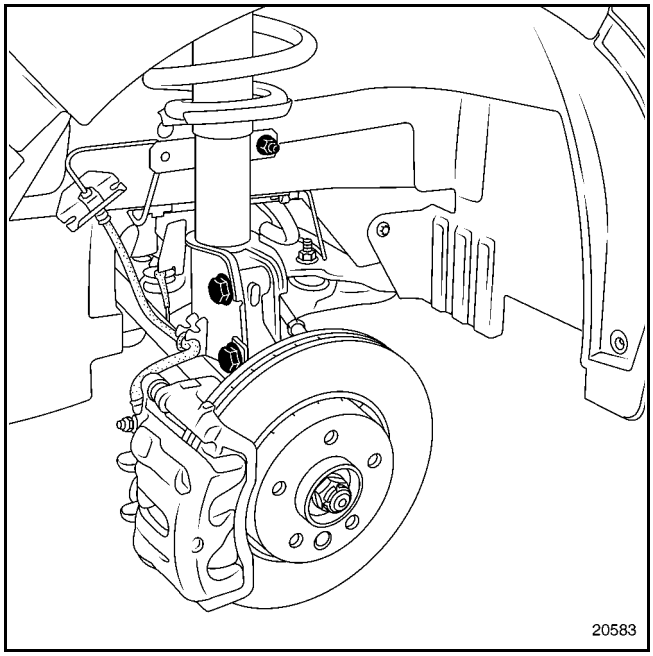
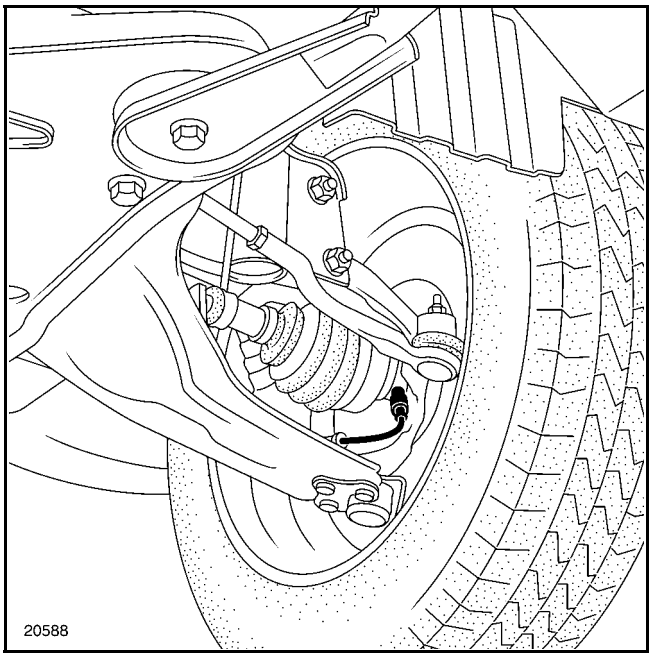
SPECIAL TOOLING REQUIRED	
T. Av. 476	Ball joint extractor
Rou. 604-01	Hub locking tool

TIGHTENING TORQUES (in daNm)	
Shock absorber base mounting nut	18
Steering ball joint nut	3.7
Lower ball joint nut	10.5
Driveshaft nut	28

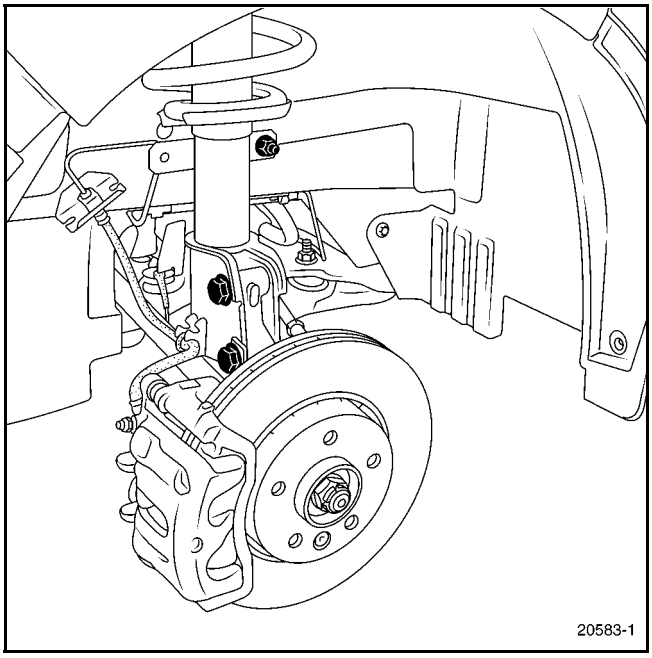


REMOVAL

Remove:
– the driveshaft nut,
– the brake disc (consult the relevant procedure),



Unclip the wheel sensor **ABS** equipment).



Remove:
– the steering ball joint mounting nut,
– the lower ball joint mounting nut,
– the shock absorber base lower mounting nuts.

Release:
– the steering ball joint,
– the lower ball joint of the stub-axle carrier.

Disengage the driveshaft

Remove:
– the mounting bolts of the base of the shock absorber (using a mallet),
– the stub-axle carrier.

REFITTING

Refit:
– the stub-axle carrier,
– the driveshaft,
– the shock absorber base mounting bolts,
– the lower mounting nuts of the base of the shock absorber,
– the lower ball joint of the stub-axle carrier,
– the lower ball joint mounting nut,
– the steering ball joint,
– the steering ball joint mounting nut,
– the brake disc (refer to the relevant procedure),
– the driveshaft nut,
– the wheel sensor **ABS** equipment).

Tighten the bolts and nuts to the recommended torque.

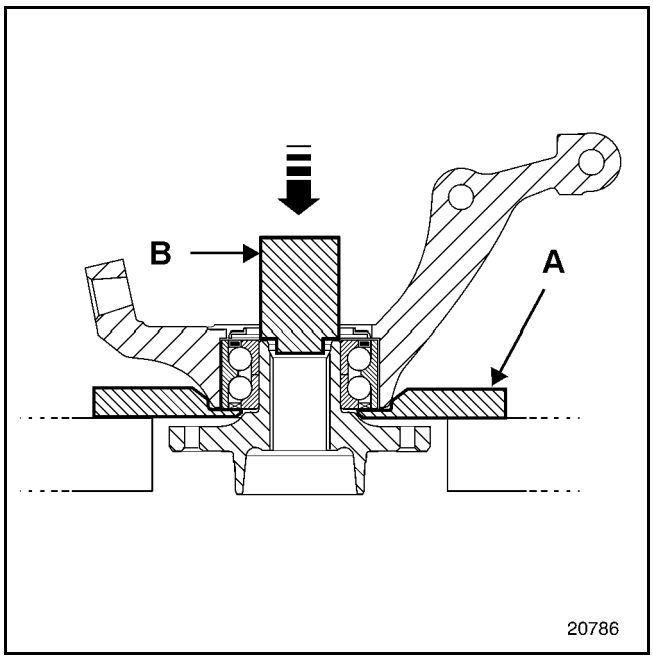
Depress the brake pedal several times to bring the pistons into contact with the brake pads and discs.

Check the brake fluid level.

