I - LOCATION OF VEHICLE IDENTIFICATION PLATE

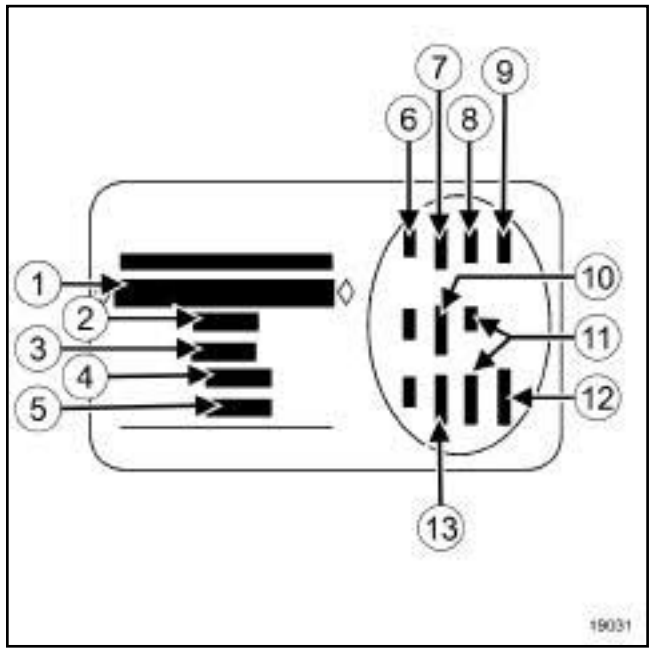
120451

II - LOCATION OF THE VEHICLE IDENTIFICATION NUMBER

120452

III - DETAILED VIEW OF THE VEHICLE IDENTIFICATION PLATE

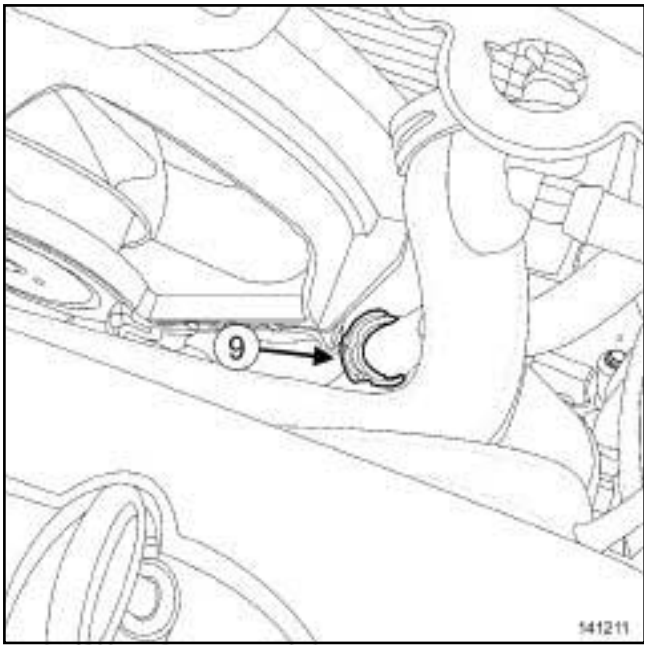
Plate (A)



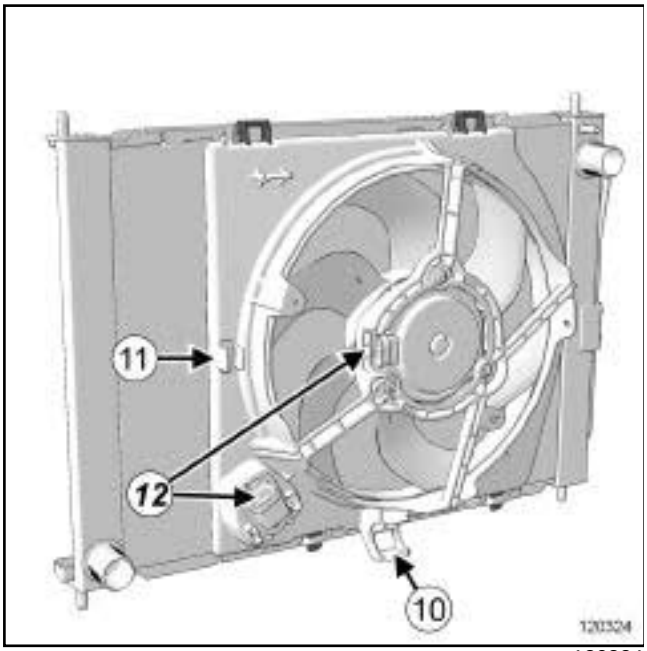
19031

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

K9K



141211



120324

❑ Unclip:

- the expansion bottle hose (**9**) from the engine cooling fan assembly,
- the bottom hose (**10**) from the engine cooling fan assembly,
- the wiring (**11**) from the engine cooling fan assembly.

