RENAULT

0 General vehicle information

01A VEHICLE MECHANICAL SPECIFICATIONS

01C VEHICLE BODYWORK SPECIFICATIONS

01D MECHANICAL INTRODUCTION

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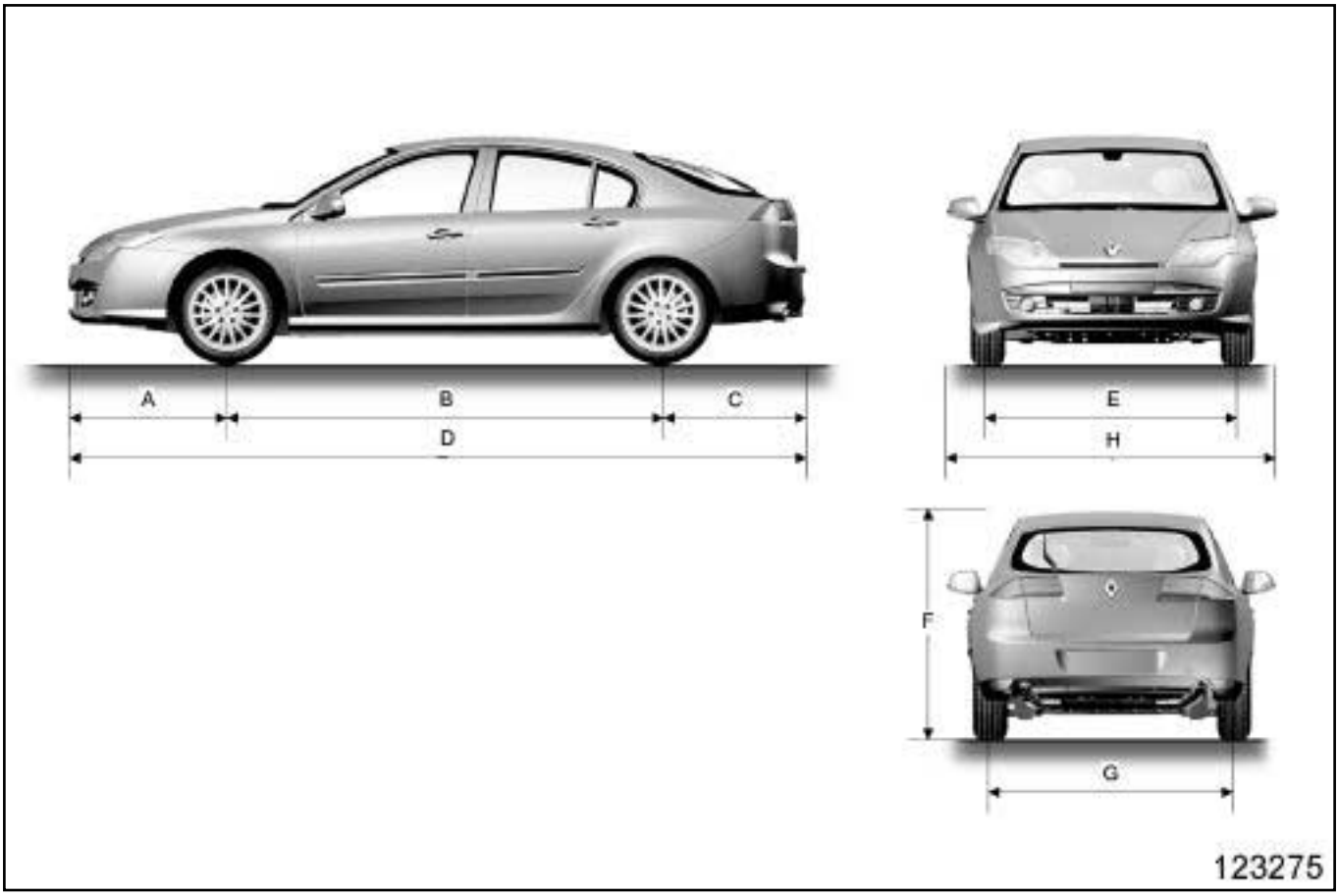
X91

AUGUST 2009 **EDITION ANGLAISE**

LAGUNA III - Section 0

Contents

B91



123275

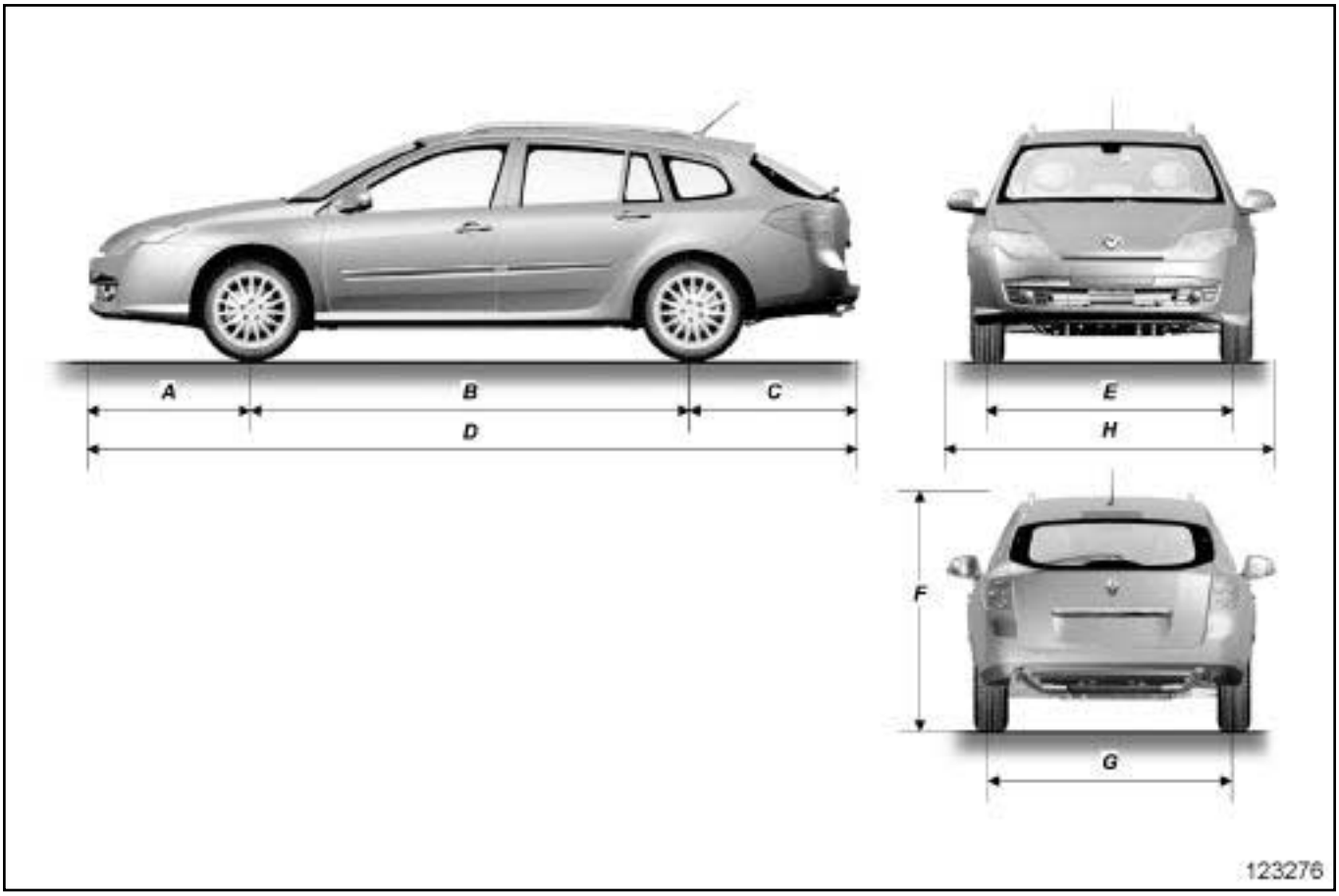
Dimensions in metres:

(**A**)	**1.014**
(**B**)	**2.756**
(**C**)	**0.925**
(**D**)	**4.695**
(**E**)	**1.557**
(**F**) (unladen)	**1.445**
(**G**)	**1.512**
(**H**)	**1.811**

B91

Engine			Gearbox		Emissions standard
Engine type	**Engine suffix**	**Cubic capacity(cc)**	**Gearbox type**	**Gearbox suffix**	
F4R	800	**1998**	PK4	008	Euro 4
	802				Euro 5
	811		AJ0	007, 018	Euro 4
	813				Euro 3, 4 and 5
K4M	824	**1598**	TL4	016, 019	Euro 3 and 4
K9K	780	**1461**		013	Euro 1, 3 and 4
	782			013, 022	Euro 5
M4R	704	**1997**		017, 020	Euro 3 and 4
	726				Euro 5
M9R	742	**1995**	PK4	007	Euro 4
	744				
	746			007, 009	
	748				Euro 3 and 4
	754				
	800			012	Euro 4
	802			007, 009	Euro 4 and 5
	803		AJ0	004	Euro 4
	805				Euro 4 and 5
	806		PK4	020	Euro 4
	808			004	
	809		AJ0	004	Euro 4 and 5
	816		PK4	012	
	845		AJ0	004	
	849				
V4Y	713	3498	AJ0	005	Euro 4
V9X	891	2998		006	Euro 5

K91



123276

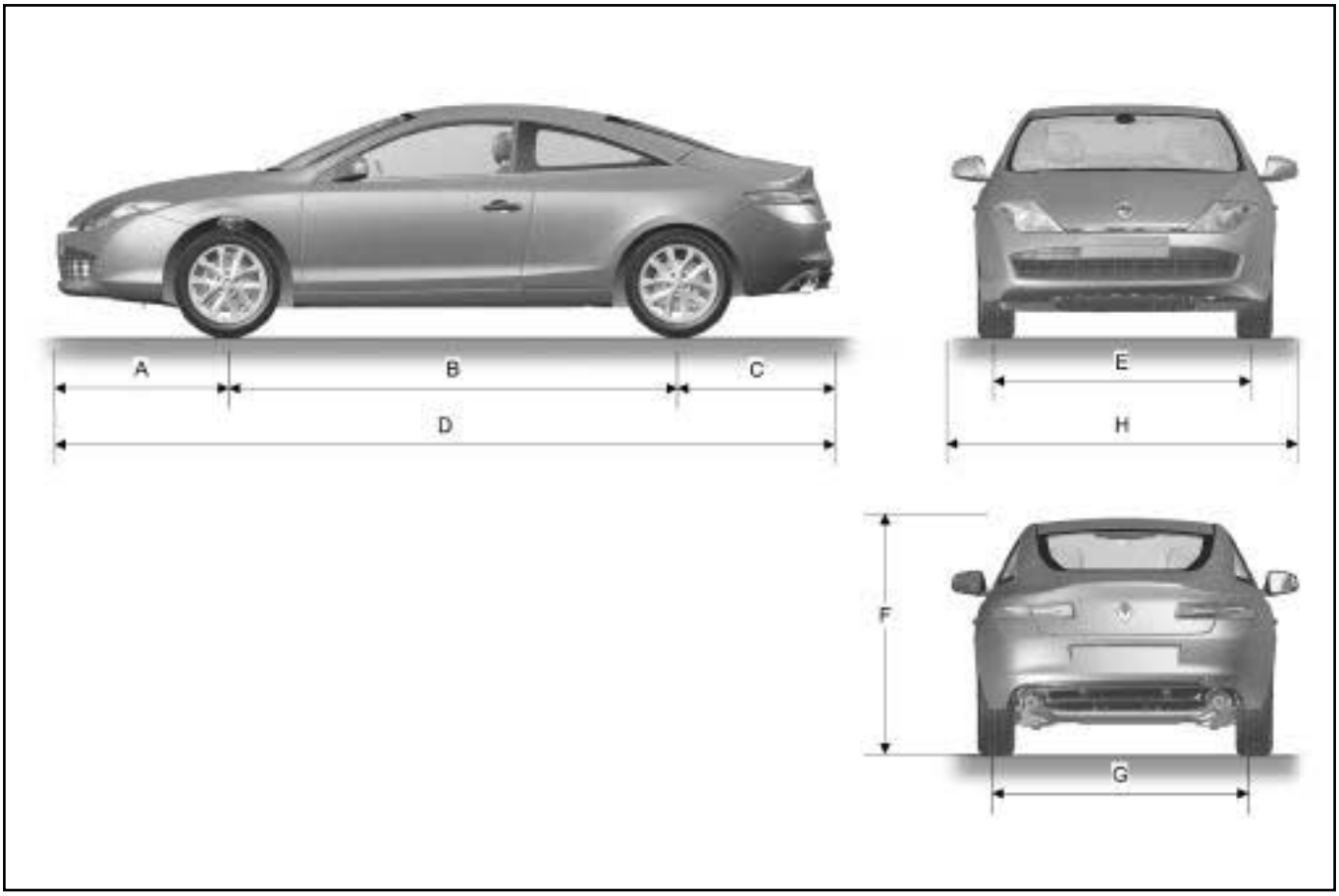
Dimensions in metres:

(**A**)	**1.014**
(**B**)	**2.758**
(**C**)	**1.031**
(**D**)	**4.776**
(**E**)	**1.557**
(**F**) (unladen)	**1.455**
(**G**)	**1.512**
(**H**)	**1.811**

K91

Engine			Gearbox		Emissions standard
Engine type	**Engine suffix**	**Cubic capacity(cc)**	**Gearbox type**	**Gearbox suffix**	
F4R	800	**1998**	PK4	008	Euro 4
	802				Euro 5
	811		AJ0	007, 018	Euro 4
	813				Euro 3 and 4
K4M	824	**1598**	TL4	016, 019	Euro 3 and 4
K9K	780	**1461**		013	Euro 4
	782			013, 022	Euro 5
M4R	704	**1997**		017, 020	Euro 3 and 4
	726				Euro 5
M9R	742	**1995**	PK4	007	Euro 4
	744				
	746			007, 009	
	748				Euro 3 and 4
	754				Euro 4
	800			012	
	802			007, 009	Euro 4 and 5
	803		AJ0	004	Euro 4
	805				Euro 4 and 5
	806		PK4	020	Euro 4
	808			004	
	809		AJ0	004	Euro 4 and 5
	816		PK4	012	
	845		AJ0	004	
	849				
V4Y	713	3498	AJ0	005	Euro 4
V9X	891	2998		006	Euro 5

D91



141547

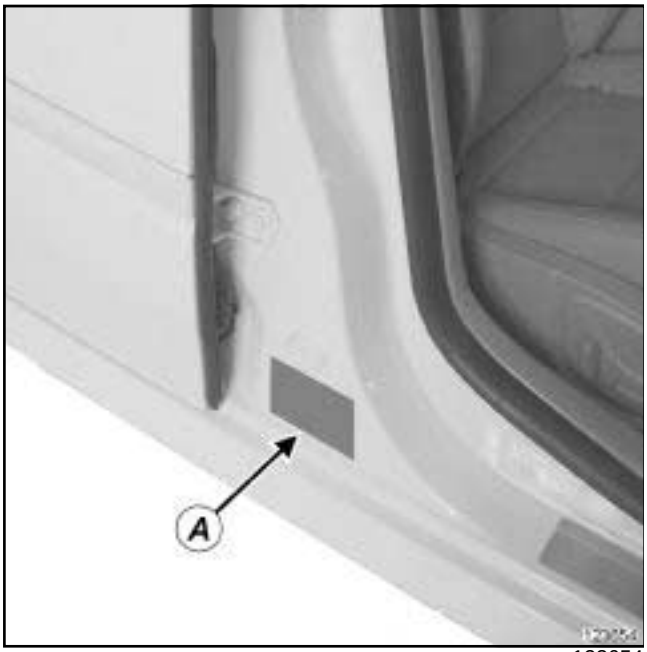
Dimensions in metres:

(**A**)	**1.019**
(**B**)	**2.693**
(**C**)	**0.931**
(**D**)	**4.643**
(**E**)	**1.547**
(**F**) (unladen)	**1.401**
(**G**)	**1.542**
(**H**)	**2.082**

D91

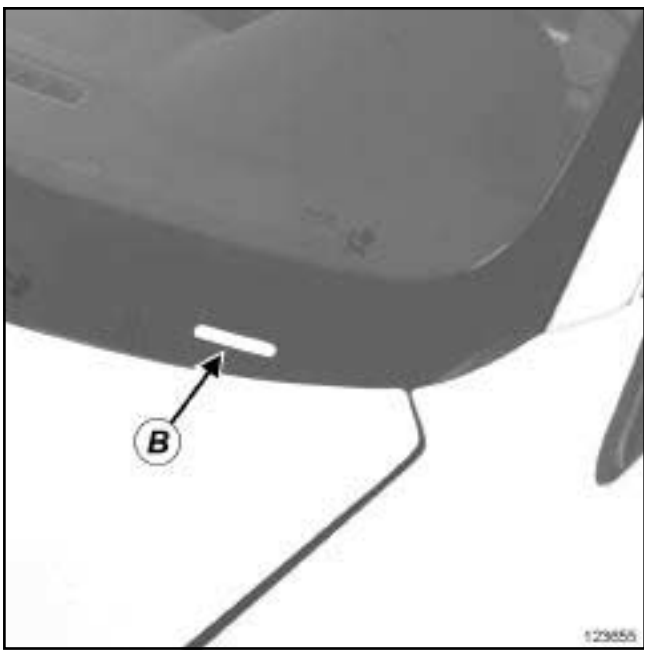
Engine			Gearbox		Emissions standard
Engine type	**Engine suffix**	**Cubic capacity(cc)**	**Gearbox type**	**Gearbox suffix**	
F4R	800	**1998**	PK4	008	Euro 4
	802				Euro 5
	811		AJ0	007, 018	Euro 4
	813				Euro 3 and 4
M9R	742	**1995**	PK4	007	Euro 4
	744				
	748			007, 009	Euro 3 and 4
	754				
	800			012	Euro 4
	802			007, 009	Euro 4 and 5
	803		AJ0	004	Euro 4
	805				Euro 4 and 5
	806		PK4	020	Euro 4
	808			004	
	809		AJ0	004	Euro 4 and 5
	816		PK4	012	
	845		AJ0	004	
	849				
V4Y	713	3498	AJ0	005	Euro 4 and 5
V9X	891	2998		006	Euro 5

I - LOCATION OF VEHICLE IDENTIFICATION PLATE (A)



123654

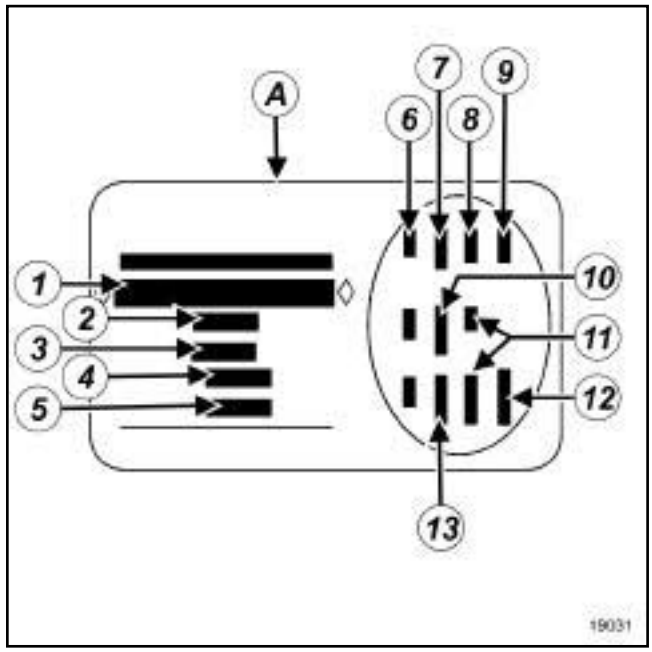
II - LOCATION OF THE VEHICLE IDENTIFICATION NUMBER (B)



123655

III - DETAILED VIEW OF THE VEHICLE IDENTIFICATION PLATE

Plate (A)

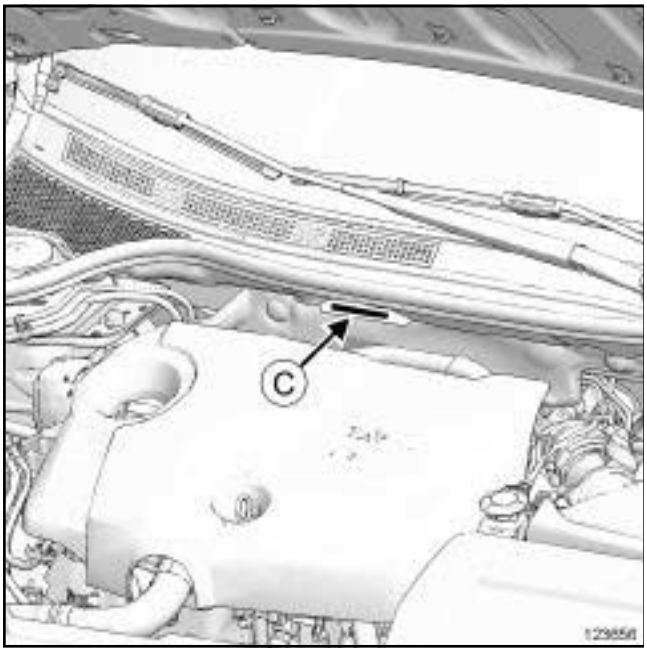


19031

(**1**)	Vehicle type mine and type number; this information also appears on marking (B)
(**2**)	MGVW (Maximum Gross Vehicle Weight)
(**3**)	GTW (Gross train weight, vehicle under load with trailer)
(**4**)	Maximum permissible front axle load
(**5**)	Maximum permissible rear axle load
(**6**)	Vehicle technical specifications
(**7**)	Paintwork reference number
(**8**)	Equipment level
(**9**)	Vehicle type
(**10**)	Upholstery code
(**11**)	Additional equipment details
(**12**)	Fabrication number
(**13**)	Interior trim code

IV - COLD-MARKING OF THE BODY

Marking (C)

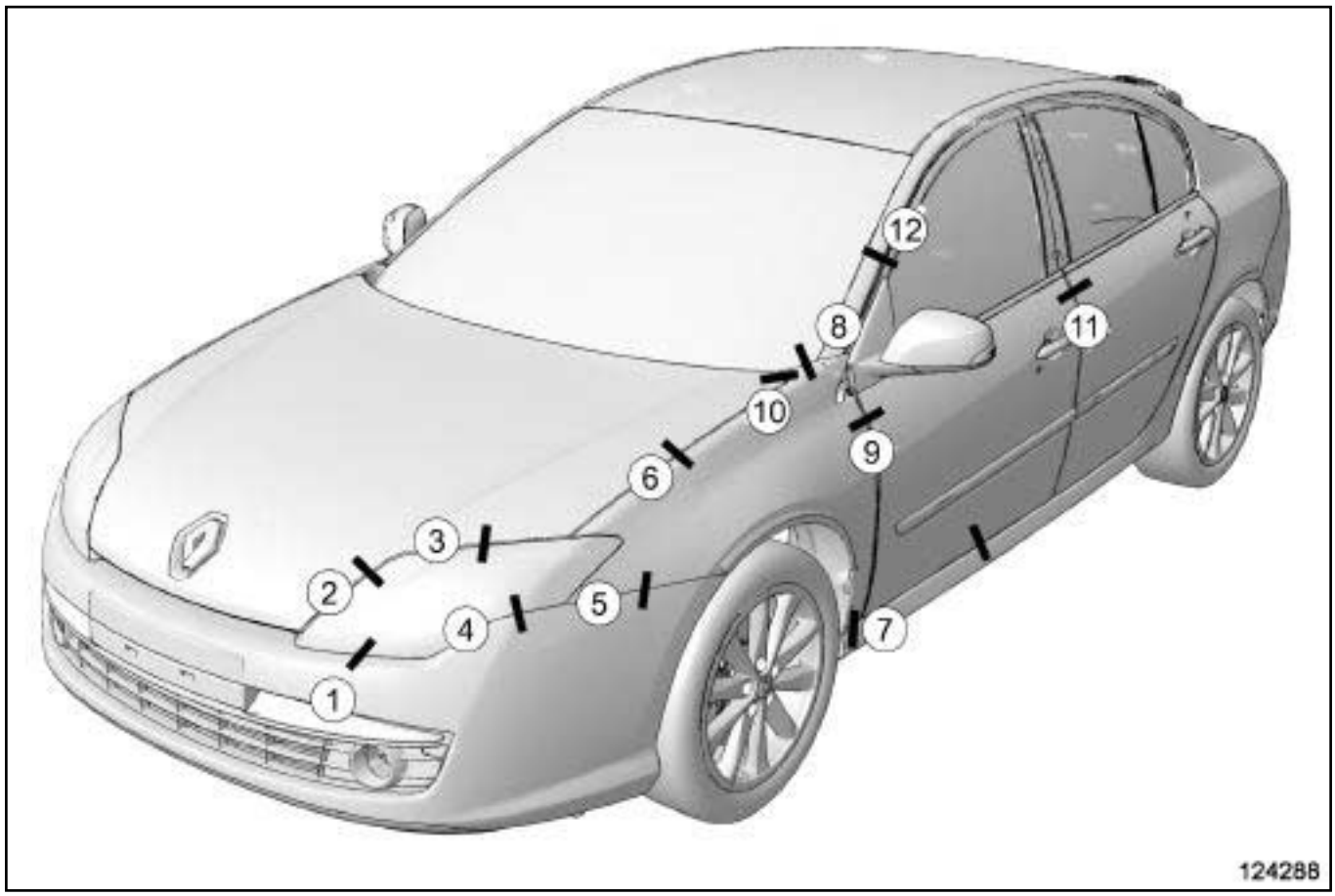


123656

Note:

If the complete body is being replaced, it must be marked in compliance with the current regulations.

B91 or K91



124288

WARNING

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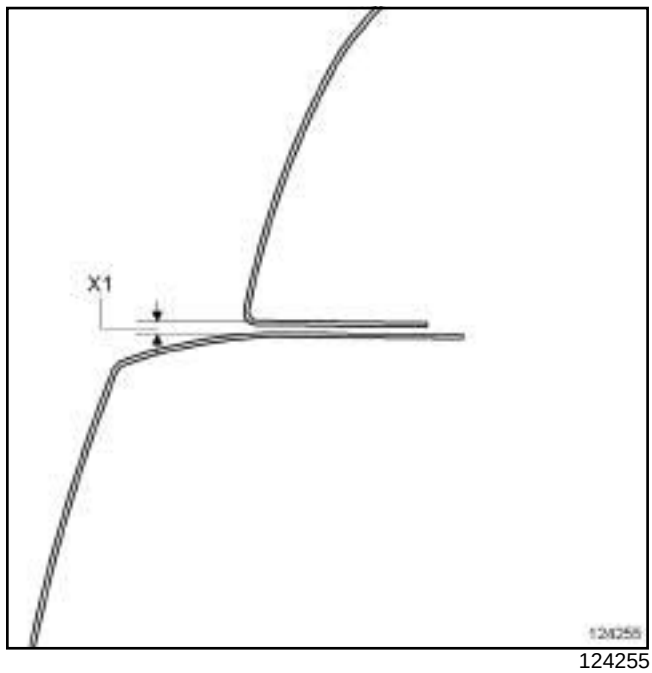
When adjusting clearances, certain rules have to be followed:

- maintain symmetry with respect to the opposite side,
- ensure the flush fitting is correct,
- check correct operation of the opening, and water/air-tightness.

All values are given in millimetres.

