

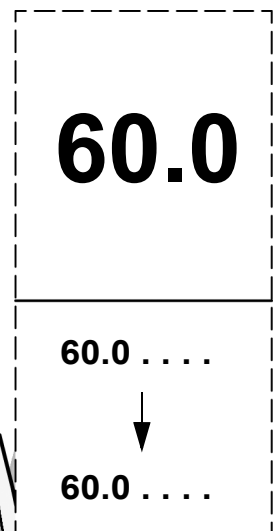
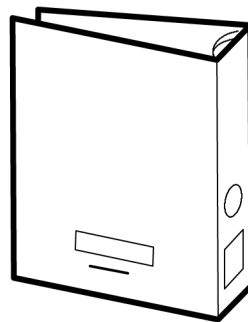
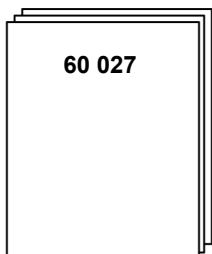
60 027 - GB - 06/2004

CAB + AIR BAG REMOVAL / FITTING

RANGE	FAMILY	VARIANT
MASCOTT DXi	-	-



The above information may change in the course of time. Only the "Consult" section of the workshop manuals repertory in standard N° 10320 serves as reference.



CONTENTS

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GENERALITIES

APPLICABILITY











Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Conventional symbols				23/05/2002	A-3
MASCOTT DXi		Warnings				31/03/2003	A-5

Conventional symbols









Fitting

	Tighten to torque (Nm) (left-hand thread)		Tighten by indicated value
	Tighten to torque (Nm) (right-hand thread)		Loosen by indicated value
	Tightening torque with lubricated threaded hardware		










Dimensioning

	Tightening		... Greater than or equal to ...
	Equal to		Wear limit
	... Less than ...		Machining limit or dimension
	... Greater than ...		Maximum out-of-true
	... Less than or equal to ...		Maximum parallelism error



















Repair

	Force to be exerted in the direction shown (hammer - press)		Smear or coat (see "Consumables" table)
	Heat or cool: Temperature in degrees Celsius (e.g. + 80 °C)		Fill to level (see "Technical Data" and "Consumables" table)
	Weld bead		Grease or oil (see "Consumables" table)
	Repair time - Heating time		Mark - Assemble according to marking

Adjustment

	Rotating friction torque		Turn anti-clockwise
	Turn in alternate directions		Turn anti-clockwise (the figure shows the number of turns)
	Turn clockwise		Turn clockwise (the figure shows the number of turns)
	Place in contact		Move in the direction shown
	Dimension to be assured (mm)		

Various information

	Exhaust - Outlet		Operation with a sequence
	Intake - Inlet		Involves
	Weight in kg (example: 275 kg)		Return to numbered operation - Connected with numbered operation
	Depending on versions or options		Withdraw - Delete
	Wrong		Direction of disassembly (the arrow shows the direction)
	Correct		Direction of assembly (the arrow shows the direction)
	Injection		... to ...
	Repair dimension		Inspect - Check condition of part
	Part to be replaced		Danger for persons, vehicle or equipment

Warnings

In this document, safety instructions are symbolized as follows:



DANGER! NON-OBSERVANCE OF THE PROCEDURE DESCRIBED OR LACK OF CARE OR ATTENTION, RISK CAUSING SERIOUS INJURY OR EVEN DEATH.



WARNING! Any different or inappropriate working method risks causing damage to the product.



NOTE! Draws attention to particular or important points of the method.



Comply without fail with the regulations in force relative to the recovery and treatment of used parts and waste.

TECHNICAL DATA

APPLICABILITY**Tightening torques**

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Definitions				27/02/2003	B1-3
MASCOTT DXi		Standard nut and bolt tightening torques table				06/06/2003	B1-4
MASCOTT DXi		Specific cab tightening torques (in Nm)				28/01/2004	B1-5
MASCOTT DXi		Specific air bag device tightening torques (in Nm)	08202/03			12/02/2004	B1-6

Tightening torques

Definitions

There are several types of tightening:

- Tightening to torque (in **Nm**)
- Tightening to angle (in °)
- Tightening to torque-angle (en **Nm + °**)

Torques given in **Nm** are nominal torques (average value calculated on the basis of the minimum torque and the maximum torque).

The tightening precision class defines the tolerance of this torque in percent as a function of the nominal torque applied.

Tightening precision classes:

- **Class I:** Special threaded hardware (tolerances $\pm 10\%$ of the final torque).
- **Class II:** Reserved for precise tightening (tolerance $\pm 10\%$ of the nominal torque).
- **Class III: Reserved for normal standard tightening** (tolerance $\pm 20\%$ of the nominal torque)

For standard threaded hardware indicated in the table below, use tightening class **III**.

For other torques, see the following page(s).



"FIH" type (Nylstop) locknuts must be replaced whenever removed. "DRH" type (oval) locknuts can be re-used. If locknuts (DRH, FIH or other) are re-used, make absolutely certain that the screw-thread of the bolt protrudes least two threads above the top edge of the nut.

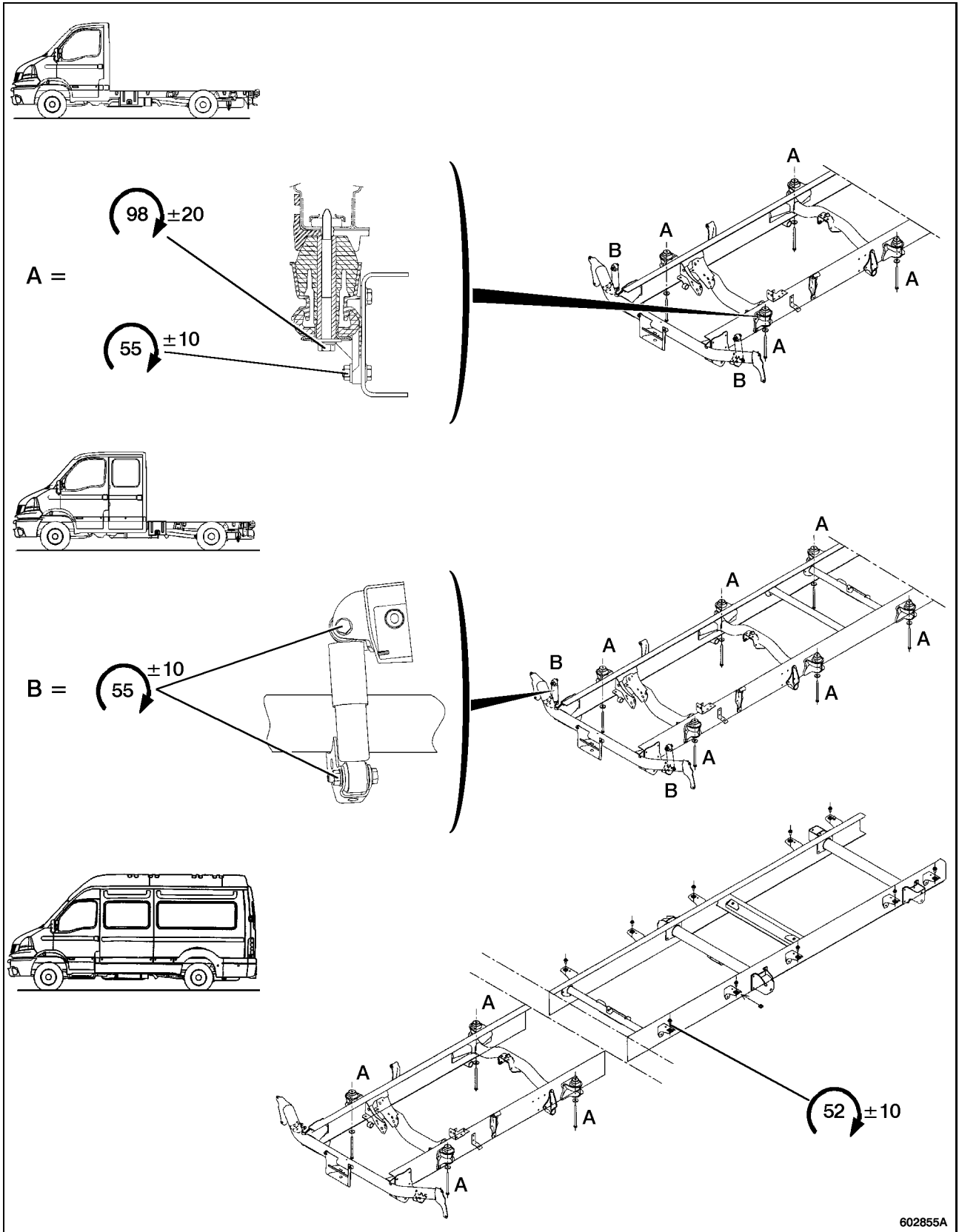
Standard nut and bolt tightening torques table



The tightening torque values given in the table are based on standard 01.50.4002 and apply to new nuts and bolts fitted dry and re-used nuts and bolts with oil applied to the screw-threads. If any nuts and bolts are replaced, **it is absolutely essential to use nuts and bolts recommended by the RENAULT TRUCKS Spare Parts Department (coefficient of friction in compliance with standard 01.50.4002).**

Tightening torque values in Nm for conventional "metric system" threaded hardware based on standard 01.50.4002 (H: normal and HE: with flange)		
dia. and pitch of nuts and bolts	Quality class III	
	Quality class 8.8	Quality class 10.9
6 x 1.00	7.5 ± 1.5	11 ± 2.2
7 x 1.00	15 ± 3	20 ± 4
8 x 1.00	20 ± 4	30 ± 6
8 x 1.25	20 ± 4	27 ± 5.4
10 x 1.00	40 ± 8	60 ± 12
10 x 1.25	40 ± 8	60 ± 12
10 x 1.50	40 ± 8	50 ± 10
12 x 1.25	70 ± 14	100 ± 20
12 x 1.50	65 ± 13	95 ± 19
12 x 1.75	60 ± 12	90 ± 18
14 x 1.50	105 ± 21	155 ± 31
14 x 2.00	100 ± 20	145 ± 29
16 x 1.50	160 ± 32	220 ± 44
16 x 2.00	150 ± 30	220 ± 44
18 x 1.50	240 ± 48	340 ± 68
18 x 2.50	210 ± 42	310 ± 62
20 x 1.50	330 ± 66	480 ± 96
20 x 2.50	300 ± 60	435 ± 87
22 x 1.50	450 ± 90	650 ± 130
22 x 2.50	410 ± 82	595 ± 119
24 x 2.00	560 ± 112	820 ± 164
24 x 3.00	510 ± 102	750 ± 150

Specific cab tightening torques (in Nm)



602855A

Front grille to bumper securing bolts

3 ± 0.3 Nm

Specific air bag device tightening torques (in Nm)

60 2890

60 2893

60 2891

60 2916

60 2889

60 2943A

$(25)_{-0}^{+5}$ †

$(25)_{-0}^{+5}$ †

† (45)

$(8)_{\pm 1}$

$(8)_{\pm 1}$

TOOLS

APPLICABILITY

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Generalities				12/12/2001	C-3

Generalities

RENAULT TRUCKS divide tools into three categories:

- **General-purpose tools:** proprietary tools.
 - **50 00 26 reference number** (possibility of purchasing through the RENAULT TRUCKS Spare Parts department).
 - **4-figure reference number** (tools classified by RENAULT TRUCKS but available from the supplier).
- **Special tools:** specifically created tools distributed by the RENAULT TRUCKS Spare Parts Department.
- **Locally manufactured tools:** these tools are classified differently according to their degree of sophistication:
 - **4-figure reference number** (represented by a drawing): tools that are simple to make without need for special qualification.
 - **50 00 26 reference number** (possibility of purchasing through the RENAULT TRUCKS Spare Parts department): a certain amount of skill is needed to make these tools.

