

MEGANE

1 Engine and peripherals

13B

DIESEL INJECTION

EDC16 C36

Program No.: 91

Vdiag No.: 44, 4C, 48, 50, 54, 58

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V7

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."

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1. SCOPE OF THIS DOCUMENT

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

Vehicle(s): MEGANE II phase 2, SCENIC II phase 2

Engine: F9Q 816, 818

Function concerned: DIESEL INJECTION

Name of computer: BOSCH EDC16 C36

Program No.: 91

Vdiag No.: 44, 4C, 48, 50, 54, 58

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedures (this document):

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

Wiring Diagrams:

- Visu-Schéma (CD-ROM), paper.

Type of diagnostic tools

- CLIP

Special tooling required

Special tooling required	
Multimeter	
Elé. 1681	Universal bornier

3. REMINDERS

Procedure

To save energy, **the vehicle's UCH interrupts the + after ignition feed after 3 minutes.**

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

- press the unlocking button on the card,
- insert the card in 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**).

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

Pressing the start button or removing the card from the card reader interrupts the forced **+ after ignition feed**, but does not interrupt the time period for the forced **+ after ignition feed**. Until one hour has elapsed, activating the **+ after ignition feed** will restart **forced + after ignition feed** for the remaining time.

Faults

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

The **present** or **stored** fault status must be considered, when **the diagnostic tool** is used after switching on the + after ignition feed (without operating the system components).

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 **Notes** section.

If the fault is **confirmed** when the instructions are applied, the fault is present. Deal with the fault.

If the fault is **not confirmed**, check:

- the electrical lines which correspond to the fault,
- the connectors for this connection,
- the resistance of the faulty component,
- the condition of the wires.

Conformity check

The purpose of the conformity check is to check data that does not produce a fault on the **diagnostic tool** if 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 repair.

The conformity check is a fault finding procedure carried out using the interpretation of statuses and parameters.

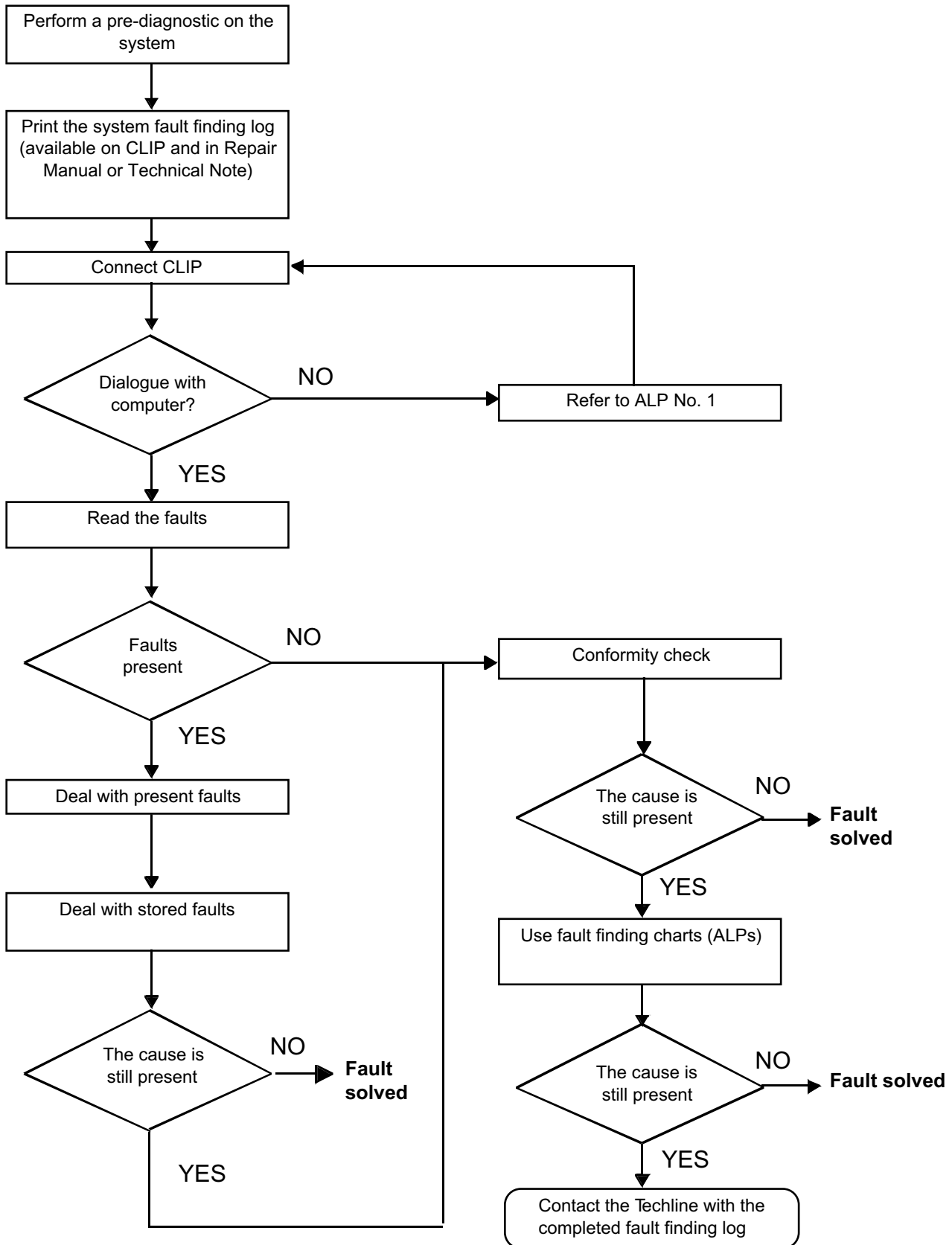
If a status does not function normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page (see interpretation of statuses and parameters).

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 dealt with by **customer complaints**

A synopsis of the general procedure to follow is provided on the following page in the form of a flow chart.

4. FAULT FINDING PROCEDURE



4. FAULT FINDING PROCEDURE (continued)

Wiring check

Fault finding problems

Disconnecting the connectors and/or manipulating the wiring may temporarily clear 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.

Physical inspection

When working on wiring, use the **diagnostic tool** to highlight a change in the status of the faults, from a "stored" fault to a "present" fault, or use the multimeter to view the status changes.

Make sure that the connectors are firmly secured.

Apply light pressure to the connectors.

Twist the wiring harness.

Checking insulation to earth

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

Checking insulation in relation to + 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 Ω \pm 1 Ω** 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 Ω \pm 1 Ω** .

Power supply check

This check can be carried out using a test light (**21 W** or **5 W** depending on the maximum permissible load).

4.1 Connector check

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 a poor electrical contact. Restrict the number of connections/disconnections as far as possible.

Note:

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

- 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, cracked, broken, etc.), in particular to the fragile components (lever, lock, terminal locations, etc.).
- Check that there is no heat damage (casing melted, blackened, deformed, etc.).
- Check that there are is no dirt (grease, mud, liquid, etc.).

4. Visual inspection of the metal contacts:

(The female contact is called CLIP. The male contact is called a 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 spring contact of the connector when the wire is pulled slightly.
- Check that there is no damage (tabs bent, clips open too wide, blackened or melted, 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 openings without removing the excess or any protruding sections (it does not matter if there is gel on the contacts).
- For hotmelt sealing (heat-shrink sleeve with adhesive), check that the sleeve has shrunk correctly on the back of the connectors and electrical wires, and that the hardened adhesive is evident from the wire ends.
- 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**.

5. FAULT FINDING LOG



IMPORTANT

IMPORTANT

All faults involving a complex system call for thorough diagnostics with the appropriate tools. The FAULT FINDING LOG, which should be completed during the fault finding procedure, ensures a record is kept of the procedure carried out. It is an essential document when consulting the manufacturer.

IT IS THEREFORE ESSENTIAL THAT THE FAULT FINDING LOG IS FILLED OUT EVERY TIME IT IS REQUESTED BY TECHLINE OR THE WARRANTY RETURNS DEPARTMENT.

You will always be asked for this log:

- when requesting technical assistance from the Techline,
- when requesting approval before replacing parts for which approval is compulsory,
- 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.

6. 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.

1. HAZARDS ASSOCIATED WITH CONTAMINATION

The high pressure direct injection system is highly sensitive to contamination. The risks caused by the introduction of contamination are:

- damage to or destruction of the high pressure injection system,
- a component seizing up,
- a component losing its sealing.

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

The cleanliness guidelines must be applied from the filter through 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,
- the ambient atmosphere,
- 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 faults in the electrical connections.

2. INSTRUCTIONS TO BE FOLLOWED PRIOR TO ALL OPERATIONS

IMPORTANT

Before carrying out any work 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.

Obtain 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. A lint-free cloth should only be used once.

Use fresh cleaning agent for each operation (used cleaning agent is contaminated). Pour it into a clean receptacle.

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.

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

Wash your hands before and during the operation if necessary.

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

3. 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. The ambient atmosphere carries contamination.

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

Using a brush, cleaning agent, air gun, brush 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.

High pressure pump:

The high pressure pump is located upstream of the common rail.

Rail pressure sensor:

This sensor is fitted to the common rail.

Rail pressure regulator:

The regulator is fitted on the high pressure pump.

Four injectors:

The injectors are fitted on the cylinder head after the common rail.

Vacuum pump:

The vacuum pump is fitted at the end of the camshaft.

Control solenoid valve:

This solenoid valve is located on the turbocharger.

Turbocharger:

The turbocharger is located after the exhaust manifold.

Turbocharger pressure sensor:

The turbocharger pressure sensor is fitted to the air circuit between the turbocharger and the damper valve.

Air mass flow meter:

The air mass flow meter is located at the air circuit inlet and integrates the air temperature sensor.

EGR valve:

The EGR valve is located between the inlet manifold and the exhaust manifold.

EGR position sensor:

This sensor is integrated into the EGR valve.

Damper valve:

The damper valve is located before the inlet manifold.

Particle filter:

The filter is located on the exhaust line after the catalytic converter (only on engines **F9Q816**).

TDC sensor:

This sensor is located on the flywheel.

Camshaft sensor:

This sensor is located at the end of the camshaft.

Refrigerant pressure sensor:

This sensor is located on the coolant circuit.

Engine coolant temperature sensor:

This sensor is located on the cylinder head near the engine water chamber.

Air temperature sensor:

The air temperature sensor is located at the air circuit inlet, integrated into the air flowmeter.

Turbocharging pressure sensor solenoid valve:

This solenoid valve is located on the turbocharger.

Catalytic converter:

The catalytic converter is located downstream of the turbocharger.

Fuel temperature sensor:

This sensor is located near the injection pump and injector return.

Cruise control/speed limiter on/off switch:

This switch is located in the passenger compartment to the left of the steering wheel near the lighting dimmer.

Fan unit relay:

The relay is located on the cooling radiator.

Accelerator potentiometer:

The potentiometer is located on the accelerator pedal.

Clutch pedal switch:

The switch is located on the clutch pedal.

Heater plugs:

The heater plugs are located on the cylinder head.

The richness ratio sensor:

The richness ratio sensor is mounted in the turbo outlet.

The turbocharger cooling pump:

This pump is located next to the turbocharger.

Particle filter downstream temperature sensor:

The sensor is located after the particle filter (only on certain **F9Q816** engines in **Vdiag 48**).

Particle filter upstream temperature sensor:

The sensor is located before the particle filter (only on engine type **F9Q816**).

Particle filter differential pressure sensor:

The sensor is located on the particle filter (only on engine type **F9Q816**).

High pressure pump:

The pump draws in fuel from the tank, which passes through a fuel filter and supplies the fuel injectors.

Rail pressure sensor:

This sensor is fitted to the rail and indicates the pressure inside the rail.

Rail pressure regulator:

This component regulates the high pressure of the fuel in the injection system.

Fuel temperature sensor:

This sensor measures the fuel return temperature from the pump and injector return.

Four injectors:

These injectors enable rapid, precise metering of the quantity of fuel injected, with excellent injection process repeat action.

Vacuum pump:

The vacuum pump is driven by the camshaft. The pump provides the vacuum required to operate the following components: control solenoid valve, brake servo.

Control solenoid valve:

The solenoid valve controls the vacuum pump and the turbocharger vane control diaphragm.

Turbocharger:

The turbocharger is used to supply the engine with more air.

Turbocharger pressure sensor:

This sensor indicates the pressure at the turbocharger air cooler outlet before the damper valve.

Air mass flow meter:

The flowmeter measures the amount of fresh air entering the engine.

EGR valve:

Exhaust gas recirculation considerably reduces the nitrogen oxide emissions (NOx).

EGR position sensor:

The sensor gives the position of the EGR solenoid valve.

Damper valve:

The damper valve is used:

- When the engine is switched off, to dampen the engine which helps stop the engine.
- When in the rest position; the valve is open by default.

Particle filter:

The particle filter retains the particles for destruction during regeneration, preventing these particles from being discharged into the atmosphere (engine type **F9Q816** only).

TDC sensor:

The angular position is measured using a magneto-inductive sensor triggered by the machined teeth on the engine flywheel. This sensor gives the engine speed as well as the position of the crankshaft for injection.

Camshaft sensor:

This sensor provides a signal to perform the injection cycle.

When the piston for cylinder 1 is at top dead centre (TDC), it may be either at the end of the compression stroke or at the end of the exhaust stroke. The camshaft sensor makes the distinction between these two states.

Electric coolant pump:

The electric water pump is activated if the coolant temperature has reached a significant temperature threshold when the engine has stopped.

Role: to cool the turbocharger when the engine is stopped.

Refrigerant pressure sensor:

Its role is to measure the refrigerant pressure in the air conditioning circuit.

Heating elements:

The heating elements heat the engine coolant to improve user comfort (only on certain types of **F9Q816** engine in Vdiag 48).

Engine coolant temperature sensor:

The engine coolant temperature sensor informs the computer of the engine coolant temperature.

Air temperature sensor:

The air temperature sensor is fitted inside the inlet manifold and informs the computer of the temperature of the air taken in by the engine.

Turbocharging pressure sensor solenoid valve:

This solenoid valve operates the turbocharger wastegate pneumatic circuit to lower the turbocharging pressure.

Catalytic converter:

The role of the catalytic converter is to convert pollutant gases into harmless gases.

Fan unit relay:

This relay controls the activation of the engine cooling fan assembly when a temperature threshold has been exceeded.

Accelerator potentiometer:

The accelerator potentiometer informs the computer of the position of the accelerator pedal (engine load).

Clutch pedal switch:

The clutch pedal switch informs the computer of the pedal status.

Heater plugs:

The heater plugs preheat the combustion chamber so that the mixture detonation takes place under the best conditions and thus start the engine.

Injector rail:

The injector rail receives and redistributes the fuel under high pressure to the injectors.

The richness ratio sensor:

The function of the proportional mixture sensor is to reset the injection system drift.

The turbocharger cooling pump:

This pump circulates the coolant to reduce the temperature of the turbocharger.

Particle filter downstream temperature sensor:

This sensor informs the computer of the temperature of the exhaust gases at the particle filter outlet (only on certain engine types **F9Q816** in **Vdiag 48**).

Particle filter upstream temperature sensor:

This sensor informs the computer of the temperature of the exhaust gases at the particle filter inlet (only engine type **F9Q816**).

Particle filter differential pressure sensor:

A differential pressure sensor monitors the status of the particle filter (particle weight) and triggers regeneration.
Role: To calculate the difference in pressure between the particle filter inlet and outlet (only engine type **F9Q816**).

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 **BOSCH 128-track computer, type EDC16C36**.

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 diesel temperature sensor,
- a coolant temperature sensor,
- a cylinder reference sensor,
- an engine speed sensor,
- a turbocharger pressure sensor,
- an accelerator pedal potentiometer,
- an EGR solenoid valve,
- a recycled gas cooling solenoid valve,
- an atmospheric pressure sensor integrated into the injection computer,
- an air flowmeter fitted with an air temperature sensor,
- a turbocharging pressure limitation solenoid valve,
- a motorised damper valve,
- a particle filter (only on engine type **F9Q816**),
- a particle filter differential pressure sensor (only on engine type **F9Q816**),
- a temperature sensor fitted before the particle filter (only on engine type **F9Q816**),
- a temperature sensor fitted after the particle filter (only on certain **F9Q816** engines in **Vdiag 48**),
- a temperature sensor fitted before the turbine (only on engine type **F9Q816**),
- a richness ratio sensor,
- a turbocharger cooling pump.

The **"common rail"** direct high pressure injection system works in sequential mode (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 supplied, according to the demand determined by the computer. The rail supplies each injector through a steel pipe.

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 a presence sensor mounted in the filter for detecting water in the diesel. 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.

Removal of the internal parts of the pump and injectors is prohibited. Only the fuel flow regulator/actuator, diesel fuel temperature sensor and the venturi can be replaced.

For safety reasons, it is strictly prohibited to undo a high pressure pipe union 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. In the event of pressure sensor failure, replace the pressure sensor, rail and high pressure pipes associated with the rail.

Supplying **+ 12 V** directly to any component in the system 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.

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 catalyst particle filter (only on engine type **F9Q816**).

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

The electronic system fitted in this vehicle is multiplexed.

It enables dialogue between the various vehicle computers. As a result:

- the fault warning lights on the instrument panel are lit by the multiplex network,
- 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 sent by the ABS computer via the multiplex network. The vehicle speed signal is mainly used by the injection computer, the airbag computer and the automatic transmission computer (if the vehicle is fitted with this).

c. Functions hosted:

Air conditioning management assistance:

For vehicles with air conditioning, the **EDC16C36** system can deactivate the air conditioning via the UCH in 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. under heavy acceleration when overtaking, anti-stalling and moving off strategies).
These conditions are only taken into account when they do not occur repeatedly, in order to prevent system instabilities (erratic deactivations), when certain faults appear.

Management of the damper valve:

The damper valve currently 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.
- “valving” function depending on the engine operation: the damper valve closes by a few % to create a “venturi” effect at the EGR valve passage section.

The aim of this is to accelerate the air flow of EGR gases and to reduce the emission of pollutants.

Thermoplunger management (only on **F9Q816** engine in **Vdiag 48**):

This vehicle is fitted with thermoplungers. They are managed and activated by the injection system.

There are two types of program:

- controlled by the injection system during particle filter regeneration,
- passenger compartment function; the air conditioning requests the injection to activate one or more thermoplungers to raise the air temperature in the passenger compartment. The injection computer authorises the actuation or non-actuation of the thermoplungers according to the operating phases and the power requirements of the engine.

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

Cruise control/speed limiter management:

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

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:

- press 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 pressed,
- when system errors are detected such as an inconsistent vehicle speed.

The cruise control function can also be temporarily disabled when the driver wants to increase speed by pressing 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 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, it is possible to exceed the limit speed by depressing the accelerator pedal and exceeding 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 limit 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 pressed,
- when system errors are detected such as an inconsistent vehicle speed.

Exhaust gas recirculation management:

The EGR (Exhaust Gas Recirculation) system involves removing exhaust gases and reintroducing them into the inlet.

The exhaust gases are collected in the exhaust manifold (before the turbocharger), then directed to the EGR cooler and the EGR valve.

EGR cooler

The EGR cooler bypass function cools the gases extracted from the exhaust via a gas-water exchanger and then reintroduces the gases at the inlet. This cooler is equipped with an all-or-nothing solenoid valve, which enables gases to be cooled or not cooled, depending on the emission control requirements.

EGR valve

The system comprises a direct current EGR valve and a potentiometer which reports the position of the valve.

Valve opening is controlled by a positive command (**0** → **100%**).

The potentiometer serves to control and run fault finding on the valve.

The very first time the engine is started, then each subsequent engine start, the “valve closed” position is programmed (offset). This value is compared to the very first offset or last programmed offset, for the purposes of fault finding. It is also used to readjust the valve control function. This is why it is important to associate the EGR valve to the computer which controls it.

Management of the richness ratio sensor (only on certain **F9Q816** engines in **Vdiag 48**):

The richness ratio sensor is mounted in the turbo outlet.

Its function is to reset the injection system drift.

The injection computer does not control the sensor immediately when the engine has just been started:

- Status **ET300 Richness regulation** is **INACTIVE**,
- **PR779 Richness ratio sensor** is **1**.

After a length of time that depends on the coolant temperature, with the engine running and in the absence of no load conditions, the injection computer authorises the heating of the sensor:

- Status **ET300 Richness regulation** changes to **ACTIVE**,
- in approximately ten seconds, **PR778 Richness ratio sensor temperature** increases up to approximately **780°C**,
- then the parameter **PR779 Richness ratio sensor** displays a value of **0.3 ± 0.1** at idle speed.

The turbocharger cooling pump:

Due to its high speed of rotation, the turbocharger does not use ball bearings for operation. Instead, the turbocharger has a bearing whose friction is reduced by a film of pressurised oil.

When the engine is stopped, the oil is no longer pressurised and so the oil no longer fulfils its main function. Therefore, a quantity of oil remains stagnant on the bearing.

The turbocharger is subjected to high temperatures when operating. After the engine has stopped, the gradual reduction in temperature warms up the stagnant oil. This alters its viscosity, thus increasing the risk of turbocharger seizure.

To avoid this, a turbocharger cooling pump circulates coolant to reduce the temperature of the turbocharger. It is activated electrically for **5 minutes** if the engine coolant temperature exceeds **80°C**. In addition, circulation of the coolant prevents the coolant from deteriorating by preventing it from stagnating due to the changes in temperature in the same way as the temperature affects the oil.

Management of the catalytic particle filter (only on engine types **F9Q816**):

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 pipe 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 catalytic particle filter fitted to the vehicle underbody,
- a differential pressure sensor to inform the computer of the pressure difference upstream and downstream of the particle filter
- a temperature sensor upstream of the particle filter,
- a temperature sensor fitted downstream of the particle filter (only on certain **F9Q816 engines in Vdiag 48**),
- a temperature sensor upstream of the turbine (TAVT).

During driving, the particle filter becomes loaded with particles of soot. Based on a given weight of soot, calculated by computer mapping, regeneration mode may be triggered if the maximum weight of soot inside the particle filter has not been reached and if the 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 differential; this measurement is used to estimate the weight of soot present in the particle filter by mapping in the computer:
(*soot weight = pressure differential as a function of exhaust volume flow rate*).

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

This temperature partially or totally burns off the particles that have accumulated inside the filter (regeneration). Regeneration efficiency depends on the particle filter inlet temperature and the time spent in regeneration mode.

Regeneration may be carried out automatically when driving if the weight of soot is less than **70 g** and if the number of regeneration attempts when driving is less than **11** (only for **Vdiag 48**).

If the weight of soot is greater than **70g**, the user must request an **After-Sales regeneration**.

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**) in order to carry out a regeneration procedure in complete safety.

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 in the driver's handbook.

After the particle filter has been replaced, it is essential to reconfigure certain parameters in the computer using command **SC036 Reinitialise programming**.

Warning light management:

Instrument panel display

The computer displays certain information on the instrument panel relating to engine operation. This involves six functions:

- the pre-postheating warning light,
- the coolant temperature 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),
- the particle filter specific warning light (only on engine type **F9Q816**).

These six functions are represented by 6 warning lights and/or messages displayed by the trip computer. In addition, certain warning lights are, when lit, accompanied by a spoken message on vehicles fitted with a voice synthesiser (refer to the driver's handbook).

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-postheating warning light

This warning light is used as an in-operation indicator lamp:

- Continuously lit under + after ignition feed: indicates preheating of the heater plugs.
- It goes out when preheating is complete and the engine is able to start.

Orange SERVICE non-critical fault warning light (level 1)

This warning light is used to indicate a fault in the system:

- Continuously lit with the message "**CHECK INJECTION**":

Indicates a level 1 fault (involving operation of the injection system in defect mode).

The driver should have the repairs carried out as soon as possible.

Temperature/red emergency STOP (level 2) warning light

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

- Intermittently lit, accompanied by the message "**ENGINE OVERHEATING**":

Indicates that the coolant temperature is too high (the driver is free to stop the vehicle or not).

- Continuously lit, accompanied by the message **INJECTION FAULT: STOP ENGINE** and by a bleep, 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.

European On Board Diagnostic excess pollution ORANGE warning light

An engine symbol accompanied by the message **CHECK EMISSIONS**.

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

This warning light is used to alert the driver to injection faults that could lead to excessive pollution, or if the **EOBD system (European On Board Diagnostic)** has been deactivated.

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

The driver should have the repairs carried out as soon as possible.

ORANGE warning light specific to the particle filter (only on F9Q816 engine):

F9Q816 engine Vdiag 48:

This warning light is used to warn the driver that the particle filter is loaded with particles (weight of soot greater than **36 g** or more than **6** regeneration failures whilst driving due to driving conditions not being favourable for regeneration). The driver must drive as soon as possible at an average speed of **48 mph (80 km/h)** subject to traffic conditions and authorised speed limits.

F9Q816 engine Vdiag 50:

This warning light or message is used to warn the driver that the particle filter is loaded with particles.

European On Board Diagnostic management:

The **OBD (On Board Diagnostic)** system permits 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. Conditions of an OBD fault appearing

An OBD fault will be detected after **3 trip cycles**.

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

List of faults displayed by the OBD system:

- **DF002 Air temperature sensor circuit.**
- **DF004 Turbocharging pressure sensor circuit.**
- **DF011 Sensor supply voltage no. 1.**
- **DF012 Sensor supply voltage no. 2.**
- **DF013 Sensor supply voltage no. 3.**
- **DF026 Cylinder 1 injector control circuit.**
- **DF027 Cylinder 2 injector control circuit.**
- **DF028 Cylinder 3 injector control circuit.**
- **DF029 Cylinder 4 injector control circuit**
- **DF054 Turbocharging solenoid valve control circuit.**
- **DF055 Turbocharging pressure regulation circuit**
- **DF056 Air flowmeter circuit.**
- **DF107 Computer memory.**
- **DF200 Atmospheric pressure sensor.**
- **DF209 EGR valve position sensor circuit.**
- **DF272 EGR valve control circuit.**
- **DF310 Particle filter upstream temp.* sensor**
- **DF315 Particle filter diff.* pressure sensor**
- **DF316 Particle filter diff.* pressure sensor**
- **DF647 EGR valve position regulation**

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.

*temp: temperature

*diff: differential

3. Conditions for deleting an OBD fault

An OBD fault is deleted in several phases.

The **present** fault on **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.

DIESEL INJECTION

Fault finding – Defect modes

13B

No.

Defect modes	Cause of fault	Customer perception
Engine stop	<ul style="list-style-type: none"> – Flow regulator short circuit to earth (flow regulator closed). – High pressure circuit leak (min. rail pressure). – Injector jammed open. – Loss of engine speed signal. – Sensor feed No.No. 3 fault. – Engine management computer internal fault. – Injector row 1 and 2 fault. – Solenoid control stage cut-off fault caused by computer initialisation (to check that cut-off is operational). 	Engine stop Level 2 on
Limited torque	<ul style="list-style-type: none"> – Rail pressure sensor fault. – Pedal sensor gangs 1 and 2 double fault (including sensor feeds 1 and 2). – Open circuit, short circuit to earth and turbocharger solenoid valve short circuit to + 12 V. – Turbocharger pressure sensor fault (sensor signal short circuit with sensor feed, sensor signal short circuit to + 12 volts, sensor open circuit to earth, sensor signal short circuit to earth, sensor feed open circuit, sensor signal open circuit, significant line resistance on sensor feed, significant line resistance on sensor signal, significant line resistance on sensor earth, significant pressure difference measured between the atmospheric pressure sensor and the turbocharger pressure sensor at idle speed). – Injector codes fault. – Computer internal fault. – Solenoid control stage cut-off fault caused by computer initialisation (to check that cut-off is operational). – Sensor feed 1, 2 and 3 fault. – Vehicle speed fault. 	Speed limited to ≈ 1750 rpm Loss of engine torque
Flow/injected quantity limited	<ul style="list-style-type: none"> – Flow regulator open circuit or short circuit to + 12 volts (Flow regulator open). – Positive rail pressure loop difference (measurement < setpoint). – Negative rail pressure loop difference (measurement > setpoint). – Max. rail pressure (flow regulator jammed in open position). 	Limited performance
Pedal limp home	<ul style="list-style-type: none"> – Pedal sensor gangs 1 and 2 double fault (including sensor feeds 1 and 2). – Activation of pedal safety programming. – Accelerator pedal mechanism jammed. 	Speed limited to 45-48 mph (75-80 km/h)

Defect modes	Cause of fault	Customer perception
Turbocharger cut-off	<ul style="list-style-type: none"> – Turbocharging pressure loop difference (vanes jammed, compressor/turbine fault, turbocharging pressure sensor fault, sensor connection fault, functional solenoid valve fault (disconnected, hose kinked, solenoid valve mechanism jammed), high pressure circuit leak (high pressure hose, major distributor leak). – Flowmeter failure (plausibility of the reading): – significant line resistance on earth sensor, – significant line resistance on sensor feed, significant line resistance on sensor signal, – flowmeter sensing element damaged, – wiring/connection fault, – flowmeter voltage or 5 V reference voltage deviation. – Flowmeter failure (plausibility of sensitivity variation): – flowmeter clogged/flow underestimated, – flow overestimated, – air circuit leak between flowmeter and compressor, – air circuit leak after compressor. – Electrical faults: – signal short circuit to + 12 V, – signal short circuit to earth, – signal open circuit, – sensor feed open circuit, – open circuit, short circuit to earth and turbocharger solenoid valve short circuit to + 12 V. – Turbocharger pressure sensor fault (sensor signal short circuit with sensor feed, sensor signal short circuit to + 12 V, sensor open circuit to earth, sensor signal short circuit to earth, sensor feed open circuit, sensor signal open circuit, significant line resistance on sensor feed, significant line resistance on sensor signal, significant line resistance on sensor earth, significant pressure difference measured between the atmospheric pressure sensor and the turbocharger pressure sensor at idle speed). – EGR valve fault (valve clogged, valve jammed open). – Camshaft sensor fault. – Engine speed sensor fault. – Sensor feed No. 1 fault. 	25-50% loss of engine performance (normally aspirated engine)
Rail pressure limited	<ul style="list-style-type: none"> – Rail pressure sensor fault. – Sensor feed No. 3 fault. 	Poor performance
Rail pressure reduction	<ul style="list-style-type: none"> – Positive rail pressure loop difference (measurement < setpoint). 	Poor performance

* normally aspirated: naturally aspirated

Summary of available configuration readings

NOTES

Configuration readings are used to check the state 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 | Air conditioning
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 |

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°).
 - 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 "Write saved data".

