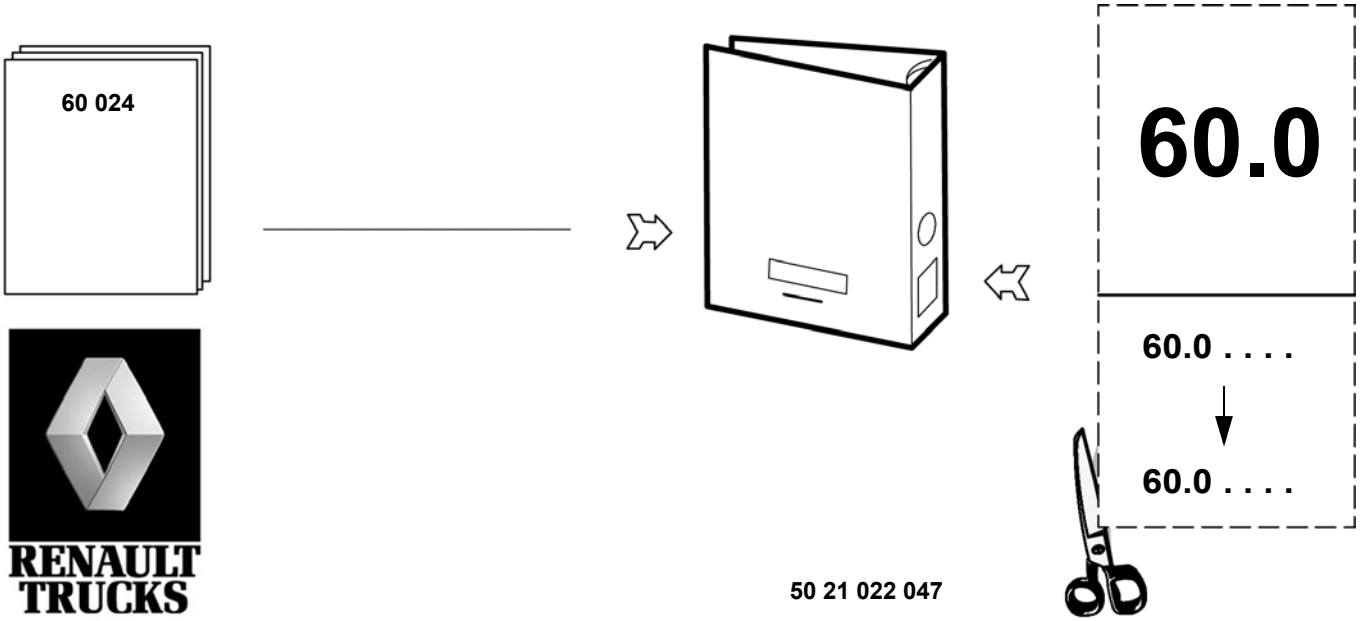
60 024 - GB - 03/2005

CAB REMOVAL / FITTING

RANGE	FAMILY	VARIANT
RENAULT MIDLUM 12 -16 t Euro 2	-	-
RENAULT MIDLUM 12-16 t Euro 3		
RENAULT MIDLUM 16-18 t		
RENAULT MIDLUM 4x4		
RENAULT MIDLUM 7-12 t		

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.



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— Standard tightening torques . . . . . B2-1 → 2
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— 4-door cab . . . . . D2-1 → 13
— Forest fire tanker truck cab (CCF) . . . . . D3-1 → 12

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GENERALITIES

APPLICABILITY

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Warnings				31/03/2003	A-4
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							
RENAULT MIDLUM 12 -16 t Euro 2		Recommendations for repair subsequent to impact suffered by the cab.				04/02/2005	A-4
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							
RENAULT MIDLUM 12 -16 t Euro 2		Conventional symbols				23/05/2002	A-5
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		**Practical advice**				**11/03/2004**	**A-7**
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							

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.

Recommendations for repair subsequent to impact suffered by the cab.

The cab tilt ram, besides its primary function, forms an integral part of the vehicle's passive safety arrangement, by contributing towards damping and absorbing head-on impacts in the event of accident.

CONSEQUENTLY, IF THE IMPACT (WHETHER IT BE HEAD-ON, ON THE SIDE OR AT THE REAR) HAS CAUSED DISTORTION OF THE CAB OR OF A LINKAGE PART BELONGING TO THE CAB SUSPENSION SYSTEM, IT IS COMPULSORY TO REPLACE THE TILT RAM COMPLETE WITH FASTENING COMPONENTS (LOWER AND UPPER), TOGETHER WITH THE FRONT AND REAR LINKAGE PARTS FASTENED TO THE CHASSIS AND TO THE CAB.

EXAMPLE: STRIKER, CAB TILT REAR LOCK, SHOCK ABSORBER FRONT AND REAR BRACKETS, BEARING, SECURING BOLTS, ETC...

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

Practical advice

Practical advice

Prior to any work:

- Clean the major unit and its surrounds (See Driving Servicing Handbook: "Vehicle washing").
- Ensure the batteries are disconnected.
- Mark the pipes and wiring harnesses, if necessary.
- Protect all ports to prevent the ingress of foreign matter.
- To blank off the ports, the Spare Parts Department supplies blanking plugs part N° **50 01 859 753**.
- Before disconnecting an air pipe, drop the circuit pressure.
- If liquid is splashed onto the bodywork, clean quickly with a cleaning product.

Before tilting the cab, ensure that nothing can risk causing damage to the vehicle.

ESTABLISH A SAFE AREA AROUND THE VEHICLE.

TECHNICAL DATA

APPLICABILITY

Cab

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Cab weights	17101/03/10/11			14/05/2004	B1-6
RENAULT MIDLUM 12-16 t Euro 3			17101/03/10/11				
RENAULT MIDLUM 16-18 t			17101/03/10/11				
RENAULT MIDLUM 4x4			17101/03/10/11				
RENAULT MIDLUM 7-12 t			17101/03/10/11				

Standard tightening torques

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Definitions				27/02/2003	B2-1
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							
RENAULT MIDLUM 12 -16 t Euro 2		Standard nut and bolt tightening torques table				06/06/2003	B2-2
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							

Specific tightening torques

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		2-door cab	17101/11			24/03/2004	B3-1
RENAULT MIDLUM 12-16 t Euro 3			17101/11				
RENAULT MIDLUM 16-18 t			17101/11				
RENAULT MIDLUM 4x4	47XA		17101/11				
	47XC		17101/11				
RENAULT MIDLUM 7-12 t			17101/11				
RENAULT MIDLUM 12 -16 t Euro 2		4-door cab	17103			24/03/2004	B3-2
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XA		17103				
	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				
RENAULT MIDLUM 4x4	47XF	CCF (forest fire tanker) cab	17110			24/03/2004	B3-3
RENAULT MIDLUM 12 -16 t Euro 2		Steering column	17101/03/10/11			12/05/2004	B3-4
RENAULT MIDLUM 12-16 t Euro 3			17101/03/10/11				
RENAULT MIDLUM 16-18 t			17101/03/10/11				
RENAULT MIDLUM 4x4			17101/03/10/11				
RENAULT MIDLUM 7-12 t			17101/03/10/11				

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Gearshift control	17101/03/10/11			12/05/2004	B3-5
RENAULT MIDLUM 12-16 t Euro 3			17101/03/10/11				
RENAULT MIDLUM 16-18 t			17101/03/10/11				
RENAULT MIDLUM 4x4			17101/03/10/11				
RENAULT MIDLUM 7-12 t			17101/03/10/11				
RENAULT MIDLUM 12 -16 t Euro 2		Airbag device	35902			12/05/2004	B3-6
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Cab

Cab weights

Type(s)	**M800** **M129**
Day cab	**565 → 670 kg**
Sleeper cab	**665 → 685 kg**
4-door cab	**950 → 990 Kg**
Forest fire tanker truck cab	**990 → 1030 Kg**

Grease

Symbols	Renault Trucks Oils	Standards
	RAM	Lithium soap grease NLGI 2 with molybdenum bisulphide

Oil capacities and specifications (see Driving & Servicing Handbook)

Standard tightening torques

Definitions

There are several types of tightening:
- Tightening to torque (in **Nm**)
- Tightening to angle (in °)
- Tightening to torque-angle (in **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 ± 10% of the final torque).
- **Class II:** Reserved for precise tightening (tolerance ± 10% of the nominal torque).
- **Class III:** Reserved for normal standard tightening (tolerance ± 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.

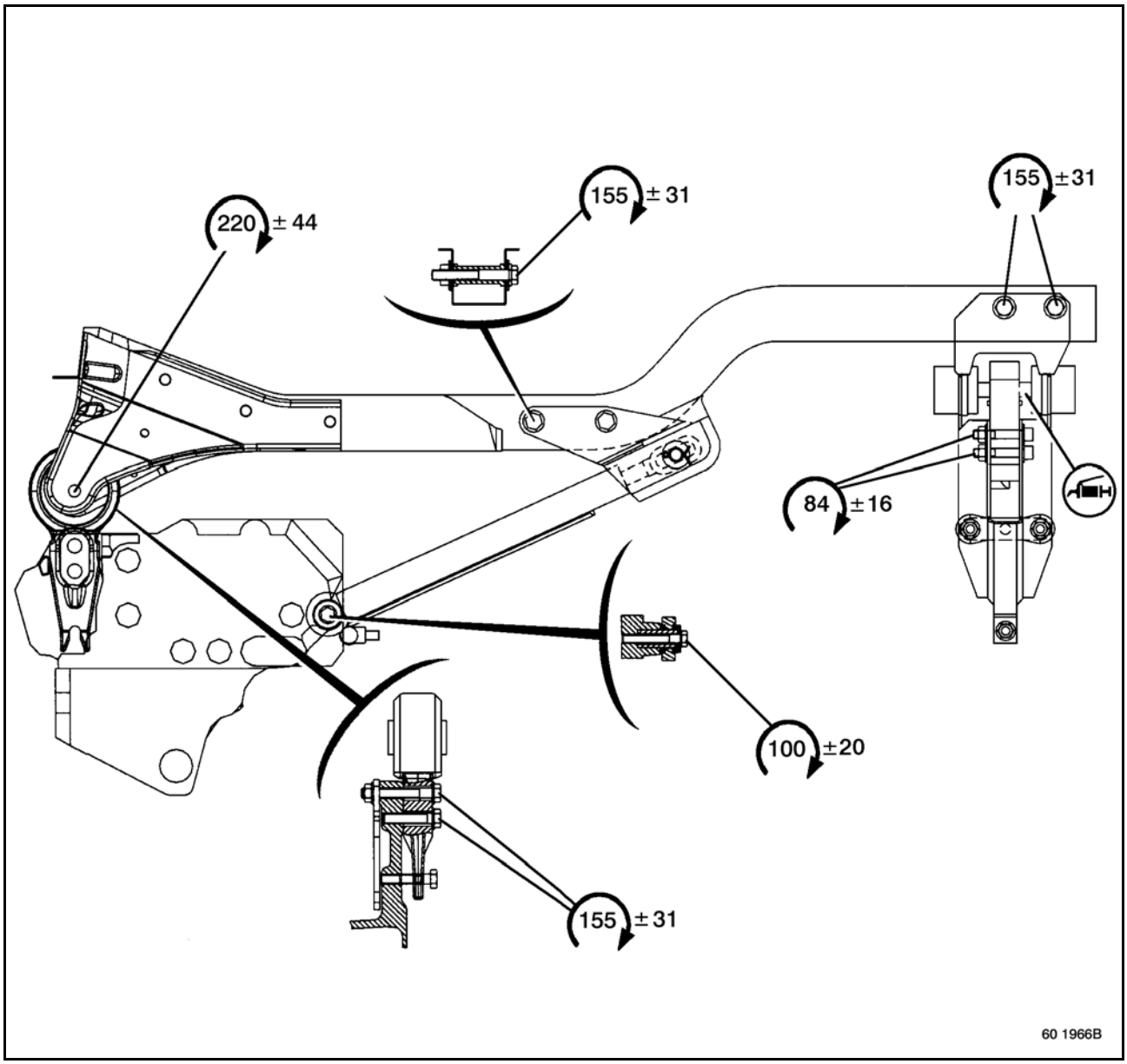
Standard nut and bolt tightening torques table

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)****.*

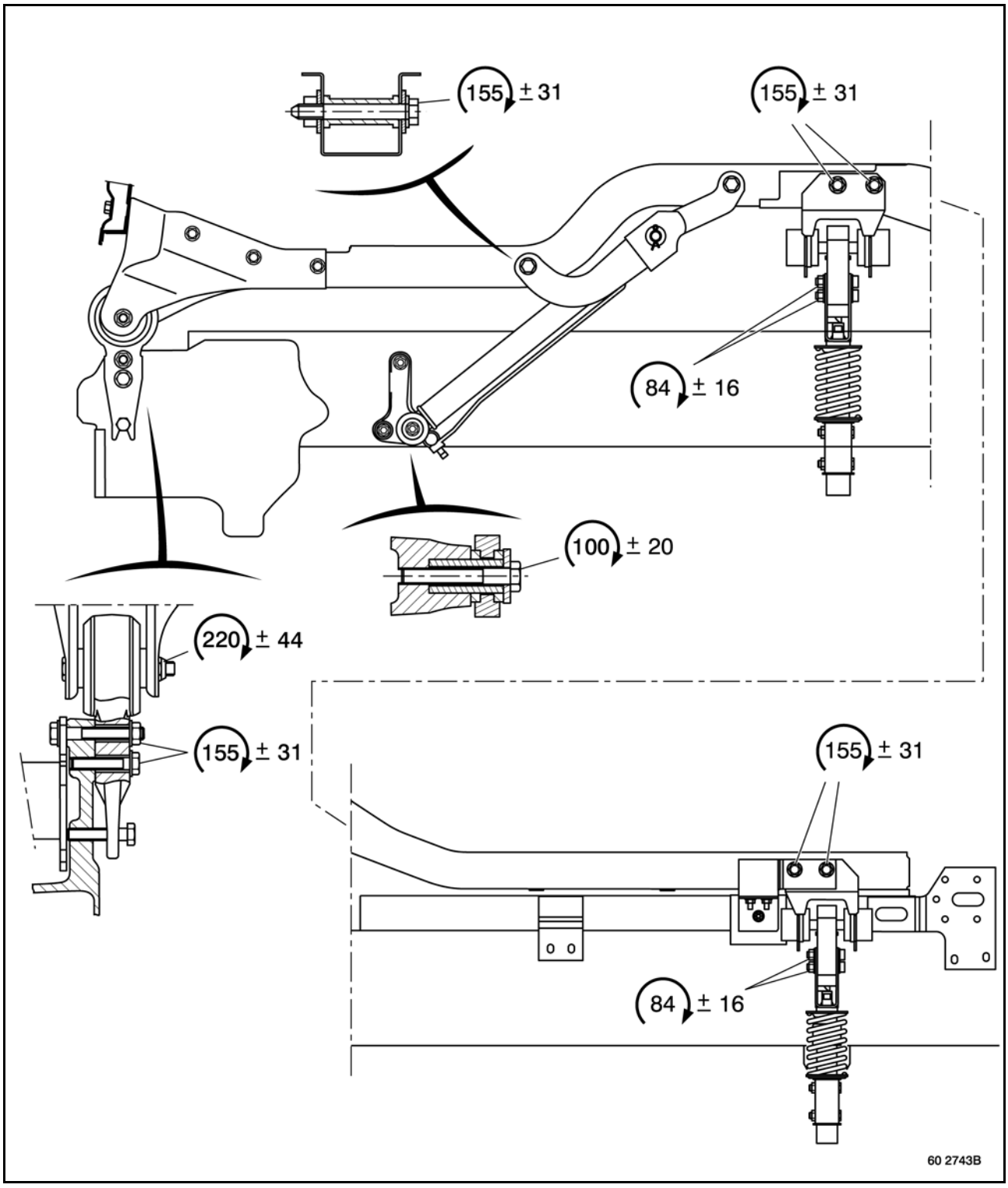
Tightening torque values in Nm for conventional "metric system" threaded hardware based on standard 01.50.4002 (H: normal and HE: with flange)		
Diameter and pitch of nuts and bolts	**Quality class III**	
	Quality class 8.8	**Quality class 10.9**
6 x 1.00	7.5 ± 1.5	11 ± 2.2
7 x 1.00	15 ± 3	20 ± 4
8 x 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 tightening torques

