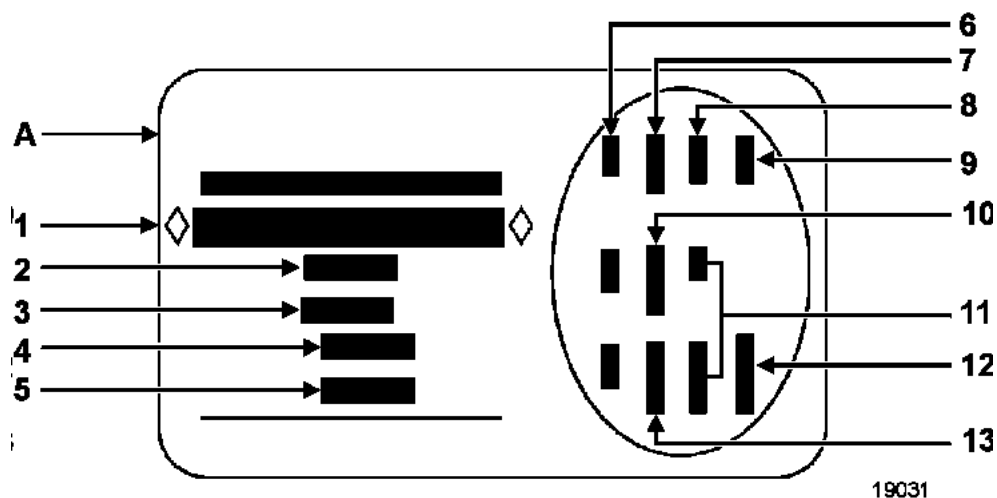
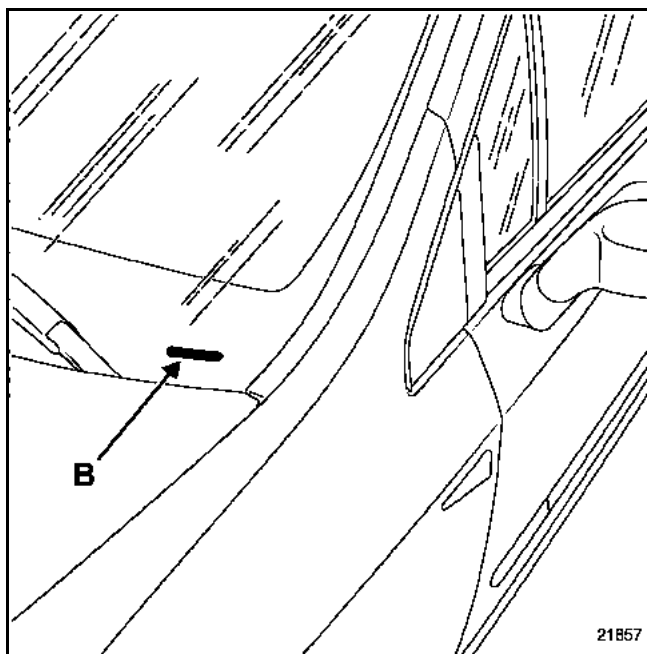
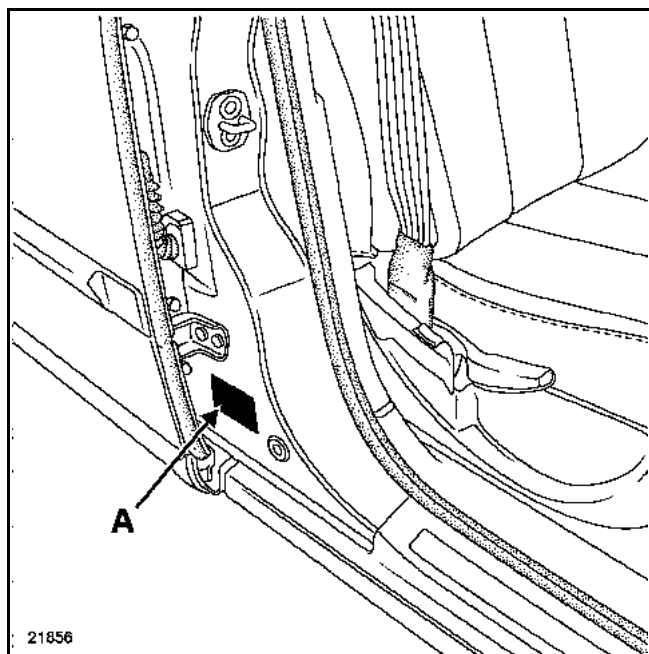


# SPECIFICATIONS

## Vehicle identification

01A

### LOCATION OF VEHICLE IDENTIFICATION PLATE



- 1 Vehicle type and type series number  
**This information is repeated on marking (B).**
- 2 MGVV (Maximum Gross Vehicle Weight)
- 3 GTW (Gross Train Weight - loaded vehicle with trailer)
- 4 Front axle MGVV
- 5 Rear axle MGVV