❑ Disconnect the engine cooling fan assembly connectors (**12**) .

II - OPERATION FOR REMOVAL OF PART CONCERNED

❑ Attach the radiator and the intercooler to the upper cross member with a **safety strap(s)**.

❑ Remove:

- the radiator mounting cross member (see **Radiator mounting cross member: Removal - Refitting**) (41A, Front lower structure),
- the « radiator - condenser - engine cooling fan» assembly using the **safety strap(s)**.

Stripping the cooling radiator

❑ Remove the plastic covers from the radiator.

❑ Unclip the engine cooling fan assembly.

REFITTING

I - REFITTING PREPARATION OPERATION

Rebuilding the cooling radiator

❑ Clip the engine cooling fan assembly in place.

❑ Refit the plastic covers to the radiator.

II - REFITTING OPERATION FOR PART CONCERNED

❑ Refit:

- the « radiator - condenser - engine cooling fan» assembly using a **safety strap(s)**,
- the radiator mounting cross member (see **Radiator mounting cross member: Removal - Refitting**) (41A, Front lower structure).

❑ Remove the **safety strap(s)**.

III - FINAL OPERATION

❑ Connect the engine cooling fan assembly connectors.

❑ Clip:

- the wiring to the engine cooling fan assembly,
- the bottom hose to the engine cooling fan assembly,
- the expansion bottle hose to the engine cooling fan assembly.

❑ Use the **(Mot. 1448)** to connect:

- the degassing hose on the radiator,

K9K

Special tooling required	
Mot. 1672	Lower engine support.

Tightening torques ▽	
mounting bolt on the suspended engine mounting unit	**62 N.m**
suspended engine mounting shaft	**105 N.m**
mounting bolts on the suspended engine mounting body	**21 N.m**
bolts of the suspended mounting rubber pad	**62 N.m**
suspended engine mounting rubber pad shaft nut	**62 N.m**
front subframe bolt	**62 N.m**
rear subframe bolt	**105 N.m**

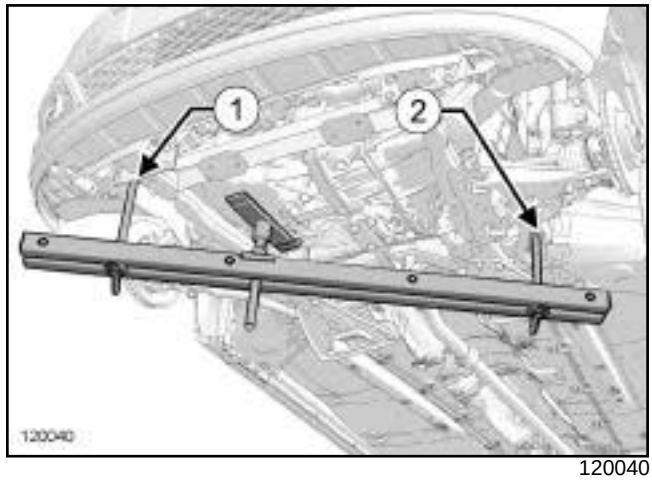
REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

❏ Remove:

- the battery (see) (80A, Battery)
- the battery tray (see **Battery tray: Removal - Refitting**) (80A, Battery),
- the diesel injection computer (see **13B**, **Diesel injection**, **Diesel injection computer: Removal - Refitting**, page **13B-13**) .



120040

❏ Remove:

- the front bolt (**1**) from the subframe,
- the rear bolt (**2**) from the subframe.

❏ Position the **(Mot. 1672)**.

❏ Mark the position of the left-hand suspended engine mounting.

DF098 PRESENT OR STORED	FUEL TEMPERATURE SENSOR CIRCUIT 3.DEF: Voltage too low. 4.DEF: Voltage too high. 5.DEF: Intermittent inconsistency of signal.

