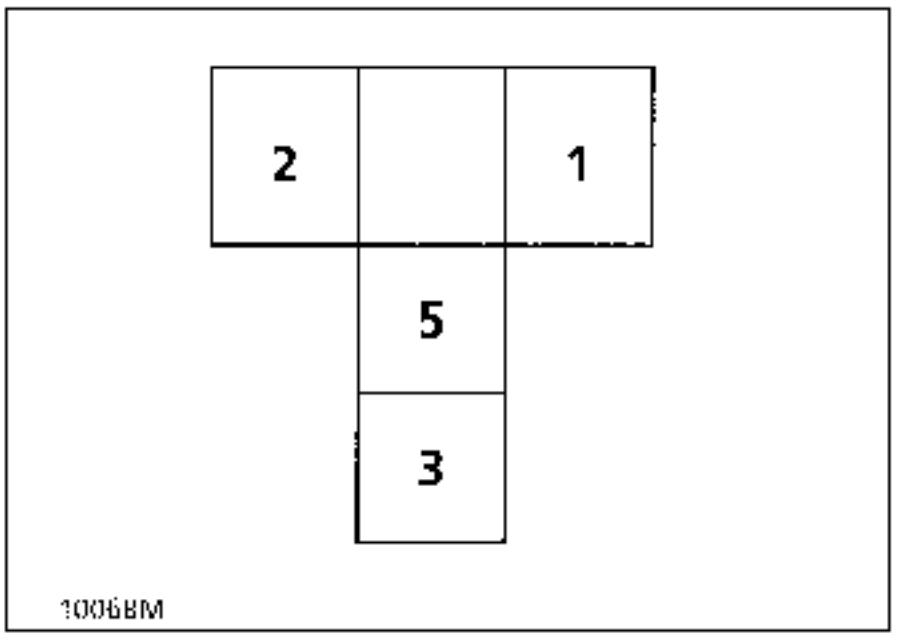
Front passenger compartment lighting relay



CONNECTION

Track	Allocation
1	+ Protected before ignition
2	Earth via unit
3	Earth.
5	Passenger compartment lighting.

NOTE: the number of the tracks used is taken from the connection on the component side.

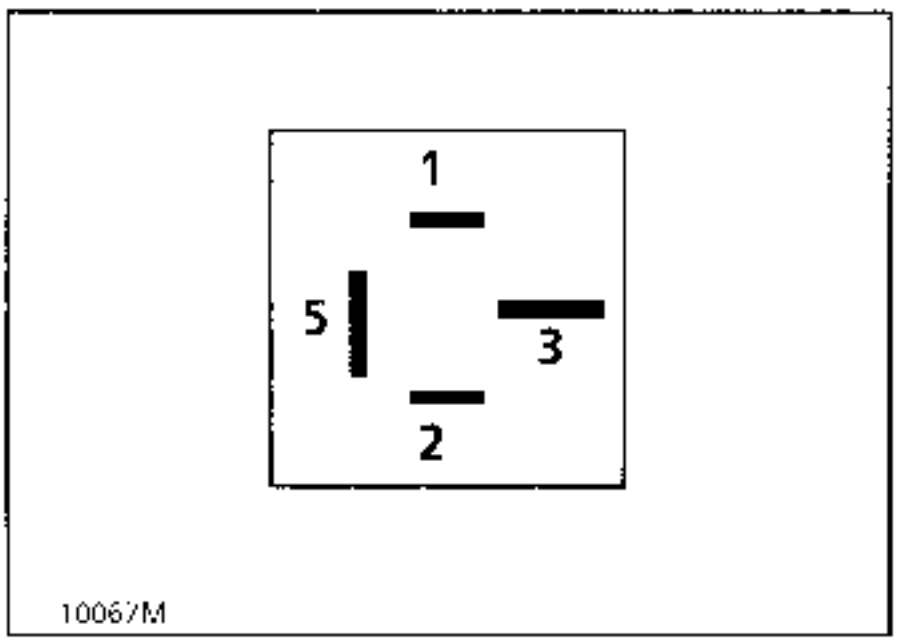


CONNECTION

Track	Allocation
1	+ relay control.
2	Earth.
3	+ Protected after ignition
5	RH front fog light and
	LH front fog light.

NOTE: the number of the tracks used is taken from the connection on the component side.

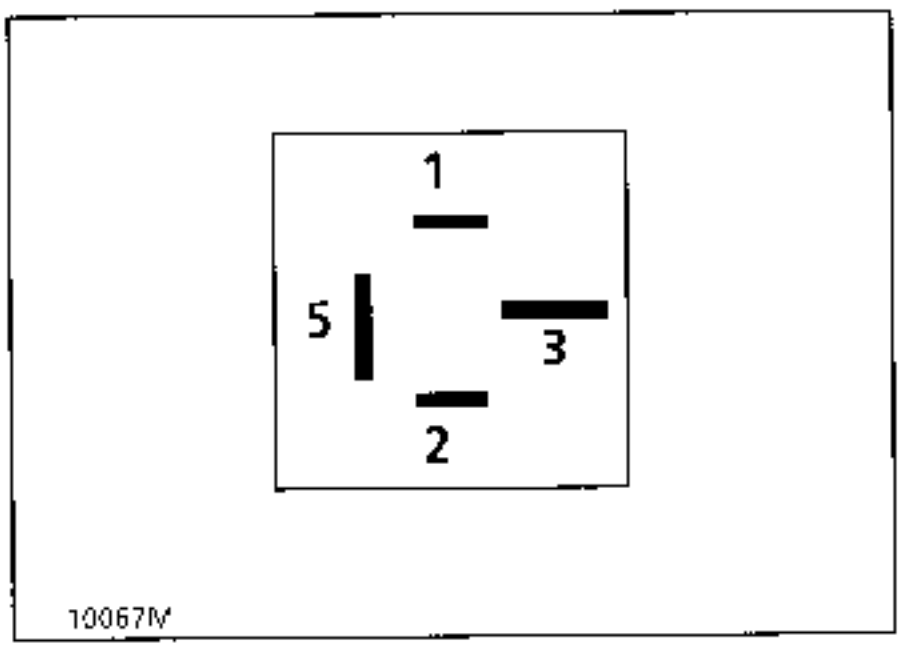
Engine after ignition relay



CONNECTION

Track	Allocation
1	– After ignition
2	Earth.
3	– Protected before ignition.
5	– Protected after ignition.

NOTE: the number of the tracks used is taken from the connection on the component side.

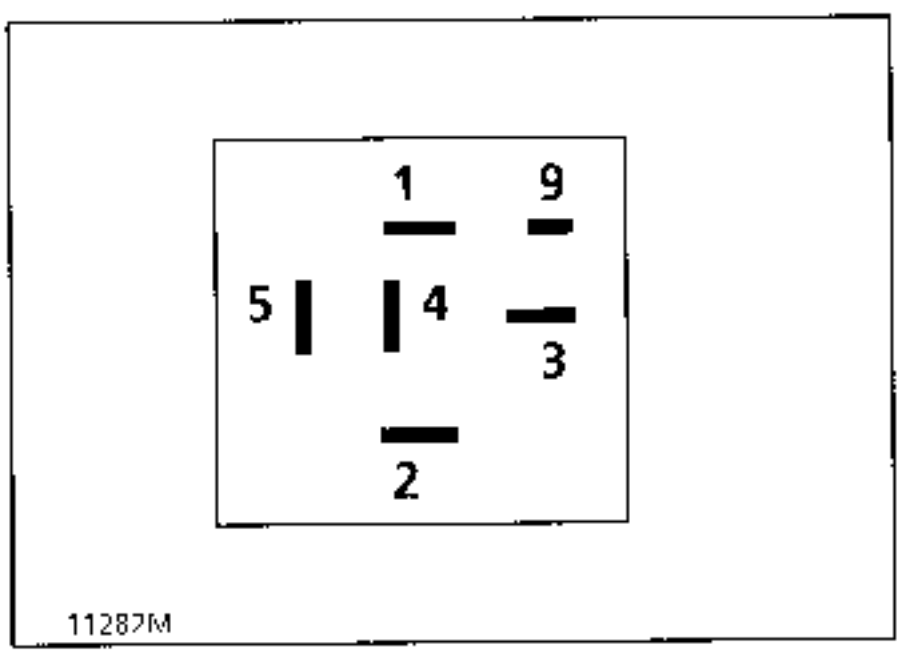


CONNECTION

Track	Allocation
1	+ After ignition
2	Earth.
3	+ Protected before ignition
5	+ Protected after ignition

NOTE: the number of the tracks used is taken from the connection on the component side.

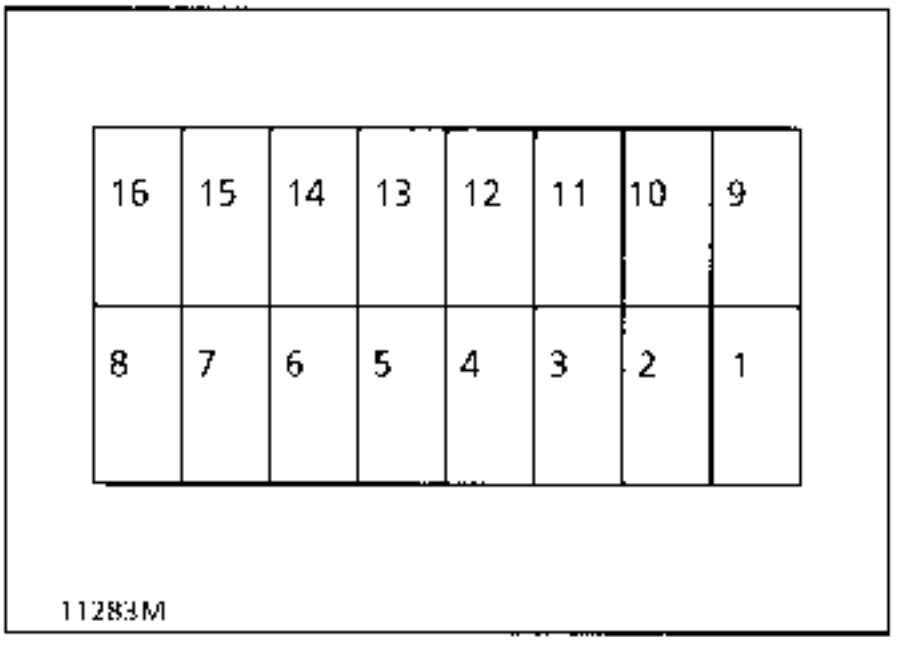
Front screen wiper timer



CONNECTION

Track	Allocation
1	Earth
2	+ windscreen washer pump
3	Front timer control
4	Park
5	Protected after ignition
9	Intermittent operation

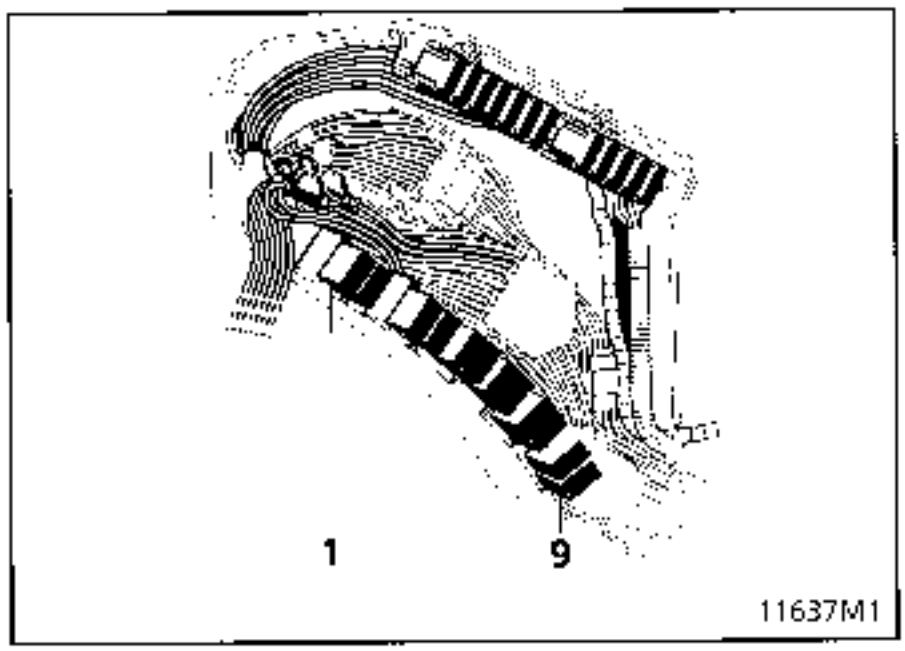
NOTE: the number of tracks used is taken from the connection on the component side.



CONNECTION

Track	Allocation
1	+ Protected after ignition
4	Earth
5	Electronic earth
7	Line K information
15	Line L information
16	+ Protected before ignition

NOTE: the number of the tracks used is taken from the connection side of the diagnostic socket:



COMPLETE UNIT
This unit is located in the engine compartment on the left hand wheel arch.

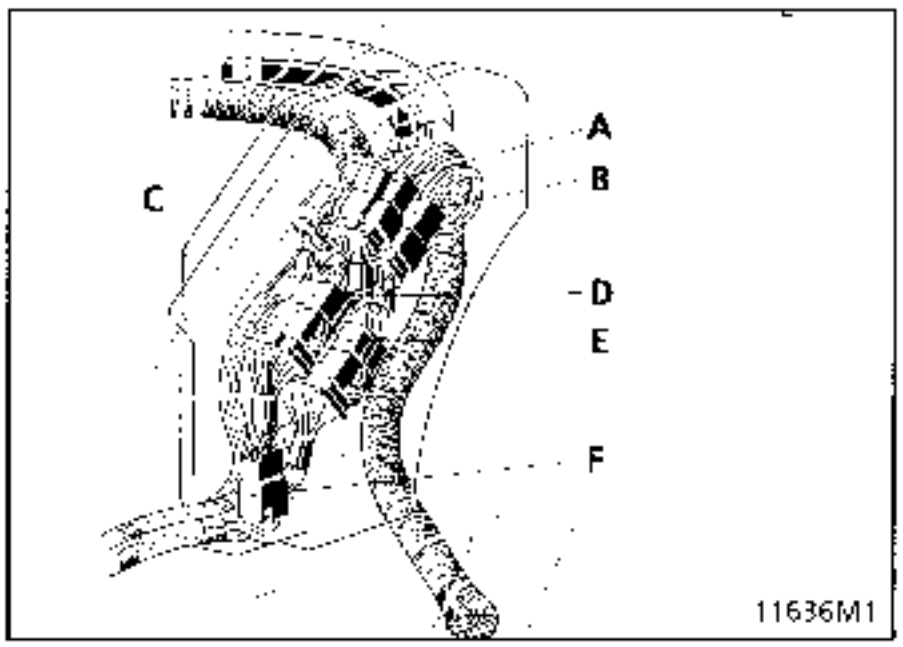
IMPORTANT: After working on the connection unit check that the plastic cover is tightly secured.

The relays: Diesel version.

1 Diesel injection computer relay.
2 **Feed relay for pre-postheating electronic unit/solenoid valve MOT.JEOH**
3 Starting relay.
4 Daytime running light relay
5 Heating ventilation relay
6 Not used
7 Not used
8 Not used
9 Not used

The relays: petrol version.

1 Fuel pump relay
2 Injection pump relay
3 Starter relay
4 Daytime running lights relay
5 Heating ventilation relay
6 2nd speed cooling fan relay.
7 Cooling fan relay
8 Antipercolation relay/**Cooling fan relay (in 4-cylinder version)**
9 Cooling fan relay



A Trailer connection
B A.B.S./fuel gauge and sender unit connection
C AT connection
D Front connection
E Engine connection
F Fan connection

Grey connector (A)

Track	Allocation
A1	· RH side light.
A2	· LH side light.
A3	LH indicator feed.
A4	RH indicator feed.
A5	· Stop light
A6	Not used
A7	– Rear fog light
A8	Not used
A9	– After ignition

Blue connector (B)

Track	Allocation
A1	Brake pad wear warning light.
A2	Fuel level information
A3	0 volt gauge/sender unit
A4	– fuel pump/ injection
A5	Not used.
A6	Not used
B1	+ After ignition A.B.S.
B2	+ Stop lights.
B3	A.B.S. warning light
B4	Diagnostic information
B5	Diagnostic information
B6	Not used

CY connector (C)

Track	Allocation
A1	+ After ignition automatic transmission unit
A2	Brake pedal switch information
A3	Eco/perf. selector switch
A4	Automatic transmission fault warning light
A5	Kickdown information
A6	Low adherence control
A7	+ Reversing fuse
A8	+ After ignition automatic transmission
A9	Information on air-conditioning cut-out by automatic transmission computer
B1	Not used
B2	Not used.
B3	Not used.
B4	Not used.
B5	Not used.
B6	Not used.
B7	Not used.
B8	Not used.
B9	Starting relay control

Blue connector (D)

Track	Allocation
A1	+ Protected main beam headlights
A2	– Protected main beam headlights.
A3	Not used.
A4	Not used.
A5	+ Protected dipped headlights.
A6	+ Protected dipped headlights.
B1	+ RH side light.
B2	+ LH side light.
B3	Not used.
B4	+ Rear screen washer pump.
B5	LH indicator feed.
B6	RH indicator feed.
B7	+ Front screen washer pump/earth
B8	Headlight adjustment control
B9	Not used
C1	Deceleration information
C2	Retardation information
C3	Cruise control feed/cruise control stop switch
C4	+ Stop light
C5	Not used
C6	Not used
C7	Not used
C8	Not used
C9	Not used

Black connector (E)

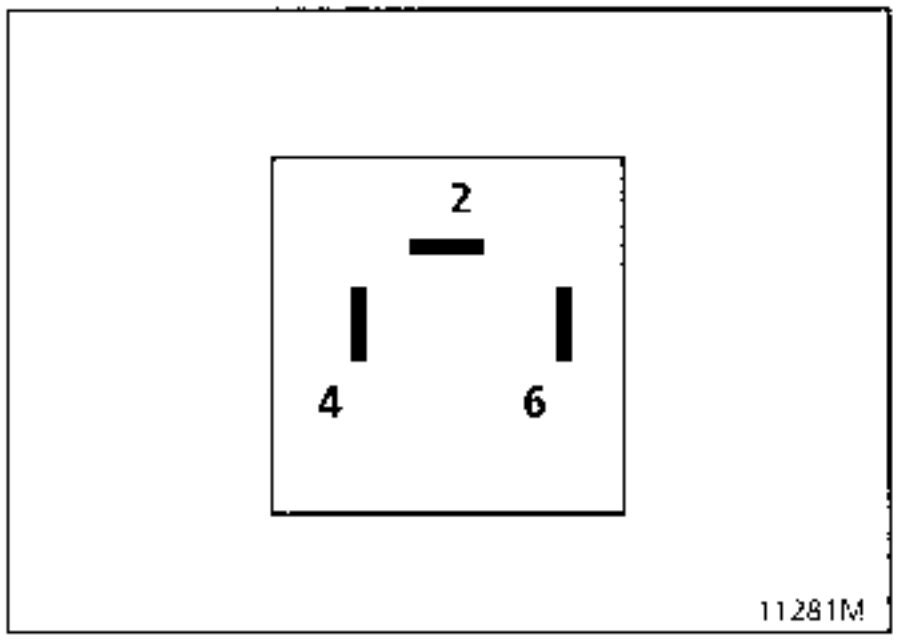
Track	Allocation
A1	+ Starter solenoid
A2	+ Protected battery
A3	Fuel flow information
A4	I Starter.
A5	I Protected after ignition stop lights.
A6	I Fuel pump/injector.
B1	Diagnostic information.
B2	Oil pressure warning light.
B3	Diagnostic information.
B4	Not used
B5	Speed information.
B6	Coolant temperature information.
B7	- Coolant temperature warning light.
B8	Engine speed information.
B9	I Diesel injection unit/ pre-postheating timing and EGR
C1	Antipercolation relay control/ cooling fan unit.
	Coded information
C2	Not used.
C3	Oil level timing earth
C4	Oil level sensor information
C5	- Preheating warning light
C6	Earth for injectors 2 and 3
C7	Reversing lights
C8	I After ignition
C9	

Black connector (E)) (contd.)

Track	Allocation
D1	Not used.
D2	Not used.
D3	Not used.
D4	Not used.
D5	Not used.
D6	Not used.
D7	- Air-conditioning cutout information
D8	- Magnetic clutch.
D9	Fast idle information.

Grey connector (F)

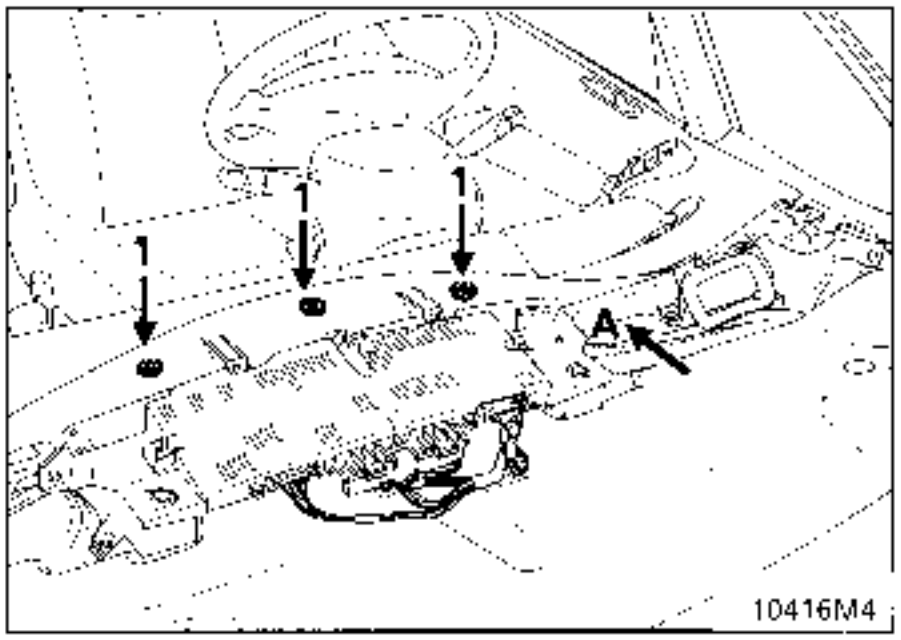
Track	Allocation
A1	– RH side light
A2	- LH side light
A3	Left indicator feed.
A4	Right indicator feed.
A5	– Stop lights.
A6	Reversing light feed
A7	+ rear foglight.
A8	Not used.
A9	+ After ignition.



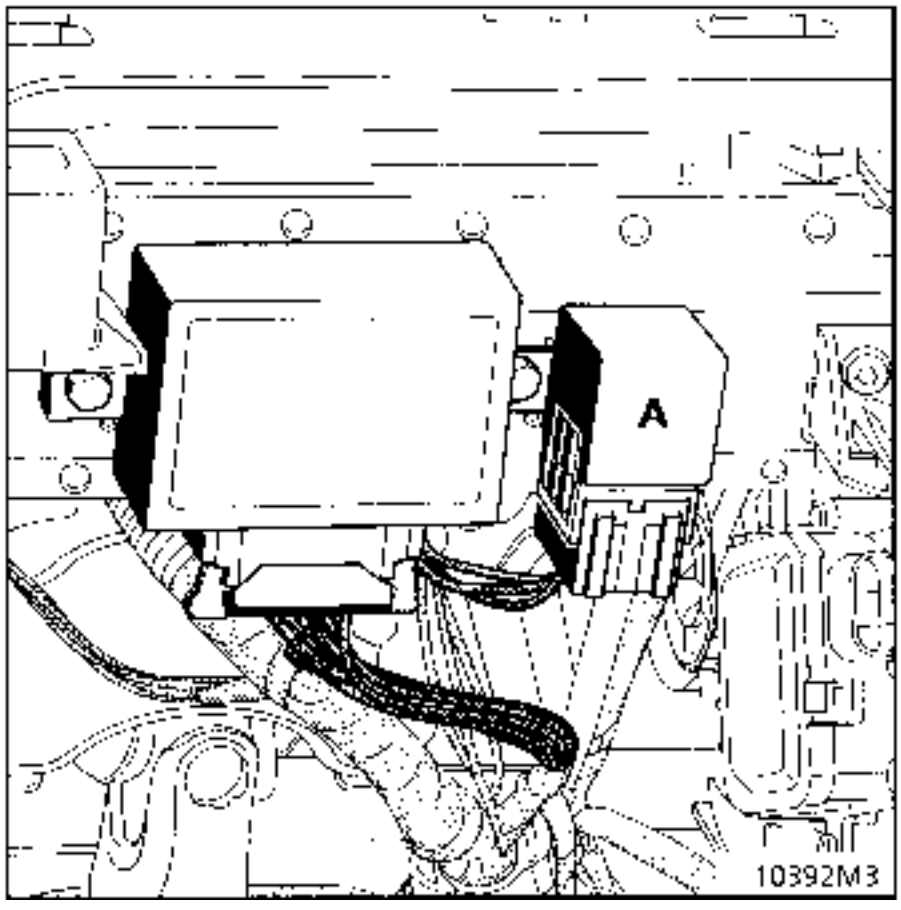
CONNECTION

Track	Allocation
2	+ after ignition via switch
4	– Warning light
6	Earth

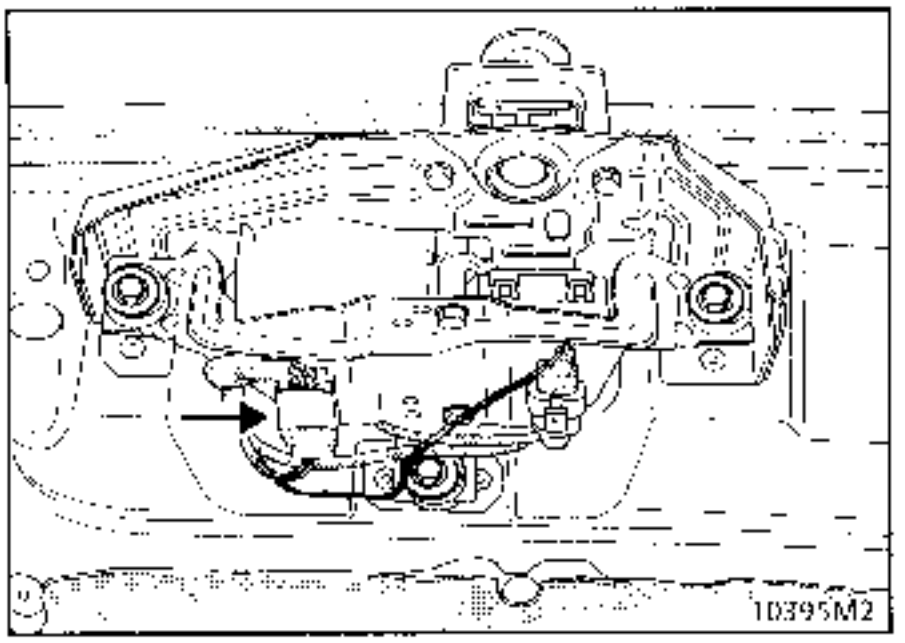
NOTE: the number of tracks used has been taken from the connection on the component side.