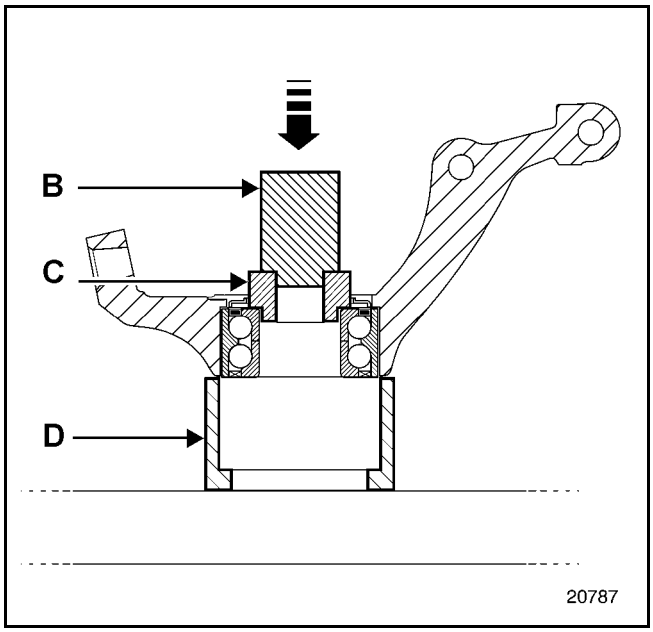
SPECIAL TOOLING REQUIRED	
T. Av. 1624	Tool kit for replacing the front bearings

REMOVAL

Remove:
– the stub-axle carrier (refer to the relevant procedure),



– the hub using tools A and B,

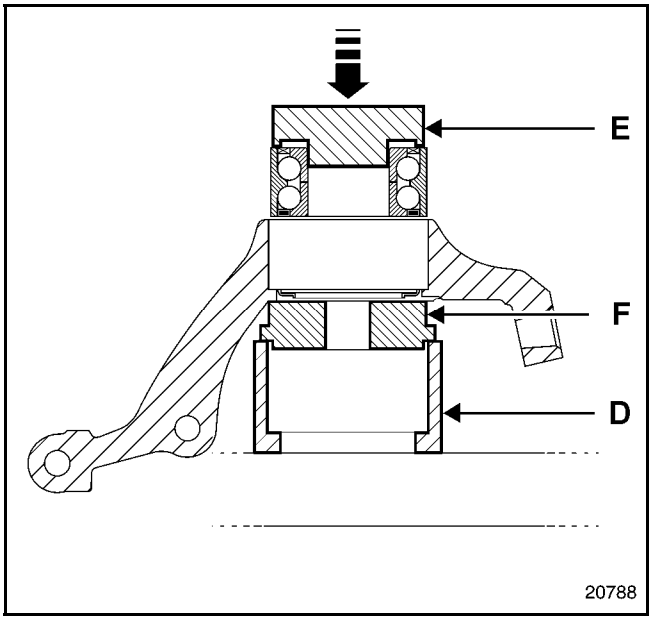


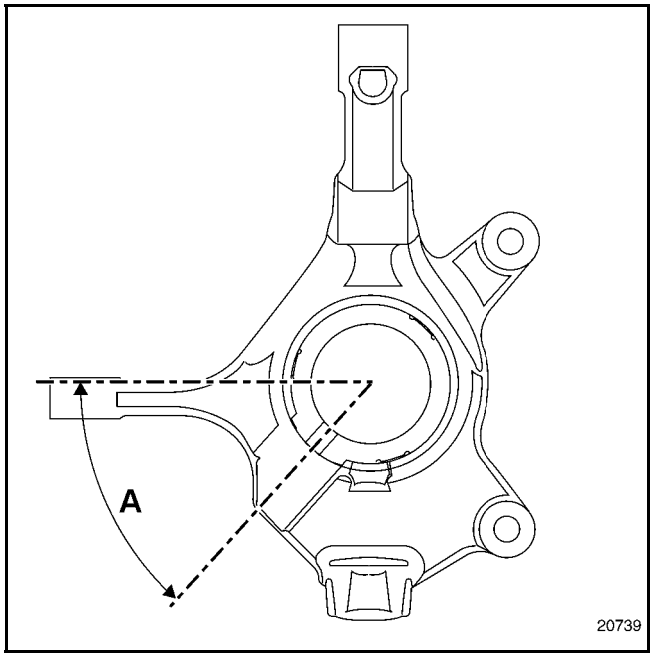
– the bearing using tools B, C and D.

IMPORTANT:
It is essential to fit a new bearing which has been cleaned to remove grease from the interior and exterior surfaces in contact with the stub-axle carrier and hub.

IMPORTANT:
It is essential to clean the surfaces of the stub-axle carrier and the hub (in contact with the bearing) to remove grease from them.

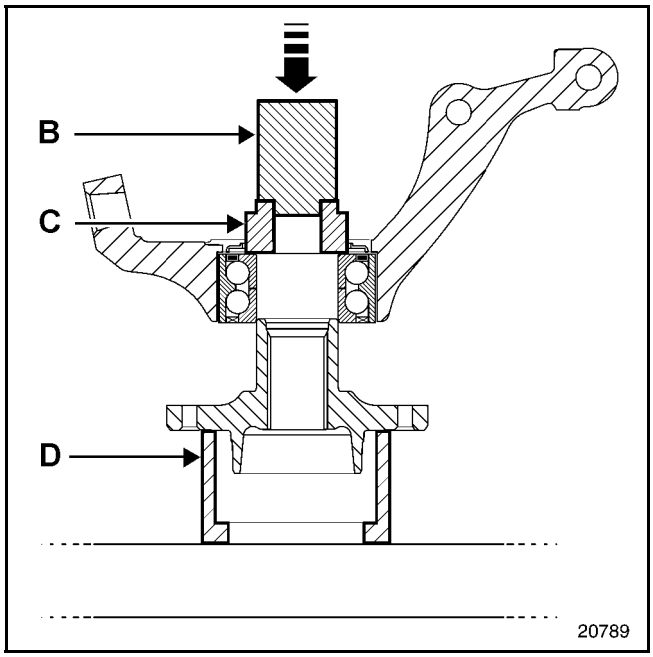
REFITTING





Refit the bearing into the stub-axle carrier using tools D, E and F, with the black **ABS** target positioned on the interior side of the stub-axle carrier.

NOTE:
It is essential to make sure that the **ABS** sensor holder is correctly positioned (**A = 48**° ± **5**° **with the horizontal**).

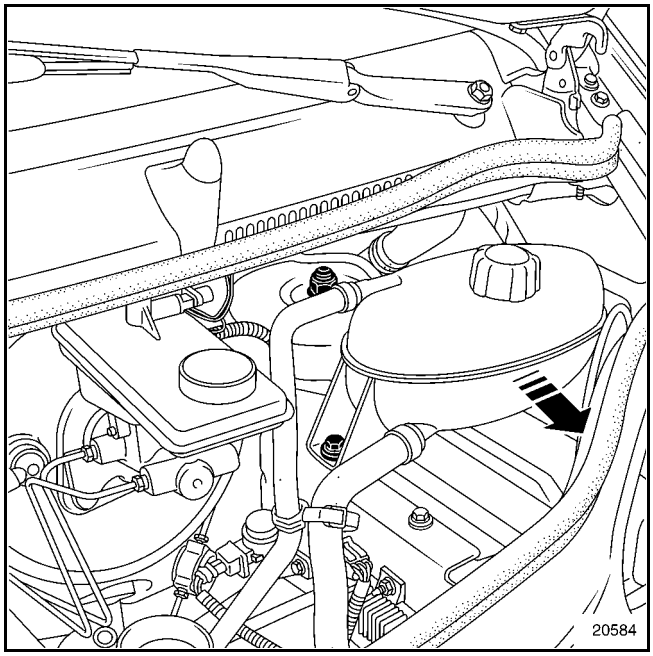


Refit:
– the hub using tools B, C and D,
– the stub-axle carrier (refer to the relevant procedure).

