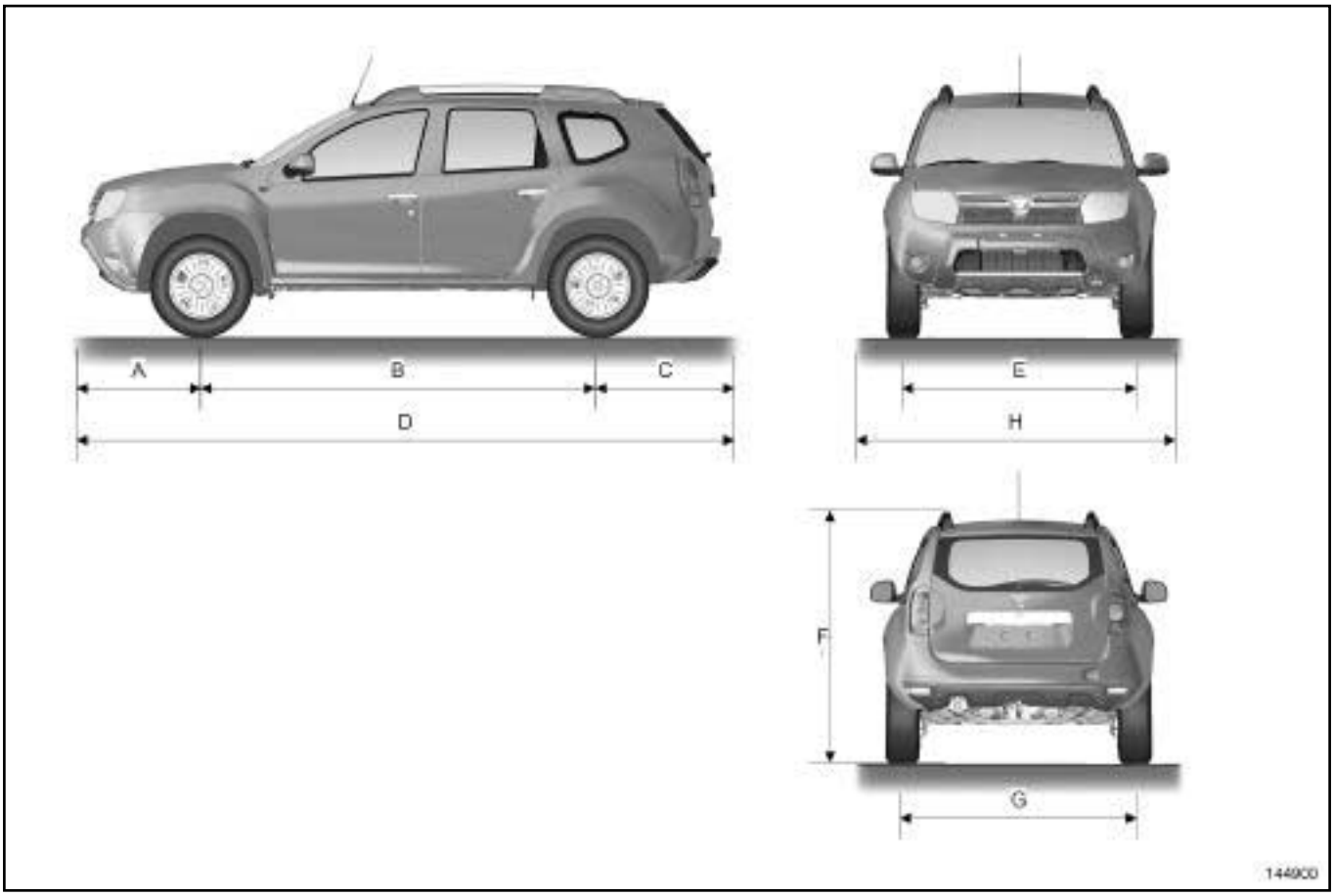


144900

4X2 TRANSMISSION

Dimensions in metres:

(A)	0.822
(B)	2.673
(C)	0.820
(D)	4.315
(E)	1.560
(F) (unladen)	1.690
(G)	1.567
(H)	1.822

