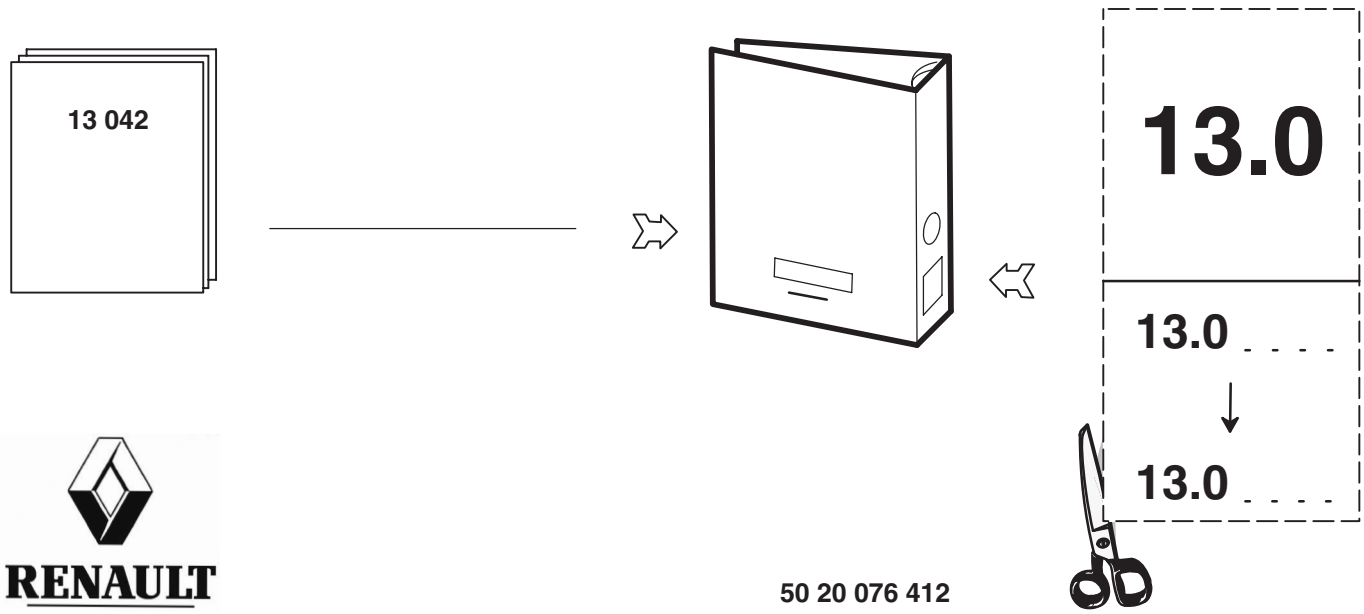
13 042 – AN – 07.1998

SUSPENSION

AIR SUSPENSION	VEHICLE
SWIVEL BRACKET REAR SUSPENSION	ALL RANGES

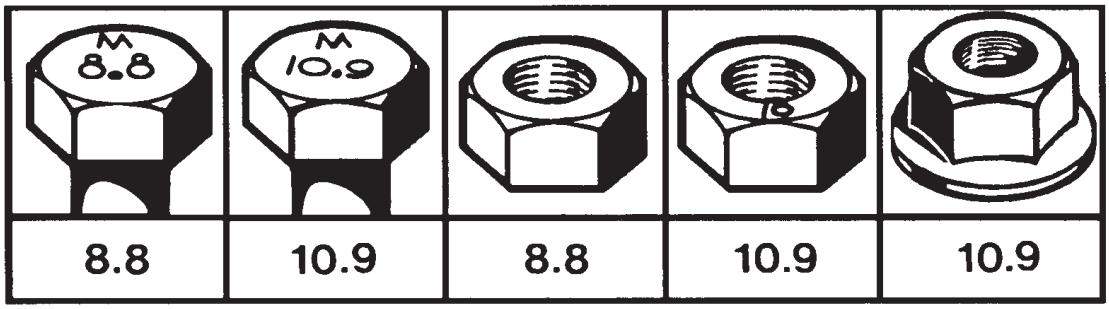
NOTE
The above information may change in the course of time.
Only the “Consult” section of the workshop manuals repertory in standard N° 10320 serves as reference.



RENAULT

CONTENTS

TECHNICAL DATA



21 0122

Tightening torques
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 accuracy class defines the tolerance of this torque in percent as a function of the nominal torque applied.

Tightening accuracy classes:
- **Classe I**: Special threaded hardware (tolerances variable depending on assembly).
- **Classe II**: Reserved for precise tightening (tolerance ± 10% of the nominal torque).
- **Classe 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 page A4 → A6.

