

# MEGANE

---

## 1 Engine and peripherals

### 13B

#### DIESEL INJECTION

EDC16

Program No: C1

Vdiag No: 18, 1C, 20, 50, 58, 5C

Fault finding – Introduction	13B - 2
Fault finding – Cleanliness guidelines	13B - 9
Fault finding – System operation	13B - 11
Fault finding – Replacement of components	13B - 21
Fault finding – Configuration and programming	13B - 26
Fault finding – Fault summary table	13B - 27
Fault finding – Interpretation of faults	13B - 32
Fault finding – Conformity check	13B - 154
Fault finding – Status summary table	13B - 155
Fault finding – Interpretation of statuses	13B - 157
Fault finding – Parameter summary table	13B - 203
Fault finding – Interpretation of parameters	13B - 207
Fault finding – Command summary table	13B - 284
Fault finding – Interpretation of commands	13B - 285
Fault finding – Customer complaints	13B - 310
Fault finding – Fault Finding Chart	13B - 311
Fault finding – Tests	13B - 330
Fault finding – Glossary	13B - 362

---

V12

Edition Anglaise

"The repair procedures given by the manufacturer in this document are based on the technical specifications current when it was prepared.

The procedures may be modified as a result of changes introduced by the manufacturer in the production of the various component units and accessories from which his vehicles are constructed."

All rights reserved by Renault s.a.s.

Copying or translating, in part or in full, of this document or use of the service part reference numbering system is forbidden without the prior written authority of Renault s.a.s.

© Renault s.a.s. 2009

## 1. SCOPE OF THIS DOCUMENT

This document presents the fault finding procedure applicable to all computers with the following specifications:

*Vehicles:* **MEGANE II ph1 and ph2, SCENIC II ph1 and ph2, LAGUNA II ph 2,**  
*Engine type and suffix:* **F9Q 758, 759, 804, 803**  
*Function concerned:* **DIESEL INJECTION**

*Name of computer:* **BOSCH EDC16 C3**  
*Program No:* **C1**  
*Vdiag No:* **18, 1C, 20, 50, 58, 5C**

## 2. PREREQUISITES FOR FAULT FINDING

### Documentation type

**Fault finding procedures** (this manual):

- Assisted fault finding (integrated into the **diagnostic tool**), Dialogys.

**Wiring Diagrams:**

- Visu-Schéma (CD-ROM), paper.

### Type of diagnostic tools

- **CLIP + multiplex line sensor**

### Special tooling required

Special tooling required	
Multimeter	
<b>Elé. 1590</b>	<b>Computer connection bornier</b>
<b>Or Elé. 1681</b>	<b>Universal bornier</b>

## 3. REMINDERS

### Procedure

In order to save energy, the **LAGUNA II Phase 2 UCH cuts off the + after ignition feed after 3 minutes.**

To run fault finding on a vehicle computer, it is possible to force the **+ after ignition feed** for **1 hour** by applying the following procedure:

- Press the card unlocking button.
- Insert the card into the reader.
- Press the start button (interrupting the timed **+ after ignition feed** mode).
- Press the start button for more than **5 seconds, without conditions for starting being met**, until the immobiliser warning light flashes rapidly (**4 Hz**).
- Connect the **diagnostic tool** and perform the required operations.

This **forced + after ignition feed** mode remains active for **1 hour**.

Pressing the Start button or removing the card from the card reader cuts off the **+ after ignition feed** but does not cut off the **forced after ignition feed** timed mode. As long as one hour has not elapsed the **+ after ignition feed** function restarts the **forced + after ignition feed** for the remaining time.

### Faults

Faults are declared as either present or stored (depending on whether they appeared in a certain context and have disappeared since, or whether they remain present but have not been diagnosed within the current context).

The **present** or **stored** status of faults should be taken into consideration when the **diagnostic tool** is switched on after the + after ignition feed (without any system components being active).

For a **present fault**, apply the procedure described in the **Interpretation of faults** section.  
For a **stored fault**, note the faults displayed and apply the instructions in the **Notes** section.

If the fault is **confirmed** when the instructions in the Notes section are applied, the fault is present. Deal with the fault  
If the fault is **not confirmed**, check:

- the electrical connections that correspond to the fault,
- the connectors for this connection,
- the resistance of the component detected as faulty,
- the condition of the wires.

**Refer to paragraphs 3.1 Checking the wiring and 3.2 Checking the connectors.**

### Conformity check

The aim of the conformity check is to check data that does not produce a fault on the **diagnostic tool** because the data is inconsistent. Therefore, this stage is used to:

- carry out fault finding on faults that do not have a fault display, and which may correspond to a customer complaint.
- check that the system is operating correctly and that there is no risk of a fault recurring after repairs.

This section gives the fault finding procedures for statuses and parameters and the conditions for checking them.

If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

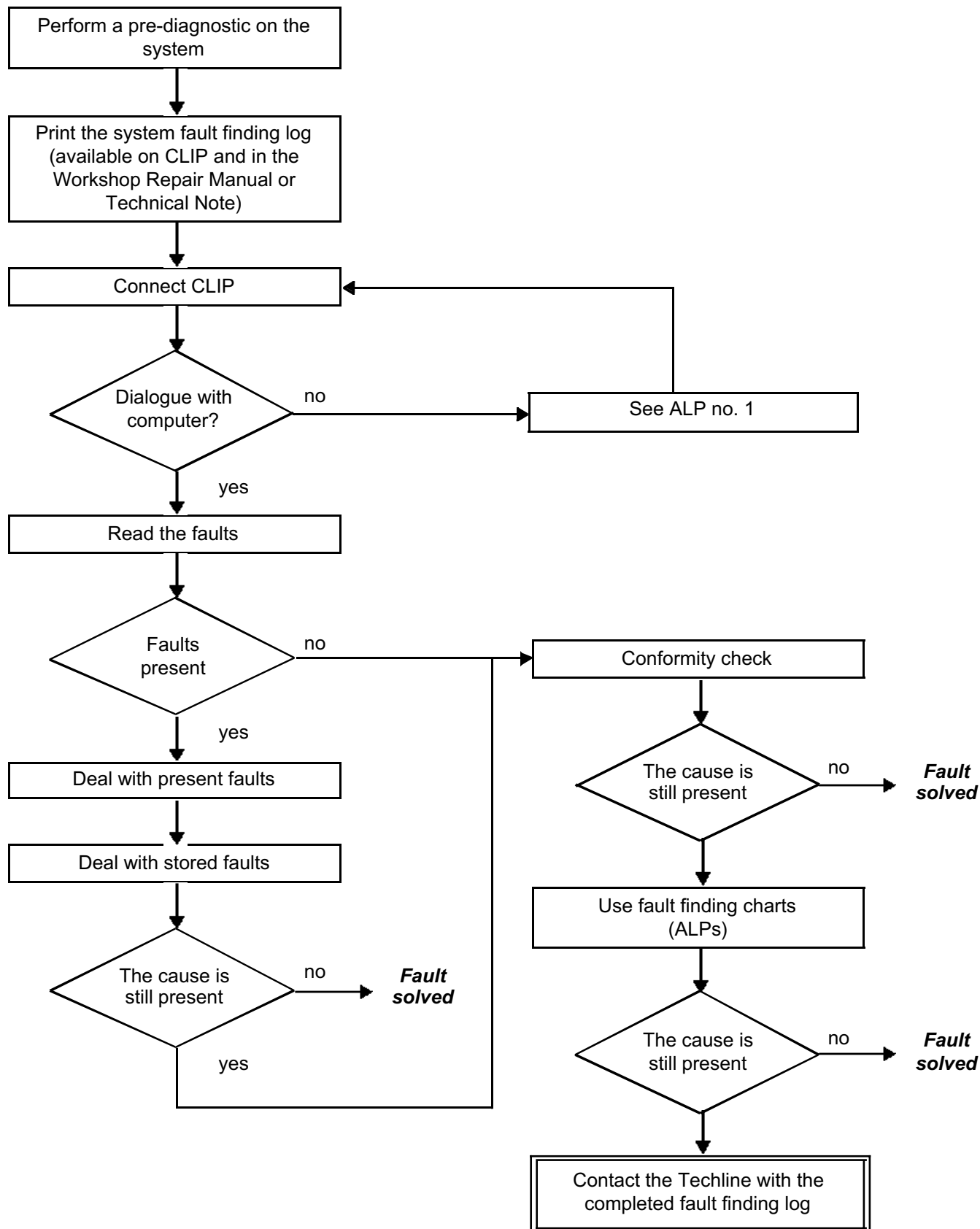
### Customer complaints - Fault finding chart

If the test with the **diagnostic tool** is OK but the customer complaint is still present, the fault should be processed by **customer complaints**.

**A summary of the overall procedure to follow is provided on the following page in the form of a flow chart.**

### 3. FAULT FINDING PROCEDURE

\* Check the battery charge, the condition of the fuses and the level of the fuel in the tank.



### 3. FAULT FINDING PROCEDURE (continued)

#### 3.1 Checking the wiring

##### **Fault finding problems**

Disconnecting the connectors and/or manipulating the wiring harness may temporarily remove the cause of a fault.

##### **Visual inspection**

Look for damage under the bonnet and in the passenger compartment.

Carefully check the protectors, insulation, and routing of the wiring, as well as the mountings.

##### **Tactile inspection**

When manoeuvring the wiring, either use the **diagnostic tool** to detect a change in status, from "stored" to "present", or the multimeter to view the status changes.

Make sure that the connectors are properly locked.

Apply light pressure to the connectors.

Twist the wiring harness.

##### **Checking earth insulation**

This check is carried out by measuring the voltage (multimeter in voltmeter mode) between the suspect connection and the **12 V** or **5 V** feed. The correct measured value is **0 V**.

##### **Checking insulation against + 12 V or + 5 V**

This check is carried out by measuring the voltage (multimeter in voltmeter mode) between the suspect connection and the earth. In the first instance, the earth may be taken on the chassis. The correct measured value is **0 V**.

##### **Continuity check**

A continuity check is carried out by measuring the resistance (multimeter in ohmmeter mode), with the connectors disconnected at both ends. The expected result is: **1  $\Omega$   $\pm$  1  $\Omega$**  for each connection. The line must be fully checked, and the intermediate connections are only included in the method if this saves time during the fault finding procedure. The continuity check on the multiplex lines must be carried out on both wires. The measured value should be **1  $\Omega$   $\pm$  1  $\Omega$** .

##### **Checking the supply**

This check may be carried out using a test light (**21 W** or **5 W** depending on the maximum authorised charge).

### 3.2 Checking the connectors

**Note:**

Carry out each requested check visually. Do not remove a connector if it is not required.

**Note:**

Repeated connections and disconnections alter the functionality of the connectors and increase the risk of poor electrical contact. Limit the number of connections/disconnections as much as possible.

**Note:**

The check is carried out on the 2 parts of the connection. There may be two types of connection:

- Connector/Connector.
- Connector/Device.

#### 1. Visual inspection of the connection:

- Check that the connector is connected correctly and that the male and female parts of the connection are correctly coupled.

#### 2. Visual inspection of the area around the connection:

- Check the condition of the mounting (pin, strap, adhesive tape, etc.) if the connectors are attached to the vehicle.
- Check that there is no damage to the wiring trim (sheath, foam, adhesive tape, etc.) near the wiring.
- Check that there is no damage to the electrical wires at the connector outputs, in particular on the insulating material (wear, cuts, burns, etc.).

Disconnect the connector to continue the checks.

#### 3. Visual inspection of the plastic casing:

- Check that there is no mechanical damage (casing crushed, split, broken, etc.), in particular to the fragile components (lever, lock, sockets, etc.).
- Check that there is no heat damage (casing melted, darker, deformed, etc.).
- Check that there are no stains (grease, mud, liquid, etc.).

#### 4. Visual inspection of the metal contacts:

*(The female contact is called CLIP. The male contact is called TAB.)*

- Check that there are no bent contacts (the contact is not inserted correctly and can come out of the back of the connector). The contact comes out of the connector when the wire is pulled gently.
- Check that there is no damage (folded tabs, clips open too wide, blackened or melted contact, etc.).
- Check that there is no oxidation on the metal contacts.

### Visual inspection of the sealing:

*(Only for watertight connectors)*

Check for the seal on the connection (between the 2 parts of the connection).

- Check the seal at the back of the connectors:
- For unit joints (1 for each wire), check that the unit joints are present on each electrical wire and that they are correctly positioned in the opening (level with the housing). Check that plugs are present on openings which are not used.
- For a grommet seal (one seal which covers the entire internal surface of the connector), check that the seal is present.
- For gel seals, check for gel in all of the sockets without removing the excess or any protruding sections (it does not matter if there is gel on the contacts).
- For hotmelt sealing (heat-shrink sheath with glue), check that the sheath has contracted correctly on the rear of the connectors and electrical wires, and that the hardened glue comes out of the side of the wire.
- Check that there is no damage to any of the seals (cuts, burns, significant deformation, etc.).

If a fault is detected, consult **Technical Note 6015A, Repairing electrical wiring**.

## 4. FAULT FINDING LOG



### IMPORTANT

#### IMPORTANT

Any fault on a complex system requires thorough fault finding with the appropriate tools. The FAULT FINDING LOG, which should be completed during the procedure, enables you to keep track of the procedure which is carried out. It is an essential document when consulting the manufacturer.

**IT IS THEREFORE MANDATORY TO FILL OUT A FAULT FINDING LOG EACH TIME FAULT FINDING IS CARRIED OUT.**

You will always be asked for this log:

- when requesting technical assistance from Techline,
- for approval requests when replacing parts for which approval is mandatory,
- to be attached to monitored parts for which reimbursement is requested. The log is needed for warranty reimbursement, and enables better analysis of the parts removed.

## 5. SAFETY INSTRUCTIONS

Safety rules must be observed during any work on a component to prevent any damage or injury:

- check the battery voltage to avoid incorrect operation of computer functions,
- Use the proper tools.

### 6. CLEANLINESS ADVICE TO FOLLOW WHEN CARRYING OUT OPERATIONS ON THE HIGH PRESSURE DIRECT INJECTION SYSTEM

#### Risks relating to contamination

The system is highly sensitive to contamination. The risks associated with contamination are:

- damage to or destruction of the high pressure injection system and the engine,
- a component seizing or leaking.

All After-Sales operations must be performed under very clean conditions. This means that no impurities (particles a few microns in size) should be allowed to penetrate the system during dismantling or get into the circuits via the fuel unions.

**The cleanliness principle must be applied from the filter to the injectors.**



### I - HAZARDS ASSOCIATED WITH CONTAMINATION

The high pressure direct injection system is highly sensitive to contamination. The risks associated with contamination are:

- damage to or destruction of the high pressure injection system,
- components jamming,
- a component leaking.

All After-Sales operations must be performed under very clean conditions. This means that no impurities (particles a few microns in size) should have entered the system during dismantling.

The cleanliness principle must be applied from the filter to the injectors.

What are the sources of contamination?

- metal or plastic swarf,
- paint,
- fibres:
  - from cardboard,
  - from brushes,
  - from paper,
  - from clothing,
  - from cloths,
- foreign bodies such as hair,
- ambient air
- etc.

#### IMPORTANT

Cleaning the engine using a high pressure washer is prohibited because of the risk of damaging connections. In addition, moisture may collect in the connectors and create electrical connection faults.

### II - INSTRUCTIONS TO BE FOLLOWED PRIOR TO ALL OPERATIONS

#### IMPORTANT

Before any work is carried out on the high pressure injection system, protect:

- the accessories and timing belts,
- the electrical accessories, (starter, alternator, electric power-assisted steering pump),
- the flywheel surface, to prevent any diesel from running onto the clutch friction plate.

Check that you have plugs for the unions to be opened (set of plugs available from the Parts Department). The plugs are single-use only. After use, they must be discarded (once used they are soiled and cleaning is not sufficient to make them reusable). Unused plugs must be discarded.

Check that you have hermetically resealable plastic bags for storing removed parts. Parts stored in this way will be less susceptible to the risk of contamination. The bags are to be used once only, and discarded after use.

Use lint-free cleaning cloths (cloth part number **77 11 211 707**). Using normal cloth or paper is prohibited. They are not lint-free and could contaminate the fuel circuit. Each cloth should only be used once.

Use fresh cleaning agent for each operation (used cleaning agent is contaminated). Pour it into an uncontaminated container.

For each operation, use a clean brush in good condition (the brush must not shed its bristles).

Use a brush and cleaning agent to clean the unions to be opened.

Blast compressed air over the cleaned parts (tools, workbench, the parts, unions and injection system zones). Check that no bristles remain.

Wash your hands before and during the operation if necessary.

When wearing leather protective gloves cover them with latex gloves to prevent contamination.

### III - INSTRUCTIONS TO BE FOLLOWED DURING THE OPERATION

As soon as the circuit is open, all openings must be plugged to prevent impurities from entering the system. The plugs to be used are available from the Parts Department. The plugs must not be reused under any circumstances.

Seal the pouch shut, even if it has to be opened shortly afterwards. Ambient air carries contamination.

All components removed from the injection system must be stored in a hermetically sealed plastic bag once they have been plugged.

Using a brush, cleaning agent, air gun, sponge or normal cloth is strictly prohibited once the circuit has been opened. These items could allow contamination to enter the system.

A new component replacing an old one must not be removed from its packaging until it is to be fitted to the vehicle.

## System outline

The high pressure injection system is designed to deliver a precise quantity of diesel fuel to the engine at a set moment.

It is fitted with a **112-track BOSCH EDC16 C3 type** computer.

The system comprises:

- a priming bulb on the low pressure circuit,
- a diesel filter,
- a high pressure pump with a built-in low pressure pump (transfer pump),
- a high pressure regulator mounted on the pump,
- an injector rail,
- a diesel fuel pressure sensor built into the rail,
- four solenoid injectors,
- a coolant temperature sensor,
- a cylinder reference sensor,
- an engine speed sensor,
- a turbocharger pressure sensor,
- an accelerator pedal potentiometer,
- an EGR solenoid valve,
- an atmospheric pressure sensor integrated into the injection computer,
- an air flowmeter with an air temperature sensor,
- a turbocharging pressure limitation solenoid valve,
- a motorised damper valve,
- a particle filter,
- a particle filter differential pressure sensor,
- a particle filter upstream temperature sensor,
- a particle filter downstream temperature sensor,
- a temperature sensor upstream of the turbine,
- four thermoplungers

The **common rail** direct high pressure injection system works sequentially (based on the petrol engine multipoint injection).

This injection system reduces operating noise, reduces the volume of pollutant gases and particles and produces high engine torque at low engine speeds thanks to a pre-injection procedure.

The high pressure pump generates the high pressure and transmits it to the injector rail. The actuator located on the pump controls the quantity of diesel fuel supplied, according to the requirement determined by the computer. The rail supplies each injector through a steel pipe.

### a) The computer:

Determines the value of injection pressure necessary for the engine to operate correctly and then controls the pressure regulator.

Checks that the pressure value is correct by analysing the value transmitted by the pressure sensor located on the rail.

It determines the injection timing required to deliver the right quantity of diesel fuel and the moment when injection should start. Controls each injector electrically and individually after determining these two values.

The flow injected into the engine is determined by:

- the duration of injector control,
- the rail pressure (regulated by the computer),
- the injector opening and closing speed,
- the needle stroke (determined by a constant for the type of injector),
- the nominal hydraulic flow of the injector (specific to each injector).

The computer manages:

- idling regulation,
- exhaust gas flow reinjection to the inlet (EGR),
- fuel supply check (advance, flow and rail pressure),
- the fan assembly control,
- the air conditioning (cold loop function),
- the cruise control/speed limiter function,
- pre-post heating control,
- indicator lights control via the multiplex network,
- the operation of the catalysed particle filter.

The high pressure pump is supplied at low pressure by an integrated low pressure pump (transfer pump).

It supplies the rail, the pressure of which is controlled by the fuel flow actuator (MPROP) for charging, and for discharging by the injector valves. This compensates for pressure drops. The flow actuator allows the high pressure pump to supply the exact quantity of diesel fuel required to maintain the pressure in the rail. This component minimises the heat generated and improves engine output.

In order to discharge the rail using the injector valves, the valves are controlled by brief electrical pulses which are:

- short enough not to open the injector (passing through the feedback circuit from the injectors),
- long enough to open the valves and discharge the rail.

Some vehicles have adopted a sensor for detecting water in the diesel fuel, located in the filter. If there is water in the diesel fuel, the orange "Injection and pre-post heating" warning light will come on.

### WARNING

The engine must not operate with:

- Diesel fuel containing more than **10%** diester.
- petrol, even in tiny quantities.

The system can inject diesel fuel into the engine at a pressure of up to **1600 bar**. Before each operation, check that the injector rail is depressurised and that the fuel temperature is not too high.

You must respect the cleanliness guidelines and safety advice specified in this document for any work on the high pressure injection system.

Do not remove the internal parts of the pump and injectors. Only the flow actuator, the diesel temperature sensor and the Venturi tube can be replaced.

For safety reasons, do not loosen high pressure pipe unions when the engine is running.

It is not possible to remove the pressure sensor from the fuel rail because this may cause circuit contamination faults. If the pressure sensor fails, the pressure sensor, the rail and the five high pressure pipes must be replaced.

Do not remove an injection pump pulley marked with the number **070 575**. If the pump needs to be replaced, replace the pulley.

Supplying any system component directly with **+ 12 V** is prohibited.

Ultrasonic decoking and cleaning are prohibited.

Never start the engine unless the battery is connected correctly.

Disconnect the injection computer when carrying out any welding work on the vehicle.

### **b)The connections between the vehicle's various computers are multiplexed.**

The electronic system fitted in this vehicle is multiplexed. This system enables dialogue between the various vehicle computers. As a result:

- the activation of the fault warning lights on the instrument panel is performed by the multiplex network, with the vehicle speed sensor on the gearbox deactivated,
- vehicle faults are displayed by the multiplex network,
- the vehicle speed sensor on the gearbox is not needed.

The vehicle speed signal on the instrument panel is transmitted by the ABS computer via a wire connection, then sent out on the multiplex network by the instrument panel. The vehicle speed signal is used mainly by the injection computer and the airbag computer.

**c) Functions hosted:**

**Air conditioning management assistance:**

In the case of vehicles with climate control, the EDC16 system has the option of deactivating the air conditioning via the UCH, under certain conditions of use:

- when requested by the driver,
- when starting the engine,
- if the engine overheats (in order to reduce the power the engine has to supply),
- when the engine speed is kept at a very high level (to protect the compressor),
- during transition phases (e.g. high acceleration demand for overtaking, anti-stalling and moving off). These conditions are only taken into account if they do not occur repeatedly, so as to prevent system instabilities (erratic deactivation),
- when certain faults appear.

**Cold loop air conditioning management (Mégane II only):**

The air conditioning is the cold loop type and its management shared between several computers.

The injection computer is responsible for:

- authorising cold requests according to the refrigerant pressure, the engine coolant temperature and the engine speed,
- calculating the power absorbed by the compressor (from the refrigerant pressure),
- requesting operation of the GMV, from the UPC, according to the vehicle speed, the refrigerant pressure and the engine coolant temperature.

The driver requests the air conditioning to be switched on by means of the ventilation selector coupled to a switch. The cold air request is authorised or denied depending on the pressure measured. If this pressure is outside the operating limits, the cold loop program is not activated.

**Management of the damper valve:**

The damper valve has three functions:

- the valve closes in order to block the passage of air towards the cylinders to shut off the engine. The aim of this is to stop the engine as quickly as possible and to reduce instabilities as the engine is switched off.
- a "valving" function depending on the various engine functions: the damper valve closes by a few % in order to create a venturi effect in the EGR valve flow section.  
The aim of this is to accelerate the EGR gas flow rate and to reduce the emission of pollutants.
- regulatory function during the regeneration of the particle filter.

**Thermoplunger management (only for Vdiag 58, 5C, 18, 1C and 20):**

This vehicle is fitted with thermoplungers. They are managed and activated by the injection system.  
See configuration reading **LC056 Thermoplungers: WITH or WITHOUT**.

**When necessary, the thermoplungers are actuated by the injection system only during particle filter regeneration by means of a specific unit.**

The maximum number of thermoplungers that can be managed is four; their activation depends mainly on the coolant temperature (< 15°C) and air temperature (< 5°C).

**Passenger Compartment Heating Resistor Management (Mégane II only):**

In order to reduce the time required to heat up the passenger compartment, the vehicle is fitted with **Passenger Compartment Heating** resistors (RCH). These passenger compartment heating resistors are run and controlled by the UCH. The injection computer authorises or prohibits the operation of the passenger compartment heating resistors according to the operating phases and engine power needs.

**Cruise control/speed limiter management:**

**The vehicle cruise control function**, when activated, allows you to keep the vehicle speed at a selected value regardless of the driving conditions encountered.

Using the control buttons, the driver can increase or reduce the speed of the vehicle.

If the driver wishes to exceed the cruising speed, he may:

- depress the accelerator pedal and exceed the cruising speed (the vehicle will return to the initial cruising speed once the driver takes his foot off the pedal),
- press the system control buttons.

The cruise control function can be deselected either by:

- the system control buttons,
- deactivating the cruise control switch,
- when system events are detected, such as the brake pedal or clutch being depressed,
- when system errors are detected such as an inconsistent vehicle speed.

The cruise function can also be temporarily disabled when the driver wants to increase speed by depressing the accelerator pedal. The cruising speed is resumed when the driver releases the accelerator pedal.

The vehicle will then attempt to reach the cruising speed at a controlled acceleration rate.

It is possible to reactivate the vehicle speed control and resume the last cruising speed after deactivation (computer supply not cut off).

**When activated (using the selection switch) the vehicle speed limiter function** limits the vehicle speed to a preselected value. The driver controls the vehicle in the normal way using the accelerator pedal until the limit speed is reached.

If an attempt is made to exceed this speed, the system ignores the pedal request and controls the vehicle speed in the same way as the cruise control function, provided that the driver keeps the accelerator pedal sufficiently depressed.

As with the cruise control function, the cruising speed can be altered using the control buttons by pressing briefly or keeping the switch pressed.

For safety reasons, the limit speed can be exceeded by depressing the accelerator pedal beyond the pedal position limit value. The vehicle speed is then totally controlled as a function of pedal position until the speed falls back below the cruising speed when the speed limiter function will once again be reactivated.

If the driver wishes to exceed the cruising speed, he may:

- exceed the accelerator pedal's kickdown point,
- increase the limit speed by pressing or pressing and holding the limit speed switch.

The speed limiter function can be deselected either:

- the system control buttons,
- by switching off the speed limiter switch,
- when system events are detected, such as the brake pedal or clutch being depressed,
- when system errors are detected such as an inconsistent vehicle speed.

### Exhaust gas recirculation management

The exhaust gas recirculation system comprises a direct current EGR valve controlled by an H bridge in the computer. This system has a built-in valve position feedback potentiometer.

The EGR valve is controlled in a closed loop on the change in the air flow measured by the flow sensor. The potentiometer is used in the fault finding procedure for the EGR valve position.

### Catalysed particle filter management:

The particle filter prevents the escape of carbon particles emitted by the engine but not yet removed from the exhaust gases.

The particle filter is a microporous structure containing channels arranged so as to force-filter the exhaust gases.

The exhaust system consists of several components:

- an oxidation catalytic converter mounted after the turbocharger. This catalytic converter ensures that HC/CO levels meet current standards by generating the heat (rise in exhaust temperature caused by catalysis) required for particle filter regeneration,
- a catalysed particle filter located under the bodywork;
- A differential pressure sensor to inform the computer about the pressures upstream and downstream of the particle filter and a temperature sensor upstream and downstream of the particle filter,
- a turbine upstream temperature sensor.

As the vehicle is being driven, the particle filter gets loaded with particles (soot). Using a given weight of soot determined by computer mapping, regeneration mode can be triggered when the maximum weight of soot in the particle filter is reached and the correct engine operating conditions are met (coolant temperature, etc.).

Particle filter regeneration consists of burning the particles of soot that have accumulated in the filter.

The differential pressure sensor measures the particle filter inlet/outlet pressure difference, this value makes it possible to calculate the weight of soot present in the particle filter using computer mapping: (soot weight = pressure differential depending on the exhaust volume flow rate).

If all the criteria are met, the computer enters regeneration mode. The injection programming is then adjusted in order to raise the target exhaust gas temperature between **550 and 650°C**.

This temperature allows the particles accumulated in the filter to be partially or completely burnt (regenerated). Regeneration efficiency depends on the particle filter inlet temperature and the time spent in regeneration mode.

Regeneration may be automatically triggered when driving if the soot content is below:

**Vdiag 58 and 5C:**    **74 g for Scénic II F9Q804**  
                             **66 g for Mégane II F9Q804**  
                             **66 g for Scénic F9Q803**

**Vdiag 50:**            **45 g for Scénic II and Mégane II**

If the weight of soot is greater than the values above or if regeneration when driving has not been carried out, the user will have to request an **After-Sales regeneration**.

Regeneration may be carried out automatically when driving if the weight of soot is less than **56 g** and if the number of regeneration attempts when driving is less than **10 (only for Vdiag 1C and 20)**.



If regeneration whilst driving has not been possible, the driver should request After-Sales regeneration in the following cases:

- the soot weight is greater than **56 g for Vdiag 18**.
- the soot weight is greater than **59 g or the number of failed regenerations is greater than 10 for Vdiag 1C and 20**.

This regeneration is carried out in the workshop. It is essential to follow the instructions described in the interpretation of commands **SC017 Particle filter regeneration**. To carry out regeneration safely (see **Technical Note 5040A, Recommendations for particle filter regeneration**).

### IMPORTANT

The particle filter must be replaced after a period of time which largely depends on the grade of engine oil used. This information is provided in the vehicle's Driver's handbook.  
After replacing the particle filter, it is essential to reconfigure certain parameters in the computer (see **SC036 Reinitialise programming**).

### Warning light management:

#### Instrument panel display

The computer manages the data display on the instrument panel relating to engine operation. This involves six functions:

- the pre-postheating warning light,
- the coolant temperature warning light or warning message;
- the level 1 fault warning light (non-critical fault),
- the level 2 fault warning light (emergency stop),
- the OBD warning light (European On Board Diagnostic),
- particle filter warning message or light.

These six functions are represented by 4 or 5 warning lights and/or messages displayed by the trip computer. In addition, for vehicles fitted with a voice synthesiser the illumination of some warning lights may be accompanied by a spoken message (refer to the Driver's Handbook for the vehicle concerned).

A **3 second** visual inspection (automatic test procedure managed by the instrument panel) is carried out by the injection computer when the ignition is switched on.

#### Orange pre-post heating/non-critical fault **SERVICE** warning light (level 1)

This light is used both as an in-operation indicator light and as a system fault indicator:

- Continuously lit with + after ignition feed:  
Indicates plug preheating (this light goes out when preheating is complete and the engine is able to start).
- Continuously lit accompanied by the message **Check injection** or **Electronic fault**:  
Indicates a **level 1** fault (involving operation of the injection system in defect mode).  
The driver should carry out repairs as soon as possible.

### Temperature warning light/red EMERGENCY STOP (level 2)

This indicator light is used both as an in-operation indicator light and as a system fault warning light. It lights up for **3 seconds** after the ignition is switched on (automatic test procedure managed by the instrument panel):

- Continuously or intermittently lit, accompanied by the message **Engine overheating**:  
Indicates engine overheating (the driver is free to choose whether or not to stop the vehicle).
- **For Vdiag 50, 58 and 5C**: continuously lit, accompanied by the message **faulty injection**:  
Indicates a **level 2** fault (in this case, the injection is automatically cut after a few seconds).  
The driver should carry out repairs as soon as possible.
- **For Vdiag 18, 1C and 20**: continuously lit, accompanied by the message **Injection fault: stop the engine** and by a bleep, this indicates a **level 2** fault.  
In that case, the vehicle must be stopped immediately (when traffic conditions allow).  
The driver should carry out repairs as soon as possible.

### ORANGE OBD excess pollution warning light

An engine symbol accompanied by the message **Check emission control**.

**This warning light comes on if the system has one or more OBD faults.**

This warning light is used to alert the driver of any injection faults that could lead to excessive pollution, or if the **EOBD** system has been deactivated.

The injection computer requests illumination of the **OBD** warning light for a present fault only after three consecutive driving cycles.

If it flashes, reduce the engine speed until the flashing stops.

The driver should carry out repairs as soon as possible.

The **3 second** visual inspection when the ignition is switched on (automatic test procedure managed by the instrument panel) is carried out by the injection computer.

### Special particle filter ORANGE warning light or warning message (depending on instrument panel)

#### – Vdiag 50, 58, 5C:

This warning light or message is used to warn the driver that the particle filter is clogged or a significant number of failed regenerations while driving due to driving conditions not being favourable for regeneration.

#### Table of thresholds:

Engine	PR383 Weight of soot in the particle filter		PR848 Number of failed regenerations	
	Scénic II	Mégane II	Scénic II	Mégane II
<b>F9Q804 Vdiag 50</b>	35	35	3	
<b>F9Q803 Vdiag 58 and 5C</b>	50		7	
<b>F9Q804 Vdiag 58 and 5C</b>	58	50	7	

### – Vdiag 18, 1C, 20:

This warning light or message is used to warn the driver that the particle filter is loaded with particles. This happens when the soot weight is greater than **46 g** or the number of failed regenerations is greater than:

- **8 for Vdiag 18.**
- **6 for Vdiag 1C and 20.**

The driver must then drive as soon as possible at an average speed of **48 mph (80 km/h)** subject to the road conditions and authorised speed limits.

### **EOBD management. (European On Board Diagnostic):**

The **OBD (On Board Diagnostic)** system permits the detection of any faults relating to the vehicle emission control system (**OBD EURO IV emission control standards** being exceeded).

**This system should be active for the entire life of the vehicle.**

### **1. OBD fault display conditions**

An **OBD** fault will be detected after **3 driving cycles** and the following parameters will be saved in the computer:

- engine load,
- vehicle speed
- air temperature
- coolant temperature,
- turbocharging pressure,
- rail pressure,
- air flow,
- distance travelled in miles by the vehicle since activation of the **OBD** warning light.

It allows the driver to know whether the vehicle has a fault directly linked to the emission control system.

## 2. System faults displayed by the OBD

Only a few faults are displayed by the **OBD** system:

- **DF001 Coolant temperature sensor circuit.**
- **DF003 Atmospheric pressure sensor circuit.**
- **DF011 Sensor supply voltage no. 1.**
- **DF012 Sensor supply voltage no. 2.**
- **DF013 Sensor supply voltage no. 3.**
- **DF038 Computer in 6.DEF EEPROM fault.**
- **DF040 Cylinder 1 injector circuit in CO Open circuit.**
- **DF041 Cylinder 2 injector circuit in CO Open circuit.**
- **DF042 Cylinder 3 injector circuit in CO Open circuit.**
- **DF043 Cylinder 4 injector circuit in CO Open circuit.**
- **DF054 Turbocharging solenoid valve control circuit in CC.0 Short circuit to earth.**
- **DF056 Air flowmeter circuit.**
- **DF209 EGR valve position sensor circuit.**
- **DF310 Particle filter upstream temp.\* sensor.**
- **DF315 Particle filter diff.\* pressure sensor.**
- **DF504 Automatic transmission.**
- **DF621 EGR valve jammed open.**
- **DF717 Particle filter upstream pressure.**
- **DF953 Particle filter absent.**

Some repair operations require programming to ensure that certain engine components function correctly. Follow the programming procedures (see Replacement of components), if replacing the exhaust gas recirculation valve or an injector.

## 3. OBD fault clearing conditions

An OBD fault is cleared in several steps.

The fault **present** in the **diagnostic tool** will only be **stored** (after a repair operation) after the vehicle has been driven 3 times.

**The OBD warning light will only go out after these 3 trips.**

**The instrument panel warning light coming on does not automatically mean that the system has a fault. In order for the OBD fault and display parameters to be cleared from the computer, the system requires 40 engine heating cycles.**

**An engine heating cycle is a driving cycle during which:**

- **the engine coolant temperature reaches at least 71.1°C,**
- **the engine coolant temperature varies by 22.2°C in relation to the engine starting temperature.**

**If one of these conditions is not fulfilled, the OBD fault will still be present or stored on the injection computer.**

\* diff: differential

\* temp: temperature

### COMPUTER REPLACEMENT OR REPROGRAMMING

#### IMPORTANT

- Switch on the diagnostic tool (mains or cigarette lighter supply).
- Connect a battery charger.
- Cut off all the electrical consumers (lights, interior lighting, air conditioning, radio CD, etc.).
- Wait for the engine to cool (engine coolant temperature < 60° and air temperature < 50°).
- For Vdiag 50, 58 and 5C, the engine fan assemblies are activated automatically when the computer is being (re)programmed.
- For Vdiag 18, 1C and 20, during (re)programming, the instrument panel screen displays Oil pressure fault.
- Ignore this message and do not take any action in connection with it.

Two operations must be performed when replacing or reprogramming the computer:

#### **SC003 Save computer data and SC001 Enter saved data.**

- Run command **SC003 Save computer data before replacing or reprogramming the computer**. This enables certain data to be saved **in the diagnostic tool** so that the new computer\* can be reconfigured like the old one. The saved data includes: injector codes, EGR programming, specific data for particle filter operation and vehicle options.
- Run command **SC001 Write saved data after replacing or reprogramming** the computer. This command rewrites the data (saved by command **SC003 Save computer data**) in the new computer\*.

**If you cannot establish dialogue with the computer being replaced:** you will not be able to save anything.

After replacing the computer:

- Manually enter the IMA code for each injector by reading the code on each injector (see 13B, **Diesel injection, Replacement of components, Injector replacement**).
- Enter the data specific to particle filter operation by running **SC036 Reinitialise programming** and select **After replacing the injection computer with no save option**.

Exhaust gas recirculation valve data is programmed automatically the 1st time the new computer is switched on\*.

\* *new computer or reprogrammed computer.*

#### **Specific operation on the Cruise control/Speed limiter to be carried out before reprogramming the computer:**

Before reprogramming the injection computer, move **the main CC/SL switch to the rest position**. The information about the cruise control or the speed limiter displayed on the instrument panel disappears.

Otherwise, if the main switch remains in the cruise control or speed limiter position during and after reprogramming, the Cruise control/Speed limiter function will not be operational.

The procedure for resetting the function is as follows:

- Vehicle ignition on.
- Position the cruise control/speed limiter switch in the **rest position** (the computer then detects the rest position).
- Position the cruise control/speed limiter switch in the **Cruise control** position to activate the Cruise control function.
- Position the cruise control/speed limiter switch in the **Speed limiter** position to activate the Speed limiter function.

### PROCEDURE:

#### Before replacing or reprogramming the computer:

- Select command **SC003 Save computer data**,
- if the following message appears: **backup file exists, do you want to overwrite it?:**  
(this file corresponds to the last save carried out on the tool)
- Select **YES**.

When the backup is complete, replace the computer or reprogram, then proceed to the next step.

#### After replacing or reprogramming the computer:

- Select command **SC001 Write saved data**, then follow the instructions given by the **diagnostic tool**,
- if the VIN has not been entered (see "**Computer identification**" on the main screen), select **VP010 "Enter VIN"**,

When both these commands have finished:

- **switch off the ignition** and wait **1 minute** before switching the ignition on again,
- then check the system faults, and clear any stored faults;
- otherwise deal with faults which are present, and clear the faults in the computer memory.

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

#### IMPORTANT

During reprogramming, the thermoplunger faults reappear.

- **DF032 Thermoplunger 1 relay control circuit**,
- **DF033 Thermoplunger 2 relay control circuit**,
- **DF034 Thermoplunger 3 relay control circuit**,
- **DF238 Thermoplunger 3 relay circuit**,
- **DF239 Thermoplunger 2 relay circuit**,
- **DF240 Thermoplunger 1 relay circuit**,

In this case, **configure the thermoplungers using configuration CF030 Thermoplungers**.

#### IMPORTANT

- The injection computer retains the same immobiliser code for life.
- The system has no security code.
- It is forbidden to perform tests with computers borrowed from the Parts Department or from another vehicle which must then be returned.
- These computers are hard-coded.
- If the injection computer appears to be faulty, contact the Techline and refer to the fault finding log.

End of operation.

### REPLACING THE INJECTORS

Note:

**The IMA coding (individual injector correction)** is a calibration made in production on **each injector** to **adjust the flow** accurately.

These correction values are etched onto the Bakelite body of each injector (6 alphanumeric characters) and then entered into the computer which then controls each injector taking into account their **manufacturing variance**.

**After replacing one or more injectors, re-enter the IMA codes.**

**The system must be configured via the diagnostic socket using the RENAULT CLIP diagnostic tool.**

**PROCEDURE** to be followed **after one or more injectors have been replaced:**

#### IMPORTANT

**Cylinder no. 1 is located on the engine flywheel end.**

- make a note of the **IMA** code(s) engraved on the injector body,
- enter these codes in the computer using command **SC002 Enter injector codes**, then follow the instructions given by the **diagnostic tool**,
- once the command has finished,
- **switch off the ignition**,
- wait **1 minute** before switching on the ignition again,
- return to fault finding mode,
- select the function **Identify computer** from the main screen,
- check that the injector codes entered into the computer match those found on the bodies of the injectors:
  - if the codes do not match, repeat the procedure for command **SC002 Enter injector codes**.
  - if the codes do match, check system faults and clear any stored faults,
  - otherwise deal with faults which are present, and clear the faults in the computer memory.

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

#### IMPORTANT

**Engines can only operate correctly if the correct IMA codes have been entered.**

**If no codes have been entered or if an invalid code has been entered, fault**

**DF276 Program injector codes is present and the engine will be in defect mode (significant engine speed restriction).**

**If another injector's code has been entered, the system will accept it but will make the wrong correction. This could lead to engine damage, loss of performance and excessive pollution.**

**Always use the correct injector codes for the engine cylinder/computer.**

End of operation.

### REPLACING OR CLEANING THE EXHAUST GAS RECIRCULATION (EGR) VALVE

After the exhaust gas recirculation valve has been replaced, the computer must store the new valve offset and the offset measured when the ignition was last switched off, which corresponds to the valve closing. Using this data, the computer can detect whether the valve is clogged or seized.

When the valve is replaced or cleaned, clear the stored offsets so that the program uses the new valve's offset value.

The data linked to this strategy is compiled in the **Antipollution/OBD** sub-function.

- **PR128: First EGR valve offset.**
- **PR129: Last EGR valve offset** > or = **PR128** for a new valve.

The programming **PR128** and **PR129** must be cleared every time the exhaust gas recirculation valve is replaced.

### PROCEDURE:

- Run command **SC036 Reinitialise programming.**
- Select **EGR valve** as the operation type, then follow the instructions given by the **diagnostic tool.**

#### Note:

When the reinitialisation is complete, the **Emission control/OBD** sub-function displays:  
**PR128 = PR129 > 100 %**

When the command is finished,

- **switch off the ignition,**
- wait **1 minute** before switching on the ignition again.

When the ignition is switched on again the new EGR valve offset is automatically reset.

#### Note:

When the new EGR valve offset has been reprogrammed, then the **Emission control/OBD** sub-function displays:

**10 % < PR128 < 40 %**  
**PR129 > 100 %**

- start the vehicle to enable the latest EGR valve offset to be programmed,
- **switch off the ignition,**
- wait **1 minute** before switching on the ignition again;

The reprogramming of the last EGR valve offset is stored in the computer.

#### Note:

When the last EGR valve offset has been reprogrammed, the **Emission control/OBD** sub-function displays:

**10% < PR128 < 40%**  
**10% < PR129 < 40%**

- then check the system faults, and clear any stored faults;
- otherwise, deal with the faults that are present and clear the faults in the computer memory.

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

End of operation.



### REPLACING THE DAMPER VALVE

After replacing the damper valve, reconfigure the computer.

The system must be configured via the diagnostic socket using the RENAULT CLIP tool.

**PROCEDURE** to be followed **after the damper valve has been replaced:**

- Switch on the ignition.
- establish dialogue with the injection computer,
- run command **SC036 Reinitialise programming**,
- select **Damper valve** as the type of operation, then follow the instructions given by the **diagnostic tool**,
- **switch off the ignition**,
- wait **1 minute** before switching on the ignition again,
- check that **PR420 Damper valve error counter = 0**,
- then check the system faults, and clear any stored faults;
- if there are faults, deal with the present faults,
- clear the faults from the computer memory.

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

End of operation.

### REPLACING THE PARTICLE FILTER:

After replacing the particle filter, reconfigure the computer.

The system must be configured via the diagnostic socket using the RENAULT CLIP tool.

**PROCEDURE** to be followed **after the particle filter is replaced:**

- switch on the ignition,
- establish dialogue with the injection computer,
- run command **SC036 Reset programming**;
- select **After particle filter replacement** as the operation type, then follow the instructions given by the **diagnostic tool**,
- **switch off the ignition**,
- wait **1 minute** before switching on the ignition again,
- if there are faults, deal with the present faults,
- clear the faults from the computer memory.

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

End of operation.

**Summary of available configuration readings**

**NOTES**

Configuration readings are used to check the status of configurations performed.  
The configuration readings cannot be changed.  
The computer is configured as soon as the one of the vehicle's optional system components is operated.  
In the event of a fault, consult the interpretation of command **RZ005 Programming**.

**LC009: Heating and air conditioning system  
WITH OR WITHOUT**

**LC056: Heating elements  
WITH OR WITHOUT**

**LC065: Water in diesel fuel sensor  
WITH OR WITHOUT**

**LC120: Cruise control  
WITH OR WITHOUT**

**LC121: Speed limiter  
WITH OR WITHOUT**

# DIESEL INJECTION

## Fault finding – Fault summary table

### WARNING LIGHT MANAGEMENT:

Management of instrument panel warning lights according to the faults notified.

Tool fault	Diagnostic tool title	Associated DTC	Level 1 fault warning light (Orange heater plugs "on" indicator light)	Level 2 fault warning light (Red overheating warning light)	No fault warning light lit	OBD warning light lit
DF001	Coolant temperature sensor circuit	115	CO.1/CC.0			CO.1/CC.0
DF003	Atmospheric pressure sensor circuit	105	1.DEF/ 2.DEF/ 3.DEF			1.DEF/ 2.DEF/ 3.DEF
DF004	Turbocharging pressure sensor circuit	235	CO.0/ CC.1/ 1.DEF			
DF005	Engine speed sensor circuit	335		1.DEF/2.DEF		
DF007	Rail pressure sensor circuit	190		CO.1/CC.0/ 1.DEF		
DF008	Pedal potentiometer circuit track 1	225	CO.0/ CC.1/ 1.DEF		2.DEF	
DF009	Pedal potentiometer circuit track 2	2120	CO.0/ CC.1/ 1.DEF			
DF011	Sensor feed voltage no. 1	641	1.DEF/2.DEF			1.DEF/ 2.DEF
DF012	Sensor feed voltage no. 2	651	1.DEF/2.DEF			1.DEF/ 2.DEF
DF013	Sensor feed voltage no. 3	697		1.DEF/2.DEF		1.DEF/ 2.DEF
DF015	Main relay control circuit	685	1.DEF/2.DEF			
DF017	Pre-postheating unit control circuit	380	CC.0/CC.1 /CO / 1.DEF			
DF025	Pre-postheating unit diagnostic line	670	X			
DF032	Heating element relay 1 control circuit ( <b>Vdiag 58 only</b> )	1641			CO/CC.0/ CC.1/ 1.DEF	
DF033	Heating element relay 2 control circuit ( <b>Vdiag 58 only</b> )	1642			CO/CC.0/ CC.1/ 1.DEF	

# DIESEL INJECTION

## Fault finding – Fault summary table

Tool fault	Diagnostic tool title	Associated DTC	Level 1 fault warning light (Orange heater plugs "on" indicator light)	Level 2 fault warning light (Red overheating warning light)	No fault warning light lit	OBD warning light lit
DF034	Heating element relay 3 control circuit ( <b>Vdiag 58 only</b> )	1643			CO/CC.0/ CC.1/1.DEF	
DF037	Engine immobiliser	C167		X		
DF038	Computer	606	6.DEF/8.DEF/ 12.DEF	1.DEF/2.DEF/ 3.DEF/4.DEF/ 5.DEF/7.DEF 10.DEF/11.DEF/ 13.DEF/14.DEF		6.DEF
DF039	Inlet air temperature sensor circuit	110		CC.0/CO.1		
DF040	Cylinder 1 injector circuit	201	CO	CC.1/CC/ 1.DEF		CO
DF041	Cylinder 2 injector circuit	202	CO	CC.1/CC/ 1.DEF		CO
DF042	Cylinder 3 injector circuit	203	CO	CC.1/CC/ 1.DEF		CO
DF043	Cylinder 4 injector circuit	204	CO	CC.1/CC/ 1.DEF		CO
DF046	Battery voltage	560			1.DEF/ 2.DEF	
DF047	Computer feed voltage	615			1.DEF	
DF049	Refrigerant sensor circuit	530			CC.1/CO.0	
DF050	Brake switch circuit	571			1.DEF/ 2.DEF	
DF051	Cruise control/speed limiter function	575			1.DEF/ 2.DEF/ 3.DEF	
DF053	Rail pressure regulation function	89	3.DEF	CC.0/CC.1/CO/ 1.DEF/2.DEF/ 4.DEF/5.DEF/ 6.DEF/7.DEF		
DF054	Turbocharging solenoid valve control circuit	33	CO/CC.0/CC.1/ 1.DEF/ 2.DEF/3.DEF/ 4.DEF/5.DEF			CC.0

# DIESEL INJECTION

## Fault finding – Fault summary table

Tool fault	Diagnostic tool title	Associated DTC	Level 1 fault warning light (Orange heater plugs "on" indicator light)	Level 2 fault warning light (Red overheating warning light)	No fault warning light lit	OBD warning light lit
DF055	Turbocharging pressure regulation circuit	243	1.DEF/2.DEF			
DF056	Air flow sensor circuit	100	CO.0/CC.1/ 1.DEF/2.DEF			CO.0/CC.1/ 1.DEF/ 2.DEF
DF057	Water in diesel fuel detector circuit	2264			X	
DF058	Oil temperature sensor circuit	195			CC.0/ CO.1	
DF059	Misfiring on cylinder 1	301			X	
DF060	Misfiring on cylinder 2	302			X	
DF061	Misfiring on cylinder 3	303			X	
DF062	Misfiring on cylinder 4	304			X	
DF069	Impact detected signal	1620		1. DEF		
DF070	Clutch switch circuit	830			1.DEF/ 2.DEF	
DF086	Coolant pump relay control circuit	2600	CO.0/CC.1			
DF091	Vehicle speed signal	500			1.DEF/ 2.DEF/ 3.DEF/ 4.DEF	
DF097	Camshaft sensor circuit	340	1.DEF/2.DEF			
DF118	EGR solenoid valve servo-control	409	2.DEF		1.DEF	

# DIESEL INJECTION

## Fault finding – Fault summary table

Tool fault	Diagnostic tool title	Associated DTC	Level 1 fault warning light (Orange heater plugs "on" indicator light)	Level 2 fault warning light (Red overheating warning light)	No fault warning light lit	OBD warning light lit
DF176	Low-speed fan assembly circuit (Vdiag 18, 1C and 20 only)	480	CO/ CO.0/ CC.1/1.DEF			
DF177	High-speed fan assembly circuit (Vdiag 18, 1C and 20 only)	481	CO/ CO.0/ CC.1/1.DEF			
DF195	Camshaft sensor/engine speed consistency	16	1.DEF			
DF209	EGR valve position sensor circuit	486			CO.0/ CC.1/ 1.DEF	CO.0/ CC.1/ 1.DEF
DF226	Damper valve circuit	638	CO/CC/ CC.0/CC.1/ 1.DEF/ 2.DEF/3.DEF			
DF238	Heating element no. 3 relay circuit (Vdiag 18, 1C and 20 only)	1643	CO/CO.0/ CC.1/ 1.DEF			
DF239	Heating element no. 1 relay circuit (Vdiag 18, 1C and 20 only)	1642	CO/CO.0/ CC.1/ 1.DEF			
DF240	Heating element no. 2 relay circuit (Vdiag 18, 1C and 20 only)	1641	CO/CO.0/ CC.1/ 1.DEF			
DF250	ESP function	C122			1.DEF/ 2.DEF	
DF272	EGR valve control circuit	403	1.DEF		2.DEF	
DF276	Injector code programming	611	1.DEF/ 2.DEF			
DF308	Clogged particle filter	1431	X			

# DIESEL INJECTION

## Fault finding – Fault summary table

Tool fault	Diagnostic tool title	Associated DTC	Level 1 fault warning light (Orange heater plugs "on" indicator light)	Level 2 fault warning light (Red overheating warning light)	No fault warning light lit	OBD warning light lit
DF309	Particle filter downstream temp.* sensor circuit	544			CO.1/ CC.0	
DF310	Particle filter downstream temperature sensor circuit	2031	CC.0/ CO.1			CC.0/ CO.1
DF311	Number of regeneration failures exceeded ( <b>Vdiag 18, 1C and 20 only</b> )	1435	X			
DF312	Speed request	1436			X	
DF315	Particle filter diff.* pressure sensor	470	CO/CO.0/ CC.1/1.DEF 2.DEF			CO/CO.0/ CC.1/ 1.DEF/ 2.DEF
DF485	Catalytic converter fault finding	422			X	...
DF504	Automatic transmission	C101	1.DEF			1.DEF
DF532	Alternator charge signal	2502	CC.0/CC.1/ 1.DEF/ 2.DEF			
DF619	EGR valve jammed open	2142	X			
DF620	EGR valve fouled	2141	X			
DF621	EGR valve is jammed open (OBD fault)	2413			X	X
DF652	Turbine upstream temperature sensor circuit	242A	CO/CC.0/CO.1/ CC.1/1.DEF			
DF717	Particle filter upstream pressure	1480	1.DEF			1.DEF
DF778	Turbine upstream temperature control	242B	1.DEF/ 2.DEF			
DF890	Movement drg* particle filter regen.*	0297			X	
DF899	Regeneration temperature limit exceeded	3031			X	
DF953	Particle filter absent	2002			X	X
DF1070	Cold loop	534				

\*Temp: temperature

\*drg: during

\*regen: regeneration

\*diff: differential

<b>DF001 PRESENT OR STORED</b>	<b><u>COOLANT TEMPERATURE SENSOR CIRCUIT</u></b> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to + 12 V
--	---

<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>          The fault is declared present after attempting to start the engine or with the engine running.</p> <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 motor-driven fan assembly (<b>GMV 1</b>) is continuously supplied,</li> <li>– if <b>fan assembly 1</b> is faulty, then <b>fan assembly 2</b> is activated on vehicles equipped with air conditioning,</li> <li>– the <b>level 1</b> warning light is lit,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (start the engine + <b>5 seconds</b>, then switch off the ignition and wait for <b>1 minute</b>).</li> </ul> <p>Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the computer connectors.</p>
--------------	---

<p>Check the <b>coolant temperature sensor</b> connections.          Check the injection computer connections.          Repair if necessary.          Measure the <b>resistance</b> of the <b>coolant temperature sensor</b> between <b>connections 3C and 3JK</b>.          Replace the sensor if its resistance is not approximately:</p> <p style="text-align: center;"> <b>68780 Ω &lt; X &lt; 82780 Ω at - 40°C</b>  <b>12338 Ω &lt; X &lt; 12582 Ω at - 10°C</b>  <b>2140 Ω &lt; X &lt; 2364 Ω at 25°C</b>  <b>772 Ω &lt; X &lt; 850 Ω at 50°C</b>  <b>275 Ω &lt; X &lt; 291 Ω at 80°C</b>  <b>112 Ω &lt; X &lt; 118 Ω at 110°C</b>  <b>85 Ω &lt; X &lt; 89 Ω at 120°C</b> </p> <p>Check the <b>insulation, continuity and the absence of interference resistance</b> on the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>3C</b>,</li> <li>– connection code <b>3JK</b>,</li> </ul> <p>between components <b>120</b> and <b>244</b>.          If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</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 <b>diagnostic tool</b>.</p>
---------------------	--



<b>DF003 PRESENT OR STORED</b>	<b><u>ATMOSPHERIC PRESSURE SENSOR CIRCUIT</u></b> 1.DEF: Signal outside upper limit 2.DEF: Signal outside lower limit 3.DEF: Inconsistent signal
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after attempting to start the engine or with the engine running.
	<b>Special notes:</b> The atmospheric pressure sensor is integrated into the injection computer, and cannot be separated. If the fault is present: <ul style="list-style-type: none"><li>– there is light smoke at the exhaust,</li><li>– the atmospheric pressure value changes to safe mode, <b>PR035 Atmospheric pressure = 750 mbar</b>,</li><li>– the <b>level 1</b> warning light is lit,</li><li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting <b>+ 5 seconds</b> + switch off the ignition and wait <b>1 minute</b>).</li></ul> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the computer connectors.