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**

K9K

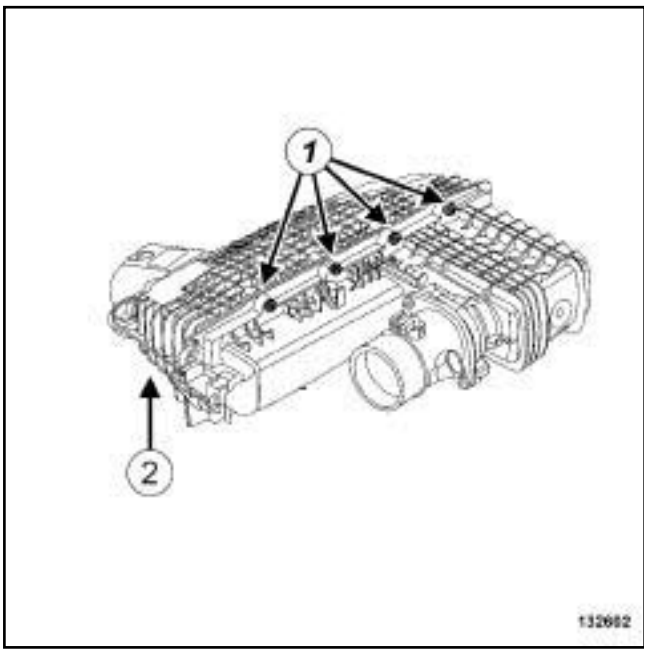
REMOVAL

I - REMOVAL PREPARATION OPERATION

❑ Remove the air filter unit (see **12A**, **Fuel mixture**, **Air filter unit: Removal - Refitting**, page **12A-6**) .

II - OPERATION FOR REMOVAL OF PART CONCERNED

1 - First fitting of air filter unit



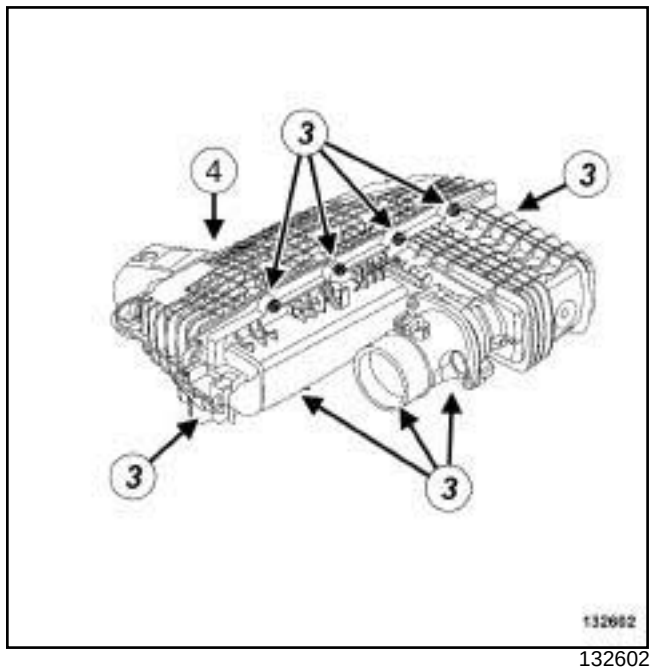
132602

❑ Remove the 4 bolts (**1**) from the air filter unit.

❑ Pivot the hinged cover (**2**) of the air filter unit in relation to the air filter unit tank.

❑ Move aside the air filter unit cover (**2**) .