Three levels (or echelons) determine their assignment:

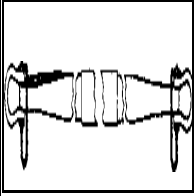
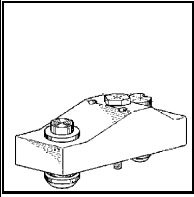
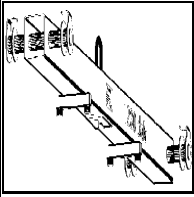
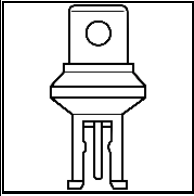
- **Level 1:** tools for servicing, maintenance and minor tasks.
- **Level 2:** tools for major repairs.
- **Level 3:** tools for refurbishment.



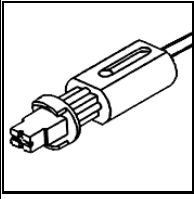
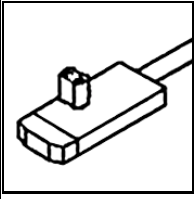
*Proprietary tools mentioned in this manual do not appear in the tools list.
These tools are identified in the standard tools manual (MO) by a 4-figure number.*

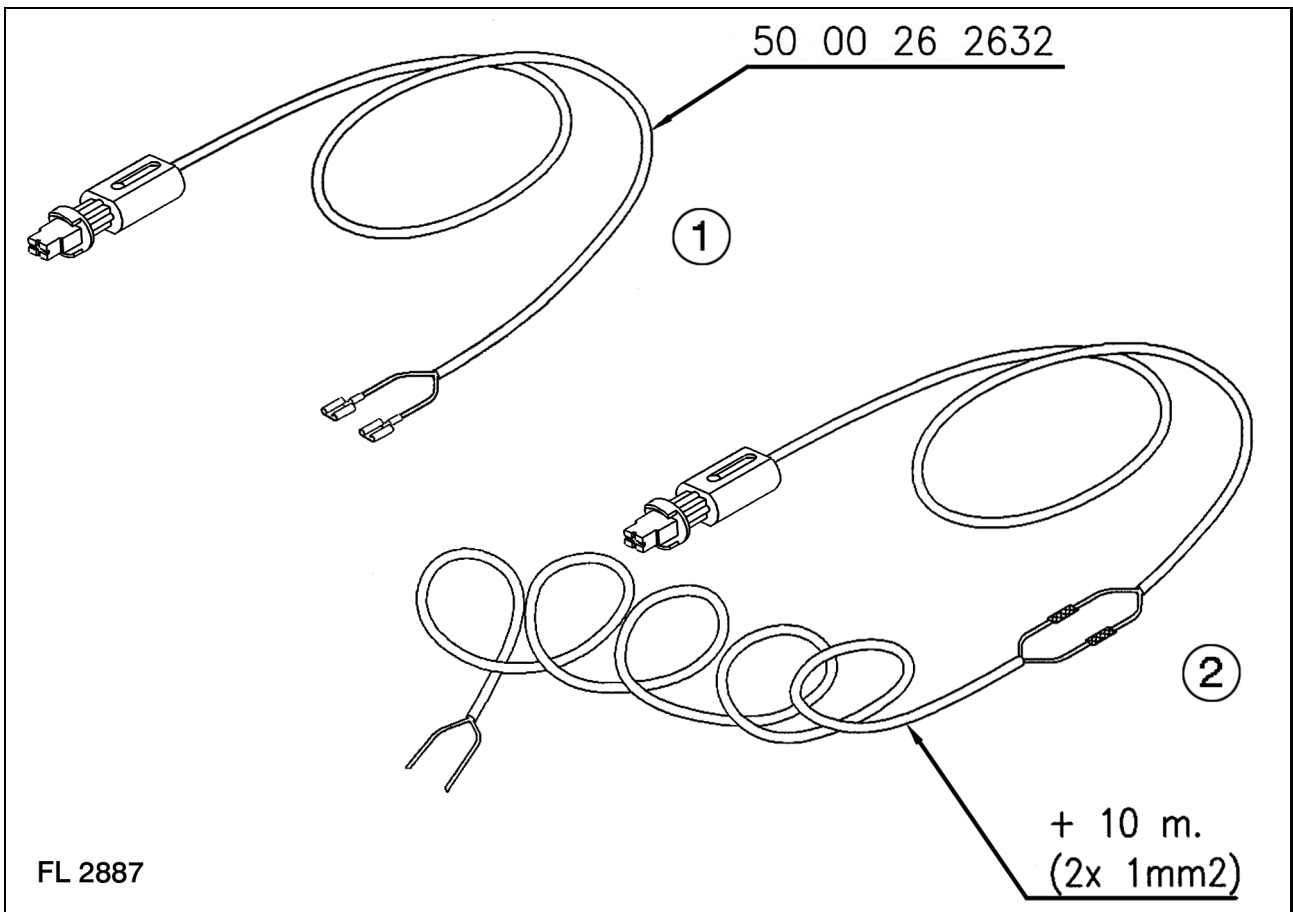
TOOLS

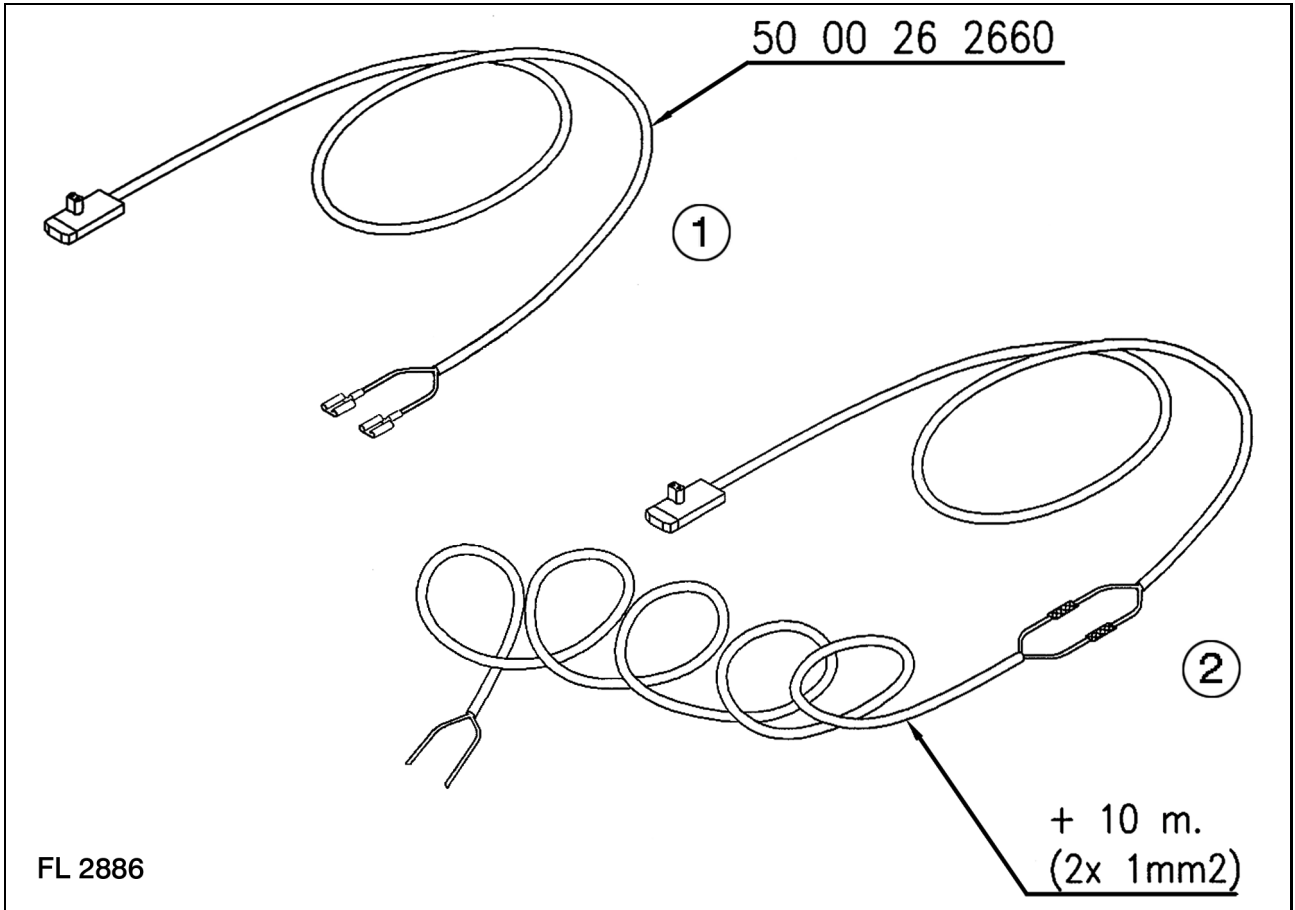
Special Tools

Illustration	RENAULT TRUCKS Ref.	Designation	Manufacturer reference	Manufacturer Code	Level	Qty
	5000262466	STRAP			1	1
	5000262359	BLANKING PLUG			1	1
	5000262370	LIFTING BEAM			1	1
	5010262623	INERT SQUIB			1	1

Locally manufactured tools

Illustration	RENAULT TRUCKS Ref.	Designation	Manufacturer Reference	Manufacturer Code	Level	Qty
	2887	AIRBAG DESTRUCTION DEVICE			1	1
	2886	AIRBAG DESTRUCTION DEVICE			1	1





CAB

APPLICABILITY

Removal/Fitting

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Preparation				28/01/2004	D1-3
MASCOTT DXi		Front end				28/01/2004	D1-3
MASCOTT DXi		Cab equipped with air conditioning	62606			29/01/2004	D1-5
MASCOTT DXi		Cooling circuit				29/01/2004	D1-6
MASCOTT DXi		Clutch control				28/01/2004	D1-6
MASCOTT DXi		Braking circuit				29/01/2004	D1-7
MASCOTT DXi		Wiring harness				29/01/2004	D1-9
MASCOTT DXi		Steering column				29/01/2004	D1-10
MASCOTT DXi		Various				30/01/2004	D1-11
MASCOTT DXi		Cab				30/01/2004	D1-12

Removal/Fitting

Preparation

Chock the vehicle's rear wheels.

Disconnect the batteries, starting with the negative terminal.

Drain the cooling system.

With the front wheels parallel and in the straight ahead position and the steering wheel spokes in a horizontal position, withdraw the ignition key and lock the steering column.

Remove the air filter.

The removal of hydraulic components does not require the circuits to be drained.

Place removed components in the vicinity of the engine.

Front end

Removal

Remove flashing lamps (1).

Remove front grille (2).



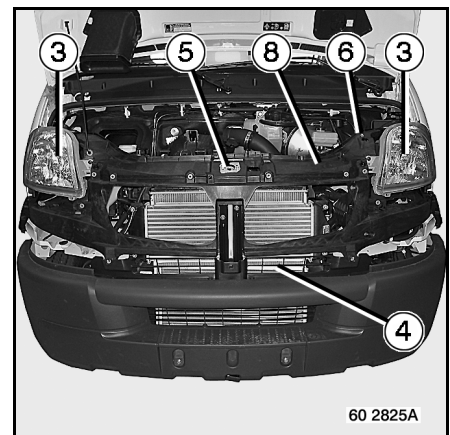
Remove front headlamps (3).