- 6 Technical specifications of the vehicle
- 7 Vehicle paint reference
- 8 Equipment level
- 9 Vehicle type
- 10 Trim code
- 11 Additional equipment details
- 12 Fabrication number
- 13 Interior trim code

# FLUID CHANGE AND FLUID REFILLING

## Engine

# 05A

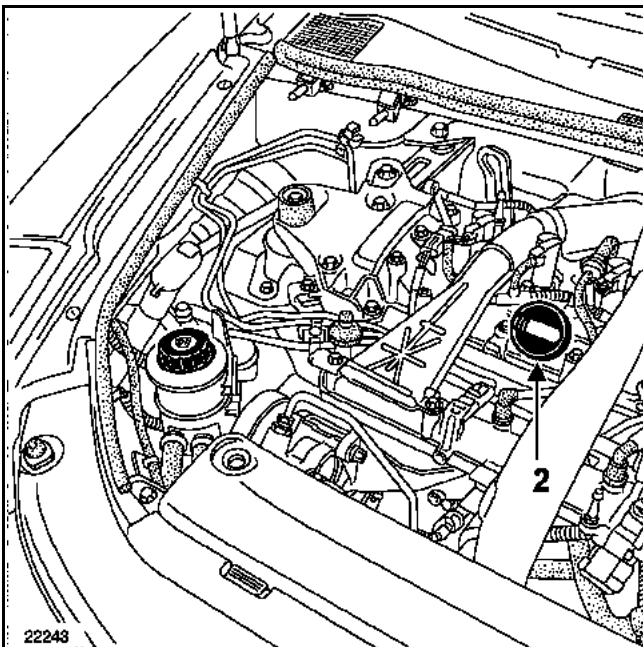
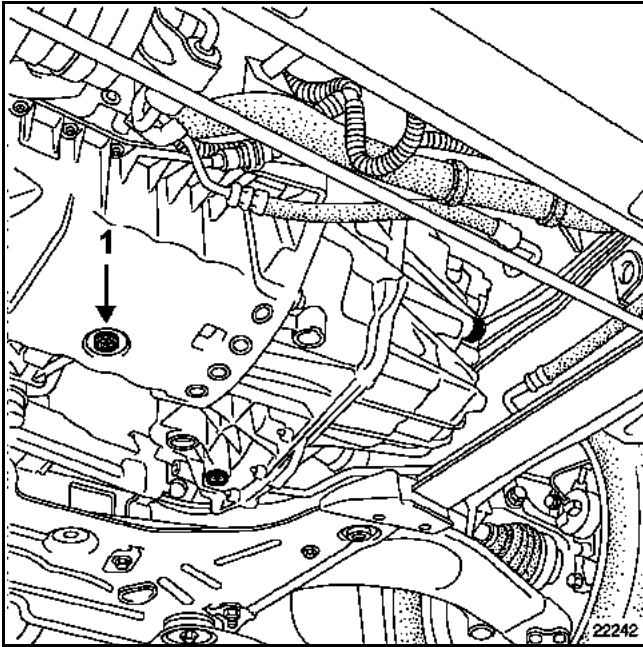
### TOOLING REQUIRED

Engine drain plug spanner

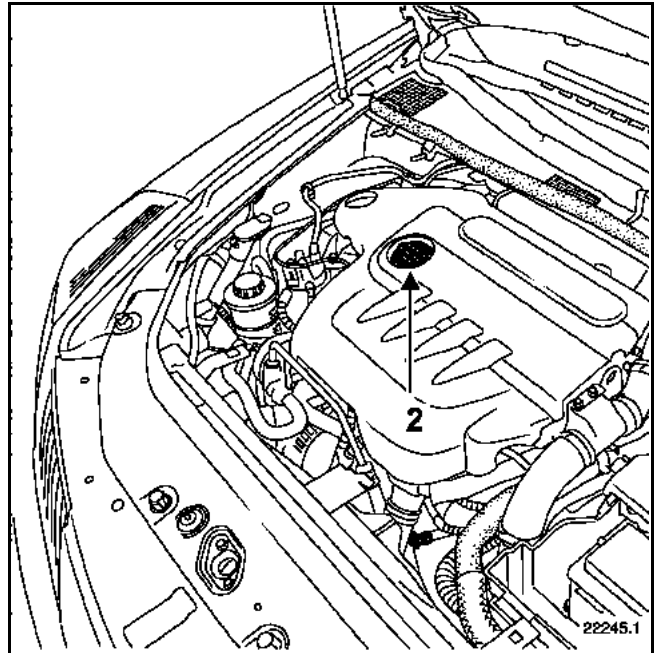
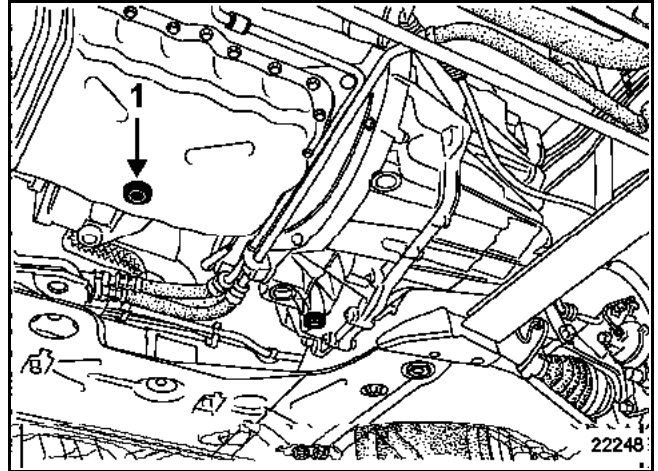
**DRAINING:** plug (1)