TIGHTENING TORQUES (in daNm)	▽
Anti-roll bar return tie-rod nut	4.4
Shock absorber base mounting nut	18
Shock absorber rod nut	6.2
Wheel bolt	14.2
Coolant tank bolt	1

REMOVAL

Left-hand side



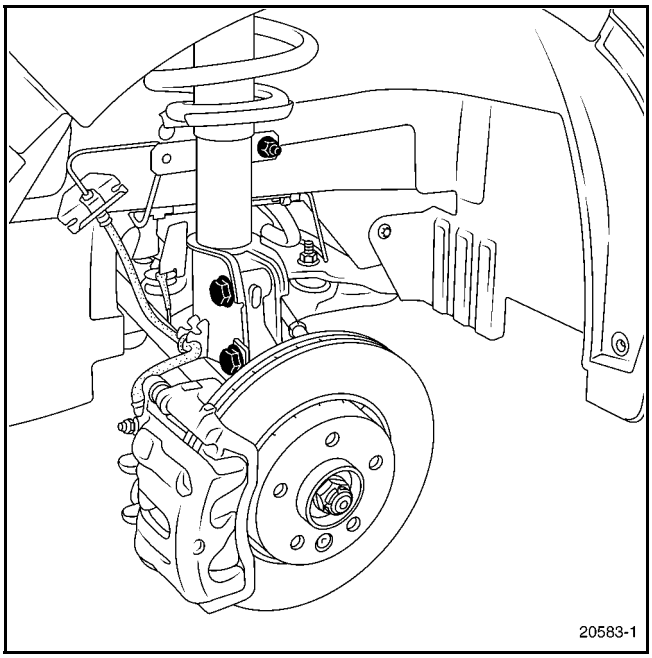
Remove the coolant tank mounting bolt.

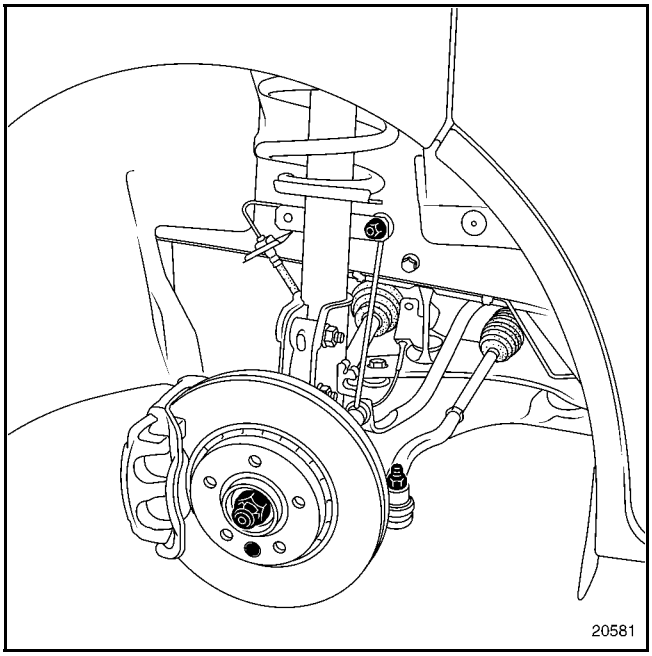
Disconnect the coolant tank to gain access to the shock absorber rod nut.

Left or right-hand side

Remove the wheel .

Unclip the wheel sensor wire (**ABS** equipment).





Remove:
– the shock absorber rod upper nut
– the noise suppression washer,
– the mounting nuts of the base of the shock absorber,
– the upper nut on the anti-roll bar return tie-rod.

Disconnect the anti-roll bar return tie-rod.

Remove:
– the mounting bolts of the base of the shock absorber (using a mallet),
– the spring and shock absorber assembly,
– the filter block (this remains on the vehicle during removal of the assembly).

REFITTING

Left or right-hand side

Refit:
– the filter block on the assembly,
– the assembly and its filter block on the vehicle,
– the noise suppression washer,
– the shock absorber rod upper nut,
– the shock absorber base mounting bolts,
– the mounting nuts of the base of the shock absorber,
– the upper tie-rod of the anti-roll bar return tie-rod,
– the upper nut on the anti-roll bar return tie-rod,
– the wheel sensor wire (**ABS** fitting).

Tighten the bolts and nuts to the recommended torque.

Refit the wheel.

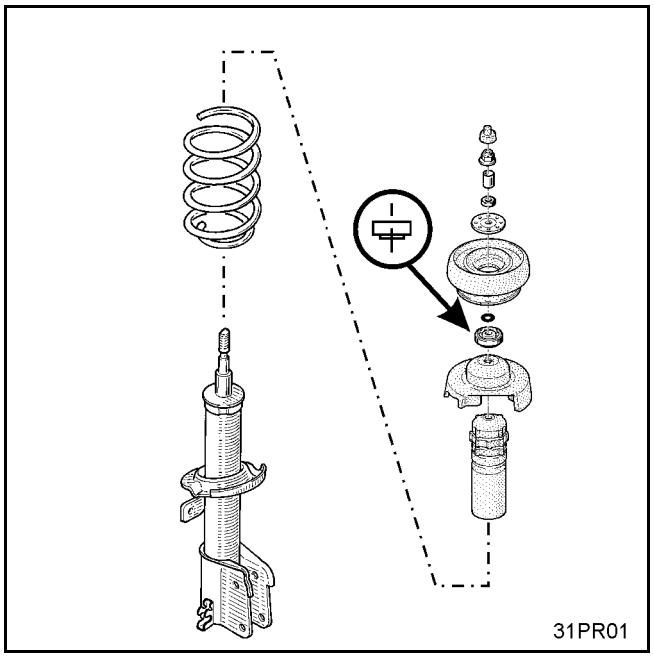
Tighten the wheel bolts to the recommended torque.

Left-hand side

Refit:
– the coolant tank,
– the coolant tank mounting bolt.

EQUIPMENT REQUIRED
Spring compressor

TIGHTENING TORQUES (in daNm)	
Shock absorber rod nut	6



REMOVAL

Remove the spring and shock absorber assembly (refer to the relevant procedure).

Fit the spring and shock absorber assembly vertically in a vice.

Press down on the spring until it detaches onto the cup mountings.

Remove:
– the shock absorber rod nut,
– the spacer,
– the washer,
– the bearing,
– the upper cup,
– the spring,
– the dust seal.

NOTE:
Shock absorbers are stored horizontally. Under these conditions, it is possible that shock absorbers designed to work vertically become drained.