Remove the grille (4).

Unclip cable (5) from the lock securing the bonnet.

Remove switch (6).

Disengage the wiring harness from the fastening clips.



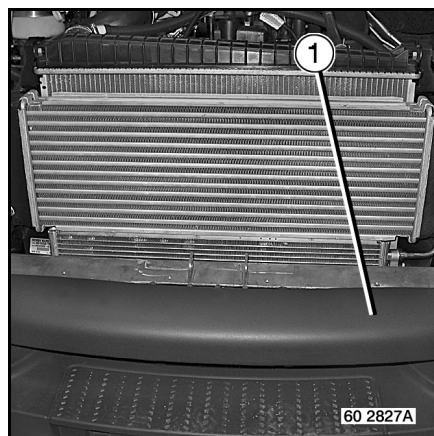


POSITION BONNET RETAINING STRUT (7) AS SHOWN IN THE DRAWING BEFORE REMOVING TECHNICAL FRONT END (8).

Remove technical front end (8).



Remove front bumper (1).

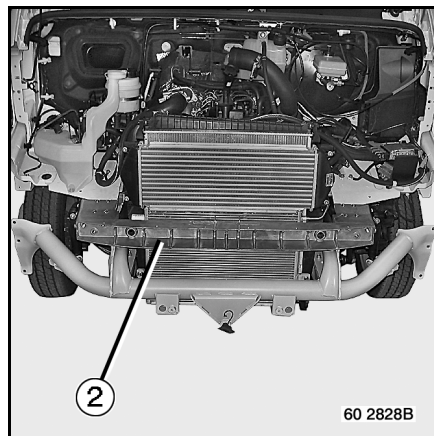


Double cab or van:

Remove cross-member (2).

Single cab:

Cross-member (2) must remain on the cab in order to fasten the lifting straps 2466.



Fitting

To fit, proceed in the reverse sequence to removal.



Watch that the cable is correctly positioned on the bonnet securing lock. Check for correct operation before closing the bonnet.

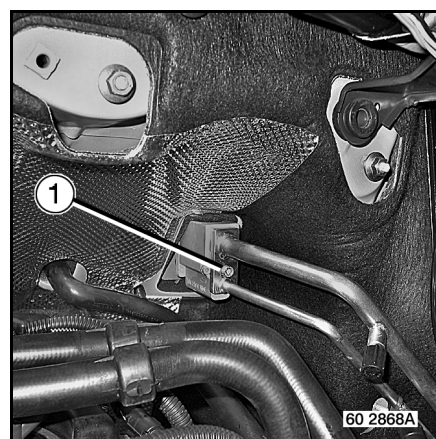
Tighten to torque.
See page(s) B-1-3.

Cab equipped with air conditioning

Removal

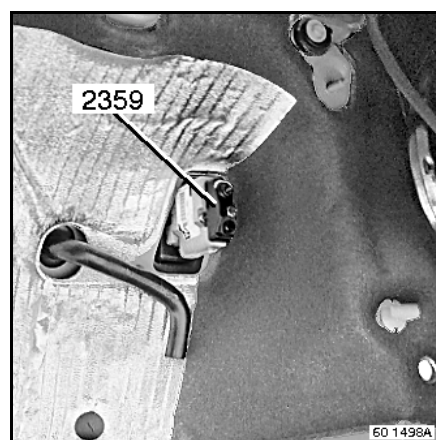
Drain the air conditioning system.

Remove bolt (1) from the pressure reducer retaining flange.



Blank off the pressure reducer ports with tool 2359.

Blank off the high and low pressure pipes.



Fitting

To fit, proceed in the reverse sequence to removal.

Recharge the air conditioning system.

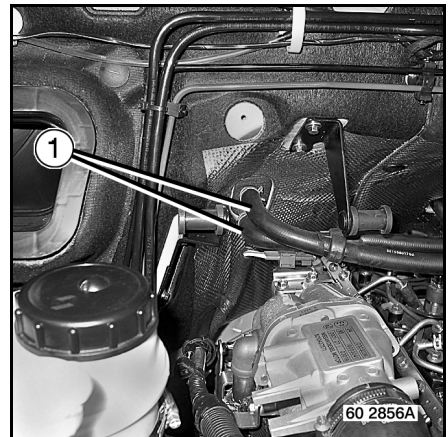
Cooling circuit

Removal

Remove the expansion bottle and fasten it to the engine surrounds.
Disconnect heating hoses (1).

Fitting

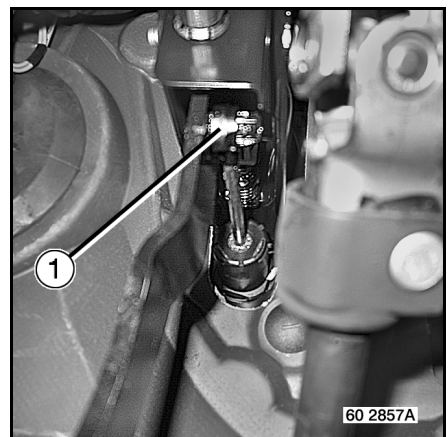
To fit, proceed in the reverse sequence to removal.
Fill the cooling system (see "Driving and Servicing" handbook).



Clutch control

Removal

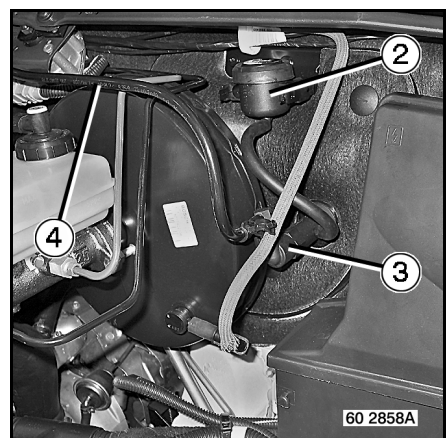
Remove ball-joint (1).



Unclip fluid reservoir (2).

Without disconnecting the flexible hydraulic pipe, turn clutch master cylinder (3) through 1/4 of a turn to remove.

Unclip flexible pipe (4) on the cab.



Fitting

To fit, proceed in the reverse sequence to removal.

Braking circuit

Removal

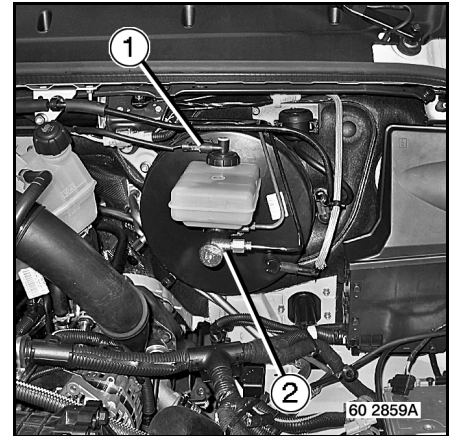


Two possible solutions: with or without draining of the system.

Without draining of the system

Unplug connector (1).

Remove master cylinder (2).

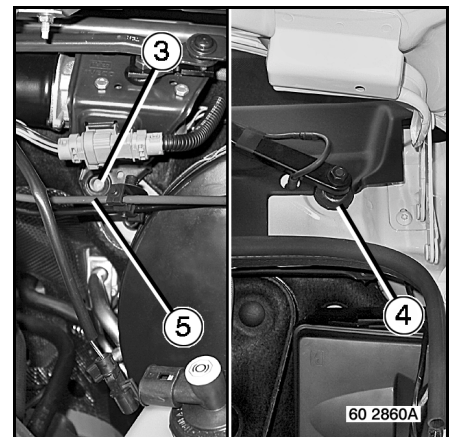


Remove bolt (3) from the windscreen wiper motor bracket.

Remove nut (4) from the left-hand windscreen wiper bracket.

Disengage brake pipes (5) from the windscreen wiper motor bracket.

Unclip the brake pipes on the cab.

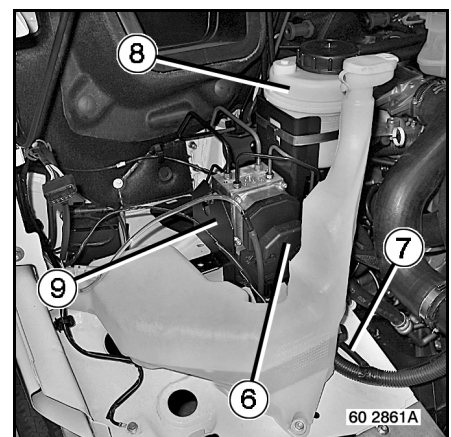


Unplug connector (6).

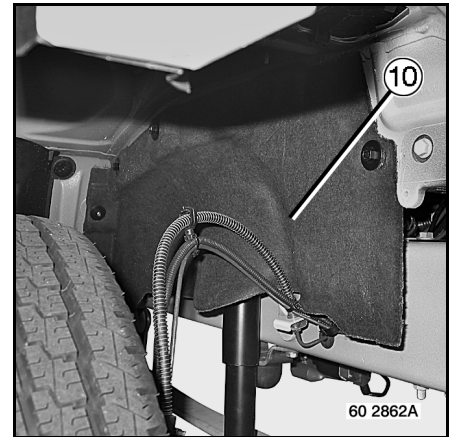
Disconnect earths (7).

Remove steering hydraulic fluid reservoir (8).

Remove bolts (9) securing the "ABS" unit bracket.



Remove guard screen (10).



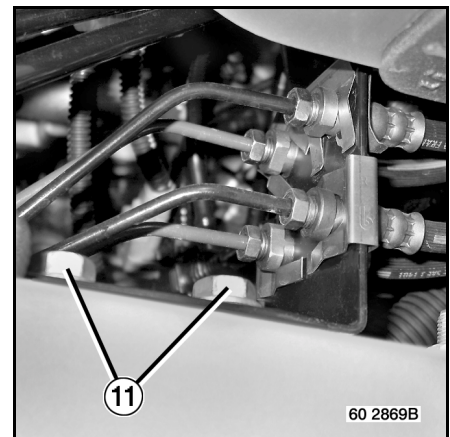
Remove bolts (11).



To free up space in the engine surrounds, remove the air and cooling circuit hoses on the right-hand side of the engine, then disengage the "ABS" unit and the steering hydraulic fluid reservoir from the cab.



Handle the brake pipes with precautions when placing the different elements in the engine surrounds.

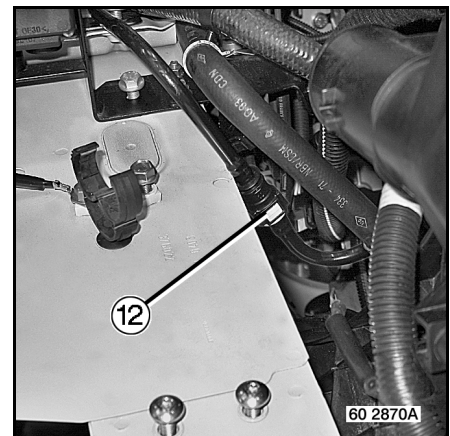


Disconnect union (12) from the braking assistance flexible pipe.
With draining of the system



It is absolutely essential to use this method for vehicles of 5.5 tonnes and upwards as it is forbidden to separate the master cylinder from the master servo (mastervac), since there may still be residual pressure after reassembly.