- Run **SC003 "Save computer data"** before replacing or reprogramming the computer. This command saves certain data **in the diagnostic tool** so that the new computer* can be configured in the same way as the former computer. The saved data are: injector codes, EGR programming, vehicle options.
- Run **SC001 "Enter 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 it is not possible to set up communications with the computer to be replaced: no information can be saved. After replacing the computer, enter the **IMA** code of each injector manually using command **SC002 "Enter injector codes"** reading the code on each injector (see **Replacing the injectors**).

Only engine **F9Q816**:

- Enter the data specific to particle filter operation by running **SC036 "Reinitialise programming"** and select **"after replacing injection computer with no save option"**.

Exhaust gas recirculation valve data is programmed automatically the 1st time the new computer is turned 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 Cruise control/Speed limiter 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 main switch in **rest position** (the computer then detects the rest position).
- Position the switch in **Cruise control** position to activate the Cruise control function.
- Position the switch in **Speed limiter** position to activate the Speed limiter function.

PROCEDURE:

Before replacing or reprogramming the computer:

- Select **SC003 "Save computer data"**,
- if the following message appears **there is a saved file; do you want to overwrite this data?:** (*this file corresponds to the last save carried out on the tool*)
- select **"YES"**.

When the save has been performed, replace the computer or carry out the programming then proceed to the next step.

After replacing or reprogramming the computer:

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

When both these commands have finished:

- switch off the ignition and wait for **the diagnostic tool** message (maximum time **8 minutes**) **"Communication lost with computer: EDC16C36, check the tool connection and computer power supply"**, before switching the ignition back on.

(The length of the powerlatch depends on the coolant temperature and how long the turbocharger cooling pump is active; this period ends when the pump is deactivated).

- then check the system faults, and clear any stored faults,
- if there are no stored faults, deal with present faults,
- clear the faults from the computer memory.

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

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 the procedure.

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 (7 alphanumeric characters) and then entered into the computer which then controls each injector taking into account its individual **manufacturing variation**.

After one or more injectors have been replaced, enter the IMA codes again and then run command **SC036 "Reset programming"**.

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**.

- Note the **"IMA"** code(s) engraved on the injector bodies,
- 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** and wait for the **diagnostic tool** message (maximum time 8 minutes) **"Communication lost with computer: EDC16C36, check the tool connection and computer power supply"**, before switching the ignition back on.
- Return to fault finding mode.
- Select the **"Identify computer"** function 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, restart the command **SC002 "Enter injector codes"** procedure.
- If the codes match, run command **SC036 "Reinitialise programming"**,
- Select **"Injectors"** as the type of operation, then follow the instructions given by **the diagnostic tool**.
- Then check the system faults, and clear any stored faults,
- If there are no stored faults, deal with present faults,
- Clear the faults from 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 code has been entered, or if an implausible code has been entered, fault DF276 "Injector Code Programming" will be present, and the engine will be in defect mode (engine speed is reduced significantly).

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 the procedure.

REPLACING THE EXHAUST GAS RECIRCULATION VALVE (EGR valve)

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

When the valve is replaced, 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 **Emission control/OBD** sub-function.

– **PR128: First EGR valve offset.**

– **PR129: Last EGR valve offset > or = PR128 if the valve is new.**

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

PROCEDURE to be followed **after replacing** the exhaust gas recirculation valve:

– Run command **SC036 "Reset programming"**,

– Select **"EGR valve"** as the type of operation, 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 and wait for **the diagnostic tool** message (maximum time **8 minutes**) **"Communication lost with computer: EDC16C36, check the tool connection and computer power supply"**, before switching the ignition back on.

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

Note:

When the new EGR valve offset is reprogrammed, 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 and wait for **the diagnostic tool** message (maximum time **8 minutes**) **"Communication lost with computer: EDC16C36, check the tool connection and computer power supply"**, before switching the ignition back on.

The last EGR valve offset reprogrammed is stored on the computer.

Note:

When the reprogramming of the last EGR valve offset is complete, the **"Emission control/OBD"** sub-function displays:

10% < PR128 < 40%

10 % < PR129 < 40 % and - 1 % ≤ PR129 – PR128 ≤ 5 %

- Then check the system faults, and clear any stored faults,
- If there are no stored faults, deal with 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 the procedure.

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 is 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 and wait for the **diagnostic tool** message (maximum time 8 minutes) **"Communication lost with computer: EDC16 C36, check the tool connection and computer power supply"**, before switching the ignition back on,
- Check that **PR420 "Damper valve error counter" = 0**,
- then check the system faults, and clear any stored faults,
- if there are no stored faults, deal with present faults,
- clear the faults from the computer memory.

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

PARTICLE FILTER REPLACEMENT (only engine F9Q816).

After replacing the particle filter, reconfigure the computer.

The system must be configured 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 for the **diagnostic tool** message (maximum time 8 minutes) **"Communication lost with computer: EDC16C36, check the tool connection and the computer power supply"**, before switching the ignition back on,
- clear the faults from the computer memory (this operation must be carried out within **3 minutes** of the ignition being switched on).

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

DIESEL INJECTION

Fault finding – Fault summary table

13B

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

Fault	DTC code in hexadecimal	Level 1 fault warning light (orange SERVICE warning light)	Level 2 fault warning light (red STOP warning light)	No fault warning light lit	OBD warning light lit
DF001 Coolant temperature sensor circuit	115	CC.0/CO.1	-	-	-
DF002 Air temperature sensor circuit	110	-	-	CC.0/CO.1	CC.0/CO.1
DF004 Turbocharging pressure sensor circuit	235	CO.0/CC.1/1.DEF	-	-	CO.0/CC.1/1.DEF
DF007 Rail pressure sensor circuit	190	CC.0/CO.1/1.DEF/2.DEF	-	-	-
DF011 Sensor supply voltage no. 1	641	1.DEF/2.DEF	-	-	1.DEF/2.DEF
DF012 Sensor supply voltage no. 2	651	1.DEF/2.DEF	-	-	1.DEF/2.DEF
DF013 Sensor supply voltage no. 3	697	-	1.DEF/2.DEF	-	1.DEF/2.DEF
DF017 Pre-heating unit control circuit	670	CC.0/CO/CC.1/1.DEF	-	-	-
DF025 Preheating unit fault finding connection	380	-	-	-	1.DEF
DF026 Cylinder 1 injector control circuit	201	CO	CC/1.DEF	-	CO/CC/1.DEF
DF027 Cylinder 2 injector control circuit	202	CO	CC/1.DEF	-	CO/CC/1.DEF
DF028 Cylinder 3 injector control circuit	203	CO	CC/1.DEF	-	CO/CC/1.DEF
DF029 Cylinder 4 injector control circuit	204	CO	CC/1.DEF	-	CO/CC/1.DEF

DIESEL INJECTION

Fault finding – Fault summary table

13B

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

Fault	DTC code in hexadecimal	Level 1 fault warning light (orange SERVICE warning light)	Level 2 fault warning light (red STOP warning light)	No fault warning light lit	OBD warning light lit
DF032 Thermoplunger 1 relay control circuit	1641	-	-	CC.1/1.DEF	-
DF033 Thermoplunger 2 relay control circuit	1642	-	-	CC.1/1.DEF	-
DF034 Thermoplunger 3 relay control circuit	1643	-	-	CC.1/1.DEF	-
DF038 Computer	606	1.DEF/ 3.DEF	1.DEF/2.DEF	1.DEF	-
DF046 Battery voltage	560	-	-	1.DEF/ 2.DEF/ 3.DEF	
DF047 Computer feed voltage	2505	-	-	1.DEF	-
DF051 Cruise control/speed limiter function	575	-	-	1.DEF	-
DF053 Rail pressure regulation function	89	3.DEF/2.DEF	1.DEF/4.DEF/ 3.DEF	-	-
DF054 Turbocharging solenoid valve control circuit	45	CC.1/CC.0/ CO/ 1.DEF	-	-	CC.1/ CC.0/CO/ 1.DEF
D F055 Turbocharging pressure regulation circuit	2263	1.DEF/2.DEF	-	-	1.DEF/ 2.DEF
DF056 Air flow sensor circuit	100	CO.0/CC.1/ 1.DEF	-	-	CO.0/ CC.1/ 1.DEF
DF059 Misfiring on cylinder 1	301	-	-	1.DEF	-

DIESEL INJECTION

Fault finding – Fault summary table

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Fault	DTC code in hexadecimal	Level 1 fault warning light (orange SERVICE warning light)	Level 2 fault warning light (red STOP warning light)	No fault warning light lit	OBD warning light lit
DF060 Misfiring on cylinder 2	302	-	-	1.DEF	-
DF061 Misfiring on cylinder 3	303	-	-	1.DEF	-
DF062 Misfiring on cylinder 4	304	-	-	1.DEF	-
DF065 Combustion misfire	300	-	-	1.DEF	-
DF069 Impact detected signal	1620	-	1.DEF	-	-
DF086 Coolant pump relay control circuit	2600	CC.1/CC.0/ CO/ 1.DEF	-	-	-
DF091 Vehicle speed signal	500	-	-	1.DEF	-
DF098 Fuel temperature sensor circuit	180	-	-	CC.0/CO.1	-
DF107 Computer memory	62F	1.DEF	-	-	1.DEF
DF119 Camshaft sensor signal	340	1.DEF/2.DEF	-	-	-
DF120 Engine speed sensor signal	335	-	1.DEF/2.DEF	-	-
DF151 Main relay circuit	685	1.DEF/2.DEF	-	-	-
DF165 Accelerator pedal position sensor circuit	2299	-	1.DEF/2.DEF	3.DEF	-
DF195 Camshaft/engine speed sensor consistency	16	-	-	1.DEF	-
DF196 Pedal sensor circuit gang 1	225	CO.0/CC.1/ 1.DEF	-	-	-
DF198 Pedal sensor circuit gang 2	2120	CO.0/CC.1/ 1.DEF	-	-	-

DIESEL INJECTION

Fault finding – Fault summary table

13B

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

Fault	DTC code in hexadecimal	Level 1 fault warning light (orange SERVICE warning light)	Level 2 fault warning light (red STOP warning light)	No fault warning light lit	OBD warning light lit
DF200 Atmospheric pressure sensor	2226	1.DEF/2.DEF	-	-	1.DEF/ 2.DEF
DF209 EGR valve position sensor circuit	409	-	-	CC.1/CO.0	CC.1/ CO.0
DF221 Clutch contact signal	830	-	-	1.DEF	-
DF226 Damper valve circuit	120	CO/CC.0/CC.1/ CC.1.DEF/ 2.DEF	-	3.DEF	-
DF228 Brake signal	571	-	-	1.DEF/ 2.DEF	-
DF232 Coolant pressure sensor circuit	530	-	-	CC.0/CO.1	CC.0/ CO.1
DF249 Injector control	62B	-	1.DEF	-	-
DF272 EGR valve control circuit	487	-	-	CO/CC.1/ CC.0/CC	CO/CC.1/ CC.0/CC
DF276 Injector code programming	611	1.DEF/2.DEF	-	-	-
DF293 Water in diesel fuel detector	2269	-	-	1.DEF	-
DF308 Clogged particle filter	242F	X	-	-	-
DF309 Particle filter downstream temp* sensor	242A	-	-	CO.1/CC.0	-
DF310 Particle filter upstream temp* sensor	2031	CO.1/CC.0	-	-	CO.1/ CC.0
DF311 Number of failed regenerations exceeded	1435	X	-	-	-

*temp: temperature

DIESEL INJECTION

Fault finding – Fault summary table

13B

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

Fault	DTC code in hexadecimal	Level 1 fault warning light (orange SERVICE warning light)	Level 2 fault warning light (red STOP warning light)	No fault warning light lit	OBD warning light lit
DF312 Speed request	1436	-	-	X	-
DF315 Particle filter diff* pressure sensor	2452	CO/CO.0CC.1/	-	-	CO/CO.0/CC.1
DF316 Particle filter diff* pressure	2453	1.DEF/2.DEF	-	-	1.DEF/2.DEF
DF502 Cruise control or speed limiter button	565	-	-	1.DEF	-
DF530 EGR adaptives	404	-	-	1.DEF	-
DF643 Rail pressure regulator circuit	90	-	CO/ CC.0/ CC.1/1.DEF	-	-
DF647 EGR valve position regulation	488	1.DEF/2.DEF/3.DEF	-	4.DEF/5.DEF	1.DEF/2.DEF/3.DEF/4.DEF /5.DEF
DF652 Turbine upstream temperature sensor circuit	544	CC.0/CO.1	-		-
DF778 Turbine upstream temperature control	2080	1.DEF			

*diff: differential

DIESEL INJECTION

Fault finding – Fault summary table

13B

Fault	DTC code in hexadecimal	Level 1 fault warning light (orange SERVICE warning light)	Level 2 fault warning light (red STOP warning light)	No fault warning light lit	OBD warning light lit
DF890 Movement during particle filter regener.*	297	-	-	X	-
DF891 Group 1 injectors feed	2146	-	1.DEF/2.DEF	-	-
DF892 Group 2 injectors feed	2149	-	1.DEF/2.DEF	-	-
DF899 Regeneration temperature threshold limit exceeded	3031			1.DEF	
DF953 Particle filter absent	2002	-	-		X
DF967 Richness ratio sensor circuit	130	-	-	CC.0/CC.1/ CO/1.DEF/ 2.DEF/ 3.DEF	-
DF970 Richness ratio sensor heater circuit	135	-	-	CC.0/CC.1/ CO/1.DEF/ 2.DEF/ 3.DEF	-
DF980 Richness ratio sensor function	2A00	-	-	1.DEF/ 2.DEF/ 3.DEF	-
DF1020 Engine oil dilution	253F	1.DEF	-	-	-

* regener: regeneration

DF001 PRESENT OR STORED	<p><u>COOLANT TEMPERATURE SENSOR CIRCUIT</u></p> <p>CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V</p>
NOTES	<p>Priorities when dealing with a number of faults: Deal with fault DF046 Battery voltage first, if it is present or stored.</p> <p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test. <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – the engine management overrides the EGR function, – the coolant temperature: PR064 Coolant temperature is fixed at 118°C, with the engine running, – the coolant temperature: PR064 Coolant temperature is fixed at 0°C, with the engine stopped, – the preheating phase is greater than 10 seconds, – the low-speed fan assembly (GMV1) is engaged, – thermoplunger cut-off in defect mode, – EGR valve cut-off, – engine torque limited, – turbocharger cooling pump actuated, – ET587 Recycled exhaust gas cooling is ACTIVE. <p>The level 1 warning light is illuminated. Use bornier Elé.1681 for any operations on the computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF001 CONTINUED 1	
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CC.0	NOTES	None.
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<p>Check the condition of the coolant temperature sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 244).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>Measure the resistance of the coolant temperature sensor.</p> <p>Replace the sensor if the resistance is less than 87Ω.</p>
<p>Check the insulation from earth of the following connection:</p> <p>– Connection code 3C between components 120 and 244.</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF001 CONTINUED 2	
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CO.1	NOTES	None.
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<p>Check the condition of the coolant temperature sensor connector (see Wiring Diagram Technical Note, Megane II ph2, Scenic II ph2, component code 244).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>Measure the resistance of the coolant temperature sensor.</p> <p>Replace the sensor if the resistance is greater than 83 kΩ.</p>
<p>Check the insulation against the + 12 V feed of the following connection:</p> <ul style="list-style-type: none"> – Connection code 3JK between components 120 and 244. <p>Check the continuity of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3C between components 120 and 244. – Connection code 3JK between components 120 and 244. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF002 PRESENT OR STORED	<u>AIR TEMPERATURE SENSOR CIRCUIT</u> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V
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NOTES	Priorities when dealing with a number of faults: Deal with fault DF046 Battery voltage first, if it is present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the inlet air temperature is in defect mode, PR058 Air temperature = 45°C. – thermoplunger cut-off in defect mode, – EGR valve cut-off, The air temperature sensor is integrated into the air flowmeter. Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.0	NOTES	None.
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Check the condition of the air flowmeter connector (see Wiring Diagram Technical Note, Mégane II ph2, Scenic II ph2, component code 799). Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120). If the connector(s) is/are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Measure the resistance between connections 3ABQ and 3DW of component 799 . Replace the air flow sensor if the resistance is less than 87 Ω .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF002 CONTINUED	
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With the flowmeter disconnected, check the **insulation** to **earth** of the following connections:

- connection code **3DW** between components **120** and **799**,
- connection code **3ABQ** between components **120** and **799**.

If 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.

CO.1	NOTES	None.
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Check the condition of the air flowmeter connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 799**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** between **connections 3ABQ and 3DW of component 799**:

Replace the air flow sensor if the resistance is **greater than 50 kΩ**.

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

- connection code **3ABQ** between components **120** and **799**.
- connection code **3DW** between components **120** and **799**.

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

- connection code **3ABQ** between components **120** and **799**.
- connection code **3DW** between components **120** and **799**.

If 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.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition, wait 1 minute and carry out a road test followed by a check with the diagnostic tool.</p>
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DF004 PRESENT OR STORED	<u>TURBOCHARGING PRESSURE SENSOR CIRCUIT</u> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Consistency between turbocharging pressure and atmospheric pressure
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NOTES	Priorities when dealing with a number of faults: Deal with faults DF011 Sensor feed voltage no. 1 and DF046 Battery voltage first, if they are present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the EGR function is inhibited by the engine management computer, – engine torque limited, – turbocharging pressure is in defect mode, – turbocharger cut-off in defect mode, – cut-off of the EGR valve in defect mode, – PR041 Turbocharging pressure = 750 mbar, – the level 1 warning light is on. Use bornier Elé.1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition, wait 1 minute and carry out a road test followed by a check with the diagnostic tool .
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DF004 CONTINUED 1	
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CO.0	NOTES	None.
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<p>Check the condition of the turbocharging pressure sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1071).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Megane II ph2, Scenic II ph2, component code 120).</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the continuity and insulation to earth of the following connections:</p> <ul style="list-style-type: none"> – connection code 3LQ, between components 120 and 1071, – Connection code 3LP between components 120 and 1071, – connection code 3LN between components 120 and 1071. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the wiring of the particle filter downstream temperature sensor, component code 1288, is present (with or without the sensor being present), check the electrical insulation in relation to + 12 V between the following connections:</p> <ul style="list-style-type: none"> • 3XU between components 120 and 1288, • 3TG between components 120 and 1288. <p>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.</p>
<p>If the fault is still present, replace the turbocharger pressure sensor.</p>

CC.1	NOTES	None.
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition, wait 1 minute and carry out a road test followed by a check with the diagnostic tool.</p>
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DF004
CONTINUED 2

Check the condition of the turbocharging pressure sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1071**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the **insulation** in relation to **+ 12 V** or **+ 5 V** (computer feed) of the following connections:

- connection code **3LN** between components **120** and **1071**,
- Connection code **3LP** between components **120** and **1071**.

Check the **continuity** of the following connection:

- connection code **3LN** between components **120** and **1071**.

If 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.

1.DEF

NOTES

None.

Check the condition of the turbocharging pressure sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1071**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Perform fault finding procedure on parameter **PR041 Turbocharging pressure**.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF007 PRESENT OR STORED	<u>RAIL PRESSURE SENSOR CIRCUIT</u> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V 1.DEF: Above max threshold 2.DEF: Below minimum threshold
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NOTES	Priorities when dealing with a number of faults: Deal with fault DF013 Sensor feed voltage no. 3 first, if it is present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – The rail pressure is in defect mode PR038 rail pressure ≤ 1150 bar, – engine torque limited, – the engine stops. Use bornier Elé.1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF007 CONTINUED 1	
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CC.0	NOTES	Special note: The engine stops when this fault appears. The level 2 warning light is on.
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<p>Check the condition of the rail pressure sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1032).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>Check the insulation to earth of the following connections:</p> <ul style="list-style-type: none"> – connection code 3LX between components 120 and 1032, – connection code 3LY between components 120 and 1032. <p>Check the continuity of the following connection:</p> <ul style="list-style-type: none"> – connection code 3LZ between components 120 and 1032. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the wiring of the particle filter downstream temperature sensor, component code 1288, is present (with or without the sensor being present), check the electrical insulation in relation to + 12 V between the following connections:</p> <ul style="list-style-type: none"> • 3XU between components 120 and 1288, • 3TG between components 120 and 1288. <p>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.</p>
<p>If the fault is still present, replace the turbocharger pressure sensor.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF007 CONTINUED 2	
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CO.1	NOTES	Special note: The engine stops when this fault appears. The level 2 warning light is on.
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Check the condition of the rail pressure sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1032**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- connection code **3LZ** between components **120** and **1032**,
- connection code **3LX** between components **120** and **1032**,
- connection code **3LY** between components **120** and **1032**.

Check the **insulation** in relation to **+ 12 V** or **+ 5 V** (computer feed) of the following connections:

- connection code **3LX** between components **120** and **1032**,
- connection code **3LY** between components **120** and **1032**.

If 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.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF007 CONTINUED 3	
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1.DEF 2.DEF	NOTES	<p>The fault is declared present or stored after an attempt to start or after starting, with the engine cold, several hours after the last trip (the difference in the coolant temperature from the last engine stop and the present attempt to start must be at least 60°C).</p> <p>The level 1 warning light is on.</p>
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<p>Check the condition of the rail pressure sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1032).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check that there are no external diesel leaks from the high pressure fuel circuit.</p>
<p>Check the continuity and for the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – connection code 3LZ between components 120 and 1032, – connection code 3LX between components 120 and 1032, – connection code 3LY between components 120 and 1032. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>With the ignition on and the engine stopped for over 1 minute:</p> <p>View parameter PR038 Rail pressure.</p> <ul style="list-style-type: none"> – If the pressure is below 90 bar, the sensor is in order. – If the pressure is above 90 bar, contact the Techline.
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF011 PRESENT OR STORED	<u>SENSOR FEED VOLTAGE NO. 1</u> 1.DEF: Above max threshold 2.DEF: Below minimum threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: <ul style="list-style-type: none"> – The fault is declared present after: – the ignition is switched on, – starting the engine, – a road test.
	Special notes: If the fault is present, <ul style="list-style-type: none"> – thermoplunger cut-off, – engine torque limited, – the cruise control/speed limiter function is switched off, – the EGR function is inhibited by the engine management computer, – safe mode on the pedal sensor: use the value of gang 2 instead of gang 1. The level 1 and European On Board Diagnostic warning lights are illuminated. Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF011 CONTINUED 1	
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1.DEF	NOTES	None.
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Note:

Supply no.1 is for the following component:

- pedal sensor (gang 1),
- turbocharger pressure sensor.

Measure the feed voltage on the following sensors:

- Connection code **3LR** of component **921**.
- Connection code **3LQ** of component **1071**.

If the voltage is more than **+ 5.1 V**, disconnect the sensor connectors one by one.

If, after disconnecting the **pedal** sensor, the voltage returns to normal,

Check **the insulation against + 12 V** of the following connection:

- Connection code **3LR** between components **120** and **921**.

If, after disconnecting the **turbocharging pressure sensor**, the voltage returns to normal,

Check **the insulation against + 12 V** of the following connection:

- connection code **3LQ**, between components **120** and **1071**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Clear the faults created by the multiple disconnections.

Carefully examine the engine management computer connections (for conductive particles, bent pins).

If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF011 CONTINUED 2	
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2.DEF	NOTES	None.
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<p>Note:</p> <p>Supply no.1 is for the following component:</p> <ul style="list-style-type: none"> – pedal sensor (gang 1), – turbocharger pressure sensor.
<p>Measure the feed voltage on the following sensors:</p> <ul style="list-style-type: none"> – Connection code 3LR of component 921. – Connection code 3LQ of component 1071. <p>If the voltage is less than + 4.9 V, disconnect the sensor connectors one by one.</p> <p>If, after disconnecting the pedal sensor, the voltage returns to normal.</p> <p>check the insulation to earth of the following connection:</p> <ul style="list-style-type: none"> – Connection code 3LR between components 120 and 921. <p>If, after disconnecting the turbocharging pressure sensor, the voltage returns to normal.</p> <p>check the insulation to earth of the following connection:</p> <ul style="list-style-type: none"> – connection code 3LQ, between components 120 and 1071. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Clear the faults created by the multiple disconnections.</p>
<p>Carefully examine the engine management computer connections (for conductive particles, bent pins).</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF012 PRESENT OR STORED	<p><u>SENSOR SUPPLY VOLTAGE NO. 2</u></p> <p>1.DEF: Above maximum threshold 2.DEF: Below minimum threshold</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test. <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – engine torque limited, – the cruise control/speed limiter function is switched off, – thermoplungers cut-off, – air conditioning is switched off, – the EGR function is inhibited by the engine management computer, – The level 1 and European On Board Diagnostic warning lights are illuminated. <p>Use bornier Elé. 1681 for all operations on the engine management computer.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF012 CONTINUED 1	
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1.DEF	NOTES	None.
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Note:

Supply no.2 is for the following components:

- pedal sensor (gang 2),
- EGR valve position sensor,
- cruise control/speed limiter button (on steering wheel),
- refrigerant pressure sensor.

Measure the feed voltage on the following sensors:

- Connection code **3LU** of component **921**.
- Connection code **3AAQ** of component **1290**.
- Connection code **3GC** of component **1460**.
- Connection code **38Y** of component **1202**.

If the voltage is more than **+ 5.1 V**, disconnect the sensor connectors one by one.

If, after disconnecting the **pedal sensor**, the voltage returns to normal,

Check **the insulation against + 12 V** of the following connection:

- connection code **3LU**, between components **120** and **921**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If, after disconnecting the **EGR valve**, the voltage returns to normal,

Check **the insulation against + 12 V** of the following connection:

- connection code **3GC** between components **120** and **1460**.

If, after disconnecting the **differential pressure sensor**, the voltage returns to normal,

Check **the insulation against + 12 V** of the following connection:

- connection code **3AAQ** between components **120** and **1290**.

If the voltage returns to normal after **the coolant pressure sensor** is disconnected,

Check **the insulation against + 12 V** of the following connection:

- Connection code **38Y** between components **120** and **1202**.

If the fault is still present, check the conformity of **ET413 Cruise control/speed limiter function**

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Clear the faults created by the multiple disconnections.

Carefully examine the engine management computer connections (for conductive particles, bent pins).

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF012 CONTINUED 2	
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2.DEF	NOTES	None.
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Note:

Supply no.2 is for the following components:

- pedal sensor (gang 2),
- EGR valve position sensor,
- cruise control/speed limiter button (on steering wheel),
- refrigerant pressure sensor.

Measure the feed voltage on the following sensors:

- Connection code **3LU** of component **921**.
- Connection code **3AAQ** of component **1290**.
- Connection code **3GC** of component **1460**.
- Connection code **38Y** of component **1202**.

If the voltage is less than **4.9 V**, disconnect the sensor connectors one by one.

If, after disconnecting the **pedal sensor**, the voltage is still too low,

Check **the insulation to earth** of the following connection:

- Connection code **3LU** between components **120** and **921**.

If, after disconnecting the **EGR valve**, the voltage returns to normal,

Check **the insulation to earth** of the following connection:

- Connection code **3GC** between components **120** and **1460**.

If, after disconnecting the **differential pressure sensor**, the voltage returns to normal,

Check **the insulation to earth** of the following connection:

- Connection code **3AAQ** between components **120** and **1290**.

If the voltage returns to normal after **the coolant pressure sensor** is disconnected,

Check **the insulation against + 12 V** of the following connection:

- Connection code **38Y** between components **120** and **1202**.

If the fault is still present, check the conformity of **ET413 Cruise control/speed limiter function**

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Clear the faults created by the multiple disconnections.

Carefully examine the engine management computer connections (for conductive particles, bent pins).

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF013 PRESENT OR STORED	<p><u>SENSOR SUPPLY VOLTAGE NO. 3</u></p> <p>1.DEF: Above max threshold 2.DEF: Below minimum threshold</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test. <p>Special notes: If the fault is present,</p> <ul style="list-style-type: none"> – engine torque limited, – the EGR function is inhibited by the engine management computer, – turbocharger cut-off, – increase in polluting emissions, – the engine stops, <p>the level 2 and European On Board Diagnostic warning lights are lit. Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF013 CONTINUED 1	
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1.DEF	NOTES	None.
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<p>Note:</p> <p>Supply no. 3 is for the following components:</p> <ul style="list-style-type: none"> – air flow sensor, – rail pressure sensor.
<p>Measure the feed voltage on the following sensors:</p> <ul style="list-style-type: none"> – Connection code 3KJ of component 799. – Connection code 3LX of component 1032. <p>If the voltage is more than + 5.1 V, disconnect the sensor connectors one by one.</p> <p>If, after disconnecting the air flow sensor, the voltage returns to normal,</p> <p>Check the insulation against + 12 V of the following connection:</p> <ul style="list-style-type: none"> – Connection code 3KJ between components 120 and 799. <p>If, after disconnecting the rail pressure sensor, the voltage returns to normal,</p> <p>Check the insulation against + 12 V of the following connection:</p> <ul style="list-style-type: none"> – connection code 3LX between components 120 and 1032. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Clear the faults created by the multiple disconnections.</p>
Carefully examine the engine management computer connections (for conductive particles, bent pins).
If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF013 CONTINUED 2	
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2.DEF	NOTES	None.
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<p>Note: Supply no. 3 is for the following components:</p> <ul style="list-style-type: none"> – flow sensor, – rail pressure sensor.
<p>Measure the feed voltage on the following sensors:</p> <ul style="list-style-type: none"> – Connection code 3KJ of component 799. – Connection code 3LX of component 1032. <p>If the voltage is below 4.9 V, disconnect the sensor connectors one by one.</p> <p>If, after disconnecting the air flow sensor, the voltage returns to normal, check the insulation to earth of the following connection:</p> <ul style="list-style-type: none"> – Connection code 3KJ between components 120 and 799. <p>If, after disconnecting the rail pressure sensor, the voltage returns to normal, check the insulation to earth of the following connection:</p> <ul style="list-style-type: none"> – connection code 3LX between components 120 and 1032. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Clear the faults created by the multiple disconnections.</p>
Carefully examine the engine management computer connections (for conductive particles, bent pins).
If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF017 PRESENT OR STORED	<u>PRE-POSTHEATING UNIT CONTROL CIRCUIT</u> CO: Open circuit CC.1: Short circuit to + 12 V CC.0: Short circuit to earth 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – the ignition is switched on, – starting the engine, – a road test, – relay actuation using command AC037 Preheating relay .
	Special notes: The injection level 1 warning light is on. Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CO	NOTES	Special note: Risk of starting difficulty due to absence of preheating.
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<p>Check the condition of the preheating unit connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 257).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>Check the continuity of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FY between components 120 and 257. – Connection code 3FF between components 120 and 257. <p>Check for + 12 V battery on the preheating unit connector.</p> <ul style="list-style-type: none"> – Connection code 3FY of component 257. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the fault is still present, replace the pre-postheating unit.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF017 CONTINUED 1	
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CC.1	NOTES	None.
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Check the condition of the preheating unit connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 257**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3FY** between components **120** and **257**.
- Connection code **3FF** between components **120** and **257**.