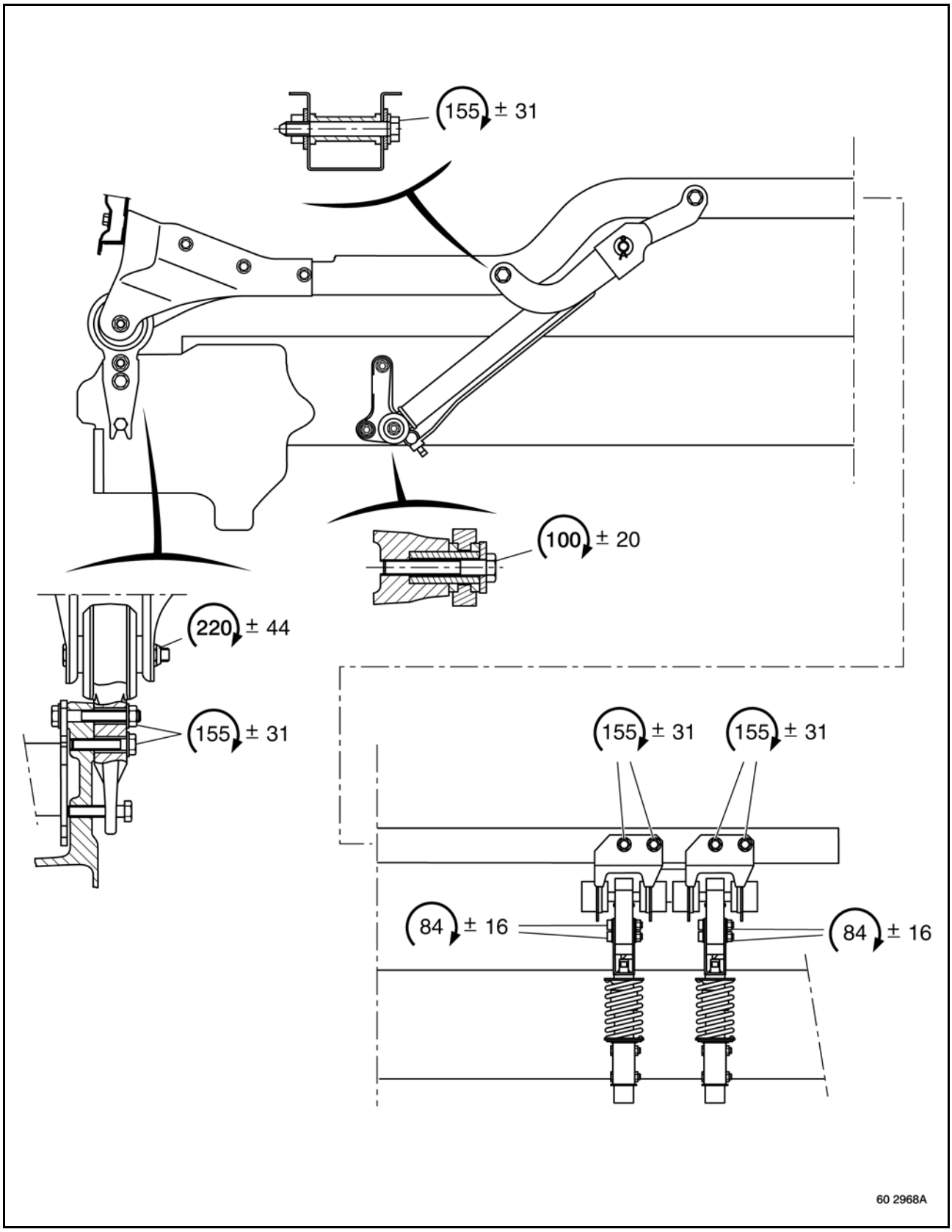
2-door cab



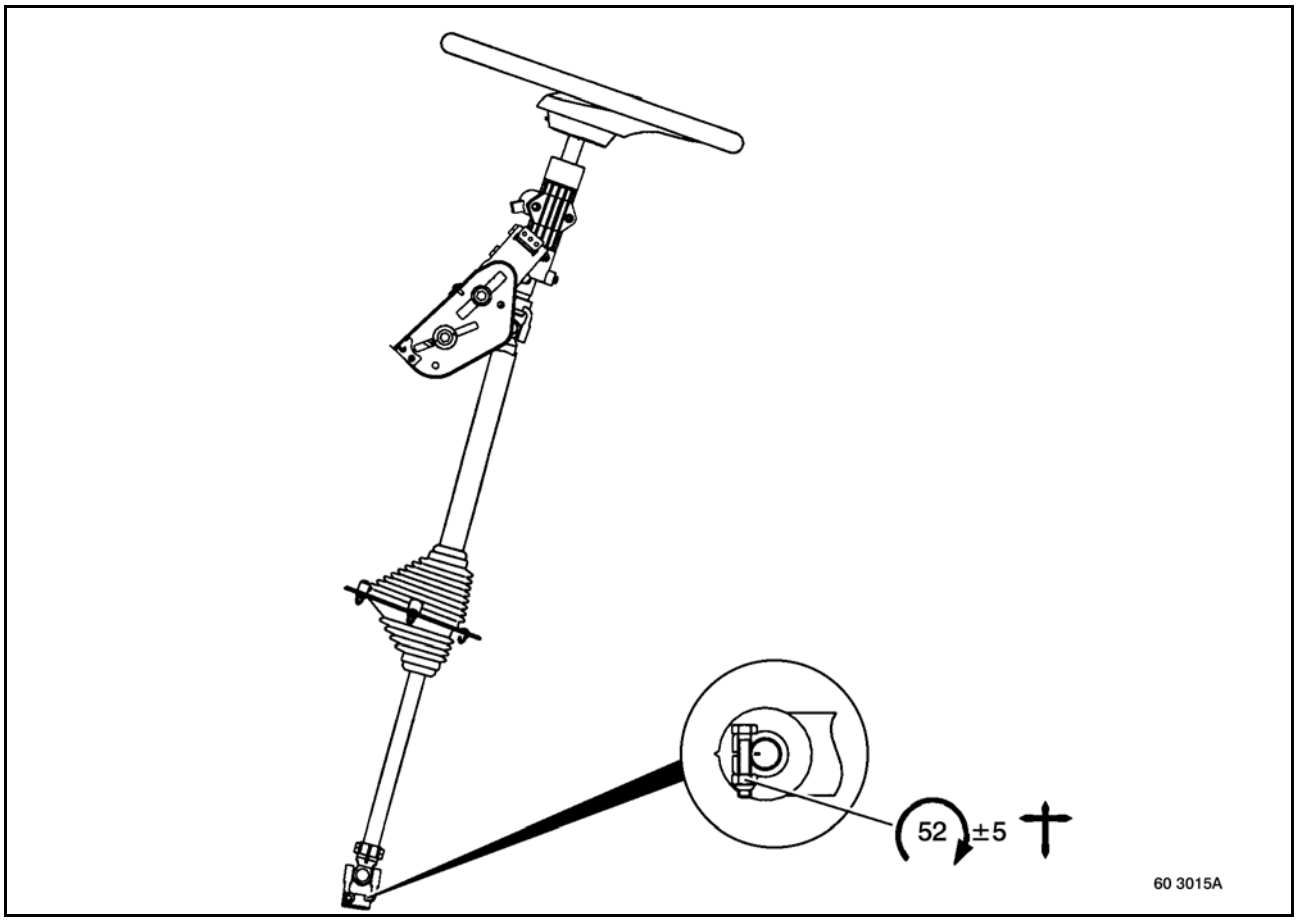
4-door cab



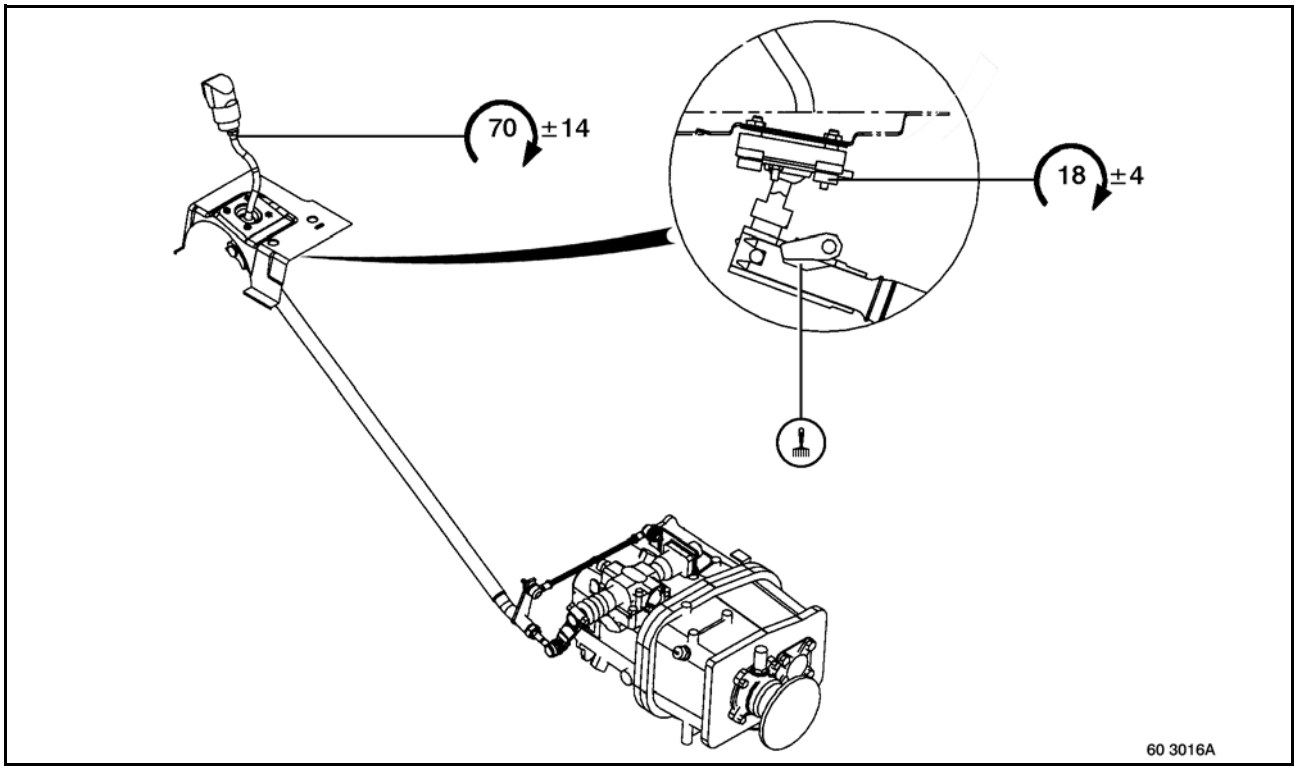
CCF (forest fire tanker) cab



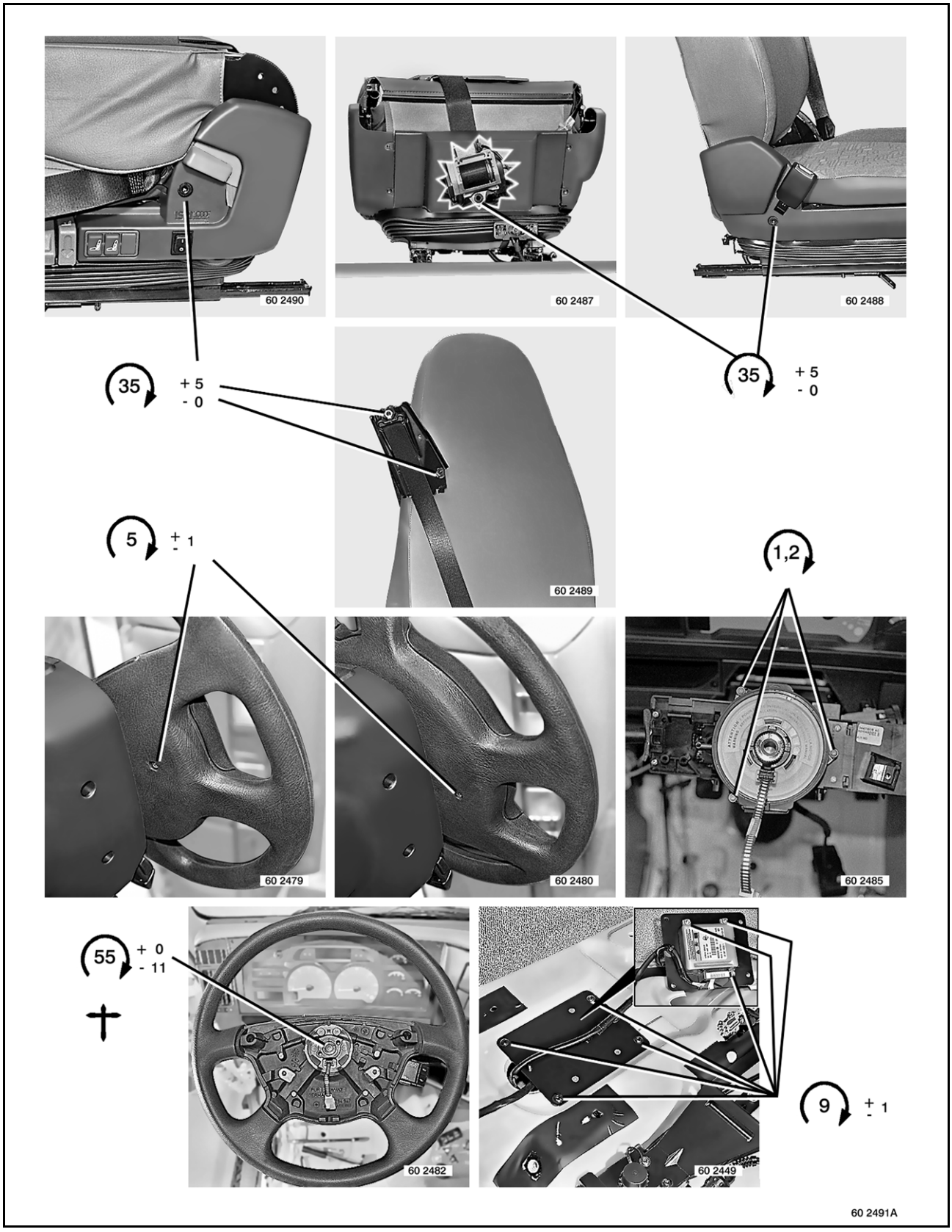
Steering column



Gearshift control



Airbag device



TOOLS

APPLICABILITY

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		**Generalities**				**12/12/2001**	**C-3**
RENAULT MIDLUM 12-16 t Euro 3							
RENAULT MIDLUM 16-18 t							
RENAULT MIDLUM 4x4							
RENAULT MIDLUM 7-12 t							

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.

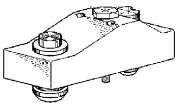
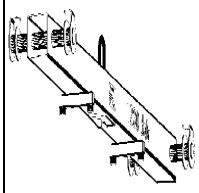
Proprietary tools mentioned in this manual do not appear in the tools list.
These tools are identified in the standard tools manual (MO) by a 4-figure number.

LIST OF TOOLS

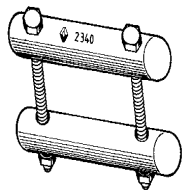
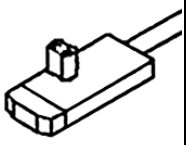
General-purpose tools

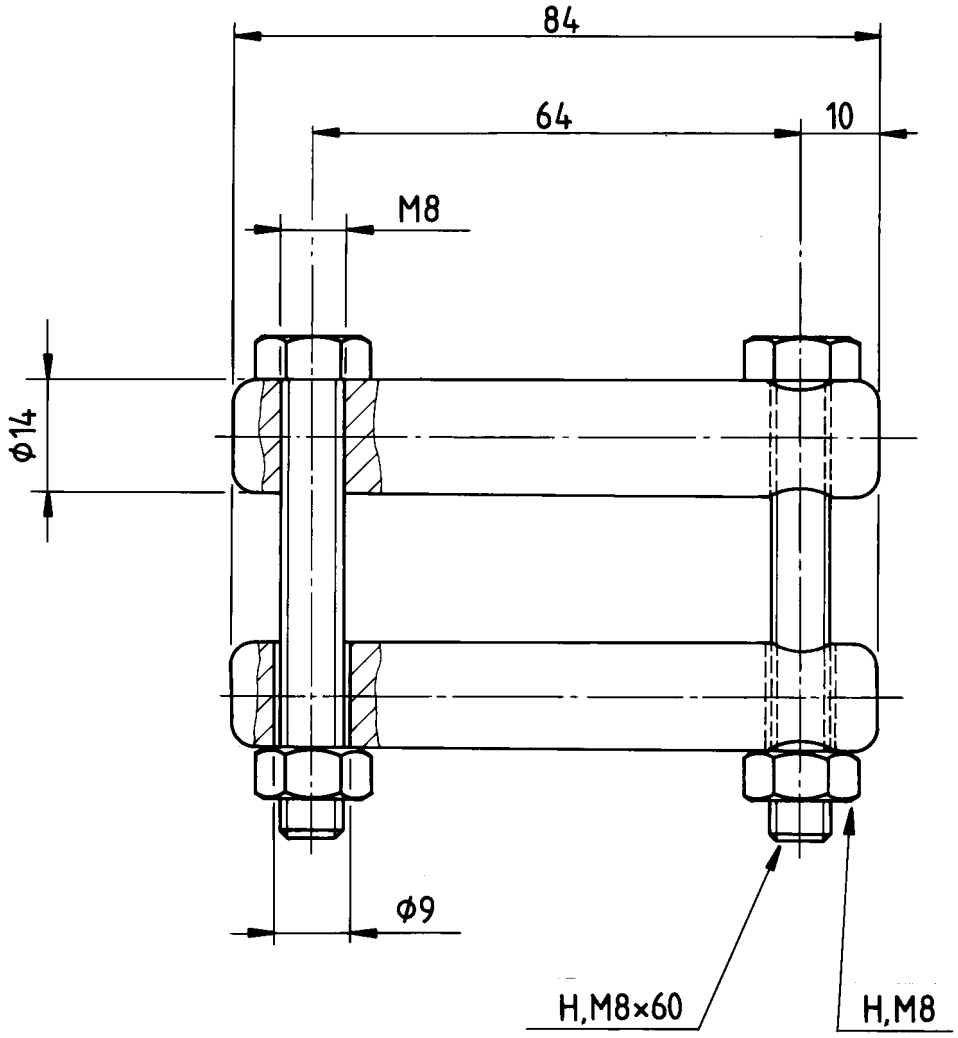
Illustration	RENAULT TRUCKS Ref.	Designation	Manufac-turer reference	Manufac-turer code	Level	Qty
	**5000269804**	STRAP			1	1

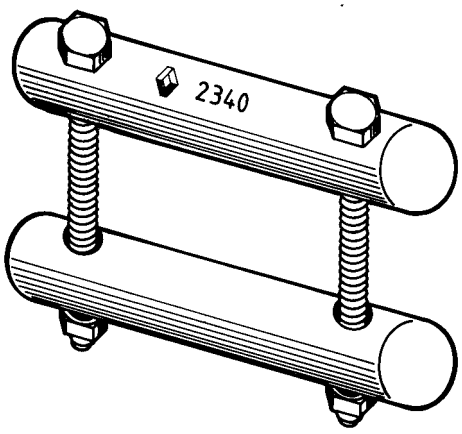
Special Tools

Illustration	RENAULT TRUCKS Ref.	Designation	Manufac-turer reference	Manufac-turer Code	Level	Qty
	**5000262359**	BLANKING PLUG			1	1
	**5000262370**	LIFTING BEAM			2	1
	85600	EXTENSION			1	1

Locally manufactured tools

Illustration	RENAULT TRUCKS Ref.	Designation	Manufac-turer Reference	Manufac-turer Code	Level	Qty
	**2340**	CLAMP			2	1
	**2886**	AIRBAG DESTRUC-TION DEVICE			1	1





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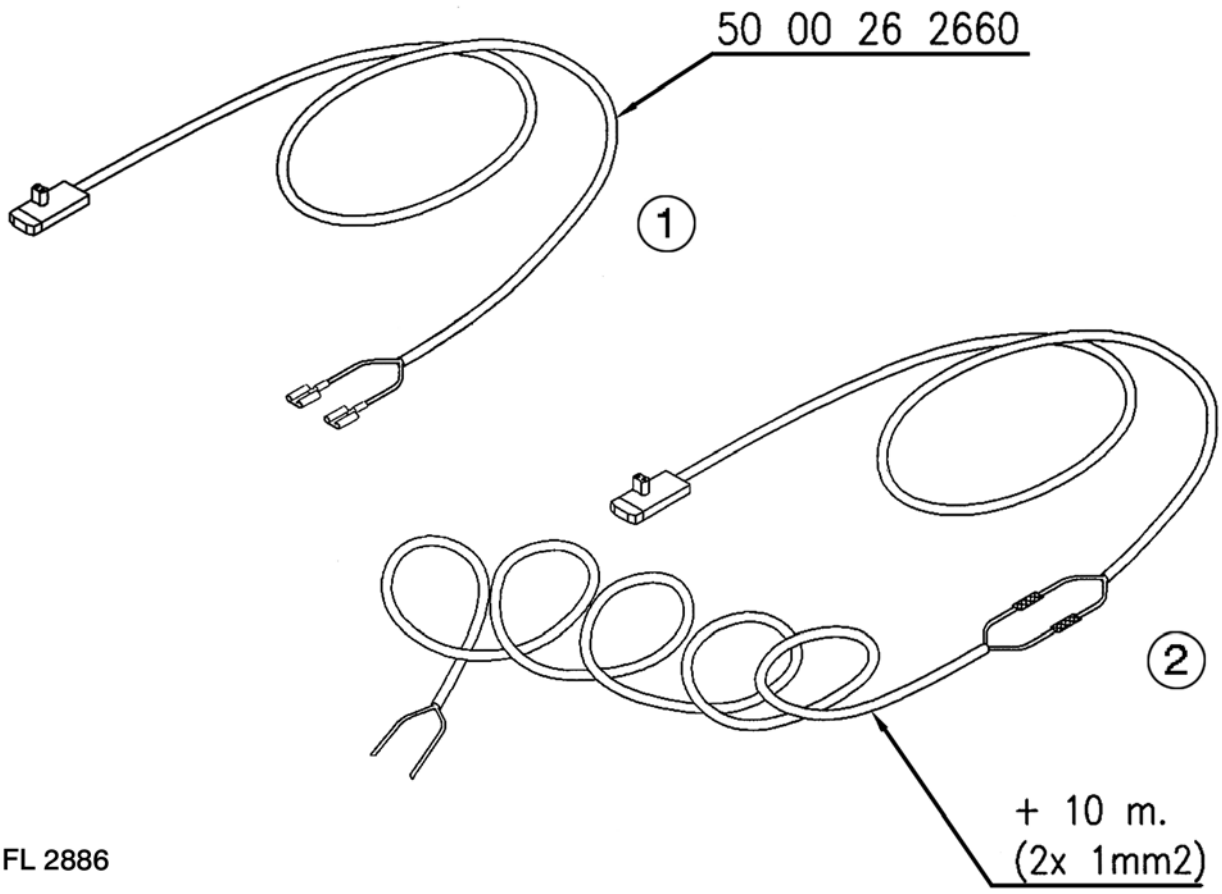


FL 2886

REMOVAL / FITTING

APPLICABILITY

2-door cab

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Removal / Fitting	17101/11			11/03/2004	D1-7
RENAULT MIDLUM 12-16 t Euro 3			17101/11				
RENAULT MIDLUM 16-18 t			17101/11				
RENAULT MIDLUM 4x4	47XA		17101/11				
	47XC		17101/11				
RENAULT MIDLUM 7-12 t			17101/11				
RENAULT MIDLUM 12 -16 t Euro 2		Cab suspension	17101/11			12/03/2004	D1-11
RENAULT MIDLUM 12-16 t Euro 3			17101/11				
RENAULT MIDLUM 16-18 t			17101/11				
RENAULT MIDLUM 4x4	47XA		17101/11				
	47XC		17101/11				
RENAULT MIDLUM 7-12 t			17101/11				
RENAULT MIDLUM 12 -16 t Euro 2		Cab tilting system	17101/11			12/03/2004	D1-12
RENAULT MIDLUM 12-16 t Euro 3			17101/11				
RENAULT MIDLUM 16-18 t			17101/11				
RENAULT MIDLUM 4x4	47XA		17101/11				
	47XC		17101/11				
RENAULT MIDLUM 7-12 t			17101/11				

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Cab lock(s)	17101/11			12/03/2004	D1-13
RENAULT MIDLUM 12-16 t Euro 3			17101/11				
RENAULT MIDLUM 16-18 t			17101/11				
RENAULT MIDLUM 4x4	47XA		17101/11				
	47XC		17101/11				
RENAULT MIDLUM 7-12 t			17101/11				
RENAULT MIDLUM 12 -16 t Euro 2		Cab tilt ram(s)	17101/11			12/03/2004	D1-14
RENAULT MIDLUM 12-16 t Euro 3			17101/11				
RENAULT MIDLUM 16-18 t			17101/11				
RENAULT MIDLUM 4x4	47XA		17101/11				
	47XC		17101/11				
RENAULT MIDLUM 7-12 t			17101/11				

4-door cab

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Removal / Fitting	17103			15/03/2004	D2-1
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				
RENAULT MIDLUM 12 -16 t Euro 2		Cab suspension	17103			15/03/2004	D2-8
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				
RENAULT MIDLUM 12 -16 t Euro 2		Cab tilting system	17103			15/03/2004	D2-9
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Cab lock(s)	17103			15/03/2004	D2-10
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				
RENAULT MIDLUM 12 -16 t Euro 2		Cab tilt ram(s)	17103			15/03/2004	D2-11
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				
RENAULT MIDLUM 12 -16 t Euro 2		Centring the cab	17103			13/05/2004	D2-13
RENAULT MIDLUM 12-16 t Euro 3			17103				
RENAULT MIDLUM 16-18 t			17103				
RENAULT MIDLUM 4x4	47XC		17103				
RENAULT MIDLUM 7-12 t			17103				

Forest fire tanker truck cab (CCF)

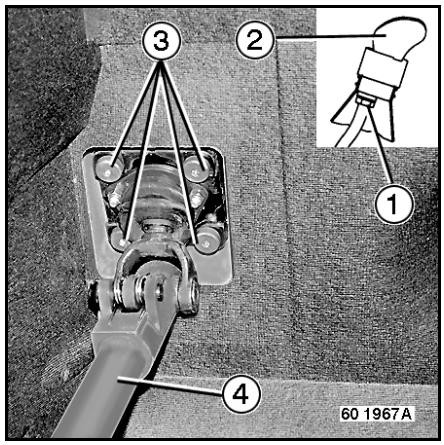
Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 4x4	47XF	Removal / Fitting	17110			16/03/2004	D3-1
RENAULT MIDLUM 4x4	47XF	Cab suspension	17110			16/03/2004	D3-8
RENAULT MIDLUM 4x4	47XF	Cab tilting system	17110			16/03/2004	D3-9
RENAULT MIDLUM 4x4	47XF	Cab lock(s)	17110			16/03/2004	D3-10
RENAULT MIDLUM 4x4	47XF	Cab tilt ram(s)	17110			16/03/2004	D3-11

2-door cab

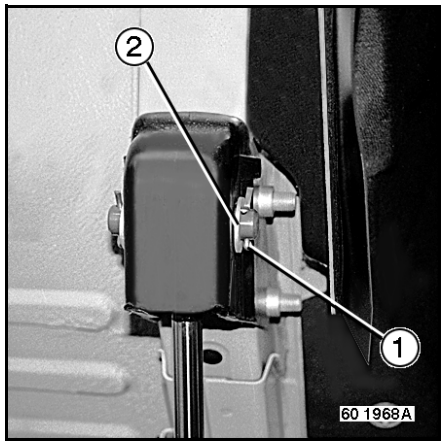
Removal / Fitting

Removal

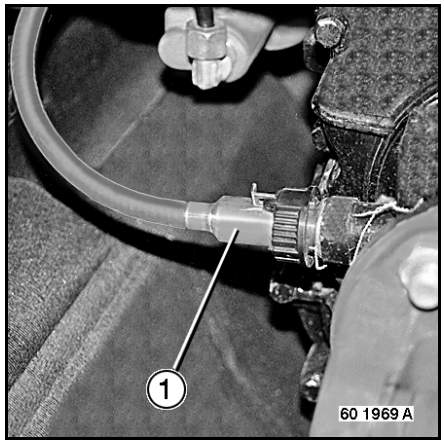
Euro 2 Vehicle(s)
Drain the cooling system (see "Driving and Servicing" handbook).
Loosen nut **(1)**.
Remove the gear lever knob **(2)**.
Tilt the cab.
Remove bolts **(3)**.
Withdraw gearshift control **(4)**.