To gain access to the system (A).
Remove the speaker grills by hand, starting with the edge on the air vent side.
Unscrew the three mountings from each speaker support.
Disconnect the speakers and remove them.
Lift the top of the dashboard, starting in the corner, and pull vertically to unclip the three mountings (1).
When replacing, make sure that the three clips (1) are present.



Rear screen wiper timer, opening screen

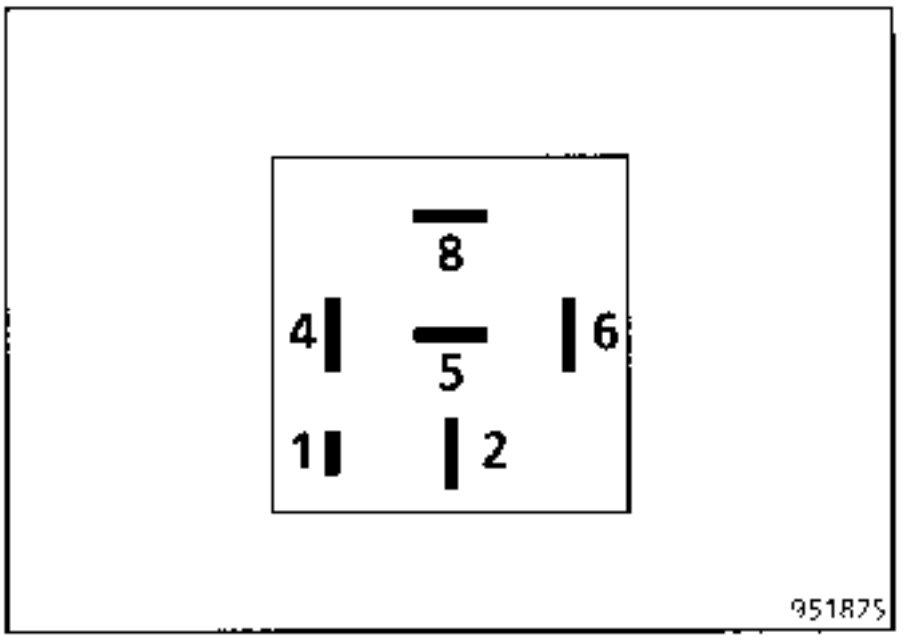


CONNECTION

Track	Allocation
A1	+ After ignition feed
A2	Not used
A3	Earth
B1	Timed motor output.
B2	+ Screen washer pump
B3	Open screen detection switch.

NOTE: To gain access to the timer incorporated in the motor, remove the tailgate trim.
The number of the tracks used has been taken from the connection on the component side.

Rear screen wiper timer, fixed screen



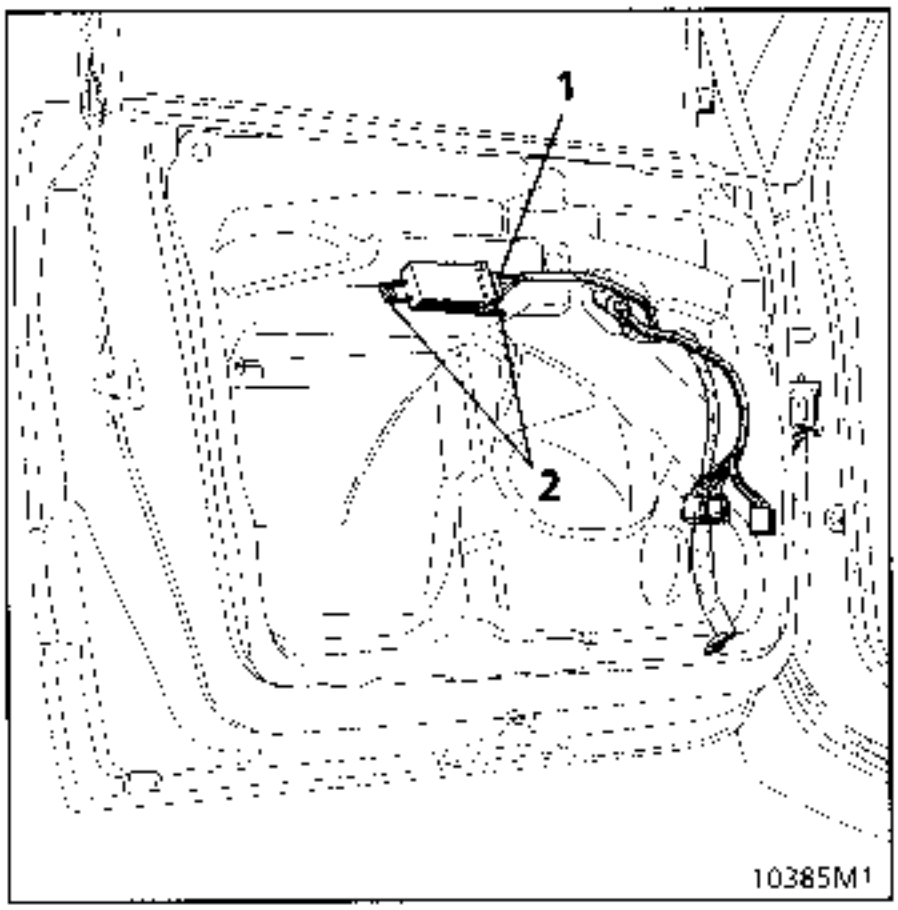
CONNECTION

Track	Allocation
1	Timed output to motor
2	Timer control
4	Earth
5	Park.
6	+ screen washer pump.
8	+ after ignition.

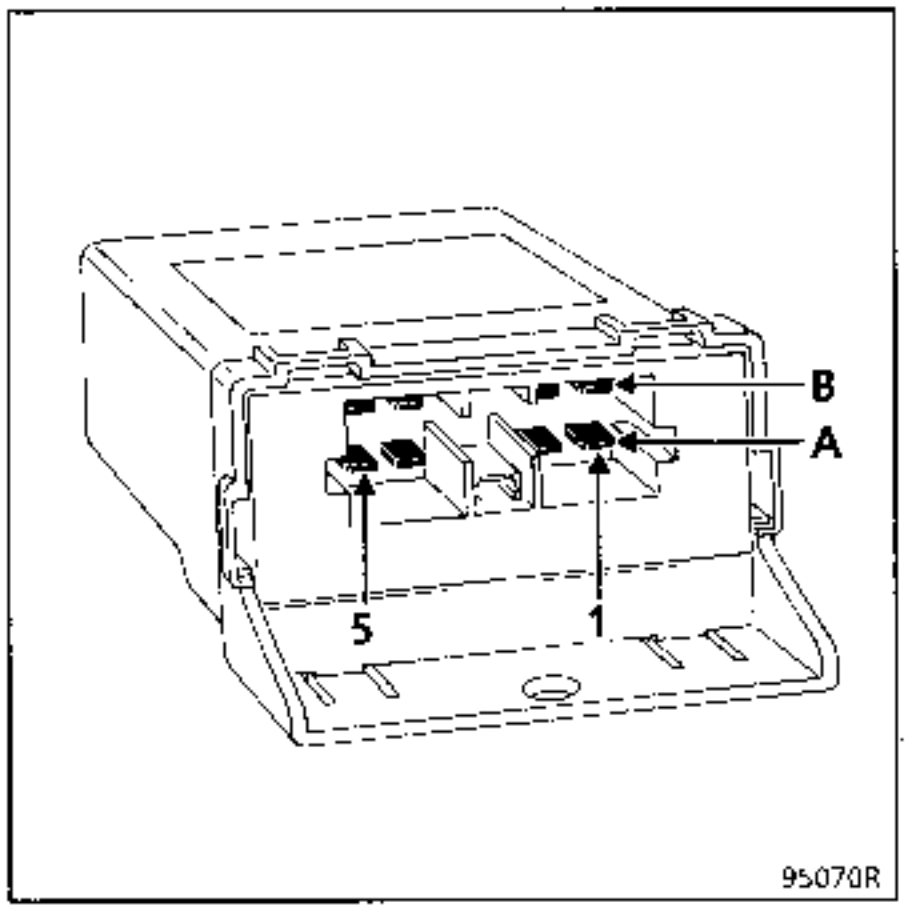
NOTE: To gain access to the timer, remove the tailgate trim, it is secured to the rear screen wiper motor plate.
The number of the tracks used has been taken from the component.

REMOVAL

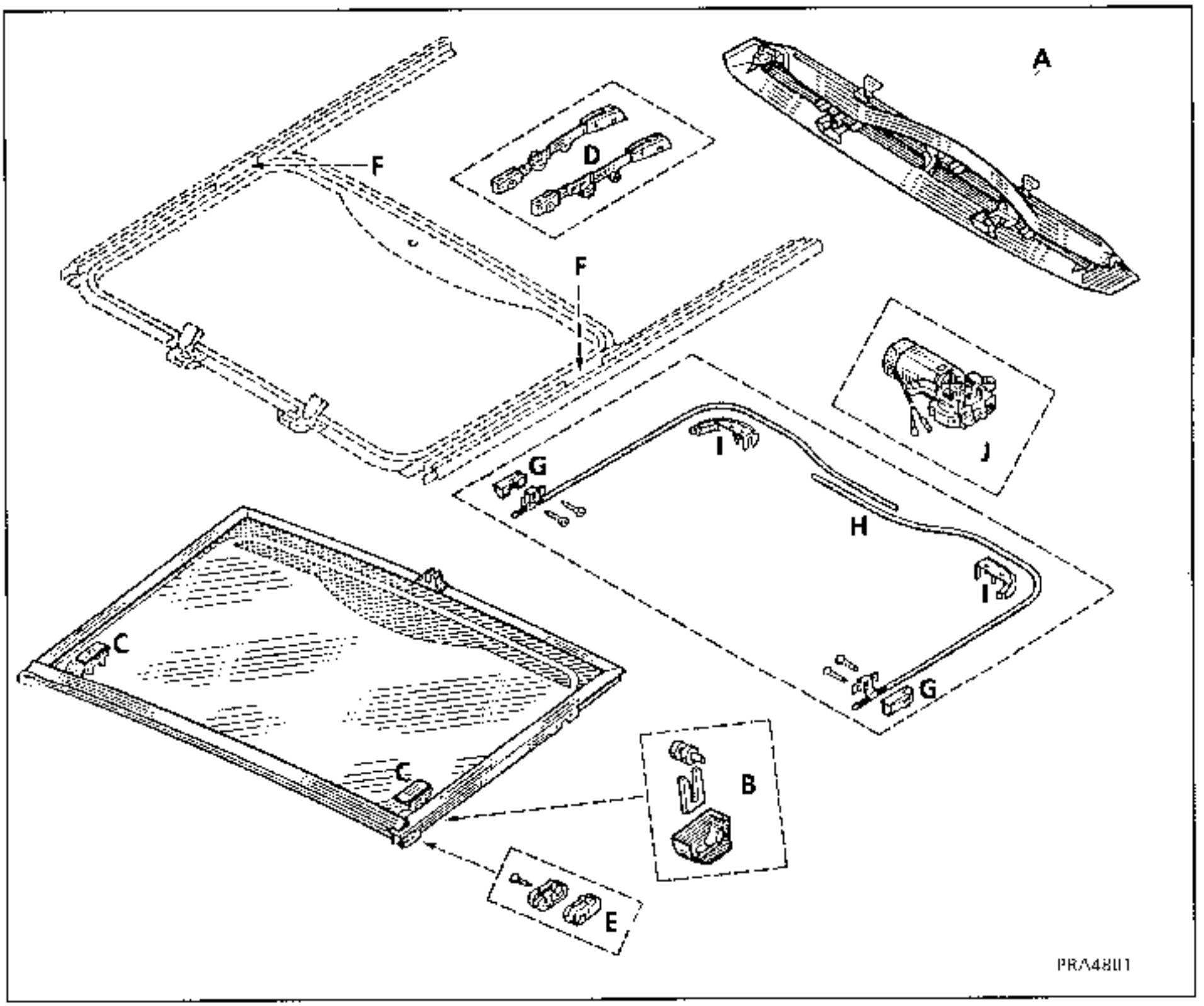
Remove the driver's door trims (see Section 72A of the body Workshop Repair Manual).
Disconnect the connector (1) on the one-touch unit.
Remove the two mounting bolts (2).



CONNECTION



Track	Allocation
A1	Normal raising control
A2	+ after ignition
A4	Pulse raising control
A5	Normal lowering control
B1	Earth.
B2	Driver electric window motor
B4	Pulse lowering control
B5	Driver electric window motor



A: motor cover

B: release mechanism

C: fixed mechanism plates

D: bars

E: front pads

F: ramps

G: drive pads

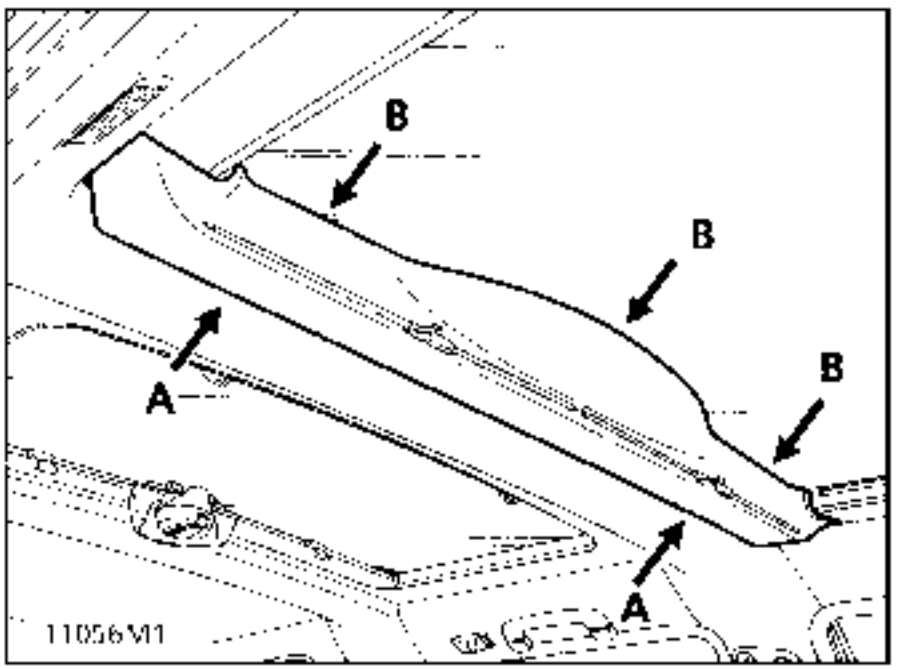
H: cable

I: rear cable stop

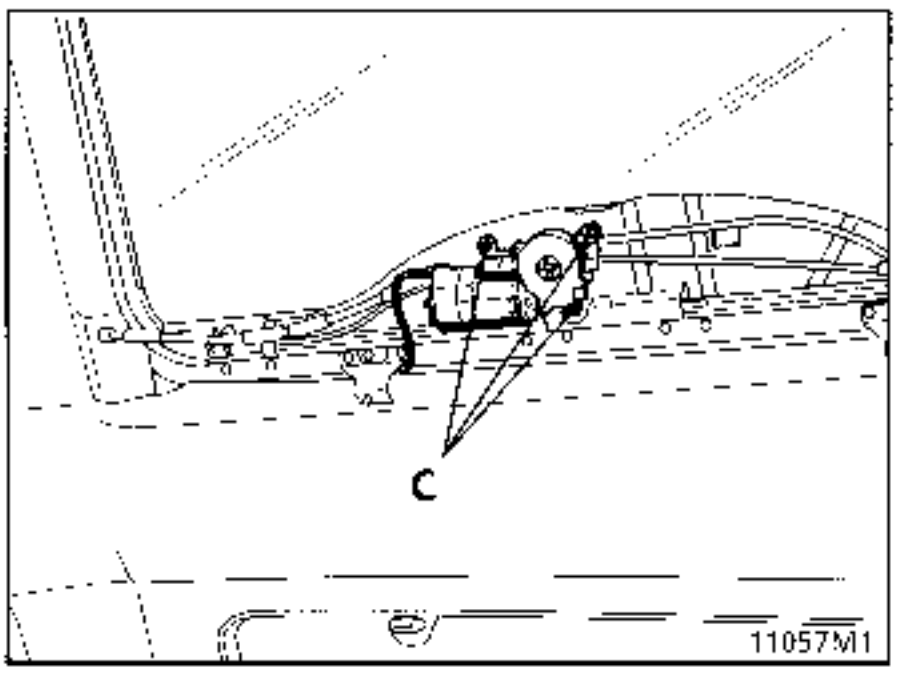
J: motor

REMOVAL

Remove: The protective motor cover (2 clips) at (A).
Pull at (B) to unclip the 3 mountings.
Remove the cover.

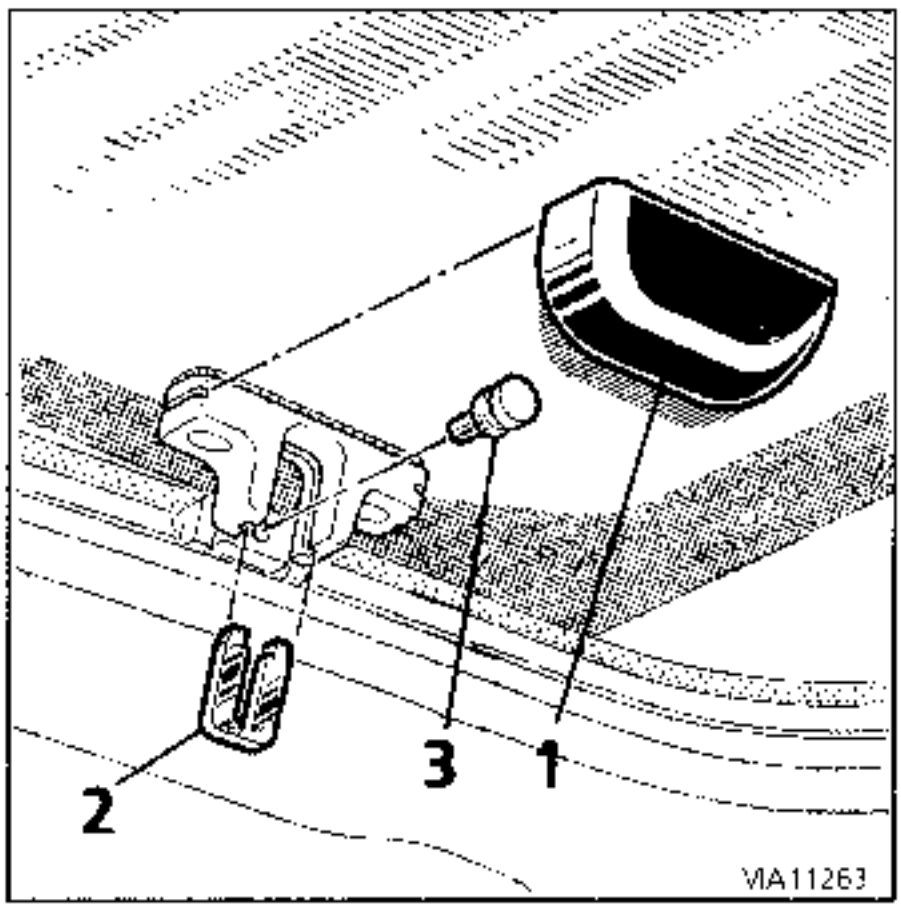


Disconnect the connector.
The three mounting bolts for the motor (C).



Sunroof motor

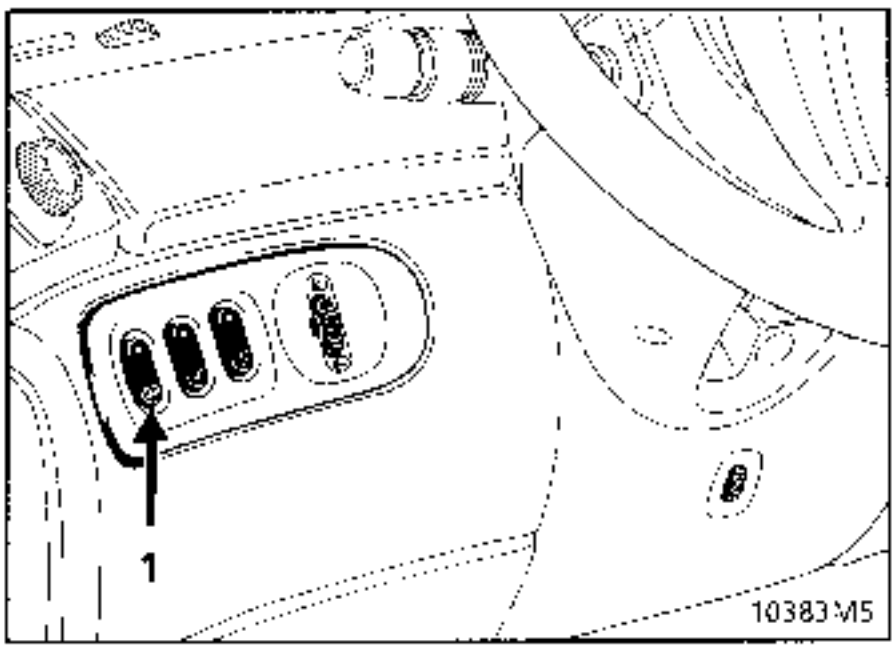
In the event of failure of the sunroof motor it is possible to operate the sunroof manually.
Release the electric motor system by releasing the right and left hand window drivers;
Unclip the cover (1) horizontally.
Pull the clip (2) downwards.
Remove the pin (3) by pulling horizontally, push the glass.



DESCRIPTION

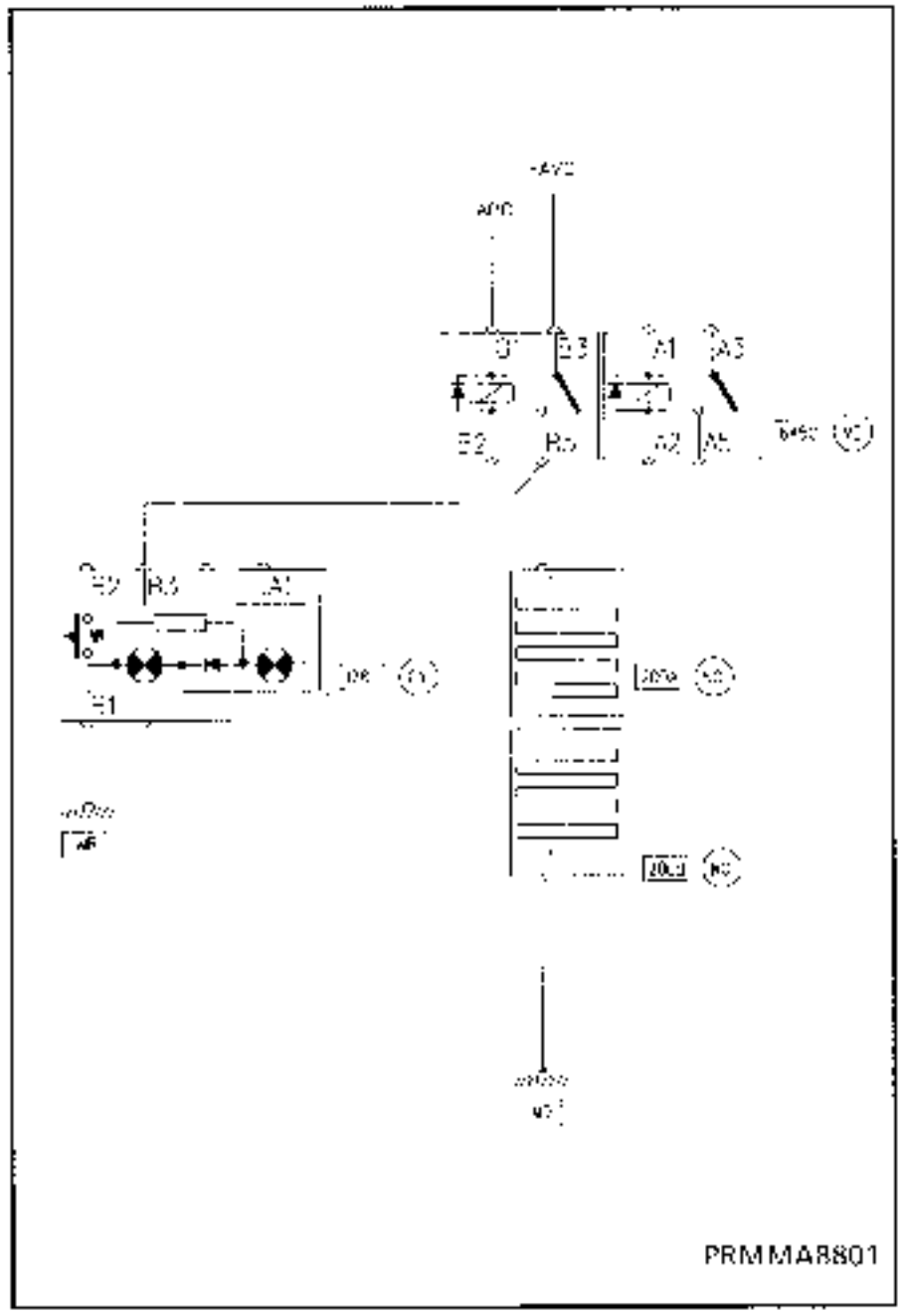
System which enables the rear screen to be electrically demisted by means of a demisting network consisting of screen printing applied to the inside of the glass.