Tightening torques for conventional nut and bolt hardware to "METRIC system" standard 01.50.4002		
Dia. and pitch of nuts and bolts (in mm)	**Quality class 8.8**	**Quality class 10.9**
	Tightening class III (± 20 %)	**Tightening class III (± 20 %)**
6 x 1.00	7.4	10.8
7 x 1.00	12.1	17.8
8 x 1.00	19.2	28.2
8 x 1.25	17.9	26.3
10 x 1.00	39.4	58
10 x 1.25	37.4	55
10 x 1.50	35.4	52
12 x 1.25	67	98
12 x 1.50	64	94
12 x 1.75	61	90
14 x 1.50	105	155
14 x 2.00	98	143
16 x 1.50	161	237
16 x 2.00	151	222
18 x 1.50	235	346
18 x 2.50	210	308
20 x 1.50	328	481
20 x 2.50	296	435
22 x 1.50	444	652
22 x 2.50	406	596

Consumables

Capacities (Refer to Servicing Handbook)

Fastening, locking and sealing products	
Industrial reference	**Automotive reference**
Loctite 542	LT 542 Oléoétanch
Loctite 549	LT 549 Autoform
Loctite 270	LT 270 Freinfilet fort
Terostat 4 000	Terostat 4 000 mastic

Grease

Symbol	**Renault Trucks Oils**	**Standards**
	..... Superol EP2	NLGI 2 grease lithium soap calcium EP additive lead–free

Preparation prior to assembly :
Carefully clean and inspect all the parts.
Seals and lock–plates must always be discarded and new ones fitted.
Always oil parts prior to force fitting.
The inside of the lips of seal rings must be smeared with grease.
Shrink fitted parts must be heated with a hot air blower or in an oven, etc... Flame heating is strictly forbidden.

NOTE
When using a torque multiplier, calibrate the torque wrench–torque multiplier assembly to the desired torque.

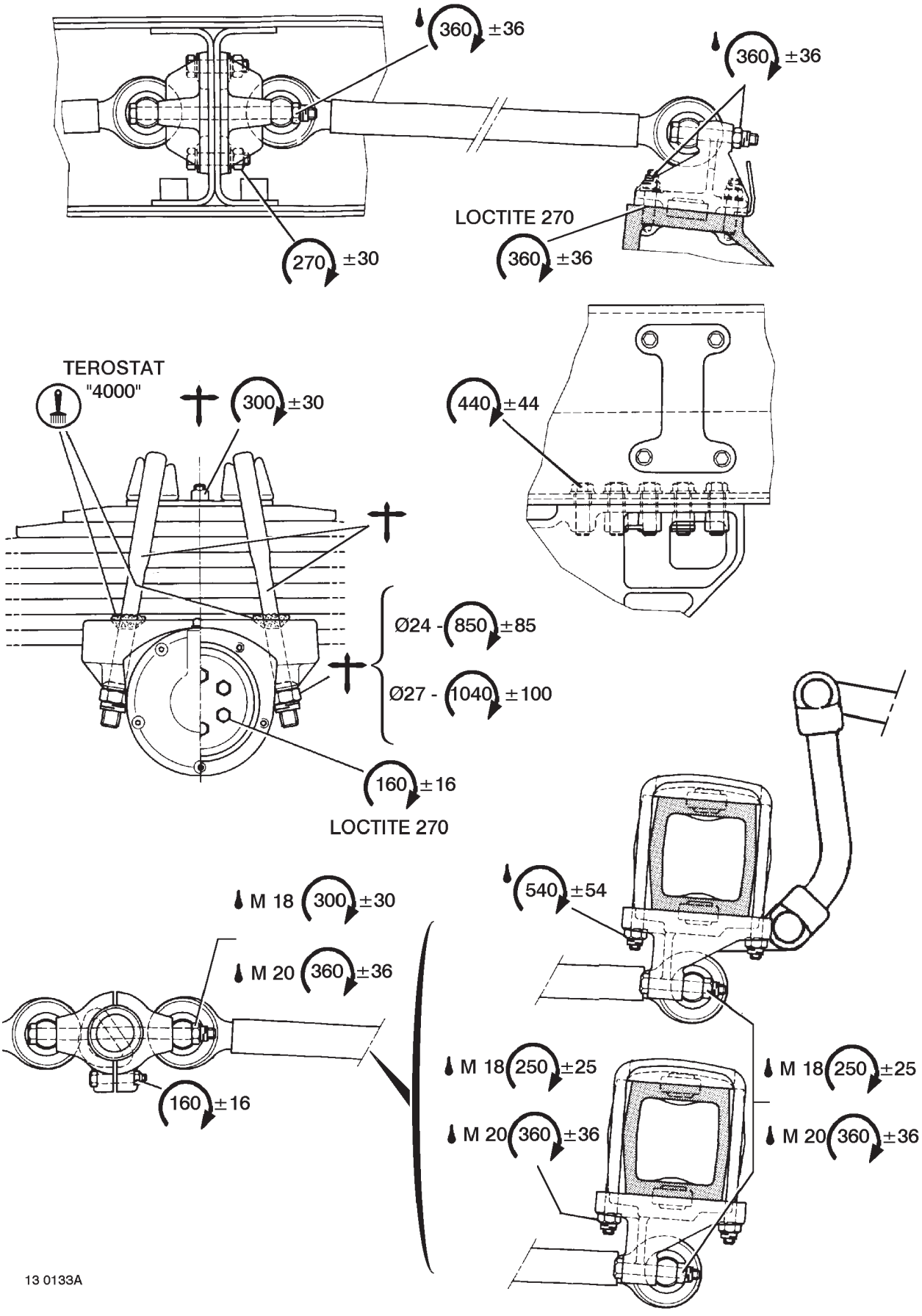
CONVENTIONAL SYMBOLS

Tighten at indicated torque (Nm) (right–hand thread)