Disconnect the injection computer and check the condition of the contacts and connector.  
Repair if necessary.  
Display the value of parameter **PR041 Turbocharger pressure**.  
If this value is stuck at **750 mbar**, refer to interpretation of fault **DF004 Turbocharging pressure sensor circuit**.  
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF004 PRESENT OR STORED</b>	<b><u>TURBOCHARGING PRESSURE SENSOR CIRCUIT</u></b> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after attempting to start the engine or with the engine running.
	<b>Special notes:</b> Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the injection computer connectors. If the fault is present: <ul style="list-style-type: none"> <li>– the EGR function is inhibited,</li> <li>– the turbocharging pressure is in defect mode, <b>PR041 Turbocharging pressure = 750 mbar</b>,</li> <li>– the <b>level 1</b> warning light is illuminated.</li> </ul>
	<b>Order of priority in the event of more than one fault:</b> Deal with fault first if it is <b>DF011 Sensor feed voltage no. 1</b> first if it is present or stored.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

<b>CO.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the turbocharger pressure sensor connections.  
 Check the injection computer connections.  
 Repair if necessary

Check **the continuity and insulation against earth** of the following connections:

- connection code **3LQ**,
- connection code **3LP**.

between components **120** and **1071**.  
 If the connection or connections 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.

If the fault is still present, replace the turbocharger pressure sensor.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF004 CONTINUED</b>	
----------------------------	--

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the turbocharger pressure sensor connections.  
Check the injection computer connections.  
Repair if necessary.

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

- connection code **3LQ**,
- connection code **3LN**,
- connection code **3LP**,

between components **120** and **1071**.

If the connection or connections 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.

If the fault is still present, replace the turbocharger pressure sensor.

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

**In the event of a combination of faults with DF003 Atmospheric pressure sensor circuit, display parameter PR041 Turbocharging pressure.**

If this value is stuck at **750 mbar** and **PR035 Atmospheric pressure is displaying a different value**, replace the turbocharging pressure sensor.

Check the turbocharger pressure sensor connections.  
Check the injection computer connections.  
Repair if necessary.

Check for **continuity and the absence of interference resistance** of the following connections:

- connection code **3LQ**,
- connection code **3LN**,
- connection code **3LP**.

between components **120** and **1071**.

If the connection or connections 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.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF005 PRESENT OR STORED</b>	<b>ENGINE SPEED SENSOR CIRCUIT</b> 1.DEF: No signal 2.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after attempting to start the engine or with the engine running.
	<b>Special notes:</b> Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the computer connectors. The engine speed sensor is consistent with the camshaft sensor. If the fault is present: <ul style="list-style-type: none"> <li>– it is impossible to start the engine or the engine stops,</li> <li>– the <b>level 2</b> warning light is lit.</li> </ul>

Check the engine speed sensor connections.  
Repair if necessary.  
Check that the sensor is correctly mounted and that the flywheel target is not damaged.  
Check that the gap between the engine speed sensor and the engine flywheel is **0.5 to 1.8 mm**.  
Measure the **resistance** of the engine speed sensor between **terminals A and B** of its black connector.  
Replace the engine speed sensor if its **winding resistance** is not **510 Ω < X < 850 Ω** for an engine temperature of **20°C**.

Check the injection computer connections.  
Repair if necessary.

Check for **continuity and the absence of interference resistance** of the following connections:

- connection code **3BG**,
- connection code **3BL**,

between components **120** and **149**.  
If the connection or connections 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.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF007 PRESENT OR STORED</b>	<b><u>RAIL PRESSURE SENSOR CIRCUIT</u></b> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to + 12 V 1.DEF: Offset at minimum threshold
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after attempting to start the engine or with the engine running.
	<b>Special notes:</b> Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the computer connectors. If the fault is present: <ul style="list-style-type: none"> <li>– the engine will stop immediately,</li> <li>– it will be impossible to restart the engine,</li> <li>– the <b>level 2</b> warning light is lit.</li> </ul>
	<b>Priorities when dealing with a number of faults:</b> Deal with fault <b>DF013 Sensor supply voltage no. 3</b> first, if it is present or stored.

<b>CC.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the rail pressure sensor connectors.  
 Check the injection computer connections.  
 Repair if necessary.

Check the **continuity** and **insulation to earth** of the following connections:

- connection code **3LY**,
- connection code **3LX**,

between components **120** and **1032**.  
 If the connection or connections 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.

If the fault is still present, replace the rail pressure sensor and tighten it to **35 ± 5 N.m**.  
**Observe the safety instructions (see Introduction).**

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF007 CONTINUED</b>	
----------------------------	--

<b>CO.1</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the rail pressure sensor connectors.  
Check the injection computer connections.  
Repair if necessary.

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

- connection code **3LY**,
- connection code **3LZ**,
- connection code **3LX**,

between components **120** and **1032**.

If the connection or connections 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.

If the fault is still present, replace the rail pressure sensor and tighten it to **35 ± 5 N.m**.  
**Observe the safety instructions (see Introduction).**

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the rail pressure sensor connectors.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity** and absence of **interference resistance** on the following connections:

- connection code **3LY**,
- connection code **3LZ**,
- connection code **3LX**,

between components **120** and **1032**.

If the connection or connections 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.

With the ignition on, and engine switched off for over **1 minute**:

Display parameter **PR038 Rail pressure** in the **Fuel circuit, Engine management** tab.

- If the value is below **50 bar**, the sensor is in order. In this case, contact the Techline.
  - If the pressure is above **50 bar**, replace the rail pressure sensor and tighten it to **35 ± 5 N.m**.
- Observe the safety instructions (see Introduction).**

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF008 PRESENT OR STORED</b>	<b>PEDAL POTENTIOMETER CIRCUIT GANGED CIRCUIT 1</b> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal 2.DEF: Accelerator pedal sensor locked
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a series of full load/no load actions on the accelerator pedal.
	<b>Special notes:</b> Turbocharging, passenger compartment heating resistor activation and the cruise control/speed limiter are not authorised. If <b>CO.0, CC.1 or 1.DEF</b> is present the <b>level 1</b> warning light is lit. The engine speed is fixed at <b>1400 rpm</b> if there is a fault on gangs 1 and 2 of the pedal potentiometer and the engine torque is limited. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the computer connectors.
	<b>Priorities when dealing with a number of faults:</b> Deal with fault first if it is <b>DF011 Sensor feed voltage no. 1</b> first if it is present or stored.

### WARNING

This fault may appear if the wiring harness has been damaged.  
Follow the procedure described in the Wiring Check in the Introduction.  
This check enables the condition and the conformity of the engine wiring harness to be checked.

<b>CO.0</b>	<b>NOTES</b>	<b>Priorities when dealing with a number of faults:</b> If fault <b>DF009 Pedal potentiometer circuit gang 2</b> is present at the same time, check that the pedal sensor connector is connected correctly.
-------------	--------------	--

Check the pedal potentiometer connections.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity** and **insulation to earth** of the following connections:  
– connection code **3KW**,  
– connection code **3LR**,  
between components **120** and **921**.  
If the connection or connections 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.

Measure the **resistance** of the pedal potentiometer on **gang 1** between connections **3LR** and **3LT**.  
Replace the pedal potentiometer if the resistance is not approximately **0.8 kΩ < X < 2.6 kΩ**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF008**  
**CONTINUED 1**

**CC.1**

**NOTES**

None.

Check the pedal potentiometer connections.  
Check the injection computer connections.  
Repair if necessary.

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

- Connection code **3LS**,
- connection code **3LR**,
- connection code **3LT**,

between components **120** and **921**.

If the connection or connections 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.

Measure the **resistance** of the pedal potentiometer on **gang 1** between connections **3LR** and **3LT**.  
Replace the pedal potentiometer if the resistance is not approximately **0.8 kΩ < X < 2.6 kΩ**.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.



<b>DF008 CONTINUED 2</b>	
------------------------------	--

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the pedal potentiometer connections.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity** and absence of **interference resistance** of the following connections:

- connection code **3LS**,
- connection code **3LR**,
- connection code **3LT**,
- connection code **3LW**,
- connection code **3LU**,
- connection code **3LV**.

between components **120** and **921**.

If the connection or connections 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.

If the fault is still present, replace the pedal potentiometer.

<b>2.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the mechanical condition of the accelerator pedal:

- locked in full load position,
- with the pedal blocked by an external component.

Repair if necessary.

Check the brake light switch.

Vary the position of the pedal and refer to the **conformity check** in order to check the operating values of the accelerator pedal potentiometer.

If the values displayed are inconsistent, replace the accelerator pedal potentiometer.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF009 PRESENT OR STORED</b>	<b><u>PEDAL POTENTIOMETER TRACK 2 CIRCUIT</u></b> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a series of full load/no load actions on the accelerator pedal.
	<b>Special notes:</b> Turbocharging, passenger compartment heating resistor activation and the cruise control/speed limiter are not authorised. If the fault is present, the <b>level 1</b> warning light is lit. The engine speed is fixed at <b>1400 rpm</b> if there is a fault on gangs 1 and 2 of the pedal potentiometer and the engine torque is limited. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the computer connectors.
	<b>Priorities when dealing with a number of faults:</b> Deal with fault <b>DF012 Sensor supply voltage no. 2</b> first if it is present or stored.

### WARNING

This fault may appear if the wiring harness has been damaged.  
Follow the procedure described in the Wiring Check in the Introduction.  
This check enables the condition and the conformity of the engine wiring harness to be checked.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF009**  
**CONTINUED 1**

**CO.0**

**NOTES**

**Priorities when dealing with a number of faults:**  
If fault **DF008 Pedal potentiometer circuit gang 1** is present at the same time, check that the pedal sensor connector is connected correctly.

Check the pedal potentiometer connections.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity** and **insulation to earth** of the following connections:  
– connection code **3LW**,  
– connection code **3LU**,  
between components **120** and **921**.  
If the connection or connections 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.

Measure the **resistance** of the pedal potentiometer on **gang 2** between connections **3LU** and **3LV**.  
Replace the pedal potentiometer if the resistance is not approximately **0.8 kΩ < X < 4.9 kΩ**.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

**DF009**  
**CONTINUED 2**

**CC.1**

**NOTES**

**Priorities when dealing with a number of faults:**

If fault **DF008 Pedal potentiometer circuit gang 1** is present at the same time, check that the pedal sensor connector is connected correctly.

Check the pedal potentiometer connections.  
Check the injection computer connections.  
Repair if necessary.

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

- connection code **3LW**,
- connection code **3LU**,
- Connection code **3LV**,

between components **120** and **921**.

If the connection or connections 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.

Measure the **resistance** of the pedal potentiometer on **gang 2** between connections **3LU** and **3LV**.  
Replace the pedal potentiometer if the resistance is not approximately **0.8 kΩ < X < 4.9 kΩ**.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

**DF009**  
**CONTINUED 3**

**1.DEF**

**NOTES**

None

Check the rail pressure sensor connectors.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity** and absence of **interference resistance** on the following connections:

- connection code **3LW**,
- connection code **3LU**,
- Connection code **3LV**,
- Connection code **3LS**,
- connection code **3LR**,
- connection code **3LT**.

between components **120** and **921**.

If the connection or connections 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.

If the fault is still present, replace the pedal potentiometer.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

<b>DF011 PRESENT OR STORED</b>	<b>SENSOR FEED VOLTAGE NO. 1</b> 1.DEF: Sensor reference voltage too low 2.DEF: Sensor reference voltage too high
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after carrying out a road test or after several attempts at starting the engine.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– the cruise control/speed limiter function is deactivated,</li> <li>– turbocharging is inhibited,</li> <li>– the engine speed is limited,</li> <li>– the <b>level 1</b> warning light is lit,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (start the engine + <b>5 seconds</b>, then switch off the ignition and wait for <b>1 minute</b>).</li> </ul> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

### WARNING

This fault may appear if the wiring harness has been damaged.

Follow the procedure described in the Wiring Check in the Introduction.

This check enables the condition and the conformity of the engine wiring harness to be checked.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF011  
CONTINUED 1**

**1.DEF  
2.DEF**

**NOTES**

**Priorities when dealing with a number of faults:**

If fault **DF008 Pedal potentiometer circuit gang 1** is present at the same time, check that the pedal sensor connector is connected correctly.

If fault **DF004 Turbocharging pressure sensor circuit** is present at the same time, check that the turbocharger pressure sensor circuit connector is connected correctly.

If fault **DF315 Particle filter diff\* pressure sensor** is present at the same time, check that the turbocharging pressure sensor connector is connected correctly.

The following sensors are connected to **supply no. 1**:

- **Turbocharger pressure sensor.**
- **Particle filter differential pressure sensor.**
- **Accelerator pedal potentiometer sensor, gang 1.**

To locate a faulty sensor and/or connection, disconnect one of these sensors then check whether the fault becomes stored.

If the fault is still present, start the operation again with the other sensor.

(Wait a few seconds after each disconnection so that the computer can carry out the check). If the fault is stored after disconnection, change the faulty sensor or repair the connection.

Clear the faults created by the multiple disconnections.

If the fault is still present when the two sensors have been disconnected:

1. Check the **earth insulation** of the following connections:

For **Laguna II**:

- connection code **3LQ between components 120, 1474 and 1290.**
- connection code **3LP between components 120 and 1474.**
- connection code **3TL between components 120 and 1290.**
- connection codes **3LR and 3LS between components 120 and 921.**

For **Mégane II and Scénic II**:

- connection code **3LQ between components 120, 1071 and 1290.**
- connection code **3LP between components 120 and 1071.**
- connection code **3TL between components 120 and 1290.**
- connection codes **3LR and 3LS between components 120 and 921.**

If the connection or connections 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.

\* diff: differential

**AFTER REPAIR**

Deal with any faults.

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

**DF011**  
**CONTINUED 2**

2. Check the **insulation against + 12 V** of the following connections:

- connection code **3LP**,
- connection code **3LN**,
- connection code **3LQ**,
- Connection code **3TL**,
- connection code **3TK**,
- connection code **3LT**,
- Connection code **3LS**,
- connection code **3LR**,

between components **120, 1071, 921 and 1290**.

If the connection or connections 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.

3. Check the **insulation** between the following connections **after disconnecting the sensors** and the injection computer:

- connection codes **3LN** and **3LQ** of the **turbocharging pressure sensor**,
- connection codes **3LQ** and **3TK** of the **particle filter differential pressure sensor**,
- connection codes **3LS** and **3LU** of **pedal sensor gang 1**.

If the connection or connections 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.

If these checks do not produce the correct results, replace the faulty sensor(s).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

Deal with any faults.

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



<b>DF012 PRESENT OR STORED</b>	<b>SENSOR SUPPLY VOLTAGE NO. 2</b> 1.DEF: Sensor reference voltage too low 2.DEF: Sensor reference voltage too high
--	---

<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault is declared present after carrying out a road test or after several attempts at starting the engine.</p> <p><b>Special notes:</b>  If the fault is present:</p> <ul style="list-style-type: none"> <li>– the EGR functions and passenger compartment heating resistance functions are inhibited,</li> <li>– the cruise control/speed limiter function is inhibited,</li> <li>– the engine speed is limited,</li> <li>– the <b>level 1</b> warning light is lit,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting + 5 seconds + switch off the ignition and wait 1 minute).</li> </ul> <p>Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.</p>
--------------	--

### WARNING

This fault may appear if the wiring harness has been damaged.  
Follow the procedure described in the Wiring Check in the Introduction.  
This check enables the condition and the conformity of the engine wiring harness to be checked.

Check the condition of the connectors of the **EGR valve position sensor**, component code **1460**, of the **accelerator pedal potentiometer gang 2 sensor**, component code **921** and of the **refrigerant pressure sensor**, component code **1202**.  
Check the condition of the injection computer connector, component code **120**.  
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.

The following sensors are connected to **supply no. 2**:

- **EGR valve position sensor.**
- **Accelerator pedal potentiometer track 2 sensor.**
- **Refrigerant pressure sensor.**

To locate a faulty sensor and/or connection, disconnect one of these sensors then check whether the fault becomes stored.  
If the fault is still present, repeat the operation with the other sensors.  
(Wait a few seconds after each disconnection so that the computer can carry out the check).  
If the fault is stored after disconnection, change the faulty sensor or repair the connection.  
Clear the faults created by the multiple disconnections.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF012**  
**CONTINUED 1**

If the fault is still present when the three sensors have been disconnected:

1 Check the **earth insulation** of the following connections:

- connection codes **3GC** and **3EL** between components **120** and **1460**.
- connection codes **3LU** and **3LW** between components **120** and **921**.
- connection codes **38Y** and **38X** between components **120** and **1202**.

If the connection or connections 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.

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

- connection code **3GC**,
  - connection code **3EL**,
  - connection code **3JM**,
- between components 120 and 1460.**
- connection code **3LU**,
  - connection code **3LW**,
  - connection code **3LV**.
- between components 120 and 921.**
- connection code **38Y**,
  - connection code **38U**,
  - connection code **38X**.
- between components 120 and 1202.**

If the connection or connections 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.

3 Check the **insulation** between the following connections **after disconnecting the sensors and the injection computer**:

- connection codes **3LT** and **3LW** of the connector of **pedal sensor gang 2**.
- connection codes **3GC** and **3JM** of the connector of the **EGR valve position sensor**.
- connection codes **38Y** and **38U** of the connector of the **refrigerant pressure sensor**.

If the connection or connections 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.

If these checks do not produce the correct results, replace the faulty sensor(s).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

Deal with any faults.

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

<b>DF013 PRESENT OR STORED</b>	<b><u>SENSOR SUPPLY VOLTAGE NO. 3</u></b> 1.DEF: Sensor reference voltage too low 2.DEF: Sensor reference voltage too high
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after carrying out a road test or after several attempts at starting the engine.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"><li>– the EGR function is inhibited,</li><li>– the engine stops,</li><li>– the <b>level 2</b> warning light is lit,</li><li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (start the engine + <b>5 seconds</b> + switch off the ignition and wait <b>1 minute</b>).</li></ul> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

**WARNING**

This fault may appear if the wiring harness has been damaged.

Follow the procedure described in the Wiring Check in the Introduction.

This check enables the condition and the conformity of the engine wiring harness to be checked.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF013**  
**CONTINUED 1**

The following sensors are connected to **supply no. 3**:

- **Rail pressure sensor.**
- **Air flowmeter.**

To locate a faulty sensor and/or connection, disconnect one of these sensors then check whether the fault becomes stored.

If the fault is still present, repeat the operation with the other sensors.

(Wait a few seconds after each disconnection so that the computer can carry out the check).

If the fault is stored after disconnection, change the faulty sensor or repair the connection.

Clear the faults created by the multiple disconnections.

If the fault is still present when the two sensors have been disconnected:

1. Check the **earth insulation** of the following connections:

- connection code **3LY**,
- connection code **3LX**,
- connection code **3DV**,
- connection code **3KJ**,
- connection code **3DW**.

Between components **120**, **1032** and **799**.

If the connection or connections 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.

**AFTER REPAIR**

Deal with any faults.

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

**DF013**  
**CONTINUED 2**

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

- connection code **3LY**,
- connection code **3LX**,
- connection code **3LZ**,
- connection code **3DV**,
- connection code **3KJ**,
- connection code **3DW**,
- connection code **3DU**.

between components **120, 1032 and 799**.

If the connection or connections 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.

3. Check the **insulation** between the following connections **after disconnecting the sensors and the injection computer**:

- connection codes **3LZ** and **3LX** of the **rail pressure sensor**,
- connection codes **3DW** and **3KJ** of the **air flowmeter** connector.

If these checks do not produce the correct results, replace the faulty sensor(s).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

Deal with any faults.

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

<b>DF015 PRESENT OR STORED</b>	<b>MAIN RELAY CONTROL CIRCUIT</b> 1.DEF: Relay cut out too soon 2.DEF: Relay cut out too late
--	---


<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> Only deal with this fault if it is stored.
	<b>Special notes:</b> The <b>supply relay of the injection control unit (50A)</b> is located on a relay plate in the engine connection unit under the Protection and Switching Unit. If the fault is present, the <b>level 1</b> warning light is lit. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

Check the Protection and Switching Unit connections (**Vdiag 50, 58, 5C only**).  
Check the injection computer connections.  
Repair if necessary.  
Check the condition of the battery terminals making sure they are correctly tightened.  
Check the condition of the injection supply relay and its mounting.  
Check the **5D (5A) + after ignition supply** located on the UPC (Protection and Switching Unit) (**Vdiag 50, 58, 5C only**).  
Repair if necessary.

Check the **continuity** and absence of **interference resistance** of connection **3AA** between components **120** and **983**.

If the connection or connections 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.

If the fault is still present, contact the Techline.

 <b>IMPORTANT</b>	<b>WARNING</b> If the UPC no longer detects the injection computer frames (for Vdiag 50, 58 and 5C only) then fan assembly 1 will be started until the battery has been completely discharged. If fan assembly 1 is not working, fan assembly 2 will be supplied.
---	---

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF017 PRESENT OR STORED</b>	<b><u>PREHEATING UNIT CONTROL CIRCUIT</u></b> CC.1: Short circuit to + 12 V CC.0: Open circuit or short circuit to earth CO: Open circuit 1.DEF: Internal electronic fault
--	--

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after several attempts to start the engine or after running actuator command <b>AC001 Preheating unit</b> .
	<b>Special notes:</b> If the fault is present, it is difficult or even impossible to start the vehicle when cold. If the fault is present, the <b>level 1</b> warning light is lit. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the preheating unit connections and the heating plug supply cables. Check the injection computer connections. Repair if necessary.
Check the condition of supply fuse <b>F2 (70A)</b> on the power supply fuse board. Check the <b>continuity and insulation from + 12 V</b> of the following connections: – connection code <b>3FF</b> , – connection code <b>3FY</b> , between components <b>120</b> and <b>257</b> . If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, replace the pre-postheating unit.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF017 CONTINUED</b>	
----------------------------	--

<b>CC.0 CO</b>	<b>NOTES</b>	<b>Special notes:</b> If the preheating unit has a short circuit to earth there is a risk that the heater plugs will be operated continuously. The heater plugs and the engine may be damaged.
--------------------	--------------	---

Check the preheating unit connections and the heating plug supply cables.  
Check the injection computer connections.  
Repair if necessary.

Check the condition of supply fuse **F2 (70A)** on the power supply fuse board.  
Check **the continuity and insulation** from earth of the following connections:  
 – connection code **3FY**,  
 – connection code **3FF**.  
 Between components **120** and **257**.  
 If the connection or connections 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.

If the fault is still present, replace the pre-postheating unit.

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the preheating unit connections and the heating plug supply cables.  
Check the injection computer connections.  
Repair if necessary.

Check the condition of supply fuse **F2 (70A)** on the power supply fuse board.  
Check **the continuity and insulation** from earth of the following connections:  
 – connection code **3FY**,  
 – connection code **3FF**.  
 Between components **120** and **257**.  
 If the connection or connections 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.

If the fault is still present, replace the pre-postheating unit.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF025 PRESENT OR STORED</b>	<u>PRE-POSTHEATING UNIT DIAGNOSTIC LINE</u>
--	---

<b>NOTES</b>	<p><b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after several attempts to start the engine or after running actuator command <b>AC001 Preheating unit</b>.</p>
	<p><b>Special notes:</b> It is difficult or even impossible to start the engine when cold. If the fault is present, the <b>level 1</b> warning light is lit. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.</p>

<p>Check the preheating unit connections. Check the connections on <b>all of the heater plugs</b>. Repair if necessary.</p>
<p>Check fuse <b>F2 for Mégane II and Scénic II and FM12 for Laguna II (70A)</b> located on the power supply fuse board. Check <b>the resistance</b> of the heater plugs: Replace any plugs whose resistance is not less than <b>2 Ω at + 20°C</b>.</p>
<p>Check <b>the continuity and absence of interference resistance</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>37AB</b> between components <b>257 and 682</b>.</li> <li>– connection code <b>37AC</b> between components <b>257 and 683</b>.</li> <li>– connection code <b>37Z</b> between components <b>257 and 680</b>.</li> <li>– connection code <b>37AA</b> between components <b>257 and 681</b>.</li> </ul>
<p>Check <b>for + 12 V</b> on connection <b>BP35</b> of the preheating unit (via fuse <b>F2 for Mégane II and Scénic II and FM12 for Laguna II (70A)</b>).</p>
<p>If the fault is still present. Check the injection computer connections. Check <b>the continuity and absence of interference resistance</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>3FY</b>,</li> <li>– connection code <b>3FF</b>.</li> </ul> <p>Between components <b>120 and 257</b>. If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the pre-postheating unit.</p>

<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>DF032 PRESENT OR STORED</b>	<b><u>THERMOPLUNGER 1 RELAY CONTROL CIRCUIT</u></b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault is declared present after:</p> <ul style="list-style-type: none"> <li>– the ignition is switched on,</li> <li>– with the engine running,</li> <li>– actuator command <b>AC063 Thermoplunger no. 1 relay</b>.</li> </ul>
	<p><b>If faults DF033 Thermoplunger 2 relay control circuit and DF034 Thermoplunger 3 relay control circuit appear, ignore them and go directly to configuration CF030 Thermoplunger configuration.</b></p> <p><b>Special notes:</b>  Use bornier <b>Elé. 1681</b> for all operations on the connectors of the engine management computer.</p>

Check the engine management computer connections. Check the connections of thermoplunger 1. Repair if necessary.
Check for <b>+ 12 V after ignition supply</b> on connections <b>BP27</b> and <b>BP35</b> of component <b>1550</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Repair if necessary. Check the <b>continuity and absence of interference resistance</b> of connection <b>3JA</b> between components <b>120 and 1550</b> .
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Using a <b>test light</b> , check the supply by running command <b>AC063 Thermoplunger no. 1 relay</b> on connection <b>3JB</b> between components <b>898</b> and <b>1550</b> . Measure the <b>resistance</b> of <b>thermoplunger 1</b> . Replace thermoplunger no. 1 if the resistance is <b>greater than 2 Ω</b> . Replace the <b>water heater interface unit</b> if necessary.
Using a <b>test light</b> , check that the <b>water heater interface unit</b> is properly <b>earthed</b> by running command <b>AC063 Thermoplunger no. 1 relay</b> on connection <b>3JA</b> between components <b>120 and 1550</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF033 PRESENT OR STORED</b>	<b>THERMOPLUNGER 2 RELAY CONTROL CIRCUIT</b> CO: Open circuit CC.1: Short circuit to + 12 V CC.0: Short circuit to earth 1.DEF: Inconsistent signal
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after: <ul style="list-style-type: none"><li>– the ignition is switched on,</li><li>– with the engine running,</li><li>– actuator command <b>AC064 Thermoplunger no. 2 relay</b>.</li></ul>
	<b>If faults DF032 Thermoplunger 1 relay control circuit and DF034 Thermoplunger 3 relay control circuit appear, ignore them and go directly to configuration CF030 Thermoplunger configuration.</b> <b>Special notes:</b> Use bornier <b>Elé. 1681</b> for all operations on the connectors of the engine management computer.

Check the engine management computer connections. Measure the connections of thermoplungers 2 and 3. Repair if necessary.
Check for <b>+ 12 V after ignition supply</b> on connections <b>BP27</b> and <b>BP35</b> of component <b>1550</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Repair if necessary. Check the <b>continuity, absence of interference resistance and insulation</b> to earth of connection <b>3JAA</b> between components <b>120</b> and <b>1550</b> .
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Check for <b>+ 12 V after ignition supply</b> on connection <b>3JC</b> between components <b>1550</b> and <b>1072</b> and on connection <b>3JD</b> between components <b>1550</b> and <b>1073</b> . Measure the <b>resistance</b> of thermoplungers <b>2</b> and <b>3</b> . Replace thermoplunger 2 or 3 if the resistance is <b>greater than 2 Ω</b> . Replace the <b>water heater interface unit</b> if necessary.
Using a <b>test light</b> , check that the <b>water heater interface unit</b> is properly <b>earthed</b> on connection <b>3JAA</b> between components <b>120</b> and <b>1550</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF034 PRESENT OR STORED</b>	<b>THERMOPLUNGER 3 RELAY CONTROL CIRCUIT</b> CO: Open circuit CC.1: Short circuit to + 12 V CC.0: Short circuit to earth 1.DEF: Inconsistent signal
--	---

<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault is declared present after:</p> <ul style="list-style-type: none"> <li>– the ignition is switched on,</li> <li>– with the engine running,</li> <li>– actuator command <b>AC031 Thermoplunger no.3 relay</b>.</li> </ul>
	<p><b>If faults DF032 Thermoplunger 1 relay control circuit and DF033 Thermoplunger 2 relay control circuit appear, ignore them and go directly to configuration CF030 Thermoplunger configuration.</b></p> <p><b>Special notes:</b>  Use bornier <b>Elé. 1681</b> for all operations on the connectors of the engine management computer.</p>

Check the engine management computer connections. Check the connections of thermoplunger 3. Repair if necessary.
Check for <b>+ 12 V after ignition supply</b> on connections <b>BP27</b> and <b>BP35</b> of component <b>1550</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Repair if necessary. Check the <b>continuity, absence of interference resistance and insulation</b> to earth of connection <b>3JAB</b> between components <b>120</b> and <b>1550</b> .
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Check for <b>+ 12 V after ignition supply</b> between connections <b>3JD</b> and <b>3JAC</b> of component <b>1550</b> and on the <b>connection of component 1074</b> . Measure the <b>resistance</b> of <b>thermoplunger 3</b> . Replace thermoplunger 3 if the resistance is <b>greater than 2 Ω</b> . Replace the <b>water heater interface unit</b> if necessary.
Using a <b>test light</b> , check that the <b>water heater interface unit</b> is properly <b>earthed</b> on connection <b>3JAB</b> between components <b>120</b> and <b>1550</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF037 PRESENT OR STORED</b>	<u>ENGINE IMMOBILISER</u>
--	---------------------------

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after an attempt to start engine.
	<b>Special notes:</b> It is impossible to start the vehicle. If the fault is present, the <b>level 2</b> warning light is lit. Use bornier <b>Elé. 1681 or Elé. 1590</b> for any operation on the injection computer connectors.

Check the UCH connections.  
Check the injection computer connections.  
Repair if necessary.

Perform a multiplex network test and run complete fault finding on the UCH (see **87B, Passenger compartment connection unit**) if the fault is declared present.  
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF038 PRESENT OR STORED</b>	<b>COMPUTER</b> 1.DEF: Permanent high signal 2.DEF: Permanent low signal 3.DEF: Configuration absent or incorrect 4.DEF: Analogue/digital converter fault 5.DEF: Communication disrupted 6.DEF: EEPROM fault 7.DEF: Watchdog activation 8.DEF: Signal outside upper limit 10.DEF: Injector control 11.DEF: Injector control capacitor fault 12.DEF: Injection fault when decelerating 13.DEF: Initialisation error 14.DEF: Open circuit or internal electronic fault.	
<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after one attempt to start the engine, or with the engine running.	
	<b>Special notes:</b> If <b>6.DEF, 8.DEF, 12.DEF</b> is present the <b>level 1</b> warning light is lit. If one of the other faults is present, the <b>level 2</b> warning light is lit. If <b>6.DEF</b> is present, the <b>OBD</b> warning light will come on after three consecutive driving cycles (starting <b>+ 5 seconds</b> , switch off the ignition and wait for <b>1 minute</b> ). Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.	
	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF046: Battery voltage</b> first if it is present or stored.	
<b>1.DEF to 5.DEF 7.DEF, 8.DEF 10.DEF, 12.DEF, 13.DEF</b>	<b>NOTES</b>	None.
Check the injection computer connections and the continuity of all the supplies. Repair if necessary. Clear the faults. Switch off the ignition, wait 1 minute and switch the ignition on again. If the fault is still present, fill in the fault finding log and contact the Techline.		
<b>6.DEF</b>	<b>NOTES</b>	None.
Run command <b>RZ034 Computer memory</b> . Switch off the ignition and perform a complete powerlatch. Read the faults. If the problem disappears: – run command <b>SC036 Reinitialise programming</b> , and select <b>After replacing injection computer with no save option</b> , – enter the injector codes using command <b>SC002 Enter injector codes</b> (see Interpretation of commands), – perform an After-Sales regeneration. Follow the procedure for command <b>SC017 Particle filter regeneration</b> (see <b>Interpretation of commands</b> ), – change the <b>engine oil</b> . If the fault is still present, contact the Techline.		
<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .	

**DF038  
CONTINUED**

**11.DEF**

**NOTES**

If there are a number of faults, deal with the other system faults first.

Display the stored context for fault **DF038**.  
**PR142 Computer fault = 10**

**NO**

Contact the Techline

**YES**

Main screen parameters.  
**PR071 Computer supply voltage > 10 V**

**NO**

**YES**

Check the charge circuit and carry out the necessary repairs:  
– Check the condition of the battery terminals,  
– carry out fault finding on the alternator.  
Recharge or replace the battery.

**NO**

Contexts stored for **DF038**.  
**PR071 Computer feed voltage > 10 V**

**YES**

Check the condition of the wiring harness between the computer and the battery, carry out the necessary repairs.  
– Start the vehicle.  
– Clear the stored faults.  
– Check the faults:  
– If **DF038** is stored, end of fault finding.  
– If **DF038** is present, contact the Techline.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

<b>DF039</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b>	<b><u>INLET AIR TEMPERATURE SENSOR CIRCUIT</u></b> CO.1: Open circuit or short circuit to + 12 V CC.0: Short circuit to earth
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after one attempt to start the engine, or with the engine running.
	<b>Special notes:</b> If the fault is present: – the air temperature value enters defect mode, i.e. <b>PR059 Inlet air temperature = 20°C</b> , – the EGR function is inhibited, – the <b>level 2</b> warning light is lit. Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.

<b>CO.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the air flowmeter connections.  
 Check the injection computer connections.  
 Repair if necessary.

Check the **continuity** of connection **3FB** between components **799** and **597**.

If the connection is 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 and insulation from + 12 V** of the following connections:

- connection code **3B**,
- connection code **3DW**,
- connection code **3KJ**,
- connection code **3DU**.

between components **120** and **799**.

If the connection or connections 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.

Measure the resistance of the air temperature sensor between **connections 3B** and **3DW** of the air flowmeter.  
 Replace the air flowmeter if the resistance displayed is not:

**3553 Ω < X < 3875 Ω at 10°C**

**2352 Ω < X < 2544 Ω at 20°C**

**1612 Ω < X < 1730 Ω at 30°C**

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF039 CONTINUED</b>	
----------------------------	--

<b>CC.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the air flowmeter connections.  
Check the injection computer connections.  
Repair if necessary.  
Check **the continuity and insulation** from earth of the following connections:

- connection code **3B**,
- connection code **3DW**,
- connection code **3KJ**,

between components **120 and 799**.

- connection code **3FB** between components **597 and 799 (Laguna II)**.
- connection code **3FB2** between components **799 and 1337 (Scénic II)**.
- connection code **3FB** between components **799 and 1337 (Mégane II)**.

If the connection or connections 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.

Measure the resistance of the air temperature sensor between **connections 3B and 3DW** of the air flowmeter.  
Replace the air flowmeter if the resistance is not approximately:

**3553 Ω < X < 3875 Ω at 10°C**  
**2352 Ω < X < 2544 Ω at 20°C**  
**1612 Ω < X < 1730 Ω at 30°C**

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF040 PRESENT OR STORED</b>	<b>CYLINDER 1 INJECTOR CIRCUIT</b> CC.1: Short circuit to + 12 V CO: Open circuit CC: Short circuit 1.DEF: Injector control
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine has been started.
	<b>Special notes:</b> If <b>CO.1</b> , <b>CC</b> or <b>1.DEF</b> is present, the <b>level 2</b> warning light is lit. If <b>CO</b> is present, the <b>level 1</b> warning light is lit. If <b>CO</b> is present, the <b>OBD</b> warning light will come on after three consecutive driving cycles (starting <b>+ 5 seconds</b> , switch off the ignition and wait for <b>1 minute</b> ). If the fault is present, the injection on cylinder 1 is disabled. Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

### WARNING

This fault may appear if the wiring harness has been damaged.  
 Follow the procedure described in the Wiring Check in the Introduction.  
 This test enables the condition and the conformity of the engine wiring harness to be checked.

<b>CC.1 CO CC 1.DEF</b>	<b>NOTES</b>	None
-------------------------------------	--------------	------

Check the connections on injector no 1.  
 Check the injection computer connections.  
 Repair if necessary.

### Disconnect injector no. 1.

Measure the **resistance** of injector no. 1 between connections **3CR** and **3KW**.  
 Replace the injector if it has a **short circuit** ( $R = 0 \Omega$ ) or **open circuit** (infinite resistance measurement).  
 Otherwise **reconnect injector no. 1**.  
 Check the **continuity and absence of interference resistance** of the following connections:  
 – connection codes **3CR** and **3KW** between components **120** and **193**.  
 If the connection or connections 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.

If the fault is still present, run **test 9: Poor injector operation**.  
 If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF041 PRESENT OR STORED</b>	<b>CYLINDER 2 INJECTOR CIRCUIT</b> CC.1: Short circuit to + 12 V CO: Open circuit CC: Short circuit 1.DEF: Injector control
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine has been started.
	<b>Special notes:</b> If <b>CO.1, CC or 1.DEF</b> is present, the <b>level 2</b> warning light is lit. If <b>CO</b> is present, the <b>level 1</b> warning light is lit. If <b>CO</b> is present, the <b>OBD</b> warning light will come on after three consecutive driving cycles (starting <b>+ 5 seconds</b> , switch off the ignition and wait for <b>1 minute</b> ). If the fault is present, the injection on cylinder 2 is inhibited. Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

### WARNING

This fault may appear if the wiring harness has been damaged.  
 Follow the procedure described in the Wiring Check in the Introduction.  
 This test enables the condition and the conformity of the engine wiring harness to be checked.

<b>CC.1 CO CC 1.DEF</b>	<b>NOTES</b>	None
-------------------------------------	--------------	------

Check the connections on injector no. 2.  
 Check the injection computer connections.  
 Repair if necessary.

### Disconnect injector no. 2.

Measure the **resistance** of injector no. 2 between connections **3KX** and **3CS**.  
 Replace the injector if it has a **short circuit (R = 0 Ω)** or **open circuit (infinite resistance measurement)**.  
 Otherwise **reconnect injector no. 2**.

Check the **continuity and absence of interference resistance** of the following connections:  
 – connection codes **3KX** and **3CS** between components **120** and **194**.  
 If the connection or connections 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.

If the fault is still present, run **test 9 Poor injector operation**.  
 If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF042 PRESENT OR STORED</b>	<b>CYLINDER 3 INJECTOR CIRCUIT</b> CC.1: Short circuit to + 12 V CO: Open circuit CC: Short circuit 1.DEF: Injector control
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine has been started.
	<b>Special notes:</b> If <b>CO.1, CC or 1.DEF</b> is present, the <b>level 2</b> warning light is lit. If <b>CO</b> is present, the <b>level 1</b> warning light is lit. If <b>CO</b> is present, the <b>OBD</b> warning light will come on after three consecutive driving cycles (starting <b>+ 5 seconds</b> , switch off the ignition and wait for <b>1 minute</b> ). If the fault is present, the injection on cylinder 3 is inhibited. Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

### WARNING

This fault may appear if the wiring harness has been damaged.  
 Follow the procedure described in the Wiring Check in the Introduction.  
 This test enables the condition and the conformity of the engine wiring harness to be checked.

<b>CC.1 CO CC 1.DEF</b>	<b>NOTES</b>	None
-------------------------------------	--------------	------

Check the connections on injector no. 3.  
 Check the injection computer connections.  
 Repair if necessary.

### Disconnect injector no. 3.

Measure the **resistance** of injector no. 3 between connections **3KY** and **3CT**.  
 Replace the injector if it has a **short circuit (R = 0 Ω)** or **open circuit (infinite resistance measurement)**.  
 Otherwise **reconnect injector no. 3**.

Check the **continuity and absence of interference resistance** of the following connections:  
 connection codes **3KY** and **3CT** between components **120** and **195**.  
 If the connection or connections 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.

If the fault is still present, run **test 9 Poor injector operation**.  
 If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF043 PRESENT OR STORED</b>	<b>CYLINDER 4 INJECTOR CIRCUIT</b> CC.1: Short circuit to + 12 V CO: Open circuit CC: Short circuit 1.DEF: Injector control
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine has been started.
	<b>Special notes:</b> If <b>CO.1, CC or 1.DEF</b> is present, the <b>level 2</b> warning light is lit. If <b>CO</b> is present, the <b>level 1</b> warning light is lit. If <b>CO</b> is present, the <b>OBD</b> warning light will come on after three consecutive driving cycles (starting <b>+ 5 seconds</b> , switch off the ignition and wait for <b>1 minute</b> ). If the fault is present, the injection on cylinder 4 is inhibited. Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

### WARNING

This fault may appear if the wiring harness has been damaged.  
 Follow the procedure described in the Wiring Check in the Introduction.  
 This test enables the condition and the conformity of the engine wiring harness to be checked.

<b>CC.1 CO CC 1.DEF</b>	<b>NOTES</b>	None
-------------------------------------	--------------	------

Check the connections on injector no 4.  
 Check the injection computer connections.  
 Repair if necessary.

### Disconnect injector no. 4.

Measure the **resistance** of injector no. 4 between connections **3KZ** and **3CU**.  
 Replace the injector if it has a **short circuit (R = 0 Ω)** or **open circuit (infinite resistance measurement)**.  
 Otherwise **reconnect injector no. 4**.

Check the **continuity and absence of interference resistance** of the following connections:  
 – connection codes **3KZ** and **3CU** between components **120** and **196**.  
 If the connection or connections 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.

If the fault is still present, run **test 9 Poor injector operation**.  
 If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF046 PRESENT OR STORED</b>	<b>BATTERY VOLTAGE</b> 1.DEF: Excess voltage 2. DEF: Undervoltage
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present following a road test or after attempting to start the engine.
	<b>Special notes:</b> Computer operating voltage: <b>9 V &lt; PR071 &lt; 16 V</b> . Battery voltage that is too low can cause the <b>level 1</b> fault warning light to come on thereby causing other faults to appear. It is then not possible to start the engine. Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.
	<b>Priorities when dealing with a number of faults:</b> If this fault is accompanied by <b>DF226 Damper valve circuit 2.DEF: Fault external to domain</b> , ignore the latter fault as <b>DF046</b> is the cause of this fault.

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the charge circuits:  
Battery condition  
Alternator condition (complete fault finding procedure)  
Carry out the necessary repairs.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF046</b> <b>CONTINUED</b>	
----------------------------------	--

<b>2.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

**With the ignition off**, measure the voltage across the battery terminals.  
If the voltage is less than **11.5 V**, test the battery.  
If the battery is defective, replace the battery then check the charging circuit.  
**With the ignition on and the with the starter motor turning**, measure the voltage between the battery terminals  
If the voltage drops below **9.6 V**, check the tightness and condition of the battery terminals.  
Repair if necessary  
If the terminals are in good condition, test the battery.  
If the battery is defective, replace it.  
If the starter is cranking the engine correctly, but the fault is still present,

Check the **continuity and absence of interference resistance** of the following connections:  
– connection code **3FB (Mégane II and Scénic II)**,  
– connection code **3FB1 (Scénic II)**,  
**between components 120 and 1337.**  
– connection code **N** between component **120 and the battery earth (Mégane II and Scénic II)**.  
– **connection code 3FB between components 120 and 597 (Laguna II)**.  
– **connection code NT between components 120 and chassis earth NT (Laguna II)**.  
If the connection or connections 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.

Repair if necessary.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF047 PRESENT OR STORED</b>	<b>COMPUTER FEED VOLTAGE</b> 1.DEF: Voltage outside permitted range of values
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after several starting attempts, or with the engine running.
	<b>Special notes:</b> Computer operating voltage: <b>9 V &lt; PR071 &lt; 16 V</b> . Battery voltage that is too low can cause the <b>level 1</b> fault warning light to come on thereby causing other faults to appear. Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.

Check the **continuity and absence of interference resistance** of the following connections:

- connection code **AP15** between components **120** and **1337 (Scénic II et Mégane II)**.
- connection code **AP29** between components **120** and **597 (Laguna II)**.

If the connection or connections 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 the condition of the **injection control unit supply relay (50A)** located on a relay plate in the engine compartment connection unit (no false contact or oxidation on the relay mounting clips).

Repair if necessary.

**If the fault does not reappear**, start the engine and **wait 1 minute**.

Carry out a road test and check the system faults.

If there are no faults, fault finding is complete.

**If the fault is still present**, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF049</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b>	<b>REFRIGERANT SENSOR CIRCUIT</b> CC.1: Short circuit to + 12 V CO.0: Open circuit or short circuit to earth
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present following a road test, or if the air conditioning is switched on.
	<b>Special notes:</b> If the fault is present, air conditioning is not authorised. Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the refrigerant pressure sensor connectors.  
 Check the injection computer connections.  
 Repair if necessary.  
 Check that the configuration reading **LC009 Air conditioning** is **WITH**.  
 If **LC009 Air conditioning** is **WITHOUT**, run command **RZ005 Programming** to reinitialise the vehicle configurations.  
 If necessary, operate the air conditioning to reconfigure the computer to **WITH**.  
 Connect an air conditioning filling station (equipped with a high pressure gauge) to the vehicle.  
 Display parameter **PR037 Refrigerant pressure** and compare the value displayed by the filling station.  
**If the values match**, run fault finding on the air conditioning (see **62A, Air conditioning**).

**If the values do not match**, check the **continuity and insulation against + 12 V** of the following connections:

- connection code **38X**,
- connection code **38Y**,
- connection code **38U**.

between components **120** and **1202**.  
 If the connection or connections 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.

If the fault is still present, replace the refrigerant pressure sensor (see **MR 364 (Mégane II)** or **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical, Air conditioning, 62A, Air conditioning, Pressure sensor: Removal - Refitting**).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF049 CONTINUED</b>	
----------------------------	--

<b>CO.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the refrigerant pressure sensor connectors.  
Check the injection computer connections.  
Repair if necessary.  
Check that the configuration reading **LC009 Air conditioning** is **WITH**.  
If **LC009 Air conditioning** is **WITHOUT**, run command **RZ005 Programming** to reinitialise the vehicle configurations.  
If necessary, operate the air conditioning to reconfigure the computer to **WITH**.  
Connect an air conditioning filling station (equipped with a high pressure gauge) to the vehicle.  
Display parameter **PR037 Refrigerant pressure** and compare the value displayed by the filling station.  
**If the values match**, run fault finding on the air conditioning (see **62A, Air conditioning**).

**If the values do not match**, check **the continuity and insulation against earth** of the following connections:  
– connection code **38X**,  
– connection code **38Y**,  
between components **120** and **1202**.  
If the connection or connections 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.

If the fault is still present, replace the refrigerant pressure sensor (see **MR 364 (Mégane II) or 370 (Scénic II) or 395 (Laguna II), Mechanical, Air conditioning, 62A, Air conditioning, Pressure sensor: Removal - Refitting**).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF050 PRESENT OR STORED</b>	<b><u>BRAKE SWITCH CIRCUIT</u></b> 1.DEF: Open circuit or short circuit 2.DEF : Inconsistent signal
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the brake pedal is depressed, or during a road test.
	<b>Special notes:</b> If the fault is present, the cruise control/speed limiter is deactivated. Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.

### WARNING

This fault may appear if the wiring harness has been damaged.  
 Follow the procedure described in the **Wiring Check** in the Introduction.  
 This check enables the condition and the conformity of the engine wiring harness to be checked.

<b>1. DEF</b>	<b>NOTES</b>	None
---------------	--------------	------

Check the brake pedal switch connections.  
 Check the condition and adjustment of the brake pedal switch.  
 Repair if necessary.

Check **the conformity of the** brake light switch:

For **Mégane II** and **Scénic II** without ESP:

**Brake pedal released:**

- continuity between connections **5A** and **BPT**,
- infinite resistance between connections **65A** and **SP17**.

**Brake pedal depressed:**

- infinite resistance between connections **5A** and **BPT**,
- continuity between the connections **65A** and **SP17**.

For **Mégane II** and **Scénic II** with ESP:

**Brake pedal released:**

- continuity between connections **5A** and **BPT**,
- infinite resistance between connections **65G** and **SP17**.

**Brake pedal depressed:**

- infinite resistance between connections **5A** and **BPT**,
- continuity between the connections **65G** and **SP17**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF050 CONTINUED</b>	
----------------------------	--

For **Laguna II**:

**Brake pedal released**

- continuity between connections **5A** and **SP13**,
- infinite resistance between connections **65A** and **SP17**.

**Brake pedal depressed**

- infinite resistance between connections **5A** and **SP13**,
- continuity between connections **65A** and **AP10**.

Replace the switch if necessary.

Check the condition of fuse **H 15A** on the passenger compartment fuse and relay board.

Replace the fuse if necessary.

Check the **supplies** to the switch:

For **Mégane II and Scénic II**:

+ 12 V after ignition           Connection **SP17** of component **160**

+ 12 V battery           Connection **BPT** of component **160 (via ABS)**

For **Laguna II**:

+ 12 V after ignition           Connection **SP13** of component **160**

+ 12 V battery           Connection **AP10** of component **160**

Check the **continuity and insulation** of connection **5A** between components **120** and **160**.

If the connection or connections 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.

<b>2.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the brake pedal switch connections.

Check the condition and adjustment of the brake pedal switch.

Repair if necessary.

Check the continuity and absence of interference resistance on connection **5A** between components **120** and **160**.

If the connection or connections 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 the conformity of the switch by consulting the interpretation of statuses **ET704 Brake switch no. 1** and **ET705 Brake switch no. 2**.

If the fault is still present, run fault finding on the ABS computer (see **38C, Anti-lock braking system**).

<b>AFTER REPAIR</b>	<p>Deal with any faults.</p> <p>Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	--

<b>DF051 PRESENT OR STORED</b>	<b><u>CRUISE CONTROL/SPEED LIMITER FUNCTION</u></b> 1.DEF: Inconsistent signal 2.DEF: Inconsistent vehicle speed 3.DEF: Steering wheel controls
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> The cruise control/speed limiter function is inhibited. Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.

### WARNING

This fault may appear if the wiring harness has been damaged.  
 Follow the procedure described in the Wiring Check in the Introduction.  
 This check enables the condition and the conformity of the engine wiring harness to be checked.

If the fault is present, refer to the interpretation of the following statuses:

- **ET042 Cruise control/speed limiter.**
- **ET415 Deactivation of cruise control/speed limiter.**

Check that by pressing the buttons the statuses change and that, with the ignition switched on, all the values are correct.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF053 PRESENT OR STORED</b>	<b><u>RAIL PRESSURE REGULATION FUNCTION</u></b> CC.1: Short circuit to + 12 V CC.0: Short circuit to earth CO: Open circuit 1.DEF: Internal electronic fault 2.DEF: Pressure measured too low 3.DEF: Pressure measured too high 4.DEF: Insufficient pressure 5.DEF: Pressure < minimum 6.DEF: Pressure > maximum 7.DEF: Significant pump control 8.DEF: Above maximum threshold
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after: <ul style="list-style-type: none"> <li>– the engine is started,</li> <li>– a road test,</li> <li>– an actuator command <b>AC011 Rail pressure regulator</b>.</li> </ul>
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– it is not possible to start the engine,</li> <li>– engine stops if already started,</li> <li>– if <b>3.DEF</b> is present, the <b>level 1</b> warning light is lit,</li> <li>– if one of the other faults is present, the <b>level 2</b> warning light is lit.</li> </ul> Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the rail pressure regulator connectors.  
 Check the injection computer connections.  
 Check the low pressure circuit by running **test 3 Low pressure circuit check**.  
 Check the conformity of the fuel used by running **test 11 Diesel fuel conformity check**.  
 Check the overpressure valve, run test **12 Incorrect operation of the overpressure valve**,  
 Check the operation of the injectors, run test **9 Incorrect injector operation**.  
 Repair if necessary.

Measure the **resistance** of the rail pressure regulator between connections **3HI and 3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)**.  
 Replace the injection pump if its resistance is not **3 ohms ± 1 at 20°C**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

### DF053 CONTINUED 1

Check the **continuity and insulation from + 12 V** of connection **3HI** between components **120** and **1105**.

If the connection or connections 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 the rail pressure sensor using the interpretation of **DF007 Rail pressure sensor circuit**.  
If the fault is still present, replace the injection pump.

**CC.0**  
**CO**

**NOTES**

None

Check the rail pressure regulator connectors.  
Check the injection computer connections.  
Check the low pressure circuit by running **test 3 Low pressure circuit check**.  
Check the conformity of the fuel used by running **test 11 Diesel fuel conformity check**.  
Check the overpressure valve, run test **12 Incorrect operation of the overpressure valve**,  
Check the operation of the injectors, run test **9 Incorrect injector operation**.  
Repair if necessary.

Measure the **resistance** of the rail pressure regulator between connections **3HI** and **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)**.  
Replace the injection pump if its resistance is not **3 ohms ± 1 Ω at 20°C**.

Check the **continuity and insulation to earth** on connection **3HI** between components **120** and **1105**.

### AFTER REPAIR

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

### DF053 CONTINUED 2

If the connection or connections 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.

With the ignition on, check for **+ 12 V** after relay on the connection **3FB (Mégane II and Laguna II)** or **3FB1 (Scénic II)** of the rail pressure regulator.

If there is no **+ 12 V** on connection **3FB (Mégane II and Laguna II)** or **3FB1 (Scénic II)**, check the **continuity and absence of interference resistance** of the following connections:

- connection code **3FB** between components **1105** and **983 (Laguna II)**,
- connection code **3FB1** between components **1105** and **1337 (Scénic II)**,
- connection code **3FB** between components **1105** and **1337 (Mégane II)**.

If the connection or connections 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 the rail pressure sensor using the interpretation of **DF007 Rail pressure sensor circuit**.  
If the fault is still present, replace the injection pump.

**1.DEF**

**NOTES**

None

Check the rail pressure regulator connectors.

Check the injection computer connections.

Check the low pressure circuit by running **test 3 Low pressure circuit check**.

Check the conformity of the fuel used by running **test 11 Diesel fuel conformity check**.

Check the overpressure valve, run test **12 Incorrect operation of the overpressure valve**,

Check the operation of the injectors, run test **9 Incorrect injector operation**.

Repair if necessary.

Measure the **resistance** of the pressure regulator between connections **3HI** and **3FB (Mégane II and Laguna II)** or **3FB1 (Scénic II)**.

Replace the injection pump if its resistance is not **3 ohms ± 1 at 20°C**.

**AFTER REPAIR**

Deal with any faults.

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



**DF053**  
**CONTINUED 3**

Check the **continuity and absence of interference resistance** of the following connections:

- connection code **3HI** between components **120** and **1105**,
- connection code **3FB** (**Mégane II and Laguna II**) or **3FB1** (**Scénic II**) between components **1105** and **983** (**Laguna II**) or **1337** (**Mégane II and Scénic II**).

If the connection or connections 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 the rail pressure sensor using the interpretation of **DF007 Rail pressure sensor circuit**.  
Repair if necessary.

If the fault is still present, **check that the computer output is working correctly**.

→ **Either using an ammeter:**

With the regulator connected, connect the current clamp to connection **3FB** (**Mégane II and Laguna II**) or **3FB1** (**Scénic II**) of the regulator (**in the direction of the current**).

Clear any rail pressure regulator faults and run command **AC011 Rail pressure regulator**.

The ammeter should display ten cycles of two successive currents: ~ **0.6A** then ~ **2A**.

→ **Or using a voltmeter:**

With the regulator connected, connect the negative terminal of the voltmeter to connection **3HI** of the rail pressure regulator and the positive terminal to connection **3FB** (**Mégane II and Laguna II**) or **3FB1** (**Scénic II**).

Clear any fuel pressure solenoid valve faults, then run command **AC011 Rail pressure regulator**.