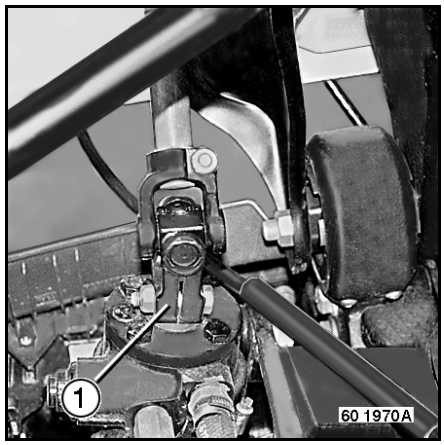
Extract the lock pin **(1)**.
Withdraw washer **(2)**.



Euro 2 Vehicle(s)
Remove the lead seal and disconnect the speed sensor wiring harness **(1)**.

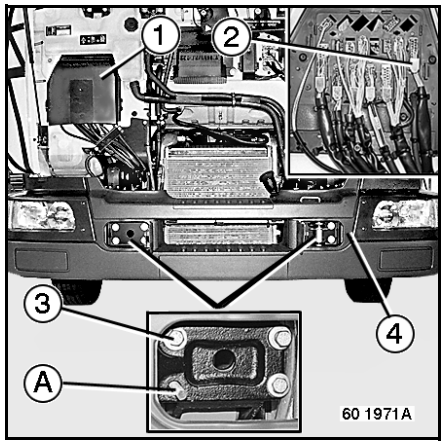


Mark and uncouple steering gear shaft **(1)**.
Return the cab to the "road" position.

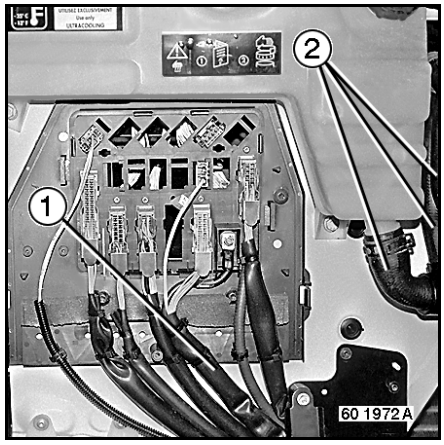


Remove guard **(1)**.
Unplug connector **(2)**.

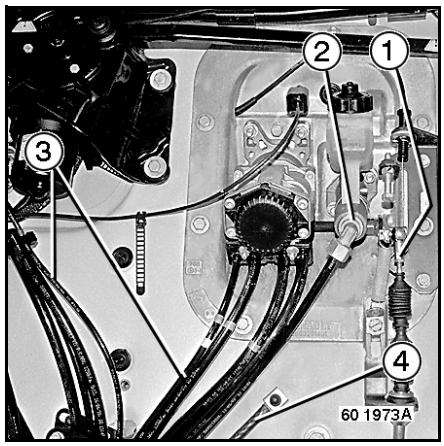
Euro 2 Vehicle(s)
Remove bolts **(3)**.
Remove front bumper **(4)**.
Use **(2)** headless screws **(A)** diameter: **12** mm, length: **100** mm.



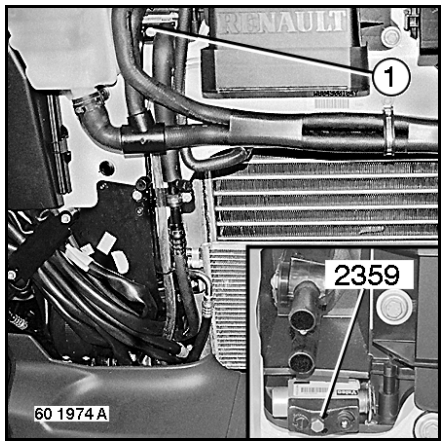
Unplug connectors **(1)**.
Remove hoses **(2)** and blank off the ports.



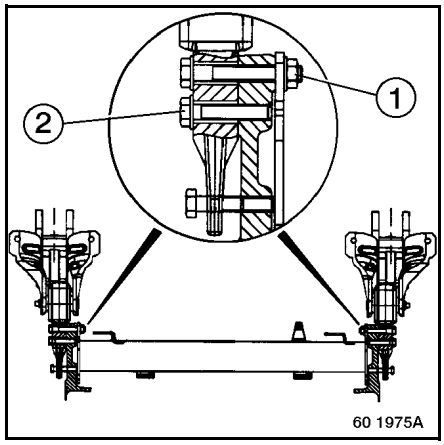
Euro 2 Vehicle(s)
Disconnect accelerator cable **(1)**.
Without disconnecting the flexible hydraulic pipe, remove clutch master cylinder **(2)**.
Mark and remove pipes **(3)**.
Remove earth braid **(4)**.



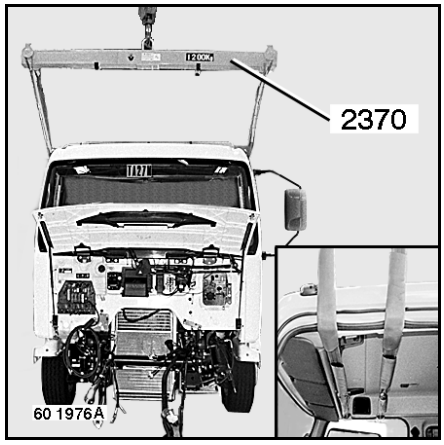
Cab equipped with air conditioning
Drain the air conditioning system.
See Workshop Manual section MR **63614**.
Remove bolt **(1)** from the pressure reducer retaining flange .
Blank off the pressure reducer ports.
Use tool **2359**.
Blank off the high and low pressure pipes.



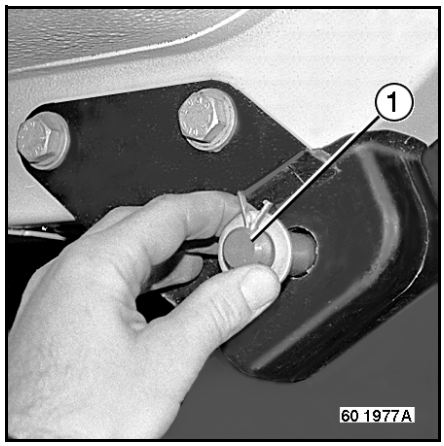
Remove nuts and bolts **(1)**.
Remove bolts **(2)**.



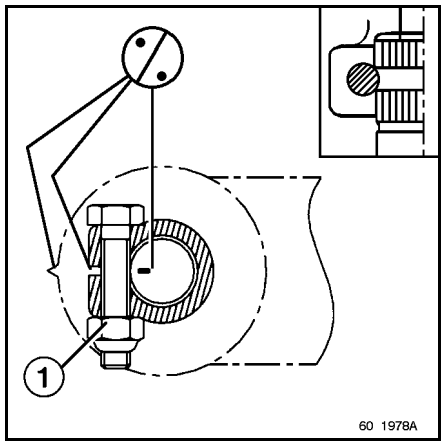
Mount tool **2370**.
Actuate the hydraulic pump to open the locks and simultaneously lift the cab.



Strike out shaft **(1)**.
Remove the cab.



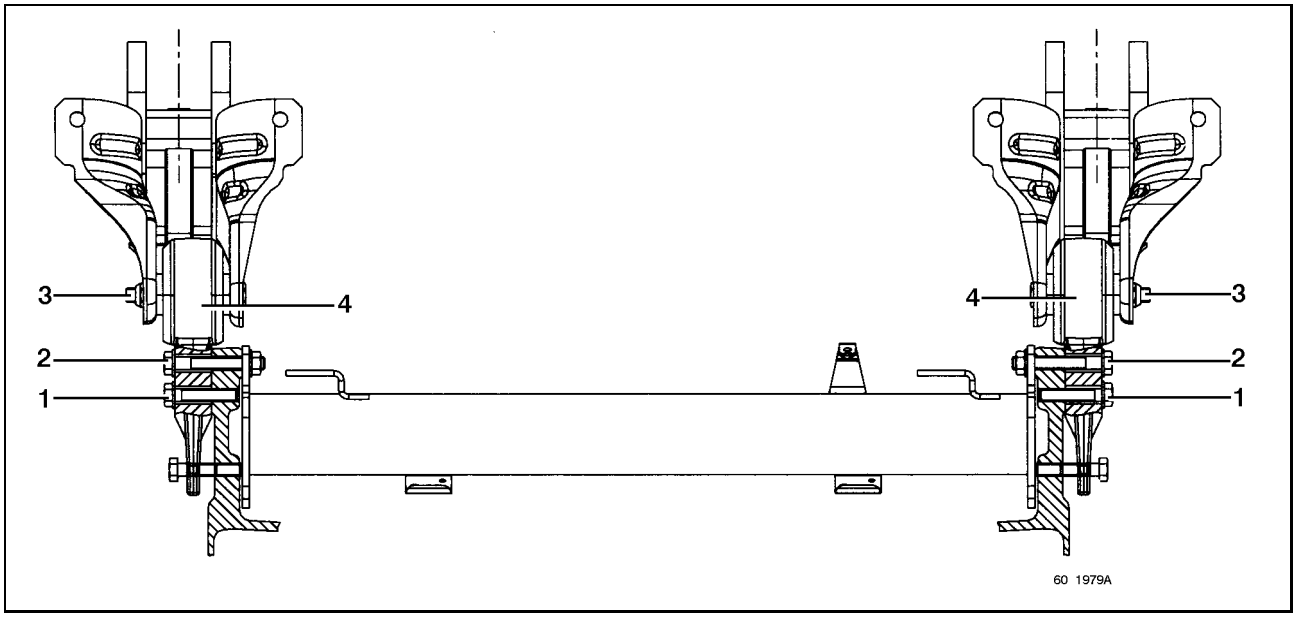
Fitting
To fit, proceed in the reverse sequence to removal.
Couple up steering gear shaft **(2)**.
Fit the nut and bolt **(1)**.
Tighten to torque.
See page(s) B-3-4.



Euro 2 Vehicle(s)
Connect the accelerator cable and adjust the control.
Connect the speed sensor wiring harness and get a lead seal fitted by an SIM-approved workshop.
Fill the cooling system (see "Driving and Servicing" handbook).

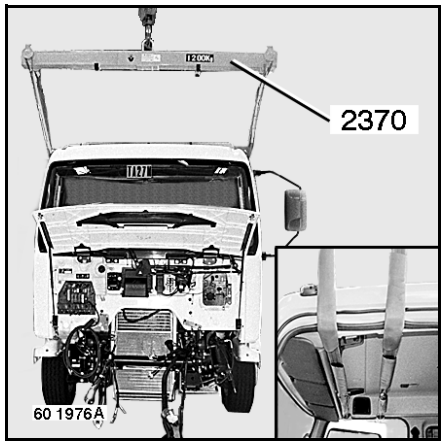
Cab equipped with air conditioning
Recharge the air conditioning system.
See Workshop Manual section MR **63614**.

Cab suspension

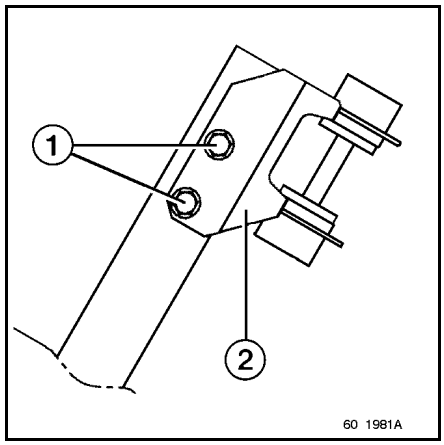


Removal

Front mountings
After removing the front bumper.
See pages D-1-8.
Remove bolts **(1)**.
Remove nuts and bolts **(2)**.
Mount tool **2370**.
Lift up the cab to relieve the load on front mountings **(4)**.
Remove nuts and bolts **(3)**.
Remove front mounting(s) **(4)**.

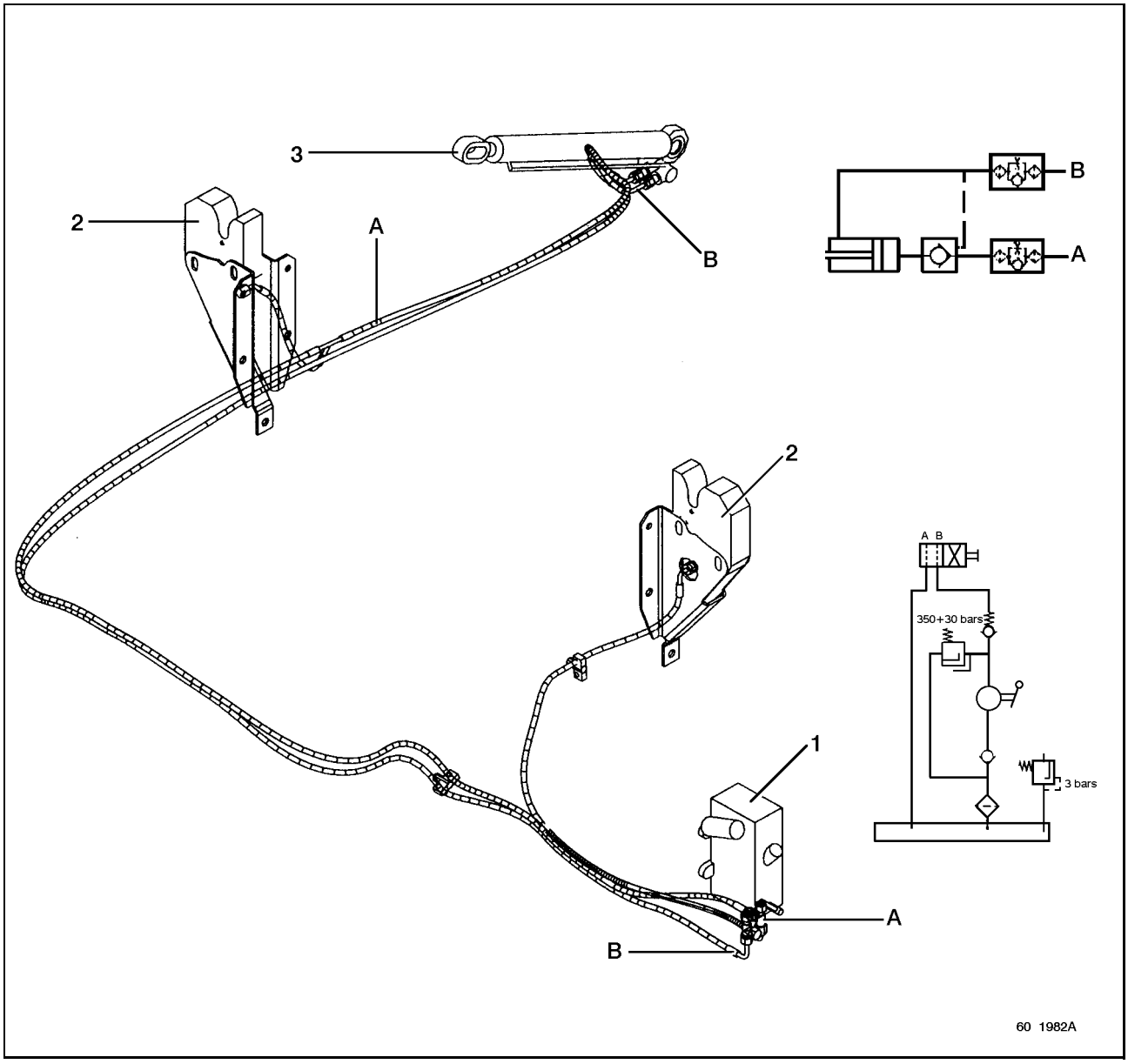


Rear mountings
Tilt the cab.
Remove nuts and bolts **(1)**.
Remove rear mounting(s) **(2)**.



Fitting
To fit, proceed in the reverse sequence to removal.
Tighten to torque.

Cab tilting system



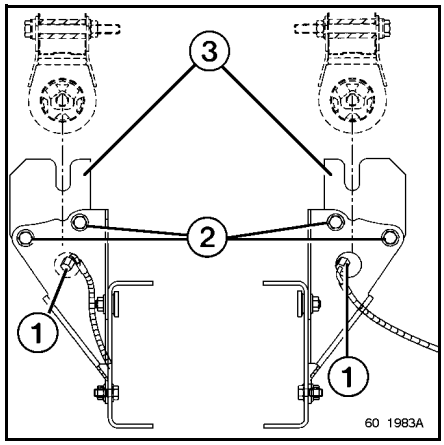
Hydraulic system

- Manual tilt pump **(1)**
- Locks **(2)**
- Tilt ram(s) **(3)**
- Pushing circuit (cab tilting) **(A)**
- Pulling circuit (cab return) **(B)**

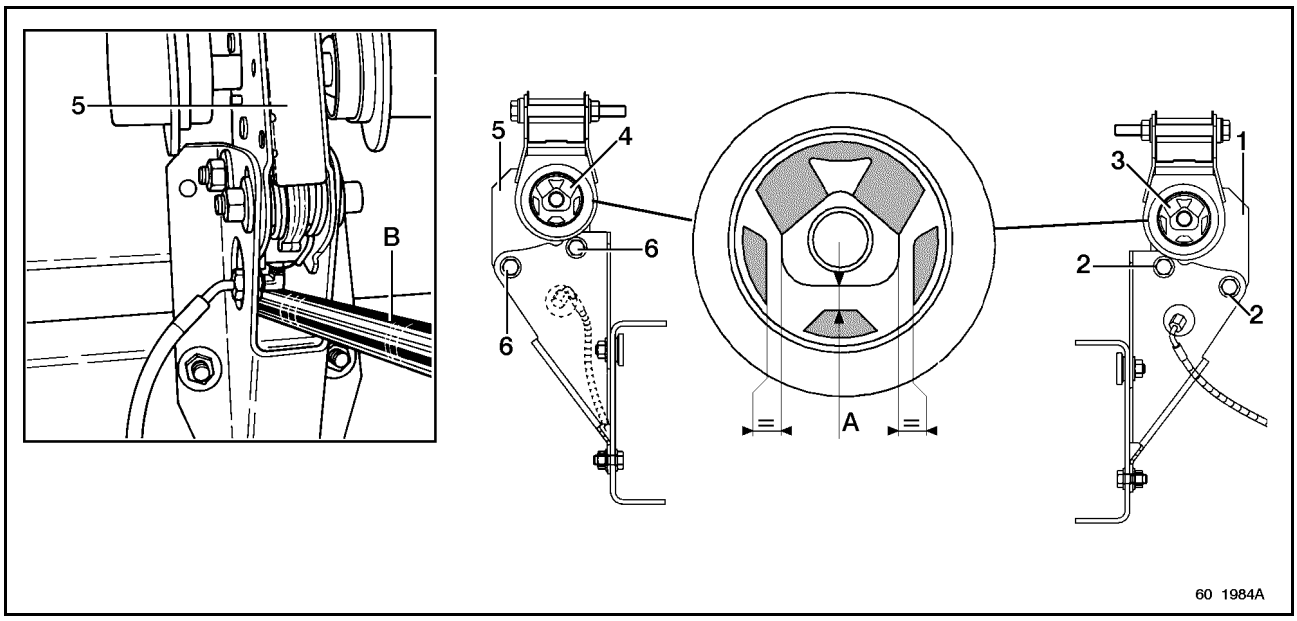
Prior to carrying out any work on the hydraulic system (pipes, ram, pumps...), secure the cab against motion, when tilted, as a safety precaution.

Cab lock(s)

Removal
Tilt the cab.
Disconnect pipe **(1)**.
Blank off the ports.
Remove nuts and bolts **(2)**.
Remove lock(s) **(3)**.



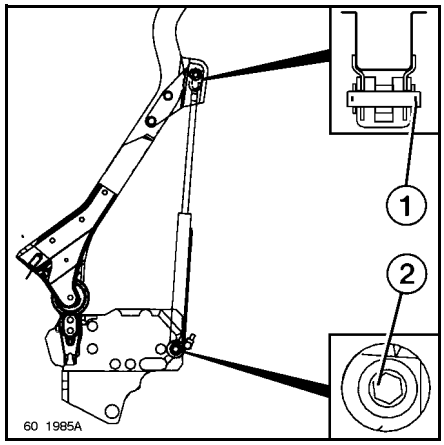
Fitting
To fit, proceed in the reverse sequence to removal.
Do not tighten nuts and bolts **(2)** so as to allow locks **(3)** to be adjusted.



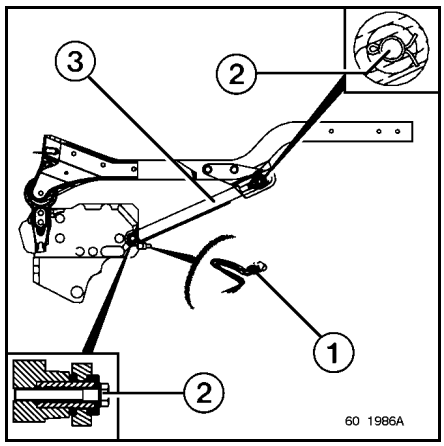
Adjustment
- Actuate the hydraulic pump in the cab return direction until the lever hardens up.
- The RH side lock **(1)** falls into position naturally. Tighten nuts and bolts **(2)**.
- Using a set of feeler gauges, measure dimension **(A)** du of RH side mounting **(3)**.
- Vary the height of **(5)** using a lever **(B)** to give the same dimension **(A)** to LH side mounting **(4)**
- In that position, tighten nuts and bolts **(6)**.
- Bleed the hydraulic system (see page D-1-14).
- Tilt the cab and tighten nuts and bolts **(2 - 6)** to torque.