The system is switched on by pressing button (1) or the "see clear" heating control.



The rear screen operation is timed for 12 minutes in + after ignition.
However, it is still possible to stop the rear screen demist before the end of the timed period by activating the control.

FUNCTIONAL DIAGRAM



+AVC	+ before ignition
+APC	+ after ignition
645	Pass. compart. connection unit
128	Rear screen control
200	Heated rear screen

The demist circuit, consisting of screen printing applied to the inside of the glass, may be accidentally broken, thereby rendering the section of the circuit concerned ineffective.

The exact point of the disconnection 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 POINT OF DISCONNECTION WITH A VOLTMETER.

Switch on the ignition.

Switch on the heated rear screen feed.

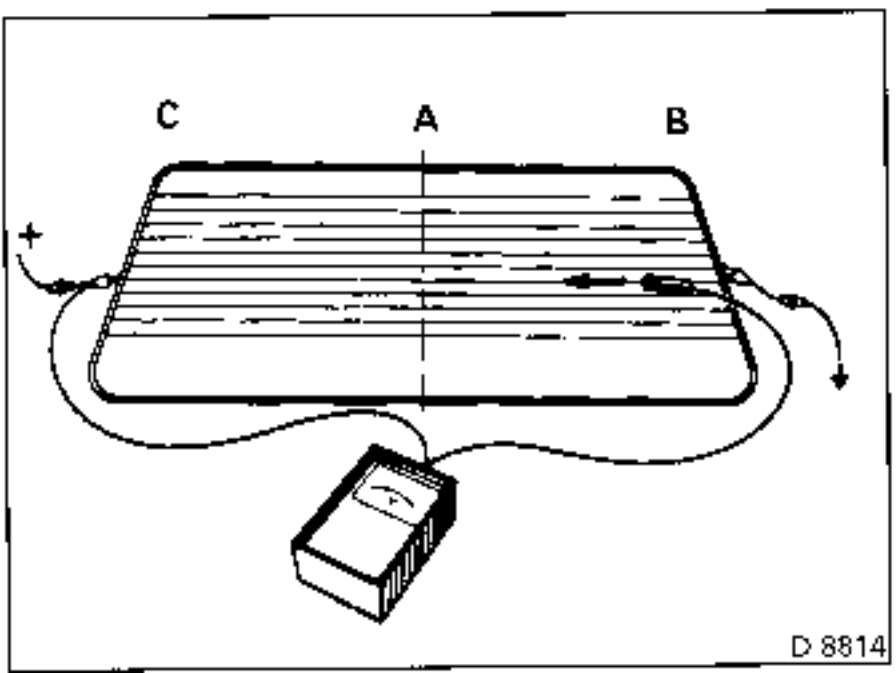
DETECTION BETWEEN LINES B AND A

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

Place the - wire of the voltmeter on a filament on the + terminal side of the rear screen (line B). Essentially a voltage equal to the battery must be obtained.

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

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



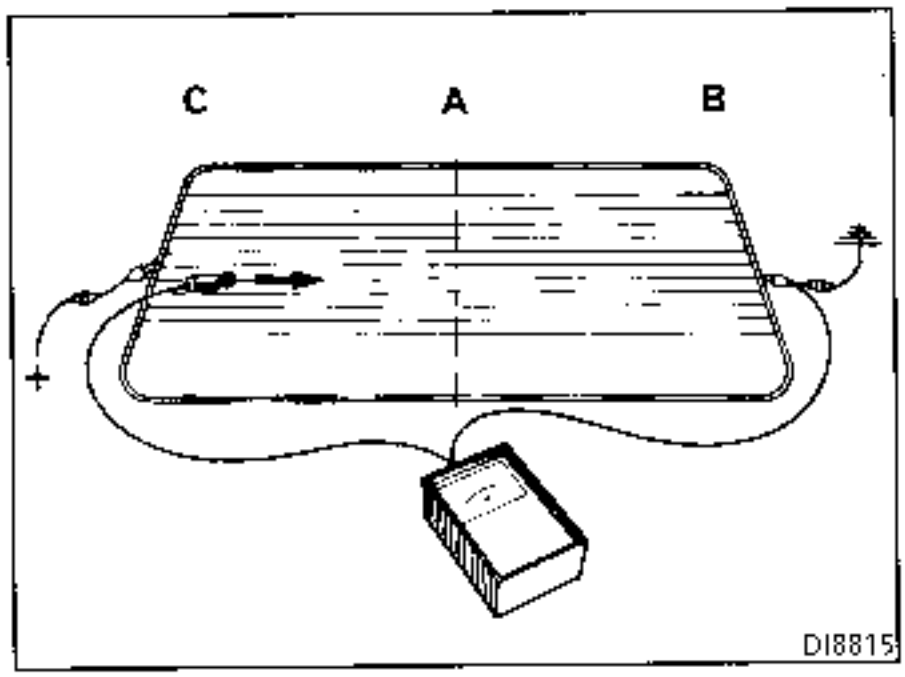
DETECTION BETWEEN LINES C AND A

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

Place the + wire of the voltmeter on a filament 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 filament must be cut at this point (carry out this operation for each filament).



REPAIR OF THE FILAMENT

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.

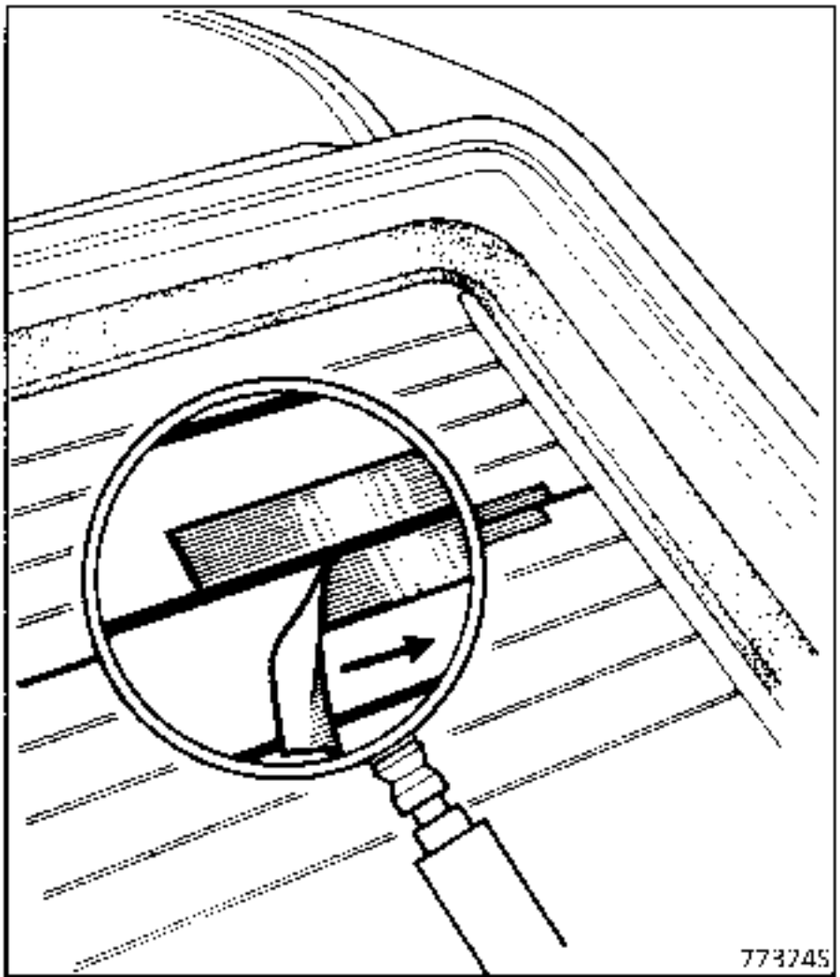
Before applying the varnish, shake the bottle to prevent the deposit of silver particles on the bottom of the bottle.

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.

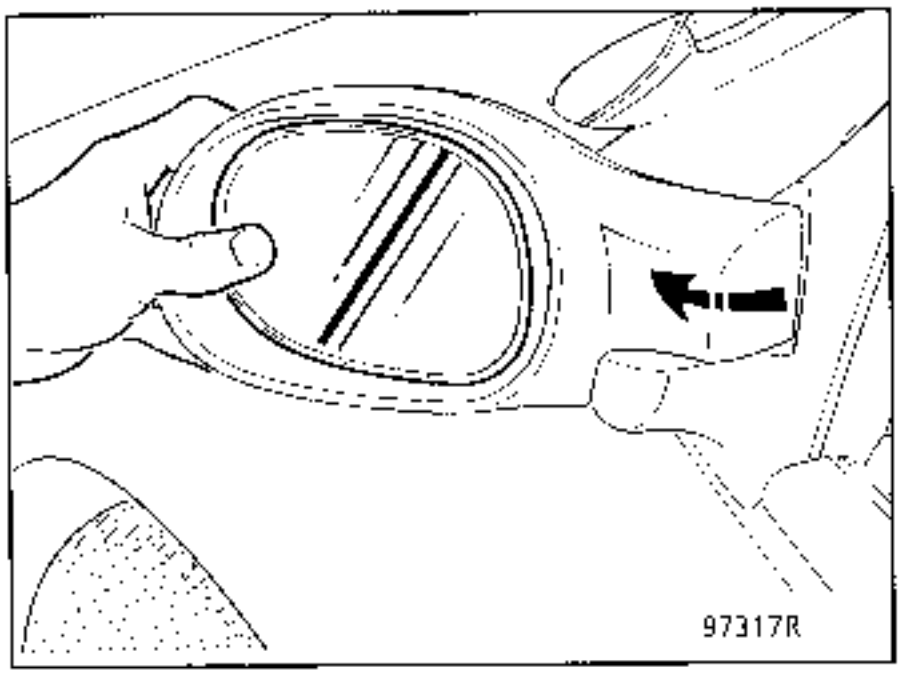
The adhesive tape acting as a guide must not be removed for one hour after application. The tape must be torn off perpendicularly to the resistance in the direction of the arrow. The varnish, applied at an ambient temperature of 20°C, is completely dry in three hours. At a lower temperature the drying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



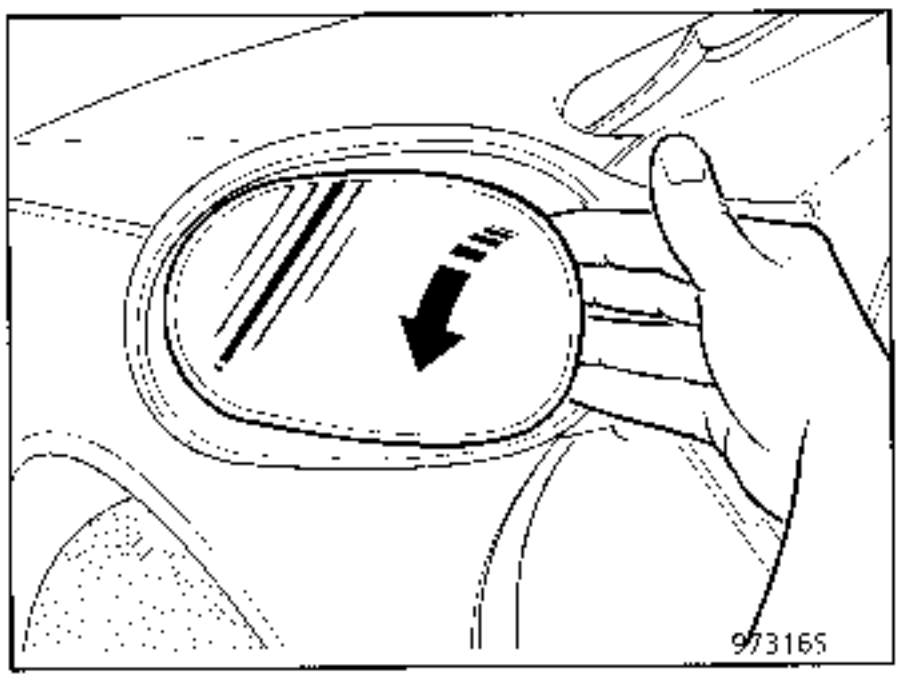
HEATED REAR VIEW MIRRORS

DESCRIPTION

System allowing fast demisting of the rear view mirrors (optional) by means of a demisting circuit inserted between the glass of the rear view mirror and its plastic mounting.



Removal of the mirror.
Tilt the rear view mirror outwards.
Press the glass as shown above (outside) so that the end of your fingers can be inserted underneath the glass (inside).



Press the glass carefully, as shown above, so that it is unclipped without breaking it.

NOTE: Always unclip it from the mirror from the casing side, to the left and right.

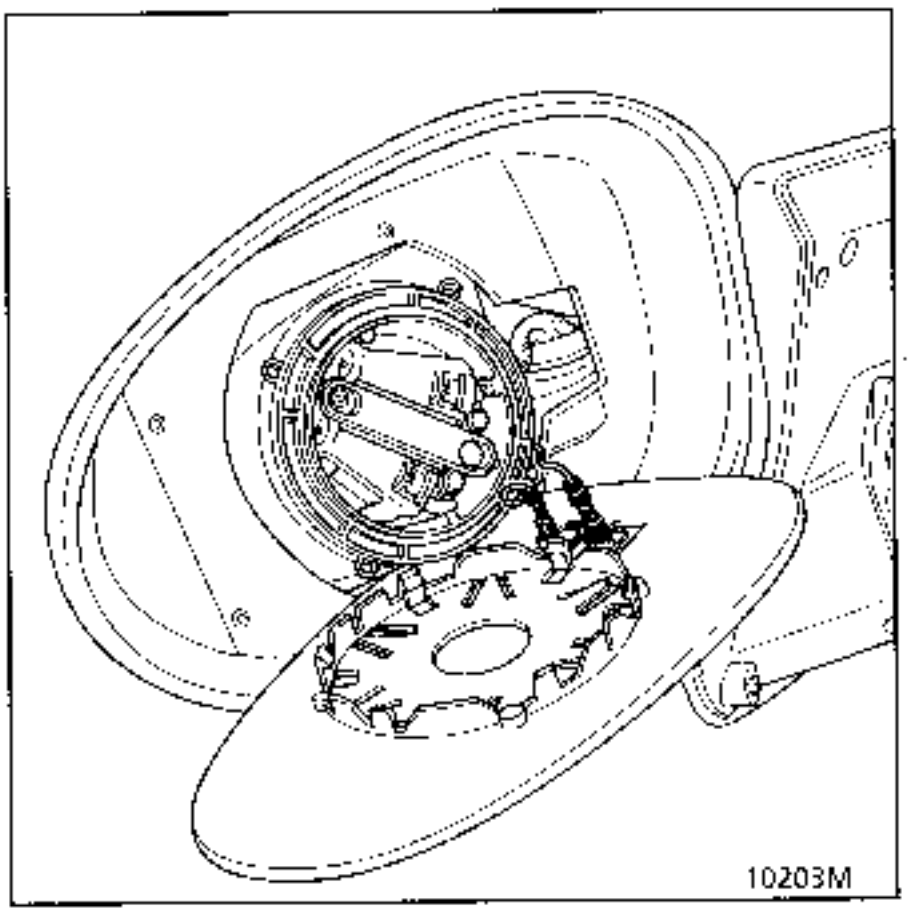
OPERATION

The system is switched on by pressing the function button for the heated rear screen located on the heating control panel.

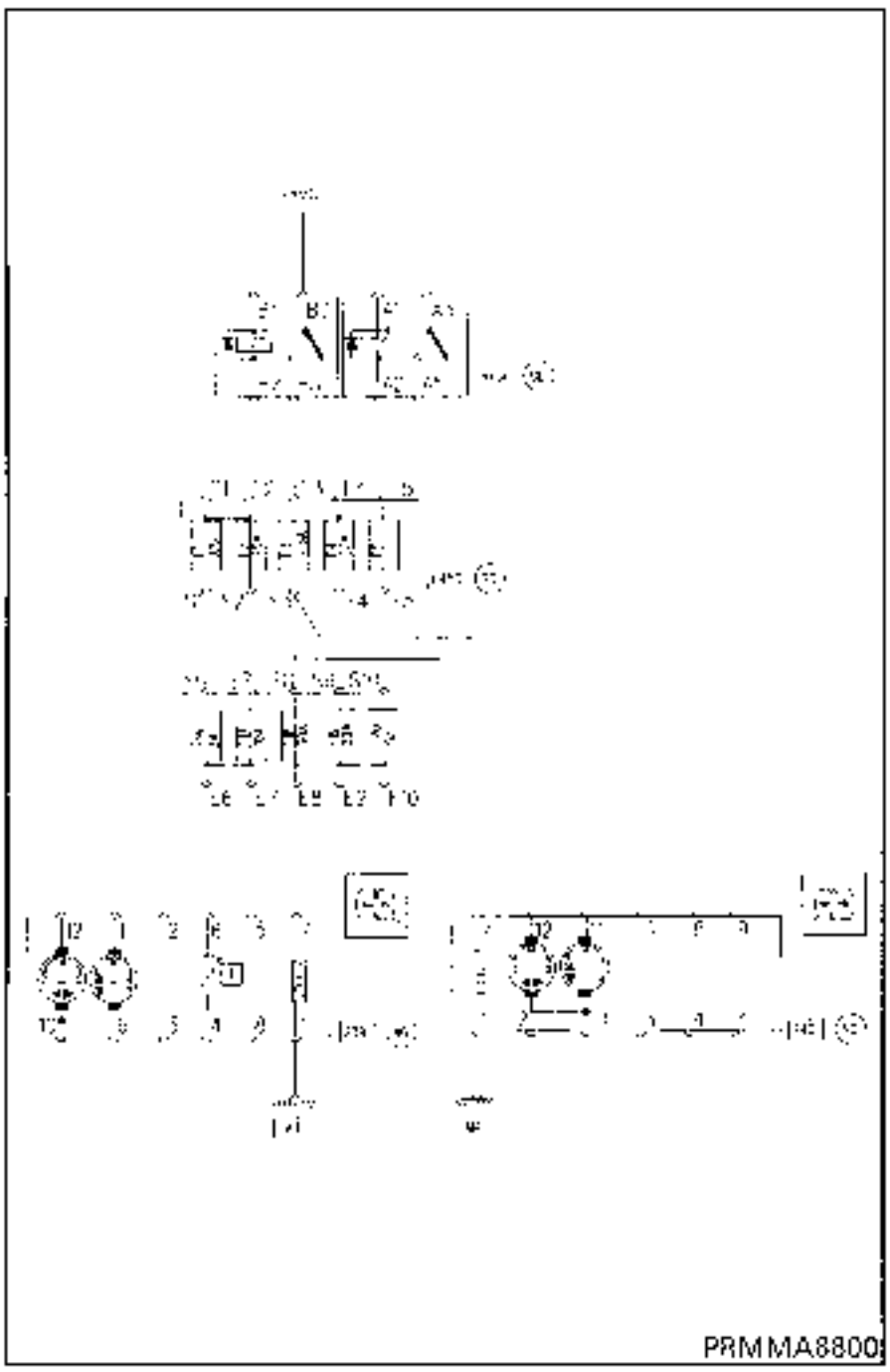
In fact the rear view mirror demisting system is linked to that of the rear screen.

The feed to the left and right hand rear view mirrors is connected in parallel to that of the rear screen from track 53 of the connection unit.

passenger compartment fuse  7.5 A.



FUNCTIONAL DIAGRAM



– AVC	Before ignition
645	Passenger compartment connection unit
240	Electric passenger rear view mirror
239	Electric driver's rear view mirror

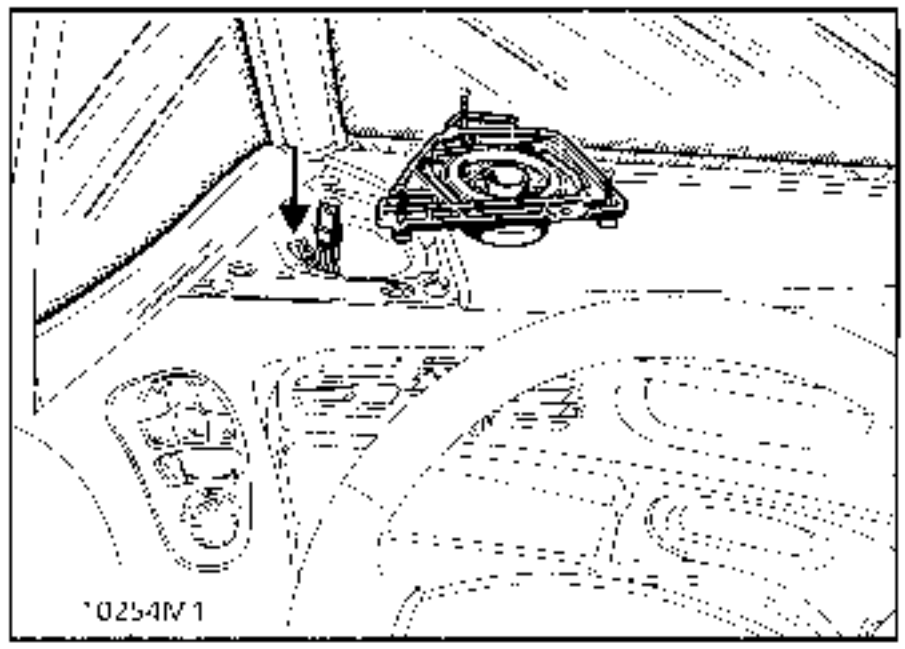
OPERATING FAULTS

Check:
- the condition of the 7.5 A fuse in the passenger compartment connection unit
- the mirror connection
- the insulation and continuity of the line (see wiring diagram).

To reach the connector:
- Unclip the speaker grille by hand, starting with the edge on the air vent side.
- Remove the speaker.

NOTE: If the resistance is disconnected, replace the mirror.

CONNECTION ON WIRING SIDE



Track	Allocation
1	Earth
2	Not used
3	Not used
4	Not used
5	Outside temperature sensor earth
6	Outside temperature sensor information
7	+ Before ignition rear view mirror demist
8	Not used
9	Not used
10	Rear view mirror motor unit
11	Rear view mirror up/down adjustment
12	Rear view mirror right/left adjustment

OUTSIDE TEMPERATURE SENSOR

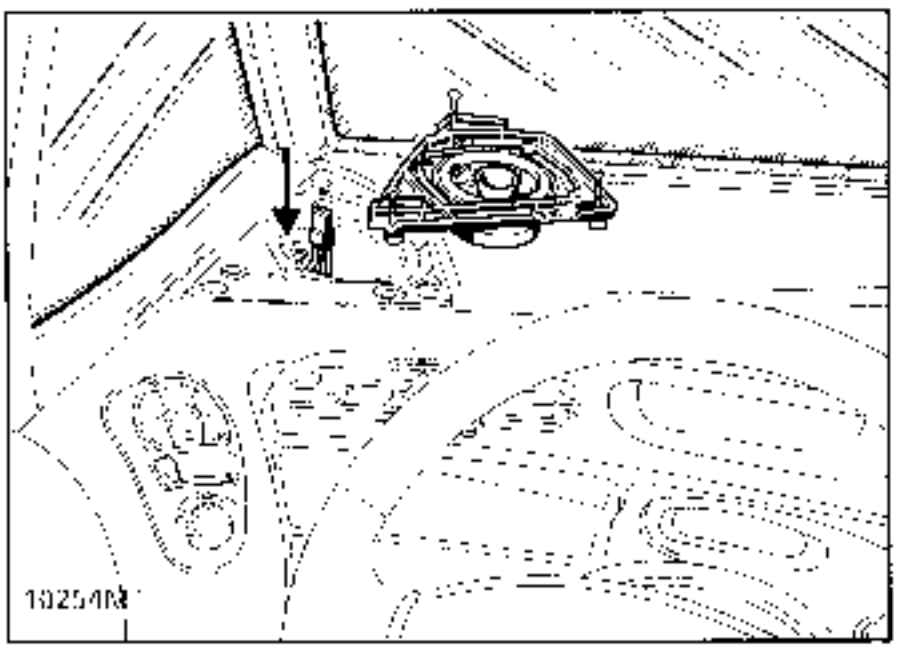
The sensor is located in the rear view mirror on the passenger side.

The sensor is tested by inserting the ohmmeter between tracks 5 and 6 of the connector on the rear view mirror side.

To reach the connector:

Unclip the speaker grille by hand, without using a tool, starting with the edge on the air vent side.