Remove guard screen (10).
Disconnect flexible pipes (13).



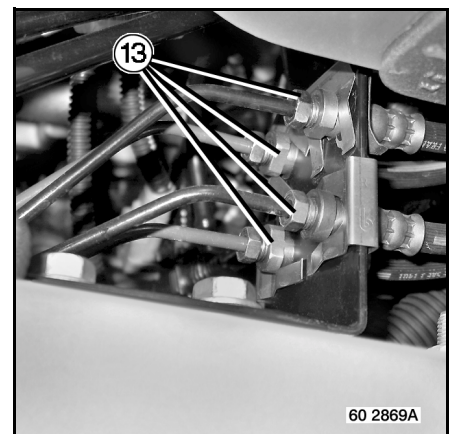
Disconnect union (12) from the braking assistance flexible pipe.

Fitting

To fit, proceed in the reverse sequence to removal.
Tighten to torque.
See page(s) B-1-3.
Bleed the system, if necessary.



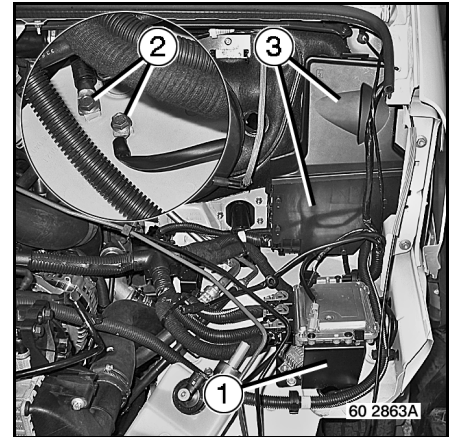
Bleed the braking system before reconnecting the battery so as not to activate the "ABS" unit (risk of ingress of air into the piloting solenoid valves).



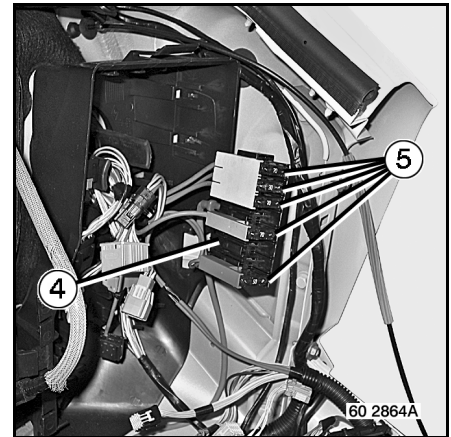
Wiring harness

Removal

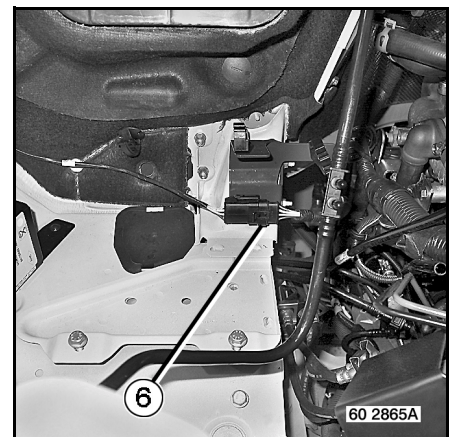
Remove fuel-injection ECU complete with bracket (1).
Disconnect earths (2).
Disconnect the horn.
Remove covers (3) from the electrical box.



Unplug connectors.
Unclip fuse-holder (4) from the electrical box.
Mark and remove fuses (5), remove fuse-holder (4).



Unplug connector (6).



Fitting

To fit, proceed in the reverse sequence to removal.
Check the efficiency of the electrical functions.

Steering column

Removal

Remove guard screen (1).

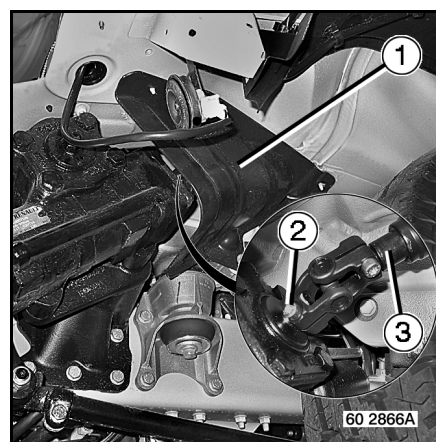
Remove bolt (2).

Disconnect steering column (3).

Fitting

To fit, proceed in the reverse sequence to removal.

To reconnect the steering column, refer to the relative workshop manual section.

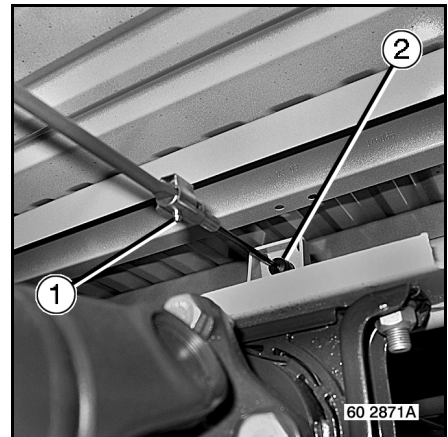


Various

Removal

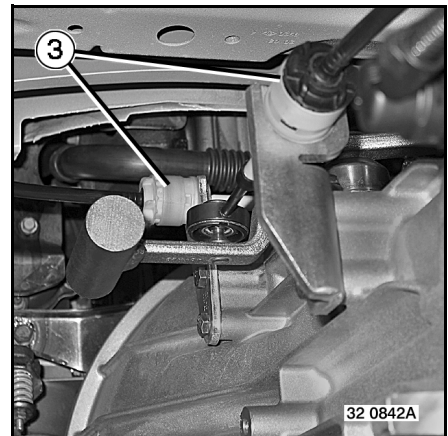
Parking brake

With the parking brake released, remove pin (1).
Disengage hand brake cable sheath (2) from the sheath stop.



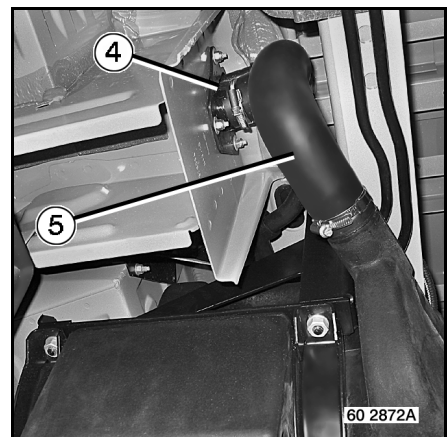
Gearshift control

Uncouple the ball-joints.
Pull rings (3) so as to withdraw the gearbox end cable stops.



Fuel tank

Remove hose (4).
Remove hose (5).



Depending on the assembly.

Diff. lock

Mark and disconnect diff. lock pipes (1).



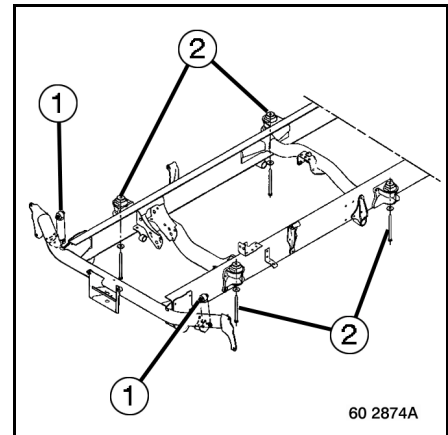
Fitting

To fit, proceed in the reverse sequence to removal.
Check the efficiency of the controls
(accelerator cable, connectors, etc...).

Cab

Removal

Remove bolts (1 - 2).

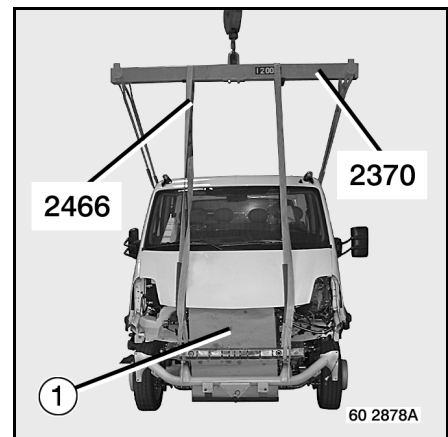


Short cab

Close the bonnet.

Protect the radiator with a guard (1).

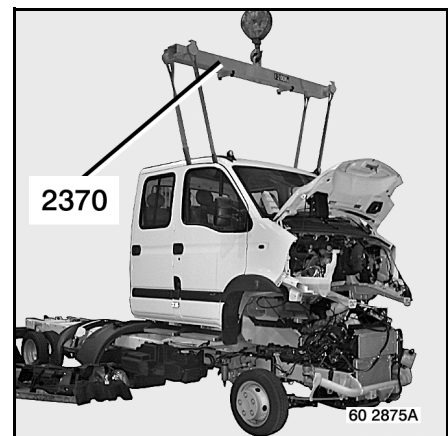
Use tool 2370 + 2466



Long cab

Use tool 2370.

Remove the cab.



Fitting

To fit, proceed in the reverse sequence to removal.

Tighten to torque.

See page(s) B-1-5.

AIRBAG

APPLICABILITY

Operation

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Operating principle	08202/03			05/02/2004	E1-4

Fuse(s)

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Airbag fuse	08202/03			05/02/2004	E2-1

Warnings

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		General instructions	08202/03			05/02/2004	E3-1

Layout of appliances

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Layout of appliances in cab	08202/03			12/02/2004	E4-1

Diagnostics

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Aid-to-trouble-shooting	08202/03			12/02/2004	E5-1

Removal/Fitting

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Airbag ECU	08202/03			13/02/2004	E6-1
MASCOTT DXi		Driver's airbag module	08202/03			16/02/2004	E6-2
MASCOTT DXi		Rotary switch	08202/03			17/02/2004	E6-4
MASCOTT DXi		Passenger's airbag module	08203			16/02/2004	E6-7
MASCOTT DXi		Pretensioner(s)	08202/03			17/02/2004	E6-9

Destruction

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
MASCOTT DXi		Airbag module destruction procedure	08202/03			18/02/2004	E7-1
MASCOTT DXi		Pretensioner destruction procedure	08202/03			18/02/2004	E7-3

Operation

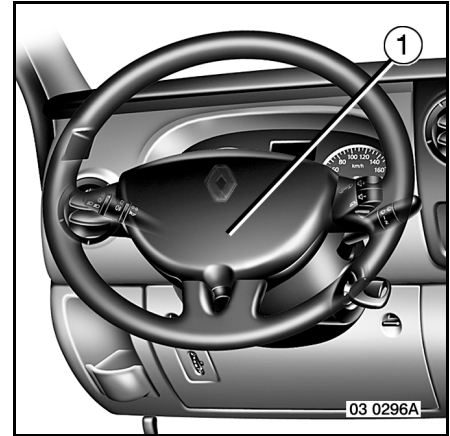
Operating principle

Airbag + pretensioner

The system consists of:

- an inflatable "bag" and its gas generator mounted under steering wheel protective cover **(1)** and under dashboard **(2)** if the vehicle is equipped with a passenger's airbag,
- seat belt pretensioners,
- an electronic box located under the driver's seat,
- an AIRBAG "Information" and fault test warning pictogram **(G23)**.

An "Airbag" marking on the protective cover(s) **(1 - 2)** and a self-adhesive sticker on the windscreen as reminder of the presence of this equipment.