Cab tilt ram(s)

Removal
Tilt the cab.
Extract the lock pin **(1)**.
Loosen bolt **(2)**.



Return the cab to the "road" position.
Disconnect pipe **(1)**.
Withdraw pins **(2)**.
Remove ram **(3)**.



Fitting
To fit, proceed in the reverse sequence to removal.
Bleed the hydraulic system.

The ram is supplied with oil. Avoid draining the oil upon assembly.

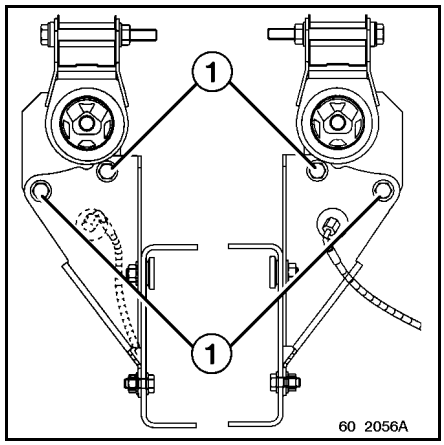
To replace a pump or a pipe
After completing the task, fill the system with oil and bleed.

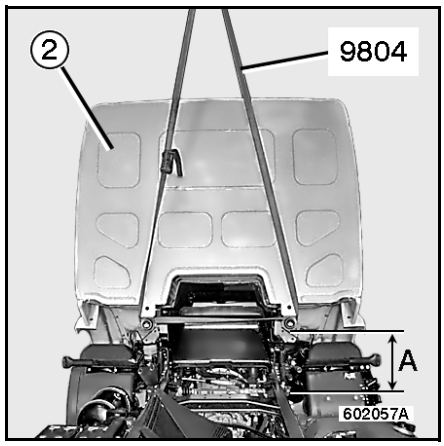
Filling the system with oil and bleeding the air
With the cab in the road position, fill with oil through the oil reservoir filler.
Actuate the hydraulic pump in the "up" direction to tilt the cab. The air escapes through the reservoir.
Actuate the hydraulic pump in the "down" direction to return the cab to the road position. Check the oil level and top up, if necessary. Carry out a complete cab tilting operation again.
Finish off bleeding the air by actuating the pump and loosening first the ram unions, then the cab lock unions.

Prior to carrying out any work on the hydraulic system (pipes, ram, pumps...), secure the cab against motion, when tilted, as a safety precaution.

If normal cab tilting is impossible, proceed as follows to enable it to tilt:
- Withdraw nuts and bolts **(1)**,
- Tilt cab **(2)** without exceeding a dimension **A** of **800** mm.

Use tool **9804**.

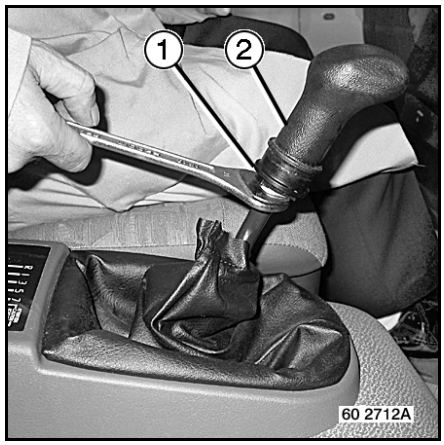




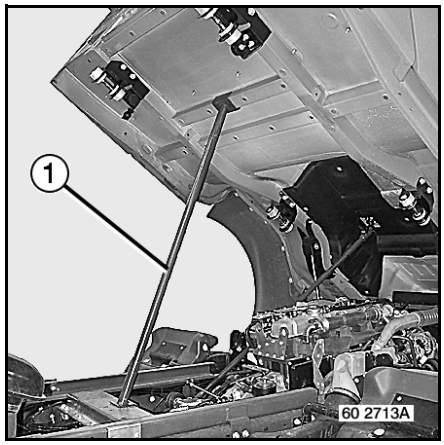
4-door cab

Removal / Fitting

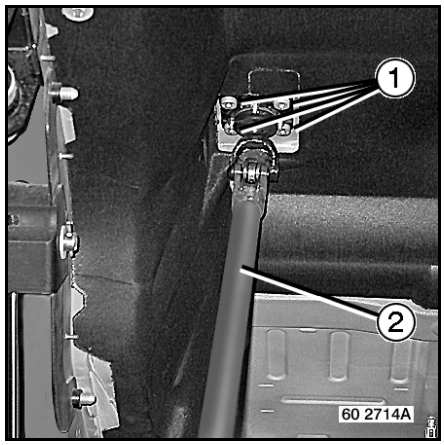
Removal
Loosen nut **(1)**.
Remove the gear lever knob **(2)**.



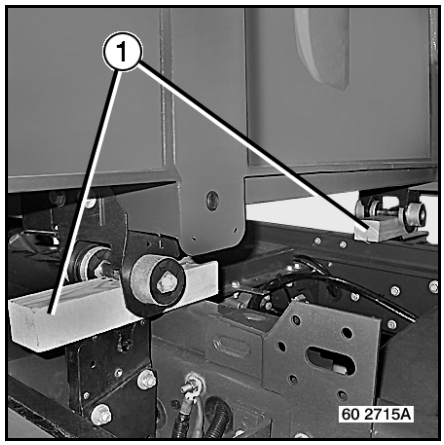
Tilt the cab.
Place safety bar **(1)** in position.



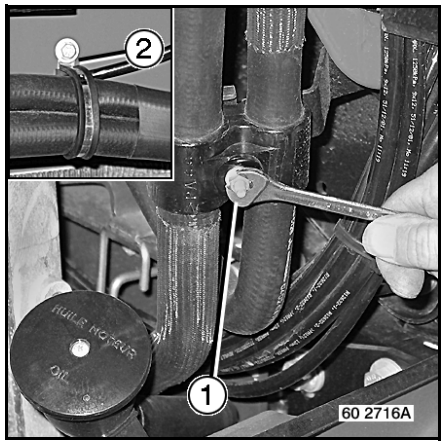
Remove bolts **(1)**.
Withdraw gearshift control **(2)**.
(Lash it to the chassis).



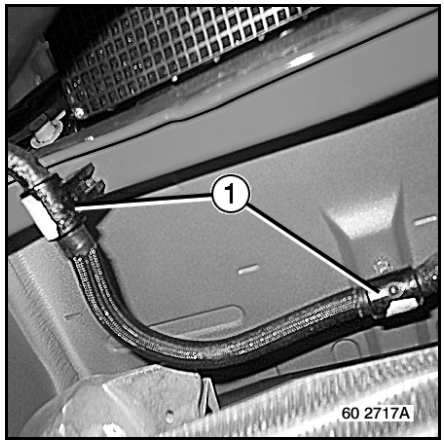
Place two wedging blocks **(1)** in position on the cab locks.
Return the cab to the "road" position.



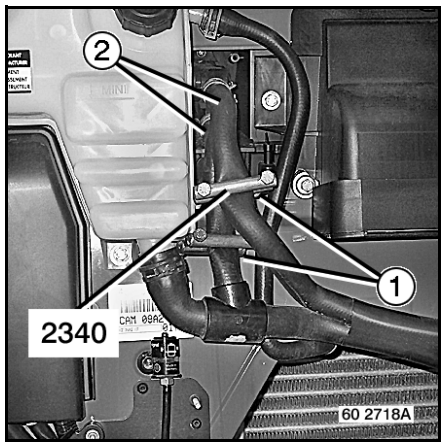
Remove flange **(1)**.
Remove clamp **(2)**.



Unclip brackets **(1)**.

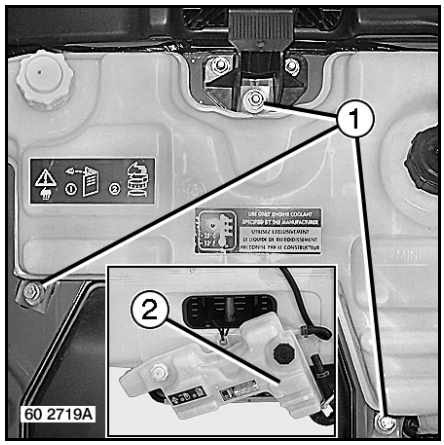


Clamp hoses **(1)**.
Use tool **2340**.
Remove clamps **(2)**.

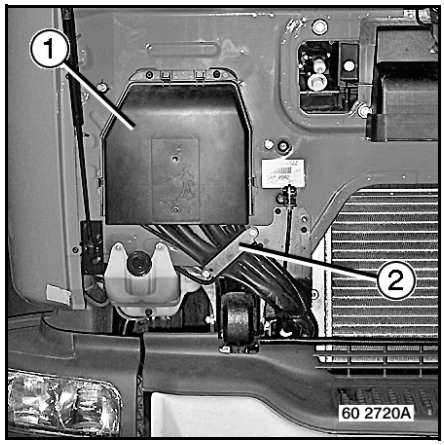


Cab equipped with air conditioning
Drain the air conditioning system.
See Workshop Manual section MR **63614**.

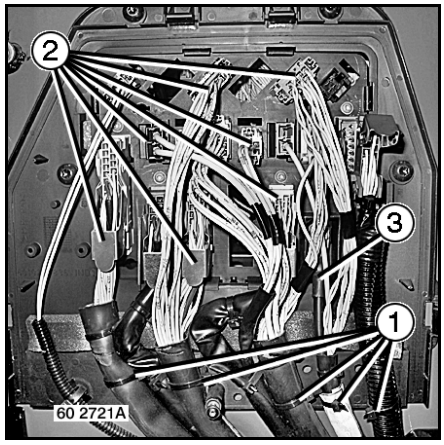
Remove bolts **(1)**.
Lash expansion bottle **(2)** to the front bumper.



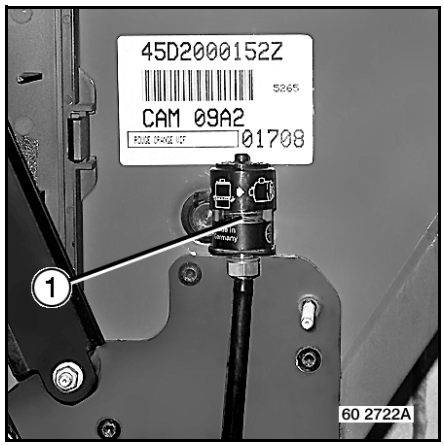
Remove guard **(1)**.
Open clamp **(2)** securing the wiring harnesses.



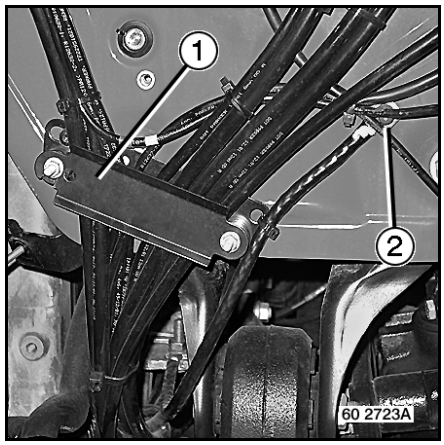
Withdraw the clamps **(1)**.
Unplug connectors **(2)**.
Disconnect earth cable **(3)**.



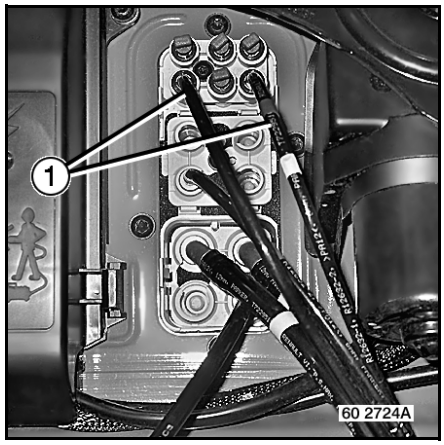
Remove air filter clogging detector **(1)**.



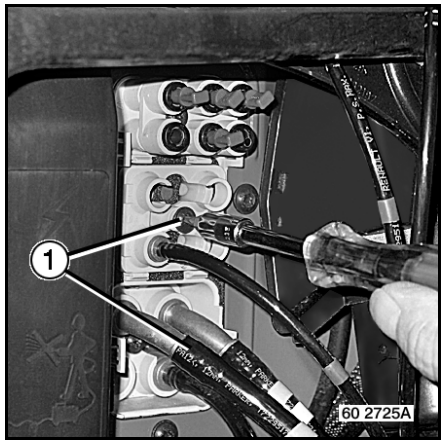
Open clamp **(1)** securing the pipes.
Disconnect earth cable **(2)**.



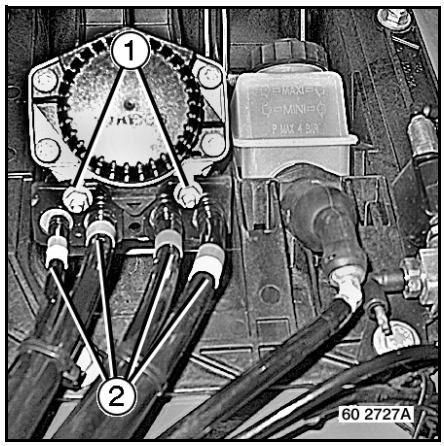
Disconnect pipes **(1)** from the cab pneumatic junction block.



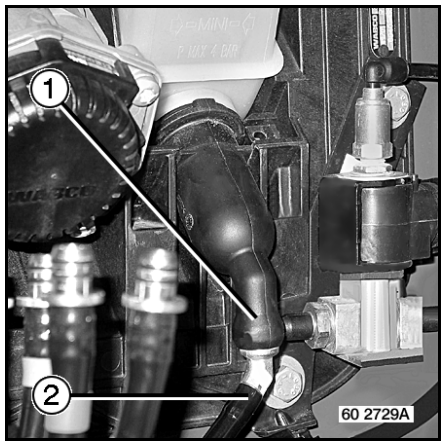
Unscrew and remove air take-offs **(1)** from the cab pneumatic junction block.



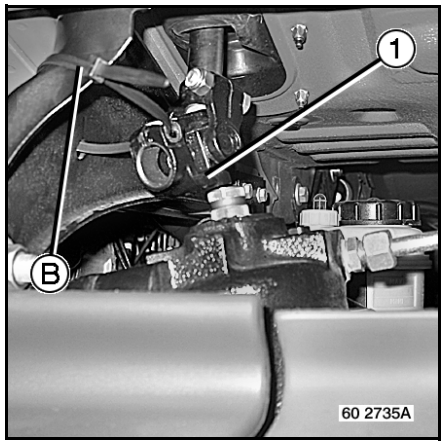
Remove flange **(1)**.
Mark and remove pipes **(2)**.



Drain the clutch system.
Remove circlip **(1)**.
Disconnect pipe **(2)**.



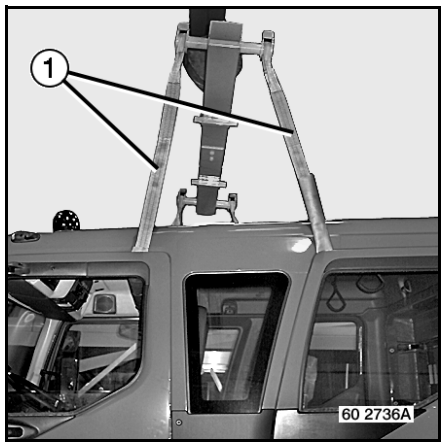
Mark and uncouple steering gear shaft **(1)**.
Lash the steering gear shaft to the cab as shown at **(B)**.



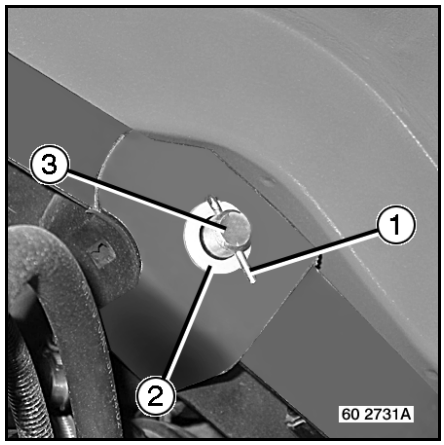
Vehicle equipped with an airbag
(Refer to precautions to be taken in the Airbag chapter)

Mount tool **2370**.

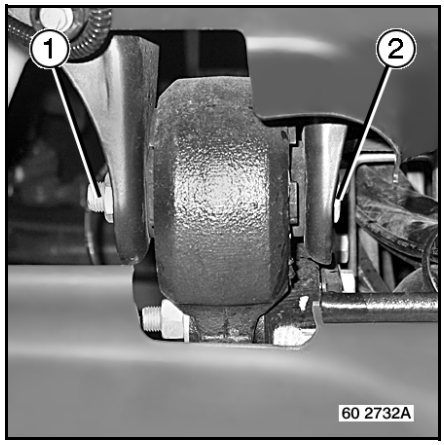
Place straps **(1)**.



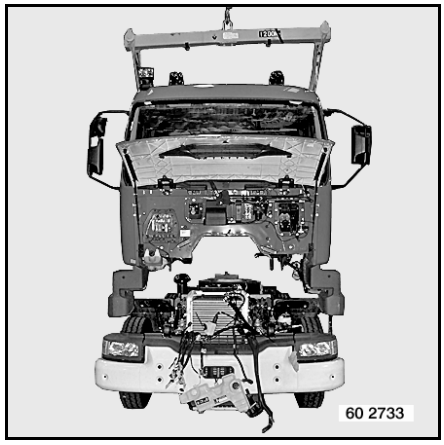
Attachment of cab tilt rams (RH & LH)
Remove pins **(1)**.
Remove washers **(2)**.
Remove pins **(3)**.



Attachment of cab front (RH & LH)
Remove nuts and washers **(1)**.
Remove bolts and washers **(2)**.

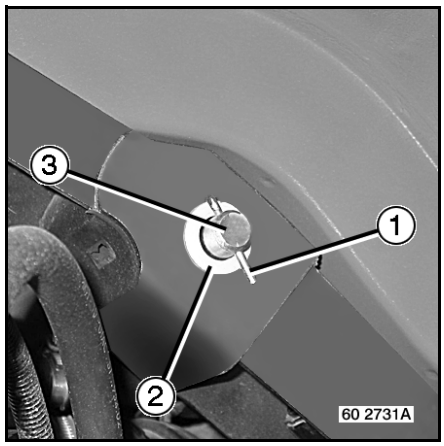


Remove the cab.

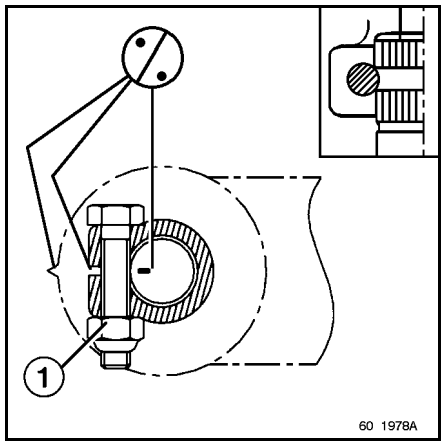


Fitting
To fit, proceed in the reverse sequence to removal.

Attachment of cab tilt rams (RH & LH)
Do not forget to put washers **(2)** and pins **(1)** back into place.



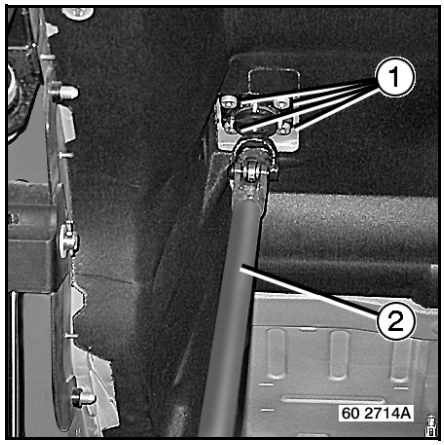
Steering control
Couple up steering gear shaft **(2)**.
Fit bolt **(1)**.
Tighten to torque.



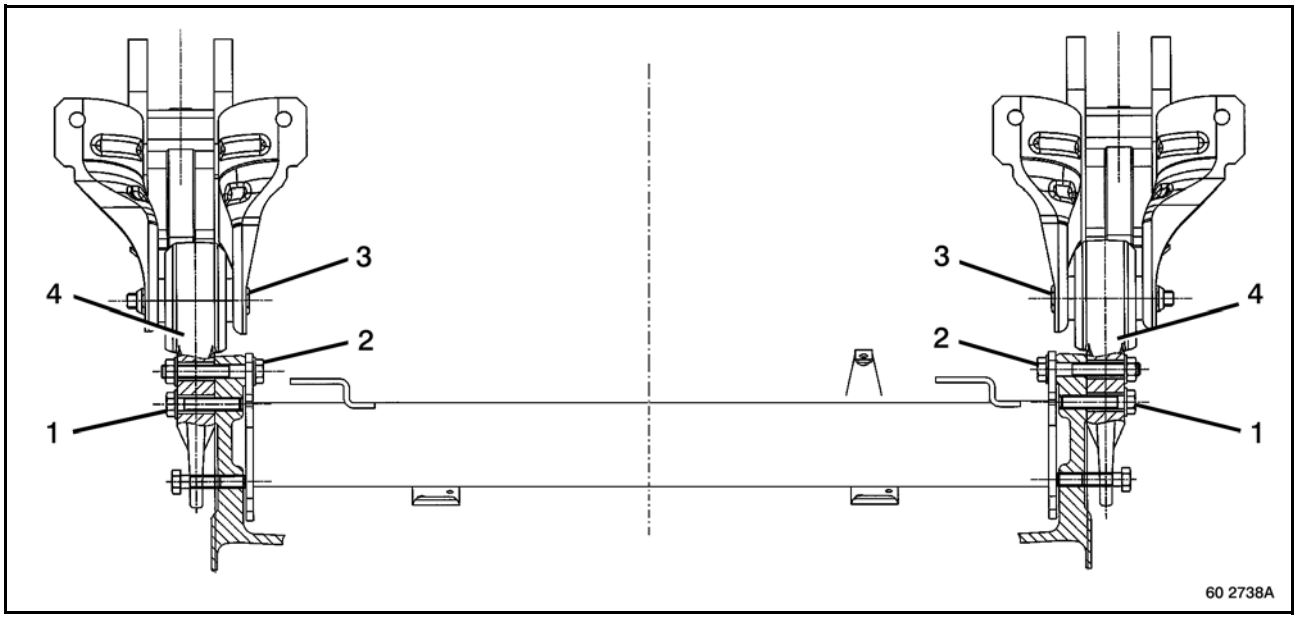
Clutch system
Fill and bleed the clutch system.