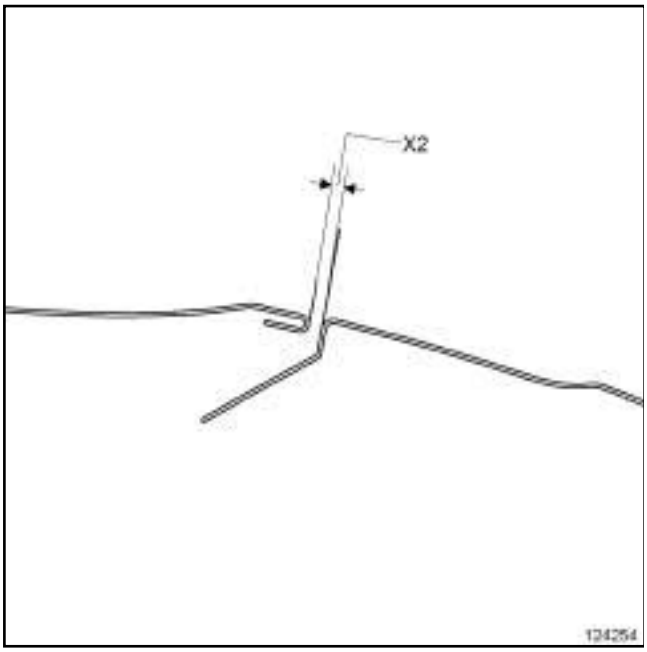
Section 1



124255

(**X1**) = **1.5 mm ± 1**

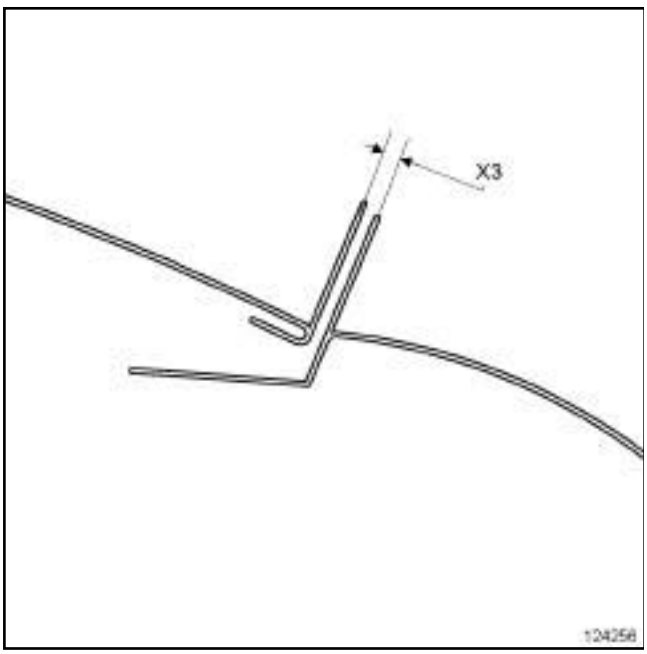
Section 2



124254

(**X2**) = **5 mm ± 2**

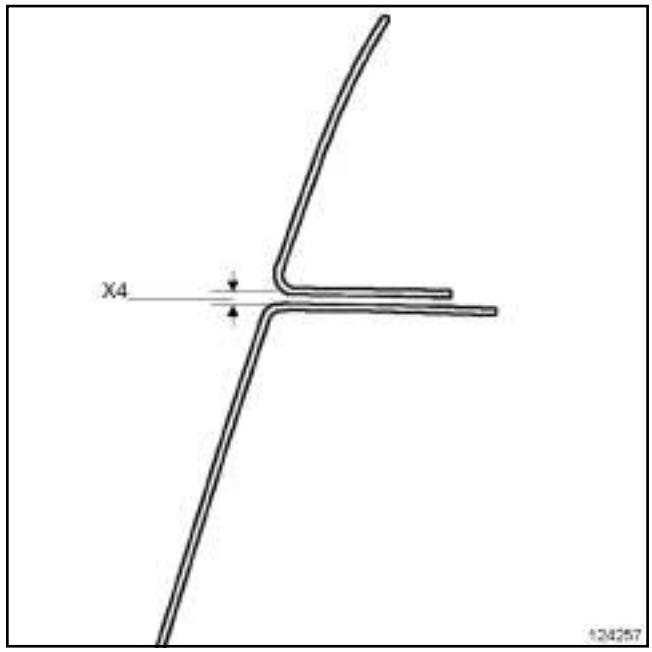
Section 3



124256

(**X3**) = **4 mm ± 1.5**

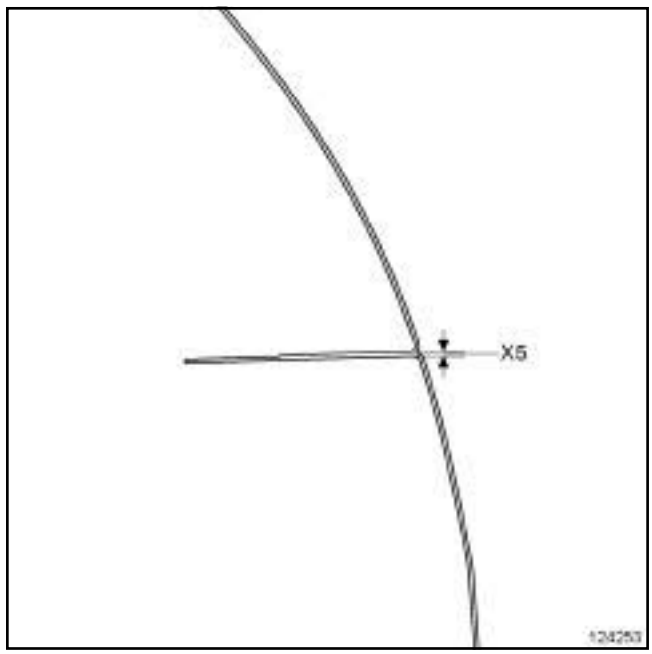
Section 4



124257

(**X4**) = **± 1 mm**

Section 5



124253

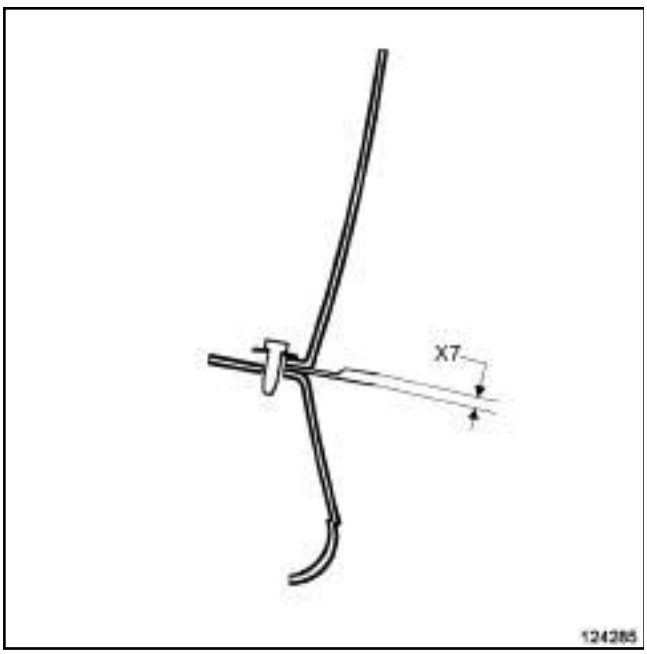
(**X5**) = **0.4 mm ± 0.4**

Section 6

124258

(**X6**) = **3.5 mm ± 1.2**

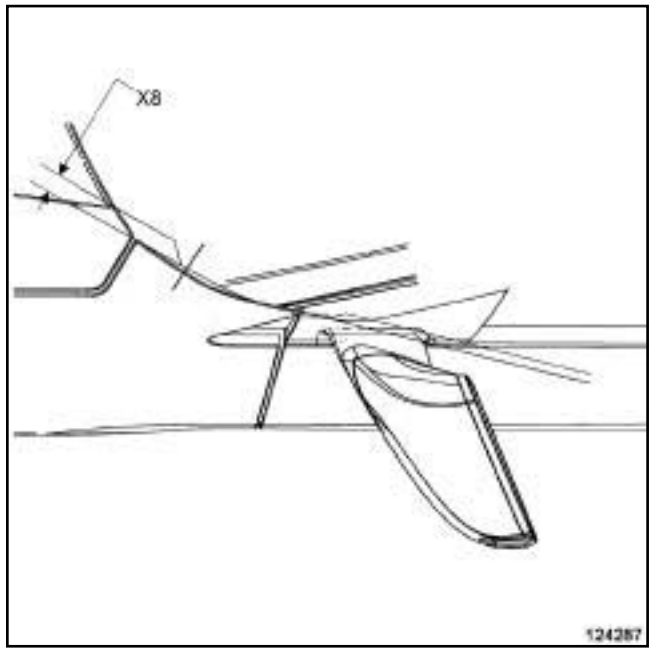
Section 7



124285

(**X7**) = **4.5 mm ± 1.2**

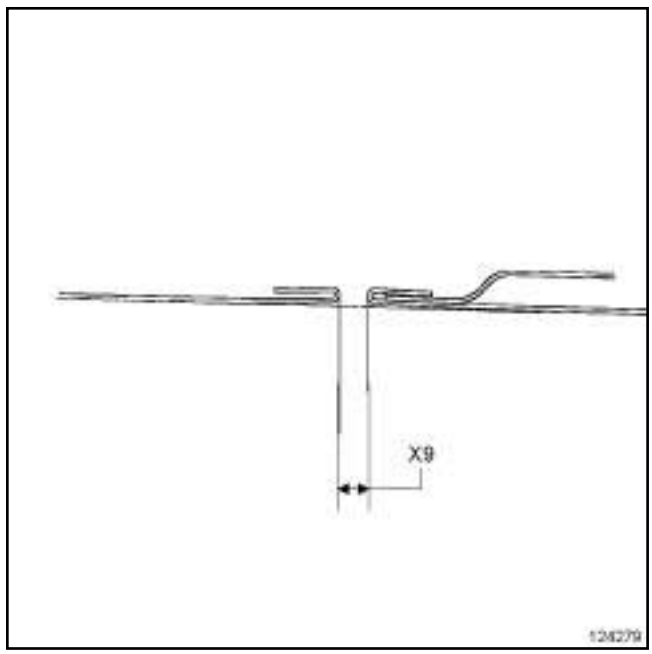
Section 8



124287

(**X8**) = Plating

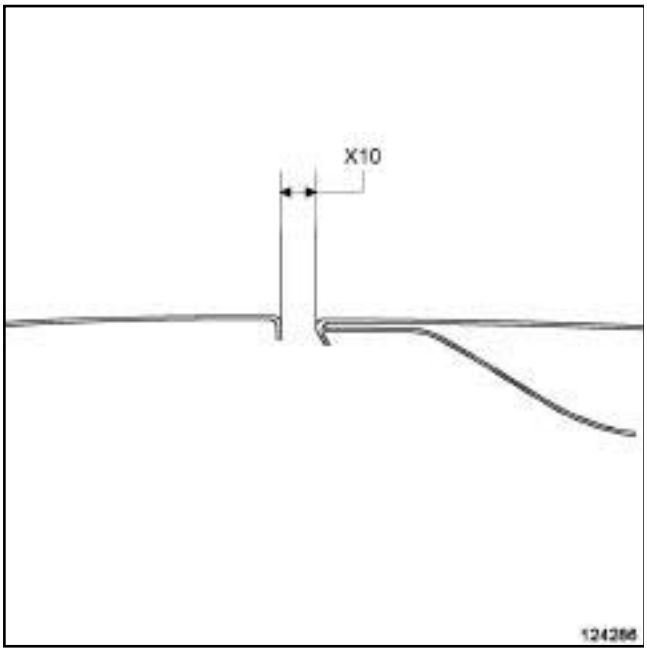
Section 9



124279

(**X9**) = **4 mm ± 0.8**

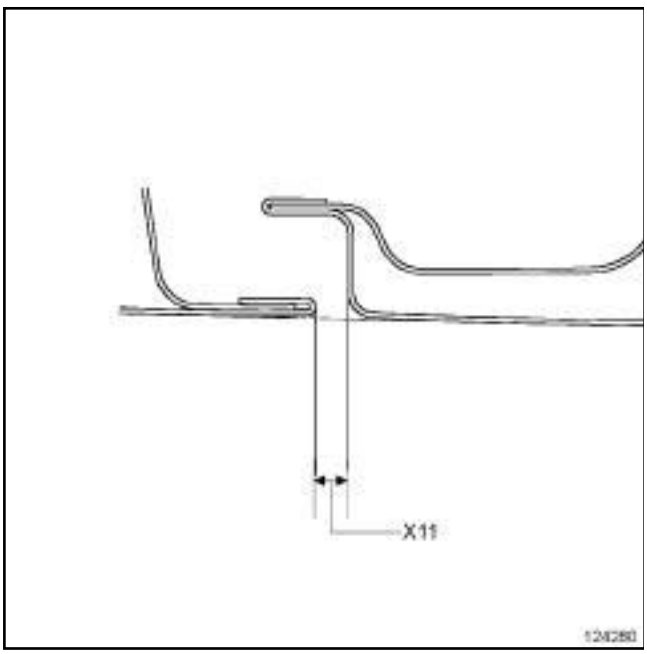
Section 10



124286

(**X10**) = **4.5 mm ± 1.2**

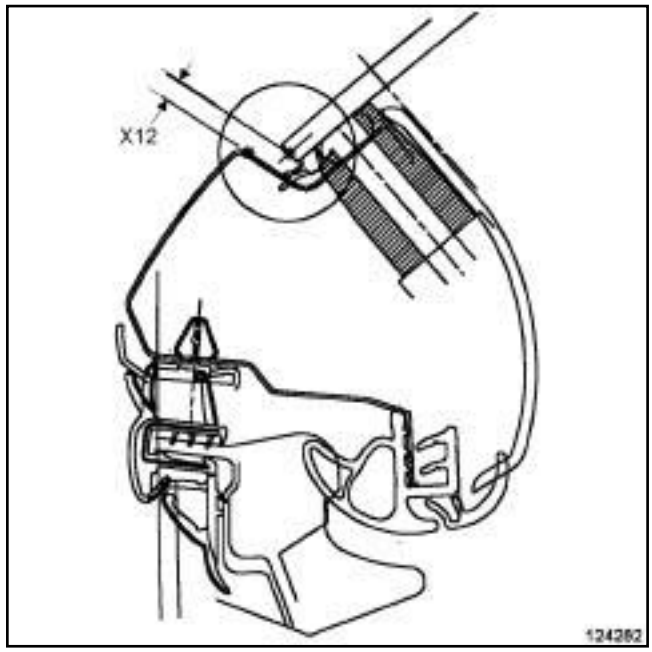
Section 11



124280

(**X11**) = **4.2 mm ± 1.2**

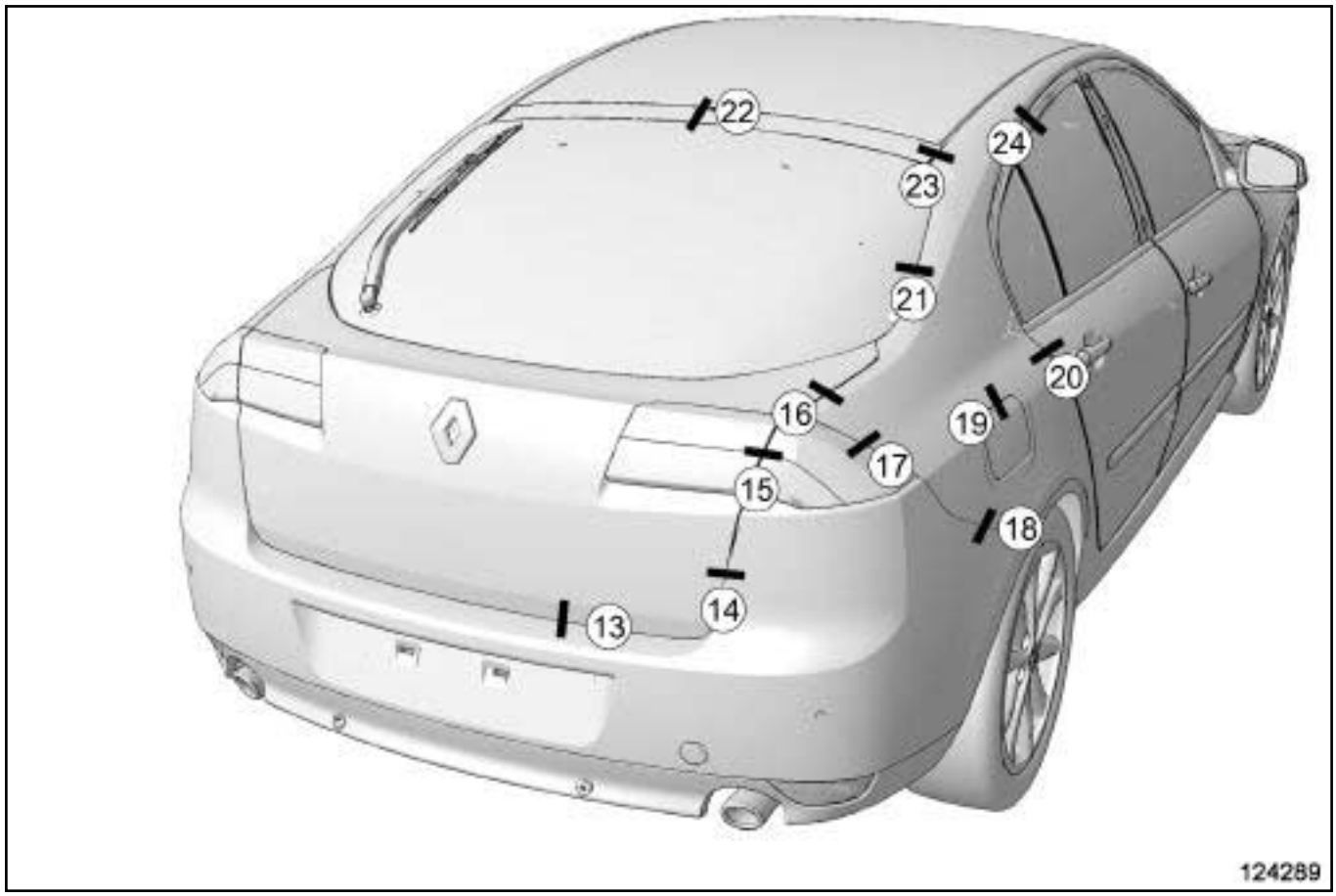
Section 12



124282

(**X12**) = **4.7 mm ± 1.2**

B91



124289

WARNING

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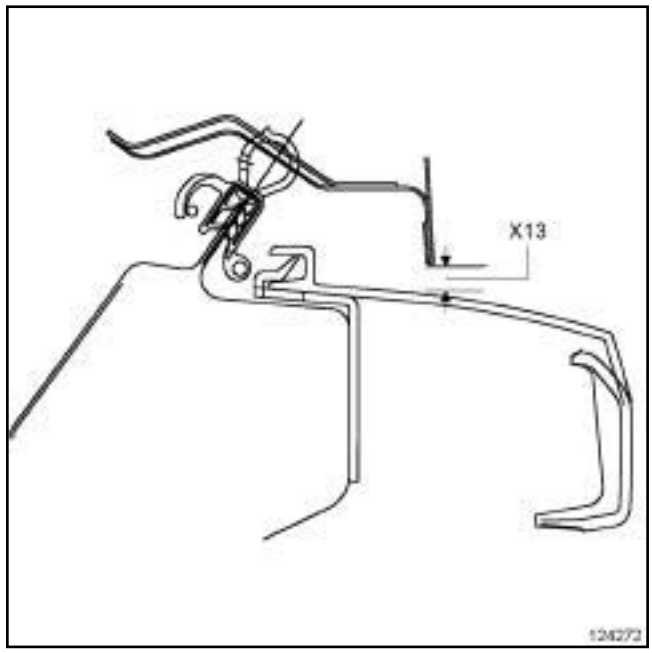
All values are given in millimetres.

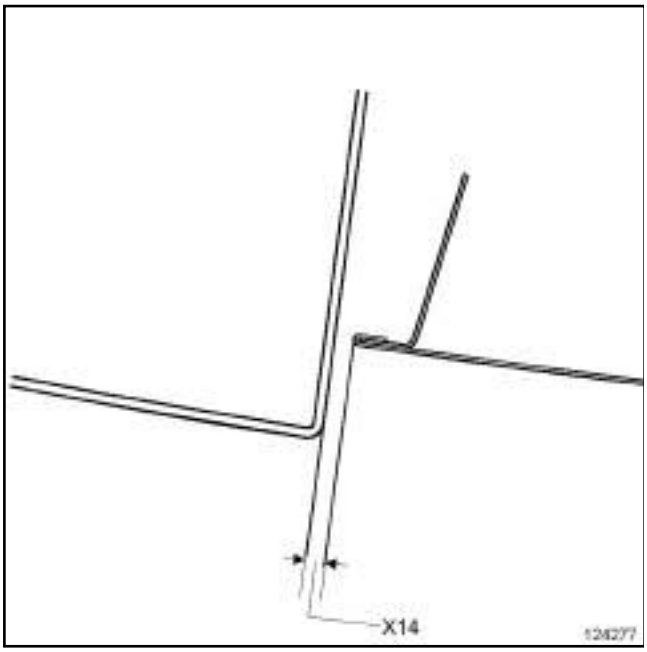
Section 13



124272

(**X13**) = **6 mm ± 0.2**

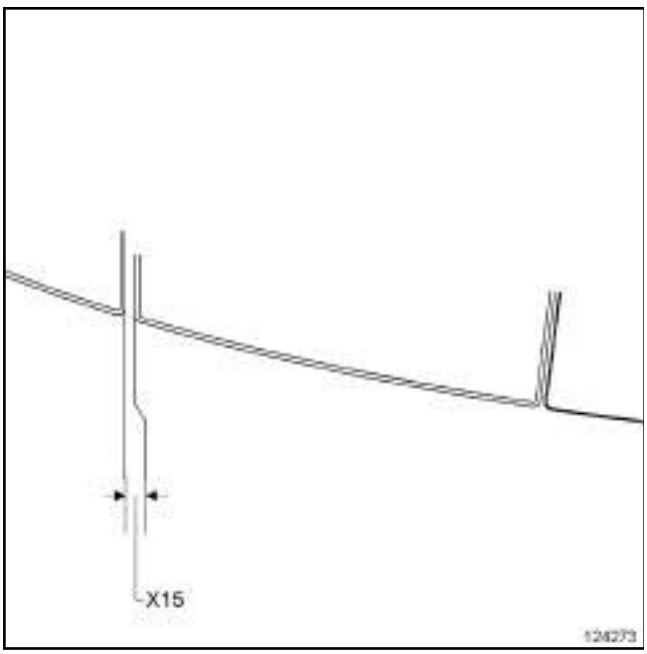
Section 14



124277

(**X14**) = **4 mm ± 1.9**

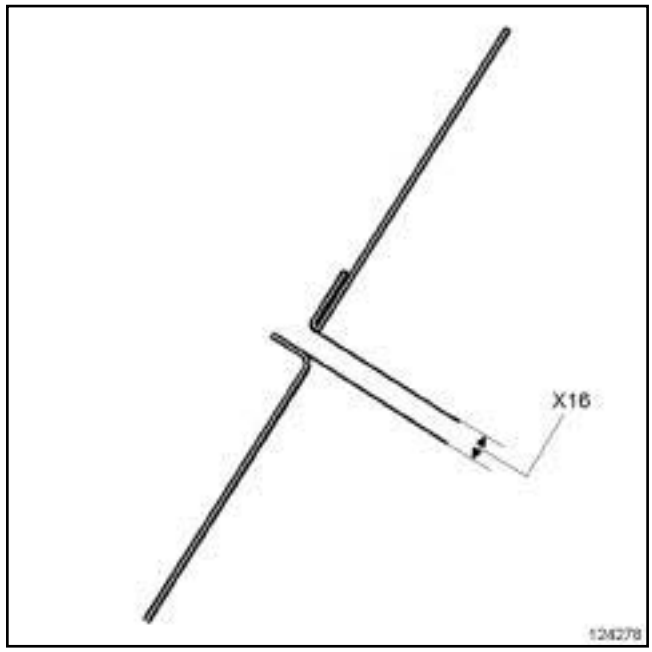
Section 15



124273

(**X15**) = **4 mm ± 1.7**

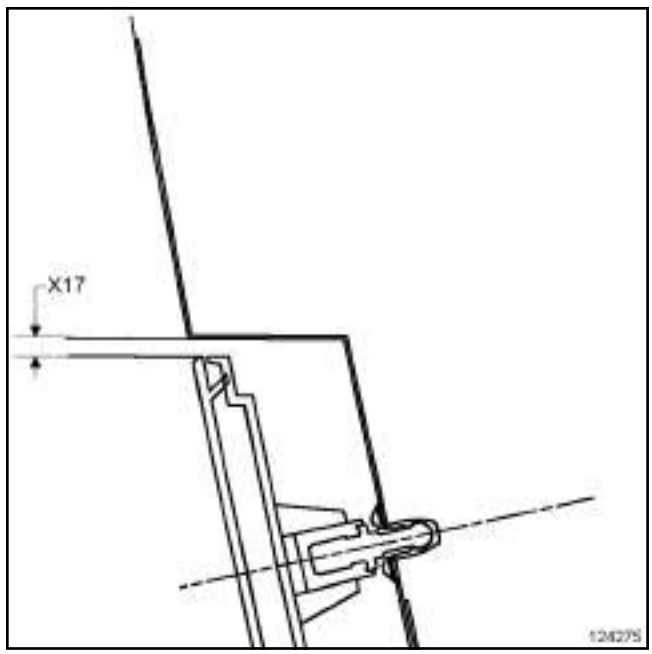
Section 16



124278

(**X16**) = **3.7 mm ± 1.25**

Section 17



124275

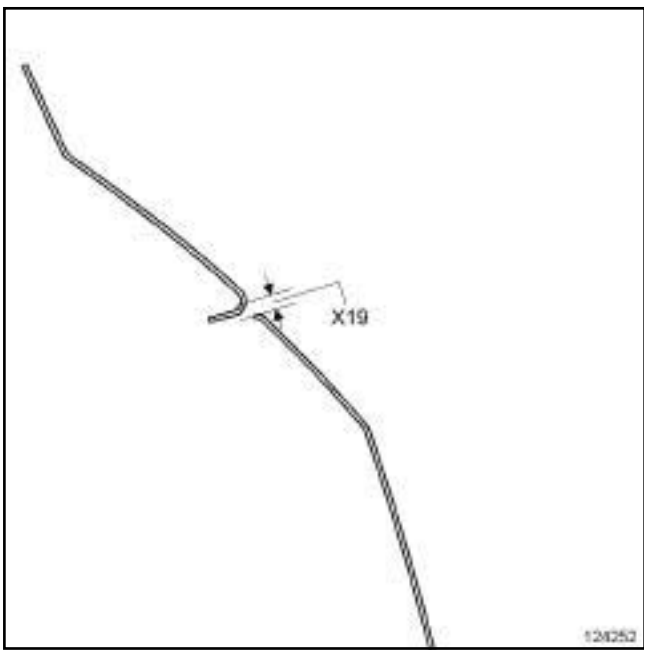
(**X17**) = **1 mm ± 0.9**

Section 18

124276

(**X18**) = **± 1 mm**

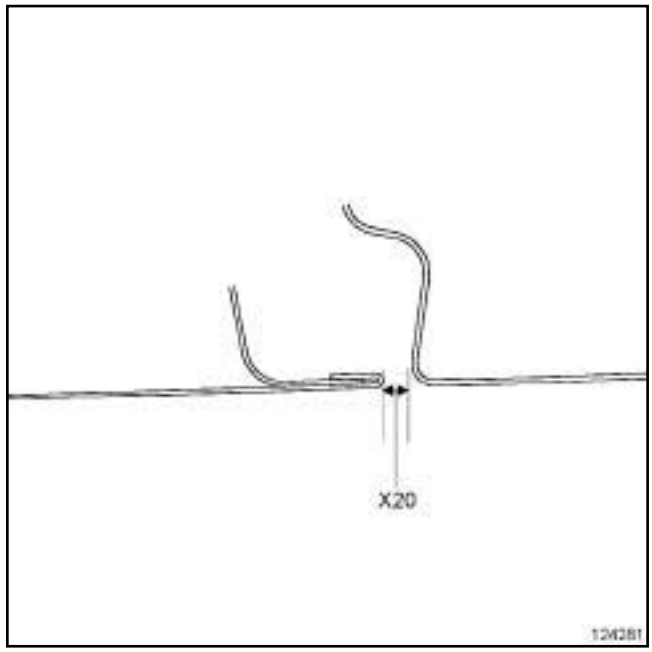
Section 19



124252

(**X19**) = **2 mm ± 1**

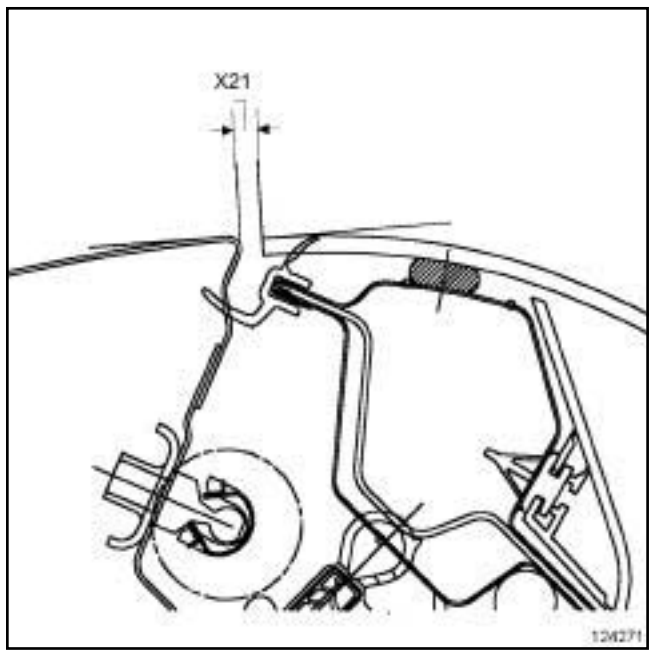
Section 20



124281

(**X20**) = **4 mm ± 0.8**

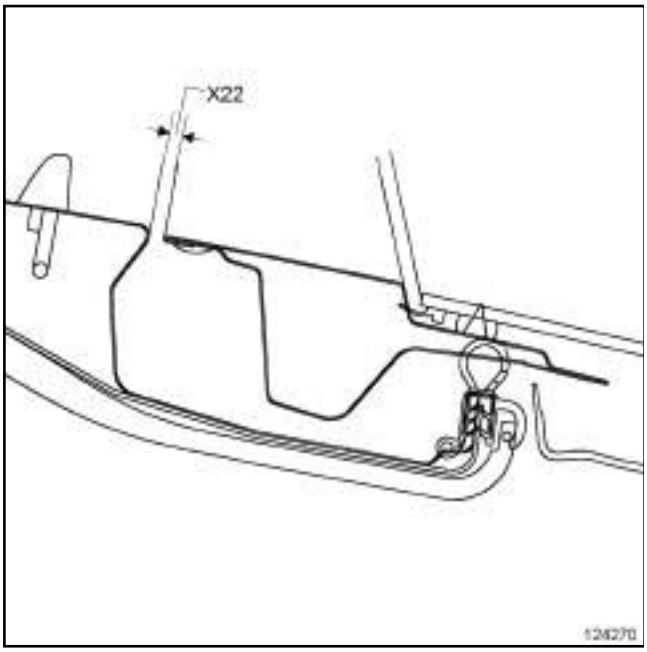
Section 21



124271

(**X21**) = **4.5 mm ± 2**

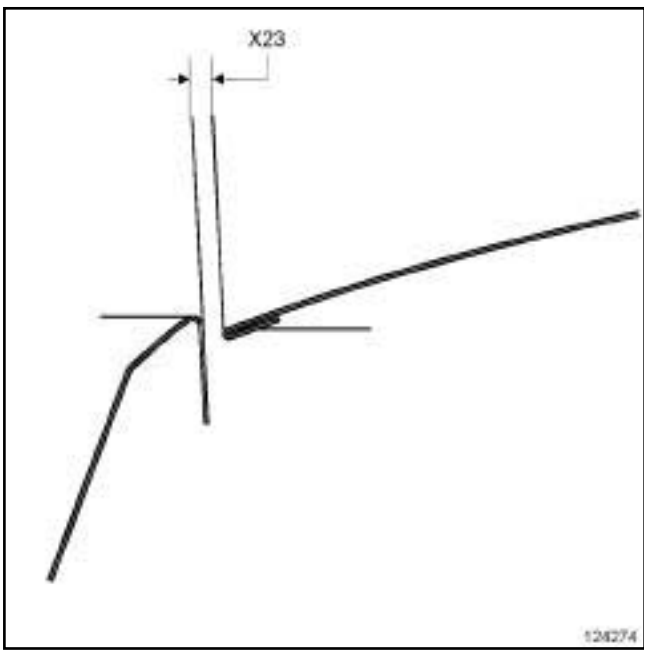
Section 22



124270

(**X22**) = **4 mm ± 2**

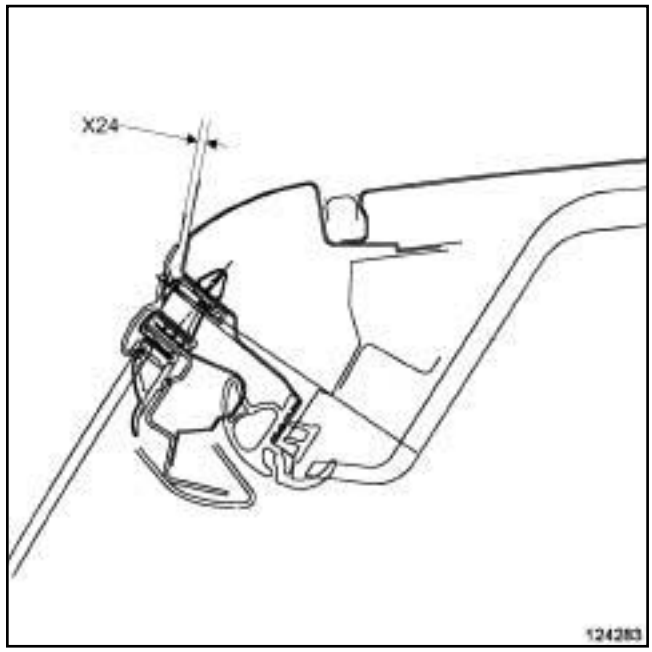
Section 23



124274

(**X23**) = **4 mm ± 1.6**

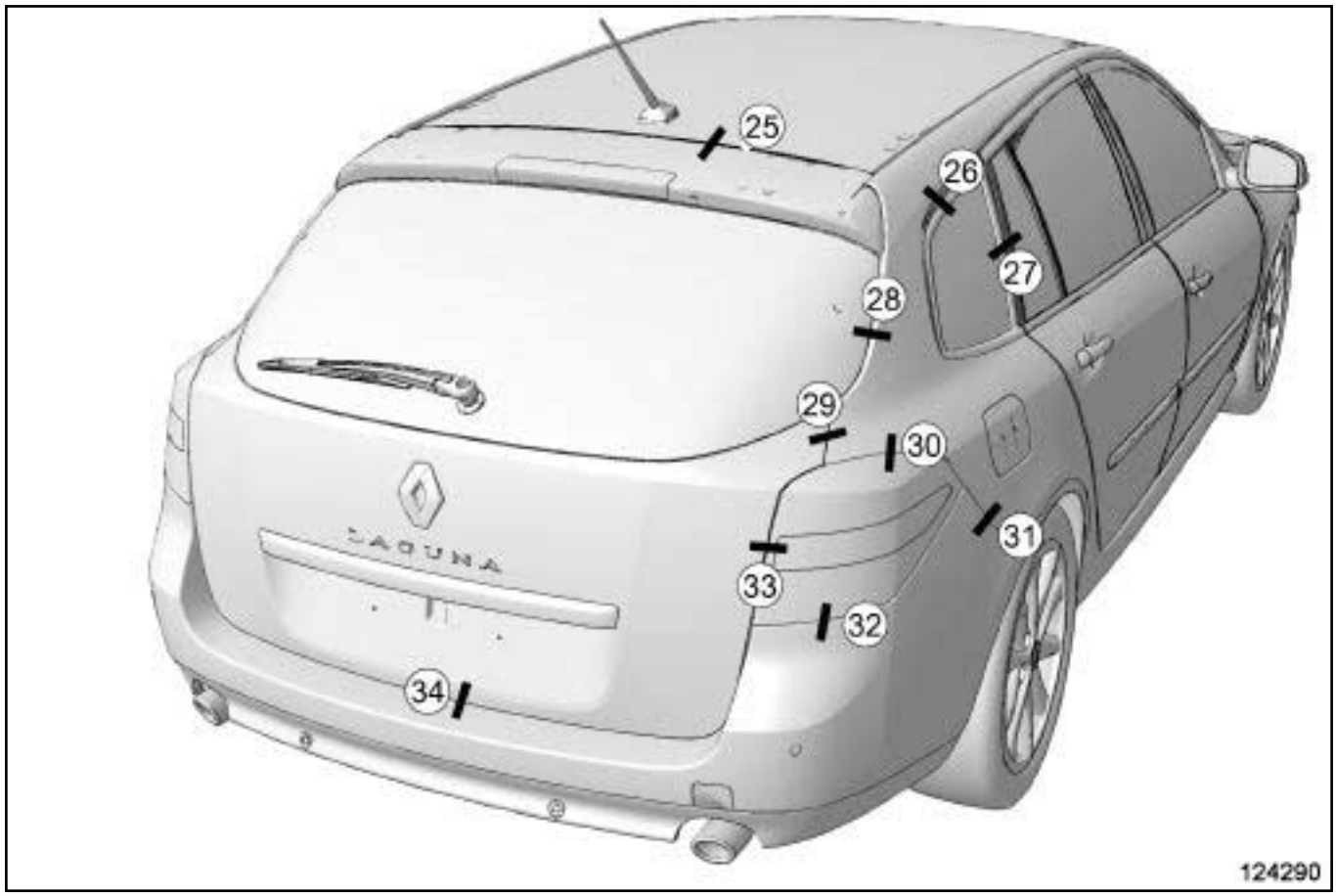
Section 24



124283

(**X24**) = **2 mm ± 0.6**

K91



124290

WARNING

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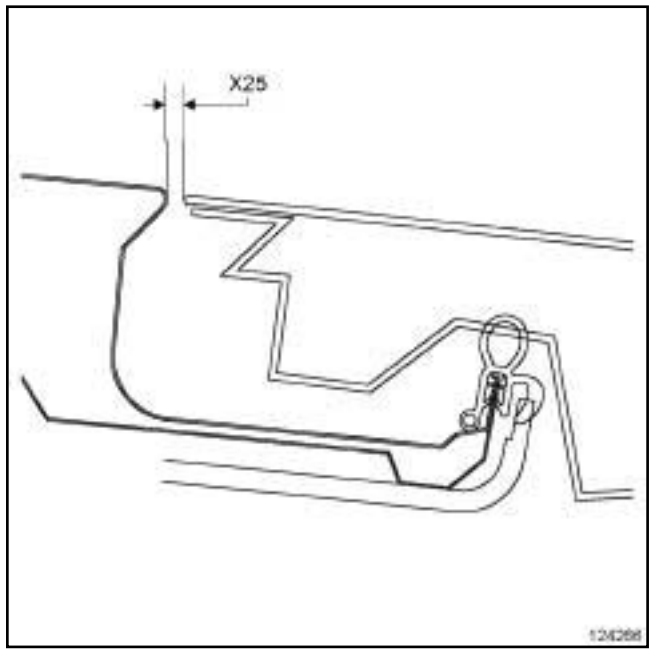
When adjusting clearances, certain rules have to be followed:

- maintain symmetry with respect to the opposite side,
- ensure the flush fitting is correct,
- check correct operation of the opening, and water/air-tightness.