Airbag

The airbag system uses a pyrotechnic principle, which explains why, upon deployment, it produces heat, gives off smoke (which is not the sign of an outbreak of fire) and generates a detonating noise. Deployment of the airbag, which must be immediate, may cause minor, reversible injuries to the surface of the skin.

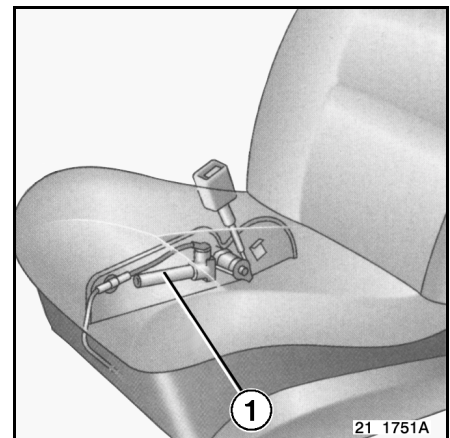


Seat belt pretensioner

The pretensioner system uses a piston **(1)** which instantaneously retracts the seat belt buckle, flattening it against the body and thus increasing its effectiveness.

Electronic box

The box is an electronic control unit (ECU) which is provided with an independent accelerations acquisition system allowing it to trigger off detonation of the system igniter squibs.



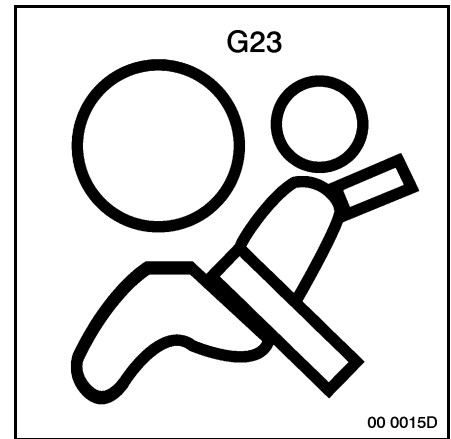
Warning pictogram

When the ignition is switched on, warning pictogram **(G23)** is illuminated for **10** seconds and is then extinguished. The system is henceforth operational. An illumination fault or permanent illumination of the warning pictogram **(G23)** means system trouble or locking (airbag inactive).

Operation

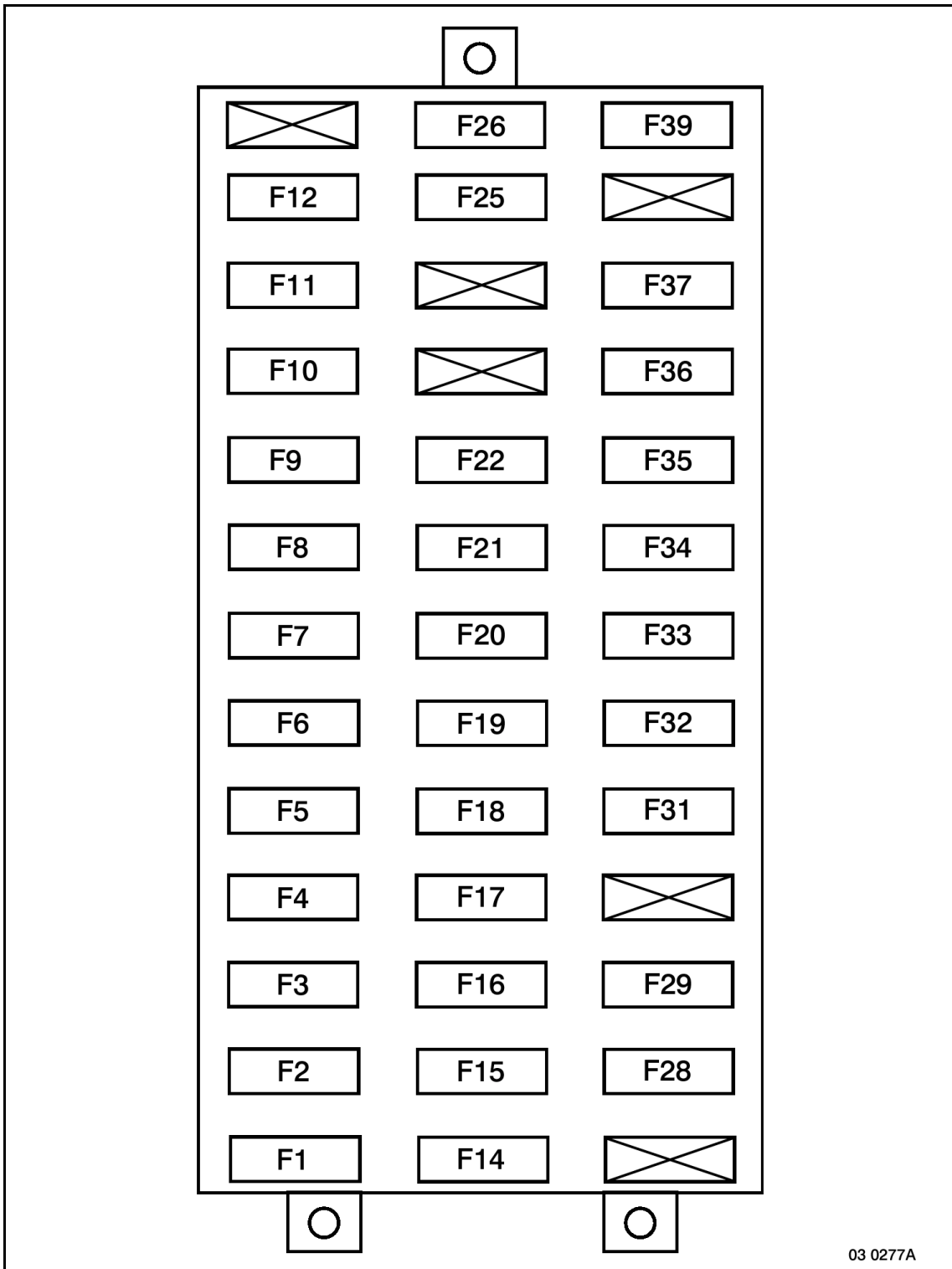
In the event of **head-on**, these systems combined with the seat belt are designed to protect the occupants according to the violence of the impact. There are two possible cases:

- 1° Only the seat belt provides protection.
- 2° The pretensioner is triggered to further tauten the seat belt and the airbag inflates, thus deadening the impact suffered by the driver against the steering wheel and by the passenger(s) against the dashboard, then deflates.



Fuse(s)

Airbag fuse



03 0277A

Description	Fuse N°	Amperage
"AIRBAG" ECU	F4	15

Warnings

General instructions



ANY WORK ON THE AIRBAG SYSTEM SHOULD BE CARRIED OUT BY QUALIFIED PERSONNEL WHO HAVE UNDERGONE SUITABLE TRAINING.

Identification of a vehicle fitted with an airbag

A vehicle equipped with a driver's airbag can be identified by:

- the inscription "Airbag" in the middle of the steering wheel,
- a sticker affixed to the lower corner of the windscreen on the driver's side (if the windscreen is replaced, place the sticker in the same corner of the new windscreen).

A vehicle equipped with a passenger's airbag can be identified by:

- the inscription "Airbag" on the dashboard,
- a sticker affixed to the lower corner of the windscreen on the passenger's side (if the windscreen is replaced, place the sticker in the same corner of the new windscreen).

Work on the airbag

The RENAULT TRUCKS diagnostics tool serves to check out:

- the ECU,
- the wiring harness,
- the connecting arrangement.



BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

Wiring harness

In the event of discrepancy on the wiring or a connector, it is essential to replace the wiring harness (do not repair it).

ECU

The airbag ECU should not suffer any knocks or distortion and should not be subjected to splashing water. Protect the electrical connections from dust. The mounting surface of the ECU should be clean and free from any foreign matter.

Subsequent to the triggering of at least one item in the system, the ECU locks up and illuminates the airbag pictogram. From that time onwards, the ECU cannot be unlocked and must be replaced.

Airbag module and pretensioner

It is forbidden to fit any component that has suffered knocks, distortion or scratching. Take the component out of its packaging at the very last moment before fitting it.

During fitting of the component, do not forget to remove any foreign bodies (screws, clips...) and ensure the connector is properly engaged.

The components of an airbag module or a pretensioner cannot be separated.



DO NOT TAKE ANY READINGS ON THESE SYSTEMS USING A MULTI-METER OR ANY ELECTRICAL MEASURING APPARATUS WHATSOEVER.

DO NOT HANDLE THE PYROTECHNIC DEVICES NEAR A NAKED FLAME OR ANY OTHER HEAT SOURCE.

Points to be checked subsequent to an impact

Whatever the violence of the impact (even if the airbags have not been activated), certain sensitive points on the vehicle are to be checked out paying special attention.

It is vital to check and replace or repair, if necessary:

- front spring hanger securing bolts (significant risk of shearing),
- engine / gearbox unit brackets,
- body bracket securing bolts (significant risk of shearing),
- cab structure for signs of distortion.

Instructions to be observed after triggering of airbags and/or pretensioners

It is essential to replace:

- pretensioners,
- airbag modules,
- rotary switch,
- airbag ECU,
- seat belts if attached when the pretensioners were triggered,
- frames of seats occupied at the time of deployment,
- **dashboard and dash cowl cross-member if the passenger's airbag was deployed (do not forget to affix the label on the side of a new dashboard forbidding a child's seat to be installed with back to the road on the passenger's seat).**

It is essential to inspect and replace, if necessary:

- steering wheel,
- steering column,
- pedal gear.

It is vital to keep the airbag ECU and the list of faults recorded on the airbag system after the accident.

Instructions to be followed after an incident involving an airbag system

When returning an airbag electronic box that has been involved in an incident for expert appraisal, it must be accompanied by at least the following information:

- chassis number of vehicle on which the box was fitted,
- state of the connecting arrangement (connector locked or not),
- state of the fastening (tightness of securing bolts),
- context of the incident (place, date, vehicle moving or not),
- state of the warning pictogram prior to the incident,
- names and addresses of the persons to contact.

In the special case where expert appraisal by a supplier is necessary, it is **vital** to not dismount or unplug the box, to not remove the wiring harness and to not detonate live initiator squibs by hand.

Scrapping a vehicle

Before scrapping a vehicle in which the airbag or the pretensioners have not been triggered, it is essential to proceed with their destruction by following the recommended method (see page(s) E-7-1 / E-7-3).



The destruction and scrapping of airbags and pretensioners are subject to the laws in force in the country in which this is carried out.

Work on the vehicle (excluding work on airbag) implying precautions to be taken to avoid inadvertent deployment of the airbag

During repair or adaptation work, the vehicle is not to undergo significant knocks (hammer blows...) nor is welding work to be undertaken without previously locking the electronic box using the RENAULT TRUCKS diagnostics tool, disconnecting the batteries and waiting for at least **5** minutes.

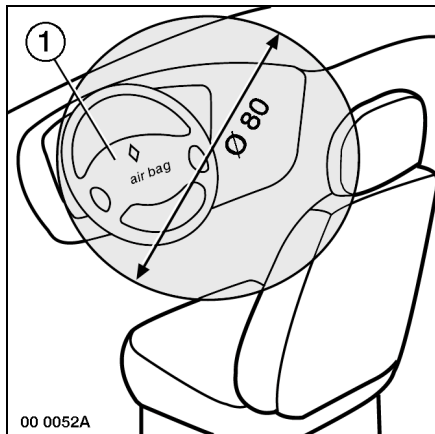
No aftermarket electrical accessory should be installed within the close surrounds of an airbag electronic box. (A loudspeaker or any other appliance generating a magnetic field might cause deployment of the airbag).