If 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.

CC.0	NOTES	Special note: Risk of battery discharge.
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Check the condition of the preheating unit connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 257**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3FY** between components **120** and **257**.
- Connection code **3FF** between components **120** and **257**.

Check for **+ 12 V battery** on the preheating unit connector.

- Connection code **3FY** of component **257**.

If 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.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF017 CONTINUED 2	
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1.DEF	NOTES	Special note: This fault appears when the control section of the computer overheats and when the preheating unit is controlled by AC037 Preheating relay .
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<p>Check the condition of the preheating unit connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 257).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the following connection for continuity and for the absence of interference resistance:</p> <ul style="list-style-type: none"> – Connection code 3FF between components 120 and 257. <p>Check for + 12 V battery on the preheating unit connector.</p> <ul style="list-style-type: none"> – Connection code 3FY of component 257. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF025 PRESENT OR STORED	<p><u>PRE-POSTHEATING UNIT DIAGNOSTIC LINE</u></p> <p>1.DEF: Faulty heater plug(s) or open circuit on the preheating unit return line to the computer</p>
NOTES	<p>Priorities when dealing with a number of faults: Deal with fault DF017 Preheating control circuit first, if it is present or stored.</p> <p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – when the ignition is switched on, during the preheating phase, – engine running in postheating phase, – controlling the heater plugs using command AC037 Preheating relay. <p>Special notes: If the fault is present: Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.</p> <ul style="list-style-type: none"> – The European On Board Diagnostic injection warning light is lit. – Difficult to start the engine. – Refer to the Wiring Diagram Technical Notes for the vehicle to locate the fuses and relays concerned. <p>IMPORTANT Please observe the cleanliness guidelines and safety advice.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF025 CONTINUED	
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<p>Check the condition of the preheating unit connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 257).</p> <p>Check the connections on all the heater plugs.</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>	
<p>Check the resistance of the heater plugs:</p> <p>Replace any plug whose resistance is not greater than 2Ω at + 20°C.</p> <p>Check the continuity of the following connections:</p> <ul style="list-style-type: none"> – Connection code 37Z between components 257 and 680. – Connection code 37AA between components 257 and 681. – Connection code 37AB between components 257 and 682. – Connection code 37AC between components 257 and 683. <p>Check for + 12 V battery feed on the preheating unit connector (supplied by fuse FM12 70A located in the engine relay and fuse box).</p> <ul style="list-style-type: none"> – Connection code 3FY of component 257. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <ul style="list-style-type: none"> – Check the engine earthing. – Interpret command AC037 Preheating relay. 	
<p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p> <p>Check the continuity, insulation and absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FY between components 120 and 257. – Connection code 3FF between components 120 and 257. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>	
<p>If the fault is still present, replace the pre-postheating unit.</p>	

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF026 PRESENT OR STORED	<u>CYLINDER 1 INJECTOR CONTROL CIRCUIT</u> CO: Open circuit CC: Short circuit 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – with the engine running, – a road test.
	Special notes: If the fault is present: – engine torque limited for CO , – engine stops for CO on more than one injector, – the level 2 warning light comes on for CC and 1.DEF , – the level 1 warning light comes on for CO , – the European On Board Diagnostic warning light is lit. – engine cut-off for CC and 1.DEF . Use bornier Elé.1681 for all operations on the engine management computer. After replacing an injector, run commands SC002 Enter injector codes and SC036 Reinitialisation of programming , follow the described procedures.
	IMPORTANT Cylinder no. 1 is located on the engine flywheel end. Please observe the cleanliness guidelines and safety advice.
	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.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF026
CONTINUED

Check the condition of the injector no.1 connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 193**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect injector no. 1.

Measure the **resistance** of injector no. 1.

Replace the injector if it has a **short circuit ($R = 0 \Omega$)** or **open circuit (infinite resistance measurement)**.

Otherwise, **reconnect injector no. 1**.

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

- Connection code **3KW** between components **120** and **193**.
- Connection code **3CR** between components **120** and **193**.

If 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, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF027 PRESENT OR STORED	<u>INJECTOR CYLINDER 2 CONTROL CIRCUIT</u> CO: Open circuit CC: Short circuit 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – with the engine running, – a road test.
	Special notes: If the fault is present: – engine torque limited for CO , – engine stops for CO on more than one injector, – the level 2 warning light comes on for CC and 1.DEF , – the level 1 warning light comes on for CO , – the European On Board Diagnostic warning light is lit. – engine cut-off for CC and 1.DEF . Use bornier Elé.1681 for all operations on the engine management computer. After replacing an injector, run commands SC002 Enter injector codes and SC036 Reinitialisation of programming , follow the described procedures.
	IMPORTANT Cylinder no. 1 is located on the engine flywheel end. Please observe the cleanliness guidelines and safety advice.
	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.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF027 CONTINUED	
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Check the condition of injector connector no. 2 (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 194**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/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.

Disconnect injector no. 2.

Measure the **resistance of injector no. 2**.

Replace the injector if it has a **short circuit ($R = 0 \Omega$)** or **open circuit (infinite resistance measurement)**.

Otherwise, **reconnect injector no. 2**.

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

- Connection code **3KX** between components **120** and **194**.
- Connection code **3CS** between components **120** and **194**.

If 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, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF028 PRESENT OR STORED	<u>CYLINDER 3 INJECTOR CONTROL CIRCUIT</u> CO: Open circuit CC: Short circuit 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – with the engine running, – a road test.
	Special notes: If the fault is present: – engine torque limited for CO , – engine stops for CO on more than one injector, – the level 2 warning light comes on for CC and 1.DEF , – the level 1 warning light comes on for CO , – the European On Board Diagnostic warning light is lit. – engine cut-off for CC and 1.DEF . Use bornier Elé.1681 for all operations on the engine management computer. After replacing an injector, run commands SC002 Enter injector codes and SC036 Reinitialisation of programming , follow the described procedures.
	IMPORTANT Cylinder no. 1 is located on the engine flywheel end. Please observe the cleanliness guidelines and safety advice.
	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.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF028 CONTINUED	
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Check the condition of injector connector no. 3 (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 195**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect injector no. 3.

Measure the **resistance** of injector no. 3.

Replace the injector if it has a **short circuit ($R = 0 \Omega$)** or **open circuit (infinite resistance measurement)**.

Otherwise, **reconnect injector no. 3**.

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

- Connection code **3KY** between components **120** and **195**.
- Connection code **3CT** between components **120** and **195**.

If 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, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF029 PRESENT OR STORED	<p><u>CYLINDER 4 INJECTOR CONTROL CIRCUIT</u></p> <p>CO: Open circuit CC: Short circuit 1.DEF: Internal electronic fault</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – with the engine running, – a road test. <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – engine torque limited for CO, – engine stops for CO on more than one injector, – the level 2 warning light comes on for CC and 1.DEF, – the level 1 warning light comes on for CO, – the European On Board Diagnostic warning light is lit. – engine cut-off for CC and 1.DEF. <p>Use bornier Elé.1681 for all operations on the engine management computer. After replacing an injector, run commands SC002 Enter injector codes and SC036 Reinitialisation of programming, follow the described procedures.</p> <p>IMPORTANT Cylinder no. 1 is located on the engine flywheel end. Please observe the cleanliness guidelines and safety advice.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF029
CONTINUED

Check the condition of the injector no.4 connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 196**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect injector no. 4.

Measure the **resistance** of injector **no. 4**.

Replace the injector if it has a **short circuit ($R = 0 \Omega$)** or **open circuit (infinite resistance measurement)**.

Otherwise, **reconnect injector no. 4**.

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

- Connection code **3KZ** between components **120** and **196**.
- Connection code **3CU** between components **120** and **196**.

If 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, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF032 PRESENT OR STORED	<u>THERMOPLUNGER 1 RELAY CONTROL CIRCUIT</u> CC.1: Short circuit to + 12 V 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – with the engine running, – actuator command AC063 Thermoplunger no. 1 relay.
	Special notes: Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use the Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.1	NOTES	None.
1.DEF		Special note: This fault appears when the computer control section has overheated.

Check the conformity of fuses **F2 (70A)** and **F3 (70A)** on component **777**, replace if necessary.
 Check the connections on the additional heater interface unit.
 check the engine management computer connections.
 If 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 ignition feed** on connections **BP27** and **BP35** of component **1550**.
 If there is no **+ 12 V**, refer to the interpretation of fault **DF151 Main relay circuit**.
 If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF032
CONTINUED

Check the supply to **thermoplunger 1**:

- Disconnect the connector of component **898**.
- Connect a test light between connection **3JB** of component **898** and a chassis earth.
- Run command **AC063 Thermoplunger no. 1 relay**.

If the test light comes on correctly, measure the thermoplunger resistance between the connection **3JA** of component **898** and a chassis earth.

If the resistance is **greater than 2 Ω**, replace **thermoplunger 1**.

If the test light does not come on, check the **continuity and insulation** of the following connection:

- Connection code **3JB** between components **1550** and **898**.

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 earthing on the additional heater interface unit:

- Disconnect the connector of component **1550**.
- Connect a test light between connections **3JA** and **BP27** of component **1550**.
- Run command **AC063 Thermoplunger no. 1 relay**.

If the test light comes on correctly, replace the additional heater interface unit.

If the test light does not come on, check **the continuity and insulation from + 12 V** of the following connection:

- Connection code **3JA** between components **120** and **1550**.

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.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF033 PRESENT OR STORED	<u>THERMOPLUNGER 2 RELAY CONTROL CIRCUIT</u> CC.1: Short circuit to + 12 V 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – with the engine running, – actuator command AC064 Thermoplunger no. 2 relay.
	Special notes: Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use the Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.1	NOTES	None.
1.DEF		Special note: This fault appears when the computer control section has overheated.

Check the conformity of fuses **F2 (70A)** and **F3 (70A)** on component **777**, replace if necessary.
 Check the connections on the additional heater interface unit.
 check the engine management computer connections.
 If 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 ignition feed** on connections **BP27** and **BP35** of component **1550**.
 If there is no **+ 12 V**, refer to the interpretation of fault **DF151 Main relay circuit**.
 If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF033
CONTINUED

Check the supply to **thermoplungers 2 and 3**:

- Disconnect the connector of component **1072**.
- Connect a test light between connection **3JC** of component **1072** and a chassis earth.
- Run command **AC064 Thermoplunger no. 2 relay**.
- Disconnect the connector of component **1073**.
- Connect a test light between connection **3JD** of component **1073** and a chassis earth.
- Run command **AC064 Thermoplunger no. 2 relay**.

If the test light comes on correctly, measure the resistance of **thermoplunger 2 and 3** between the following connections:

- **3JC** of component **1072** and a chassis earth,
- **3JD** of component **1073** and a chassis earth.

If the resistance is **greater than 2 Ω**, replace **thermoplunger 2 or 3**.

If the test light does not come on, check **the continuity and insulation** of the following connections:

- Connection code **3JC** between components **1550** and **1072**.
- Connection code **3JD** between components **1550** and **1073**.

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

Check the earthing on the additional heater interface unit:

- Disconnect the connector of component **1550**.
- Connect a test light between connections **3JAA** and **BP27** of component **1550**.
- Run command **AC064 Thermoplunger no. 2 relay**.

If the test light comes on correctly, replace the additional heater interface unit.

If the test light does not come on, check **the continuity and insulation from + 12 V** of the following connection:

- Connection code **3JAA** between components **120** and **1550**.

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.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF034 PRESENT OR STORED	<u>THERMOPLUNGER 3 RELAY CONTROL CIRCUIT</u> CC.1: Short circuit to + 12 V 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – with the engine running, – actuator command AC031 Thermoplunger no. 3 relay.
	Special notes: Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use the Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.1	NOTES	None.
1.DEF		Special note: This fault appears when the computer control section has overheated.

Check the conformity of fuses **F2 (70A)** and **F3 (70A)** on component **777**, replace if necessary.
 Check the connections on the additional heater interface unit.
 check the engine management computer connections.
 If 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 ignition feed** on connections **BP27** and **BP35 of component 1550**.
 If there is no **+ 12 V**, refer to the interpretation of fault **DF151 Main relay circuit**.
 If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF034
CONTINUED

Check the supply to **thermoplunger 4**:

- Disconnect the connector of component **1074**.
- Connect a test light between connection **3JAC** of component **1074** and a chassis earth.
- Run command **AC031 Thermoplunger relay no.3**.

If the test light illuminates correctly, measure the resistance of the **thermoplunger 4** between the following connection:

- **3JAC** of component **1074** and a chassis earth,

If the resistance is **greater than 2 Ω**, replace **thermoplunger 4**.

If the test light does not come on, check the **continuity and insulation** of the following connection:

- Connection code **3JAC** between components **1550** and **1074**.

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 earthing on the additional heater interface unit:

- Disconnect the connector of component **1550**.
- Connect a test light between connections **3JAB** and **BP27** of component **1550**.
- Run command **AC031 Thermoplunger relay no.3**.

If the test light comes on correctly, replace the additional heater interface unit.

If the test light does not come on, check **the continuity and insulation from + 12 V** of the following connection:

- Connection code **3JAB** between components **120** and **1550**.

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.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF038 PRESENT OR STORED	COMPUTER 1.DEF: Internal electronic fault 2.DEF: Voltage too low 3.DEF: Data inconsistency
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – starting the engine, – a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – depending on the situation, the level 1 or level 2 warning light is lit for 1.DEF, – the level 1 warning light comes on for 3.DEF, – the level 2 warning light comes on for 2.DEF, – increase in polluting emissions, – injection cut-off in defect mode, – the engine stops. Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	None.
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If the fault is stored , clear the fault from the computer memory. Switch off the ignition, wait for the end of the power latch, then switch the ignition back on. Start the engine and re-establish dialogue.
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF038 CONTINUED	
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2.DEF	NOTES	Priorities when dealing with a number of faults: Deal with faults DF047 Computer supply voltage and DF046 Battery voltage first, if they are present or stored.
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If either of faults **DF047 Computer supply voltage** or **DF046 Battery voltage** is present or stored, clear the fault after dealing with **DF046 Battery voltage** or **DF047 Computer supply voltage**.

If the fault is still present, contact the Techline.

3.DEF	NOTES	None.
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Contact Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF046 PRESENT OR STORED	BATTERY VOLTAGE 1.DEF: Above max threshold 2.DEF: Below minimum threshold 3.DEF: Initialisation not done.
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – starting the engine, – a road test.
	Special notes: – thermoplungers cut-off, – engine torque limited, Computer operating voltage: 6 V < operating voltage < 16.5 V . It is then not possible to start the engine. Use bornier Elé.1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	None.
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Check the charging circuit, apply **Technical Note 6014A Checking the charging circuit**.
Carry out the necessary repairs.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF046 CONTINUED	
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2.DEF	NOTES	Use the Wiring Diagram Technical Notes for the vehicle.
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Reminder of computer operating voltage: **6 V < operating voltage < 16.5 V**
Using a voltmeter, take a reading of the battery voltage at its terminals.
– Compare the voltage obtained with the value displayed **on the diagnostic tool PR074 Battery voltage**.
If it there is no difference (less than **1 V**):
Recharge and test the battery and replace it if it is defective.
Next check the charge circuit.
If there is a difference (greater than **1 V**):
– Check the tightness and the condition of the battery terminals.
– Using the appropriate wiring diagram:
Check **the continuity and absence of interference resistance** on the following connections:
– Connection code **3FB** between components **597** and **120**.
– Connection code **AP29** between components **597** and **120**.
– Connection code **NT** between components **NT** and **120**.
(Check the four NT connections)
If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

3.DEF	NOTES	Only deal with this fault when it is present.
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Switch off the ignition and wait for **the diagnostic tool** message (maximum time **8 minutes**) **Communication lost with computer: EDC16 C36, check the tool connection and computer power supply** before switching the ignition back on.
Switch on the ignition again and check if the fault is still present.
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF047 PRESENT OR STORED	COMPUTER SUPPLY VOLTAGE 1.DEF: Voltage outside permitted range of values
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NOTES	Conditions for applying the fault finding procedure to stored faults: – The fault is declared after the ignition has been switched on.
	Special notes: – impossible to start the engine. Use bornier Elé.1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	Impossible to start.
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<p>Check the continuity and absence of interference resistance on the following connection:</p> <p>– Connection code AP29 between components 597 and 120.</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the condition of the injection control unit supply relay (R08) in the engine fuse and relay box (no bad contacts or oxidation on the relay mounting clips).</p> <p>If there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair) repair the wiring, otherwise replace it.</p> <p>If the fault does not recur, start the engine and wait 1 min.</p> <p>Carry out a road test and check the system faults.</p> <p>If there are no faults, fault finding is complete.</p> <p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF051 PRESENT OR STORED	<u>CRUISE CONTROL/SPEED LIMITER</u> 1.DEF: Cruise control or speed limiter fault.
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – a road test with activation of the cruise control/speed limiter function. – the engine is started.
	Special notes: If the fault is present, the cruise control/speed limiter is switched off. Use bornier Elé.1681 for any operations on the injection computer connectors.

1.DEF	NOTES	Order of priority for a combination of faults: Deal with faults DF196 Pedal sensor circuit gang 1 and DF198 Pedal sensor circuit gang 2 first if they are stored.
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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 fault **DF051** is declared present, consult the interpretation of status **ET415 Cruise control/speed limiter deactivation**.

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.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF053 PRESENT OR STORED	<p><u>RAIL PRESSURE REGULATION FUNCTION</u></p> <p>1.DEF: Above maximum threshold 2.DEF: Negative loop deviation 3.DEF: Positive loop deviation 4.DEF: Below minimum threshold</p>
NOTES	<p>Order of priority for a combination of faults: Deal with fault DF643 Rail pressure regulator circuit first if it is present or stored.</p> <p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – the engine is started, – a road test. <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – engine torque limited for 2.DEF/3.DEF, – the level 1 warning light comes on for 2DEF/3.DEF, – the level 2 warning light comes on for 1.DEF/3.DEF/4.DEF, – engine stops for 1.DEF/3.DEF/4.DEF. <p>Use bornier Elé.1681 for any operations on the injection computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF053
CONTINUED

In the event of rail overpressure:

Check the operation of the injectors (see **Test 10 Incorrect injector operation**).

Display parameter **PR038 Rail pressure** and refer to the conformity check to check the conformity of the operating values.

If these checks do not indicate any abnormality and if the fault persists, replace the injection pump.

In the event of rail vacuum pressure:

Check that the rail pressure sensor is operating correctly using command **AC011 Rail pressure regulator**. Display parameter **PR038 Rail pressure** and refer to the conformity check to check the conformity of the operating values.

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 that there are no air bubbles between the filter and the high pressure pump.

Check the seal of the low and high pressure diesel circuits (visual checks, odour, etc.), pump body, overpressure valve, pipes, rail and injector unions, injector wells, etc.

Check the operation of the injectors (see **Test 10 Incorrect injector operation**).

Carry out the necessary operations.

If the fault is still present, replace the injection pump.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF054 PRESENT OR STORED	<u>TURBOCHARGING SOLENOID VALVE CONTROL CIRCUIT</u> CO: Open circuit CC.1: short-circuit to + 12 V CC.0: Short circuit to earth 1.DEF: Internal electronic fault
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NOTES	Priorities when dealing with a number of faults: Deal with fault DF046 Battery voltage first, if it is present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test, – actuator command AC004 Turbocharging solenoid valve.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – turbocharging is no longer authorised, – the EGR function is inhibited, – the level 1 and European On Board Diagnostic warning lights are lit. Use bornier Elé.1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF054 CONTINUED 1	
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CO	NOTES	None.
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<p>Check the condition of the turbocharging solenoid valve (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1475).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Measure the resistance of the turbocharging solenoid valve between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FB of component 1475. – Connection code 3MG of component 1475. <p>If the resistance measured is greater than 1 kΩ or less than 6 Ω, replace the turbocharging solenoid valve.</p>
<p>Check the continuity of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3MG between components 1475 and 120. <p>Check for the presence of + 12 V after relay on the turbocharging solenoid valve connector.</p> <ul style="list-style-type: none"> – Connection code 3FB of component 1475. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the turbocharging solenoid valve.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF054 CONTINUED 2	
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CC.1	NOTES	None.
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<p>Check the condition of the turbocharging solenoid valve (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1475).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Measure the resistance of the turbocharging solenoid valve between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FB of component 1475. – Connection code 3MG of component 1475. <p>If the resistance measured is greater than 1 kΩ or less than 6 Ω, replace the turbocharging solenoid valve.</p>
<p>Check the continuity and insulation in relation to + 12 V of the following connection:</p> <ul style="list-style-type: none"> – Connection code 3MG between components 1475 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the turbocharging solenoid valve.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF054 CONTINUED 3	
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CC.0	NOTES	None.
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Check the condition of the turbocharging solenoid valve (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1475**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the turbocharging solenoid valve between the following connections:

- Connection code **3FB** of component **1475**.
- Connection code **3MG** of component **1475**.

If the resistance measured is greater than **1 kΩ** or less than **6 Ω**, replace the turbocharging solenoid valve.

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

- Connection code **3MG** between components **1475** and **120**.

Check for **the presence of + 12 V after relay** on the turbocharging solenoid valve connector.

- Connection code **3FB** of component **1475**.

If 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.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF054 CONTINUED 4	
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1.DEF	<i>NOTES</i>	Special note: This fault appears when the computer control section has overheated.
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<p>Check the condition of the turbocharging solenoid valve (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1475).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Measure the resistance of the turbocharging solenoid valve between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FB of component 1475. – Connection code 3MG of component 1475. <p>If the resistance measured is not 15.4 ± 0.1 Ω at 20°C, replace the turbocharging solenoid valve.</p>
<p>Check the continuity and insulation of the following connection:</p> <ul style="list-style-type: none"> – Connection code 3MG between components 1475 and 120. <p>Check for + 12 V after relay feed on the turbocharging solenoid valve connector.</p> <ul style="list-style-type: none"> – Connection code 3FB of component 1475. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<ul style="list-style-type: none"> – If the fault is stored, clear the fault using AC004 Turbocharging solenoid valve. – If, when AC004 Turbocharging solenoid valve is running, DF054 "Turbocharging solenoid valve control circuit" 1.DEF is present or stored, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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<p>DF055 PRESENT OR STORED</p>	<p><u>TURBOCHARGING PRESSURE REGULATION CIRCUIT</u></p> <p>1.DEF: Turbocharging pressure too high 2.DEF: Turbocharging pressure too low</p>
<p>NOTES</p>	<p>Priorities when dealing with a number of faults: Deal with faults DF054 Turbocharger solenoid valve control circuit and DF004 Turbocharging pressure sensor circuit first, if they are present or stored.</p>
	<p>Conditions for applying the fault finding procedure to stored faults: In the negative loop difference phase. The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – starting the engine, – a road test.
	<p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – engine torque limited, – turbocharging regulation is inhibited, – the EGR function is inhibited, – increase in polluting emissions, – activation of the EGR bypass, – the injection level 1 warning light is on. <p>Use bornier Elé.1681 for any operations on the injection computer connectors.</p>
	<p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

<p>AFTER REPAIR</p>	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF055 CONTINUED	
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1.DEF 2.DEF	NOTES	None.
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<p>Check the condition of the turbocharging pressure sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1071).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the continuity and absence of interference resistance of the following connections:</p> <ul style="list-style-type: none"> – connection code 3LP between components 1071 and 120. – connection code 3LQ, between components 1071 and 120. – connection code 3LN between components 1071 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>With the engine stationary and ignition on, display parameters PR035 Atmospheric pressure and PR041 Turbocharging pressure.</p> <p>If there is a difference of > 100 mbar, check that the atmospheric pressure read is consistent (by comparing the value with that of another vehicle for example).</p> <p>If atmospheric pressure is consistent, replace the turbocharging sensor.</p> <p>If not, contact the Techline.</p>
<p>Apply test 4: Turbocharged air inlet circuit check.</p>
<p>If the fault is still present, refer to the interpretation of parameter PR041 Turbocharging pressure.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF056 PRESENT OR STORED	<p><u>AIR FLOW SENSOR CIRCUIT</u></p> <p>CO.0: Open circuit or short circuit to earth CC.1: Short circuit + 12 volts 1.DEF: Value outside permitted tolerance values</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults:</p> <p>The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – starting for CC.1 and continuously for CO.0, – a road test, – the ignition is switched off: 1.DEF. <p>Special notes:</p> <p>If the fault is present:</p> <ul style="list-style-type: none"> – the level 1 warning light is lit, – the EGR function is inhibited, <p>Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF056 CONTINUED 1	
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CO.0	NOTES	<p>Priorities when dealing with a number of faults: In the event of the simultaneous presence of fault DF002 Air temperature sensor circuit, check that the air flow sensor connector is connected correctly. Deal with fault DF013 Sensor supply voltage no. 3, 1.DEF first, if it is present or stored.</p>
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<p>Check the condition of the air flowmeter connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 799).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the continuity and insulation to earth of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3DW between components 799 and 120. – Connection code 3DV between components 799 and 120. – Connection code 3KJ between components 799 and 120. <p>Check for the presence of the + 5 V feed on the air flowmeter connector.</p> <ul style="list-style-type: none"> – Connection code 3KJ of component 799. <p>Check for the + 12 V feed on the air flowmeter connector.</p> <ul style="list-style-type: none"> – Connection code 3DV of component 799. <p>Apply test 5 Air flowmeter.</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>With the flowmeter connected, the vehicle ignition on and engine stopped:</p> <p>Check the voltage between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3DW of component 799. – Connection code 3DV of component 799. <p>If the voltage is not approximately 0.6 V ± 0.1 V, replace the air flowmeter.</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the air flowmeter.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF056 CONTINUED 2	
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CC.1	NOTES	<p>Priorities when dealing with a number of faults: Deal with fault DF013 Sensor supply voltage no. 3, 1.DEF first, if it is present or stored.</p>
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<p>Check the condition of the air flowmeter connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 799).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the insulation in relation to + 12 V of the following connections:</p> <ul style="list-style-type: none"> – connection code 3DW between components 799 and 120. – Connection code 3DV between components 799 and 120. – Connection code 3KJ between components 799 and 120. <p>Check for the presence of the + 5 V feed on the air flowmeter connector.</p> <ul style="list-style-type: none"> – Connection code 3KJ of component 799. <p>Check for the + 12 V feed on the air flowmeter connector.</p> <ul style="list-style-type: none"> – Connection code 3DV of component 799. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>With the flowmeter connected, the vehicle ignition on and engine stopped:</p> <p>Check the voltage between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3DW of component 799. – Connection code 3DV of component 799. <p>If the voltage is not approximately 0.6 V ± 0.1 V, replace the air flowmeter.</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the air flowmeter.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF056 CONTINUED 3	
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1.DEF	NOTES	Priorities when dealing with a number of faults: Deal with fault DF013 Sensor supply voltage no. 3, 1.DEF first, if it is present or stored.
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<p>Check the condition of the air flowmeter connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 799).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check for continuity and absence of interference resistance of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3DW between components 799 and 120. – Connection code 3DV between components 799 and 120. – Connection code 3KJ between components 799 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the condition of the flowmeter: no visible damage to the nearby flowmeter element.</p>
<p>If the fault is still present, replace the air flowmeter.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF059 PRESENT OR STORED	<u>COMBUSTION MISFIRES ON CYLINDER 1</u> 1.DEF: Above maximum threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – engine speed is between idling speed and 1050 rpm PR055 Engine speed , – PR064 Coolant temperature $\geq 50^{\circ}\text{C}$.
	Priorities when dealing with a number of faults: Apply the interpretation of faults DF026 CYLINDER 1 INJECTOR CONTROL CIRCUIT and DF249 Injector control first if they are present or stored.
	Special notes: Check that the stored injector codes are consistent with those engraved on each injector. If not, run command SC002 Enter injector codes and follow the procedure, After an injector has been replaced, run command SC002 Enter injector codes and command SC036 Reintialise programming and follow the procedure.
	IMPORTANT Possible absence of combustion on one cylinder even though the injector is properly fed. Cylinder no. 1 is located at the timing end. Do not disconnect the injectors when the engine is running. When removing or refitting an injector, follow the cleanliness and safety instructions (see MR 364 (Mégane) or 370 (Scénic), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting).

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF059
CONTINUED

DF059 appears on the **diagnostic tool** when the engine management computer has detected a fault during the combustion phase several times in succession.

Several components may be responsible:

- the piston rings,
- the piston,
- the valves,
- the injector,
- the heater plug sealing.

If the fault is **present**:

- remove the injector concerned,
- if there is no obvious fault in the way the injector has been fitted (notably the injector washer), swap the injector with another from the engine.
- Run commands **SC002 Enter injector codes** and **SC036 Reintialise programming** and follow the procedures.
- Restart the engine.
- If the injector concerned produces another combustion misfire in its new position, replace it.

If the fault is **stored**:

check that no customer complaint has been declared; clear the fault and carry out a road test.

If the fault is still present, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF060 PRESENT OR STORED	<u>MISFIRING ON CYLINDER 2</u> 1.DEF: Above max threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – engine speed is between idling speed and 1050 rpm PR055 Engine speed , – PR064 Coolant temperature $\geq 50^{\circ}\text{C}$.
	Priorities when dealing with a number of faults: Apply the interpretation of faults DF027 CYLINDER 2 INJECTOR CONTROL CIRCUIT and DF249 Injector control first if they are present or stored.
	Special notes: Check that the stored injector codes are consistent with those engraved on each injector. If not, run command SC002 Enter injector codes and follow the procedure. After an injector has been replaced, run command SC002 Enter injector codes and command SC036 Reintialise programming and follow the procedure.
	IMPORTANT Possible absence of combustion on one cylinder even though the injector is properly fed. Cylinder no. 1 is located at the timing end. Do not disconnect the injectors when the engine is running. When removing or refitting an injector, follow the cleanliness and safety instructions (see MR 364 (Mégane) or 370 (Scénic), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting).

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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**DF060
CONTINUED**

DF060 appears on the **diagnostic tool** when the engine management computer has detected a fault during the combustion phase several times in succession.

Several components may be responsible:

- the piston rings,
- the piston,
- the valves,
- the injector,
- the heater plug sealing.