**FILLING:** plug (2)

#### F4R ENGINE



#### G9T ENGINE



# PETROL INJECTION

## Adaptive richness adjustment

# 17B

V4Y ENGINE

### PRINCIPLE

In closed loop mode, the richness regulation (**PR173** and **174**) corrects the injection timing to give fuel metering which is as close as possible to richness 1. The correction value is around **100 %**, with limits of **75 %** and **125 %**.

The adaptive richness correction (**PR177** and **178**) makes it possible to offset the injection mapping to reset the richness regulation to **100 %**.

Adaptive correction takes **100 %** as the average value after initialisation (erasing the memory) and has the following limit values: **74 %** and **139 %**.

Richness regulation bank 1 or 2	$75 \% \leq \text{PR173 and 174} \leq 125 \%$
Richness regulation adaption bank 1 or 2	$74 \% \leq \text{PR177 and 178} \leq 139 \%$

### Programming conditions for adaptive richness correction:

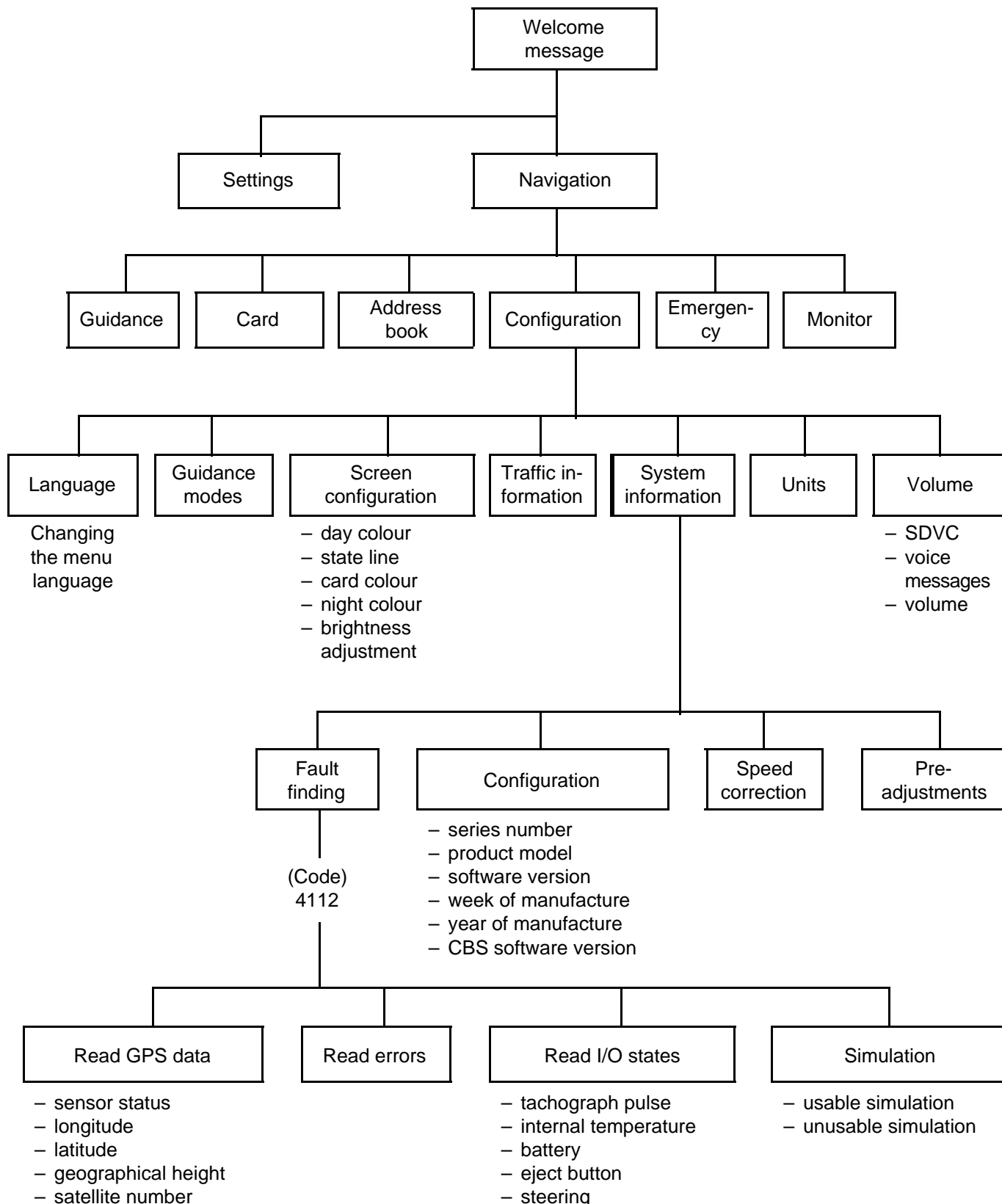
- engine warm, coolant temperature above **70 °C**,
- closed loop richness regulation,
- disconnect the fuel vapour absorber by the solenoid valve or block the inlet pipe on the engine.