Before removing the steering wheel, it is essential to unplug the airbag module connector so as to avoid any damage.

In the event of any work requiring uncoupling of the steering box universal joint, the roadwheels must be in the straight-ahead position and the steering wheel must be immobilized, in order to keep to the mid-point of the rotary switch.

No other electrical consumer should use the airbag electronic box fastening points as earth points.

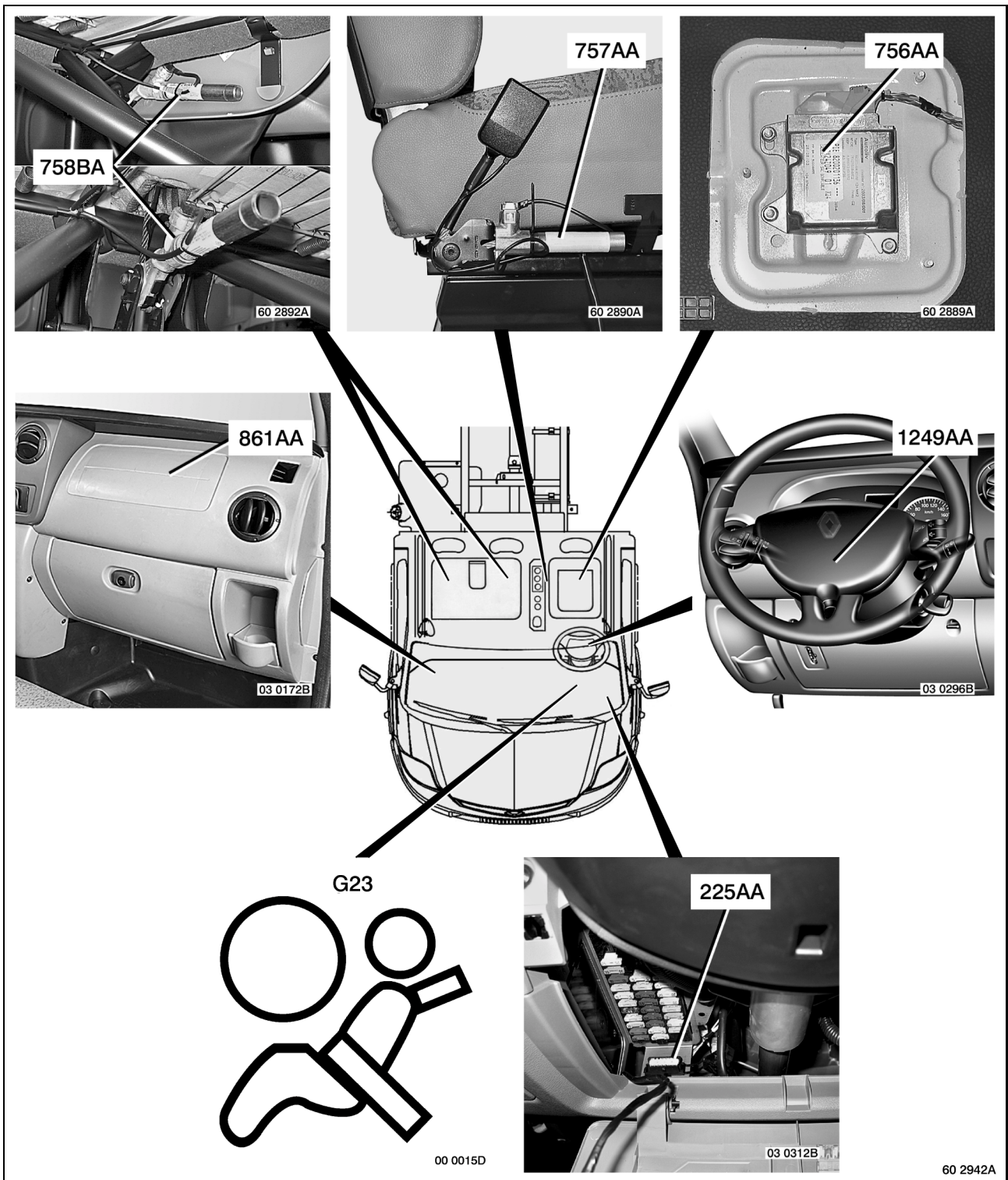
Non-observance of these instructions might cause malfunction or even inadvertent deployment of the airbag.



- If the driver's seat or passenger's bench seat designed for the airbag system has to be changed, they must be replaced by seats identical to the ones originally fitted.
- The protective covers must be free from any article (ledge, clock, various accessories...).
- There should be no objects within the airbag deployment area (dia. 80 cm for the driver's airbag and dia. 100 cm for the passenger's airbag).
- Check out the airbag system in the case of accident or if there has been attempted theft of or from the vehicle and at the time of second-hand resale of the vehicle.
- For safety reasons, replace the airbag and the pretensioner every 10 years.
- If water is splashed onto or gets into the electronic box, replace it.
- Any significant modification to the suspension or the front end of the vehicle or any overloading of the vehicle may lead to inadvertent deployment of the airbag.
- Do not drive a vehicle in which the airbag system has been activated and whose bag is still left on the steering wheel. Get the vehicle towed.
- It is forbidden to fit a bull-bar or a forward winch on a vehicle equipped with an airbag system.

Layout of appliances

Layout of appliances in cab



1249AA - Driver's airbag module + rotary switch.

861AA - Passenger's airbag module.

225AA - Diagnostic socket.

756AA - Airbag ECU.

G23 - Airbag test and fault warning pictogram.

757AA - Driver's seat belt pretensioner.

758BA - Passenger's seat belt pretensioner(s).

Diagnostics

Aid-to-troubleshooting

Faults can be visualized using the RENAULT TRUCKS diagnostics tool plugged into the vehicle diagnostic socket.



DO NOT MAKE READINGS ON THESE SYSTEMS USING A MULTI-METER OR ANY ELECTRICAL MEASURING INSTRUMENT WHATSOEVER AS THERE IS A RISK OF TRIGGERING INADVERTENT DEPLOYMENT OF THE AIRBAG DUE TO THE OPERATING CURRENT OF SUCH INSTRUMENTS.

BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL (WARNING PICTOGRAM G23 SHOULD BE ILLUMINATED), DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES. IF CONNECTION PROVES TO BE IMPOSSIBLE, REMOVE FUSE F4, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

ENSURE THAT THE VOLTAGE DOES NOT DROP BELOW 10 VOLTS WHEN RUNNING THE DIAGNOSTICS CHECK.

To obtain more accurate diagnostics, use an inert igniter squib.

Tool **2623**



*To be able to connect tool **2623** to the module end wiring harness, it is necessary to cut off one of the tool locking catches.*

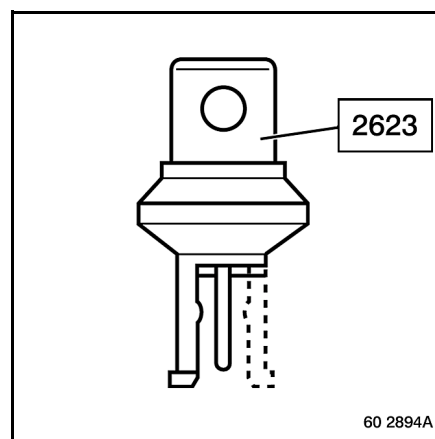
Lock the ECU using the RENAULT TRUCKS diagnostics tool.

Connect the inert igniter squib to the airbag wiring harness in the place of the module or pretensioner of the line concerned.

Unlock the ECU.

If the fault is still present, it originates from the line.

If the fault is no longer present, it originates from the module or the pretensioner.



Testing the wiring harness

The wiring harness and the rotary switch can be tested using a multi-meter if they are completely disconnected from the other components including the rotary switch and the pretensioners wiring harness.

The pretensioners wiring harness and the rotary switch cannot be checked out directly as they contain a capacitive component.

If the fault does not originate from the airbag module or the pretensioner and the continuity of the main wiring harness and the seat wiring harnesses are in order, it may be deduced that the fault originates from the rotary switch or the pretensioner wiring harness.



Some connectors short-circuit when they are unplugged in order to avoid any risk of inadvertent deployment of the airbag.

After the work, erase the fault codes using the RENAULT TRUCKS diagnostics tool.

Removal/Fitting

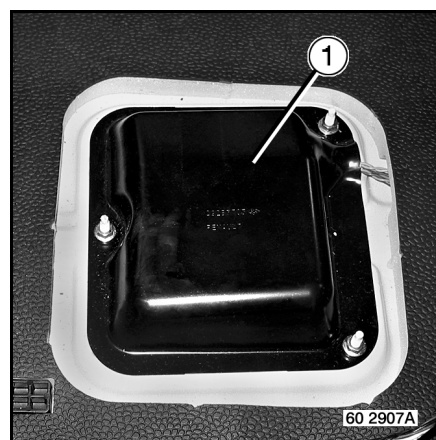
Airbag ECU



BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

Removal

Remove the driver's seat.
Unplug the seat wiring harness connector.
Remove protective cover (1) from the airbag ECU.

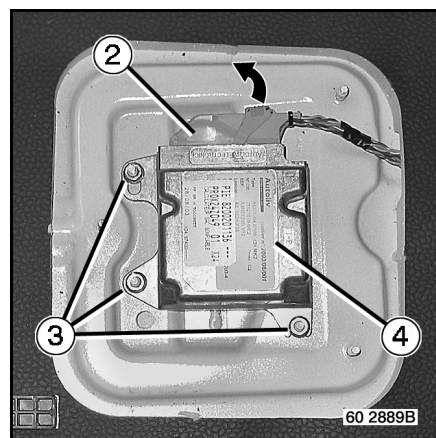


Unplug connector (2).
Remove bolts (3).
Remove airbag ECU (4).



New ECUs are supplied locked and without their parameters programmed.

It is necessary to switch on the ignition again after the parameters have been programmed so that they are taken into account.



Fitting

To fit, proceed in the reverse sequence to removal.
Tighten to torque.
See page(s) B-1-6.
Check that the ECU connector is locked is locked.

Testing:

Turn the ignition key to the 'ignition' position.
Get out of the cab and make arrangements to forbid access.
Reconnect the batteries and switch the ignition back on.
Unlock the ECU.
Switch off the ignition.
Disconnect the batteries, starting with the negative terminal.
Turn the ignition key to the 'ignition' position.
Get out of the cab and make arrangements to forbid access.
Reconnect the batteries and switch the ignition back on.
After **10** seconds, airbag warning pictogram (**G23**) should be extinguished.



**IT IS ESSENTIAL TO SECURE THE ECU TO THE VEHICLE BEFORE PLUGGING IN THE CONNECTOR.
IF THE AIRBAG(S) HAS(HAVE) BEEN DEPLOYED AND THE PRETENSIONER(S) TRIGGERED, IT IS VITAL TO REPLACE THE AIRBAG ECU SINCE IT LOCKS AUTOMATICALLY AND CANNOT BE UNLOCKED (SOME COMPONENTS LOSE THEIR RATED CHARACTERISTICS AFTER THE FIRING ENERGY HAS PASSED THROUGH THEM).**

Driver's airbag module



BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

MOVE THE ROADWHEELS TO THE STRAIGHT-AHEAD POSITION.