All values are given in millimetres.

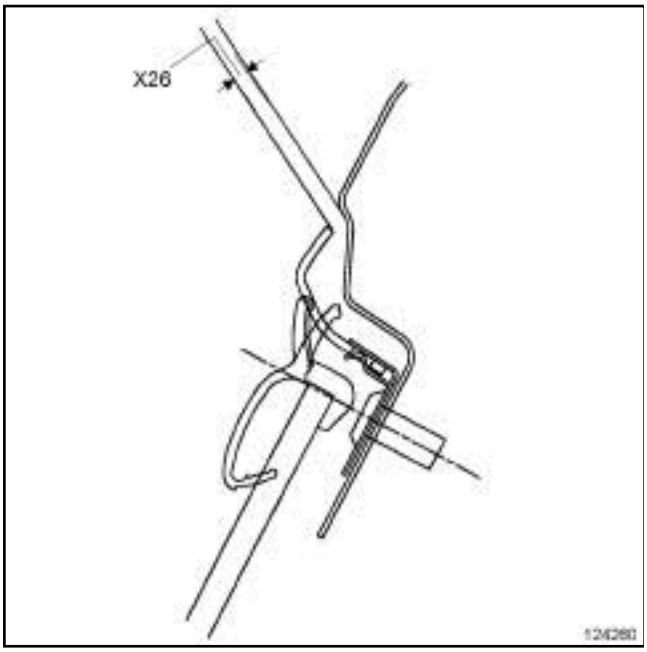
Section 25



124266

(**X25**) = **± 1.6 mm**

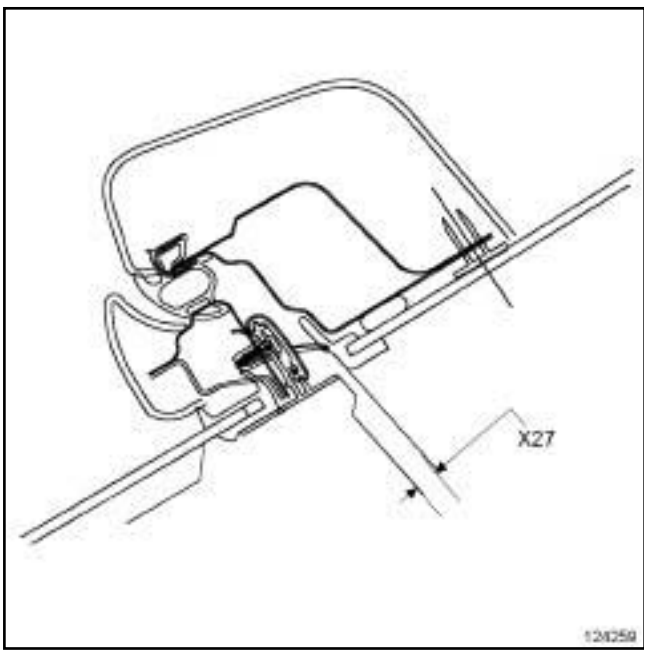
Section 26



124260

(**X26**) = **2 mm ± 1**

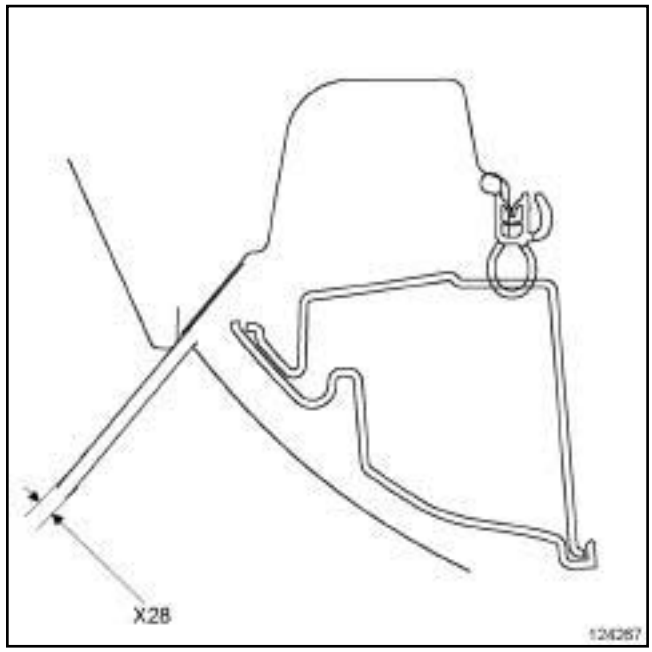
Section 27



124259

(**X27**) = **4.2 mm ± 1.75**

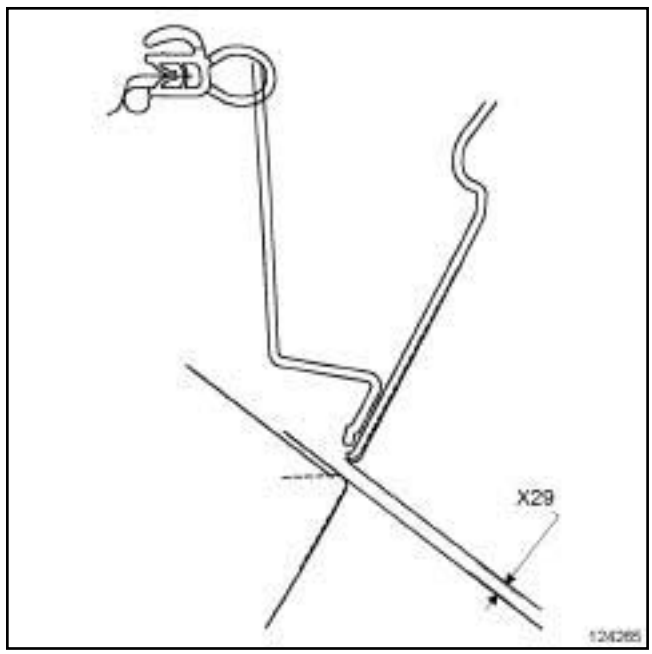
Section 28



124267

(**X28**) = **± 2.2 mm**

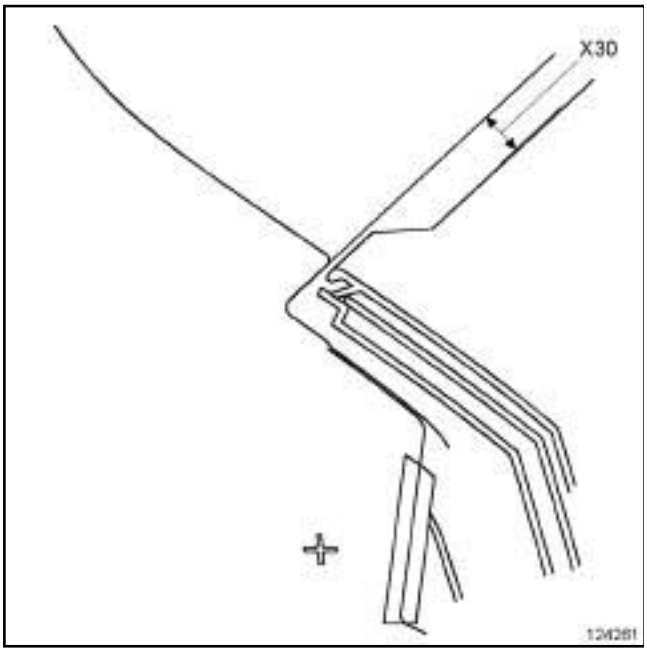
Section 29



124265

(**X29**) = **4 mm ± 1.7**

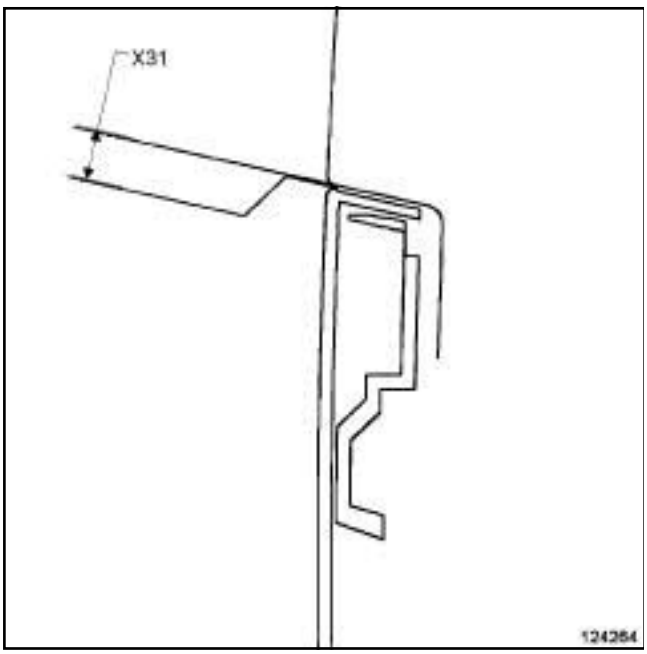
Section 30



124261

(**X30**) = **1 mm ± 1.2**

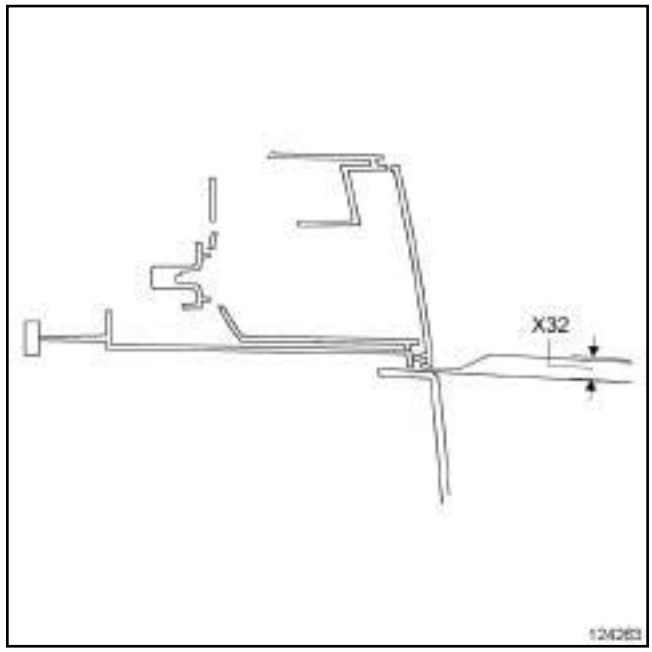
Section 31



124264

(**X31**) = **0.4 mm ± 0.4**

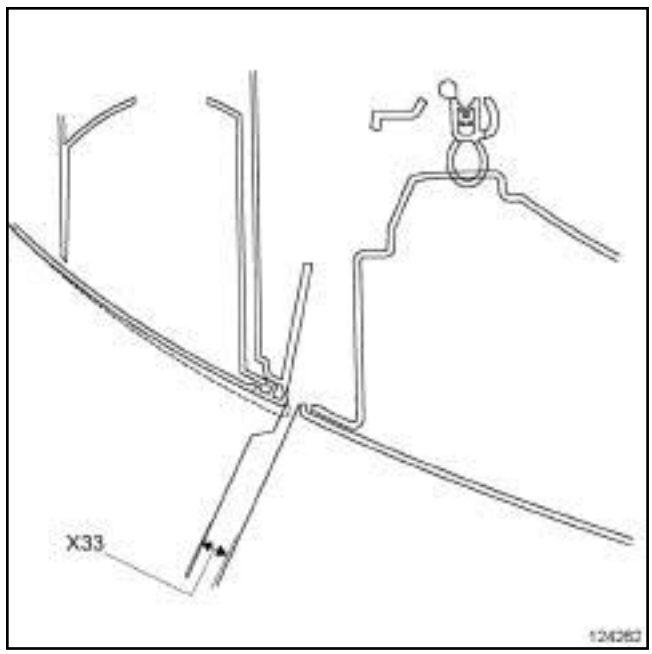
Section 32



124263

(**X32**) = **1 mm ± 1.7**

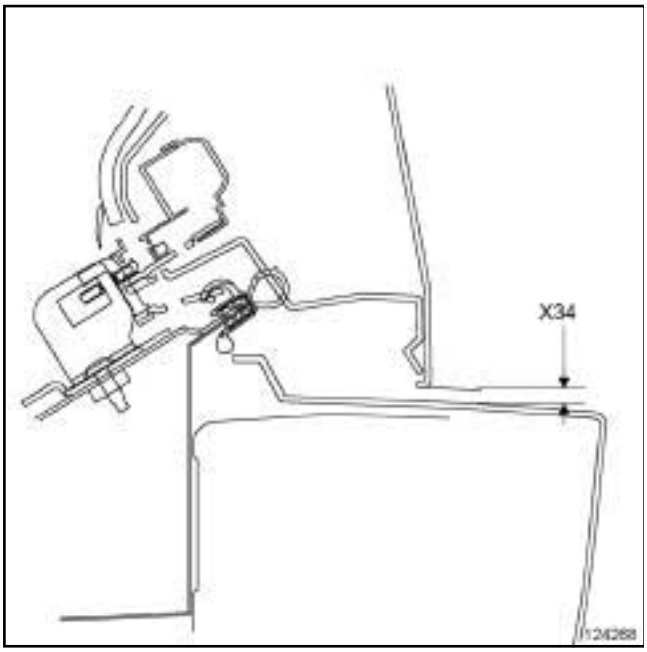
Section 33



124262

(**X33**) = **1 mm ± 1.7**

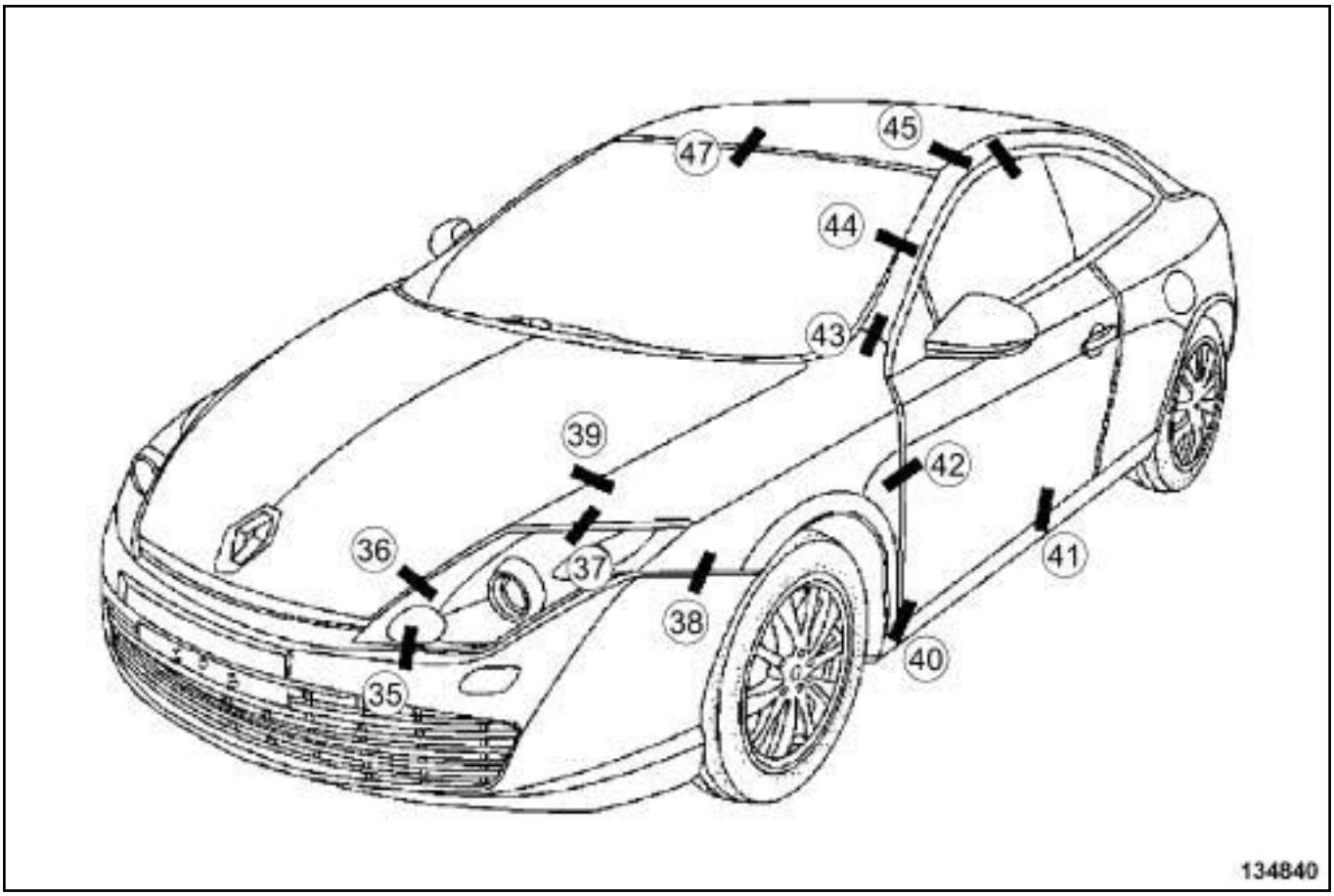
Section 34



124268

(**X34**) = **6.5 mm ± 2.4**

D91



134840

WARNING

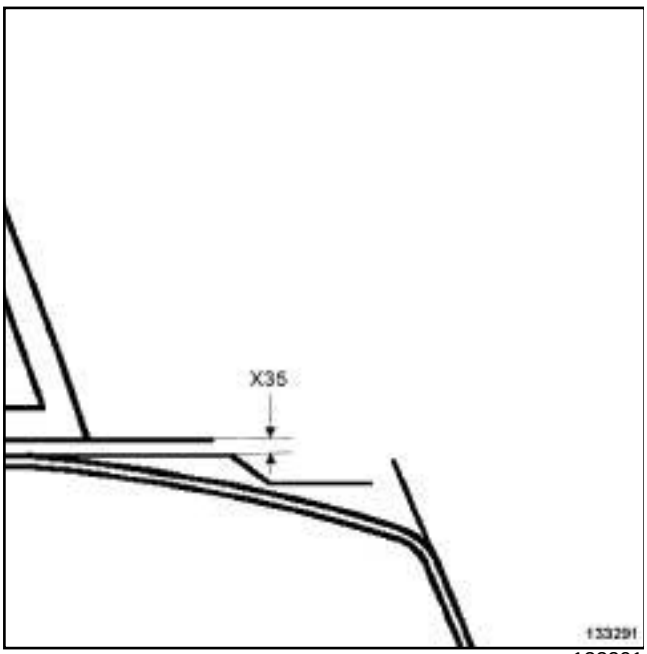
The clearance values are given for information purposes.

When adjusting clearances, certain rules have to be followed:

- maintain symmetry with respect to the opposite side,
- ensure the flush fitting is correct,
- check correct operation of the opening, and water/air-tightness.

All values are given in millimetres.