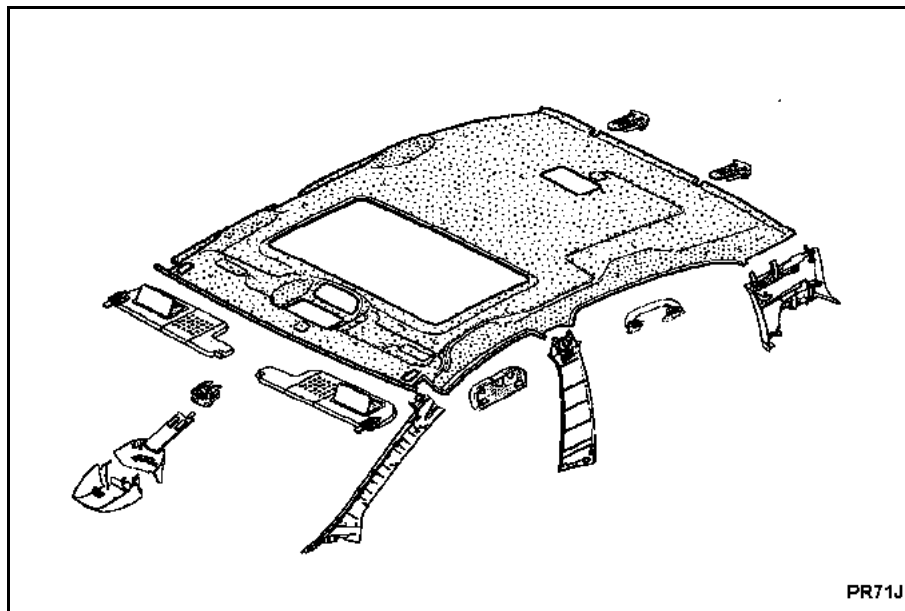
Following this test the adjustments will be operational. The test should be followed by normal, smooth and varied driving over **5 to 10 kilometres**.

After the test, record the values of the adaptive programs. Initially **100 %**, they should have changed. If not, repeat the readings taking care to observe the test conditions strictly.

### INTERPRETATION OF VALUES OBTAINED FROM A ROAD TEST'

If there is a lack of fuel, the richness regulation (**PR173** and **174**) increases to obtain a richness as close as possible to **1** and the adaptive richness correction increases until the richness correction again fluctuates at approximately **100 %**. If there is excess fuel, the opposite is true.



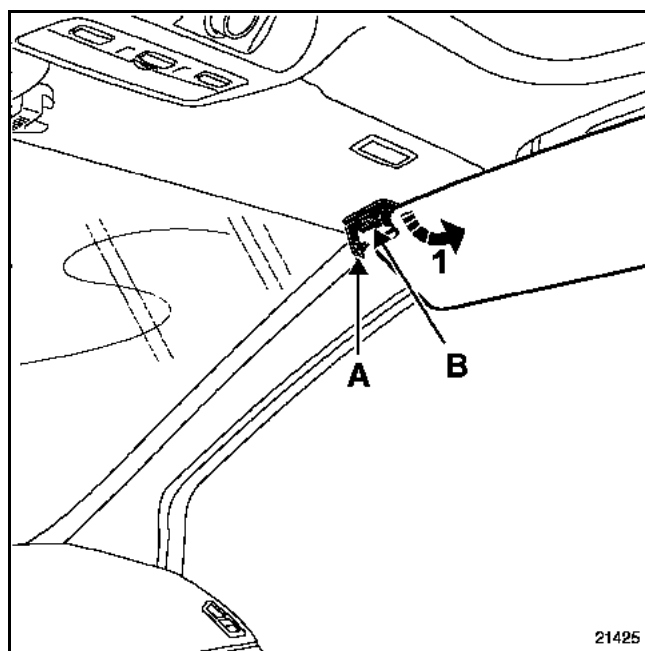


REMOVAL

**IMPORTANT:** before removing the headlining, it is essential to lock the airbag computer using the diagnostic tool (for instructions, refer to **section 88**).

