



3 Chassis

36 STEERING ASSEMBLY

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STEERING ASSEMBLY

Power assisted steering rack

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SPECIAL TOOLING REQUIRED

T. Av. 476 Ball joint extractor

TIGHTENING TORQUES (in daNm)



Wheel bolt	9
Steering ball joint nut	3.7
Steering ball joint lock nut (on the axial ball joint)	5.3
Steering rack mounting bolt	5
Retractable shaft lower mounting bolt (steering column universal joint)	2.1

Put the vehicle on a two-post lift.

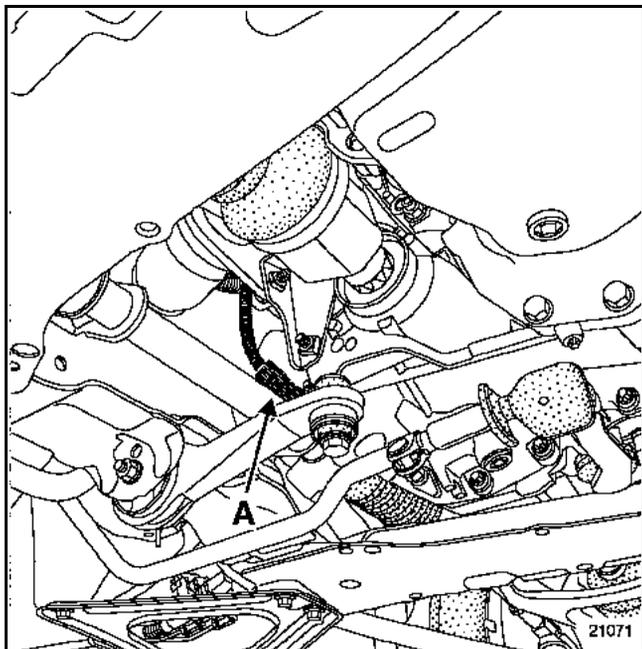
Lock the position of the steering wheel.

REMOVAL

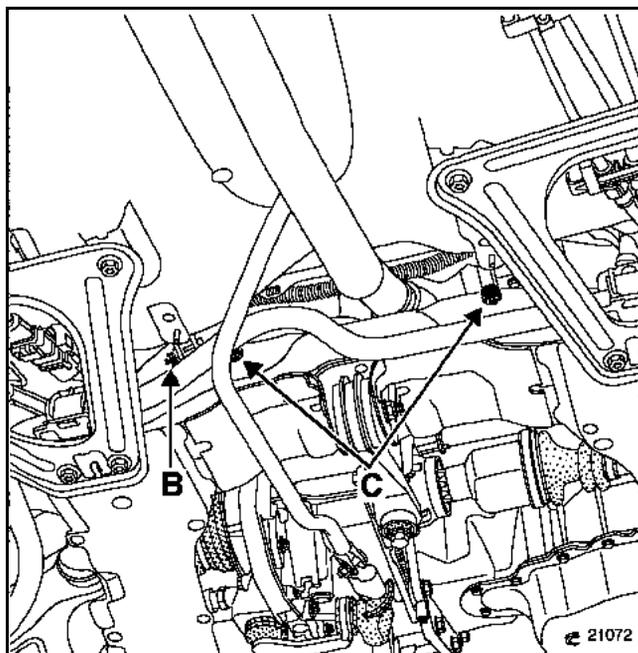
Remove:

- the two front wheels,
- the steering ball joint nuts.

Disconnect the steering ball joints using tool **T. Av. 476**.



Disconnect the steering wheel angle sensor connector (A).



Remove:

- the universal joint eccentric bolt (B),
- the steering rack mounting bolts (C) on the sub-frame,
- the steering rack.