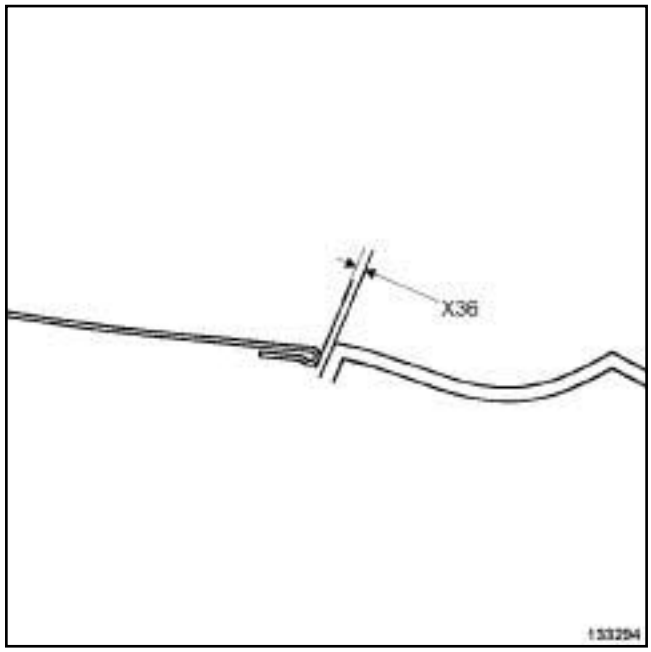
Section 35



133291

(**X35**) = **1.5 mm ± 1**

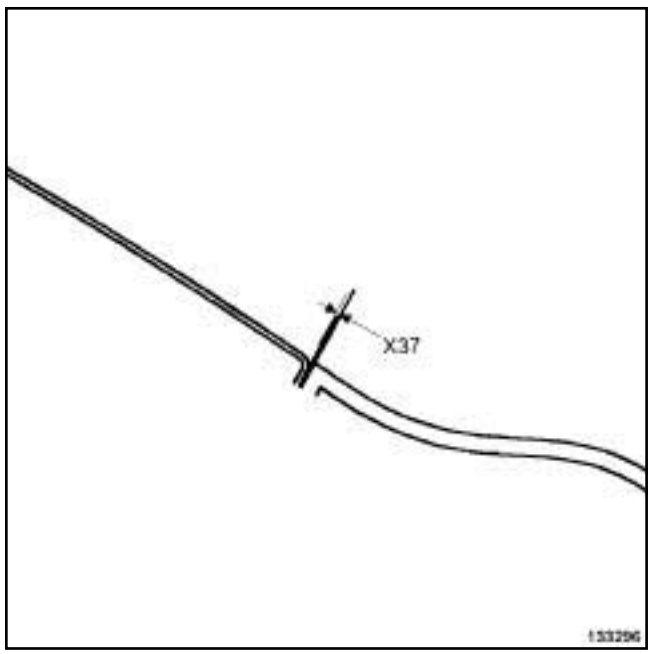
Section 36



133294

(**X36**) = **4 mm ± 1.5**

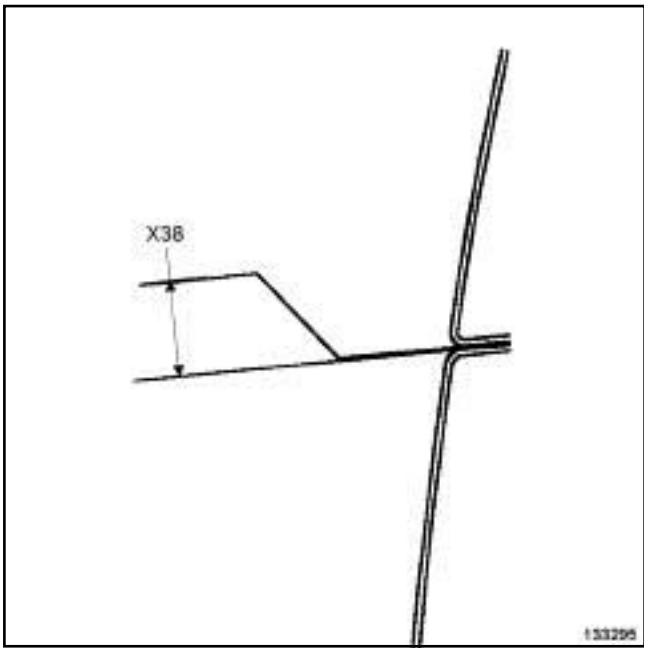
Section 37



133296

(**X37**) = **0.5 mm ± 0.5**

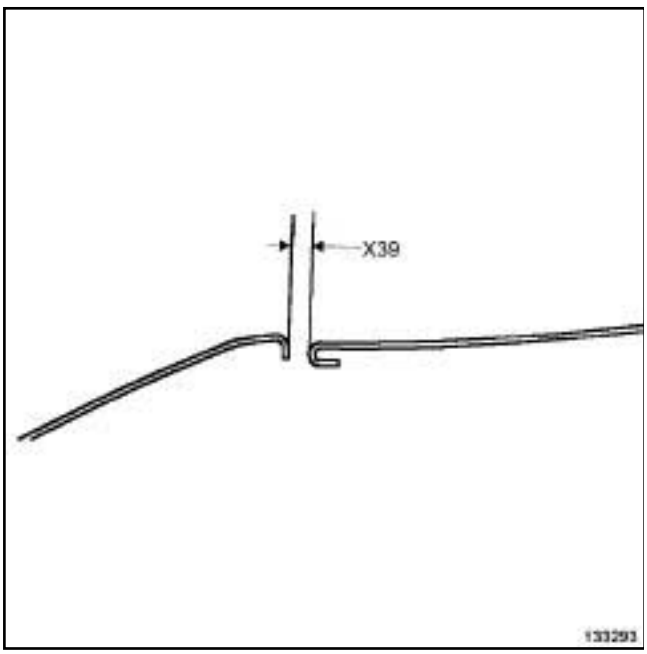
Section 38



133295

(**X38**) = **0.4 mm ± 0.4**

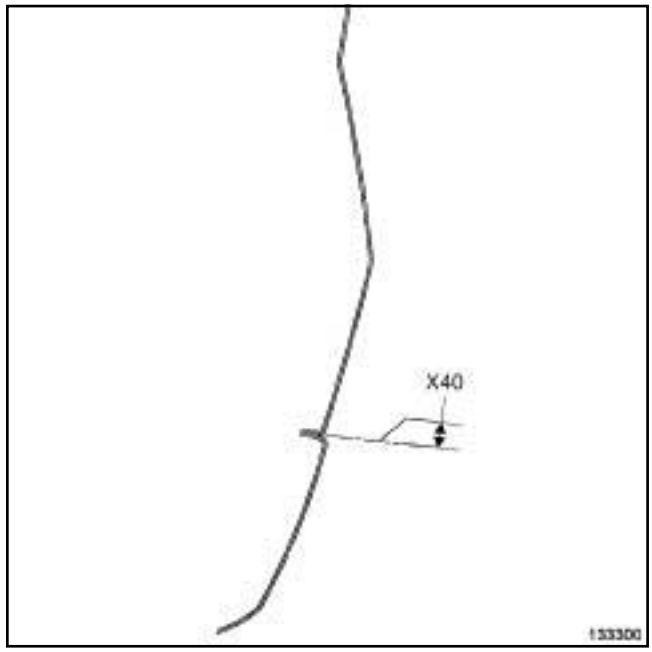
Section 39



133293

(**X39**) = **3.5 mm ± 1.2**

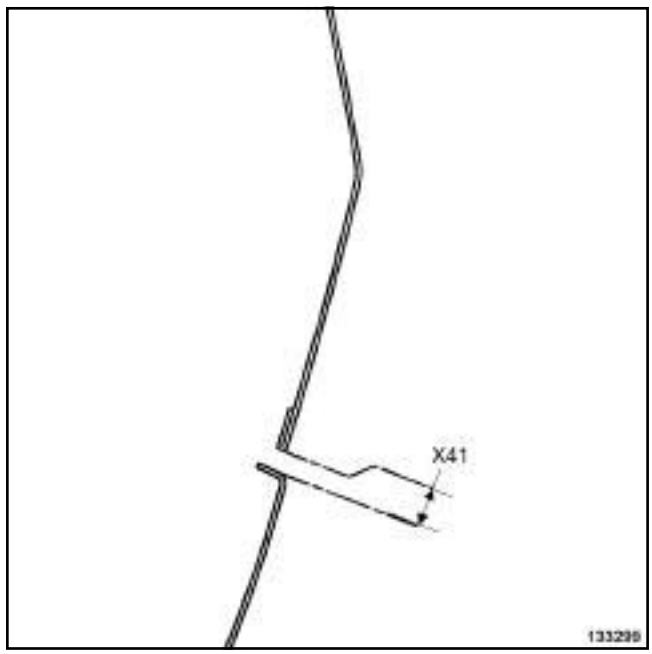
Section 40



133300

(**X40**) = **1 mm ± 0.9**

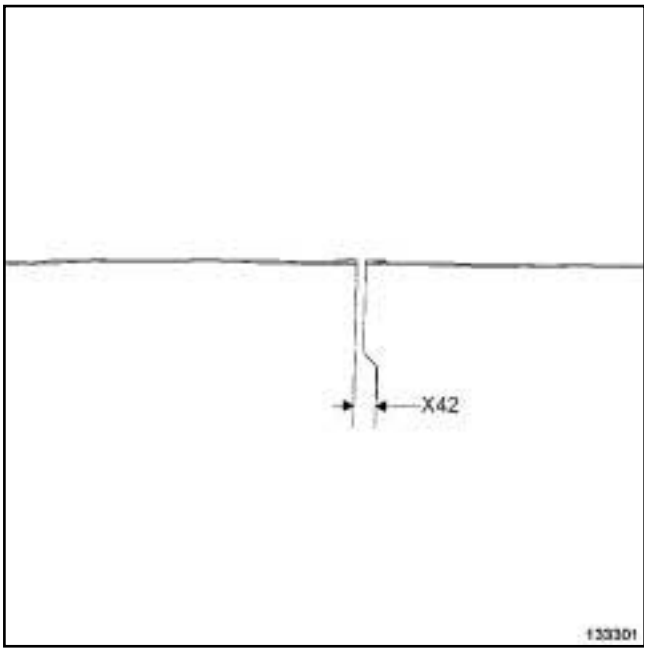
Section 41



133299

(**X41**) = **4.5 mm ± 1.5**

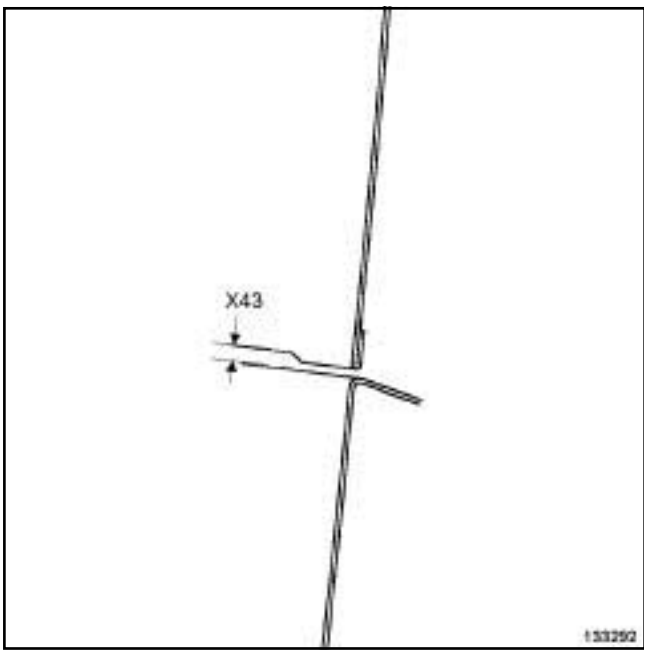
Section 42



133301

(**X42**) = **4 mm ± 1**

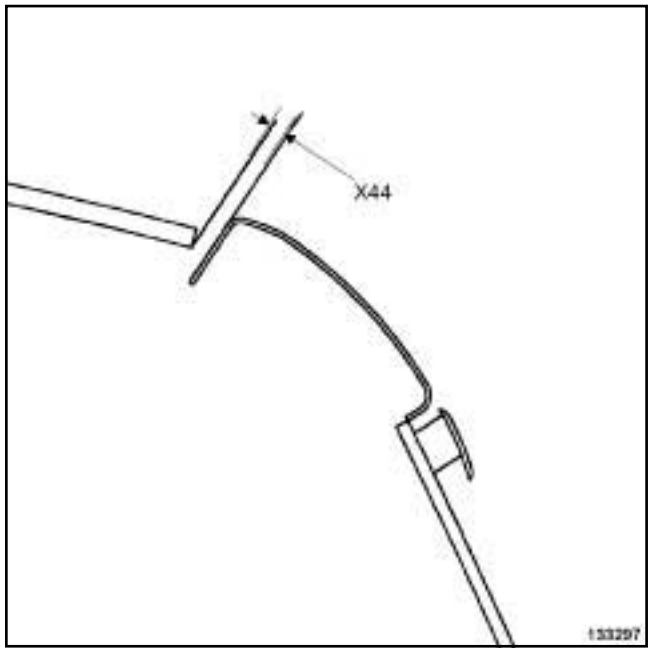
Section 43



133292

(**X43**) = **1.5 mm ± 0.9**

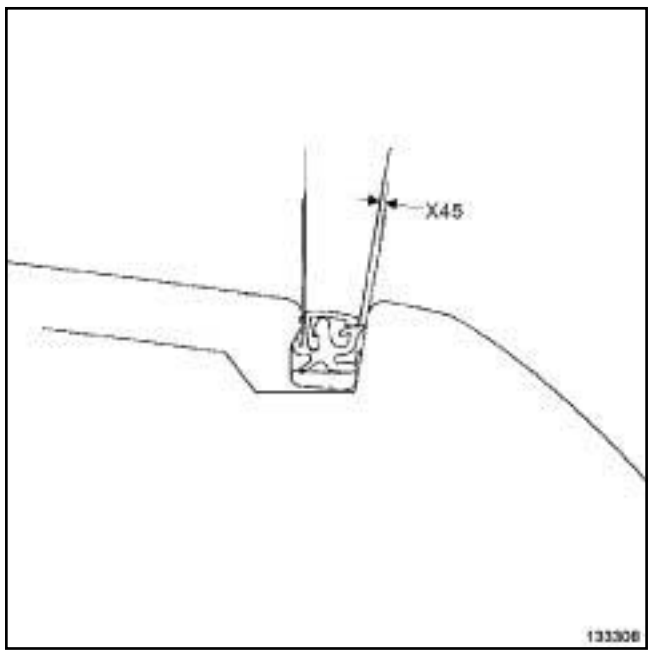
Section 44



133297

(**X44**) = **4.5 mm ± 1.5**

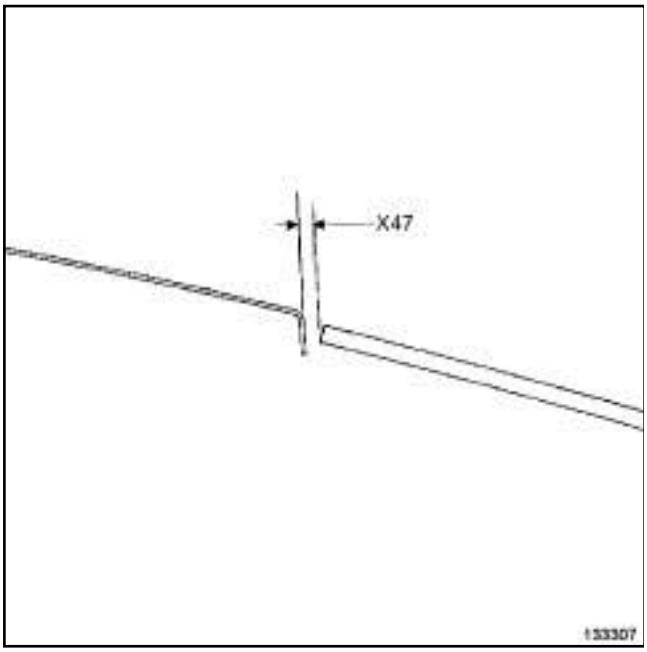
Section 45



133308

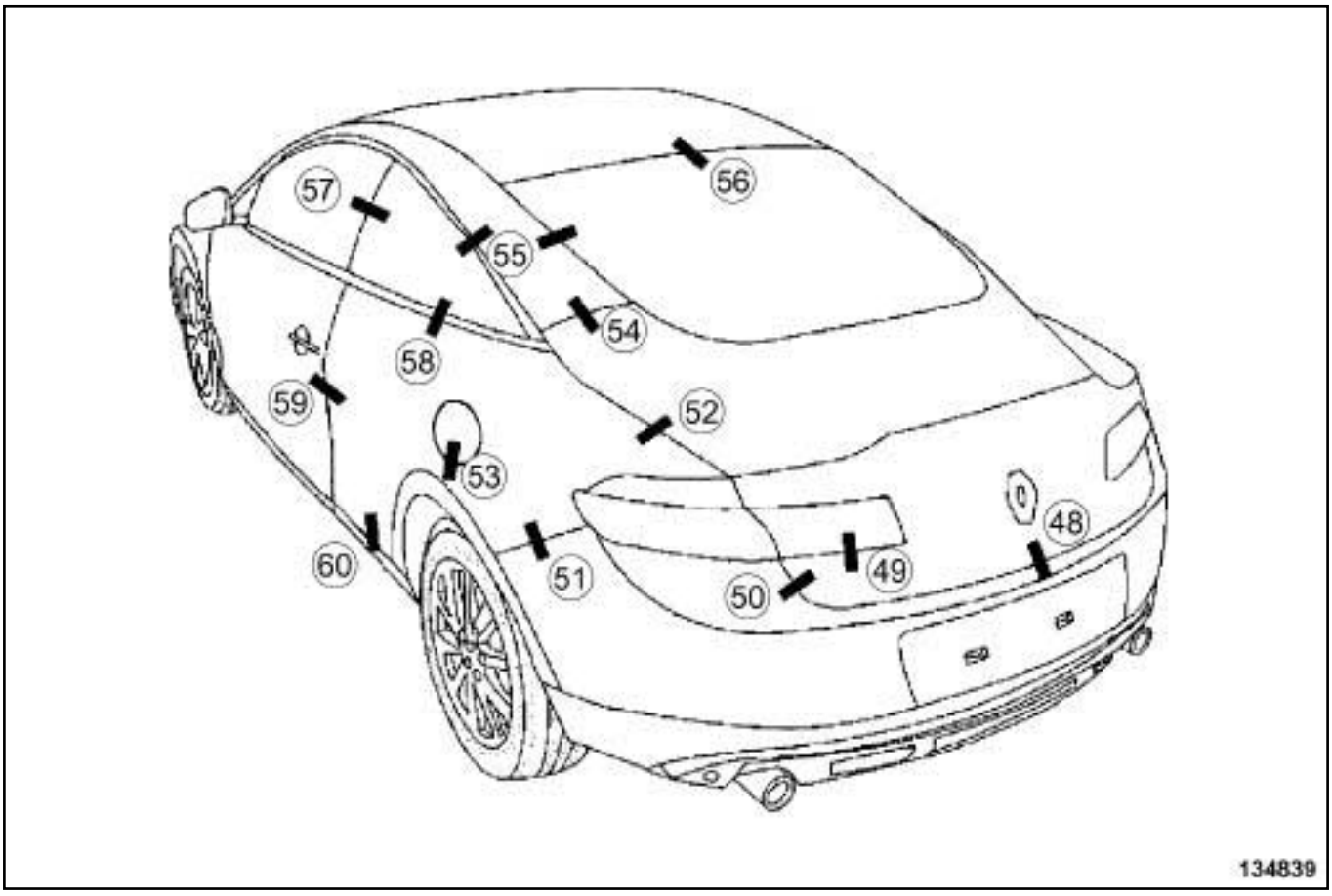
(**X45**) = **1.3 mm ± 1.2**

Section 47



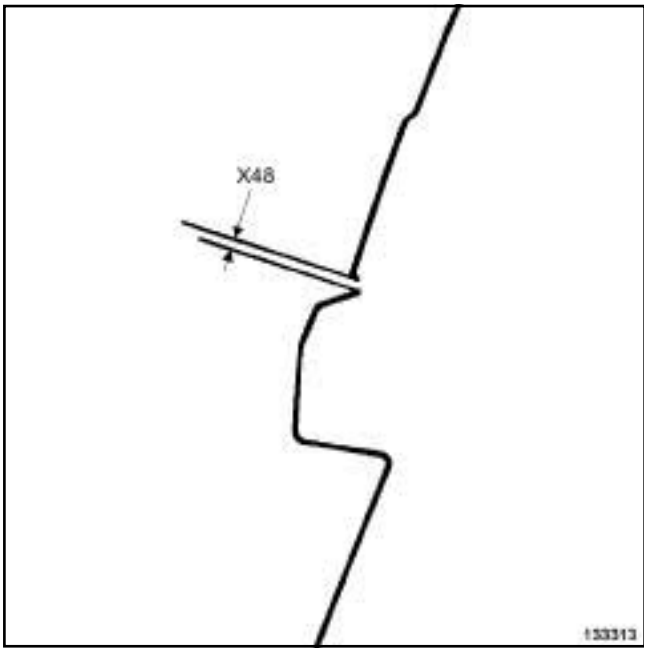
133307

(**X47**) = **4 mm ± 2**



134839

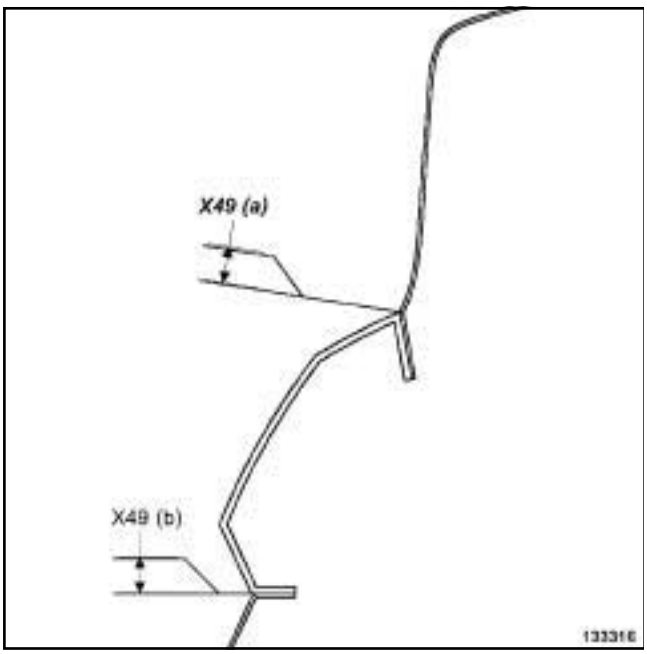
Section 48



133313

(**X48**) = **5.4 mm ± 1.5**

Section 49

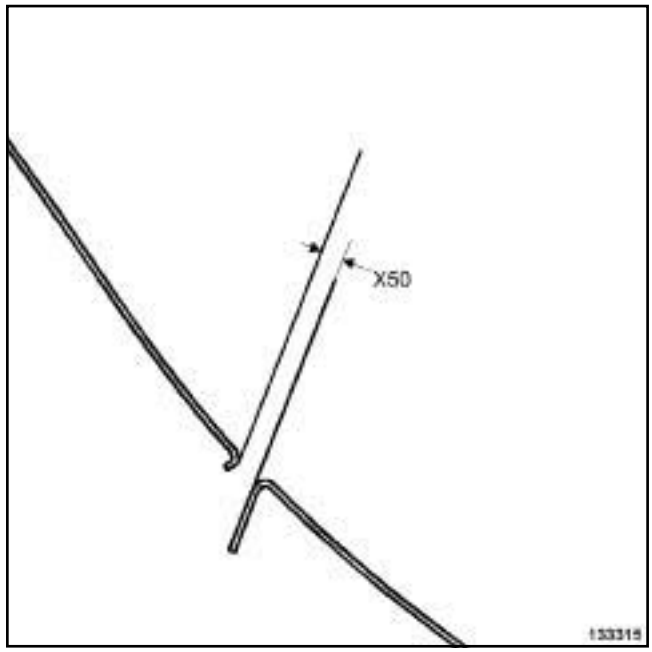


133316

(**X49 (a)**) = **1 mm ± 0.8**

(**X49 (b)**) = **1 mm ± 0.8**

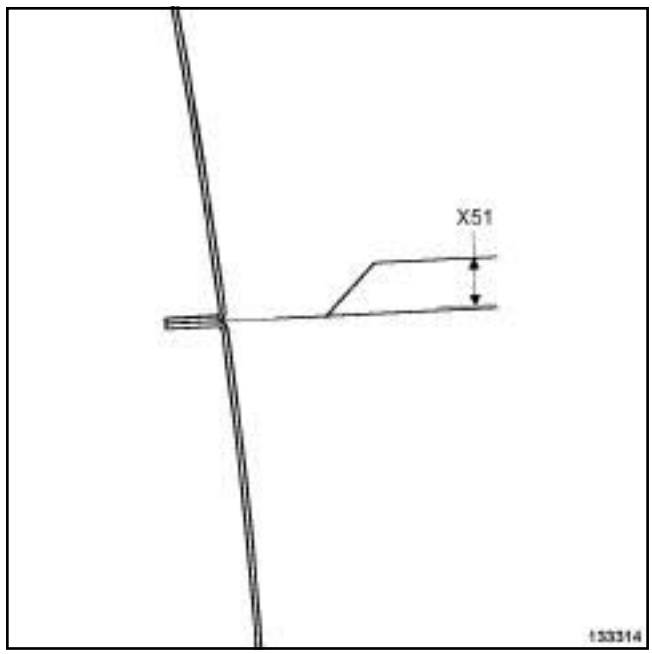
Section 50



133315

(**X50**) = **4 mm ± 1.5**

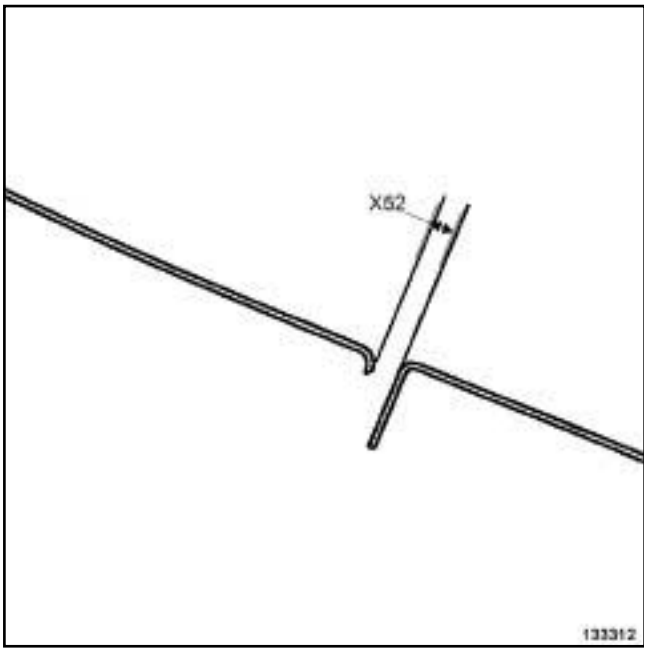
Section 51



133314

(**X51**) = **0.4 mm ± 0.4**

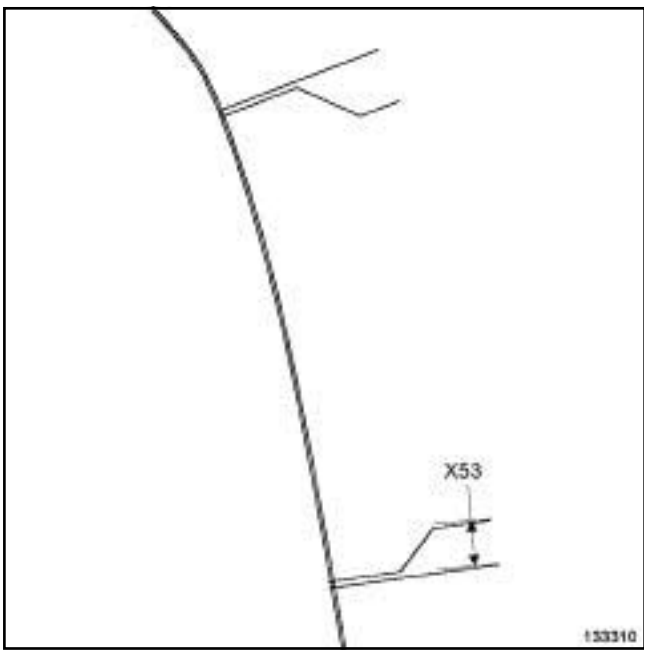
Section 52



133312

(**X52**) = **4 mm ± 1.2**

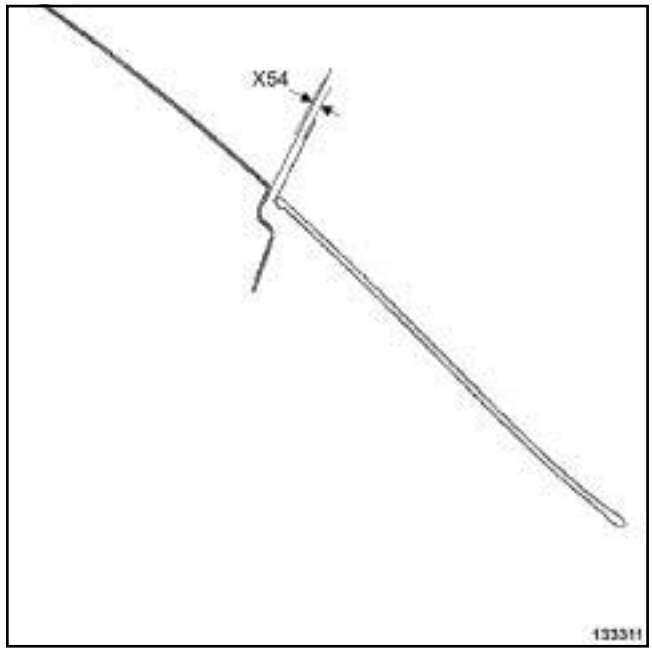
Section 53



133310

(**X53**) = **2 mm ± 0.7**

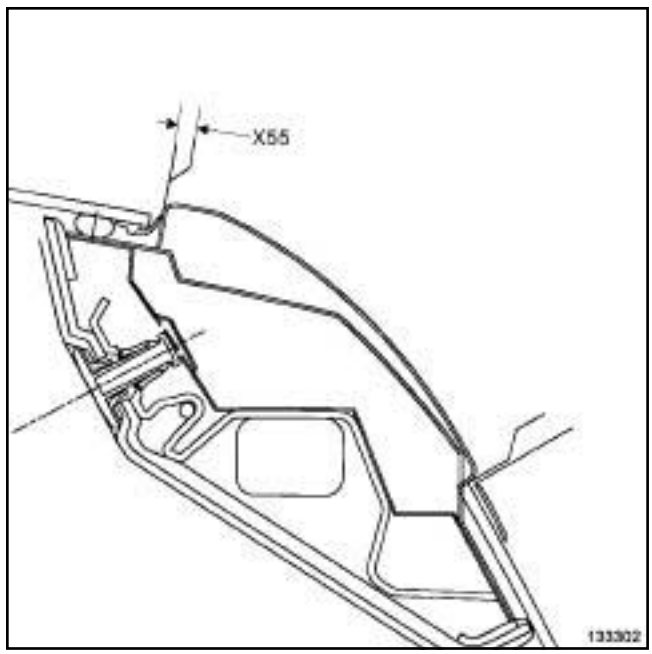
Section 54



133311

(**X54**) = **4 mm ± 1.5**

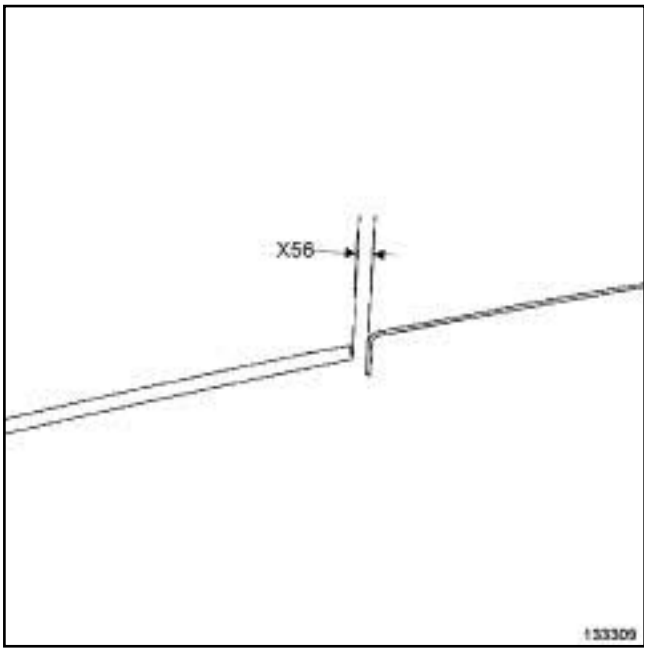
Section 55



133302

(**X55**) = **4 mm ± 1**

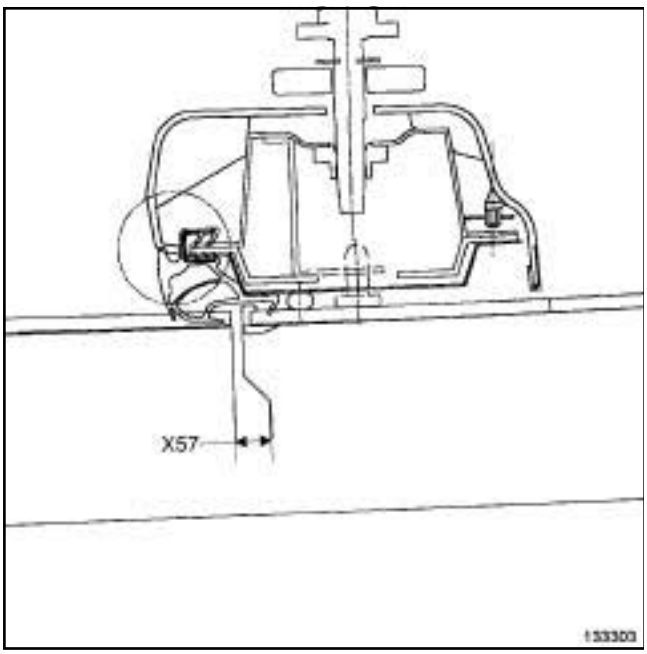
Section 56



133309

(**X56**) = **4 mm ± 2**

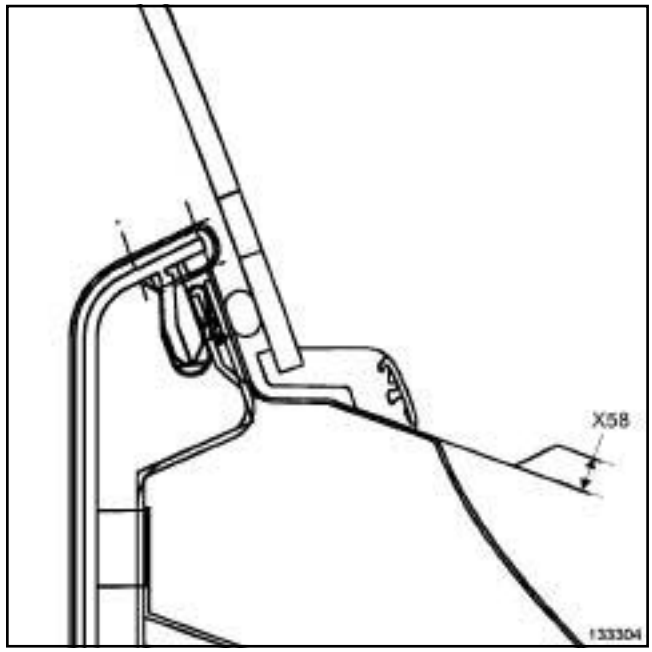
Section 57



133303

(**X57**) = **4 mm ± 1**

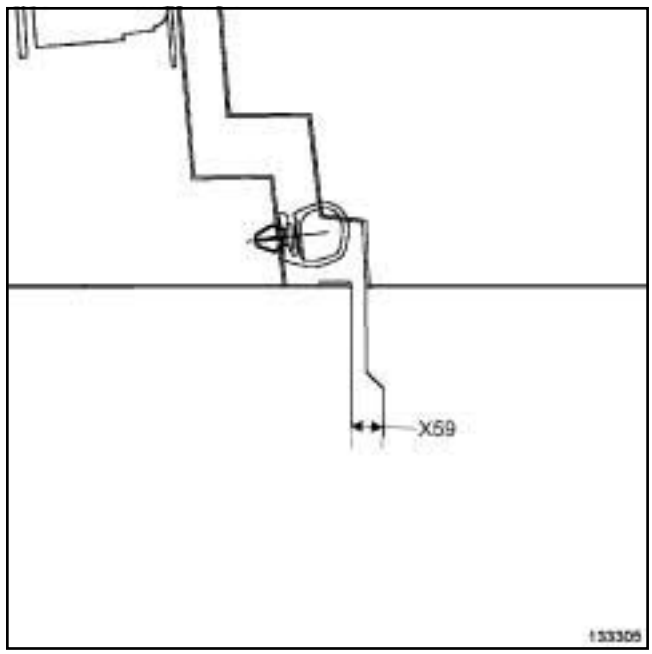
Section 58



133304

(**X58**) = **0 mm**

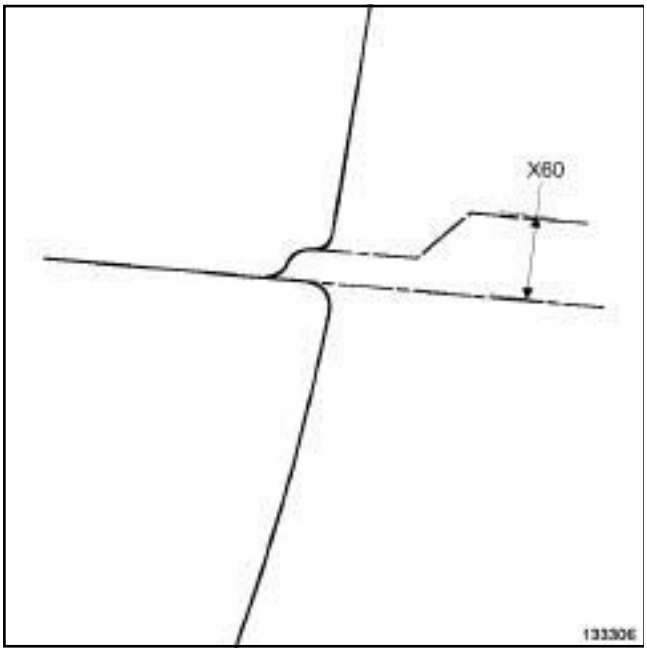
Section 59



133305

(**X59**) = **4 mm ± 1**

Section 60



133306

(**X60**) = **5 mm ± 0.5**

GENERAL INFORMATION

All information contained in these manuals is intended exclusively for automotive industry professionals.

The documentation is intended to cover all vehicles in the **RENAULT** range throughout the world, but may not cover equipment designed for use in specific countries.

The procedures and fault finding procedures recommended and described in this manual have been designed by automotive industry repair professionals.

1 - General recommendations

Observe basic principles of vehicle repair.

The quality of repair depends first and foremost on the care exercised by the person in carrying it out.

To ensure good repair:

- protect the sensitive areas of the vehicle (seats, steering wheel, wings, etc.),
- unless otherwise indicated, all repairs must be done with the ignition off,
- when welding on the vehicle, it is advisable to remove or disconnect components near the repair area that could be affected by the heat,
- use recommended professional products and original parts,
- observe the tightening torques,
- replace roll pins, self-locking or bonded nuts or bolts every time they are removed,
- take care with electrical and electronic components which cannot withstand excess voltage and improper handling; replace any electrical and electronic components which have experienced a voltage drop,
- make sure that the connectors are correctly clipped,
- do not pull on the wiring,
- check for the sealing plugs on the connectors,
- Do not splash any liquid, regardless of its type (oil, cleaner, etc.), on the electric and electronic components (computers, sensors, etc.)
- do not just replace parts one after the other, carry out detailed fault finding beforehand,
- carry out a final check before returning the vehicle to the customer (set the clock, check the alarm operation, check the lights and indicators etc.),
- clean and degrease the sections to be bonded (threads, stub axle splines) to ensure proper adherence,
- protect the accessories and timing belts, the electrical accessories (starter, blanking cover, electric power assisted steering pump) and the mating face to prevent diesel fuel spilling onto the clutch friction plate.

The design quality of our vehicles demands that nothing is left to chance in making a good repair, and it is essential to refit parts or components exactly as they were originally (for instance: heat shields, wiring routing, pipe routing, particularly in the area of the exhaust pipe).

Do not blow away asbestos particles or dust (brakes, clutch, etc.), vacuum them up or clean the component with a cleaning agent (such as a brake cleaning product).

Use professional products and apply them with care, for example do not apply too much sealing paste to the sealing surface.

Exhaust gases (petrol and diesel) are pollutants. Operate engines with care and always use exhaust gas extractors.

Ensure that there is no risk of a short circuit occurring when the electrical connections are reconnected (e.g. starter, alternator, etc.). Some points need greasing, others do not, therefore particular attention should be paid during refitting operations to ensure that they work properly under all conditions.

2 - Special tooling - ease of use

The repair procedures have been designed using special tools; they must therefore be carried out using these tools to ensure a high degree of working safety and quality of repair.

The equipment we have approved has undergone careful research and testing, and must be used and maintained with care.

3 - Reliability - updating

New repair procedures are constantly being developed in the interests of repair quality, either with new products (emission control, injection, electronics, etc.), or in fault finding. Be sure to consult the Workshop Repair Manuals or Technical Notes or fault finding summaries before any servicing operation.

Since vehicle specifications are subject to change during their commercial life, it is essential to check whether there are any updated Technical Notes when seeking information.

4 - Safety

Operations on certain equipment and certain parts (for instance: spring-shock absorber assembly, automatic transmission, brake system, ABS, airbag, common rail diesel injection, LPG, etc.) require particular attention to be paid to safety, cleanliness and care.

The safety symbol used in this manual indicates that special attention must be paid to the procedure or the tightening torque values.

Working safely:

- use suitable tools which are in good condition (use of « multi-purpose» tools, such as adjustable pliers, etc., should be avoided wherever possible),
- use supports and adopt a correct posture when performing heavy work or raising loads,
- make sure that the procedure used is not dangerous,
- Do not wear any jewellery or other small objects during an operation,
- use personal protection (gloves, safety glasses, work shoes, masks, skin barrier creams, etc.),
- always follow the safety instructions associated with the operation to be performed,
- do not smoke when working on vehicles,
- use smoke extractors (welding, exhaust gases, etc.),
- do not use harmful products in unventilated rooms,
- do not overstrain yourself or attempt inappropriate work operations,
- use axle stands when working under a vehicle raised on a jack,
- do not ingest any chemicals (brake fluid, coolant, etc.),
- do not open the cooling circuit when it is hot and pressurised,
- take care with components that are liable to start up suddenly (engine cooling fan, etc.).

Respecting the environment:

- do not allow waste refrigerants to escape into the atmosphere,
- do not dispose of waste vehicle fluids (oil, brake fluid, etc.) in drains,
- do not burn discarded products (tyres, etc.).

5 - Conclusion

The procedures contained in this document merit your attention. Please read them carefully in order to reduce the risk of injury, and avoid using incorrect procedures that could damage the vehicle or make it dangerous in use.

Following the recommended procedures will help you to provide a quality of service which will ensure the vehicles achieve the highest levels of performance and reliability.

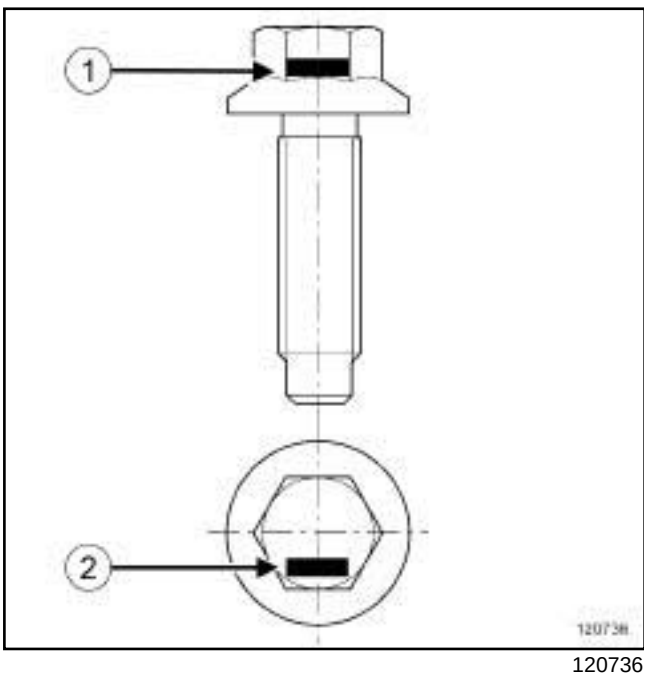
Maintenance and repair operations must be carried out under the proper conditions to ensure that our vehicles run safely and reliably.

I - TABLE OF STANDARD TORQUES

Fastenings		Standard tightening torque (N.m)
Diameter	**Property class**	
M6	8.8	10
M8	8.8	25
M10	8.8	50
M10	10.9	62
M12	10.9	105
M14	10.9	180
M16	10.9	280
M18	10.9	400

Special notes on electrical earths

Fastenings	Standard tightening torque (N.m)
Diameter	
M6	8
M8	21
M10	44



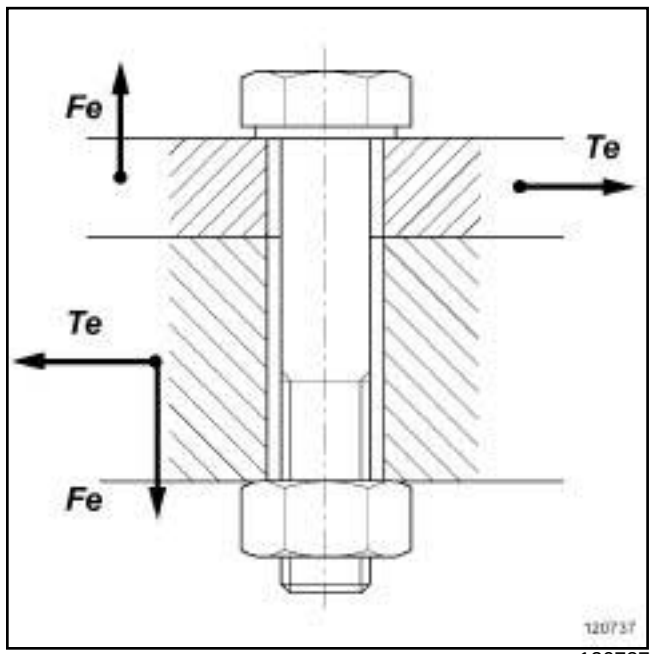
120736

The property class is indicated on the bolt (**1**) or (**2**) .

II - FUNCTION OF A BOLTED ASSEMBLY

The bolting system connects parts of an assembly to prevent their separation or sliding when submitted to exterior forces.