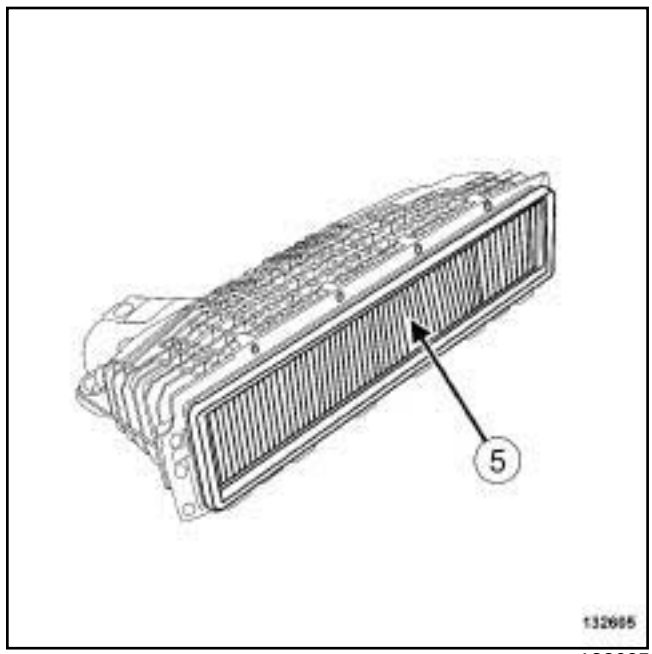
2 - Second fitting of air filter unit



132602

❑ Remove the 9 bolts (**3**) from the air filter unit.

❑ Move aside the air filter unit cover (**4**) .



132605

❑ Remove the air filter (**5**) from the air filter unit cover.

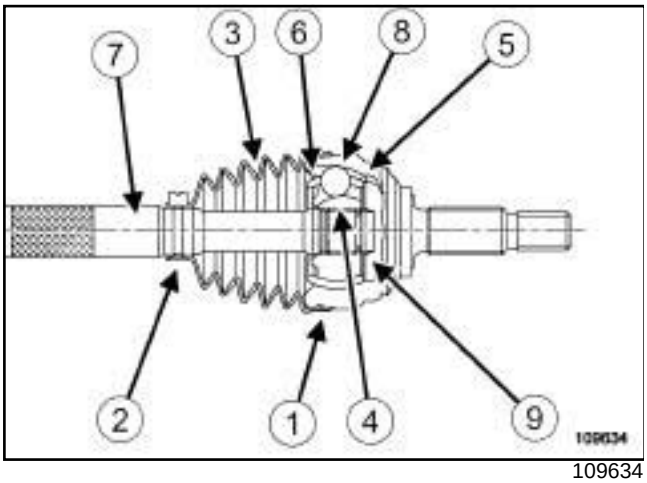
REFITTING

I - REFITTING PREPARATION OPERATION

❑ Clean the air filter unit.

JR5

Special tooling required	
Emb. 880	Pin extractor tool.



109634

(**1**) Big securing clip
(**2**) Small securing clip
(**3**) Driveshaft gaiter
(**4**) Ball hub
(**5**) Stub axle bowl
(**6**) Ball race
(**7**) Driveshaft
(**8**) Balls
(**9**) Lock ring

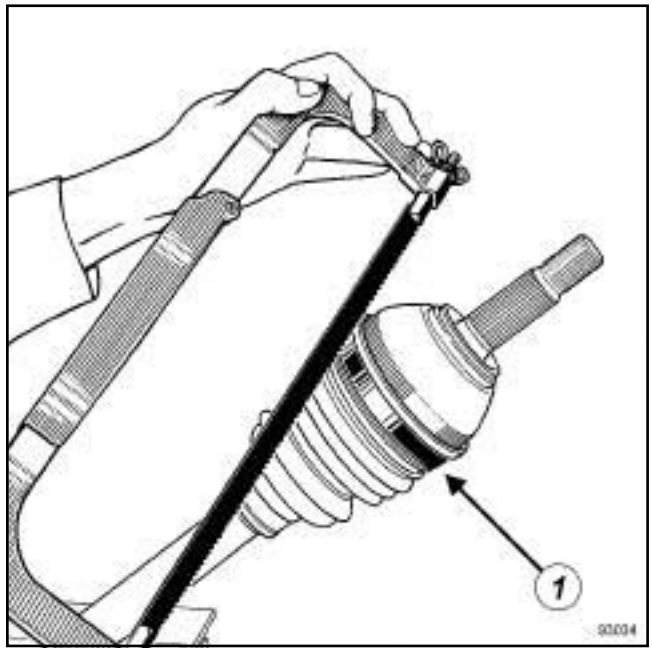
IMPORTANT
Wear leaktight gloves (Nitrile type) for this operation.