NOTES	**Conditions for application to a stored fault:** The fault is declared **present** after the ignition has been switched on.
	Special notes: **After this fault appears:** – Noisy engine. – The **Level 1 warning light** is illuminated.
	See the **Wiring Diagrams Technical Note for Kangoo II, Duster, Clio III, Modus, Logan, Sandero and New Twingo**.

The temperature sensor is integrated on the high pressure pump.
Check the connection and condition of the **fuel temperature sensor** connector, component code **1066**. Check the connection and condition of the **injection computer** connector, component code **120.**
If the connector or 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.

Measure the **resistance** at the terminals of the **fuel temperature sensor**, component code **1066** between connections:
– **3FAB** and **3LD** (for **Kangoo II**, **Logan** and **Sandero**),
– **3FAB** and **3NAJ** (for **Duster**, **Clio III**, **Modus** and **New Twingo**).
If the **resistance** of the **fuel temperature sensor** is not between **50** $\Omega \leq$ **X** $\leq$ **80 K**Ω between **0°C** and **40°C**, replace the **fuel temperature sensor**, component code **1066** (see **MR 417 (Kangoo II), MR 451 (Duster), MR 392 (Clio III), MR 385 (Modus), MR 388 (Logan or Sandero), MR 411 (New Twingo), Mechanical, 13B, Diesel injection, Fuel temperature sensor: Removal - Refitting**).

Check **the insulation, continuity and the absence of interference resistance** on the following connections:
– **3FAB** between components **1066** and **120**,
– **3LD** between components **1066** and **120** (for **Kangoo II**, **Logan** and **Sandero**),
– **3NAJ** between components **1066** and **120** (for **Duster**, **Clio III**, **Modus** and **New Twingo**).

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

If the fault is still present, contact the Techline.

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**.

DCM3.4_V45_DF098 / DCM3.4_V64_DF098 / DCM3.4_V4C_DF098 / DCM3.4_V65_DF098

TEST 3	Air flowmeter

NOTES	See the **Wiring Diagrams Technical Note for Kangoo II, Clio III, Modus, Logan, Sandero and New Twingo**.

With the engine switched off, check the area around the **air flowmeter**, component code **799**.
Check the condition of the **air flowmeter** connector, component code **799**.
If the connector is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

With the ignition on and the engine stopped, check that the value of **PR916 Air flow measured** is **0 kg/h**.
If the value is not correct, move on to **part A**.

With the engine running and the air conditioning switched off, leave the engine idling **40 seconds** so that the EGR switches off.
Check that the value of **PR916** is between **20 kg/h < X < 40 kg/h**.
If the value is not correct, move on to **part A**.

Part A

With the engine stopped and ignition on, check the **+ 12 V supply** on connection: **3FB3** (for **Kangoo II**), **3FB2** (for **Clio III**, **Modus** and **New Twingo**) and **3FBA** (for **Duster**, **Logan** or **Sandero**) of component **799**.