Remove:

- the luggage compartment door seal (partially),
- the four door frame seals (upper part),
- the rear side parcel shelves (**section 71A.A**),
- the rear quarter panel trims (**section 71A.G**).



Position the sun visor towards the door.

Unclip:

- cover mounting (A),
- clip (B).

Pull the sun visor down towards the windscreen, then remove it (1).

<b>DF001 PRESENT OR STORED</b>	<p><u>COOLANT TEMPERATURE SENSOR CIRCUIT</u></p> <p>CC.0 : short circuit to earth          CO.1 : open circuit or short circuit on + 12 V</p>
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<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>          The fault is declared present:</p> <ul style="list-style-type: none"> <li>- when an attempt is made to start the engine,</li> <li>- the engine is running</li> </ul>
	<p><b>Special notes:</b>          If the fault is present:</p> <ul style="list-style-type: none"> <li>- the coolant temperature: <b>PR064 Coolant temperature</b> is fixed at <b>119°C</b>,</li> <li>- the preheating phase is greater than <b>10 seconds</b>,</li> <li>- the low-speed fan unit (<b>motor-driven fan unit 1</b>) is continuously supplied,</li> <li>- if <b>motor-driven fan unit 1</b> is faulty, then <b>motor-driven fan unit 2</b> is activated on vehicles fitted with climate control.</li> <li>- the <b>level 1</b> warning light is lit.</li> </ul> <p>Use bornier <b>Elé. 1681</b> for all operations on the computer connectors.</p>

<p>Check the connections of the <b>coolant temperature sensor 4-track connector</b>.          Repair if necessary.          Measure the <b>resistance</b> of the <b>coolant temperature sensor</b> between <b>tracks 2 and 3</b> of its black connector.          Replace the sensor if its resistance is not approximately:</p> <div style="text-align: right; padding-right: 20px;"> <p><b>75780 ± 7000 Ω at - 40°C</b>  <b>12460 ± 1128 Ω at -10°C</b>  <b>2252 ± 112 Ω at 25°C</b>  <b>811.4 ± 39 Ω at 50°C</b>  <b>283 ± 8 Ω at 80°C</b>  <b>115 ± 3 Ω at 110°C</b>  <b>87 ± 2 Ω at 120°C</b></p> </div>
<p>Check the injection computer connections.          Check the <b>insulation, continuity and the absence of interference resistance</b> on the following connections:</p> <p style="padding-left: 20px;">Injection computer brown 48-track connector B, <b>track F2</b>        <b>Track 3</b> coolant temperature sensor</p> <p style="padding-left: 20px;">Injection computer brown 48-track connector B, <b>track H1</b>        <b>Track 2</b> coolant temperature sensor</p> <p>Repair if necessary.</p>
<p>If the fault is still present, replace the coolant temperature sensor.</p>