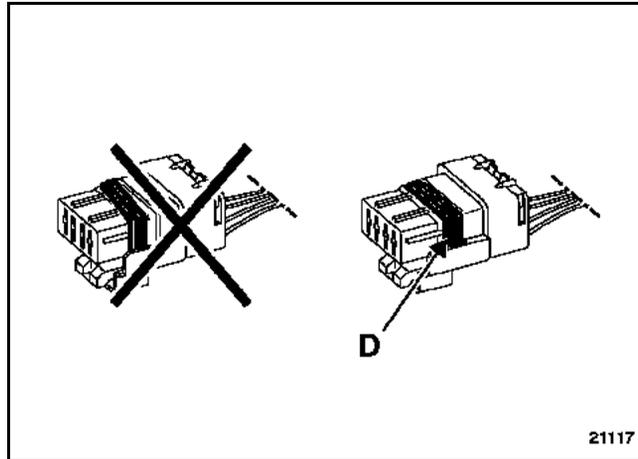
REFITTING

Refit:

- the steering rack,
- the steering rack mounting bolts on the sub-frame,
- the ball joints,
- the universal joint,
- the universal joint eccentric bolt.

Check that the steering wheel is still in the same position.

Tighten all nuts and bolts to torque.



IMPORTANT: you must ensure that the connectors are mechanically sound and free from traces of dirt before connecting them.

IMPORTANT: you must ensure that the seal (D) on the steering wheel angle connector is in the correct position and in good condition.

Connect the steering wheel angle sensor connector.

Refit the wheels and tighten the wheel bolts to torque.

Check the parallelism of the front wheels and adjust if necessary.

STEERING ASSEMBLY

Power assisted steering column

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TIGHTENING TORQUES (in daNm)



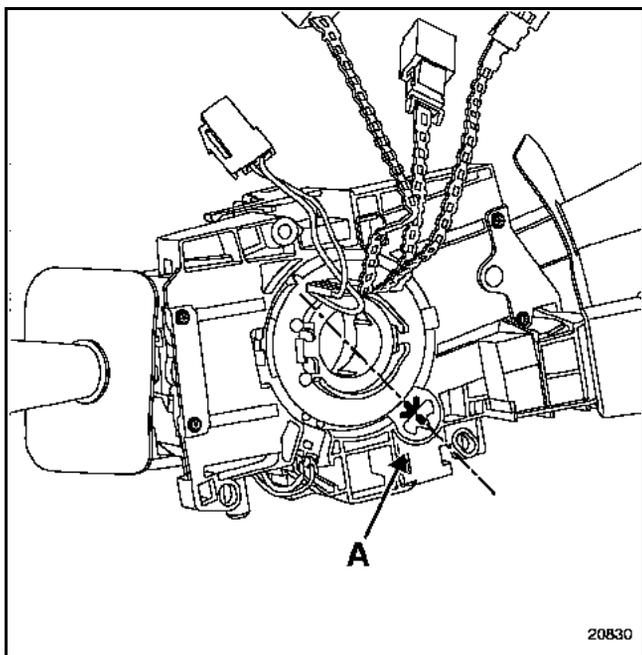
Steering wheel mounting bolt	4.4
Retractable shaft upper mounting bolt	3
Steering column mounting bolt	2.1

IMPORTANT: pyrotechnic systems (air bags and pretensioners) must not be handled near a heat source or flame; they may be triggered.

IMPORTANT: you must lock the pyrotechnic systems with the fault finding tool before removing the dashboard (consult **section 88** for instructions).

REMOVAL

Disconnect the battery.



IMPORTANT: when removing the dashboard, you will have to check that the rotary switch mark (A) is in the neutral position before removing the steering column.

Remove the dashboard (consult the relevant procedure).

Remove the air duct located under the steering column.

Move the steering wheel to align the wheels and then mark the position of the steering wheel with a chalk line.