The voltmeter should display two successive voltage readings:

~ **3.15 V** for an OCR\* of **25%** then ~ **9.45 V** for an OCR\* of **75%** (ten cycles)

→ **Or using an oscilloscope** (range **5 V/division** and time base **1 ms/division**):

With the regulator connected, connect the negative terminal of the oscilloscope to the battery earth and the positive terminal to connection **3HI** of the fuel pressure solenoid valve, clear any rail pressure regulator faults, and run command **AC011 Rail pressure regulator**:

the oscilloscope should display a square pulse signal with an amplitude of **12.5 V** at a frequency of **185 Hz** (with an OCR\* alternating successively from **25** to **75%**).

if the measurement does not show any control or continuous voltage, contact the techline.

**\*OCR: Opening Cyclic Ratio**

**AFTER REPAIR**

Deal with any faults.

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

<b>DF053</b> <b>CONTINUED 4</b>	
------------------------------------	--

<b>2.DEF A</b> <b>8.DEF</b>	<b>NOTES</b>	None
--------------------------------	--------------	------

Check the rail pressure regulator connectors.  
Check the injection computer connections.  
Check the low pressure circuit by running **test 3 Low pressure circuit check**.  
Check the conformity of the fuel used by running **test 11 Diesel fuel conformity check**.  
Check the overpressure valve, run test **12 Incorrect operation of the overpressure valve**.  
Repair if necessary.

Measure the **resistance** of the pressure regulator between connections **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II) and 3HI**.  
Replace the injection pump if its resistance is not **3 ohms  $\pm$  1  $\Omega$  at 20°C**.

Check the **continuity and absence of interference resistance** on the following connections:  
– connection code **3HI between components 120 and 1105**,  
– connection code **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II) between components 1105 and 983 (Laguna II) or 1337 (Mégane II and Scénic II)**.  
If the connection or connections 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.

**In the event of rail overpressure:**  
Check the operation of the injectors by running **test 9 Poor injector operation**.  
Check that the rail pressure sensor is operating correctly using command **AC011 Rail pressure regulator**.  
Check the conformity of parameter **PR038 Rail pressure**.  
If these checks do not reveal any faults, and if the fault is still present, replace the rail pressure regulator.

**in the event of rail underpressure:**  
Check that the rail pressure sensor is operating correctly using command **AC011 Rail pressure regulator**.  
Check the conformity of parameter **PR038 Rail pressure**.  
Check the low pressure diesel circuit priming.  
Check the conformity of the diesel filter connections.  
Check the condition of the filter (clogging and water saturation).  
Check that there are no air bubbles between the filter and the high pressure pump.  
Check the low and high pressure diesel fuel circuit sealing (visual inspections, etc.) pump housing, pressure relief valve, pipes, rail and injector unions, injector wells, etc.  
Check the conformity of the seal fitting on the pressure regulator.  
Check the operation of the injectors by running **test 9 Poor injector operation**.  
Carry out the necessary operations.  
If the fault is still present replace the rail pressure regulator.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF054 PRESENT OR STORED</b>	<p><b><u>TURBOCHARGING SOLENOID VALVE CONTROL CIRCUIT</u></b></p> <p>CC.1: Short circuit to + 12 V CC.0: Short circuit to earth CO: Open circuit</p> <p>1.DEF: Internal electronic fault 2.DEF : Inconsistent signal 3.DEF: Below minimum threshold 4.DEF: Above maximum threshold 5.DEF: Permanent high signal</p>
<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after:</p> <ul style="list-style-type: none"> <li>– the engine is started,</li> <li>– a road test,</li> <li>– actuator command <b>AC004 Turbocharging solenoid valve.</b></li> </ul> <p><b>Special notes:</b> If the fault is present:</p> <ul style="list-style-type: none"> <li>– turbocharging is no longer authorised,</li> <li>– the EGR function is inhibited,</li> <li>– the vehicle performance is reduced,</li> <li>– the <b>level 1</b> warning light is lit,</li> <li>– If <b>CC.0</b> is present, the <b>OBD</b> warning light will come on after three consecutive driving cycles (starting <b>+ 5 seconds</b>, switch off the ignition and wait for <b>1 minute</b>).</li> </ul> <p>Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors</p> <p><b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.</p>

<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>DF054</b> <b>CONTINUED 1</b>	
------------------------------------	--

<b>CC.1</b> <b>4.DEF</b> <b>5.DEF</b>	<b>NOTES</b>	None
---	--------------	------

Check the turbocharging solenoid valve connections.  
Check the injection computer connections.  
Repair if necessary.

Measure the resistance of the turbocharging solenoid valve between connections **3MG** and **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)**.  
Replace the turbocharging solenoid valve if the resistance measured is not **14.7 Ω < X < 16.1 Ω at 20°C**.

Check the **continuity and insulation from + 12 V** of connection **3MG** between components **120** and **1475**.

If the connection or connections 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.

If the fault is still present, replace the turbocharging solenoid valve.

<b>CC.0</b> <b>CO</b> <b>3.DEF</b>	<b>NOTES</b>	None
--	--------------	------

Check the turbocharging solenoid valve connections.  
Check the injection computer connections.  
Repair if necessary.

Measure the resistance of the turbocharging solenoid valve between connections **3MG** and **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)**.  
Replace the turbocharging solenoid valve if the resistance displayed is not **14.7 Ω < X < 16.1 Ω at 20°C**.

Check the **continuity and insulation** from earth of the following connections:

- connection code **3MG between components 120 and 1475**,
- connection code **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II) between components 1475 and 1337 (Mégane II and Scénic II) or 983 (Laguna II)**.

If the connection or connections 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.

If the fault is still present, replace the turbocharging solenoid valve.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF054</b> <b>CONTINUED 2</b>	
------------------------------------	--

<b>1.DEF</b> <b>2.DEF</b>	<b>NOTES</b>	None
------------------------------	--------------	------

Check the turbocharging solenoid valve connections.  
Check the injection computer connections.  
Repair if necessary.

Measure the resistance of the turbocharging solenoid valve between connections **3MG** and **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)**.  
Replace the turbocharging solenoid valve if the resistance displayed is not **14.7 Ω < X < 16.1 Ω at 20°C**.

Check **the continuity and insulation** from earth of the following connections:  
connection code **3MG between components 120 and 1475**,  
connection code **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II) between components 1475 and 1337 (Mégane II and Scénic II) or 983 (Laguna II)**.  
If the connection or connections 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.

If the fault is still present, **check that the computer output stage is working correctly**.  
With the turbocharging solenoid valve connected:

→ **Or using a voltmeter:**

Connect the negative terminal of the voltmeter to connection **3MG** of the solenoid valve and the positive terminal to connection **3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)**.

Clear any solenoid valve faults and run command **AC004 Turbocharger solenoid valve**.

The voltmeter should display **ten cycles** of two successive voltages: **~ 2.5 V (OCR\* of 20%)** then **~ 8.75 V (OCR\* of 70%)**.

→ **Or with an oscilloscope** (range **5 V/division** and time base **1 ms/division**): Connect the negative terminal of the oscilloscope to the battery earth and the positive terminal to **3FB** of the solenoid valve.

Clear any solenoid valve faults and run command **AC004 Turbocharging solenoid valve**.

The oscilloscope should display a square wave signal with an amplitude of **12.5 V (~ battery voltage)** at a frequency of **140 Hz** (with an OCR\* changing successively from **~ 20** to **~ 70%**).

if the measurement is correct, replace the solenoid valve.

if the measurement does not show any control or continuous voltage, contact the techline.

**\*OCR: Opening Cyclic Ratio**

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF055 PRESENT OR STORED</b>	<b><u>TURBOCHARGING PRESSURE REGULATION CIRCUIT</u></b> 1.DEF: Pressure too low 2.DEF: Pressure too high
<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"><li>– turbocharging is no longer authorised,</li><li>– the EGR function is inhibited,</li><li>– the <b>level 1</b> warning light is illuminated.</li></ul> Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF055 CONTINUED 1</b>	
------------------------------	--

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Check the turbocharging pressure sensor connections,  
Check the connections of the turbocharging solenoid valve,  
Check the injection computer connections.  
Repair if necessary.

**Check the sealing of the high pressure air circuit:**

- disconnected or pierced pipes,
- pressure sensor disconnected or poorly fitted (seal present),
- intercooler pierced (to check the intercooler: with the vehicle stopped, stabilise the engine speed between **3500 and 4000 rpm** and check that there are no leaks).

Check the conformity of the turbocharging pressure signal and run **test 2Air line at the turbocharger**, **test 6 Turbocharger control solenoid valve check** and **test 7 Turbocharger**.

**Check that the turbocharger and the control circuit are working:**

- With the engine stopped, check that the control rod is (in the rest position the control rod is retracted).
  - start the engine and check that the control rod disengages and pulls on the turbocharger geometry (when the engine is stopped, the control rod should return to the rest position).
- If the control rod does not move correctly, carry out the following checks:

1. Check the control vacuum pressure:

- Disconnect the solenoid valve inlet **hose** and connect it to a pressure gauge,
- start the engine and stabilise it at idle speed,
- if the vacuum is not between **700 mbar < X < 900 mbar**, check the vacuum circuit from the vacuum pump,
- Stop the engine, reconnect the intake hose and proceed to step 2.

2. Solenoid valve control check:

- Disconnect the solenoid valve outlet **hoses**,
- start the engine and stabilise it at idle speed,
- place your hand on the solenoid valve and block the outlet **connection** with your thumb,
- if there is no detectable vibration of the solenoid valve, check that the computer output is operating correctly (see **DF054 Turbocharging solenoid valve control circuit 1.DEF**).

3. Solenoid valve operation check:

- Connect the pressure gauge to the solenoid valve outlet **union**,
- start the engine and stabilise it at idle speed,
- if the vacuum is not **700 mbar < X < 900 mbar**, replace the solenoid valve.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF055</b> <b>CONTINUED 2</b>	
------------------------------------	--

<b>2.DEF</b>	<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF004 Turbocharging pressure sensor circuit</b> first if it is present or stored.
--------------	--------------	---

Check the turbocharging pressure sensor connections,  
 Check the connections of the turbocharging solenoid valve,  
 Check the injection computer connections.  
 Repair if necessary.

Check the conformity of the turbocharging pressure signal (refer to the interpretation of parameter **PR041 Turbocharging pressure**).

**Make sure the turbocharging pressure relief solenoid valve is not jammed open:**

- With the engine switched off, disconnect the **inlet and outlet hoses** from the solenoid valve.
- connect a vacuum pump to the inlet **union** and apply a vacuum pressure.
- If the vacuum pressure **is not maintained**, replace the solenoid valve.

**Check that the turbocharger control rod has not seized:**

- With the engine stopped, check that the turbocharger control rod is in the rest position (the control rod engaged),
- apply a vacuum of **700 mbar < X < 900 mbar** to the hose connected to the turbocharger control diaphragm,
- if the diaphragm retains the vacuum, check the movement and setting of the turbocharger control rod (see **MR 364 (Mégane II), MR 370 (Scénic II), MR 395 (Laguna II), Mechanical, 12B, Turbocharging**).

If the control rod is seized, replace the turbocharger.

If the fault is still present, run **test 2 Air line at the turbocharger**, **test 6 Turbocharger control solenoid valve check** and **test 7 Turbocharger**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF056 PRESENT OR STORED</b>	<b><u>AIR FLOWMETER CIRCUIT</u></b> CC.1: Short circuit to + 12 V CO.0: Open circuit or short circuit to earth 1.DEF: Offset at maximum threshold 2.DEF: Offset at minimum threshold
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after a road test.
	<b>Special notes:</b> If the fault is present: – the <b>level 1</b> warning light is lit, – the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting <b>+ 5 seconds</b> + switch off the ignition and wait <b>1 minute</b> ). Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.
	<b>Priorities when dealing with a number of faults:</b> Deal with fault <b>DF013 Sensor supply voltage no. 3</b> first, if it is present or stored.

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the air flowmeter connections.  
 Check the injection computer connections.  
 Repair if necessary.

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

- connection code **3DW**,
- connection code **NT (Laguna II)**,
- connection code **3DU (Mégane II and Scénic II)**,
- connection code **3DV**,
- connection code **3KJ**.

**Between components 120 and 799.**

If the connection or connections 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.

If the fault is still present, replace the air flow sensor.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF056</b> <b>CONTINUED 1</b>	
------------------------------------	--

<b>CO.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check that there is a **+ 5 V** supply on connection **3KJ** of the air flow sensor.  
 Check the air flowmeter connections.  
 Check the injection computer connections.  
 If the connection is 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 insulation and continuity to **earth** between the following connections:  
 connection code **3DW**,  
 connection code **3KJ**,  
 connection code **3DV**,  
**between components 120 and 799.**  
 connection code **3FB (Mégane II and Laguna II) or 3FB2 (Scénic II)** between components **799** and **983 (Laguna II) or 1337 (Mégane II and Scénic II)**.  
 If the connection or connections 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.

If the fault is still present, replace the air flowmeter.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF056 CONTINUED 2</b>	
------------------------------	--

<b>1.DEF</b>	<b>NOTES</b>	None
<b>2.DEF</b>		<p><b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the ignition has been switched off for <b>40 seconds</b>.</p>

Check the air flowmeter connections.  
Check the injection computer connections.  
Repair if necessary

Check for **continuity and the absence of interference resistance** of the following connections:

- connection code **3KJ**,
- connection code **3DV**,
- connection code **3DW**,
- connection code **3DU (Mégane II and Scénic II)**,  
between components **120 and 799**.
- connection code **3FB (Laguna II and Mégane II)** or **3FB2 (Scénic II)** between components **799 and 983 (Laguna II)** or **1337 (Mégane II and Scénic II)**.
- connection code **NT (Laguna II)** between component **799** and the **chassis earth NT**.

If the connection or connections 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.

If the fault is still present, run **test 4 Checking the turbocharged air inlet circuit** and **test 5 Air flowmeter**, check that the damper valve is open (valve control **resting against** the air vent unit), with the flowmeter **connected**, the vehicle **ignition on** and **engine stopped**, check the voltage between connections **3DW** and **3DV** of the air flowmeter:  
Replace the air flow sensor if its value is not **0.5 V < X < 0.7 V**.

**Check the EGR valve is not jammed open:**

- Deal with any faults,
- Use the conformity check and **Emission control/OBD** sub-function,

If these checks show that the valve is jammed or irrevocably seized, replace the EGR valve.  
If no faults are revealed, but the fault is still present, replace the air flow sensor.

<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>DF057 PRESENT OR STORED</b>	<u><b>WATER IN DIESEL FUEL DETECTOR CIRCUIT</b></u>
--	---

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test.
--------------	--

Check the conformity and quality of the fuel by running **test 11 Diesel fuel conformity check**.  
Check the sealing of the tank and the low pressure circuit by running **test 3 Low pressure circuit check**.

**A. Check that the water in diesel detection sensor is correctly connected.**

- If not, clear the fault,
- carry out a road test (**speed > 12 mph (20 km/h) and engine speed > 1200 rpm**) for more than **30 seconds**.
- If the fault does not recur, *end the fault finding procedure*.
- If the fault reappears, go to **step C**.

**b) If the water detection sensor is not present:**

- **Insulate the electrical connector not connected to the vehicle** (risk of humidity, oxidation, and erratic appearance of faults).

Check that the configuration reading **LC065 Water in diesel fuel sensor** is **WITHOUT**.

If **LC065 Water in diesel fuel sensor** is **WITH**, run command **RZ005 Programming** to reinitialise the vehicle configurations.

- Clear the faults.
- Carry out a road test (**speed > 12 mph (20 km/h) and engine speed > 1200 rpm**) for more than **30 seconds**.
- If the fault does not recur, *end the fault finding procedure*.

**c) If the sensor is correctly connected:**

- Bleed the diesel filter unit (see **MR 395 (Laguna II), 370 (Scénic II) or 364 (Mégane II), Mechanical, 13A, Fuel supply**).
- Clear the fault.
- Carry out a road test (**speed > 12 mph (20 km/h) and engine speed > 1200 rpm**) for more than **30 seconds**.
- **If the fault does not reappear**, end the fault finding procedure.

**d) If the fault reappears:**

- Check the **continuity and absence of interference resistance** on connection **3WT** between components **414** and **120**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF057  
CONTINUED**

**Check the supply** of the water detection sensor between connections **3FB** and **N**.

If the connection or connections 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.

**If none of these checks reveal any faults:**

- Replace the water detection sensor (see **MR 395 (Laguna II), 370 (Scénic II) or 364 (Mégane II), Mechanical, 13A, Fuel supply**).
- Clear the fault.
- Carry out a road test (**speed > 12 mph (20 km/h) and engine speed > 1200 rpm**) for more than **30 seconds** to confirm the repair.

Note:

If the level of water in the fuel filter unit is lower than the sensor electrodes, certain driving conditions (turns, hills) may cause **erratic illumination** of the injection fault warning light.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

<b>DF058 PRESENT OR STORED</b>	<b><u>OIL TEMPERATURE SENSOR CIRCUIT</u></b> CO.1: Open circuit or short circuit to + 12 V CC.0: Short circuit to earth
--	---

<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault is declared present when the ignition is switched on or with the engine running.</p>
	<p><b>Special notes:</b>  Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the computer connectors.  This fault only occurs on vehicles with <b>automatic transmission</b>.</p>

<p>Check the <b>oil temperature sensor</b> connections.  Check the injection computer connections.  Repair if necessary.  Measure the <b>resistance of the oil temperature sensor</b> between connections <b>47Q</b> and <b>115A</b>.  Replace the oil temperature sensor if the <b>resistance</b> is not approximately:</p> <p style="text-align: center;"> <b>1150 Ω at 40°C</b>  <b>308 Ω at 80°C</b>  <b>105 Ω at 120°C</b>  <b>53 Ω at 150°C</b> </p>
<p>Check <b>the insulation, continuity and the absence of interference resistance</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>47Q</b>,</li> <li>– connection code <b>115A</b>.</li> </ul> <p>Between components <b>120</b> and <b>688</b>.  If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the oil temperature sensor.</p>

<b>AFTER REPAIR</b>	<p>Deal with any faults.  Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	--

<b>DF059 PRESENT OR STORED</b>	<u>COMBUSTION MISFIRES ON CYLINDER 1</u>
--	--

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present, engine performance is reduced and engine instabilities may occur.
	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF040 Cylinder 1 injector circuit</b> first, if it is present or stored.

Check that the <b>IMA code for injector no. 1</b> has been entered correctly and that it matches the code marked on the corresponding injector. Enter the code to the unprogrammed/incorrectly programmed injector, if necessary. Refer to the interpretation of command <b>SC002 Enter injector codes</b> (see <b>Interpretation of commands</b> ).
Check the engine compression. Repair if necessary.
Check the <b>valve clearance</b> and adjust if necessary.
When dealing with a number of misfiring faults, check the fuel conformity by running <b>test 11 Diesel fuel conformity check</b> .
Visually inspect the return pipe of injector no. 1. Repair if necessary.
If the fault is still present, run <b>test 9 Poor injector operation</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF060 PRESENT OR STORED</b>	<u>MISFIRING ON CYLINDER 2</u>
--	--------------------------------

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present, engine performance is reduced and engine instabilities may occur.
	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF041 Cylinder 2 injector circuit</b> first, if it is present or stored.

Check that the <b>IMA code for injector no. 2</b> has been entered correctly and that it matches the code marked on the corresponding injector. Enter the code to the unprogrammed/incorrectly programmed injector, if necessary. Refer to the interpretation of command <b>SC002 Enter injector codes</b> (see <b>Interpretation of commands</b> ).
Check the engine compression. Repair if necessary.
Check the <b>valve clearance</b> and adjust if necessary.
When dealing with a number of misfiring faults, check the fuel conformity by running <b>test 11 Diesel fuel conformity check</b> .
Visually inspect the injector no. 2 return pipe. Repair if necessary.
If the fault is still present, run <b>test 9 Poor injector operation</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF061 PRESENT OR STORED</b>	<u>MISFIRING ON CYLINDER 3</u>
--	--------------------------------

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present, engine performance is reduced and engine instabilities may occur.
	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF042 Cylinder 3 injector circuit</b> first, if it is present or stored.

Check that the <b>IMA code for injector no. 3</b> has been entered correctly and that it matches the code marked on the corresponding injector. Enter the code to the unprogrammed/incorrectly programmed injector, if necessary. Refer to the interpretation of command <b>SC002 Enter injector codes</b> (see <b>Interpretation of commands</b> ).
Check the engine compression. Repair if necessary.
Check the <b>valve clearances</b> and adjust them if necessary.
When dealing with a number of misfiring faults, check the fuel conformity by running <b>test 11 Diesel fuel conformity check</b> .
Visually inspect the injector no. 3 return pipe. Repair if necessary.
If the fault is still present, run <b>test 9 Poor injector operation</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF062 PRESENT OR STORED</b>	<u>MISFIRING ON CYLINDER 4</u>
--	--------------------------------

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present, engine performance is reduced and engine instabilities may occur.
	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF043 Cylinder 4 injector circuit</b> first, if it is present or stored.

Check that the <b>IMA code for injector no. 4</b> has been entered correctly and that it matches the code marked on the corresponding injector. Enter the code to the unprogrammed/incorrectly programmed injector, if necessary. Refer to the interpretation of command <b>SC002 Enter injector codes</b> (see <b>Interpretation of commands</b> ).
Check the engine compression. Repair if necessary.
Check the <b>valve clearance</b> and adjust if necessary.
When dealing with a number of misfiring faults, check the fuel conformity by running <b>test 11 Diesel fuel conformity check</b> .
Visually inspect the injector no. 4 return pipe. Repair if necessary.
If the fault is still present, run <b>test 9 Poor injector operation</b> .
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF069 PRESENT OR STORED</b>	<b><u>IMPACT DETECTED SIGNAL</u></b> 1.DEF: Impact stored by the injection computer
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> Only apply the interpretation of this fault if the fault is present and the vehicle will not start.
	<b>Special notes:</b> The fault appears when the injection computer receives a frontal impact signal from the Airbag computer via the multiplex network. As soon as the injection computer receives this signal: – engine operation is prohibited, – the <b>level 2</b> warning light is lit. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

**If the vehicle has been involved in an accident:**

Carry out any necessary repairs,

- clear the fault,
- switch off the ignition,
- wait **1 minute**,
- switch on the ignition.

If the fault does not recur, *end the fault finding procedure.*

If the fault recurs, run fault finding on the **AIRBAG** computer.

**If the vehicle has not been involved in an accident:**

Run fault finding on the **AIRBAG** computer (see 88C, Airbag and pretensioner).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF070 PRESENT OR STORED</b>	<b><u>CLUTCH SWITCH CIRCUIT</u></b> 1.DEF: No signal 2.DEF: Inconsistent signal
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after the clutch pedal is depressed, or during a road test.
	<b>Special notes:</b> If this fault is present, the cruise control/speed limiter function will be inhibited. Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the injection computer connectors.

### WARNING

This fault may appear if the wiring harness has been damaged.  
Follow the procedure described in the Wiring Check in the Introduction.  
This check enables the condition and the conformity of the engine wiring harness to be checked.

Check the conformity and adjustment of the clutch switch (position, connection).

- Display status **ET405 Clutch pedal switch**:
  - with the clutch engaged, status **ET405 Clutch pedal switch** should be **RELEASED**
  - when the clutch pedal is disengaged status **ET405 Clutch pedal switch** should be **DEPRESSED**.
- If these checks are not OK, replace the clutch switch.

If these checks are correct:  
Check the connections of the clutch pedal switch.  
Check the injection computer connections  
Repair if necessary.

Check the **continuity and absence of interference resistance** on connection **86D** between components **120** and **675**.

If the connection or connections 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 for **earth on connection MAM** of the clutch pedal switch.  
If the connection or connections 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.  
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF086 PRESENT OR STORED</b>	<b><u>COOLANT PUMP RELAY CONTROL CIRCUIT</u></b> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to +12 V
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the ignition has been switched off and after waiting <b>1 minute</b> , or after actuator command <b>AC195 Electric coolant pump</b> .
	<b>Special notes:</b> The control relay is located in the engine compartment connection unit. If the fault is present: <ul style="list-style-type: none"> <li>– the EGR function is inhibited,</li> <li>– the <b>level 1</b> warning light is illuminated.</li> </ul> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

<b>CO.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the **electric coolant pump relay FM3 (A 20A or 30A)** and check that it is operating correctly.  
 Check the injection computer connections.  
 Repair if necessary.

Check the continuity between the following connections:

- connection codes **3FB** and **3VG** of component **573 (Laguna II)**.
- connection codes **3VG** and **3FB2** of component **573 (Scénic II)**.
- connection codes **3VG** and **3FB** of component **573 (Mégane II)**.

If these checks are correct,

Check the **continuity** and **insulation to earth** of the following connections:  
 connection code **3VG** between components **120 and 573 (Laguna II) or 299 (Mégane II and Scénic II)**  
 connection code **3FB** between components **573 and 120 (Laguna II) or 1337 (Mégane II and Scénic II)**  
 connection code **3VH** between components **573 and 369**.  
 If the connection or connections 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 for **earth on connection M** of the turbocharger bearing coolant pump connector.  
 Repair if necessary.  
 If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF086 CONTINUED</b>	
----------------------------	--

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the **electric coolant pump relay (A 20A)** and check that it is operating correctly.  
Check the injection computer connections.  
Repair if necessary.

Check the continuity between connections **3FB** and **3VG** of component **573**.

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

- connection code **3VG** between components **120** and **573**.
- connection code **MAS of component 369**.

If the connection or connections 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.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF091 PRESENT OR STORED</b>	<b><u>VEHICLE SPEED SIGNAL</u></b> 1.DEF: Inconsistent signal 2.DEF: Signal outside upper limit 3.DEF: Configuration absent or incorrect 4.DEF: Multiplex line connection fault
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present during a road test.
	<b>Special notes:</b> Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the injection computer connectors.

Check the ABS computer connections.  
Check the injection computer connections.  
Repair if necessary.

Run fault finding on the multiplex network (see **88B, Multiplexing**) and on the ABS (see **38C, Anti-lock braking system**).  
Refer to the Technical Notes for the vehicle when dealing with any faults.  
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF097 PRESENT OR STORED</b>	<b><u>CAMSHAFT SENSOR CIRCUIT</u></b> 1.DEF: No signal 2.DEF: Inconsistent signal
--	---

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test. A drop in engine speed followed by nominal behaviour from the vehicle is possible.
	<b>Special notes:</b> If this fault is present: – It is impossible to start the vehicle, – the <b>level 1</b> warning light is illuminated. Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

<b>1.DEF 2.DEF</b>	<b>NOTES</b>	Check the conformity of the <b>+ 12 V</b> after relay supply line, from connection <b>3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)</b> of component <b>1337 or 597</b> . Use the vehicle <b>Wiring Diagrams</b> Technical Note.
------------------------	--------------	---

Check the camshaft sensor connections. Check the injection computer connections. Check the camshaft sensor fitting and positioning, Also check its general condition, (damaged housing, overheating, etc.), Carry out the necessary repairs.
Check the <b>continuity and absence of interference resistance</b> of the following connections: – connection codes <b>3CQ and 3FJ</b> between components <b>120 and 746</b> .
<b>With the ignition on and the camshaft sensor connected:</b> Use a voltmeter to measure the voltage between connections <b>3FJ and 3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)</b> of the camshaft sensor: The voltage displayed should be equal to the battery voltage <b>± 0.08 V</b> . – If the voltage is outside permitted tolerance values, take the measurement again on the connector, with the <b>camshaft sensor disconnected</b> , – If the voltage is still outside permitted tolerance values with the sensor disconnected. Check the <b>continuity and the absence of interference resistance</b> on connection <b>3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)</b> between components <b>756 and 1337 or 597</b> .
If the measured voltage is correct with the sensor disconnected. Measure the <b>resistance</b> of the camshaft sensor between connections <b>3CQ and 3FB (Mégane II and Laguna II) or 3FB1 (Scénic II)</b> . Replace the sensor if its resistance is not <b>9750 Ω &lt; X &lt; 10750 Ω at 20°C</b>
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF118 PRESENT OR STORED</b>	<b><u>EGR SOLENOID VALVE SERVO-CONTROL</u></b> 1.DEF: Insufficient EGR valve flow 2.DEF: Excessive EGR valve flow
--	---

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present the EGR function is disabled. If <b>1.DEF</b> is present, the <b>level 1</b> warning light is lit. Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the injection computer connectors.
	<b>Priority when dealing with a number of faults:</b> – <b>DF272 EGR valve control circuit</b> if it is present or stored.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter. If dealing with this fault requires the EGR valve to be replaced, run command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR valve</b> offsets (see <b>Replacement of components</b> ).

Check the EGR valve connections. Check the injection computer connections. Repair if necessary.
Check for <b>continuity</b> and <b>absence of interference resistance</b> of the following connections: - connection code <b>3VP</b> , - connection code <b>3VQ</b> . between components <b>120</b> and <b>1460</b> . If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Check that there are no leaks on the EGR circuit, pierced or damaged pipes, and the tightness of the clips.
Measure the <b>resistance</b> of the EGR valve motor between connections <b>3VP</b> and <b>3VQ</b> . Replace the EGR valve if the resistance displayed is not between <b>1 Ω &lt; X &lt; 400 Ω at 20°C</b> .
If the valve is jammed or irrevocably seized, replace the EGR valve. Run command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR valve</b> offsets (see <b>Replacement of components</b> ).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF176 PRESENT OR STORED</b>	<b><u>LOW-SPEED FAN ASSEMBLY CIRCUIT</u></b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	---

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after: <ul style="list-style-type: none"> <li>– an attempted start, or with engine running,</li> <li>– command <b>AC038 Low-speed fan assembly relay</b> is run.</li> </ul>
	<b>Special notes:</b> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.

<b>CO</b>	<b>NOTES</b>	None.
-----------	--------------	-------

Check the **+ 12 V** after relay supply to the relay mounting **R09 on connection 3FB**.  
 Check the condition of the connections and the correct operation of the running lights relay **R09**.  
 Replace it if necessary.

Check the **continuity and absence of interference resistance** on connection **3JN** between components **120** and **597**.

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

<b>CC.0</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the **continuity and insulation to earth** of connection **3FB** between components **983** and **700**.  
 If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF176 CONTINUED</b>	
----------------------------	--

<b>CC.1</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the **continuity and insulation from + 12 V** of connection **3JN** between components **597** and **120**.  
If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

<b>1. DEF</b>	<b>NOTES</b>	None.
---------------	--------------	-------

Check the condition of the connections:  
– on the low-speed fan unit relay connector,  
– on the injection computer grey connector C.  
Repair if necessary.

Check the **continuity and absence of interference resistance** between the following connections:  
– connection code **3JN** between components **120** and **597**.  
– connection code **3FB** between components **983** and **700**.  
If the connection or connections 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.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

<b>DF177 PRESENT OR STORED</b>	<b><u>HIGH-SPEED FAN ASSEMBLY CIRCUIT</u></b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after: – an attempted start, or with engine running, – command <b>AC039 High-speed fan unit</b> run.
	<b>Special notes:</b> Use bornier <b>Elé. 1681</b> for all operation at the level of the injection computer connectors.

<b>CO</b>	<b>NOTES</b>	None.
-----------	--------------	-------

Check the **+ 12 V** after relay supply to the fan assembly relay mounting **R10 on connection 3FB**.  
Check the condition of the connections and the correct operation of the relay.**R10**  
Replace the relay if necessary.

Check the **continuity and the absence of interference resistance** of connection **3JP** between components **120** and **597**.  
If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

<b>CC.0</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the **continuity and insulation to earth** of connection **3FB** between components **120** and **983**.  
If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

**DF177  
CONTINUED**

**CC.1**

**NOTES**

None.

Check the **continuity and insulation from + 12 V** of connection **3JP** between components **120** and **597**.  
If the connection or connections 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.

**1. DEF**

**NOTES**

None.

Check the condition of the connections:  
– of the **R10** fan assembly relay connector,  
– on the injection computer grey connector C.  
Repair if necessary.

Check the **continuity and absence of interference resistance** between the following connections:  
– connection code **3JP**,  
– connection code **3FB**,  
Between components **120** and **597**.  
If the connection or connections 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.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

<b>DF195 PRESENT OR STORED</b>	<b>ENGINE SPEED/CAMSHAFT SENSOR CONSISTENCY</b> 1.DEF: Signal incoherent
--	---

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault becomes present after an attempt to start.
	<b>Special notes:</b> If the fault is <b>stored</b> , clear the fault from the computer memory. Switch off the ignition, start the engine and check that the fault does not reappear. Use bornier <b>Elé. 1681</b> or <b>Elé. 1590</b> for all operations on the injection computer connectors.

Check the **engine speed sensor** and **camshaft sensor** connections.  
Check the injection computer connections.  
Repair if necessary.  
With the connector disconnected, check **the continuity and absence of interference resistance** on the following connections:

- connection code **3FJ**,
- connection code **3CQ**,

**between components 120 and 746.**

- connection code **3BG**,
- connection code **3BL**.

**between components 120 and 149.**

If the connection or connections 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.

**With the ignition on and the camshaft sensor connected:**  
Use a voltmeter to measure the voltage between connections **3FJ** and **3FB** or **3FB1** of the camshaft sensor:  
The voltage displayed should be equal to the battery voltage **± 0.08 V**.

- If the voltage is outside permitted tolerance values, take the measurement again on the connector, with the **camshaft sensor disconnected**,
- If the voltage is still outside permitted tolerance values with the sensor disconnected:

Check the **continuity and absence of interference resistance** on connection **3FB** or **3FB1** between components **746 and 1337 or 983**.

If the voltage measured is correct, with the sensor disconnected:  
Measure the **resistance** of the **camshaft sensor** between connections **3CQ** and **3FB** or **3FB1**.  
Replace the sensor if its resistance is not **9750 Ω < X < 10750 Ω at 20°C**  
Check that the engine speed sensor is correctly mounted and that the flywheel target is not damaged.  
Check that the engine speed sensor - flywheel air gap is correct: **0.5 mm < X < 1.8 mm**.  
Measure the **resistance** of the **engine speed sensor** between connections **3BG** and **3BL**.  
Replace the sensor if its resistance is not **510 Ω < X < 850 Ω at 20°C**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF209 PRESENT OR STORED</b>	<b>EGR POSITION SENSOR CIRCUIT</b> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Micro-breaks
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– there is smoke coming from the exhaust,</li> <li>– the EGR offset fault finding function is disabled,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting + <b>5 seconds</b> + switch off the ignition and wait <b>1 minute</b>).</li> </ul> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.
	<b>Priorities when dealing with a number of faults:</b> <ul style="list-style-type: none"> <li>– <b>DF012 Sensor supply voltage no. 2</b> if it is present or stored.</li> </ul>
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter. If dealing with this fault requires the EGR valve to be replaced, run command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR valve</b> offsets (see <b>Replacement of components</b> ).

### WARNING

This fault may appear if the wiring harness has been damaged.  
Follow the procedure described in the **Wiring Check** in the Introduction.  
This check enables the condition and the conformity of the engine wiring harness to be checked.

<b>CO.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the EGR valve connections.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity** and **insulation to earth** of the following connections:

- connection code **3EL**,
- connection code **3GC**.

between components **120** and **1460**.  
If the connection or connections 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.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

### DF209 CONTINUED 1

#### EGR valve with a square connector:

Measure the **resistance** of the EGR valve position feedback potentiometer between connections **3GC** and **3JM**.  
Replace the EGR valve if the resistance displayed is not between **3.9 Ω < X < 9.1 Ω at 20°C**.

#### EGR valve with a flat connector:

Replace the EGR valve.

If the valve is jammed or irrevocably seized, replace the EGR valve.

When replacing the **EGR** valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the EGR valve offsets (see **Replacement of components**).

**CC.1**  
**1.DEF**

#### NOTES

None

Check the EGR valve connections.  
Check the injection computer connections.  
Repair if necessary.

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

- connection code **3EL**,
- connection code **3JM**,
- connection code **3GC**.

between components **120** and **1460**.

If the connection or connections 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 for **+ 5 V** on connection **3GC** of the EGR valve.

#### EGR valve with a square connector:

Measure the **resistance** of the EGR valve position feedback potentiometer between connections **3GC** and **3JM**.  
Replace the EGR valve if the resistance displayed is not between **3.9 Ω < X < 9.1 Ω at 20°C**.

#### EGR valve with a flat connector:

Replace the EGR valve.

If the valve is jammed or irrevocably seized, replace the EGR valve.

When replacing the **EGR** valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the EGR valve offsets (see **Replacement of components**).

### AFTER REPAIR

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.



**DF209**  
**CONTINUED 2**

Check for **+ 5 V** on connection 3GC of the EGR valve.

**EGR valve with a square connector:**

Measure the **resistance** of the EGR valve position feedback potentiometer between connections **3GC** and **3JM**.  
Replace the EGR valve if the resistance displayed is not between **3.9 Ω < X < 9.1 Ω at 20°C**.

**EGR valve with a flat connector:**

Replace the EGR valve.

If the valve is jammed or irrevocably seized, replace the EGR valve.

When replacing the **EGR** valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the EGR valve offsets (see **Replacement of components**).

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

<b>DF226 PRESENT OR STORED</b>	<b><u>DAMPER VALVE CIRCUIT</u></b> CC.1: Short circuit to + 12 V CC.0: Short circuit to earth CO: Open circuit CC: Short circuit 1.DEF: Internal electronic fault 2.DEF: External fault finding 3.DEF: Values outside tolerances
--	---

<b>NOTES</b>	<b>Conditions for applying fault finding procedures to stored faults:</b> The fault is declared present after: <ul style="list-style-type: none"> <li>– the engine is started,</li> <li>– a road test,</li> <li>– actuator command <b>AC012 Damper valve</b>,</li> <li>– the ignition is switched off for <b>1 minute</b>.</li> </ul>
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– it is difficult or even impossible to start the vehicle,</li> <li>– the engine stops noisily,</li> <li>– the <b>level 1</b> warning light is illuminated.</li> </ul> Use bornier <b>Elé. 1681 or Elé. 1590</b> for all operations on the injection computer connectors.
	<b>Priorities when dealing with a number of faults:</b> Deal with fault <b>DF046 "Battery voltage"</b> first if it is present or stored.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

<b>CC.1</b>	<b>NOTES</b>	After any work is carried out on the damper valve, run <b>SC036 Reinitialise programming</b> and select <b>Damper valve</b> , then switch off the ignition and wait <b>1 minute</b> .
-------------	--------------	---

Check the damper valve connections. Check the injection computer connections. Repair if necessary.
Check the <b>continuity and insulation from + 12 V</b> of the following connections: <ul style="list-style-type: none"> <li>– connection code <b>NT (Laguna II) or N (Scénic II and Mégane II)</b> between component <b>1461</b> and chassis earth <b>NT or N</b>.</li> <li>– connection code <b>3VN</b>,</li> <li>– connection code <b>3VM</b>.</li> </ul> between components <b>120</b> and <b>1461</b> . If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, replace the damper valve.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF226</b> <b>CONTINUED 1</b>	
------------------------------------	--

<b>CO</b> <b>CC.0</b>	<b>NOTES</b>	After any work is carried out on the damper valve, run <b>SC036 Reinitialise programming</b> and select <b>Damper valve</b> , then switch off the ignition and wait <b>1 minute</b> .
--------------------------	--------------	---

Check the damper valve connections  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity and insulation to earth** of the following connections:

- connection code **3VN**,
- connection code **3VM**.

between components **120** and **1461**

- connection code **3FB** or **3FB1** between components **1461** and **1337** or **597**.

If the connection or connections 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.

If the fault is still present, replace the damper valve.

<b>CC</b>	<b>NOTES</b>	After any work on the damper valve, run <b>SC036 Reinitialise programming</b> and <b>select Damper valve</b> , then switch off the ignition and wait for <b>1 minute</b> .
-----------	--------------	--

Check the damper valve connections.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity, insulation and absence of interference resistance** of the following connections:

- connection codes **3VN** and **3VM** between components **120** and **1461**
- connection code **3FB** or **3FB1** between components **1461** and **1337** or **597**.
- connection code **NT (Laguna II)** or **N (Scénic II and Mégane II)** between component **1461** and chassis earth **NT** or **N**.

If the connection or connections 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.

If the fault is still present, replace the damper valve.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF226</b> <b>CONTINUED 2</b>	
------------------------------------	--

<b>1.DEF</b> to <b>3.DEF</b>	<b>NOTES</b>	After any work is carried out on the damper valve, run <b>SC036 "Reinitialise programming" and select "Damper valve"</b> , then switch off the ignition and wait <b>1 minute</b> .
------------------------------------	--------------	--

Check the damper valve connections.  
Check the injection computer connections.  
Repair if necessary.

Check the **continuity, insulation and absence of interference resistance** of the following connections:

- connection code **3VN**,
  - connection code **3VM**,
- between components **120 and 1461**
- connection code **3FB or 3FB1** between components **1461 and 1337 or 597**,
  - connection code **NT (Laguna II) or N (Scénic II and Mégane II)** between component **1461** and chassis earth **NT or N**.

If the connection or connections 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.

If the fault is still present, **check that the computer output is working correctly**.

Damper valve connected:

- connect the **negative** terminal of the voltmeter to connection **NT** of the damper valve,
- connect the **positive** terminal of the voltmeter to connection **3FB** of the damper valve,
- use command **AC012 Damper valve**:

The voltmeter should display **ten cycles** of two successive voltages: **~ 2.5 V** (OCR\* of **20%**) then **~ 8.75 V** (OCR\* of **70%**).

If the voltmeter does not indicate any control while the command is running (ten **1-second** cycles), contact the Techline.

\*OCR: Opening Cyclic Ratio

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF238 PRESENT OR STORED</b>	<b>THERMOPLUNGER NO.3 RELAY CIRCUIT</b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is displayed as present following an engine start or following actuator command <b>AC031 Thermoplunger relay no. 3.</b>
	<b>If faults DF239 "Heating element relay No. 2 circuit" and DF240 "Heating element relay No. 1 circuit" occur, ignore them and go directly to configuration CF030 "Heating element configuration".</b> <b>Special notes:</b> Use bornier <b>Elé. 1681</b> for all operations on the computer connectors. See the <b>Wiring diagrams</b> Technical Note for the vehicle to locate the fuses and relays concerned.

<b>1.DEF CO</b>	<b>NOTES</b>	None
---------------------	--------------	------

Check for <b>+ 12 V after ignition supply</b> on relay mounting <b>R5 on connection 3FB</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Check the condition of the connectors of thermoplunger <b>no.3</b> relay ( <b>R5</b> ) and of the injection computer. Repair if necessary.
Check the condition and correct operation of the <b>R5</b> relay. Replace if defective.
Check the <b>continuity and absence of interference resistance</b> on connection <b>3JAB</b> between components <b>120 and 597</b> .
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

13B

<b>DF238</b> <b>CONTINUED 1</b>	
------------------------------------	--

<b>CC.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the condition and correct operation of the **R5** relay.  
Replace if defective.

Check the **continuity, absence of interference resistance and insulation** to earth of connection **3FB** between components **1069** and **983**.

If the connection or connections 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.

<b>CC.1</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the condition and correct operation of the **R5** relay.  
Replace if defective.

**Check the continuity and insulation from + 12 V** of connection **3JAB** between components **597** and **120**.

If the connection or connections 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.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF239 PRESENT OR STORED</b>	<b>THERMOPLUNGER RELAY CIRCUIT N° 2</b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after an engine start or actuator command <b>AC064 Thermoplunger no. 2 relay</b> .
	<b>If faults DF238 "Heating element relay No. 3 circuit" and DF240 "Heating element relay No. 1 circuit" occur, ignore them and go directly to configuration CF030 "Heating element configuration".</b> <b>Special notes:</b> Use bornier <b>Elé. 1681</b> for all operations on the computer connectors. See the <b>Wiring diagrams</b> Technical Note for the vehicle to locate the fuses and relays concerned.

<b>1.DEF CO</b>	<b>NOTES</b>	None
---------------------	--------------	------

Check for <b>+ 12 V after ignition supply</b> on relay mounting <b>R11 on connection 3FB</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Check the condition of the connectors on thermoplunger <b>no. 2 relay (R11)</b> and on the injection computer. Repair if necessary.
Check the condition and correct operation of the <b>R11</b> relay. Replace if defective.
Check the <b>continuity and absence of interference resistance</b> on connection <b>3JAA</b> between components <b>120 and 597</b> .
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

<b>DF239 CONTINUED</b>	
----------------------------	--

<b>CC.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the condition and the correct operation of the **R1** relay.  
Replace the relay if necessary.

Check the **insulation to earth** of connection **3FB** between components **1068** and **983**.

If the connection or connections 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.

<b>CC.1</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the condition and correct operation of the **R11** relay.  
Replace if defective.

**Check the continuity and insulation from + 12 V** of connection **3JAA** between components **120** and **597**.

If the connection or connections 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.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



<b>DF240 PRESENT OR STORED</b>	<b>THERMOPLUNGER N° 1 RELAY CIRCUIT</b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the engine is started or after actuator command <b>AC063 Thermoplunger no. 1 relay</b> .
	<b>If faults DF238 "Heating element relay No. 3 circuit" and DF239 "Heating element relay No. 2 circuit" occur, ignore them and go directly to configuration CF030 "Heating element configuration".</b> <b>Special notes:</b> Use bornier <b>Elé. 1681</b> for all operations on the computer connectors. See the <b>Wiring diagrams</b> Technical Note for the vehicle to locate the fuses and relays concerned.

<b>1.DEF CO</b>	<b>NOTES</b>	None
---------------------	--------------	------

Check for <b>+ 12 V after ignition supply</b> on relay mounting <b>R1 on connection 3FB</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Check the condition of the connectors on thermoplunger <b>no. 1 relay (R1)</b> and on the injection computer. Repair if necessary.
Check the condition and the correct operation of the <b>R1</b> relay. Replace if defective.
Check the <b>continuity and absence of interference resistance</b> of connection <b>3JA</b> between components <b>120</b> and <b>597</b> .
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

13B

<b>DF240 CONTINUED</b>	
----------------------------	--

<b>CC.0</b>	<b>NOTES</b>	None
-------------	--------------	------

Check the condition and the correct operation of the **R1** relay.  
Replace if defective.

Check the **insulation to earth** of connection **3FB** between components **1067** and **983**.

If the connection or connections 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.

<b>CC.1</b>	<b>NOTES</b>	None.
-------------	--------------	-------

Check the condition and the correct operation of the **R1** relay.  
Replace if defective.

**Check the continuity and insulation from + 12 V** of connection **3JA** between components **120** and **597**.

If the connection or connections 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.

<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>DF250 PRESENT OR STORED</b>	<b><u>ELECTRONIC STABILITY PROGRAM FUNCTION</u></b> 1.DEF: Inconsistent signal 2.DEF: Multiplex line connection fault
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present during a road test.
	<b>Special notes:</b> Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.

Check the ABS computer connections.  
Check the injection computer connections.  
Repair if necessary.

Run fault finding on the multiplex network (see **88B, Multiplexing**) and on the ABS (see **38C, Anti-lock braking system**).  
Refer to the Technical Notes for the vehicle when dealing with any faults.  
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF272 PRESENT OR STORED</b>	<b><u>EGR VALVE CONTROL CIRCUIT</u></b> 1.DEF: Valve jammed open 2.DEF: Valve jammed closed
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a road test.
	<b>Special notes:</b> The EGR function is inhibited if several faults are present with <b>DF226 Damper valve circuit</b> . If <b>1.DEF</b> is present: <ul style="list-style-type: none"> <li>– the <b>level 1</b> warning light is lit,</li> <li>– the vehicle performance is reduced,</li> <li>– there is smoke coming from the exhaust.</li> </ul> Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.

<b>1.DEF 2.DEF</b>	<b>NOTES</b>	None
------------------------	--------------	------

Check the EGR valve connections. Check the injection computer connections. Repair if necessary.
Check the continuity and absence of interference resistance of the following connections: <ul style="list-style-type: none"> <li>– connection code <b>3VP</b>,</li> <li>– connection code <b>3VQ</b>.</li> </ul> between components <b>120</b> and <b>1460</b> . If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Check that there are no leaks on the EGR circuit, pierced or damaged pipes, and the tightness of the clips.
Measure the <b>resistance</b> of the EGR valve motor between connections <b>3VP</b> and <b>3VQ</b> . Replace the EGR valve if the resistance displayed is not between <b>1 Ω &lt; X &lt; 400 Ω at 20°C</b> .
If the valve is jammed or irrevocably seized, replace the EGR valve. Run command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR</b> valve offsets (see <b>Replacement of components</b> ).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF276 PRESENT</b>	<b>INJECTOR CODE PROGRAMMING</b> 1.DEF: Internal electronic fault when writing 2.DEF: No code stored
--------------------------	--

<b>NOTES</b>	<b>Condition for applying fault finding ONLY to a present fault:</b> The fault is declared present after: <ul style="list-style-type: none"> <li>– reprogramming the injection computer,</li> <li>– replacing and programming the injection computer.</li> </ul>
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– the engine speed is limited,</li> <li>– the <b>level 1</b> warning light is illuminated.</li> </ul>

<b>1.DEF</b>	<b>NOTES</b>	None
--------------	--------------	------

Enter the injector codes using command **SC002 Enter injector codes** (see **Interpretation of commands**).  
 If the fault is still present after switching off the ignition, waiting **1 minute** and then re-establishing dialogue.  
 Refer to the interpretation of command **SC002 Enter injector codes**.  
 If the fault is still present, contact the Techline.  
 Otherwise clear the fault memory using **RZ007 Fault memory**.

<b>2.DEF</b>	<b>NOTES</b>	This fault appears on any blank computer (new or recently reprogrammed)
--------------	--------------	---

### WARNING

**A computer without the IMA option can be replaced by a computer with this option. The codes are not saved during command SC003 Save computer data.**  
**In this case, status ET104 "Use of injector codes" becomes "YES", fault DF276 is present and the engine operates in defect mode.**  
 Program the injector codes using command **SC002 Enter injector codes** (see **Interpretation of commands**).  
 If the fault is still present after switching off the ignition, waiting **1 minute** and then re-establishing dialogue, refer to interpretation of command **SC002 Enter injector codes**.  
 If the fault is still present, contact the Techline.  
 Otherwise clear the fault memory using **RZ007 Fault memory**.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF308 PRESENT OR STORED</b>	<p><b><u>CLOGGED PARTICLE FILTER</u></b></p> <p>1.DEF: Maximum limit</p>
<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.</p> <p><b>Special notes:</b> If the fault is present:</p> <ul style="list-style-type: none"> <li>– particle filter regeneration is inhibited,</li> <li>– the EGR function is inhibited,</li> <li>– the vehicle performance is reduced,</li> <li>– the <b>level 1</b> warning light is illuminated and a warning message or a special particle filter warning light is displayed on the instrument panel.</li> </ul> <p>Use bornier <b>Elé. 1681</b> for all operations on the engine management computer connector.</p> <p><b>Priorities when dealing with a number of faults:</b> Firstly, deal with the following faults:</p> <ul style="list-style-type: none"> <li>– <b>DF315 Particle filter differential pressure sensor if it is present.</b></li> <li>– <b>DF308 if DF315 is stored.</b></li> <li>– <b>DF226 Damper valve circuit</b> if it is present or stored.</li> <li>– <b>DF272 EGR valve control circuit</b> if it is present or stored.</li> </ul>

<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	---

**DF308  
CONTINUED 1**

The fault appears if the weight of soot contained in the particle filter exceeds:

- 74 g for Scénic II and 66 g for Mégane II Vdiag 58 and 5C
- 45g for Vdiag 50.
- 56 g for Vdiag 18.
- 59 g for Vdiag 1C and 20.

**Step 1:**

Run **TEST 2 Air path at the turbocharger**.

If the air path is not correct:

- Repair the leak,
- replace the particle filter,
- run command **SC036 Reinitialise programming** (see **Interpretation of commands**) and select **After particle filter replacement**.
- **Clear fault DF308, if Present or Stored.**

**IMPORTANT: DF308 must be cleared within the 3 minutes following the last power latch.**

If the air path is in order, go **to Step 2**.

\* diff. : differential

\*temp. : temperature

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

**DF308  
CONTINUED 2**

**Step 2:**

Check whether one or more faults, in the list below, are present or stored.

If at least one exists:

- Deal with the present and stored faults,
- replace the particle filter,
- run command **SC036 Reinitialise programming** (see **Interpretation of commands**) and select **"After particle filter replacement"**.
- **Clear fault DF308, if Present or Stored**

**IMPORTANT: DF308 must be cleared within the 3 minutes following the last power latch.**

If no faults are present or stored, move on to **step 3**.

List of faults:

- **DF001 Coolant temperature sensor circuit.**
- **DF003 Atmospheric pressure sensor circuit.**
- **DF011 Sensor supply voltage no. 1.**
- **DF013 Sensor supply voltage no. 3.**
- **DF038 Computer.**
- **DF039 Inlet air temperature sensor circuit.**
- **DF055 Turbocharging pressure regulation circuit, 1.DEF Pressure too low.**
- **DF056 Air flowmeter circuit.**
- **DF310 Particle filter upstream temp\* sensor.**
- **DF315 Particle filter diff\* pressure sensor.**
- **DF717 Particle filter upstream pressure.**
- **DF778 Turbine upstream temperature regulation.**
- **DF953 Particle filter absent.**

**Step 3:**

Carry out an After-Sales regeneration.

Follow the procedure for command **SC017 Particle filter regeneration** (see **Interpretation of commands**).

**Clear fault DF308, if Present or Stored**

**IMPORTANT: DF308 must be cleared within the 3 minutes following the last power latch.**

If the fault is still present, contact the Techline.

**AFTER REPAIR**

Deal with any faults.

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



<b>DF309 PRESENT OR STORED</b>	<b>PARTICLE FILTER DOWNSTREAM TEMP.* SENSOR</b> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault becomes present: – ignition is on ( <b>CC.0</b> ), – following a road test, engine warm ( <b>CO.1</b> ). Use bornier <b>Elé.1681</b> for all operations on the engine management computer connector.
	<b>IMPORTANT</b> The particle filter downstream temperature sensor only measures temperatures above 50°C.

<b>CC.0</b>	<b>NOTES</b>	None.
-------------	--------------	-------

<p>Check the condition of the particle filter downstream temperature sensor connector (see <b>Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1288</b>).</p> <p>Check the condition of the engine management computer connector (see <b>Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120</b>).</p> <p>If the connectors are faulty and if there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>) repair the connector(s); otherwise, replace the wiring.</p>
<p>Check the <b>insulation to earth</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>3TG</b>,</li> <li>– connection code <b>3XU</b>,</li> </ul> <p>between components <b>120</b> and <b>1288</b>.</p> <p>If any of the connections are faulty and there is a repair method (see <b>Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs</b>), repair the wiring; otherwise replace the wiring.</p>
<p>If the fault is still present, replace the particle filter downstream temperature sensor.</p>

\*temp: temperature

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF309  
CONTINUED**

**CO.1**

**NOTES**

**None.**

Check the condition of the particle filter downstream temperature sensor connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1288**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120**).

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(s); otherwise, replace the wiring.

Check **the continuity and insulation** of the following connections against **+ 12 V**:

- connection code **3TG**,
- connection code **3XU**,

between components **120** and **1288**.

If any of the connections are faulty and there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

If the fault is still present, replace the particle filter downstream temperature sensor.

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

# DIESEL INJECTION

## Fault finding – Interpretation of faults

13B

<b>DF310 PRESENT OR STORED</b>	<b>PARTICLE FILTER UPSTREAM TEMP*. SENSOR</b> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault becomes present: <ul style="list-style-type: none"> <li>– ignition is on (<b>CC.0</b>),</li> <li>– following a road test, engine warm (<b>CO.1</b>).</li> </ul>
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– particle filter regeneration is inhibited,</li> <li>– the <b>level 1</b> warning light is lit,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting <b>+ 5 seconds</b> + switch off the ignition and wait <b>1 minute</b>).</li> </ul>
	<b>IMPORTANT</b> The particle filter upstream temperature sensor only measures temperatures above 50°C.

<b>CC.0</b>	<b>NOTES</b>	None.
-------------	--------------	-------

<p>Check the condition of the particle filter upstream temperature sensor connector (see <b>Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1287</b>).</p> <p>Check the condition of the engine management computer connector (see <b>Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120</b>).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p> <p>Check the <b>insulation</b> to <b>earth</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>3XT</b>,</li> <li>– connection code <b>3TD</b>,</li> </ul> <p>between components <b>120</b> and <b>1287</b>.</p> <p>If any of the connections are faulty and there is a repair method (see <b>Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs</b>), repair the wiring; otherwise replace the wiring.</p> <p>If the fault is still present, replace the particle filter upstream temperature sensor.</p>
--

\*temp: temperature

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

13B

<b>DF310 CONTINUED</b>	
----------------------------	--

<b>CO.1</b>	<b>NOTES</b>	<b>None.</b>
-------------	--------------	--------------

Check the condition of the particle filter upstream temperature sensor connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1287**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120**).