REMOVAL

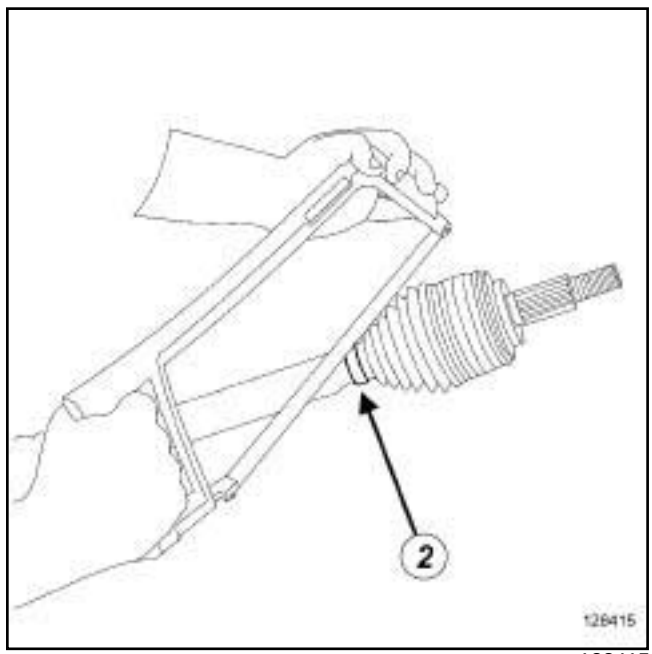
I - REMOVAL PREPARATION OPERATION

❏ Remove the front driveshaft on the side concerned (see **29A**, **Driveshafts**, **Front right-hand driveshaft: Removal - Refitting**, page **29A-4**) or (see **29A**, **Driveshafts**, **Front left-hand driveshaft: Removal - Refitting**, page **29A-1**) .