Exterior forces

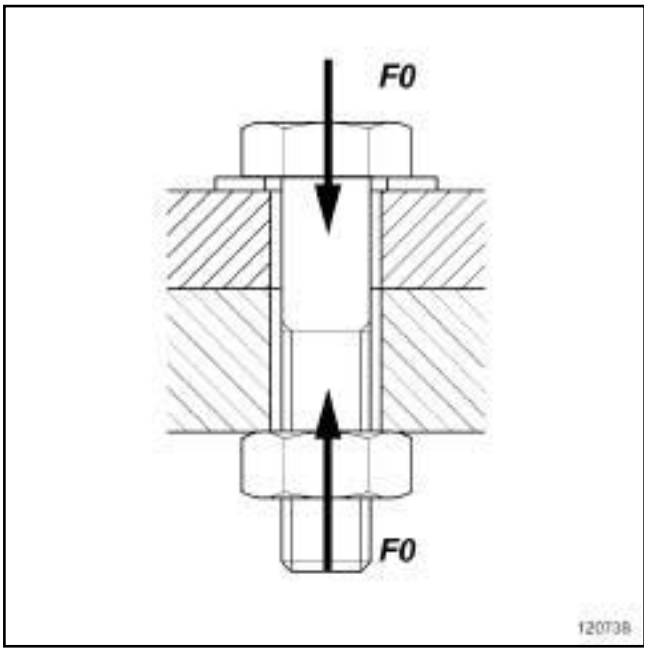


120737

The assembly is submitted to forces that are:

- static and / or dynamic,
- simple (e.g. simple traction),
- multiple (traction + flexion + torsion).

Creating tension (or preload) F0

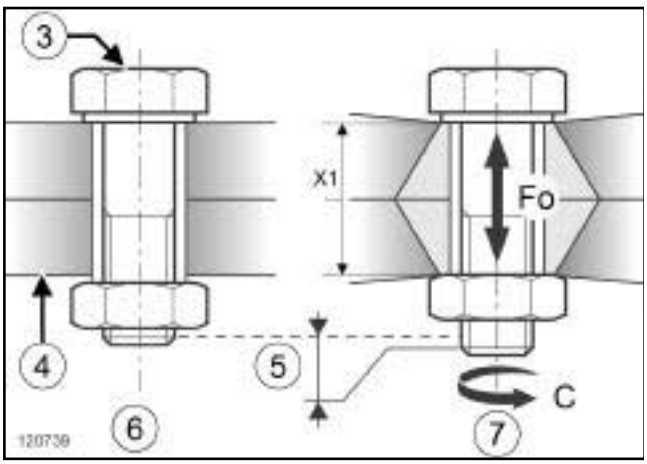


120738

The assembly is held together by the tension created in the bolt when it is tightened.

A reliable assembly is only possible if the correct tension is used:

- insufficient tension: risk of loosening,
- too much tension: risk of deformation of the parts to be assembled, or shearing of the bolt.



120739

(**3**)	Bolt
(**4**)	Assembled components
(**5**)	Extension of the bolt
(**6**)	Non-tightened assembly
(**7**)	Tightened assembly
(**X1**)	compression of the assembly
(**Fo**)	tension
(**C**)	tightening torque

Customer complaints resulting from incorrect tightening may be, following assembly, a safety issue (fire, loss of control of the vehicle etc.), an immobilising fault or a noise.

III - TIGHTENING PROCEDURES

The two controlled tightening procedures adapted to automotive repairs because of their low cost and simple operation are torque tightening and angle tightening (also called torque and angle).

1 - Torque tightening

This is the most commonly used procedure. Is consists of tightening until a given resisting torque is reached, known as tightening torque.

The tightening torque is distributed in a large part as friction torque (under the head and in the thread) and in a small part as useful torque (to create the tension).

This practise spreads the tension significantly due to the variation in the friction coefficients from one assembly to another and the uncertainty of the tightening procedures and methods.

2 - Angle tightening

The principle consists of putting the parts of the assembly in contact using a mating torque (approximately 25 to 30% of the final torque) then to tighten to a determined angle.

This method, which is not dependent on the friction of the tightened assembly, gives more precise results than torque tightening.

IV - OBSERVING THE TIGHTENING TORQUES AND ANGLES

Bolted assemblies whose tightening torques and angles are explicitly specified in the removal / refitting procedures must be observed using the appropriate tools (torque wrench, angle measuring disc). Failure to observe this can lead to safety risks, immobilising faults or unwanted noises.

For other bolted assemblies, non-measured tightening (using standard spanners) is acceptable. Nevertheless, the corresponding tightening torque is indicated in the table of standard tightening torques.

V - RECOMMENDED TIGHTENING TOOLS

For measured tightening, the repairer must have available torque wrenches to tighten from **4 to 400 N.m** as well as an angle measuring disc.

The torque wrenches used may be click type or electronic.

For example:

- 1 torque wrench **4 - 40 N.m**,

- 1 torque wrench **20 - 100 N.m**,

- 1 torque wrench **80 - 400 N.m**,

- 1 angle measurement disc.

The torque wrenches used must comply with the **ISO 6789** standard. They must be calibrated regularly following the supplier's recommendations using the appropriate procedures.

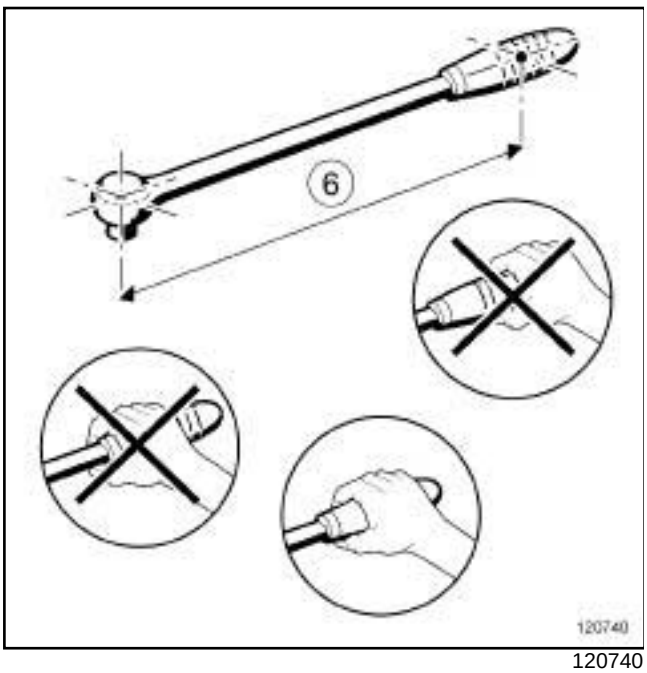
VI - PRECAUTIONS WHEN USING A CLICK TYPE TORQUE WRENCH

A click type torque wrench is a manual tightening tool. The trigger mechanism causes a break or disengagement of the wrench past a force threshold.

This threshold depends on the setting of the wrench but also depends on the way the wrench is handled.

When used following best practises, the accuracy of the tightness when using a click type torque wrench is ± 15%.

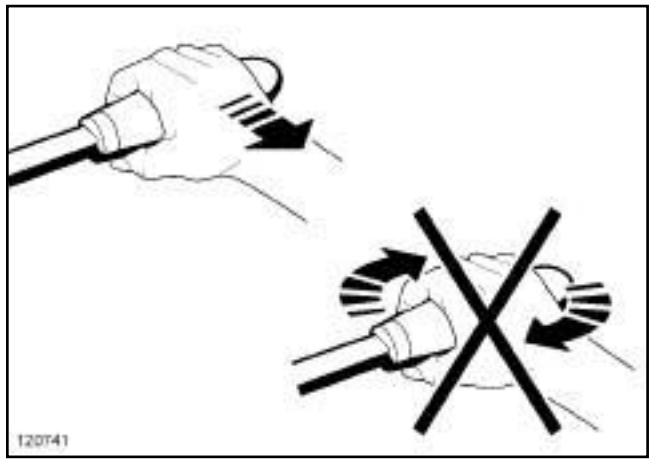
The instructions to be observed are:



120740

(**6**) lever arm

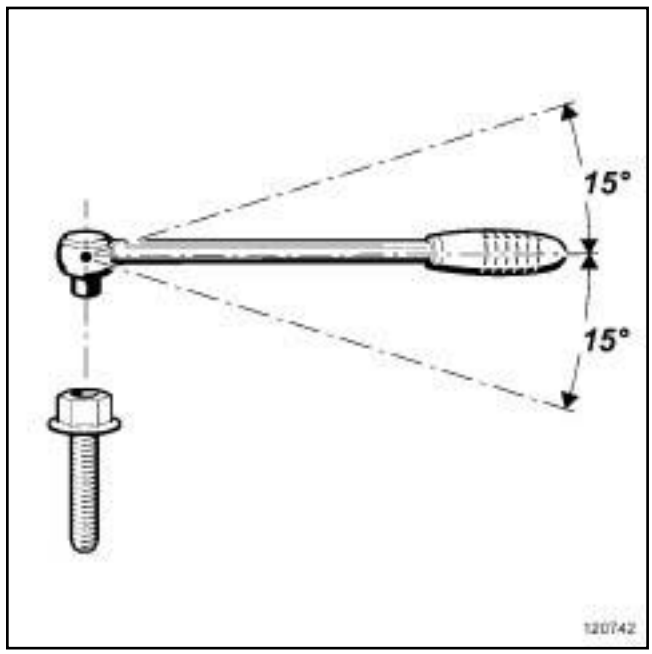
- Place the hand in the centre of the handle. An incorrectly positioned hand on the handle will alter the trigger threshold.



120741

- Pull the wrench gently and steadily, without applying any torsion. Excessive tightening speed as well as jerkiness are major causes of overtightening. Any torsion applied to the wrench will alter the trigger threshold.

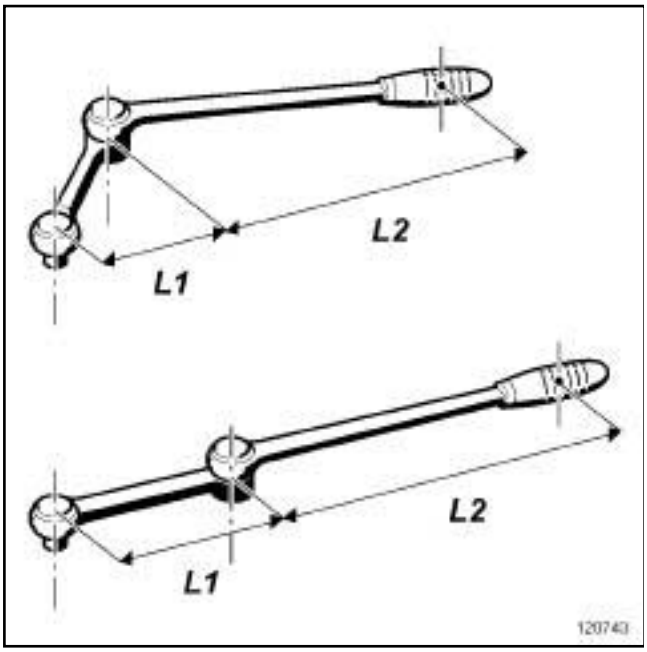
- Hold the wrench on the bolt using a minimum of effort. Any effort applied to the wrench head will alter the trigger threshold.



120742

- Apply the tightening effort perpendicular to the mounting observing a tolerance of ± 15° relative to the perpendicularity. If the wrench is not perpendicular to the mounting axis, this will result in insufficient tightening.

- Stop tightening as soon as the wrench is triggered. Continued tightening after the wrench is triggered will lead to overtightening.



120743

If the length of the wrench is modified (extending the handle, adapting an end piece) it is essential to recalibrate the wrench to its new configuration.

Modifying the length of the wrench will modify its trigger threshold.

Use the formula: C1 = CO x L2 / (L1+L2)

- CO: torque to apply,

- C1: adjustment torque to be displayed on the wrench,

- L1: length of the extension,

- L2: length of the wrench.

Unless there are special instructions in the repair method, a universal joint (CARDAN joint type) should be used for measured tightening. Using a universal joint will result in a difference between the set torque of the wrench and the actual torque applied.

Before storing the wrench, loosen the adjustment spring completely. A wrench stored with a spring under tension will lose its tightening accuracy.

VII - PRECAUTIONS WHEN USING ELECTRONIC TORQUE WRENCHES

An electronic torque wrench is a manual tightening tool. The tightening torque and, depending on the model, the angle is read directly.

When used following best practises, the accuracy of the tightness when using an electronic torque wrench is ± 5%.

Electronic torque wrenches are not affected by the position of the operator's hand.

It is advisable to handle the wrench with care and to stop tightening when the required value is displayed on the wrench.

B91 or D91 or K91

Equipment required
Diagnostic tool
safety strap(s)

I - TOWING

WARNING

See the current towing regulations in each country.

Never use the driveshafts, axle assembly components or suspension components as attachment points.

Always fully tighten and lock the towing ring before use.

Always pull in the direction of the rod's length in order to avoid breaking it.

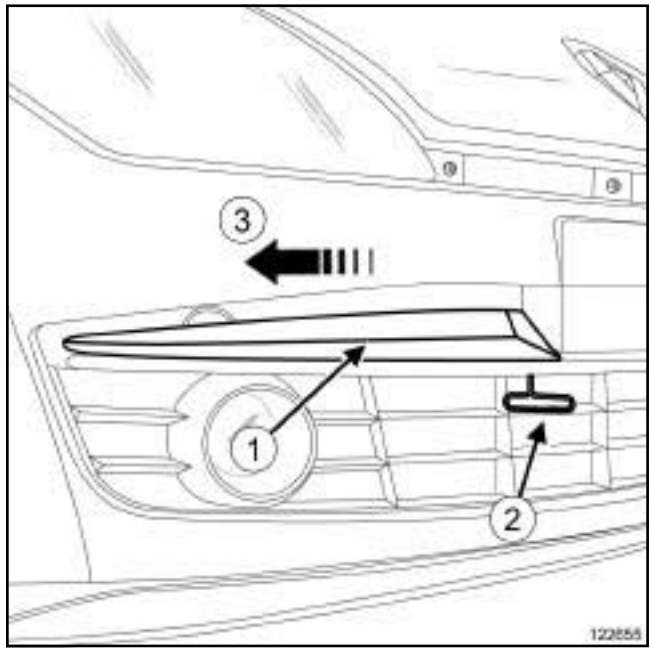
Vehicles fitted with automatic transmission:

- The vehicle should preferably be transported on a platform or towed by lifting the front wheels. As an exception, the vehicle may be towed with the wheels on the ground but at a speed below 12 mph (20km/h) and over a maximum distance of **18 miles (30 km)** (with the gear lever in neutral).

Vehicles fitted with Renault Card:

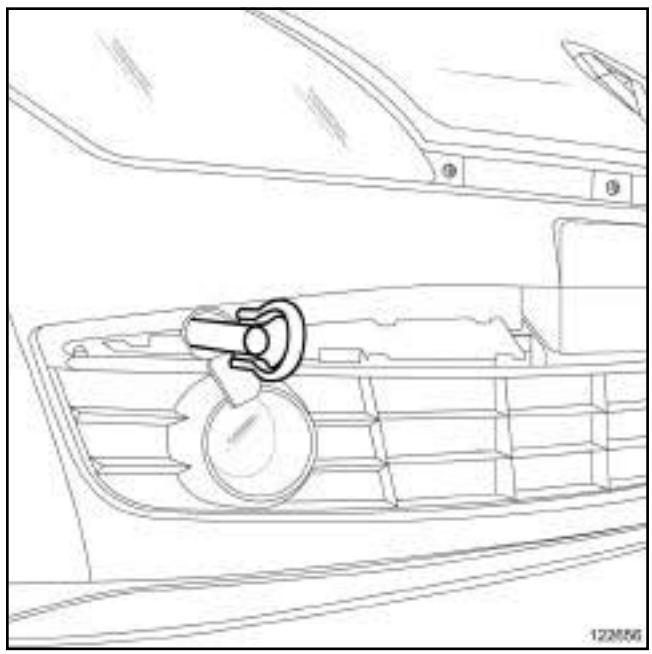
- If the vehicle battery is flat, the steering column remains locked. In this case, fit a new battery or connect to an electrical source to lock the airbag computer using the **Diagnostic tool** (see **Airbag and pretensioners: Precautions for the repair**) (MR 411, 88C, Airbag and pretensioners), which unlocks the steering column.
- If it is not possible to lock the airbag computer, the front of the vehicle must be lifted.

1 - Position of front attachment point



122655

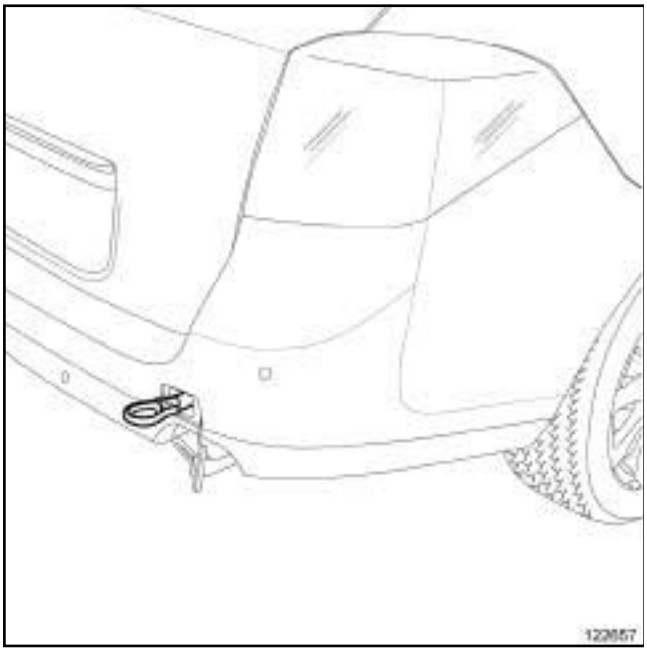
To access the front attachment point, the front bumper trim (**1**) must be removed in the direction and order indicated (**2**) and (**3**) .


122656

Fully screw in the towing ring supplied in the onboard vehicle tool kit located in the luggage compartment inside the emergency spare wheel.

B91 or D91 or K91

2 - Position of rear attachment point


122657

Fully screw in the towing ring supplied in the onboard vehicle tool kit located in the luggage compartment inside the emergency spare wheel.

II - LIFTING POINT USING A TROLLEY JACK

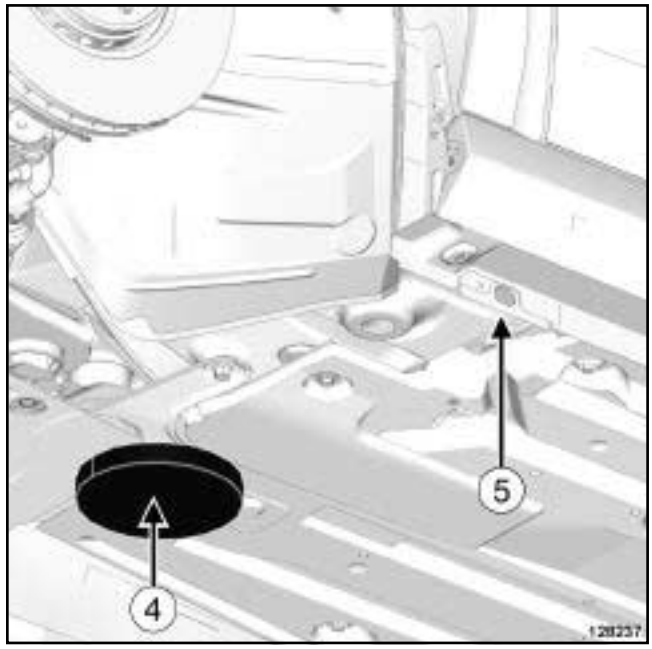
IMPORTANT

To prevent any accidents, the trolley jack must only be used to lift and/or move the vehicle. The vehicle height must be maintained with axle stands which are strong enough to support the weight of the vehicle.

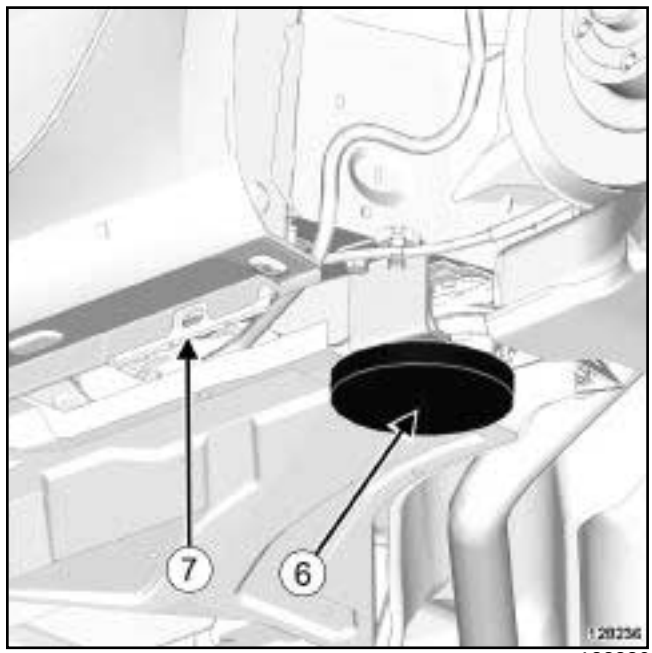
WARNING

To avoid any damage to the original protection, use equipment fitted with rubber pads to prevent the equipment coming into direct contact with the vehicle.

To avoid any damage to the axle assemblies, the vehicle must not be raised using the front suspension arms for support or under the rear axle.



128237



128236

To place the vehicle on axle stands:

- front:

  • raise the vehicle under the front side cross member at (**4**) and place the axle stand under the jacking point at (**5**) ,

- rear:

  • raise the vehicle under the rear axle mechanism bearing at (**6**) and place the axle stand under the jacking point at (**7**) .

III - LIFTING POINT USING A VEHICLE LIFT

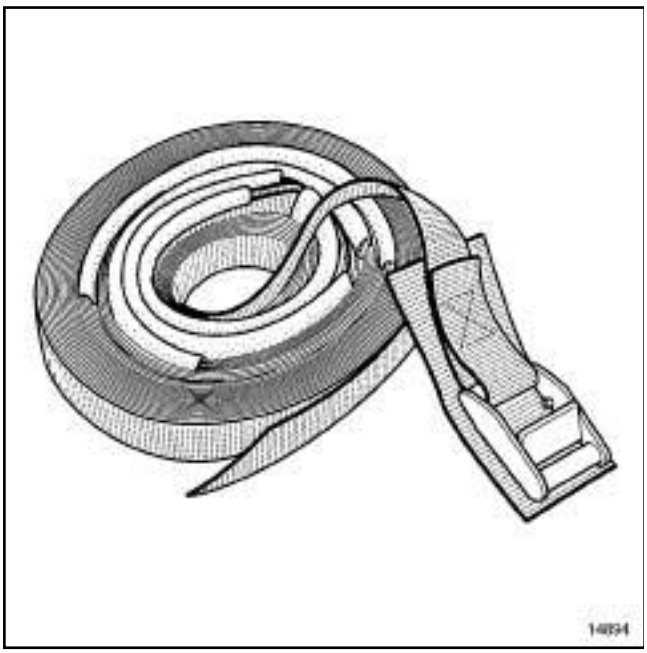
1 - Safety advice reminder

4-WHEEL STEERING

If a four-wheel drive vehicle is locked in a rear wheel lock position, attempting to raise the vehicle on a four-post lift may cause it to fall.

Follow this advice:

- Repair the vehicle on a two-post lift.



14894

Safety advice reminder:

If it is necessary to remove heavy components from the vehicle, it is preferable to use a four-post lift.

There is a danger that the vehicle will tilt on a two-post lift after certain components have been removed (e.g. engine and transmission assembly, rear axle, gear-box). Fit the **safety strap(s)** available from the Parts Department.

2 - Fitting the straps

14893

Fitting the **safety strap(s)** :

For safety reasons, the **safety strap(s)** must always be in perfect condition; replace them if they show signs of wear.

When fitting the **safety strap(s)**, check that the seats and fragile parts of the vehicle are correctly protected.

a - Tilting towards the front

Place the **safety strap(s)** under the rear right-hand arm of the lift.

Pass the **safety strap(s)** through the vehicle interior.

Pass the **safety strap(s)** under the rear left-hand arm of the lift.

Pass the **safety strap(s)** through the vehicle interior again.

Tighten the strap.

b - Tilting towards the rear

Place the **safety strap(s)** under the front right-hand arm of the lift.

Pass the **safety strap(s)** through the vehicle interior.

Pass the **safety strap(s)** under the front left-hand arm of the lift.

Pass the **safety strap(s)** through the vehicle interior again.

Tighten the **safety strap(s)**.

B91 or D91 or K91

3 - Permitted lifting points

IMPORTANT

Only the jacking points described in this section allow the vehicle to be raised in complete safety.

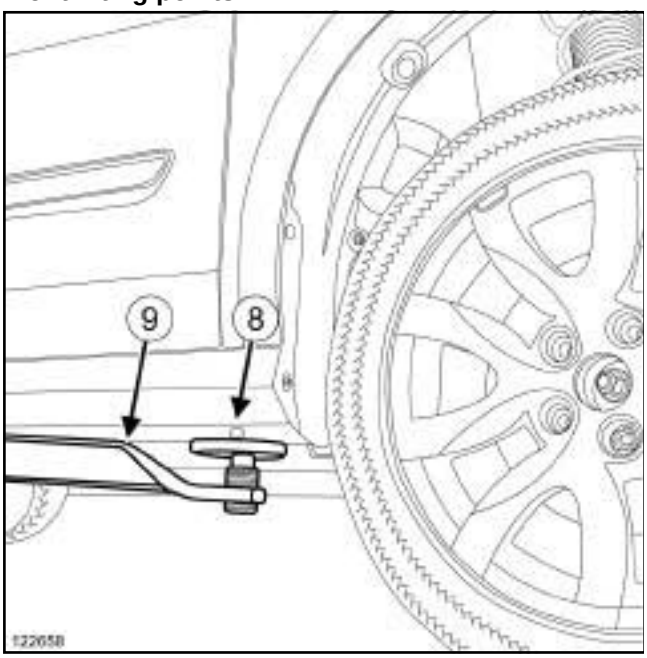
Do not raise the vehicle using points other than those described in this section.

Note:

When raising with a lift, make sure that the lifting arm pads ***(8)*** and ***(10)*** are sufficiently loosened to prevent damaging the sill panel.

To raise the vehicle, position the lifting arm pads as indicated below, taking care not to damage the underside of the sill panel ***(9)*** and ***(11)*** .

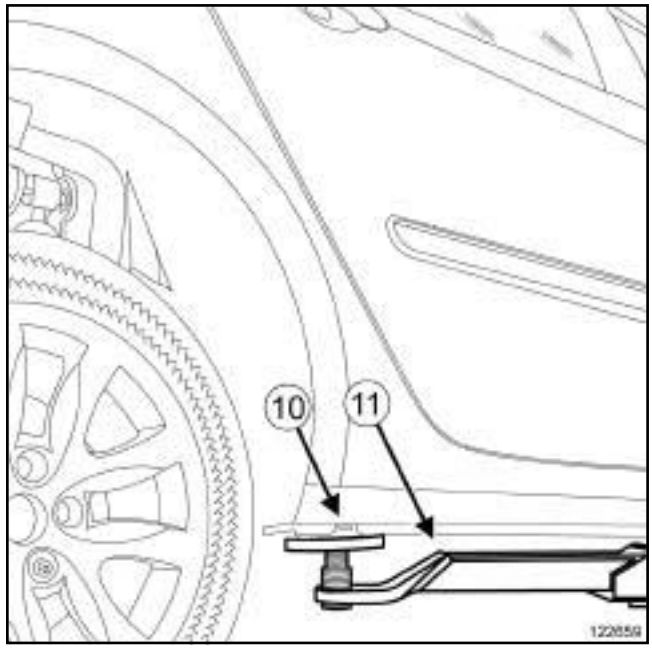
Front lifting points



122658

Position the lifting arms under the jacking points (**8**) at the front.

Rear lifting points



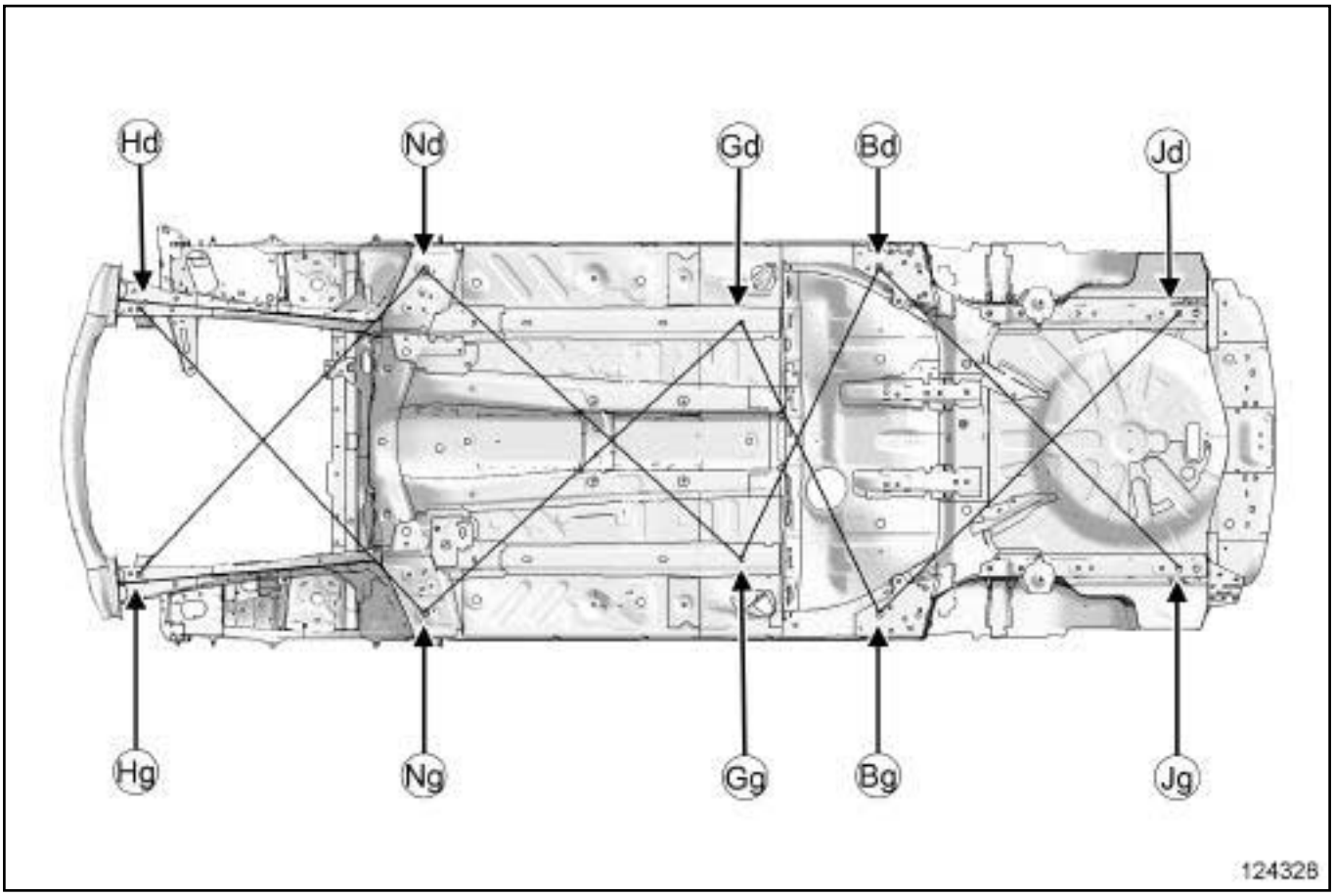
122659

Position the lifting arms under the jacking points (**10**) at the rear.

Note:

If it is necessary to disengage the jacking points, follow the instructions for lifting using a trolley jack (for example, fit anchoring clamps if placing on a body jig bench for bodywork rebuilding).