If one of the connectors is 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 continuity and insulation** of the following connections against **+ 12 volts**:

- connection code **3XT**,
- connection code **3TD**,

between components **120** and **1287**.

If any of the connections are faulty and there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

If the fault is still present, replace the particle filter upstream temperature sensor.

<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>DF311 PRESENT OR STORED</b>	<u><b>FAILED REGENERATIONS LIMIT EXCEEDED</b></u>
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– the <b>level 1</b> warning light is lit,</li> <li>– particle filter regenerations when driving are inhibited.</li> </ul> Use bornier <b>Elé. 1681</b> for all operations on the engine management computer connector.
	<b>Priorities when dealing with a number of faults:</b> Firstly, deal with the following faults: <ul style="list-style-type: none"> <li>– DF308 Particle filter clogged <b>if it is present or stored</b>,</li> <li>– <b>DF226 Damper valve circuit</b> if it is present or stored,</li> <li>– DF272 EGR valve control circuit <b>if it is present or stored</b>.</li> </ul>

**The fault appears after a certain number of failed regeneration attempts while driving (between 10 and 12 for MEGANE II and SCENIC II; between 6 and 8 for LAGUNA II).**

- Run **TEST 2 Air path at the turbocharger**.
- Carry out an After-Sales regeneration.
- Follow the procedure for command **SC017 Particle filter regeneration** (see **Interpretation of commands**).

**Carry out an oil change if the particle filter is replaced.**

\*diff.: differential

\*temp. : temperature

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF312 PRESENT OR STORED</b>	<u><b>SPEED REQUEST</b></u>
<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– a warning message or a special particle filter warning light is displayed on the instrument panel,</li> <li>– <b>A specific kind of driving is required to bring about regeneration of the particle filter when driving.</b></li> </ul> Use bornier <b>Elé. 1681</b> for all operations on the engine management computer connector.
	<b>Priorities when dealing with a number of faults:</b> Firstly, deal with the following faults: <ul style="list-style-type: none"> <li>– <b>DF308 Particle filter clogged</b> if it is present or stored,</li> <li>– <b>DF311 Number of failed regenerations exceeded</b> if it is present or stored,</li> <li>– <b>DF226 Damper valve circuit</b> if it is present or stored,</li> <li>– <b>DF272 EGR valve control circuit</b> if it is present or stored.</li> </ul>

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF312  
CONTINUED**

For MEGANE II and SCENIC II, the fault appears when the weight of soot contained in the particle filter is greater than:

Engine	PR383 Weight of soot in the particle filter		PR848 Number of failed regenerations	
	Scenic II	Mégane II	Scenic II	Mégane II
F9Q803 Vdiag 50	35	35	3	
F9Q803 Vdiag 58 and 5C	50		h7	
F9Q804 Vdiag 58 and 5C	58	50	7	

For LAGUNA II, the fault appears when the weight of soot contained in the particle filter is greater than 46 g (Vdiag 18,1C, 20 only) or:

- 8 failed regeneration attempts while driving for Vdiag 18
- 6 failed regeneration attempts while driving for Vdiag 1C and 20
- Run **TEST 2 Air path at the turbocharger**. Then continue fault finding by applying the following flow chart.

### PART A

The flow chart on the following page allows analysis of the driving profile and the causes for the warning to come on:

\* diff: differential

**AFTER REPAIR**

Deal with any faults.  
Carry out a road test followed by another check with the **diagnostic tool**.

### DF312 CONTINUED 1

Repair request with **DF312 present or stored ONLY**

Read the information from the **Particle filter history sub-function: PR784 to PR793 Stored DF312 no. 1 to no. 10**

Are **PR784 to PR793** all equal to **0 miles (0 km)**?

NO

YES

Among these parameters (**PR784 to PR793**):

- Find the parameter with the highest mileage: this is the mileage of the last **DF312**.
- Note the parameter index on the order of repair with the relevant mileage value.

E.g.: **PR787 = 2794 miles (4657 Km)**

Read the information from the **Particle filter history sub-function: PR794 to PR803 Failed regeneration records no. 1 to no. 10.**

vdiag 5c and 20

vdiag 50, 58, 18 and 1c

Is at least one of **PR794 to PR803 = 19660 miles (32766 km)**?

YES

NO

Identify the distance(s) from the values of parameters **PR794 to PR803 Failed regeneration records no. 1 to no. 10**, included between the **Mileage of the last DF312** and the **Mileage of the last DF312 - 120 miles (200 km)**. These are the **mileages of the last failures**.

Example: **2674 miles (4457 km) < PR801 = 2760 miles (4600 km) < 2794 miles (4657 km)**

Is there at least one?

NO

YES

Within **ET706 to ET715 Stored engine status no. 1 to no. 10**:

- Read the values of the statuses relating to the **mileage of the last failures**.
- These are the **engine statuses of the last failures**.

Is the **engine status value** for one of the last failures **STOPPED**?

NO

Contact the Techline.

YES

- Read in the context of the appearance of fault **DF312**, **PR383 Weight of soot in the particle filter**. It is the **soot deposit at the time of DF312**.
- Read in the current context, the **current value of PR383 Weight of soot in the particle filter**

NO

Current value of **PR383 > soot weight at the time of DF312 + 5g**?

YES

**B**

**C**

\*Hist: history

### AFTER REPAIR

Deal with any faults.

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



**DF312  
CONTINUED 2**

**PART B**

**1- NO particle filter regeneration.**

2- On the repair order, note the parameter and the status that correspond to the last failure:

- **Mileage of the last DF312.**
- **Mileage of the last failures.**
- **Engine statuses of the last failures.**

E.g.: **PR787 = 2794 miles (4657 km); PR801 = 2760 miles (4600 km); engine status = STOPPED.**

**3- Interpretation of the values written on the order of repair by the service advisor for the customer:**

Before the last time the **warning light or Particle Filter message** came on (appeared at the **Mileage of the last DF312**), the customer had not respected the driving recommendations: the failure that occurred at the **Mileage of the last failure** is due to the engine being switched off.

4- Explain to the customer the procedure to turn off the warning light, backed up by the parameters written in the repair order: see **PART D**.

**PART C**

1- Carry out a regeneration in the Renault network with the **approval of the Techline**.

2- Change the oil and replace the oil filter if requested by a message on the **diagnostic tool**.

3- Run command **SC036 Reinitialise programming** and select **After particle filter replacement**

4- Explain to the customer the procedure for regeneration when driving in order to avoid unnecessary repairs: see **PART D**.

**PART D**

Procedure to switch off the Particle filter message or warning light on the instrument panel.

Certain types of driving can trigger the illumination of the particle filter warning light or message, and therefore cause fault **DF312** to appear. The customer must drive in a specific way (refer to vehicle's user manual) which entails:

1. When the engine is warm, drive at a speed greater than **48 mph (80 km/h)** for **2 minutes** to trigger the regeneration procedure.
2. Continue to drive at an average speed of **48 mph (80 km/h)** until the "particle filter" message or warning light on the instrument panel goes out. In order for the procedure to succeed, it is necessary to drive without stopping the engine or leaving the engine running at idle speed for an extended period of time. The regeneration time depends on the vehicle and driving conditions but should last for **20 minutes maximum**.
3. If regeneration when driving fails (the warning light has not switched off or the service warning light has come on), carry out a particle filter regeneration in the Renault dealership.

Run command **SC017 Particle filter regeneration** (see **Interpretation of commands**).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

Deal with any faults.

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

<b>DF315 PRESENT OR STORED</b>	<b>PARTICLE FILTER DIFF*. PRESSURE SENSOR</b> CO: Open circuit CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Inconsistent signal 2.DEF: Signal outside lower limit
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"> <li>– the <b>level 1</b> warning light is lit,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting <b>+ 5 seconds</b> + switch off the ignition and wait <b>1 minute</b>),</li> <li>– the particle filter fault finding procedure is inhibited,</li> <li>– particle filter regeneration is inhibited.</li> </ul>
	<b>Priorities when dealing with a number of faults:</b> <ul style="list-style-type: none"> <li>● DF315 if it is present.</li> <li>● DF308 Particle filter clogged if DF315 is stored and DF308 is present.</li> <li>● DF011 Sensor supply voltage no. 1 if it is present or stored</li> </ul>

<b>CC.1</b>	<b>NOTES</b>	None
-------------	--------------	------

<p>Check the condition of the differential pressure sensor connector (see <b>Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1290</b>).</p> <p>Check the condition of the engine management computer connector (see <b>Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120</b>).</p> <p>If the connectors are faulty and if there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>) repair the connector(s); otherwise, replace the wiring.</p>
<p>Check <b>the insulation</b> from <b>+ 12 V</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– connection code <b>3TL</b>,</li> <li>– connection code <b>3TM</b>,</li> </ul> <p>between components <b>120</b> and <b>1290</b>.</p> <p>If any of the connections are faulty and there is a repair method (see <b>Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs</b>), repair the wiring; otherwise replace the wiring.</p>
<p>If the fault is still present, replace the differential pressure sensor.</p>

\*diff: differential

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

# 13B

<b>DF315 CONTINUED</b>	
----------------------------	--

<b>CO.0 CO</b>	<b>NOTES</b>	None
--------------------	--------------	------

Check the condition of the differential pressure sensor connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1290**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120**).

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(s); otherwise, replace the wiring.

Check the **continuity and insulation to earth** of the following connections:

- connection code **3TL**,
- connection code **3TM**,

between components **120** and **1290**.

If any of the connections are faulty and there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

If the fault is still present, replace the differential pressure sensor.

<b>1.DEF 2.DEF</b>	<b>NOTES</b>	None
------------------------	--------------	------

Check the condition of the pressure pipes on the differential pressure sensor.

Check their seal and that they are correctly positioned (see **MR 395 (Laguna II) or 364 (Mégane II), or 370 (Scénic II), Mechanical, 19B Exhaust, Particle filter pressure sensor: Removal - Refitting**).

Replace if necessary.

Check the condition of the connectors on the differential pressure sensor and the injection computer.

If the connector(s) is faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s); otherwise, replace the wiring.

Check the **continuity and absence of interference resistance** of the following connections:

- Connection code **3TL**,
- Connection code **3TM**.

Between components **120** and **1290**.

If the connection or connections 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.

If the fault is still present, replace the differential pressure sensor.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF485 PRESENT OR STORED</b>	<u><b>CATALYTIC CONVERTER FAULT FINDING</b></u>
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault occurs during After-Sales regeneration using the <b>diagnostic tool</b> when the particle filter upstream temperature is less than <b>450°C</b> .
	<b>Special notes:</b> If the fault is present, particle filter regenerations are not possible. Use bornier <b>Elé. 1681</b> for all operations on the engine management computer connector.

The oxidation catalytic converter does not produce enough heat at the particle filter inlet to regenerate the particle filter.  
Replace the catalytic converter, then run command **SC017 Particle filter regeneration**.  
If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

13B

<b>DF504 PRESENT OR STORED</b>	<b><u>AUTOMATIC TRANSMISSION</u></b> 1.DEF: Multiplex line connection fault
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults</b> The fault is declared present with the engine running.
	<b>Special notes:</b> <b>If the fault is present:</b> <ul style="list-style-type: none"><li>– the <b>level 1</b> warning light is lit,</li><li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting <b>+ 5 seconds</b> + switch off the ignition and wait <b>1 minute</b>).</li></ul>

**Run a multiplex network test (see 88B, Multiplexing).**

If the fault is still present, run fault finding on the **Automatic transmission** system (see **21A, Automatic transmission**).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

# 13B

<p><b>DF532 PRESENT OR STORED</b></p>	<p><b>ALTERNATOR CHARGE SIGNAL</b> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Above maximum threshold. 2.DEF: Below minimum threshold.</p>
---	---

<p><b>NOTES</b></p>	<p><b>Conditions for applying the fault finding procedure to stored faults</b> The fault is declared present when the ignition is switched on or with the engine running.</p>
	<p><b>Special notes:</b> If the fault is present, the <b>level 1</b> warning light will be lit.</p>
	<p><b>IMPORTANT</b> The fault can appear after the alternator has been saturated for too long. For stored faults, clear the fault, switch off the ignition and wait for <b>1 minute</b>, then perform a road test to confirm the fault before any carrying out any operation.</p>

<p><b>Run a multiplex network test (see 88B, Multiplexing).</b></p>
<p><b>For Laguna II:</b> If the fault is still present, check the insulation and continuity of connection <b>2K</b> between components <b>120 and 103</b>.</p>
<p>If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

<p><b>AFTER REPAIR</b></p>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>
----------------------------	---

<b>DF619 PRESENT OR STORED</b>	<u><b>EGR VALVE JAMMED OPEN</b></u>
--	-------------------------------------

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after a road test.
	<b>Priorities when dealing with a number of faults:</b> <ul style="list-style-type: none"><li>– <b>DF118 EGR solenoid valve servo-control,</b></li><li>– <b>DF209 EGR valve position sensor circuit,</b></li><li>– <b>DF272 EGR valve control circuit,</b></li></ul> if they are present or stored.
	<b>Special note:</b> If the fault is present: <ul style="list-style-type: none"><li>– The EGR and turbocharging functions are inhibited,</li><li>– the <b>level 1</b> warning light is illuminated.</li></ul> Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter. If the EGR valve needs to be replaced to resolve the fault, use command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR</b> valve offsets (see <b>Replacement of components</b> ).

Check the EGR valve connections.  
Check the injection computer connections.  
Repair if necessary.

Check the operation of the EGR valve:

- exit fault finding mode in CLIP,
- switch off the vehicle ignition,
- disconnect the EGR valve connector,
- remove the EGR valve.
- Check that there are no particles blocking the movement of the piston.
- Clean the EGR valve, (see **Technical Note 3916A Cleaning the EGR valve**).
- Refit the EGR valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the **EGR** valve offsets (see **Replacement of components**).

If the valve is jammed or irrevocably seized, replace the EGR valve. Run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the **EGR** valve offsets (see **Replacement of components**).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF620 PRESENT OR STORED</b>	<u><b>EGR VALVE FOULED</b></u>
<b>NOTES</b>	<p><b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after a road test.</p>
	<p><b>Priorities when dealing with a number of faults:</b></p> <ul style="list-style-type: none"> <li>– <b>DF118 EGR solenoid valve servo-control,</b></li> <li>– <b>DF209 EGR valve position sensor circuit,</b></li> <li>– <b>DF272 EGR valve control circuit,</b></li> </ul> <p>if they are present or stored.</p>
	<p><b>Special note:</b> If the fault is present:</p> <ul style="list-style-type: none"> <li>– the EGR function is inhibited,</li> <li>– particle filter regeneration is inhibited,</li> <li>– turbocharging is inhibited,</li> <li>– the <b>level 1</b> warning light is lit.</li> </ul> <p>Use bornier <b>Elé.1681 or Elé.1590</b> for any operation on the injection computer connectors.</p>
	<p><b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter. If the EGR valve needs to be replaced to resolve the fault, use command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR</b> valve offsets (see <b>Replacement of components</b>).</p>
<p>Check the EGR valve connections. Check the injection computer connections. Repair if necessary.</p>	
<p>Check the operation of the EGR valve:</p> <ul style="list-style-type: none"> <li>– exit fault finding mode in CLIP,</li> <li>– switch off the vehicle ignition,</li> <li>– disconnect the EGR valve connector,</li> <li>– remove the EGR valve.</li> <li>– Check that there are no particles blocking the movement of the piston.</li> <li>– Clean the EGR valve, (see <b>Technical Note 3916A Cleaning the EGR valve</b>).</li> <li>– Refit the EGR valve, run command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR</b> valve offsets (see <b>Replacement of components</b>).</li> </ul> <p>If the valve is jammed or irrevocably seized, replace the EGR valve. Run command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR</b> valve offsets (see <b>Replacement of components</b>).</p>	
<b>AFTER REPAIR</b>	<p>Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b>.</p>



<b>DF621 PRESENT OR STORED</b>	<u><b>EGR VALVE JAMMED OPEN (OBD FAULT)</b></u>
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after a road test.
	<b>Priorities when dealing with a number of faults:</b> <ul style="list-style-type: none"> <li>– <b>DF118 EGR solenoid valve servo-control,</b></li> <li>– <b>DF209 EGR valve position sensor circuit,</b></li> <li>– <b>DF272 EGR valve control circuit,</b></li> </ul> if they are present or stored.
	<b>Special note:</b> If the fault is present: <ul style="list-style-type: none"> <li>– there is heavy smoke coming from the exhaust,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting + 5 seconds + switch off the ignition and wait 1 minute).</li> </ul> Use bornier <b>Elé.1681</b> or <b>Elé.1590</b> for any operation on the injection computer connectors.
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter. If the EGR valve needs to be replaced to resolve the fault, use command <b>SC036 Reinitialise programming</b> and select <b>EGR valve</b> to reinitialise the <b>EGR</b> valve offsets (see <b>Replacement of components</b> ).

Check the EGR valve connections.  
 Check the injection computer connections.  
 Repair if necessary.

Check the operation of the EGR valve:

- exit fault finding mode in CLIP,
- switch off the vehicle ignition,
- disconnect the EGR valve connector,
- remove the EGR valve.
- Check that there are no particles blocking the movement of the piston.
- Clean the EGR valve, (see **Technical Note 3916A Cleaning the EGR valve**).
- Refit the EGR valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the **EGR** valve offsets (see **Replacement of components**).

If the valve is jammed or irrevocably seized, replace the EGR valve. Run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the **EGR** valve offsets (see **Replacement of components**).

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

# DIESEL INJECTION

## Fault finding – Interpretation of faults

# 13B

<b>DF652 PRESENT OR STORED</b>	<b><u>TURBINE UPSTREAM TEMPERATURE SENSOR CIRCUIT</u></b> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO.1: Open circuit or short circuit to + 12 V 1.DEF: Signal outside upper limit
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault becomes present: – ignition is on ( <b>CC.0</b> ), – following a road test, engine warm ( <b>CO.1</b> ).
	<b>Special notes:</b> If the fault is present: – the EGR function is inhibited, – particle filter regeneration is inhibited, – the vehicle performance is reduced, – the <b>level 1</b> warning light is illuminated.
	<b>Priorities when dealing with a number of faults:</b> <b>DF011 Sensor voltage supply no. 1</b> <b>IMPORTANT</b> The turbine upstream temperature sensor only measures temperatures above 200.°C

Check the condition of the turbine upstream temperature sensor connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1589**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120**).

If one of the connectors is 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 continuity, absence of interference resistance and insulation** against + 5 V and + 12 V of the following connections:

- connection code **3ABS**,
- connection code **3ABT**.

Between components **120** and **1589**.

If the connection or connections 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 the **continuity, absence of interference resistance and insulation to earth** of connection **3ABS** between components **120** and **1589**.

If the connection or connections 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 for **earth** on connection **3ABT** of the turbine upstream temperature sensor

If the fault is still present, warm up the engine until **PR064 Coolant temperature = 80°C**.

Run the engine at fast idle speed:

**PR055 Engine speed = 1500 rpm for 2 minutes.**

If **PR667 Turbine upstream temperature** remains fixed at **200°C**, replace the turbine upstream temperature sensor.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF717 PRESENT OR STORED</b>	<b><u>PARTICLE FILTER UPSTREAM PRESSURE</u></b> 1.DEF: Signal incoherent
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> <b>If the fault is present:</b> <ul style="list-style-type: none"><li>– the <b>level 1</b> warning light is lit,</li><li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting <b>+ 5 seconds</b> + switch off the ignition and wait <b>1 minute</b>),</li><li>– the particle filter fault finding procedure is inhibited,</li><li>– particle filter regeneration is inhibited.</li></ul>

Check the condition of the pressure pipe between the particle filter upstream take-off point and the differential pressure sensor.

Check that the pipe is not crushed, blocked or pierced.  
Check that it is correctly positioned and connected to the differential pressure sensor (**see MR 395 (Laguna II), 370 (Scénic II) or 364 (Mégane II), Mechanical, 19B Exhaust, Particle filter pressure sensor: Removal - Refitting**).  
Replace the pressure pipe if necessary.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF778 PRESENT OR STORED</b>	<b><u>TURBINE UPSTREAM TEMPERATURE REGULATION</u></b> 1.DEF: Measured temperature too high 2.DEF: Parameter at maximum limit
<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault becomes present: <ul style="list-style-type: none"><li>– the engine is started with a speed greater than <b>1750 rpm</b> and a fuel flow greater than <b>30 mg/st</b>,</li><li>– a road test.</li></ul>
	<b>Special notes:</b> If the fault is present: <ul style="list-style-type: none"><li>– particle filter regeneration is inhibited,</li><li>– the vehicle performance is reduced,</li><li>– the <b>level 1</b> warning light is lit.</li></ul>
	<b>IMPORTANT</b> This fault can result in a rapid and significant fouling of the particle filter.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

**DF778  
CONTINUED**

Check the turbine upstream temperature sensor connections.

check the engine management computer connections.

If 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, absence of interference resistance and insulation** against **+ 5 V** and **+ 12 V** of the following connections:

- connection code **3ABS**,
- connection code **3ABT**.

Between components **120** and **1589**.

If the connection or connections 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 the **continuity, absence of interference resistance and insulation** to **earth** of connection **3ABS** between components **120** and **1589**.

Check for **earth** on connection **3ABT** of the turbine upstream temperature sensor.

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

Apply **TEST 4 Turbocharged air inlet circuit check**.

If the fault is still present, warm up the engine until parameter **PR064 Coolant temperature = 80°C**.

Run the engine at fast idle speed:

**PR055 Engine speed = 1500 rpm for 2 minutes**.

If **PR667 Turbine upstream temperature** remains fixed at **200°C**, replace the turbine upstream temperature sensor.

**AFTER REPAIR**

Deal with any faults.

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

<b>DF890 PRESENT OR STORED</b>	<u>MOVEMENT DRG* PARTICLE FILTER REGEN.*</u>
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault becomes present during an After-Sales regeneration carried out using the <b>diagnostic tool</b> at a speed above zero.
	<b>Special notes:</b> If the fault is present, the particle filter regeneration in progress is interrupted.

**IMPORTANT**

The fault is present because the vehicle has been driven while the After-Sales regeneration was in progress.

The vehicle must remain stationary throughout regeneration.

**DO NOT DRIVE THE VEHICLE.**

**CHECK THAT THE VEHICLE IS CORRECTLY IMMOBILISED.**

– switch off the ignition and wait for the diagnostic tool **message**:

**"Loss of dialogue with the computer, check the tool connection and the computer supply",**

– switch on the ignition,

– establish dialogue with the injection computer,

– carry out another After-Sales regeneration,

– Run command **SC017 Particle filter regeneration** and follow the procedure (see **Interpretation of commands**).

If the fault is still present, contact the Techline.

\* DRG: during

\* REGEN: regeneration

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF899 PRESENT OR STORED</b>	<u>REGENERATION TEMPERATURE LIMIT EXCEEDED</u>
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault occurs during After-Sales regeneration using the <b>diagnostic tool</b> when the particle filter upstream temperature is above <b>700°C</b> .
	<b>Special notes:</b> If the fault is present, the particle filter regeneration in progress is interrupted.

**IMPORTANT**

The fault is present because the particle filter has reached an abnormally high temperature while After-Sales regeneration is being carried out.

The vehicle's particle filter upstream temperature must not exceed 700°C during the whole regeneration process.

- Replace the particle filter,
- run command **SC036 Reinitialise programming** (see Interpretation of commands) and select **After particle filter replacement**.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--

<b>DF953 PRESENT OR STORED</b>	<u><b>PARTICLE FILTER ABSENT</b></u>
--	--------------------------------------

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present after the engine is started or following a road test.
	<b>Special notes:</b> <b>If the fault is present:</b> <ul style="list-style-type: none"> <li>– particle filter regeneration is inhibited,</li> <li>– blue/white smoke and black particles coming from the exhaust,</li> <li>– the <b>OBD</b> warning light illuminates after three consecutive driving cycles (starting + 5 seconds + switch off the ignition and wait 1 minute).</li> </ul>
	<b>Priorities when dealing with a number of faults:</b> <b>Firstly, deal with the following faults:</b> <ul style="list-style-type: none"> <li>– <b>DF315 Particle filter diff* pressure sensor</b> if it is present or stored.</li> <li>– <b>DF717 Particle filter upstream pressure</b> if it is present or stored.</li> </ul> Use bornier <b>Elé.1681</b> for all operations on the engine management computer connector.
	<b>IMPORTANT</b> In the long term, this fault may lead to premature wear and a greater risk of turbocharger failure.

Check the condition of the differential pressure sensor connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 1290**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II, Scénic II or Laguna II, component code 120**).

If the connector(s) is faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, wiring: Precautions for repair**), repair the connector(s); otherwise, replace the wiring.

Check the particle filter is present.

If the filter is present,

Visually inspect the particle filter by placing the vehicle on a lift:

- not damaged (no abnormal welds, if necessary compare it with another vehicle fitted with particle filter),
- if After-Sales sleeves are present, due to work being carried out previously, check that the particle filter's contents were not emptied out when it was removed.

If the particle filter is not working correctly or is absent:

- Replacing the particle filter,
- run command **SC036 Reinitialise programming** and select **After particle filter replacement** (see **Interpretation of commands**).

If the fault is still present, contact the Techline.

\*diff: differential

<b>AFTER REPAIR</b>	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
---------------------	--



# DIESEL INJECTION

## Fault finding – Interpretation of faults

13B

DF1070 PRESENT OR STORED	<u>COLD LOOP</u>
-----------------------------------	------------------

NOTES	<b>Conditions for applying the fault finding procedure to a stored fault:</b> The fault is declared present with the engine running and a heating and air conditioning request
	<b>Priorities when dealing with a number of faults:</b> <b>Firstly, deal with the following faults:</b> – <b>DF049 Refrigerant sensor circuit</b> , if it is present or stored.

When the fault is present or stored, the heating and air conditioning system is inhibited.
Check fuse <b>F22 (10A)</b> of the <b>UPC</b> and the condition of the air conditioning compressor connector. If the connectors is faulty and there is a repair procedure (see <b>Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Check the air conditioning compressor wiring. If the wiring is faulty and there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Manually check if the compressor is jammed (turn the clutch plate manually to check that there is no point of resistance). In the event of sticking, replace the air conditioning compressor (see <b>MR 364 (Mégane II) or 370 (Scénic II), Mechanical, Heating and air conditioning system, 62A, Air conditioning, Compressor: Removal - Refitting</b> ).
Top up with refrigerant, check for any leaks and repair if necessary (see <b>MR 364 (Mégane II) or 370 (Scénic II), Mechanical, Heating and air conditioning system, 62A, Air conditioning, Refrigerant circuit: check, Refrigerant circuit: Draining - Filling</b> ).

AFTER REPAIR	Deal with any faults. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
--------------	--

The global **conformity check** for the functions and sub-functions of this system is no longer interpreted in the conformity check. Instead, all information available in the functions and sub-functions can be found in the following sections:

For **STATUSES**, refer to the "INTERPRETATION OF STATUSES" section.

For **PARAMETERS**, refer to the **INTERPRETATION OF PARAMETERS** section.

For **COMMANDS**, refer to the **INTERPRETATION OF COMMANDS** section.

# DIESEL INJECTION

## Fault finding – Status summary table

13B

Tool status	Diagnostic tool title
ET001	+ After ignition computer feed
ET003	Engine immobiliser
ET004	Air conditioning authorisation
ET007	Pre-postheating unit control
ET014	Monitor cooling fan 1
ET015	Monitor cooling fan 2
ET021	High speed fan assembly request
ET022	Low speed fan assembly request
ET038	Engine
ET042	Cruise control/speed limiter
ET076	Starting
ET077	Impact detected
ET079	Air conditioning present
ET088	Compressor actuation request
ET104	Injector code use
ET111	Number of passenger compartment heating resistors fixed ( <b>Vdiag 50 only</b> )
ET112	Passenger compartment heating resistors cut out ( <b>Vdiag 50 only</b> )
ET143	Low-speed fan assembly relay control ( <b>Vdiag 18, 1C, 20 only</b> )
ET144	High-speed fan assembly relay control ( <b>Vdiag 18, 1C, 20 only</b> )
ET205	Heating element no. 1 relay control ( <b>Vdiag 58 only</b> )
ET206	Heating element no. 2 relay control ( <b>Vdiag 58 only</b> )
ET207	Heating element no. 3 relay control ( <b>Vdiag 58 only</b> )
ET238	Synchronisation
ET341	Immobiliser code programmed
ET405	Clutch pedal switch
ET415	Cruise control/speed limiter deactivation
ET651	EGR programming cut-off

# DIESEL INJECTION

## Fault finding – Status summary table

Tool status	Diagnostic tool title
ET703	Cruise control/speed limiter button
ET704	Brake switch No. 1
ET705	Brake switch No. 2
ET706	Stored engine status no. 1
ET707	Stored engine status no. 2
ET708	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 regen.* request status No. 1
ET743	Stored regen.* request status No. 2
ET744	Stored regen.* request status No. 3
ET745	Stored regen.* request status No. 4
ET746	Stored regen.* request status No. 5
ET747	Stored regen.* request status No. 6
ET748	Stored regen.* request status No. 7
ET749	Stored regen.* request status No. 8
ET750	Stored regen.* request status No. 9
ET751	Stored regen.* request status No. 10

\* **regen.**: regeneration

<b>ET001</b>	<u>COMPUTER + AFTER IGNITION FEED</u>
--------------	---------------------------------------

<b>STATUS DEFINITION</b>	<b>"PRESENT"</b> , this status indicates that the + after ignition feed is active. <b>"ABSENT"</b> , this status indicates that the + after ignition feed is inactive.
--------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.
--------------	--

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>PRESENT</b>	With the ignition on and engine running warm at idle speed, + after ignition feed is activated. In the event of a fault, apply the interpretation of <b>DF046 Battery voltage</b> or <b>DF151 Main relay circuit</b> .
----------------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET001 CONTINUED</b>	
----------------------------	--

Sensor electrical conformity
------------------------------

<b>ABSENT</b>	<b>NOTES</b>	Ignition on
---------------	--------------	-------------

Check the condition and the conformity of the supply fuse **F5D (5A)** for the Protection and Switching Unit (**Vdiag 18,1C, 20** only).  
Repair if necessary

Check for an earth on connection **NT (Laguna II)** or **N (Mégane II and Scénic II)** of component **120**.  
If the connection is defective and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for a **+ 12 V** feed on connection **AP29 (Laguna II)** or **AP15 (Mégane II and Scénic II)** of the injection computer.  
If there is no voltage, check the continuity and the **masse** insulation of connection **AP29 (Laguna II)** or **AP15 (Mégane II and Scénic II)** between components **120 and 1337 (Vdiag 18, 1C, 20 only)** or **597 (Vdiag 50, 58, 5C only)**.  
If the connection or connections are defective and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

<b>PRESENT</b>	<b>NOTES</b>	Ignition on
----------------	--------------	-------------

Check that there is no **+ 12 V** feed with the ignition off on connection **AP29 (Laguna II)** or **AP15 (Mégane II and Scénic II)** of component **120**.  
If the connection is defective and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET003</b>	<u>ENGINE IMMOBILISER</u>
--------------	---------------------------

<b>STATUS DEFINITION</b>	<b>"ACTIVE"</b> , this status indicates that the immobiliser is active. <b>"INACTIVE"</b> , this status indicates that the immobiliser is inactive.
--------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.
--------------	--

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>ACTIVE</b>	Refer to the fault finding note for the UCH (see <b>87B, Passenger compartment connection unit</b> ).
---------------	---

<b>INACTIVE</b>	Refer to the fault finding note for the UCH (see <b>87B, Passenger compartment connection unit</b> ).
-----------------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET004</b>	<u>AC AUTHORISED</u>
--------------	----------------------

<b>STATUS DEFINITION</b>	<p><b>"YES"</b>, this status indicates that the air conditioning is active.</p> <p><b>"NO"</b>, this status indicates that the air conditioning is inactive.</p>
--------------------------	--

<b>NOTES</b>	<p><b>Special notes</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	--

<b>Engine running, engine coolant temperature &gt; 80 °C</b>
--

<b>YES</b>	<p>The air conditioning authorisation only changes to <b>"YES"</b> if:</p> <ul style="list-style-type: none"> <li>– the air conditioning request has been made by the driver (air conditioning switch in <b>AC</b> or <b>AUTO</b> position with minimum ventilation),</li> <li>– the engine is not under full load,</li> <li>– the air conditioning system is not faulty.</li> </ul>
------------	--

<b>Conformity check with engine stopped and ignition on</b>
---

<b>NO</b>	<p>Status <b>ET004</b> remains at <b>"NO"</b> under the following conditions:</p> <ul style="list-style-type: none"> <li>– Vehicle stopped with the ignition on,</li> <li>– faults present in the air conditioning circuit,</li> <li>– no air conditioning request made by the driver,</li> <li>– engine under full load.</li> </ul> <p>If status <b>ET004</b> remains <b>"NO"</b> then the air conditioning should be authorised, check:</p> <ul style="list-style-type: none"> <li>– that the air conditioning compressor is activated correctly,</li> <li>– the air conditioning system feed fuses,</li> <li>– the presence of refrigerant in the air conditioning circuit,</li> <li>– that the refrigerant fluid pressure value is consistent at idle speed.</li> </ul> <p>If the fault is still present, check the climate control computer faults (see <b>62C, Air conditioning</b>).</p>
-----------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>ET007</b>	<u>PRE-POSTHEATING UNIT CONTROL</u>
--------------	-------------------------------------

<b>STATUS DEFINITION</b>	<p><b>"ACTIVE"</b>, when the heater plugs are activated according to the engine coolant temperature.</p> <p><b>"INACTIVE"</b>, after the engine has been running for a certain period.</p> <p>In the event of a fault, consult the interpretation of fault <b>DF017: Pre-postheating control circuit</b>.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C</b>
--

<b>"ACTIVE" then "INACTIVE"</b>	<p>After the engine has been running for a certain period, the status changes from <b>"ACTIVE"</b> to <b>"INACTIVE"</b>.</p> <p>In the event of a fault, consult the interpretation of fault <b>DF017 Pre-postheating unit control circuit</b>.</p>
---	---

<b>Sensor conformity check</b>
--------------------------------

<b>ACTIVE</b>	<p>When the vehicle is started from cold, the injection computer controls the pre-postheating unit so that the vehicle can be started.</p> <p>Status <b>ET007</b> becomes <b>YES</b> a few seconds after the ignition is switched on and during pre-postheating.</p> <p>If the vehicle does not start and status <b>ET007</b> becomes <b>YES</b>, check:</p> <ul style="list-style-type: none"> <li>– supply fuse <b>F2 (Scénic II and Mégane II) or FM12 (Laguna II) (70A)</b> for the pre-postheating unit, located on the power feed fuse rack in the engine compartment connection unit, below the Protection and Switching Unit,</li> <li>– the resistance of the heater plugs.</li> </ul> <p>Replace any plug with a resistance of less than <b>2 Ω</b>.</p> <p>If the vehicle starts and status <b>ET007</b> remains <b>"YES"</b> during the engine operating phase, refer to the interpretation of faults:</p> <ul style="list-style-type: none"> <li>– <b>DF017 Preheating relay control circuit.</b></li> <li>– <b>DF025 Pre-postheating unit diagnostic connection.</b></li> </ul>
---------------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET007 CONTINUED</b>	
----------------------------	--

<b>INACTIVE</b>	<p>After the engine is started and the postheating phase, the injection computer should stop the pre-postheating unit operating. Status <b>ET007</b> should become <b>"NO"</b>.</p> <p>In the event that the vehicle does not start and status <b>ET007</b> remains <b>"NO"</b>, check the continuity and absence of interference resistance of the following connections:</p> <ul style="list-style-type: none"><li>– Connection code <b>3FY</b>,</li><li>– Connection code <b>3FF</b>.</li></ul> <p>Between components <b>120 and 257</b>. If any connections are defective and if there is a repair method (<b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p> <p>If the fault is still present, refer to the interpretation of faults:</p> <ul style="list-style-type: none"><li>– <b>DF017 Preheating relay control circuit.</b></li><li>– <b>DF025 Pre-postheating unit diagnostic connection.</b></li></ul>
-----------------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET014</b>	<u>CHECK COOLING FAN 1</u>
--------------	----------------------------

<b>STATUS DEFINITION</b>	<p><b>"RUNNING"</b>, this status indicates that the fan assembly is engaged.</p> <p><b>"STOPPED"</b>, this status indicates that the fan assembly is not engaged.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---


<p><b>NOTE:</b></p> <p>Statuses <b>ET014</b> and <b>ET022 "Low-speed fan assembly request"</b> change status simultaneously.</p>
--

<p><b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b></p>
--

<b>RUNNING</b>	<p>The low-speed engine fan is supplied in three scenarios:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is above <b>89 °C</b>;</li> <li>– <b>the air conditioning is operating</b></li> <li>– the injection computer has system faults that could lead to the engine overheating.</li> </ul> <p>When the low-speed fan assembly is supplied:</p> <ul style="list-style-type: none"> <li>– status <b>ET014</b> becomes <b>"RUNNING"</b> and status <b>ET022 "Low-speed fan assembly request"</b> becomes <b>"ACTIVE"</b>.</li> </ul> <p>If the low-speed fan assembly does not work, refer to the fault finding note for the Protection and Switching Unit (<b>Vdiag 18, 1C, 20 only</b>).</p>
----------------	---

<p><b>Conformity check with engine stopped and ignition on.</b></p>
---

<b>STOPPED</b>	<p>The low-speed fan assembly stops when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is below <b>89 °C</b>;</li> <li>– the air conditioning is not switched on by the driver.</li> </ul>
----------------	---

 <b>IMPORTANT</b>	<p><b>WARNING</b></p> <p>If the Protection and Switching Unit (Vdiag 18, 1C, 20 only) no longer detects the injection computer signals, the low-speed fan assembly is supplied until the battery is completely discharged.</p> <p>If the low-speed fan assembly is defective, the high-speed fan assembly will be activated.</p>
---	--

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>ET015</b>	<u>CHECK COOLING FAN 2</u>
--------------	----------------------------

<b>STATUS DEFINITION</b>	<p><b>"RUNNING"</b>, this status indicates that the fan assembly is engaged.</p> <p><b>"STOPPED"</b>, this status indicates that the fan assembly is not engaged.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

**NOTE:**


Statuses **ET015** and **ET021 "High-speed fan assembly request"** change status simultaneously.

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

<b>RUNNING</b>	<p>The engine fan assembly can be supplied when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is above <b>99 °C</b>.</li> <li>– the injection computer has system faults that could lead to the engine overheating.</li> </ul> <p>When the high speed fan is supplied:</p> <ul style="list-style-type: none"> <li>– status <b>ET015</b> becomes <b>"RUNNING"</b> and status <b>ET144 "High-speed fan assembly request"</b> becomes <b>"ACTIVE"</b>.</li> </ul>
----------------	---

**Conformity check with engine stopped and ignition on**

<b>STOPPED</b>	<p>The high-speed fan assembly stops when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is below <b>99 °C</b>;</li> </ul>
----------------	--

 <b>IMPORTANT</b>	<p><b>WARNING</b></p> <p>If the Protection and Switching Unit (Vdiag 18, 1C, 20 only) no longer detects the injection computer signals, the low-speed fan assembly is supplied until the battery is completely discharged.</p> <p>If the low-speed fan assembly is defective, the high-speed fan assembly will be activated.</p>
---	--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET021</b>	<u>HIGH-SPEED FAN REQUEST</u>
--------------	-------------------------------

<b>STATUS DEFINITION</b>	<p><b>"RUNNING"</b>: this status indicates that the high-speed fan assembly has been requested.</p> <p><b>"STOPPED"</b>: this status indicates that the high-speed fan assembly has not been requested.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	--

**NOTE:**


Statuses **ET021** and **ET015 "GMV2 test"** change status simultaneously.

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

<b>ACTIVE</b>	<p>The injection computer requests the activation of the high speed GMV when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is above <b>99 °C</b>.</li> <li>– the injection computer has system faults that could lead to the engine overheating.</li> </ul> <p>When the high speed fan is supplied:</p> <ul style="list-style-type: none"> <li>– status <b>ET021</b> becomes <b>"ACTIVE"</b> and status <b>ET015 "GMV2 test"</b> becomes <b>"RUNNING"</b>.</li> </ul>
---------------	--

**Conformity check with engine stopped and ignition on**

<b>INACTIVE</b>	<p>The high-speed fan assembly stops when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is below <b>99 °C</b>;</li> <li>– <b>no fault which could cause engine overheating is present in the injection system.</b></li> </ul>
-----------------	--

 <b>IMPORTANT</b>	<p><b>WARNING</b> If the Protection and Switching Unit (Vdiag 18, 1C, 20 only) no longer detects the injection computer signals, the low-speed fan assembly is supplied until the battery is completely discharged.</p> <p>If the low-speed fan assembly is defective, the high-speed fan assembly will be activated.</p>
---	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET022</b>	<u>LOW SPEED GMV CONTROL</u>
--------------	------------------------------

<b>STATUS DEFINITION</b>	<p><b>"RUNNING"</b>, this status indicates that the high-speed fan assembly has been requested.</p> <p><b>"STOPPED"</b>, this status indicates that the high-speed fan assembly has not been requested.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

**NOTE:**


Statuses **ET022** and **ET014 "GMV1 test"** change status simultaneously.

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

<b>ACTIVE</b>	<p>The injection computer requests the activation of the low speed GMV when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is above <b>89 °C</b>;</li> <li>– the injection computer has system faults that could lead to the engine overheating,</li> <li>– the air conditioning is switched on by the driver.</li> </ul> <p>When the high speed fan is supplied:</p> <ul style="list-style-type: none"> <li>– status <b>ET022</b> becomes <b>"ACTIVE"</b>,</li> <li>– status <b>ET014 "GMV1 test"</b> becomes <b>"RUNNING"</b>.</li> </ul>
---------------	---

**Conformity check with engine stopped and ignition on**

<b>INACTIVE</b>	<p>The low-speed fan assembly stops when:</p> <ul style="list-style-type: none"> <li>– the engine coolant temperature is below <b>89 °C</b>;</li> <li>– <b>no fault which could cause engine overheating is present in the injection system.</b></li> </ul> <p><b>the air conditioning is not requested by the driver</b></p>
-----------------	---

 <b>IMPORTANT</b>	<p><b>WARNING</b></p> <p>If the Protection and Switching Unit (Vdiag 18, 1C, 20 only) no longer detects the injection computer signals, the low-speed fan assembly is supplied until the battery is completely discharged.</p> <p>If the low-speed fan assembly is defective, the high-speed fan assembly will be activated.</p>
---	--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET038</b>	<u>ENGINE</u>
--------------	---------------

<b>STATUS DEFINITION</b>	<p><b>" + AFTER IGNITION FEED "</b>: this status indicates that the engine is under + after ignition feed.</p> <p><b>"RUNNING"</b>: this status indicates that the engine is running.</p> <p><b>"STOPPED"</b>: this status indicates that the engine is stopped.</p>
--------------------------	--

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

<b>Conformity check with engine stopped and ignition on</b>
---

<b>+ after ignition feed</b>	<p>This status indicates that the engine is in + after ignition feed.</p> <p>In the event of a fault, switch off the ignition and wait <b>1 minute</b>.</p> <p>If the fault is still present, contact the Techline.</p>
------------------------------	---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C</b>
--

<b>RUNNING</b>	<p>This status indicates that the engine is running.</p> <p>In the event of a fault, switch off the ignition and wait <b>1 minute</b>.</p> <p>If the fault is still present, contact the Techline.</p>
----------------	--

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>ET042</b>	<u><b>CRUISE CONTROL/SPEED LIMITER</b></u>
--------------	--

<b>STATUS DEFINITION</b>	<p><b>"NOT DETECTED"</b>: this status indicates that the cruise control or speed limiter function is not present on the vehicle.</p> <p><b>"INACTIVE"</b>: this status indicates that the cruise control/speed limiter main On/Off switch is in the rest (or neutral) position.</p> <p><b>"LIMITER"</b>: this status indicates that the driver has used the main switch to select the speed limiter.</p> <p><b>"CRUISE CONTROL"</b>: this status indicates that the driver has used the main switch to select the cruise control.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

<b>NOT DETECTED</b>	<p>If the vehicle does not have cruise control or speed limiter function buttons, status <b>ET042</b> is permanently <b>"NOT DETECTED"</b>. This confirms that the cruise control/speed limiter function is not present on the vehicle.</p> <p>If the vehicle is fitted with cruise control or speed limiter function buttons, the main switch is in rest (or neutral) position and the injection computer has just been programmed or reprogrammed, status <b>ET042</b> is <b>"NOT DETECTED"</b>.</p> <p>To activate the cruise control or speed limiter function, press the main switch in the cruise control position and then in the speed limiter position.</p> <p>Return to rest position</p> <p>The tool displays status <b>ET042: "INACTIVE"</b>.</p> <p>If not, several steps must be checked:</p> <ol style="list-style-type: none"> <li>1. Return to the multiplex network test page with the Clip application. Repeat the multiplex network test. Re-establish dialogue with the injection computer. Check status <b>ET042</b>. If <b>ET042</b> is <b>INACTIVE</b>, the injection computer has detected the various positions of the main switch. The cruise control/speed limiter is activated.</li> <li>2. If status <b>ET042</b> is <b>"NOT DETECTED"</b>, check that the vehicle's owner has not had the cruise control/speed limiter function disabled in the past. Contact the Techline.</li> </ol>
---------------------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



**ET042  
CONTINUED 1**

**INACTIVE**

**Procedure to apply for Laguna II:**

When the main switch is in the rest (or neutral) position, status **ET042** is **INACTIVE**.  
If **CRUISE CONTROL** or **SPEED LIMITER** appears despite the main button being in the rest (or neutral) position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

Check for **+ 12 V APC** on the main switch connector.

– Connection code **AP10 of component 1081**.

Disconnect the main switch and with it in the rest position, check the insulation between:

– Connection codes **AP10 and 3FX, of component 1081**.

– Connection codes **AP10 and 3PD, of component 1081**.

Check the continuity between **connections AP10 and 3PD of component 1081** in the speed limiter position.

Check the continuity between **connections AP10 and 3FX of component 1081** in the cruise control position.

If these checks are not in order, replace the switch.

Check the **insulation, continuity and absence of interference resistance** on the following connections:

– Connection code **3FX**,

– connection code **3PD**.

**Between components 1081 and 120.**

Also check the engine management computer connectors.

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**AFTER REPAIR**

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

**ET042  
CONTINUED 2**

**INACTIVE**

**Procedure to apply for Mégane II and Scénic II:**

When the main switch is in the rest (or neutral) position, status **ET042** is **INACTIVE**.

If **CRUISE CONTROL** or **SPEED LIMITER** appears despite the main button being in the rest (or neutral) position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

Check for **+ 12 V** APC on the main switch connector.

- Connection code **AP43 of component 1081 (Mégane II)**
- Connection code **AP43 of component 1546 (Scénic II)**

Disconnect the main switch and with it in the rest position, check the insulation between:

- Connection codes **AP43 and 3FX of component 1081 (Mégane II)**
- Connection codes **AP43 and 3PD of component 1081 (Mégane II)**
- Connection codes **AP43 and 3FX of component 1546 (Scénic II)**
- Connection codes **AP43 and 3PD of component 1546 (Scénic II)**

Check the continuity between **connections AP43 and 3PD of component 1081 (Mégane II) and component 1546 (Scénic II)** in the speed limiter position.

Check the continuity between **connections AP43 and 3FX of component 1081 (Mégane II) and component 1546 (Scénic II)** in the cruise control position.

If these checks are not in order, replace the switch.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **3FX**,
- connection code **3PD**.

**Between components 1081 and 120 (Mégane II)**

**Between components 1546 and 120 (Scénic II)**

Also check the engine management computer connectors.

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**AFTER REPAIR**

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

**ET042  
CONTINUED 3**

**SPEED LIMITER**

**Procedure to apply for Laguna II:**

When the driver presses the main switch in the speed limiter position, status **ET042** becomes **SPEED LIMITER**.

If **CRUISE CONTROL** or **INACTIVE** appears although the switch was pressed in the speed limiter position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

Check for **+12 V** after ignition feed on the main switch connector.

- Connection code **AP10**, of component **1081**.

Disconnect the main switch and with it in the rest position, check the insulation between:

- Connection codes **AP10** and **3FX**, of component **1081**.
- Connection codes **AP10** and **3PD**, of component **1081**.

- Check the continuity between **connections AP10** and **3PD of component 1081** in the speed limiter position.
- Check the continuity between **connections AP10** and **3FX of component 1081** in the cruise control position.

If these checks show incorrect values, replace the main switch.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **3FX**,
- Connection code **3PD**,

**between components 1081 and 120.**

Also check the engine management computer connectors.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**AFTER REPAIR**

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

**ET042  
CONTINUED 4**

**SPEED LIMITER**

**Procedure to apply for Mégane II and Scénic II:**

When the driver presses the main switch in the speed limiter position, status **ET042** becomes **SPEED LIMITER**.

If **CRUISE CONTROL** or **INACTIVE** appears although the driver pressed the switch in the speed limiter position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

Check for **+12 V** after ignition feed on the main switch connector.

- Connection code **AP43 of component 1081 (Mégane II)**.
- Connection code **AP43 of component 1546 (Scénic II)**.

Disconnect the main switch and with it in the rest position, check the insulation between:

- Connection code **AP43 and 3FX, of component 1081 (Mégane II)**.
- Connection code **AP43 and 3PD, of component 1081 (Mégane II)**.
- Connection code **AP43 and 3FX, of component 1546 (Scénic II)**.
- Connection code **AP43 and 3PD, of component 1546 (Scénic II)**.

- Check the continuity between **connections AP43 and 3PD of component 1081 (Mégane II) and component 1546 (Scénic II)** in the speed limiter position.
- Check the continuity between **connections AP43 and 3FX of component 1081 (Mégane II) and component 1546 (Scénic II)** in the cruise control position.

If these checks show incorrect values, replace the main switch.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **3FX**,
- Connection code **3PD**,

**between components 1081 and 120 (Mégane II).**

**between components 1546 and 120 (Scénic II).**

Also check the engine management computer connectors.

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, then check with the **diagnostic tool**.

**ET042  
CONTINUED 5**

**CRUISE CONTROL**

Procedure to apply for **Laguna II**:

When the driver presses the main button in the cruise control position, status **ET042** becomes "**CRUISE CONTROL**".

If "**SPEED LIMITER**" or "**INACTIVE**" appears although the driver pressed the switch in the cruise control position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

Check for **+ 12 V** APC on the main switch connector.

- Connection code **AP10 of component 1081**.

Disconnect the switch and when it is in the rest position, check the insulation between:

- Connection codes **AP10 and 3FX, of component 1081**.
- Connection codes **AP10 and 3PD, of component 1081**.

- Check the continuity between connections **AP10 and 3PD of component 1081** in the speed limiter position.

- Check the continuity between connections **AP10 and 3FX of component 1081** in the cruise control position.

If these checks show incorrect values, replace the main switch.

Check the insulation, continuity and the absence of interference resistance on the following connections:

- Connection code **3FX**,
- connection code **3PD**.

Between components **1081 and 120**.

Also check the engine management computer connectors.

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**AFTER REPAIR**

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

**ET042**  
**CONTINUED 6**

**CRUISE CONTROL**

Procedure to apply for **Mégane II** and **Scénic II**:

When the driver presses the main switch in the cruise control position, status **ET042** becomes **CRUISE CONTROL**.

If **SPEED LIMITER** or **INACTIVE** appears although the driver pressed the switch in the cruise control position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

Check for **+12 V** after ignition feed on the main switch connector.

- Connection code **AP43 of component 1081 (Mégane II)**.
- Connection code **AP43 of component 1546 (Scénic II)**.

Disconnect the switch and when it is in the rest position, check the insulation between:

- Connection code **AP43 and 3FX, of component 1081 (Mégane II)**.
- Connection code **AP43 and 3PD, of component 1081 (Mégane II)**.
- Connection code **AP43 and 3FX, of component 1546 (Scénic II)**.
- Connection code **AP43 and 3PD, of component 1546 (Scénic II)**.

- Check the continuity between connections **AP43 and 3PD of component 1081 (Mégane II) and component 1546 (Scénic II)** in the speed limiter position.
- Check the continuity between connections **AP43 and 3FX of component 1081 (Mégane II) and component 1546 (Scénic II)** in the cruise control position.

If these checks show incorrect values, replace the main switch.

Check the insulation, continuity and the absence of interference resistance on the following connections:

- Connection code **3FX**,
- connection code **3PD**.

Between components **1081 and 120 (Mégane II)**.

Between components **1546 and 120 (Scénic II)**.

Also check the engine management computer connectors.

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**AFTER REPAIR**

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

<b>ET076</b>	<u>STARTING</u>
--------------	-----------------

<b>STATUS DEFINITION</b>	<b>"PROHIBITED"</b> , this status indicates that starting is not possible. <b>"AUTHORISED"</b> , this status indicates that starting is possible.
--------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.
--------------	--

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>AUTHORISED</b>	Starting the vehicle is authorised when the UCH authorises starting. Status <b>ET076</b> changes to <b>"AUTHORISED"</b> if the vehicle cards are recognised and the engine immobiliser is inactive.
-------------------	--

<b>PROHIBITED</b>	If the card is not recognised by the UCH, starting the vehicle is prohibited. Status <b>ET076</b> is <b>"PROHIBITED"</b> and the vehicle cannot be started. Run fault finding on the UCH and refer to the Technical Note for the vehicle to deal with any faults (see <b>87B, Passenger compartment connection unit</b> ).
-------------------	--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET077</b>	<u><b>IMPACT DETECTED</b></u>
--------------	-------------------------------

<b>STATUS DEFINITION</b>	<b>"NO"</b> : This status indicates that the airbag computer has not detected an impact. <b>"YES"</b> : This status indicates that the airbag computer has detected an impact.
--------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.
	This signal is transmitted by the airbag computer via the multiplex network.

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>NO</b>	In normal operation conditions, status <b>ET077</b> is <b>"NO"</b> if the computer has received no impact signal.
<b>YES</b>	If the vehicle has had an accident, the injection computer receives the impact signal via the multiplex network and may switch off the ignition. Status <b>ET077</b> is <b>YES</b> . Switch off the ignition for <b>1 minute</b> then switch on the ignition again so the engine can be started. Carry out a multiplex network test and deal with any faults.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>ET088</b>	<u>REQUEST TO START COMPRESSOR</u>
--------------	------------------------------------

<b>STATUS DEFINITION</b>	<p><b>"ACTIVE"</b>: this status indicates that the compressor is engaged.</p> <p><b>"INACTIVE"</b>: this status indicates that the compressor is not engaged.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

<b>Engine running, engine coolant temperature &gt; 80 °C</b>
--

<b>ACTIVE</b>	<p>Status <b>ET088</b> becomes <b>"ACTIVE"</b> if there has been a request for air conditioning ("AC" or "AUTO" button pressed, with maximum cold) and if status <b>ET004 "Air conditioning authorisation"</b> is <b>"YES"</b>.</p> <p>The selection is made on the air conditioning control panel, the request for air conditioning is transmitted to the UCH which in turn transmits the request to the injection computer which either authorises or does not authorise compressor activation. If the injection computer authorises compressor switch-on, it sends the <b>compressor switch-on request</b> to the Protection and Switching Unit (<b>Vdiag 18, 1C, 20 only</b>) and status <b>ET088</b> becomes <b>"ACTIVE" (climate control)</b>.</p> <p>If the vehicle is equipped with <b>manual air conditioning</b>, the air conditioning request is transmitted from the air conditioning control panel to the UCH which then accepts or does not accept the air conditioning compressor coming on depending on the operating status of the passenger compartment fan. When the request has been accepted, the request to switch on the compressor is transmitted to the injection computer which either authorises or does not authorise the compressor to start.</p> <p>If the injection computer authorises compressor switch-on, it sends the <b>compressor switch-on request</b> to the Protection and Switching Unit (<b>Vdiag 18, 1C, 20 only</b>) and status <b>ET088</b> becomes <b>"ACTIVE"</b>.</p> <p>If there has been no compressor switch-on request and status <b>ET088</b> remains <b>"ACTIVE"</b> (see <b>62A, Air conditioning</b>).</p> <p>Note:</p> <p><b>Compressor switch-on is only authorised when the engine is running.</b></p> <p><b>Compressor switch-on is finally requested by the Protection and Switching Unit (Vdiag 18, 1C, 20 only).</b></p>
---------------	--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

**ET088  
CONTINUED**

**Conformity check with engine stopped and ignition on**

**INACTIVE**

Status **ET088** is "**INACTIVE**" when there has been no air conditioning request and when compressor switch-on has not been authorised (**ET004 "Air conditioning authorisation"** is "**NO**" or when the driver switches off the air conditioning).