<b>AFTER REPAIR</b>	<p>Deal with any faults.          Carry out a road test followed by another check with the diagnostic tool.</p>
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<b>DF040 PRESENT OR STORED</b>	<u>CYLINDER 1 INJECTOR CIRCUIT</u> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 V DEF : Unidentified electrical fault
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<b>NOTES</b>	<p><i>If the faults DF084 Actuator relay control circuit or DF175 Power supply are present or stored, deal with them first.</i></p> <p><b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the engine has been running for a timed period of <b>10 seconds</b>.</p> <p><b>WARNING</b> <i>If the fault is stored, do not clear it; there may be an <b>OBD fault</b> (On Board Diagnostic).</i></p>
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Check the <b>cleanliness and condition</b> of the cylinder 1 injector and its connections. Clean or replace as necessary.
Check, with the ignition on, for <b>+ 12 V on track 1 of the injector 1 connector</b> .
Disconnect the battery. Disconnect the computer. Check the <b>cleanliness and condition</b> of the connections. Use the bornier to check the <b>insulation, continuity and the absence of interference resistance</b> on the following connection: <b>Injection computer track L4, connector B</b> —————▶ <b>Cylinder 1 injector, track 2</b> Repair if necessary.
Check the <b>resistance of the cylinder 1 injector</b> (see the value in the <b>Help</b> section). Replace the injector if necessary.
In the fault is still present, replace the injector.
<b>If the fault has still not disappeared, process the other faults and then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair: <ul style="list-style-type: none"><li>– continue to deal with the fault if it is present,</li><li>– ignore the fault if it is stored.</li></ul> Deal with any other faults. After carrying out all the tests, clear the stored faults.
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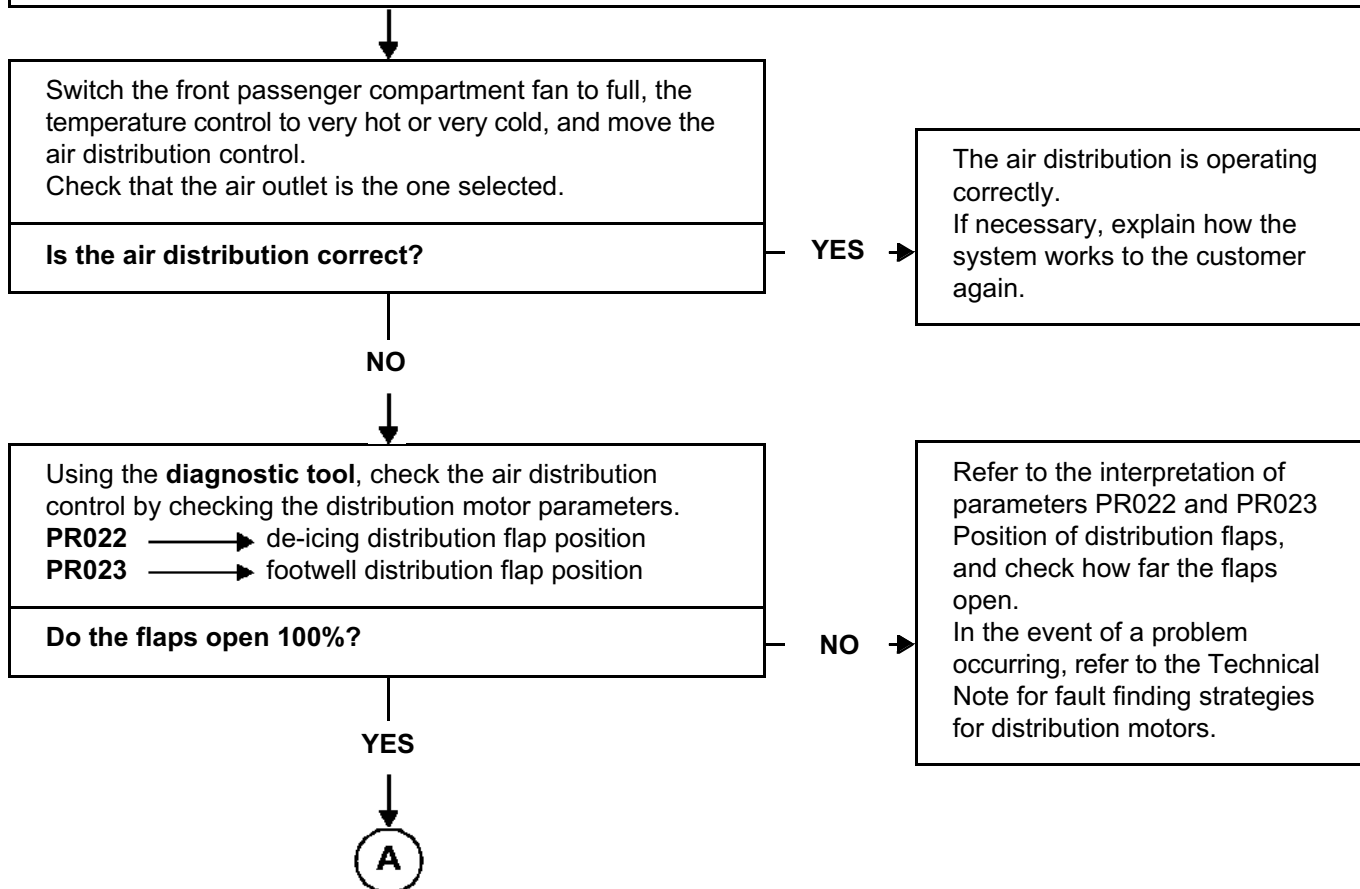
<b>ALP 1</b>	<b>Air distribution fault</b>
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<b>NOTES</b>	Only consult this customer complaint after a <b>complete check with the diagnostic tool</b> .
	<b>Special notes:</b> Adjusting the air distribution or ventilation controls switches off automatic climate control mode.

Check that **the air circuit (particle filter, scuttle panel grille, air vents, etc.)** is not blocked.  
Ensure that the fan blades are in good condition.  
Repair, clean or replace the particle filter if necessary.