As a result, you just need to manually pump the shock absorber rod a few times in a vertical position before fitting the spring.

REFITTING

Refit:
– the dust seal,
– the spring,
– the upper cup,
– the bearing (**take care to observe the direction of fitting: collar of the interior cage turned towards the base of the shock absorber**),
– the washer,
– the spacer,
– the shock absorber rod nut.

Tighten the shock absorber rod nut to the recommended torque.

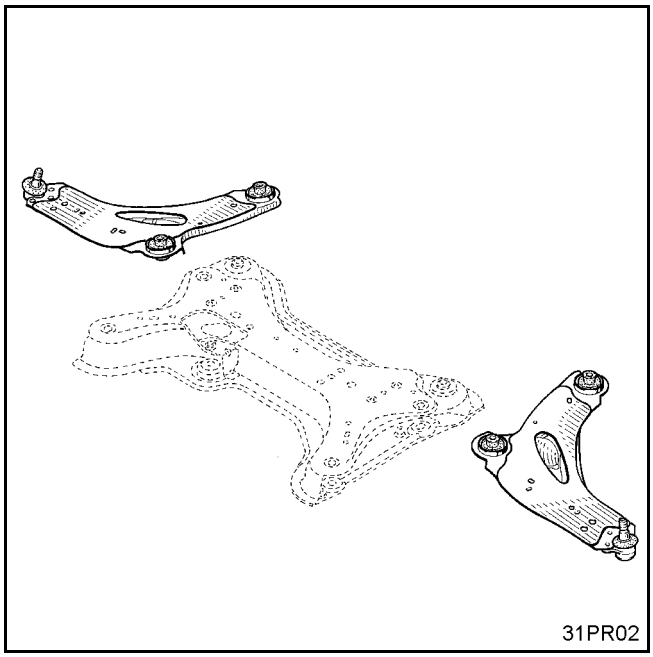
Position the spring in the stops of the upper and lower cups.

Decompress the spring.

Refit the spring and shock absorber assembly (refer to the relevant procedure).

SPECIAL TOOLING REQUIRED	
T. Av. 476	Ball joint extractor

TIGHTENING TORQUES (in daNm)	
Lower ball joint nut	10.5
Lower arm bolt on sub-frame	18
Wheel bolt	14.2



REMOVAL

Remove the wheel.

Unclip the wheel sensor wire (**ABS** equipment).

Remove:
– the lower ball joint nut,
– the arm mounting bolts on the sub-frame.

Release the lower ball joint.

Remove the lower arm.

REFITTING

Refit:
– the lower arm,
– the arm mounting bolts on the sub-frame,
– the lower ball joint nut,
– the wheel sensor wire (**ABS** equipment).

Tighten the bolts and nuts to the recommended torque.

Refit the wheel.

Tighten the wheel bolts to the recommended torque.

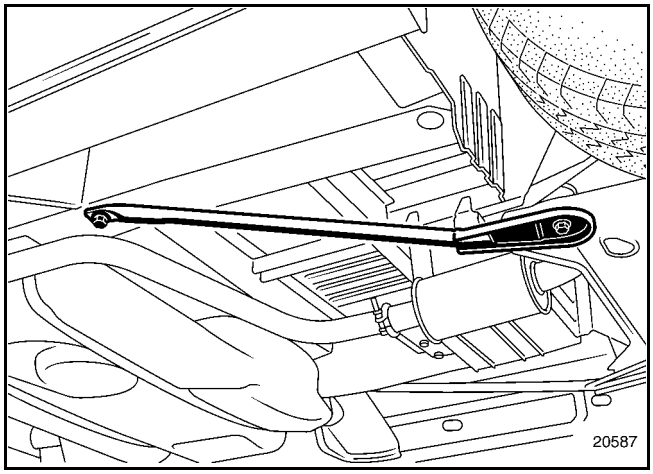
SPECIAL TOOLING REQUIRED	
T. Av. 476	Ball joint extractor
EQUIPMENT REQUIRED	
Component jack	

TIGHTENING TORQUES (in daNm)	▽
Anti-roll bar return tie-rod nut	4.4
Lower arm bolt on the sub-frame	18
Sub-frame rear mounting bolt	12
Sub-frame front mounting bolt	10.5
Steering rack mounting bolt	18
Engine tie bar mounting bolt	10.5
Bearing mounting bolt	2.1
Sub-frame tie-rod mounting bolt (stiffener bar)	10.5
Mounting bolt on the heat shield	1.5
Wheel bolt	14.2

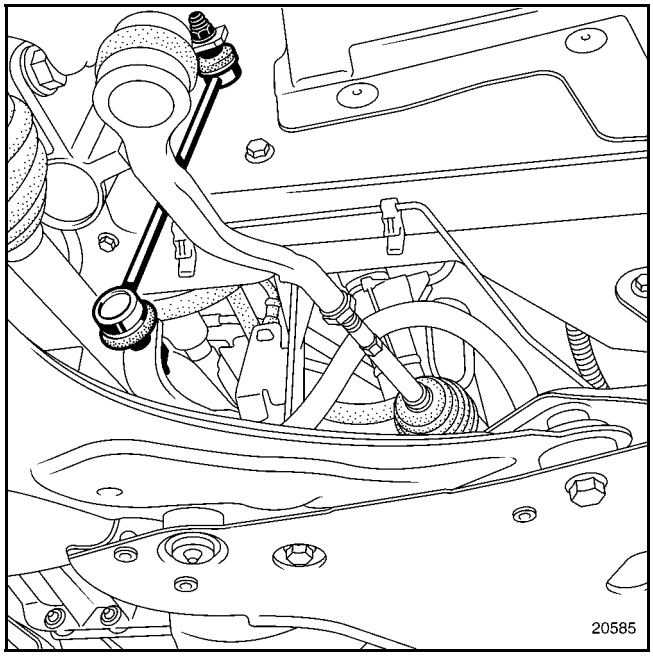
REMOVAL

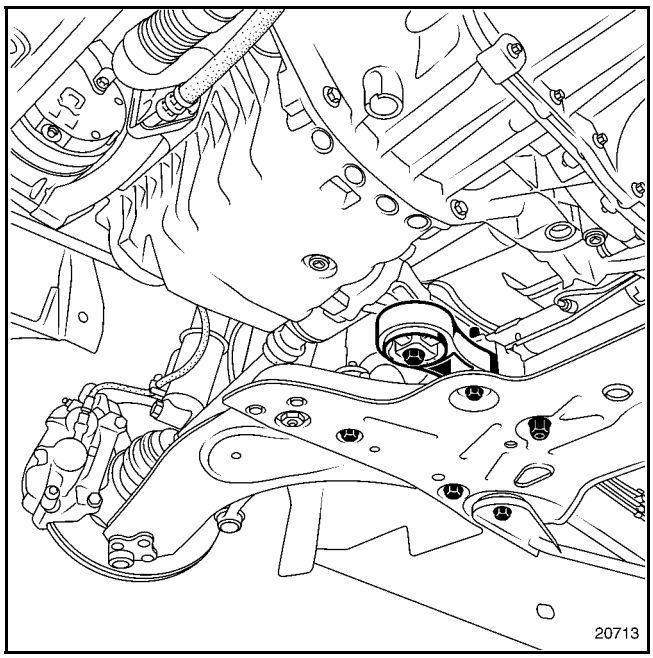
Remove the wheels.