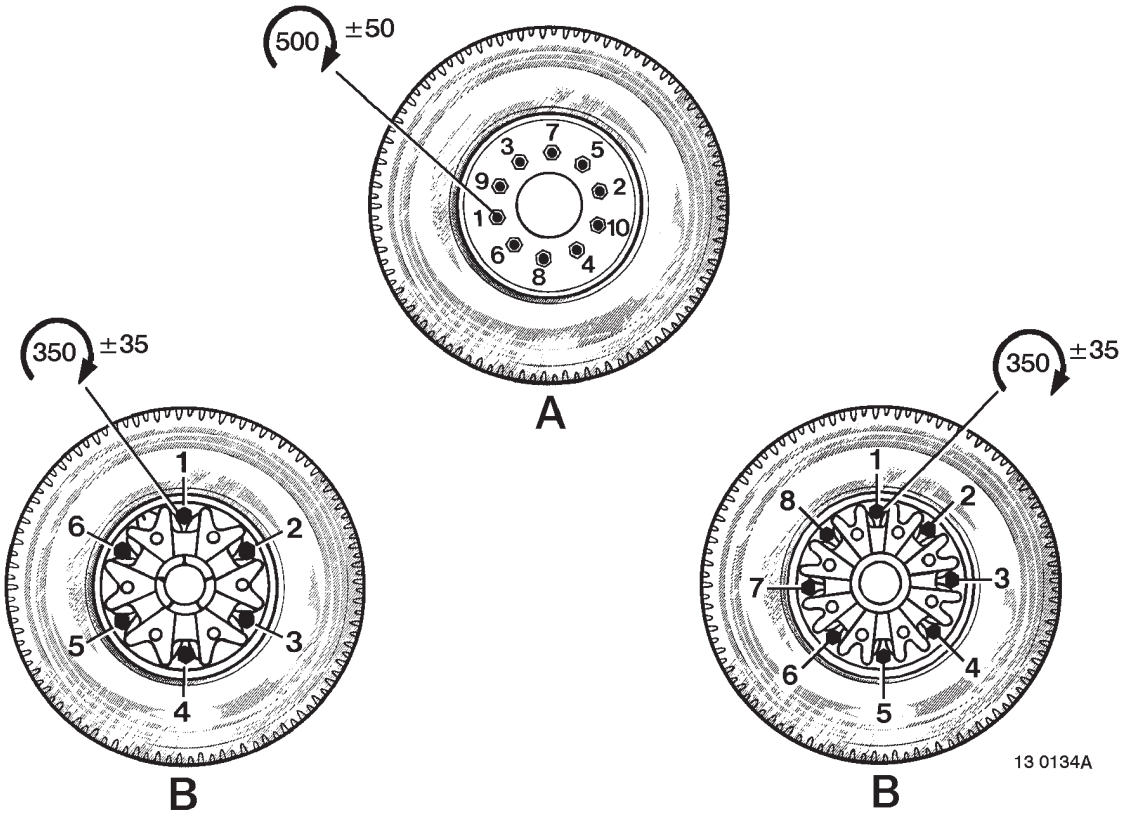

Smear (see “Consumables” table)