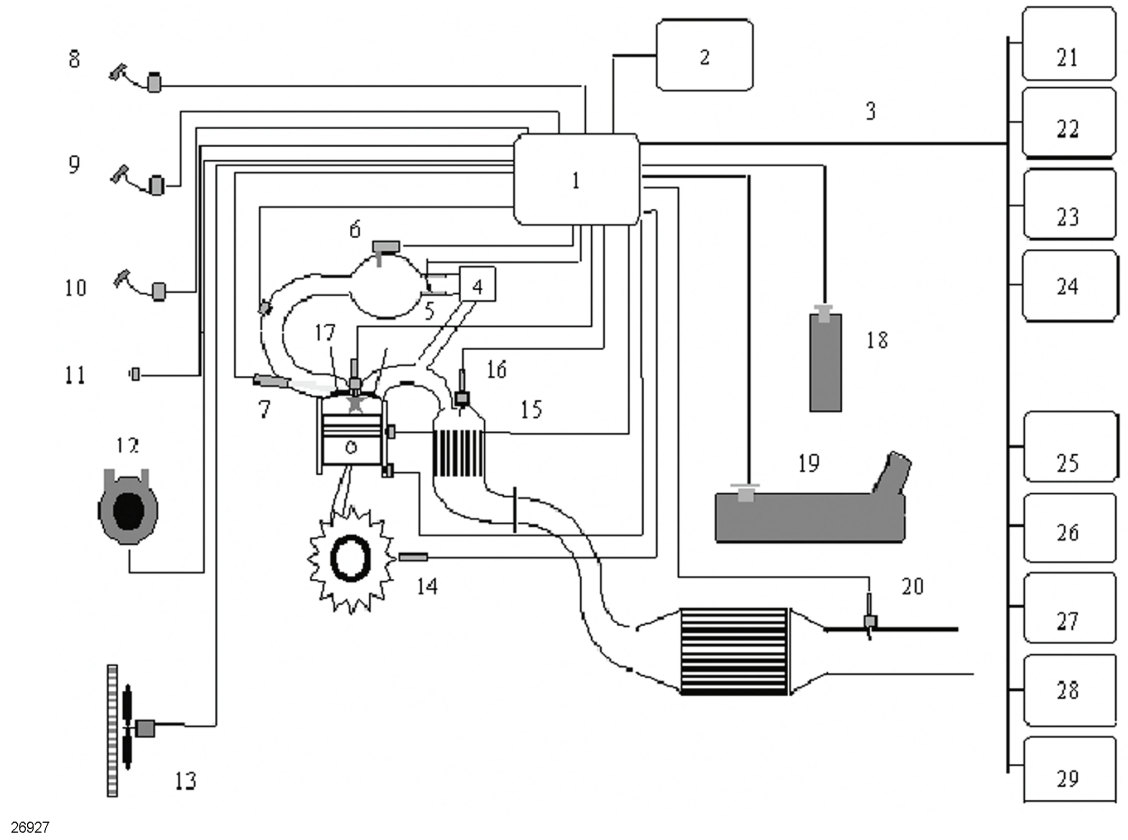
If the supply is correct, move on to **part B**.

If the supply is not correct, check **the insulation, continuity and the absence of interference resistance** on the following connection:
– **3FB3** between components **799** and **1337** (for **Kangoo II**),
– **3FBA** between components **799** and **597** (for **Duster**, **Logan** or **Sandero**),
– **3FB2** between components **799** and **1337** (for **Clio III** or **Modus**) or **597** (for **New Twingo**).

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

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

DCM3.4_V45_TEST3/DCM3.4_V64_TEST3/DCM3.4_V4C_TEST3/DCM3.4_V65_TEST3



26927

1 - Injection computer	16 - Upstream sensor signal
2 - RV* / LV* buttons	17 - Ignition command
3 - Multiplex network	18 - Bleed canister command
4 - Turbocharger	19 - Fuel pump command
5 - Motorised throttle	20 - Downstream sensor signal
6 - Manifold pressure	21 - ESP computer
7 - Injector command	22 - Rev counter computer
8 - Clutch Pedal	23 - ABS computer
9 - Brake pedal	24 - Instrument panel computer
10 - Accelerator pedal	25 - Sequential gearbox computer
11 - Refrigerant fluid pressure	26 - AIRBAG computer
12 - Air conditioning compressor command	27 - Vehicle speed sensor computer
13 - Engine cooling fan assembly command	28 - Air conditioning computer
14 - Flywheel signal	29 - UCH computer
15 - Pinking signal	30 – Turbocharging pressure

RV* / LV*: Cruise control/Speed Limiter

ET082	MOTORISED THROTTLE POSITION

STATUS DEFINITION	**LOWER END STOP**: This status indicates that the motorised throttle is at the lower end stop. **UPPER END STOP**: This status indicates that the motorised throttle is at the upper end stop.

NOTES	**Special notes:** Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

"LOWER END STOP" or "UPPER END STOP"	Depending on the load on the accelerator pedal, the throttle stop must be at the **lower** or **upper** or intermediate end stop. In the event of a fault, apply the interpretation of **DF095 Throttle potentiometer circuit gang 1** and **DF096 Throttle potentiometer circuit gang 2.**

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

SIM32_V44_ET082/SIM32_V4C_ET082/SIM32_V50_ET082/SIM32_V54_ET082

AC015 CONTINUED 2	

For **CLIO III or MODUS**:

Reconnect the Protection and Switching Unit connector and reconnect the battery.
If there is still no **+ 12 V** on the fuel pump relay connector, there is a fault in the Protection and Switching Unit.
Carry out fault finding on the **Protection and Switching Unit** (see **87G, Engine compartment connection unit**).
If the fault is still present, contact the Techline.