II - REMOVAL OPERATION



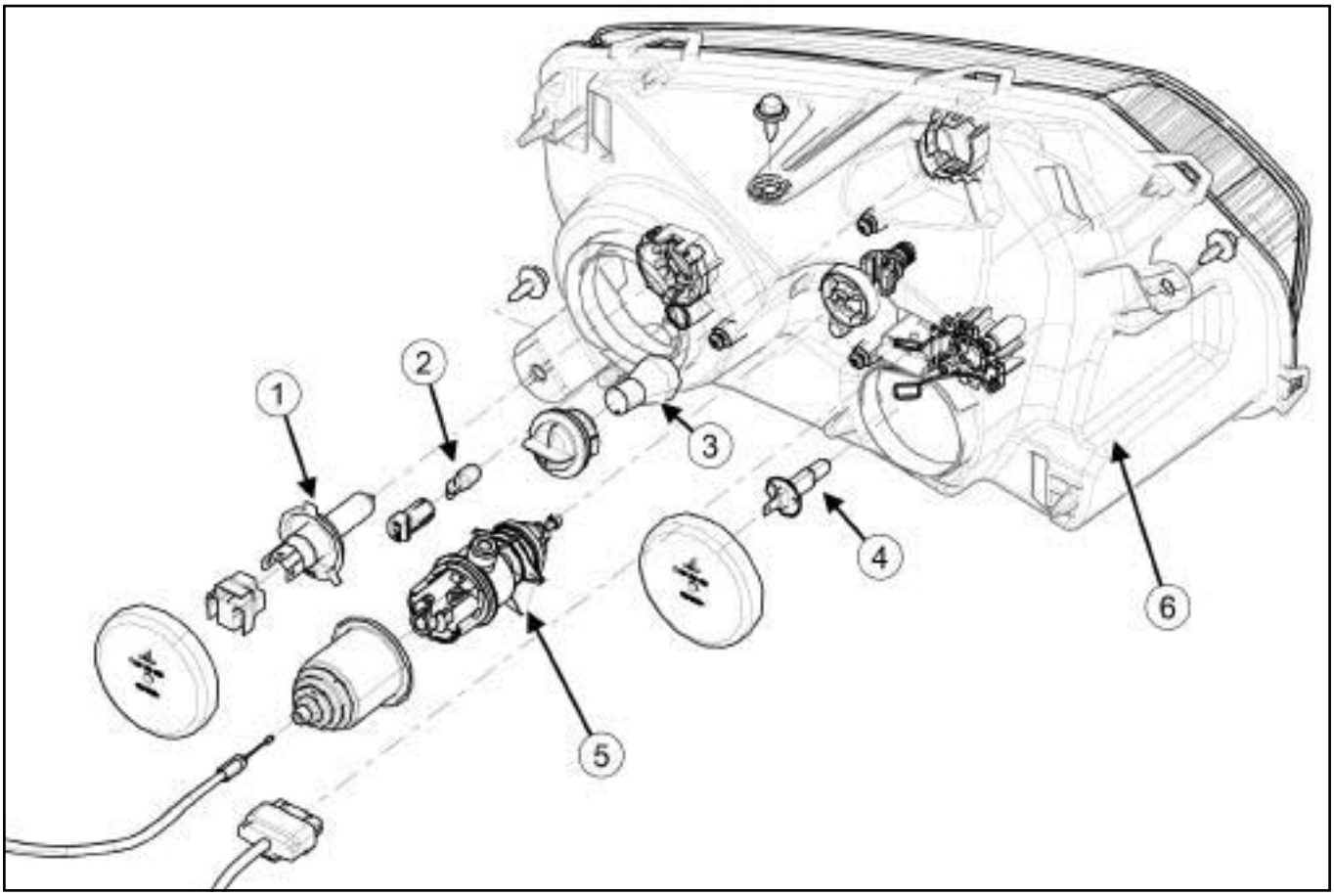
93034



128415

❏ Cut the big securing clip (**1**) and the small securing clip (**2**) using cutting pliers or a metal saw, taking care not to damage the stub axle bowl and the driveshaft.