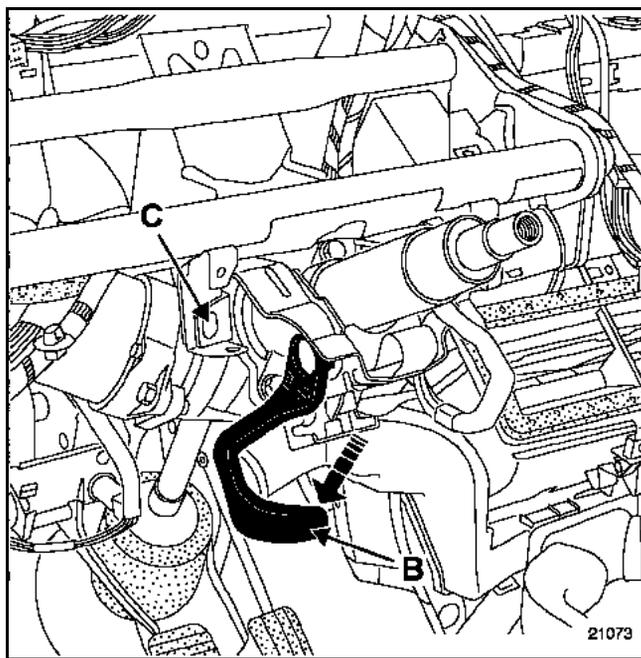
Move the steering wheel until the retractable shaft upper mounting bolt can be reached, and then remove this bolt.

Move the steering wheel back into the previous position (against the chalk line).

Disconnect:

- the torque sensor,
- the braking assistance motor connection.

Unclip and disconnect the ignition key switch connection.

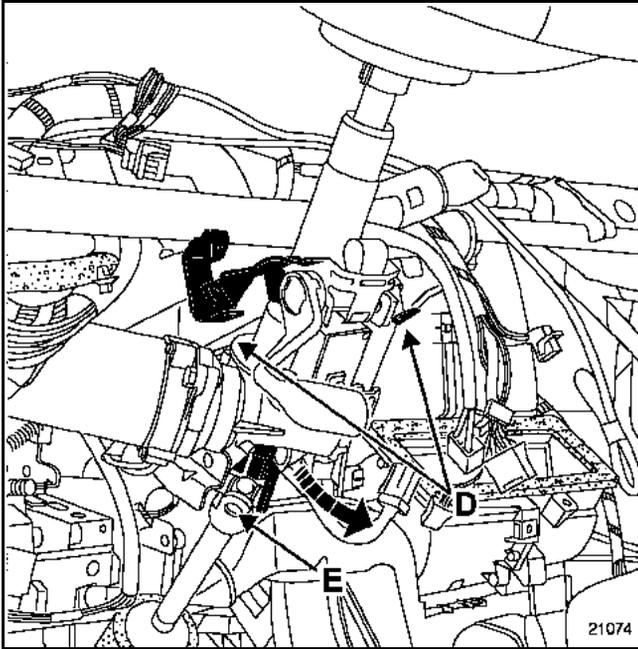


IMPORTANT: you must lock the steering column position lever (B) before removing the column mountings.

Remove the steering column bolt (C) on the cross member.

NOTE: there is no need to refit this bolt.

Remove the steering column mounting bolts.



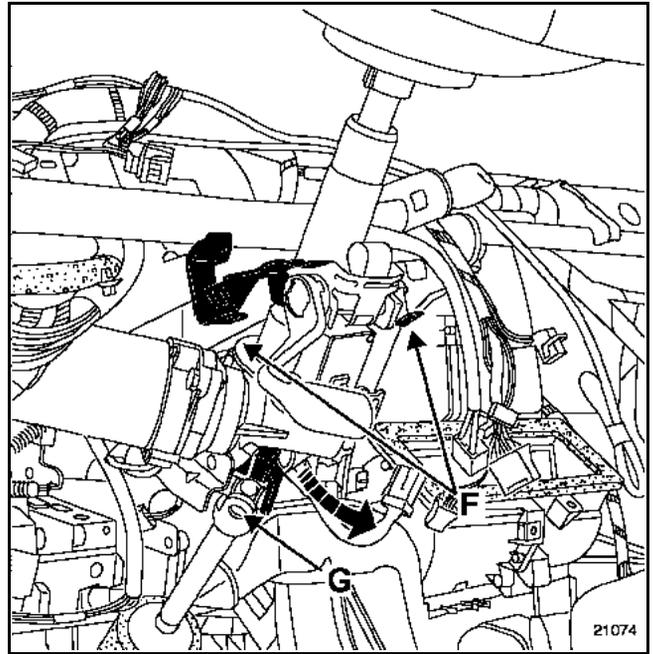
Unclip the wiring harness attachments on the two positioning lugs (D).