Gearshift control
Replace bolts **(1)**.
Tighten to torque.
See pages B-3-5.

Cab equipped with air conditioning
Recharge the air conditioning system.
See Workshop Manual section MR **63614**.

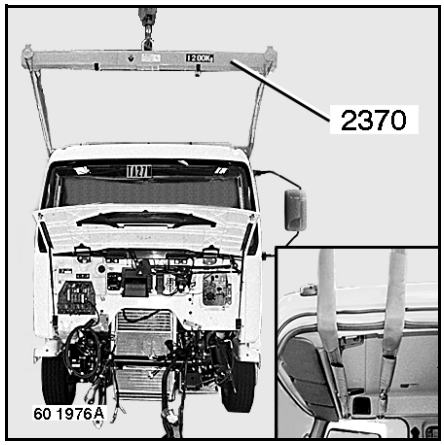


Cab suspension

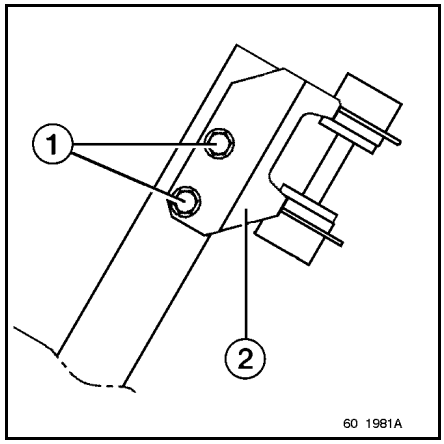


Removal

Front mountings
After removing the front bumper.
See pages D-1-8.
Remove bolts **(1 - 2)**.
Mount tool **2370**.
Lift up the cab to relieve the load on front mountings **(4)**.
Remove bolts **(3)**.
Remove front mounting(s) **(4)**.

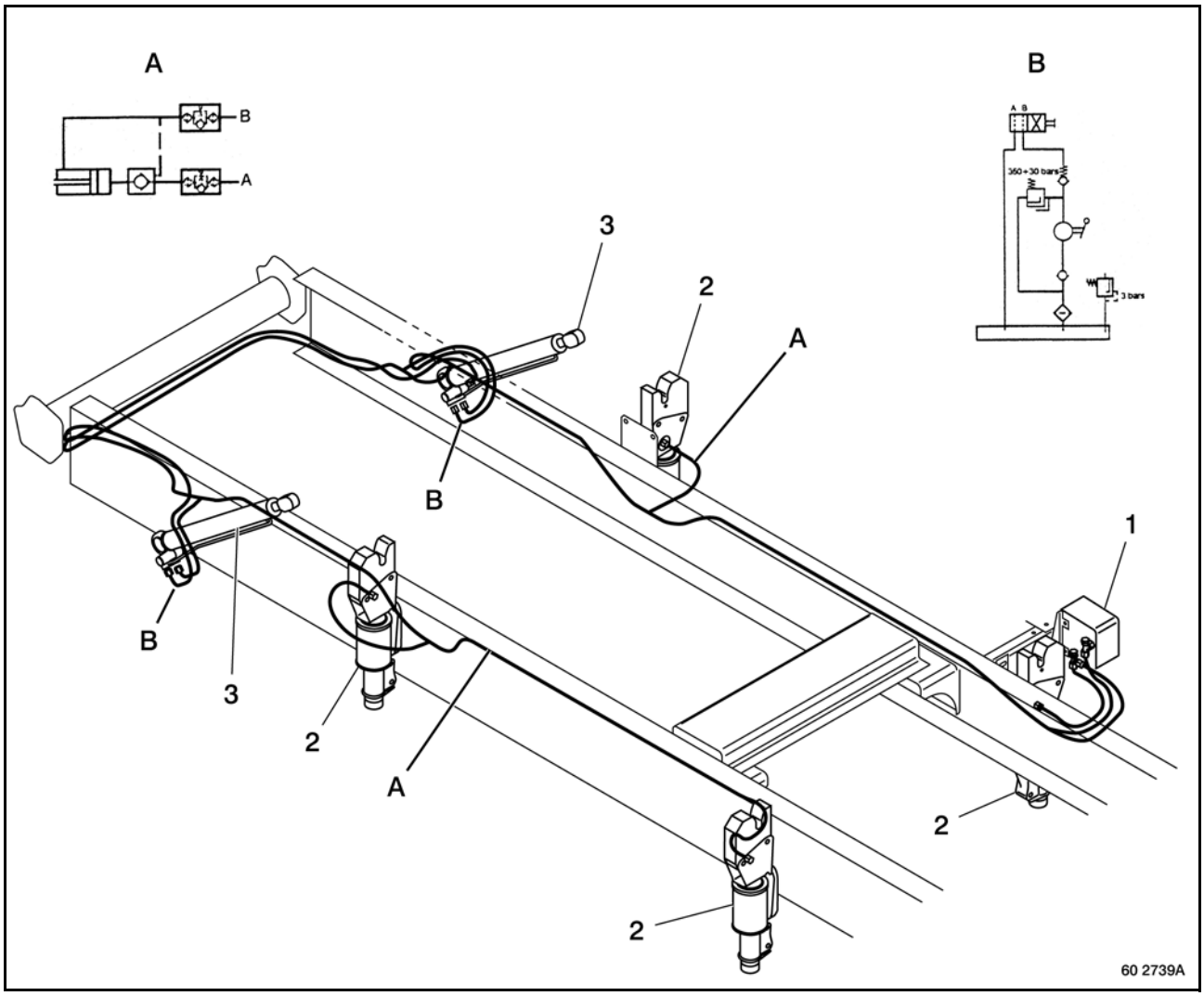


Rear mountings
Tilt the cab.
Remove bolts **(1)**.
Remove rear mounting(s) **(2)**.



Fitting
To fit, proceed in the reverse sequence to removal.
Tighten to torque.

Cab tilting system



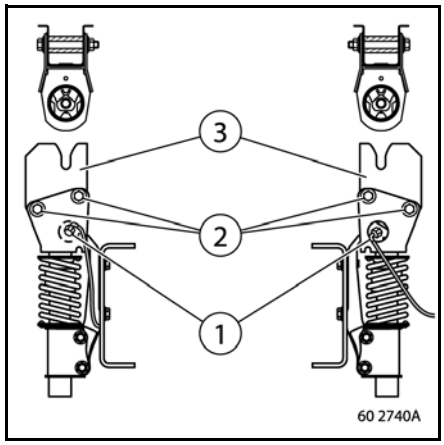
Hydraulic system

- Manual tilt pump **(1)**
- Locks **(2)**
- Tilt ram(s) **(3)**
- Pushing circuit (cab tilting) **(A)**
- Pulling circuit (cab return) **(B)**

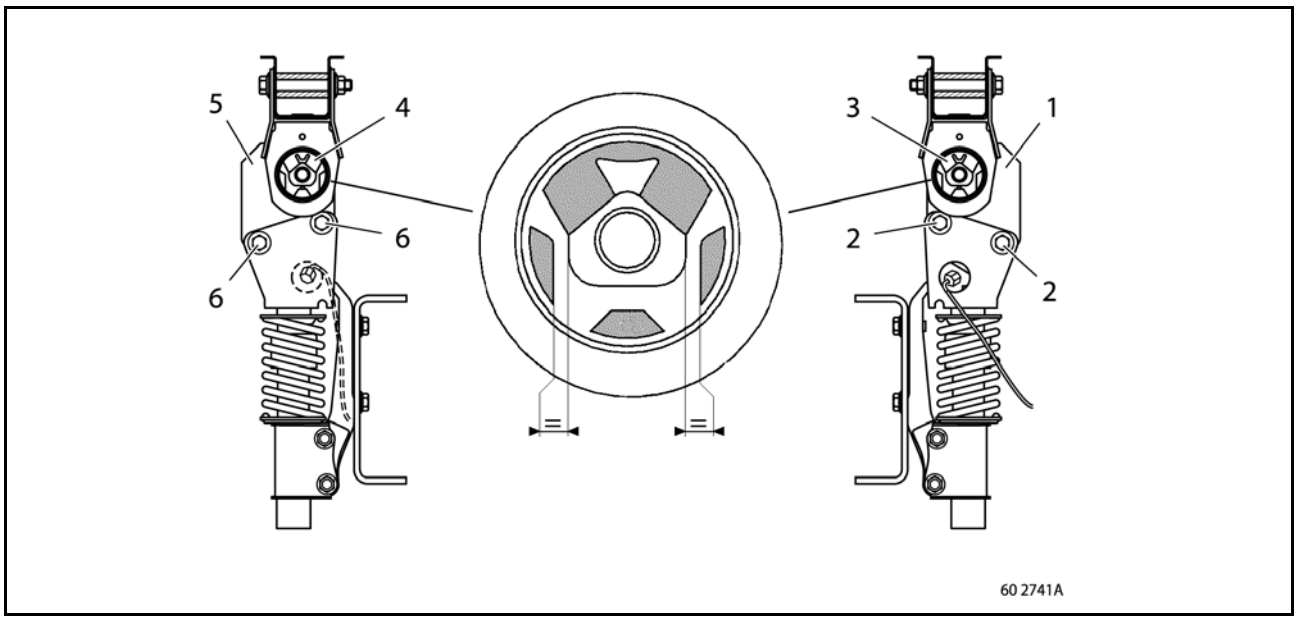
Prior to carrying out any work on the hydraulic system (pipes, ram, pumps...), secure the cab against motion, when tilted, as a safety precaution.

Cab lock(s)

Removal
Tilt the cab.
Disconnect pipe **(1)**.
Blank off the ports.
Remove bolts **(2)**.
Remove lock(s) **(3)**.



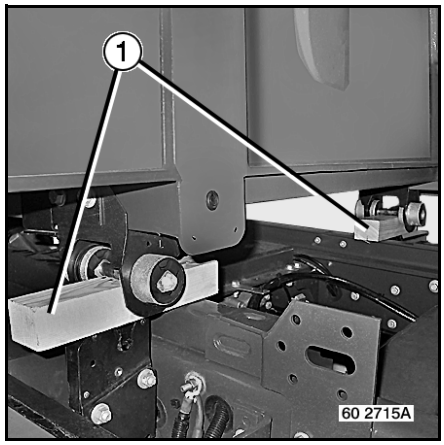
Fitting
To fit, proceed in the reverse sequence to removal.
Do not tighten nuts and bolts **(2)** so as to allow locks **(3)** to be adjusted.



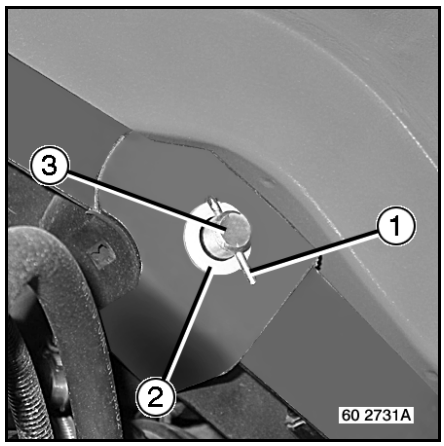
Adjustment
Actuate the hydraulic pump in the cab return direction until the lever hardens up.
The locks **(1 - 5)** fall into position naturally. Tighten nuts and bolts **(2 - 6)**.
Bleed the hydraulic system.
See pages D-2-12.
Tilt the cab and tighten nuts and bolts **(2 - 6)** to torque.

Cab tilt ram(s)

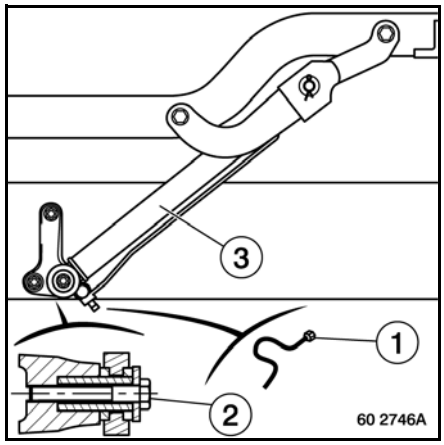
Removal
Place two wedging blocks **(1)** in position on the cab locks.
Return the cab to the "road" position.



Remove pins **(1)**.
Remove washers **(2)**.
Remove pins **(3)**.

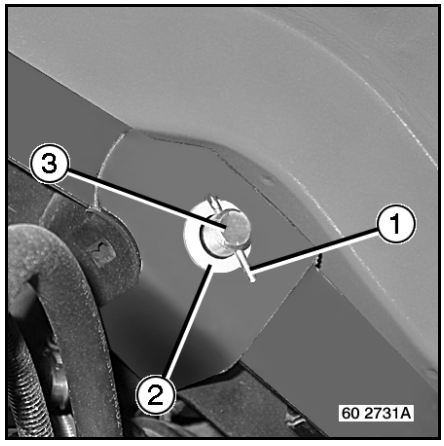


Disconnect pipe **(1)**.
Remove bolts **(2)**.
Remove ram(s) **(3)**.



Fitting
To fit, proceed in the reverse sequence to removal.
Do not forget to put washers **(2)** and pins **(1)** back into place.
Bleed the hydraulic system.

The ram is supplied with oil. Avoid draining the oil upon assembly.

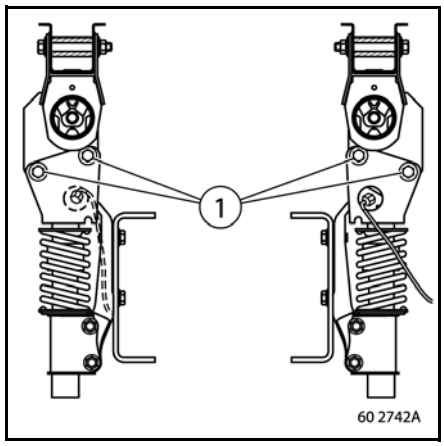


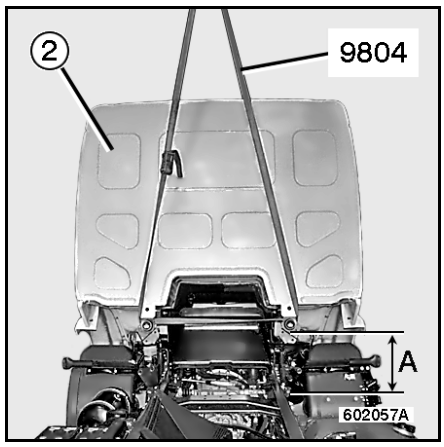
To replace a pump or a pipe
After completing the task, fill the system with oil and bleed.

Filling the system with oil and bleeding the air
With the cab in the road position, fill with oil through the oil reservoir filler.
Actuate the hydraulic pump in the "up" direction to tilt the cab. The air escapes through the reservoir.
Actuate the hydraulic pump in the "down" direction to return the cab to the road position. Check the oil level and top up, if necessary. Carry out a complete cab tilting operation again.
Finish off bleeding the air by actuating the pump and loosening first the ram unions, then the cab lock unions.

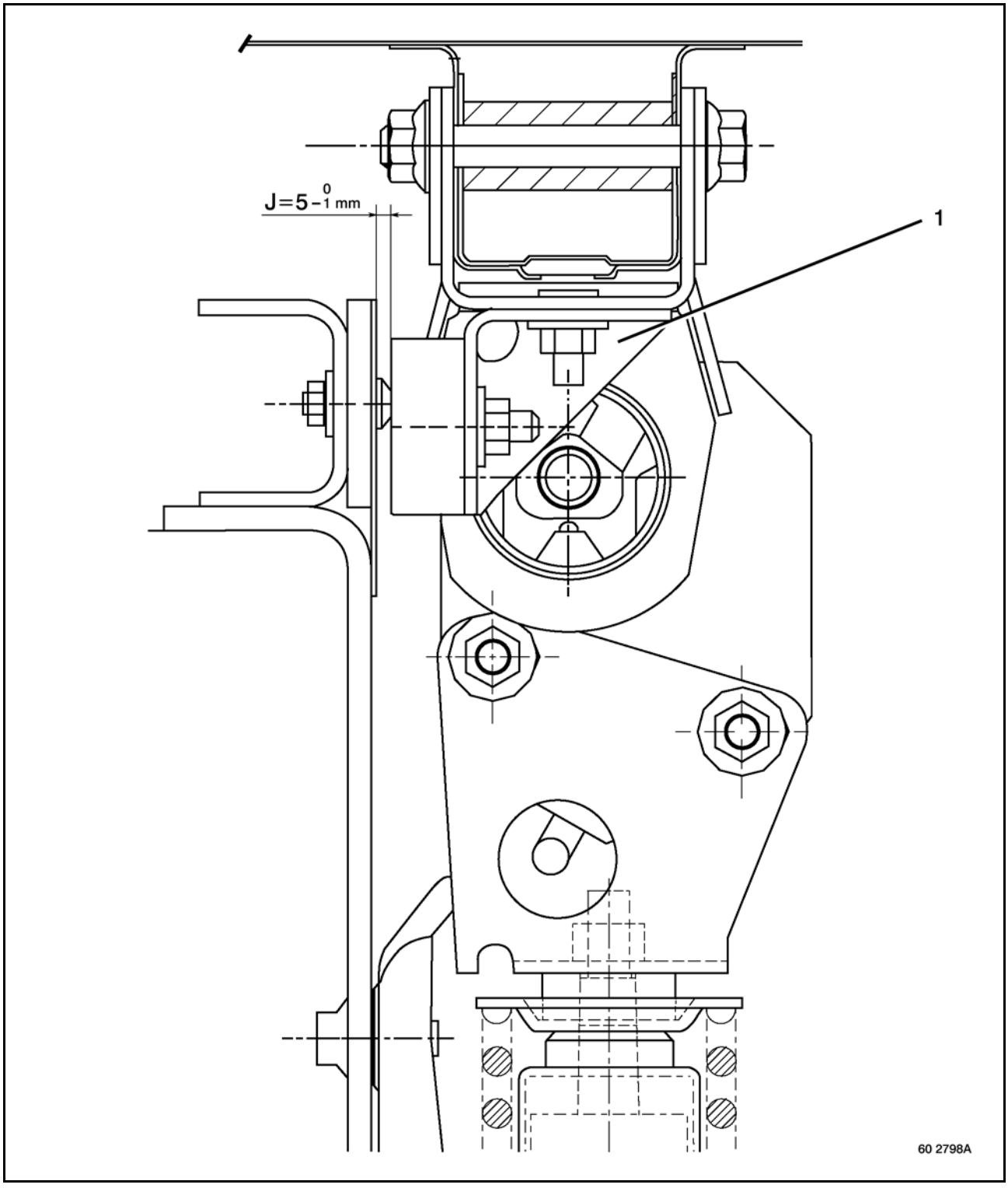
Prior to carrying out any work on the hydraulic system (pipes, ram, pumps...), secure the cab against motion, when tilted, as a safety precaution.

If normal cab tilting is impossible, proceed as follows to enable it to tilt:
- Withdraw nuts and bolts **(1)**,
- Tilt cab **(2)** without exceeding a dimension **A** of **800** mm.
Use tool **9804**.





Centring the cab

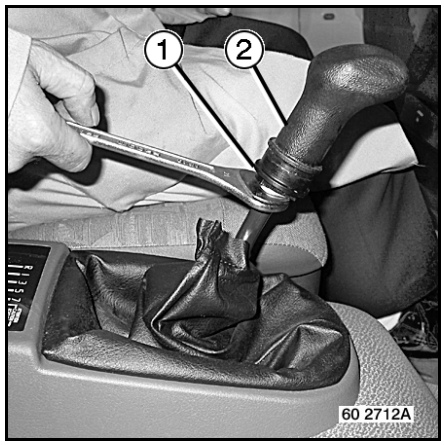


The cab is centred by moving runners **(1)** to ensure dimension **(J)**.

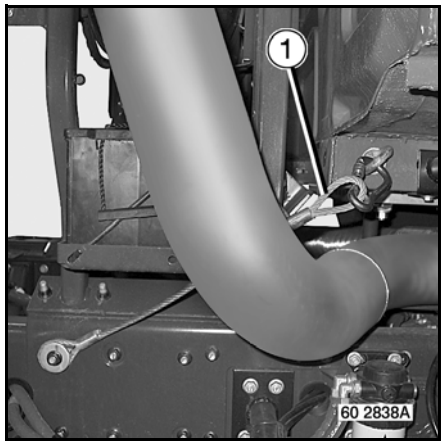
Forest fire tanker truck cab (CCF)

Removal / Fitting

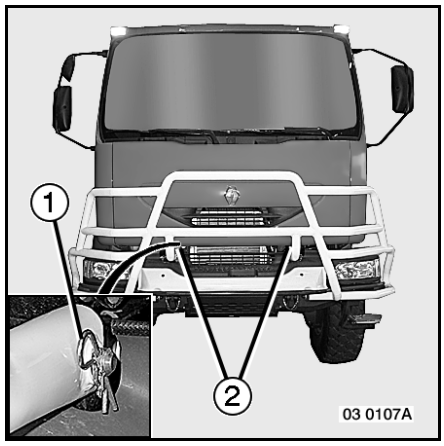
Removal
Loosen nut **(1)**.
Remove the gear lever knob **(2)**.



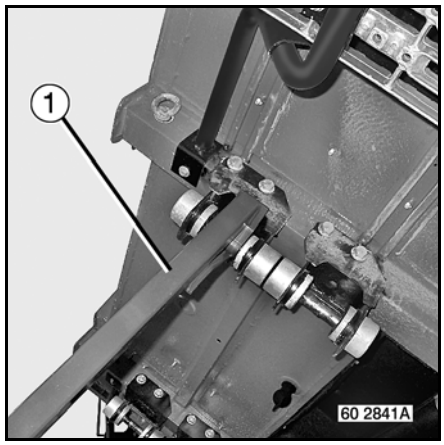
Place safety rope **(1)**.