If there has been no compressor on request and status **ET088** remains **INACTIVE** (see **62A, Air conditioning**).

Note:

**Switching on the compressor is only authorised when the engine is running. Compressor switch-on is finally requested by the Protection and Switching Unit (Vdiag 18, 1C, 20 only).**

**AFTER REPAIR**

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

<b>ET104</b>	<u><b>INJECTOR CODE USE</b></u>
<b>STATUS DEFINITION</b>	<p><b>"NO"</b>: this status indicates that injector code use is not available.</p> <p><b>"YES"</b>: this status indicates that injector code use is available.</p> <p><b>"FAULT"</b>: this status indicates that there has been an injector code use fault.</p>
<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>	
<b>NO</b>	<p>Status <b>ET104</b> is <b>"NO"</b> if the computer is not configured to interpret the <b>IMA (individual injector correction) codes</b>.</p> <p>Use command <b>SC002 "Enter injector codes"</b> (see <b>Interpretation of commands</b>).</p>
<b>YES</b>	<p>Status <b>ET104</b> is <b>"YES"</b> if the <b>IMA (individual injector correction) option is activated in the injection computer</b>.</p> <p><b>All the injectors have IMA codes</b> inscribed on the bakelite body, but <b>not all computers use them</b>.</p> <p>In the case of a computer configured with the <b>IMA</b> option, the injector codes must be entered into the injection computer in the following scenarios:</p> <ul style="list-style-type: none"> <li>– when one or more injectors is replaced,</li> <li>– when the injection computer is replaced,</li> <li>– when the injection computer is reprogrammed.</li> </ul> <p><b>If the injector codes are not programmed after these operations, fault DF276 "Injector code programming" will be present and the engine will operate in defect mode.</b></p> <p>Use command <b>SC002 "Enter injector codes"</b> (see <b>Interpretation of commands</b>).</p>
<b>DEFECTIVE</b>	<p>Status <b>ET104</b> is <b>FAULT</b> if the computer does not have IMA codes in the memory.</p> <p>Fault <b>DF276 "Injector code programming"</b> is present and the engine runs in defect mode.</p> <p>Use command <b>SC002 "Enter injector codes"</b> (see <b>Interpretation of commands</b>).</p> <p>If at the end of the procedure status <b>ET104</b> remains <b>FAULT</b>, contact Techline.</p>
<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>

<b>ET111</b>	<u>SET NUMBER OF PASSENGER COMPARTMENT HEATING RESISTORS</u>
--------------	--

<b>STATUS DEFINITION</b>	<p><b>"YES"</b>: this status indicates that the number of passenger compartment heating resistors engaged is fixed by the injection computer.</p> <p><b>"NO"</b>: this status indicates that the number of passenger compartment heating resistors can be freely controlled by the UCH.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

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

<b>YES</b>	<p>Depending on the requirements of the injection system (power requirement, torque reduction, etc.), the injection computer fixes the number of controlled passenger compartment heating resistors (no more, no less).</p> <p>Status <b>ET111</b> becomes <b>"YES"</b> when the number of activated passenger compartment heating resistors is fixed by the injection computer.</p>
------------	--

<b>NO</b>	<p>Depending on the requirements of the injection system (power requirement, torque reduction, etc.), the injection computer fixes the number of controlled passenger compartment heating resistors (no more, no less).</p> <p>Status <b>ET111</b> becomes <b>"NO"</b> when the number of activated passenger compartment heating resistors can be freely controlled by the UCH.</p>
-----------	--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET112</b>	<u>PASSENGER COMPARTMENT HEATING RESISTOR CUT-OFF</u>
--------------	---

<b>STATUS DEFINITION</b>	<p><b>"YES"</b>: this status indicates that the passenger compartment heating resistors are switched off by the injection computer.</p> <p><b>"NO"</b>: this status indicates that the passenger compartment heating resistors can be freely controlled by the UCH.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	--

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

<b>YES</b>	<p>Depending on the requirements of the injection system (power requirements, torque reduction, etc.), the injection computer cuts off the passenger compartment heating resistors.</p> <p>Status <b>ET112</b> becomes <b>"YES"</b> when the passenger compartment heating resistors are cut off by the injection computer.</p>
------------	---

<b>NO</b>	<p>Depending on the requirements of the injection system (power requirements, torque reduction, etc.), the injection computer cuts off the passenger compartment heating resistors.</p> <p>Status <b>ET112</b> becomes <b>"NO"</b> when the passenger compartment heating resistors can be freely controlled by the UCH.</p>
-----------	--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET143</b>	<u>LOW-SPEED FAN ASSEMBLY RELAY CONTROL</u>
<b>STATUS DEFINITION</b>	<b>ACTIVE:</b> This status indicates that the low-speed fan assembly relay is active. <b>INACTIVE:</b> This status indicates that the low-speed fan assembly relay is inactive.
<b>NOTES</b>	<p>If the vehicle is fitted with air conditioning, the fan assembly electrical circuit contains 2 relays. The fan speed 1 relay will be actuated when the engine coolant temperature exceeds <b>96°</b> and will cool the engine as long as the engine coolant temperature does not exceed <b>99°</b>.</p> <p>If the engine coolant temperature exceeds <b>99°</b>, the fan speed 2 relay will be actuated and the engine cooling fan will run more quickly.</p>
<b>ACTIVE</b>	<p>When the coolant reaches <b>96 °C</b>, the diesel computer actuates the low speed fan relay and status <b>ET143</b> becomes "<b>ACTIVE</b>".</p> <p>The relay then supplies the fan assembly and the cooling fan begins to turn.</p> <p>Run command <b>AC038 Low-speed fan assembly relay</b> and check visually that the cooling fan is turning.</p> <p>If this is not the case, carry out the following operations:</p> <ul style="list-style-type: none"><li>– check the condition of the <b>FM15 (60A)</b> fuse and the motor relay <b>R09</b>,</li><li>– disconnect the low-speed and high-speed relays, check their operation and the condition of the connections.</li><li>– repair if necessary,</li><li>– check for a <b>+ 12 V</b> feed on connection <b>3FB</b> of the low speed relay when it is actuated then check the <b>continuity and the absence of interference resistance</b> on connection <b>3JN</b> between components <b>120</b> and <b>597</b>.</li></ul> <p>If the connection or connections are defective and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<b>INACTIVE</b>	<p>If the engine coolant temperature is lower than <b>96 °C</b>, the engine cooling fan should not switch on and the low-speed fan relay should not be actuated.</p> <p>Status <b>ET143</b> becomes "<b>INACTIVE</b>" when the control relay and the engine cooling fan are not supplied.</p>
<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .

<b>ET144</b>	<u>HIGH-SPEED FAN ASSEMBLY RELAY CONTROL</u>
<b>STATUS DEFINITION</b>	<b>ACTIVE:</b> This status indicates that the low-speed fan assembly relay is active. <b>INACTIVE:</b> This status indicates that the low-speed fan assembly relay is inactive.
<b>ACTIVE</b>	<p>When the coolant reaches <b>99 °C</b>, the diesel computer actuates the high speed fan relay and status <b>ET144</b> becomes "<b>ACTIVE</b>".</p> <p>The relay then supplies the fan assembly and the cooling fan begins to turn.</p> <p>Run command <b>AC039 High-speed fan assembly relay</b> and visually check that the cooling fan is turning. If this is not the case, carry out the following operations:</p> <ul style="list-style-type: none"><li>– check the condition of the <b>FM15 (60A)</b> fuse and the motor relay <b>R10</b>,</li><li>– disconnect the fan unit relays, check their operation and the condition of the connections,</li><li>– repair if necessary,</li><li>– check for a <b>+ 12 V</b> feed on connection <b>49B</b> of components <b>597</b> and <b>262</b>, when the high speed relay is actuated.</li></ul> <p>Check the <b>continuity and the absence of interference resistance</b> on the following connections:</p> <ul style="list-style-type: none"><li>– <b>Connection codes 3JP and 49B</b> between components <b>120, 957 and 262</b>.</li></ul> <p>If the connection or connections are defective and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<b>INACTIVE</b>	<p>If the engine coolant temperature is lower than <b>99 °C</b>, the engine cooling fan should not switch on and the high-speed fan relay should not be actuated.</p> <p>Status <b>ET144</b> becomes <b>INACTIVE</b> when the control relay and the engine cooling fan are not supplied.</p>

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET205</b> <b>ET206</b> <b>ET207</b>	<u>HEATING ELEMENTS NO. 1, 2, 3 RELAY CONTROL</u>
--	---

<b>STATUS DEFINITION</b>	<p><b>"ACTIVE"</b>: This status indicates that the control of heating element relay no. 1, no.2 and no. 3 is active.</p> <p><b>"INACTIVE"</b>: This status indicates that the control of heating element relay no. 1, no.2 and no. 3 is inactive.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>ACTIVE</b>	<p>Statuses <b>ET205, ET206, ET207</b> are <b>"ACTIVE"</b> when:</p> <ul style="list-style-type: none"> <li>– the engine has been started,</li> <li>– and the engine coolant temperature is low (&lt; 15°),</li> <li>– and the air temperature is low (&lt; 5°).</li> </ul> <p>This program allows the engine coolant to be heated and to enable the passenger compartment to be heated.</p> <p>To control the operation of the heating element relay, run the following commands:</p> <ul style="list-style-type: none"> <li>– <b>AC063 Heating element no.1 relay.</b></li> <li>– <b>AC064 Heating element no.2 relay.</b></li> <li>– <b>AC031 "Heating element relay no.3".</b></li> </ul> <p>In the event of a fault, refer to the interpretation of the fault:</p> <ul style="list-style-type: none"> <li>– <b>DF032 "Heating element no. 1 relay control circuit"</b></li> <li>– <b>DF033 "Heating element no. 2 relay control circuit"</b></li> <li>– <b>DF033 "Heating element no. 3 relay control circuit"</b></li> </ul>
---------------	--

<b>INACTIVE</b>	<p>Statuses <b>ET205, ET206, ET207</b> are <b>"INACTIVE"</b> when the ignition is on and the engine stopped, or when the engine is warm.</p>
-----------------	--

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

EDC16\_V50\_ET205/EDC16\_V58\_ET205/EDC16\_V5C\_ET205/EDC16\_V18\_ET205/EDC16\_V1C\_ET205/EDC16\_V20\_ET205/  
EDC16\_V50\_ET206/EDC16\_V58\_ET206/EDC16\_V5C\_ET206/EDC16\_V18\_ET206/EDC16\_V1C\_ET206/EDC16\_V20\_ET206/  
EDC16\_V50\_ET207/EDC16\_V58\_ET207/EDC16\_V5C\_ET207/EDC16\_V18\_ET207/EDC16\_V1C\_ET207/EDC16\_V20\_ET207



<b>ET238</b>	<u>SYNCHRONISATION</u>
--------------	------------------------

<b>STATUS DEFINITION</b>	<p><b>"Complete":</b> This status indicates that synchronisation is complete.</p> <p><b>"Not complete":</b> This status indicates that synchronisation is not complete.</p>
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

### WARNING

Synchronisation is carried out during the engine starting phase. This is established between the camshaft position sensor and the Top Dead Centre sensor.

Once this synchronisation has been carried out, it enables the computer to identify cylinder no. 1 and to calculate the precise position of the cylinder's Top Dead Centre.

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

<b>COMPLETED</b>	<p>Synchronisation is carried out during the engine starting phase. Cylinder no.1 is indicated and the synchronisation will be performed once the engine is started.</p> <p>Status <b>ET238</b> is <b>"COMPLETED"</b>.</p> <p>If after several attempts to start the engine, status <b>ET238</b> remains <b>"NOT COMPLETED"</b>, refer to the interpretation of the following faults:</p> <ul style="list-style-type: none"> <li>– <b>DF005 Engine speed sensor circuit.</b></li> <li>– <b>DF097 Camshaft sensor circuit.</b></li> </ul> <p>If the engine does not start, consult <b>ALP2 "Starting faults"</b> (see <b>Fault finding chart</b>).</p>
------------------	---

<b>NOT PERFORMED</b>	<p>When the engine is stopped but the ignition switched on, cylinder no. 1 is no longer indicated.</p> <p>Status <b>ET238</b> is <b>NOT PERFORMED</b>, no synchronisation between the crankshaft and the camshaft has been carried out.</p>
----------------------	---

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

<b>ET341</b>	<u>IMMOBILISER CODE PROGRAMMED</u>
--------------	------------------------------------

<b>STATUS DEFINITION</b>	<p><b>"YES":</b> This status indicates that the immobiliser code has been programmed.</p> <p><b>"NO":</b> This status indicates that the immobiliser code has not been programmed.</p>
--------------------------	--

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>YES</b>	<p>Status <b>ET341</b> becomes <b>"YES"</b> if dialogue is established between the UCH and the injection computer and the card code is recognised.</p> <p>Authorisation to start the engine is only given if the code is recognised by the UCH computer and status <b>ET003 "Immobiliser"</b> is <b>"INACTIF"</b></p>
------------	---

<b>NO</b>	<p>The code remains <b>"NO"</b> if dialogue between the UCH and the injection computer is not possible. Status <b>ET003 "Immobiliser"</b> is <b>"ACTIVE"</b>.</p> <p>The cause of the malfunction may be incorrect programming of the cards (see <b>87B, Passenger compartment connection unit</b>); in this case, refer to the Technical Note for the UCH and apply the card programming procedure.</p> <p>If it is not caused by the card codes, carry out a multiplex network test (if the previous fault finding check was by function), and check that dialogue is established between the UCH, the Protection and Switching Unit and the injection computer.</p> <p>If dialogue is not established, contact the Techline.</p>
-----------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

ET405	<u>CLUTCH PEDAL SWITCH</u>											
STATUS DEFINITION	<b>"Inactive"</b> : this status indicates that the switch is released. <b>"Active"</b> : this status indicates that the switch is pressed.											
NOTES	<b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system programming functions.											
	The clutch pedal is present depending on the gearbox type.											
ACTIVE and clutch pedal released	<p>Check the condition and fitting of the clutch pedal switch, Remove the clutch pedal switch and check that it is functioning correctly.</p> <table><tr><td></td><td>Continuity between connections</td><td>Insulation between connections</td></tr><tr><td>Switch pressed (Clutch pedal released)</td><td>MAM and 86D</td><td></td></tr><tr><td>Switch released (Clutch pedal depressed)</td><td></td><td>MAM and 86D</td></tr></table> <p>Replace the switch if necessary.</p>				Continuity between connections	Insulation between connections	Switch pressed (Clutch pedal released)	MAM and 86D		Switch released (Clutch pedal depressed)		MAM and 86D
	Continuity between connections	Insulation between connections										
Switch pressed (Clutch pedal released)	MAM and 86D											
Switch released (Clutch pedal depressed)		MAM and 86D										
INACTIVE and clutch pedal depressed	<p>Check the condition and fitting of the clutch pedal switch, Check the continuity and the absence of interference resistance on connection <b>86D</b> between components <b>120 and 675</b>. If the connection or connections are defective and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p> <p>Check for an earth on connection <b>MAM</b> of the clutch switch. Repair if necessary. Remove the clutch pedal switch and check that it is functioning correctly.</p> <table><tr><td></td><td>Continuity between connections</td><td>Insulation between connections</td></tr><tr><td>Switch pressed (Clutch pedal released)</td><td>MAM and 86D</td><td></td></tr><tr><td>Switch released (Clutch pedal depressed)</td><td></td><td>MAM and 86D</td></tr></table> <p>Replace the clutch pedal switch if necessary.</p>				Continuity between connections	Insulation between connections	Switch pressed (Clutch pedal released)	MAM and 86D		Switch released (Clutch pedal depressed)		MAM and 86D
	Continuity between connections	Insulation between connections										
Switch pressed (Clutch pedal released)	MAM and 86D											
Switch released (Clutch pedal depressed)		MAM and 86D										
AFTER REPAIR	Carry out a road test, then check with the <b>diagnostic tool</b> .											

<b>ET415</b>	<u><b>CRUISE CONTROL/SPEED LIMITER DEACTIVATION</b></u>
--------------	---

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the statuses do not correspond with the system operation programming.</p>
--------------	--

**Note:**

Cruise control can be activated when the vehicle speed exceeds **20 mph (30 km/h)**.

Status **ET415** shows various factors that cause deactivation of the cruise control/speed limiter function, due to a driver request or the external environment (eg. STATUS 1).

**IMPORTANT:**

Clear the fault memory by running command **RZ007 Fault memory, to reset this status to WITHOUT**.

<b>NONE</b>	<p>This status is present on the <b>diagnostic tool</b> if: the computer has been reinitialised, the computer has been reprogrammed.</p>
-------------	--

<b>STATUS 1</b>	<p><b>Traction control request</b></p> <p>If the vehicle is fitted with a traction control system, the cruise control function is deactivated every time the ABS computer calls for traction control. Status <b>ET415</b> becomes <b>STATUS 1</b> when driving, with cruise control active (<b>ET042: Cruise control/Speed limiter: CRUISE CONTROL</b>) and upon a traction control request. This deactivates cruise control. <b>Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".</b> If status <b>ET415</b> becomes <b>STATUS 1</b> without a traction control request (see <b>38C, ABS</b>).</p>
-----------------	--

<b>STATUS 2</b>	<p><b>Brake pedal depressed</b></p> <p>The cruise control function is deactivated when the brake pedal is depressed. Status <b>ET415</b> becomes "<b>STATUS 2</b>" when driving with cruise control active (<b>ET042 Cruise control/Speed limiter: CRUISE CONTROL</b>) and the brake pedal is depressed. This deactivates cruise control. <b>Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".</b> If status <b>ET415</b> becomes <b>STATUS 2</b> without pressing the brake pedal, consult the interpretation of statuses <b>ET704</b> and <b>ET705 Brake contact No 1 and No 2</b>.</p>
-----------------	--

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

**ET415  
CONTINUED 1**

**STATUS 3**

**Clutch pedal depressed**

**Manual gearbox ONLY**

The cruise control function is deactivated when the gearbox is not coupled to the engine (clutch pedal depressed).

Status **ET415** becomes **STATUS 3** when driving with cruise control active (**ET042 Cruise control/speed limiter: CRUISE CONTROL**) and the clutch pedal is depressed. This deactivates cruise control.

**Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".**

If status **ET415** becomes **STATUS 3** without the clutch pedal being depressed, consult the interpretation of status **ET405: "Clutch pedal"**.

If the vehicle is fitted with automatic transmission:

Carry out a multiplex network test, check the configuration of the multiplex network according to the vehicle's technical definition and, in particular, the automatic gearbox computer configuration (see **88B, Multiplex**).

**STATUS 4**

**Cancel button pressed**

The cruise control/speed limiter function is deactivated each time the suspend button is pressed.

Status **ET415** becomes **STATUS 4**, when driving when:

- Either the cruise control is active, or
- the speed limiter is active
- and the driver presses the **0** button.

This action deactivates the Cruise control/Speed limiter.

**Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".**

If status **ET415** becomes **STATUS 4** without pressing the **0** button, refer to the interpretation of status **ET703 Cruise control/speed limiter buttons** and test the **R/0** control button located on the right-hand side of the steering wheel.

**AFTER REPAIR**

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

<b>ET415 CONTINUED 2</b>	
<b>STATUS 5</b>	<p><b>Cruise control or speed limiter monitoring</b></p> <p>This status appears when the vehicle brakes or decelerates sharply without the injection computer receiving a signal indicating that the brake pedal switch has been pressed. If status <b>ET415</b> is <b>STATUS 5</b>, refer to the interpretation of:</p> <ul style="list-style-type: none"> <li>– of status <b>ET042 Cruise control/speed limiter</b>,</li> <li>– of status <b>ET703 Cruise control/speed limiter buttons</b>,</li> <li>– of status <b>ET704 Brake contact no. 1</b>,</li> <li>– and status <b>ET705 Brake contact No 2</b>,</li> </ul> <p>to test the cruise control/speed limiter system components and find the defective component.</p> <p>Also check the operation of the accelerator pedal, and check for any faults on the diagnostic tool relating to this component. Deal with them if necessary.</p> <p><b>Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".</b></p> <p>If status <b>ET415</b> changes to <b>"STATUS 5"</b>, deal with present faults or those stored in the injection computer.</p> <p>If the fault is still present, contact Techline.</p>
<b>STATUS 6</b>	<p><b>Gear lever in neutral (manual gearbox) or the neutral position (automatic gearbox)</b></p> <p>Status <b>ET415</b> becomes <b>STATUS 6</b> when driving with cruise control active (<b>ET042 "Cruise control/speed limiter": CRUISE CONTROL</b>) and:</p> <ul style="list-style-type: none"> <li>– If the driver puts the gear lever in neutral position on a manual gearbox without declutching or,</li> <li>– if the gear lever is in neutral on an automatic gearbox.</li> </ul> <p>This deactivates cruise control.</p> <p><b>Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".</b></p> <p>If status <b>ET415</b> becomes <b>STATUS 6</b> without shifting the gear lever into neutral on a manual gearbox without declutching, or into neutral on an automatic transmission, test the ABS computer and check the configuration of the tyre size stored in the computer. If the configuration is correct, contact the Techline.</p>
<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>

**ET415  
CONTINUED 3**

**STATUS 7**

**Inconsistency between the request and the vehicle speed**

Status **ET415** changes to **STATUS 7** if the computer detects too great a difference between the speed requested by the driver and the vehicle speed.  
This could occur when driving with cruise control active (**ET042 Cruise control/ speed limiter: CRUISE CONTROL**) and when there is a significant difference.  
This inconsistency deactivates cruise control.  
**Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".**  
If status **ET415** changes to **STATUS 7** where there is no significant difference in the levels, contact the Techline.

**STATUS 8**

**Automatic transmission in defect mode.**

Status **ET415** becomes **STATUS 8** when driving with the cruise control active (**ET042 Cruise control/speed limiter: CRUISE CONTROL**) and the automatic transmission is in defect mode.  
This signal is conveyed on the multiplex line and deactivates the cruise control.  
Carry out a multiplex network test, then run fault finding on the automatic transmission computer.  
Deal with any present or stored faults (see **23A, Automatic transmission, interpretation of faults**).  
Clear the automatic transmission computer fault memory by running command **RZ007 "Fault memory"**.  
**Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory"**.  
If STATUS 8 is still present, contact the Techline.

**AFTER REPAIR**

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

**ET415  
CONTINUED 4**

**STATUS 9**

**Vehicle speed monitoring**

Status **ET415** changes to **STATUS 9** if the vehicle speed received by the computer is invalid or absent.

This signal is conveyed on the multiplex line and deactivates the cruise control. Carry out a multiplex network test, then Perform fault finding on the **ABS** computer.

Deal with any present or stored faults (see **38C, Anti-lock braking system, interpretation of faults**).

**Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".**

If **status 9** continues, contact the Techline.

**STATUS 10**

**Monitoring by injection computer**

Status **ET415** becomes "**STATUS 10**" when driving with cruise control active (**ET042 "Cruise control/speed limiter": CRUISE CONTROL**) if the injection computer detects a fault anywhere in the engine management system, or an engine speed that is too high or too low.

This signal is conveyed on the multiplex line and deactivates the cruise control.

Carry out a multiplex network test, then Perform fault finding on the injection computer. Deal with present or stored faults.

**Reinitialise status ET415 on the injection computer by running command RZ007 "Fault memory".**

If **status 10** continues, contact the Techline.

**AFTER REPAIR**

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



<b>ET651</b>	<u>EGR PROGRAMMING CUT-OFF</u>
--------------	--------------------------------

<b>STATUS DEFINITION</b>	This status indicates the EGR valve programming cut-off.
--------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the status does not correspond with the system programming functions.
--------------	--

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<b>NONE</b>	<b>No EGR cut-off, the EGR valve is working properly in accordance with the computer programs.</b>
-------------	--

<b>STATUS 1, 5, 6, 7, 9, 10, 12, 13, 15, 19 23, 24</b>	Switch off the ignition and wait <b>1 minute</b> . Switch the ignition on and check for faults. Check the engine battery voltage with the engine switched off and the engine running. If no faults are present or stored, restart the vehicle and test at idle speed. <b>Do not accelerate too much and reach an engine speed that is too high.</b>
--	---

<b>STATUS 3, 14, 16</b>	Accelerate above idle speed for a few seconds.
-------------------------	--

<b>STATUS 2</b>	Check that the clutch pedal ( <b>ET405 "Clutch pedal switch"</b> ) is not pressed and that the vehicle has stopped completely.
-----------------	--

<b>STATUS 4, 17</b>	Test the present and stored faults and repair.
---------------------	--

<b>STATUS 8</b>	Reset the EGR offsets by referring to the interpretation of command <b>SC036 "Reinitialise programming"</b> and select <b>"EGR valve"</b> .
-----------------	---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET651 CONTINUED</b>	
<b>STATUS 11, 22</b>	Allow the engine to heat up until this cut-off disappears.
<b>STATUS 18</b>	Check that the regeneration of the particle filter in progress has completely finished.
<b>STATUS 20</b>	Allow the engine to cool until this cut-off disappears.
<b>STATUS 21</b>	Too low atmospheric pressure, the EGR valve is disabled.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>ET703</b>	<u><b>CRUISE CONTROL/SPEED LIMITER BUTTONS</b></u>
--------------	--

<b>NOTES</b>	<p>Special notes:</p> <p>Carry out these checks if the statuses do not correspond with system operation programming.</p>
--------------	--

<b>INACTIVE</b>	<p>Status <b>ET703</b> becomes <b>INACTIVE</b> when none of the cruise control/speed limiter buttons are pressed. These buttons are located on the steering wheel.</p> <p>To carry out the checks and measurements in complete safety follow the instructions for removing the driver's front airbag (see <b>MR 364 (Mégane II)</b>, <b>372 (Scénic II)</b> or <b>395 (Laguna II)</b>, <b>Mechanical</b>, <b>88C</b>, <b>Airbag and pretensioners</b>, <b>Driver's front airbag, removal-refitting</b>).</p> <p>If status <b>ET703</b> does not display <b>INACTIVE</b>,</p> <ul style="list-style-type: none"> <li>– check the condition of the cruise control/speed limiter <b>+/-</b> button and the condition of its connector.</li> <li>– check the condition of the cruise control/speed limiter <b>R/O</b> button and the condition of its connector.</li> </ul> <p>Repair if necessary.</p>
-----------------	---

<b>INCREASE</b>	<p>Status <b>ET703</b> becomes <b>PLUS</b> when the cruise control/speed limiter <b>+</b> button is pressed. This button is on the steering wheel, on the left-hand side.</p> <p>If status <b>ET703</b> does not display <b>PLUS</b>, check the condition of the cruise control/speed limiter <b>+/-</b> button, and the condition of its connector. Repair if necessary.</p> <p>To carry out the checks and measurements in complete safety follow the instructions for removing the driver's front airbag (see <b>MR 364 (Mégane II)</b>, <b>372 (Scénic II)</b> or <b>395 (Laguna II)</b>, <b>Mechanical</b>, <b>88C</b>, <b>Airbag and pretensioners</b>, <b>Driver's front airbag, removal-refitting</b>).</p> <p>Measure the <b>resistance of the following connections while pressing the "+" button (on the button tracks)</b>:</p> <ul style="list-style-type: none"> <li>– Connection code <b>86G</b>, of component <b>331</b>.</li> <li>– Connection code <b>86M</b> of component <b>331</b>.</li> </ul> <p>If the resistance is not approximately <b>300 Ω</b>, check the continuity of the connection when the button is not pressed.</p> <p>If there is continuity, replace the <b>+/-</b> control button.</p> <p>If there is a repair procedure (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
-----------------	---

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

### ET703 CONTINUED 1

#### DECREASE

Status **ET703** becomes "**MINUS**" when the cruise control/speed limiter "-" button is pressed. This button is on the steering wheel, on the left-hand side.  
If status **ET703** does not change to **MINUS**, check the condition of the cruise control/speed limiter +/- button, and the condition of its connector. Repair if necessary.

To carry out the checks and measurements in complete safety follow the instructions for removing the driver's front airbag (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag, removal-refitting**).

Measure **the resistance of the following connection whilst pressing the "-" button (on the button tracks)**:

- Connection code **86G**, of component **331**.
- Connection code **86M** of component **331**.

If the resistance is not approximately **100 Ω**, check the continuity of the connection when the button is in rest position.

If there is continuity, replace the +/- control button.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Repair precautions**), repair the wiring, otherwise replace it.

#### SUSPEND

Status **ET703** becomes **SUSPEND** when the cruise control/speed limiter **0** button is pressed. This button is located on the steering wheel, to the right.  
If status **ET703** does not change to **SUSPEND**, check the condition of the cruise control/speed limiter **R/0** button, and the condition of its connector.

To carry out the checks and measurements in complete safety follow the instructions for removing the driver's front airbag (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag, removal-refitting**).

Measure **the resistance of the following connection whilst pressing the 0 button (on the button tracks)**:

- Connection code **86G**, of component **331**.
- Connection code **86M** of component **331**.

If the resistance is not approximately **0Ω**, replace the **R/0** control button.

If there is continuity, replace the **R/0** control button.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Repair precautions**), repair the wiring, otherwise replace it.

#### AFTER REPAIR

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

**ET703  
CONTINUED 2**

**RESUME**

Status **ET703** becomes **RESUME** when the cruise control/speed limiter **R** button is pressed. This button is located on the steering wheel, to the right.  
If status **ET703** does not change to **RESUME**, check the condition of the cruise control/speed limiter **R/0** button, and the condition of its connector. Repair if necessary.

To carry out the checks and measurements in complete safety follow the instructions for removing the driver's front airbag (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag, removal-refitting**).

Measure **the resistance of the following connection whilst pressing the R button (on the button tracks)**:

- Connection code **86G**, of component **331**.
- Connection code **86M** of component **331**.

If the resistance is not approximately **900 Ω**, check the continuity of the connection when the button is in rest position.

If there is continuity, replace the **R/0** control button.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Repair precautions**), repair the wiring, otherwise replace it.

**AFTER REPAIR**

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

ET704 ET705	<u>BRAKE SWITCH NO. 1</u> <u>BRAKE SWITCH NO. 2</u>
----------------	--

<b>NOTES</b>	<b>Special note:</b> Statuses <b>ET704</b> and <b>ET705</b> should change status at the same time. In the event of inconsistency, consult the interpretation of fault <b>DF050 Brake switch circuit</b>
--------------	--

ACTIVE

or

INACTIVE

If the brake lights are working:  
check the continuity and make sure there is no interference resistance on the following connection:  
Connection code **5A between components 160 and 120/645/119**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Repair precautions**), repair the wiring, otherwise replace it.

If the brake lights are not operational, check:

- the condition and fitting of the brake switch,
- the condition and conformity of the brake lights fuse,
- the conformity of the values in the following table:

disconnect the switch and carry out the following checks:  
for **Mégane II and Scénic II with ESP**

	Continuity between connections	Insulation between connections
Switch pressed (Brake pedal released)	5A and BPT	65G and SP17
Switch released (Brake pedal depressed)	65G and SP17	5A and BPT

for **Mégane II and Scénic II without ESP:**

	Continuity between connections	Insulation between connections
Switch pressed (Brake pedal released)	5A and BPT	65A and SP17
Switch released (Brake pedal depressed)	65A and SP17	5A and BPT

For **Laguna II:**

	Continuity between connections	Insulation between connections
Switch pressed (Brake pedal released)	5A and SP13	65A and AP10
Switch released (Brake pedal depressed)	65A and AP10	5A and SP13

Replace the switch if the values obtained are not correct

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

EDC16\_V50\_ET704/EDC16\_V58\_ET704/EDC16\_V5C\_ET704/EDC16\_V50\_ET705/EDC16\_V58\_ET705/EDC16\_V5C\_ET705/  
EDC16\_V18\_ET704/EDC16\_V1C\_ET704/EDC16\_V20\_ET704/EDC16\_V18\_ET705/EDC16\_V1C\_ET705/EDC16\_V20\_ET705

ET706	<u>STORED ENGINE STATUS NO. 1</u>
ET707	<u>STORED ENGINE STATUS NO. 2</u>
ET708	<u>STORED ENGINE STATUS NO. 3</u>
ET709	<u>STORED ENGINE STATUS NO. 4</u>
ET710	<u>STORED ENGINE STATUS NO. 5</u>
ET711	<u>STORED ENGINE STATUS NO. 6</u>
ET712	<u>STORED ENGINE STATUS NO. 7</u>
ET713	<u>STORED ENGINE STATUS NO. 8</u>
ET714	<u>STORED ENGINE STATUS NO. 9</u>
ET715	<u>STORED ENGINE STATUS NO. 10</u>

<b>STATUS DEFINITION</b>	These statuses indicate the recorded engine status for failed regenerations when driving.
--------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b></p> <p>Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p>These statuses should only be interpreted if <b>DF312 "Speed request"</b> is present or stored.</p>
--------------	--

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b>
---

<p>This status shows the stored engine status during a regeneration failure when driving:  <b>NONE, + AFTER IGNITION, RUNNING, STOPPED.</b></p>
---

<p>Each <b>STATUS</b> between <b>ET706</b> and <b>ET715</b> corresponds to regeneration failures for which the mileage is recorded from <b>PR794 Stored regeneration failure no. 1</b> to <b>PR803 Stored regeneration failure no. 10</b> (for example, <b>PR797 Stored regeneration failure no. 4</b> is related to <b>ET709 Stored engine status no. 4</b>).</p>
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

EDC16\_V50\_ET706/EDC16\_V58\_ET706/EDC16\_V5C\_ET706/EDC16\_V50\_ET707/EDC16\_V58\_ET707/EDC16\_V5C\_ET707/  
EDC16\_V50\_ET708/EDC16\_V58\_ET708/EDC16\_V5C\_ET708/EDC16\_V50\_ET709/EDC16\_V58\_ET709/EDC16\_V5C\_ET709/  
EDC16\_V50\_ET710/EDC16\_V58\_ET710/EDC16\_V5C\_ET710/EDC16\_V50\_ET711/EDC16\_V58\_ET711/EDC16\_V5C\_ET711/  
EDC16\_V50\_ET712/EDC16\_V58\_ET712/EDC16\_V5C\_ET712/EDC16\_V50\_ET713/EDC16\_V58\_ET713/EDC16\_V5C\_ET713/  
EDC16\_V50\_ET714/EDC16\_V58\_ET714/EDC16\_V5C\_ET714/EDC16\_V50\_ET715/EDC16\_V58\_ET715/EDC16\_V5C\_ET715/  
EDC16\_V18\_ET706/EDC16\_V1C\_ET706/EDC16\_V20\_ET706/EDC16\_V18\_ET707/EDC16\_V1C\_ET707/EDC16\_V20\_ET707/  
EDC16\_V18\_ET708/EDC16\_V1C\_ET708/EDC16\_V20\_ET708/EDC16\_V18\_ET709/EDC16\_V1C\_ET709/EDC16\_V20\_ET709/  
EDC16\_V18\_ET710/EDC16\_V1C\_ET710/EDC16\_V20\_ET710/EDC16\_V18\_ET711/EDC16\_V1C\_ET711/EDC16\_V20\_ET711/  
EDC16\_V18\_ET712/EDC16\_V1C\_ET712/EDC16\_V20\_ET712/EDC16\_V18\_ET713/EDC16\_V1C\_ET713/EDC16\_V20\_ET713/  
EDC16\_V18\_ET714/EDC16\_V1C\_ET714/EDC16\_V20\_ET714/EDC16\_V18\_ET715/EDC16\_V1C\_ET715/EDC16\_V20\_ET715

ET706 ET707 ET708 ET709 ET710 ET711 ET712 ET713 ET714 ET715 CONTINUED	
---	--

<b>RUNNING</b>	If the <b>STATUS</b> is " <b>RUNNING</b> ", regeneration failed because: <ul style="list-style-type: none"><li>– the customer's driving did not generate enough heat,</li><li>– an engine management system component is faulty.</li></ul>
<b>STOPPED</b>	If the <b>STATUS</b> is " <b>STOPPED</b> ", regeneration failed because the engine was switched off.
<b>NONE</b>	No failed regeneration is present.
<b>+ APC</b>	POWER LATCH

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



ET742	<u>STORED REGEN.* REQUEST STATUS NO. 1</u>
ET743	<u>STORED REGEN.* REQUEST STATUS NO. 2</u>
ET744	<u>STORED REGEN.* REQUEST STATUS NO. 3</u>
ET745	<u>STORED REGEN.* REQUEST STATUS NO. 4</u>
ET746	<u>STORED REGEN.* REQUEST STATUS NO. 5</u>
ET747	<u>STORED REGEN.* REQUEST STATUS NO. 6</u>
ET748	<u>STORED REGEN.* REQUEST STATUS NO. 7</u>
ET749	<u>STORED REGEN.* REQUEST STATUS NO. 8</u>
ET750	<u>STORED REGEN.* REQUEST STATUS NO. 9</u>
ET751	<u>STORED REGEN.* REQUEST STATUS NO. 10</u>

<b>STATUS DEFINITION</b>	<p>Statuses <b>ET742</b> to <b>ET751</b> correspond to the causes of the regeneration request. They are associated with parameters <b>PR816 "Stored regeneration start No. 1"</b> to <b>PR825 "Stored regeneration start No. 10"</b> which contain the record of the vehicle mileage at the start of regeneration (eg. <b>PR745 "Stored regeneration start No. 4"</b> is associated with <b>"ET709 Stored regeneration request status no. 4"</b>).</p>
--------------------------	--

<b>NOTES</b>	<p><b>Special note:</b> These statuses should only be interpreted for <b>ALP9: Particle filter warning light comes on too frequently</b>.</p>
--------------	---

<p style="text-align: center;"><b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80 °C</b></p>
--

<b>AFTER REPAIR</b>	<p>Carry out a road test, then check with the <b>diagnostic tool</b>.</p>
---------------------	---

EDC16\_V50\_ET742/EDC16\_V58\_ET742/EDC16\_V5C\_ET742/EDC16\_V50\_ET743/EDC16\_V58\_ET743/EDC16\_V5C\_ET743/  
EDC16\_V50\_ET743/EDC16\_V58\_ET744/EDC16\_V5C\_ET744/EDC16\_V50\_ET745/EDC16\_V58\_ET745/EDC16\_V5C\_ET745/  
EDC16\_V50\_ET745/EDC16\_V58\_ET746/EDC16\_V5C\_ET746/EDC16\_V50\_ET747/EDC16\_V58\_ET747/EDC16\_V5C\_ET747/  
EDC16\_V50\_ET747/EDC16\_V58\_ET748/EDC16\_V5C\_ET748/EDC16\_V50\_ET749/EDC16\_V58\_ET749/EDC16\_V5C\_ET749/  
EDC16\_V50\_ET750/EDC16\_V58\_ET750/EDC16\_V5C\_ET750/EDC16\_V50\_ET751/EDC16\_V58\_ET751/EDC16\_V5C\_ET751/  
EDC16\_V18\_ET742/EDC16\_V1C\_ET742/EDC16\_V20\_ET742/EDC16\_V18\_ET743/EDC16\_V1C\_ET743/EDC16\_V20\_ET743/  
EDC16\_V18\_ET743/EDC16\_V1C\_ET744/EDC16\_V20\_ET744/EDC16\_V18\_ET745/EDC16\_V1C\_ET745/EDC16\_V20\_ET745/  
EDC16\_V18\_ET745/EDC16\_V1C\_ET746/EDC16\_V20\_ET746/EDC16\_V18\_ET747/EDC16\_V1C\_ET747/EDC16\_V20\_ET747/  
EDC16\_V18\_ET747/EDC16\_V1C\_ET748/EDC16\_V20\_ET748/EDC16\_V18\_ET749/EDC16\_V1C\_ET749/EDC16\_V20\_ET749/  
EDC16\_V18\_ET750/EDC16\_V1C\_ET750/EDC16\_V20\_ET750/EDC16\_V18\_ET751/EDC16\_V1C\_ET751/EDC16\_V20\_ET751

ET742 ET743 ET744 ET745 ET746 ET747 ET748 ET749 ET750 ET751 CONTINUED	
---	--

<b>STATUS1</b>	<b>Request by weight of soot</b> Regeneration has been requested following measurement of the maximum weight of soot in the particle filter, without the particle filter warning light coming on.
<b>STATUS2</b>	<b>Request by estimated weight of soot</b> Regeneration has been requested following an estimate of the maximum weight of soot in the particle filter, without the particle filter warning light coming on.
<b>STATUS3</b>	<b>Request by distance travelled</b> Regeneration has been requested as the distance travelled since the last successful regeneration has reached the maximum authorised value (the particle filter warning light has not come on).
<b>STATUS4</b>	<b>Request by number of failed regenerations or soot weight</b> This status corresponds to the appearance of <b>DF312 "Speed request"</b> . This corresponds to the maximum number of failed regenerations or to the maximum weight of soot in the particle filter, with the particle filter warning light coming on.

\* REGEN: Regeneration

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

# DIESEL INJECTION

## Fault finding – Parameter summary table

13B

Tool parameter	Diagnostic tool title
PR002	Alternator charge
PR005	EGR valve opening setpoint
PR006	Rail pressure regulator current
PR007	Rail pressure regulator current setpoint
PR008	Rail reference pressure
PR009	Turbocharging pressure setpoint
PR011	Turbocharging solenoid valve position sensor
PR015	Engine torque
PR016	Alternator flow ( <b>Vdiag 50, 58, 5C</b> only)
PR017	Fuel flow
PR022	EGR valve position feedback loop difference
PR030	Accelerator pedal position
PR035	Atmospheric pressure
PR037	Refrigerant pressure
PR038	Rail pressure
PR041	Turbocharging pressure
PR043	Heating element power authorised
PR045	Power requested by thermoplungers
PR047	Turbocharging pressure *OCR
PR048	Refrigerant pressure regulation valve *OCR
PR051	EGR valve position feedback
PR053	Engine speed requested by air conditioning
PR055	Engine speed
PR058	Inlet air temperature ( <b>Vdiag 18, 1C and 20</b> only)
PR059	Inlet air temperature ( <b>Vdiag 50, 58 and 5C</b> only)

\* OCR: Opening cyclic ratio

# DIESEL INJECTION

## Fault finding – Parameter summary table

Tool parameter	Diagnostic tool title
PR061	Exterior air temperature
PR064	Coolant temperature
PR066	Oil temperature
PR071	Computer feed voltage
PR073	Air flowmeter feed voltage
PR076	Refrigerant sensor voltage
PR077	EGR valve position sensor voltage
PR079	Atmospheric pressure sensor voltage
PR080	Rail pressure sensor voltage
PR083	Air temperature sensor voltage
PR084	Coolant temperature sensor voltage
PR085	Oil temperature sensor voltage
PR089	Vehicle speed
PR128	First EGR valve offset
PR129	Last EGR valve offset
PR130	Cruise control setpoint
PR131	EGR air flow variation
PR132	Air flow
PR146	Inlet air flow
PR147	Pedal potentiometer voltage gang 1
PR148	Pedal potentiometer voltage gang 2
PR157	Fuel flow setpoint
PR171	Air flow setpoint for EGR
PR190	Idle speed setpoint
PR209	Turbocharging pressure loop difference
PR213	Rail pressure loop difference

# DIESEL INJECTION

## Fault finding – Parameter summary table

Tool parameter	Diagnostic tool title
PR358	Sensor reference voltage
PR364	Cylinder no. 1 fuel correction
PR365	Cylinder no. 4 fuel flow correction
PR381	Particle filter downstream temperature
PR382	Particle filter upstream temperature
PR383	Weight of soot in the particle filter
PR385	Exhaust pipe flow
PR391	Mileage since particle filter replacement
PR405	Cylinder no. 2 fuel flow correction
PR406	Cylinder no. 3 fuel flow correction
PR412	Mileage since last successful regeneration
PR414	Particle filter differential pressure
PR415	Time since last regeneration
PR417	Damper valve OCR*
PR420	Damper valve error counter
PR667	Turbine upstream temperature
PR668	Turbine upstream temperature sensor voltage
PR672	Damper valve position setpoint
PR754	Supplier no. 1 signal
PR784	Stored DF312 no. 1
PR785	Stored DF312 no. 2
PR786	Stored DF312 no. 3
PR787	Stored DF312 no. 4
PR788	Stored DF312 no. 5
PR789	Stored DF312 no. 6

\* OCR: Opening cyclic ratio

# DIESEL INJECTION

## Fault finding – Parameter summary table

Tool parameter	Diagnostic tool title
PR790	Stored DF312 no. 7
PR791	Stored DF312 no. 8
PR792	Stored DF312 no. 9
PR793	Stored DF312 no. 10
PR794	Stored regeneration failure no. 1
PR795	Stored regeneration failure no. 2
PR796	Stored regeneration failure no. 3
PR797	Stored regeneration failure no. 4
PR798	Stored regeneration failure no. 5
PR799	Stored regeneration failure no. 6
PR800	Stored regeneration failure no. 7
PR801	Stored regeneration failure no. 8
PR802	Stored regeneration failure no. 9
PR803	Stored regeneration failure no.10
PR816	Stored regeneration start no. 1
PR817	Stored regeneration start no. 2
PR818	Stored regeneration start no. 3
PR819	Stored regeneration start no. 4
PR820	Stored regeneration start no. 5
PR821	Stored regeneration start no. 6
PR822	Stored regeneration start no. 7
PR823	Stored regeneration start no. 8
PR824	Stored regeneration start no. 9
PR825	Stored regeneration start no.10
PR1012	Weight of soot after regeneration

<b>PR002</b>	<u>ALTERNATOR CHARGE</u>
--------------	--------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the alternator charge value in %.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The alternator charge value varies according to the battery voltage.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR005</b>	<u>EGR VALVE OPENING VALUE REQUIRED</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates a theoretical opening value for the EGR valve giving optimum engine performance.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

The EGR valve theoretical opening value for operation with the engine stopped and ignition on is: <b>- 10 &lt; PR005 &lt; 0%.</b> In the event of a fault, refer to the interpretation of fault <b>DF272 EGR control circuit</b> .
--

<b>Conformity check with the engine running and engine coolant temperature &gt; 80°C.</b>
---

The theoretical EGR valve opening value for operation with the engine running and the engine coolant temperature > 80°C is <b>10 &lt; PR005 &lt; 40%.</b> If there is a fault, refer to the interpretation of fault <b>DF272 EGR control circuit</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR006</b>	<u>RAIL PRESSURE REGULATOR CURRENT</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the current absorbed by the rail pressure regulator.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Conformity check with engine stopped and ignition on.
---

<b>PR006 = PR007 Rail pressure regulator current setpoint <math>\pm</math> 5 mA</b> <b>Default value: 1600 mA</b> In the event of a fault, refer to the interpretation of faults <b>DF053 Rail pressure regulation function</b> and <b>DF007 Rail pressure sensor circuit</b> .
---

Engine running, engine coolant temperature > 80°C.
--

<b>PR006 = PR007 Rail pressure regulator current setpoint <math>\pm</math> 5 mA</b> <b>Default value: 1600 mA</b> In the event of a fault, consult the interpretation of fault <b>DF007 Rail pressure sensor circuit</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR007</b>	<u>RAIL PRESSURE REGULATOR CURRENT SETPOINT</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the current setpoint absorbed by the rail pressure regulator.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>395 mA &lt; PR007 &lt; 405 mA</b> <b>Default value: 1600 mA</b> In the event of a fault, refer to the interpretation of faults <b>DF053 Rail pressure regulation function</b> and <b>DF007 Rail pressure sensor circuit</b> .
--

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

<b>1350 mA &lt; PR007 &lt; 1450 mA</b> <b>Default value: 1600 mA</b> In the event of a fault, consult the interpretation of fault <b>DF007 Rail pressure sensor circuit</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR008</b>	<u>RAIL REFERENCE PRESSURES</u>
--------------	---------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the theoretical pressure value for optimum engine operation in bar.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

The theoretical rail pressure value is a setpoint of: <b>200 bar &lt; PR008 &lt; 300 bar.</b> In the event of a fault, refer to the interpretation of faults <b>DF053 Rail pressure regulation function</b> and <b>DF007 Rail pressure sensor circuit</b> .
---

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

The theoretical rail pressure value is a setpoint of: <b>220 bar &lt; PR008 &lt; 320 bar.</b> In the event of a fault, consult the interpretation of fault <b>DF053 Rail pressure regulator function</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR009</b>	<u>TURBOCHARGING PRESSURE SETPOINTS</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the theoretical turbocharging pressure setpoint value in <b>bar</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The theoretical turbocharging pressure value is a setpoint of:  
Pressure ≈ **1 bar**

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR011</b>	<u>TURBOCHARGING SOLENOID VALVE POSITION CORRECTION</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbocharging solenoid valve position correction in %.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

This value must be **PR011 < 5%**.  
**The Opening Cyclic Ratio should be identical to the correction of the solenoid valve position**

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR015</b>	<u>ENGINE TORQUE</u>
--------------	----------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the engine torque in Nm.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

The value must be between <b>20 N.m. &lt; PR015 &lt; 40 N.m.</b> <b>This parameter is only valid when the engine is running.</b>
---

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR016</b>	<u>ALTERNATOR FLOW</u>
--------------	------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the alternator flow in <b>mA</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>Ignition on: PR016 = 0 mA</b> <b>In the event of a fault, check the charge circuit.</b>
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>Engine running: PR016 ≈ 1500 &lt; PR016 &lt; 2500 mA</b> <b>With consumers: PR016 ≈ 2500 &lt; PR016 &lt; 3600 mA</b> <b>In the event of a fault, check the charge circuit.</b>
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR017</b>	<u>FUEL FLOW</u>
--------------	------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the fuel flow in <b>mg/st</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>Engine running: PR017 = PR157: Fuel flow setpoint</b>
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>Engine running: 0 &lt; PR017 &lt; 60 mg/stroke</b>
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR022</b>	<u>EGR VALVE POSITION FEEDBACK LOOP DIFFERENCE</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the percentage difference between the setpoint and the EGR valve position.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>PR022 = PR005 EGR valve opening setpoint - PR051 EGR valve position feedback</b> In the event of a fault, consult the interpretation of fault <b>DF118 EGR solenoid valve servo-control</b> .
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR022 = PR005 EGR valve opening setpoint - PR051 EGR valve position feedback</b> <b>At idle speed the value should be close to 0.</b> In the event of a fault, consult the interpretation of fault <b>DF118 EGR solenoid valve servo-control</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR030</b>	<u><b>ACCELERATOR PEDAL POSITION</b></u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the accelerator pedal position as a percentage.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
	<b>There must be no present or stored faults.</b> Perform this fault finding procedure: – after finding an inconsistency in the parameter, – after a customer complaint (e.g. lack of power).

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

**If no pressure is being applied to the pedal PR030 = 0%.**  
In the event of a fault, refer to the interpretation of fault **DF008 Pedal potentiometer circuit gang 1** or **DF009 Pedal potentiometer circuit gang 2**.

### Sensor electrical conformity.

Check **the continuity and absence of interference resistance** of the following connections:

- connection code **3LR**,
- Connection code **3LS**,
- connection code **3LT**,
- connection code **3LU**,
- connection code **3LW**,
- connection code **3LV**.

Between components **120** and **921**.

If any of the connections are faulty and there is a repair method (**see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repairs**), repair the wiring; otherwise replace the wiring.

Pedal sensor **connected**, vehicle **ignition on** and **engine stopped**:

- check the value of **PR030**:  
**0%** no load,  
**100%** full load,  
**138%** full load after kickdown point on pedal.
- if the value is not correct, replace the pedal sensor.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR035</b>	<u>ATMOSPHERIC PRESSURE</u>
--------------	-----------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the atmospheric pressure in mbar. The sensor is integrated in the computer.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The default value is: **750 mbar**  
**In the event of a fault, consult the interpretation of fault DF003 Atmospheric pressure sensor circuit.**

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR037</b>	<u>REFRIGERANT PRESSURE</u>
--------------	-----------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the atmospheric pressure in mbar; the sensor is integrated in the computer.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

The value must be between (Vdiag 50, 58 and 5C only): <b>1 bar &lt; PR037 &lt; 27 bar</b> <b>In the event of a fault, consult the interpretation of fault DF049 Refrigerant sensor circuit.</b>
The value must be between (Vdiag 18, 1C and 20 only): <b>1 bar &lt; PR037 &lt; 40 bar</b> <b>In the event of a fault test the multiplex network.</b>

<b>Conformity check with engine stopped and ignition on.</b>
--

The value must be between (Vdiag 50, 58 and 5C only): <b>2 bar &lt; PR037 &lt; 27 bar</b> <b>In the event of a fault, consult the interpretation of fault DF049 Refrigerant sensor circuit.</b>
---

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR038</b>	<u>RAIL PRESSURE</u>
--------------	----------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the rail pressure in bar.
---------------------------------	--

<b>NOTES</b>	<p><b>There must be no present or stored faults.</b> Perform this fault finding procedure:</p> <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– after a customer complaint (starting problems, poor performance, stalling etc.),</li> <li>– after interpretation of command <b>AC225 Rail pressure regulator</b>.</li> </ul>
	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p>

<b>Conformity check with engine stopped and ignition on.</b>
--

<p>The rail pressure value is between: <b>0 bar &lt; PR038 &lt; 10 bar</b> <b>Default value: 250 bar</b> In the event of a fault, consult the interpretation of fault <b>DF007 Rail pressure sensor circuit</b>.</p>
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<p>The rail pressure value is (engine at idle speed): <b>PR038 ≈ 315 bar</b> <b>Default value: 250 bar</b> In the event of a fault, consult the interpretation of fault <b>DF007 Rail pressure sensor circuit</b>.</p>
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

**PR038  
CONTINUED**

**Sensor electrical conformity.**

Check the condition of the rail pressure sensor connector (see **Wiring Diagram Technical Note, Vehicle, component code 1032**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Vehicle, component code 120**).

If one of the connectors is 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 **continuity** and absence of **interference resistance** of the following connections:

- connection code **3LX**,
- connection code **3LY**,
- connection code **3LZ**.

Between components **120** and **1032**.

If any of the connections are faulty and there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

Check that there are no external diesel leaks from the high pressure fuel circuit.

With the ignition on and the engine stopped for over **1 minute**:

Display parameter **PR038**.

- If the pressure is below **90 bar**, the sensor is in order.
- If the pressure is above **90 bar**, contact the Techline.

**AFTER REPAIR**

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

<b>PR041</b>	<u>TURBOCHARGING PRESSURE</u>
--------------	-------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbocharging pressure in mbar.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The turbocharging pressure value is:  
**PR041 = PR035 Atmospheric pressure ± 10 mbar**  
In the event of a fault, apply the interpretation of **DF004 Turbocharging pressure sensor circuit**.

### Sensor electrical conformity.

Check the **continuity** and absence of **interference resistance** on the following connections:  
For **Mégane II and Scénic II**:  
– connection code **3LQ**,  
– connection code **3LP**,  
– connection code **3LN**.  
Between components **120 and 1071**.  
For **Laguna II**:  
– connection code **3LQ**,  
– connection code **3LP**,  
– connection code **3LN**.  
Between components **120 and 1474**.  
If any of the connections are faulty and there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

**PR041  
CONTINUED**

**Vehicle with ignition on, and the engine stopped for over 1 minute:**

Compare the values of **PR041** and **PR035 Atmospheric pressure**.

If the difference between **PR041** and **PR035 Atmospheric pressure** is greater than **0.1 bar**, check the value of **PR035 Atmospheric pressure** by comparing it with the reading on a vehicle in the workshop which is correct.

If the value of **PR035 Atmospheric pressure** is not correct (difference greater than **0.1 bar** between the 2 vehicles), contact the Techline.

Otherwise (when the value **PR035 Atmospheric pressure** is correct), change the turbocharging pressure sensor.

If the difference between **PR041** and **PR035 Atmospheric pressure** is less than **0.1 bar**.