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Ensure that the front fan unit is properly **sealed**.  
Repair if necessary.



<b>AFTER REPAIR</b>	Check that the system is operating correctly.
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<p>PR784 PR785 PR786 PR787 PR788 PR789 PR790 PR791 PR792 PR793</p>	<p><u>DF312 RECORD No. 1</u> <u>DF312 RECORD No. 2</u> <u>DF312 RECORD No. 3</u> <u>DF312 RECORD No. 4</u> <u>DF312 RECORD No. 5</u> <u>DF312 RECORD No. 6</u> <u>DF312 RECORD No. 7</u> <u>DF312 RECORD No. 8</u> <u>DF312 RECORD No. 9</u> <u>DF312 RECORD No. 10</u></p>
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<p><b>NOTES</b></p>	<p><b>Special note:</b> These parameters must only be interpreted for <b>DF312 Speed request</b> if it is present or stored.</p>
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These parameters can be used to find out the history of the last ten times the particle filter warning light has come on.

Each parameter from **PR784 to PR793** records the mileage when the particle filter warning light illuminates in association with **DF312 Speed request**.  
Each time the particle filter warning light comes on, the vehicle mileage is stored in the following parameter (PR+1).

When all ten parameters have a value other than zero, and the particle filter warning light illuminates again, the mileage information for **PR784 DF312 record no. 1** is cleared and replaced by the new value.

<p><b>AFTER REPAIR</b></p>	<p>Repeat the conformity check from the start.</p>
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EDC16\_V08\_PR784/EDC16\_V08\_PR785/EDC16\_V08\_PR786/EDC16\_V08\_PR787/  
EDC16\_V08\_PR788/EDC16\_V08\_PR789/EDC16\_V08\_PR790/EDC16\_V08\_PR791/  
EDC16\_V08\_PR792/EDC16\_V08\_PR793/EDC16\_V10\_PR784/EDC16\_V10\_PR785/  
EDC16\_V10\_PR786/EDC16\_V10\_PR787/EDC16\_V10\_PR788/EDC16\_V10\_PR789/  
EDC16\_V10\_PR790/EDC16\_V10\_PR791/EDC16\_V10\_PR792/EDC16\_V10\_PR793/  
EDC16\_V14\_PR784/EDC16\_V14\_PR785/EDC16\_V14\_PR786/EDC16\_V14\_PR787/  
EDC16\_V14\_PR788/EDC16\_V14\_PR789/EDC16\_V14\_PR790/EDC16\_V14\_PR791/  
EDC16\_V14\_PR792/EDC16\_V14\_PR793

### DF086 CONTINUED 1

Check the **continuity** of the following connections:

- **3AAZ** between components **120** and **573**,
- **3VH** between components **573** and **369**,
- **M** between components **369** and the vehicle **earth**.

Check the **+ 12 V after relay supply** to the coolant pump relay:

- **3FB** of component **573**.

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.

CC.1

**NOTES**

None.

Check the condition of the coolant pump relay mounting connector on the engine fuse box (see **Wiring Diagram Technical Note, Laguna II ph2, Vel Satis ph2, Espace IV ph2, Mégane II ph2, Scénic II ph2, component code 597**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Laguna II ph2, Vel Satis ph2, Espace IV ph2, Mégane II ph2, Scénic II ph2, 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.

Check the conformity of the coolant pump relay (relay removed):

- **Insulation** between connections **3FB** and **3VH** of component **573**.
- Measure the **resistance** between connections **3AAZ** and **3FB** of component **573**.

Replace the relay if the resistance of the coolant pump relay is greater than **1 kΩ** or less than **6 Ω**.

Check the **insulation** from **+ 12 V** of the following connections:

- **3AAZ** between components **120** and **573**,
- **3VH** between components **573** and **369**.

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.

### AFTER REPAIR

Deal with any other faults. Clear the fault memory.

Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check with the **diagnostic tool**.

# DIESEL INJECTION

## Fault finding – Status summary table

Tool status	Diagnostic tool title
ET703	Cruise control/speed limiter buttons
ET704	Brakecontact No. 1
ET705	Brakecontact No. 2
ET706	Stored engine status No. 1
ET707	Stored engine status No. 2
RT708	Stored engine status No. 3
ET709	Stored engine status No. 4
ET710	Stored engine status No. 5
ET711	Stored engine status No. 6
ET712	Stored engine status No. 7
ET713	Stored engine status No. 8
ET714	Stored engine status No. 9
ET715	Stored engine status No. 10
ET742	Stored rege.* request status No. 1
ET743	Stored rege.* request status No. 2
ET744	Stored rege.* request status No. 3
ET745	Stored rege.* request status No. 4
ET746	Stored rege.* request status No. 5
ET747	Stored rege.* request status No. 6
ET748	Stored rege.* request status No. 7
ET749	Stored rege.* request status No. 8
ET750	Stored rege.* request status No. 9
ET751	Stored rege.* request status No. 10