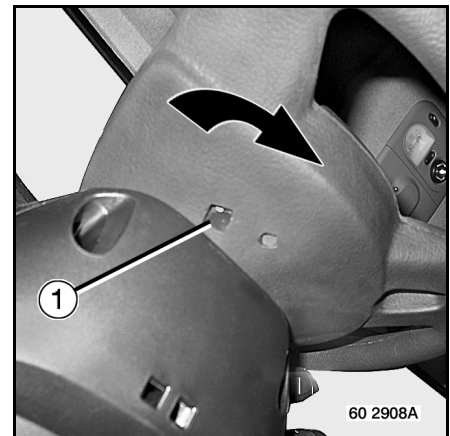
THE COMPONENTS OF AN AIRBAG MODULE OR PRETENSIONER CANNOT BE SEPARATED.

DO NOT HANDLE THE PYROTECHNIC DEVICES CLOSE TO A NAKED FLAME OR ANY SOURCE OF HEAT AS THERE IS A RISK OF TRIGGERING OFF THE AIRBAG DEPLOYMENT SYSTEM.

DO NOT MAKE READINGS ON THESE SYSTEMS USING A MULTI-METER OR ANY ELECTRICAL MEASURING INSTRUMENT WHATSOEVER AS THERE IS A RISK OF TRIGGERING INADVERTENT DEPLOYMENT OF THE AIRBAG DUE TO THE OPERATING CURRENT OF SUCH INSTRUMENTS.

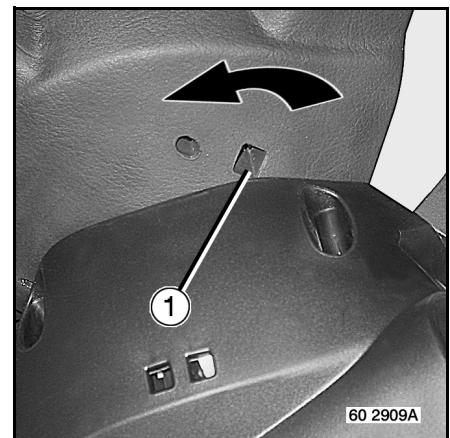
Removal

Move the roadwheels to the straight-ahead position.
Turn the steering wheel slightly.



Unclip airbag module (3) using a flat-bladed screwdriver inserted into openings (1).

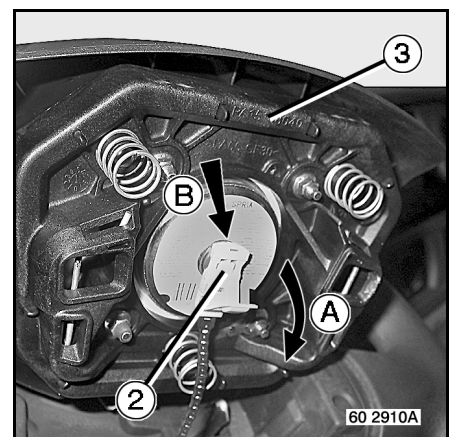
Move the roadwheels back to the straight-ahead position.



Unplug connector (2):

- **A** - unlock the connector.
- **B** - disconnect the connector.

Remove the airbag module (3).



Fitting

Plug in and lock connector **(2)**.

Clip on airbag module **(3)**.

Testing:

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

Unlock the ECU.

Switch off the ignition.

Disconnect the batteries, starting with the negative terminal.

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

After **10** seconds, airbag warning pictogram should be extinguished.

Rotary switch



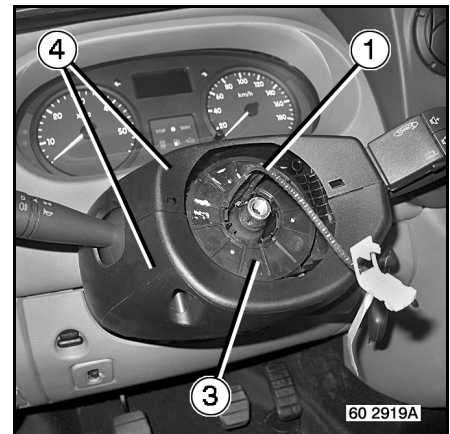
**BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.
MOVE THE ROADWHEELS TO THE STRAIGHT AHEAD POSITION.**

Removal

Remove the airbag module.
See page(s) E-6-2.
Do not bend or damage connector (1).
Remove bolt (2).
Mark the steering wheel.
Remove flywheel.

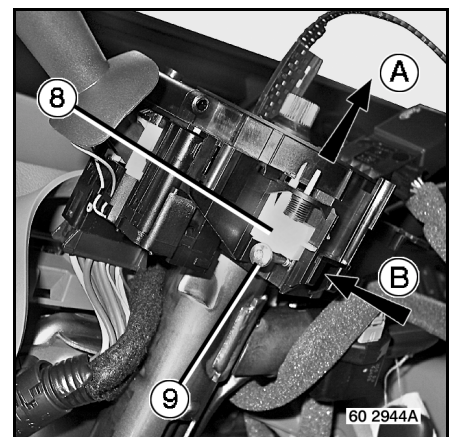


Ensure that rotary switch (3) does not move, with connector (1) in a vertical position and facing upwards.
Retain rotary switch (3) against motion with a piece of adhesive tape.
Remove covers (4).

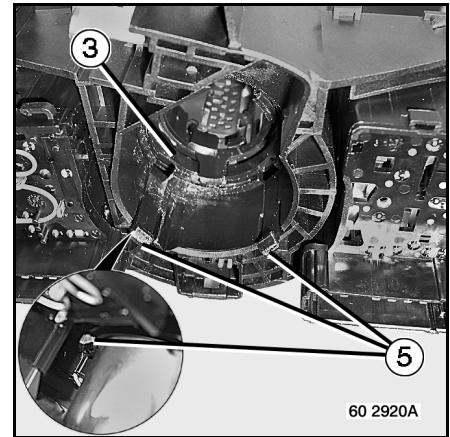


Lock the rotary switch:

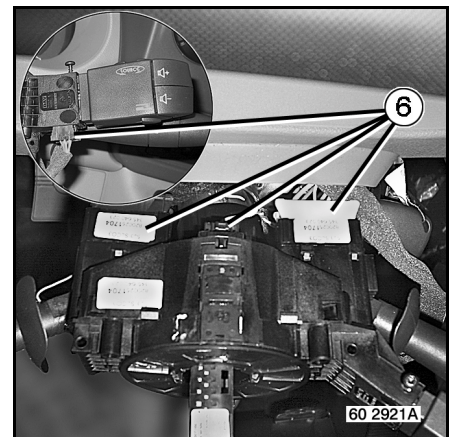
- **A** - lift up lock (8),
- **B** - unscrew screw (9) until flush with lock (8) in order to keep it locked.



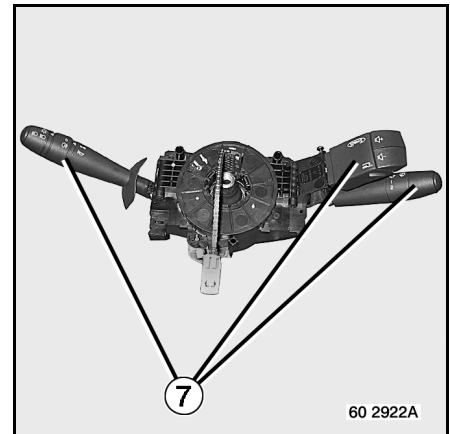
Spread open clips (5) using a flat-bladed screwdriver.
Lift up the rotary switch.



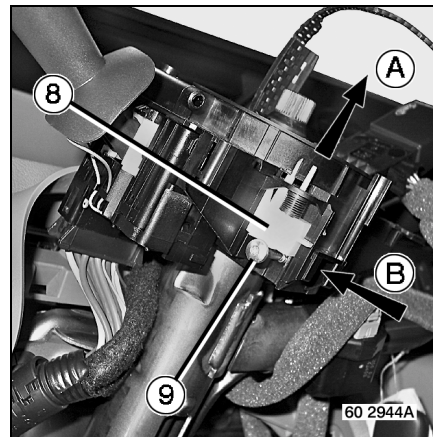
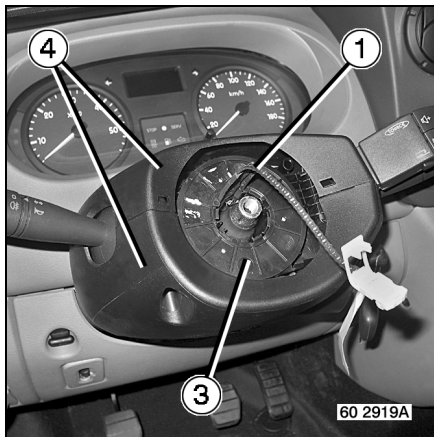
Unplug connectors (6).
Remove rotary switch (3).



Remove controls (7).



Finding the mid-point



IF YOU HAVE ANY DOUBT ON THE POSITIONING OF THE ROTARY SWITCH, IT IS VITAL TO CHECK ITS MID-POINT IN THE FOLLOWING WAY.

Turn the rotary switch clockwise until it reaches abutment, without forcing.

Then turn back anti-clockwise through 3 turns.

Still turning anti-clockwise, bring connector (1) into a vertical position and facing upwards.

Ensure that rotary switch (3) does not move, with connector (1) in a vertical position and facing upwards.

Retain rotary switch (3) against motion with a piece of adhesive tape.

Lock the rotary switch:

- A - lift up lock (8),
- B - unscrew screw (9) until flush with lock (8) in order to keep it locked.

Fitting

To fit, proceed in the reverse sequence to removal.



Upon reassembly, take off the adhesive tape at the very last moment before refitting the steering wheel. Once the adhesive tape is removed, ensure that the rotary switch does not move.

Align and fit the steering wheel.

Do not bend or damage connector (1).

Replace screw (2) without fail.

Tighten to torque.

See page(s) B-1-6.

Fit the driver's airbag module.

See page(s) E-6-2.

Testing:

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

Unlock the ECU.

Switch off the ignition.

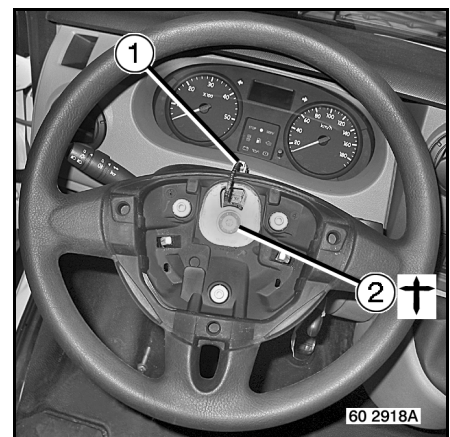
Disconnect the batteries, starting with the negative terminal.

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

After 10 seconds, airbag warning pictogram (G23) should be extinguished.



Passenger's airbag module



BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

THE COMPONENTS OF AN AIRBAG MODULE OR PRETENSIONER CANNOT BE SEPARATED.

DO NOT HANDLE THE PYROTECHNIC DEVICES CLOSE TO A NAKED FLAME OR ANY SOURCE OF HEAT AS THERE IS A RISK OF TRIGGERING OFF THE AIRBAG DEPLOYMENT SYSTEM.