**Start the engine, with the engine idling:**

Compare the values of **PR041** and **PR035 Atmospheric pressure**.

If the difference between **PR041** and **PR035 Atmospheric pressure** is greater than **0.2 bar**.

**Check the air inlet circuit:**

**absence of leaks or blockages** in the **low** and **high** pressure air circuit: ducts, presence and tightness of the mounting clips, mounting of the turbocharger pressure sensor, intercooler, etc.

Check that the damper valve is not jammed closed.

Repair if necessary.

**AFTER REPAIR**

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



<b>PR047</b>	<u>TURBOCHARGER PRESSURE OCR*</u>
--------------	-----------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbocharger pressure opening cyclic ratio as a %.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

The value must be between <b>60% &lt; PR047 &lt; 90%</b> . <b>The Opening Cyclic Ratio should be identical to the correction of the solenoid valve position</b>
--

<b>Conformity check with engine stopped and ignition on.</b>
--

This value must be <b>PR047 &lt; 5%</b> . <b>The Opening Cyclic Ratio should be identical to the correction of the solenoid valve position</b>
---

\* OCR: Opening cyclic ratio

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR048</b>	<u>RAIL PRESSURE REGULATION VALVE OCR*</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbocharger pressure opening cyclic ratio in %.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

The value must be between <b>35% &lt; PR048 &lt; 45%</b> <b>In the event of a fault, consult the interpretation of fault DF007 Rail pressure sensor circuit.</b>
---

<b>Engine stopped, ignition on.</b>
-------------------------------------

The value must be <b>PR048 = 15%</b> . In the event of a fault, consult the interpretation of faults <b>DF007 Rail pressure sensor circuit</b> and <b>DF053 Rail pressure regulation function</b> .
--

\* OCR: Opening cyclic ratio

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR051</b>	<u>EGR VALVE POSITION FEEDBACK</u>
--------------	------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the EGR valve opening ratio.
---------------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p><b>There must be no present or stored faults.</b> Perform this fault finding procedure:</p> <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– after a customer complaint (loss of power, smoke etc.).</li> <li>– after interpretation of command <b>AC103 EGR by-pass</b>.</li> </ul>
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<p>The value must be between - 10% &lt; <b>PR051</b> &lt; 0%.</p> <p>In the event of a fault, consult the interpretation of fault <b>DF118 EGR solenoid valve servo-control</b>.</p>
--

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

<p>The value must be between 10% &lt; <b>PR051</b> &lt; 40%.</p> <p>In the event of a fault, consult the interpretation of fault <b>DF118 EGR solenoid valve servo-control</b>.</p>
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR053</b>	<u>SPEED REQUESTED BY HEATING/AIR CONDITIONING</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the engine's speed of rotation with air conditioning in <b>rpm</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

The engine speed requested by the air conditioning is increased and fluctuates around <b>875 rpm</b> . This parameter is only valid when the engine has been started.
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR055</b>	<u>ENGINE SPEED</u>
--------------	---------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the engine's rotational speed in <b>rpm</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

With the ignition on the value is: <b>PR055 = 0 rpm</b> . In the event of a fault, refer to the interpretation for fault <b>DF005 Engine speed sensor circuit</b> .
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

With the engine idling, the value is approximately <b>800 rpm</b> . In the event of a fault, refer to the interpretation for fault <b>DF005 Engine speed sensor circuit</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR058</b> <b>PR059</b>	<u>INLET AIR TEMPERATURE</u>
------------------------------	------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the inlet air temperature in °C.
---------------------------------	---

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p><b>There must be no present or stored faults.</b> Perform this fault finding procedure:</p> <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– after a customer complaint (e.g. lack of power).</li> </ul>
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<p>With the ignition on the inlet air temperature varies according to the exterior temperature.  <b>Default value: 20°C</b>          In the event of a fault, refer to the interpretation for <b>DF039 Inlet air temperature circuit sensor</b>          Parameter <b>PR059</b> ≈ <b>PR064 Coolant temperature</b> cold engine.</p>
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<p>With the engine running at idle speed the inlet air temperature varies according to the engine coolant temperature.  <b>Default value: 20°C</b>          In the event of a fault, refer to the interpretation for <b>DF039 Inlet air temperature circuit sensor</b></p>
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

**PR058  
PR059  
CONTINUED**

**Sensor electrical conformity.**

With the flowmeter disconnected, check the **insulation** to **earth** of connection **3FB** of component **799**.  
Check the **+ 12 V after relay supply** of connection **3B** between components **120** and **799**.  
If any of the connections are faulty and there is a repair method (**see Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

Measure the **resistance** between connections **3ABQ** and **3DW** of component **799**.  
Replace the air flowmeter if the resistance is not approximately:

**9716 Ω < PR058 or PR059 < 9689 Ω - 10°C**  
**5497 Ω < PR058 or PR059 < 6051 Ω at + 0°C**  
**3553 Ω < PR058 or PR059 < 3875 Ω at + 10°C**  
**2353 Ω < PR058 or PR059 < 2544 Ω at + 20°C**  
**1612 Ω < PR058 or PR059 < 1730 Ω at + 30°C**  
**1114 Ω < PR058 or PR059 < 1186 Ω at + 40°C**  
**795 Ω < PR058 or PR059 < 839 Ω at + 50°C**  
**568 Ω < PR058 or PR059 < 598 Ω at + 60°C**  
**418 Ω < PR058 or PR059 < 436 Ω at + 70°C**  
**311 Ω < PR058 or PR059 < 321 Ω at + 80°C**  
**234 Ω < PR058 or PR059 < 242 Ω at + 90°C**

**AFTER REPAIR**

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

<b>PR061</b>	<u>EXTERIOR AIR TEMPERATURE</u>
--------------	---------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the exterior air temperature in °C.
---------------------------------	--

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p><b>There must be no present or stored faults.</b> Perform this fault finding procedure:</p> <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– after a customer complaint (e.g. lack of power).</li> </ul>
--------------	--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<p>This parameter indicates the exterior air temperature in °C. This parameter is controlled by the UCH and transmitted to the injection on the multiplex network. Default value = 20°C <b>In the event of a fault, consult the UCH (see 87B, Passenger compartment connection unit).</b></p>
---

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR064</b>	<u>COOLANT TEMPERATURE</u>
--------------	----------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the engine coolant temperature in °C.
---------------------------------	--

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p><b>There must be no present or stored faults.</b> Perform this fault finding procedure:</p> <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– after a customer complaint (e.g. lack of power).</li> </ul>
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<p>With the ignition on the coolant temperature varies according to the exterior temperature.</p> <p><b>Safe value: 119°C</b></p> <p>In the event of a fault, consult the interpretation of fault <b>DF001 Coolant temperature sensor circuit</b>. Parameter <b>PR059: Inlet air temperature</b> ≈ <b>PR064</b> cold engine.</p>
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<p>With the engine running at idle speed the coolant temperature varies according to the engine temperature.</p> <p><b>Safe value: 119°C</b></p> <p>In the event of a fault, refer to the interpretation of <b>DF001 Coolant temperature sensor circuit</b>.</p>
--

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

**PR064  
CONTINUED**

**Sensor electrical conformity.**

Check the **continuity** and absence of **interference resistance** on the following connections:

- connection code **3C**,
- connection code **3JK**.

Between components **120** and **244**.

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.

Measure the **resistance** between connections **3C** and **3JK** of component **244**.

Replace the sensor if the resistance is not:

**$11332 \Omega < \text{PR064} < 13588 \Omega$  at  $-10^{\circ}\text{C}$**

**$2140 \Omega < \text{PR064} < 2364 \Omega$  at  $+25^{\circ}\text{C}$**

**$772 \Omega < \text{PR064} < 850 \Omega$  at  $+50^{\circ}\text{C}$**

**$275 \Omega < \text{PR064} < 291 \Omega$  at  $+80^{\circ}\text{C}$**

**$112 \Omega < \text{PR064} < 118 \Omega$  at  $+110^{\circ}\text{C}$**

**AFTER REPAIR**

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

<b>PR071</b>	<u>COMPUTER SUPPLY VOLTAGE</u>
--------------	--------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the computer supply voltage in volts.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The voltage must be between **9 V < PR071 < 16 V**.  
In the event of a fault, carry out a fault finding procedure on the charging circuit and refer to the interpretation for **DF047 Computer supply voltage**.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR073</b>	<u>AIR FLOWMETER FEED VOLTAGE</u>
--------------	-----------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the air flowmeter feed voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Conformity check with engine stopped and ignition on.
---

<b>0.5 &lt; PR073 &lt; 1 V</b> Default value: <b>0 V</b> . In the event of a fault, refer to the interpretation of fault <b>DF013 Sensor supply voltage no. 3</b> .
---

Engine running, engine coolant temperature > 80°C.
--

<b>1.5 &lt; PR073 &lt; 2.5 V</b> Default value: <b>0 V</b> . In the event of a fault, refer to the interpretation of fault <b>DF013 Sensor supply voltage no. 3</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR076</b>	<u>REFRIGERANT SENSOR VOLTAGE</u>
--------------	-----------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the refrigerant sensor voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

The value should be between: <b>0 V &lt; PR076 &lt; 5 V</b> In the event of a fault test the multiplex network.
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR077</b>	<u>EGR VALVE POSITION SENSOR VOLTAGE</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the EGR valve position sensor voltage in volts.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>0.5 &lt; PR077 &lt; 1.5 V</b> Default value: <b>0 V</b> . In the event of a fault, refer to the interpretation of fault <b>DF012 Sensor feed voltage no. 2</b> .
---

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

<b>1.5 &lt; PR077 &lt; 2.5 V</b> Default value: <b>0 V</b> . In the event of a fault, refer to the interpretation of fault <b>DF012 Sensor supply voltage no. 2</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR079</b>	<u>ATMOSPHERIC PRESSURE SENSOR VOLTAGE</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the atmospheric pressure sensor voltage in volts.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**3.80 V < PR079 < 4 V**

In the event of a fault, consult the interpretation of fault **DF003 Atmospheric pressure sensor circuit**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR080</b>	<u>RAIL PRESSURE SENSOR VOLTAGE</u>
--------------	-------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the rail pressure sensor voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>0.5 V &lt; PR080 &lt; 1 V</b> <b>Default value: 5 V</b> In the event of a fault, refer to the interpretation of fault <b>DF013 Sensor supply voltage no. 3</b> .
---

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

<b>1 V &lt; PR080 &lt; 1.5 V</b> <b>Default value: 5 V</b> In the event of a fault, refer to the interpretation of fault <b>DF013 Sensor supply voltage no. 3</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR083</b>	<u><b>AIR TEMPERATURE SENSOR VOLTAGE</b></u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the air temperature sensor voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**Vdiag 50, 58, 5C:**

**1.90 V < PR083 < 2.90 V**

**Default value: 5 V**

In the event of a fault, refer to the interpretation of fault **DF039 Inlet air temperature sensor circuit**.

**Vdiag 18, 1C, 20:**

**1.90 V < PR083 < 3.10 V.**

**Default value: 5 V.**

In the event of a fault, consult the interpretation of fault **DF003 Atmospheric pressure sensor circuit**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR084</b>	<u>COOLANT TEMPERATURE SENSOR VOLTAGE</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the coolant temperature sensor voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>The voltage must be between 3 V &lt; PR084 &lt; 4 V</b> Default value: <b>5 V</b> In the event of a fault, see the interpretation of <b>DF001 Coolant temperature sensor circuit</b> .
---

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

<b>The voltage must be between 1 V &lt; PR084 &lt; 2 V</b> Default value: <b>5 V</b> In the event of a fault, see the interpretation of <b>DF001 Coolant temperature sensor circuit</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR089</b>	<u>VEHICLE SPEED</u>
--------------	----------------------

<b>PARAMETER DEFINITION</b>	Gives the vehicle speed in mph.
---------------------------------	---------------------------------

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p>
	<p>This parameter is transmitted by the ABS computer. This signal is transmitted to the injection on the multiplex network.</p>

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

In the event of a fault, test the multiplex network (see **88B, Multiplexing**).  
Then complete fault finding on the ABS computer (see **38C, Anti-lock braking system**).

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR128</b>	<u>FIRST EGR VALVE OFFSET</u>
--------------	-------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the closing ratio of the EGR valve for the first offset of the EGR valve.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The value must be between 10% < PR128 < 40%  
In the event of a fault, run command **SC036 Reinitialise programming**.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR129</b>	<u>LAST EGR VALVE OFFSET</u>
--------------	------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the EGR valve closing ratio for the last EGR valve offset.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The value must be between 10% < PR129 < 40%  
In the event of a fault, run command **SC036 Reinitialising programming**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR130</b>	<u>CRUISE CONTROL SETPOINT</u>
--------------	--------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the cruise control setpoint.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
	<b>There must be no faults present.</b> Perform this fault finding procedure: <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– or after a customer complaint (lack of power, smoke etc.).</li> </ul>

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

Indicates the cruise control cruising speed.  
Cruise control can only be activated for a speed **V > 18 mph (30 km/h)**.  
In the event of a fault, refer to the interpretation of statuses **ET042 Cruise control/Speed limiter**, **ET556 Driver deactivation of Cruise control/Speed limiter** and **ET557 Deactivation of Cruise control/Speed limiter by function**.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR131</b>	<u>EGR AIR FLOW DIFFERENCE</u>
--------------	--------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the EGR air flow difference.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**PR131 = PR146 Inlet air flow - PR171 Air flow setpoint for EGR.**

The value should be as close as possible to 0.

In the event of a fault, consult the interpretation of parameter **DF056 Air flow sensor circuit**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR132</b>	<u>AIR FLOW</u>
--------------	-----------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the inlet air flow in kg/h.
---------------------------------	--

<b>NOTES</b>	<p><b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p><b>There must be no faults present.</b> Perform this fault finding procedure:</p> <ul style="list-style-type: none"> <li>– after finding an inconsistency in the parameter,</li> <li>– or after a customer complaint (lack of power, smoke etc.).</li> </ul>
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<p>Indicates the inlet air flow in kg/h. The value should be between: <b>0 kg/h &lt; PR132 &lt; 10 kg/h.</b> In the event of a fault, apply the interpretation of <b>DF056 Air flow sensor circuit</b>.</p>
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<p>Indicates the inlet air flow in kg/h. The value should be between: <b>Approximately 30 kg/h.</b> In the event of a fault, apply the interpretation of <b>DF056 Air flow sensor circuit</b>.</p>
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



**PR132  
CONTINUED**

**Sensor electrical conformity.**

**Test the air inlet circuit** (from the air filter inlet to the inlet manifold tracts, apply **test 4 Turbocharged air inlet circuit check**):

- air filter unit inlet not blocked and filter not clogged,
- **visual inspection only**, run **test 4 Turbocharged air inlet circuit check** for **ALP2 Starting difficult or impossible**,
- oil vapour recirculation circuit connected correctly,
- **absence of leaks or blockages** in the **low** and **high pressure** air circuits: ducts, presence and tightness of the mounting clips, mounting of the turbocharging pressure sensor, intercooler, etc.
- check that the damper valve is not jammed closed.

Carry out the necessary repairs.

Check **the electrical conformity of the air flowmeter**:

Check the **+ 5 V supply** to the air flowmeter on connection **3KJ** between components **120** and **799**.

Check the **+ 12 V after relay supply** to the air flowmeter on connection **3B** between components **120** and **799**.

Check the **continuity** and **absence of interference resistance** of the following connections:

- connection code **3DV**,
- connection code **3DW**.

Between components **120** and **799**.

If any of the connections are faulty and there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: precautions for repairs**), repair the wiring; otherwise replace the wiring.

With the flow meter **connected**, the **vehicle ignition on** and **engine stopped**:

Measure the voltage between connections **3DV** and **3DV** between components **120** and **799**.

Replace the air flowmeter if its voltage is not approximately **0.5 V < PR073 Air flowmeter supply voltage < 0.7 V**.

**AFTER REPAIR**

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

<b>PR146</b>	<u>INLET AIR FLOW</u>
--------------	-----------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the air flow entering the engine in mg/st.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

This parameter indicates the air flow entering the engine in mg/st. <b>0 mg/st</b> In the event of a fault, consult the interpretation of parameter <b>DF056 Air flow sensor circuit</b> .
--

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

This parameter indicates the air flow entering the engine in mg/st. In the event of a fault, consult the interpretation of parameter <b>DF056 Air flow sensor circuit</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR147</b>	<u>PEDAL POTENTIOMETER GANG 1 VOLTAGE</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the pedal potentiometer gang 1 voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

Accelerator pedal released: **0.70 V < PR147 < 0.80 V**  
In the event of a fault, refer to the interpretation of **DF008 Pedal potentiometer circuit gang 1** or **DF009 Pedal potentiometer circuit gang 2**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR148</b>	<u>PEDAL POTENTIOMETER GANG 2 VOLTAGE</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the pedal potentiometer gang 2 voltage in volts.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

Accelerator pedal released: **0.35 V < PR148 < 0.40 V**  
In the event of a fault, refer to the interpretation of **DF008 Pedal potentiometer circuit gang 1** or **DF009 Pedal potentiometer circuit gang 2**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR157</b>	<u>FUEL FLOW SETPOINT</u>
--------------	---------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the fuel flow setpoint in <b>mg/st</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>Ignition on: 0 &lt; PR157 &lt;60 mg/stroke</b>
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>Engine running: PR017: Fuel flow = PR157.</b>
--

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR171</b>	<u>AIR FLOW SETPOINT FOR EGR</u>
--------------	----------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the flow of air required by the EGR valve in <b>mg/st</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

Indicates the air flow required by the EGR valve

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR190</b>	<u>IDLE SPEED SETPOINT</u>
--------------	----------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the engine's rotational speed in <b>rpm</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

With the ignition on the value is <b>0 rpm</b> . In the event of a fault, refer to the interpretation of fault <b>DF005 Engine speed sensor circuit</b> .
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

With the engine running at idle speed the value is approximately <b>800 rpm</b> . In the event of a fault, refer to the interpretation of fault <b>DF005 Engine speed sensor circuit</b> . The difference between the idle speed and its setpoint should be less than <b>50 rpm</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR209</b>	<u>TURBOCHARGING PRESSURE LOOP DIFFERENCE</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbocharging pressure loop difference in bar.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR209 = PR009 Turbocharging pressure setpoint - PR041 Turbocharging pressure = ~ 0 bar</b> If <b>PR209</b> is significant, apply the interpretation of command <b>AC004 Turbocharging solenoid valve</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR213</b>	<u>RAIL PRESSURE LOOP DIFFERENCE</u>
--------------	--------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates that the fuel pressure variation is the difference between the rail pressure and the rail pressure setpoint.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

The value should be: <b>PR213 = PR008 Rail pressure setpoint - PR038 Rail pressure</b> In the event of a fault, consult the interpretation of fault <b>DF007 Rail pressure sensor circuit</b> .
---

<b>Engine running, engine coolant temperature &gt; 80°C.</b>
--

The value should be: <b>PR213 = PR008 Rail pressure setpoint - PR038 Rail pressure</b> In the event of a fault, refer to the interpretation of faults <b>DF007 Rail pressure sensor circuit</b> and <b>DF053 Rail pressure regulation function</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR358</b>	<u>SENSOR REFERENCE VOLTAGE</u>
--------------	---------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the sensor reference voltage.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The sensor reference voltage must be between **3.4 V < PR358 < 3.8 V**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR364</b>	<u>CYLINDER NO. 1 FUEL FLOW CORRECTION</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the cylinder's fuel flow correction in <b>mg/st.</b>
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>PR364 = 0.0 mg/st.</b> In the event of a fault, consult <b>test 9 Poor injector operation.</b>
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR364 = ± 1 mg/stroke</b> In the event of a fault, consult <b>test 9 Poor injector operation.</b>
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool.</b>
---------------------	--

<b>PR365</b>	<u>CYLINDER NO. 4 FUEL FLOW CORRECTION</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the cylinder's fuel flow correction in <b>mg/st.</b>
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>PR365 = 0.0 mg/st.</b> In the event of a fault, consult <b>test 9 Poor injector operation.</b>
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR365 = ± 1 mg/stroke</b> In the event of a fault, consult <b>test 9 Poor injector operation.</b>
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool.</b>
---------------------	--

<b>PR381</b>	<u>PARTICLE FILTER DOWNSTREAM TEMPERATURE</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the particle filter downstream temperature in °C.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**PR381 ≈ PR382 Particle filter upstream temperature ≈ ± 200°C.**

In the event of a fault, refer to the interpretation of faults DF309 **Particle filter downstream temp\* sensor** and **DF310 Particle filter upstream temperature sensor**.

\* temp: temperature

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR382</b>	<u>PARTICLE FILTER UPSTREAM TEMPERATURE</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the particle filter upstream temperature in °C.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**PR382 ≈ 200°C**

In the event of a fault, refer to the interpretation of faults **DF309 Particle filter downstream temp\* sensor** and **DF310 Particle filter upstream temp\* sensor**.

\* temp: temperature

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR383</b>	<u>WEIGHT OF SOOT IN PARTICLE FILTER</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the weight of soot in the particle filter in <b>g</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**Vdiag 50, 58, 5C:**

**PR383 < 45 g.**

**If the weight is greater than 45 g:**

Refer to the interpretation of fault **DF315 Particle filter differential pressure sensor**.

**Vdiag 18, 1C, 20:**

**PR383 < 56 g.**

**If the weight is greater than 56 g:**

Refer to the interpretation of fault **DF315 Particle filter differential pressure sensor**.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR385</b>	<u>EXHAUST SYSTEM FLOW</u>
--------------	----------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the exhaust system flow in <b>mg/stroke</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

With the vehicle stopped, the value should be <b>0 m<sup>3</sup>/h</b> .
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

With the engine running, the value must be between <b>20 m<sup>3</sup>/h &lt; PR385 &lt; 80 m<sup>3</sup>/h</b>
---

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR391</b>	<u>DISTANCE SINCE PARTICLE FILTER REPLACEMENT</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the distance travelled since the particle filter was last replaced in <b>miles (km)</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

Indicates the mileage travelled since replacement of the particle filter.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR403</b>	<u>IDLE SPEED REQUEST BY THERMOPLUNGERS</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the idle speed requested by the thermoplungers in <b>rpm</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR043 ≈ 875 rpm</b> if one of the three thermoplunger is <b>ACTIVE</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR405</b>	<u>CYLINDER NO. 2 FUEL FLOW CORRECTION</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the cylinder's fuel flow correction in <b>mg/stroke</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>PR405 = 0.0 mg/st.</b> In the event of a fault, consult <b>test 9 Poor injector operation</b> .
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR405 = 1 mg/stroke</b> In the event of a fault, consult <b>test 9 Poor injector operation</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR406</b>	<u>CYLINDER NO. 3 FUEL FLOW CORRECTION</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the cylinder's fuel flow correction in <b>mg/stroke</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on.</b>
--

<b>PR406 = 0.0 mg/st.</b> In the event of a fault, consult <b>test 9 Poor injector operation</b> .
---

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>PR406 = ≈ 1 mg/stroke</b> In the event of a fault, consult <b>test 9 Poor injector operation</b> .
--

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR412</b>	<u>DISTANCE VALUE AT LAST SUCCESSFUL REGENERATION</u>
--------------	---

<b>PARAMETER DEFINITION</b>	This parameter indicates the vehicle's mileage at the last successful regeneration in <b>miles (km)</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

This parameter indicates the vehicle's mileage at the last successful regeneration.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR414</b>	<u>PARTICLE FILTER DIFF PRESSURE</u>
--------------	--------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the particle filter differential pressure in <b>mbar</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on</b>
---

<b>- 1 mbar &lt; PR414 &lt; 1 mbar</b> In the event of a fault, consult the interpretation of <b>DF315 Particle filter diff.* pressure sensor</b> .
--

<b>Conformity check with engine running, engine coolant temperature &gt; 80 °C.</b>
---

<b>10 mbar &lt; PR414 &lt; 100 mbar</b> In the event of a fault, consult the interpretation of <b>DF315 Particle filter diff.* pressure sensor</b> .
---

\* diff: differential

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR415</b>	<u>TIME SINCE LAST REGENERATION</u>
--------------	-------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the time since the last regeneration in <b>hours</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

Time counter since last regeneration (in hours).

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR417</b>	<u>DAMPER VALVE OCR*</u>
--------------	--------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the damper valve opening cyclic ratio in %.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**PR417 < 5%**

In the event of a fault, refer to the interpretation for **DF226 Damper valve circuit**.

\* OCR: Opening cyclic ratio

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR420</b>	<u>DAMPER VALVE ERROR COUNTER</u>
--------------	-----------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the number of damper valve errors.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**PR420 = 0**

In the event of a fault, refer to the interpretation for **DF226 Damper valve circuit**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR667</b>	<u>TURBINE UPSTREAM TEMPERATURE</u>
--------------	-------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbine upstream temperature in °C.
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

<b>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature &gt; 80°C.</b>
---

Indicates the turbine upstream air temperature in °C, which is ≈ <b>200°C</b> . In the event of a fault, refer to the interpretation of <b>DF652 Turbine upstream temperature sensor circuit</b> .
---

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR668</b>	<u>TURBINE UPSTREAM TEMPERATURE SENSOR VOLTAGE</u>
--------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the turbine upstream temperature sensor voltage in <b>volts</b> .
---------------------------------	--

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The voltage must be between 4.95 V < PR668 < 5 V.  
In the event of a fault, refer to the interpretation of **DF652 Turbine upstream temperature sensor circuit**.

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR672</b>	<u>DAMPER VALVE POSITION SETPOINT</u>
--------------	---------------------------------------

<b>PARAMETER DEFINITION</b>	This parameter indicates the damper valve position setpoint as a %.
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

**PR672 < 5%**

In the event of a fault, refer to the interpretation for **DF226 Damper valve circuit**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

<b>PR784</b> <b>PR785</b> <b>PR786</b> <b>PR787</b> <b>PR788</b> <b>PR789</b> <b>PR790</b> <b>PR791</b> <b>PR792</b> <b>PR793</b>	<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>
--	---

<b>PARAMETER DEFINITION</b>	These parameters are shown in <b>Km</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> These parameters must only be interpreted for <b>DF312 Speed request</b> if it is present or <b>stored</b> .
--------------	---

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

In the event of a fault, consult the interpretation of fault **DF312 Speed request**.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

EDC16\_V50\_PR784/EDC16\_V58\_PR784/EDC16\_V5C\_PR784/EDC16\_V50\_PR785/EDC16\_V58\_PR785/EDC16\_V5C\_PR785/  
 EDC16\_V50\_PR786/EDC16\_V58\_PR786/EDC16\_V5C\_PR786/EDC16\_V50\_PR787/EDC16\_V58\_PR787/EDC16\_V5C\_PR787/  
 EDC16\_V50\_PR788/EDC16\_V58\_PR788/EDC16\_V5C\_PR788/EDC16\_V50\_PR789/EDC16\_V58\_PR789/EDC16\_V5C\_PR789/  
 EDC16\_V50\_PR790/EDC16\_V58\_PR790/EDC16\_V5C\_PR790/EDC16\_V50\_PR791/EDC16\_V58\_PR791/EDC16\_V5C\_PR791/  
 EDC16\_V50\_PR792/EDC16\_V58\_PR792/EDC16\_V5C\_PR792/EDC16\_V50\_PR793/EDC16\_V58\_PR793/EDC16\_V5C\_PR793/  
 EDC16\_V18\_PR784/EDC16\_V1C\_PR784/EDC16\_V20\_PR784/EDC16\_V18\_PR785/EDC16\_V1C\_PR785/EDC16\_V20\_PR785/  
 EDC16\_V18\_PR786/EDC16\_V1C\_PR786/EDC16\_V20\_PR786/EDC16\_V18\_PR787/EDC16\_V1C\_PR787/EDC16\_V20\_PR787/  
 EDC16\_V18\_PR788/EDC16\_V1C\_PR788/EDC16\_V20\_PR788/EDC16\_V18\_PR789/EDC16\_V1C\_PR789/EDC16\_V20\_PR789/  
 EDC16\_V18\_PR790/EDC16\_V1C\_PR790/EDC16\_V20\_PR790/EDC16\_V18\_PR791/EDC16\_V1C\_PR791/EDC16\_V20\_PR791/  
 EDC16\_V18\_PR792/EDC16\_V1C\_PR792/EDC16\_V20\_PR792/EDC16\_V18\_PR793/EDC16\_V1C\_PR793/EDC16\_V20\_PR793/

PR784  
PR785  
PR786  
PR787  
PR788  
PR789  
PR790  
PR791  
PR792  
PR793  
**CONTINUED**

These parameters are used so that the history of the last ten regeneration failures when driving are known.

**For VDIAG 58, 18, 1C:**

Each parameter from **PR784 to PR793** records the mileage when the particle filter warning light comes on which is associated 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 is illuminated again, the mileage information for **PR784** is cleared and replaced by the new value.

**For VDIAG 5C and 20**

Each parameter from **PR784 to PR793** contains a record of the vehicle mileage when the particle filter warning light illuminates. The appearance of fault **DF312 Speed request** is associated with each of these parameters.

**PR784 to PR793** operate through successive feedback (when the particle filter warning light comes on, the value of **PR784** is copied to **PR785**, the value of **PR785** is copied to **PR786** and so on).

When there are more than ten records, the value of **PR793** is overwritten. The new mileage is allocated to **PR784**.

If none of the parameters between **PR784** and **PR793** is available in the sub-function, this means that nothing has been recorded. The parameters appear in the sub-function when they have a value above zero.

**AFTER REPAIR**

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

<b>PR794</b> <b>PR795</b> <b>PR796</b> <b>PR797</b> <b>PR798</b> <b>PR799</b> <b>PR800</b> <b>PR801</b> <b>PR802</b> <b>PR803</b>	<u>REGENERATION FAILURE RECORD NO. 1</u> <u>REGENERATION FAILURE RECORD NO. 2</u> <u>REGENERATION FAILURE RECORD NO. 3</u> <u>REGENERATION FAILURE RECORD NO. 4</u> <u>REGENERATION FAILURE RECORD NO. 5</u> <u>REGENERATION FAILURE RECORD NO. 6</u> <u>REGENERATION FAILURE RECORD NO. 7</u> <u>REGENERATION FAILURE RECORD NO. 8</u> <u>REGENERATION FAILURE RECORD NO. 9</u> <u>REGENERATION FAILURE RECORD NO. 10</u>
--	---

<b>PARAMETER DEFINITION</b>	These parameters are shown in <b>Km</b> .
---------------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Interpret these parameters only if <b>DF312 Speed request is present</b> or <b>stored</b> .
--------------	--

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

These parameters are used so that the history of the last ten regeneration failures when driving are known.

### For VDIAG 58, 18, 1C

Each of these parameters contains the vehicle mileage during a failed particle filter regeneration when driving. Each parameter relates to an engine status. The statuses and parameters are recorded at the same time (for example **PR797 is associated with ET709 Engine status record no. 4**).

Each new recorded value is saved under the next PR (PR+1).

When all ten parameters have a value other than zero and there is a regeneration failure when driving, the mileage information for **PR794** is cleared and replaced with the new value.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

EDC16\_V50\_PR794/EDC16\_V58\_PR794/EDC16\_V5C\_PR794/EDC16\_V50\_PR795/EDC16\_V58\_PR795/EDC16\_V5C\_PR795/  
 EDC16\_V50\_PR796/EDC16\_V58\_PR796/EDC16\_V5C\_PR796/EDC16\_V50\_PR797/EDC16\_V58\_PR797/EDC16\_V5C\_PR797/  
 EDC16\_V50\_PR798/EDC16\_V58\_PR798/EDC16\_V5C\_PR798/EDC16\_V50\_PR799/EDC16\_V58\_PR799/EDC16\_V5C\_PR799/  
 EDC16\_V50\_PR800/EDC16\_V58\_PR800/EDC16\_V5C\_PR800/EDC16\_V50\_PR801/EDC16\_V58\_PR801/EDC16\_V5C\_PR801/  
 EDC16\_V50\_PR802/EDC16\_V58\_PR802/EDC16\_V5C\_PR802/EDC16\_V50\_PR803/EDC16\_V58\_PR803/EDC16\_V5C\_PR803/  
 EDC16\_V18\_PR794/EDC16\_V1C\_PR794/EDC16\_V20\_PR794/EDC16\_V18\_PR795/EDC16\_V1C\_PR795/EDC16\_V20\_PR795/  
 EDC16\_V18\_PR796/EDC16\_V1C\_PR796/EDC16\_V20\_PR796/EDC16\_V18\_PR797/EDC16\_V1C\_PR797/EDC16\_V20\_PR797/  
 EDC16\_V18\_PR798/EDC16\_V1C\_PR798/EDC16\_V20\_PR798/EDC16\_V18\_PR799/EDC16\_V1C\_PR799/EDC16\_V20\_PR799/  
 EDC16\_V18\_PR800/EDC16\_V1C\_PR800/EDC16\_V20\_PR800/EDC16\_V18\_PR801/EDC16\_V1C\_PR801/EDC16\_V20\_PR801/  
 EDC16\_V18\_PR802/EDC16\_V1C\_PR802/EDC16\_V20\_PR802/EDC16\_V18\_PR803/EDC16\_V1C\_PR803/EDC16\_V20\_PR803

<p>PR794 PR795 PR796 PR797 PR798 PR799 PR800 PR801 PR802 PR803 CONTINUED</p>	
--	--

**For VDIAG 5C and 20**

Each parameter between **PR794** and **PR803** contains the vehicle mileage when particle filter regeneration fails when driving. Each parameter relates to an engine status. They are recorded simultaneously (for example, **PR797 is associated with ET709 Engine status record no. 4**).

**PR795** to **PR803** operate through successive feedback (when regeneration fails whilst driving, the value of **PR794** is copied in **PR795**, the value of **PR795** is copied in **PR796** and so on).

When there are more than ten records, the value of **PR803** is overwritten. The new mileage is allocated to **PR794**.

If none of parameters **PR794 to PR803** is available in the sub-function, this means that no record has been made. The parameters appear in the sub-function when they have a value above zero.

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---



<b>PR816</b> <b>PR817</b> <b>PR818</b> <b>PR819</b> <b>PR820</b> <b>PR821</b> <b>PR822</b> <b>PR823</b> <b>PR824</b> <b>PR825</b>	<u>REGENERATION START RECORD NO. 1</u> <u>REGENERATION START RECORD NO. 2</u> <u>REGENERATION START RECORD NO. 3</u> <u>REGENERATION START RECORD NO. 4</u> <u>REGENERATION START RECORD NO. 5</u> <u>REGENERATION START RECORD NO. 6</u> <u>REGENERATION START RECORD NO. 7</u> <u>REGENERATION START RECORD NO. 8</u> <u>REGENERATION START RECORD NO. 9</u> <u>REGENERATION START RECORD NO. 10</u>
--	---

<b>PARAMETER DEFINITION</b>	These parameters are shown in <b>Km</b> .
-----------------------------	---

<b>NOTES</b>	<b>Special notes:</b> Interpret these parameters only for <b>ALP9 Particle filter warning light comes on too often</b> .
--------------	---

<b>Conformity check with the engine stopped and the ignition on, or with the engine running and the engine coolant temperature &gt; 80°C</b>	
These parameters are used so that the history of the last ten activations of the particle filter warning light are known.	
<b>For VDIAG 58, 18 and 1C</b> Each parameter between <b>PR816</b> and <b>PR825</b> contains the vehicle mileage when particle filter regeneration starts when driving. Each parameter is connected with a "Rege* request status record". They are recorded simultaneously (for example, <b>PR819 is associated with ET745 Rege* request status record no. 4</b> ).	
Each new recorded value is saved under the next PR (PR+1). When all ten parameters have a value other than zero, and a new regeneration starts when driving, the mileage information for <b>PR816</b> is cleared and replaced with the new value.	

\* rege: regeneration

<b>AFTER REPAIR</b>	Carry out a road test, then check with the <b>diagnostic tool</b> .
---------------------	---

EDC16\_V50\_PR816/EDC16\_V58\_PR816/EDC16\_V5C\_PR816/EDC16\_V50\_PR817/EDC16\_V58\_PR817/EDC16\_V5C\_PR817/EDC16\_V50\_PR818/EDC16\_V58\_PR818/EDC16\_V5C\_PR818/EDC16\_V50\_PR819/EDC16\_V58\_PR819/EDC16\_V5C\_PR819/EDC16\_V50\_PR820/EDC16\_V58\_PR820/EDC16\_V5C\_PR820/EDC16\_V50\_PR821/EDC16\_V58\_PR821/EDC16\_V5C\_PR821/EDC16\_V50\_PR822/EDC16\_V58\_PR822/EDC16\_V5C\_PR822/EDC16\_V50\_PR823/EDC16\_V58\_PR823/EDC16\_V5C\_PR823/EDC16\_V50\_PR824/EDC16\_V58\_PR824/EDC16\_V5C\_PR824/EDC16\_V50\_PR825/EDC16\_V58\_PR825/EDC16\_V5C\_PR825/EDC16\_V18\_PR816/EDC16\_V1C\_PR816/EDC16\_V20\_PR816/EDC16\_V18\_PR816/EDC16\_V1C\_PR817/EDC16\_V20\_PR817/EDC16\_V18\_PR816/EDC16\_V1C\_PR818/EDC16\_V20\_PR818/EDC16\_V18\_PR819/EDC16\_V1C\_PR819/EDC16\_V20\_PR819/EDC16\_V18\_PR820/EDC16\_V1C\_PR820/EDC16\_V20\_PR820/EDC16\_V18\_PR821/EDC16\_V1C\_PR821/EDC16\_V20\_PR821/EDC16\_V18\_PR822/EDC16\_V1C\_PR822/EDC16\_V20\_PR822/EDC16\_V18\_PR823/EDC16\_V1C\_PR823/EDC16\_V20\_PR823/EDC16\_V18\_PR824/EDC16\_V1C\_PR824/EDC16\_V20\_PR824/EDC16\_V18\_PR825/EDC16\_V1C\_PR825/EDC16\_V20\_PR825

<p>PR816 PR817 PR818 PR819 PR820 PR821 PR822 PR823 PR824 PR825 CONTINUED</p>	
--	--

### For VDIAG 5C and 20

Each parameter from **PR816 to PR825** records the mileage when particle filter regeneration starts and the status of each request is recorded by **ET742 Rege\* request status record no. 1 to ET751 Rege\* request status record no. 10** (for example, **PR819 is associated with ET745 Rege\* request status record no.4**).

Each time a new regeneration when driving is started, the vehicle mileage is recorded in **PR816**, as well as its status in **ET742 Rege\* request status record no. 1**

**PR816 to PR825** operate through successive feedback (when regeneration starts, the value of **PR816** is copied to **PR817**, the value of **PR817** is copied to **PR818** and so on).

When there are more than ten records, the value of **PR825** is overwritten.

The new mileage is allocated to **PR816**.

If only parameter **PR816** is available in the sub-function and it has a value of zero, this means that no record was made.

If a recording has been made, it will have a value above zero.

\*rege: regeneration

<p><b>AFTER REPAIR</b></p>	<p>Carry out a road test followed by a check with the <b>diagnostic tool</b>.</p>
----------------------------	---

<b>PR1012</b>	<u>WEIGHT OF SOOT AFTER REGENERATION</u>
---------------	--

<b>PARAMETER DEFINITION</b>	This parameter indicates the weight of soot in <b>g</b> present in the particle filter after a regeneration.
---------------------------------	--

<b>NOTES</b>	This parameter is to be consulted after using <b>SC017 Particle filter regeneration</b> .
--------------	---

<b>Conformity check with the engine stopped and ignition on, or the engine running and engine coolant temperature &gt; 80°C, without electrical consumers</b>
---

<p>If <b>PR1012</b> is less than <b>15 g</b>, the particle filter regeneration completed correctly.</p> <p>If <b>PR1012</b> is greater than <b>15 g</b>, a second particle filter regeneration must be performed using command <b>SC017 Particle filter regeneration</b>.</p>
<p><b>IMPORTANT:</b></p> <p>Before performing a second After-Sales regeneration of the particle filter, the engine must be allowed to cool down for <b>2 hours</b> with the bonnet open.</p> <p>Do not perform a routine oil change before a second After-Sales regeneration (see <b>SC017 Particle filter regeneration</b>).</p>

<b>AFTER REPAIR</b>	Carry out a road test followed by a check with the <b>diagnostic tool</b> .
---------------------	---

# DIESEL INJECTION

## Fault finding – Command summary table

**13B**

Tool command	Diagnostic tool title
<b>SC001</b>	Write saved data
<b>SC002</b>	Enter injector codes
<b>SC003</b>	Save computer data
<b>SC017</b>	Particle filter regeneration
<b>SC036</b>	Reinitialise programming
<b>CF030</b>	Thermoplungers
<b>RZ005</b>	Programming
<b>RZ007</b>	Fault memory
<b>RZ034</b>	Computer memory
<b>LC009</b>	Air conditioning
<b>LC056</b>	Thermoplungers
<b>LC065</b>	Water in diesel fuel sensor
<b>LC120</b>	Cruise control
<b>LC121</b>	Speed limiter
<b>VP010</b>	Enter VIN
<b>AC001</b>	Preheating unit
<b>AC004</b>	Turbocharging solenoid valve
<b>AC011</b>	Rail pressure regulator
<b>AC012</b>	Damper valve
<b>AC031</b>	Thermoplunger no. 3 relay ( <b>Vdiag 58 only</b> )
<b>AC038</b>	Low-speed fan assembly relay ( <b>Vdiag 18, 1C, 20 only</b> )
<b>AC039</b>	High-speed fan assembly relay ( <b>Vdiag 18, 1C, 20 only</b> )
<b>AC063</b>	Thermoplunger no. 1 relay ( <b>Vdiag 58 only</b> )
<b>AC064</b>	Thermoplunger no. 2 relay ( <b>Vdiag 58 only</b> )
<b>AC195</b>	Electric coolant pump

<b>SC001</b>	<u>WRITE SAVED DATA</u>
--------------	-------------------------

<b>NOTES</b>	All data must be saved with command <b>SC003 Save computer data</b> for this command to be run. Writing is carried out after the computer has been reprogrammed or replaced.
--------------	---

Validating this command writes the data saved using command **SC003 Save computer data**.

The data is as follows:

- Vehicle idle speed.
- injector calibration codes (if the vehicle is fitted with IMA).
- programming of exhaust gas recirculation valve data.
- options available on the vehicle and managed by the computer (Example: Air conditioning).
- specific data related to the operation of the particle filter.

They will configure the computer and will enable it to avoid:

- engine malfunction after reprogramming or replacing the computer,
- faulty interpretation of information provided by the CLIP tool.

<b>SC002</b>	<u>ENTER INJECTOR CODES</u>
--------------	-----------------------------

<b>NOTES</b>	This command must be run after replacing the injectors but only if the vehicle is configured with IMA ( <b>ET104 Injector code use</b> to <b>YES</b> ). If this command is not run, fault <b>DF276 Injection code programming</b> will be present.
--------------	--

**WARNING**

The letters **J** and **Q**, and figures **0** and **9** are **not used in IMA coding**.  
If these characters are used the entry will be **invalid**.

**Cylinder no. 1** is the cylinder located on the **engine flywheel end**.

Procedure to be followed:

- Make a note of the **6-character** alphanumeric codes engraved on the upper section of the injector bodies.
- Use command **SC002**.
- Select the cylinder number for the cylinder concerned in the **Desired**, column, then confirm.
- Enter the injector code displayed for the cylinder.
- Enter the new codes for each cylinder, then confirm.
- When the command is completed, the modified codes appear in the **Current** column.
- Check that the codes correspond to those read earlier.
- If the codes entered do not appear in either the **Current** column or the **Desired** column, check the codes read and make sure that the data has been entered correctly.

**The possible confusions are:**

digit "1" with the letter "I"  
figure 8 with the letter B  
figure 5 with the letter S

- Exit fault finding mode.
- Switch off the ignition and **wait for 1 min**. Switch the ignition back on and check for faults.
- **DF276 Injector code programming** should be stored.

If fault **DF276 Injector code programming** is present, the command has not run correctly.

Start the procedure again and follow the instructions.

If the codes are still not accepted, check that the computer has been put on standby correctly:

Switch off the ignition and **wait for 1 minute**.

If the warning light flashes as soon as the ignition is switched off, the computer has not been put on standby and the command will be ignored.

If all these checks still do not enable the command to be confirmed, contact the Techline.

<b>SC003</b>	<u>SAVE COMPUTER DATA</u>
--------------	---------------------------

<b>NOTES</b>	Carry out this save before reprogramming or replacing the computer.
--------------	---

Select scenario **SC003** on the **CLIP tool**.

If the following message appears:

**"a saved file exists, do you want to overwrite this data?":**

(this file corresponds to the last save carried out on the tool)

select **"YES"**.

Confirming this command saves the following vehicle-specific data:

- injector codes,
- the EGR valve data programming;
- options available on the vehicle and managed by the computer (e.g. air conditioning);
- specific data related to the operation of the particle filter.

This information will be saved in the **CLIP diagnostic tool**.

After saving has finished, use the command **SC001 Enter saved data** to be able to set the new computer parameters, after programming and reprogramming.

<b>SC017</b>	<u><b>PARTICLE FILTER REGENERATION</b></u>
--------------	--

<b>NOTES</b>	<p>Only run this command after the interpretation of the following faults:</p> <ul style="list-style-type: none"><li>– <b>DF308 Clogged particle filter.</b></li><li>– <b>DF311 Number of failed regenerations exceeded.</b></li><li>– <b>DF312 "Speed request".</b></li></ul>
--------------	--

**WARNING**

It is essential to follow the safety and cleanliness instructions (see MR364 (Mégane II ph2), MR370 (Scénic II ph2), MR 395 (Laguna II ph2), Mechanical, 19B, Exhaust, Particle filter: Cleaning) and follow the procedure below.

**SAFETY INSTRUCTIONS TO BE FOLLOWED:**

The regeneration causes exhaust fumes and high temperatures.

The vehicle must be outside during regeneration.

If it is not possible to carry out regeneration outside, use an extractor fan which can withstand very high regeneration temperatures (**400°C at the exhaust outlet**).

Perform regeneration on a surface free from fire risks (oil, dry leaves, etc.). **Nothing should be left in the vicinity of the exhaust pipe.**

**WARNING:**

- **Check the engine oil level before running the command to avoid any engine racing. The oil level must be between the minimum threshold and the middle level on the oil dipstick.**
- **Before performing a particle filter regeneration, it is essential to deactivate the air conditioning compressor (risk of engine damage) and all the electrical consumers.**

**IF NECESSARY:**

Regeneration can be stopped by briefly pressing the vehicle start button twice (less than **3 seconds**).

Switch off the ignition and wait for the **diagnostic tool** message (maximum wait **8 minutes**): **Loss of dialogue with the computer: EDC16C3, check the tool connection and the computer supply**, before switching the ignition back on.

**PROCEDURE TO BE FOLLOWED:**

To run this command, select the command mode on the **diagnostic tool**, and select command **SC017 Particle filter regeneration**.

When regeneration is complete, a message will indicate whether regeneration was successful or if any other operations need to be carried out (**filter replacement, whether an oil change is required, etc.**).



**SC017**  
**CONTINUED 1**

**DESCRIPTION OF THE PROCESS**

Particle filter regeneration takes place in 3 stages (values given as a guide only):

- **Warm-up phase:** the engine speed is fixed or varies between **1000 rpm and 1650 rpm**. This phase lasts at least **3 minutes**, until the coolant temperature exceeds **80°C**.
- **Regeneration phase:** the engine speed is fixed or varies between **1000 rpm and 1650 rpm**. Engine injection is retarded. The exhaust fumes rise in temperature and burn the soot retained in the particle filter. The **particle filter downstream temperature** starts to rise after the **particle filter upstream temperature** due to the volume of the particle filter. Then the combustion of the soot stored in the particle filter causes the **particle filter downstream temperature** to increase, possibly reaching more than **700°C** depending on the amount of soot in the filter (with a **particle filter upstream temperature** of approximately **600°C**). This phase lasts between **20 and 25 minutes**.
- **Cooling phase:** the engine speed is fixed or varies between **1000 rpm and 1650 rpm**. Engine injection returns to normal and the exhaust gases cool the particle filter. This phase lasts **3 minutes**. At the end of this period, the engine speed returns to idle speed or remains fixed at **1500 rpm**.

**The process lasts at least 30 minutes** (regeneration time will be increased depending on how long it takes for the coolant temperature to reach **80°C**).

**CONFIRMING THE REGENERATION PROCESS**

At the end of regeneration, a message appears to announce whether the regeneration was successful:

● **Particle filter regeneration finished:**

Consult **PR1012 Weight of soot after regeneration**. If **PR1012** is less than **15 g**, the particle filter regeneration completed correctly. If **PR1012** is greater than **15 g**, a second particle filter regeneration must be performed using the command in **the diagnostic tool** and choose command **SC017**.

**IMPORTANT:**

Before performing a second After-Sales regeneration of the particle filter, the engine must be allowed to cool down for **2 hours** with the bonnet open.

Do not systematically change the engine oil before a second After-Sales regeneration.

Consult **PR848 Number of regeneration failures**. If **PR848** is greater than 3, change the engine oil.

- **Particle filter too full - replace the particle filter:** regeneration has failed. The weight of soot in the particle filter is so great that it is creating back-pressure. Deal with any faults that appear or replace the particle filter. Run command **SC036 Reinitialise programming** and select **After particle filter replacement**.
- Consult **PR848 Number of regeneration failures**. If this parameter is greater than 3, it is essential to change the engine oil.
- Explain to the customer the procedure for regeneration when driving to avoid unnecessary repairs: see **PART D** in the interpretation of **DF312 Speed request**.
- **Particle filter regeneration failed - run test "Temperature upstream of turbine too low":** regeneration has failed because the temperature upstream of the turbine is too low. Run **test 10 Temperature upstream of turbine too low**.

**SC017**  
**CONTINUED 2**

**In all cases, the following actions must be carried out:**

- switch off the ignition and wait for the **diagnostic tool** message (maximum wait 8 minutes): **Loss of dialogue with the computer: EDC16, check the tool connection and the computer supply.**
- switch on the ignition and re-establish dialogue with the injection computer,
- run command **SC036 Reset programming;**
- depending on the operation performed, select **After particle filter regeneration with diag tool**, or **After particle filter replacement.**
- switch off the ignition and wait for the **diagnostic tool** message (maximum wait 8 minutes): **Loss of dialogue with the computer: EDC16, check the tool connection and the computer supply.**
- **Then switch on the ignition again, clear the present or stored faults from the computer memory (operation to be carried out within 3 minutes of switching on the ignition).**

If **DF308 Clogged particle filter** or **DF312 Speed request** is still present, contact the Techline.

**Note:**

It is essential to change the **engine oil** and the **oil filter** in the following cases:

- following an After-Sales regeneration **only** if a message on the **CLIP diagnostic tool** requests it,
- after particle filter replacement following **DF311 Number of failed regenerations exceeded** (present or stored before regeneration),
- following a second regeneration (in the case of two successive regenerations).

<b>SC036</b>	<u>REINITIALISE PROGRAMMING</u>
--------------	---------------------------------

<b>NOTES</b>	<p>This command is used to reset the computer parameters according to the type of operation or component repaired or replaced from the following list:</p> <ul style="list-style-type: none"><li>– the EGR valve,</li><li>– damper valve;</li><li>– after replacing the particle filter,</li><li>– after particle filter regeneration using the <b>diagnostic tool</b>,</li><li>– after injection computer replacement with no save option,</li></ul> <p><b>Ignition on and engine stopped.</b></p>
--------------	---

To run this command, select scenario **SC036** on the **CLIP diagnostic tool**.

Procedure to be followed:

- on the main screen, select the component to reinitialise after an operation (removal - refitting or replacement of component),
- select **YES** then **OK** to begin reinitialisation,
- select **Finish** on the **Configuration performed** screen to return to the main screen,
- end of operation.
- perform a complete powerlatch.

<b>CF030</b>	<u>THERMOPLUNGERS</u>
--------------	-----------------------

<b>NOTES</b>	<p>Carry out this command:</p> <ul style="list-style-type: none"><li>– After reprogramming the injection computer or</li><li>– after replacing the computer, without the possibility of using scenario <b>SC003 Save computer data</b> before reprogramming to save the computer data.</li></ul>
--------------	--

To run this command, select scenario **CF030** on the CLIP tool.  
Important: configure the vehicle **without** thermoplungers only if faults **DF032 + 12 V relay supply circuit**, **DF033 Fan assembly supply circuit** and **DF034 Alternator type** are present.  
After having configured the computer configuration, it is essential to clear the faults using command **RZ007 Fault memory**.

<b>RZ005</b>	<u>PROGRAMMING</u>
--------------	--------------------

<b>NOTES</b>	This command enables you to reinitialise the entire computer configuration according to the vehicle.
--------------	--

Command **RZ005** reconfigures the computer.  
If the computer has no configuration data,  
use command **RZ005** to enter the options fitted on the vehicle:

- air conditioning,
- thermoplungers,
- cruise control/speed limiter.

These options are detected by the computer even if command **RZ005** is not used.  
The computer is configured as soon as the one of the vehicle's optional system components is operated.

<b>RZ034</b>	<u>COMPUTER MEMORY</u>
--------------	------------------------

<b>NOTES</b>	<b>IMPORTANT</b> Only use this command if <b>DF038 Computer memory</b> is <b>present</b> . <b>Ignition on and engine stopped.</b>
--------------	---

Command **RZ034** is used to reinitialise the computer memory.

With the ignition on:

- Use command **RZ034**.
- Switch off the ignition and wait for the message Communication lost with computer.
- Switch on the ignition again.
- Run the programming commands (see **Configuration and programming**)
- switch off the ignition and wait for the message Communication lost with computer.

Perform a road test to reinitialise the parameters of the vehicle.

<b>AC001</b>	<u>PREHEATING UNIT</u>
--------------	------------------------

<b>NOTES</b>	<p>This command is only run if fault <b>DF025 Preheating unit diagnostic line</b> or <b>DF017 Preheating unit control circuit</b> is present or stored and if no other faults are present. Refer to the <b>Wiring Diagrams Technical Note</b> for the vehicle to locate the fuses and relays concerned.</p>
--------------	---

Switch on the ignition and connect the **diagnostic tool**.

With the preheating unit connected:

- connect the negative terminal of the voltmeter to connection **3FF** of component **257**,
- connect the positive terminal of the voltmeter to the **+ 12 V** battery,
- run command **AC001**.

If the voltmeter does not indicate the battery voltage while the command is running (ten **1-second** ON/OFF cycles):

1- Check the condition of the preheating unit supply fuse **F01 (70A)**.

Replace it if necessary.

2- Check the **continuity and the absence of interference resistance** of the following connections:

- connection code **3FF**,
- connection code **3FY**.

Between components **120 and 257**.

If the connection or connections 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.

Repair if necessary.

3- Check the connections on the pre-postheating unit, heater plugs and injection computer.

Repair if necessary.

4- Measure the resistance of the heater plugs. If this resistance is greater than **2 Ω**, replace the faulty plug(s).

5- Check the **continuity and the absence of interference resistance** between the following connections:

- connection code **37AB**,
- connection code **37Z**,
- connection code **37AC**,
- connection code **37AA**.

Between components **257, 680, 681, 682 and 683**.

If the connection or connections 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.

6- Check for **+ 12 V** on connection **BP35** of component **257**.

If the fault is still present, replace the preheating unit

<b>AC004</b>	<u><b>TURBOCHARGING SOLENOID VALVE</b></u>
<b>NOTES</b>	This command is used to check the turbocharging circuit.

**This command checks that the turbocharger and the control circuit are working properly.**

### Introduction

#### 1- Check the sealing of the high pressure air circuit:

Pipes not joined or pierced, pressure sensor disconnected or poorly fitted (seal present), intercooler pierced.  
To check the intercooler: with the vehicle stopped, stabilise the engine speed between **3500 rpm < X < 4000 rpm** and check that there are no leaks.

Check the resistance of the turbocharging pressure relief solenoid valve between connections **3FB** and **3MG**.  
Replace the solenoid valve if its resistance is not: **14.7 Ω < X < 16.1 Ω at 20°C**.

Check the injection computer connections.

Check the **continuity and absence of interference resistance** of connection **3MG** between components **120** and **1475**.

If the connection or connections 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 for **+ 12 V** after relay on **connection 3FB** of component **1475**.