Part to be replaced


Mark – Assemble as per marking



Tightening torque with lubricated threaded hardware

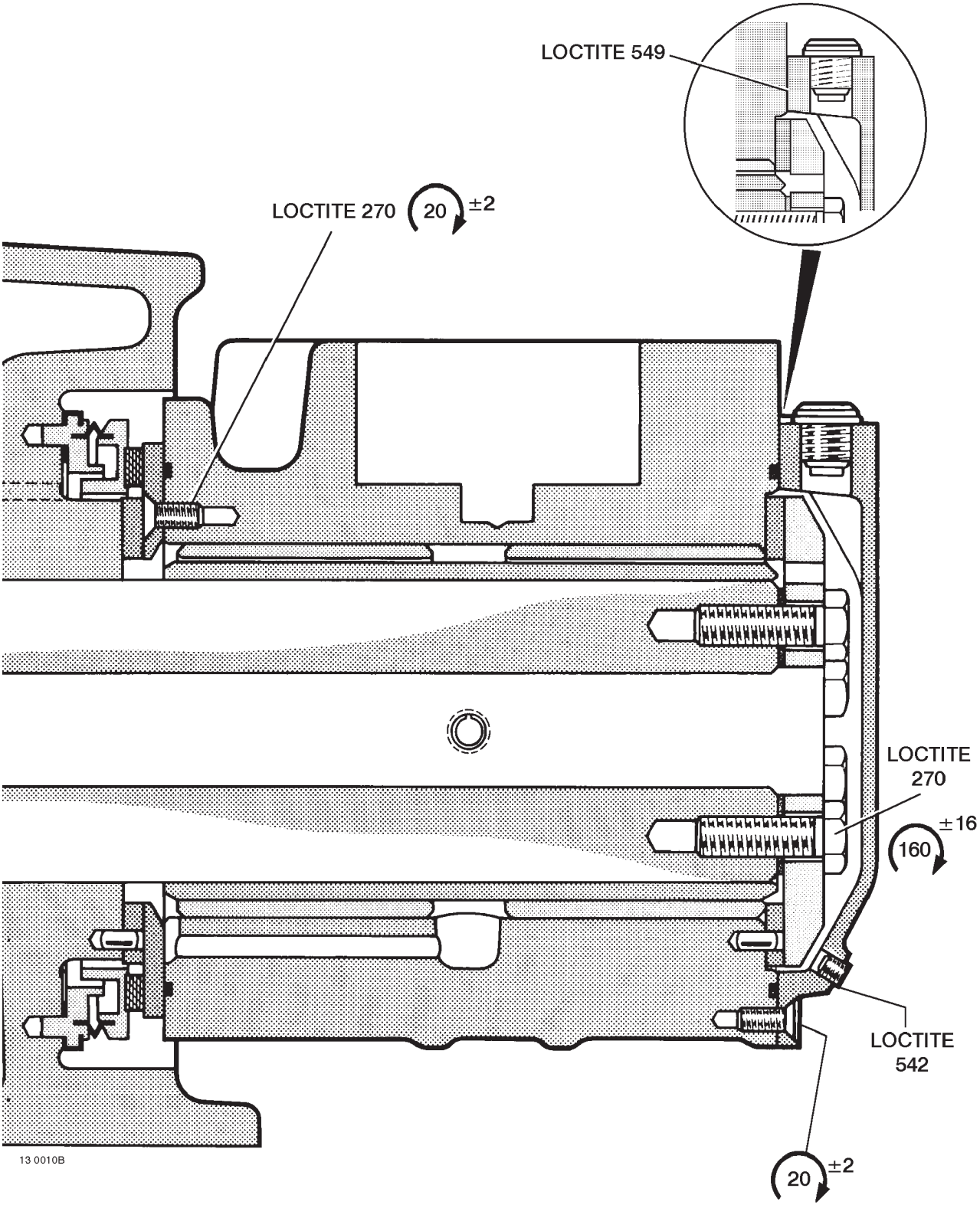


Depending on the assembly.

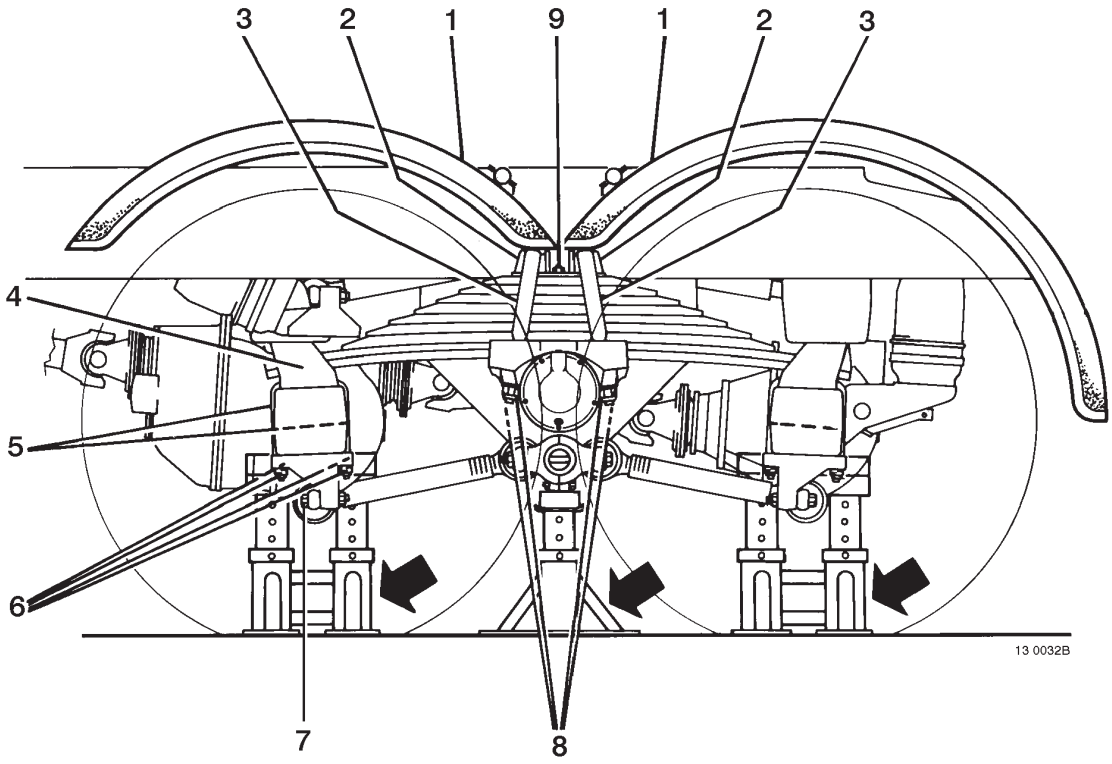
Wheel nut tightening torques and sequence

A : Disc rim wheels (steel / light alloy)

B : “Trilex” wheels


LOCTITE 549
LOCTITE 270
20
±2
LOCTITE
270
±16
160
LOCTITE
542
20
±2
13 0010B

REAR SPRING

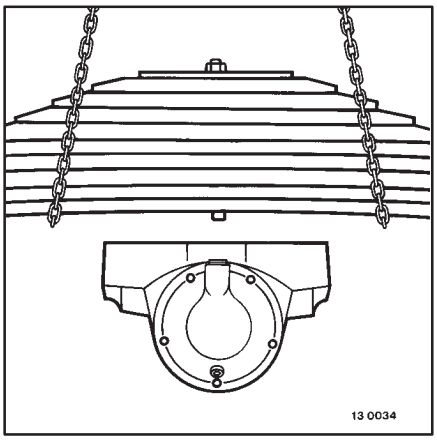


Removal

The item numbers indicated in the text refer to the figure on page **B2**.