I - CHECKING THE SUBFRAME



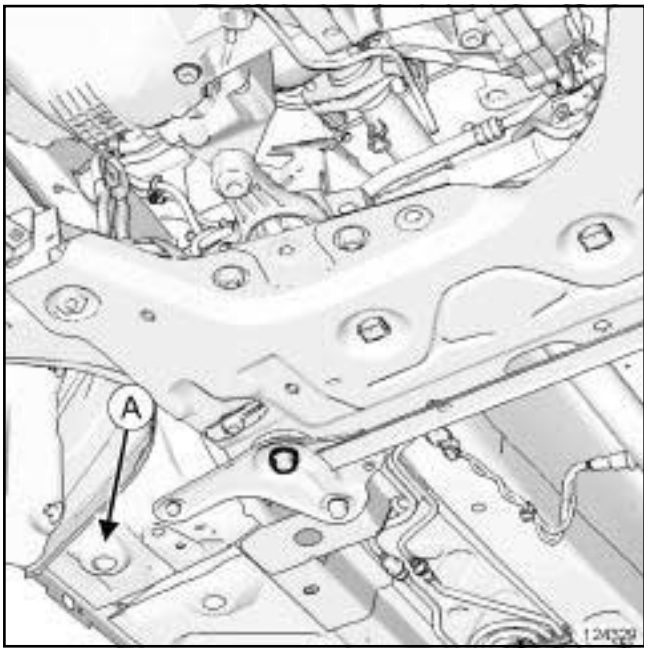
124328

❑ Chronological order of checks:

- Front impact:
  - (**Gd**) - (**Ng**) = (**Gg**) - (**Nd**)
  - (**Nd**) - (**Hg**) = (**Ng**) - (**Hd**)
- Rear impact:
  - (**Gd**) - (**Bg**) = (**Gg**) - (**Bd**)
  - (**Bd**) - (**Jg**) = (**Bg**) - (**Jd**)

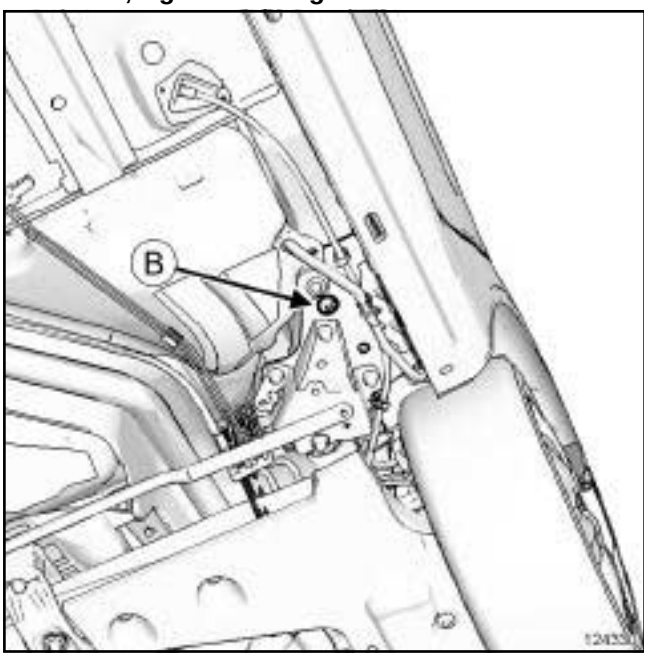
II - DETAILED VIEW OF INSPECTION POINTS

Points Ad, Ag



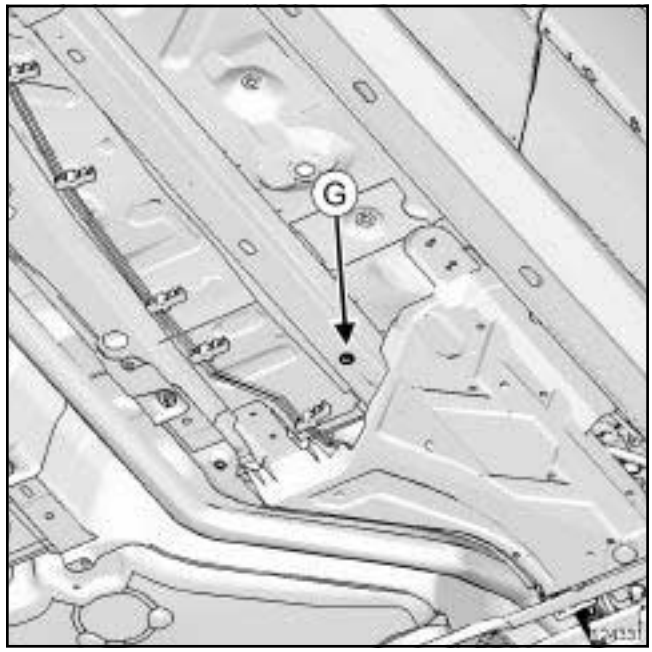
124329

Points Bd, Bg Rear axle guide



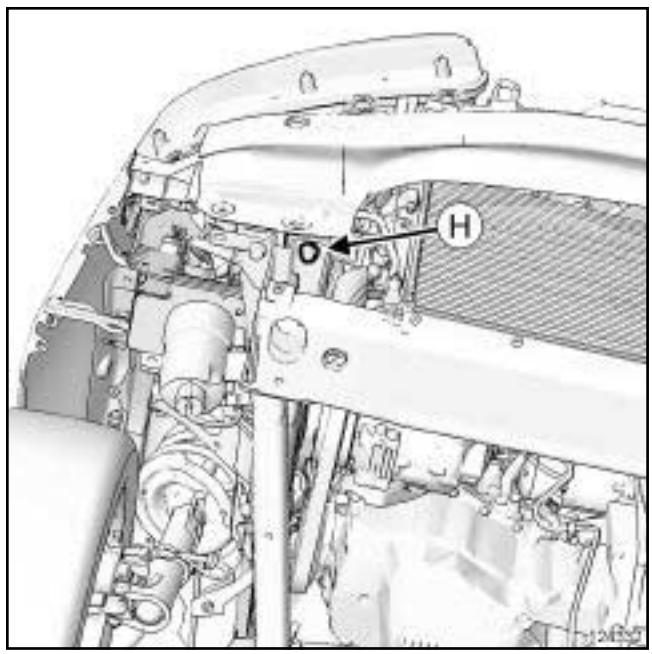
124330

Points Gd, Gg Front side member rear guide



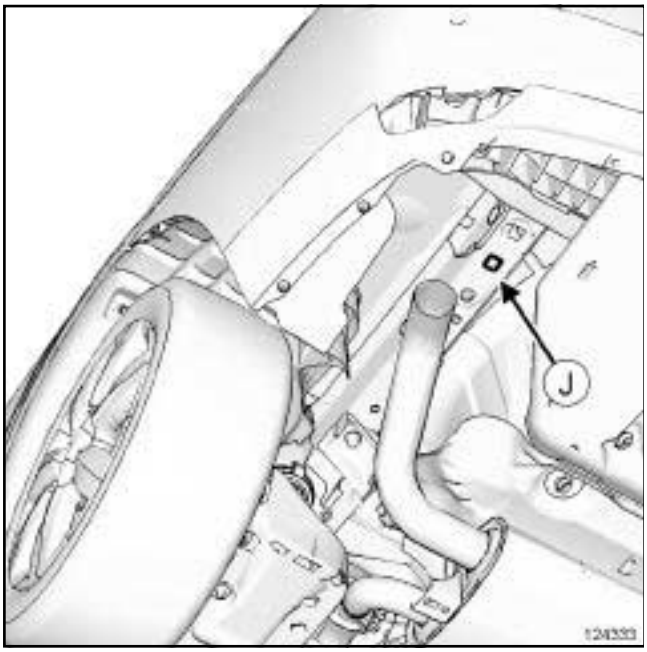
124331

Points Hg, Hd Radiator cross member mounting on front side member



124332

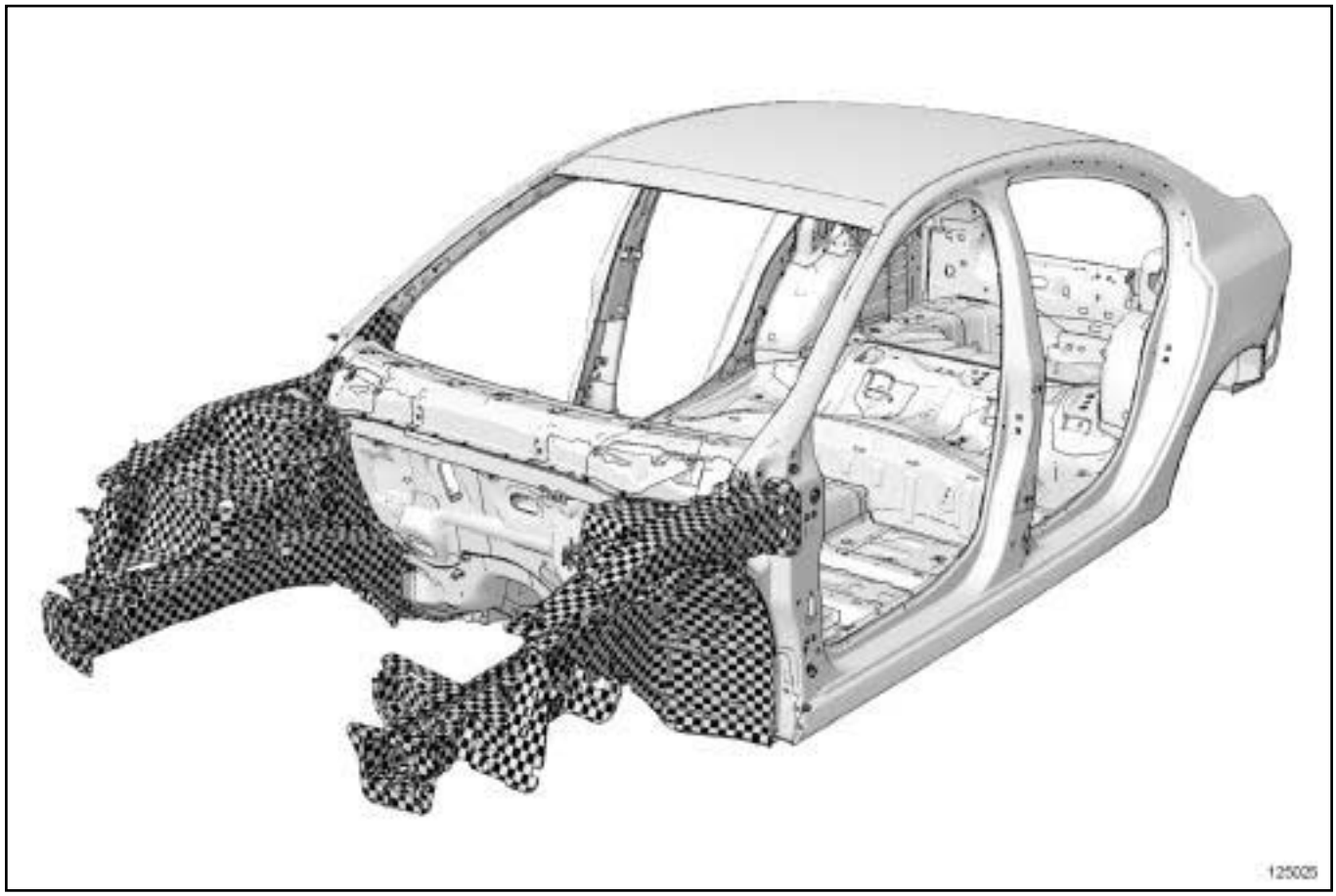
Points Jd, Jg Rear side member rear leader pin



124333

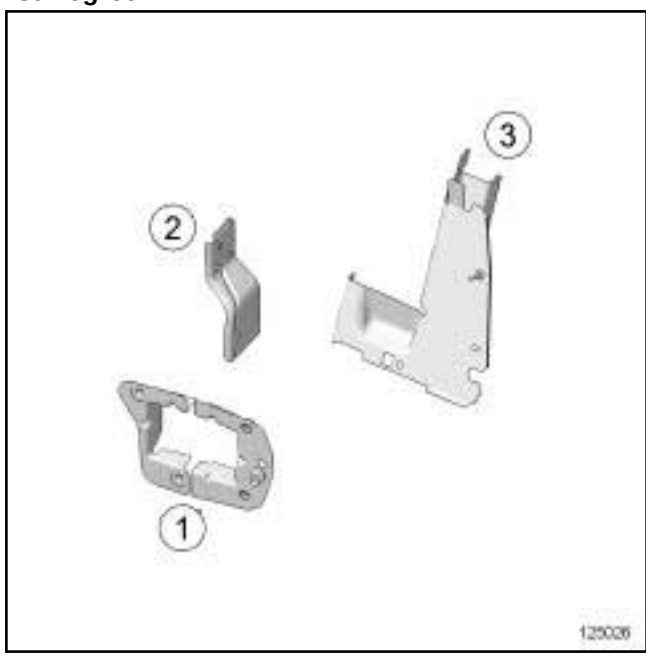
❑

COMBINATIONS FOR REPLACING WELDED STRUCTURAL PARTS IN ACCORDANCE WITH IMPACT SUSTAINED



125025

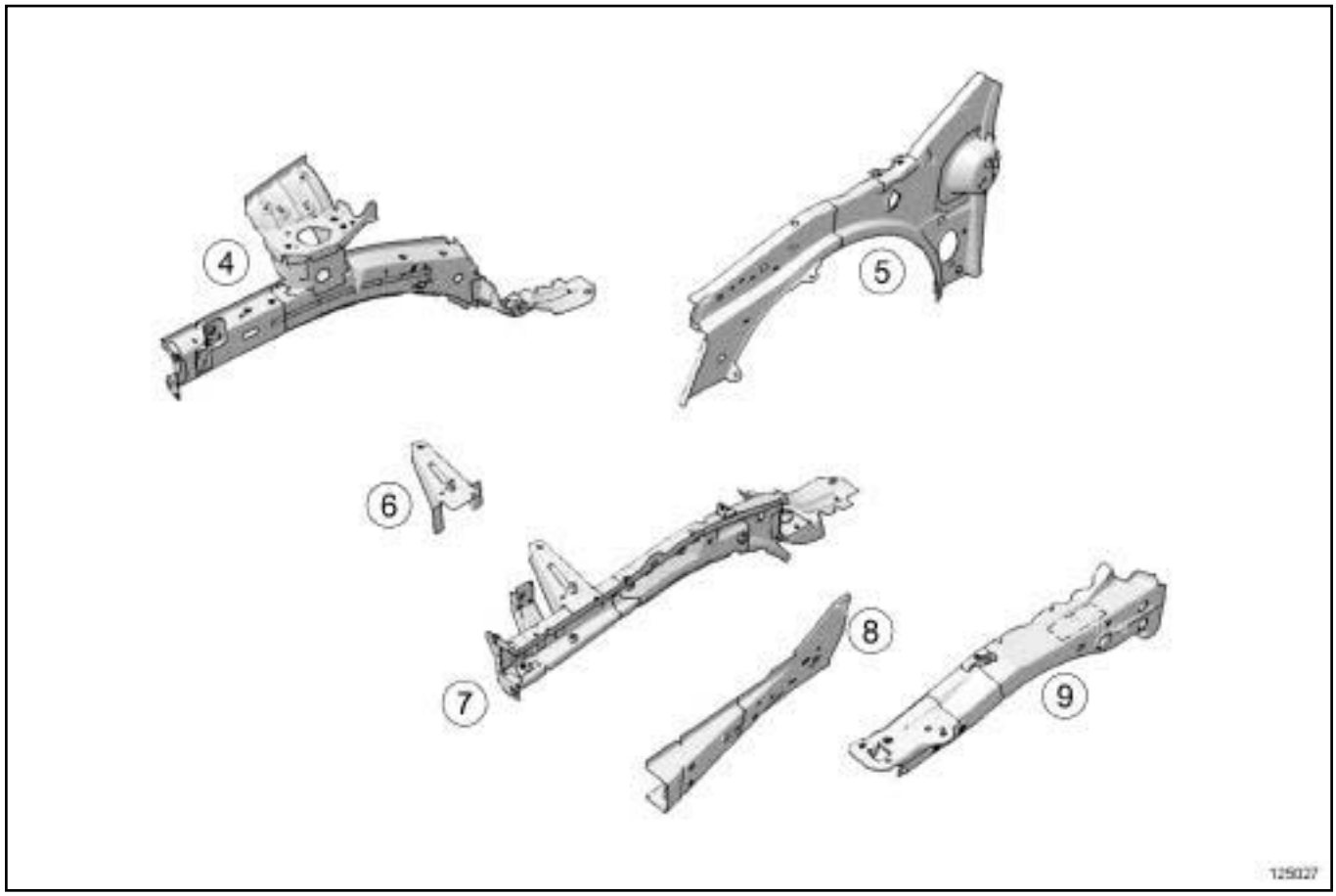
1st Degree



125026

- (**1**) front end cross member mounting stiffener,
- (**2**) front panel mounting bracket,
- (**3**) front side end cross member.

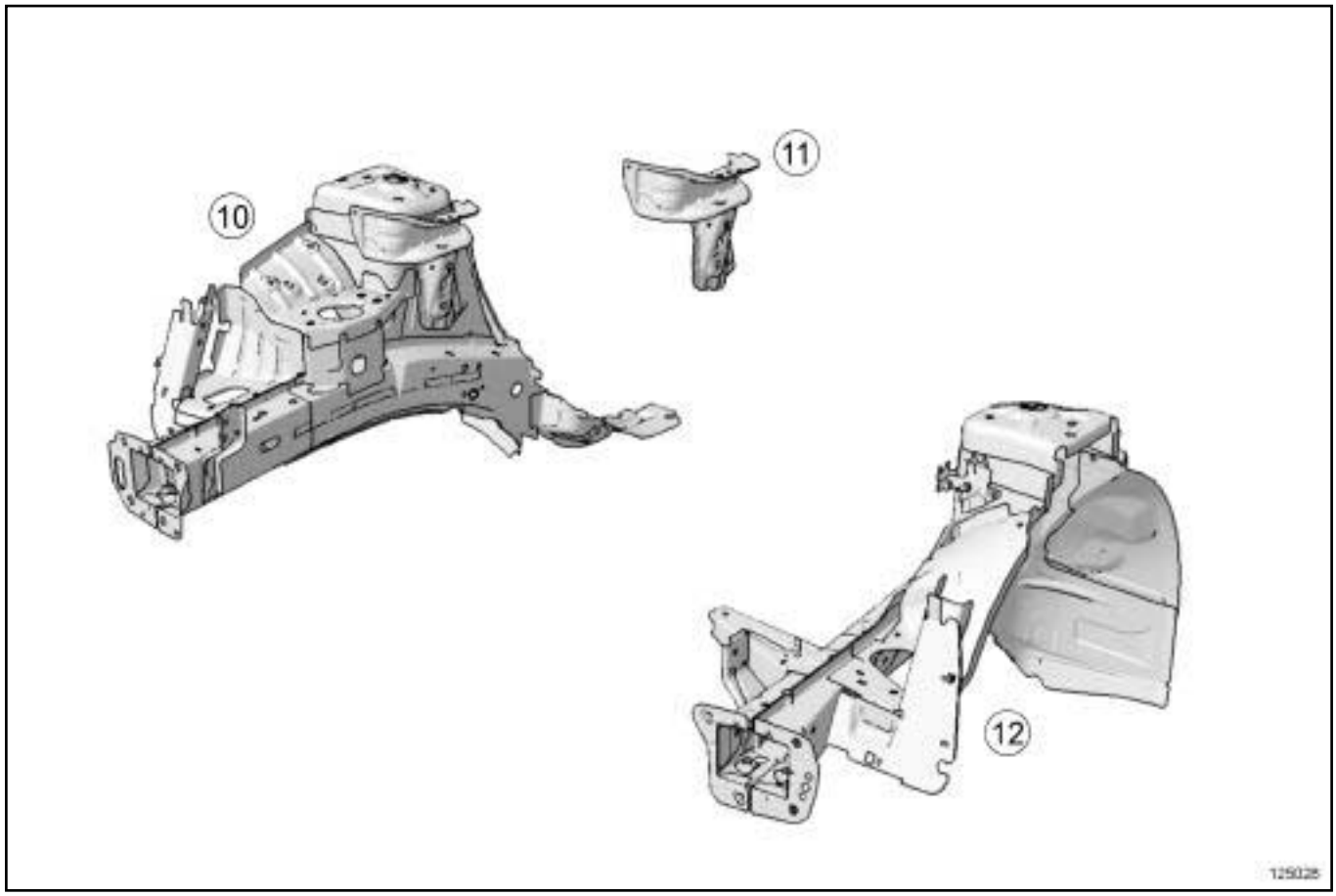
2nd Degree



125027

- (**4**) front section of front right-hand side member,
- (**5**) scuttle side panel,
- (**6**) battery tray bracket,
- (**7**) front section of front left-hand side member,
- (**8**) front side member closure panel, front section,
- (**9**) scuttle side panel upper stiffener.

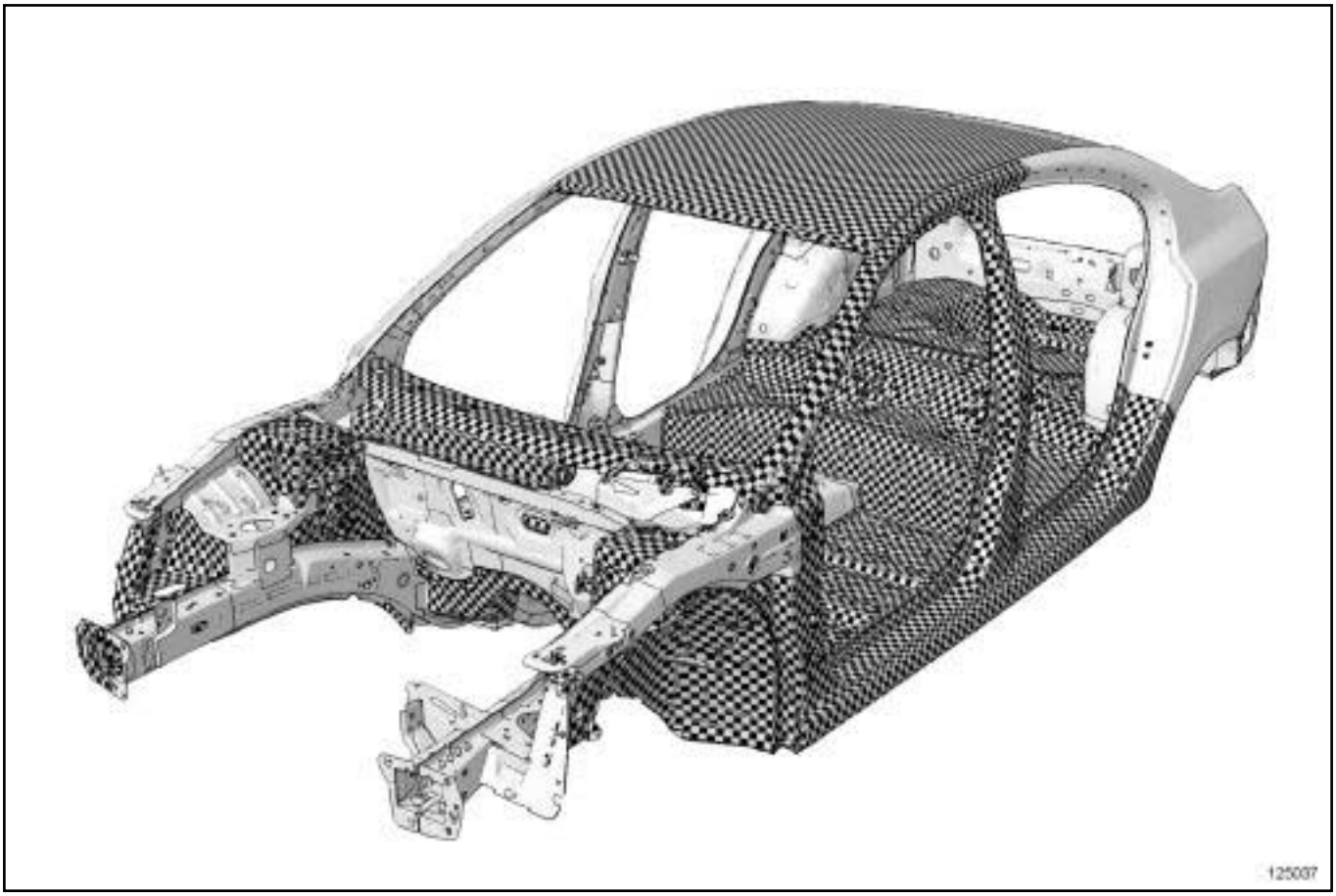
3rd Degree



125028

- (**10**) front right-hand half unit,
- (**11**) upper linkage mounting,
- (**12**) front left-hand half unit.

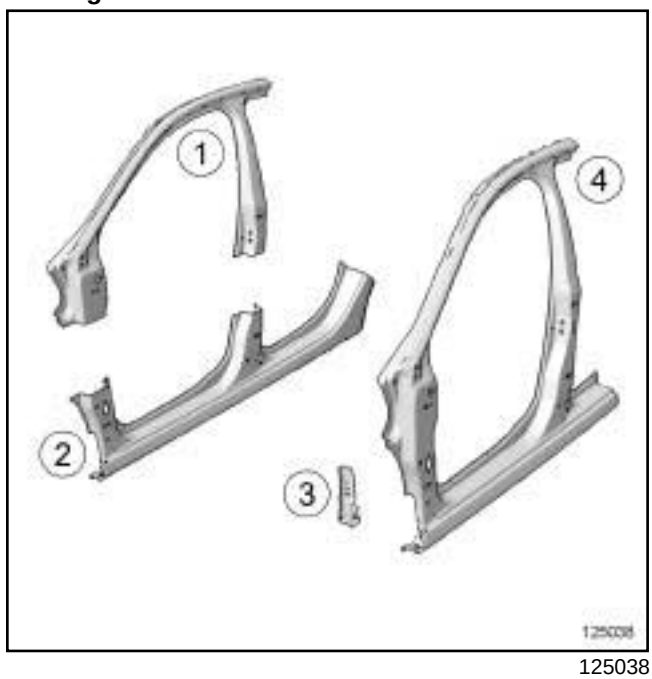
B91 or K91



125037

B91 or K91

1st Degree

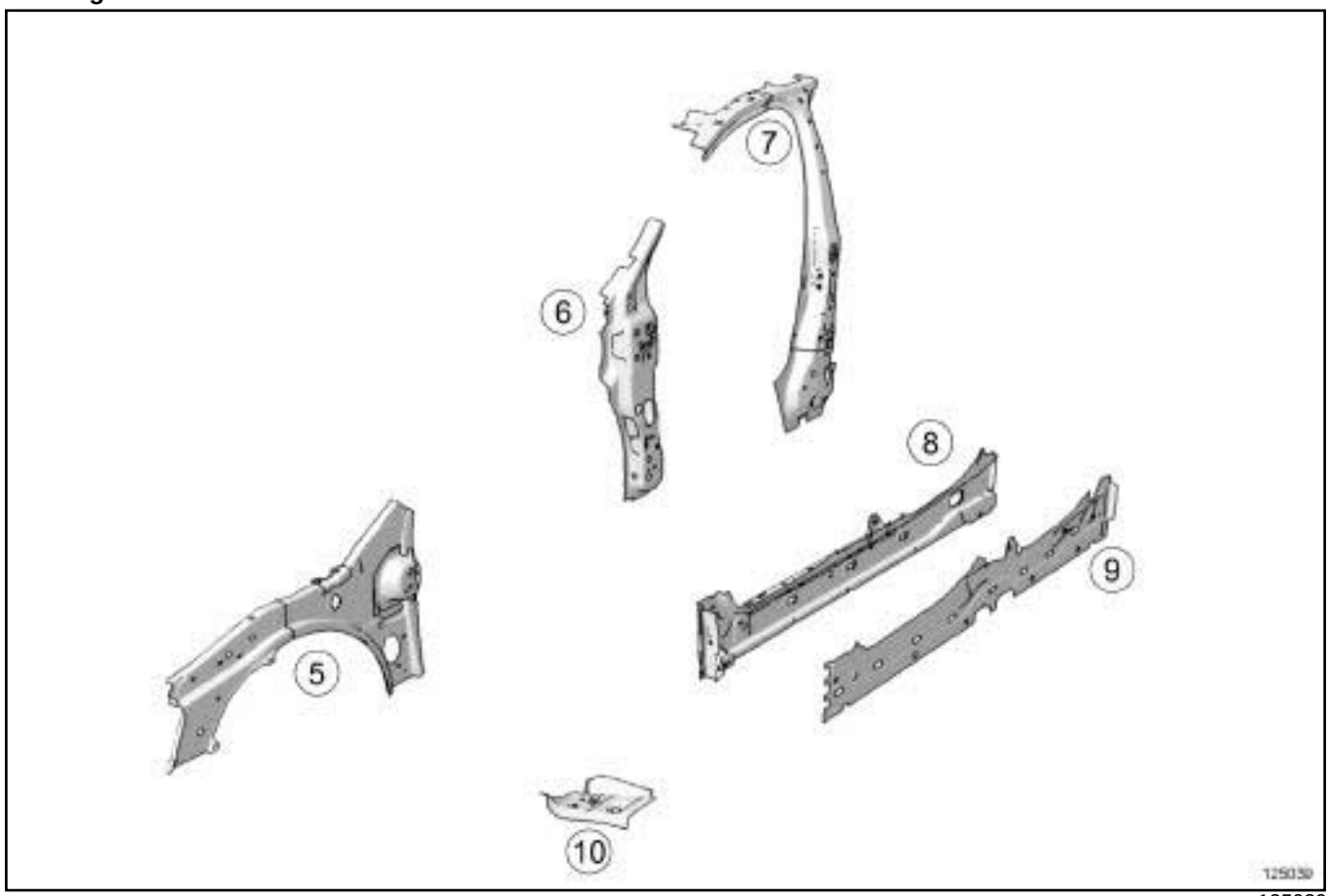


125038

- (**1**) upper body,
- (**2**) sill panel,
- (**3**) body side closure panel,
- (**4**) body side, front section.

B91 or K91

2nd Degree

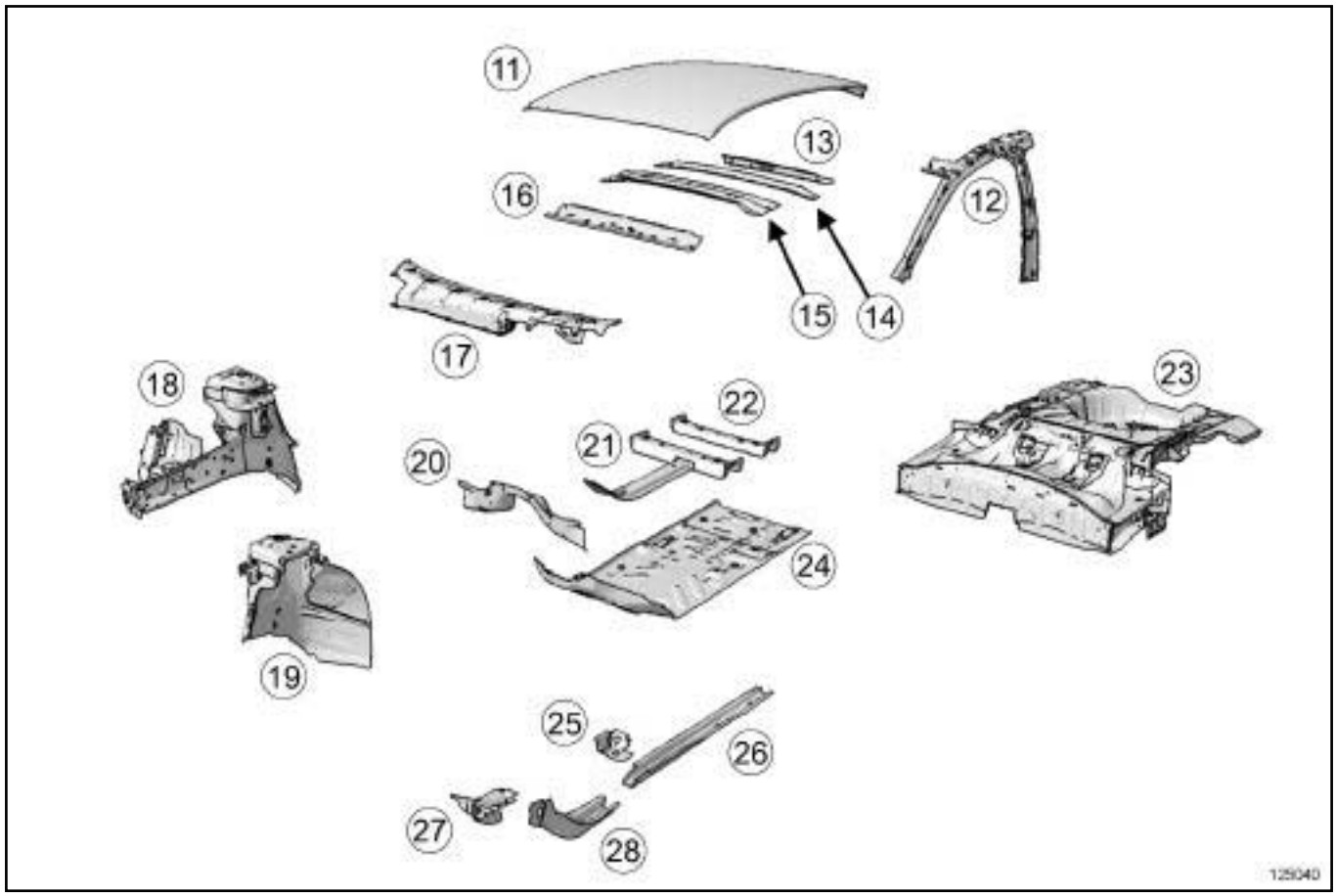


125039

- (**5**) scuttle side panel,
- (**6**) A-pillar reinforcement,
- (**7**) B-pillar reinforcement,
- (**8**) sill panel closure panel,
- (**9**) sill panel reinforcement,
- (**10**) centre floor front side cross member.