Unclip:
– the wheel sensor wires (**ABS** equipment),
– the brake pipes on the sub-frame.

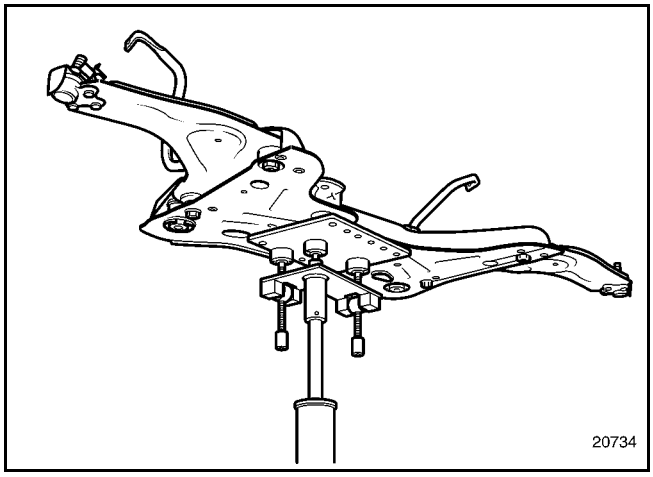


Unscrew the rear bolts on the two sub-frame stiffener bars.





Remove:
– the lower nuts on the anti-roll bar return tie-rod,
– the heat shield on the steering rack,
– the steering rack mounting bolts on the sub frame,
– the engine tie bar.



Position the component jack beneath the sub-frame and fix it firmly into place.

Remove:
– the two sub-frame front mounting bolts,
– the two sub-frame rear mounting bolts.

Turn the two sub-frame stiffener bars towards the outside.

Lower the sub-frame and anti-roll bar assembly by **20 centimetres**, pivoting the anti-roll bar to prevent it from attaching to the steering rack.

Remove:
– the four bearing mounting bolts.
– the anti-roll bar and bearings

REFITTING

Refit:
– the anti-roll bar and bearings,
– the four bearing mounting bolts.

Tighten the four bearing mounting bolts to the correct torque.

Refit the sub-frame, and anti-roll bar assembly whilst turning the anti-roll bar to make sure it does not make contact with the bulkhead.

NOTE:
Ensure the correct positioning of the sub-frame with relation to the casing and the front silentbloc fittings.

Refit:
– the two sub-frame stiffener bars,
– the two sub-frame rear mounting bolts,
– the two sub-frame front mounting bolts.

Tighten to the recommended torque:
– the two sub-frame rear mounting bolts,
– the two sub-frame front mounting bolts,
– the rear bolts of the two sub-frame stiffener bars.

Remove the component jack.

Refit:
– the engine tie bar,
– the steering rack mounting bolts on the sub-frame,
– the heat shield on the steering rack,
– the lower nuts on the anti-roll bar return tie-rod,
– the brake pipes on the sub-frame.

Tighten the bolts and nuts to the recommended torque.

Refit the wheels.

Tighten the wheel bolts to the recommended torque.

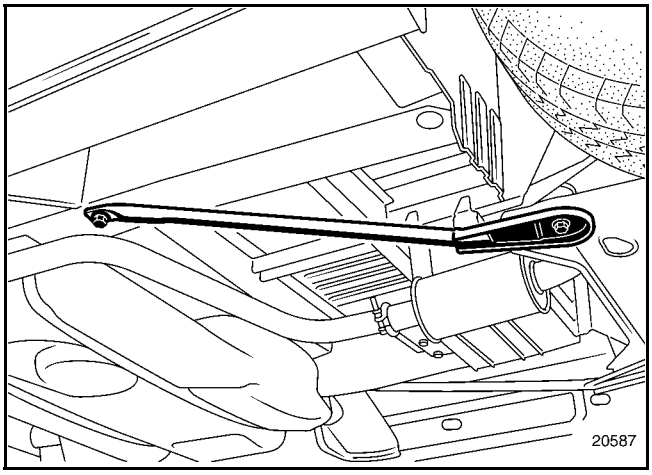
SPECIAL TOOLING REQUIRED	
T. Av. 476	Ball joint extractor
EQUIPMENT REQUIRED	
Component jack	

TIGHTENING TORQUES (in daNm)	▽
Anti-roll bar return tie-rod nut	4.4
Lower ball joint nut	10.5
Lower arm bolt on sub-frame	18
Sub-frame rear mounting bolt	12
Sub-frame front mounting bolt	10.5
Steering rack mounting bolt	18
Engine tie bar mounting bolt	10.5
Bearing mounting bolt	2.1
Sub-frame tie-rod mounting bolt	10.5
Mounting bolt on the heat shield	1.5
Wheel bolt	14.2

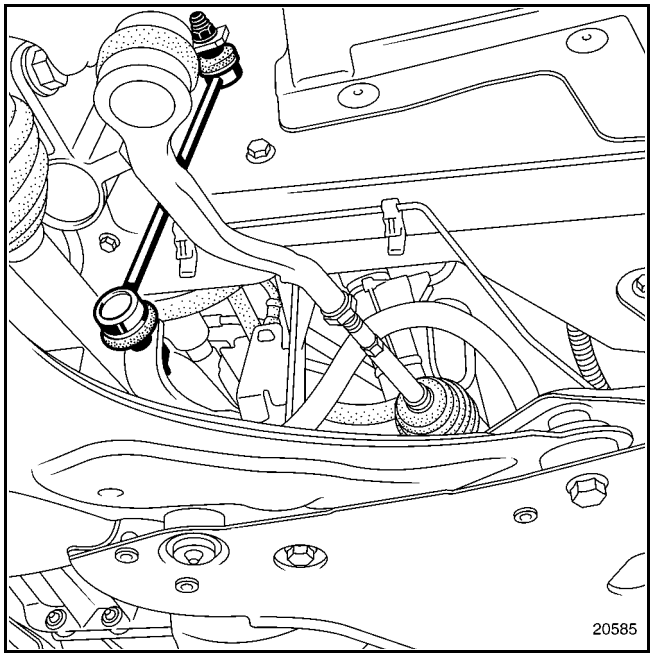
REMOVAL

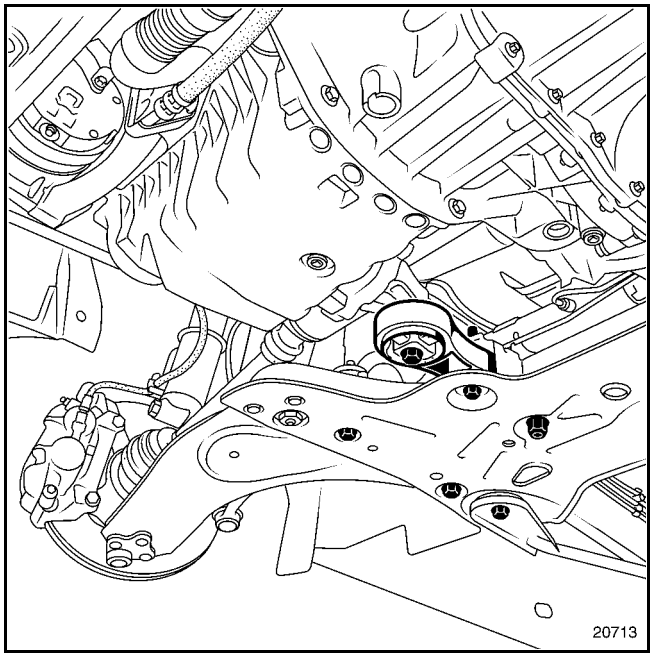
Remove the wheels.