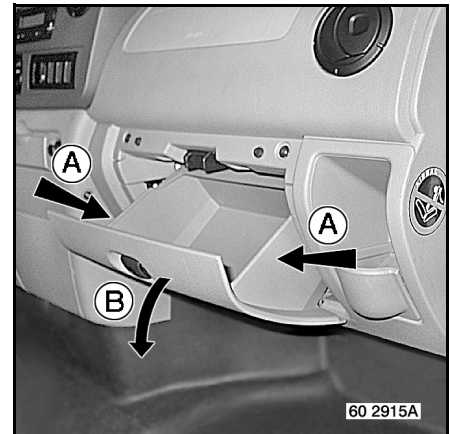
DO NOT MAKE READINGS ON THESE SYSTEMS USING A MULTI-METER OR ANY ELECTRICAL MEASURING INSTRUMENT WHATSOEVER AS THERE IS A RISK OF TRIGGERING INADVERTENT DEPLOYMENT OF THE AIRBAG DUE TO THE OPERATING CURRENT OF SUCH INSTRUMENTS.

Removal

Press on both sides of glove box (A).

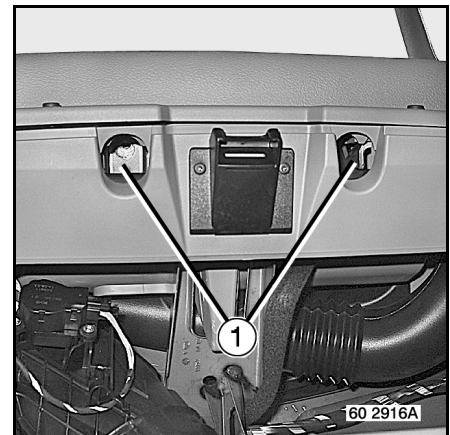
Tilt glove box (B) forwards.

Remove the glove box.



Remove bolts (1).

Unclip the airbag module from the dashboard.

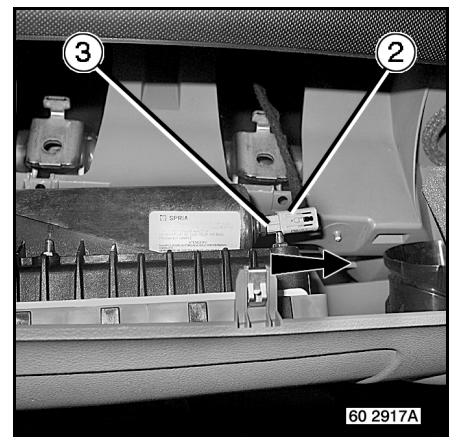


Unplug connector (3); it unplugs in two stages.

Pull the connector:

1° unlock lock (2).

2° disconnect connector (3).



Fitting

Plug in and lock connector **(3)**.

Clip the passenger's airbag module to the dashboard.

Fit bolts **(1)**.

Tighten to torque.

See page(s) B-1-6.

Fit the glove box.

Testing:

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

Unlock the ECU.

Switch off the ignition.

Disconnect the batteries, starting with the negative terminal.

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

After **10** seconds, airbag warning pictogram **(G23)** should be extinguished.

Pretensioner(s)



AV BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

THE COMPONENTS OF AN AIRBAG MODULE OR PRETENSIONER CANNOT BE SEPARATED.

DO NOT HANDLE THE PYROTECHNIC DEVICES CLOSE TO A NAKED FLAME OR ANY SOURCE OF HEAT AS THERE IS A RISK OF TRIGGERING OFF THE AIRBAG DEPLOYMENT SYSTEM.

DO NOT MAKE READINGS ON THESE SYSTEMS USING A MULTI-METER OR ANY ELECTRICAL MEASURING INSTRUMENT WHATSOEVER AS THERE IS A RISK OF TRIGGERING INADVERTENT DEPLOYMENT OF THE AIRBAG DUE TO THE OPERATING CURRENT OF SUCH INSTRUMENTS.

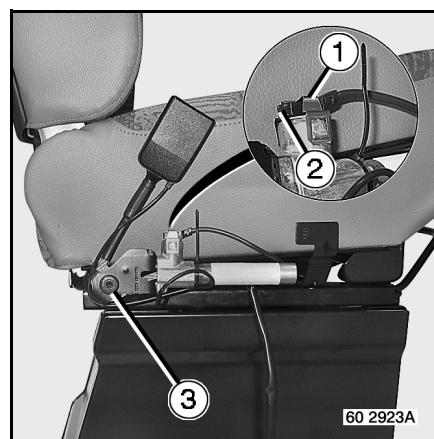
Removal

Remove the cover.

Withdraw clip (1).

Unplug connector (2).

Remove bolt (3).



Fitting

To fit, proceed in the reverse sequence to removal.

Replace screw (3) without fail.

Tighten to torque.

See page(s) B-1-6.



Testing:

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

Unlock the ECU.

Switch off the ignition.

Disconnect the batteries, starting with the negative terminal.

Turn the ignition key to the 'ignition' position.

Get out of the cab and make arrangements to forbid access.

Reconnect the batteries and switch the ignition back on.

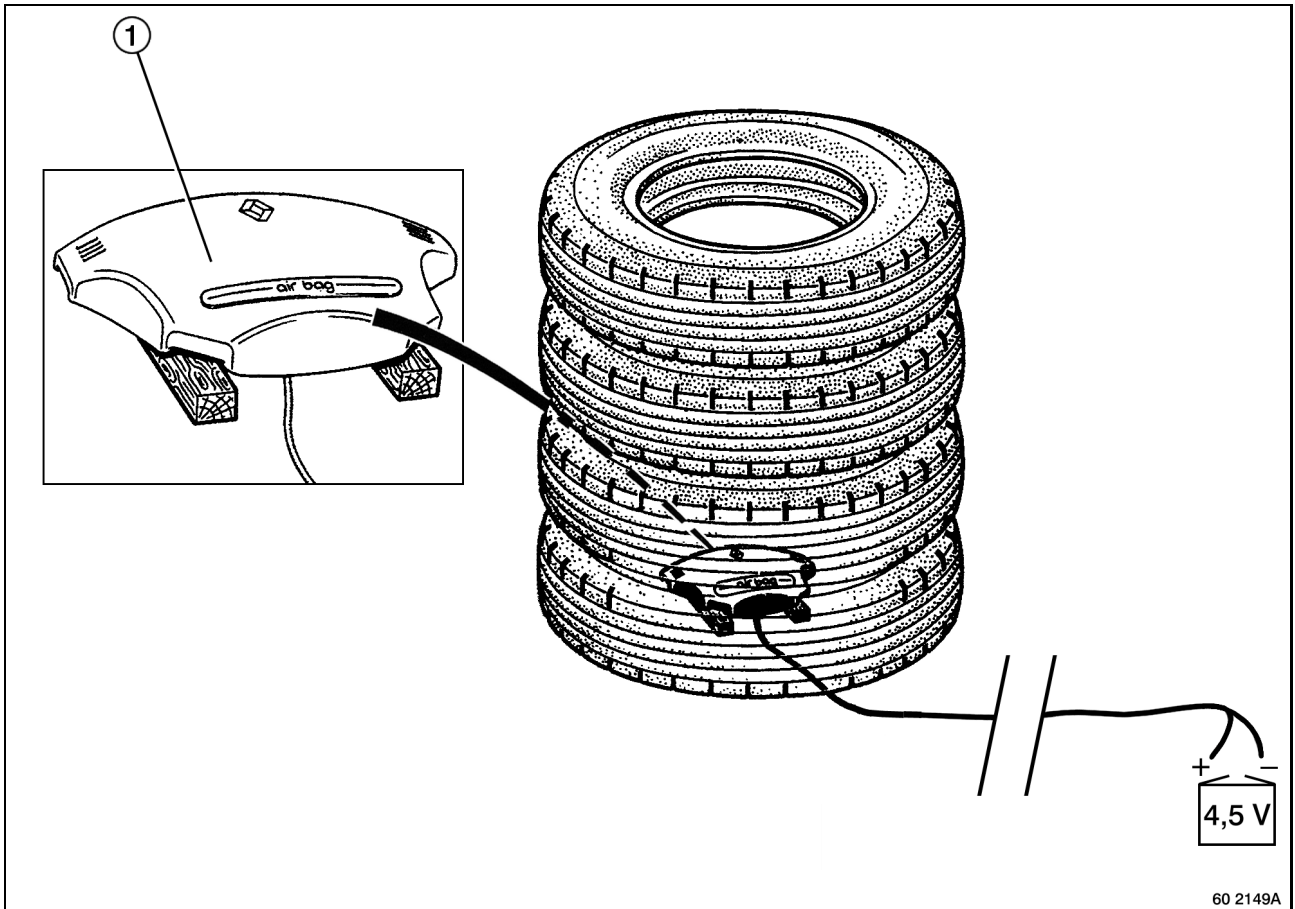
After 10 seconds, airbag warning pictogram (G23) should be extinguished.



AFTER A PRETENSIONER IS TRIGGERED, THE STRAIN EXERTED ON THE BUCKLE IS PASSED ON TO THE INERTIA REEL AND RISKS DAMAGING THE MECHANISM, SO THE SEAT BELT MUST BE REPLACED IF IT WAS ATTACHED AT THE TIME OF TRIGGERING OR IF ANY DOUBT REMAINS ON THE FACTS OF THE MATTER.

Destruction

Airbag module destruction procedure



*This procedure complies with French regulations.
For other countries, refer to the national regulations in force.*

This operation must be performed outside the workshop.
To avoid any risk of accident, the pyrotechnic igniter squibs must be detonated before the vehicle or the single component is scrapped.

Method:

- 1° Connect tool **2887** to the module.
- 2° Place the module on two wooden blocks, with the conductor wires directed downwards to prevent them from getting damaged.
- 3° Cover the unit over with a stack of four used tyres.
- 4° Unwind two wires over a distance of about 10 metres so as to be well away from the detonation zone.
- 5° Ensure there is nobody nearby.
- 6° Proceed with destruction of the airbag by connecting the two conductor wires to a **4.5** Volt battery (there is no polarity to be observed).



**DO NOT TOUCH THE METAL PART AROUND THE CONNECTOR AFTER DESTRUCTION: RISK OF SERIOUS BURNS.
DISCONNECT TOOL 2887 IMMEDIATELY AFTER DESTRUCTION TO PREVENT IT FROM MELTING.**



Do not detonate modules and pretensioners that have to be returned under the warranty, as this would make analysis impossible.

It is essential to return the defective part in the original packing for the new part.

Pretensioner destruction procedure



*This procedure complies with French regulations.
For other countries, refer to the national regulations in force.*

This operation must be performed in the vehicle outside the workshop.



BEFORE WORKING ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS DIAGNOSTICS TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

Unplug the connector of the pretensioner to be destroyed.

Method:

- 1° Connect tool **2886** to the pretensioner.
- 2° Unwind two wires over a distance of about 10 metres so as to be well away from the detonation zone.
- 3° Ensure there is nobody nearby.
- 4° Proceed with destruction of the pretensioner by connecting the two conductor wires to a **4.5** Volt battery (there is no polarity to be observed).



DO NOT TOUCH THE METAL PART AROUND THE CONNECTOR AFTER DESTRUCTION: RISK OF SERIOUS BURNS. DISCONNECT TOOL 2886 IMMEDIATELY AFTER DESTRUCTION TO PREVENT IT FROM MELTING.



Do not detonate modules and pretensioners that have to be returned under the warranty, as this would make analysis impossible.

It is essential to return the defective part in the original packing for the new part.