B91 or K91

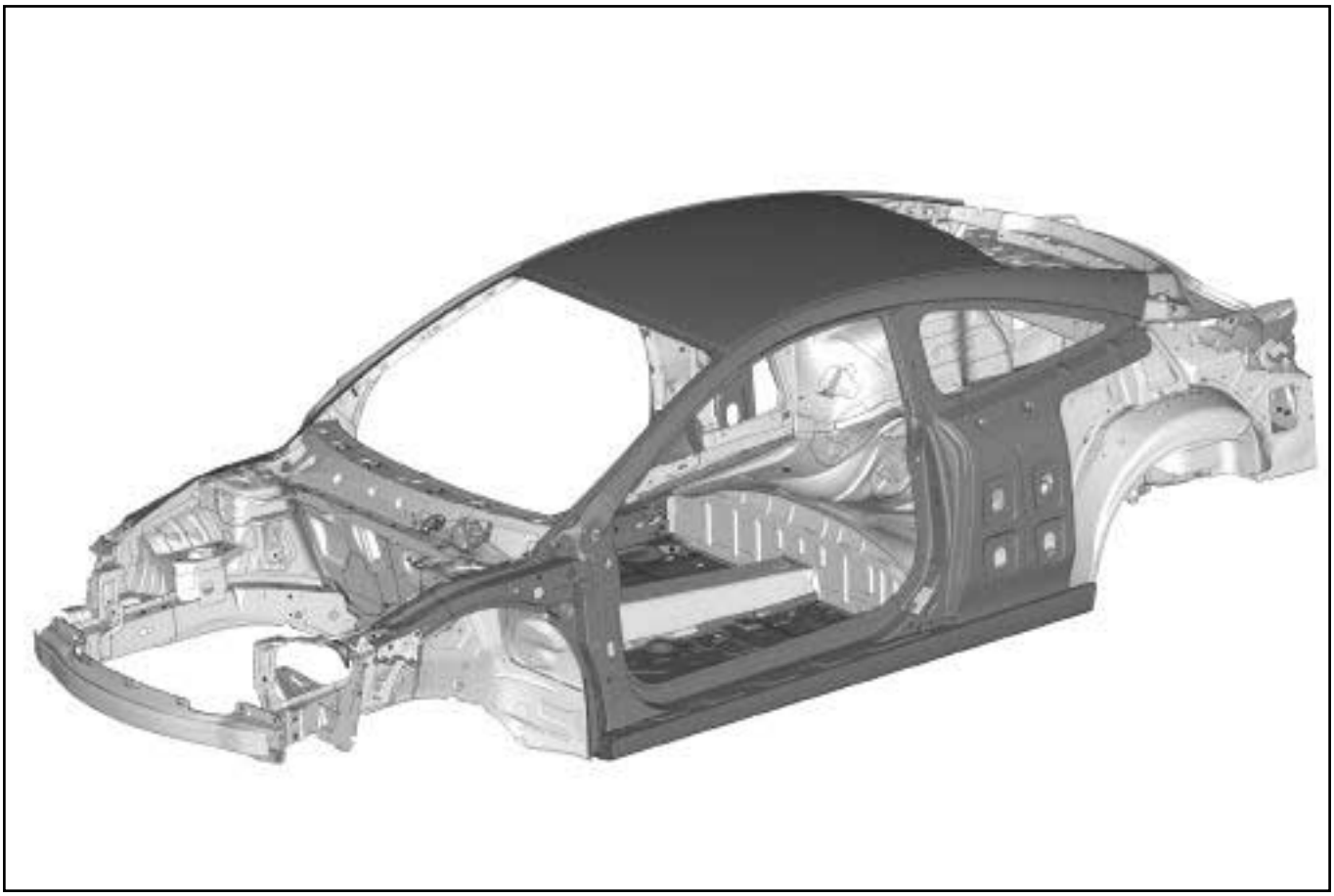
3rd Degree



125040

- (**11**) roof,
- (**12**) windscreen pillar lining,
- (**13**) roof rear cross member,
- (**14**) roof panel arch,
- (**15**) roof middle cross member,
- (**16**) roof front cross member,
- (**17**) windscreen aperture lower cross member,
- (**18**) front wheel arch, front section,
- (**19**) front wheel arch, rear section,
- (**20**) centre floor front cross member,
- (**21**) front cross member under front seat,
- (**22**) rear cross member under front seat,
- (**23**) rear floor unit,
- (**24**) centre floor, side section,
- (**25**) anti-impact unit of front subframe,
- (**26**) front side member, rear section,
- (**27**) front subframe rear mounting unit,
- (**28**) front side member, centre section.

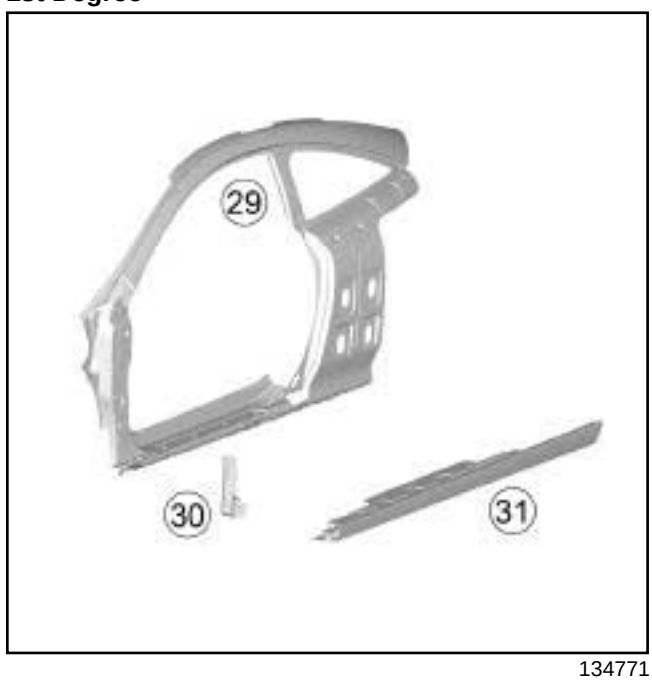
D91



134770

D91

1st Degree

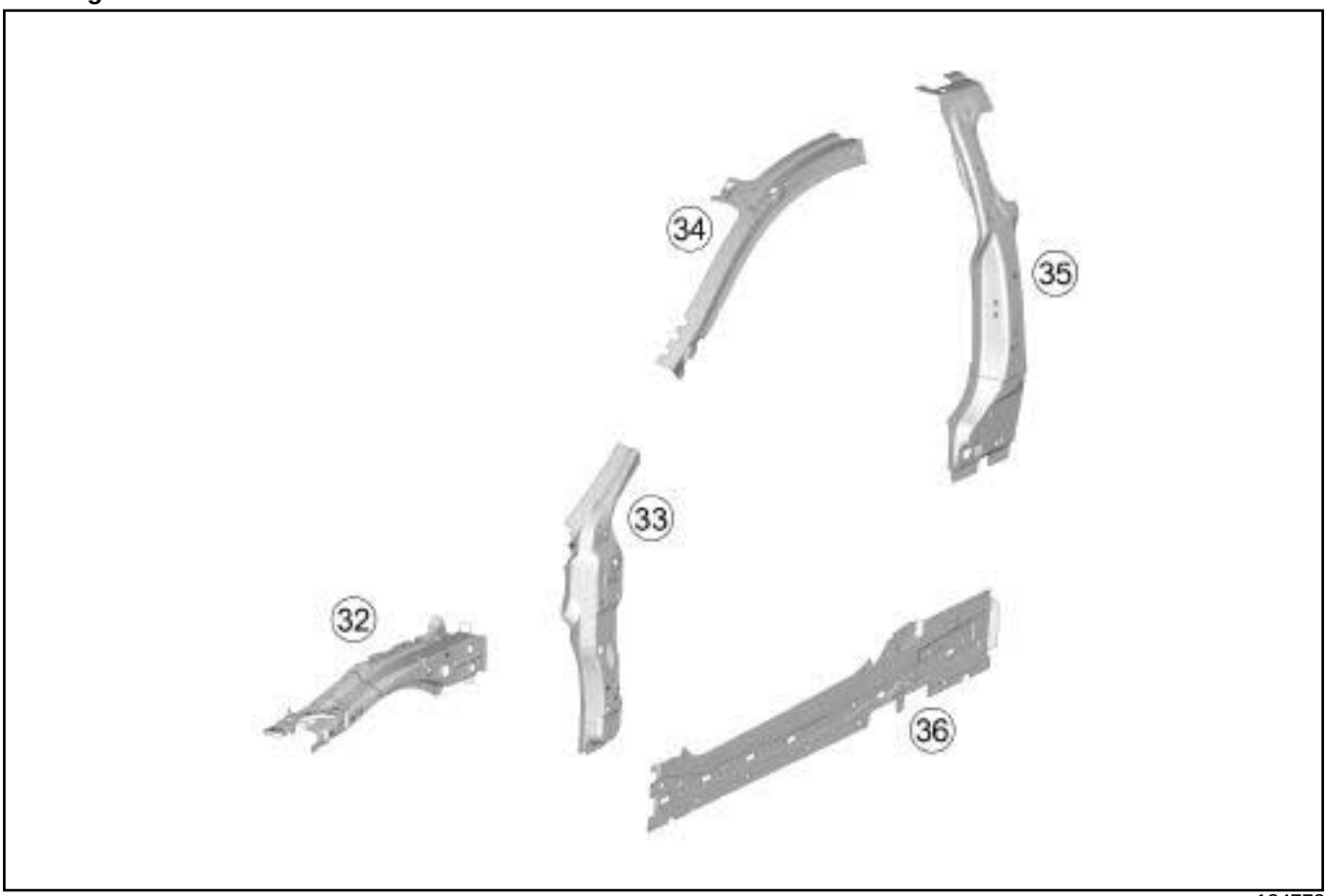


134771

- (**29**) body side front section,
- (**30**) body side closure panel, front section,
- (**31**) sill panel.

D91

2nd Degree

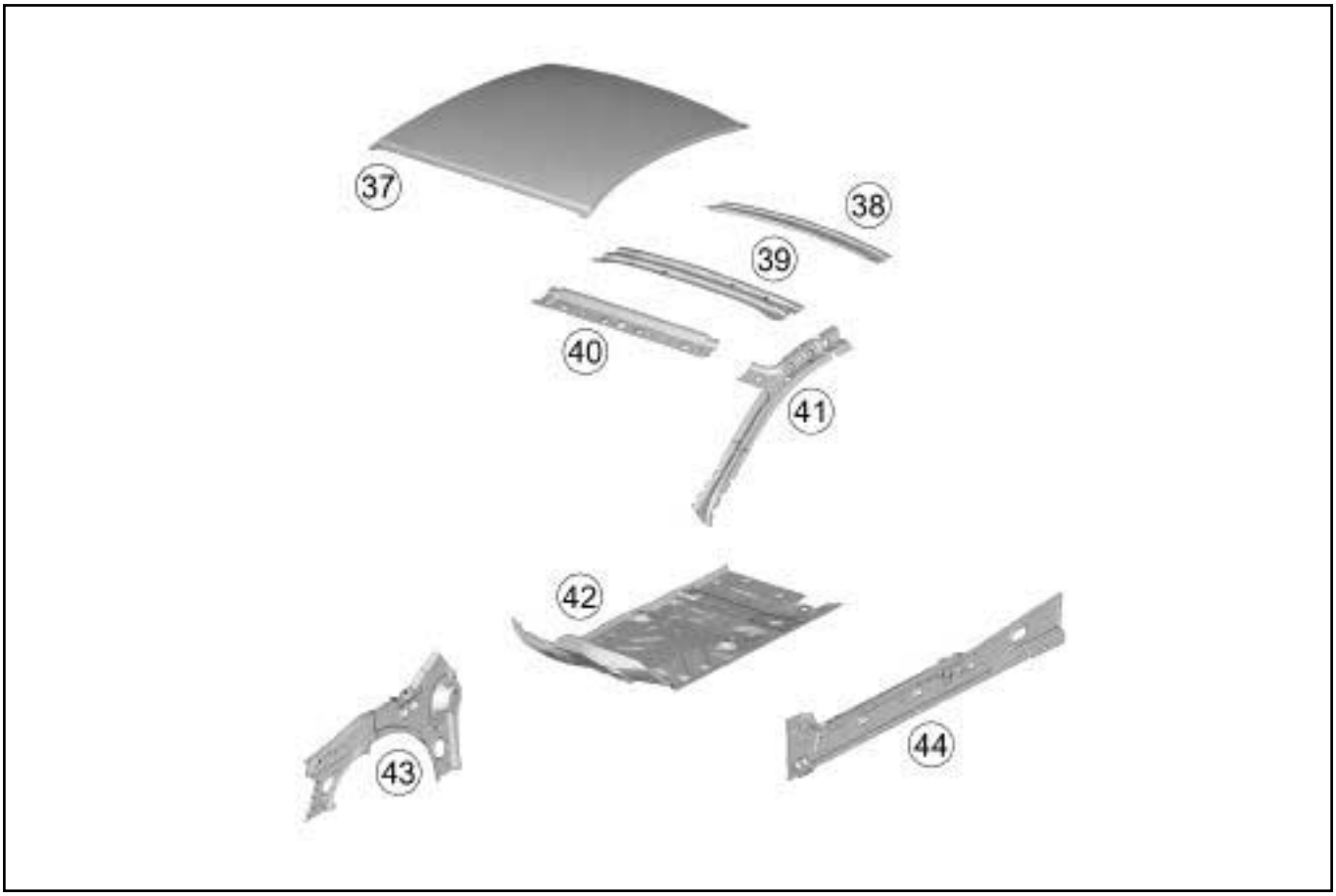


134772

- (**32**) scuttle side panel reinforcement,
- (**33**) A-pillar reinforcement,
- (**34**) windscreen pillar reinforcement,
- (**35**) B-pillar reinforcement,
- (**36**) sill panel reinforcement.

D91

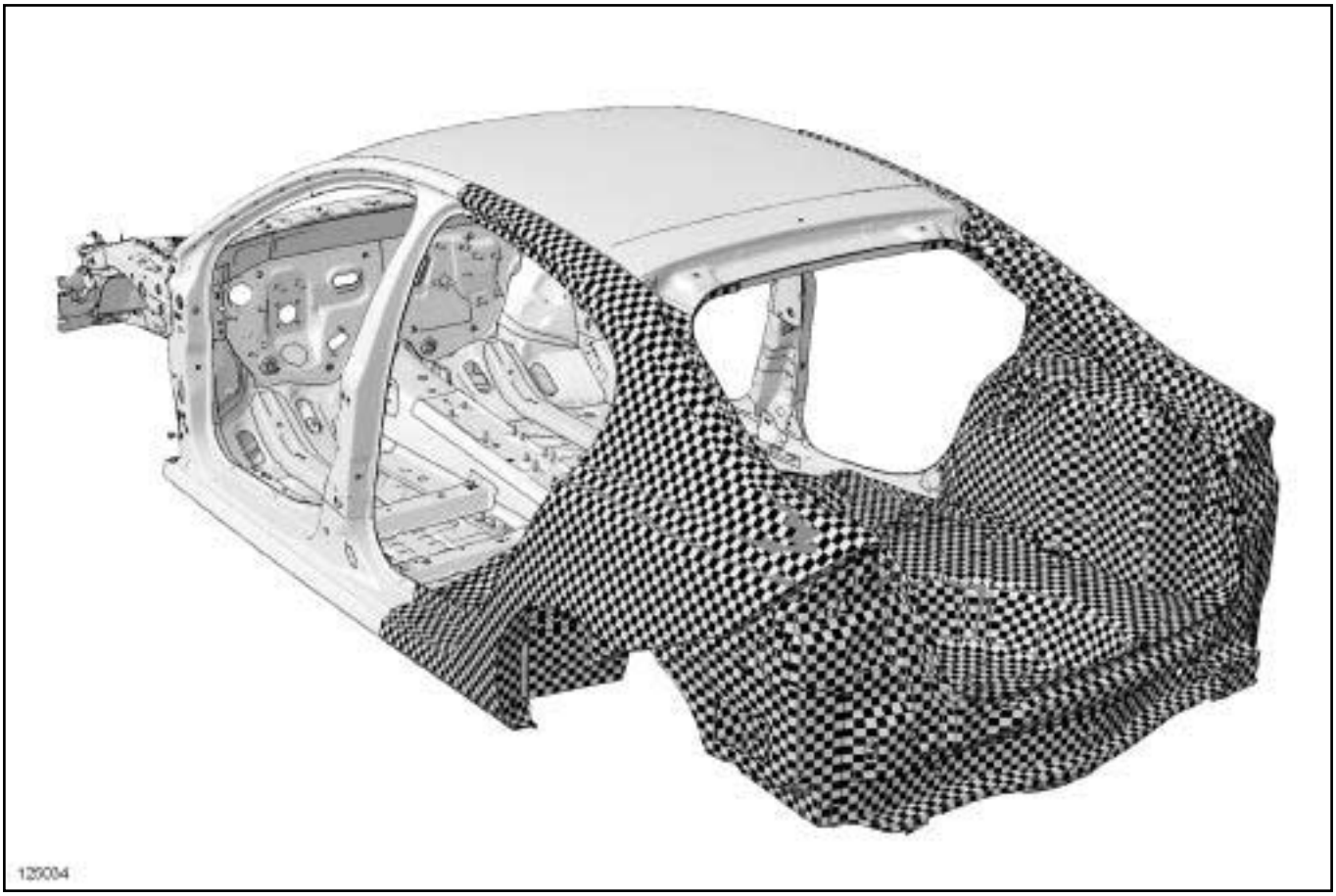
3rd Degree



134773

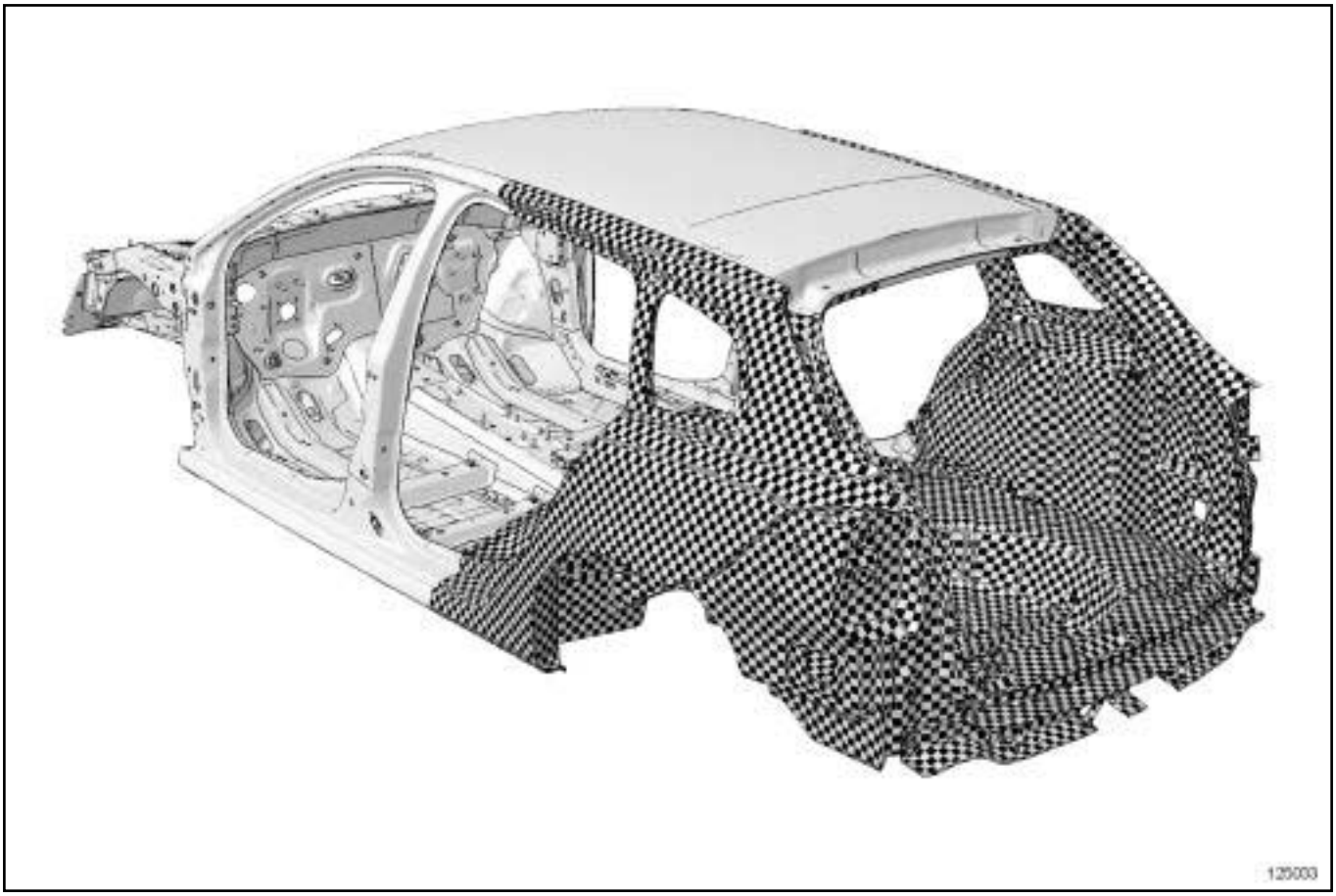
- (**37**) roof,
- (**38**) roof rear cross member,
- (**39**) roof middle cross member,
- (**40**) roof front cross member,
- (**41**) A-pillar lining,
- (**42**) side floor,
- (**43**) A-pillar lining,
- (**44**) sill panel lining.

B91



125034

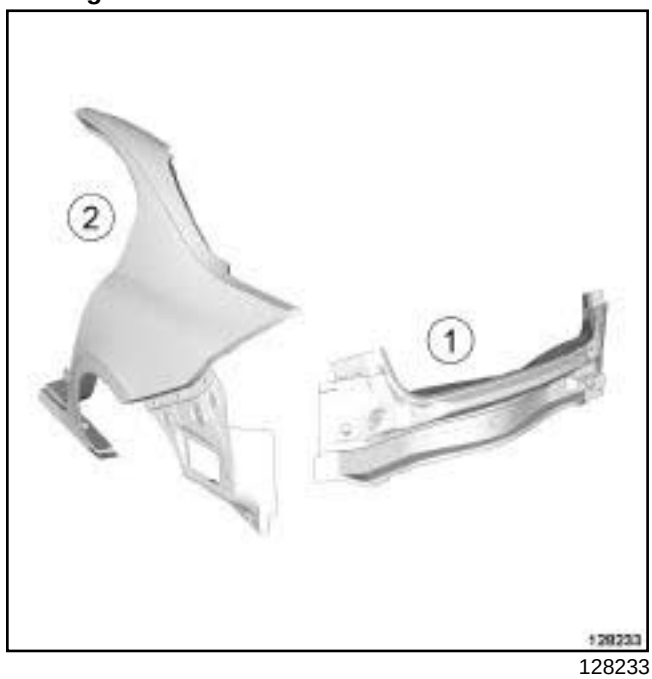
K91



125033

B91

1st Degree

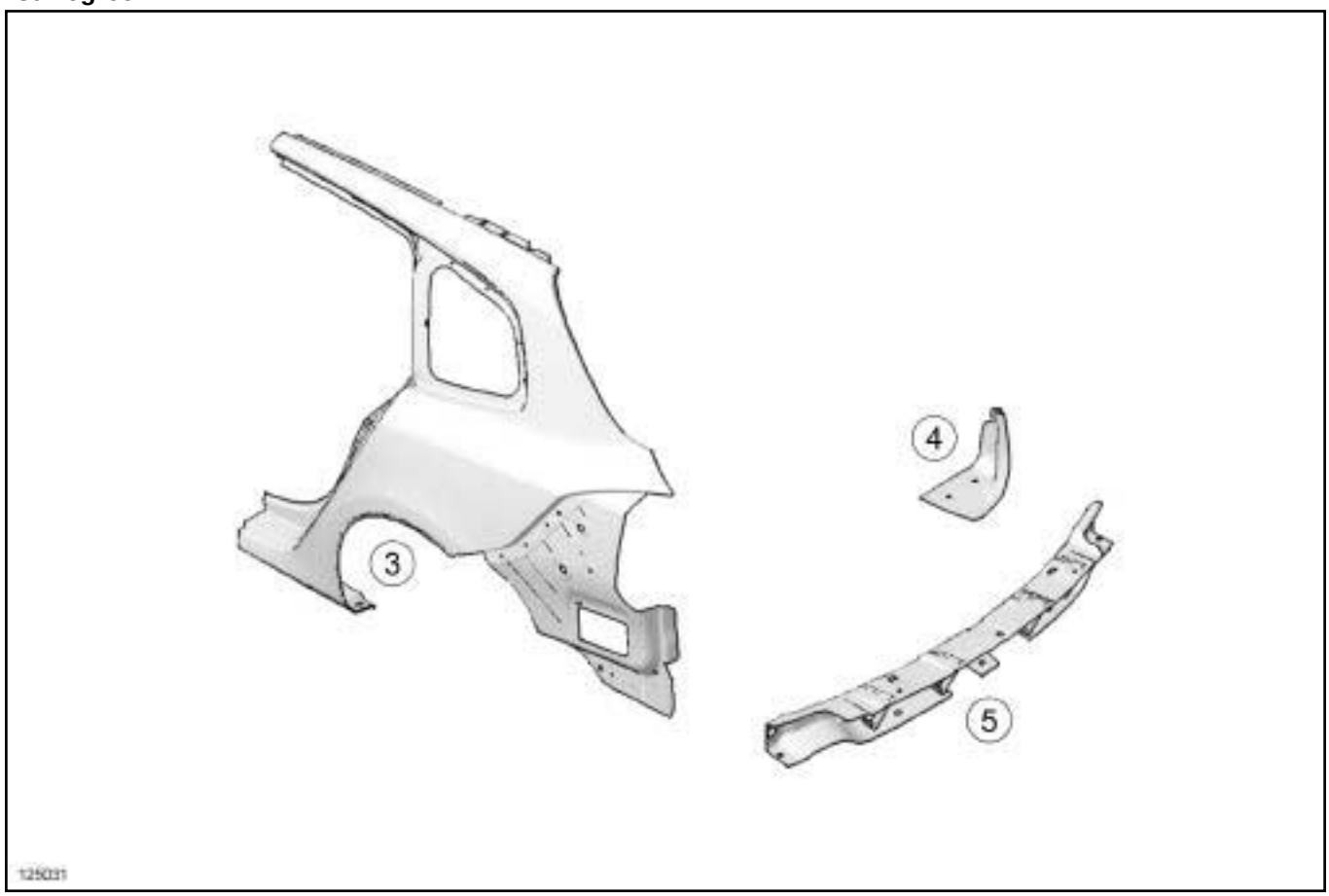


128233

- (**1**) rear end panel,
- (**2**) rear wing panel.

K91

1st Degree

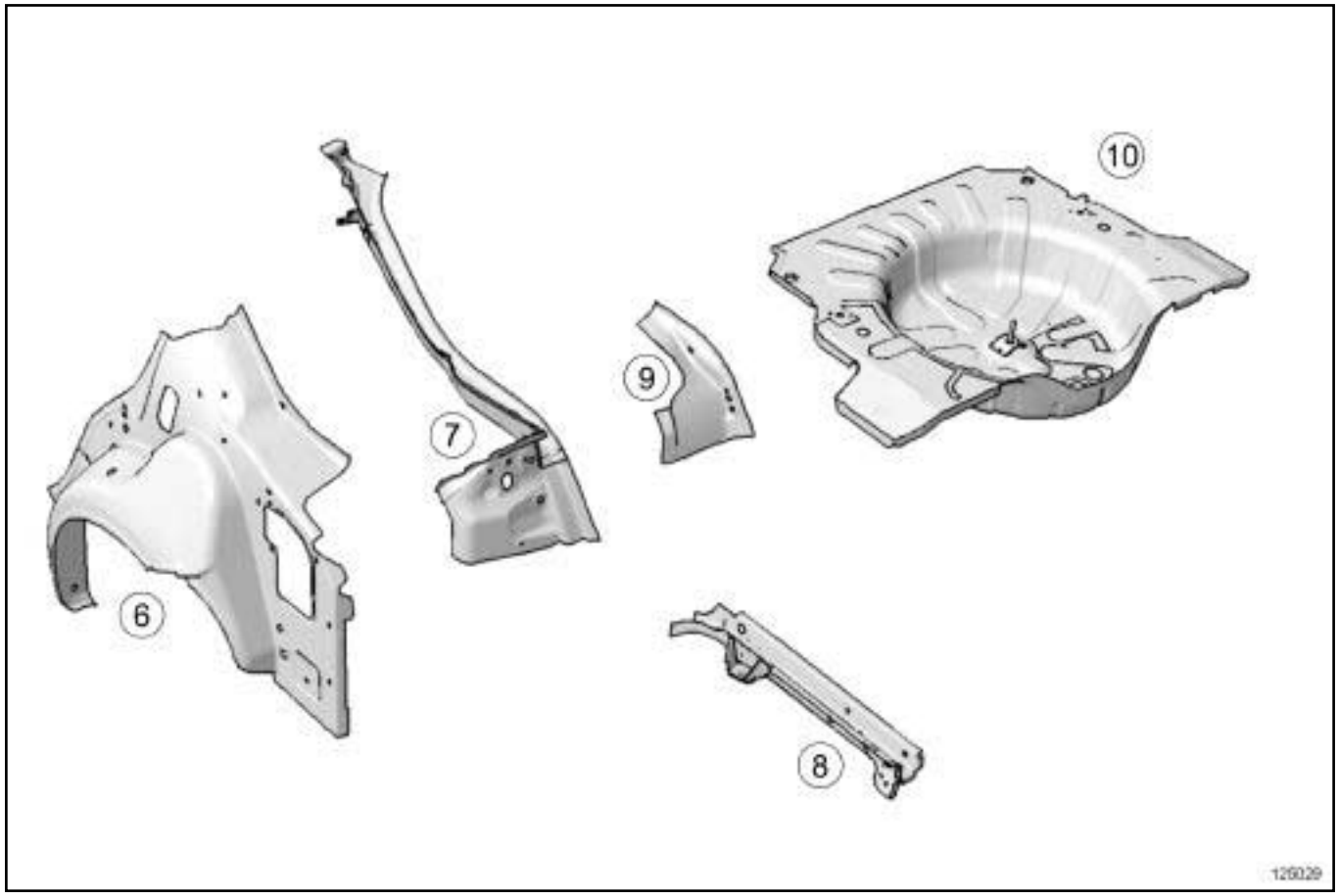


125031

- (**3**) rear wing panel,
- (**4**) cross member closure panel component,
- (**5**) absorber mounting cross member.

B91

2nd Degree

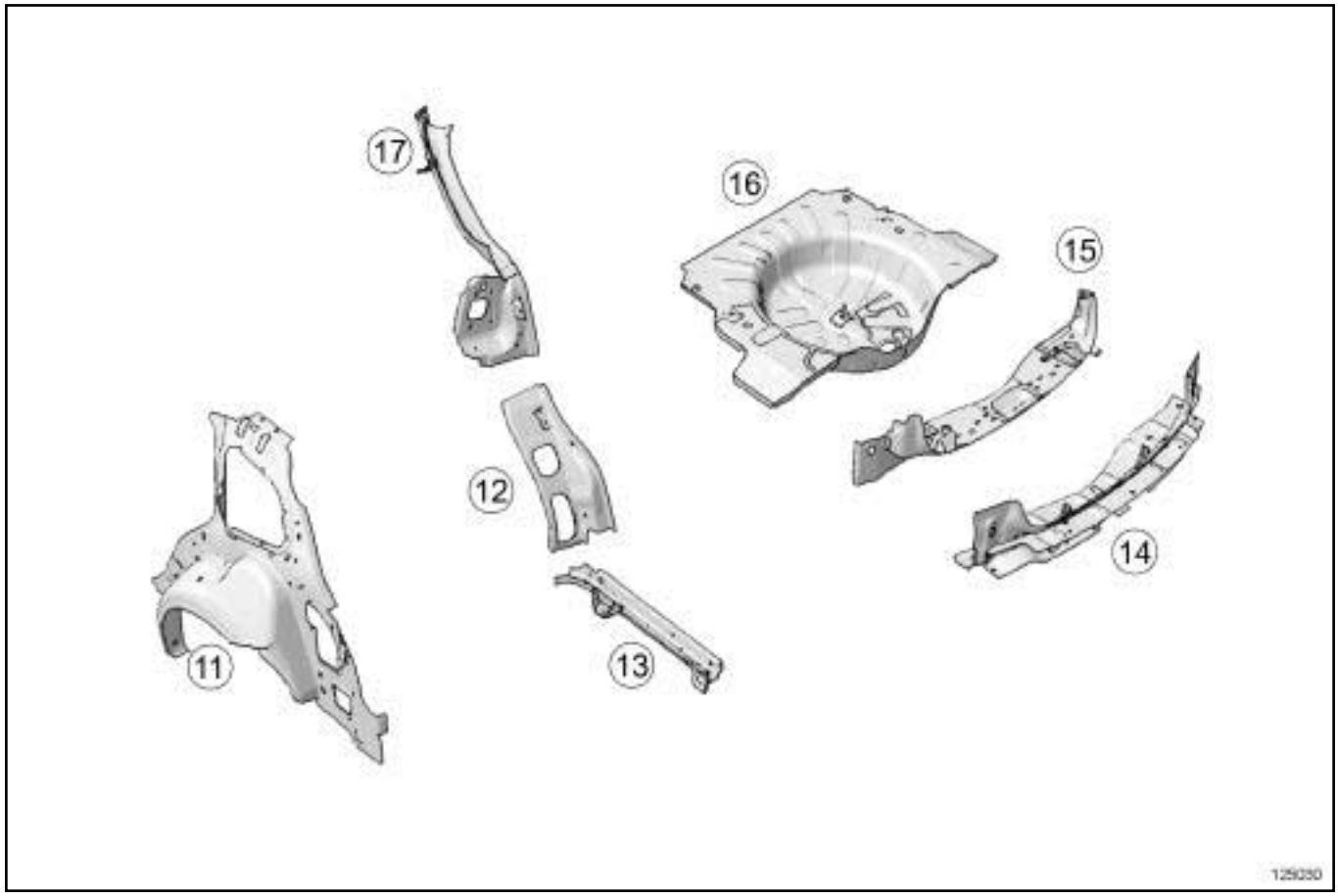


125029

- (**6**) rear wheel arch,
- (**7**) rear wing panel rain channel,
- (**8**) rear side member,
- (**9**) light mounting lining,
- (**10**) rear floor, rear section.