Headlight assembly: Exploded view

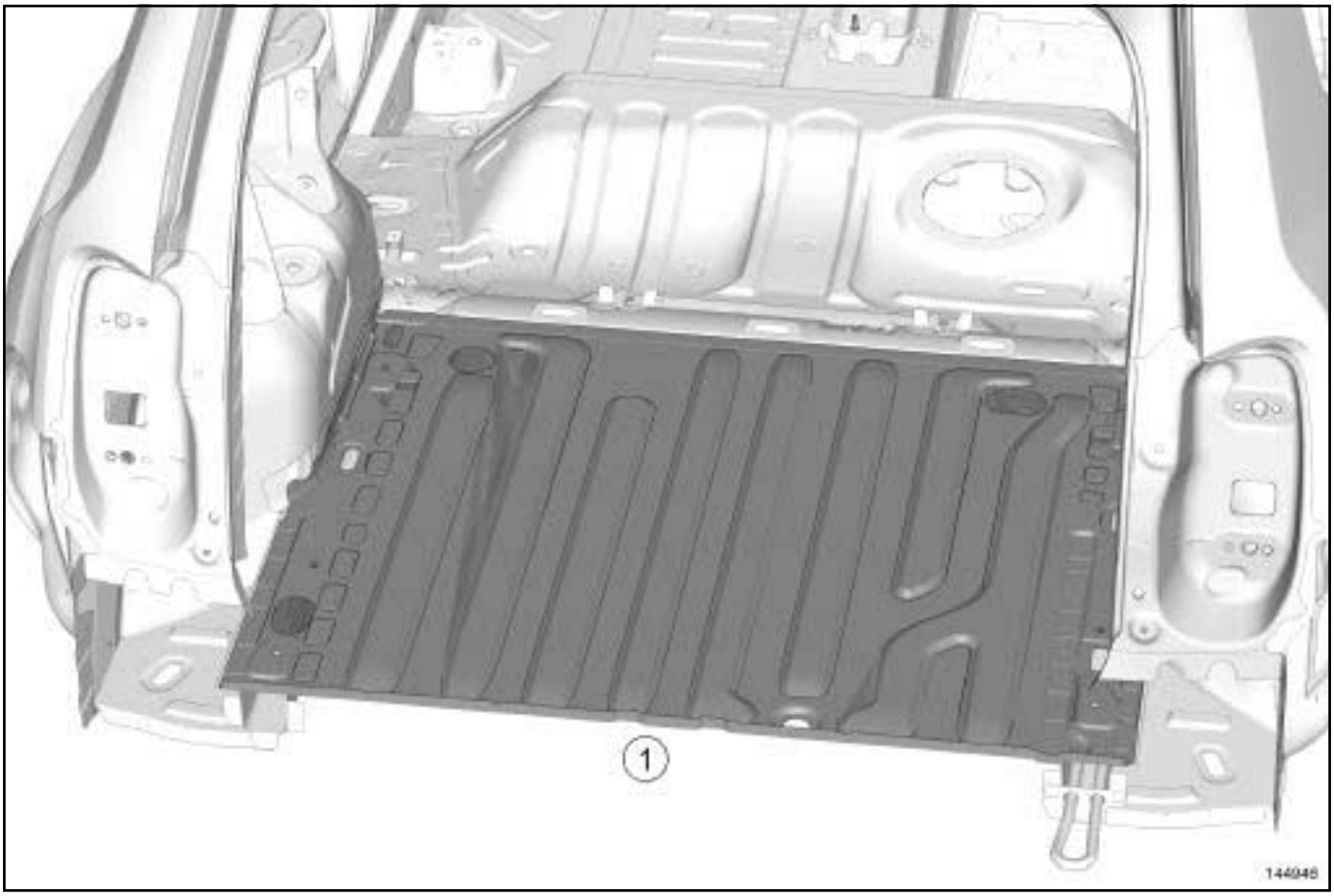


143999

1	Main beam headlight bulbs	(see **80B**, **Headlights**, **Headlight bulb: Removal - Refitting**, page **80B-5**)
2	Side light bulb	
3	Direction indicator bulb	
4	Dipped beam headlight bulb	
5	Headlight beam adjustment actuator	(see **80B**, **Headlights**, **Remote headlight beam adjustment actuator: Removal - Refitting**, page **80B-9**)
6	Headlight	(see **80B**, **Headlights**, **Headlight: Removal - Refitting**, page **80B-2**)

1 - Complete replacement

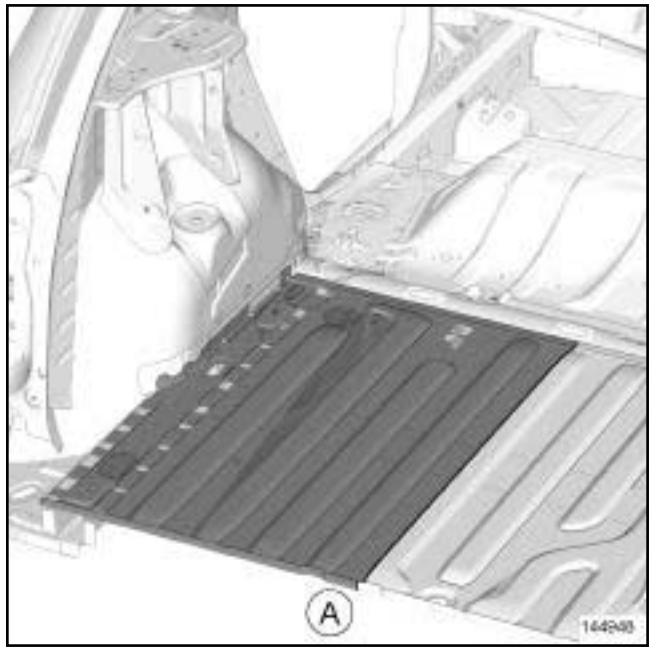
Part in position



144946

2 - Partial replacement along cut A

Part in position



144948

ALP1	No dialogue with the computer

NOTES	**Only consult this customer complaint after a complete check with the diagnostic tool.**

Try to establish dialogue with a computer on another vehicle to check that **the diagnostic tool** is not faulty. If the tool is not at fault, and dialogue cannot be established with any other computer on the same vehicle, the cause could be a faulty computer interfering on the multiplex network. Check the battery voltage and make the necessary adjustments to obtain a correct voltage (**9.5 V < Battery voltage < 17.5 V**).