Remove the speaker



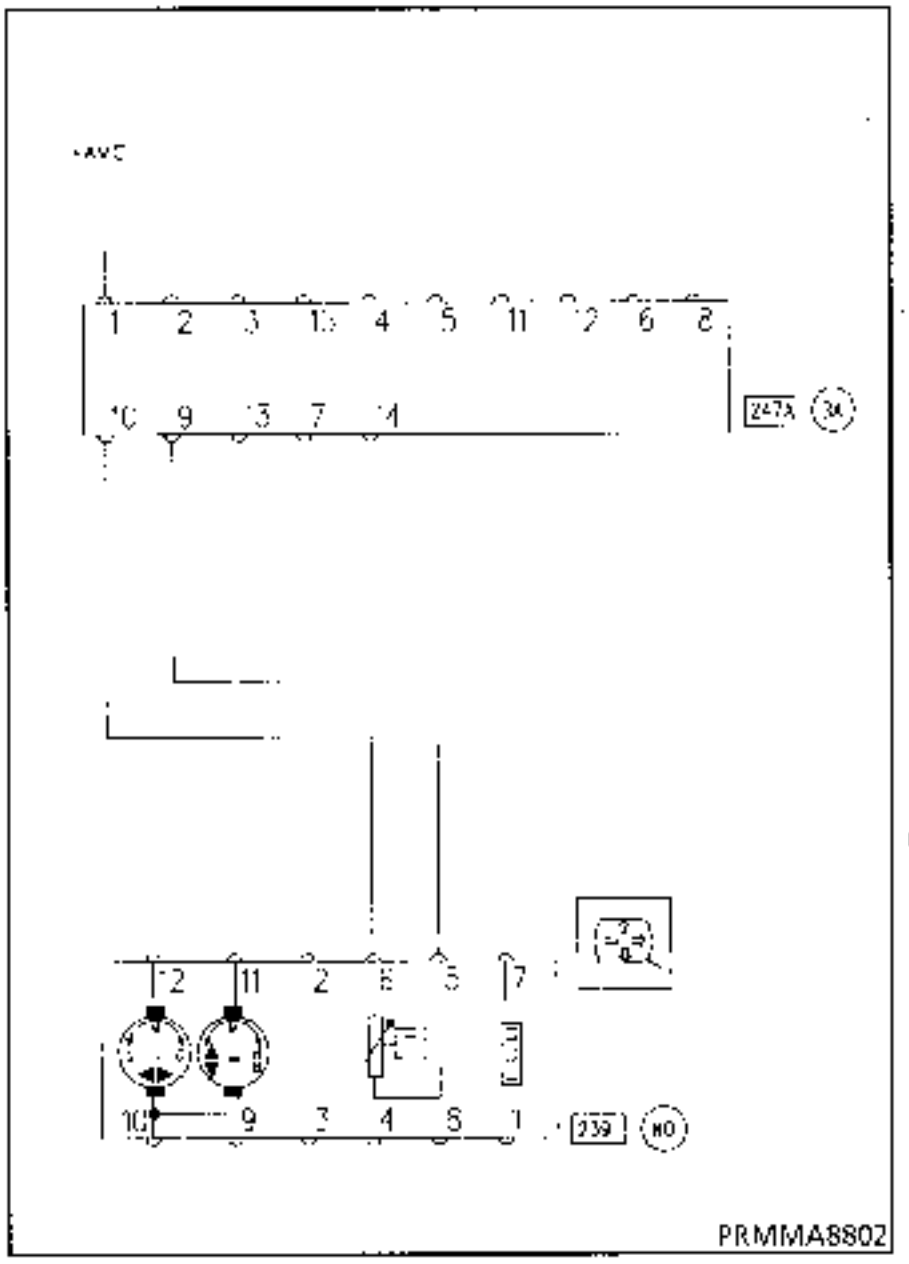
The correct values are :

Approximate ambient temperature (°C)	Electrical resistance of the sensor (ohms)	
	Minimum	Maximum
between 0 and 5	5400	6200
between 6 and 10	4400	5400
between 11 and 15	3700	4400
between 16 and 20	3000	3700
between 21 and 25	2500	3000
between 26 and 30	2100	2500
between 31 and 35	1700	2100
between 36 and 40	1450	1700

OPERATING FAULTS

- The outside temperature display indicates -40°C: the sensor is disconnected or its wiring has been cut.
- The outside temperature display indicates −80°C ; the sensor or its wiring has short-circuited.
- The outside temperature display indicates an incorrect value: replace the sensor.

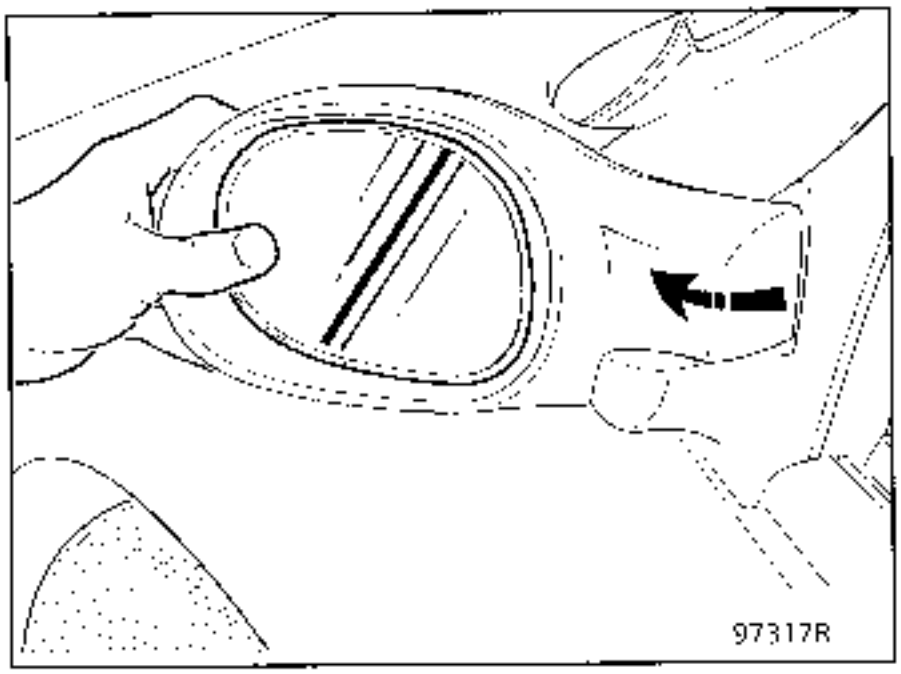
FUNCTIONAL DIAGRAM



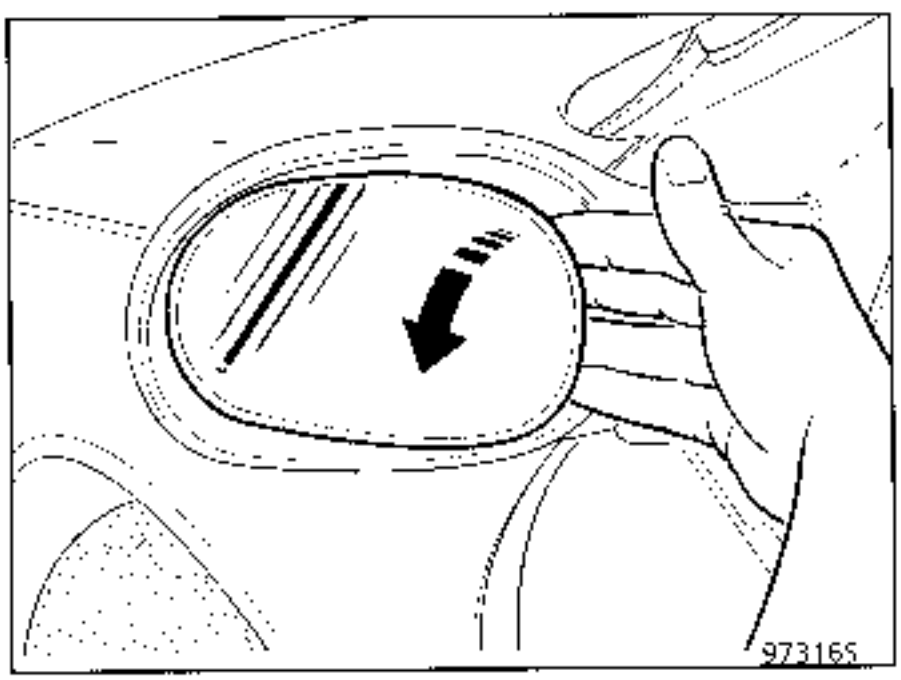
+ AVC + Before ignition
247 display
239 Electric driver's rear view mirror

REPLACEMENT OF THE SENSOR

Unclip the glass from the rear view mirror.



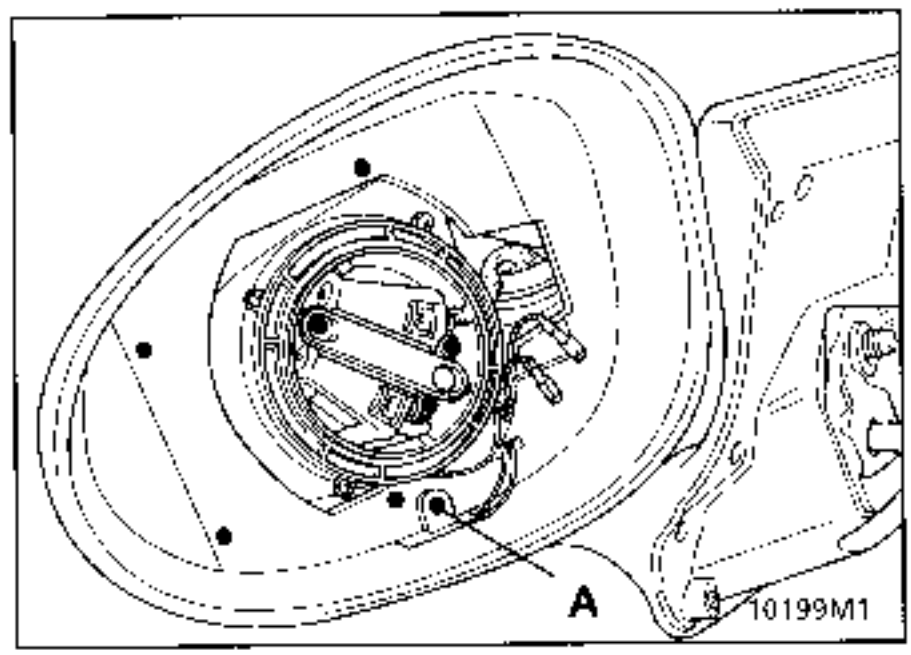
Remove the glass.
Tilt the rear view mirror outwards.
Press on the glass as shown above (outside) so that the end of your fingers can be inserted underneath the glass (inside).



Press the glass carefully as shown above so that the mirror is unclipped without breaking it.

NOTE: Always unclip the glass from the casing side, on the left and right.

Slacken bolt (A).
Remove the sensor from its housing.



Cut the sensor feed wires after having marked them.

Replace the sensor and connect the wires using heat shrink sleeving (refer to Technical Note 8039 for use of the sleeves).

DESCRIPTION

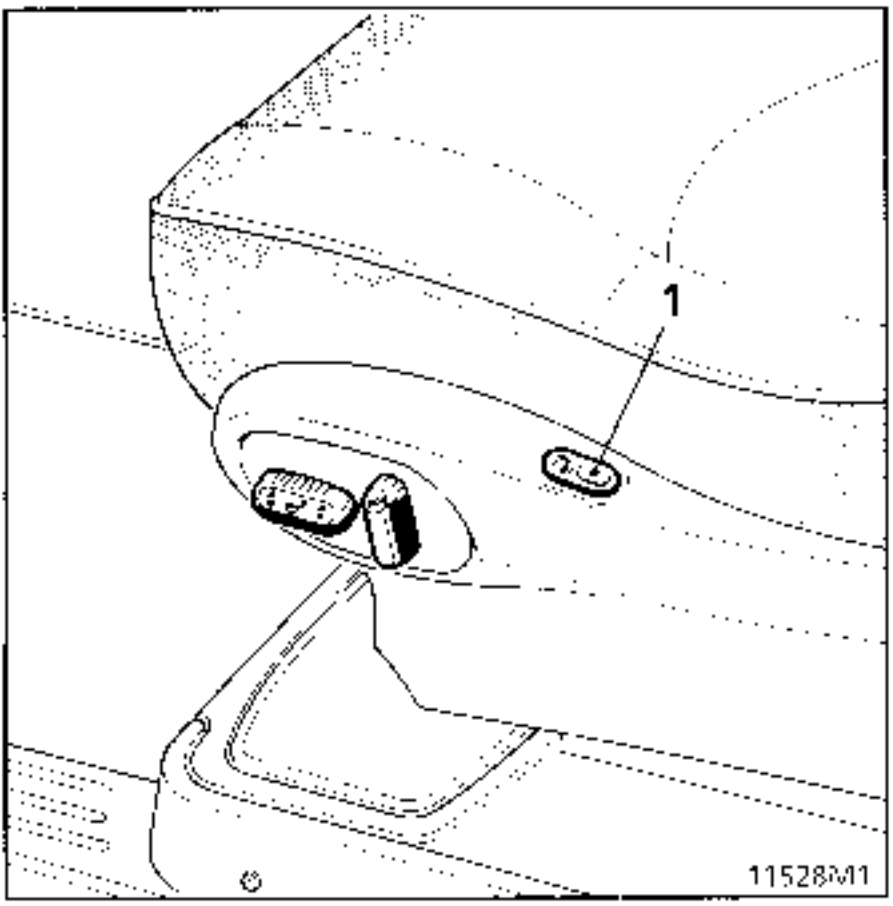
System enabling the trim of the front seats in the car to be heated by means of a heating strip inserted between the foam and seat trim.

Each front seat is equipped (optionally) with a separate system. Only the warning light, which is illuminated on the instrument panel, is common to both seats.

The heating strip comprises:
- two resistances
  one 1.4 ohm resistance in the cushion (A).
  one 0.94 ohm resistance in the back (B).
  A temperature switch located level with the cushion, connected in series in the resistance circuit, permits or prevents feed to the heating circuit.

OPERATION

The system is switched on by activating switch (1). A warning light is then illuminated on the instrument panel whether one heated seat switch is activated or both.



IMPORTANT

The illuminated warning light merely indicates that the heating resistances have been supplied with power.

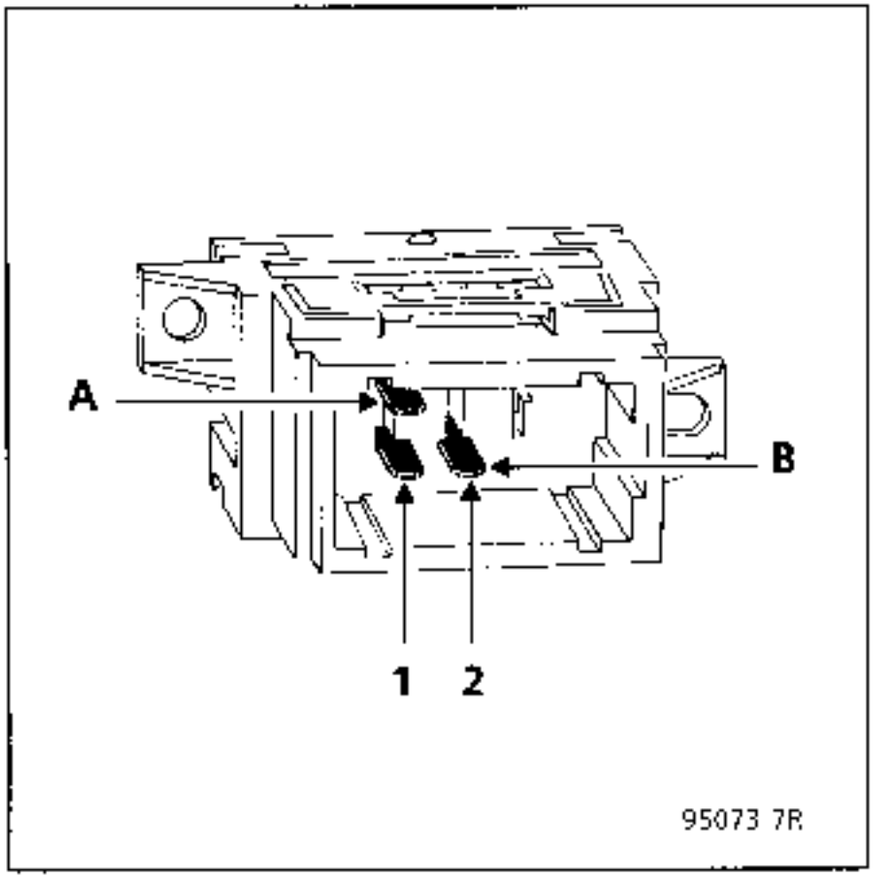
In fact only a temperature lower than 12°C ±5°C in the passenger compartment, at the thermal switch, will enable the system to operate.

The temperature switch will cut the feed to the heating circuit when the temperature has reached a threshold of 27 · 3°C.

Whilst the system is still activated (warning light illuminated), the temperature switch will again enable the resistances to receive power when the temperature drops back to 12 + 5°C.

The warning light will only extinguish if the system is de-activated by pressing switch (1) again.

CONNECTION



Track	Allocation
A1	Earth
B1	Heated seat warning light
B2	Heating strip switch

GENERAL

These vehicles are equipped with an infrared remote control with rolling code.

This system prevents any copying of the infrared code from unlocking the doors of the vehicle.

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

When a transmitter is replaced it will therefore be necessary to resynchronise it so that the transmitters are returned to phase with the PLIP decoder unit.

DESCRIPTION

The infrared transmitter (PLIP)

The infrared transmitter is integrated in the vehicle key.

It can be replaced independently of the key by ordering it under the number inscribed in the key head (alphanumeric characters).

In this case it will be necessary to resynchronise the 2 transmitters (see procedure).

IMPORTANT: the infrared red remote control does not operate if:
- a portable neon lamp or microcomputer (with open screen) is illuminated in the vehicle,
- there is a succession of commands (PLIP) close together (antiscanning),
- the − after ignition feed is established.

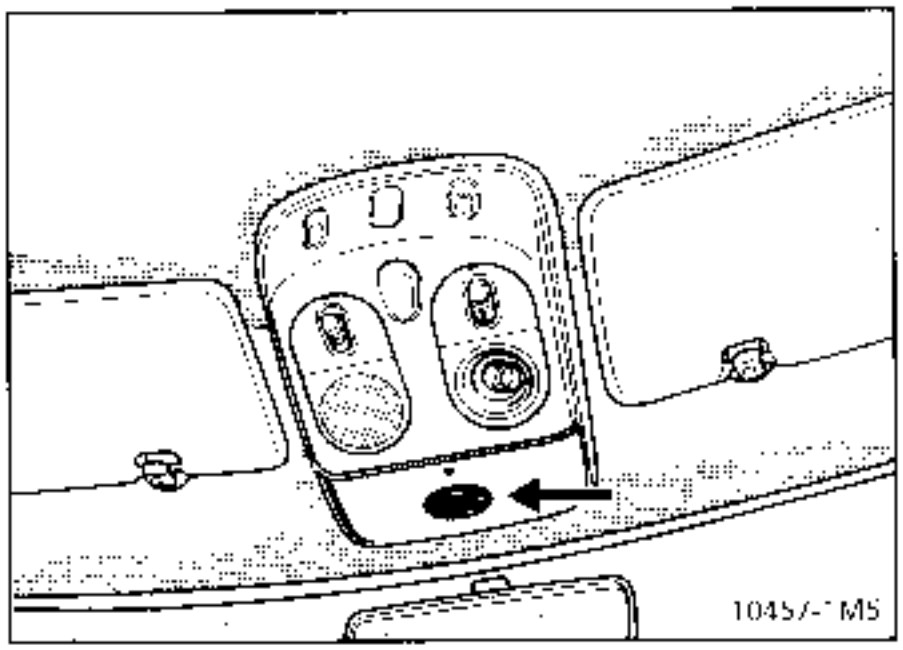
The infrared receiver

This is located in the roof console.

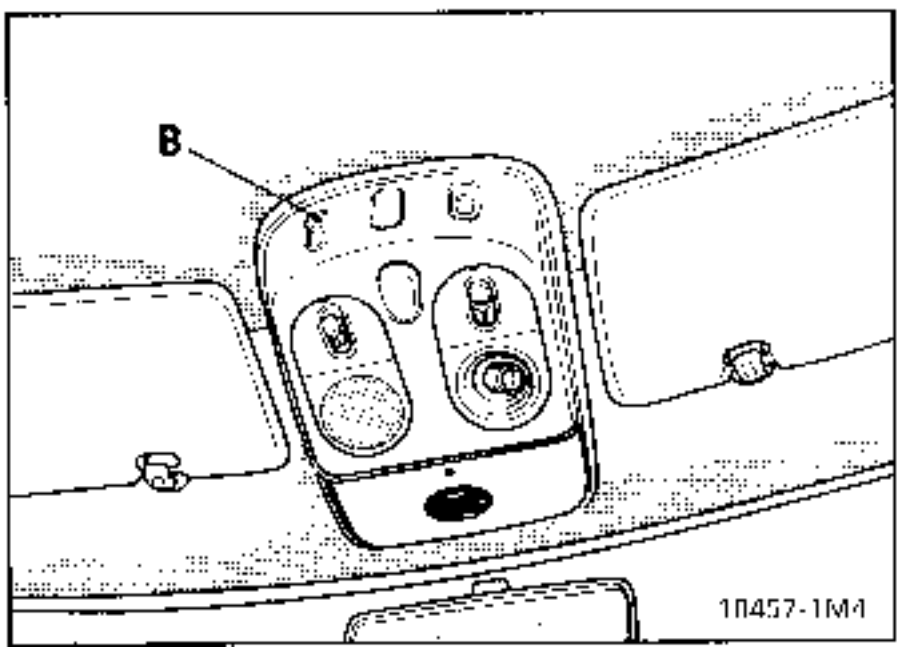
It receives the infrared code from the transmitter and transmits it to the unit. Its purpose is to amplify the infrared signal.

The infrared receiver is **replaced separately** from the infrared transmitter and the PLIP unit (it is not coded).

PLIP decoder unit: this manages the unlocking of the doors and timing of the front courtesy lights.



The central door locking button (C.P.E.).



RESYNCHRONISING PROCEDURE

This procedure will be used when replacing a transmitter or when the transmitter code no longer lies within the reception range of the decoder unit (over 1,000 consecutive presses on the transmitter, away from the vehicle).

This enables the two transmitters to be returned to phase with the PLIP decoder unit (rolling code).

IMPORTANT: to ensure that the two PLIPS are operational after a resynchronising procedure, it will be necessary to carry out the operation with the two transmitters, even if only one of them has failed. Otherwise only the transmitter present at the time of the procedure can operate. If a customer has a single transmitter with him some distance from his home, he must repeat a resynchronisation with his two PLIPS on his return.

To carry out this procedure:

1 Switch on the ignition.

2 Press the central locking button for more than 5 seconds. The doors will unlock and lock.

3 Switch off the ignition.
From this point onwards the operator will have 15 seconds to carry out the next two operations.

4 Press the 1st transmitter twice for at least 3 seconds (the doors will lock and unlock after the 2nd press).

5. Press the 2nd transmitter twice for at least 3 seconds (the doors will lock and unlock after the 2nd press).

6. To ensure that the infrared code is correctly transmitted it is essential to direct the transmitter towards the receiver to carry out operations 4 and 5. If the procedure fails it will be necessary to restart from the beginning.

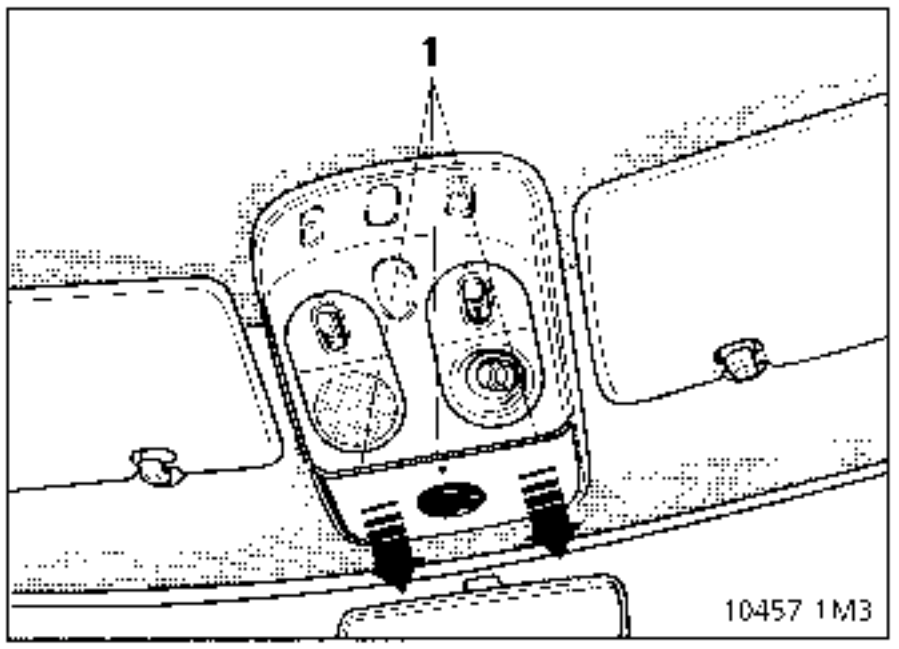
7. Once the procedure is completed check that the door locking mechanism is operating correctly.

REMOVAL

Unclip the plastic cover of the roof console supporting the infrared receiver by moving it forward to release the three notches (1).

Disconnect the connector.

Remove the assembly.