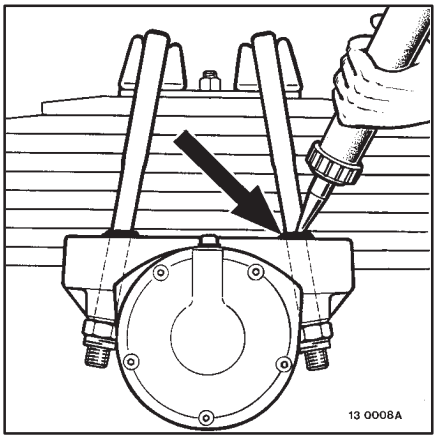
Withdraw the wings **(1)**.
Put axle stands under the vehicle.
Remove the wheels.
Remove the nuts **(8)**.
Remove the U–bolts **(3)**.
Withdraw the guides **(2)**.

Remove the bolts **(7)**.
Remove the nuts **(6)**.
Remove the U–bolts **(5)**.
Remove the retainers **(4)**.
Remove the spring.



Fitting

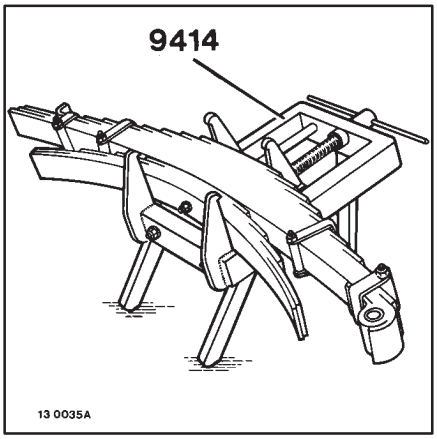
To fit, proceed in the reverse sequence to removal.
Tighten at the recommended torque.
Use a sealing compound " **Terostat 4000**".



Disassembly

Rear spring

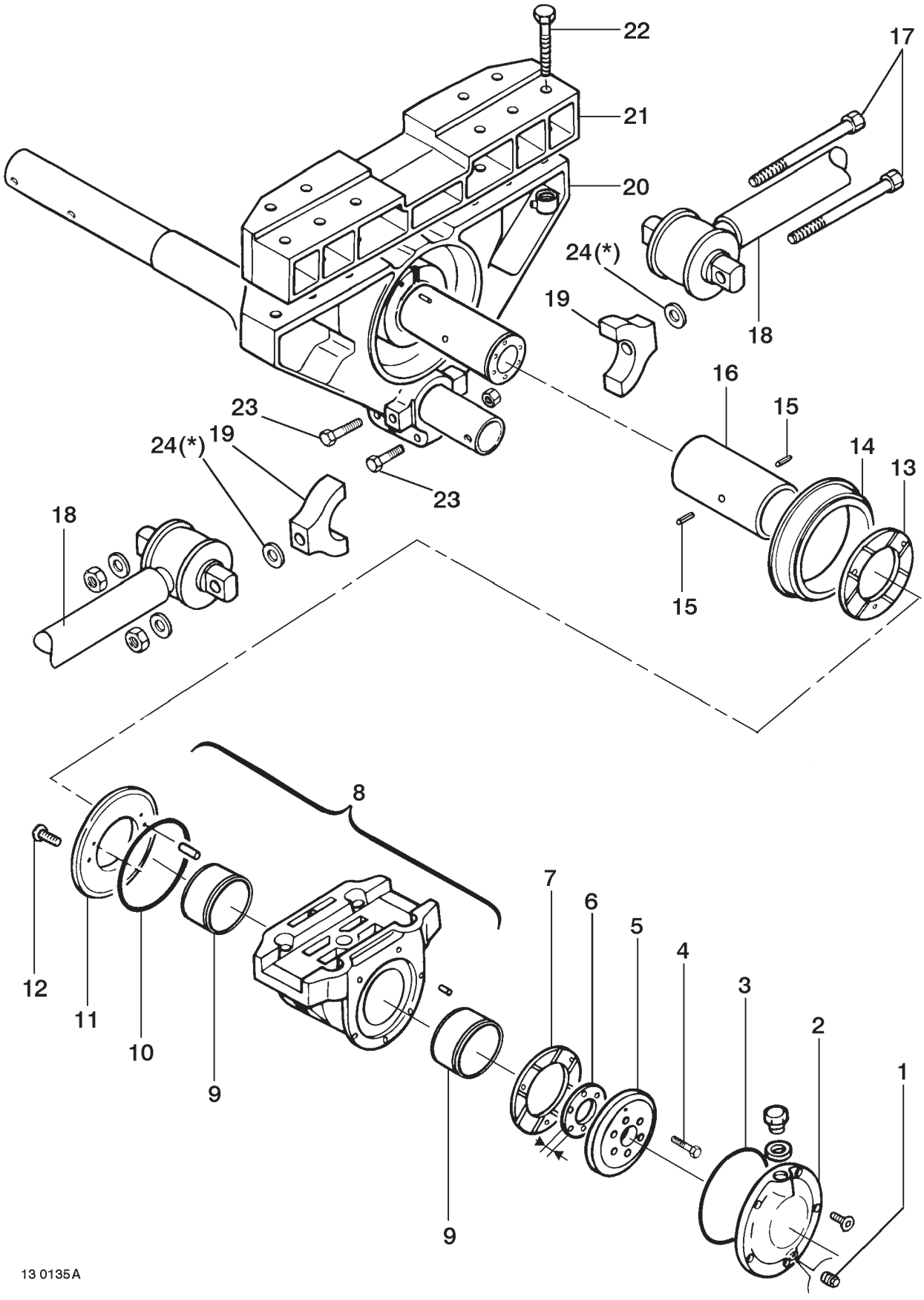
Clamp the spring.
Use tool(s) N° **9414**.
Remove steady pin **(9)**.
Free the spring leaves.