K91

2nd Degree

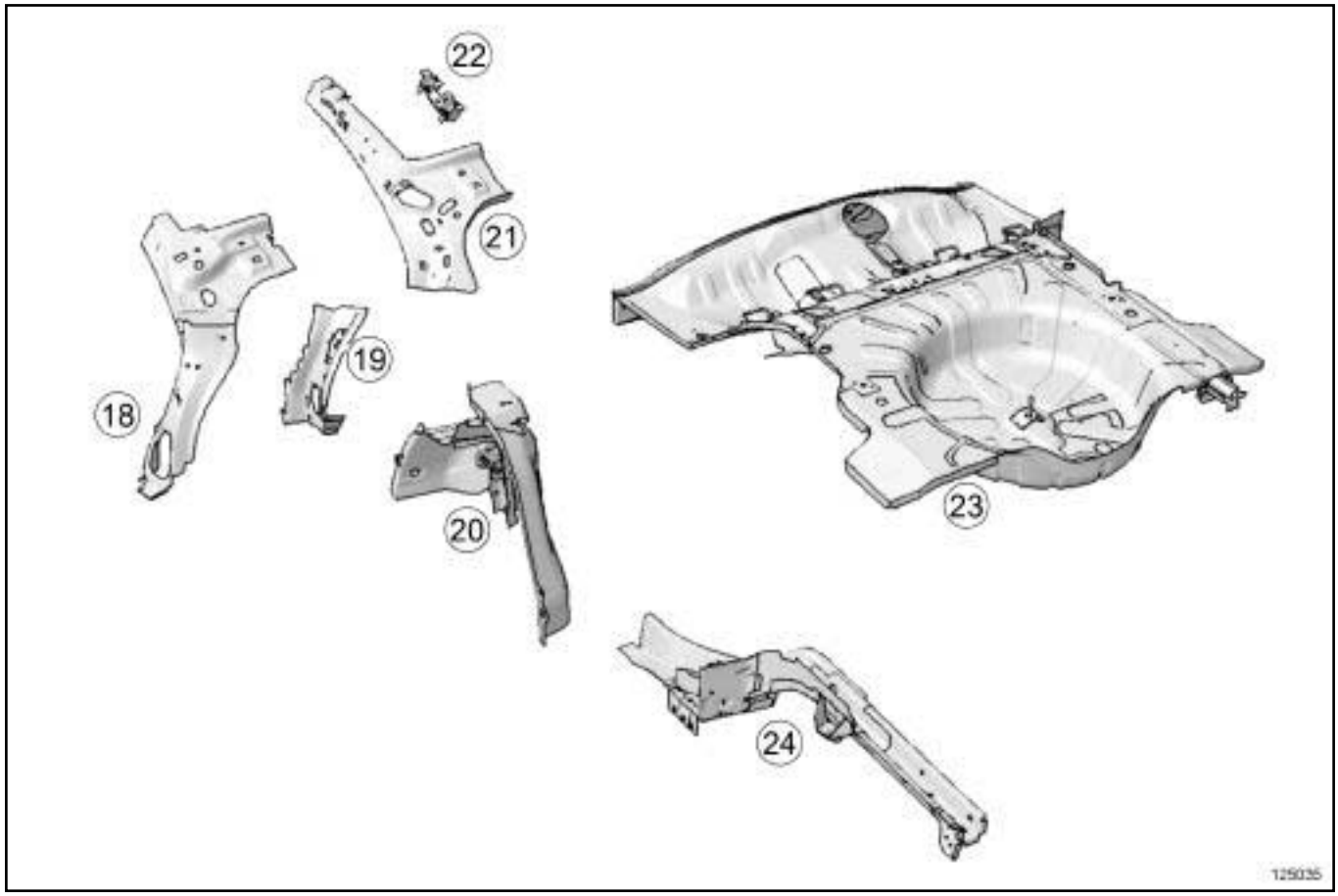


125030

- (**11**) rear wheel arch,
- (**12**) rear end pillar closure panel,
- (**13**) rear side member,
- (**14**) rear end panel,
- (**15**) rear cross member, rear section,
- (**16**) rear floor, rear section,
- (**17**) rear wing panel rain channel.

B91

3rd Degree

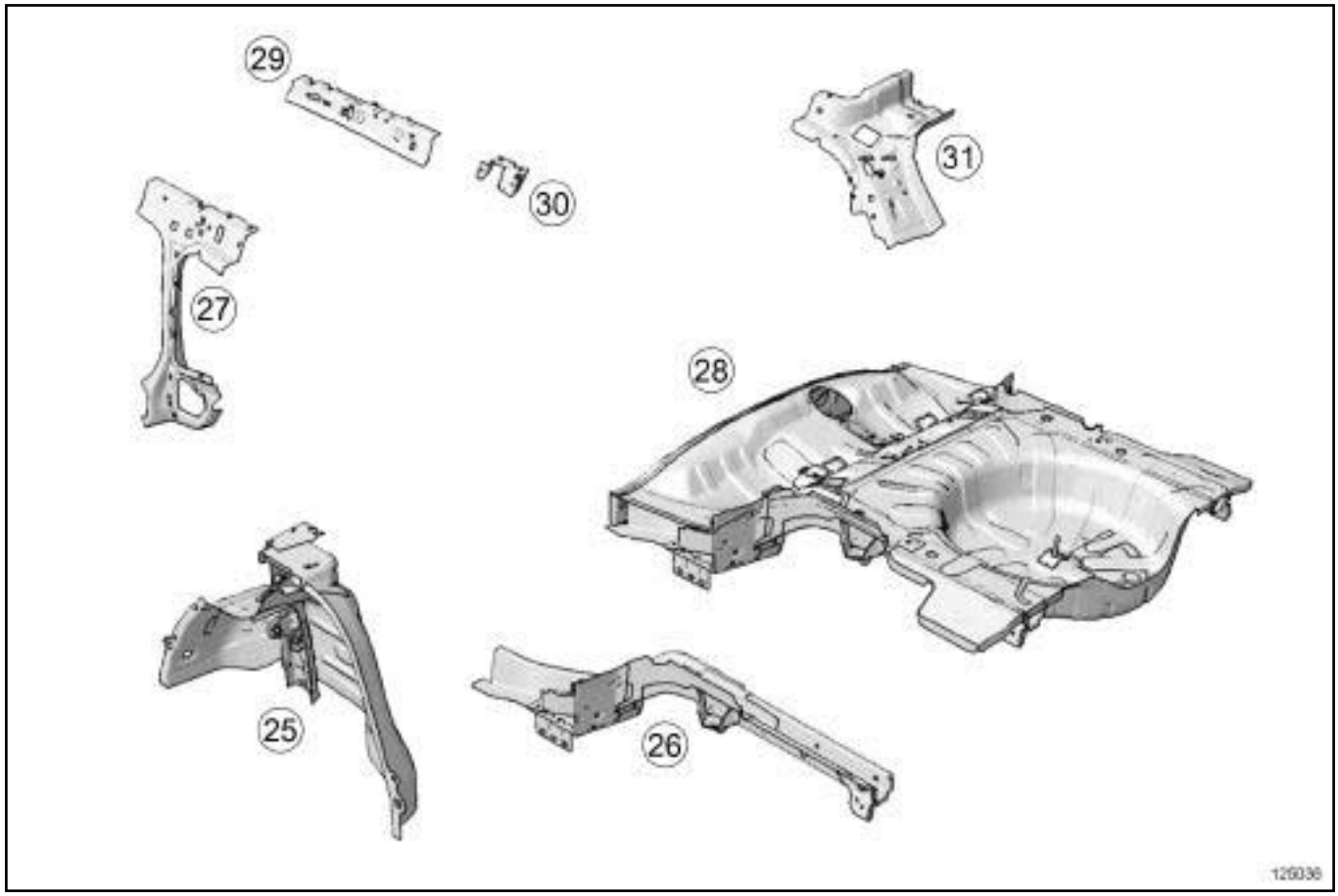


125035

- (**18**) quarter panel reinforcement,
- (**19**) shoulder harness reinforcement,
- (**20**) rear wheel arch,
- (**21**) side roof rail lining,
- (**22**) grab handle fixed bridge piece,
- (**23**) rear subframe assembly,
- (**24**) rear side member assembly.

K91

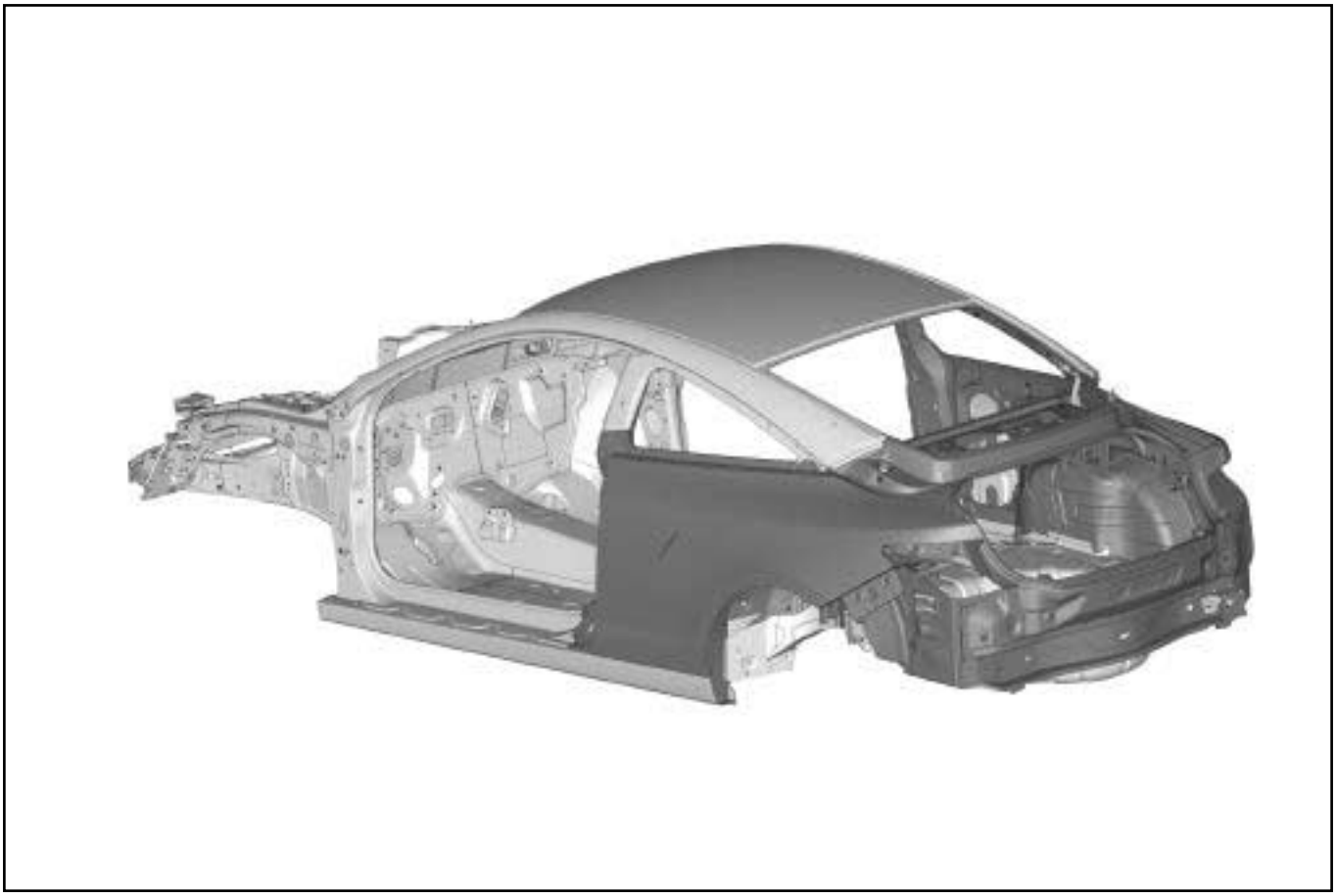
3rd Degree



125036

- (**25**) rear wheel arch,
- (**26**) rear side member assembly,
- (**27**) side roof rail lining, rear section,
- (**28**) rear subframe assembly,
- (**29**) side roof rail lining, front section,
- (**30**) roof bar mounting reinforcement,
- (**31**) quarter panel reinforcement.

D91



134769

D91

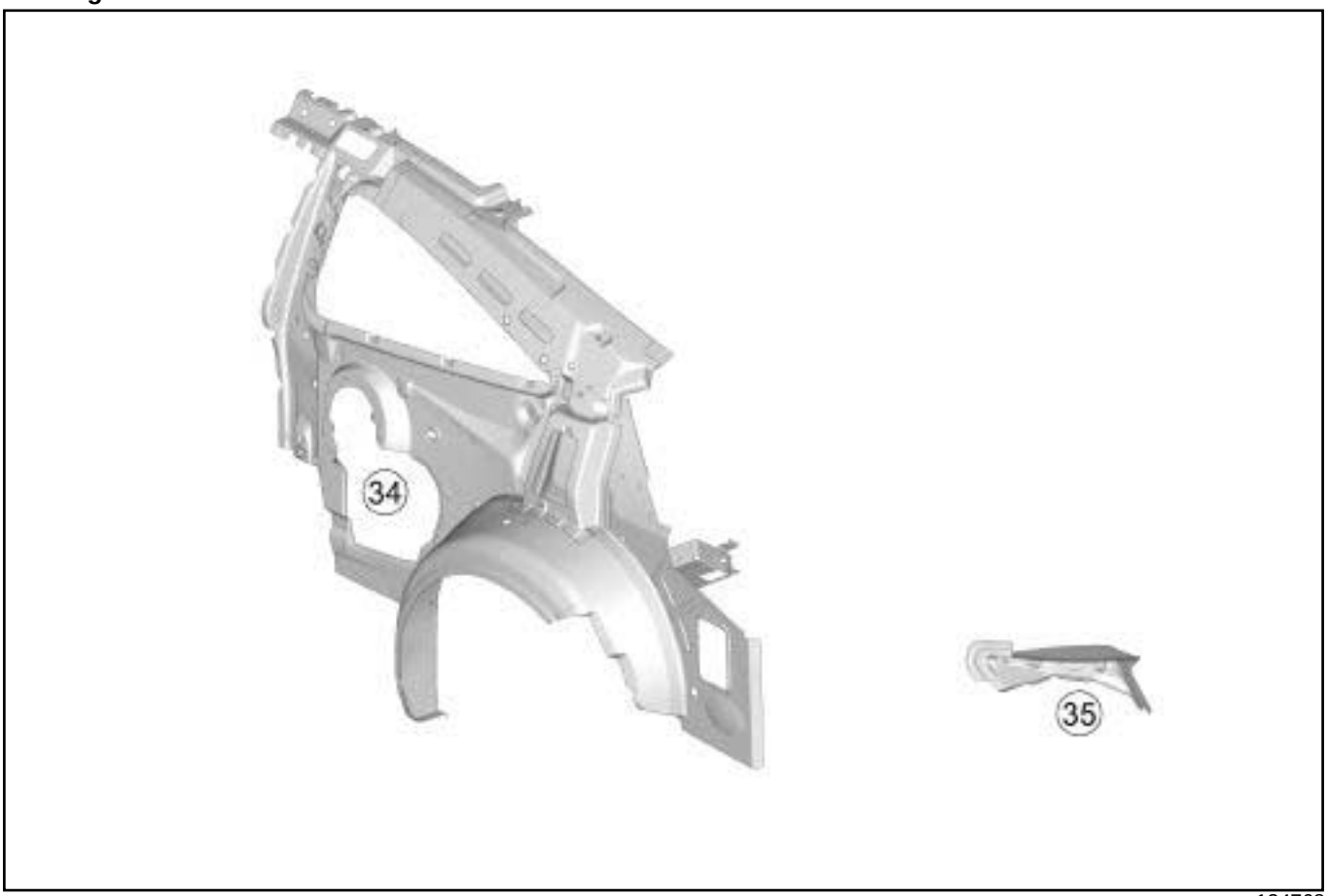
1st Degree

134774

- (**32**) body side rear section,
- (**33**) rear end panel.

D91

2nd Degree

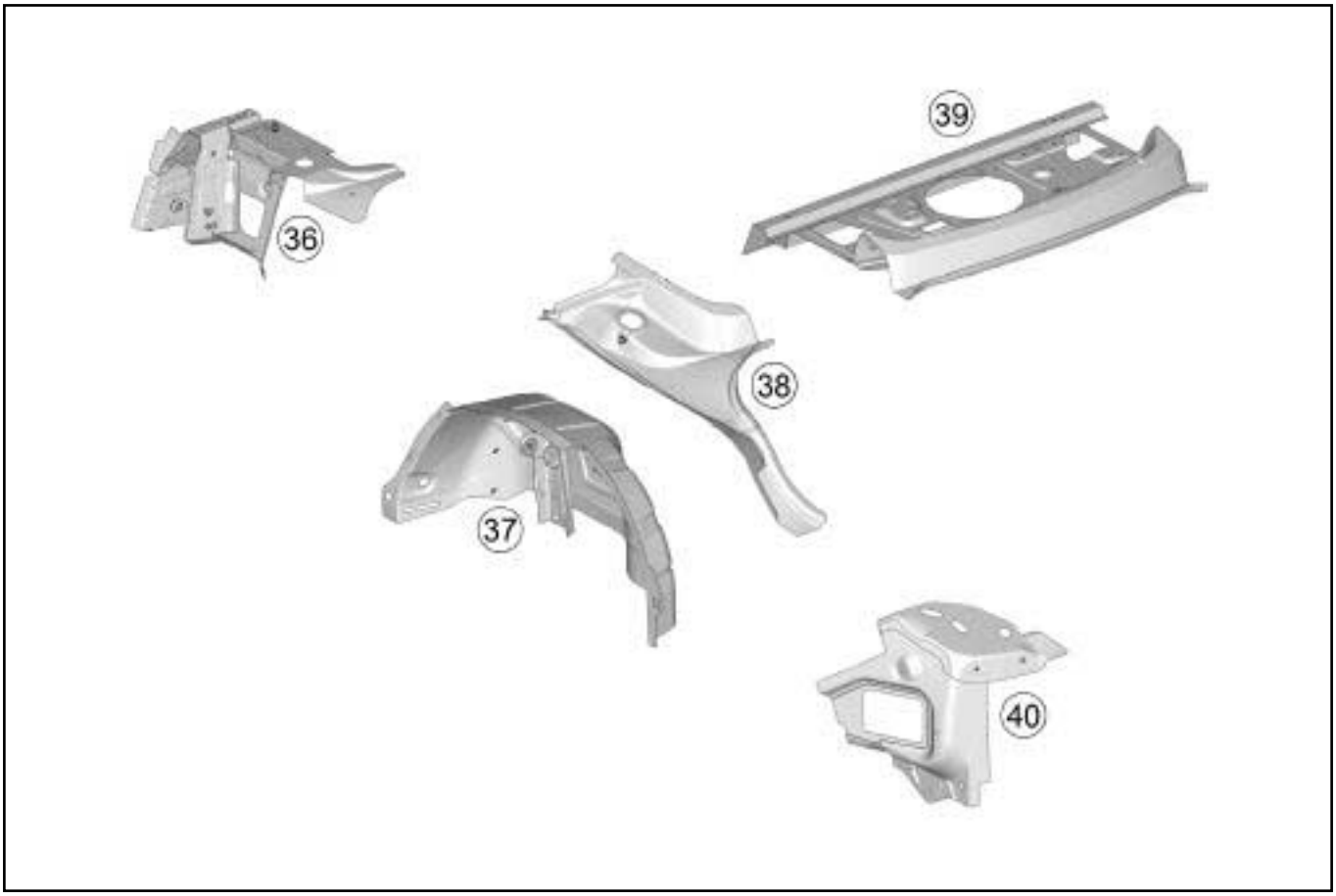


134768

- (**34**) quarter panel lining,
- (**35**) rear light mounting element, upper section.

D91

3rd Degree



134775

- (**36**) rear side parcel shelf,
- (**37**) rear inner wheel arch,
- (**38**) rear side rain channel,
- (**39**) rear parcel shelf,
- (**40**) body side extension.

Consumables for mechanical repair:

DEFINITION	PACKAGING	PART NUMBER
MECHANICAL SEALANTS		
SILICOR sealing paste	**85 g** tube	**77 11 236 470**
MASTIXO Joint face seal	**100 g** tube	**77 11 236 172**
BEARING SEALING KIT For crankshaft bearing cap side sealing	Kit	**77 11 237 896**
SILICONE ADHESIVE SEAL Engine and gearbox sealing paste	**100 g** cartridge	**77 11 227 484**
TRANSPARENT SEALING MASTIC	**45 g** tube	**77 11 223 369**
SILICOJOINT	**90 g** tube	**77 11 236 469**
LOCTITE ADHESIVE 597 Sealing paste for PXX gearboxes	Cartridge	**77 11 219 705**
RESIN ADHESIVE or **SEALING RESIN** Sealing resin for engine and gearbox covers	**25 ml** tube	**77 11 237 640**
EXHAUST MASTIC For exhaust pipe union seals	**1.5 kg** tin	**77 01 421 161**
LEAK DETECTOR	**400 ml** aerosol	**77 11 236 176**
ADHESIVES		
FRENETANCHE Sealing the threading at low and medium pressure	**50 ml** bottle	**77 11 236 471**
HIGH-STRENGTH THREADLOCK For locking bolts	**50 ml** bottle	**77 11 230 112**
SEALING RESIN For locking the bearings	**50 ml** bottle	**77 11 236 472**
LUBRICANT CLEANERS		
NÉTELEC Avoid bad contacts in electrical circuits	**150 ml** aerosol	**77 11 225 871**

INJECTOR CLEANER	**355 ml** container	**77 11 224 188** or **77 11 225 539**
CLOTH FOR INJECTION SYSTEM		**77 11 211 707**
SUPER RELEASING AGENT	**500 ml** aerosol	**77 11 236 166**
SUPER RELEASING AGENT	**250 ml** aerosol	**77 11 420 439**
SUPER CLEANER FOR JOINT FACES For cleaning joint faces	**300 ml** aerosol	**77 11 238 181**
SURFACE CLEANER	**5 L** container	**77 01 404 178**
SILICONE LUBRICANT	**400 ml** aerosol	**77 11 236 168**
SILICONE-FREE LUBRICANT	**400 ml** aerosol	**77 11 236 167**
BRAKE CLEANER	**600 ml** aerosol	**77 11 422 413**
	150 ml aerosol	**77 11 422 414**
BIO BRAKE CLEANER	**750 ml** spray bottle	**77 11 427 217**
AIR CONDITIONING CLEANER	**250 ml** aerosol	**77 11 230 498**
CARBURETTOR CLEANER	Aerosol	**77 11 236 177**
IXTAR ENGINE CLEANER	**400 ml** can	**77 11 229 365**
GREASE		
BR2+ GREASE For: - the lower arm bearings, - the anti-roll bar grooves, - the driveshaft splines.	**1 kg** pack	**77 01 421 145**
SILICONE GREASE For: - the tubular rear axle bushes, - the anti-roll bar bushes.	**100 g** tube	**77 11 419 216**
COPPER ANTI-SEIZE GREASE Grease for turbochargers (high temperature)	**85 g** tube	**77 11 236 173**
COPPER-ALUMINIUM LUBRICANT Grease for turbochargers (high temperature)	**500 ml** aerosol	**77 11 236 169**
GREASE For driveshaft seals	**180 g** sachets	**77 11 420 011**

WHITE GREASE For wheel sensors	**400 ml** aerosol	**77 11 236 174**
MULTIPURPOSE GREASE	**500 ml** aerosol	**77 11 236 170**
	250 ml aerosol	**77 11 236 171**
FLUORSTAR 2L Silicone-free electric sealing grease	**100 g** tube	**82 00 168 855**
LACQUER		
JELT ARGENT Varnish for repairing heated rear screens	**5 g** bottle	**77 11 230 111**
BRAKE		
DOT 4, ISO CLASS 6, RENAULT STANDARD: 03-50-006, For vehicles with and without electronic stability program (ESP)	**0.5 L** container	**77 11 218 589**
	5 L container	**77 11 238 318**
	25 L container	**77 11 238 319**
DOT 4, ISO CLASS 4, RENAULT STANDARD: 03-50-005 Authorised for vehicles without ESP	**0.5 L** container	**77 11 172 381**
	5 L container	**77 01 395 503**
	25 L container	**77 11 171 926**
DOT 4 Authorised for vehicles without ESP, without clutch with hydraulic tappet	**0.5 L** container	**86 71 000 000**
	5 L container	**86 71 014 277**
	25 L container	**86 71 014 278**
COOLING SYSTEM		
ANTIFREEZE (TYPE D)	**1 L** container	**77 11 170 548**
COOLANT (TYPE D)	**1 L** container	**77 11 171 589**
	2 L container	**77 11 170 545**
	5 L container	**77 11 170 546**
OIL		
ENGINE OIL	(see **Engine oil: Specifications**) (Technical Note 6013A, 04A, Lubricants)	
GEARBOX OIL	(see **Manual gearbox oil: Specifications**) (Technical Note 6012A, 04A, Lubricants)	
	(see **Automatic gearbox oil: Specifications**) (Technical Note 6012A, 04A, Lubricants)	
	(see **Sequential gearbox oil: Specifications**) (Technical Note 6012A, 04A, Lubricants)	

AXLE OIL	(see **Rear axle oil: Specifications**) (Technical Note 6012A, 04A, Lubricants)	
ELF RENAULT MATIC D2 Oil for power-assisted steering: Pump connected, pump assembly (except Laguna III)	**2 L** container	**77 01 402 037**
TOTAL POWER-ASSISTED STEERING FLUID Oil for power-assisted steering: Pump assembly (Laguna III)	**1 L** container	
PLANETELF PAG 488	**250 ml** container	**77 11 172 668**
SANDEN SP 10 Oil for air conditioning compressor		**77 01 419 313**
TYRES		
TYRE PASTE	**1 kg** pack	**77 11 223 052**
	5 kg pack	**77 11 223 053**
TYRE REPAIR AGENT	**400 ml** tube	**77 11 221 296**
	300 ml tube	**77 11 222 802**
BLANKING PLUG		
Engine type	Injection type	Part no.
F5R		**77 01 206 382**
F8Q		**77 01 206 340**
F9Q		**77 01 208 229**
G9T AND G9U		**77 01 208 229**
K9K	**DELPHI**	**77 01 206 804**
K9K	**SIEMENS**	**77 01 476 857**
M9R		**77 01 209 062**
P9X		**77 01 474 730**
ZD3		**77 01 208 229**
MISCELLANEOUS		
GREY ABRASIVE PAD		**77 01 405 943**

Consumables for bodywork repair:

HOLLOW SECTION WAX		
SPR CC	**1 L** container	**77 11 172 672**

SPR CC SPRAY	**500 ml** aerosol	**77 11 211 654**
STRUCTURAL ADHESIVE		
STRUCTURAL ADHESIVE	Kit =2 **80 ml** cartridges	**77 11 219 885**
HIGH PERFORMANCE STRUCTURAL ADHESIVE	1 **195 ml** cartridge	**77 11 419 113**
GLAZING PRODUCTS AND ADHESIVES		
MONOPAC EVOLUTION ADHESIVE KIT	**310 ml** cartridge	**77 11 421 430**
MONOPAC EVOLUTION ADDITIONAL CARTRIDGE + NOZZLE	**310 ml** cartridge	**77 11 421 431**
S-P KIT ADHESIVE KIT	**310 ml** cartridge	**77 11 421 432**
ADDITIONAL S-P KIT CARTRIDGE + NOZZLE	**310 ml** cartridge	**77 11 421 433**
BIPAC EVOLUTION ADHESIVE KIT	2 **225 ml** cartridges	**77 11 421 434**
LINT-FREE CLOTH	Box of **340** cloths	**77 11 237 262**
METAL PRIMER	Bottle	**77 11 419 599**
WINDOW SEALING MASTIC	**310 ml** cartridge	**77 11 170 222**
SPECIAL ADHESIVE FOR WINDOWS		**77 11 425 759**
ADHESION PROMOTER For bonding double-sided adhesive tape to windows	Cloth	**77 11 423 222**
MISCELLANEOUS		
DOUBLE-SIDED ADHESIVE	**20 m** roll	**77 11 226 308**
FRENETANCHE	**50 ml** bottle	**77 11 236 471**
ADHESIVE PATCH		**82 00 043 181**
ADHESIVE PAD		**77 05 042 163**
SEALS		
BLACK MJ PRO (Electroweldable)	**310 ml** cartridge	**77 11 172 676**
WHITE MJ PRO II (Electroweldable)	**310 ml** cartridge	**77 11 426 951**
PREFORMED SEALING MASTIC BEAD	**2.6 m** roll	**77 01 423 330**
BRUSH MASTIC	**1 kg** pack	**77 11 228 113**
FILLER MASTIC	60 beads **Ø 6 mm by 0.3 m**	**77 11 170 230**

GREASE		
CLEAN GREASE	**300 ml** aerosol	**77 11 236 174**
OPENING ELEMENT MECHANISM GREASE	**20 g** sachets	**77 11 419 865**
SOUNDPROOFING		
SPR GREY EVOLUTION	**1 l** cartridge	**77 11 419 114**
SPR GREY EVOLUTION SPRAY	**400 ml** aerosol	**77 11 419 116**
SPR BLACK EVOLUTION II	**1 l** cartridge	**77 11 419 115**
SOUNDPROOFING PAD (3.5 Kg/m²)	Pack of **10**	**77 01 423 546**
SOUNDPROOFING PAD (6.5 Kg/m²)	Pack of **5**	**77 01 423 269**
POLISHING		
POLISHING LIQUID	**1 L** container	**77 11 420 288**
FINISHING LIQUID	**1 L** container	**77 11 420 289**
MASTIC		
Universal mastic		
GALAXI	**2.5 kg** pack	**77 11 172 238**
OPTIMAX	**1.23 l** cartridge	**77 11 172 239**
EXCELLENCE +	**960 g** cartridge	**77 11 423 539**
For finishing plastic repair	**1 kg** pack	**77 11 423 540**
Plugging mastic		
XFIBRE FIBREGLASS MASTIC	**975 kg** pack	**77 11 172 235**
STANDARD BASIX POLYESTER MASTIC	**1.975 kg** pack	**77 11 172 234**
ALUX ALUMINIUM MASTIC	**975 kg** pack	**77 11 172 236**
Sprayable mastic		
PIXTO SPRAYABLE POLYESTER MASTIC	**1.5 kg** tin	**77 11 172 237**
Finishing mastic		
IXTRA POLYESTER MASTIC	**1.625 kg** pack	**77 11 172 233**
Anti-grit mastic		
MAG PRO 1	**310 ml** cartridge	**77 11 172 679**
MAG PRO 3 (Dual component)	**1.5 kg** tin	**77 11 218 364**

SURFACE CLEANER		
HEPTANE	**500 ml** container	**77 11 170 064**
SOLVENT SURFACE CLEANER	**5 L** container	**77 01 404 178**
WATER-BASED SURFACE CLEANER	**5 L** container	**77 11 421 337**
ANTISTATIC THINNER (for plastic materials)	**400 ml** aerosol	**77 01 408 493**
COMPOSITE MATERIAL REPAIR BY BONDING		
PLASTIC REPAIR KIT		**77 11 170 064**
NOZZLE FOR PLASTIC REPAIR KIT		**77 11 423 523**
PLASTIC REPAIR CLEANER	**1 L** container	**77 11 423 517**
PLASTIC REPAIR PRIMER	**150 ml** bottle	**77 11 423 518**
PLASTIC REPAIR ADHESIVE	**2 x 25 ml** bicomponent cartridge	**77 11 423 519**
PLASTIC REPAIR CLOTH	**90 m** roller	**77 11 423 520**
PLASTIC REPAIR NOZZLES	**12** nozzles	**77 11 423 522**
COMPOSITE MATERIAL REPAIR BY WELDING		
PLASTIC WELD REPAIR SET		**77 11 425 742**
PROTECTIVE STRIPS	Bag of **10** protective strips	**77 11 425 744**
STAINLESS STEEL MESH	Bag of **2** meshes	**77 11 425 743**
COOLER	**400 ml** aerosol	**77 11 425 745**
BRUSH	Box of **10** brushes	**77 11 237 793**
WINDOW MASKING TAPE		
10 MM WINDSCREEN TAPE		**77 11 171 708**
20 MM WINDSCREEN TAPE		**77 11 171 709**
PROTECTIVE WELDING		
ANTI-SPLASH SPRAY	**400 ml** aerosol	**77 11 218 270**
SPECIFIED UNDERCOAT		
PRE-TREATMENT PRIMER WITH-OUT ZINC CHROMATE (I-Alpha) + **THINNER**	**1 L** container	**77 11 420 027** (Primer) **77 11 420 028** (Thinner)
I-PREMIA REACTIVE PRIMER (do not use on aluminium)	**3.5 l** container	**77 11 239 243** (Primer) **77 11 228 654** (Thinner)

I-PREMIA REACTIVE PRIMER (do not use on aluminium)	**400 ml** aerosol	**77 11 419 416**
ADHÉRA SPRAY (adhesion promoter for thermoplastics)	**400 ml** aerosol	**77 11 423 734**
PRIMARA BLACK (adhesion promoter/primer for thermoplastics)	**1 L** container	**77 11 423 735**
		77 11 171 514 (Activator)
PRIMARA (adhesion promoter/ primer for thermoplastics)	**1 L** container	**77 11 171 513**
		77 11 171 514 (Activator)
UNDERCOAT		
LEVIA	**3.5 l** container	**77 11 228 651**
FORTIA	**3.5 l** container	**77 11 228 650**