Unclip:
– the wheel sensor wires (**ABS** equipment)
– the brake pipes on the sub-frame.

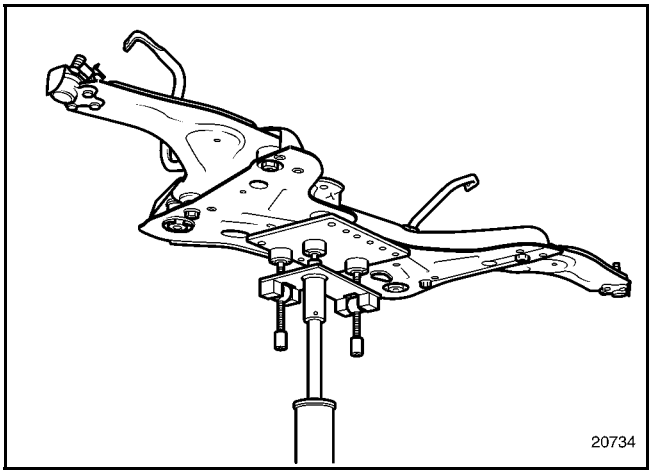


Loosen the rear bolts on the two sub-frame stiffener bars.





Remove:
– the lower ball joint nut,
– the lower nuts on the anti-roll bar return tie-rod,
– the heat shield on the steering rack,
– the steering rack mounting bolts on the sub frame,
– the engine tie bar.



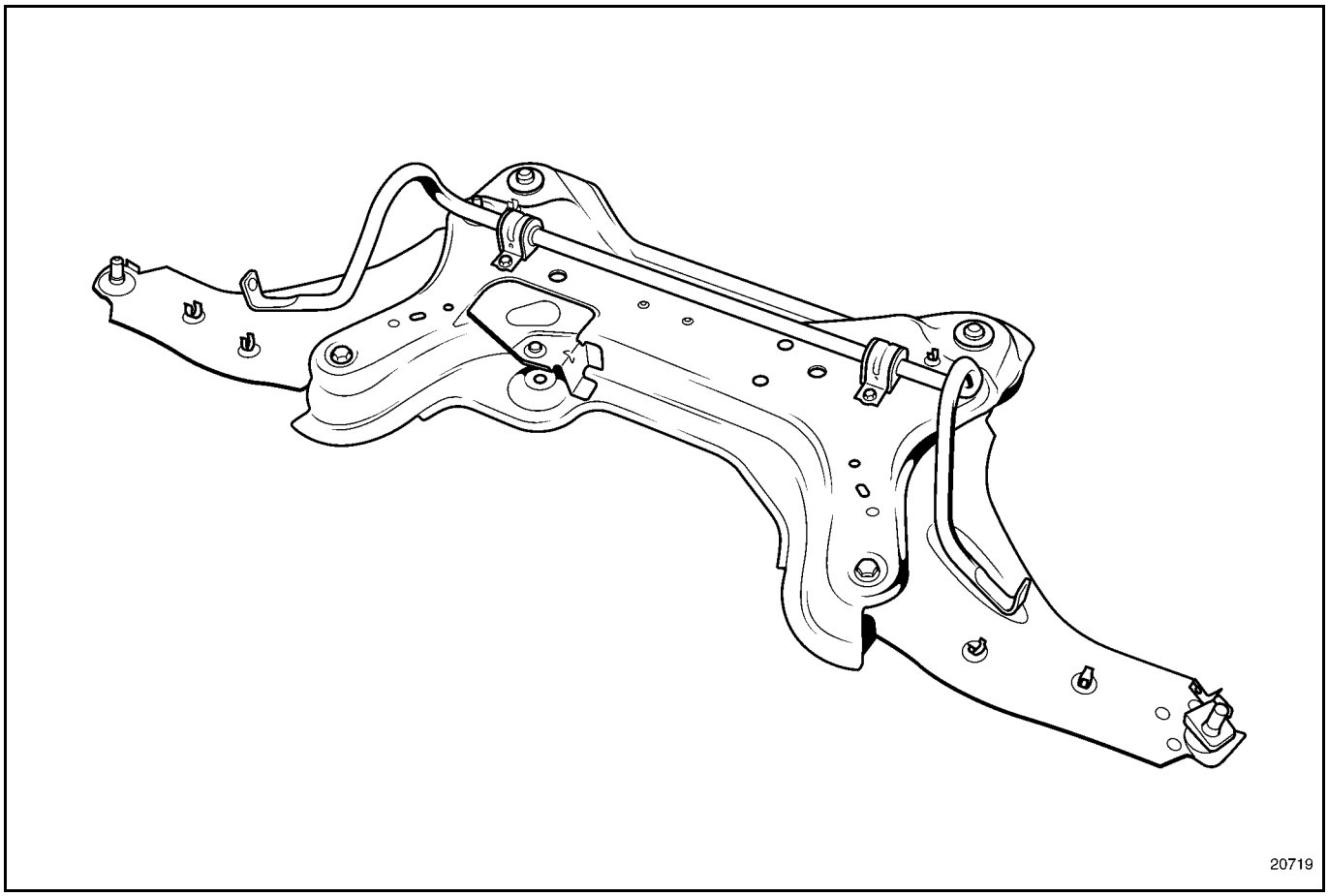
Position the component jack beneath the sub-frame and fix it firmly into place.

Release the two lower ball joints.

Remove:
– the two sub-frame front mounting bolts,
– the two sub-frame rear mounting bolts.

Turn the two sub-frame stiffener bars towards the outside.

Lower the sub-frame, arm and anti-roll bar assembly whilst turning the anti-roll bar to make sure it does not hook on to the steering rack.



Remove:
– the four arm mounting bolts,
– the two arms,
– the four bearing mounting bolts,
– the anti-roll bar and bearings.

REFITTING

Refit:
– the two arms,
– the four arm mounting bolts,
– the anti-roll bar and bearings,
– the four bearing mounting bolts.

Tighten the four bearing mounting bolts to the correct torque.

Refit the sub-frame, arm and anti-roll bar assembly whilst turning the anti-roll bar to make sure it does not make contact with the bulkhead.

NOTE:
Ensure the correct positioning of the sub-frame with relation to the casing and the front silentbloc fittings.

Refit:
– the two sub-frame stiffener bars,
– the two sub-frame rear mounting bolts,
– the two sub-frame front mounting bolts.

Tighten to the recommended torque:
– the two sub-frame rear mounting bolts,
– the two sub-frame front mounting bolts,
– the rear bolts of the two sub-frame stiffener bars.

Remove the component jack.