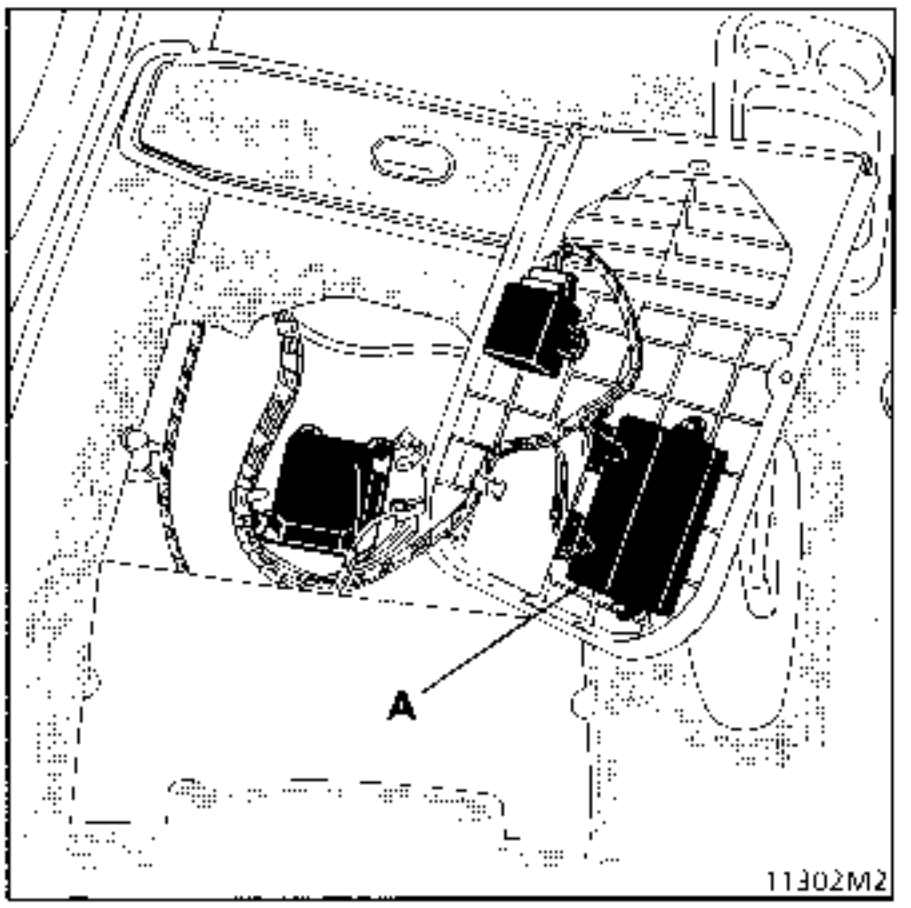


CONNECTION

Track	Allocation
1	Not used
2	+ Battery
3	Earth
4	Infrared receiver return
5	ı Infrared receiver feed
6	Warning light

The PLIP decoder unit.

Unit (A): this controls the unlocking of the doors and timing of the courtesy lights.
It is located underneath the driver's seat.



CONNECTION OF BLACK 15-TRACK CONNECTOR

Track	Allocation
A1	+ After ignition
A2	Opening control
A3	Closing control
B1	+ Closing
B3	+ Opening
B5	ı before ignition
B6	Earth

CONNECTION OF BLUE 18-TRACK CONNECTOR

Track	Allocation
A2	+ Accessory
A3	Infrared receiver return
A4	+ Infrared receiver feed
B1	Rear doors switch
B2	Front left door switch
B3	Front right door switch
B6	0 volt relay control after PLIP
B7	Courtesy light control

REPLACEMENT OF THE PLIP DECODER UNIT ONLY.

Remove:

The passenger seat.
Remove the carpet.
The plastic protection (2 bolts)
Disconnect and remove the PLIP decoder unit.

IMPORTANT

- Before removing the seat, and to prevent untimely release of the airbag or pretensioners, carry out the following during the operation:
- Connect the XR25 to the vehicle
- Switch on the ignition
- Use fiche no. 49 (**ISO selector on S8 code**)

enter the code. D 4 9

Lock the airbag/pretensioner computer:

With the command G 8 0 *

- When this function has been activated all the ignition lines are inhibited and bargraph 14 LH side on the XR25 is illuminated.
- **Wait 2 seconds** for automatic discharge of the airbag/pretensioner unit.
- Switch off the ignition.

A new decoder unit is not coded. Once fitted on the vehicle it will therefore be necessary to programme it with the code for the two transmitters to render it operational.

1 Switch on the ignition.

2 Press the door locking button for more than 5 seconds; the doors open and close.

3 Switch off the ignition
From this point onwards the operator has 15 seconds to carry out the next two operations.

4 Press the 1st transmitter twice in less than 3 seconds (the doors lock and unlock after pressing for the 2nd time).

5. Press the 2nd transmitter twice in less than 3 seconds (the doors lock and unlock after pressing for the 2nd time).

6. To ensure that the infrared code is correctly transmitted it is essential to point the transmitter towards the receiver to carry out operations 4 and 5. If the procedure fails it will be necessary to restart from the beginning.

7. Once the procedure is completed, check for satisfactory operation of the door locking mechanism.

IMPORTANT :

- **When replacing the seat:**
- Reconnect the connectors
- on the pretensioner side, clip the white connector as tightly as possible (tight clipping).
- Carry out a check using the XR25. If all is correct, unlock the computer with

  the command G 8 1 *
- Check that left hand bargraph 14 has extinguished.

IMPORTANT: failure to follow these instructions could disrupt normal operation of the systems and even result in their premature triggering.

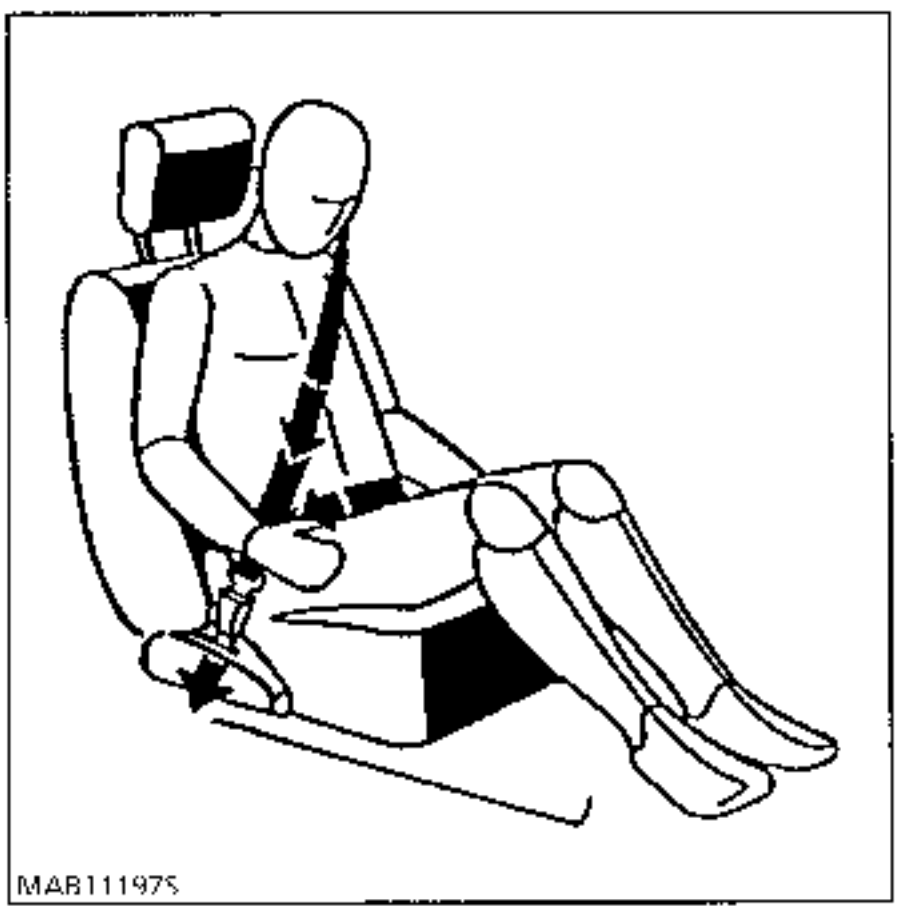
A - GENERAL

IMPORTANT : all work on the airbag and pretensioner systems must be carried out by qualified personnel who have received the proper training.

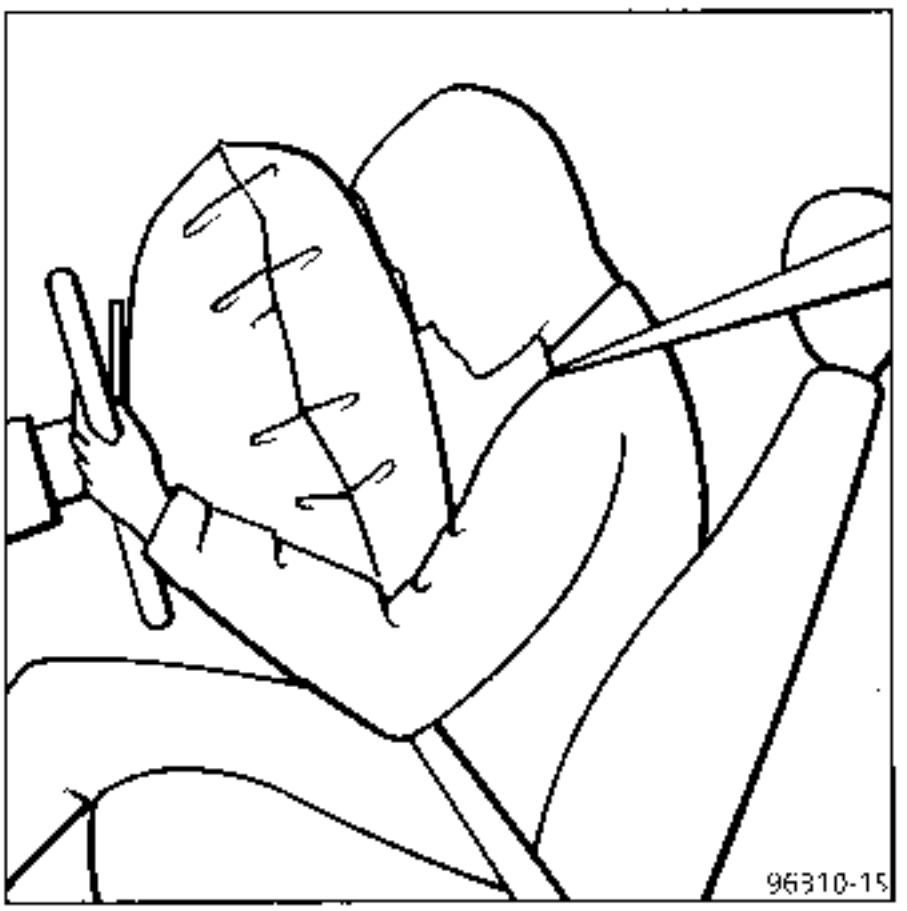
There are 3 safety systems which supplement the seat belt.

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

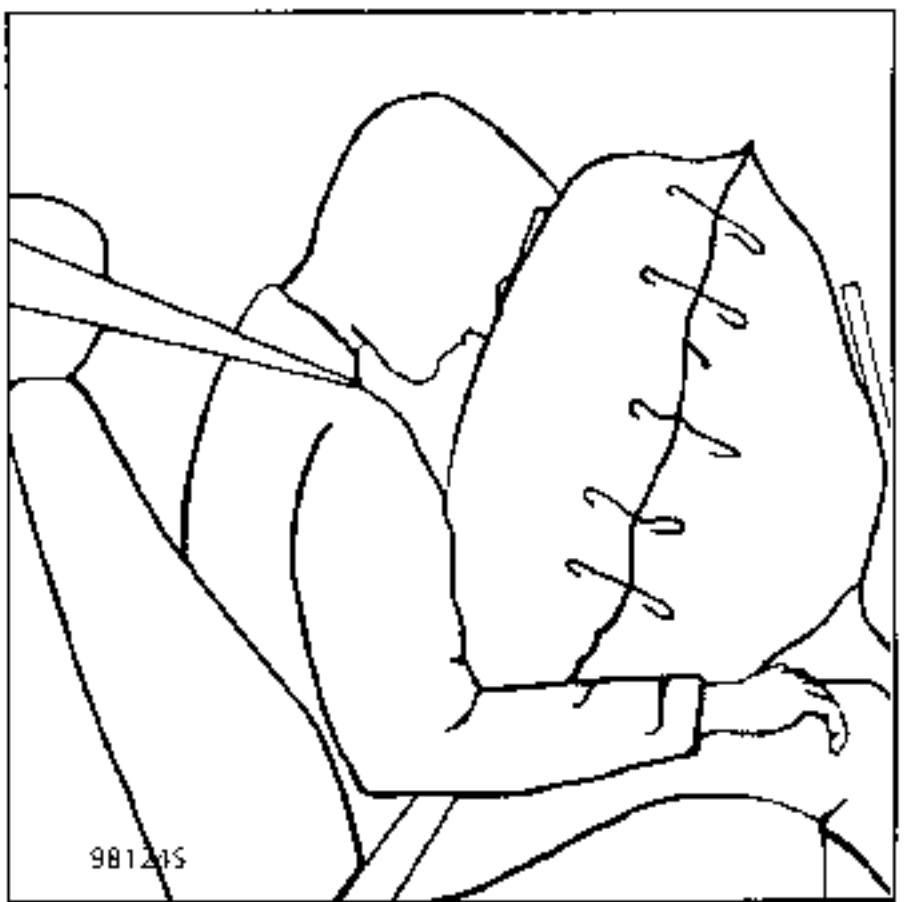
- **The pretensioners** which restrict the seat belts for the front seats so that they are pressed against the body.



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



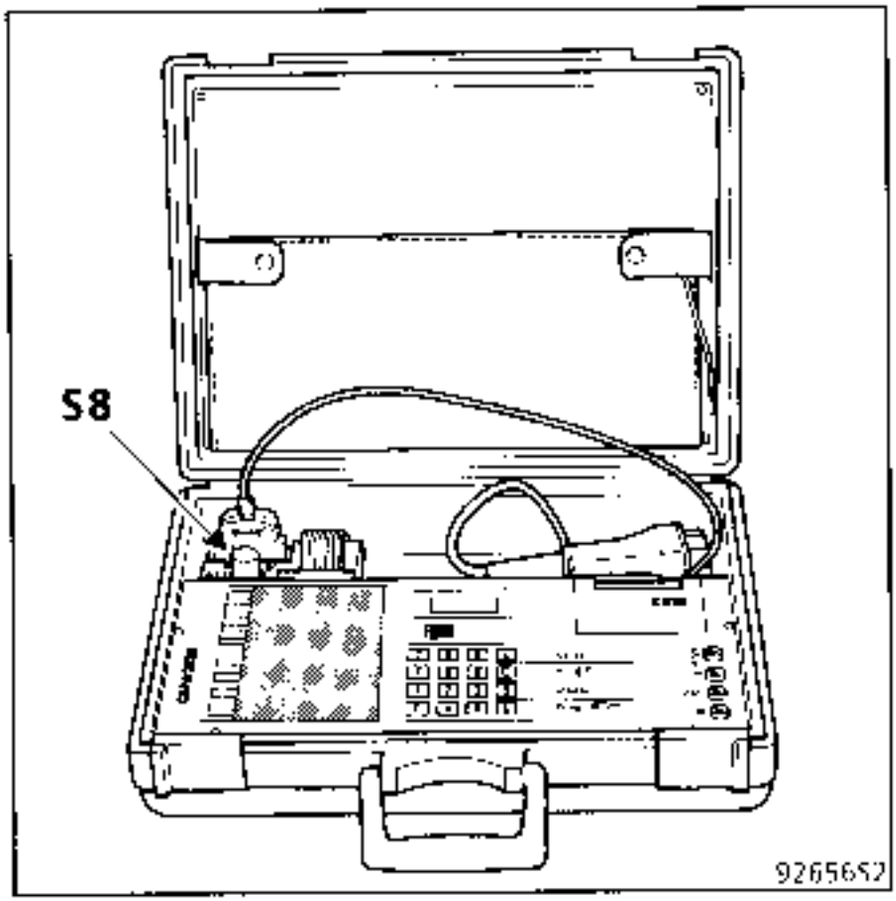
- **The airbag module** which inflates from the dashboard to protect the front passenger's head.



B - SPECIAL TOOLS

PRESENTATION

XR25

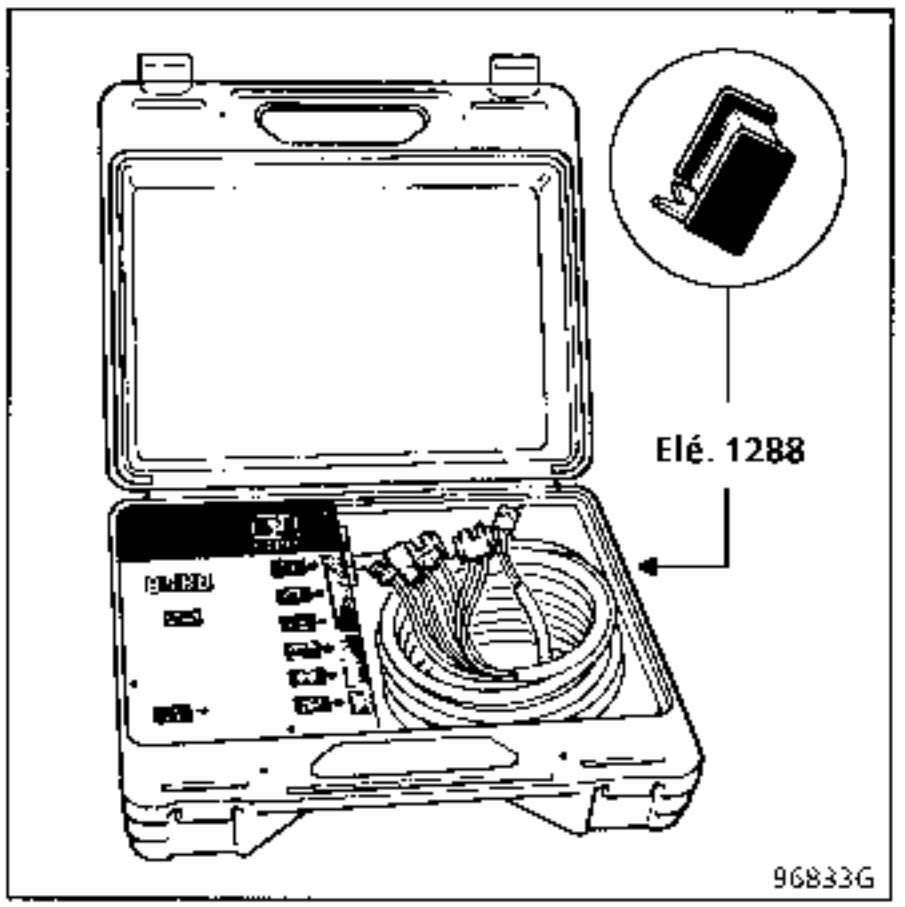


The 30-track computer is provided with the K and L lines for fault finding with the XR25.

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

NOTE: before each operation an auxiliary function enables the ignition lines to be de activated to prevent the risk of triggering the pyrotechnic gas generators.

XRBAG CONTROL UNIT (Elé. 1288)

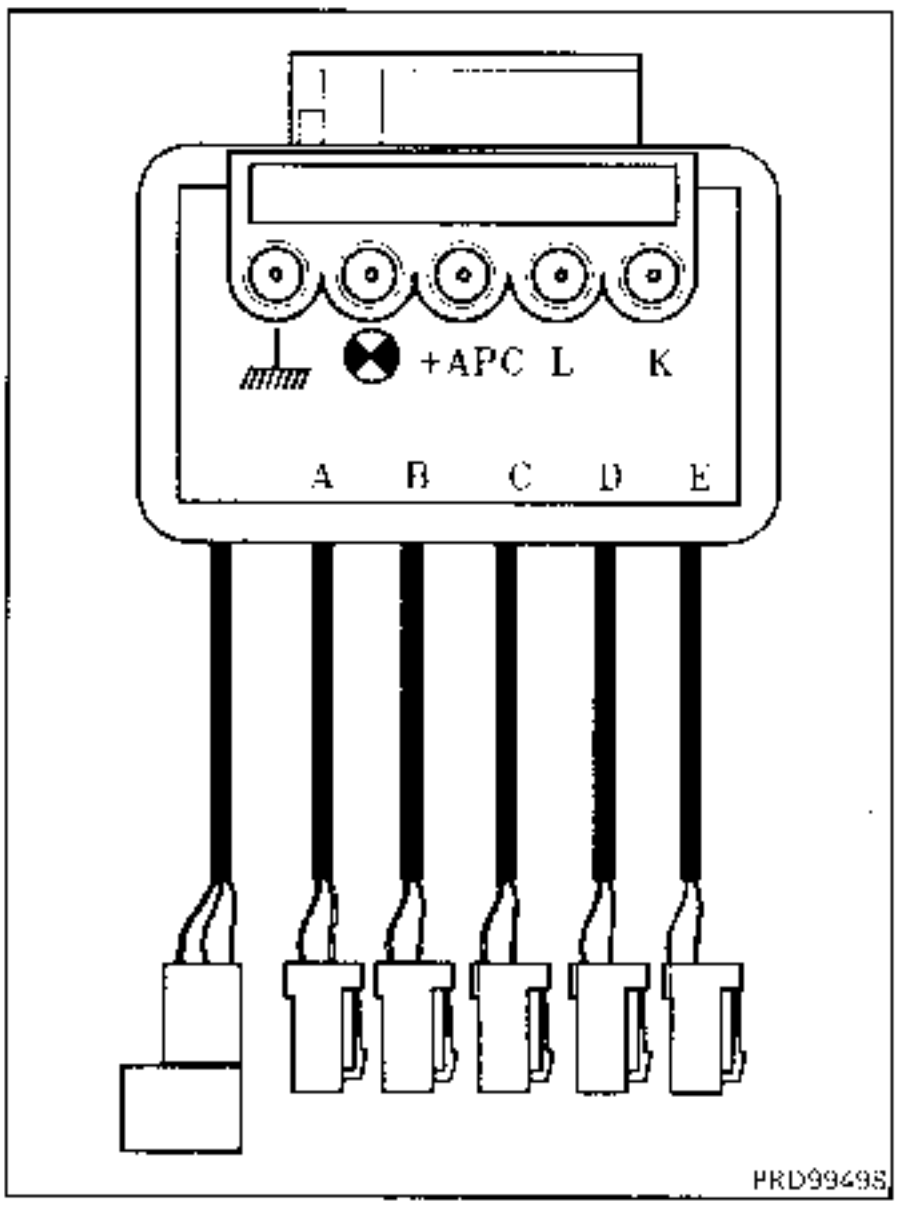


This unit is a tool specifically designed to inspect and detect faults in airbag devices and seat belt pretensioners.

It enables electrical measurements to be carried out on the different lines in the systems.

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 (refer to the section on "Fault finding").

XRBAG 30-TRACK ADAPTER



This bornier is connected instead of computers fit ted with a single 30-track connector.

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 airbag warning light on the dashboard to be illuminated.

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

DUMMY AIRBAG IGNITION MODULE

A dummy airbag 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 airbag cushion when it is being checked for faults.

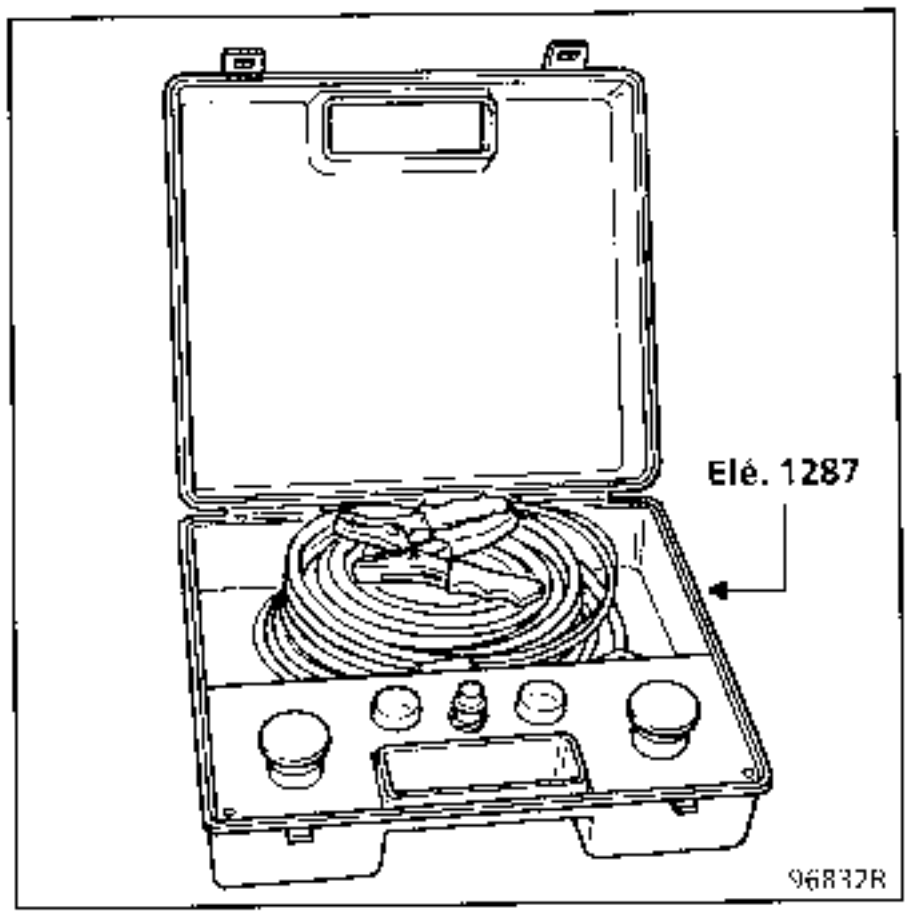
Two dummy ignition modules are required for checking the passenger airbag for faults.

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 airbags and seat belt pretensioners must be released before the vehicle or the individual part is scrapped.