Assembly

Use tool(s) N° **9414**.
To assemble, proceed in the reverse sequence to disassembly.
Burr the nut using a centre–punch to lock the steady pin **(9)**.

SWIVEL BRACKET



(*) PMR 3041 – PMR 3045

The item numbers indicated in the text refer to the figure on page **C2**.

Removal

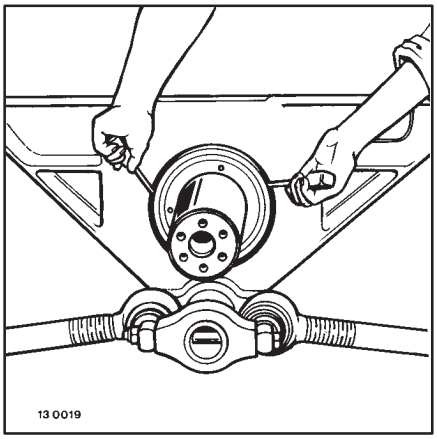
Remove the spring.
(See chapter : **B**).

Drain the oil through plug port **(1)**.
Remove the cap **(2)**.

Depending on the assembly.
Withdraw the O–ring **(3)**.

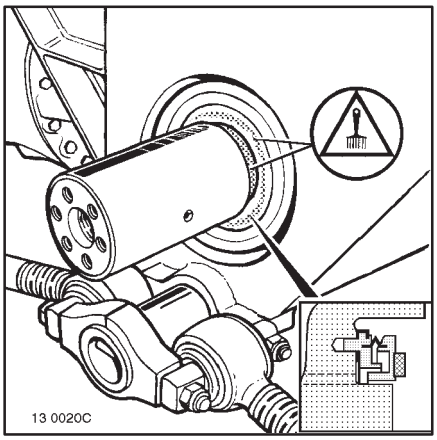
Remove the screws **(4)**.
Remove the stop plate **(5)**.
Save the shim **(6)**.
Remove the friction washer **(7)**.
Remove the assembly **(8)**.
Remove the friction washer **(13)**.

Save seal **(14)**.

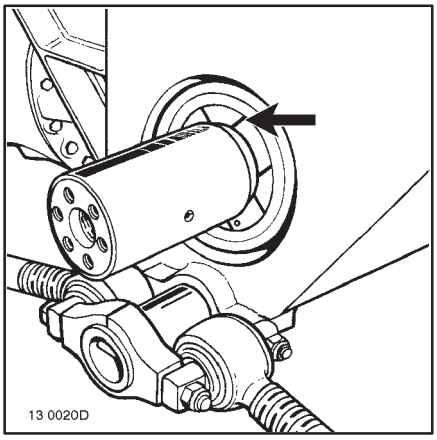


Fitting

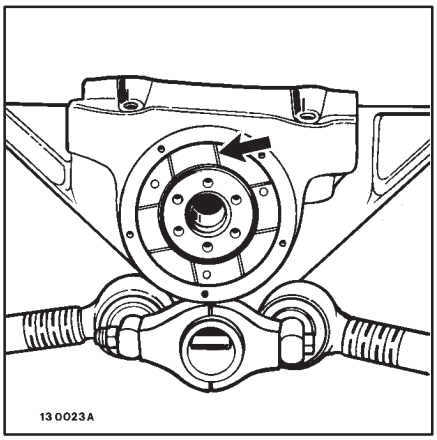
Grease.
Fit seal **(14)**.
Oil the cork bearing surface of seal **(14)**.



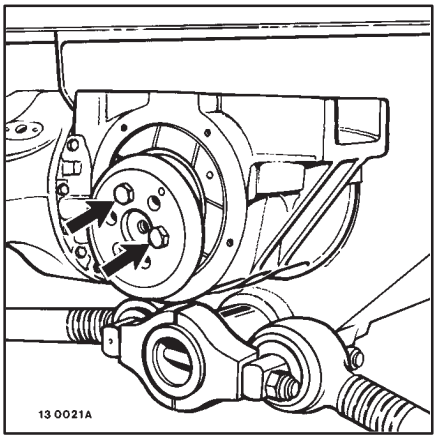
Fit the friction washer **(13)**.
Respect the direction of assembly.



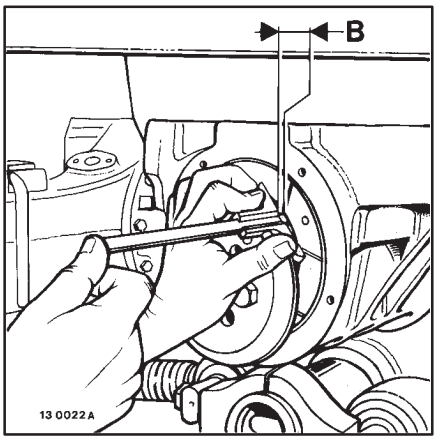
Fit the assembly **(8)**.
Fit the friction washer **(7)**.
Respect the direction of assembly.