For **NEW TWINGO or WIND**:

Reconnect the battery.
With the ignition on, if the **+ 12 V** is still not present on the fuel pump relay connector, there is a fault in the engine fuse and relay box.
Carry out fault finding on the engine fuse and relay box to check the **30A fuse** and the **continuity** of the following connection:
- **BP17** between components **120** and **397, 238** and **397**.

If the connection is faulty and if 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, check the battery and run fault finding on the charging circuit (see **Technical Note 6014A, Checking the charging circuit**).

IF THE PUMP DOES NOT OPERATE

Check that there is an earth on connection **MF** on the fuel pump, component code **833**.
If the connection is faulty and if 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, replace the fuel pump.

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

TEST 14	Upstream O2 sensor check

NOTES	See the **Wiring Diagrams Technical Note for Twingo II ph2**.

Visually check the position and mounting of the upstream oxygen sensor, component code **887** (see **MR 411, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).
With the engine warm, **PR064 Coolant temperature >70°C**, depress the accelerator pedal and check that **PR098 Upstream oxygen sensor voltage** varies correctly between: **20 mV < PR098 < 1395 mV**. The variation must be greater than **50 mV**.
Check the connection and condition of the upstream oxygen sensor connector, component code **887** and of the injection computer connector, component code **120**. If the connector or connectors are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
Check **the insulation, continuity and absence of interference resistance** on the following connections: – **3GH** between components **887** and **120**, – **3GK** between components **887** and **120**. 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.

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

EMS3120_V44_TEST14/EMS3120_V54_TEST14

DF072 PRESENT OR STORED	ENGAGEMENT SOLENOID VALVE 1 CIRCUIT CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 volts

NOTES	**Conditions for applying the fault finding procedure to stored faults:** A fault is declared present after engaging all gears, with the brake pedal depressed and the engine stopped.
	Special note: – warning light comes on, – automatic mode deactivated, – certain gear changes are inhibited.
	Use the Wiring Diagrams Technical Note for **New TWINGO**.

Check the **connection** and **condition** of the connectors of components **1051** and **119**.
If the connectors are faulty and if there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connectors; otherwise, replace the wiring.

Check the **continuity and insulation to earth and to + 12 V** on the following connections:
- Connection code **5FE**,

between components **119** and **1051**.
- Connection code **N**,

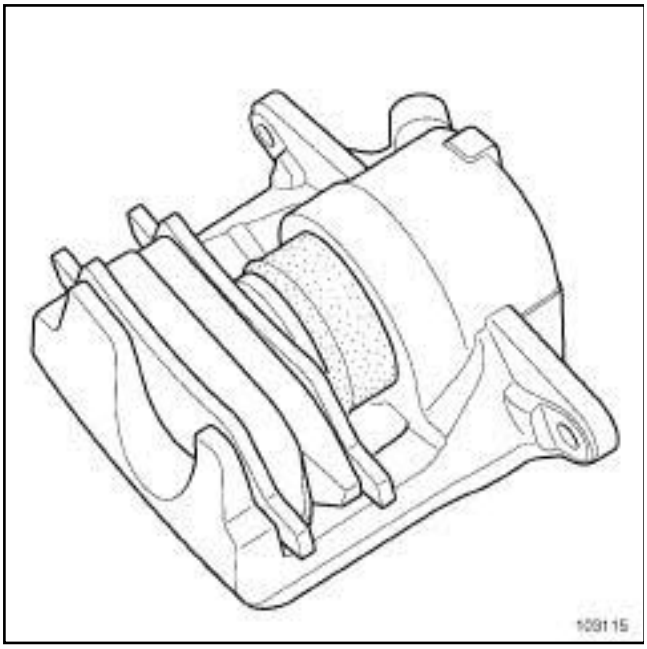
between component **1051** and chassis earth **N**.
If the connections are faulty, check the connection and condition of the intermediate connector **R235** located on the hydraulic unit.
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check that engagement solenoid valve 1 is operating correctly by carrying out a listening test using command **AC015 Engagement solenoid valves**.
If the checks are correct, replace engagement solenoid valve 1 (see **MR 411 Mechanical, 21B, Sequential gearbox, Solenoid valves: Removal - Refitting**).

If the fault is still present, contact the Techline.

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

EQUIPMENT LEVEL SPORT



103115

❑ Push the piston fully into its housing using the tool **(Fre. 1190-01)** part number **77 11 223 715**.