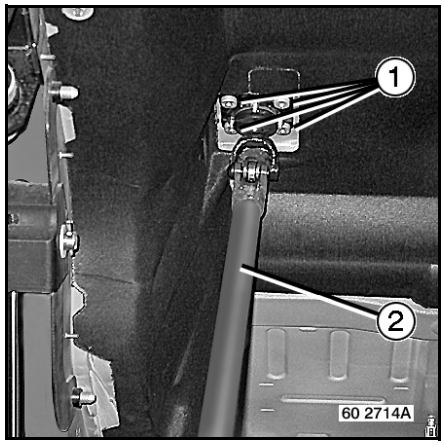
Take out pins **(1)**. While holding the shield, free pins **(2)** and pivot the shield.
Open the front grille.



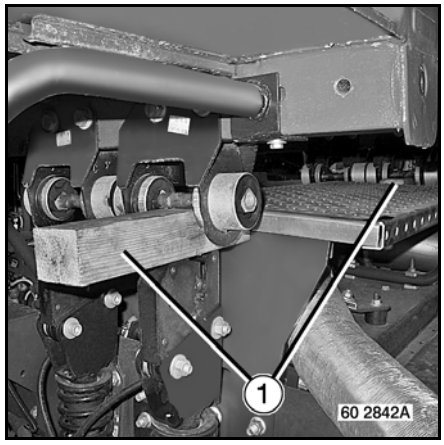
Tilt the cab.
Place safety bar **(1)** in position.



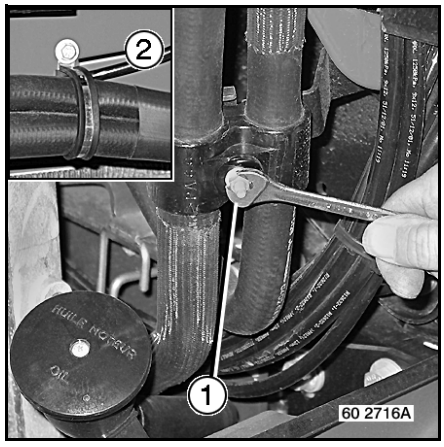
Remove bolts **(1)**.
Withdraw gearshift control **(2)**.
(Lash it to the chassis).



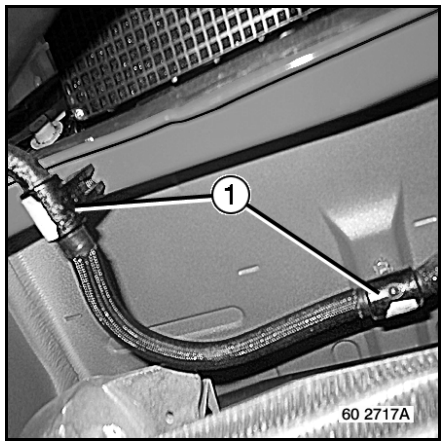
Place two wedging blocks **(1)** in position on the cab locks.
Return the cab to the "road" position.



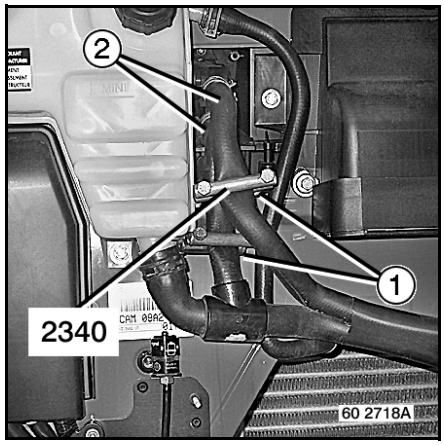
Remove flange **(1)**.
Remove clamp **(2)**.



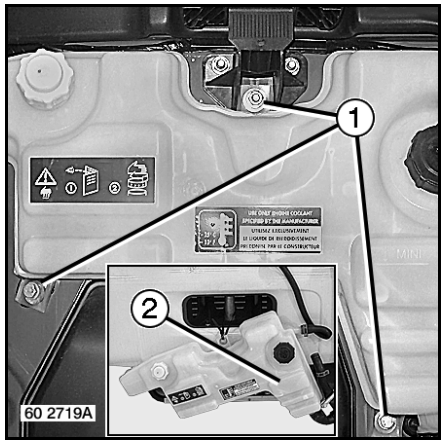
Unclip brackets **(1)**.



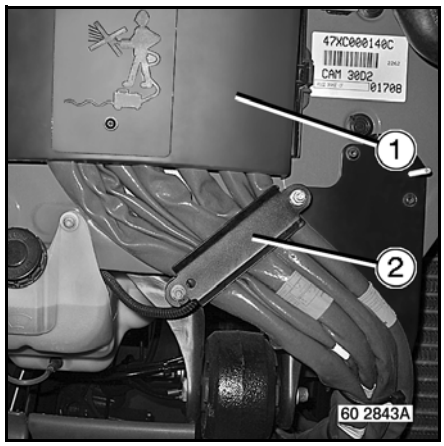
Clamp hoses **(1)**.
Use tool **2340**.
Remove clamps **(2)**.



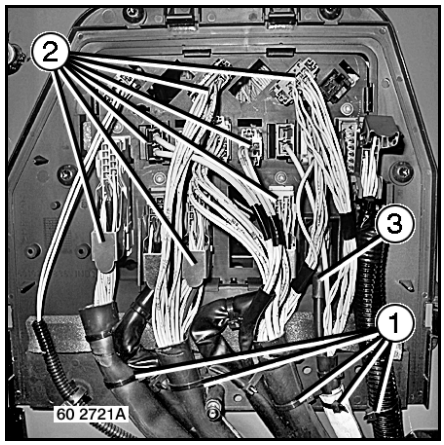
Remove bolts **(1)**.
Lash expansion bottle **(2)** to the front bumper.



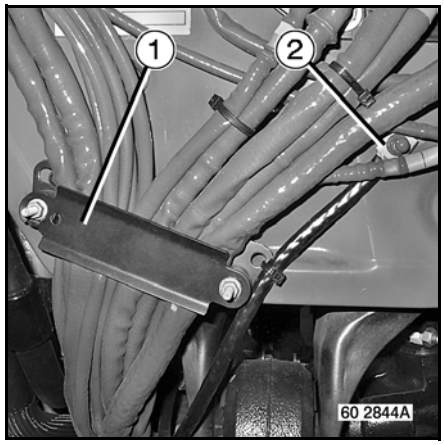
Remove guard **(1)**.
Open clamp **(2)** securing the wiring harnesses.



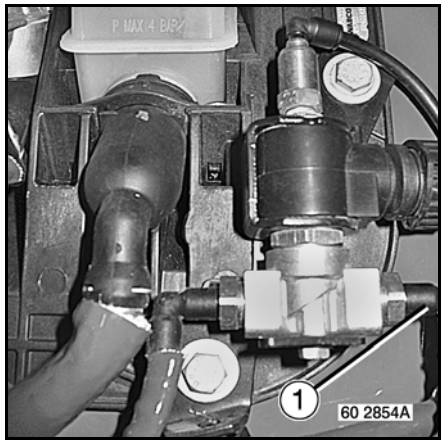
Withdraw the clamps **(1)**.
Unplug connectors **(2)**.
Disconnect earth cable **(3)**.



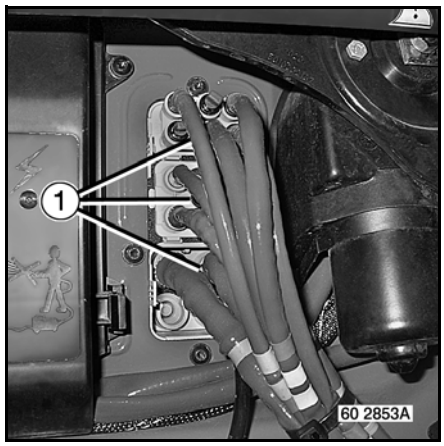
Open clamp **(1)** securing the pipes.
Disconnect earth cable **(2)**.



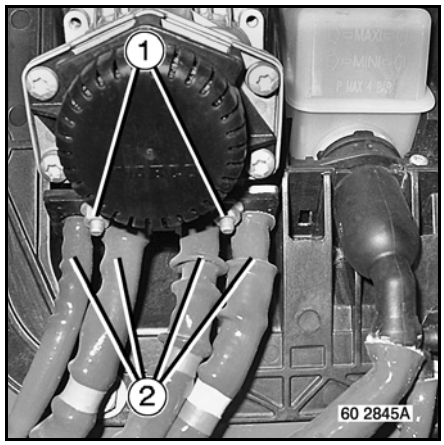
Disconnect pipe **(1)**.



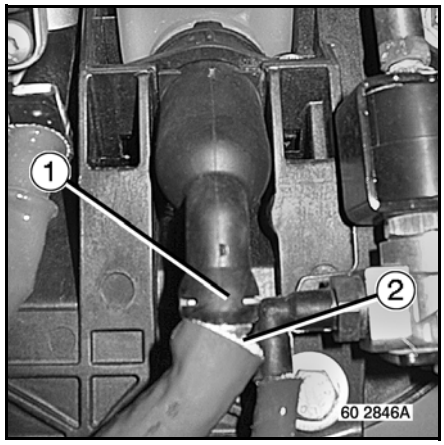
Unscrew and remove air take-offs **(1)** from the cab pneumatic junction block.



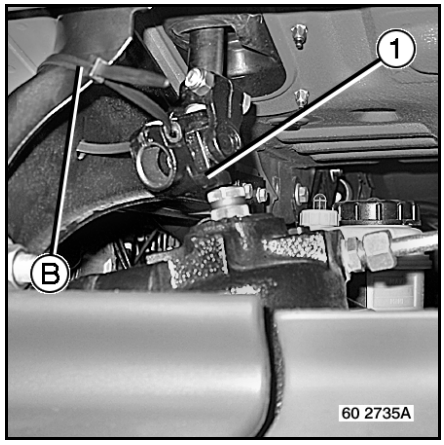
Remove flange **(1)**.
Mark and remove pipes **(2)**.



Drain the clutch system.
Remove circlip **(1)**.
Disconnect pipe **(2)**.

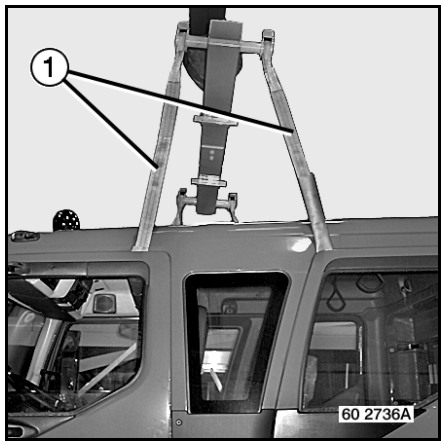


Mark and uncouple steering gear shaft **(1)**.
Lash the steering gear shaft to the cab as shown at **(B)**.

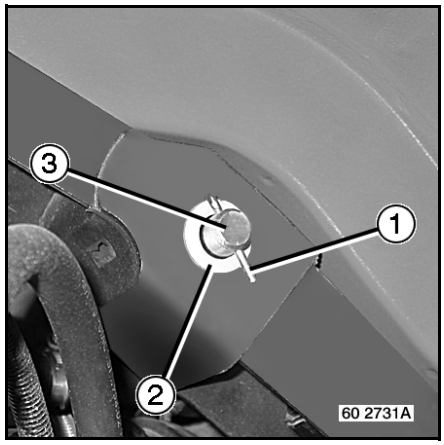


Mount tool **2370**.

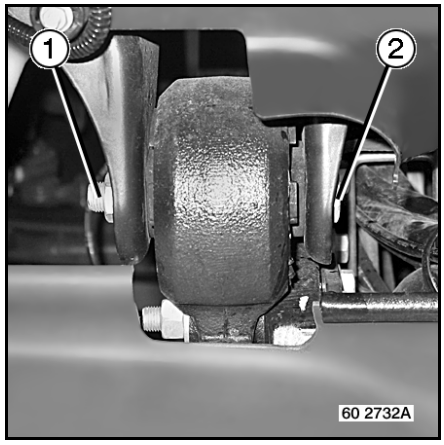
Place straps **(1)**.



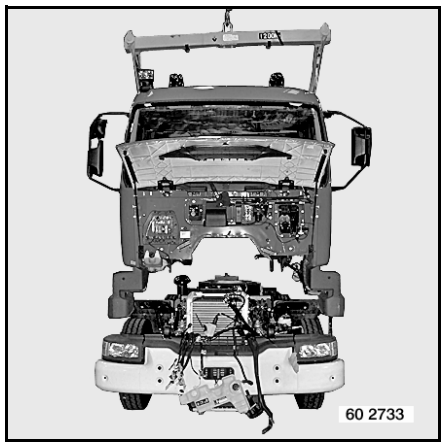
Attachment of cab tilt rams (RH & LH)
Remove pins **(1)**.
Remove washers **(2)**.
Remove pins **(3)**.



Attachment of cab front (RH & LH)
Remove nuts and washers **(1)**.
Remove bolts and washers **(2)**.

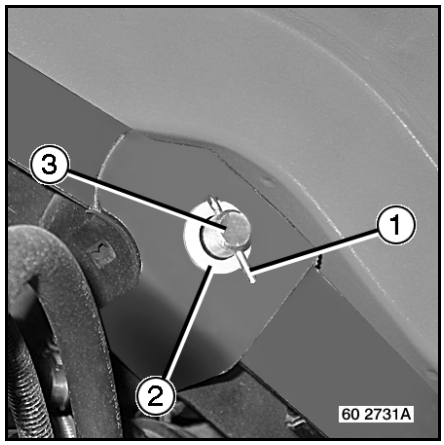


Remove the cab.

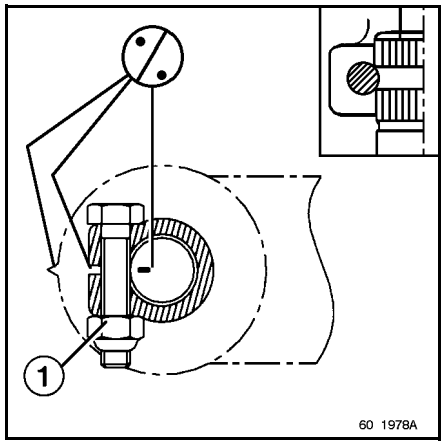


Fitting
To fit, proceed in the reverse sequence to removal.

Attachment of cab tilt rams (RH & LH)
Do not forget to put washers **(2)** and pins **(1)** back into place.

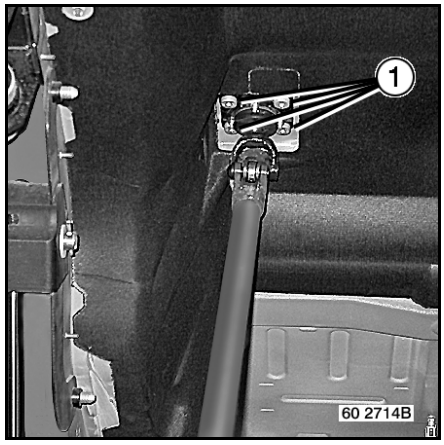


Steering control
Couple up steering gear shaft **(2)**.
Fit bolt **(1)**.
Tighten to torque.
See pages B-3-4.

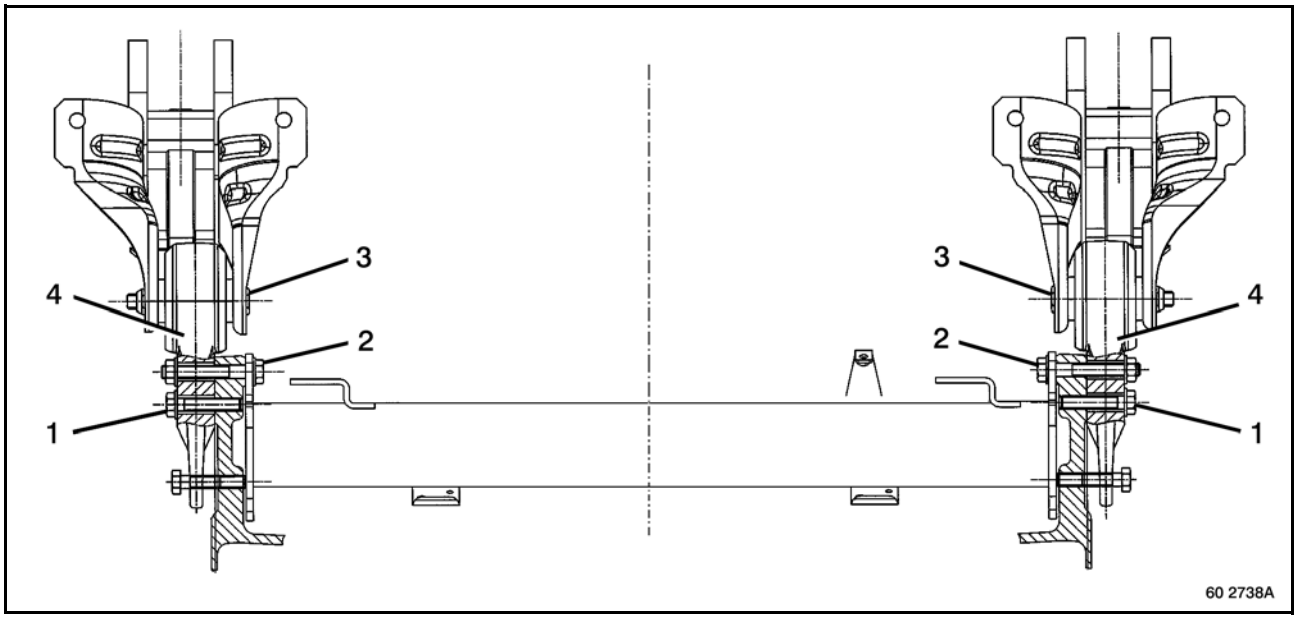


Clutch system
Fill and bleed the clutch system.

Gearshift control
Replace bolts **(1)**.
Tighten to torque.
See pages B-3-5.

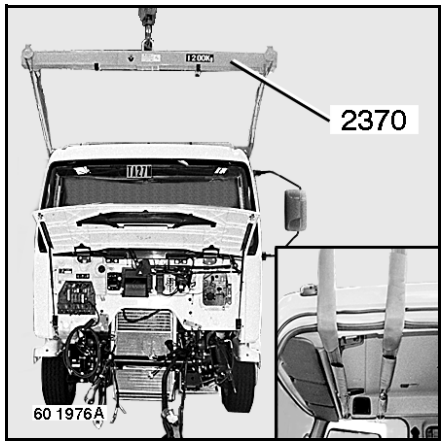


Cab suspension

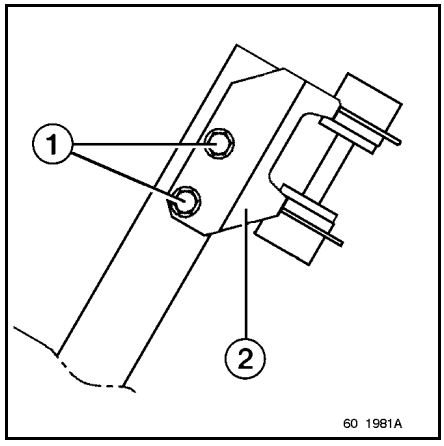


Removal

Front mountings
Remove bolts **(1)**.
Remove bolts **(2)**.
Mount tool **2370**.
Lift up the cab to relieve the load on front mountings **(4)**.
Remove bolts **(3)**.
Remove front mounting(s) **(4)**.

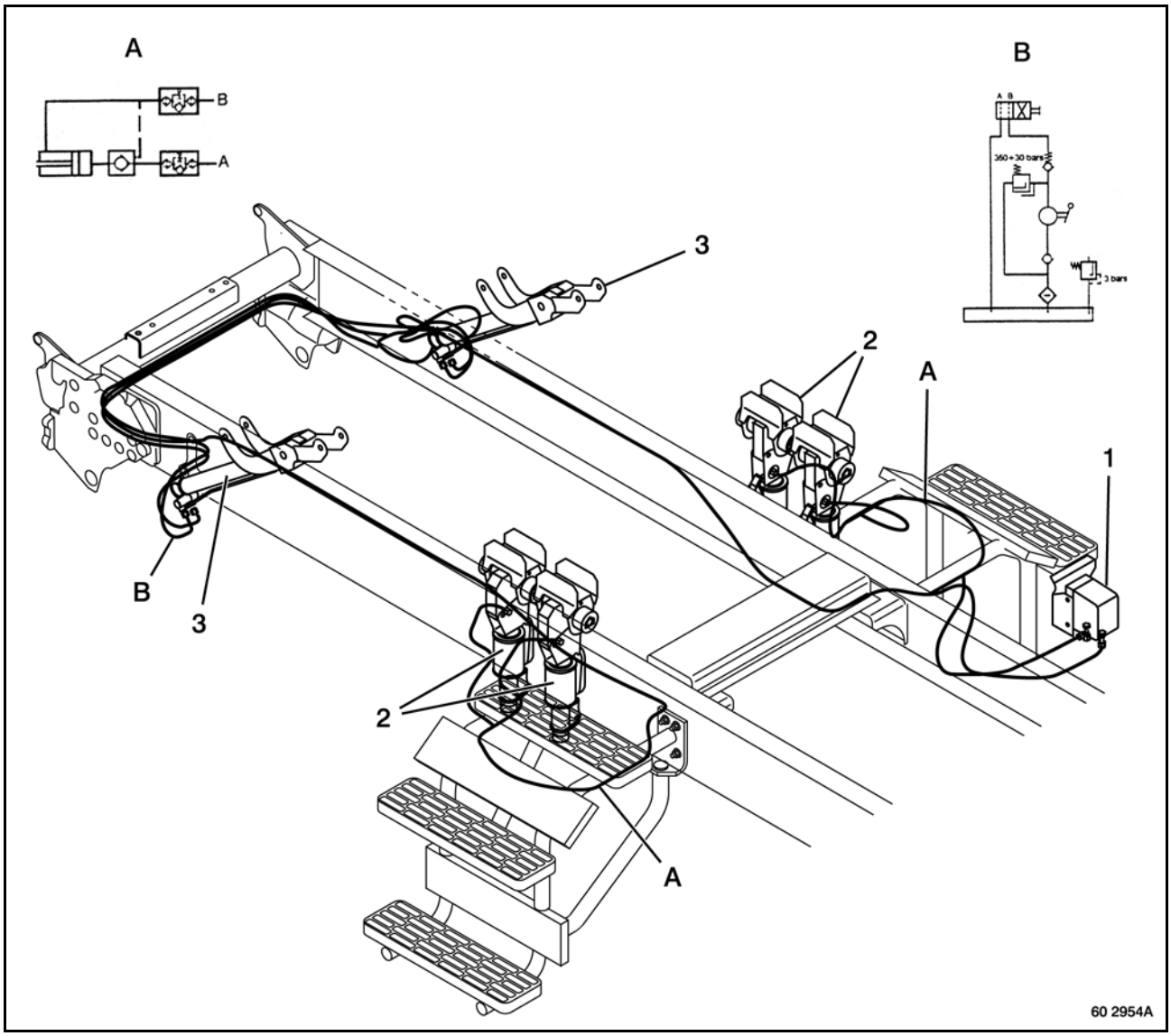


Rear mountings
Tilt the cab.
Remove bolts **(1)**.
Remove rear mounting(s) **(2)**.