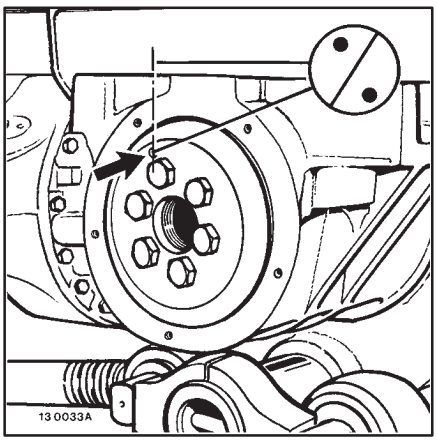
Position the stop ring **(5)**.
Tighten the screws moderately.



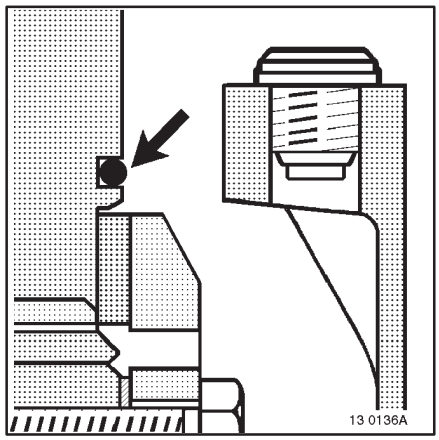
Measure the dimension **(B)**.
Calculate the thickness **(A)** of the shim **(6)**
A = B + 0.05 mm
+ 0.
Select the appropriate spacer **(6)**.
(Spare Part value: **3 – 1 – 0.5 – 0.1 mm**).



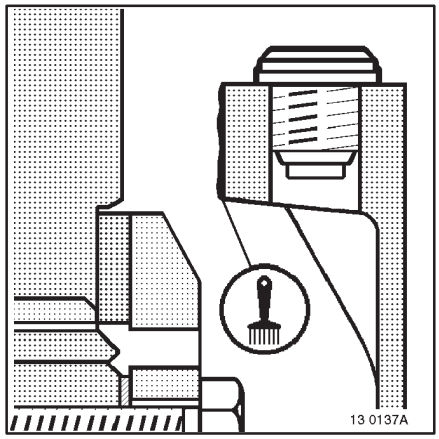
Fit the shim **(6)**.
Position the stop ring **(5)**.
Respect the orientation.
Fit the screws **(4)**.
Use a securing product such as "**LT 270**".
Tighten at the recommended torque.



Depending on the assembly.
Install the O–ring **(3)**.
Fit the cap **(2)**.



Depending on the assembly.
Use a sealing product “**LT 549**”.
Fit the cap **(2)**.

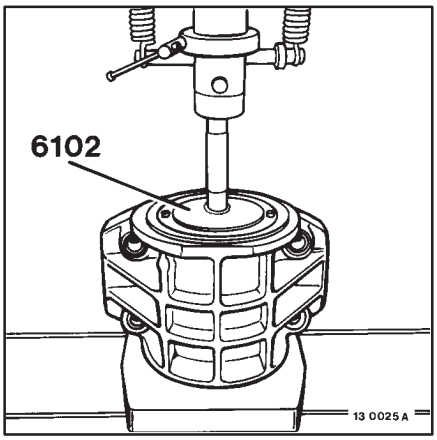


Fit the plug **(1)**.
Use a sealing product “**LT 542**”.
Fill with oil.
(Refer to Servicing Handbook).

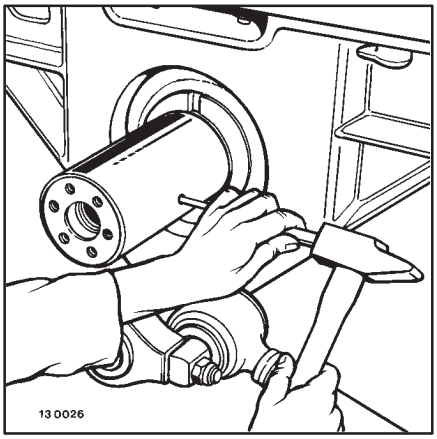
Disassembly

Remove the assembly **(8)**.
See page(s) **C2**.

Remove the screws **(12)**.
Remove the washer **(11)**.
Withdraw the O–ring **(10)**.
Remove the bushes **(9)**.
Use tool(s) **6102**.



For replacement only.
Remove the pins **(15)**.

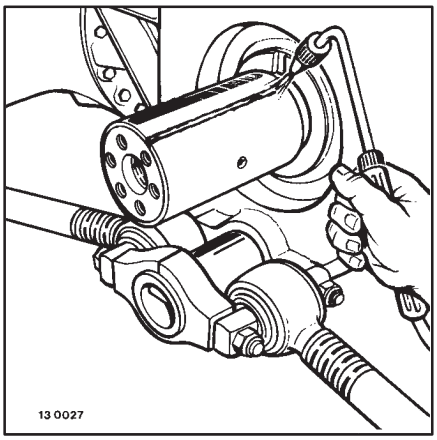


Remove the collar **(16)**.