#### 2- Turbocharger control circuit check

- With the engine stopped, check that the control rod is in the rest position (the control rod is retracted),
- Start the engine and check that the control rod extends to pull on the turbocharger (when the engine is switched off, the control rod should return to the rest position).
- If the control rod does not move correctly, carry out the following checks:
  - 1) Vacuum pressure command check:
    - Disconnect the solenoid valve inlet **hose** and connect it to a pressure gauge.
    - Start the engine and run it at a stable idle speed.
    - if the vacuum is not between **700 mbar < X < 900 mbar**, check the vacuum circuit from the vacuum pump.
    - Stop the engine, reconnect the inlet hose and go to **step no. 2**.

#### 2) Solenoid valve control check:

- Disconnect the solenoid valve outlet **hose**.
  - Start the engine and run it at a stable idle speed.
  - Place your hand on the solenoid valve and block the outlet **union** with your thumb.
  - If there is no perceptible vibration of the solenoid valve, check that the computer output is working correctly (**step 5**) and check solenoid valve operation:
    - Connect the pressure gauge to the solenoid valve outlet **union**.
    - Start the engine and run it at a stable idle speed.
- if the vacuum is not between **700 mbar < X < 900 mbar**, replace the solenoid valve.



**AC004  
CONTINUED**

**Turbocharger control circuit check (continued)**

**4) Check the operation of the turbocharger:**

**a) Attach a vacuum pump to the hose** connected to the turbocharger control diaphragm,

Apply a vacuum of **700 mbar < X < 900 mbar**:

If there is a leak, replace the turbocharger (diaphragm included).

**b) Check the movement and adjustment of the control rod** (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging**).

If the control rod is sticking, replace the turbocharger.

**c) Engine cold and stopped:**

Remove the turbocharger inlet duct and check that the compressor turns freely on the axis.

**d) If the fault persists:**

Check that the exhaust manifold is not leaking.

Check that the exhaust is not blocked.

Carry out the necessary repairs.

**5) Check the computer output stage** with the **solenoid valve** connected:

This operation can **only** be carried out if the checks indicated in **step no. 2** are **not conclusive**.

→ **Using a voltmeter:**

Connect the voltmeter earth lead to connection **3FB (Laguna II and Mégane II) or 3FB1 (Scénic II)** of component **1475** and the positive lead to connection **3MG**.

Clear any solenoid valve fault then run command **AC004**:

The voltmeter should display **ten cycles** of two successive voltages ~ = battery voltage X current OCR\*.

Either: ~ **2.5 V** (OCR\* of **20%**) then ~ **8.7 V** (OCR\* of **70%**).

→ **Or using an oscilloscope** (range **5 V/division** and time base **1 ms/division**):

Connect the oscilloscope earth lead to the battery earth and the positive test pin to connection **3FB (Laguna II and Mégane II) or 3FB1 (Scénic II)** of component **1475**.

Clear any solenoid valve faults, then run command **AC004**:

the oscilloscope should display a square wave signal of **12.5 V** in amplitude at a frequency of **140 Hz** (with an OCR\* passing from ~ **20 to ~ 70%**).

If the measurement is correct, replace the solenoid valve.

If the measurement does not show any control or continuous voltage, contact the Techline.

\* OCR = Opening Cyclic Ratio

<b>AC011</b>	<u>RAIL PRESSURE REGULATOR</u>
--------------	--------------------------------

<b>NOTES</b>	<p>This command is used to check:</p> <ul style="list-style-type: none"> <li>– the operation of the pressure regulator,</li> <li>– and the high pressure injection circuit.</li> </ul>
--------------	--

### Step 1:

Measure the resistance of the pressure regulator between connections **3HI** and **3FB**.

- Replace the regulator if its resistance is not  **$2.5 \Omega < X < 3.5 \Omega$  at 20°C**.

Check **the continuity and absence of interference resistance** of the following connections:

- connection code **3HI**,
- connection code **3FB**.

Between components **120** and **1105**.

If the connection or connections 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.

If, when running command **AC011**, you can hear a slight whistling noise and a clicking noise from the pressure regulator, go to **step 2**. Otherwise, check that the computer output stage is functioning correctly:

→ **Using a voltmeter:**

With the solenoid valve connected, connect the voltmeter earth lead to connection **3HI** of component **1105** and the positive lead to connection **3FB (Laguna II and Mégane II) or 3FB1 (Scénic II)**. Clear any fuel pressure solenoid valve faults, then run command **AC011**:

The voltmeter should display two successive voltages: **~ 2.5 V** for an OCR\* of **20%**, then **~ 8.75 V** for an OCR\* of **70%** (ten cycles)

→ **Or using an oscilloscope** (range **5 V/division** and time base **1 ms/division**):

With the solenoid valve connected, connect the oscilloscope earth to the battery earth and the positive test pin to connection **3HI** of component **1105**; clear any fuel pressure solenoid valve faults then run command **AC011**:

The oscilloscope should display a square wave signal of **12.5 V** in amplitude at a frequency of **185 Hz** (with an OCR\* passing successively from **20 to 70%**).

If the measurement is correct, replace the regulator.

If the measurement is not correct, contact the Techline.

\* OCR: Opening Cyclic Ratio

**AC011  
CONTINUED**

**Step 2**

**In the event of rail overpressure:** Check injector operation:

Run **test 9 Poor injector operation**.

Check that the rail pressure sensor is operating correctly:

Interpretation of fault **DF007 Rail pressure sensor circuit**.

Carry out the necessary repairs.

If these checks do not reveal any faults, and if the fault is still present, replace the rail pressure sensor.

**In the event of rail underpressure:**

Check that the rail pressure sensor is operating correctly:

Fault interpretation **DF007 Rail pressure sensor circuit**.

Check the priming of the low-pressure diesel circuit.

Check the conformity of the diesel filter connections,

Check the condition of the filter (clogging and water saturation),

Check there are no air bubbles between the filter and the high pressure pump.

Check the sealing of the high pressure and low pressure diesel circuit

(visual inspections, etc.): pump body, pressure release valve, pipes, rail and injector unions, injector wells, etc.

Check the conformity of the seal fitting on the pressure regulator.

Check the injectors are working:

Run **test 9 Poor injector operation**.

Carry out the necessary repairs.

If these checks do not reveal any faults, and if the fault is still present, replace the rail pressure sensor.

<b>AC012</b>	<u>DAMPER VALVE</u>
--------------	---------------------

<b>NOTES</b>	<p>Carry out this interpretation:</p> <ul style="list-style-type: none"> <li>– after <b>DF226 Damper valve</b>,</li> <li>– or after a customer complaint (starting faults, poor performance).</li> </ul> <p>Ignition on and engine stopped.</p>
--------------	---

Check the **continuity, insulation and absence of interference resistance** on the following connections:

- connection code **NT (Laguna II)** between component **1461** and the earth **NT**.
- connection code **N (Scénic II and Mégane II)** between component **1461** and the earth **N**.
- connection code **3FB (Laguna II)** between components **1461** and **597**.
- connection code **3FB2 (Scénic II)** between components **1461** and **1337**.
- connection code **3FB (Mégane II)** between components **1461** and **1337**.

If the connection or connections 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 for **+ 12 V** on connection **3FB (Laguna II and Mégane II)** or **3FB2 (Scénic II)** of component **1461**.  
Repair if necessary.

Check for **earth** on connection **N (Scénic II and Mégane II)** or **NT (Laguna II)** of component **1461**.  
Repair if necessary.

Check that the **damper valve** is **open**.  
If not, clean or replace the air vent unit.

Actuate the valve using command **AC012** and check its travel and rest position.  
Check the operation of the computer output stage with a voltmeter:  
Actuate the valve with command **AC012**.  
If the solenoid valve opens (vacuum pump pressure gauge returns to atmospheric pressure), go to **step C**.  
Otherwise, with the solenoid valve connected, check the operation of the computer output stage with a voltmeter between connections **3FB (Laguna II and Mégane II)** or **3FB2 (Scénic II)** and **N (Scénic II and Mégane II)** or **NT (Laguna II)** of component **1461**.

The voltmeter should display three **ON-OFF** cycles (**12.5 V** then return to **0 V**).  
If the measurement is correct, replace the damper valve.  
If the measurement does not show any operation, **contact the Techline**.

<b>AC031</b>	<b>THERMOPLUNGER NO. 3 RELAY</b> (check that the computer is correctly configured)
--------------	---

<b>NOTES</b>	<p><b>There must be no present or stored faults.</b></p> <p>Perform this fault finding procedure if there is a fault in the <b>command</b> menu, or a passenger compartment heating/demisting fault.</p> <p>Refer to the <b>Wiring diagrams Technical Note</b> for the vehicle to locate the fuses and relays concerned.</p>
--------------	--

<b>Vdiag 50, 58, 5C:</b>	
If the <b>additional heater no. 3 relay does not operate</b> when running command <b>AC031</b> : Check the engine management computer connections. Check the connections of <b>thermoplunger no. 3</b> . Repair if necessary.	
Check for <b>+ 12 V after ignition supply</b> on connections <b>3FB and 3JAB of component 1069</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Repair if necessary. Check the <b>continuity, absence of interference resistance and insulation</b> to earth of connection <b>3JAB</b> between components <b>120 and 597</b> .	
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.	
Check for <b>+ 12 V after ignition supply</b> between connections <b>3FB and BP9</b> of component <b>1069</b> and connection <b>3JAC of component 1074</b> . Measure the <b>resistance</b> of <b>thermoplunger no. 3</b> . Replace <b>thermoplunger no. 3</b> if the resistance is <b>greater than 2 Ω</b> . Replace the <b>water heater interface unit</b> if necessary.	
Using a <b>test light</b> , check that the <b>water heater interface unit</b> is properly <b>earthed</b> on <b>connections 3FB and 3JAB between components 120 and 1069</b> .	
If the fault is still present, contact the Techline.	

### AC031 CONTINUED

#### Vdiag 18, 1C, 20:

If the **additional heater no. 3 relay does not operate** when running command **AC031**:

Check the **additional heater no. 3** relay mounting.

Check the engine management computer connections.

Repair if necessary.

If the fault is still present, check as follows that this relay is controlled by the engine management computer:  
Disconnect the **additional heater no. 3** relay, fit a **50 to 100 Ω** resistor on the mounting in place of the coil and connect a voltmeter as follows:

Positive terminal to **+12 V** battery.

Negative terminal to connection **3JAB** of the **additional heater no. 3** relay mounting.

Clear the fault and actuate the relay using command **AC031**.

If the voltmeter shows the battery voltage (two, **2-second** ON-OFF cycles), replace the additional heater no. 3 relay.

If the voltmeter does not show the battery voltage (two **2 second** ON-OFF cycles), contact the Techline.

**If the additional heater no. 3 relay** is supplied by command **AC031**, but there is still a fault with the passenger compartment heating and demisting, check using a wiring diagram:

- the conformity of the thermoplunger Maxi-fuse.
- the presence of **+ 12 V** battery on connection **BP9** of the **additional heater no. 3** relay mounting,
- the conformity of the additional heater relay 3;
- the continuity between connection **3JAC** of the **additional heater no. 3** relay mounting and the supply terminal for thermoplunger no. 3.
- the conformity of the thermoplunger resistance: **0.4 Ω < X < 0.5 Ω at 20 °C**,
- the presence of earth at the water chamber (thermoplunger mounting).

Also check the level of the cooling circuit and that there are no leaks.

Carry out the necessary repairs.

<b>AC038</b>	<u>LOW-SPEED FAN ASSEMBLY RELAY</u>
--------------	-------------------------------------

<b>NOTES</b>	<p><b>There must be no present or stored faults.</b></p> <p>Perform this fault finding procedure if a malfunction appears on the <b>command</b> menu or after an engine cooling system or air conditioning fault.</p> <p>Refer to the <b>Wiring diagrams Technical Note</b> for the vehicle to locate the fuses and relays concerned.</p>
--------------	---

If the **low-speed fan assembly relay** does not operate when command **AC038** is run:  
Check the **low speed fan** relay mounting and the connections of the engine management computer.  
Repair if necessary.

If the fault is still present, check that the relay is actuated by the engine management computer as follows:  
Disconnect the **low-speed fan assembly** relay, fit a  $50\ \Omega < X < 100\ \Omega$  resistor on the relay mounting in place of the coil, and connect a voltmeter as follows:  
Positive terminal to the **+12 V** battery.  
Negative terminal to connection **3JN** of the **low-speed fan assembly** relay mounting.  
Clear the fault and run command **AC038**  
If the voltmeter indicates the battery voltage (three **2-second** ON-OFF cycles), replace the relay.  
If the voltmeter does not show the battery voltage (three **2 second** ON-OFF cycles), contact the techline.

If the **low speed fan assembly** relay operates when command **AC038**, is run, but there is still a fan assembly activation fault, use the wiring diagram to check the following:

- the conformity of the fan unit maxi-fuse.
- the conformity of the **low-speed fan unit** relay,
- the continuity of connection **49L** between components **597** and **321**.
- the continuity of connection **49B** between components **321** and **262**.
- the conformity of the fan assembly and the continuity of connection **MAS** of component **262**.

Carry out the necessary repairs.

<b>AC039</b>	<u>HIGH SPEED FAN ASSEMBLY RELAY</u>
--------------	--------------------------------------

<b>NOTES</b>	<p><b>There must be no present or stored faults.</b></p> <p>Perform this fault finding procedure if a malfunction appears on the <b>command</b> menu or after an engine cooling system or air conditioning fault.</p> <p>Refer to the <b>Wiring Diagrams Technical Note</b> for the vehicle to locate the fuses and relays concerned.</p>
--------------	---

If the **high-speed fan assembly relay** does not operate when command **AC039** is run:  
Check the **high-speed fan assembly** relay mounting and the connections of the engine management computer.  
Repair if necessary.

If the fault is still present, check that the relay is actuated by the engine management computer as follows:  
Disconnect the **high-speed fan assembly** relay, fit a **50 Ω < X < 100 Ω** resistor on its mounting in place of the coil, and connect a voltmeter as follows:  
Positive terminal to the **+12 V** battery.  
Negative terminal to connection **3JP** of the **high-speed fan assembly** relay mounting.  
Clear the fault and run command **AC039**.  
If the voltmeter indicates the battery voltage (three **2-second** ON-OFF cycles), replace the relay.  
If the voltmeter does not show the battery voltage (three **2 second** ON-OFF cycles), contact the techline.

If the **high-speed fan unit** relay is fed by command **AC039**, but there remains a fault with the triggering the fan unit. Check using the wiring diagram:

- the conformity of the fan unit maxi-fuse.
- + battery feed on connection **BP71** of the **high-speed fan assembly** relay mounting,
- the conformity of the **high-speed fan unit** relay,
- the continuity of connection **49B** between components **597** and **262**,
- the conformity of the fan unit,
- the continuity of connection **MAS** of component **262**.

Carry out the necessary repairs.



<b>AC063</b>	<b>THERMOPLUNGER NO. 1 RELAY</b> (check that the computer is correctly configured).
--------------	--

<b>NOTES</b>	<p><b>There must be no present or stored faults.</b></p> <p>Perform this fault finding procedure if there is a fault in the <b>command</b> menu, or a passenger compartment heating/demisting problem.</p> <p>Refer to the <b>Wiring diagrams Technical Note</b> for the vehicle to locate the fuses and relays concerned.</p>
--------------	--

<b>Vdiag 50, 58, 5C:</b>	
If the <b>additional heater no. 1 relay does not operate</b> when running command <b>AC063</b> : Check the engine management computer connections. Check the connections of <b>thermoplunger no. 1</b> . Repair if necessary.	
Check for <b>+ 12 V after ignition supply</b> on connections <b>BP9</b> and <b>3FB</b> of component <b>1067</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Repair if necessary.	
Check the <b>continuity, absence of interference resistance and insulation</b> on connection <b>3JA</b> between components <b>120</b> and <b>597</b> .	
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.	
Using a <b>test light</b> , check the supply by running command <b>AC063</b> on connection <b>3JB</b> between components <b>1067</b> and <b>898</b> .	
Measure the <b>resistance</b> of <b>thermoplunger no. 1</b> . Replace thermoplunger no. 1 if the resistance is <b>greater than 2 Ω</b> . Replace the <b>water heater interface unit</b> if necessary.	
Using a <b>test light</b> , check that the <b>water heater interface unit</b> is properly <b>earthed</b> by running command <b>AC063</b> on connection <b>3JA</b> between components <b>120</b> and <b>597</b> .	
If the fault is still present, contact the Techline.	

### AC063 CONTINUED

#### Vdiag 18, 1C, 20:

If the **additional heater no. 1** relay does not operate when running command **AC063**:

Check the **additional heater no. 1** relay mounting.

Check the engine management computer connectors.

Repair if necessary.

If the fault is still present, check as follows that this relay is controlled by the engine management computer:

Disconnect the **additional heater no. 1** relay, fit a  $50\ \Omega < X < 100\ \Omega$  resistor on the relay mounting in place of the coil, and connect a voltmeter as follows:

Positive terminal to the **+12 V** battery.

Negative terminal to connection **3JA** of component **597**.

Clear the fault and actuate the relay using command **AC063**.

If the voltmeter shows the battery voltage (two, **2-second** ON-OFF cycles), replace the additional heater no. 1 relay.

If the voltmeter does not show the battery voltage (two, **2-second** ON-OFF cycles), contact the Techline.

If the **additional heater no. 1** relay is supplied by command **AC063**, but there is still a fault with the passenger compartment heating and demisting, check the following using a wiring diagram:

- the conformity of the thermoplunger Maxi-fuse.
- **+ 12 V** battery on connection **3FB** of component **597**.
- the conformity of the additional heater no. 1 relay,
- the continuity between connection **3JB** of component **597** and connection **3JB** of component **898**,
- the conformity of the thermoplunger resistance:  $0.40\ \Omega < X < 0.50\ \Omega$  at **20°C**,
- the presence of earth at the water chamber (thermoplunger mounting).

Also check the level of the cooling circuit and that there are no leaks.

Carry out the necessary repairs.

<b>AC064</b>	<b>THERMOPLUNGER NO. 2 RELAY</b> (check that the computer is correctly configured).
--------------	--

<b>NOTES</b>	<p><b>There must be no present or stored faults.</b></p> <p>Perform this fault finding procedure if there is a fault in the <b>Command</b> menu, or a passenger compartment heating/demisting problem.</p> <p>Refer to the Wiring Diagram Technical Notes for the vehicle to locate the fuses and relays concerned.</p>
--------------	---

<b>Vdiag 50, 58, 5C:</b>	
If the <b>additional heater no. 2 relay does not operate</b> when running command <b>AC064</b> : Check the engine management computer connections. Check the connections of <b>thermoplungers 2 and 3</b> . Repair if necessary.	
Check for <b>+ 12 V after ignition supply</b> on connections <b>3FB and BP91</b> of component <b>1068</b> . If there is no <b>+ 12 V supply</b> , refer to the interpretation of fault <b>DF015 Main relay control circuit</b> . Repair if necessary. Check the <b>continuity, absence of interference resistance and insulation</b> to earth of connection <b>3JAA</b> between components <b>120</b> and <b>597</b> .	
If the connection or connections are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.	
Check for <b>+ 12 V after ignition feed</b> between connections <b>BP91 and 3JAD of component 597 and connection 3JAD of components 1072 and 1073</b> . Measure the <b>resistance</b> of <b>thermoplungers 2 and 3</b> . Replace thermoplunger no. 2 or 3 if the resistance is <b>greater than 2 Ω</b> . Replace the <b>water heater interface unit</b> if necessary.	
Using a <b>test light</b> , check that the <b>water heater interface unit</b> is properly <b>earthed</b> on connection <b>3JAA</b> between components <b>120</b> and <b>597</b> .	
If the fault is present, contact the Techline.	

### AC064 CONTINUED

#### Vdiag 18, 1C, 20:

If the **additional heater no. 2 relay does not operate** when running command **AC064**, check the **additional heater no. 2** relay mounting, check the connectors on the engine management computer. Repair if necessary.

If the fault is still present, check as follows that this relay is controlled by the engine management computer: Disconnect the **additional heater no. 2** relay, fit a **50 Ω < X < 100 Ω** resistor on the mounting in place of the coil, and connect a voltmeter as follows:  
Positive terminal to the **+12 V** battery.  
Negative terminal to connection **3JAA** of component **597**.  
Clear the fault and actuate the relay via command **AC064**.  
If the voltmeter shows the battery voltage (two 2-second ON-OFF **cycles**), replace the additional heater 1 relay.  
If the voltmeter does not show the battery voltage (two **2 second** ON-OFF cycles), contact the Techline.

If the **additional heater no. 2** relay is supplied by command **AC064**, but there is still a fault with the passenger compartment heating and demisting, use the wiring diagram to check the following:

- the conformity of the thermoplunger Maxi-fuse.
- **+ 12 V** battery on connection **BP91** of component **597**,
- the conformity of the additional heater no. 2 relay,
- the continuity of connection **3JAD** between components **597** and **1072**.
- the conformity of the thermoplunger resistance: **0.40 Ω < X < 0.50 Ω at 20°C**,
- the presence of earth at the water chamber (thermoplunger mounting).

Also check the level of the cooling circuit and that there are no leaks.  
Carry out the necessary repairs.

<b>AC195</b>	<u>ELECTRIC COOLANT PUMP</u>
--------------	------------------------------

<b>NOTES</b>	This command allows you to check the operation of the electric coolant pump.
--------------	--

Check the **electric coolant pump relay (A 20A)** and check that it is operating correctly.  
Check the injection computer connections.  
Repair if necessary.

Check the continuity between connections **3FB** of component **597 (Laguna II)**.  
If the checks are correct, check the **continuity and absence of interference resistance** on the following connections:

- connection code **3VG** between components **120** and **597 (Laguna II)** or **299 (Mégane II and Scénic II)**
- connection code **3FB** of component **597 (Laguna II)**
- connection code **3FB2** between components **299** and **1337 (Scénic II)**.
- connection code **3FB** between components **299** and **1337 (Mégane II)**.
- connection code **3VH** between components **597 (Laguna II)** or **299 (Mégane II and Scénic II)** and **369**.
- connection code **MAS** between component **369** and earth **MAS**.

If the connection or connections 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.

If the fault is still present, contact the Techline.

### NOTES

before dealing with this customer complaint, check that there are no faults, and check the conformity (or otherwise) of the **parameters** and **statuses** using the **diagnostic tool**.

if the customer complaint is not eliminated, then proceed according to the corresponding fault finding chart.

no dialogue with engine management computer

ALP 1

starting difficult or impossible

ALP 2

injection noise

ALP 3

poor performance

ALP 4

irregular engine operation

ALP 5

external leaks from the fuel circuit

ALP 6

rough idle

ALP 7

oil leaks from the turbocharger

ALP 8

particle filter warning light comes on too frequently

ALP 9

noise from the turbocharger

ALP 10

smoke from the exhaust

ALP 11

**ALP 1**

**No dialogue with engine management computer**

Try to establish dialogue with a computer on another vehicle to check that **the diagnostic tool** is not faulty.  
Check the battery voltage and carry out the operations necessary to obtain the correct voltage  
(**9.5 V < X < 17.5 V**).

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.

Disconnect the engine management computer.

Try to establish dialogue with another computer.

If the fault is still present, reconnect the computer and proceed by elimination by successively disconnecting all the following computers (according to wiring diagram and equipment): Air conditioning, Airbag, ABS and ESP, UCH, instrument panel, central communication unit, proximity sensor.

Try to establish a dialogue between each disconnection:

If, after a disconnection, you manage to establish dialogue, perform the fault finding procedure for the relevant computer.

Carry out a fault finding procedure on the multiplex network using the **diagnostic tool**.

Check the presence and condition of the injection fuses on the UPC and in the engine fuse box.

Check the connection of the computer connectors 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:

**Earth on connections NT (Laguna II) or N (Scénic II and Mégane II) of component 120.**

**+ after ignition feed on connection AP29 (Laguna II) or AP15 (Scénic II and Mégane II) of component 120.**

Check that the power supply to the diagnostic socket is correct:

– **+ before ignition feed on connection BP32 (Scénic II and Mégane II), or BCP4 (Laguna II) of component 225.**

– **+ before ignition feed on connection AP43 (Scénic II and Mégane II), or AP10 (Laguna II) of component 225.**

– **Earth on connections MAN and NAM (Scénic II and Mégane II), or MA and NAP (Laguna II) of component 225.**

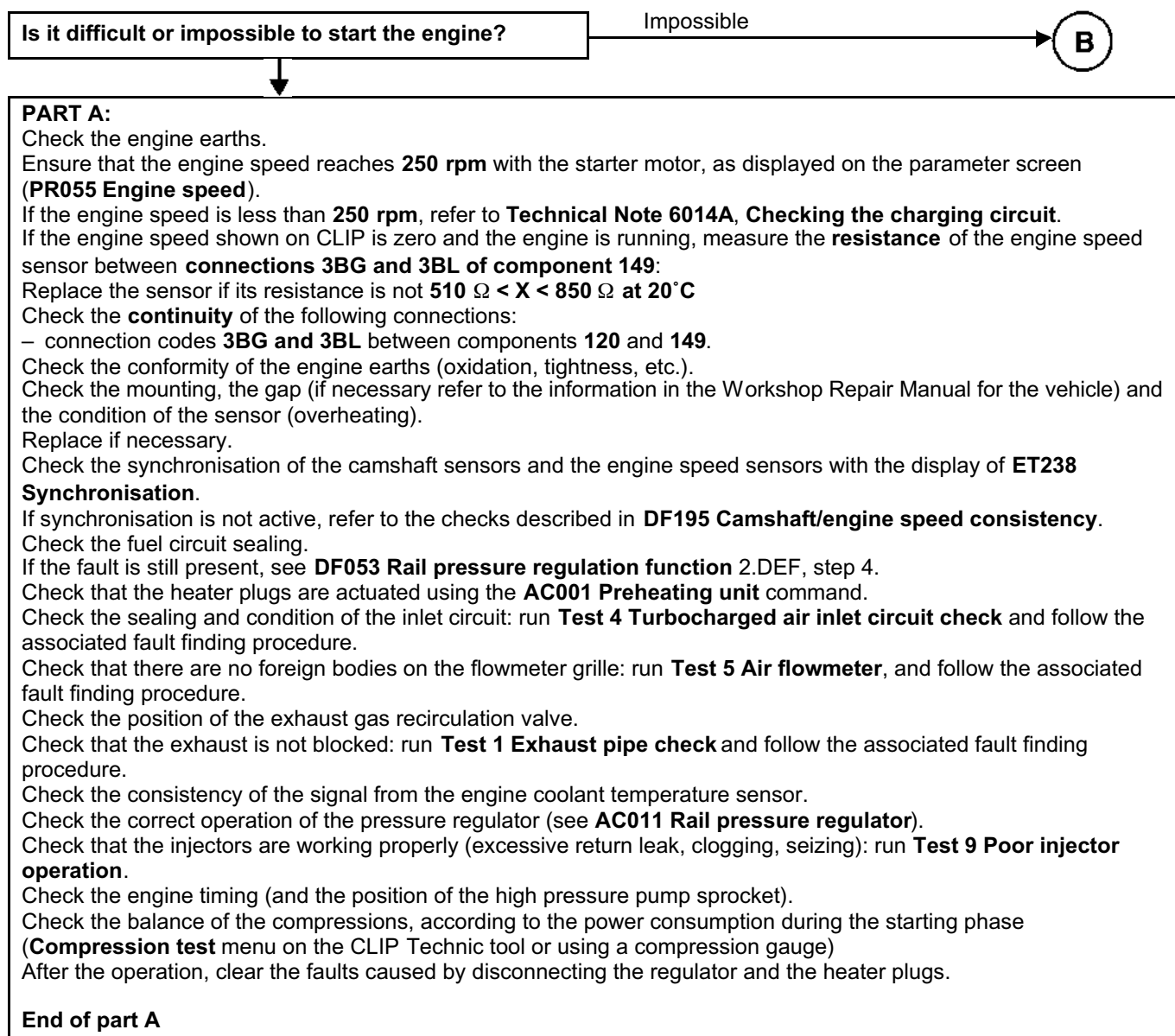
If dialogue has still not been established after these checks, contact Techline.

**AFTER REPAIR**

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

<b>ALP 2</b>	<b>Starting difficult (or impossible)</b>
--------------	---

<b>NOTES</b>	<p>Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.</p> <p>If the customer complaint is not eliminated, perform the following checks.</p>
--------------	---



<b>AFTER REPAIR</b>	Carry out a road test followed by a complete check with the <b>diagnostic tool</b> .
---------------------	--



**ALP 2  
CONTINUED 1**

**B**

Is there diesel in the tank?

**YES**

**NO**

Does the starter motor work properly?  
(Check that the engine speed reaches > ~ 250 rpm with the  
starter motor in operation, **PR055 Engine speed**).

Fill the tank with diesel fuel.  
Bleed the low and high pressure diesel  
circuit.

**YES**

**NO**

Using the **diagnostic tool**, check the conformity of  
the immobiliser: **ET003 Immobiliser** must be  
**INACTIVE**.

Run fault finding on the starter (see **Technical Note  
6014A, Checking the charging circuit**).

**ET003 not correct  
or immobiliser  
warning light  
permanently  
illuminated**

**ET003 in order  
(immobiliser  
code warning  
light off)**

Consult the fault finding procedure  
for the immobiliser.

Continue the fault finding procedure with **Part A** of  
this fault finding chart.

**AFTER REPAIR**

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

**ALP 3**

**Injection noise**

**NOTES**

**Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.**

**If the customer complaint is not eliminated, perform the following checks.**

**If the injection noise occurs after starting from cold:**

Check the low pressure diesel circuit priming.

Check the fuel heater supply.

Check the operation of the preheating system.

Check that fuel and engine temperatures are consistent.



**If the injection noise occurs at idle speed:**

Check the condition of the injector connector and pressure regulator terminals.

Check the conformity of the air flow signal, refer to the interpretation of **PR132 Air flow** or run **Test 4**

**Turbocharged air inlet circuit check.**

If the complaint is still present, perform fault finding on the injectors: run **Test 9 Poor injector operation**.

**Does the injection noise occur at all engine speeds?**

Run fault finding on the injectors: run **Test 9 Poor injector operation**.

Check the condition of the injector connector and pressure regulator terminals.

Check the conformity of the fuel used by running **Test 11 Diesel fuel conformity check**.

If the diesel fuel is not correct: Replace the diesel fuel.

Change the diesel filter.

Bleed the low and high pressure diesel circuit.

Check the conformity of the air flow signal, use the interpretation of **PR132 Air flow**.

If the customer complaint is still present:

Run command **AC011 Rail pressure regulator**,

check the following parameters:

- the conformity of the fuel pressure between **PR008 Rail pressure setpoint** and **PR038 Rail Pressure**,
- the conformity of the pump fuel flow between **PR157 Fuel flow setpoint** and **PR017 Fuel flow**. If the fault is still present, contact the Techline.

**AFTER REPAIR**

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

### ALP 4

### Poor performance

#### NOTES

Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.

If the customer complaint is not eliminated, perform the following checks.

#### IMPORTANT

In the event of the engine overheating above **119°C**, the computer deliberately limits the fuel flow (warning light is illuminated when temperature exceeds **115°C**).

Please observe the cleanliness guidelines and safety advice.

Is the engine running on all cylinders?

YES

A

NO

Check:

- Check the conformity of the fuel used by running **Test 11 Diesel fuel conformity check**.

If the diesel fuel is not correct: Replace the diesel fuel.

Change the diesel filter.

Bleed the low and high pressure diesel circuit.

- The conformity of the assembly of the injectors (presence and **conformity of the sealing washer**).

Checking procedure:

- Take a straightedge approximately **40 cm** long and place it on the 4 injectors. The straightedge should rest on the 4 injectors.
- If 1 injector protrudes, remove the injector and check that the washer is correct.
- If one injector does not touch the straightedge (clearance of more than **1 mm**), remove the injector and check for the presence of the washer.
- Clean the injector well and the injector, refit the injector with its correct sealing washer.
- The sealing and condition of the inlet circuit, run **Test 4 Turbocharged air inlet circuit check**.
- The condition of the air flowmeter, run **Test 5 Air flowmeter**.

Check the turbocharger:

- Run **Test 2 Air line at the turbocharger**.
- Run **Test 6 Turbocharger control solenoid valve check**.
- Run **Test 7 Turbocharger**.

Check that the turbocharging pressure follows the increase in engine speed and that the loop difference with the turbocharging pressure is low.

Otherwise, replace the turbocharger.

#### AFTER REPAIR

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

**ALP 4  
CONTINUED**

**A**

Check the injector operation: run **test 9**.

If the fault is still present

Check the conformity of the accelerator pedal position sensor, the brake pedal sensor, the atmospheric pressure sensor, the exhaust gas recirculation valve and the damper valve.

Check the consistency of the signal: of the air flowmeter, of the engine coolant temperature sensor, of the fuel temperature sensor and of the engine speed.

Check the connections, continuity and absence of interference resistance on the air flow sensor (run **DF056 Air flow sensor circuit, 2.DEF**), the engine coolant temperature sensor (run **DF001 Coolant circuit, 1.DEF**), and the engine speed (run **DF195 Engine speed / camshaft sensor consistency, 2.DEF**).

Check:

- That the diesel filter is not clogged (for the test, see **DF053 Rail pressure regulation function 2.def**).
- That there are no leaks on the high and low pressure diesel circuits, run **Test 4 Turbocharged air inlet circuit check**.
- That the oil vapour rebreathing system is connected.
- The flow regulator (jammed / seized), apply the interpretation of command **AC011 Rail pressure regulator**.
- Check the timing setting (and the position of the high pressure pump pinion)
- Check the engine compressions (cylinder compression balance with the **Compression test** function on the CLIP Technic tool).
- Measure the engine compressions with the special tool
- If the fault is still present, contact the Techline.

**AFTER REPAIR**

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

**ALP 5**

**Irregular engine operation**

**NOTES**

**Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.**

**If the customer complaint is not eliminated, perform the following checks.**

If the engine races during gear changes, check, if there is a floor carpet, that this is not blocking the accelerator pedal, the brake pedal or the clutch pedal, then check the conformity of the clutch switch and the conformity of the accelerator pedal sensor when the pedal is released. Measure the **resistance** of the engine speed sensor between **connections 3BG and 3BL of component 149**:

Replace the sensor if its resistance is not  **$510\ \Omega < X < 850\ \Omega$  at 20°C**.

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

- connection code **3BG**,
- connection code **3BL**.

Between components **120** and **149**.

If the connection or connections 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 the conformity of the engine earths (oxidation, tightness, etc.).

Check the mounting, air gap (check that the engine speed sensor - flywheel gap is correct:  **$0.5 < X < 1.8\ \text{mm}$** ) and the condition of the sensor (heating).

Replace if necessary.

Low pressure circuit check.

- Check the pressure regulating solenoid valve using **part B of ALP7 Rough idle**.  
~ **1600 bar** with full load on the accelerator.
- Apply the procedure used for checking the air flow (see "Conformity check").
- Check the turbocharger:
- Run **Test 2 Air line at the turbocharger**.
- Run **Test 6 Turbocharger control solenoid valve check**.
- Run **Test 7 Turbocharger**.
- Apply the procedure used for checking the hydraulic circuit (see conformity check).

If the fault is still present:

Check the balance of the cylinders using the CLIP Technic function, **Compression test** physical measurements icon.

Check the engine compressions with the special tool, if necessary.

**AFTER REPAIR**

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

### ALP 6

### Fuel system leaks

#### NOTES

Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.

If the customer complaint is not eliminated, perform the following checks.

**IMPORTANT**

Please observe the cleanliness guidelines and safety advice.

#### Procedure for checking for an external leak on the fuel circuit:

Clean away traces of grease with clean thinner and wipe the part or parts concerned with cleaning cloths.

Start the engine and increase the engine coolant temperature to **80°C**.

Stop the engine and check for traces of grease on the part or parts concerned.

If this is the case, replace the part or parts concerned.

Bleed the fuel circuit and continue the checks.

Does the priming bulb show traces of grease? (Visual and tactile inspections)  
(If there is a priming bulb)

**YES**

**NO**

Does the diesel filter show traces of grease?  
(Visual and tactile inspections)

**YES**

**NO**

Do the fuel return pipes show traces of grease?  
(Visual and tactile inspections)

**YES**

**NO**

**A**

Check the assembly of the components and the condition of the seal at the union of the two components, if the leak is at the seal. Replace the part or the parts concerned. Bleed the fuel circuit and continue the checks.

#### AFTER REPAIR

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

**ALP 6  
CONTINUED**



Does the high pressure pump show traces of grease?  
(Visual and tactile inspections)

↓ NO

Do the high pressure pipes and the injector rail  
show traces of grease?  
(Visual and tactile inspections)

YES

↓ NO

Do the injectors show traces of grease?  
(Visual and tactile inspections)

YES

↓ NO

End of fault finding.

Location of the leak.  
Where does the leak appear?

On the  
component

On the  
union - seal

If the leak is on the  
component, replace this and  
the high pressure pipe(s) at  
the same time as the  
component.

If the leak is on the join of a high pressure pipe  
and the component, remove the high pressure  
pipe and perform a visual inspection of the  
unions: if you find damaged unions, change the  
faulty component and the high pressure pipe(s)  
removed at the same time as the component.

**Reminder:**

**Do not replace the rail, pump or injector unless the union is found to be damaged during the visual inspections.**

**Bleed the fuel circuit and continue the checks.**

**AFTER REPAIR**

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

**ALP 7**

**Rough idle**

**NOTES**

Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.

If the customer complaint is not eliminated, perform the following checks.

Check the sealing and condition of the inlet circuit by running **Test 4 Turbocharged air inlet circuit check**



Check the low pressure circuit



Check the engine parameters:

- Check the update of the engine management computer calibration (last calibration).
- Check the conformity of the **IMA** codes (using the **Identification** screen on the **Clip diagnostic tool**).
- Check the charging circuit (see **Technical Note 6014A Checking the charging circuit**)
  
- To check the conformity of the engine speed signal, check:
  - \* The wiring.
  - \* The position of the flywheel and the condition of the flywheel teeth,
  - \* The position and tightness of the engine speed sensor.
  
- Check the fuel flow correction from station to station, run **Test 9 Poor injector operation**.



Check the connections and wiring of the injectors.  
Check the connections and wiring of the engine management computer to the injectors.  
Repair if necessary.



Check the high pressure circuit (external leaks) (see the end of **ALP6 Fuel circuit external leaks**)



Check the timing setting (and the position of the high pressure pump pinion)



Check the lower engine:

- Check the compressions using the CLIP Technic **diagnostic tool**, **Compression test** or the special tool.
  - Check the engine mounts only if there is noise or excessive vibrations at idle speed.
- If the checks are correct, contact the Techline.

**AFTER REPAIR**

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



### ALP 8

### Oil leaks from the turbocharger

#### NOTES

Before dealing with this customer complaint, check that there are no faults, and the conformity (or otherwise) of the parameters and statuses using the diagnostic tool.

If the customer complaint is not eliminated, perform the following checks.

#### Check the area around the turbocharger

##### Note:

An oil leak does not correspond always to a turbocharger fault, the oil leak can arise from the area around the turbocharger.

Depending on the vehicle type, the best visual access will be either from above or from below.

- 1- Do not start the engine.  
Check the area around the turbocharger and identify the origin of the leaks.  
Clean the oil traces on the turbocharger.
- 2- Start the engine and let it warm up several minutes.

#### IMPORTANT

If the air filter was removed previously, refit it before starting the engine (risks foreign matter entering the air inlet circuit).

Accelerate with no load several times, progressively increasing the duration before releasing the accelerator pedal.

Visually inspect the exterior condition of the fuel supply pipes and the turbocharger oil return and the area around it. Identify the origin of the leaks.

**Is an oil leak present at the air compressor inlet or outlet?**

YES

NO

#### Check the air compressor inlet or outlet

Check for a loose interface (inlet or outlet) that is the cause of the air leak.

##### Note:

It is normal to find oil traces inside the pipes at the turbocharger inlet or outlet, because the air entering the compressor is laden with oil from the engine rebreathing circuit.

**Is the suspected interface properly tightened?**

NO

Tighten the interface or the concerned pipe.  
**End of procedure.**

YES

Replace the pipe concerned (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, Mechanical, 12B, Turbocharging).

#### AFTER REPAIR

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

<b>ALP 8 CONTINUED 1</b>	
------------------------------	--



Is an oil leak present only at the casing of the compressor section?

YES

NO

The turbocharger is not faulty. The oil leak is from another engine component and the oil is flowing onto the turbocharger.



<b>AFTER REPAIR</b>	Carry out a road test followed by a complete check with the <b>diagnostic tool</b> .
---------------------	--

### ALP 8 CONTINUED 2

B

Is an oil leak present at the turbocharger oil supply inlet or outlet?

YES

**Check the turbocharger oil supply inlet and outlet**

Check for a loose interface (inlet or outlet) that is the cause of the oil leak.

**Is the suspected interface properly tightened?**

NO

**Tighten the pipe concerned.  
End of the procedure**

YES

Replace only the seal **or** the pipe of the section concerned (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical**, **12B**, **Turbocharging**).

NO

Is an oil leak present at the interfaces of the turbine casing and the exhaust pipes?

YES

NO

**End of procedure.**

The turbocharger is not faulty. Another engine fault is probably present.  
Mark the component that is the source of the leak and refer to the repair manual (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **10A Engine and peripherals**).

### AFTER REPAIR

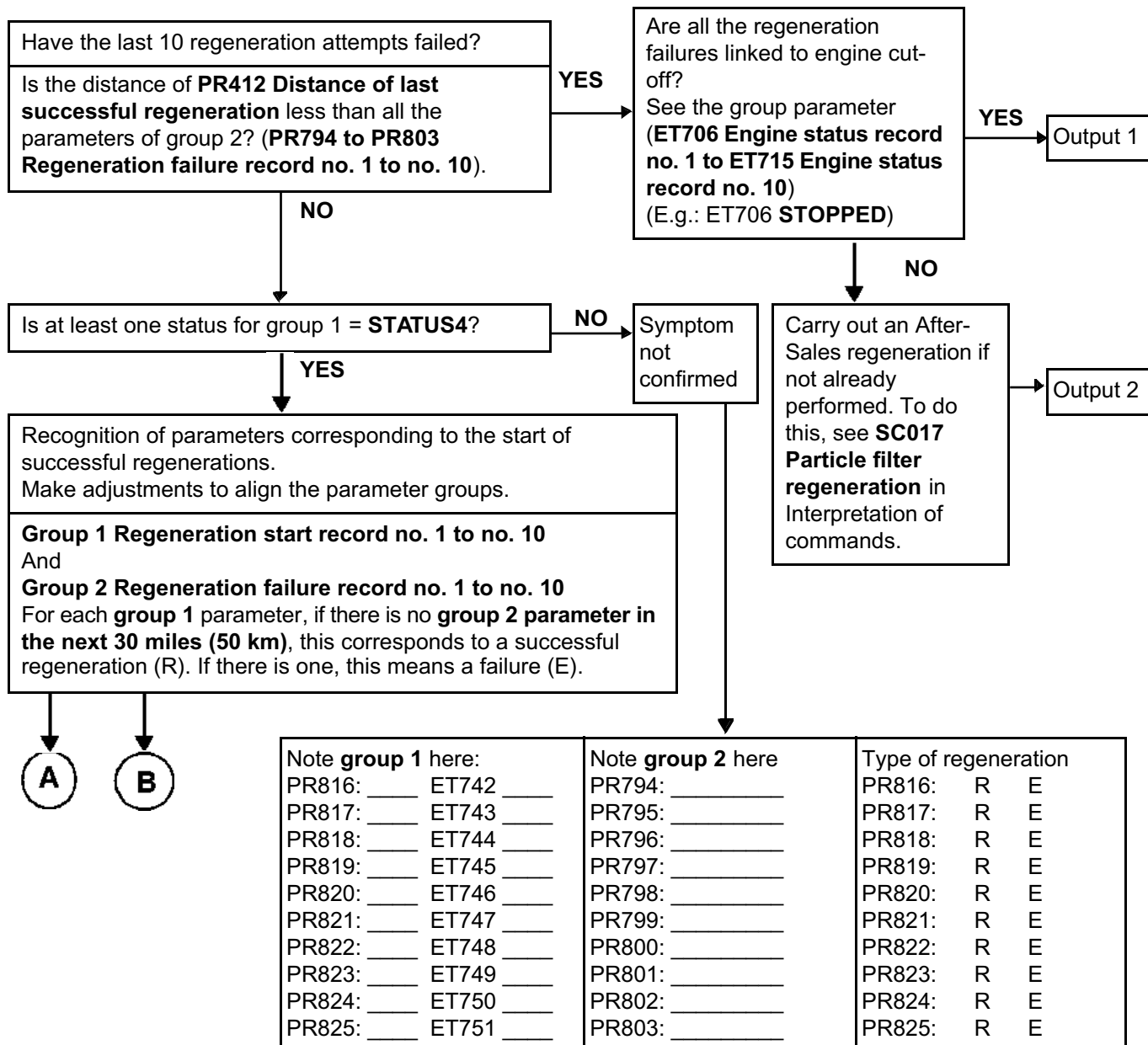
Carry out a road test followed by a complete check with the **diagnostic tool**.

### ALP 9

### Particle filter warning light comes on too often

#### NOTES

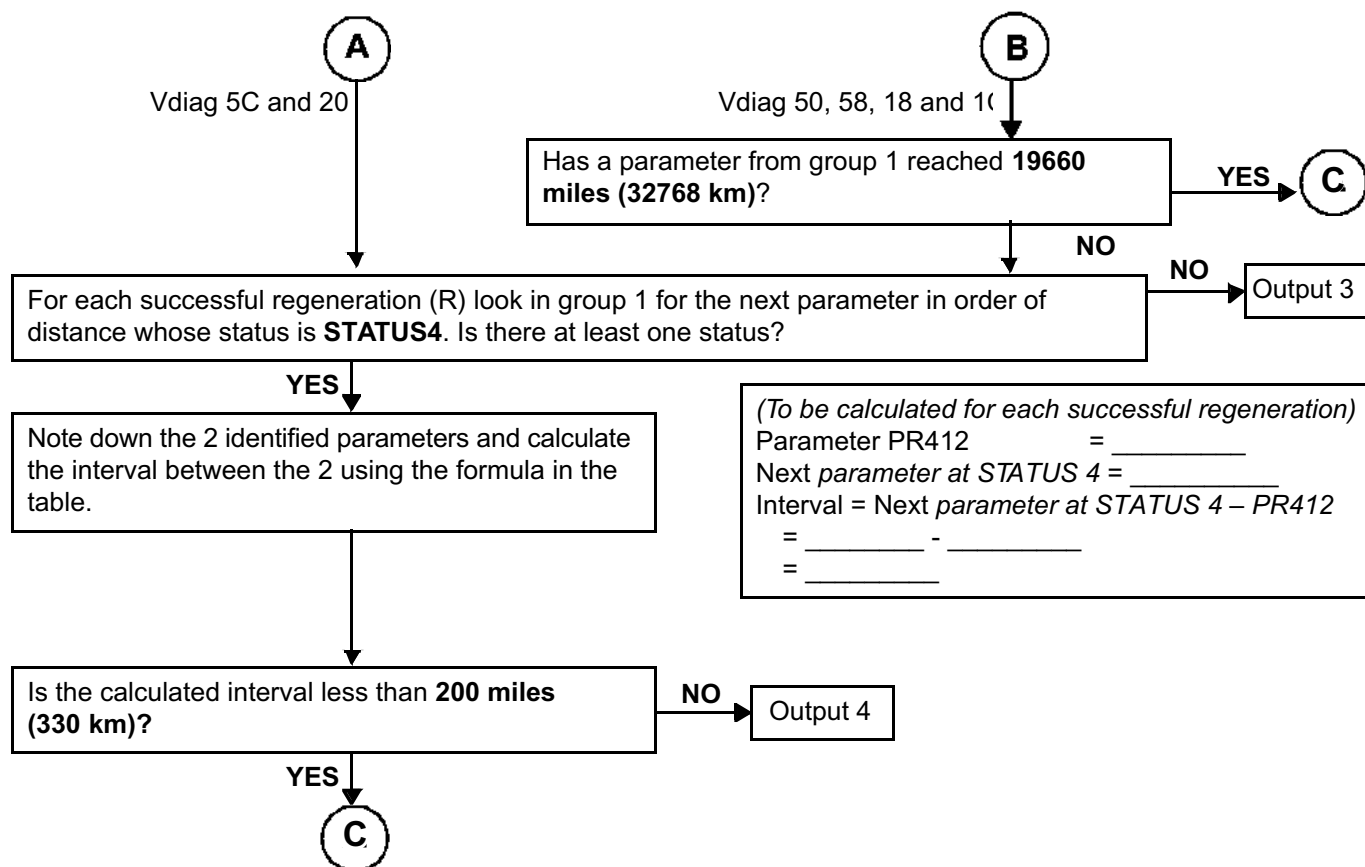
Before dealing with this customer complaint, check that there are no faults except DF312 Speed request and the conformity (or otherwise) of the "parameters" and "status" using the diagnostic tool. Deal with the other faults first.  
If the customer complaint is not eliminated, perform the following checks.



#### AFTER REPAIR

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

### ALP 9 CONTINUED 1



### AFTER REPAIR

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

**ALP 9  
CONTINUED 2**

**C**

- Check the consistency between the **IMA** codes entered and the codes engraved on the injector bodies.
- Check that the particle filter differential pressure sensor is correctly positioned and connected (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 19B Exhaust, Particle filter pressure sensor: Removal - Refitting**).
- Check the exhaust system (see **test 1 Exhaust system check**).
- Check the air inlet circuit (see **test 4 Turbocharged air inlet circuit check**).
- Check the air flowmeter (see **test 5 Air flowmeter**).
- Check the turbocharger (see **test 2 Air line at the turbocharger, test 6 Turbocharger control solenoid valve check and test 7 Turbocharger**).
- Check the injectors (see **test 9 Poor injector operation**).
- Check the cylinder compressions.

If the fault has not been located and the customer complaint is still present, contact the Techline.

**AFTER REPAIR**

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

<b>ALP 9 CONTINUED 3</b>	
------------------------------	--

Analysis of output for **ALP9 Particle filter warning light comes on too frequently**

Output no.	Output conditions	Cause - type of driving	Regeneration frequency	What to tell the customer?
<b>Output 1</b>	The last 10 regeneration attempts failed because the engine was switched off.	Regeneration failures caused by <b>engine cut-off</b> .	No regeneration frequency analysis.	Explain to the customer the need to wait until the end of regeneration (warning light goes out) before switching off the engine.
<b>Output 2</b>	The last 10 regeneration attempts failed, but not because the engine was switched off.	<b>Unsuitable driving conditions.</b>	No regeneration frequency analysis.	Explain again to the customer the driving criteria for when the warning light comes on.
<b>Output 3</b>	After successful regenerations stored in the memory, the warning light did not come on. The interval cannot be calculated.	Since the last successful regeneration recordings, the driving profile has been such that the warning lights have not come on.	Should be normal	Vehicle correct
<b>Output 4</b>	The interval between a successful regeneration and the particle filter warning light coming on is correct (above the lowest possible values). The system does not have any irregular components.	Unsuitable driving (urban, underspeed, etc.)	Normal	Vehicle correct

<b>AFTER REPAIR</b>	Carry out a road test followed by a complete check with the <b>diagnostic tool</b> .
---------------------	--

**ALP 10**

**Turbocharger noise**

**Apply the Technical Note 5164A, Noise fault finding.**

**Note:**

Pay close attention to faulty components that might result in unjustified replacement of the turbocharger. For example, whistling does not necessarily indicate damage to the turbocharger (this could be coming from the exhaust, the timing, the gearbox, etc.).

**AFTER REPAIR**

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



**ALP 11**

**Exhaust fumes**

Run **TEST 2 Air line at the turbocharger**.  
Run **TEST 6 Turbocharger control solenoid valve check**.

**Is the vehicle equipped with a particle filter?**

**NO**

**YES**

Start the engine and warm it up at idle speed for **10 minutes**.

**IMPORTANT**

If the air filter was removed previously, refit it before starting the engine (risks foreign matter entering the air inlet circuit).

Perform several rapid and brief accelerations under no load.

Note:

The presence of smoke is often normal.

The quantity, density, colour and persistence of the smoke are the important factors.

**Is the exhaust outlet producing abnormal smoke?**

**YES**

**NO**

Refer to **TEST 7 Turbocharger**.

The turbocharger is not faulty. Another engine fault is probably present. **Consult the TEST or the corresponding ALP**.

Perform the fault finding of the "particle filter" function, refer to the **TESTS or corresponding ALP**

**AFTER REPAIR**

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

Exhaust system check

TEST 1

Turbocharger air chain

TEST 2

Low pressure circuit check

TEST 3

Checking the turbocharged air inlet circuit

TEST 4

Air flowmeter

TEST 5

Turbocharger control solenoid valve test

TEST 6

Turbocharger

TEST 7

Incorrect injector operation

TEST 9

Temperature upstream of turbine too low

TEST 10

Diesel fuel conformity check

TEST 11

Incorrect operation of the overpressure valve

TEST 12

### TEST 1

### Exhaust system check

#### Engine stopped:

Check that the silencer outlet is not blocked.  
Repair or replace the silencer, if necessary.

Check the seal of the exhaust manifold on the contact surface between the turbocharger and the exhaust manifold.

**Is the seal in order?**

NO

Repair or replace the defective part.

YES

Loosen the catalytic converter on the turbocharger side. Place a wooden block between the two parts. Start the vehicle and check if the engine runs better.

**Is the engine running normally?**

NO

The exhaust system is not the cause of the fault. Continue with the engine fault finding (see Customer complaints).

YES

Retighten the catalytic converter. Loosen or uncouple the particle filter on the catalytic converter side. Place a wooden block between the two parts if necessary. Start the vehicle and check if the engine runs better.

**Is the engine running normally?**

NO

Replace the catalytic converter.

YES

Retighten the particle filter. Loosen or uncouple the silencer on the particle filter side (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 19B Exhaust, Parts and consumables for repair**).

Start the vehicle and check if the engine runs better.  
**Is the engine running normally?**

NO

Replace the particle filter (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 19B Exhaust, Particle filter, Removal - Refitting**). After any operation on the particle filter, reinitialise the parameters. Run command **SC036 Reinitialise programming** and select **After particle filter replacement**.

YES

Replace the silencer.

**TEST 2**

**Air line at the turbocharger**

Check that the air filter is present.  
Check the replacement interval of the air filter on the maintenance booklet.  
Compare the part nos. of the fitted air filter on the vehicle and of the air filter recommended by the manufacturer.  
Check the direction of fitting of the air filter.

**Is the air filter correctly fitted on the vehicle?**

**YES**

**NO**

**Check the condition of the air filter**

Visually inspect the condition of the filtering section of the air filter.

**Is the air filter or its seal damaged?**

**Is the air filter fouled (does it contain a lot of impurities)?**

**YES**

Replace the air filter (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12A, Fuel mixture, Air filter, Removal - Refitting**).

**NO**

**Low pressure circuit check**

Note:

Depending on the vehicle type, the best visual access will be either from above or from below.

Visually inspect the condition of the following components:

- fresh air inlet scoop on the front panel of the vehicle,
- air inlet pipe to the air filter,
- air pipe of the filter up to the compressor inlet,
- air flowmeter mountings.

**Is one of these components incorrect (pipes dislodged, torn, bent, pierced or kinked)?**

**YES**

Replace the defective parts (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging**).

**NO**



**TEST 2  
CONTINUED 1**

**A**

**High pressure circuit check**

Note:

Depending on the vehicle type, the best visual access will be either from above or from below.

Visually inspect the condition of the following components:

- outlet pipe of the compressor to the turbocharging air cooler,
- outlet pipe of the turbocharging air cooler to the inlet manifold,
- inlet manifold
- pressure and temperature sensors.

**Is one of these components incorrect (pipes dislodged, torn, bent, pierced or kinked)?**

**YES**

Replace the defective parts  
(see MR 364 (Mégane II), 370  
(Scénic II) or 395 (Laguna II),  
Mechanical, 12B, Turbocharging).

**NO**

**Exhaust circuit check**

Visually inspect the condition of the following engine sections:

- from the exhaust manifold circuit to the turbocharger turbine,
- from the turbine outlet pipe to the end of the exhaust pipe,
- from the inlet manifold to the EGR valve
- pressure and temperature sensors connected.

**Do certain of these components have blackish or whitish traces?**

**YES**

**NO**

Run **test 6 Turbocharger control solenoid valve check**.