Lift the steering column to disengage the two positioning lugs.

Turn the column to disconnect the retractable shaft (E).

Remove the steering column.

REFITTING



Refit the steering column on the two positioning lugs (F).

Place the steering wheel back in position temporarily.

IMPORTANT: the steering wheel splines are fitted with foolproofing devices. The steering wheel should enter the splines easily.

Move the steering column to align the steering wheel and the chalk mark.

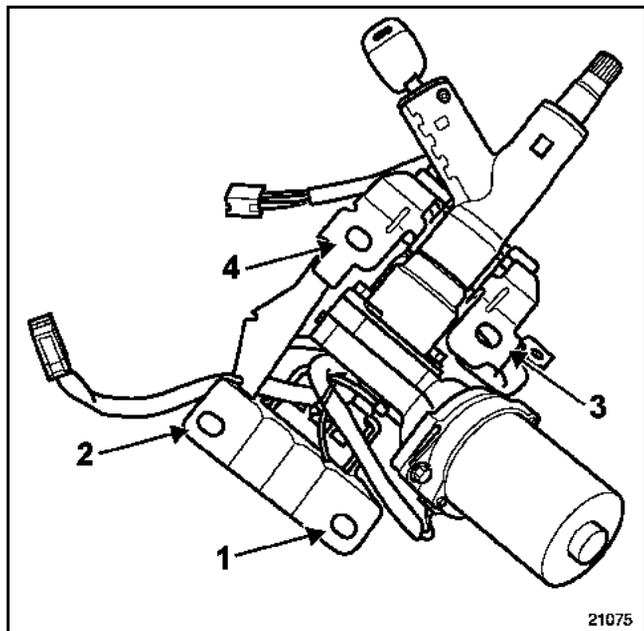
Insert the retractable shaft into the steering column splines (G).

Turn the column and refit one mounting bolt.

Look to check that the wheel alignment and the chalk mark on the steering wheel are in the correct positions. Adjust the alignment if necessary.

Refit the steering column mounting bolt.

IMPORTANT: you must check that the steering column position lever is still locked before tightening the bolts. If it is not, tighten bolts **1, 2, 3** and **4** in that order, then lock the position lever.



Tighten the steering column mounting bolts to torque.

Clip the wiring harness attachments on the two positioning lugs.

Clip and connect the ignition key switch connection.

IMPORTANT: you must ensure that the connectors are mechanically sound and free from traces of dirt before connecting them.

Connect:

- the torque sensor,
- the braking assistance motor connection.

Move the steering wheel until the retractable shaft upper mounting bolt can be reached and refit the bolt, ensuring that it is lightly coated with brake lubricant.

Tighten the retractable shaft upper mounting bolt to torque.

Move the steering wheel back into the previous position (against the chalk line).

Refit the air duct located under the steering column.

Refit the dashboard (consult the relevant procedure).

IMPORTANT: remember to check for foreign bodies, such as bolts or clips, when refitting the air bag modules. The air bag module connectors and safety locks must be correctly positioned and secured.

IMPORTANT: the steering wheel bolts must be replaced every time the steering wheel is removed and then tightened to torque.

WARNING: pyrotechnic systems (air bags and pretensioners) must not be handled near to a heat source or flame; they may be triggered.

IMPORTANT: perform a check with the fault finding tool before locking the pyrotechnic systems computer. If everything is in order, unlock the computer. If not, refer to the fault finding section.

WARNING: if these instructions are not followed the system may not operate normally and could even cause accidental triggering.

Check the parallelism of the front wheels and adjust if necessary.

TIGHTENING TORQUES (in daNm)



Retractable shaft upper mounting bolt	3
Retractable shaft lower mounting bolt (steering column universal joint)	2.1

REMOVAL

Remove the retractable shaft lower mounting bolt (steering column universal joint).

NOTE: you do not need to remove the dashboard before carrying out the following operations.