II - REFITTING OPERATION

❑

WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

WARNING

In order not to damage the brake hose:

- do not tension the hose,
- do not twist the hose,
- check that there is no contact with the surrounding components.

❑ Screw the brake hose union onto the calliper.

❑ Refit the brake pads (see **31A**, **Front axle components**, **Front brake pads: Removal - Refitting**, page **31A-1**) .

❑ Torque tighten the **brake hose union (13 N.m)**.

❑ Clean the drips using **BRAKE CLEANER** (see) (04B, Consumables - Products).

III - FINAL OPERATION

❑ Remove the **pedal press** from the brake pedal.

❑ Refit the front wheel (see **35A**, **Wheels and tyres**, **Wheel: Removal - Refitting**, page **35A-1**) .

❑ Bleed the brake circuit (see **30A**, **General information**, **Braking circuit: Bleed**, page **30A-4**) .

IMPORTANT

To avoid any accident, bring the pistons, brake pads and brake discs into contact by depressing the brake pad several times.

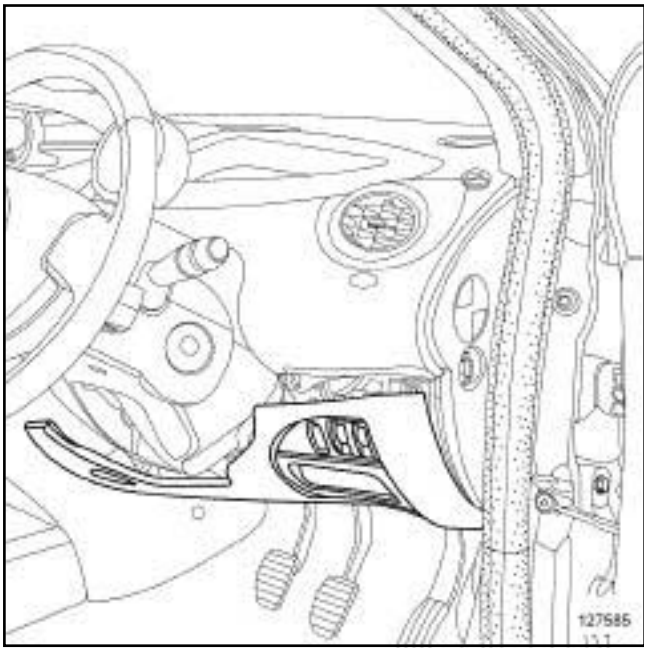
RIGHT-HAND DRIVE

Equipment required
Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

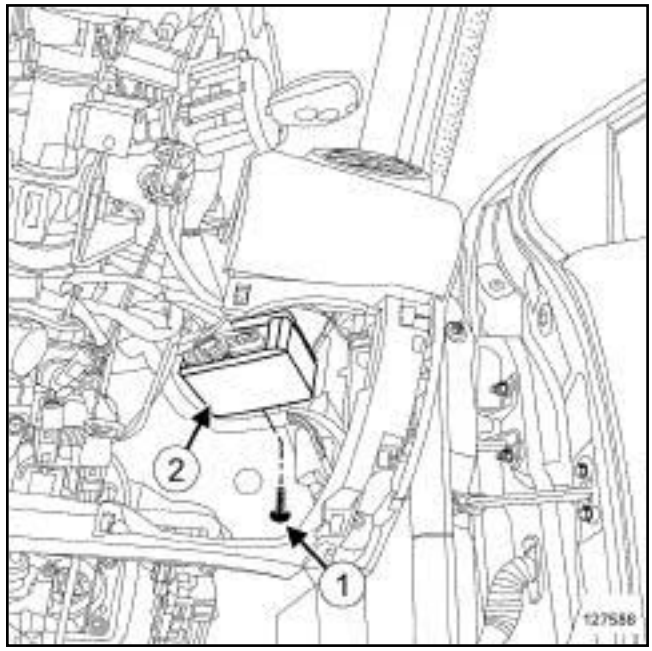


127585

❏ Unclip the dashboard lower trim

❏ Disconnect the various connectors.