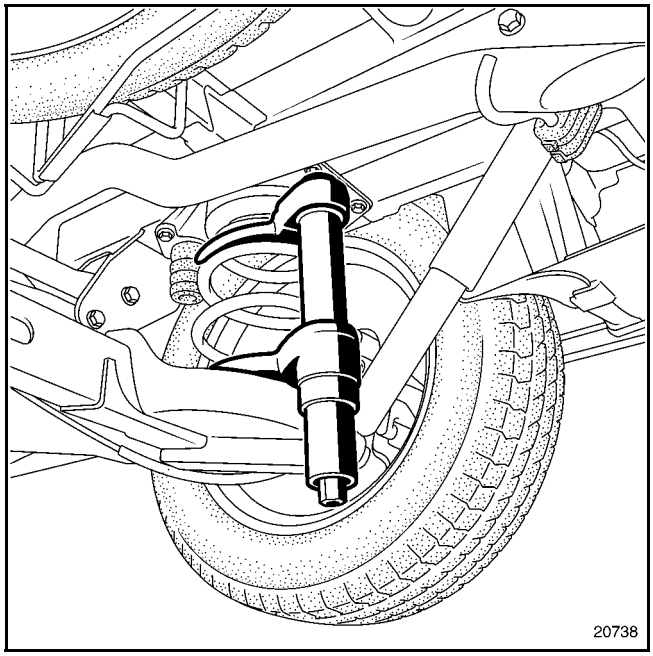
Refit:
– the engine tie bar,
– the steering rack mounting bolts on the sub frame,
– the heat shield on the steering rack,
– the lower ball joint nut,
– the lower nuts on the anti-roll bar return tie-rod,
– the brake pipes on the sub-frame.

Tighten the bolts and nuts to the recommended torque.

Refit the wheels.

Tighten the wheel bolts to the recommended torque.

EQUIPMENT REQUIRED
Spring compressor



REMOVAL

Press down on the spring until it detaches onto the cup mountings.

Remove the spring and the tool.

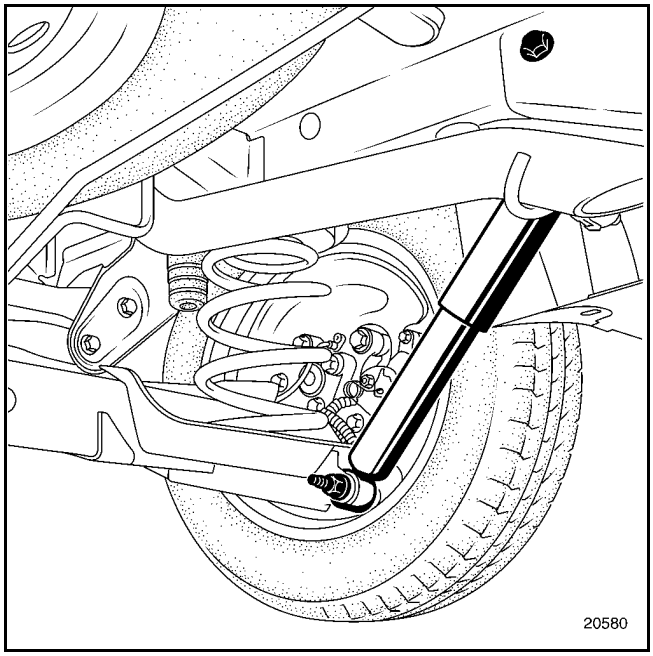
REFITTING

Replace the spring and the tool.

Decompress the springs.

TIGHTENING TORQUE (in daNm)	
Shock absorber mounting bolt	18

REMOVAL

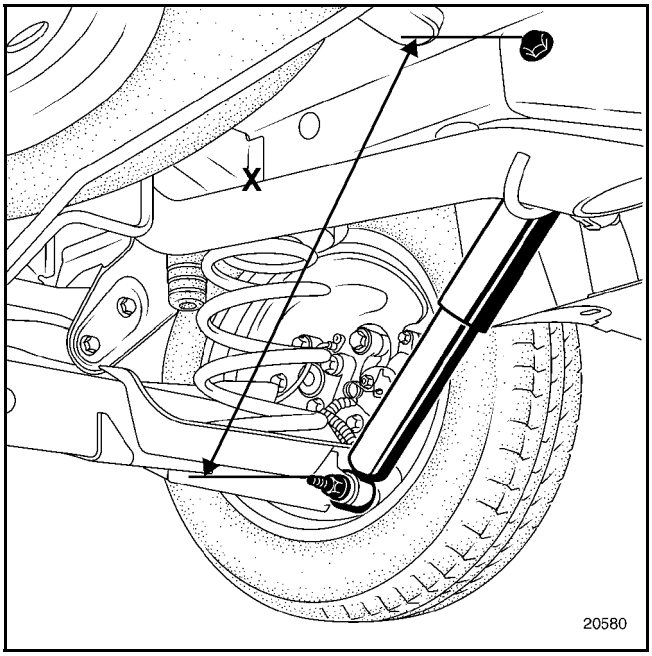


Put the car on a four-post lift.

Remove:
– the shock absorber mounting bolts,
– the shock absorber.

REFITTING

Refit:
– the shock absorber,
– the shock absorber mounting bolts, without tightening them.



Measure dimension X between the shock absorber mounting bolt centreline.

Compress or load the vehicle to obtain the measurement:
X = 397 ± 2 mm.

Torque-tighten the shock absorber mounting bolts.

EQUIPMENT REQUIRED
Hydraulic jack
Spring compressor

TIGHTENING TORQUES (in daNm)	▽
Wheel bolt	14.2
Brake pipes	1.4
Shock absorber mounting bolt	1.8
Anti-lock Braking System sensor mounting bolt	0.8
Tie-rod mounting bolt	10.5
Rear axle mounting bolt	10.5

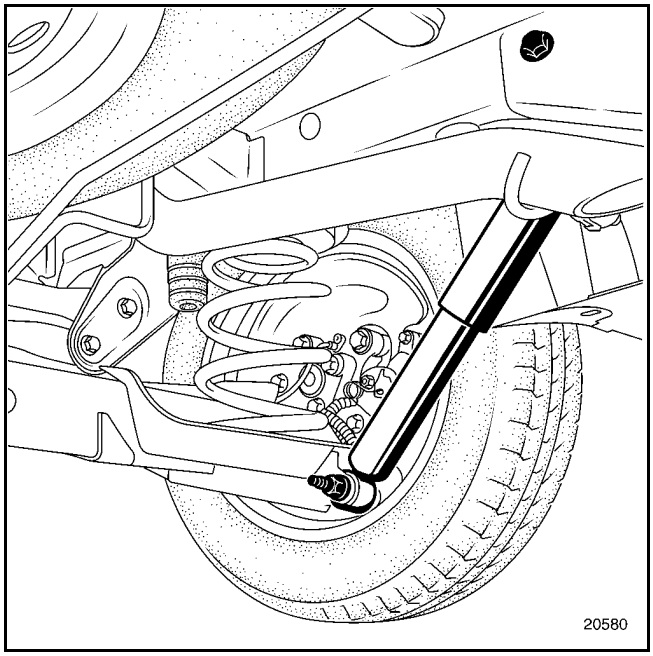
REMOVAL

Put the car on a two-post lift.