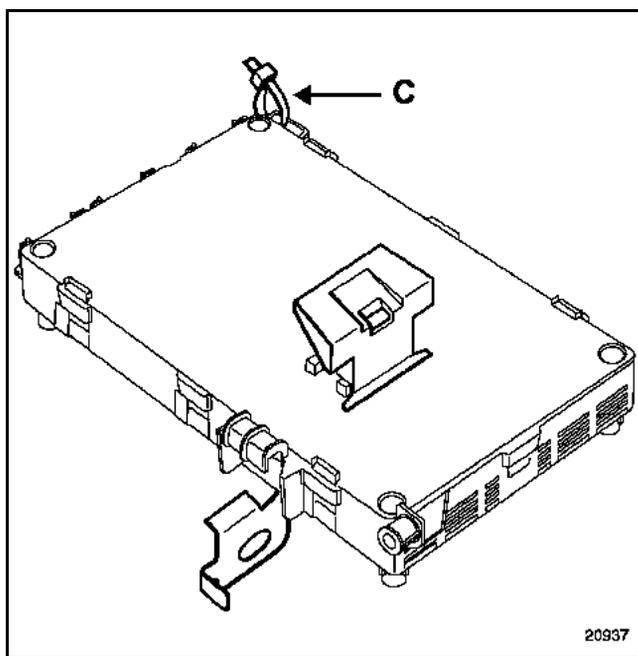
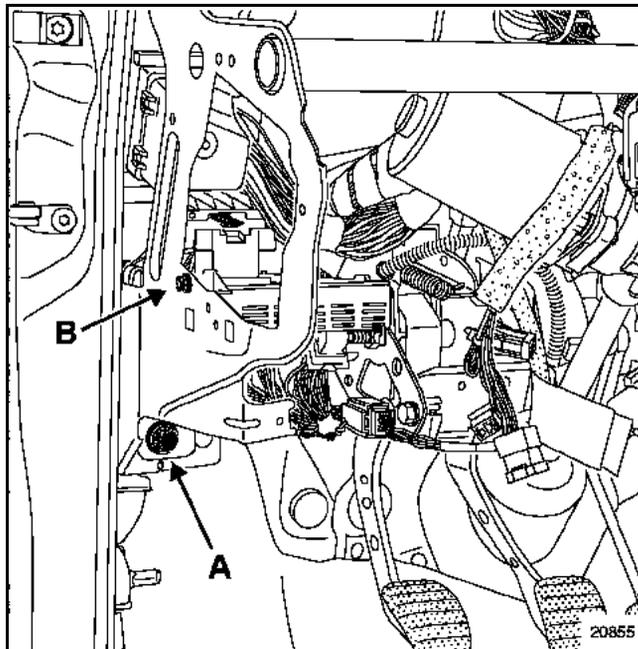
Push the left-hand seat back as far as it will go.

Remove:

- the bonnet opening handle,
- the fuse box access flap,
- the lens unit adjustment control mounting.

Partially remove:

- the left-hand side door seal,
- the A-pillar lining.



Remove:

- the UCH support mounting bolt (A),
- the UCH mounting bolt (B),
- and the clip (C) if necessary.

Partially remove the UCH.

IMPORTANT: you must remove the air duct from the side of the heating and ventilation unit, but only after the left-hand side air louver.

Remove the air duct located under the steering column.

Move the steering wheel to align the wheels and then mark the position of the steering wheel with a chalk line.

Move the steering wheel until the retractable shaft upper mounting bolt can be reached, and then remove this bolt.

Move the steering wheel back into the previous position (against the chalk line).