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

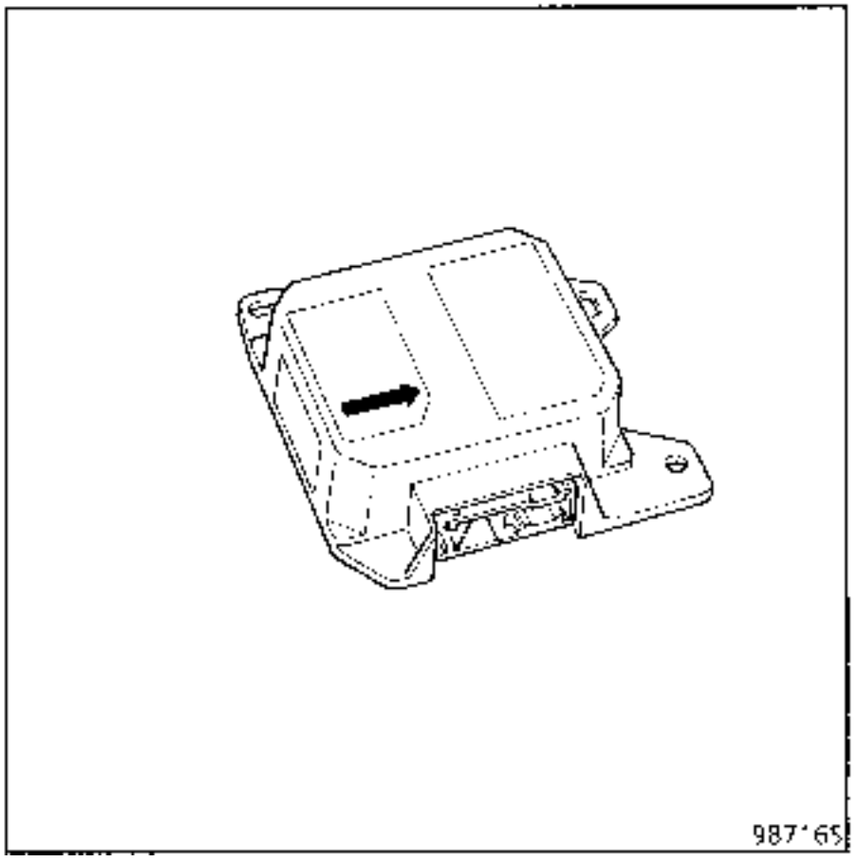


Refer to the section entitled "Destruction procedure".

C -ELECTRONIC UNIT

It comprises:

- an electromagnetic safety sensor,
- a decelerometer for the airbags
- an ignition circuit for the different pyrotechnic systems,
- a power reserve,
- a diagnostic and detected fault storage circuit,
- an emergency warning light control circuit on the instrument panel,
- a K - L communication interface via the diagnostic socket.



C - COMPUTER

This is located underneath the passenger seat.

IMPORTANT

Before replacing the seat

- Connect the XR25 to the vehicle
- Switch on the ignition
- Use fiche no. 49 **(ISO selector on S8 code).**

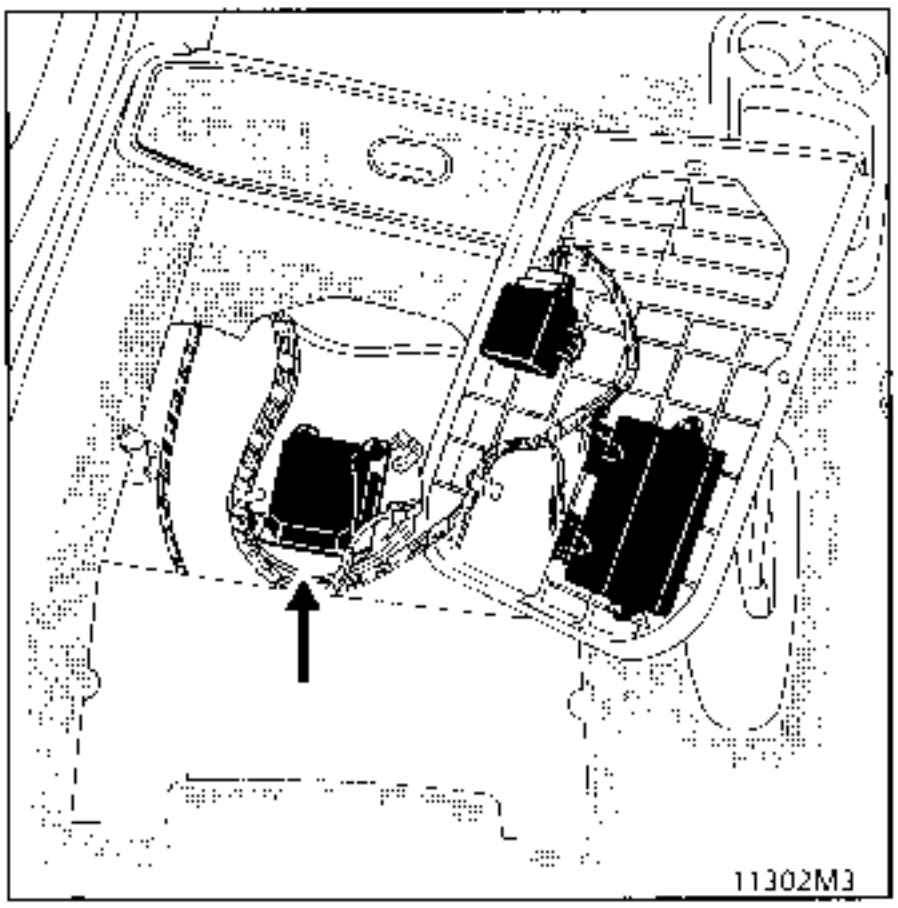
Enter the code **D** **4** **9**

Lock the computer with:

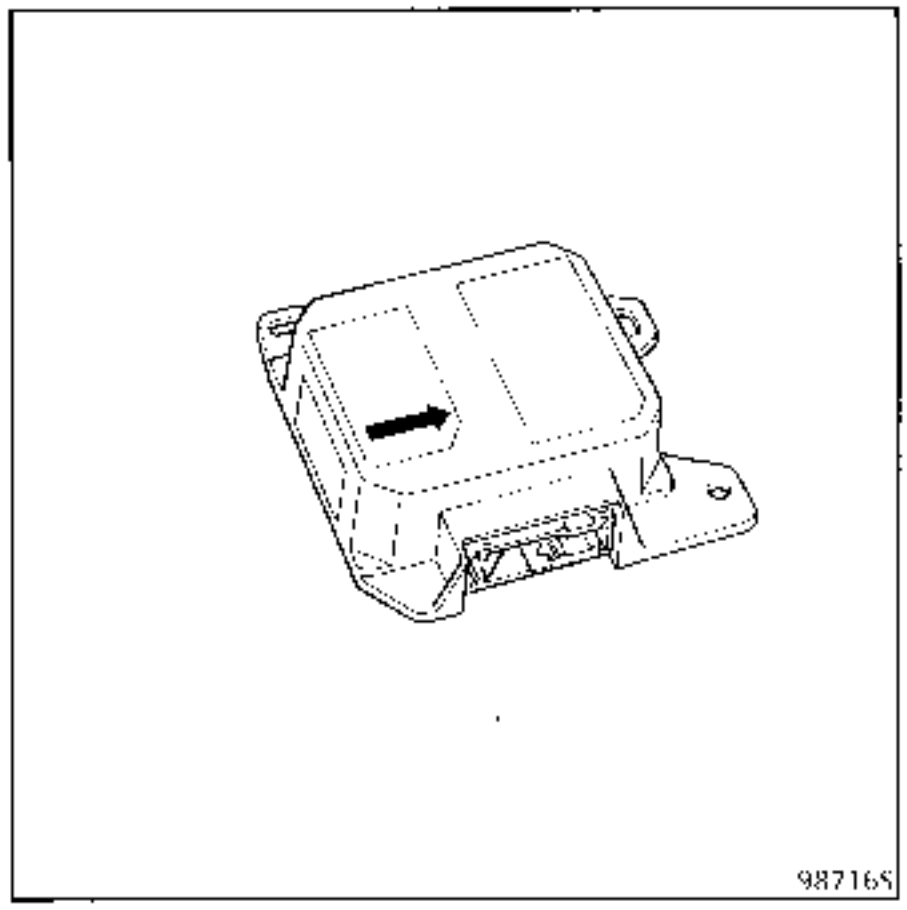
the command **G** **8** **0** *****

- When this function is activated all the ignition lines are inhibited, the bargraph 14 LH side on the XR25 is illuminated **(new computers are supplied locked).**

- **Wait 2 seconds** for automatic discharge of the unit.
- Switch off the ignition.



REMOVE
- The passenger seat
- Disconnect the pretensioner (feed to elertric seat, if provided).
  Lift the carpet.
- The plastic protection (2 bolts)
- Disconnect the 30 track connector
- The computer



IMPORTANT:

- the computer must be replaced after triggering of the belt pretensioners and airbags. Some components lose their nominal characteristics after the triggering current has passed through them.

- **IMPORTANT** : To replace the computer:

- Secure it to the vehicle; the arrow on the unit must face forward (tightening torque **0.4 daN.m**).

When everything has been replaced:

- Carry out a check using the XR25.
  If everything is correct, unlock the computer

with the command **G** **8** **1** *****

- Check that the bargraph 14 LH side is extinguished.

IMPORTANT: failure to follow these instructions could disrupt normal operation of the systems and even lead to their premature triggering.

CONNECTION

1 30-track connector

Track	Allocation
1	– Driver pretensioner signal
2	+ Driver pretensioner signal
3	– Passenger pretensioner signal
4	+ Passenger pretensioner signal
5	+ After ignition
6	+ Passenger airbag signal (line 1)
7	–Passenger airbag signal (line 1)
8	Warning light
9	Earth
10	– Driver airbag signal
11	Driver airbag signal
12	"K" diagnostic line
13	+ Passenger airbag signal (line 2)
14	–Passenger airbag signal (line 2)
15	"L" diagnostic line
16 17	Shunt
18 19	Shunt
20	Not used
21 22	Shunt
23	Not used
24	Not used
25 26	Shunt
27	Not used
28 29	Shunt
30	Not used

NOTE:

- The characteristic of the 30-track connector of the electronic unit is that it short-circuits the different ignition lines as soon as it is disconnected. In fact, shunts located opposite each pretensioner or airbag line prevent these systems from triggering prematurely (by aerial effect, for example).

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

  However, reserve power capacity is incorporated in the computer should the battery become disconnected on initial impact.

IMPORTANT:

- in any operation underneath the vehicle (exhaust, body, etc.), do not use a hammer or transmit shocks to the floor without first locking the computer by means of the XR25 with the command **G80* (ISO selector on S8 code D49).**
  Wait 2 seconds for automatic discharge of the unit.

- when installing an optional electrical accessory (speaker, alarm unit or any instrument which is capable of generating a magnetic field), it must not be located in the immediate vicinity of the airbags and pretensioners computer.

WORK ON THE IGNITION WIRING

If a fault is observed on one of the ignition wires, the component must be replaced, not repaired.

This safety device cannot tolerate any conventional repair work on wires or connectors.

IMPORTANT: when laying new wiring, make sure that it is not corroded and that its original cleanliness has been preserved.

OPERATION WITH AIRBAG AND PRETENSIONER EQUIPMENT

When the ignition is switched on the computer is then on standby and will take account of the decelerations of the vehicle based on the signal measured by the integrated decelerometer.

When a frontal impact of sufficient strength occurs it triggers the simultaneous ignition of the pyrotechnic generators of the two seat belt pretensioners after receiving confirmation of detection of an impact by the electromechanical safety sensor.

Under the action of the gases generated by the system, a piston is displaced in its cylinder, carrying with it a cable connected to the corresponding central catch, thus enabling the seat belt to be retracted (see pretensioner section).

If the frontal impact is greater than this, the decelerometer triggers the ignition of the pyrotechnic gas generators which inflate the driver and passenger airbags once the impact has been validated by the electromechanical safety sensor.

These systems are not triggered in the case of:
- a lateral impact,
- a rear impact.

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

IMPORTANT : the systems must **NECESSARILY** be checked by means of the **XRBAG** tool, following:
- an accident which has not given rise to triggering,
- theft or attempted theft of the vehicle,
- before the sale of a used vehicle.

WARNING LIGHT ON THE DASHBOARD

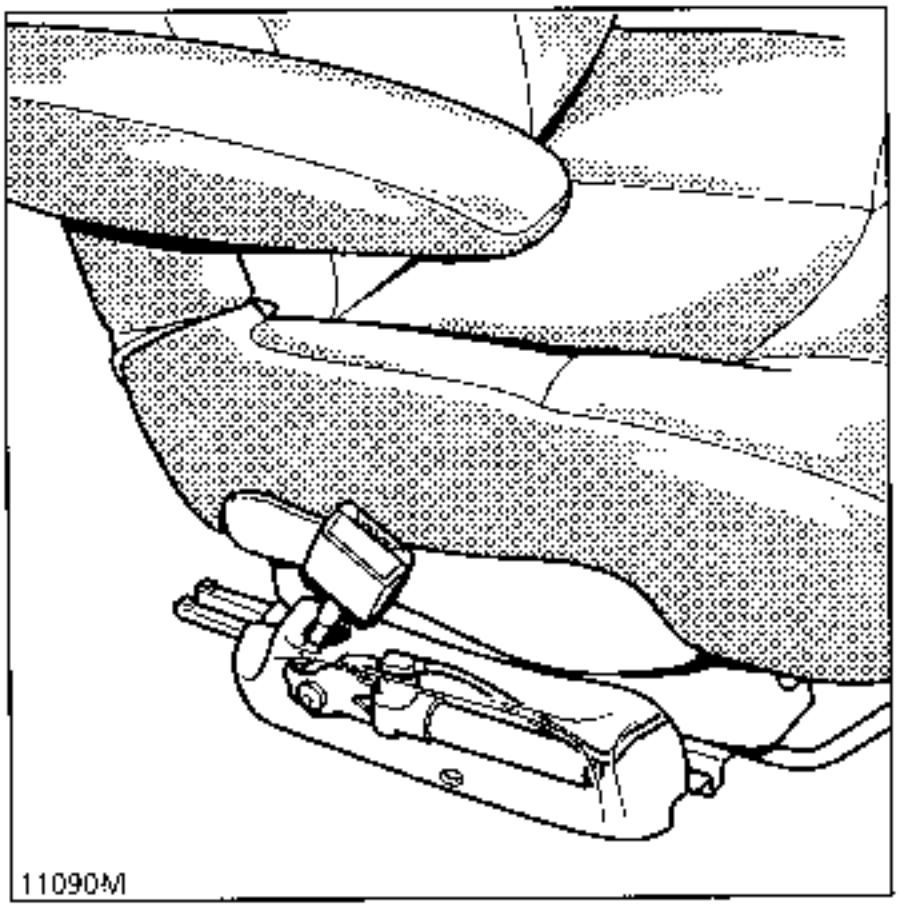
This warning light monitors the pretensioners and airbags.

If the warning light illuminates whilst the vehicle is moving this indicates a fault in the system (see fault finding section).

D - SEAT BELT PRETENSIONERS

DESCRIPTION

They are mounted on the side of the front seats.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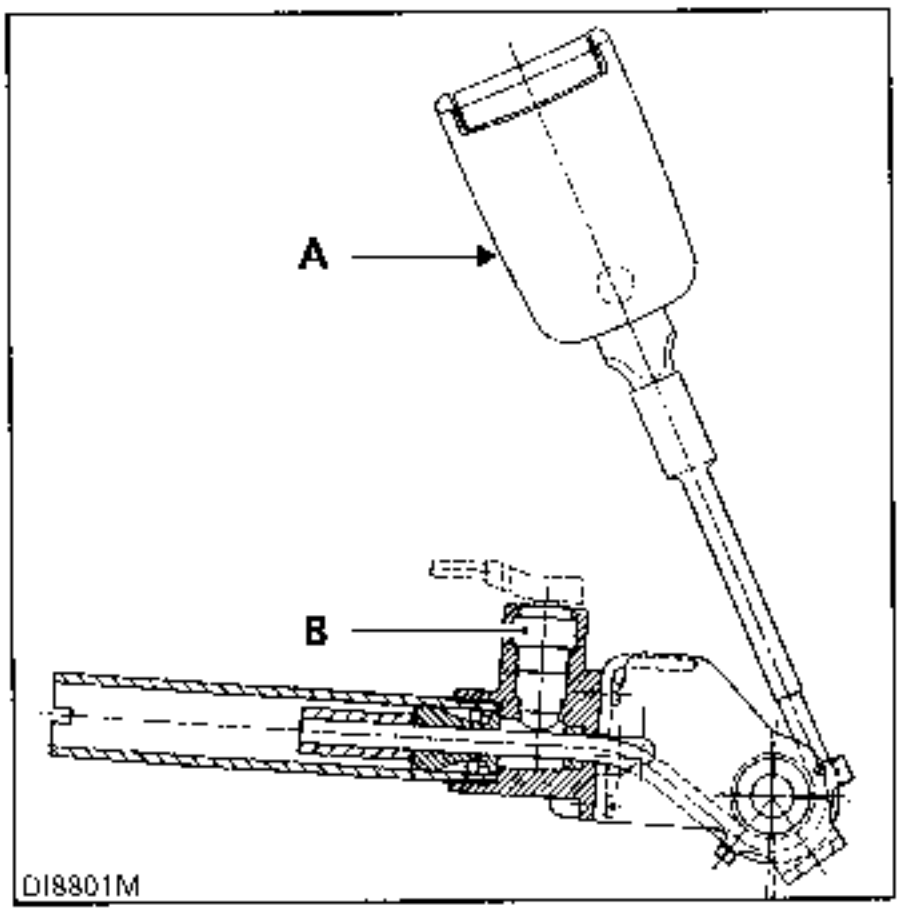
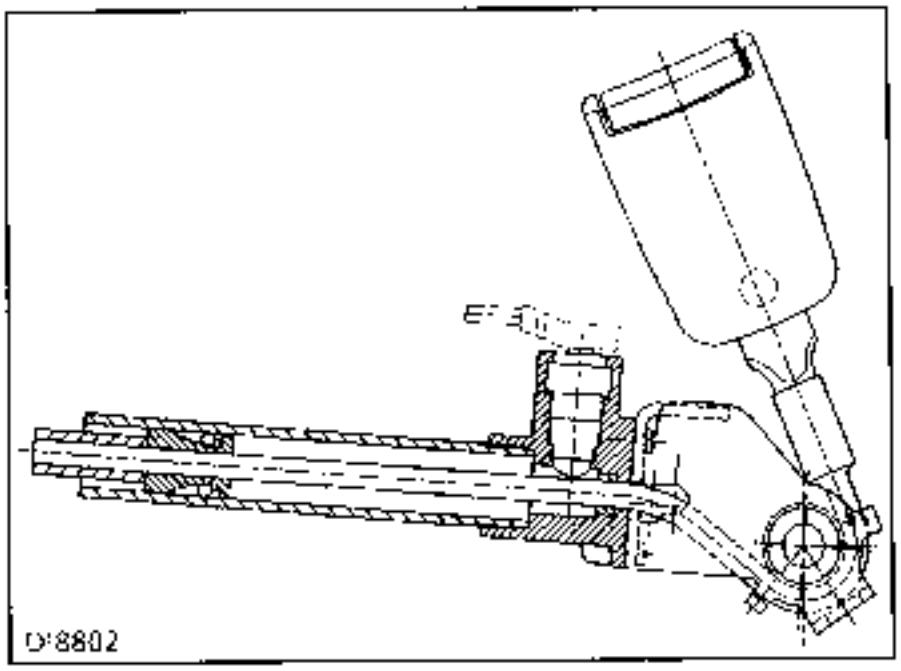
A pretensioner includes:
- a special seat belt catch (A),
- a pyrotechnic gas generator and ignition module (B).



DI8801M

When it is triggered the system is able to retract the catch by up to **70 mm** (maximum)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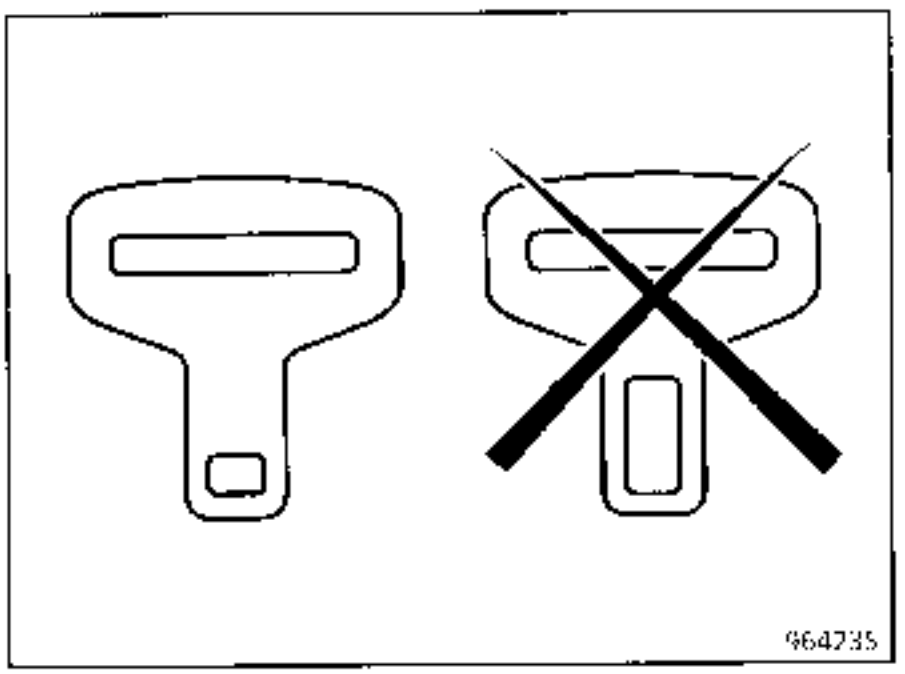
The components of the pretensioner cannot be separated.

IMPORTANT : the pretensioner catches must be used with seat belts having buckles with small windows.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SEAT BELTS

When the pretensioners are triggered the front seat belt or belts must be systematically replaced if they were attached during the pretension (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 risk damaging its mechanism.

REMOVAL

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

IMPORTANT:

Before removal

- Connect the XR25 to the vehicle
- Switch on the ignition
- Use fiche no. 49 **(ISO selector on S8 code).**

enter the code D 4 9

Lock the computer with:

the command G 8 0 *

- When this function is activated all the ignition lines are inhibited and the left hand bargraph 14 of the XR25 is illuminated **(new computers are supplied locked).**

- **Wait 2 seconds** for automatic discharge of the unit.
- Switch off the ignition.

Remove:

- The protective lining of the pretensioner (3 20 torx bolts)
- Disconnect the connector (A)
- The bolt (B)

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

REFITTING

Ensure that the wiring is correctly routed underneath the seats and pay attention to the mounting points.

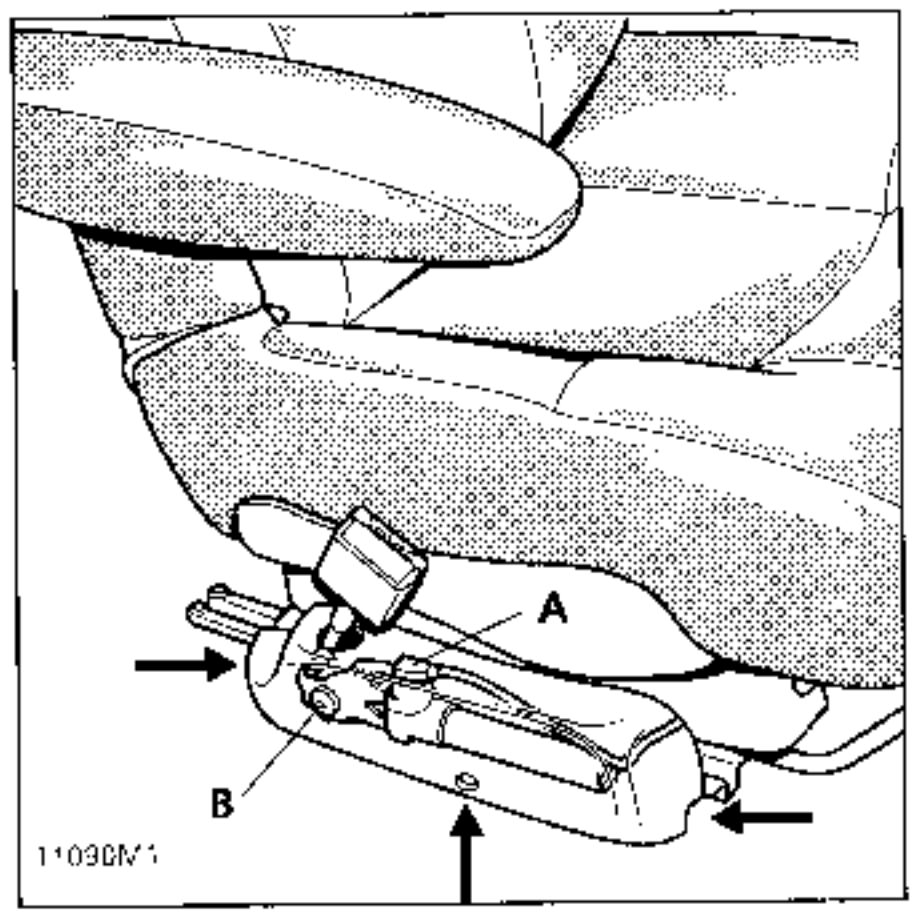
IMPORTANT :

- Reconnect the connectors.
- On the pretensioner side, clip the white connector as tightly as possible (tight clipping).
- Carry out a check using the XR25. If all is correct unlock the computer with

  the command G 8 1 *

- Check that the left hand bargraph 14 is extinguished.