If the fault is **present**:

- remove the injector concerned,
- if there is no obvious fault in the way the injector has been fitted (notably the injector washer), swap the injector with another from the engine.
- Run commands **SC002 Enter injector codes** and **SC036 Reintialise programming** and follow the procedures.
- Restart the engine.
- If the injector concerned produces another combustion misfire in its new position, replace it.

If the fault is **stored**:

check that no customer complaint has been declared; clear the fault and carry out a road test.

If the fault is still present, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF061 PRESENT OR STORED	<u>MISFIRING ON CYLINDER 3</u> 1.DEF: Above max threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – engine speed is between idling speed and 1050 rpm PR055 Engine speed , – PR064 Coolant temperature ≥ 50°C .
	Priorities when dealing with a number of faults: Apply the interpretation of faults DF028 Cylinder 3 injector control circuit and DF249 Injector control first if they are present or stored.
	Special notes: Check that the stored injector codes are consistent with those engraved on each injector. If not, run command SC002 Enter injector codes and follow the procedure. After replacing an injector, run commands SC002 Enter injector codes and SC036 Reinitialise programming , follow the procedures.
	IMPORTANT Possible absence of combustion on one cylinder even though the injector is properly fed. Cylinder no. 1 is located at the timing end. Do not disconnect the injectors when the engine is running. When removing or refitting an injector, follow the cleanliness and safety instructions (see MR 364 (Mégane) or 370 (Scénic), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting).

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF061
CONTINUED

DF061 appears on the **diagnostic tool** when the engine management computer has detected a fault during the combustion phase several times in succession.

Several components may be responsible:

- the piston rings,
- the piston,
- the valves,
- the injector,
- the heater plug sealing.

If the fault is **present**:

- remove the injector concerned,
- if there is no obvious fault in the way the injector has been fitted (notably the injector washer), swap the injector with another from the engine.
- Run commands **SC002 Enter injector codes** and **SC036 Reintialise programming** and follow the procedures.
- Restart the engine.
- If the injector concerned produces another combustion misfire in its new position, replace it.

If the fault is **stored**:

check that no customer complaint has been declared; clear the fault and carry out a road test.

If the fault is still present, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF062 PRESENT OR STORED	<u>MISFIRING ON CYLINDER 4</u> 1.DEF: Above max threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – engine speed is between idling speed and 1050 rpm, PR055 Engine speed – PR064 Coolant temperature $\geq 50^{\circ}\text{C}$.
	Priorities when dealing with a number of faults: Apply the interpretation of faults DF029 CYLINDER 4 INJECTOR CONTROL CIRCUIT and DF249 Injector control first if they are present or stored.
	Special notes: Check that the stored injector codes are consistent with those engraved on each injector. If not, run command SC002 Enter injector codes and follow the procedure. After replacing an injector, run commands SC002 Enter injector codes and SC036 Reinitialise programming , follow the procedures.
	IMPORTANT Possible absence of combustion on one cylinder even though the injector is properly fed. Cylinder no. 1 is located at the timing end. Do not disconnect the injectors when the engine is running. When removing or refitting an injector, follow the cleanliness and safety instructions (see MR 364 (Mégane) or 370 (Scénic), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting).

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF062 CONTINUED	
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DF062 appears on **the diagnostic tool** when the engine management computer has detected a fault during the combustion phase several times in succession.

Several components may be responsible:

- the piston rings,
- the piston,
- the valves,
- the injector,
- the heater plug sealing.

If the fault is **present**:

- remove the injector concerned,
- if there is no obvious fault in the way the injector has been fitted (notably the injector washer), swap the injector with another from the engine.
- Run commands **SC002 Enter injector codes** and **SC036 Reintialise programming** and follow the procedures.
- Restart the engine.
- If the injector concerned produces another combustion misfire in its new position, replace it.

If the fault is **stored**:

check that no customer complaint has been declared; clear the fault and carry out a road test.

If the fault is still present, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF065 PRESENT OR STORED	<u>COMBUSTION MISFIRES</u> 1.DEF: Above max threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – engine speed is between idling speed and 1050 rpm PR055 Engine speed , – a coolant temperature \geq 50°C PR064 Coolant temperature .
	Priorities when dealing with a number of faults: DF249 Injector control , present or stored, DF026 Injector 1 control circuit , present or stored, DF027 Injector 2 control circuit , present or stored, DF028 Injector 3 control circuit , present or stored, DF029 Injector 4 control circuit , present or stored.
	IMPORTANT When removing or refitting an injector, observe the cleanliness and safety instructions (see MR 364 (Mégane) or 370 (Scénic), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting).
	IMPORTANT Possible absence of combustion on one cylinder even though the injector is properly fed. Do not disconnect the injectors when the engine is running.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF065 CONTINUED	
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DF065 appears on the **diagnostic tool** when the engine management computer has detected a fault during the combustion phase several times in succession.

Several components may be responsible:

- the piston rings,
- the piston,
- the valves,
- the injector,
- the heater plug sealing.

Check that the stored injector codes are consistent with those engraved on each injector. If not, run command **SC002 Enter injector codes**, and follow the procedure.

When dealing with a number of misfiring faults, check the fuel conformity by running **test 11 Diesel fuel conformity check**.

Check the engine compressions.

Carry out the necessary repairs.

If the fault is still present, apply **test 10: Incorrect injector operation**.

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF069 PRESENT OR STORED	<u>IMPACT DETECTED SIGNAL</u> 1.DEF: Impact stored by the injection computer
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NOTES	Conditions for applying the fault finding procedure to stored faults: Only apply the interpretation of this fault if the fault is present and the vehicle will not start.
	Special notes: 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 level 2 warning light is lit. Use bornier Elé. 1681 or Elé. 1590 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 for 1 minute , – switch on the ignition. If the fault does not reappear, 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) .

AFTER REPAIR	Deal with any faults. Carry out a road test followed by another check with the diagnostic tool .
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DF086 PRESENT OR STORED	<p><u>COOLANT PUMP RELAY CONTROL CIRCUIT</u></p> <p>CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit 1.DEF: Internal electronic fault</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the ignition has been switched off and after waiting for 1 minute, Or after an actuator control AC195 Electric coolant pump.</p> <p>Special notes: The control relay is located in the engine connection unit. If the fault is present: – turbocharger reliability compromised, – coolant reliability compromised, – the level 1 warning light is lit. Use bornier Elé. 1681 or Elé. 1590 for all operations at the level of the injection computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF086 CONTINUED	
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CO.0	NOTES	None.
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Check the condition of the **electric coolant pump relay connector (A 20A)** (see **Wiring Diagram Technical Note for Mégane II ph2, Scénic II ph2, component code 573**) and check that it operates correctly.

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- connection codes **32A** and **32B** between **components 688** and **1337**,
- connection codes **47Q** and **115A** between **components 688** and **120**.

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

Check for **connection code M earth** on the turbocharger bearing coolant pump **component code 369**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF091 PRESENT OR STORED	<u>VEHICLE SPEED SIGNAL</u> 1.DEF: Vehicle speed too high.
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after a road test.
	Special notes: – engine torque limited, – the cruise control/speed limiter function is inhibited, The vehicle speed signal sent by the ABS computer to the injection computer is greater than the threshold defined in the calibration. Use bornier Elé.1681 for any operations on the injection computer connectors.

Check the condition of the ABS computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component Code 118 or 1094). Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Run full fault finding on the ABS (see 38C Anti-lock braking system). Repair if necessary.
Run complete fault finding on the multiplex network (see 88B, Multiplexing). Repair if necessary.
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF098 PRESENT OR STORED	<u>FUEL TEMPERATURE SENSOR CIRCUIT</u> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – Engine running.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the fuel temperature safe value PR063 Fuel temperature = 100°C. Use bornier Elé. 1681 for all operations on the connectors of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.0	NOTES	None.
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<p>Check the condition of the fuel temperature sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1066).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Measure the resistance of the fuel temperature sensor between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FAB of component 1066. – Connection code 3LD of component 1066. <p>Replace the sensor if resistance is less than 85 Ω or greater than 50 kΩ.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF098 CONTINUED	
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Check the **insulation** to **earth** of the following connection:

– Connection code **3FAB** between components **1066** and **120**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the wiring of the particle filter downstream temperature sensor, component code **1288**, is present (with or without the sensor being present), check the electrical insulation in relation to **+ 12 V** between the following connections:

- **3XU** between components **120** and **1288**,
- **3TG** between components **120** and **1288**.

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.

CO.1	NOTES	None.
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Check the condition of the fuel temperature sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1066**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

Measure **the resistance** of the fuel temperature sensor between the following connections:

- Connection code **3FAB** of component **1066**.
 - Connection code **3LD** of component **1066**.
- Replace the sensor if resistance is **less than 85 Ω or greater than 50 k Ω** .

Check the **continuity and insulation** to **+ 12 V** on the following connections:

- Connection code **3FAB** between components **1066** and **120**.
- Connection code **3LD** between components **1066** and **120**.

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	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF107 PRESENT OR STORED	<u>COMPUTER MEMORY</u> 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the ignition has been switched on.
	Special notes: The level 1 and European On Board Diagnostic warning lights are lit. Use bornier Elé.1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

<p>If the fault is stored, clear the fault from the computer memory.</p> <ul style="list-style-type: none"> – Switch off the ignition and wait for the diagnostic tool message (maximum time 8 minutes) Communication lost with computer: EDC16 C36, check the tool connection and computer power supply before switching the ignition back on. <p>Start the engine and re-establish dialogue.</p> <p>This fault may be linked to a write error following disconnection of the battery when the computer was in the process of writing to the EEPROM phase (computer memory).</p> <p>If this is the case, loading a new calibration will remove the fault.</p> <p>If a more recent calibration is available, load this calibration on to the computer.</p> <p>If the fault is still present:</p> <ul style="list-style-type: none"> – use the command RZ034 Computer memory, – Switch off the ignition and wait for the computer dialogue lost message, – switch on the ignition again, – define the injector codes using the control SC002 Enter injector codes. – Run the programming commands (See configuration and programming), – switch off the ignition and wait for the message loss of communication with the computer. <p>Perform a road test to reinitialise the vehicle parameters.</p> <p>Only for F9Q816:</p> <p>If the vehicle is not new (mileage greater than 10 km):</p> <ul style="list-style-type: none"> – Do an after-sales regeneration using the control SC017 Particle filter regeneration. – Perform an oil change (see MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 10A Engine and peripherals, Engine oil: Draining – Filling). <p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF119 PRESENT OR STORED	<u>CAMSHAFT SENSOR SIGNAL</u> 1.DEF: No camshaft signal or timing fault (belt tension or timing adjustment) 2.DEF: Feed fault, signal interference, camshaft sensor internal fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – starting the engine, – a road test.
	Special notes: Difficulty starting engine. No effect while driving. If the fault is present, the level 1 warning light will illuminate. Use bornier Elé.1681 for any operations on the injection computer connectors.
	IMPORTANT If fault DF119 appears with status 2.DEF and PR055 Engine speed (stored context) < 150 rpm, there is a diagnostic fault due to the engine stalling: It is not necessary to interpret this fault.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	None.
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Check the condition of the camshaft sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 746). Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120). If the connector(s) is/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.
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF119 CONTINUED 1

WARNING

If the fault is **stored**:

Visually check the condition of the surrounding area.

If, on detection of the fault, the engine speed is considerably slower than the idling speed (less than **400 rpm**) and no customer complaint is declared (warning light indicated by the customer does not come on and vehicle can be started), the fault was detected because the engine stalled. Clear the fault and carry out a road test.

Check the sensor mounting and the conformity of the camshaft target.

Check that the camshaft sensor/camshaft sprocket air gap is **3 mm maximum**.

Check the electrical specifications of the sensor:

Note:

Make sure that the resistance is measured between the tracks indicated.

1. Disconnect the sensor before measuring the resistance with an Ohmmeter or multimeter.
2. The resistance between connections **3FB** and **3PL** of component **746** (earth and supply) must be between **7.2 kΩ and 13.4 kΩ (10.2 kΩ nominal)**.
3. The resistance between connections **3FB** and **3CQ** of component **746** (output and feed) should be above **100 kΩ**.
4. The resistance between connections **3PL** and **3CQ** of component **746** (output and earth) should be above **100 kΩ**.

If the values are incorrect, replace the camshaft sensor.

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

– Connection code **3PL** between components **746** and **120**.

– Connection code **3CQ** between components **746** and **120**.

Check for **+ 12 V after relay** on connection **3FB** of component **746**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

If the fault is still present, replace the camshaft sensor.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF119 CONTINUED 2	
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2.DEF	NOTES	Priorities when dealing with a number of faults: Deal with fault DF120 Engine speed sensor signal , 1.DEF first if it is present or stored.
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<p>Check the condition of the camshaft sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 746).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the sensor mounting and the conformity of the camshaft target.</p> <p>Check that the camshaft sensor/camshaft sprocket air gap is 3 mm maximum.</p>
<p>Check the continuity of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3PL between components 746 and 120. – Connection code 3CQ between components 746 and 120. <p>Check for + 12 V after relay on connection 3FB of component 746.</p> <p>If the connector(s) is/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.</p>
<ul style="list-style-type: none"> – Check the tension of the timing belt. – Check the conformity of the camshaft sprocket/camshaft assembly. – Check the timing adjustment. <p>Carry out the necessary repairs.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF120 PRESENT OR STORED	<p><u>ENGINE SPEED SENSOR SIGNAL</u></p> <p>1.DEF: Engine speed signal interference, broken tooth on flywheel or engine speed sensor internal fault</p> <p>2.DEF: No engine speed signal, or interference affecting the engine speed signal</p>
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NOTES	<p>Conditions for applying the fault finding procedure to stored faults:</p> <p>If the fault is declared present after:</p> <ul style="list-style-type: none"> – when an attempt is made to start the engine, – starting the engine, – a road test.
	<p>Special notes:</p> <p>The engine speed sensor is consistent with the camshaft sensor.</p> <p>If the fault is present,</p> <ul style="list-style-type: none"> – the level 2 warning light will be lit, – engine stops or impossible to start, – engine cut-off, – turbocharger cut-off, <p>Use bornier Elé.1681 for any operations on the injection computer connectors.</p>
	<p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

<p>Check the condition of the engine speed sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 149).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p> <p>Check that the sensor is securely attached.</p> <p>Measure the resistance of the engine speed sensor between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3BG of component 149. – Connection code 3BL of component 149. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the winding resistance is not between 200 Ω and 270 Ω at 20°C, replace the engine speed sensor.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF120 CONTINUED	
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Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3BG** between components **149** and **120**.
- Connection code **3BL** between components **149** and **120**.

If 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 engine speed sensor.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition, wait for the end of the power-latch phase and perform a road test followed by a check using the diagnostic tool .
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DF151 STORED	MAIN RELAY CIRCUIT 1.DEF: Relay cut off too soon 2.DEF: Relay cut off too late
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NOTES	Special notes: The level 1 warning light is on.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	None.
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<p>Check the condition of the injection feed relay mounting connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 983).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
Check the tightness and the condition of the "+" and "-" battery terminals.
<p>Check the conformity of the main relay (relay removed):</p> <p>Insulation of the contacts between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FB of component 983. – Connection code BP37 of component 983. <p>Resistance of the coil between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3AA of component 983. – Connection code BP37 of component 983. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Replace the relay if the resistance is less than 6 Ω or greater than 1 kΩ.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF151
CONTINUED 1

Check for **+ 12 V battery** on the following connection:

- Connection code **BP37** of component **983**.

Check for **+ 12 V after relay feed** on the following connection:

- Connection code **3FB** of component **983**.

If 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 and absence of any interference resistance** on the following connection:

- Connection code **3AA** between components **983** and **120**.

If 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 feed** on the following connections:

- Connection code **3FB** of component **120**.
- Connection code **AP29** of component **120**.

If 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 management computer earths:

- Connection code **NT** of component **120**.

If 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 fuse **FM3** in the engine fuse and relay box (crimping and condition of wires on terminals).

Check the conformity of the impact sensor: incorrect contact (depending on equipment).

If 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 injection supply relay.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF151 CONTINUED 2	
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2.DEF	NOTES	None.
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<p>Check the condition of the injection supply relay mounting connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 983).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the conformity of the main relay (relay removed):</p> <p>Insulation of the contacts between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FB of component 983. – Connection code BP37 of component 983. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Resistance of the coil between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3AA of component 983. – Connection code BP37 of component 983. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Replace the relay if the resistance is less than 6 Ω or greater than 1 kΩ.</p>
<p>Check the continuity and absence of any interference resistance on the following connection:</p> <ul style="list-style-type: none"> – Connection code 3AA between components 983 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the injection supply relay.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF165 PRESENT OR STORED	<u>ACCELERATOR PEDAL POSITION SENSOR CIRCUIT</u> 1.DEF: No signal 2.DEF: Accelerator pedal sensor locked 3.DEF: Detection of accelerator pedal depressed at same time as brake pedal
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1.DEF 2.DEF	NOTES	Priorities when dealing with a number of faults: Deal with fault DF012 Sensor supply no. 2 voltage first, if it is present or stored.
		Conditions for applying the fault finding procedure to stored faults: The fault occurs if the brake pedal and the accelerator pedal are depressed simultaneously for more than 1 second .
		Special notes: If the fault is present, – the level 2 warning light illuminates if 1.DEF or 2.DEF is present, – turbocharging and cruise control are not authorised, – the engine speed is fixed at 1400 rpm , – cruise control/speed limiter function unusable, – limitation of the quantity of fuel injected. Use bornier Elé.1681 for any operations on the computer connectors.
		Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF165 CONTINUED 1

Check the condition of the pedal sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the pedal sensor gang 1 between the following connections:

- Connection code **3LR** of component **921**.
- Connection code **3LT** of component **921**.

Replace the sensor if the resistance is not **1.2 kΩ ± 0.48 kΩ**.

Measure the **resistance** of the pedal sensor gang 2 between the following connections.

- Connection code **3LU** of component **921**.
- Connection code **3LV** of component **921**.

Replace the sensor if the resistance is not **1.7 kΩ ± 0.68 kΩ**.

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

- Connection code **3LR** between components **921** and **120**.
- Connection code **3LS** between components **921** and **120**.
- Connection code **3LT** between components **921** and **120**.
- Connection code **3LU** between components **921** and **120**.
- Connection code **3LV** between components **921** and **120**.
- Connection code **3LW** between components **921** and **120**.

If 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.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF165 CONTINUED 2	
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3.DEF	NOTES	Priorities when dealing with a number of faults: Deal with fault DF012 Sensor feed voltage no. 2 first, if it is present or stored.
		Conditions for applying the fault finding procedure to stored faults: The fault occurs if the brake pedal and the accelerator pedal are depressed simultaneously for more than 30 seconds without any movement.
		Special notes: Do not interpret the conditions under which the fault occurs.

Make sure that the accelerator pedal is not mechanically jammed (broken spring, floor carpet, etc.). Check that the brake switch is correctly positioned in its housing. If the fault is still present, deal with fault DF165 2.DEF .
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF195 PRESENT OR STORED	<u>ENGINE SPEED/CAMSHAFT SENSOR CONSISTENCY</u> 1.DEF: Signal incoherent
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – 10 seconds with the starter active, – a delay of 1 minute with the engine running.
	Special notes: Use bornier Elé. 1681 for any operations on the computer connector.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	Priorities when dealing with a number of faults: Apply the interpretation of faults DF119 Camshaft sensor signal and DF120 Engine speed sensor signal first, if they are present or stored.
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Check the sensor mounting and the conformity of the camshaft target. Check that the camshaft sensor/camshaft sprocket air gap is 3 mm maximum . Check the engine speed sensor mounting.
Check the condition of the engine speed sensor and camshaft sensor connectors (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component codes 149 and 746). Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
<ul style="list-style-type: none"> – Check the tension of the timing belt. – Check the conformity of the camshaft sprocket/camshaft assembly. – Check the timing adjustment. Carry out the necessary repairs.
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF196 PRESENT OR STORED	<p><u>PEDAL SENSOR CIRCUIT GANG 1</u></p> <p>CO.0: Open circuit or short circuit to earth CC.1: Short circuit to +12 V 1.DEF: Consistency between gang 1 and gang 2</p>
NOTES	<p>Priorities when dealing with a number of faults: Deal with fault DF011 Sensor supply voltage no. 1 first if it is present or stored.</p> <p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after a series of full load / no load actions on the accelerator pedal.</p> <p>Special notes: If the fault is present: <ul style="list-style-type: none"> – engine torque limited, – cruise control not authorised, – the level 1 warning light is lit, – the level 2 warning light is lit if 1.DEF and only if 2 gangs lost, – the idle speed is 1400 rpm if 2 gangs lost. Use bornier Elé.1681 for any operations on the computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF196 CONTINUED 1	
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CO.0	NOTES	Dealing with a number of faults: If there is a simultaneous occurrence of fault DF198 Pedal sensor circuit gang 2 , check that the pedal sensor connector is connected correctly.
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<p>Check the condition of the pedal sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>Measure the resistance of the pedal sensor between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3LR of component 921. – Connection code 3LT of component 921. <p>Replace the sensor if the resistance is not 1.2 kΩ ± 0.48 kΩ.</p>
<p>Check the continuity and insulation from earth of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3LR between components 921 and 120. – Connection code 3LS between components 921 and 120. – Connection code 3LT between components 921 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF196 CONTINUED 2	
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CC.1	NOTES	None.
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Check the condition of the pedal sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the pedal sensor between the following connections:

- Connection code **3LR** of component **921**.
- Connection code **3LT** of component **921**.

Replace the sensor if the resistance is not **1.2 kΩ ± 0.48 kΩ**.

Check **the continuity** and **insulation** from **+ 12 V** and **+ 5 V** (computer feeds) on the following connections:

- Connection code **3LR** between components **921** and **120**.
- Connection code **3LS** between components **921** and **120**.
- Connection code **3LT** between components **921** and **120**.

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	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF196 CONTINUED 3	
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1.DEF	NOTES	None.
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Check the condition of the pedal sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the pedal sensor between the following connections:

- Connection code **3LR** of component **921**.
- Connection code **3LT** of component **921**.

Replace the sensor if the resistance is not **1.2 kΩ ± 0.48 kΩ**.

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

- Connection code **3LR** between components **921** and **120**.
- Connection code **3LS** between components **921** and **120**.
- Connection code **3LT** between components **921** and **120**.
- Connection code **3LU** between components **921** and **120**.
- Connection code **3LV** between components **921** and **120**.
- Connection code **3LW** between components **921** and **120**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check **the insulation** between the following connections:

- Connection code **3LS** between components **921** and **120**.
- Connection code **3LW** between components **921** and **120**.

If 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, vary the pedal position and consult the **interpretation of parameters** to check the operating values of the accelerator pedal sensor.

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

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF198 PRESENT OR STORED	<p><u>PEDAL SENSOR CIRCUIT GANG 2</u></p> <p>CO.0: Open circuit or short circuit to earth CC.1: Short circuit to +12 V 1.DEF: Consistency between gang 1 and gang 2</p>
NOTES	<p>Priorities when dealing with a number of faults: Deal with fault DF012 Sensor feed voltage no. 2 first, if it is present or stored.</p> <p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after a series of full load / no load actions on the accelerator pedal.</p> <p>Special notes: If the fault is present: <ul style="list-style-type: none"> – engine torque is limited – cruise control not authorised, – the level 1 warning light is lit, – the level 2 warning light is lit if 1.DEF and only if 2 gangs lost, – the idle speed is 1400 rpm if 2 gangs lost. Use bornier Elé.1681 for any operations on the computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF198 CONTINUED 1	
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CO.0	NOTES	Dealing with a number of faults: If there is a simultaneous occurrence of fault DF196 Pedal sensor circuit gang 1 , check that the pedal sensor connector is connected correctly.
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<p>Check the condition of the pedal sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>Measure the resistance of the pedal sensor between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3LU of component 921. – Connection code 3LV of component 921. <p>Replace the sensor if the resistance is not 1.7 kΩ ± 0.68 kΩ.</p>
<p>Check the continuity and insulation from earth of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3LU between components 921 and 120. – Connection code 3LV between components 921 and 120. – Connection code 3LW between components 921 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF198 CONTINUED 2	
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CC.1	NOTES	None.
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Check the condition of the pedal sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the pedal sensor between the following connections:

- Connection code **3LU** of component **921**.
- Connection code **3LV** of component **921**.

Replace the sensor if the resistance is not **1.7 kΩ ± 0.68 kΩ**.

Check **the continuity** and **insulation** from **+ 12 V** and **+ 5 V** (computer feeds) on the following connections:

- Connection code **3LU** between components **921** and **120**.
- Connection code **3LV** between components **921** and **120**.
- Connection code **3LW** between components **921** and **120**.

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	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF198 CONTINUED 3	
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1.DEF	NOTES	None.
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Check the condition of the pedal sensor connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 921**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the pedal sensor between the following connections:

- Connection code **3LU** of component **921**.
- Connection code **3LV** of component **921**.

Replace the sensor if the resistance is not **1.7 kΩ ± 0.68 kΩ**.

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

- Connection code **3LR** between components **921** and **120**.
- Connection code **3LS** between components **921** and **120**.
- Connection code **3LT** between components **921** and **120**.
- Connection code **3LU** between components **921** and **120**.
- Connection code **3LV** between components **921** and **120**.
- Connection code **3LW** between components **921** and **120**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check **the insulation** between the following connections:

- Connection code **3LS** of component **921**.
- Connection code **3LW** of component **921**.

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

If the fault is still present, vary the pedal position and consult the interpretation of parameters to check the operating values of the accelerator pedal sensor.

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

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF200 PRESENT OR STORED	<p><u>ATMOSPHERIC PRESSURE SENSOR</u></p> <p>1.DEF: Above max threshold 2.DEF: Below minimum threshold</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – the engine is started, – a road test. <p>Special notes:</p> <ul style="list-style-type: none"> – The level 1 warning light is illuminated. – engine torque is limited, – Increase in polluting emissions, – EGR programming cut-off: valve in the closed position. <p>The atmospheric pressure sensor is integrated in the injection computer, and cannot be separated.</p> <p>If the fault is present:</p> <ul style="list-style-type: none"> – there is light smoke, – the atmospheric pressure value changes to safe mode, PR035 Atmospheric pressure = 750 mbar. <p>Use bornier Elé.1681 for any operations on the computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF200 CONTINUED	
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1.DEF 2.DEF	NOTES	None.
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Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/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.

Verify 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 (more than **100 mbar** difference between the 2 vehicles), contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF209 PRESENT OR STORED	<u>EGR VALVE POSITION SENSOR CIRCUIT</u> CC.1: Short circuit to +12 V CO.0: Open circuit or short circuit to earth
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NOTES	Priorities when dealing with a number of faults: <ul style="list-style-type: none"> – DF046 Battery voltage, – DF012 Sensor supply voltage no. 2, if present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – the engine is started, – a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the European On Board Diagnostic warning light is lit, – increase in polluting emissions, – EGR programming cut-off: valve in the closed position. Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.
	For EGR valves with a flat connector, it is not possible to check the sensor resistance.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.
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DF209 CONTINUED 1	
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CC.1	NOTES	None.
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Check the condition of the connector of the **EGR valve** (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Code organe1460**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **continuity and insulation** against **+12 V** and **+5 V** on the following connections:

- Connection code **3GC** between components **1460** and **120**.
- Connection code **3EL** between components **1460** and **120**.
- Connection code **3JM** between components **1460** and **120**.

Check the **insulation between** the following connections:

- Connection code **3GC** between components **1460** and **120**.
- Connection code **3VP** between components **1460** and **120**.
- Connection code **3EL** between components **1460** and **120**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

EGR valve with a square connector:

Measure **the resistances of the EGR valve** between the following connections:
(sensor supply and sensor earth)

- Connection code **3GC** of component **1460**.
- Connection code **3JM** of component **1460**.

Replace the valve if the resistances are not between: **3.9 kΩ < X < 9.1 kΩ**.

EGR valve with a flat connector:

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**).

If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF209 CONTINUED 2	
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CO.0	NOTES	None.
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Check the condition of the connector of the **EGR** valve (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1460**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3GC** between components **1460** and **120**.
- Connection code **3EL** between components **1460** and **120**.
- Connection code **3JM** between components **1460** and **120**.

Check **the insulation between** the following connections:

- Connection code **3GC** between components **1460** and **120**.
- Connection code **3EL** between components **1460** and **120**.
- Connection code **3JM** between components **1460** and **120**.
- Connection code **3VQ** between components **1460** and **120**.

If 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 EGR valve between the following connections:
(sensor supply and sensor earth)

- Connection code **3GC** of component **1460**.
- Connection code **3JM** of component **1460**.

Replace the valve if the resistances are not between: **3.9 kΩ < X < 9.1 kΩ**.

When replacing the EGR valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the EGR valve offsets (see **Replacement of components**).