Fitting
To fit, proceed in the reverse sequence to removal.
Tighten to torque.

Cab tilting system



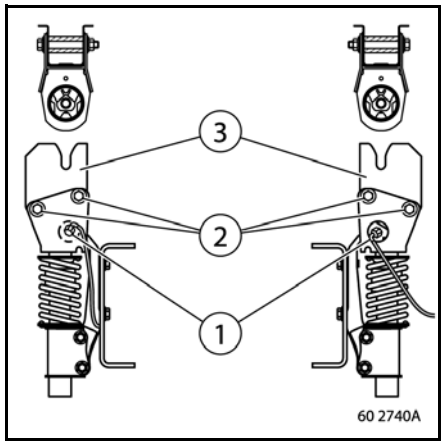
Hydraulic system

- Manual tilt pump **(1)**
- Locks **(2)**
- Tilt ram(s) **(3)**
- Pushing circuit (cab tilting) **(A)**
- Pulling circuit (cab return) **(B)**

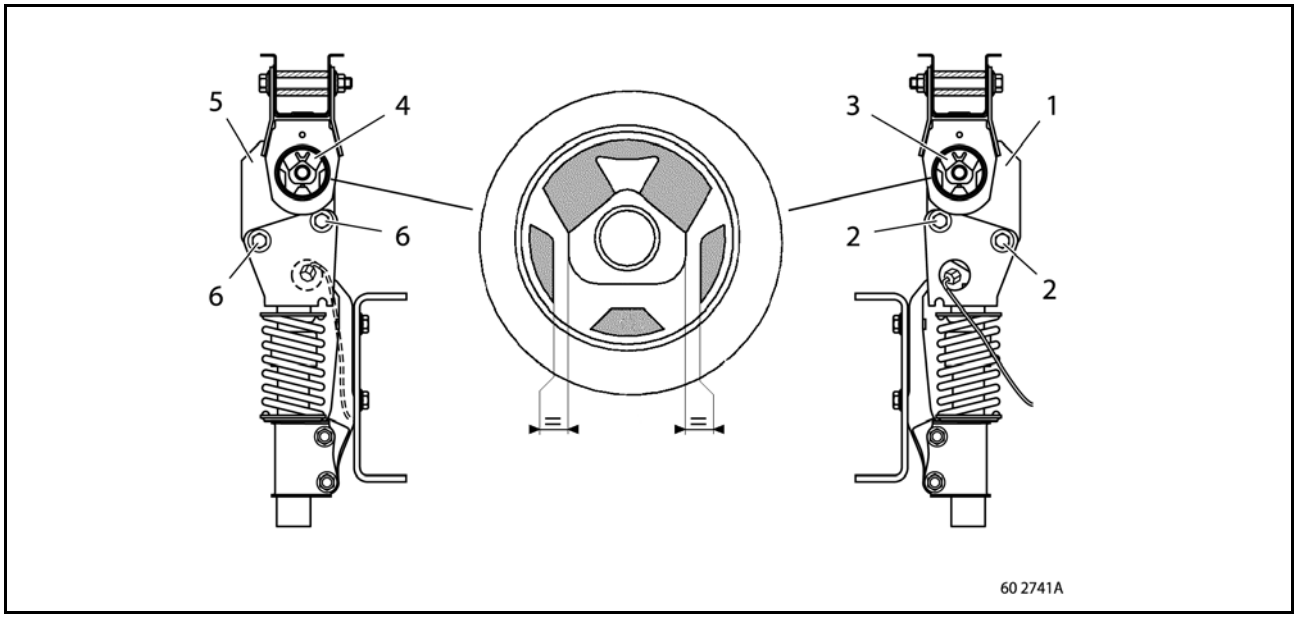
Prior to carrying out any work on the hydraulic system (pipes, ram, pumps...), secure the cab against motion, when tilted, as a safety precaution.

Cab lock(s)

Removal
Tilt the cab.
Disconnect pipe **(1)**.
Blank off the ports.
Remove bolts **(2)**.
Remove lock(s) **(3)**.



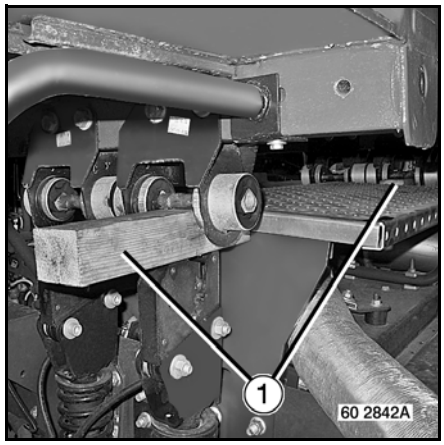
Fitting
To fit, proceed in the reverse sequence to removal.
Do not tighten nuts and bolts **(2)** so as to allow locks **(3)** to be adjusted.



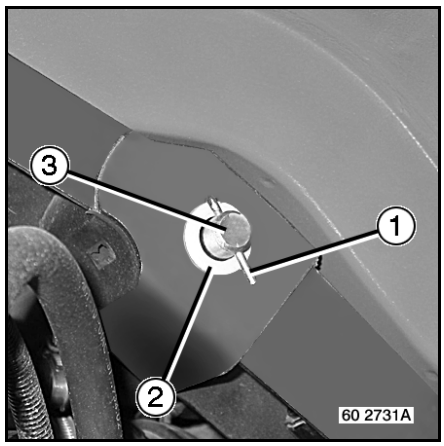
Adjustment
Actuate the hydraulic pump in the cab return direction until the lever hardens up.
The locks **(1 - 5)** fall into position naturally. Tighten nuts and bolts **(2 - 6)**.
Bleed the hydraulic system.
See pages D-3-12.
Tilt the cab and tighten nuts and bolts **(2 - 6)** to torque.

Cab tilt ram(s)

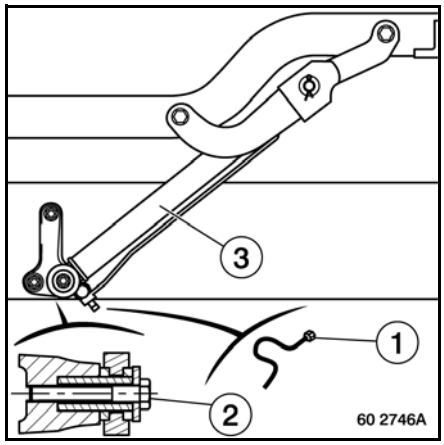
Removal
Place two wedging blocks **(1)** in position on the cab locks.
Return the cab to the "road" position.



Remove pins **(1)**.
Remove washers **(2)**.
Remove pins **(3)**.

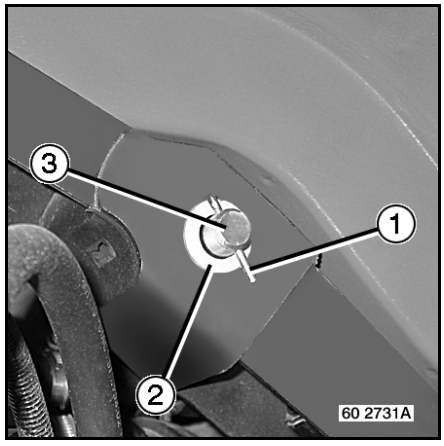


Disconnect pipe **(1)**.
Remove bolts **(2)**.
Remove ram(s) **(3)**.



Fitting
To fit, proceed in the reverse sequence to removal.
Do not forget to put washers **(2)** and pins **(1)** back into place.
Bleed the hydraulic system.

The ram is supplied with oil. Avoid draining the oil upon assembly.



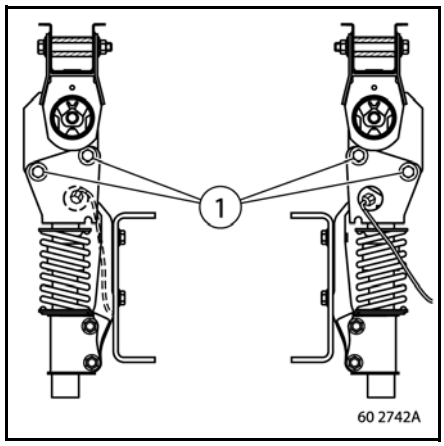
To replace a pump or a pipe
After completing the task, fill the system with oil and bleed.

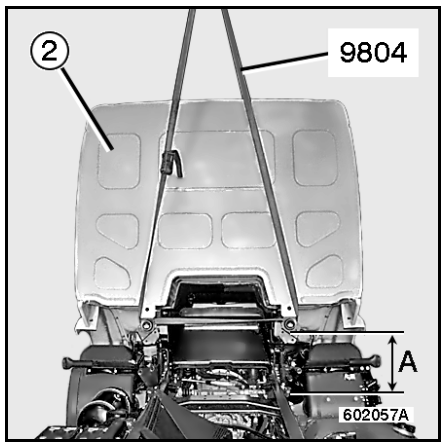
Filling the system with oil and bleeding the air
With the cab in the road position, fill with oil through the oil reservoir filler.
Actuate the hydraulic pump in the "up" direction to tilt the cab. The air escapes through the reservoir.
Actuate the hydraulic pump in the "down" direction to return the cab to the road position. Check the oil level and top up, if necessary. Carry out a complete cab tilting operation again.
Finish off bleeding the air by actuating the pump and loosening first the ram unions, then the cab lock unions.

Prior to carrying out any work on the hydraulic system (pipes, ram, pumps...), secure the cab against motion, when tilted, as a safety precaution.

If normal cab tilting is impossible, proceed as follows to enable it to tilt:
- Withdraw nuts and bolts **(1)**,
- Tilt cab **(2)** without exceeding a dimension **A** of **800** mm.

Use tool **9804**.





AIRBAG

APPLICABILITY

Operation

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Operating principle	35902			18/03/2004	E1-6
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Fuses

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Airbag fuse	35902			26/03/2004	E2-1
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Warnings

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		General instructions	35902			26/03/2004	E3-1
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Layout of appliances

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Layout of appliances in cab	35902			26/03/2004	E4-1
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Diagnostics

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Aid-to-trouble-shooting	35902			26/03/2004	E5-1
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Removal / Fitting

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Airbag ECU	35902			26/03/2004	E6-1
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				
RENAULT MIDLUM 12 -16 t Euro 2		Driver's airbag module	35902			26/03/2004	E6-2
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				
RENAULT MIDLUM 12 -16 t Euro 2		Rotary switch	35902			26/03/2004	E6-3
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				
RENAULT MIDLUM 12 -16 t Euro 2		Pretensioner(s)	35902			26/03/2004	E6-6
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Range	Family	Title	Variant	Applicability date		Updating	Page N°
				Start	End		
RENAULT MIDLUM 12 -16 t Euro 2		Airbag module destruction procedure	35902			26/03/2004	E6-7
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				
RENAULT MIDLUM 12 -16 t Euro 2		Pretensioner destruction procedure	35902			14/05/2004	E6-8
RENAULT MIDLUM 12-16 t Euro 3			35902				
RENAULT MIDLUM 16-18 t			35902				
RENAULT MIDLUM 7-12 t			35902				

Operation

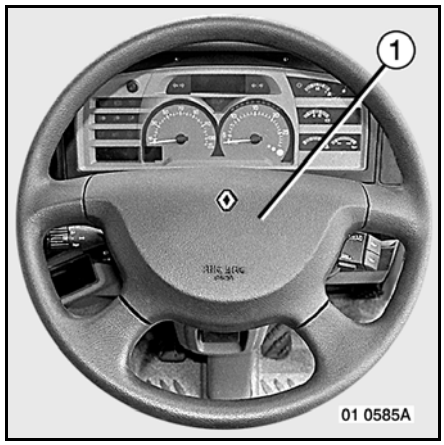
Operating principle

Airbag + pretensioner

The system consists of:

- An inflatable bag and its gas generator mounted under the steering wheel protective cover **(1)**.
- Seat belt pretensioner.
- An electronic box located under the driver's seat.
- An "AIRBAG" "Information" and defect test warning light **(G24)**.
- A rotary switch under the steering wheel.

A marking "Airbag" on the steering wheel protective cover **(1)** and a self-adhesive sticker on the windscreen remind 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 **(1)** uses a pyrotechnic principle, which instantaneously retracts the seat belt buckle, flattening the belt 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 **(G24)** is illuminated for **10** seconds and is then extinguished. The system is henceforth operational. An illumination fault or permanent illumination of the warning pictogram **(G24)** means system trouble or locking (airbag inactive).

Operation

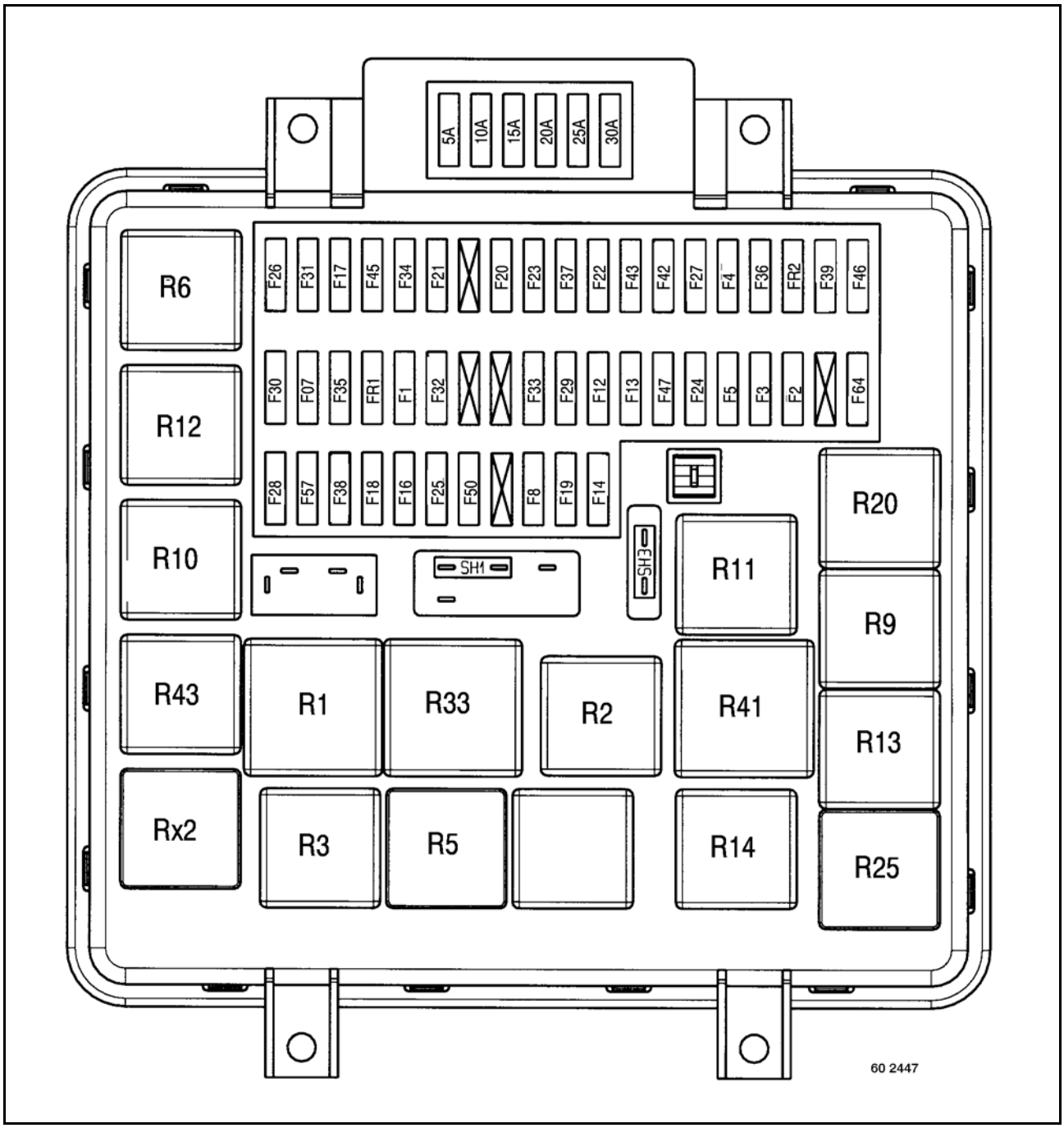
In the event of **head-on**, these systems combined with the seat belt are designed to protect the occupants according to the violence of the impact. There are two possible cases:

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.

Fuses

Airbag fuse



Code N°	Name of function	Fuse item N°	amper-age
9400	Airbag ECU	F64	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).

Work on the airbag
The RENAULT TRUCKS diagnostics tool serves to check out:
- the ECU,
- the wiring harness,
- the connecting arrangement.

BEFORE CARRYING OUT ANY WORK ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS TEST 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 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 (screwbolts, 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.

Instructions to be followed after the airbag and/or pretensioner has/have been set off.
It is essential to replaceIl est impératif de changer:
- the pretensioner (if it has been set off),
- the airbag module (if it has been set off),
- the rotary switch (if the airbag has been set off),
- the seat wiring harness (if the pretensioner has been set off),
- the airbag ECU,
- the seat belt buckle (if the pretensioner has been set off).

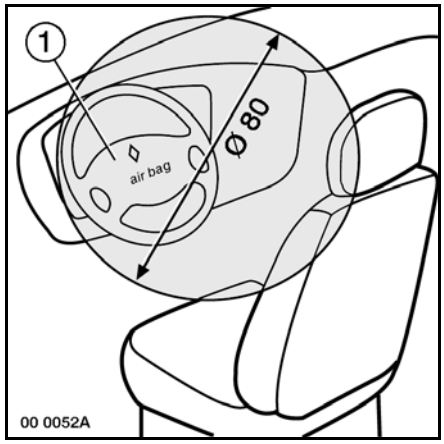
It is vital to keep the airbag ECU and the list of faults recorded on the airbag system after the accident.

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-6-7**,** E-6-8).

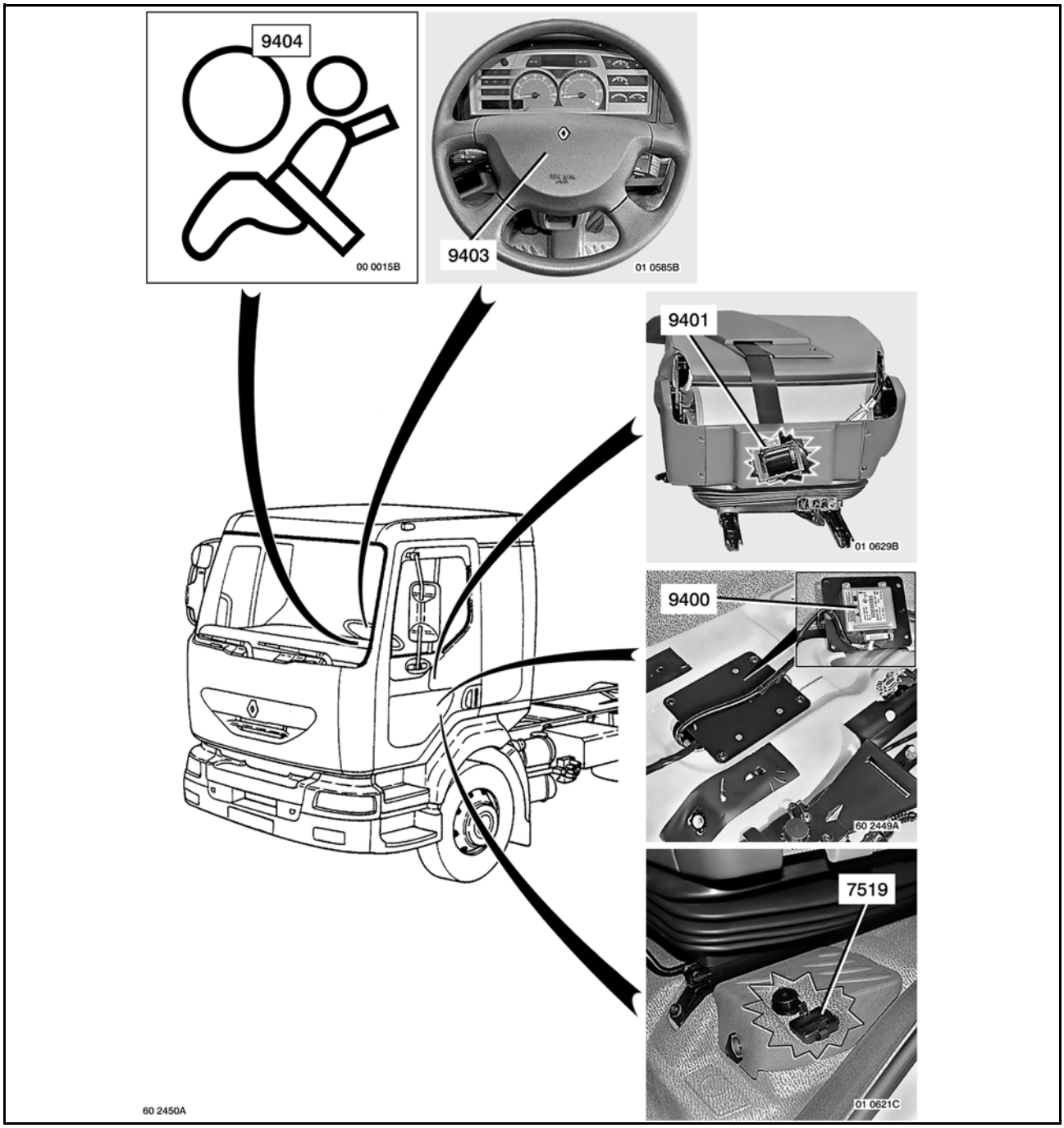
Work on the vehicle (excluding work on airbag) implying precautions to be taken to avoid inadvertent deployment of the airbag
During repair or adaptation work, the vehicle is not to undergo significant knocks (hammer blows...) nor is welding work to be undertaken without previously locking the electronic 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 seat designed for the airbag system has to be changed, it must be replaced by a seat identical to the one originally fitted.**
- **The airbag module protective cover must be free from any article (ledge, clock, adhesive, various accessories...).**
- **There should be no objects within the airbag deployment area (∅dia. 80 cm).**
- **Get the airbag system checked out 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 15 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 detonation of the airbag igniter squib.**
- **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 install a bull-bar or forward winch on a vehicle equipped with an airbag.**

Layout of appliances

Layout of appliances in cab



Code N°	Name of function
7519	Diagnostics socket
9400	Airbag ECU
9401	Driver's seat belt pretensioner
9403	Airbag rotary switch
9404	Airbag test and fault "Information" warning lamp

Diagnostics

Aid-to-troubleshooting

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

DO NOT MAKE ANY 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, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

To obtain more accurate diagnostics, use an inert igniter squib. Tool **2886**
Disconnect the batteries and wait for **5** minutes.
Connect the inert igniter squib to the airbag wiring harness in the place of the module or pretensioner of the line concerned.
Reconnect the batteries and switch the ignition back on.
If the fault is no longer present, it originates from the module or the pretensioner.
If the fault is still present, it originates from the line.
The lines includelignes:
- airbag: main wiring harness + rotary switch,
- pretensioner: main wiring harness + seat wiring harness.