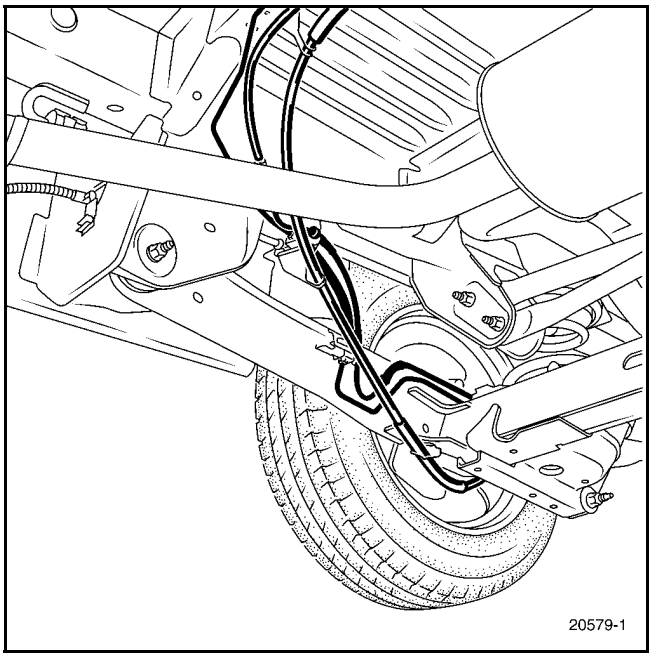
Fasten the vehicle on a two-post lift.

Activate the brake pedal using a pedal press (this has the effect of limiting the flow of brake fluid).

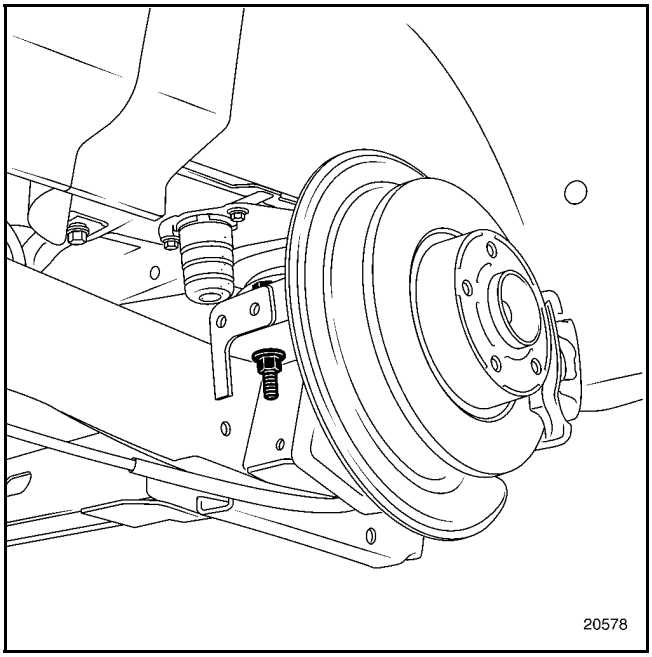
Remove:
– the wheels;
– the springs (refer to the relevant procedure),

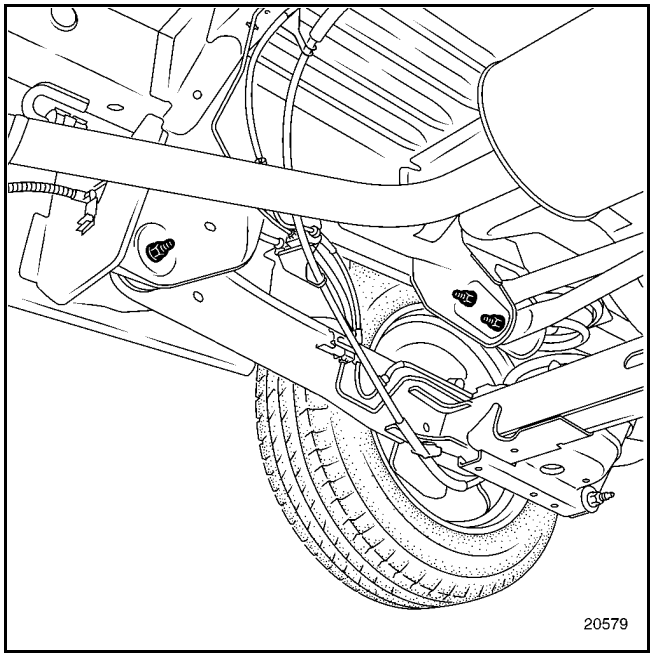


– the shock absorber mounting bolts,
– the shock absorbers,



– the wheel sensors (Anti-lock Braking System equipment),
– the compensator control lever nut (except Anti-lock Braking System equipment),
– the handbrake cables,
– the flexible brake pipe hoses.





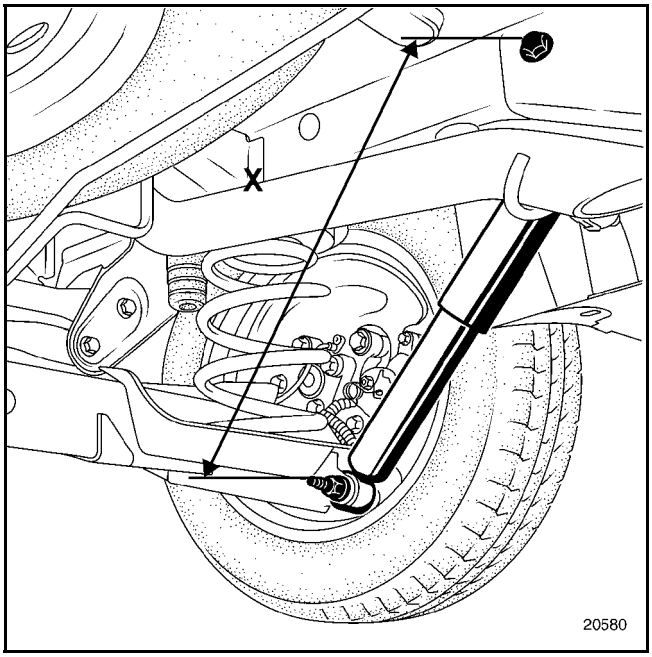
Remove:
– the tie-bar mounting bolts,
– the tie-rod.

Position the hydraulic jack beneath the rear axle and fix it firmly into place.

Remove:
– the rear axle mounting bolts,
– the rear axle.

REFITTING

Refit:
– the rear axle,
– the rear axle mounting bolts,
– the tie-rod,
– the tie-rod mounting bolts (**bolt head towards the rear of the vehicle**),
– the flexible brake pipe hoses,
– the handbrake cables,
– the wheel sensors (Anti-lock Braking System equipment),
– the compensator control lever sensors (except Anti-lock Braking System equipment),
– the shock absorbers,
– the shock absorber mounting bolts, without tightening them,
– the springs,
– the wheels.



Measure dimension X between the shock absorber mounting bolt centreline.

Compress or load the vehicle to obtain the measurement:
X = 397 ± 2 mm.

Tighten to torque:
– the rear axle mounting bolts,
– the shock absorber mounting bolts.

Bleed the brake circuit (refer to the relevant method).

Adjust the handbrake control (refer to the relevant procedure).

Check the angles of the rear axle geometry.