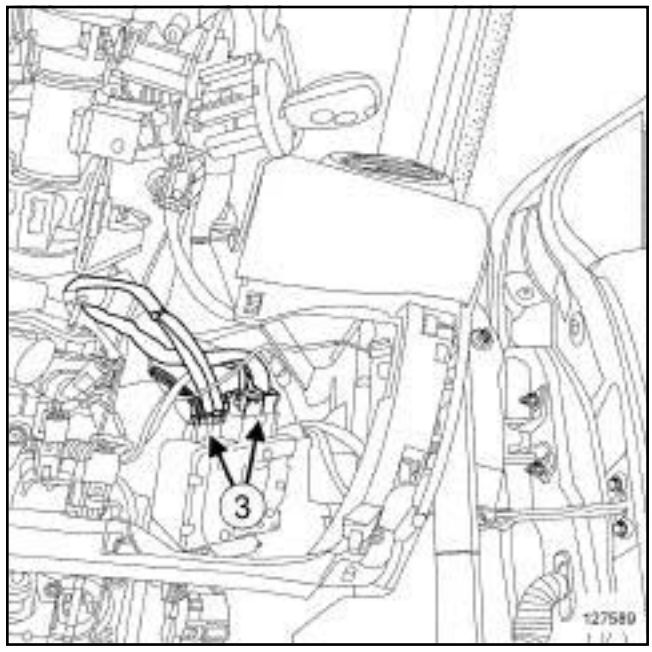
II - OPERATION FOR REMOVAL OF PART CONCERNED



127588

❏ Remove the bolt (**1**) of the support of the power-assisted steering computer.

❏ Separate the "support - computer" assembly (**2**) .



127589

❏ Unclip the locking clips of the connectors of the power-assisted steering computer.

❏ Disconnect the connectors (**3**) of the power-assisted steering computer.

❏ Remove the "support - computer" assembly.

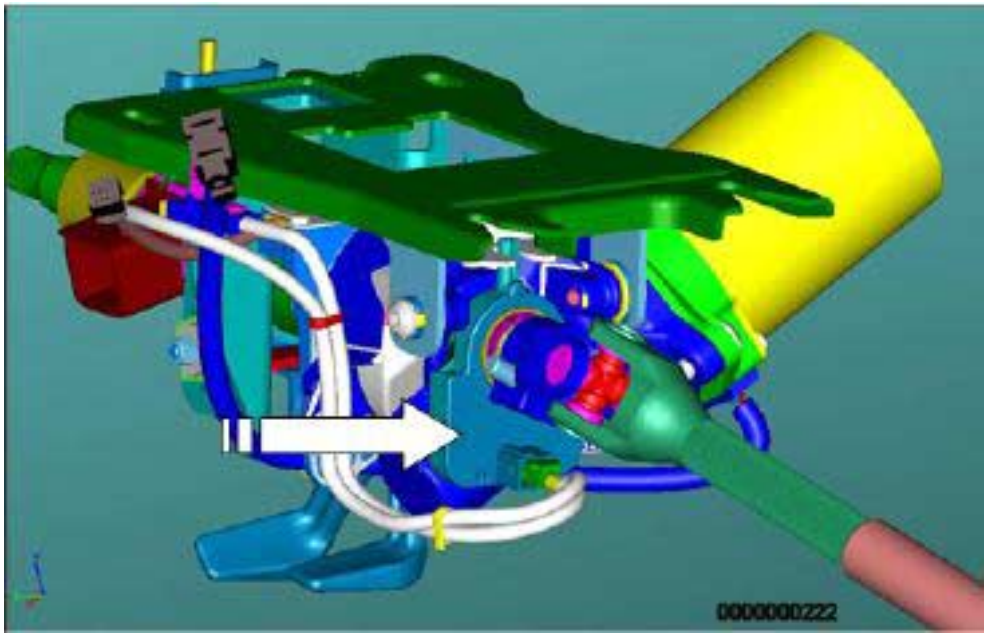
NOTES	Only carry out this conformity check after a **complete check** with the **diagnostic tool**. **Application conditions: engine at idle speed, no movement of the steering wheel, front wheels straight ahead.**