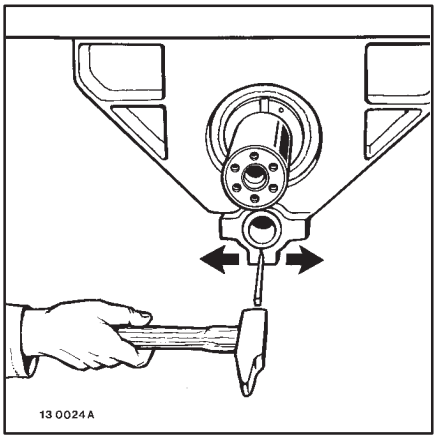
Withdraw the nuts and bolts **(17)**.
Uncouple the link rods **(18)**.
Withdraw the spacers **(19)**.

Depending on the assembly.
Withdraw the spacers **(24)**.

Withdraw the nuts and bolts **(22)**.
Depending on the assembly.
Save the shim **(21)**.

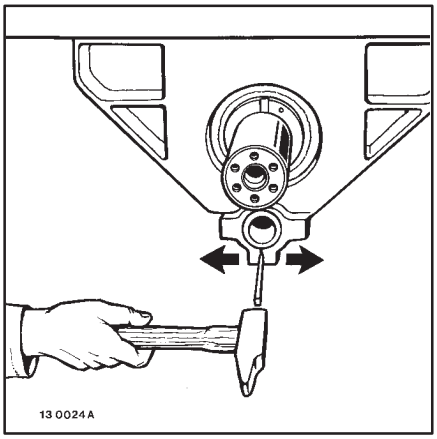


Withdraw the nuts and bolts **(23)**.
Separate the jaws.
Remove fitting **(20)**.



Assembly

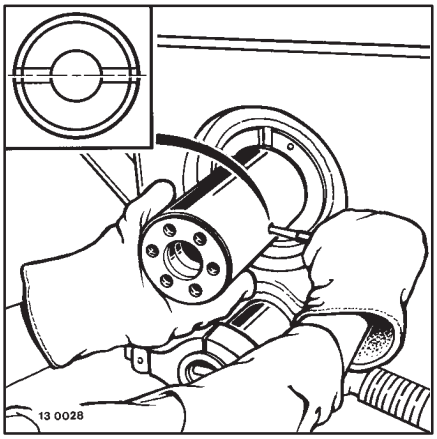
Separate the jaws.
Fit the fitting **(20)**.



Depending on the assembly.
Install the shim **(21)**.
Tighten the nuts and bolts **(22–23)**.
Tighten at the recommended torque.
Fit the spacers **(19)**.
Depending on the assembly.
Fit the spacers **(24)**.

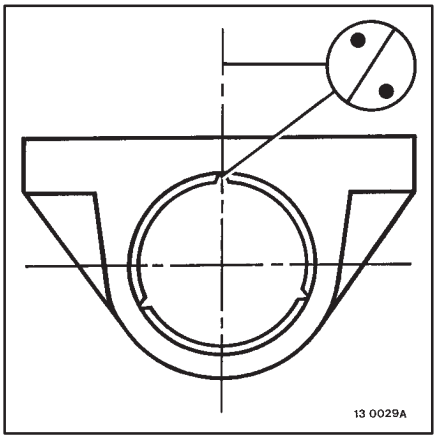
Couple up the link rods **(18)**.
Tighten the nuts and bolts **(17)**.
Tighten at the recommended torque.

Mount the collar **(16)**.
Heat part **(16)** to **120** °C.
Align the pin holes.
Install the pins **(15)**.



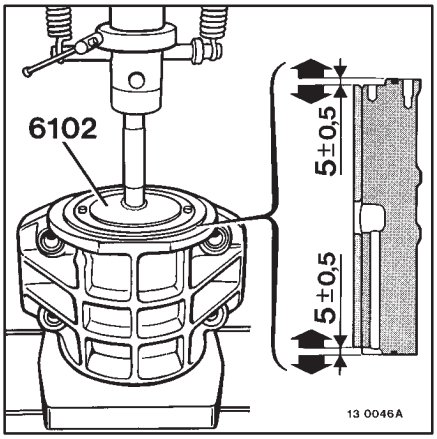
NOTE
This operation requires special attention.

Fit the bushes **(9)**.
Respect the orientation.



Use tool(s) **6102**.
Use a press.
Respect the position

Install the O–ring **(10)**.
Fit the washer **(11)**.
Fit the screws **(12)**.
Use a securing product such as “**LT 270**”.
Tighten at the recommended torque.



TOOLS

RENAULT TRUCKS divide tools into 3 categories:

– **General–purpose tools:** Commercially available tools.
  . **50 00 26 .... reference number** (possibility of purchasing through the RENAULT TRUCKS Spare Parts department).
  . **4–figure reference number** (tools with RENAULT TRUCKS reference number, but available from the supplier).

– **Special tools:** Specially created tools, distributed by the RENAULT TRUCKS spare parts division.

– **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 skill is needed to make these tools.

Three levels (or echelons) determine their assignment:

– **LEVEL 1:** Tools for servicing and minor tasks.

– **LEVEL 2:** Tools for major repairs.

– **LEVEL 3:** Tools for refurbishment.

Specific tools				
RENAULT TRUCKS Ref. N°	**Designation**	**Level**	**Quantity**	**Pages**
50 00 26 **6102**	Pusher	1	1	C6