\* rege: regeneration

**Fault finding - Interpretation of faults**

<b>DF951</b>  <b>CONTINUED</b>	
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<b>2.DEF</b>	<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> – level 1 warning light on, – swirl flap control inactive.
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<p>Check the swirl flap moves using a vacuum pump.          Check the status <b>ET695 Front row swirl flap position</b>.          Replace the inlet manifold if necessary.          Check the vacuum circuit, if the swirl flap is operating.          Repair or replace the vacuum circuit if necessary.</p>
<p>Check for <b>continuity and the absence of interference resistance</b> on the following connection:          – connection code <b>3MD</b>,          between the swirl flap solenoid valve connector, <b>component code 1075</b> and the engine management computer, <b>component code 120</b>.          If the connections are faulty and there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, wiring: precautions for repairs</b>) repair the wiring, otherwise change the wiring.</p>
<p>Check the following connections for <b>continuity and make sure there is no interference resistance</b>:          – connection code <b>3ACZ</b>,          – connection code <b>3CJ</b>,          – connection code <b>3AX</b>,          between the front row swirl flap position sensor connector, <b>component code 1709</b> and the engine management computer, <b>component code 120</b>.          If the connections are faulty and there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, wiring: precautions for repairs</b>) repair the wiring, otherwise change the wiring.</p>
<p>Check the performance of the vacuum pump. The vacuum is greater than - <b>900 mbar</b>.          Replace the vacuum pump, if the pump does not perform correctly.</p>
<p>If <b>the fault is still present</b>, contact the Techline.</p>

<b>AFTER REPAIR</b>	Deal with any faults detected by the <b>diagnostic tool</b> . Clear the computer memory. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
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<b>DF286 PRESENT OR STORED</b>	<p><u>LEVER POSITION SENSOR SIGNAL</u></p> <p>1.DEF: No signal 2.DEF: Signal outside upper limit 3.DEF: Internal electronic fault</p>
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<b>NOTES</b>	<p><b>Conditions for applying fault finding procedures to stored faults:</b> The fault appears after:</p> <ul style="list-style-type: none"> <li>- the computer fault memory has been cleared,</li> <li>- the ignition has been switched off and on again,</li> <li>- selector lever movement.</li> </ul> <hr/> <p><b>Special notes:</b> The lever position sensor is built into the computer. This sensor cannot be checked electrically.</p>
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<b>1.DEF 2.DEF</b>	<b>NOTES</b>	None
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Check that the gear lever position corresponds to the position indicated on the tool, using status <b>ET012 Gear lever position</b> .
Check the condition of the cable and mountings connecting the lever to the gearbox. Replace if necessary.
If the fault is still present, contact the Techline.

<b>3.DEF</b>	<b>NOTES</b>	None
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Contact the Techline.
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<b>AFTER REPAIR</b>	<p>Deal with any faults detected by the diagnostic tool. Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool.</p>
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# INSTRUMENT PANEL

## Fault finding - System operation

### 2. Display following defect mode

Trip Computer parameters	Fuel consumed fault present	ABS stored fault present	ECU stored fault present	LPG/CNG stored absence fault	petrol/diesel sender stored fault present	Gas sender fault	fault(s) Currently being detected
Petrol/diesel consumed	dashes flashing at 2 Hz	no effect	dashes flashing at 2 Hz	no effect	no effect	no effect	Value remains unchanged
Petrol/diesel average consumption	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	no effect	no effect	no effect	Value remains unchanged
Petrol/diesel instantaneous consumption	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	no effect	no effect	no effect	Value remains unchanged
Petrol/diesel fuel range	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	no effect	dashes flashing at 2 Hz	no effect	Value remains unchanged
Gas consumed	dashes flashing at 2 Hz	no effect	dashes flashing at 2 Hz	dashes flashing at 2 Hz	no effect	no effect	Value remains unchanged
Average gas consumption	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	no effect	no effect	Value remains unchanged
Gas fuel range	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	dashes flashing at 2 Hz	no effect	dashes flashing at 2 Hz	Value remains unchanged
Distance travelled	no effect	dashes flashing at 2 Hz	no effect	no effect	no effect	no effect	Value remains unchanged
Average speed	no effect	dashes flashing at 2 Hz	no effect	no effect	no effect	no effect	Value remains unchanged
Oil service interval	no effect	dashes flashing at 2 Hz	no effect	no effect	no effect	no effect	Value remains unchanged
Miscellaneous	Letter "d" displayed on the 3 <sup>rd</sup> digital line in Test mode	no effect	no effect	no effect	Letter "j" displayed on the 2 <sup>nd</sup> digital line in test mode	no effect	no effect