↓

Carry out fault finding on the multiplex network using the **diagnostic tool** (see **88B, Multiplexing**).

↓

Check the presence and the condition of the injection fuses in the engine fuse box.
Check the connection of the injection computer connectors, component code **120** and the condition of its connections.
Check the injection computer **earths** (quality, oxidation, earth bolts secure on the battery terminal).
Check that the supply to the computer is correct:
- **NH** or **N** between **earth** and component **120**.
- **AP29** or **AP15** between components **1016** and **120.**

If the connection(s) are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

↓

(A)

AFTER REPAIR	Carry out a road test followed by a check with the **diagnostic tool**.

DCM1.2_V08_ALP01

DF236 PRESENT OR STORED	SERIOUS INJECTION FAULT WARNING LIGHT CIRCUIT CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Open circuit or short circuit

NOTES	**Conditions for applying the fault finding procedure to stored faults:** The fault is declared present when the ignition is on or on command **AC069 Serious injection fault warning light**.
	Special notes: – **CO/CC.1**: Level 2 warning light not illuminated. – **CC.0**: Level 2 warning light constantly illuminated. – Level 1 warning light illuminated if the level 2 warning light is defective. – **1.DEF**: for all stored faults.
	Use the **Technical Note Wiring Diagrams for H79**.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool. Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool.

ALP 24	Engine stalls

Check the fuel pump relay by running **TEST 1 Petrol supply pump relay check**.
Check the air filter unit.
Check the inlet manifold air pressure sensor by running **TEST 7 Air inlet pressure sensor check**.
Check the air pipes.
Check the additional fuel circuit solenoid valve by running **TEST 5 Checking the additional fuel tank**.
Check the injector rail.
Check the injectors by running **TEST 13 Checking the injectors**.
Check the additional petrol circuit pump by running **TEST 12 Additional fuel tank pump check**.
Check the TDC sensor by running **TEST 10 TDC sensor check**.
Check the upstream oxygen sensor by running **TEST 17 Checking the upstream O2 sensor**.
Check the downstream oxygen sensor by running **TEST 18 Checking the downstream O2 sensor**.
Check the camshaft.
Check the valves.
Check the timing.
Check the injection computer.
Check the injection computer supply relay.
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out a road test, then check with the **diagnostic tool**.

DF263 CONTINUED	

Check for **earth** on the longitudinal accelerometer, component code **1380** between the following connection:
- **44AE** of component **1380**.

Check **the continuity, insulation** and **the absence of interference resistance** of the following connection:
- **44AE** between component **1380** and **118**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check **the continuity, insulation** and **the absence of interference resistance** of the following connection:
- **44AF** between components **1380** and **118**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Clear the computer memory using command **RZ001 Fault memory**. Carry out a road test followed by another check with the **diagnostic tool**.

– Passenger compartment heating resistors (depending on the equipment level):
The passenger compartment heating resistors (RCH) are electrical heating devices in the air conditioning unit. This system is an additional heating system which operates when the engine is cold (when starting).

- **ACTUATORS**

– Air distribution flap:

This flap enables the air flowing into the passenger compartment to be directed.

– Air mixing flap:

This flap mixes the air in order to meet the temperature requirements of the occupants.

– Recirculation flap:

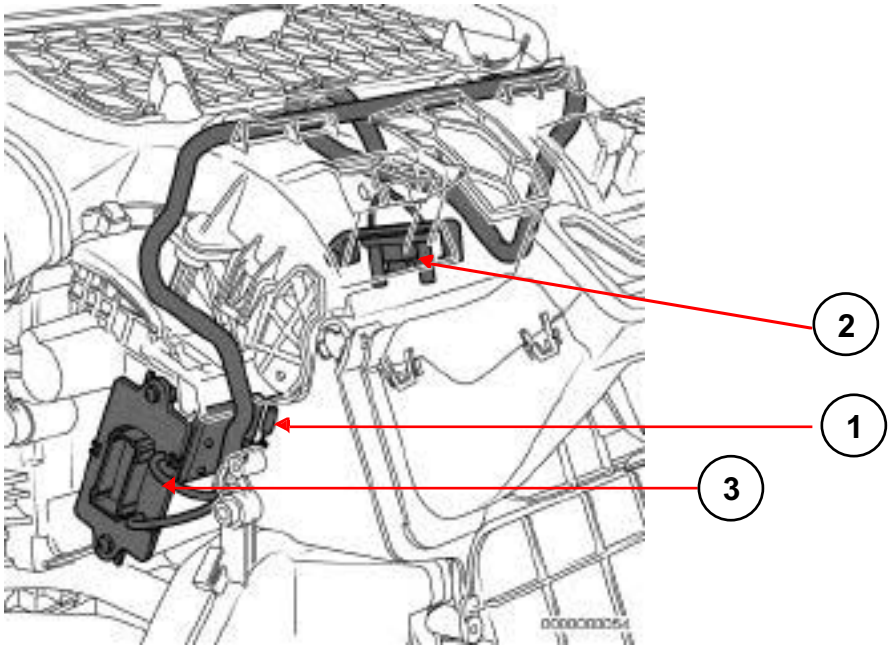
This flap prevents the entry of exterior air. In this case, the passenger compartment is isolated from the exterior and air is blown in the passenger compartment in a closed circuit.

These three flaps are **controlled by a cable**.

- **OTHERS**

– Passenger compartment blower unit:

The passenger compartment fan assembly is controlled by the Resistive Blower Dimmer Module (**MVPR**).



Equipment required:
CLIP diagnostic tool

Access and Safety function configurations in the UCH

Configuration readings available using the **diagnostic tool**:

Configuration reading	Name of configuration	Option	Configuration
LC012	Automatic relocking	**WITH** OR **WITHOUT**	**SC008 UCH type**
LC097	Type of key	**ONE BUTTON** or **TWO BUTTONS**	
LC113	Airbag	**WITH** OR **WITHOUT**	
LC149	Key locking	**WITH** OR **WITHOUT**	
LC165	Seat belt not fastened sensor	**ACTIVE** or **INACTIVE**	
LC169	Vehicle locked by RAID* function	**YES** or **NO**	
LC170	RAID* function authorisation by diag tool	**WITH** OR **WITHOUT**	
LC171	Radiofrequency function	**WITH** OR **WITHOUT**	
LC172	Type of central door locking button (CPE)*	**1 POSITION** or **2 POSITIONS**	

* RAID: Renault Anti-Intruder Device.
* CPE: Electric central door locking.

- Check the configurations in the **Read configurations** menu

ALP 3 CONTINUED 1	

(A)

Check the **condition** and **connection** of the connectors of the **instrument panel**, component code **247** and the **fuel sender**, component code **833** (**Petrol**) or **199** (**Diesel**).
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair),** repair the connector, otherwise replace the wiring.

Check the **continuity**, **insulation and the absence of interference resistance** of the following connections:
- **41A** between components **247** and **833** (**Petrol**) or **199** (**Diesel**),
- **47A** between components **247** and **833** (**Petrol**) or **199** (**Diesel**).

Are the checks correct?

NO → (B)

YES ↓

Measure the resistance of the sender and the wiring using a multimeter via the connector, on the instrument panel side.

Are the value measured and the value provided by the CLIP tool the same to within ±5 Ω?

YES → Contact the Techline.

NO ↓

Replace the instrument panel, component code **247** (see **MR 451, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

Is the fault still present?

NO → The problem disappears.

YES ↓

Contact the Techline.

AFTER REPAIR	Check for correct operation.

ALP 35	The 4X4 warning light remains illuminated Message from: ETC torque distribution computer

NOTES	Use the **Technical Note Wiring Diagrams for H79**.

Run fault finding on the ETC front - rear torque distributor (see **26A**, **Rear final drive**).
Deal with any other faults.

Check the **condition** and **connection** of the connectors of the **ETC front - rear torque distribution computer**, component code **2017** and the **instrument panel**, component code **247**.
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check **the continuity, insulation** and **the absence of interference resistance** of the following connection:
– **85L** between components **2017** and **247**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Check for correct operation.

Passive Safety Architecture – Computer with 6 trigger lines.