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF221 STORED	<u>CLUTCH CONTACT SIGNAL</u> 1.DEF: Clutch inconsistency upon gear change
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NOTES	Conditions for applying the fault finding procedure to stored faults: If the fault becomes present during a road test at speeds higher than 21 mph (35 km/h) .
	Special notes: – the cruise control/speed limiter function is switched off. Use bornier Elé. 1681 for all operations on the engine management computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

<p>Check the condition of the clutch switch (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 675).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector(s) is/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.</p>
<p>View status ET405 "Clutch pedal switch", normally "INACTIVE" if the pedal is not depressed.</p> <p>Depress the clutch pedal and note whether this status becomes ACTIVE.</p>
<p>If the status becomes ACTIVE when the clutch pedal is in the rest position.</p> <p>Clear the fault, switch off the ignition, wait for the end of the power latch* and switch on the ignition again.</p> <p>Carry out a road test and then take a fault reading.</p> <p>If the fault is still present, contact the Techline.</p>
<p>If the status does not become ACTIVE when the clutch pedal is depressed.</p> <p>Remove the clutch pedal switch, check the insulation with the switch in the rest position between connections M and 86D of component 675.</p> <p>Press the clutch switch and check the continuity between connections M and 86D of component 675.</p> <p>If these two checks are not in order, replace the switch.</p> <p>Then check the continuity and absence of interference resistance of the following connection:</p> <ul style="list-style-type: none"> – connection code 86D between components 120 and 675. – Make sure that the earth is in order on connection M of component 675. <p>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.</p>

* The immobiliser warning light will flash a few seconds after the ignition is switched off.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF226 PRESENT OR STORED	<p><u>DAMPER VALVE CIRCUIT</u></p> <p>CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CC: Short circuit 1.DEF: Internal electronic fault 2.DEF: External fault finding in the domain 3.DEF: Values out of range</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after:</p> <ul style="list-style-type: none"> – switching off the ignition and waiting for 1 minute, – the ignition is switched on, – a road test, – command AC012 Damper valve. <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – it is difficult or even impossible to start the vehicle, – the engine stops noisily, – turbocharger cut-off for 3.DEF and CC.1, – the level 1 warning light comes on except for 3.DEF, – EGR is cut off and the valve is closed (regulation), <p>Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF226 CONTINUED 1	
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CC CC.1	NOTES	After any operation on the damper valve, run SC036 Reinitialise programming (see Interpretation of commands).
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<p>Check the condition of the damper valve (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1461).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>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.</p>
<p>Check the insulation from + 12 V of the following connections:</p> <ul style="list-style-type: none"> – Connection code NT between components 1461 and NT. – Connection code 3VM between components 1461 and 120. – Connection code 3VN between components 1461 and 120. <p>Check the continuity and insulation between the following connections:</p> <ul style="list-style-type: none"> – Connection code NT between components 1461 and NT. – Connection code 3VM between components 1461 and 120. – Connection code 3VN between components 1461 and 120. – Connection code 3FB between components 1461 and 983. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF226 CONTINUED 2	
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CC.0 CO	NOTES	After any operation on the damper valve, run SC036 Reinitialise programming (see Interpretation of commands).
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<p>Check the condition of the damper valve connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1461).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>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.</p>
<p>Check the continuity and insulation against earth and between the following connections:</p> <ul style="list-style-type: none"> – Connection code NT between components 1461 and NT. – Connection code 3VM between components 1461 and 120. – Connection code 3VN between components 1461 and 120. – Connection code 3FB between components 1461 and 983. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF226 CONTINUED 3	
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1.DEF 2.DEF 3.DEF	NOTES	<p>Special notes: This fault appears when the computer control section has overheated. – A road test may be necessary.</p> <p>Priority when dealing with a number of faults: Deal with the statuses CO, CC.0, and CC.1 first if they are present or stored. After any operation on the damper valve, run SC036 Reinitialise programming (see Interpretation of commands).</p>
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<p>Check the condition of the damper valve connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1461).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>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.</p> <p>Check that the valve is not mechanically jammed:</p> <p>With the engine stopped, disconnect the air inlet hose from the damper valve.</p> <p>Check that the valve is in the open position.</p> <p>Start, then switch off the engine.</p> <p>Check that the valve closes when the engine is switched off and then opens again when the engine has stopped.</p> <p>If this does not happen, replace the damper valve.</p>
<p>Check that the valve is clean and that there is no component preventing it from closing (particularly for 2.DEF). Clean if necessary.</p>
<p>Check the continuity of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3VM between components 1461 and 120. – Connection code 3VN between components 1461 and 120. <p>Check the insulation against + 5 V and + 12 V (computer feed) of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3VM between components 1461 and 120. – Connection code 3VN between components 1461 and 120. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF228 PRESENT OR STORED	<u>BRAKE SIGNAL</u> 1.DEF: Consistency with redundant brakes 2.DEF: Engine deceleration too high
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1.DEF 2.DEF	NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the brake pedal is depressed.
		Special notes: If the fault is present, the cruise control/speed limiter is switched off. Use bornier Elé. 1681 for all operations on the engine management computer connectors.
		Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF228 CONTINUED 1

From the List of Statuses menu, check **ET012** and **ET013** and check:

- brake pedal in rest position **ET012** = "RELEASED" and **ET013** = "RELEASED"
- brake pedal depressed **ET012** = "DEPRESSED" and **ET013** = "DEPRESSED"

Has **ET013** been correctly recognised?

YES

Has **ET012** been correctly recognised?

YES

Clear the fault
End of fault finding
procedure

NO

NO

Check the connections of the brake pedal switch, the ABS computer, the electronic stability program computer and the engine management computer.

If 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 ignition feed on the **connections** of the brake pedal switch connector and the condition of the fuse.

- Connection code **AP10** of component **160**.
- Connection code **SP13** of component **160**.

Disconnect the ABS - ESP and check **the continuity and insulation** against **+ 12 V** and against **earth** of the following connection:

- Connection code **65A** between components **160** and **1094**.

Check that the brake pedal switch is working correctly:

in rest position: infinite resistance continuity between the following connections:

- Connection code **65A** of component **160**.
- Connection code **AP10** of component **160**.

depressed: continuity between the following connections:

- Connection code **65A** of component **160**.
- Connection code **AP10** of component **160**.

Replace the switch if necessary.

If the fault is still present, carry out fault finding on the anti-lock braking system - electronic stability program; if no irregularity is detected, then carry out fault finding on the multiplex network.

A

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF228
CONTINUED 2

A

Check the brake pedal switch connections and the engine management computer connections.
If 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 and adjustment of the brake-pedal switch. Repair if necessary.
Check for **+ 12 V** after ignition feed on the **connections** of the brake pedal switch connector and the condition of the fuse.

- Connection code **AP10** of component **160**.
- Connection code **SP13** of component **160**.

Check **the continuity** and **insulation** against **+ 12 V** and against **earth** of the following connection:

- Connection code **5A** between components **160** and **120/645/119**.

Check that the brake pedal switch is working correctly:

in rest position: infinite resistance continuity between the following connections:

- Connection code **5A** of component **160**.
- Connection code **SP13** of component **160**.

depressed: continuity between the following connections:

- Connection code **5A** of component **160**.
- Connection code **SP13** of component **160**.

Replace the switch if necessary.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF232 PRESENT OR STORED	<u>REFRIGERANT PRESSURE SENSOR CIRCUIT</u> CC.0: Short circuit to earth CO.1: Open circuit or short circuit to +12 V
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NOTES	<p>Priority when dealing with a number of faults: If DF012 Sensor feed voltage no. 2 is present or stored:</p> <ul style="list-style-type: none"> – deal with it first, – fan assembly GMV1 activated (low-speed), – heating and air conditioning system inhibited.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

<p>Check the condition of the refrigerant pressure sensor connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 1202) and ensure that it is operating correctly.</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the insulation, continuity and the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – connection codes 38U, 38X, 38Y between components 1202 and 120. <p>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.</p>
<p>If the wiring of the particle filter downstream temperature sensor, component code 1288, is present (with or without the sensor being present), check the electrical insulation in relation to + 12 V between the following connections:</p> <ul style="list-style-type: none"> • 3XU between components 120 and 1288, • 3TG between components 120 and 1288. <p>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.</p>
If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF249 PRESENT OR STORED	<u>INJECTOR CONTROL</u> 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – the ignition is switched on, – the engine is started.
	Priority when dealing with a number of faults: Deal with faults DF046 Battery voltage , DF026 Injector cylinder 1 control circuit , DF027 Injector cylinder 2 control circuit , DF028 Injector cylinder 3 control circuit and DF029 Injector cylinder 4 control circuit first if they are present or stored.
	Special notes: In some cases if the fault is present, the level 2 warning light illuminates and the engine stops. Use bornier Elé.1681 for all operations on the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2 , Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF249
CONTINUED

This fault appears when the computer detects a fault on the injector control section

Check the condition of the injector connectors (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component codes 193, 194, 195, 196**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3KW** between components **193** and **120**.
- Connection code **3CR** between components **193** and **120**.
- Connection code **3KX** between components **194** and **120**.
- Connection code **3CS** between components **194** and **120**.
- Connection code **3KY** between components **195** and **120**.
- Connection code **3CT** between components **195** and **120**.
- Connection code **3KZ** between components **196** and **120**.
- Connection code **3CU** between components **196** and **120**.

If 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.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF272 PRESENT OR STORED	<u>EGR VALVE CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CC: Short circuit
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – the engine is started, – a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the European On Board Diagnostic warning light is lit, – there is smoke from the exhaust. Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.
	For EGR valves with a flat connector, it is not possible to check the sensor resistance.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF272 CONTINUED 1	
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CO	<i>NOTES</i>	None.
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Check the condition of the connector of the **EGR** valve (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1460**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3VP** between components **1460** and **120**.
- Connection code **3VQ** between components **1460** 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.

EGR valve with a square connector:

Measure the **resistance** of the EGR valve between the following connections:

- Connection code **3VP** of component **1460**.
- Connection code **3VQ** of component **1460**.

EGR valve with a flat connector:

Replace the EGR valve.

Replace the valve if the resistance is not between $1\ \Omega < X < 400\ \Omega$.

When replacing the EGR valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the EGR valve offsets (see **Replacement of components**).

If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF272 CONTINUED 2	
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CC.0 CC.1	NOTES	None.
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<p>Check the condition of the connector of the EGR valve (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Code organe 1460).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the insulation from + 12 V of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3VP between components 1460 and 120. – Connection code 3VQ between components 1460 and 120. <p>Check the insulation against + 5 V (computer supplies) of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3VP between components 1460 and 120. – Connection code 3VQ between components 1460 and 120. <p>Check the insulation against earth of the following connections:</p> <ul style="list-style-type: none"> – Connection code 3VP between components 1460 and 120. – Connection code 3VQ between components 1460 and 120. <p>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.</p>
<p>EGR valve with a square connector:</p> <p>Measure the resistance of the EGR valve between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3VP of component 1460. – Connection code 3VQ of component 1460. <p>EGR valve with a flat connector:</p> <ul style="list-style-type: none"> – Replace the EGR valve. <p>Replace the valve if the resistance is not between 1 Ω < X < 400 Ω.</p> <p>When replacing the EGR valve, run command SC036 Reinitialise programming and select EGR valve to reinitialise the EGR valve offsets (see Replacement of components).</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF272 CONTINUED 3	
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CC	<i>NOTES</i>	None.
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Check the condition of the connector of the **EGR** valve (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1460**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation between** the following connections:

- Connection code **3VP** between components **1460** and **120**.
- Connection code **3VQ** between components **1460** 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.

EGR valve with a square connector:

Measure the **resistance** of the EGR valve between the following connections:

- Connection code **3VP** of component **1460**.
- Connection code **3VQ** of component **1460**.

EGR valve with a flat connector:

- Replace the EGR valve.

Replace the valve if the resistance is not between $1 \Omega < X < 400 \Omega$.

When replacing the EGR valve, run command **SC036 Reinitialise programming** and select **EGR valve** to reinitialise the EGR valve offsets (see **Replacement of components**).

If the fault is still present, contact the Techline.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF276 PRESENT OR STORED	<u>INJECTOR CODE PROGRAMMING</u> 1.DEF: No code stored 2.DEF: Internal electronic fault during programming
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the ignition has been switched on.
	Special notes: If the fault is present, – torque limited, engine speed limited to 1500 rpm , – engine torque limited, – the level 1 warning light is illuminated. Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF 2.DEF	NOTES	This fault appears: – when an incorrect injector code has been entered using command SC002 Enter injector codes , – after replacing the injection computer, – after (re)programming.
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF276
CONTINUED

Check the injector codes and reprogram the correct codes using command **SC002 Enter injector codes**.

Note:

If the computer is new or has just been reprogrammed,
run command **SC001 Enter saved data**,
only if the save has been carried out on the replacement computer.

(Consult the procedures defined in the **Interpretation of commands** section).

- After the codes have been written:
- Switch off the ignition and wait for **the diagnostic tool** message (maximum time **8 minutes**) **Communication lost with computer: EDC16 C36, check the tool connection and computer power supply** before switching the ignition back on.
- Establish dialogue and clear the fault memory.
- End of the procedure.

If the fault has become **stored**, clear the fault memory and end the operation.

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

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF293 PRESENT OR STORED	<p><u>WATER IN DIESEL FUEL SENSOR</u></p> <p>1.DEF: Open circuit on the line or water present in the diesel fuel</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults:</p> <p>The fault is declared present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – a road test. <p>Special notes:</p> <p>If the fault is present,</p> <ul style="list-style-type: none"> – risk of engine destruction if fault DF293 not taken into account, – water in diesel warning light on. <p>Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.</p> <p>IMPORTANT</p> <p>Please observe the cleanliness guidelines and safety advice.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF293
CONTINUED

Make sure that there is **no water** in the diesel filter.

Bleed the diesel filter and the low and high pressure diesel circuits, if necessary (see **MR 364 (Mégane) or 370 (Scénic), Mechanical, 13A, Fuel supply, and 13B, Diesel injection**).

If the diesel filter contains a large amount of water, apply the first part of the **Test 11: Diesel fuel conformity check** (Is the fuel cloudy or does it separate into 2 parts?)

Start the engine and wait **at least 1 minute** to confirm the repair.

If the fault was stored but not present, carry out a road test (see Note).

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

Check **the continuity, insulation and the absence of interference resistance** of the following connection:

- Connection code **3WT** between components **414** and **120**.

Check the +12 V after relay feed of the water detection sensor:

- Connection code **3FB** of component **414**.

Check the earth of the water detection sensor:

- Connection code **NT** of component **414**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

- Start the engine and wait **at least 1 minute** to confirm the repair.

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

If none of these checks reveal any faults:

- Replace the water detection sensor,

- clear the fault,

- start the engine and wait **at least 1 minute** to confirm the repair.

Note:

When the water level in the fuel filter unit is below the sensor's electrodes, some driving conditions (cornering, gradients) may result in water being detected (in fact, the sensor's off-centre position in the fuel filter unit, combined with the driving conditions, causes water to be detected).

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

<p>DF308 PRESENT OR STORED</p>	<p><u>CLOGGED PARTICLE FILTER</u></p>
<p>NOTES</p>	<p>Conditions for applying fault finding procedures to stored faults: The fault is declared present after the engine is started or following a road test.</p>
	<p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – particle filter regeneration is inhibited, – the EGR function is inhibited, – the vehicle performance is reduced, – the level 1 warning light is lit and a warning message (or light) is displayed on the instrument panel.
	<p>Priorities when dealing with a number of faults: Deal with the following faults first:</p> <ul style="list-style-type: none"> – DF315 Particle filter differential pressure sensor if it is present. – DF308 if DF315 is stored. – DF316 Particle filter diff.* pressure if it is present or stored. – DF226 Damper valve circuit if it is present or stored. – DF272 EGR valve control circuit if it is present or stored. – DF647 EGR valve position regulation if it is present or stored. – DF309 Particle filter downstream temperature sensor if it is present or stored. – DF899 Regeneration temperature threshold exceeded if it is present or stored. – DF310 Particle filter upstream temperature sensor if it is present or stored. – DF778 Turbine upstream temperature regulation if it is present or stored. – DF652 Turbine upstream temperature sensor circuit if it is present or stored.

*diff: differential

*temp: temperature

<p>AFTER REPAIR</p>	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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EDC16C36_V48_DF308/EDC16C36_V50_DF308/EDC16C36_V58_DF308

**DF308
CONTINUED**

Carry out an After-Sales regeneration.
Run command **SC017 "Particle filter regeneration"** (see **Interpretation of commands**).
Clear fault DF308 Present or Stored.
Apply **TEST 4 Turbocharged air inlet circuit check**.
If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF309 PRESENT OR STORED	<u>PARTICLE FILTER DOWNSTREAM TEMP.* SENSOR</u> CO.1: Open circuit or short circuit to +12 V CC.0: Short circuit to earth
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NOTES	Conditions for applying fault finding procedures to stored faults: The fault becomes present: <ul style="list-style-type: none"> – ignition is on (CC.0), – following a road test, engine warm (CO.1).
	IMPORTANT The particle filter downstream temperature sensor only measures temperatures greater than 50°C.
	Use the Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.0	NOTES	None.
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Check the condition of the particle filter downstream temperature sensor connector. Check the condition of the engine management computer connector. If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation from earth of the following connections: <ul style="list-style-type: none"> – connection code 3TG, – connection code 3XU, between components 120 and 1288 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, replace the particle filter downstream temperature sensor.

*temp: temperature

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DIESEL INJECTION

Fault finding – Interpretation of faults

13B

DF309 CONTINUED	
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CO.1	NOTES	None.
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Check the condition of the particle filter downstream temperature sensor connector.
Check the condition of the engine management computer connector.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check **the continuity and insulation** from **+ 12 V** of the following connections:
– connection code **3TG**,
– connection code **3XU**,
between components **120** and **1288**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the particle filter downstream temperature sensor.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF310 PRESENT OR STORED	<p><u>PARTICLE FILTER UPSTREAM TEMP.* SENSOR</u></p> <p>CO.1: Open circuit or short circuit to +12 V CC.0: Short circuit to earth</p>
NOTES	<p>Conditions for applying fault finding procedures to stored faults: The fault becomes present:</p> <ul style="list-style-type: none"> – ignition is on (CC.0), – following a road test, engine warm (CO.1). <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – particle filter regeneration is inhibited, – the level 1 warning light is lit, – the OBD warning light comes on after three consecutive driving cycles (start + 5 seconds, switch off the ignition and wait 1 minute). <p>IMPORTANT The particle filter upstream temperature sensor only measures temperatures above 50°C.</p> <p>Use the Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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EDC16C36_V48_DF310/EDC16C36_V50_DF310/EDC16C36_V58_DF310

DIESEL INJECTION

Fault finding – Interpretation of faults

13B

DF310 CONTINUED 1	
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CC.0	NOTES	None.
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Check the condition of the particle filter upstream temperature sensor connector.
Check the condition of the engine management computer connector.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation** from **earth** of the following connections:
– connection code **3XT**,
– connection code **3TD**,
between components **120** and **1287**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the wiring of the particle filter downstream temperature sensor, component code **1288**, is present (with or without the sensor being present), check the electrical insulation in relation to **+ 12 V** between the following connections:
• **3XU** between components **120** and **1288**,
• **3TG** between components **120** and **1288**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the particle filter upstream temperature sensor.

*temp: temperature

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DIESEL INJECTION

Fault finding – Interpretation of faults

13B

DF310 CONTINUED 2	
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CO.1	NOTES	None.
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Check the condition of the particle filter upstream temperature sensor connector.
Check the condition of the engine management computer connector.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check **the continuity and insulation** from **+ 12 V** of the following connections:
– connection code **3XT**,
– connection code **3TD**,
between components **120** and **1287**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the particle filter upstream temperature sensor.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF311 PRESENT OR STORED	<u>FAILED REGENERATIONS LIMIT EXCEEDED</u>
NOTES	Conditions for applying fault finding procedures to stored faults: The fault is declared present after the engine is started or following a road test.
	Special notes: If the fault is present, <ul style="list-style-type: none">– the level 1 warning light is illuminated.– particle filter regenerations when driving are inhibited.
	Priorities when dealing with a number of faults: Firstly, deal with the following faults: <ul style="list-style-type: none">– DF308 Particle filter clogged if it is present or stored.– DF315 Particle filter diff.* pressure sensor if it is present or stored.– DF316 Particle filter diff.* pressure if it is present or stored.– DF055 Turbocharging pressure regulation circuit if it is present or stored.– DF309 Particle filter downstream temperature sensor if it is present or stored.– DF899 Regeneration temperature threshold exceeded if it is present or stored.– DF310 Particle filter upstream temperature sensor if it is present or stored.– DF778 Turbine upstream temperature regulation if it is present or stored.– DF652 Turbine upstream temperature sensor circuit if it is present or stored.– DF272 EGR valve control circuit if it is present or stored.– DF647 EGR valve position regulation if it is present or stored.

*diff: differential

*temp: temperature

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition, wait for the end of the power-latch phase and perform a road test followed by a check using the diagnostic tool .
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EDC16C36_V48_DF311/EDC16C36_V58_DF311

**DF311
CONTINUED**

The fault appears after 11 failed regeneration attempts when driving.

- Carry out an After-Sales regeneration.
- Follow the procedure for command **SC017 Particle filter regeneration** (see **Interpretation of commands**).
- At the end of After-Sales regeneration, if **the CLIP diagnostic tool** indicates that you must replace the particle filter, perform a oil change and replace the oil filter.

Explain to the customer the procedure for regeneration when driving to limit future garage repairs: see **PART D** in the interpretation of **DF312 Speed request**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF312 PRESENT OR STORED	<u>SPEED REQUEST</u>
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NOTES	Conditions for applying fault finding procedures to stored faults: The fault is declared present after the engine is started or following a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none">– the special regenerate particle filter warning light is lit or a warning message is displayed on the instrument panel.– The vehicle needs to be driven specially to activate particle filter regeneration during driving.
	Priorities when dealing with a number of faults: Firstly, deal with the following faults: <ul style="list-style-type: none">– DF308 Particle filter clogged if it is present or stored.– DF311 Failed regenerations limit exceeded if it is present.– DF315 Particle filter diff* pressure sensor if it is present or stored.

The fault appears after:

- 7 failed regeneration attempts when driving and the weight of soot in the particle filter is greater than 21 g.
- the weight of soot in the particle filter is greater than 58 g.

PART A:

The flow chart on the following page can be used to analyse the driving profile and causes of the activation of this fault.

*diff: differential

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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**DF312
CONTINUED 1**

Repair request with **DF312** present or stored ONLY

Read the information from the sub-function **Particle filter histo***: **PR784 to PR793 DF312 No. 1 to No. 10 records**

Are **PR784 to PR793** all equal to **0 miles (0 km)**?

—YES—

NO

Among these parameters (**PR784 to PR793**):

- Find the parameter with the highest mileage: it 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 in the **Particle filter histo*** sub-function:
PR794 to PR803 Stored regeneration failures No. 1 to No. 10.

Does at least one of parameters **PR794 to PR803 = 19659 miles (32766 Km)**?

—YES—

NO

Identify the distance(s) from the values of **parameters PR794 to PR803 Stored regeneration failures 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)**

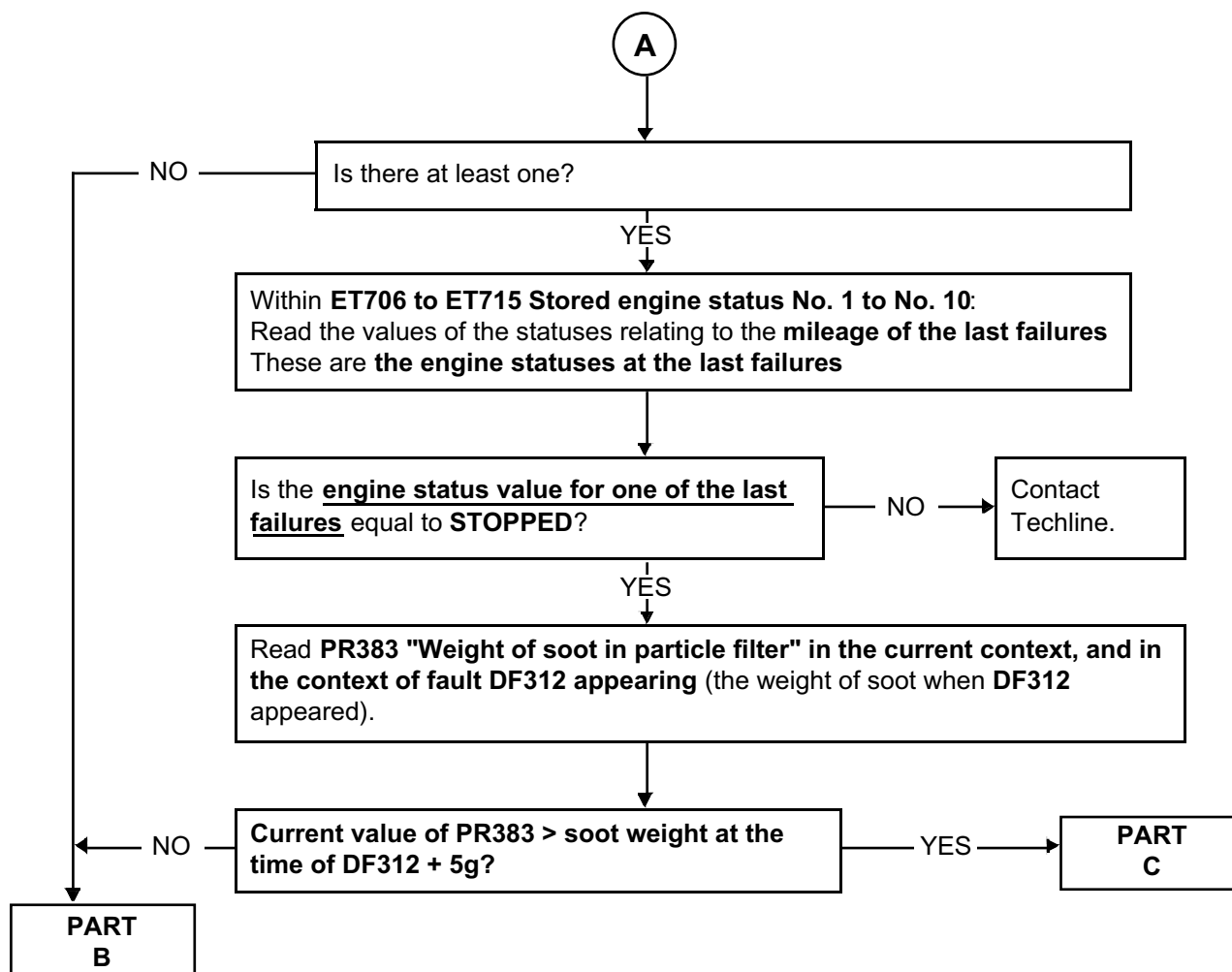
A

Contact the Techline

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

**DF312
CONTINUED 2**



AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

**DF312
CONTINUED 3**

PART B

1. **No particle filter regeneration.**

2. Write on the repair order the parameter and status relating to the last failure:

Mileage of last DF312

Mileage of last failures

Engine statuses of 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 repair order by the service advisor for the customer:

Before the last time the **Particle Filter message or warning light** illuminated (appeared at the **Mileage of the last DF312**), the customer had not adhered to 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, making use of the parameters noted in the repair order: see **PART D**.

PART C

Carry out an After-Sales regeneration with the **consent of the Techline**.

Follow the procedure for command **SC017 Particle filter regeneration** (see **Interpretation of commands**).

Explain to the customer the procedure for regeneration when driving to avoid unnecessary repairs: see **PART D**.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF312
CONTINUED 4

PART D

Procedure to switch off the **Particle filter** message or warning light on the instrument panel

The customer must carry out a specific driving operation (cf. vehicle user manual) that consists of:

1. When the engine is warm, drive at a speed greater than **36 mph (60 km/h)** for **1 minute** to trigger the regeneration procedure.
2. Keep driving at an average speed of **36 mph (60 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 other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF315 PRESENT OR STORED	<p><u>PARTICLE FILTER DIFF* PRESSURE SENSOR</u></p> <p>CO: Open circuit CC.1: Open circuit or short-circuit on + 12 volts C0.0: Open circuit or short circuit to earth</p>
NOTES	<p>Conditions for applying fault finding procedures to stored faults: The fault is declared present after the engine is started or following a road test.</p> <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – the level 1 warning light is lit, – the OBD warning light will come on after three consecutive driving cycles (start + 5 seconds + switch off the ignition switched and wait 1 minute), – the particle filter fault finding procedure is inhibited, – particle filter regeneration is inhibited. <p>Priorities when dealing with a number of faults:</p> <ul style="list-style-type: none"> – DF315 if it is present. – DF308 "Particle filter clogged" if DF315 is stored and DF308 is present. – DF011 Sensor supply voltage no. 1 if it is present or stored. <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

*diff: differential

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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EDC16C36_V48_DF315/EDC16C36_V50_DF315/EDC16C36_V58_DF315

DIESEL INJECTION

Fault finding – Interpretation of faults

13B

DF315 CONTINUED 1	
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CC.1	NOTES	None.
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Check the condition of the connector of the differential pressure sensor.
Check the condition of the connector of the engine management computer.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation** against **+12 V** 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 procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF315 CONTINUED 2	
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CO.0 CO	NOTES	None.
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<p>Check the condition of the connector of the differential pressure sensor (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1290).</p> <p>Check the condition of the connector of the engine management computer (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the continuity and insulation to earth of the following connections:</p> <ul style="list-style-type: none"> – connection code 3TL, – connection code 3TM, <p>between components 120 and 1290.</p> <p>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.</p>
<p>If the wiring of the particle filter downstream temperature sensor, component code 1288, is present (with or without the sensor being present), check the electrical insulation in relation to + 12 V between the following connections:</p> <ul style="list-style-type: none"> • 3XU between components 120 and 1288, • 3TG between components 120 and 1288. <p>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.</p>
<p>If the fault is still present, replace the differential pressure sensor.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF316 PRESENT OR STORED	<u>PARTICLE FILTER DIFF* PRESSURE</u> 1.DEF: Signal incoherent 2.DEF: Below minimum threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on. – the engine is started.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the particle filter fault finding procedure is inhibited, – the Level 1 and OBD warning lights are lit. Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

Check the condition of the pressure pipes on the differential pressure sensor. Check that they are sealed and in the correct position. Replace if necessary.
Check the condition of the connectors on the differential pressure sensor and the injection computer. If 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, insulation and the absence of interference resistance on the following connections: <ul style="list-style-type: none"> – Connection code 3AAQ, – Connection code 3TM, – Connection code 3TL, between components 1290 and 120 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

* diff: differential

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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EDC16C36_V48_DF316/EDC16C36_V50_DF316/EDC16C36_V58_DF316

DF502 PRESENT OR STORED	<u>CRUISE CONTROL OR SPEED LIMITER BUTTON</u> 1.DEF: Cruise control/Speed limiter on/off button inconsistency
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NOTES	Conditions for applying the fault finding procedure to stored faults: If the fault is declared present after: – a road test with activation of the cruise control/speed limiter function, – the engine is started.
	Special notes: If the fault is present, the cruise control/speed limiter is switched off. Use bornier Elé. 1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

<p>Check the condition of the connector of the start/stop button for the cruise control/speed limiter (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1081).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>With the button released, check the insulation between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FX of component 1081. – Connection code AP10 of component 1081. – Connection code 3PD of component 1081. – Connection code AP10 of component 1081. <p>Check the continuity between connections 3FX and AP10 of component 1081 in the cruise control position.</p> <p>Check the continuity between connections 3PD and AP10 of component 1081 in the speed limiter position.</p>
<p>Check the continuity and absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FX between components 1081 and 120. – Connection code 3PD between components 1081 and 120. <p>Check for + 12 V on the connector of the cruise control/speed limiter button.</p> <ul style="list-style-type: none"> – Connection code AP10 of component 1081. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, replace the start/stop button of the cruise control/speed limiter.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF530 PRESENT OR STORED	<u>EGR ADAPTIVES</u> 1.DEF: Offset invalid
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – the engine is started, – a road test.
	Special notes: If the fault is present the EGR function is disabled. Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

1.DEF	NOTES	None.
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Check the condition of the connector of the EGR valve (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Code organe1460). Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120). If the connector(s) is/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.
Run command SC036 Reinitialise the programming and select EGR valve to reinitialise the EGR valve offsets. (see Interpretation of commands).
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF643 PRESENT OR STORED	<u>RAIL PRESSURE REGULATOR CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Internal electronic fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault reappears after: <ul style="list-style-type: none"> – the ignition is switched on, – the regulator is actuated by command AC011 Rail pressure regulator.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – the engine stops, – the level 2 warning light is lit. Use bornier Elé. 1681 for all operations on the engine management computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

<p>Check the condition of the pressure regulator connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1105).</p> <p>Check the condition of the engine management computer connector (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p> <p>Check the low pressure circuit.</p> <p>Repair if necessary.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF643
CONTINUED

Check **the continuity and insulation against earth and against +12 V** on the following connection:

– Connection code **3HI** between components **1105 and 120**.