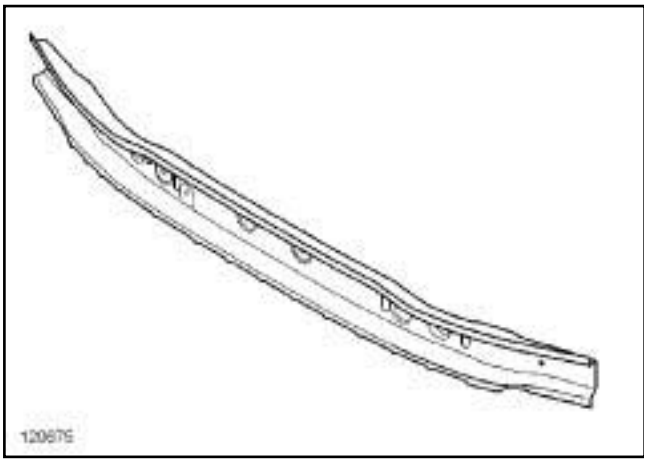
SUB-FUNCTION: ASSISTANCE

Function	Parameter or Status Checked or Action		Display and notes	Fault finding
Supply	**PR032:**	Feed voltage	**12 < X < 16 V**	In the event of a fault on this parameter, apply the fault finding procedure of **DF037 Battery voltage**.
Wire information	**PR003:**	Vehicle speed	**0 mph (0 km/h)**	In the event of a fault, apply the interpretation of parameter **PR003**.
	PR004:	Engine speed	**850 +/- 50 rpm**	In the event of a fault, apply the interpretation of parameter **PR004**.
Steering wheel angle (**Vdiag 04** only)	**ET020:**	Steering wheel angle sensor programming	**Not programmed**	In the event of a fault, apply the interpretation of status **ET020**.
	PR121:	Steering wheel angle	**- 5° < X < 5°**	In the event of a fault, apply the interpretation of parameter **PR121**.
Faults	**ET021:**	Motor thermal protection indicator	**Not active**	In the event of a fault, apply the interpretation of status **ET021**.
	ET025:	Fault indicator	**Off**	In the event of a fault, apply the interpretation of status **ET025**.

Steering wheel angle sensor:

– Located on the steering column, on the intermediate shaft side.





120675

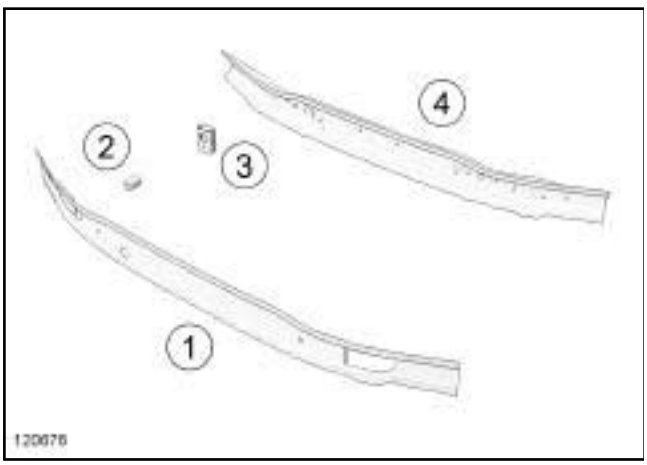
There is only one way of replacing this part:

- complete replacement.

Note:

The repair bench does not have to be used, on condition that the side members have not been affected by the impact.

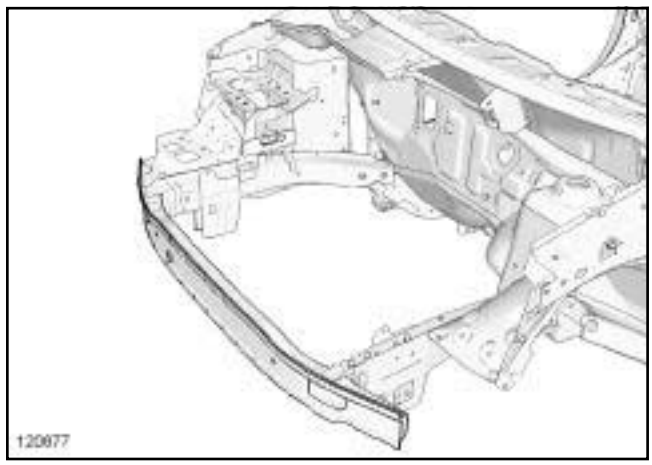
I - COMPOSITION OF THE SPARE PART



120676

No.	Description	Type	Thic-kness (mm)
(**1**)	Front cross member closure panel	HLE	**1.5**
(**2**)	Tow hitch socket	Mild steel	**-**
(**3**)	Front tow hitch support	Mild steel	**3**
(**4**)	Front end cross member	HLE	**1.5**

II - PART FITTED



120677

WARNING

If the spot welds cannot be made as they were originally using an electrical spot welding machine, they should be replaced with plug welds after holes have been drilled in the first panel.