REMINDER: if the pretensioners have been triggered their computer **MUST** be replaced.



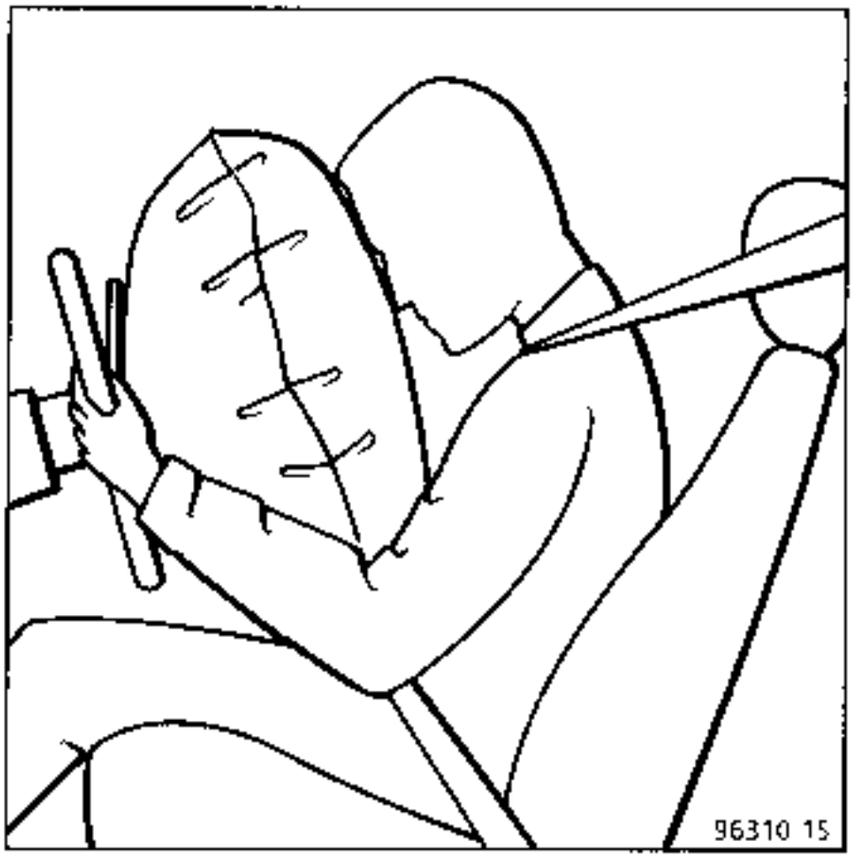
E - "CENTRAL" DRIVER'S AIR BAG

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.



NOTE : when the airbag inflates, the steering wheel cover is torn.

Warning light  on the instrument panel shows the correct operation of the driver's airbag.

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

STEERING WHEEL AIRBAG AND ROTARY SWITCH

REMOVAL

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

IMPORTANT:

Before removal

- Connect the XR25 to the vehicle
- Switch on the ignition
- Use fiche no. 49 **(ISO selector on S8 code).**

enter the code **D 4 9**

Lock the computer with:

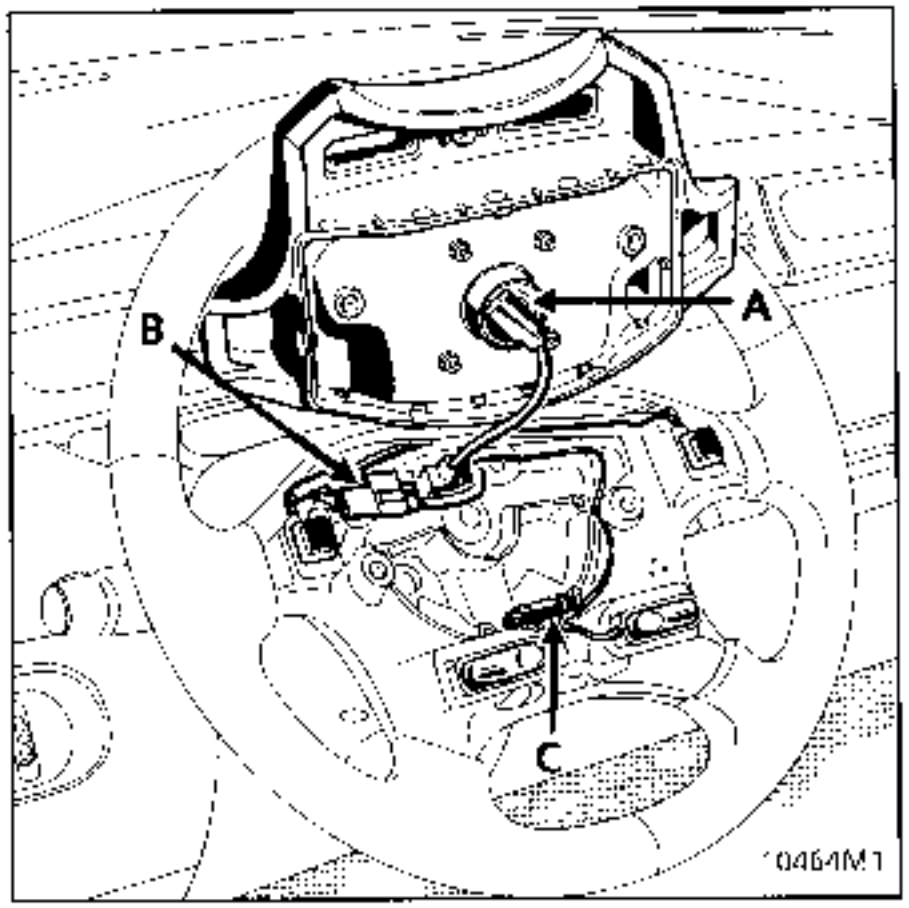
the command **G 8 0 ***

- When this function is activated all the ignition lines are inhibited and the left hand bargraph 14 of the XR25 is illuminated **(new computers are supplied locked).**

- **Wait 2 seconds** for automatic discharge of the unit.
- Switch off the ignition.

Remove:

- the airbag cushion by its two 30 torx bolts located behind the steering wheel and disconnect its connector (A).



- the connectors (B) of the horn and cruise control (C) if fitted,
- the bolt from the steering wheel,
- the steering wheel after straightening the wheels.

IMPORTANT :

When everything has been refitted:

- Carry out a check using the XR25. to ensure that there is no fault in the system.
- If all is correct unlock the computer with

the command **G 8 1 ***

- Check that the bargraph 14 LH side is extinguished.

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

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

SPECIAL PURPOSE OF THE ROTARY SWITCH UNDERNEATH THE STEERING WHEEL

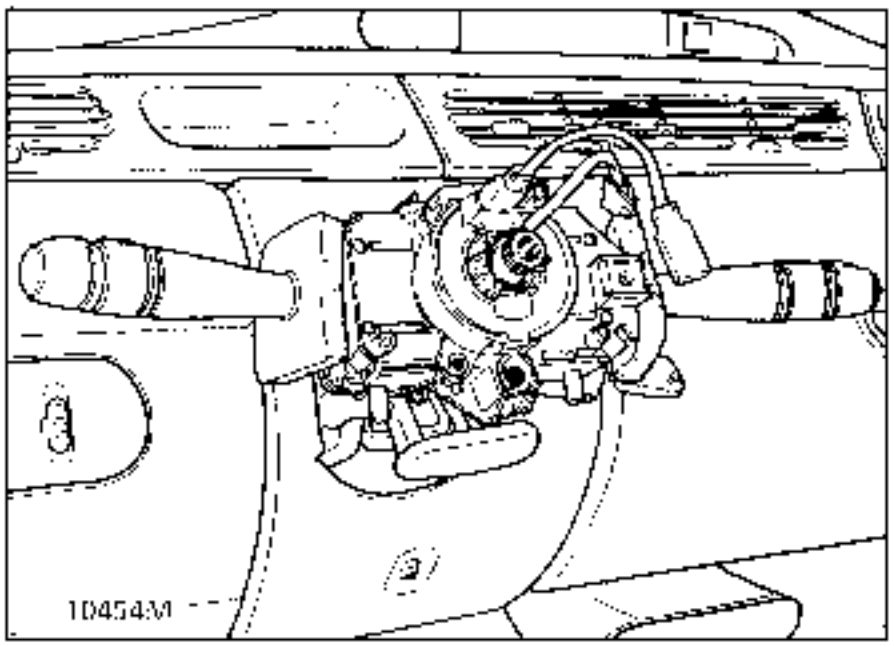
It provides the electrical connection between the steering column and steering wheel.

It consists of a strip with conducting tracks (air-bag) with length designed to provide 2.5 turns of the steering wheel (steering lock plus security) on each side.

REMOVAL

When removing the switch its position must be marked either:

- by making sure that the wheels are straight at the time of removal, so that the length of the strip is positioned in the centre,
- by immobilising the rotor of the rotary switch with adhesive tape.



When it is replaced the new part will be supplied centred and secured by an adhesive label which can be torn off at the first turn of the steering wheel (to be fitted with wheels straight).

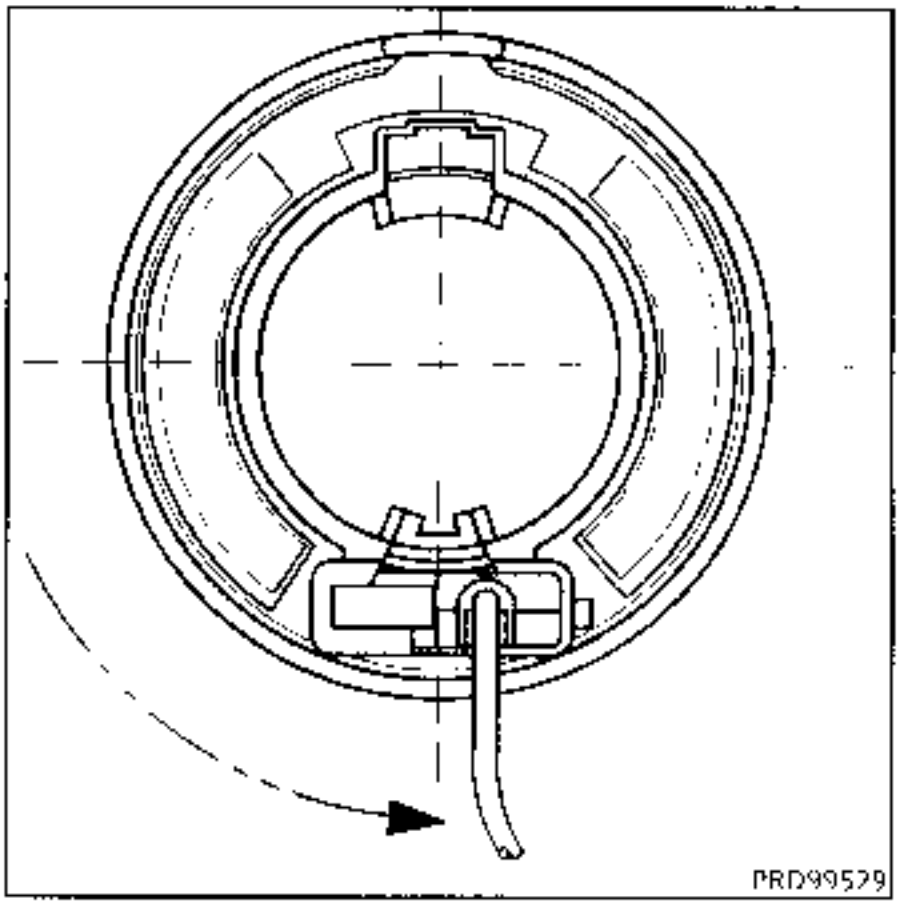
REFITTING

Make sure that the wheels are straight at all times.

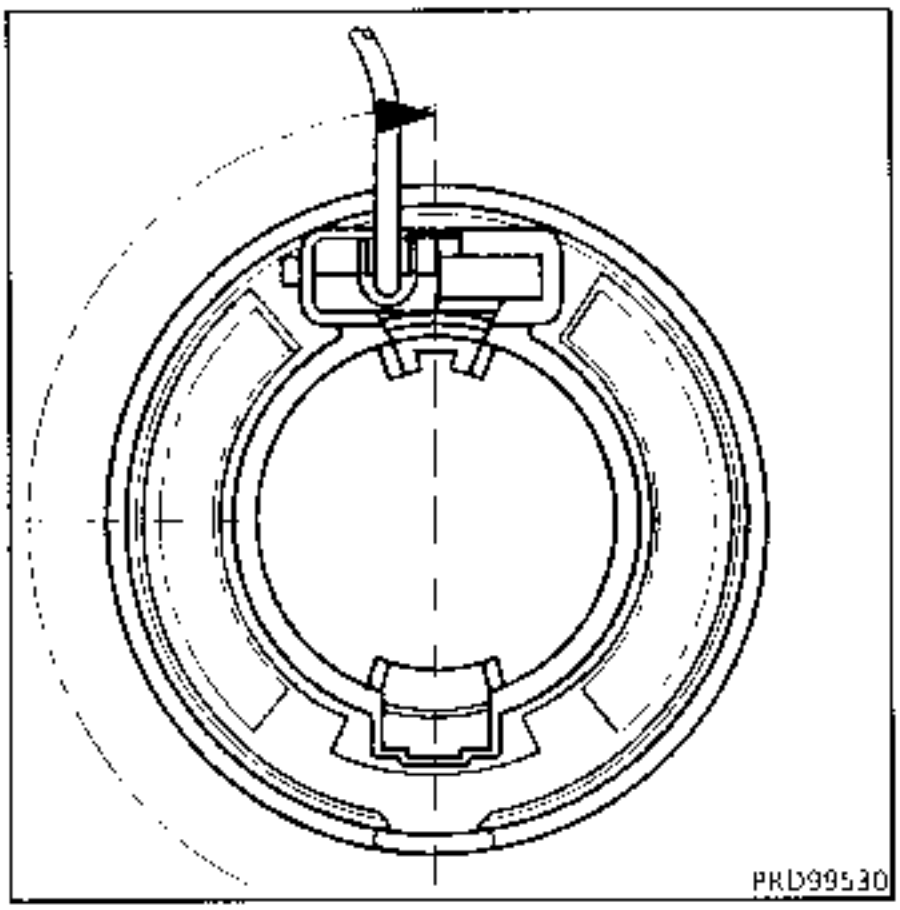
Check that the rotary switch is still immobilised before refitting.

If this is not the case, follow the centring method described below:

- rotate the upper section of the rotary switch anti clockwise. The approach of the extreme position, shown below, is indicated by a certain stiffness (do not force).



– then lightly rotate the upper section of the part clockwise and check that the rotary switch is actually in the position shown below.



– again rotate the part in the clockwise direction by making two complete turns, and after this operation make sure that the rotary switch is actually in the position previously described.

Refit the steering wheel and **replace the pre-bonded bolt,** ensuring its correct tightening torque **(4.5 daN.m).**

Reconnect the airbag cushion and secure it to the steering wheel, tightening torque **(0.5 daNm).**

SPECIAL CASES

Where work is being done involving removal of the steering, engine, transmission, etc., requiring uncoupling of the rack and steering column:

the steering wheel must be immobilised using a "steering wheel locking" tool.

IMPORTANT: to 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 so that the centring method described above can be applied.

REMINDER: in this case, only qualified personnel who have received the correct training must work on the airbag.

IMPORTANT :

When everything has been refitted:

- Carry out a check using the XR25 to ensure that there is no fault in the system.
- If all is correct unlock the computer with

  the command **G 8 1 ***
- Check that the left hand bargraph 14 is extinguished.

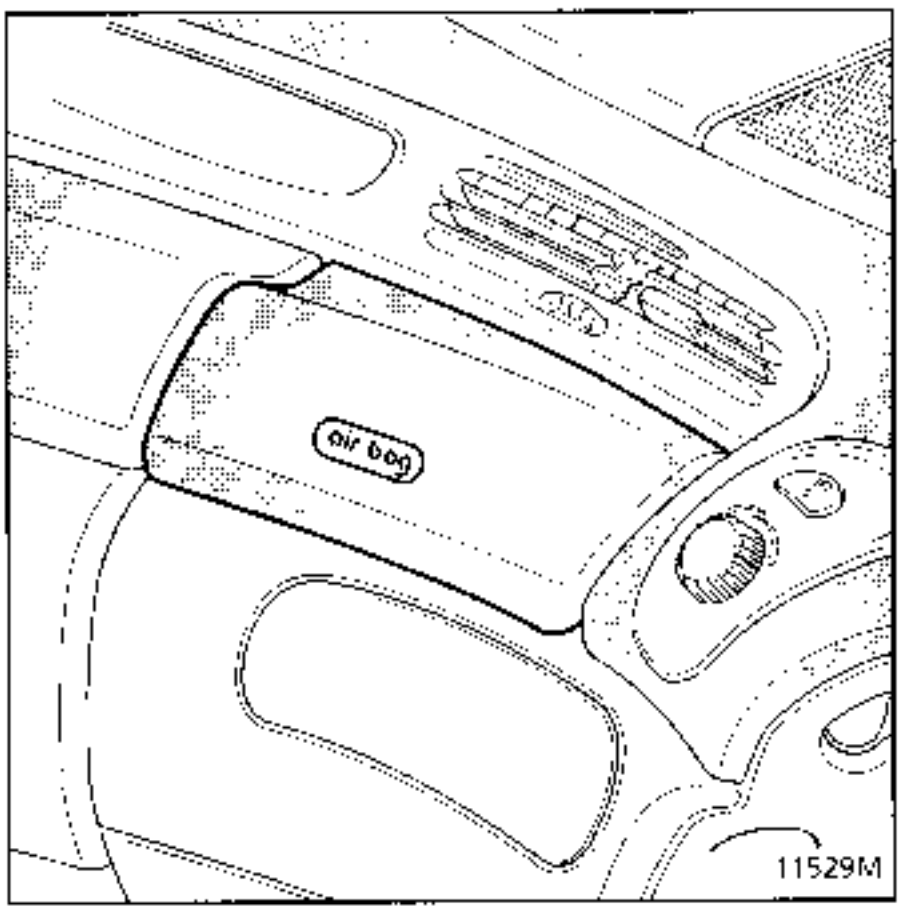
IMPORTANT:
If these procedures are not correctly observed the systems may not operate correctly or may be accidentally triggered.

F - PASSENGER AIRBAG MODULE

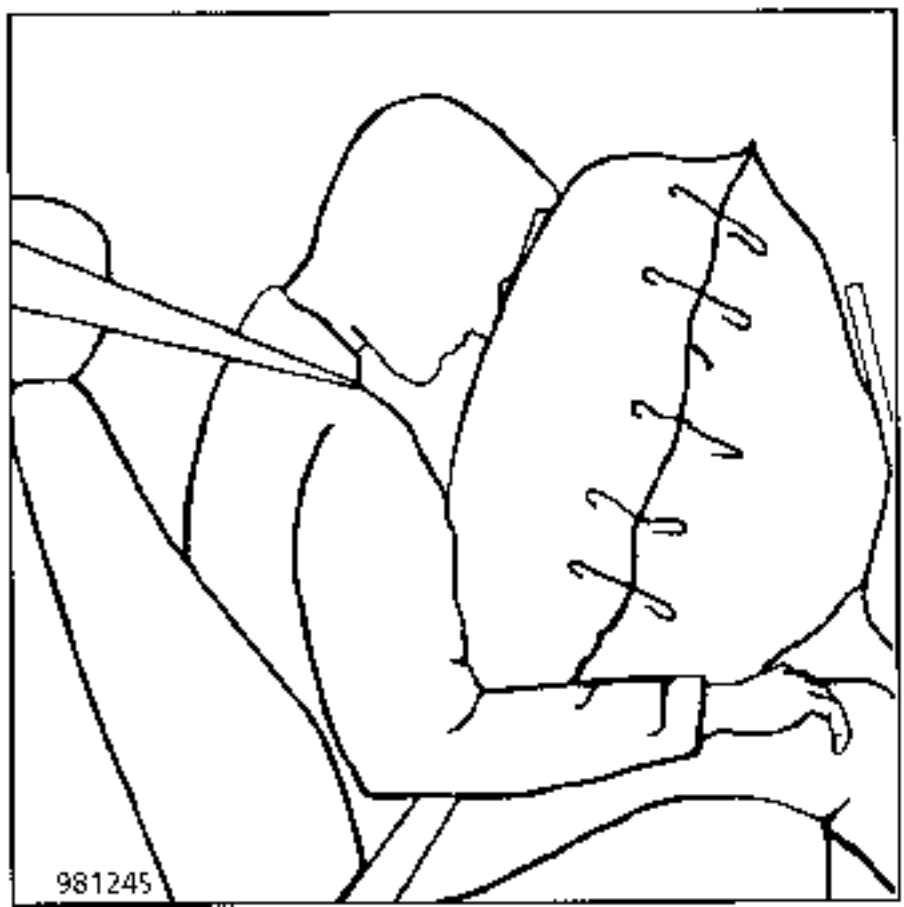
DESCRIPTION:

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

It comprises:
- an inflatable cushion,
- two pyrotechnic gas generators and ignition modules.



The components of the airbag module cannot be separated.



REPLACEMENT OF THE PASSENGER AIRBAG MODULE

IMPORTANT: when the passenger airbag module is triggered, the deformation of and damage to the mountings **automatically requires the replacement of the dashboard.**

IMPORTANT : before scrapping a non triggered airbag cushion it **MUS**T be destroyed in accordance with the method for destruction (see section "Destruction procedure").

IMPORTANT:

- **Before removal**
  Connect the XR25 to the vehicle
- Switch on the ignition
- Use fiche no. 49 **(ISO selector on 58 code).**

enter the code

D 4 9

Lock the computer with:

the command

G 8 0 *

- When this function is activated all the ignition lines are inhibited and the left hand bargraph 14 of the XR25 is illuminated **(new computers are supplied locked).**

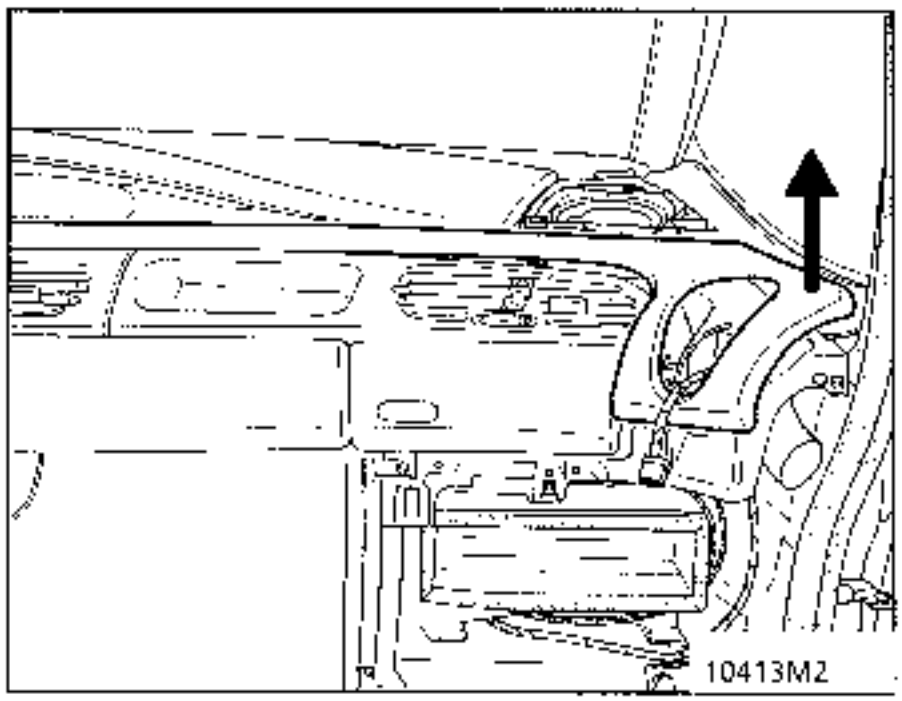
- **Wait 2 seconds** for automatic discharge of the unit.
- Switch off the ignition.

REMOVE:

- The passenger speaker grille
- The lower passenger console
- The heating control
- The mountings (1) of the airbag cover.

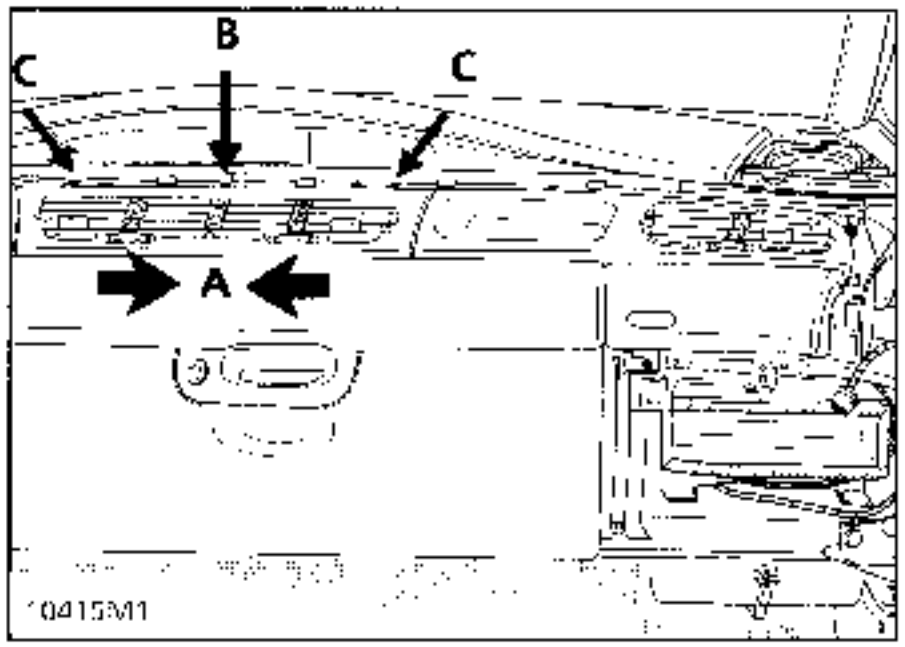
For this operation it is not necessary to remove the strip.