Also check for **+ 12 V after relay** feed on the pressure regulator connector.

– Connection code **3FB** of component **1105**.

If 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 pressure regulator between the following connections:

– Connection code **3FB** of component **1105**.

– Connection code **3HI** of component **1105**.

If the resistance value of the regulator is not **$3 \pm 0.1 \Omega$ at 20]X**, replace the pressure regulator.

If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF647 PRESENT OR STORED	<u>EGR VALVE POSITION REGULATION</u> 1.DEF: Inconsistent EGR 1 offset 2.DEF: Offset too high: valve clogged, stuck open or abnormal 3.DEF: Inconsistent EGR 3 offset 4.DEF: Above maximum threshold 5.DEF: Valve jammed closed
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – the engine is started, – a road test.
	Special notes: If the fault is present: – the level 1 warning light is illuminated for 1.DEF , 3.DEF and 5.DEF , – the European On Board Diagnostic warning light is illuminated for 2.DEF and 4.DEF , – the EGR function and turbocharging are inhibited by the engine management computer, – engine torque is limited. Use bornier Elé. 1681 bornier for all operations on the connector of the engine management computer.
	If faults DF647 and DF038 Computer are displayed at the same time, deal with DF038 Computer first. Then check that the EGR valve is open during idling to make sure that the programming has not been lost. If the valve does not open, carry out the programming phase.
	Priorities when dealing with a number of faults: – DF209 EGR valve position sensor circuit , – DF046 Battery voltage , – DF012 Sensor supply voltage no. 2 , – DF272 EGR valve control circuit , if they are present or stored.
	For EGR valves with a flat connector, it is not possible to check the sensor resistance.
	Use Wiring Diagram Technical Note, Mégane II ph2 , Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF647
CONTINUED

Check the condition of the connector of the **EGR** valve (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1460**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector(s) is/are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3GC** between components **1460** and **120**.
- Connection code **3JM** between components **1460** and **120**.
- Connection code **3EL** between components **1460** 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

EGR valve with a square connector:

Measure **the resistance** of the EGR valve between the following connections:

- Connection code **3JM** of component **1460**.
- Connection code **3GC** of component **1460**.

EGR valve with a flat connector:

Replace the EGR valve.

Replace the valve if the resistance is not **between: $3.9\text{ k}\Omega < X < 9.1\text{ k}\Omega$** .

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 other faults. Clear the fault memory.

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

DF652 PRESENT OR STORED	<u>TURBINE UPSTREAM TEMPERATURE SENSOR CIRCUIT</u> CC.O: Short circuit to earth CO.1: Open circuit or short-circuit on +12 V.
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NOTES	Conditions for applying fault finding procedures to stored faults: The fault becomes present with the ignition on (CC.0) or after a road test, with the engine warm (CO.1).
	Special notes: If the fault is present: <ul style="list-style-type: none"> – particle filter regeneration is inhibited, – the vehicle performance is reduced, – temperature regulation before the particle filter is inhibited.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

CC.0	NOTES	None.
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Check the condition of the turbine upstream temperature sensor connector. Check the condition of the engine management computer connector. If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation from earth of the following connections: <ul style="list-style-type: none"> – connection code 3ABS, – connection code 3ABT, between components 120 and 1589 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, replace the turbine upstream temperature sensor.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DIESEL INJECTION

Fault finding – Interpretation of faults

13B

DF652 CONTINUED	
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CO.1	NOTES	None.
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Check the condition of the turbine upstream temperature sensor connector.
Check the condition of the engine management computer connector.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check **the continuity and insulation** of the following connections against **+ 12 volts**:
– connection code **3ABS**,
– connection code **3ABT**,
between components **120** and **1589**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the turbine upstream temperature sensor.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF778 PRESENT OR STORED	<u>TURBINE UPSTREAM TEMPERATURE CONTROL</u> 1.DEF: Positive loop deviation
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault becomes present after starting the engine.
	Priorities when dealing with a number of faults: Deal with faults DF652 Turbine upstream temperature sensor circuit and DF226 Damper valve circuit first, if they are present or stored.
	Special notes: If the fault is present: <ul style="list-style-type: none">– The level 1 warning light is illuminated.– A loss of engine performance will be perceived.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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EDC16C36_V48_DF778/EDC16C36_V50_DF778/EDC16C36_V58_DF778

DF778
CONTINUED

Check the turbine upstream temperature sensor connections.

check the engine management computer connections.

If 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** from **+ 5 V** and **+ 12 V** of the following connections:

– Connection code **3ABS**,

– Connection code **3ABT**,

between components **1589** and **120**.

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

Check **the continuity, the absence of interference resistance, and the insulation** against **earth** of the following connection:

– Connection code **3ABS** between components **1589** 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.

Check for **the earth** on the connector of the turbine upstream temperature sensor:

– Connection code **3ABT** of component **1589**.

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**.

Then 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 other faults. Clear the fault memory.

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

DF890 PRESENT OR STORED	<u>MOVEMENT DURING PARTICLE FILTER REGENERATION</u>
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NOTES	Conditions for applying fault finding procedures to stored faults: The fault becomes present during an After-Sales regeneration carried out using the diagnostic tool at a speed above zero.
	Special notes: If the fault is present: – regeneration in progress is stopped.

IMPORTANT

The fault is present because the vehicle was driven while the After-Sales regeneration was in progress. The vehicle must remain stationary throughout regeneration.

**DO NOT DRIVE THE VEHICLE DURING AFTER-SALES REGENERATION.
CHECK THAT THE VEHICLE IS CORRECTLY IMMOBILISED.**

- switch off the ignition and wait for the **diagnostic tool** message (maximum time **8 minutes**): **Communication lost with computer: EDC16C36, check the tool connection and computer supply.**
- switch on the ignition,
- establish dialogue with the injection computer,
- clear the faults from the computer memory,
- 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.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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EDC16C36_V48_DF890/EDC16C36_V50_DF890/EDC16C36_V58_DF890

DF891 PRESENT OR STORED	<p><u>GROUP 1 INJECTORS FEED</u></p> <p>1.DEF: Faulty connections 2.DEF: Short-circuit on earth or short-circuit on +12 V</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: If the fault becomes present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – the engine is started. <p>Priority when dealing with a number of faults: Deal with faults DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit, DF028 Cylinder 3 injector control circuit and DF029 Cylinder 4 injector control circuit first, if they are present or stored.</p> <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – the level 2 injection warning light is illuminated, – the engine stops. <p>Use bornier Elé. 1681 for all operations on the engine management computer connectors.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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**DF891
CONTINUED**

Check the condition of the injector connectors (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component codes 193, 194, 195, 196**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3KW** between components **193** and **120**.
- Connection code **3CR** between components **193** and **120**.
- Connection code **3KX** between components **194** and **120**.
- Connection code **3CS** between components **194** and **120**.
- Connection code **3KY** between components **195** and **120**.
- Connection code **3CT** between components **195** and **120**.
- Connection code **3KZ** between components **196** and **120**.
- Connection code **3CU** between components **196** and **120**.

If 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

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF892 PRESENT OR STORED	<p><u>GROUP 2 INJECTORS FEED</u></p> <p>1.DEF: Faulty connections 2.DEF: Short-circuit on earth or short-circuit on +12 V</p>
NOTES	<p>Conditions for applying the fault finding procedure to stored faults: If the fault becomes present after:</p> <ul style="list-style-type: none"> – the ignition is switched on, – the engine is started. <p>Priority when dealing with a number of faults: Deal with faults DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit, DF028 Cylinder 3 injector control circuit and DF029 Cylinder 4 injector control circuit first if they are present or stored.</p> <p>Special notes: If the fault is present:</p> <ul style="list-style-type: none"> – the level 2 injection warning light is illuminated, – the engine stops. <p>Use bornier Elé. 1681 for any operations on the connectors of the engine management computer.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF892
CONTINUED

Check the condition of the injector connectors (see **Wiring Diagram Technical Note, Vehicle, Component codes 193, 194, 195, 196**).

Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3KW** between components **193** and **120**.
- Connection code **3CR** between components **193** and **120**.
- Connection code **3KX** between components **194** and **120**.
- Connection code **3CS** between components **194** and **120**.
- Connection code **3KY** between components **195** and **120**.
- Connection code **3CT** between components **195** and **120**.
- Connection code **3KZ** between components **196** and **120**.
- Connection code **3CU** between components **196** and **120**.

If 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.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

DF899 PRESENT OR STORED	<u>REGENERATION TEMPERATURE LIMIT EXCEEDED</u> 1.DEF: Above maximum threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present during an After-Sales regeneration, if the temperature threshold is exceeded.
	Special notes: If the fault is present: – regeneration in progress is stopped.

Carry out particle filter replacement:

- Switch on the ignition.
- establish dialogue with the injection computer,
- run command **SC036 Reinitialise programming**,
- select **After particle filter replacement** as the operation type, then follow the instructions given by the diagnostic tool,
- **switch off the ignition**,
- wait for the **diagnostic tool** message (maximum time **8 minutes**) **Communication lost with computer: EDC16C36, check the tool connection and the computer supply** before switching the ignition back on,
- clear the faults from the computer memory (this operation must be carried out within **3 minutes** of the ignition being switched on).

If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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EDC16C36_V48_DF899/EDC16C36_V50_DF899/EDC16C36_V58_DF899

DF953 PRESENT OR STORED	<u>PARTICLE FILTER ABSENT</u>
NOTES	Conditions for applying fault finding procedures to stored faults: The fault is declared present after the engine is started or following a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none"> – particle filter regeneration is inhibited, – blue/white smoke and black particles coming from the exhaust, the OBD warning light will illuminate after three consecutive driving cycles (start + 5 seconds, switch off the ignition and wait 40 seconds).
	Priorities when dealing with a number of faults: <ul style="list-style-type: none"> – DF315 Particle filter diff.* pressure sensor if present or stored
	IMPORTANT In the long term, this fault may lead to premature wear and a greater risk of turbocharger failure.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

* diff: differential

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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EDC16C36_V48_DF953/EDC16C36_V50_DF953/EDC16C36_V58_DF953

**DF953
CONTINUED**

Check the condition of the connector of the differential pressure sensor.
Check the condition of the connector of the engine management computer.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the particle filter is present.
If it is present,
Visually check that the particle filter is in good condition by positioning the vehicle on a lift:
– not damaged (no abnormal welds, if necessary compare it with another vehicle fitted with particle filter),
– if there are After-Sales sleeves, as a result of a previous operation, check that the particle filter's contents were not emptied out when it was removed.
If the particle filter is not in good condition or is absent:
– Replace the particle filter.
– Switch on the ignition.
– establish dialogue with the injection computer,
– run command **SC036 Reinitialise programming**,
– select **After particle filter replacement** as the operation type, then follow the instructions given by the **diagnostic tool**,
– switch off the ignition,
– wait for the **diagnostic tool** message (maximum time **8 minutes**): **Communication lost with computer: EDC16C36, check the tool connection and computer supply** before switching the ignition back on.
– clear the faults from the computer memory (this operation must be carried out within **3 minutes** of the ignition being switched on).
If the fault is still present, contact the Techline.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.
Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using **the diagnostic tool**.

<p>DF967 PRESENT OR STORED</p>	<p><u>RICHNESS RATIO SENSOR CIRCUIT</u> CC.0: Short circuit to earth CC.1: Short-circuit on +12 volts CO: Open circuit 1.DEF: Abnormal voltage 2.DEF: Below minimum threshold 3.DEF: Above maximum threshold</p>
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<p>NOTES</p>	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – the ignition is switched on, – a road test.</p>
	<p>Special notes: Use the bornier Elé. 1681 for all operations on the connectors of the injection computer. The richness ratio sensor is only present on certain F9Q818 engines. Check that the vehicle is correctly equipped with this sensor.</p>
	<p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

<p>Check the condition of the connector of the richness ratio sensor (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1587). Check the condition of the connector of the engine management computer (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 120). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the continuity, insulation and the absence of interference resistance on the following connections: – Connection code 3AAS between components 1587 and 120. – Connection code 3AAT between components 1587 and 120. – Connection code 3AAU between components 1587 and 120. – Connection code 3AAV between components 1587 and 120. – Connection code 3AAW between components 1587 and 120. Check for + 12 V on the connector of the richness ratio sensor. – Connection code 3FB of component 1587. If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

<p>AFTER REPAIR</p>	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool.</p>
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DF970 PRESENT OR STORED	<u>RICHNESS RATIO SENSOR HEATING CIRCUIT</u> CC.0: Short circuit to earth CC.1: Short-circuit on +12 volts CO: Open circuit 1.DEF: Internal electrical fault 2.DEF: Below minimum threshold 3.DEF: Above maximum threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none"> – the ignition is switched on, – a road test, – the relay is actuated by command AC231 Richness ratio sensor heating.
	Special notes: Use the bornier Elé. 1681 for all operations on the connectors of the injection computer. The richness ratio sensor is only present on certain F9Q818 engines . Check that the vehicle is correctly equipped with this sensor.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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EDC16C36_V44_DF970/EDC16C36_V4C_DF970/EDC16C36_V48_DF970

**DF970
CONTINUED**

Check the condition of the connector of the richness ratio sensor (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1587**).

Check the condition of the connector of the engine management computer (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

- Connection code **3AAS** between components **1587** and **120**.
- Connection code **3AAT** between components **1587** and **120**.
- Connection code **3AAU** between components **1587** and **120**.
- Connection code **3AAV** between components **1587** and **120**.
- Connection code **3AAW** between components **1587** and **120**.

Check for **+ 12 V** on the connector of the richness ratio sensor.

- Connection code **3FB** of component **1587**.

If 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.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

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

DF980 PRESENT OR STORED	<u>RICHNESS RATIO SENSOR FUNCTION</u> 1.DEF: Above max threshold 2.DEF: Below minimum threshold 3.DEF: Signal incoherence
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the ignition has been switched on.
	Special notes: Use the bornier Elé. 1681 for all operations on the connectors of the injection computer. The richness ratio sensor is only present on certain F9Q818 engines . Check that the vehicle is correctly equipped with this sensor.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

<p>Check the condition of the connector of the richness ratio sensor (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1587).</p> <p>Check the condition of the connector of the engine management computer (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 120).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Check the continuity, insulation and the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 3AAS between components 1587 and 120. – Connection code 3AAT between components 1587 and 120. – Connection code 3AAU between components 1587 and 120. – Connection code 3AAV between components 1587 and 120. – Connection code 3AAW between components 1587 and 120. <p>Check for + 12 V on the connector of the richness ratio sensor.</p> <ul style="list-style-type: none"> – Connection code 3FB of component 1587. <p>If there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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DF1020 PRESENT OR STORED	<u>ENGINE OIL DILUTION</u> 1. DEF: Above maximum threshold
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: <ul style="list-style-type: none">– the engine is started.– a road test.
	Special notes: If the fault is present: <ul style="list-style-type: none">– particle filter regeneration is inhibited. Use bornier Elé. 1681 for any operations on the injection computer connectors.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

Note:

This fault is activated in case of considerable oil dilution due to a significant number of particle filter regenerations.

Carry out the following:

- An oil change (see **MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 10A Engine and peripherals, Engine oil: Draining – Filling**),
- reset the oil wear meter,
- clear the faults.

Reset the oil wear meter after the oil change:

It will be necessary to reinitialise the display of the trip computer.

With the ignition on:

- hold down the TC* button for **5 s**.

Re-initialisation has worked when the on-board computer no longer displays the key.

If this is not the case, restart the procedure.

Specific case:

If an oil change is performed before the oil service interval warning is exceeded, reinitialise the display.

*ADAC: Trip Computer

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check using the diagnostic tool .
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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 chapters:

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 control
ET014	Fan assembly 1 check
ET015	Monitor cooling fan 2
ET038	Engine
ET039	Brake pedal
ET040	Clutch pedal
ET042	Cruise control/speed limiter
ET076	Starting
ET077	Impact detected
ET079	Air conditioning present
ET104	Injector code use
ET120	Pre-postheating signal
ET143	Low speed fan assembly relay control
ET144	High-speed fan assembly relay control
ET205	Heating element No. 1 relay control
ET206	Heating element No. 2 relay control
ET207	heating element No. 3 relay control
ET238	Synchronisation
ET300	Richness regulation
ET341	Immobiliser code programmed
ET405	Clutch pedal switch
ET415	Deactivation of cruise control/speed limiter
ET651	EGR programming cut-off
ET703	Cruise control/speed limiter buttons
ET704	Brakecontact No. 1
ET705	Brakecontact No. 2

DIESEL INJECTION

Fault finding – Status summary table

13B

Tool status	Diagnostic tool title
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 regeneration request status No. 1
ET743	Stored regeneration request status No. 2
ET744	Stored regeneration request status No. 3
ET745	Stored regeneration request status No. 4
ET746	Stored regeneration request status No. 5
ET747	Stored regeneration request status No. 6
ET748	Stored regeneration request status No. 7
ET749	Stored regeneration request status No. 8
ET750	Stored regeneration request status No. 9
ET751	Stored regeneration request status No. 10

ET001	<u>COMPUTER + AFTER IGNITION FEED</u>
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STATUS DEFINITION	<p>PRESENT: This status indicates that the + after ignition feed is active.</p> <p>"ABSENT": This status indicates that the + after ignition is not active.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
	Use the Mégane II ph2, Scénic II ph2 Wiring Diagram Technical Note.

<p>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C</p>
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PRESENT	<p>Ignition on and engine running warm at idle speed, + after ignition feed is activated. In the event of a fault, apply the interpretation of DF046 Battery voltage or DF151 Main relay circuit.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET001 CONTINUED	
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Sensor electrical conformity

ABSENT	NOTES	Ignition on
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If the ignition is not switched on, the status **ET001** must be **ABSENT**.
As soon as the ignition is switched on, the computer should be supplied with power. The status **ET001** becomes **PRESENT**.
If this status remains locked on **ABSENT**, follow the procedure below:
Check the status of fuse **FM3 (30A)** in the engine fuse and relay box.
Check the **continuity and absence of any interference resistance** on the following connection:
– connection code **3AA** between components **120** and **983**.
If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.
Check the condition of the engine management computer connector (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, component code 120**).
If the connector or connectors are faulty and there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
If the fault is still present, contact the Techline.

PRESENT	NOTES	Ignition on
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Normal operating condition.
The computer is correctly supplied after the ignition has been switched on.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET003	<u>ENGINE IMMOBILISER</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the immobiliser is active. INACTIVE: This status indicates that the immobiliser is not active.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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ACTIVE	Refer to the fault finding note for the UCH (see 87B, Passenger compartment connection unit).
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INACTIVE	Refer to the fault finding note for the UCH (see 87B, Passenger compartment connection unit).
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET004	<u>AIR CONDITIONING AUTHORISATION</u>
STATUS DEFINITION	YES: This status indicates that the air conditioning is active. NO: This status indicates that the air conditioning is inactive.
NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C	
YES or NO	If the air conditioning is authorised or the compressor actuated (see 62A, Air conditioning).

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET004 CONTINUED	
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Sensor electrical conformity

YES	<p>The air conditioning authorisation only changes to YES if:</p> <ul style="list-style-type: none">– the air conditioning request has been made by the driver (air conditioning switch in AC or AUTO position with minimum ventilation),– the engine is not under full load,– the air conditioning system is not faulty.
NO	<p>Status ET004 remains NO under the following conditions:</p> <ul style="list-style-type: none">– Vehicle stopped with the ignition on,– faults present in the air conditioning circuit,– no air conditioning request made by the driver,– engine under full load. <p>If status ET004 remains NO then the air conditioning should be authorised. Check:</p> <ul style="list-style-type: none">– that the air conditioning compressor starts correctly,– the air conditioning system supply fuses,– the presence of refrigerant in the air conditioning circuit, <p>If the fault is still present, check the air conditioning computer faults (see 62B, Air conditioning).</p>

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET007	<u>PRE-POSTHEATING UNIT CONTROL</u>
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STATUS DEFINITION	<p>ACTIVE: when the heater plugs are activated according to the temperature of the engine coolant.</p> <p>INACTIVE: after the engine has been running for a certain period.</p> <p>In the event of a fault, consult the interpretation of fault DF017 Preheating unit control circuit.</p>
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NOTES	<p>Special notes:</p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on

ACTIVE	<p>When the ignition is switched on, the status ET007 must have an ACTIVE status for a time that varies depending on the temperature of the engine coolant. Both the relay and the heater plugs are supplied.</p> <p>After starting, the status should remain ACTIVE for a time that varies depending on the engine temperature. This is the postheating phase.</p> <p>If ET007 is INACTIVE when the ignition is switched on, check:</p> <ul style="list-style-type: none"> – The supply fuse FM12 (70A) in (597) the engine fuse and relay box. – The feed to the heater plugs after relay actuation, and the connections of the heater plugs. <p>IMPORTANT</p> <p>On this engine, the plug supply voltage is variable.</p>
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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<p>ET007 CONTINUED</p>	
<p>ACTIVE</p>	<p>The continuity and absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 37AB between components 257 and 683, – Connection code 37AA between components 257 and 680, – Connection code 37Z between components 257 and 681, – Connection code 37AC between components 257 and 682. <p>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 the wiring.</p> <p>Check the status of the preheating unit and that they are connected correctly (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 257).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector. Otherwise replace the wiring.</p> <p>If the vehicle starts, postheating has ended and status ET007 remains ACTIVE during the engine operating phase, consult the interpretation of faults DF017 'Preheating unit control circuit' and DF025 Preheating unit diagnostic line (see Interpretation of faults).</p>
<p>INACTIVE</p>	<p>If the vehicle will not start, the status remains INACTIVE and preheating does not start when the ignition is switched on or during the starting phase.</p> <p>Check the continuity and absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FY, between components 120 and 257. – Connection code 3FF between components 120 and 257. <p>Check the + 12 V battery supply to the pre-postheating unit.</p> <ul style="list-style-type: none"> – Connection code BP35 of component 257. <p>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 the wiring.</p>
<p>Conformity check with engine running, engine coolant temperature > 80°C</p>	
<p>ACTIVE then INACTIVE</p>	<p>After the engine has been running for a certain period, the status changes from ACTIVE to INACTIVE.</p> <p>In the event of a fault, consult the interpretation of fault DF017 Preheating unit control circuit.</p>
<p>AFTER REPAIR</p>	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>

ET014	<u>FAN ASSEMBLY NO. 1 CHECK</u>
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STATUS DEFINITION	<p>RUNNING: This status indicates that the fan assembly is engaged.</p> <p>STOPPED: This status indicates that the fan assembly is not engaged.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system operation programming.</p>
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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RUNNING	<p>The low-speed engine fan unit is supplied in three scenarios:</p> <ul style="list-style-type: none"> – the engine coolant temperature is greater than 89°C, – the air conditioning is operating, – the injection computer has system faults that could lead to the engine overheating. <p>When the low-speed engine fan is supplied:</p> <ul style="list-style-type: none"> – status ET014 Fan assembly 1 check becomes RUNNING. – status ET143 Low speed fan unit relay control becomes ACTIVE.
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Conformity check with engine stopped and ignition on

STOPPED	<p>The low-speed engine fan assembly stops when:</p> <ul style="list-style-type: none"> – the engine coolant temperature is less than 89°C, – the air conditioning is not switched on by the driver.
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET015	<u>FAN ASSEMBLY NO. 2 CHECK</u>
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STATUS DEFINITION	<p>RUNNING: This status indicates that the fan assembly is engaged.</p> <p>STOPPED: This status indicates that the fan assembly is not engaged.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system operation programming.</p>
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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RUNNING	<p>The low-speed engine fan unit is supplied in three scenarios:</p> <ul style="list-style-type: none"> – the engine coolant temperature is greater than 89°C, – the air conditioning is operating, – the injection computer has system faults that could lead to the engine overheating. <p>When the low-speed engine fan is supplied:</p> <ul style="list-style-type: none"> – status ET015 Fan assembly 2 check becomes RUNNING. – status ET144 Low speed fan unit relay control becomes ACTIVE.
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Conformity check with engine stopped and ignition on

STOPPED	<p>The low-speed engine fan assembly stops when:</p> <ul style="list-style-type: none"> – the engine coolant temperature is less than 89°C, – the air conditioning is not switched on by the driver.
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET038	<u>ENGINE</u>
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STATUS DEFINITION	<p>+ AFTER IGNITION: This status indicates that the engine is in + after ignition.</p> <p>RUNNING: This status indicates that the engine is running.</p> <p>STOPPED: This status indicates that the engine is stopped.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on

STOPPED	Status ET038 is Stopped if the engine ignition is on without the starter engaged.
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Conformity check with engine running, engine coolant temperature > 80°C

RUNNING	<p>This status indicates that the engine is running.</p> <p>In the event of a fault, switch off the ignition and wait for the diagnostic tool message (maximum time 8 minutes) Communication lost with computer: EDC16C36, check the tool connection and computer power supply, before switching the ignition back on.</p> <p>If the fault is still present, contact the Techline.</p>
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Status ET038 may also be in the STARTING or STALLED phase
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UNDER starter	Status ET038 is Starting when the engine is in starting phase.
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STALLED	Status ET038 is Stalled if the engine has stalled. The vehicle is still under + after ignition feed .
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET039	<u>BRAKE PEDAL</u>
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STATUS DEFINITION	DEPRESSED: This status indicates that the brake pedal is in the depressed position. RELEASED: This status indicates that the brake pedal is in the released position.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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DEPRESSED	Status ET039 is RELEASED when there is no action on the brake pedal. In the event of a fault, see the interpretation of statuses ET704 Brake switch no. 1 and ET705 Brake switch no. 2 .
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RELEASED	Status ET039 is DEPRESSED when there is pressure on the brake pedal. In the event of a fault, see the interpretation of statuses ET704 Brake switch no. 1 and ET705 Brake switch no. 2 .
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET040	<u>CLUTCH PEDAL</u>
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STATUS DEFINITION	DEPRESSED: This status indicates that the clutch pedal is depressed. RELEASED: This status indicates that the clutch pedal is released.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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DEPRESSED	Status ET040 is DEPRESSED when there is no action on the clutch pedal. In the event of a fault, see the interpretation of status ET405 Clutch pedal switch . Non-conformity of the brake signals and or the clutch switch signals can cause the engine to race during gear changes. If the fault is still present, contact Techline.
RELEASED	When the vehicle ignition is switched on without depressing the clutch pedal, status ET040 is RELEASED . In the event of a fault, see the interpretation of status ET405 Clutch pedal switch . Non-conformity of the brake signals and or the clutch switch signals can cause the engine to race during gear changes. If the fault is still present, contact Techline.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET042	<u>CRUISE CONTROL/SPEED LIMITER</u>
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STATUS DEFINITION	<p>NOT DETECTED: This status indicates that the cruise control or speed limiter function is not present on the vehicle.</p> <p>INACTIVE: This status indicates that the main On/Off switch of the cruise control/speed limiter is in the rest (or neutral) position.</p> <p>LIMITER: This status indicates that the driver has used the main switch to select the speed limiter.</p> <p>CRUISE CONTROL: This status indicates that the driver has used the main switch to select the cruise control.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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NOT DETECTED	The cruise control or speed limiter function is not present on the vehicle.
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INACTIVE	No button has been pressed.
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SPEED LIMITER	<p>The speed limiter ON/OFF button has been pressed.</p> <p>Lights the orange warning light on the instrument panel.</p>
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CRUISE CONTROL	<p>The cruise control ON/OFF button has been pressed.</p> <p>Lights the green warning light on the instrument panel.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
---------------------	---

**ET042
CONTINUED 1**

Sensor electrical conformity

NOT DETECTED

If the vehicle is not fitted with cruise control/speed limiter function buttons, status **ET042** is permanently **NOT DETECTED**. This confirms that the cruise control/speed limiter function is not present on the vehicle.

If the vehicle is fitted with cruise control or speed limiter function buttons and the main switch is in the rest (or neutral) position and the injection computer has just been programmed or reprogrammed, then status **ET042** is **NOT DETECTED**.

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.

Return to rest position

For status **ET042**: the tool displays **INACTIVE**.

If not, several steps must be checked:

1. return to the multiplex network test page on the CLIP application. Repeat the multiplex network test. Re-establish dialogue with the injection computer. Check **ET042**. If **ET042** is **INACTIVE**, the injection computer has detected the various positions of the main switch. The cruise control/speed limiter is active.
2. If status ET042 is still **NOT DETECTED**, check that the vehicle's owner has not had the cruise control/speed limiter function disabled in the past. Contact Techline.

AFTER REPAIR

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

ET042 CONTINUED 2	
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INACTIVE	<p>MEGANE II:</p> <p>When the main switch is in rest position (or neutral), status ET042 is INACTIVE. If CRUISE CONTROL or SPEED LIMITER appears despite the main switch being in the rest (or neutral) position, carry out the following operations:</p> <p>Check the connections of the cruise control/speed limiter main switch. Check for +12 V after ignition on the switch connector.</p> <ul style="list-style-type: none"> – Connection code AP43 of component 1081. <p>Disconnect the main switch, and when it is in the rest position, check the insulation between:</p> <ul style="list-style-type: none"> – Connection codes AP43 and 3FX, of component 1081. – Connection codes AP43 and 3PD of component 1081. <p>Check the continuity between connections AP43 and 3PD of component 1081 in the speed limiter position. Check the continuity between connections AP43 and 3FX of component 1081 in the cruise control position. If these checks are not in order, replace the switch.</p> <p>Check the continuity, insulation and the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 3FX, – Connection code 3PD, <p>between components 1081 and 120.</p> <p>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.</p>
-----------------	--

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

ET042 CONTINUED 3

INACTIVE

SCENIC II:

When the main switch is in rest position (or neutral), status **ET042** is **INACTIVE**.
If **CRUISE CONTROL** or **SPEED LIMITER** appears despite the main switch 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** after ignition on the switch connector.
– Connection code **AP43 of component 1546**.
Disconnect the main switch, and when it is in the rest position, check the insulation between:
– Connection codes **AP43 and 3FX of component 1546**.
– Connection codes **AP43 and 3PD of component 1546**.
Check the continuity between **connections AP43 and 3PD of component 1546** in the speed limiter position.
Check the continuity between **connections AP43 and 3FX of component 1546** in the cruise control position.
If these checks are not in order, replace the switch.
Check the **continuity, insulation and the absence of interference resistance** on the following connections:
– Connection code **3FX**,
– Connection code **3PD**,
between components 1546 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 4**

SPEED LIMITER

MEGANE II:

When the driver presses the main speed limiter switch, 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 on the switch connector.