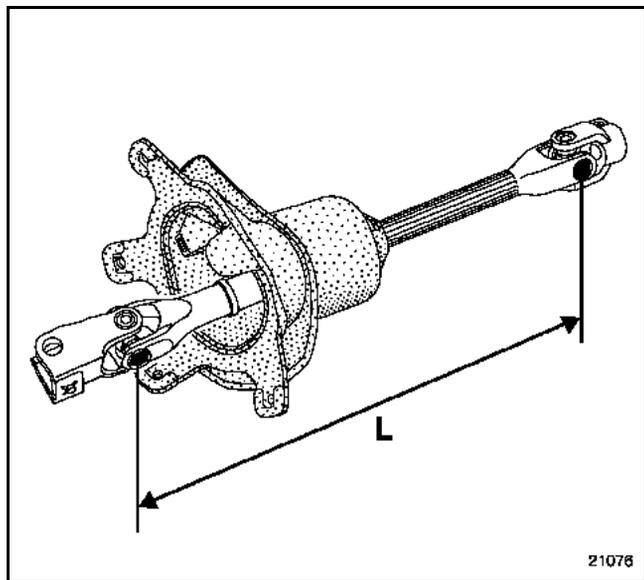
Remove the universal joint from the steering rack.

Remove the retractable shaft from the steering column splines by pulling it downwards.

Remove the retractable shaft from the steering rack by pulling it upwards.

Remove the retractable shaft and its gaiter.

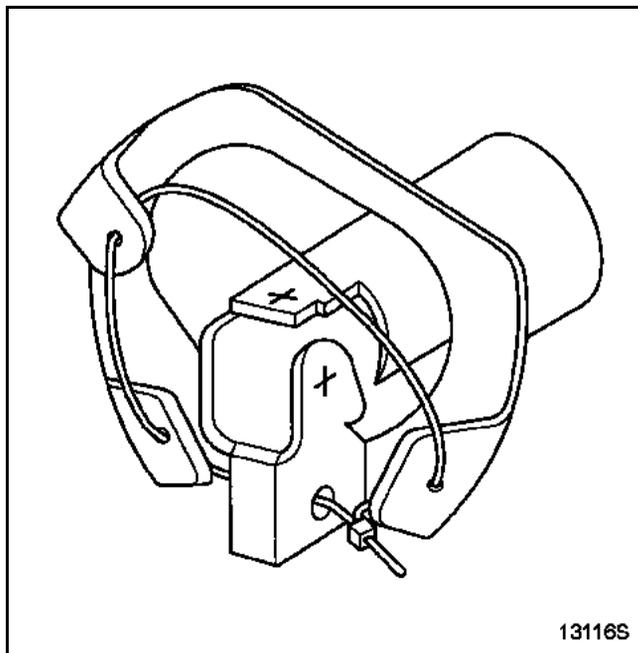
CHECKING



Check the centre-to-centre distance (L). If this measurement is not correct, replace the retractable shaft.

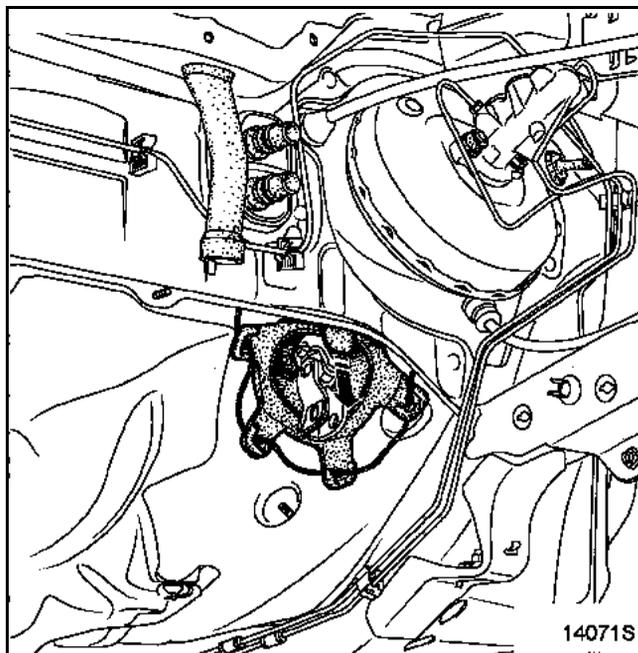
	Centre-to-centre
Left-hand drive	363.6 ± 1.5
Right-hand drive	386.6 ± 1.5

REFITTING



Join the gaiter lugs and the universal joint with a piece of string.

Fit the retractable shaft into the bulkhead passage.



Cut the string to fit the gaiter in place.

Refit the retractable shaft lower mounting bolt (steering column universal joint), but do not tighten.