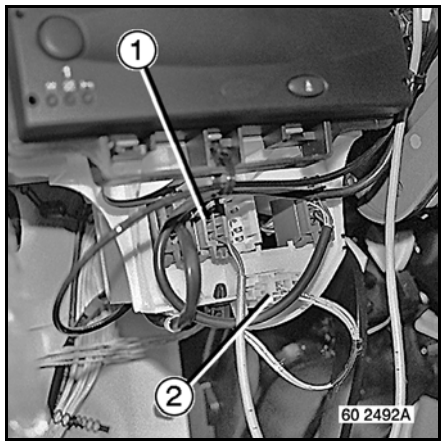
The seat wiring harness and the rotary switch cannot be tested directly as they contain a capacitive component.
If the fault does not originate from the airbag module or the pretensioner and the continuity of the main wiring harness is in order, it may be deduced that the fault originates from the rotary switch or the seat wiring harness.

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.

Airbag line
- Main wiring harness continuity:
  - wire **(0053)**,
  - wire **(0054)**.
- Dashboard wiring harness continuity:
  - blue wire,
  - brown wire.

Pretensioner line
- Main wiring harness continuity:
  - wire **(0051)**,
  - wire **(0052)**.
- Dashboard connecting arrangement:
  - grey connector **(1)** → line air bag,
  - white connector **(2)** → power supply, diagnostics, airbag warning light.

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



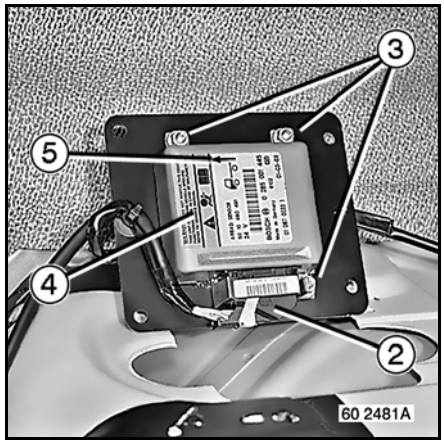
After the work, erase the fault codes using the RENAULT TRUCKS diagnostics tool.

Removal / Fitting

Airbag ECU

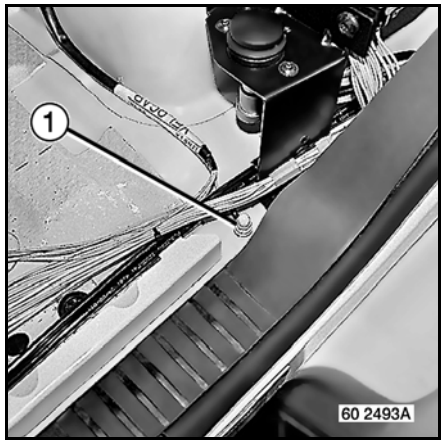
BEFORE CARRYING OUT ANY WORK ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS TEST TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.

Removal
Remove the driver's seat.
Depending on the vehicle's equipment
Drain the compressed air circuits through the air tanks.
Disconnect air pipe.
Unplug the heated seat and pretensioner.
Unplug the seat wiring harness connector.
Remove bracket **(1)**.
Unplug connector **(2)**.
Remove bolts **(3)**.
Remove airbag ECU **(4)**.



Fitting
Fit airbag ECU **(4)**, arrow **(5)** pointing towards the front of the vehicle.
To fit, proceed in the reverse sequence to removal.
Tighten to torque.
Check that the ECU connector is locked.
Plug in the seat wiring harness connector.

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.
After **10** seconds, airbag warning pictogram **(G24)** should be extinguished.



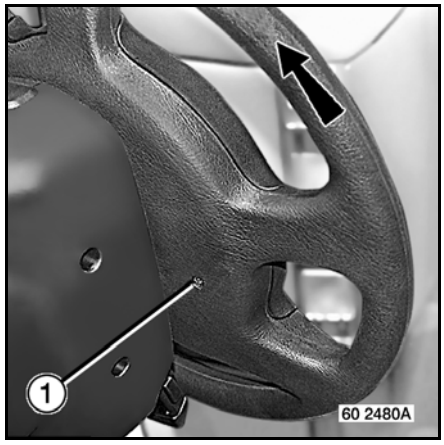
*The earth **(1)** for the electronic box is located on the cab floor.*

IF THE AIRBAG AND/OR THE PRETENSIONER HAVE BEEN SET OFF, IT IS ESSENTIAL TO REPLACE THE AIRBAG ELECTRONIC BOX WITHOUT FAIL.
IT LOCKS AUTOMATICALLY AND CANNOT BE UNLOCKED (SOME COMPONENTS LOSE THEIR RATED CHARACTERISTICS AFTER THE DETONATION ENERGY HAS PASSED THROUGH.

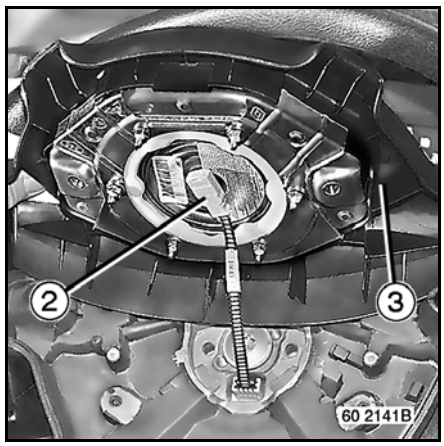
Driver's airbag module

BEFORE CARRYING OUT ANY WORK ON THE AIRBAG SYSTEM, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.
MOVE THE ROADWHEELS TO THE STRAIGHT-AHEAD POSITION.
THE COMPONENTS OF AN AIRBAG MODULE 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 MULTIMETER 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.
Remove bolts **(1)**.
Move the roadwheels back to the straight-ahead position.



Unplug connector **(2)**.
Remove the airbag module **(3)**.



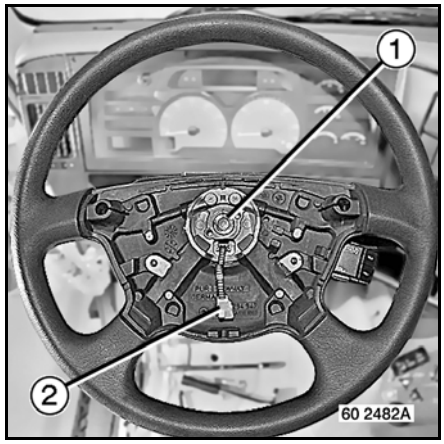
Fitting
Put airbag module **(3)** back into place.
Plug in connector **(2)**.
(tight clip fit).
Tighten bolts **(1)**.
If you change the bolts **(1)**, replace them with original bolts of the same length.
Tighten to torque.

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.
After **10** seconds, airbag warning pictogram **(G24)** should be extinguished.

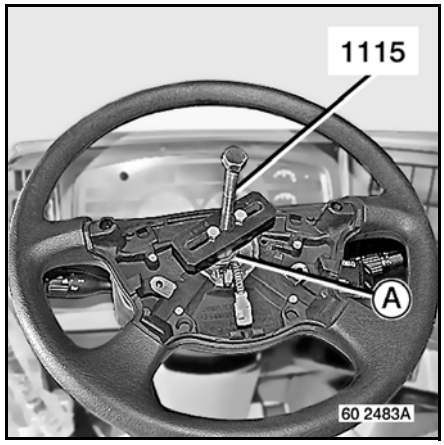
Rotary switch

BEFORE CARRYING OUT ANY WORK ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS TEST TOOL, DISCONNECT THE BATTERIES AND WAIT FOR 5 MINUTES.
MOVE THE ROADWHEELS TO THE STRAIGHT-AHEAD POSITION.

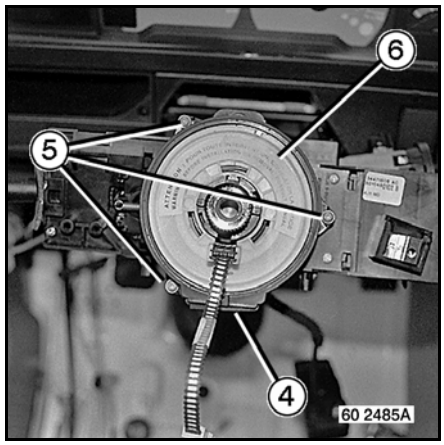
Removal
Remove the airbag module.
See pages E-6-2.
Do not bend or damage connector **(2)**.
Ensure that the roadwheels are still in the straight-ahead position.
Remove bolt **(1)**.
Remove the steering wheel.



Use a bolt **(A = M12x1.75x20)**.
Use tool **1115**.
When the steering wheel is removed, a device immobilizes the rotary switch.
Remove the steering column trim.

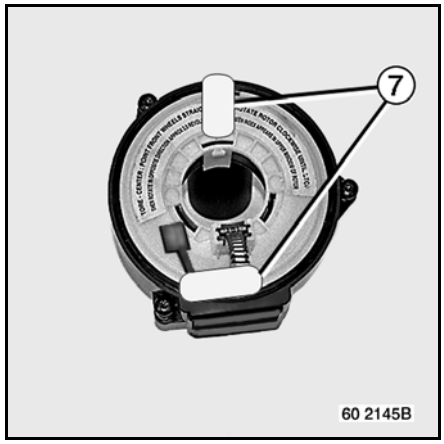


Retain rotary switch against motion with a piece of adhesive tape.
Unplug connector **(4)**.
Remove bolts **(5)**.
Remove rotary switch **(6)**.

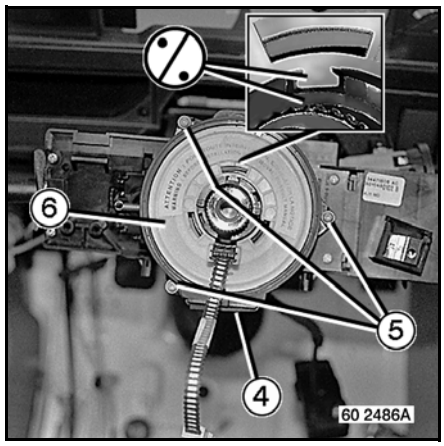


Fitting
Fitting a new rotary switch.

DO NOT BEND OR DAMAGE THE CONNECTOR.
THE NEW ROTARY SWITCH IS SUPPLIED HELD IN THE CENTRED POSITION BY A LABEL (7) THAT IS TORN OFF THE FIRST TIME THE STEERING WHEEL IS TURNED.
CHECK THAT THE ROTARY SWITCH IS STILL IMMOBILIZED PRIOR TO ASSEMBLY. (IF THIS IS NOT THE CASE, SEE "FINDING THE MID-POINT").
ASSEMBLY MUST BE CARRIED OUT WITH THE ROADWHEELS IN THE STRAIGHT-AHEAD POSITION.
IF THESE INSTRUCTIONS ARE NOT OBEYED, IT MAY LEAD TO MALFUNCTION OR EVEN PREMATURE DETONATION OF THE AIRBAG SQUIB.

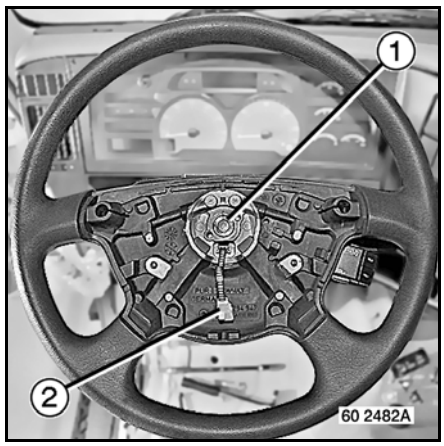


Fit rotary switch **(6)**.
Keep in the mid-point position.
The lug of the rotary switch should be properly engaged in the steering column.
Tighten bolts **(5)**.
Tighten to torque.
Plug in connector **(4)**.
Fit the steering column trim.



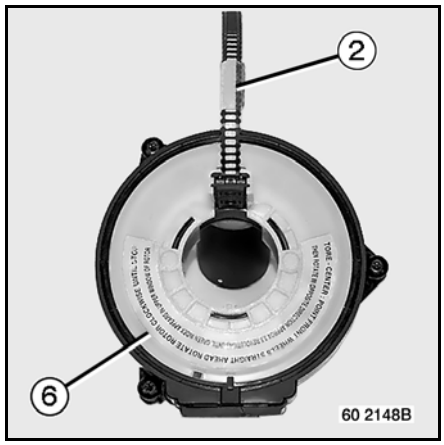
Align and fit the steering wheel.
Replace screwbolt **(1)** without fail.
Fit bolt **(1)**.
Tighten to torque.
Fit the driver's airbag module.
See pages E-6-2.

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.
After **10** seconds, airbag warning pictogram **(G24)** should be extinguished.

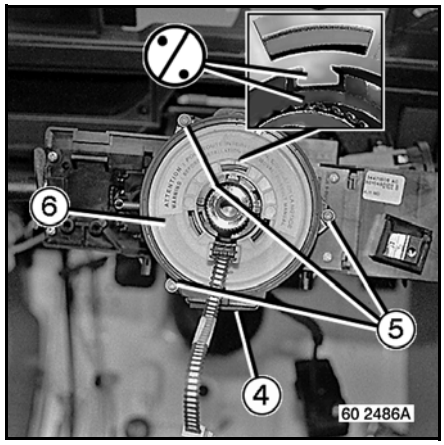


Fitting a re-used rotary switch.

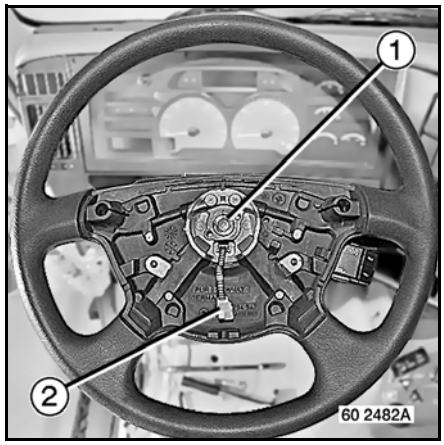
Do not bend or damage connector (2).
Keep the rotary switch in the mid-point position prior to installation (procedure hereafter).



Finding the mid-point
Turn the rotary switch as far as abutment in one direction, without forcing.Mark its position.Turn the rotary switch as far as abutment in the other direction and count the number of turns.
Turn the rotary switch to the mid-point position (by dividing the number of turns by two).
Fit rotary switch **(6)**.
Keep in the mid-point position.
The lug of the rotary switch should be properly engaged in the steering column.
Tighten bolts **(5)**.
Tighten to torque.
Plug in connector **(4)**.
If it is the same rotary switch that has been removed, pull off the adhesive tape.



Align and fit the steering wheel.
Replace screwbolt **(1)** without fail.
Fit bolt **(1)**.
Tighten to torque.
Fit the driver's airbag module.
See pages E-6-2.

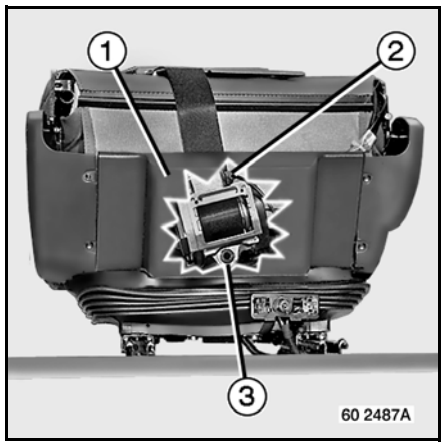


Testing:
Turn the ignition key to the 'ignition' position.
Get out of the cab and make arrangements to forbid access.
Reconnect the batteries and switch the ignition back on.
After **10** seconds, airbag warning pictogram **(G24)** should be extinguished.

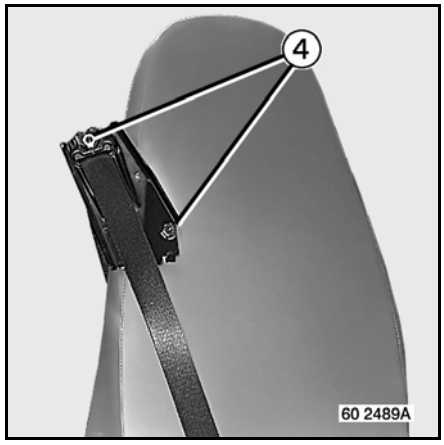
Pretensioner(s)

BEFORE CARRYING OUT ANY WORK 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 seat.
Remove the cover **(1)**.
Unplug connector **(2)**.
Remove bolt **(3)**.
Remove the pretensioner.
Remove the seat belt cover behind the seat.
Remove bolts **(4)**.
Remove bolt **(5)**.



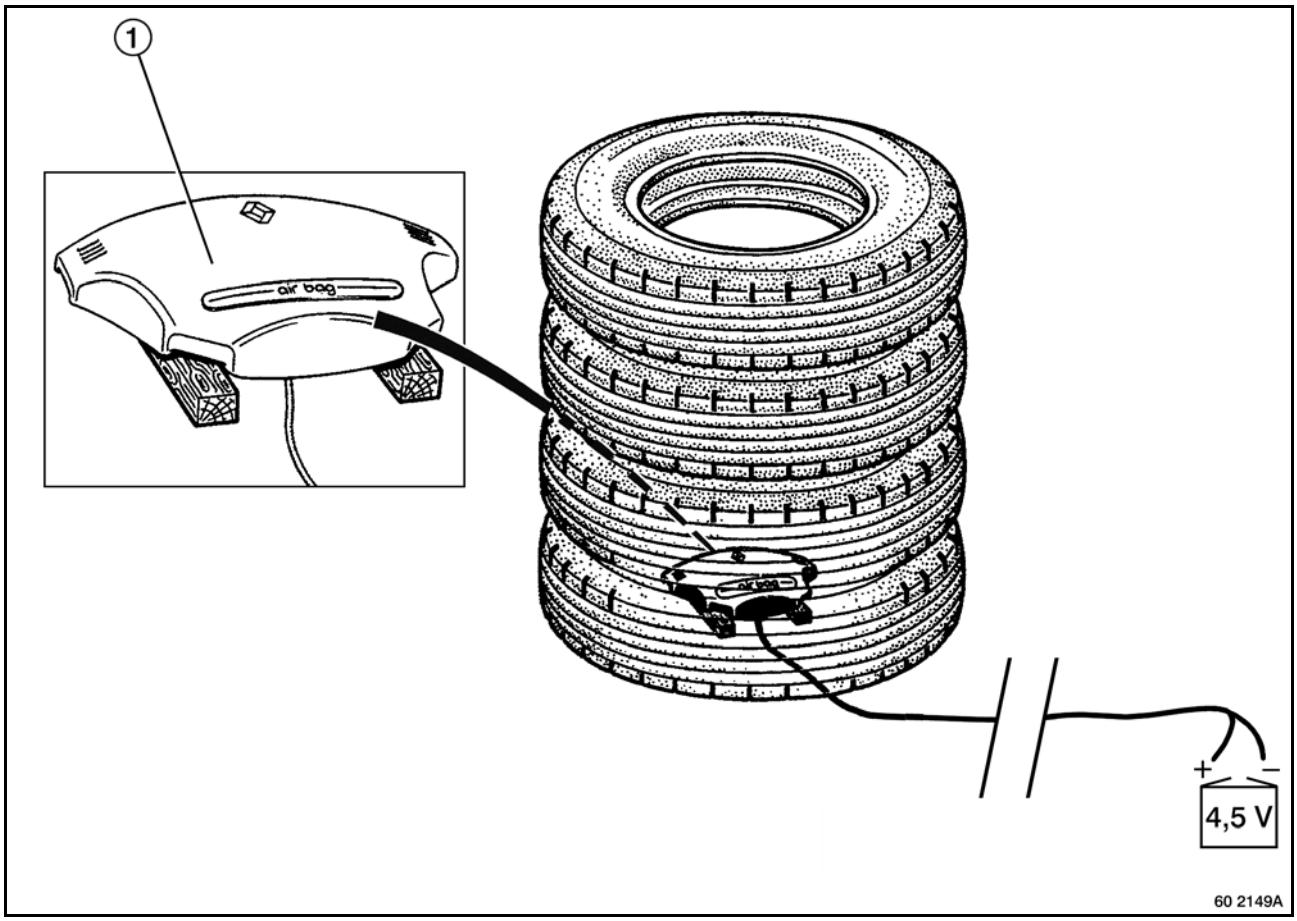
Fitting
Replace screwbolt **(3)** without fail.
Proceed in the reverse sequence to dismantling.
Tighten to torque.
Plug in connector **(2)**.
(tight clip fit).
Match the direction of orientation.



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.
After **10** seconds, airbag warning pictogram **(G24)** 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.

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 **2886** to the module.
2° Place the module **(1)** 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 BURNING.
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.

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 CARRYING OUT ANY WORK ON THE AIRBAG SYSTEM, LOCK THE ECU USING THE RENAULT TRUCKS TEST 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 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.