– Connection code **AP43 of component 1081**.

Disconnect the main switch, and when it is in the rest position, check the insulation between:

– Connection codes **AP43 and 3FX of component 1081**.

– Connection codes **AP43 and 3PD of component 1081**.

Check the continuity between **connections AP43 and 3PD of component 1081** in the speed limiter position.

Check the continuity between **connections AP43 and 3FX of component 1081** in the cruise control position.

If these checks are not in order, replace the switch.

Check the **continuity, insulation 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 5**

SPEED LIMITER

SCENIC II:

When the driver presses the main speed limiter switch, 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 on the switch connector.

– Connection code **AP43 of component 1546**.

Disconnect the main switch, and when it is in the rest position, check the insulation between:

– Connection codes **AP43 and 3FX of component 1546**.

– Connection codes **AP43 and 3PD of component 1546**.

Check the continuity between **connections AP43 and 3PD of component 1546** in the speed limiter position.

Check the continuity between **connections AP43 and 3FX of component 1546** in the cruise control position.

If these checks are not in order, replace the switch.

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

– Connection code **3FX**,

– Connection code **3PD**,

between components 1546 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**

MEGANE II:

When the driver presses the main cruise control button, 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 on the switch connector.

- Connection code **AP43 of component 1081**.

Disconnect the main switch, and when it is in the rest position, check the insulation between:

- Connection codes **AP43 and 3FX, of component 1081**.

- Connection codes **AP43 and 3PD of component 1081**.

Check the continuity between **connections AP43 and 3PD of component 1081** in the speed limiter position.

Check the continuity between **connections AP43 and 3FX of component 1081** in the cruise control position.

If these checks show incorrect values, replace the switch.

Check the **continuity, insulation 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

Deal with any other faults. Clear the fault memory.

Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.

**ET042
CONTINUED 7**

**CRUISE
CONTROL**

SCENIC II:

When the driver presses the main cruise control button, 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.

After ignition, check for **+12 V** on the switch connector.

- Connection code **AP43 of component 1546**.

Disconnect the main switch, and when it is in the rest position, check the insulation between:

- Connection codes **AP43 and 3FX of component 1546**.

- Connection codes **AP43 and 3PD of component 1546**.

Check the continuity between **connections AP43 and 3PD of component 1546** in the speed limiter position.

Check the continuity between **connections AP43 and 3FX of component 1546** in the cruise control position.

If these checks show incorrect values, replace the switch.

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

- Connection code **3FX**,

- Connection code **3PD**,

between components 1546 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

Deal with any other faults. Clear the fault memory.

Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.

ET076	<u>STARTING</u>
--------------	-----------------

STATUS DEFINITION	<p>PROHIBITED: This status indicates that starting is not possible.</p> <p>AUTHORISED: This status indicates that starting is possible.</p>
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NOTES	<p>Special notes:</p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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<p>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C</p>
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PROHIBITED	Refer to the fault finding note for the UCH (see 87B, Passenger compartment connection unit).
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AUTHORISED	Refer to the fault finding note for the UCH (see 87B, Passenger compartment connection unit).
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET077	<u>IMPACT DETECTED</u>
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STATUS DEFINITION	NO: This status indicates that the airbag computer has not detected an impact. YES: This status indicates that the airbag computer has detected an impact.
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NOTES	Special notes: 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.

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

NO	The status is usually NO as no impact has been detected. Otherwise, check the airbag computer (see 88C, Airbags and pretensioners).
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YES	If YES an impact must be present. Otherwise, check the airbag computer (see 88C, Airbags and pretensioners).
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET079	<u>AIR CONDITIONING PRESENT</u>
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STATUS DEFINITION	<p>YES: This status indicates that air conditioning is present on the vehicle.</p> <p>NO: This status indicates that air conditioning is not present on the vehicle.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
	The heating and air conditioning system is present depending on the vehicle's equipment level.

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

YES or NO , depending on the vehicle equipment.
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET104	<u>INJECTOR CODE USE</u>
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STATUS DEFINITION	<p>NO: This status indicates that the injector codes have not been entered.</p> <p>YES: This status indicates that the injector codes have been entered.</p> <p>FAULTY: This status indicates that there has been an injector code entry fault.</p>
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NOTES	<p>Special notes:</p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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NO	<p>Program the injector codes using:</p> <ul style="list-style-type: none"> – either the SC002 Enter injector codes control, – or command SC001 Enter saved data when replacing with a blank computer or after reprogramming. <p>(Consult the procedures defined in the Interpretation of commands section).</p>
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YES	<p>When the injector codes are programmed.</p>
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DEFECTIVE	<p>Program the injector codes using:</p> <ul style="list-style-type: none"> – either the SC002 Enter injector codes control, – or command SC001 Enter saved data when replacing with a new computer or after reprogramming. <p>(see the procedures defined in the Interpretation of commands section).</p>
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AFTER REPAIR	<p>Carry out a road test, then check with the diagnostic tool.</p>
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ET120	<u>PRE-POSTHEATING SIGNAL</u>
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STATUS DEFINITION	<p>PRESENT: This status indicates that the pre-postheating signal is still active.</p> <p>ABSENT: This status indicates that the pre-postheating signal is not active.</p>
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NOTES	<p>Test the battery and run fault finding on the charging circuit (see Technical Note 6014A, Checking the charging circuit).</p>
	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>

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

PRESENT	Status ET120 is PRESENT when preheating is activated.
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ABSENT	<p>The status ET120 is ABSENT as long as pre-postheating is not activated. See interpretation of faults DF025 Preheating unit diagnostic line and DF017 Preheating unit control circuit.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET143	<u>LOW-SPEED FAN ASSEMBLY RELAY CONTROL</u>
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STATUS DEFINITION	This status indicates whether the low speed fan assembly is active.
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions. If the vehicle is equipped with air conditioning, the engine cooling fan will operate at 1st speed as soon as the air conditioning compressor is activated.</p>
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on

INACTIVE	Engine cold and air conditioning switched off
-----------------	---

Conformity check with engine running, engine coolant temperature > 80 °C
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(heating and air-conditioning off) INACTIVE OR ACTIVE , depending on the engine temperature.
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET143 CONTINUED	
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Sensor electrical conformity

ACTIVE	<p>When the coolant reaches 99°C, the injection computer commands the low-speed relay of the fan assembly, and status ET143 becomes ACTIVE. The relay then supplies the fan assembly and the cooling fan begins to turn.</p> <p>If status ET143 is ACTIVE, but the cooling fan is not running, perform the following operations:</p> <ul style="list-style-type: none"> – Check the condition of fuse FM15 (60 A) in the engine fuse and relay box. <p>Disconnect the low speed and high speed relays, check their operation and the status of the connectors of the relay mounting (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 597).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector. Otherwise replace the wiring.</p> <p>Check for the supply of + 12 V after the relay to the low-speed relay of the fan assembly:</p> <ul style="list-style-type: none"> – Connection 3FB of component 700. <p>Check for continuity and the absence of interference resistance on the following connection:</p> <ul style="list-style-type: none"> – Connection code 49L between components 700 and 321. <p>Check for continuity and the absence of interference resistance on the following connection:</p> <ul style="list-style-type: none"> – Connection code 49B between components 262 and 321. <p>Check for continuity and the absence of interference resistance on the following connection:</p> <ul style="list-style-type: none"> – Connection code 3JN between components 700 and 120. <p>Check that the earth is in order on the MAS connection of component 262.</p> <p>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 the wiring.</p>
INACTIVE	<p>If the engine temperature is lower than 99°C, the engine cooling fan cannot switch on and the low speed fan relay of the cannot be run.</p> <p>Status ET143 must therefore be INACTIVE when the control relay and the engine cooling fan are not supplied.</p>

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET144	<u>HIGH-SPEED FAN ASSEMBLY RELAY CONTROL</u>
--------------	--

STATUS DEFINITION	This status indicates whether the high speed fan assembly is active.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on

INACTIVE	Engine cold and air conditioning switched off
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET144 CONTINUED	
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Conformity check with engine running, engine coolant temperature > 80 °C

(heating and air-conditioning off) **INACTIVE** OR **ACTIVE**, depending on the engine temperature.

ACTIVE	<p>When the coolant reaches 102°C, the injection computer commands the low-speed relay of the fan assembly and status ET144 becomes ACTIVE. The relay then supplies the cooling fan.</p> <p>If status ET144 is ACTIVE, but the cooling fan is not running, perform the following operations:</p> <ul style="list-style-type: none"> – Check the condition of fuse FM15 (60 A) in the engine fuse and relay box. – Disconnect the high speed relay of the fan assembly, check it is functioning correctly and the status of the connectors of the relay mounting (see Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 597). <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector. Otherwise replace the wiring.</p> <p>Check for the supply of + 12 V after the relay to the high-speed fan assembly relay:</p> <ul style="list-style-type: none"> – connection 3FB of component 234. <p>Check for continuity and the absence of interference resistance on the following connection:</p> <ul style="list-style-type: none"> – connection code 3JP between components 234 and 120. <p>Check for continuity and the absence of interference resistance on the following connection:</p> <ul style="list-style-type: none"> – Connection code 49B between components 234 and 262. <p>Check that the earth is in order on the MAS connection of component 262.</p> <p>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 the wiring.</p>
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INACTIVE	<p>When the injection computer no longer requests cooling, the status ET144 changes to INACTIVE. The fan assembly should then switch off.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET205 ET206 ET207	<u>THERMOPLUNGER 1 RELAY CONTROL</u> <u>THERMOPLUNGER 2 RELAY CONTROL</u> <u>THERMOPLUNGER 3 RELAY CONTROL</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the thermoplunger is supplied. INACTIVE: This status indicates that the thermoplunger is not supplied.
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NOTES	Status only available on certain Vdiag48 (depending on vehicle equipment).
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INACTIVE	Statuses ET205, ET206, ET207 are INACTIVE with the ignition on and the engine stopped, or when the engine is warm.
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Active	<p>Statuses ET205, ET206 and ET207 are ACTIVE when the engine is started, the engine coolant temperature is low (< 15°C) and the air temperature is low (< 5°). This program allows the engine coolant to be heated to enable the passenger compartment to be heated.</p> <p>The thermoplungers also act both to load the engine to improve regeneration of the particle filter</p> <p>To control the operation of the thermoplunger relays, run the following commands: AC063 Thermoplunger no.1 relay. AC064 Thermoplunger no. 2 relay. AC031 Thermoplunger no. 3 relay.</p> <p>In the event of a fault, refer to the interpretation of faults: DF032 Thermoplunger 1 relay control circuit. DF033 Thermoplunger 2 relay control circuit. DF034 Thermoplunger 3 relay control circuit.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET238	<u>SYNCHRONISATION</u>
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STATUS DEFINITION	<p>Synchronisation is carried out during the engine starting phase. The camshaft position sensor and the TDC sensor are synchronised. Once this synchronisation has been carried out, it enables the computer to identify cylinder n°1 and to ascertain the precise position of the cylinder's top dead centre.</p> <p>Synchronisation also allows the computer to determine the injection strategy.</p>
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NOTES	<p>Special notes:</p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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DONE	<p>Status ET238 is DONE when the engine is started. The computer has identified cylinder no. 1 and has identified the exact top dead centre position. Injection phasing and engine management are now possible, and the engine should be working properly.</p>
-------------	--

NOT PERFORMED	<p>Status ET238 is NOT COMPLETED if the engine has been stopped with the + after ignition on.</p> <p>If status ET238 remains NOT COMPLETED after an attempted start, consult the interpretation of fault DF195 Camshaft sensor/engine speed consistency.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET300	<u>RICHNESS REGULATION</u>
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STATUS DEFINITION	<p>ACTIVE: This indicates that the richness is regulated.</p> <p>INACTIVE: This status indicates that the richness is not regulated.</p>
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NOTES	<p>Special notes:</p> <p>This status only concerns certain F9Q818 engines. Check that the vehicle is definitely equipped with a richness ratio sensor.</p>
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Conformity check with engine stopped and ignition on

INACTIVE	<p>The status is INACTIVE when the engine is not running.</p> <p>In the event of a fault, consult the interpretation of fault DF967 Richness ratio sensor circuit.</p>
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Engine running, engine coolant temperature > 80 °C
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ACTIVE	<p>The status is ACTIVE when the engine is running.</p> <p>In the event of a fault, consult the interpretation of fault DF967 Richness ratio sensor circuit.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET341	<u>IMMOBILISER CODE PROGRAMMED</u>
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STATUS DEFINITION	<p>YES: This status indicates that the immobiliser code has been programmed.</p> <p>NO: This status indicates that the immobiliser code has not been programmed.</p>
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NOTES	<p>Special notes:</p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

YES	<p>Status ET341 is YES if dialogue is possible between the UCH computer and the injection computer and if the key code is recognised.</p> <p>Engine starting authorisation is only given if the code is correctly recognised by the UCH computer and status ET003: Engine immobiliser is INACTIVE.</p> <p>In the event of a fault (see 87B, passenger compartment connection unit, conformity check).</p>
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NO	<p>Status ET341 is NO if dialogue is not possible between the UCH computer and the injection computer (status ET003 Engine immobiliser remains ACTIVE).</p> <p>This fault may be caused by incorrect key programming or a lack of key programming. In this case, refer to the UCH fault-finding note (see 87B, Passenger compartment connection unit) and follow the key programming procedure.</p> <p>If the key programming is not the cause, run a multiplex network test (see 88B, Multiplexing) and check that dialogue between the UCH and the injection computer is possible.</p> <p>If dialogue is not established, contact Techline.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET405	<u>CLUTCH PEDAL SWITCH</u>
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STATUS DEFINITION	<p>ACTIVE: This status indicates that the clutch pedal is depressed.</p> <p>INACTIVE: This status indicates that the clutch pedal is released.</p>
--------------------------	--

NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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ACTIVE	<p>Clutch pedal depressed. Non-conformity of the brake signals and/or the clutch switch signals can cause the engine to race during gear changes. In the event of a fault, check the electrical conformity of the sensor.</p>
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INACTIVE	<p>Clutch pedal released. Non-conformity of the brake signals and/or the clutch switch signals can cause the engine to race during gear changes. In the event of a fault, check the electrical conformity of the sensor.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET405 CONTINUED	
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Sensor electrical conformity

INACTIVE	<p>Check the condition and fitting of the clutch pedal switch. Remove the clutch pedal switch, check the insulation between connections M and 86D of component 675, with the switch in the rest position.</p> <ul style="list-style-type: none"> – Repeat this operation with the switch pressed, and check the continuity between the two connections. <p>If these 2 checks are faulty, replace the switch. Then check the continuity and absence of interference resistance of the following connection:</p> <ul style="list-style-type: none"> – connection code 86D between components 120 and 675. <p>Make sure that the earth is compliant on connection M of component 675. 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 the wiring.</p>
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ACTIVE	<p>Check the condition and fitting of the clutch pedal switch. Remove the clutch pedal switch, check the insulation between connections M and 86D of component 675, with the switch in the rest position.</p> <ul style="list-style-type: none"> – Repeat this operation with the switch pressed, and check the continuity between the two connections. <p>If these 2 checks are faulty, replace the switch.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET415	<u>CRUISE CONTROL/SPEED LIMITER DEACTIVATION</u>
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STATUS DEFINITION	This status varies according to engine specifications.
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NOTES	Special notes: Apply the conformity check to see if the statuses are inconsistent with the operating programs of the system.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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STATUS 1	Traction control request.
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STATUS 2	Brake pedal depressed.
-----------------	------------------------

STATUS 3	Clutch pedal depressed.
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STATUS 4	Suspend button pressed.
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STATUS 5	Cruise control or speed limiter monitoring.
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STATE 6	Inconsistency between the request and the vehicle speed. Gear lever in neutral (manual gearbox) or the neutral position (automatic gearbox).
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET415 CONTINUED 1	
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STATUS 7	Inconsistency between the request and the vehicle speed.
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STATUS 8	Automatic transmission in defect mode.
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STATE 9	Vehicle speed monitoring.
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STATUS 10	Monitoring by the injection computer.
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Sensor electrical conformity

Note:

Cruise control can be activated when the vehicle speed exceeds **18 mph (30 km/h)**.

Status **ET415** displays the various reasons for deactivation of the cruise control/speed limiter function, due to a driver request or the external environment (e.g. **STATUS 1**).

IMPORTANT

Clear the fault memory by running command **RZ001 Fault memory** to reset this status to **NONE**.

NONE	
	This status is present on the diagnostic tool if: the computer has been reinitialised, the computer has been reprogrammed.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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<p>ET415 CONTINUED 2</p>	
<p>STATUS 1</p>	<p>Traction control request</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 ET415 becomes STATUS 1 when driving with the cruise control active (ET042 Cruise control/Speed limiter: CRUISE CONTROL) and traction control is requested. This deactivates cruise control. Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory. If status ET415 becomes STATUS 1 with no traction control request (see 38C, Anti-lock Braking System).</p>
<p>STATUS 2</p>	<p>Brake pedal depressed</p> <p>The cruise control function is deactivated when the brake pedal is depressed. Status ET415 becomes STATUS 2, when driving, with cruise control active (ET042 Cruise control/Speed limiter: CRUISE CONTROL) and the brake pedal depressed. This deactivates cruise control. Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory. If status ET415 becomes STATUS 2 without pressing the brake pedal, consult the interpretation of statuses ET704 and ET705 Brake switch No. 1 and No. 2.</p>
<p>AFTER REPAIR</p>	<p>Carry out a road test, then check with the diagnostic tool.</p>

ET415 CONTINUED 3	
STATUS 3	<p>Clutch pedal depressed</p> <p>Manual gearbox ONLY The cruise control function is deactivated when the gearbox is no longer 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 RZ001 Fault memory. If status ET415 becomes STATUS 3 without the clutch pedal being depressed, consult the interpretation of status ET405 Clutch pedal switch. If the vehicle is fitted with an automatic transmission: Test the multiplex network: check the configuration of the multiplex network in relation to the vehicle's technical specification, especially the configuration of the automatic transmission computer (see 88B, Multiplexing).</p>
STATUS 4	<p>Cancel button pressed</p> <p>The cruise control/speed limiter function is deactivated whenever 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 when the "0" button is pressed by the driver. This action deactivates the Cruise control/Speed limiter. Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory. If status ET415 becomes STATUS 4 without pressing the 0 button, consult the interpretation of status ET703 Cruise control/speed limiter buttons and run fault-finding on the R/0 control button located on the steering wheel, to the right.</p>
AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .

ET415 CONTINUED 4	
STATUS 5	<p>Cruise control or speed limiter monitoring</p> <p>This status appears when the vehicle brakes or decelerates sharply without the injection computer receiving a signal that the brake pedal switch has been pressed. If status ET415 is STATUS 5, consult the interpretation of statuses:</p> <ul style="list-style-type: none"> – ET042 Cruise control/speed limiter – ET703 Cruise control/speed limiter buttons, – ET704 Brake switch No. 1 – ET705 Brake switch No. 2 <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 use the diagnostic tool to check the presence of a fault connected with this component. Deal with them if necessary.</p> <p>Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory.</p> <p>If status ET415 changes to STATUS 5, deal with faults present or stored in the injection computer.</p> <p>If the fault is still present, contact the Techline.</p>
STATUS 6	<p>Gear lever in neutral (manual gearbox) or the neutral position (automatic gearbox)</p> <p>Status ET415 becomes STATUS 6, when driving with cruise control active (ET042: Cruise control/speed limiter: CRUISE CONTROL) and:</p> <ul style="list-style-type: none"> – if the driver puts the gear lever in neutral position on a manual gearbox without declutching or, – if the gear lever is put in neutral on an automatic transmission. <p>This deactivates cruise control.</p> <p>Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory.</p> <p>If status ET415 becomes STATUS 6 without shifting the gear lever into neutral on a manual gearbox without declutching, or into the neutral position on an automatic transmission, test the ABS computer and check the configuration of the tyre size stored in the computer.</p> <p>If the configuration is correct, contact the Techline.</p>
AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .

<p>ET415 CONTINUED 5</p>	
<p>STATUS 7</p>	<p>Inconsistency between the request and the vehicle speed</p> <p>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 RZ001 Fault memory. If status ET415 changes to STATUS 7 when on flat or even terrain, contact the Techline.</p>
<p>STATUS 8</p>	<p>Automatic transmission in defect mode.</p> <p>Status ET415 becomes STATUS 8 when driving with cruise control active (ET042: Cruise control/speed limiter: CRUISE CONTROL) and if 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). Clear the automatic transmission computer memory by running command RZ001 Fault memory. Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory. If STATUS 8 is still present, contact the Techline.</p>
<p>AFTER REPAIR</p>	<p>Carry out a road test, then check with the diagnostic tool.</p>

ET415 CONTINUED 6	
STATUS 9	<p>Vehicle speed monitoring</p> <p>Status ET415 becomes 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 run fault finding on the ABS computer. Deal with any present or stored faults (see 38C, ABS, interpretation of faults). Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory. If STATUS 9 is still present, contact the Techline.</p>
STATUS 10	<p>Monitoring by the injection computer.</p> <p>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 run fault finding on the injection computer. Deal with any present or stored faults (see 13B, Diesel injection, interpretation of faults). Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory. If STATUS 10 is still present, contact the Techline.</p>
AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .

ET651	<u>EGR PROGRAMMING CUT-OFF</u>
NOTES	None.
NONE	No EGR cut-off, the EGR valve is working properly in accordance with the computer programs.
STATUS 1, 5, 6, 7, 9, 10, 12, 13, 15, 19, 23, 24	Switch off the engine and wait for the diagnostic tool message (maximum time 8 minutes): Communication lost with computer: EDC16C36, check the tool connection and computer power supply. Switch the ignition on and check for faults. Check the 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. Do not accelerate too much and reach an engine speed that is too high.
STATUS 3, 14, 16	Accelerate above idle speed for a few seconds.
STATUS 2	Check that the clutch pedal status (ET405 Clutch pedal switch) is not ACTIVE , and that the vehicle has stopped completely.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET651 CONTINUED	
STATUS 4, 17	Check for present and stored faults, and repair.
STATUS 8	Reset the EGR offsets by referring to the interpretation of command SC036 "Reinitialise the programming" and select "EGR valve" .
STATUS 11, 22	Allow the engine to heat up until this cut-off disappears.
STATUS 18	Check that the regeneration of the particle filter in progress has completely finished.
STATUS 20	Allow the engine to cool until this cut-off disappears.
STATUS 21	Too low atmospheric pressure, the EGR valve is disabled.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET703	<u>CRUISE CONTROL/SPEED LIMITER BUTTONS</u>
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STATUS DEFINITION	<p>RESUME: R button pressed.</p> <p>SUSPEND: 0 button pressed.</p> <p>INCREASE: Increase button pressed.</p> <p>DECREASE: Decrease button pressed.</p> <p>INACTIVE: This status indicates that no button has been pressed.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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INACTIVE	<p>When that no button has been pressed.</p> <p>In the event of a fault, consult the interpretation of status ET703.</p>
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SUSPEND	<p>'0' button pressed.</p> <p>In the event of a fault, consult the interpretation of status ET703.</p>
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RESUME	<p>R button pressed.</p> <p>In the event of a fault, consult the interpretation of status ET703.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET703 CONTINUED 1	
DECREASE	<p>Decrease button pressed. In the event of a fault, consult the interpretation of status ET703.</p>
INCREASE	<p>Increase button pressed. In the event of a fault, consult the interpretation of status ET703.</p>
Sensor electrical conformity	
INACTIVE	<p>Status ET703 becomes INACTIVE when none of the cruise control/speed limiter buttons are pressed. These buttons are located on the steering wheel. To carry out these checks and measurements in complete safety, observe the recommendations for removing the driver's frontal airbag (see MR 364 Mégane, MR370 Scénic, Mechanical, 88C, Airbag and pretensioners, Driver's front airbag, Removal - Refitting). If status ET703 does not display INACTIVE, <ul style="list-style-type: none"> – check the status of the cruise control/speed limiter +/- button and the condition of its connector. – check the status of the cruise control/speed limiter R/O button and the condition of its connector. Repair if necessary.</p>
INCREASE	<p>Status ET703 becomes INCREASE when the + button of the cruise control/speed limiter is pressed. This button is on the steering wheel, on the left-hand side. To carry out these checks and measurements in complete safety, observe the recommendations for removing the driver's frontal airbag (see MR 364 Mégane, MR370 Scénic, Mechanical, 88C, Airbag and pretensioners, Driver's front airbag, Removal - Refitting). If status ET703 does not display INCREASE, check the status of the +/- button of the cruise control/speed limiter and the status of its connector. Repair if necessary. Measure the resistance on the following connections while pressing the + button (on the button tracks): <ul style="list-style-type: none"> – Connection code 86G of component 331. – Connection code 86M of component 331. If the resistance is not approximately 300 Ω, check the continuity of the connection when the button is not pressed. If there is continuity, replace the +/- control button.</p>
AFTER REPAIR	<p>Carry out a road test, then check with the diagnostic tool.</p>

ET703 CONTINUED 2	
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DECREASE	<p>Status ET703 becomes DECREASE when the - button of the cruise control/speed limiter is pressed. This button is on the steering wheel, on the left-hand side.</p> <p>To carry out these checks and measurements in complete safety, observe the recommendations for removing the driver's frontal airbag (see MR 364 Mégane, MR370 Scénic, Mechanical systems, 88C, Airbag and pretensioners, Driver's front airbag, Removal - Refitting).</p> <p>If status ET703 does not display DECREASE, check the status of the +/- button of the cruise control/speed limiter and the status of its connector. Repair if necessary.</p> <p>If there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair) repair the wiring, otherwise replace it.</p> <p>Measure the resistance of the following connection whilst pressing the - button (on the button tracks):</p> <ul style="list-style-type: none"> – Connection code 86G of component 331. – Connection code 86M of component 331. <p>If the resistance is not approximately 100 Ω check the continuity of the connection when the button is not pressed.</p> <p>If there is continuity, replace the +/- control button.</p>
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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<p style="text-align: center;">ET703 CONTINUED 3</p>	
<p style="text-align: center;">SUSPEND</p>	<p>Status ET703 becomes SUSPEND when the 0 button of the cruise control/speed limiter is pressed. This button is located on the steering wheel, to the right.</p> <p>To carry out these checks and measurements in complete safety, observe the recommendations for removing the driver's frontal airbag (see MR 364 Mégane, MR370 Scénic, Mechanical systems, 88C, Airbag and pretensioners, Driver's front airbag, Removal - Refitting).</p> <p>If status ET703 does not change to SUSPEND, check the status of the cruise control/speed limiter R/0 button, and the status of its connector.</p> <p>If there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair) repair the wiring, otherwise replace it.</p> <p>Measure the resistance of the following connection whilst pressing the 0 button (on the button tracks):</p> <ul style="list-style-type: none"> – Connection code 86G of component 331. – Connection code 86M of component 331. <p>If the resistance is not approximately 0 Ω, replace the R/0 control button.</p> <p>If there is continuity, replace the R/0 control button.</p>
<p style="text-align: center;">RESUME</p>	<p>Status ET703 becomes RESUME when the R button of the cruise control/speed limiter is pressed. This button is located on the steering wheel, to the right.</p> <p>To carry out these checks and measurements in complete safety, observe the recommendations for removing the driver's frontal airbag (see MR 364 Mégane, MR370 Scénic, Mechanical systems, 88C, Airbag and pretensioners, Driver's front airbag, Removal - Refitting).</p> <p>If status ET703 does not change to RESUME, check the status of the cruise control/speed limiter R/0 button, and the status of its connector. Repair if necessary.</p> <p>If there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair) repair the wiring, otherwise replace it.</p> <p>Measure the resistance on the following connection while pressing the R button (on the button tracks):</p> <ul style="list-style-type: none"> – Connection code 86G of component 331. – Connection code 86M of component 331. <p>If the resistance is not approximately 900 Ω check the continuity of the connection when the button is not pressed.</p> <p>If there is continuity, replace the R/0 control button.</p>
<p style="text-align: center;">AFTER REPAIR</p>	<p>Carry out a road test, then check with the diagnostic tool.</p>

ET704 ET705	<u>BRAKE SWITCH NO. 1</u> <u>BRAKE SWITCH NO. 2</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the brake pedal is depressed. INACTIVE: This status indicates that the brake pedal is released.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
	Note: Statuses ET704 and ET705 should change status at the same time. If they are inconsistent, consult the interpretation of fault DF228 Brake signal .
	Use the Mégane II ph2, Scénic II ph2 Technical Note wiring diagram.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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ACTIVE	Brake pedal depressed. A brake signal non-conformity may cause the engine to race during gear changes. In the event of a fault, apply the interpretation of statuses ET704 Brake contact no. 1 and ET705 Brake contact no. 2 .
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INACTIVE	Brake pedal released. A brake signal non-conformity may cause the engine to race during gear changes. In the event of a fault, apply the interpretation of statuses ET704 Brake contact no.1 and ET705 Brake contact no. 2 .
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ET704 ET705 CONTINUED	
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Sensor electrical conformity

ACTIVE

or

INACTIVE

If the brake lights are working:
check the continuity and the absence of interference resistance on the following connection:

- Connection code **5A between components 160 and 120/645/119**.

If there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

If the brake lights are not operational, check:

- the condition and fitting of the brake switch,
- the status and conformity of the fuse for the brake lights.
- the conformity of the values in the following table:

Disconnect the switch and carry out the following checks:

for MEGANE II and SCENIC II with ESP

	Continuity between connections	Insulation between connections
Switch engaged (Brake pedal released)	5A and BPT	65G and SP17
Switch released (Brake pedal depressed)	65G and SP17	5A and BPT

Replace the switch if the values obtained are not correct.

For MEGANE II and SCENIC II without ESP

	Continuity between connections	Insulation between connections
Switch engaged (Brake pedal released)	5A and BPT	65A and SP17
Switch released (Brake pedal depressed)	65A and SP17	5A and BPT

Replace the switch if the values obtained are not correct.

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

STATUS DEFINITION	These statuses indicate the engine status in the event of a regeneration failure when driving.
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NOTES	Special notes: For Vdiag 48 : Interpret these parameters only if DF312 Speed request is present or stored.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

This status indicates the engine status in the event of a regeneration failure when driving:
NONE, + AFTER IGNITION, RUNNING, STOPPED.