**TEST 3**

**Low pressure circuit check**

Check the fuel filter:

- Conformity of the fuel filter (correct part number and RENAULT filter),
- Positioning and clogging condition of the filter cartridge,
- Positioning and condition of the seals.

**If there is metal swarf in the filter:**

Replace the fuel filter, bleed the circuit and **continue the fault finding procedure.**

**Supplying the injection system with fuel from an additional tank.**

This operation aims to detect possible faults in the low pressure supply system of a vehicle by replacing it entirely with an additional tank.

**Mode:**

- Disconnect the diesel fuel supply pipe at the fuel filter inlet and seal it with a plug.
- Connect a tube to the fuel filter inlet and insert the other end into a **clean** container which is approximately **5 litres** in volume.
- Disconnect the diesel fuel return pipe at the pump return and injector return joint and seal it with a plug.
- Fill the container with **clean** diesel fuel.
- Start the engine and let the system drain itself of its air (there must not be any air bubbles in the return pipe).

Is the customer complaint still present?

**NO**

**YES**

Are the low pressure circuit connections in order and in good condition?

**YES**

**NO**

**A**

If the low pressure circuit is in order, reconnect the various pipes making up the low pressure circuit and repeat the fault finding procedure in the fault finding chart or for the fault that referred you to this test.

Carry out the necessary repairs.

**TEST 3  
CONTINUED**

**A**

Check the condition of the priming bulb, and that it is working properly.  
Perform repairs if necessary and continue the test.

If the fault is still present with a low fuel level, check the consistency of the actual fuel level and that indicated on the instrument panel.  
– The bailing unit is supplied via a venturi valve located beneath it.  
Check that the opening of the venturi (**6 to 8 mm** in diameter) is not blocked by dirt contained in the fuel tank.  
Check the priming of the low pressure diesel circuit.

Check the conformity of the fuel used by running **test 11 Diesel fuel conformity check**.  
If the diesel fuel is not correct:  
– Replace the diesel fuel.  
– Change the diesel filter.  
– Bleed the low and high pressure diesel circuit.

Low pressure circuit correct.  
**END OF TEST3.**

**TEST 4**

**Checking the turbocharged air inlet circuit**

**Engine stopped:**

Check the **sealing** of the low and high pressure air circuits (air leak or intake) both upstream and downstream of the turbocharger.



Check the parts that are abnormally greasy of the circuit and reveal a lack of tightness.

Check:

- the condition and fitting of the ducts (foreign, clogged, not joined, kinked, broken, pierced, cut bodies, tightness of the mounting bolts, etc.).
- the presence, condition and fitting of the seals.
- the present and tightening of the clamps.
- The fitting of the turbocharging pressure sensor.

Carry out the necessary repairs.



Checking the air filter.



Check:

- That the air filter unit inlet and outlet are not blocked.
- the condition and the assembly of the air filter unit (disconnected, broken, pierced ...).
- The cleanliness, conformity and the absence of deformation of the filter element.
- The air flowmeter: run **Test 5 Air flowmeter**.

Carry out the necessary repairs.



If the engine is equipped accordingly, check:

- that the damper valve is open (**AC012 Damper valve, step B**).
- the condition of the damper valve:
  - the tightening of the mounting bolts,
  - cracks in the damper valve.

Carry out the necessary repairs.

**Replace the valve if necessary.**



Check that there is no leak at the exhaust manifold, in particular at the exhaust manifold/turbocharger connection.

Check the exhaust, run **Test 1 Exhaust system check**.

Carry out the necessary repairs.



Check the condition of the intercooler:

- clogging,
- leaks (vehicle stationary, stabilise the engine speed between **3500 rpm** and **4000 rpm** and check that there are no leaks).

**Replace the intercooler if necessary.**

**End of test.**



**TEST 5**

**Air flowmeter**

**Pollution of the grilles:**

Visual inspection: remove the flowmeter. There must be no foreign bodies in the grilles (see illustration 110734).

**Do not clean the grilles using compressed air or any other procedure: this damages the sensors and creates variations from the values displayed on the CLIP tool.**

Check the sealing of the air circuit upstream of the air flowmeter:

disconnected or pierced pipes and air filter unit, seals present.

Replace the air flowmeter if necessary and clean upstream of this, if necessary.

**Damage to electrical components:**

Visual inspection:

– remove the flowmeter, the components should not be broken (see illustration 110736).

Replace the air flowmeter if necessary.

**Oxidation of the electrical components:**

Visual inspection:

– remove the air flowmeter, there should not be any greenish deposits on the electrical components.

Replace the air flowmeter if necessary.

**Clogging of the air flowmeter:**

Test:

– Check the values for conformity:

\* During the first 5 seconds after starting:

– Coolant temperature: **80°C**.

– Engine speed: at idle speed (**750 rpm < PR055 < 850 rpm**).

– Air flow measurement: **37 kg/h < PR132 < 57 kg/h**.

– EGR valve OCR\*: between - **10% and 0%**.

\* After the starting phase:

– Coolant temperature: **80°C**,

– Engine speed: at idle speed (**750 rpm < PR055 < 850 rpm**).

– Air flow measurement: **25 kg/h < PR132 < 35 kg/h**.

– EGR valve OCR\*: between **10% and 40%**.

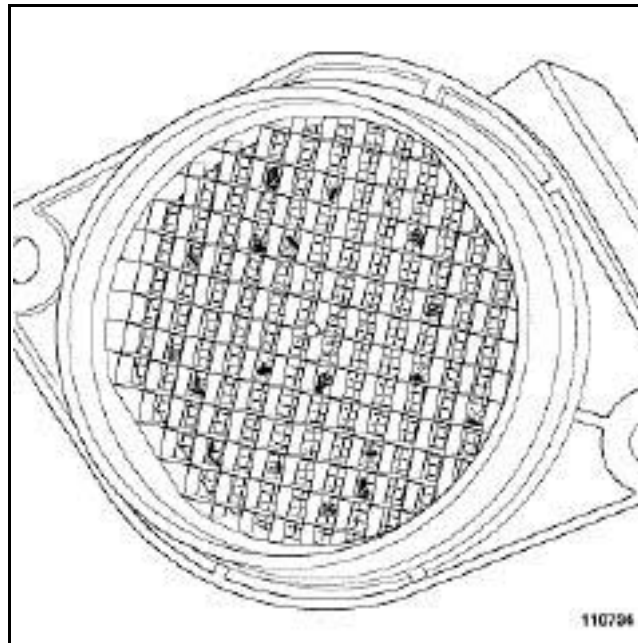
– Refer to the interpretation of **DF056 Air flow sensor circuit 2.DEF**, for the air flowmeter checks.

Replace the air flowmeter if necessary.

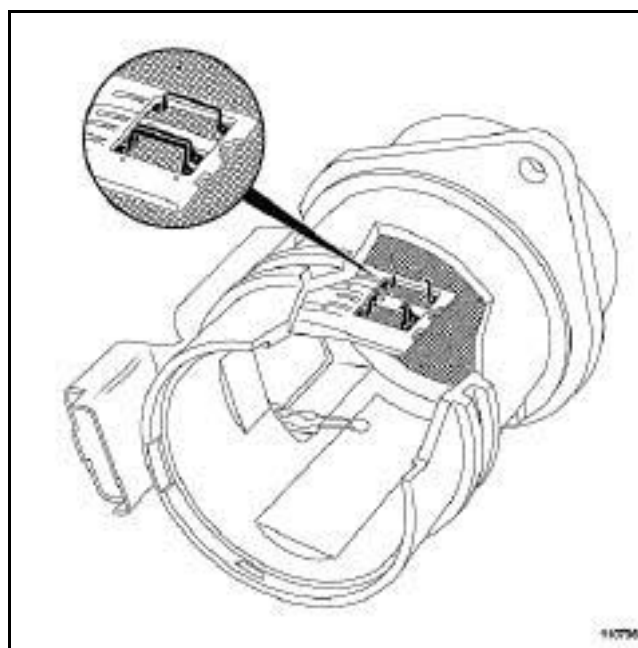
\* OCR: Opening Cyclic Ratio

**TEST 5  
CONTINUED**

**Contamination of the grille**



**Damage to the electrical sensors**



**End of test 5.**

**TEST 6**

**Turbocharger control solenoid valve test**

Start the engine and let it run at idle speed for **1 minute**.  
Check the battery voltage.  
If the value of **PR071 Computer supply voltage** is **greater than 13 V**, continue the test.  
Otherwise, check the charge circuit, then perform a road test to confirm the disappearance of the fault.

**Checking the vacuum at the pressure regulator inlet**

Run the engine at idle speed.

Check the engine temperature using the CLIP parameter **PR064 Coolant temperature**.

Let the engine warm up until the temperature reaches **80°C**.

Disconnect the vacuum pipe from the end piece of the pressure regulator.

Connect a vacuum pressure gauge **to the end of the disconnected pipe** and put it in the **vacuum measurement** position.

Perform a quick acceleration by depressing the accelerator pedal completely and then releasing it immediately.

The total duration of pressing and holding in the full load position must not exceed **1 second**.

During this acceleration, the engine speed must reach a value between **3000** and **4000 rpm**.

Repeat the operation 3 times.

Read the maximum vacuum posted by the pressure gauge during the increase and decrease in the speed and after the return to idle speed.

Tolerance intervals for the vacuum are:

**-1 bar < CORRECT vacuum value < - 0.6 bar**

**-0.6 bar < INCORRECT vacuum value < 0 bar**

**Is the vacuum at the turbocharging pressure regulator inlet displayed on the vacuum gauge within the tolerance interval?**

NO



YES

The solenoid valve is in order.  
If the customer complaint is **Smoke from the exhaust**, run **ALP11 Smoke from the exhaust**. Otherwise, run **TEST 7 Turbocharger**.

**TEST 6  
CONTINUED 1**



Reconnect the vacuum pipe on the turbocharging pressure regulator



**Checking the vacuum at the solenoid valve outlet**

Leave the engine running at idle speed.

Disconnect the vacuum pipe from the end piece of the solenoid valve outlet.  
This pipe connects the solenoid valve to the turbocharging pressure regulator.

Connect a vacuum pressure gauge **to the solenoid valve outlet** and put it in the **vacuum measurement** position.

Perform a quick acceleration by depressing the accelerator pedal completely and then releasing it immediately.  
The total duration of pressing and holding in the full load position must not exceed **1 second**.  
During this acceleration, the engine speed must reach a value between **3000** and **4000 rpm**.

Repeat the operation 3 times.

Read the maximum vacuum posted by the pressure gauge during the increase and decrease in the speed and after the return to idle speed.

Tolerance intervals for the vacuum are:

**-1 bar < CORRECT vacuum value < - 0.6 bar**

**-0.6 bar < INCORRECT vacuum value < 0 bar**

**Is the vacuum displayed by the pressure gauge at the solenoid valve outlet within the tolerance interval?**

**NO**



Reconnect the vacuum pipe on the turbocharging pressure regulator



**YES**



Replace the vacuum pipe between the solenoid valve and the turbocharging pressure regulator (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging**).

**TEST 6**  
**CONTINUED 2**

**B**

**Visual inspection of the electrical connector of the solenoid valve**

Switch off the engine.

Note:

The requested checks are only visual.

- 1- Check that the connector is correctly connected and locked.
- 2- Check the absence of damage to the electric wires where they leave the insulation.  
Disconnect the connector to continue the checks.
- 3- Check the absence of thermal damage to the unit and mechanical damage to the lock.
- 4- Check the absence of deformations of the contacts (clips and tabs).
- 5- Check the sealing of the connector.

**Do the visual inspections show any damage?**

**NO**

**YES**

If there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.  
**After the repair, repeat the test from the start.**

**Checking the vacuum at the solenoid valve inlet**

Run the engine at idle speed.

Disconnect the vacuum pipe from the end piece of the solenoid valve inlet.

This pipe connects the vacuum pump to the turbocharger solenoid valve.

Connect a vacuum pressure gauge **to the end of the disconnected pipe** and put it in the **vacuum measurement** position.

Read the vacuum posted by the pressure gauge.

Tolerance intervals for the vacuum are:

**-1 bar < CORRECT vacuum value < -0.85 bar**

**-0.85 bar < INCORRECT vacuum value < 0 bar**

**Is the vacuum displayed by the pressure gauge at the solenoid valve inlet within the tolerance interval?**

**NO**

**YES**

Replace the solenoid valve (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging**).

Carry out the following operations.

- reconnect the vacuum pipe to the turbocharger solenoid valve.
- Check the conformity of the vacuum pipe connections.
- visually check the condition of the vacuum pipes leaving the vacuum pump to the different supplied components.

Refer to the repair manual (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B Turbocharging**).

**TEST 7**

**Turbocharger**

**IMPORTANT**

Perform these checks without removing the turbocharger and with the vehicle ignition switched off.

**Checking the turbocharger shaft**

**WARNING**

Observe the following safety precautions:

- wear high temperature protective gloves when the engine is hot,
- do not wear oversize or baggy clothing or hanging jewellery,
- watch out for possible triggering of the motor-driven cooling fan unit and the operation of the accessories belt or belts.

**Note:**

The turbocharger shaft is the shaft that connects the compressor wheel and the turbine wheel. Depending on the vehicle type, the best visual access will be either from above or from below.

Disconnect the air pipe located between the turbocharger and the air filter.

Wearing gloves, check the operation of the turbocharger shaft by turning the vanes manually without forcing.

**Does the shaft have a kickdown point in rotation?**

**Does the compressor wheel touch the casing of the turbocharger?**

If the response for  
these **2 questions** is  
**NO**



If **YES** for **one**  
of these **2**  
questions

Replace the turbocharger (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical**, **12B**, **Turbocharging**, **Turbocharger: Removal - Refitting** and **Technical Note 3938A**, **Broken turbocharger: replacement instructions**).

### TEST 7 CONTINUED 1



#### Checking the condition of the turbocharger vanes.

Note:

This check is facilitated by using a mirror and a bulb.

Depending on the vehicle type, the best visual access will be either from above or from below.

Visually check that the compressor vanes are in good condition.

**Are the vanes damaged or twisted?**

NO

YES

Replace the turbocharger (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging, Turbocharger: Removal - Refitting and Technical Note 3938A, Broken turbocharger: replacement instructions**).

#### Which type of turbocharger is it?

Variable geometry  
turbocharger

Fixed geometry  
turbocharger



**TEST 7  
CONTINUED 2**

**B**

**Checking the turbocharging pressure regulator to determine if it is a variable geometry turbocharger**

**Note:**

The pressure regulator rod of a variable geometry turbocharger is orthogonal to the turbocharger shaft.  
Variable geometry turbochargers are controlled by a solenoid valve.  
Depending on the vehicle type, the best visual access will be either from above or from below.

**Note:**

If necessary, according to the vehicle type and the accessibility of the pressure regulator, connect the vacuum pump to the end of the pressure regulator pipe at the solenoid valve outlet.

Using a **manual vacuum pump**, apply a vacuum to the turbocharging pressure regulator of approximately **650 mbar**.

- 1-Check that the fitting is completely leaktight.
- 2-Check that the control rod **is resting against its stop**.
- 3-Lock the **vacuum device** and check that the pressure variation is not greater than **100 mbar in 10 seconds**.
- 4-Release the pressure and check that the control rod comes back to its initial position without jerking.

Repeat the complete sequence 3 times.

**Is the pressure regulator leaktight and is the rod movement correct?**

**YES**

The turbocharger is correct.  
**End of procedure.**

**NO**

Replace the turbocharger (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging, Turbocharger: Removal - Refitting and Technical Note 3938A, Broken turbocharger: replacement instructions**).



**TEST 7  
CONTINUED 3**

C

**Checking the turbocharging pressure regulator to determine if it is a fixed geometry turbocharger**

**Note:**

The pressure regulator rod of a fixed geometry turbocharger is aligned with the turbocharger shaft.  
Fixed geometry turbochargers are controlled by a solenoid valve.  
Depending on the vehicle type, the best visual access will be either from above or from below.

**Note:**

If necessary, according to the vehicle type and the accessibility of the pressure regulator, connect the vacuum pump to the end of the pressure regulator pipe at the solenoid valve outlet.

Using a **manual vacuum pump**, apply a vacuum to the turbocharging pressure regulator of approximately **650 mbar**.

- 1-Check that the fitting is completely leaktight.
- 2-Check that the control rod **moved several millimetres**.
- 3-Lock the **vacuum device** and check that the pressure variation is not greater than **100 mbar in 10 seconds**.
- 4-Release the pressure and check that the control rod comes back to its initial position without jerking.

Repeat the complete sequence 3 times.

**Is the pressure regulator leaktight and is the rod movement correct?**

**YES**

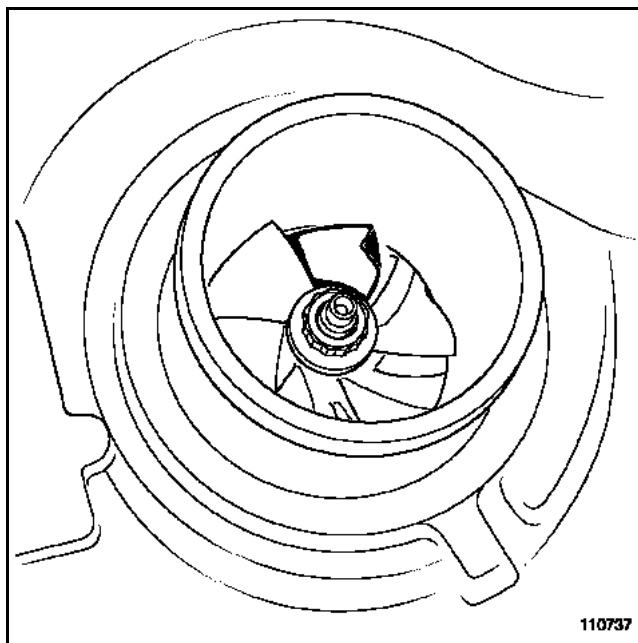
The turbocharger is correct.  
**End of procedure.**

**NO**

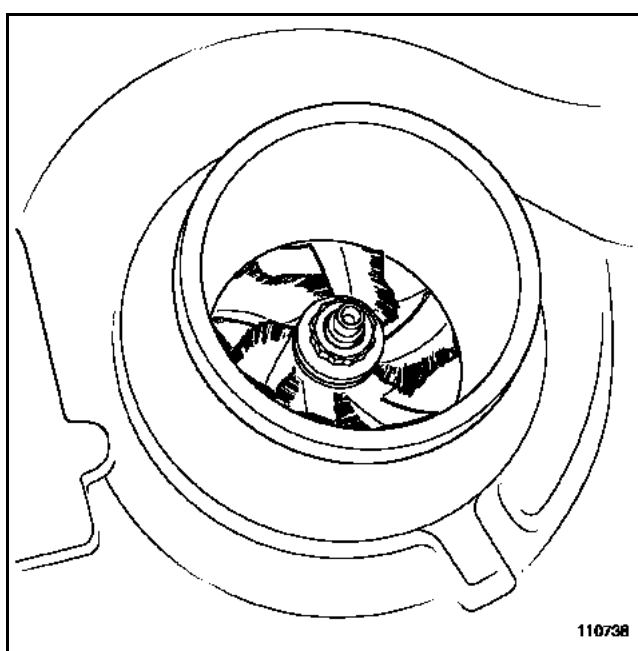
Replace the turbocharger (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 12B, Turbocharging, Turbocharger: Removal - Refitting and Technical Note 3938A, Broken turbocharger: replacement instructions**).

**TEST 7**  
**CONTINUED 4**

**Deformed, twisted blade ("soft" foreign body)**



**Broken blades ("hard" foreign body)**



**TEST 9**

**Incorrect injector operation**

**Section A: Fuel regulation balance check for each injector (individual correction):**

- In the **CLIP diagnostic tool**, choose the **Fuel circuit** subfunction.
- With the engine idling and the fuel temperature **> 50°C**, display the flow correction values for each injector (individual correction), i.e.:
  - **PR364 Cylinder no. 1 fuel flow correction.**
  - **PR405 Cylinder no. 2 fuel flow correction.**
  - **PR406 Cylinder no. 3 fuel flow correction.**
  - **PR365 Cylinder no. 4 fuel flow correction.**

The flow correction **range** per injector is between **- 5 mg/stroke and + 5 mg/stroke without reaching these values.**

- If this has not already been carried out, check the injector connections and wiring.
- Check the connections and wiring of the engine management computer to the injectors.
- Repair if necessary.
- Check the **IMA** injector codes, comparing the **IMA** codes on the injectors (the **IMA** codes must be read from left to right) and the **IMA** codes read in **the CLIP diagnostic tool**.
- If the **IMA** codes are correct, continue the fault finding procedure,
- If not, modify the incorrect **IMA** codes using command **SC002 Enter injector codes** (see **Interpretation of commands**).

To confirm the repair, consult **part B of test 9**.

**CASE No. 1: If at least one of these values is equal to or greater than + 5 mg/st**

- Check the valve clearance.
- Check the condition of the engine and the compressions (using the **Clip diagnostic tool** or a compression gauge).
- If the compression test reveals a cylinder fault, carry out the necessary repairs.
- If the compression is correct, check that the injector is fitted correctly (see **MR 364 (Mégane II), 370 (Scénic II) or 395 (Laguna II), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting**)

**In particular, check that each injector has one compression washer.**

Check the fuel regulation again for each injector (individual correction).

- If not, replace the injector and check for the sealing washer. Modify the **IMA** code using command **SC002 Enter injector codes** (see **Interpretation of commands**).
- Apply **Part B** of this test to confirm the fault finding.

**TEST 9  
CONTINUED 1**

**CASE No. 2: If at least one of these values is equal to or less than - 5 mg/st**

- Check the valve clearance.
- Check the level and condition of the engine oil.
- Remove the injector with the largest correction.
- If there is diesel fuel contamination, check the condition of the cylinder concerned (cylinder, piston, valves). Use an endoscope if possible.
- Only replace the removed injector, and modify the **IMA** code using command **SC002 Enter injector codes** (see **Interpretation of commands**).
- Apply **Part B** of this test to confirm the fault finding.

**CASE No. 3: If at least one of these values does not stabilise (20 seconds after starting)**

- Check the low pressure circuit using **Test 4 Low pressure circuit check**.
- Check the conformity of the fuel by applying **Test 11 Diesel fuel conformity check**
- Apply **Part B** of this test to confirm the fault finding procedure

**CASE No. 4: If all the fuel flow correction values are correct (between - 5 mg/st and + 5 mg/st)**

- Apply **Part C** of this test (**Fuel return flow measurement**).

**IMPORTANT**

When removing or refitting injectors, follow the cleanliness and safety instructions (see **MR 364 (Mégane II)**, **370 (Scénic II)** or **395 (Laguna II)**, **Mechanical**, **13B**, **Diesel injection**, **Diesel injector: Removal - Refitting**).

**TEST 9**  
**CONTINUED 2**

**Section B: Confirmation of flow correction fault finding for each injector (individual correction):**

Clear the faults and perform a test with the **engine idling** for at least **5 minutes** and fuel temperature **> 50°C**.

Check that no fault appears on the **CLIP diagnostic tool** and that the corrective values do not reach **± 5 mg/stroke** to confirm the repair.

If the customer complaint is still present and the fuel flow correction values are between **-5 mg/stroke and + 5mg/stroke**, apply **Part A Fuel regulation balance check for each injector (individual)** of this test (**Case no.4**).

If one or more cylinders has an injector flow correction value in excess of **± 5 mg/stroke**, apply **Part A Fuel regulation balance check for each injector (individual)** of this test, as one or more injectors may be defective.

**Part C: Measuring fuel return flow**

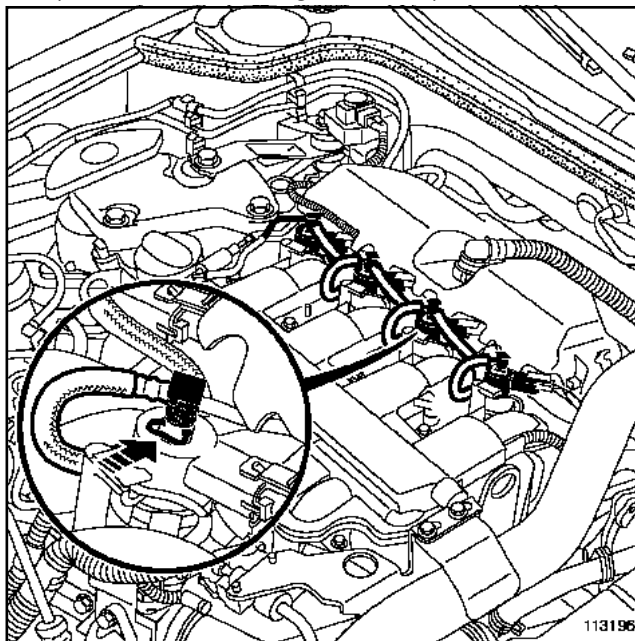
**1 - Fitting the tool:**

**This section is only to be carried out if PR063 "Fuel temperature" is higher than 50°C (see step 2 of section C for this test).**

Remove the engine undertray

Disconnect the entire fuel return pipe in accordance with the following procedure (do not remove the clips):

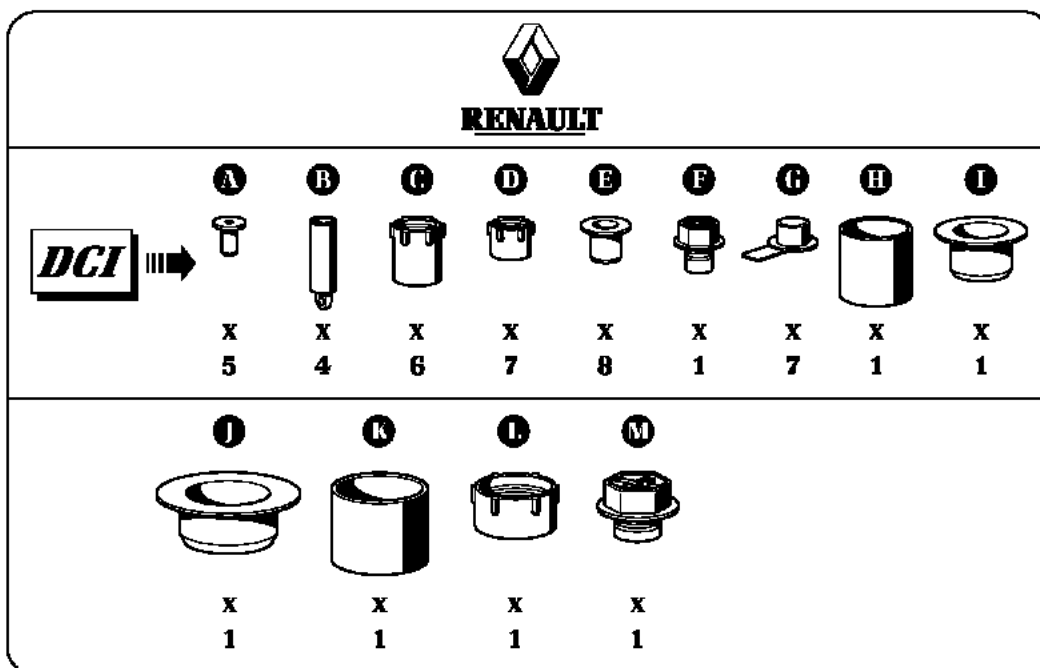
- press the clip,
- pull vertically on the end piece (see arrow in the diagram below) of the fuel return pipe.



**IMPORTANT**

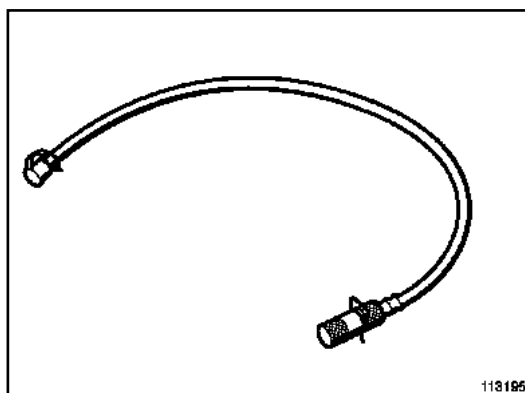
The end piece is fragile. Be careful not to break it by pulling it too hard. Replace all removed clips

### TEST 9 CONTINUED 3



107209

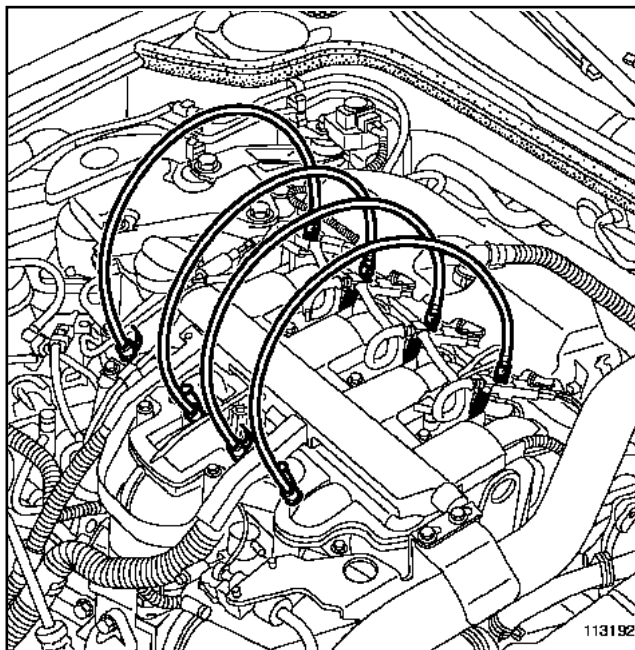
Fit the blanking plugs (B), from the kit (part number 77 01 208 229), on the end pieces of the fuel return pipe.  
If **Mot. 1760** is not fitted on the injectors immediately, place blanking plugs (A) on the injector fuel return openings.



113195

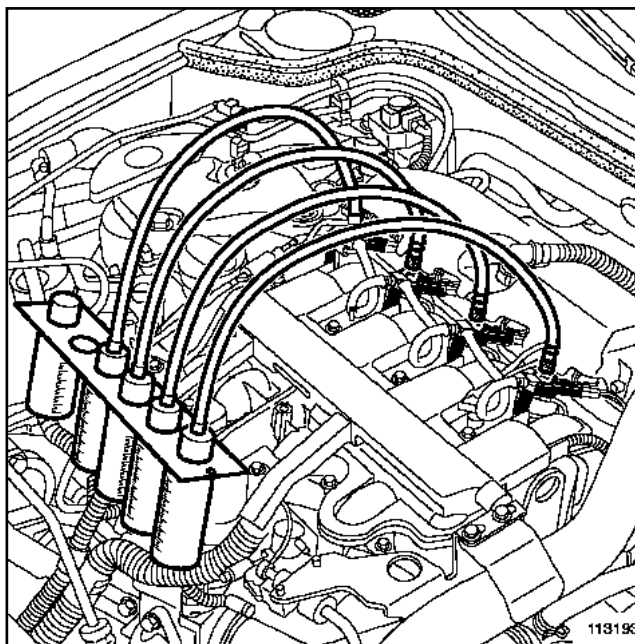
On the pipes of **Mot.1760** (see illustration 113195 above), remove the clips and the plugs from the end pieces (on the right in the diagram) and leave the plugs (on the left in the diagram) in place.

### TEST 9 CONTINUED 4



Connect the pipes of tool **Mot.1760** to the injectors (without removing the clips on the injectors):

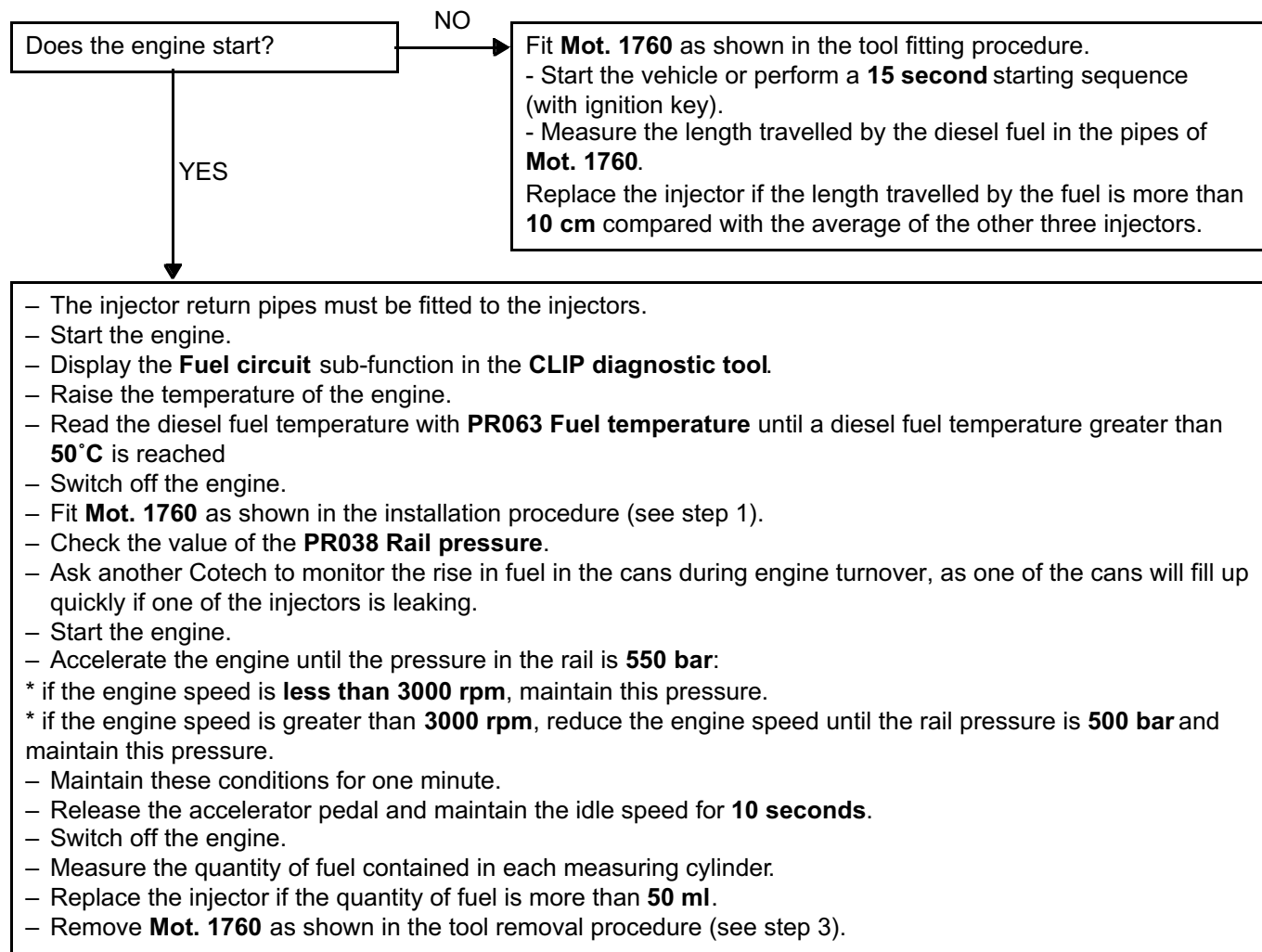
- press on the injector clip,
- insert the end piece into the injector fuel return opening.
- remember to fit the end piece plugs to the injector fuel return openings with the clips provided.
- Remove the plugs left on the **Mot.1760**



Insert the ends of the pipes into the measuring cylinders of tool **Mot.1760**. The measuring cylinders are taken from tool **Mot. 1711**.

**TEST 9**  
**CONTINUED 5**

**2 - Injector return flow balance check:**



**3 - Removing the tool:**

**IMPORTANT**

Use a cleaning cloth (part number **77 11 211 707**) to absorb fuel run-off.

Disconnect the pipe from an injector:

- press on the injector clip,
- pull vertically on the end piece of the pipe of tool **Mot.1760**, placing a wipe on the end piece to prevent run-off.

Lift the end piece vertically so that the fuel contained in the pipes flows into the measuring cylinders of tool **Mot.1760**.

Remove the other 3 pipes using the same procedure.

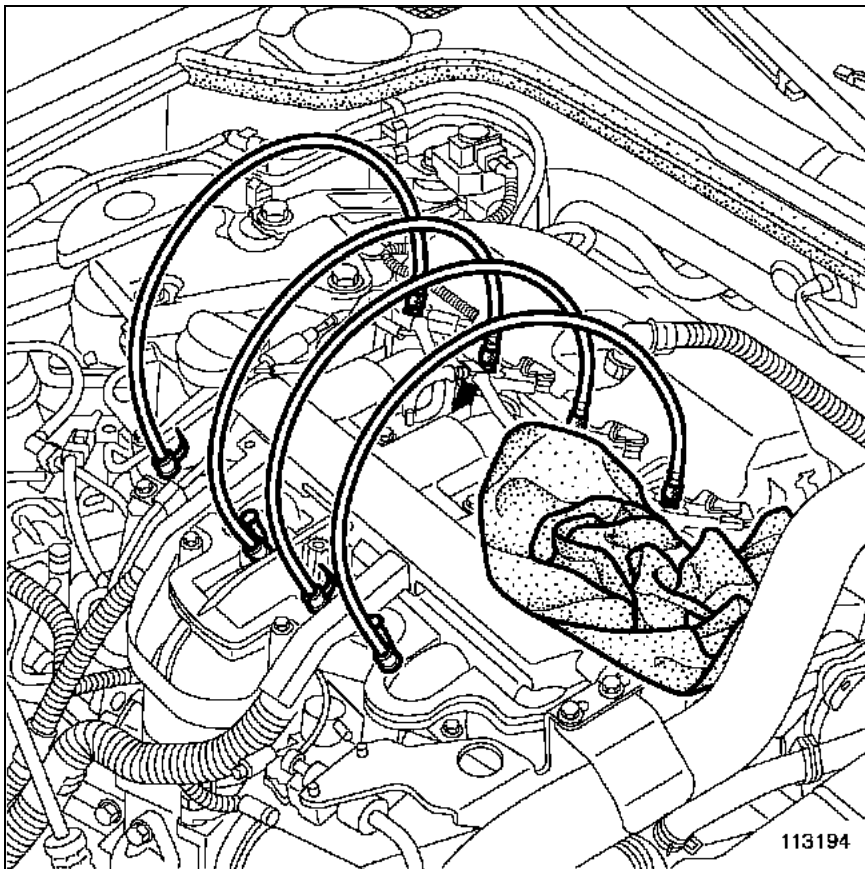


### TEST 9 CONTINUED 6

Remove the plug welds from the fuel return pipe end pieces.

Connect the complete fuel return pipe to the injectors.

Wipe up any fuel run-off with a cleaning cloth (part number **77 11 211 707**).



**End of test 9.**

**TEST 10**

**Temperature upstream of turbine too low**

Run full fault finding on the injection computer using the diagnostic tool.  
**Are any faults present or stored?**

**YES**

Apply the procedure for dealing with the associated faults (see **Interpretation of faults**).

**NO**

Apply **Test 1 Exhaust system check**.  
**Is the exhaust pipe in order?**

**NO**

**YES**

Apply **Test 4 Turbocharged air inlet circuit check**.  
**Is the inlet circuit in order?**

**NO**

**YES**

Apply **Test 5 Air flowmeter**.  
**Is the air flow sensor correct?**

**NO**

**YES**

Apply **Test 9 Poor injector operation**.  
**Are the injectors correct?**

**NO**

**YES**

Contact the Techline.

Repair then carry out a new particle filter regeneration. Run command **SC017 Particle filter regeneration**. If the second regeneration is successful, it is essential to change the engine oil and replace the oil filter. If the second regeneration fails, contact the Techline.

### TEST 11

### Diesel fuel conformity check

#### WARNING

During this operation, it is essential to:

- refrain from smoking or bringing incandescent objects close to the work area,
- protect yourself against fuel splashes due to residual pressure in the pipes,
- wear safety goggles with side guards,
- wear leaktight gloves (Nitrile type).

#### IMPORTANT

- To avoid any corrosion or damage, protect the areas on which fuel is likely to run.
- To prevent impurities from entering the circuit, place protective plugs on all fuel circuit components exposed to the open air.

#### Preparations:

Weigh an empty **1300 ml** plastic cup (**part no. 77 11 171 413**) with its cover (**part no. 77 11 171 416**) using electronic scales similar to those used in body paint workshops (example: **PANDA part no. 77 11 224 995**). Record the weight of the empty plastic cup.  
This type of plastic cup is used to prepare paint.

Take a **1 l** fuel sample from the **diesel fuel filter outlet** (see **MR 364 (Mégane II)** or **MR 395 (Laguna II ph 2), Mechanical, 19C, Tank, Fuel tank: Draining** or **MR 370 (Scénic II), Mechanical, 19C, Tank, Fuel tank draining**), using a pneumatic transfer pump (**part no. 634-200**) and place it in a **1300 ml** plastic cup. Cover the plastic cup with its cover and let the fuel settle for approximately **2 minutes**.

Is the fuel cloudy or does it separate into two parts?

YES →

The diesel fuel contains water and is not compliant. Drain the fuel circuit, including the tank (see **MR 364 (Mégane II)** or **MR 395 (Laguna II ph 2), Mechanical, 19C, Tank, Fuel tank: Draining** or **MR 370 (Scénic II), Mechanical, 19C, Tank, Fuel tank draining**).

NO

A

**TEST 11  
CONTINUED**

**A**

Weigh the diesel fuel and note the fuel weight after subtracting the weight of the empty plastic cup and its cover. Does the fuel weight fall between the minimum and maximum weights given in the table below?

Calculated weight (g.)		Fuel temperature (°C)
Min. weight	Max. weight	
821	846	13
821	846	14
820	845	15
819	844	16
819	844	17
818	843	18
817	842	19
816	841	20
816	841	21
815	840	22
814	839	23
814	839	24
813	838	25

Check the fuel temperature by immersing a thermometer in the plastic cup.

**YES**



End of test.

**NO**



The fuel is not correct.

If the fuel weight is less than the minimum value then there is petrol in the diesel fuel.

If the fuel weight is greater than the maximum value then there is oil in the diesel fuel.

Drain the fuel circuit, including the tank (see **MR 364 (Mégane II)** or **MR 395 (Laguna II ph 2), Mechanical, 19C, Tank, Fuel tank: Draining** or **MR 370 (Scénic II), Mechanical, 19C, Tank, Fuel tank draining**).

**Note:**

If the weight measured reaches the limit values, the measurement can be performed with a **2230 ml (part no. 77 11 171 414)** plastic cup with a cover (**part no. 77 11 171 417**):

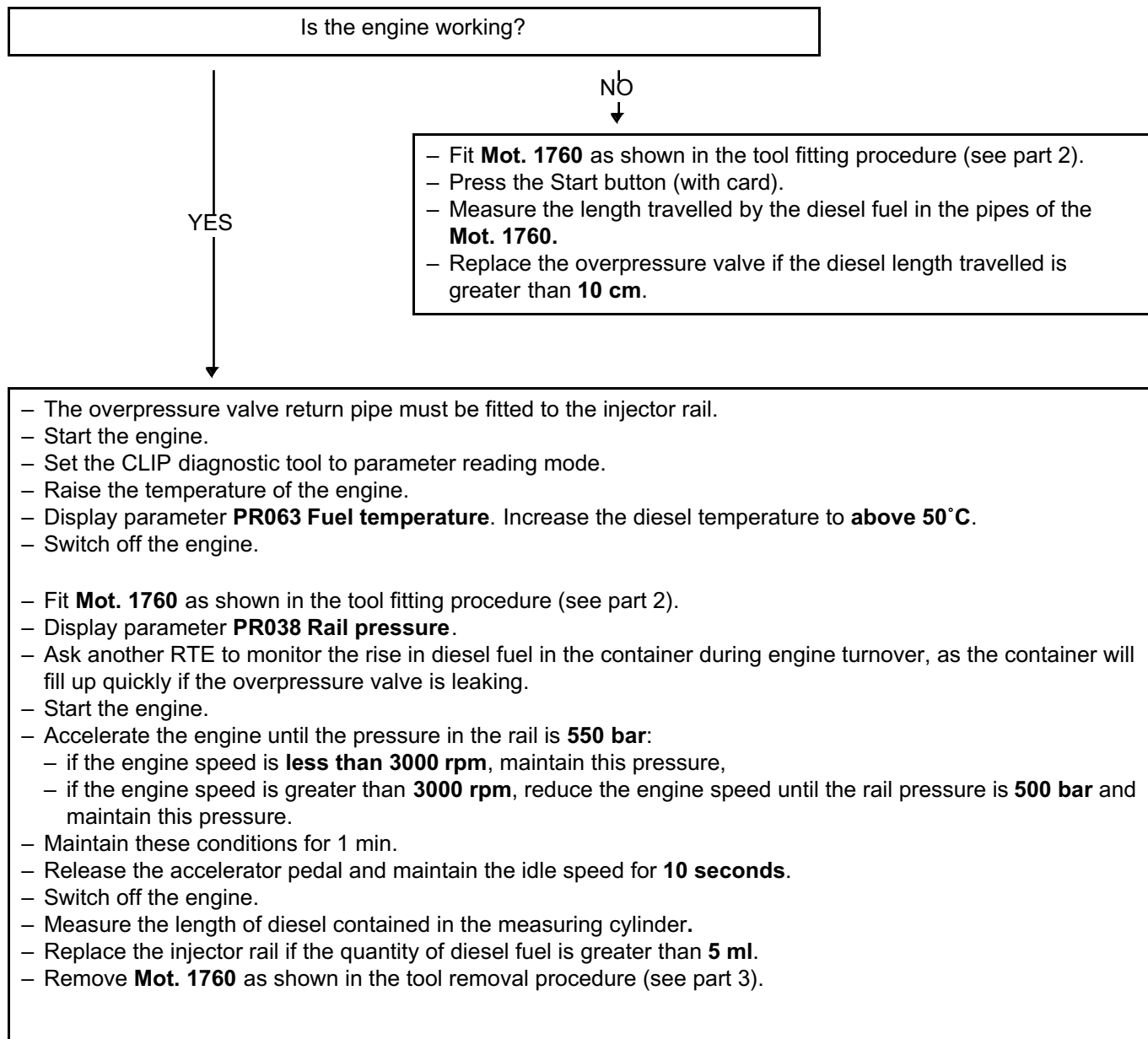
- Carry out a quick test drive in order to mix the fuel and then take a sample of **2 litres** of fuel.
- Perform the test again and check the results by multiplying the limit values by 2.

**Contact the Techline if you have doubts or problems with the customer.**

### TEST 12

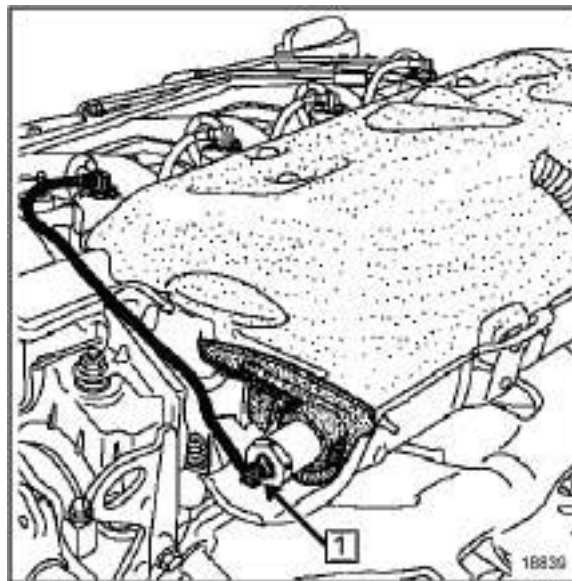
### Incorrect operation of the overpressure valve

#### Part 1. Overpressure valve return flow test:



**TEST 12**  
**CONTINUED 1**

**Part 2: Fitting the tool:**



Remove the engine undertray.

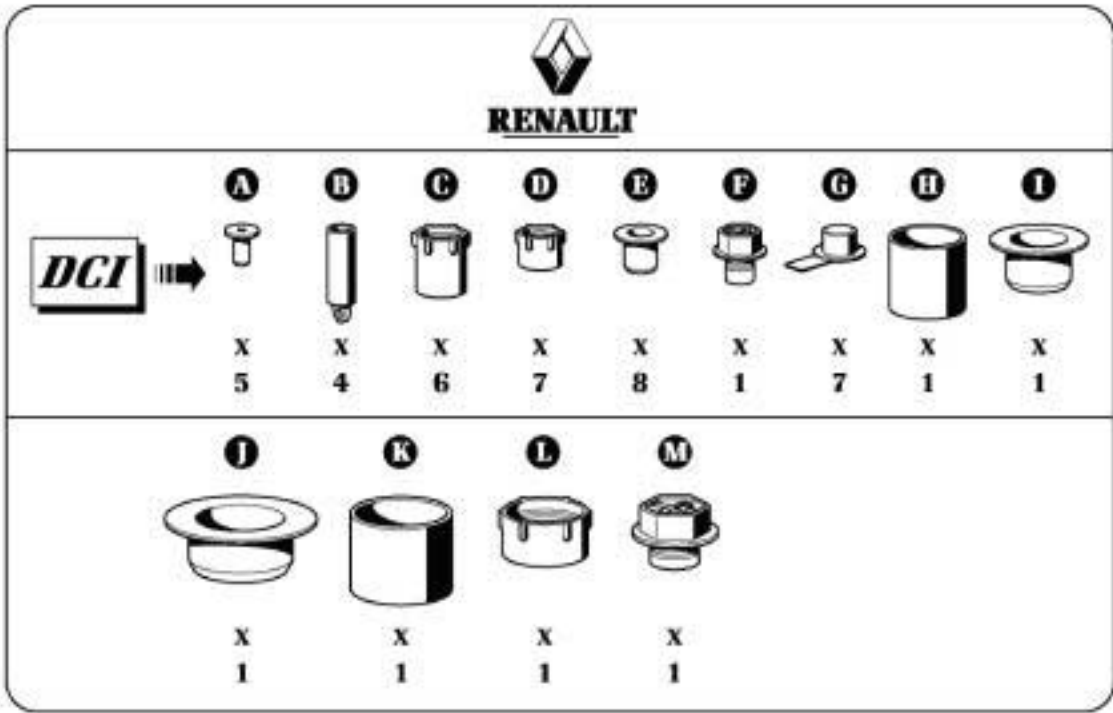
Disconnect the overpressure valve return pipe according to the following procedure (**do not remove the clips**):

- press the clip,
- pull vertically on the end piece (1) of the fuel return pipe.

**IMPORTANT**

The end piece is fragile. Be careful not to break it by pulling it too hard. Replace all removed clips.

TEST 12  
CONTINUED 2



107209

Fit the blanking plugs (B), from the kit (part number 77 01 208 209), on the end pieces of the fuel return pipe.  
If **Mot.1760** is not fitted immediately on the overpressure valve, place a blanking plug (A) on the overpressure valve fuel return opening.

**TEST 12**  
**CONTINUED 3**



113F95

Shown above is the pipe (**Mot. 1760**) with the end piece (**2**) on the right and the plug (**4**) on the left.

Remove the clip and the plug from the end piece (**2**) of the pipe of tool **Mot. 1760**, leave the plug (**4**) in place.

Connect the pipe of **Mot. 1760** to the rail overpressure valve (without removing the clip on the overpressure valve):

- press on the clip (**1**) of the overpressure valve,
- insert the end piece (**2**) in the overpressure valve fuel return opening.
- do not forget to fit the end piece plug (**2**) to the overpressure valve fuel return opening using the clip supplied.

Remove the plug (**4**).

Insert the end of the pipe in the measuring cylinder of the tool **Mot. 1760**, the measuring cylinder is retrieved from the tool **Mot.1711**.

Measure the return flow (see the procedure in **part 1** of this test).

**Part 3: Removing the tool:**

**IMPORTANT**

Use a cleaning cloth (part number **77 11 211 707**) to absorb fuel run-off.



**TEST 12**  
**CONTINUED 4**

Disconnect the pipe of **Mot. 1760** on the overpressure valve:

- press on the clip (1) of the overpressure valve,
- pull horizontally on the end piece (2) of the pipe of **Mot. 1760** while putting a cloth on the end piece (2) to avoid the drips.

Lift the end piece (2) vertically so that the diesel fuel contained in the pipe flows into the measuring cylinder of **Mot. 1760**.

Remove the plug from the fuel return pipe end piece (2).

Connect the complete fuel return pipe to the overpressure valve.

Wipe up any diesel fuel run-off using a cleaning cloth (part number **77 11 211 707**).

Injection computer	<b>112-track</b> (BOSCH) Connectors: black A 32-track, brown B 48-track, grey C 32-track
Atmospheric pressure sensor	Integrated into the computer (BOSCH)
Injector	<b>0.23 <math>\Omega</math> at + 20°C/2 <math>\Omega</math> max.</b> (BOSCH) <b>1600 bar</b> (1800 bar max.)
Flow regulator (high pressure pump)	<b>R = 3 <math>\Omega</math> at + 20°C</b> (BOSCH, pump type CP3.2+)
Rail pressure sensor	Start of opening ~ <b>1600 bar</b> , Rail pressure limiter: opening at approximately <b>1800 bar</b> (BOSCH, bolted to the rail)
Engine speed sensor	<b>510 &lt; R &lt; 850 <math>\Omega</math> at + 20°C</b> (MGI)
Camshaft sensor	Hall effect sensor (ELECTRICFIL) <b>R = 10250 <math>\pm</math> 500 <math>\Omega</math> at + 20°C</b> (measured between connections <b>3CQ</b> and <b>3FB</b> of component <b>746</b> )
Turbocharger control solenoid valve	<b>15.4 <math>\pm</math> 0.7 <math>\Omega</math> at + 20°C</b> (PIERBURG)
Electric EGR valve	<b>3VP: + 12 V</b> electric motor <b>3GC: + 5 V</b> potentiometer Track 3: Not used Direct current motor: R between connections <b>VP</b> and <b>VQ</b> = <b>between 1 <math>\Omega</math> and 400 <math>\Omega</math> at + 20°C</b> Potentiometer: R between connections <b>3GC</b> and <b>3JM</b> : <b>6.5 <math>\pm</math> 2.6 k<math>\Omega</math> at + 20°C</b> (SIEMENS) <b>3JM</b> : potentiometer earth <b>3VQ</b> : engine earth <b>3EL</b> : potentiometer signal
Electrical damper valve	Direct current motor (VDO)
Air flowmeter	<b>3B</b> : air temperature signal <b>3DW</b> : flowmeter earth <b>3KJ: + 5 V</b> potentiometer (SIEMENS) <b>3FB: + 12 V</b> battery <b>3DV</b> : air flow signal <b>NT</b> : battery earth
Air temperature sensor	<b>R = 3714 <math>\Omega \pm 161</math> at + 10°C/2448 <math>\Omega \pm 96</math> at + 20°C/1671 <math>\Omega \pm 59</math> at + 30°C</b>
Coolant temperature sensor	<b>R = 2252 <math>\Omega \pm 112</math> at 25°C/811 <math>\Omega \pm 39</math> at 50°C/283 <math>\Omega \pm 8</math> at 80°C</b>
Accelerator pedal sensor	<b>R gang 1 = 1700 <math>\pm</math> 900 <math>\Omega</math>;</b> <b>R gang 2 = 2,850 <math>\pm</math> 2,050 <math>\Omega</math></b>
Heater plug	<b>R = 0.6 <math>\Omega</math> at + 20°C/2 <math>\Omega</math> max.</b> Maximum current drawn: <b>28 A at 0 seconds/12 A at 10 seconds/9 A after 30 seconds</b>
Turbine upstream temperature sensor	2-track yellow connector (NTK) <b>T=400°C -&gt; R = 1772 <math>\Omega</math>, T=500°C -&gt; R = 725 k<math>\Omega</math></b>
Particle filter differential pressure sensor	<b>Connection 3LQ = 5 V</b> , connection <b>3TK</b> = Earth, connection <b>3TL</b> = Signal (BOSCH)
Temperature sensor upstream of the particle filter	2-track blue connector (DENZO) <b>T=50°C -&gt; R = 106 k<math>\Omega</math>, T=100°C -&gt; R = 33.5 k<math>\Omega</math></b>
Temperature sensor downstream of the particle filter	2 track black connector (DENZO) <b>T=50°C -&gt; R = 106 k<math>\Omega</math>, T=100°C -&gt; R = 33.5 k<math>\Omega</math></b>
Water in diesel fuel sensor	According to application (ZERTAN)