- Raise the cloth strip on the passenger side, start lifting in one corner and pull up to unclip the mountings.



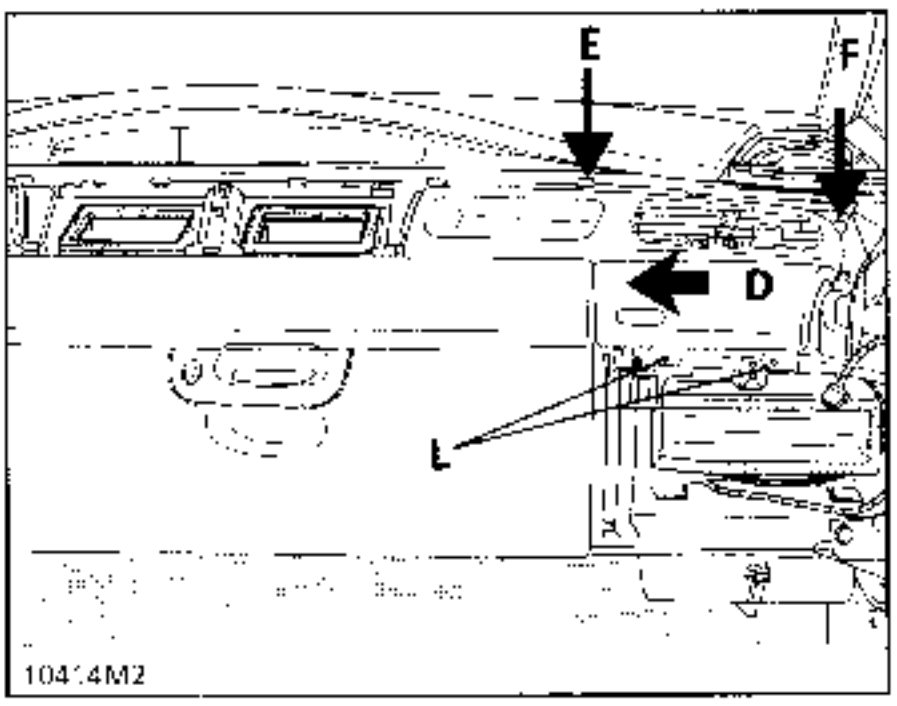
- Place the two central vent control wheels in position (A), in the vent closed position.
- Slacken the mountings (B)
- Unclip the mountings (C)

  Unclip the bottom of the vent
- Withdraw the vent by tilting it towards you.

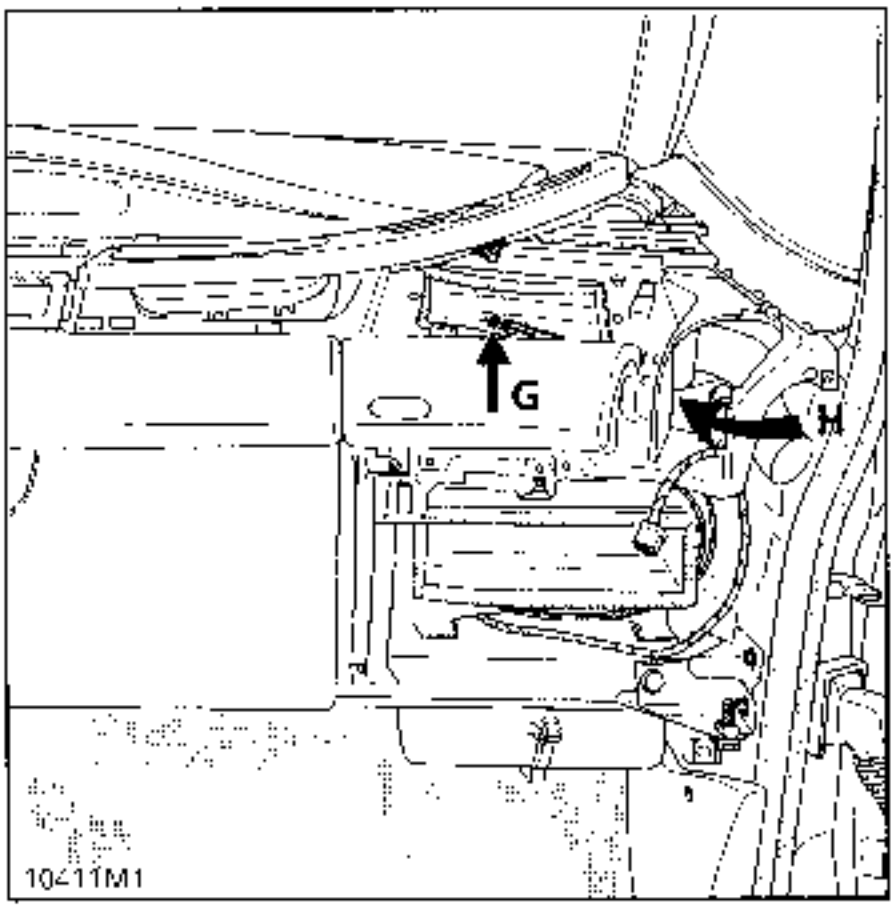


REMOVAL

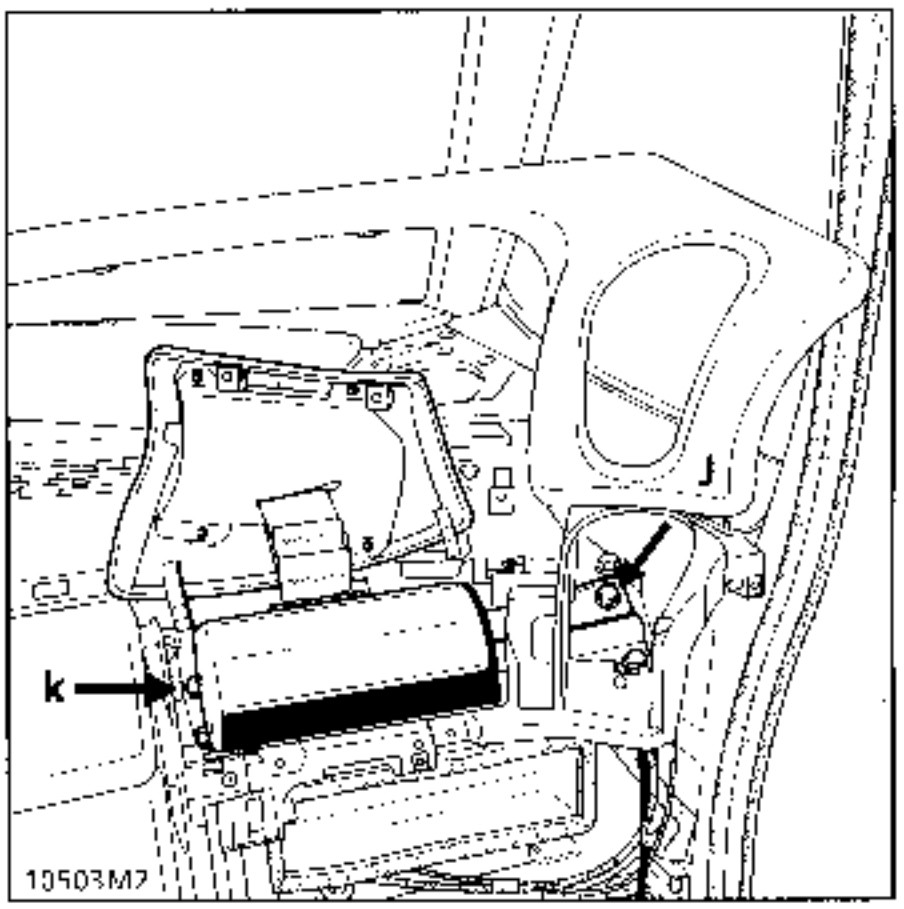
- Place the lateral vent control wheel in position (D).
- Remove clip (E).
- Slacken the mounting (F).
- Withdraw the vent by pulling a few millimetres on the glove compartment side, paying attention to the control rod.



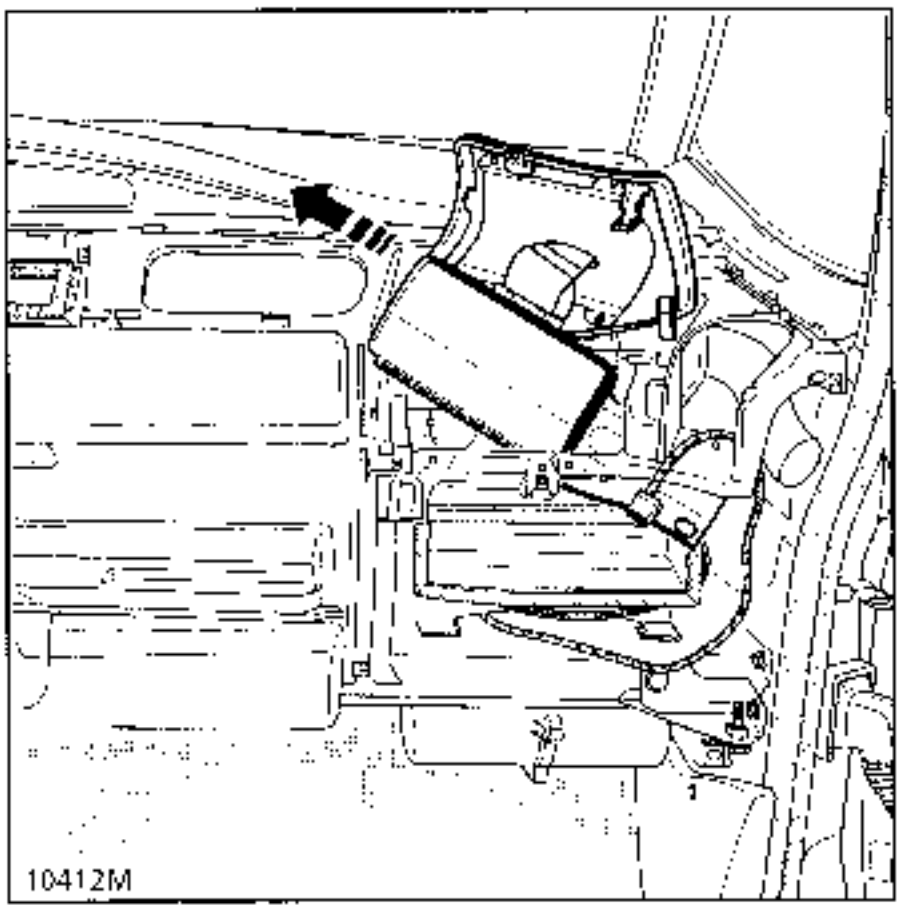
- Remove the ball joint (G) from the rod by pushing downwards.
- Remove the vent.
- Remove the mountings (L) from the airbag cover (20 torx)



- The torx mountings (J)
- Slacken the 2 hexagonal bolts (K) with a ring spanner



- Release the airbag module from its support by lifting it and pulling it towards the central storage compartment.
- Disconnect the 2 generators.



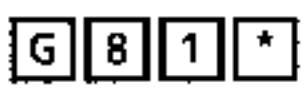
REFITTING

Refitting is the reverse of removal - the tightening torque of the 4 module mounting bolts (**2.4 daN.m**) MUST be observed.

IMPORTANT:

When everything has been refitted:

- Carry out a check using the XR25 to ensure that there is no fault in the system.
- If one or more bargraphs is/are illuminated, refer to the "Fault finding" section.
- If all is correct unlock the computer with the command



- Check that the left hand bargraph 14 is extinguished.

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

THE OPERATION TO BE CARRIED OUT DURING FAULT FINDING FOR PERMITTING ACCESS TO THE PASSENGER AIRBAG IGNITION MODULES IS THE SAME AS FOR REMOVAL.

REPLACING THE COMPUTER

The computers are supplied locked to avoid any risk of accidental triggering (all the ignition lines are inhibited). This mode of operation is shown by the illumination of the warning light on the instrument panel.

When replacing an airbag computer, observe the following procedure:

- Ensure the ignition is off,
- Replace the computer,

IMPORTANT : when fitting the computer, it MUST be mounted on the vehicle before its connectors are connected. The arrow on the computer must point forwards (tightening torque **0.4 daN.m**).

Turn the ignition on

- Check using the XR25,

unlock the computer using command **G81*** if there are no faults noted by the XR25 (otherwise refer to the "Fault finding" section).

TOOLING REQUIRED FOR WORKING ON THE AIRBAG AND SEAT BELT PRETENSIONER SYSTEMS

- XR25 (with cassette N°15 minimum).
- XRBAG with update N°3 (with the new measuring cable and adapters together with the 30 track adapter for working on the computer connector).

REMINDERS

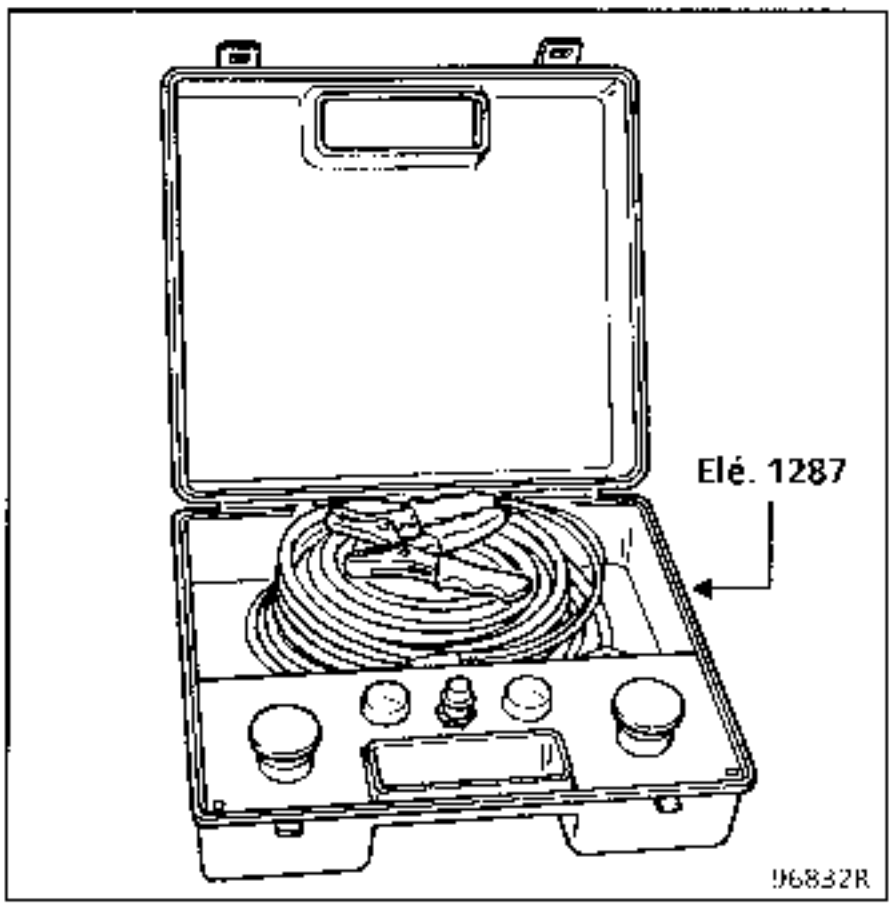
Never take measurements on the airbag and pretensioner ignition lines with equipment other than the XRBAG.

Before using a dummy ignition module, ensure its resistance is between 1.8 and 2.5Ω.

G - 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

DESTRUCTION OF THE PART FITTED TO THE VEHICLE

Move the vehicle outside the workshop.

Connect the destruction tool to the connector under the front seat using the appropriate lead.

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.

Carry out the same operation for the 2nd pretensioner.

NOTE : if the pretensioner cannot be triggered (ignition module faulty), return the part in the packaging from the new component to JTG (Service 0428).

DESTRUCTION OF THE PART REMOVED FROM THE VEHICLE

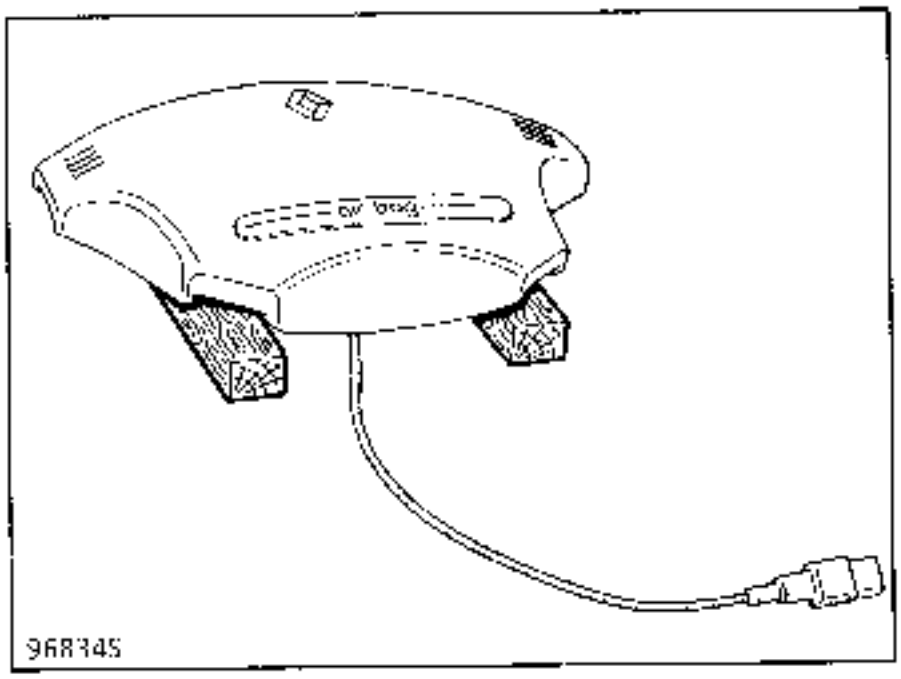
Proceed in the same manner as for the airbag (removed part).

DRIVER'S AIRBAG

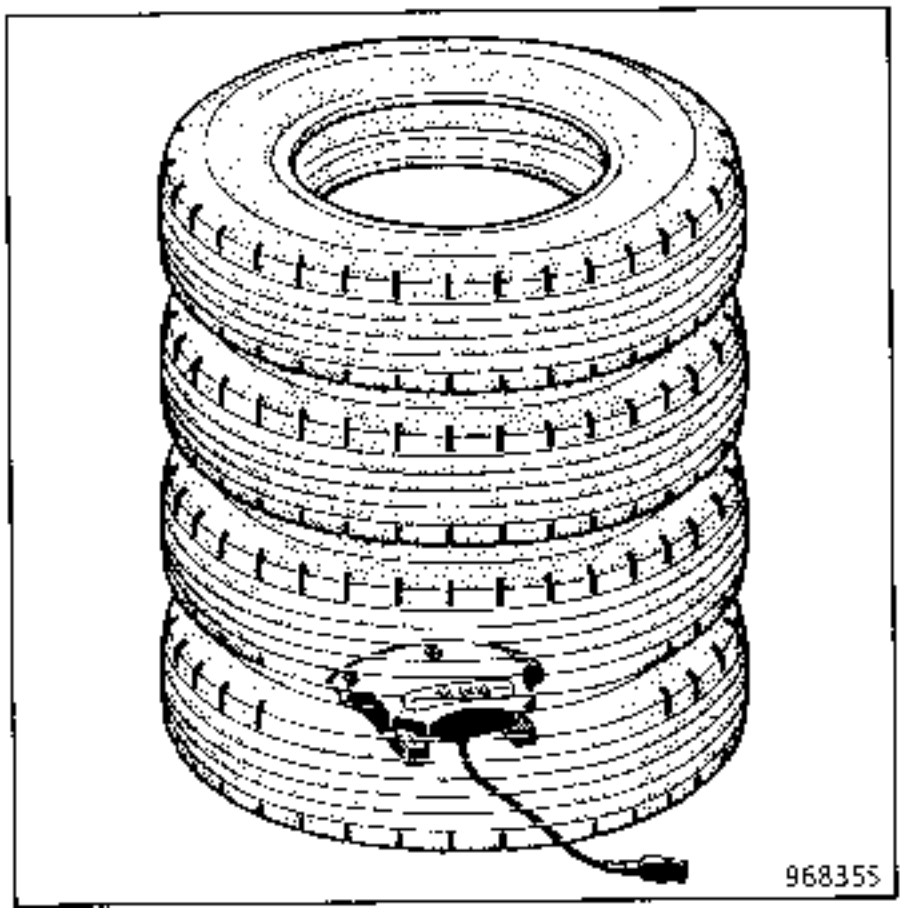
DESTRUCTION OF THE PART REMOVED FROM THE VEHICLE

Carry out the operation outside of the workshop.

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



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 airbag 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 pretensioner by pressing the two buttons on the tool at the same time.

NOTE : if the pretensioner cannot be triggered (ignition module faulty), return the part in the packaging from the new component to ITG (Service 0428).

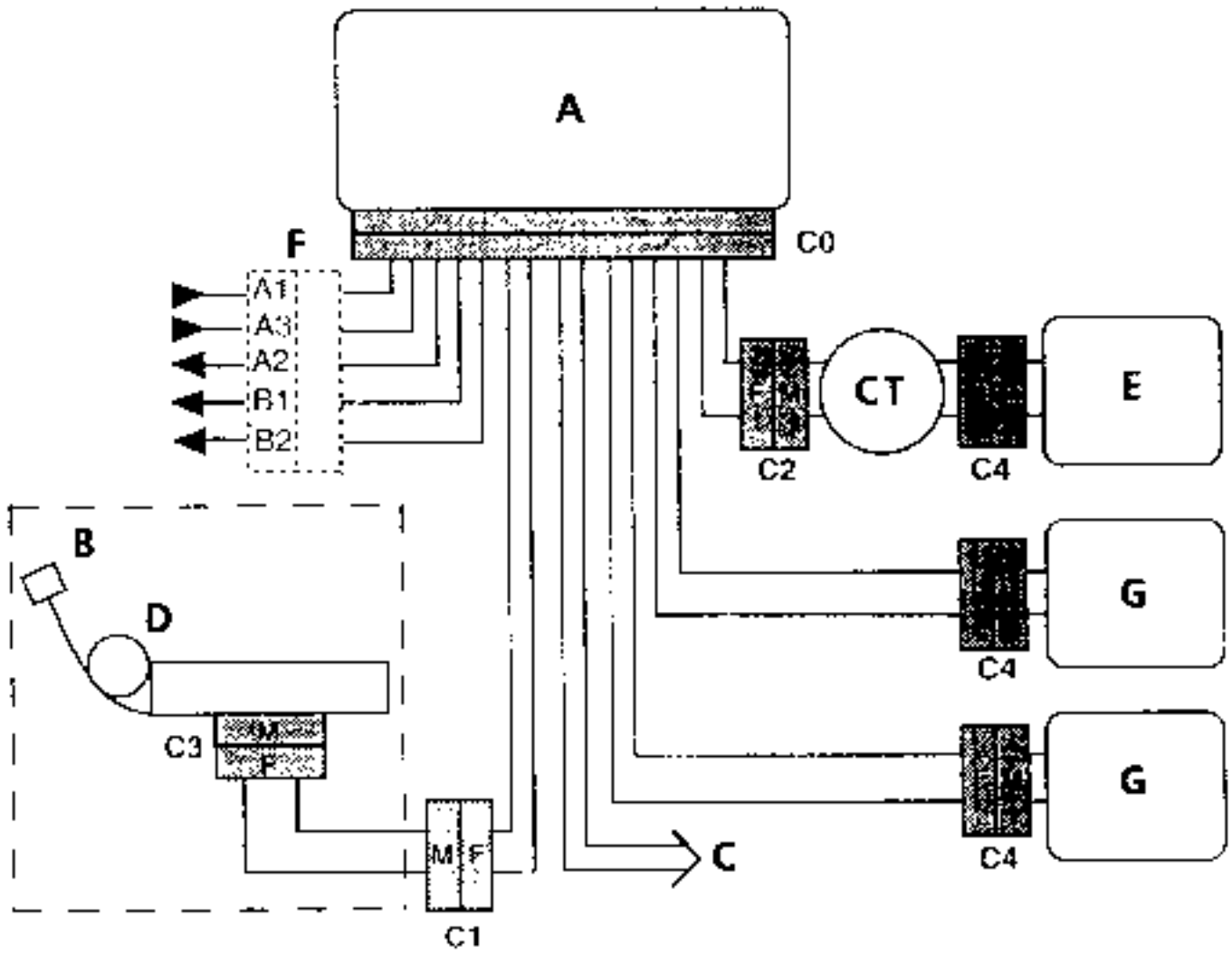
PASSENGER AIRBAG

DESTRUCTION OF THE PART REMOVED FROM THE VEHICLE

Proceed in the same manner as for the driver's airbag (removed part), destroying the two pyrotechnic gas generators one by one.

FAULT FINDING - XRBAG FICHE

Pretensioner, driver's and passenger airbag



- **A** Central computer
- **B** Driver's seat
- **C** Passenger seat
- **D** Pretensioners
- **E** Driver's airbag ignition module
- **F** Sigma 6 track connector
- **G** Passenger airbag ignition module
- **CT** Rotary switch
- **A1** + 12 Volts
- **A3** Earth
- **A2** Warning light
- **B1**, **B2** Diagnostic socket

	AIRBAG	
	Measuring point	Correct value
Driver	C0, C2 and C4	2 to 9.4 Ω
Passenger	C0 and C4	1.6 to 4.6 Ω

PRETENSIONERS	
Measuring point	Correct value
C0, C1 and C3	1.6 to 4.6 Ω

Correct insulation value : display ≥ 100.h or 9999 flashing