Insert the retractable shaft into the steering column splines by pulling it upwards.

Move the steering wheel until the retractable shaft upper mounting bolt can be reached, and then refit this bolt.

Tighten the retractable shaft upper mounting bolt to torque, ensuring that it is lightly coated with brake lubricant.

Move the steering wheel back into the previous position (against the chalk line).

Tighten the retractable shaft lower mounting bolt (steering column universal joint) to torque.

Refit:

- the air duct,
- the UCH,
- the lens unit adjustment control mounting,
- the fuse box access flap,
- the A-pillar lining,
- the left-hand side door seal,
- the bonnet opening handle.

Check the parallelism of the front wheels and adjust if necessary.

TIGHTENING TORQUES (in daNm)



Computer mounting bolt

0.8

REMOVAL

Push the left-hand seat back as far as it will go.

Disconnect the battery.

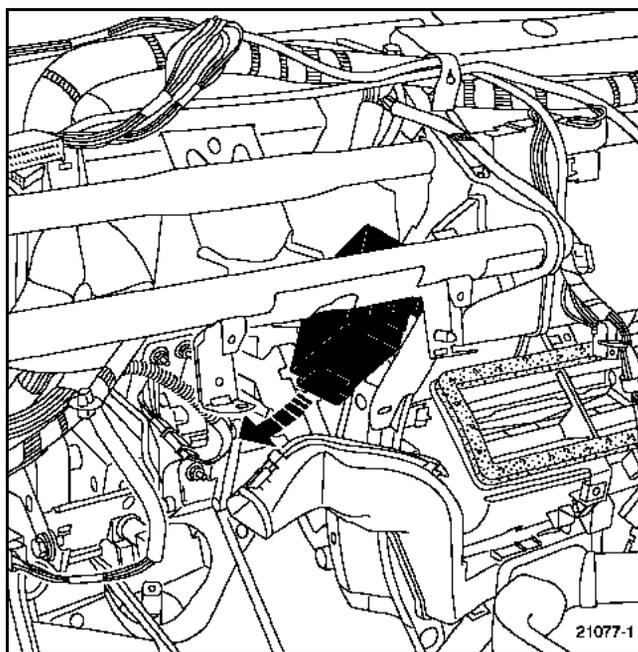
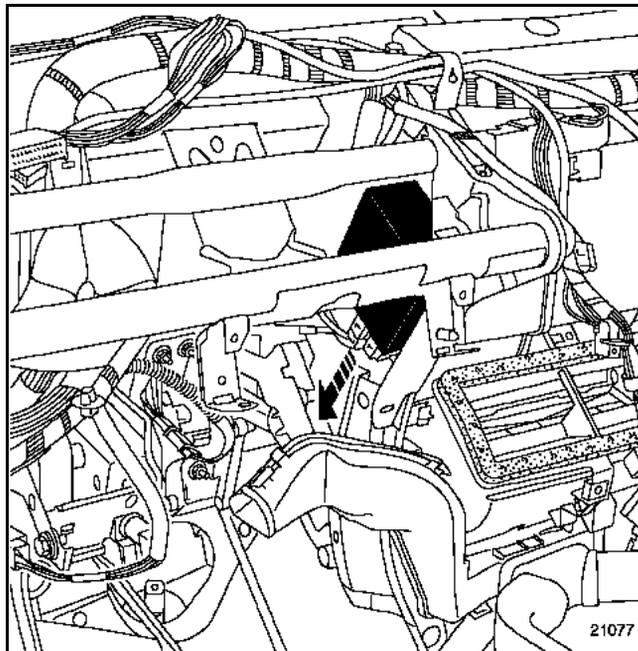
Remove:

- the upper section of the dashboard (consult the relevant procedure),
- the dashboard.

NOTE: you do not need to remove the lower section of the dashboard before carrying out the following operations.

Remove the computer mounting bolt.

Disconnect the three computer connectors.



To remove the computer, push it downwards, pass it between the bulkhead and the retractable shaft and take it out on the left-hand side of the shaft.

REFITTING

Proceed in the reverse order to removal.