Each **STATUS** between **ET706** and **ET715** corresponds to the engine status during a regeneration failure for which the mileage is saved by **PR794 Stored regeneration failure No. 1** to **PR803 Stored regeneration failure No. 10** (for example, **PR797 Stored regeneration failure No. 4** is related to **ET709 Stored engine status No. 4**).

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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EDC16C36_V48_ET706/EDC16C36_V48_ET707/EDC16C36_V48_ET708/EDC16C36_V48_ET709/EDC16C36_V48_ET710/
EDC16C36_V48_ET711/EDC16C36_V48_ET712/EDC16C36_V48_ET713/EDC16C36_V48_ET714/EDC16C36_V48_ET715/
EDC16C36_V50_ET706/EDC16C36_V50_ET707/EDC16C36_V50_ET708/EDC16C36_V50_ET709/EDC16C36_V50_ET710/
EDC16C36_V50_ET711/EDC16C36_V50_ET712/EDC16C36_V50_ET713/EDC16C36_V50_ET714/EDC16C36_V50_ET715/
EDC16C36_V58_ET706/EDC16C36_V58_ET707/EDC16C36_V58_ET708/EDC16C36_V58_ET709/EDC16C36_V58_ET710/
EDC16C36_V58_ET711/EDC16C36_V58_ET712/EDC16C36_V58_ET713/EDC16C36_V58_ET714/EDC16C36_V58_ET715

ET706 ET707 ET708 ET709 ET710 ET711 ET712 ET713 ET714 ET715 CONTINUED	
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RUNNING	If the STATUS is RUNNING , the regeneration failed because: <ul style="list-style-type: none">– the customer's driving did not generate enough heat,– an engine management system component is defective.
STOPPED	If the STATUS is STOPPED , regeneration has failed due to engine cut-off.
+ AFTER IGNITION FEED	POWER LATCH
NONE	No failed regeneration is present.

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

STATUS DEFINITION	Statuses ET742 to ET751 correspond to the causes for the regeneration request. They are connected to parameters PR816 Stored regeneration start No. 1 to PR825 Stored regeneration start No. 10 which contains the stored mileage of the vehicle at the start of the regeneration (for example, PR745 Store regeneration start No. 4 is related to ET709 Store regen.* request status No. 4).
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NOTES	Special notes: For Vdiag 48 : These statuses should only be interpreted for ALP11 Particle filter warning light comes on too frequently .
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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STATUS 1	Request by weight of soot Regeneration has been requested after the maximum weight of soot has been reached and measured in the particle filter, without the particle filter warning light coming on.
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* Regen: regeneration

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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EDC16C36_V48_ET742/EDC16C36_V48_ET743/EDC16C36_V48_ET744/EDC16C36_V48_ET745/EDC16C36_V48_ET746/
EDC16C36_V48_ET747/EDC16C36_V48_ET748/EDC16C36_V48_ET749/EDC16C36_V48_ET750/EDC16C36_V48_ET751/
EDC16C36_V50_ET742/EDC16C36_V50_ET743/EDC16C36_V50_ET744/EDC16C36_V50_ET745/EDC16C36_V50_ET746/
EDC16C36_V50_ET747/EDC16C36_V50_ET748/EDC16C36_V50_ET749/EDC16C36_V50_ET750/EDC16C36_V50_ET751/
EDC16C36_V58_ET742/EDC16C36_V58_ET743/EDC16C36_V58_ET744/EDC16C36_V58_ET745/EDC16C36_V58_ET746/
EDC16C36_V58_ET747/EDC16C36_V58_ET748/EDC16C36_V58_ET749/EDC16C36_V58_ET750/EDC16C36_V58_ET751

ET742 ET743 ET744 ET745 ET746 ET747 ET748 ET749 ET750 ET751 CONTINUED	
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STATUS 2	Request by estimated weight of soot 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.
STATUS 3	Request by distance travelled Regeneration has been requested because the distance travelled since the last successful regeneration has reached the maximum authorised value (the particle filter warning light has not illuminated).
STATUS 4	Request by number of regeneration failures or weight of soot This status corresponds to the appearance of DF312 Speed request . This corresponds to the maximum number of failed regenerations or to the maximum weight of soot in the particle filter, with illumination of the particle filter warning light.

* Regen: regeneration

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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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
PR015	Engine torque
PR017	Fuel flow
PR022	EGR valve position feedback loop difference
PR025	Mileage
PR030	Accelerator pedal position
PR035	Atmospheric pressure
PR037	Refrigerant pressure
PR038	Rail pressure
PR041	Turbocharging pressure
PR045	Power requested by heating elements
PR047	Turbocharging pressure OCR*
PR048	OCR* Rail pressure regulation valve
PR051	EGR valve position feedback
PR053	Engine speed requested by air conditioning
PR054	Engine speed requested by heating elements
PR055	Engine speed
PR058	Air temperature
PR063	Fuel temperature
PR064	Coolant temperature
PR066	Oil temperature
PR071	Computer feed voltage
PR073	Air flowmeter supply voltage

* OCR: Opening cycle ratio

DIESEL INJECTION

Fault finding – Parameter summary table

13B

Tool parameter	Diagnostic tool title
PR076	Refrigerant sensor voltage
PR077	EGR valve position sensor voltage
PR079	Atmospheric pressure sensor voltage
PR080	Rail pressure sensor voltage
PR082	Fuel temperature sensor voltage
PR083	Air temperature sensor voltage
PR084	Coolant temperature sensor voltage.
PR086	Pedal potentiometer voltage gang 1
PR088	Pedal potentiometer gang 2 voltage
PR089	Vehicle speed
PR128	First EGR valve offset
PR129	Last EGR valve offset
PR130	Cruise control setpoint
PR131	EGR air flow difference
PR132	Air flow
PR146	Inlet air flow
PR157	Fuel flow setpoint
PR171	Air flow setpoint for EGR
PR190	Engine idle speed setpoint.
PR209	Turbocharging pressure loop difference
PR213	Rail pressure loop difference
PR224	Turbocharging pressure sensor voltage
PR358	Sensor reference voltage
PR364	Cylinder no. 1 fuel flow 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

DIESEL INJECTION

Fault finding – Parameter summary table

13B

Tool parameter	Diagnostic tool title
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 at last successful regeneration
PR414	Particle filter pressure diff.*
PR415	Time since last regeneration
PR420	Damper valve error counter
PR667	Turbine upstream temperature
PR668	Turbine upstream temperature sensor voltage
PR672	Damper valve position setpoint
PR747	Damper valve position
PR777	Richness ratio sensor voltage
PR778	Richness ratio sensor temp.*
PR779	Richness ratio
PR784	DF312 recording No. 1
PR785	DF312 recording No. 2
PR786	DF312 recording No. 3
PR787	DF312 recording No. 4
PR788	DF312 recording No. 5
PR789	DF312 recording No. 6
PR790	DF312 recording No. 7
PR791	DF312 recording No. 8
PR792	DF312 recording No. 9
PR793	DF312 recording No. 10
PR794	Stored regeneration failure no. 1
PR795	Stored regeneration failure no. 2
PR796	Stored regeneration failure no. 3

* diff: differential

* temp: temperature

DIESEL INJECTION

Fault finding – Parameter summary table

13B

Tool parameter	Diagnostic tool title
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	No.1 regeneration start recording
PR817	No.2 regeneration start recording
PR818	No.3 regeneration start recording
PR819	No.4 regeneration start recording
PR820	No.5 regeneration start recording
PR821	No.6 regeneration start recording
PR822	No.7 regeneration start recording
PR823	No.8 regeneration start recording
PR824	No.9 regeneration start recording
PR825	No.10 regeneration start recording
PR848	Number of regeneration failures
PR873	Oil oxidation signal
PR874	Last service

PR002	<u>ALTERNATOR CHARGE</u>
--------------	--------------------------

PARAMETER DEFINITION	This parameter indicates the charge value of the alternator in %.
---------------------------------	---

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

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

The alternator charge value varies according to the battery voltage.
--

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

PR005	<u>EGR VALVE OPENING SETPOINTS</u>
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PARAMETER DEFINITION	This parameter indicates a theoretical opening value for the EGR valve for optimum engine performance.
---------------------------------	--

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

Conformity check with engine stopped and ignition on

The EGR valve theoretical opening value for operation with the engine stopped and ignition on is: - 10 < PR005 < 0%

Conformity check with engine running, engine coolant temperature > 80 °C
--

The theoretical EGR valve opening value for operation with the engine running and engine coolant temperature > 80 °C is 10 < PR005 < 40%

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

PR006	<u>RAIL PRESSURE REGULATOR CURRENT</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the current absorbed by the rail pressure regulator.
---------------------------------	---

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

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

This parameter indicates the current absorbed by the rail pressure regulator PR006 ≈ PR007 Rail pressure regulator current setpoint. If there is a fault, consult the interpretation of fault DF643 Rail pressure regulator circuit .
--

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

PR007	<u>RAIL PRESSURE REGULATOR CURRENT SETPOINT</u>
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PARAMETER DEFINITION	This parameter indicates the theoretical setpoint for the current absorbed by the rail pressure regulator.
---------------------------------	--

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

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

This parameter indicates the theoretical current absorbed by the rail pressure regulator.

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

PR008	<u>RAIL REFERENCE PRESSURES</u>
--------------	---------------------------------

PARAMETER DEFINITION	This parameter indicates the theoretical rail pressure value for optimum engine operation in bar .
---------------------------------	---

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

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

The theoretical rail pressure value is a setpoint, i.e. 200 < PR008 < 300 bar
--

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

PR009	<u>TURBOCHARGING PRESSURE SETPOINTS</u>
--------------	---

PARAMETER DEFINITION	This parameter indicates the theoretical turbocharging pressure setpoint value in bar .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

The theoretical turbocharging pressure value is a setpoint, i.e. PR009 ≈ 1 bar

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

PR015	<u>ENGINE TORQUE</u>
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PARAMETER DEFINITION	This parameter indicates the engine torque in Nm .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Engine running, engine coolant temperature > 80°C

This value must be between 20 N.m < PR015 < 40 N.m This parameter is only valid when the engine is running.
--

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

PR017	<u>FUEL FLOW</u>
--------------	------------------

PARAMETER DEFINITION	This parameter indicates the fuel flow in mg/st.
---------------------------------	---

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

Conformity check with engine stopped and ignition on

PR017 = 0 mg/st. If there is a fault, consult the interpretation of fault DF643 Rail pressure regulator circuit.

Conformity check with engine running, engine coolant temperature > 80 °C
--

PR017 = PR157 Fuel flow setpoint. If there is a fault, consult the interpretation of fault DF643 Rail pressure regulator circuit.
--

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

PR022	<u>EGR VALVE POSITION FEEDBACK LOOP DIFFERENCE</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the percentage difference between the setpoint and the EGR valve position.
---------------------------------	---

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

Conformity check with engine stopped and ignition on

This parameter indicates the percentage difference between the setpoint and the EGR valve position. In the event of a fault, consult the interpretation of faults DF209 EGR valve position sensor circuit and DF647 EGR valve position regulation .
--

Conformity check with engine running, engine coolant temperature > 80 °C
--

PR022 = +/- 5% In the event of a fault, consult the interpretation of faults DF209 EGR valve position sensor circuit and DF647 EGR valve position regulation .
--

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

PR030	<u>ACCELERATOR PEDAL POSITION</u>
--------------	-----------------------------------

PARAMETER DEFINITION	This parameter indicates the accelerator pedal position as a percentage.
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no present or stored faults. Perform this fault finding procedure: <ul style="list-style-type: none">– after finding an inconsistency in the parameter,– after a customer complaint (e.g. lack of power, etc.).
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

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

If no pressure is being applied to the pedal PR030 = 0% In the event of a fault, consult the interpretation of fault DF196 Pedal sensor gang 1 circuit or DF198 Pedal sensor circuit gang 2.
--

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

**PR030
CONTINUED**

Sensor electrical conformity

Check **the continuity and the 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 with **the ignition on** and **the engine stopped**:

- check that the value of **PR030 Accelerator pedal position**:

0% no load,

100% full load,

138% full load after kickdown point on pedal.

- if the value is not correct, replace the pedal sensor.

AFTER REPAIR

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

PR035	<u>ATMOSPHERIC PRESSURE</u>
--------------	-----------------------------

PARAMETER DEFINITION	This parameter indicates the atmospheric pressure in bar . The sensor is integrated in the computer.
---------------------------------	---

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

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

The atmospheric pressure value is PR035 $\approx 1 \text{ bar} \pm 0.20 \text{ bar}$. In the event of a fault, consult the interpretation of fault DF004 Turbocharging pressure sensor circuit and DF200 Atmospheric pressure sensor .

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

PR037	<u>REFRIGERANT PRESSURE</u>
--------------	-----------------------------

PARAMETER DEFINITION	This parameter indicates the atmospheric pressure in mbar . The sensor is integrated in the computer.
---------------------------------	--

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

Engine running, engine coolant temperature > 80°C

The value must be between 1 bar < PR037 < 40 bar In the event of a fault, test the multiplex network (see 88B, Multiplex).

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

PR038	<u>RAIL PRESSURE</u>
--------------	----------------------

PARAMETER DEFINITION	This parameter indicates the rail pressure in bar .
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NOTES	<p>There must be no present or stored faults. Perform this fault finding procedure:</p> <ul style="list-style-type: none"> – after finding an inconsistency in the parameter, – after a customer complaint (starting faults, poor performance, stalling etc.), – after interpretation of command AC225 Rail pressure regulator.
	<p>Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.</p>
	<p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>

Conformity check with engine stopped and ignition on

<p>The rail pressure value is: 0 bar < PR038 < 90 bar if the coolant temperature < 30°C In the event of a fault, consult the interpretation of fault DF007 Rail pressure sensor circuit.</p>

Conformity check with engine running, engine coolant temperature > 80°C

<p>The rail pressure value is: At idle speed: PR038 = 270 bar ± 20 bar Full load: PR038 = 1700 bar ± 20 bar In the event of a fault, consult the interpretation of fault DF007 Rail pressure sensor circuit.</p>

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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**PR038
CONTINUED**

Sensor electrical conformity

Check the status of the connector of the rail pressure sensor (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 1032**).

Check the status of the connector of the rail pressure sensor (see **Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2, Component code 120**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the continuity and absence of **interference resistance** on 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 is no external diesel leak 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**.

PR041	<u>TURBOCHARGING PRESSURE</u>
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PARAMETER DEFINITION	This parameter indicates the turbocharging pressure in mbar .
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NOTES	<p>Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.</p> <p>Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.</p>
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

<p>The turbocharging pressure value is PR041 = PR035 ± 0.20 bar In the event of a fault, consult the interpretation of DF004 Turbocharging pressure sensor circuit.</p>

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

**PR041
CONTINUED**

Sensor electrical conformity

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

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

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

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.

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 greater 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:

The low and high pressure air circuit is **sealed** and **not obstructed**: the pipes and mounting clamps are present and tightened, turbocharging pressure sensor, intercooler, etc. are fitted.

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**.

PR045

POWER REQUESTED BY THERMOPLUNGERS

PARAMETER DEFINITION

This parameter indicates the power consumed by the thermoplungers in **watts**.

NOTES

Special note:

Only perform these tests if the parameters do not correspond with the system operation programming.

This parameter exists on certain vehicles in **Vdiag 48** (depending on equipment).

Engine running, engine coolant temperature > 80°C, with no electrical consumers

0 < PR045 < 1200 W

If the parameter value is not within this range, consult the interpretation of faults:

- DF032 Thermoplunger 1 relay control circuit,
- DF033 Thermoplunger 2 relay control circuit,
- DF034 Thermoplunger 3 relay control circuit.

Engine stopped, ignition on

PR045 = 0 W

In the event of a fault, consult the interpretation of faults:

- DF032 Thermoplunger 1 relay control circuit,
- DF033 Thermoplunger 2 relay control circuit,
- DF034 Thermoplunger 3 relay control circuit.

AFTER REPAIR

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

PR048	<u>RAIL PRESSURE REGULATION VALVE OCR*</u>
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PARAMETER DEFINITION	This parameter indicates the turbocharger pressure opening cyclic ratio in %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Engine running, engine coolant temperature > 80°C

The value must be between 35 < PR048 < 45% In the event of a fault, consult the interpretation of fault DF007 Rail pressure sensor circuit .

Engine stopped, ignition on

The value should be: PR048 = 15% In the event of a fault, consult the interpretation of faults DF007 Rail pressure sensor circuit and DF053 Rail pressure regulation function .
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* OCR: opening cycle ratio

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR051	<u>EGR VALVE POSITION FEEDBACK</u>
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PARAMETER DEFINITION	This parameter indicates the EGR valve opening ratio.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no present or stored faults. Perform this fault finding procedure: <ul style="list-style-type: none"> – after finding an inconsistency in the parameter, – after a customer complaint (loss of power, smoke etc.). – after interpretation of command AC103 EGR by-pass.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

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

This parameter indicates the EGR valve opening ratio. In the event of a fault, consult the interpretation of faults DF209 EGR valve position sensor circuit and DF647 EGR valve position regulation .
--

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

**PR051
CONTINUED**

Sensor electrical conformity

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

- connection code **3JM**,
- connection code **3EL**,
- connection code **3GC**,

between components **120** and **1460** or **169**.

If the connection or connections are faulty and there is a repair procedure (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

AFTER REPAIR

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

PR053	<u>SPEED REQUESTED BY HEATING/AIR CONDITIONING</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the engine's speed of rotation with air conditioning in rpm .
---------------------------------	---

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

Conformity check with engine stopped and ignition on

Indicates the engine's speed of rotation with air-conditioning in rpm . PR035 = 0 rpm.

Conformity check with engine running, engine coolant temperature > 80 °C
--

The speed requested by the air-conditioning is increased and varies around 850 rpm .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR055	<u>ENGINE SPEED</u>
--------------	---------------------

PARAMETER DEFINITION	This parameter indicates the engine's rotational speed in rpm .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

PR055 = 0 rpm. In the event of a fault, consult interpretation of faults DF195 Camshaft sensor/engine speed consistency , DF119 Camshaft sensor signal and DF120 Engine speed sensor signal .
--

Conformity check with engine running, engine coolant temperature > 80 °C
--

With the engine running at idle speed the value is approximately 800 rpm . In the event of a fault, consult interpretation of faults DF195 Camshaft sensor/engine speed consistency , DF119 Camshaft sensor signal and DF120 Engine speed sensor signal .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR058	<u>AIR TEMPERATURE</u>
--------------	------------------------

PARAMETER DEFINITION	This parameter indicates the air inlet temperature in °C.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no present or stored faults. Perform this fault finding procedure: – after finding an inconsistency in the parameter, – after a customer complaint (e.g. lack of power).
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

Conformity check with engine stopped and ignition on

With the ignition on the inlet air temperature varies according to the exterior temperature. Default value: 20°C In the event of a fault, consult the interpretation of fault DF002 Air temperature sensor circuit . Parameter PR059 ≈ PR064 Coolant temperature engine cold.
--

Conformity check with engine running, engine coolant temperature > 80°C

With the engine running at idle speed the inlet air temperature varies according to the engine coolant temperature. Default value: 20°C In the event of a fault, consult the interpretation of fault DF002 Air temperature sensor circuit .

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

**PR058
CONTINUED**

Sensor electrical conformity

With the flow sensor disconnected, check the **insulation** from **earth** of the following connection:

– Connection code **3ABQ** between components **120** and **799**.

Check the **supply** of **+ 12 V after the relay** to the air flowmeter.

– Connection code **3FB** of component **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:

9202 Ω \pm 487 Ω at -10°C

5774 Ω \pm 277 Ω at 0°C

3714 Ω \pm 161 Ω at +10°C

2448 Ω \pm 96 Ω at +20°C

1671 Ω \pm 59 Ω at +30°C

1150 Ω \pm 36 Ω at +40°C

817 Ω \pm 23 Ω at +50°C

583 Ω \pm 15 Ω at +60°C

427 Ω \pm 9 Ω at +70°C

316 Ω \pm 6 Ω at +80°C

238 Ω \pm 4 Ω at +90°C

AFTER REPAIR

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

PR063	<u>FUEL TEMPERATURE</u>
--------------	-------------------------

PARAMETER DEFINITION	This parameter indicates the fuel temperature in °C.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no present or stored faults. Perform this fault finding procedure: <ul style="list-style-type: none"> – after finding an inconsistency in the parameter, – after a customer complaint (e.g. lack of power).
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

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

This parameter indicates the fuel temperature: - 30°C < PR063 < 90°C Default value: 100°C In the event of a fault, see the interpretation of DF098 Fuel temperature sensor circuit .

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

**PR063
CONTINUED**

Sensor electrical conformity

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

- Connection code **3FAB**,
 - Connection code **3LD**,
- between components **120** and **1066**.

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 **3FAB** and **3LD** of component **1066**

Replace the sensor if the resistance is not approximately:

3820 Ω \pm 282 at + 10°C

2050 Ω \pm 100 at + 25°C

810 Ω \pm 47 at + 50°C

AFTER REPAIR

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

PR064	<u>COOLANT TEMPERATURE</u>
--------------	----------------------------

PARAMETER DEFINITION	This parameter indicates the engine coolant temperature in °C.
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no present or stored faults. Perform this fault finding procedure: <ul style="list-style-type: none"> – after finding an inconsistency in the parameter, – after a customer complaint (e.g. lack of power).
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2 .

Conformity check with engine stopped and ignition on

With the ignition on the coolant temperature varies according to the exterior temperature. In the event of a fault, refer to the interpretation of DF001 Coolant temperature sensor circuit . Parameter PR059 Air inlet temperature ≈ PR064 engine cold.

Conformity check with engine running, engine coolant temperature > 80°C

With the engine running at idle speed the coolant temperature varies according to the engine temperature. In the event of a fault, refer to the interpretation of DF001 Coolant temperature sensor circuit .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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**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 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 **3C** and **3JK** of component **244**.

Replace the sensor if the resistance is not:

12460 Ω \pm 1128 Ω at - 10°C

2252 Ω \pm 112 Ω at +25°C

811 Ω \pm 39 Ω at +50°C

283 Ω \pm 8 Ω at +80°C

115 Ω \pm 3 Ω at +110°C

AFTER REPAIR

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

PR071	<u>COMPUTER SUPPLY VOLTAGE</u>
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PARAMETER DEFINITION	This parameter specifies the supply voltage of the computer in volts .
---------------------------------	---

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and 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 .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR073	<u>AIR FLOWMETER FEED VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the power supply of the air flowmeter in volts .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on
--

0 < PR073 < 2.5 V Default value: 0 V . In the event of a fault, refer to the interpretation of fault DF013 Sensor feed voltage no. 3 .

Engine running, engine coolant temperature > 80 °C
--

1.5 < PR073 < 3.5 V Default value: 0 V . In the event of a fault, refer to the interpretation of fault DF013 Sensor feed voltage no. 3 .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR076	<u>REFRIGERANT SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the refrigerant sensor voltage.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

0 V ≤ PR076 ≤ 5 V Carry out fault finding on the climate control computer (see 62B, Climate control).

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR077	<u>EGR VALVE POSITION SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the power supply of the EGR valve position sensor voltage in volts .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

0 < PR077 < 1.5 V Default value: 0 V . In the event of a fault, refer to the interpretation of DF012 Sensor supply voltage no. 2 .

Engine running, engine coolant temperature > 80 °C
--

0 < PR077 < 5 V Default value: 0 V . In the event of a fault, refer to the interpretation of DF012 Sensor supply voltage no. 2 .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR079	<u>ATMOSPHERIC PRESSURE SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the atmospheric pressure sensor in volts .
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NOTES	None.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

0 V < PR079 < 5 V

In the event of a fault, refer to the interpretation of the fault:

- DF011 Sensor supply voltage no. 1,
- DF012 Sensor supply voltage no. 2,
- DF013 Sensor supply voltage no. 3.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR080	<u>RAIL PRESSURE SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the rail pressure sensor in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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0 V <PR080 <5 V In the event of a fault, refer to the interpretation of fault DF013 Sensor feed voltage no. 3 .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR082	<u>FUEL TEMPERATURE SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the fuel temperature sensor in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

0 V < PR082 < 5 V In the event of a fault, consult the interpretation of DF098 Fuel temperature sensor circuit .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR083	<u>AIR TEMPERATURE SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the air temperature sensor in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

0 V < PR083 < 5 V In the event of a fault, consult the interpretation of faults DF011 Sensor supply voltage no. 1 , DF012 Sensor supply voltage no. 2 and DF013 Sensor supply voltage no. 3 .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR084	<u>COOLANT TEMPERATURE SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the coolant temperature sensor in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

0 V < PR084 < 5 V In the event of a fault, refer to the interpretation of DF001 Coolant temperature sensor circuit .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR086	<u>PEDAL POTENTIOMETER GANG 1 VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the pedal potentiometer gang 1 in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

Accelerator pedal released: 0.70 V < PR086 < 0.80 V IMPORTANT This corresponds to normal operation.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR088	<u>PEDAL POTENTIOMETER GANG 2 VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the pedal potentiometer gang 2 in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

Accelerator pedal released: 0.30 V < PR088 < 0.40 V IMPORTANT This corresponds to normal operation.

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

PR089	<u>VEHICLE SPEED</u>
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PARAMETER DEFINITION	Gives the vehicle speed in km/h .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	This parameter is transmitted by the ABS computer. This signal is transmitted to the injection on the multiplex network.

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

In the event of a fault, carry out a multiplex network test (see 88B, Multiplexing) And then full fault-finding on the ABS computer (see 38C, Anti-lock braking system).
--

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

PR128	<u>FIRST EGR VALVE OFFSET</u>
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PARAMETER DEFINITION	This parameter indicates the closing ratio of the EGR valve for the first offset of the EGR valve.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

Indicates the percentage $\approx 20\%$. PR128 \approx PR129 Last EGR valve offset, these 2 values should be similar. In the event of a fault, consult the interpretation of faults DF209 EGR valve position sensor circuit and DF647 EGR valve position regulation.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR129	<u>LAST EGR VALVE OFFSET</u>
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PARAMETER DEFINITION	This parameter indicates the EGR valve closing ratio for the last EGR valve offset.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

Indicates the percentage $\approx 20\%$.
PR128 First EGR valve offset \approx **PR129**, these 2 values should be similar.
In the event of a fault, see the interpretation of faults **DF209 EGR valve position sensor circuit** and **DF647 EGR valve position regulation**.

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

PR130	<u>CRUISE CONTROL SETPOINT</u>
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PARAMETER DEFINITION	This parameter indicates the cruise control setpoint.
---------------------------------	---

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no faults present. Perform this fault finding procedure: <ul style="list-style-type: none">– after finding an inconsistency in the parameter,– or after a customer complaint (lack of power, smoke etc.).

Conformity check with engine stopped and ignition on, or engine running, and 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)

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

PR131	<u>EGR AIR FLOW DIFFERENCE</u>
--------------	--------------------------------

PARAMETER DEFINITION	This parameter indicates the EGR air flow difference.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

PR131 = PR146 - PR171 The value should be as close as possible to 0. In the event of a fault, consult the interpretation of fault DF056 Air flow sensor circuit.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR132	<u>AIR FLOW</u>
--------------	-----------------

PARAMETER DEFINITION	This parameter indicates the inlet air flow in kg/h .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no faults present. Perform this fault finding procedure: <ul style="list-style-type: none"> – after finding an inconsistency in the parameter, – or after a customer complaint (lack of power, smoke etc.).
	Use the Mégane II ph2, Scénic II ph2 Wiring Diagram Technical Note.

Conformity check with engine stopped and ignition on

PR132 = 0 kg/h

Conformity check with engine running, engine coolant temperature > 80°C

PR132 ≈ 60 kg/h

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR132 CONTINUED	
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Sensor electrical conformity

Test the air inlet circuit (from the air filter inlet to the inlet manifold, apply **test 4 Turbocharged air inlet circuit check**):

- air filter unit inlet not blocked and filter not clogged,
- **visual inspection only, run test 4 of ALP2 Starting fault or starting impossible,**
- oil vapour recirculation circuit connection conformity.
- **absence of leaks or blockages** in the **low** and **high pressure** air circuits: pipes, presence and tightness of the mounting clips, mounting of the turbocharger 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 feed** to the air flowmeter.

- connection **3KJ** of component **799**.

Check the **+12 V after relay feed** to the air flowmeter.

- connection **3FB** of component **799**.

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

- connection code **3DV**,

- connection code **3DW**,

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

With the flowmeter **connected**, the vehicle **ignition on** and **engine stopped**:

Check the voltage between connections **3DW** and **3DV** of component **799**.

- If the voltage is not approximately **0.6 V ± 0.1 V**, replace the air flowmeter.

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

PR146	<u>INLET AIR FLOW</u>
--------------	-----------------------

PARAMETER DEFINITION	This parameter indicates the flow of air entering the engine in mg/st .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

This parameter indicates the air flow entering the engine in mg/st . 0 mg/st In the event of a fault, consult the interpretation of parameter DF056 Air flow sensor circuit .
--

Engine running, engine coolant temperature > 80 °C
--

This parameter indicates the flow of air entering the engine in mg/st . In the event of a fault, consult the interpretation of fault DF056 Air flow sensor circuit .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR157	<u>FUEL FLOW SETPOINT</u>
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PARAMETER DEFINITION	This parameter indicates the fuel flow setpoint in mg/st
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Conformity check with engine stopped and ignition on

Ignition on: 0.0 mg/st. If there is a fault, refer to the interpretation of fault DF643 Rail pressure regulator circuit .
--

Conformity check with engine running, engine coolant temperature > 80°C

Engine running: PR017: Fuel flow = PR157. In the event of a fault, refer to the interpretation of fault DF643 Rail pressure regulator circuit .
--

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

PR171	<u>AIR FLOW SETPOINT FOR EGR</u>
--------------	----------------------------------

PARAMETER DEFINITION	This parameter indicates the flow of air required by the EGR valve in mg/st.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

Indicates the air flow required by the EGR valve
--

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

PR190	<u>IDLE SPEED SETPOINT</u>
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PARAMETER DEFINITION	This parameter indicates the engine's rotational speed in rpm .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

<p>With the ignition on the value is 0 rpm.</p> <p>In the event of a fault, consult the interpretation of faults DF195 Camshaft sensor - engine speed consistency, DF119 Camshaft sensor signal, and DF120 Engine speed sensor signal.</p>
--

Conformity check with engine running, engine coolant temperature > 80°C

<p>With the engine running at idle speed the value is approximately 800 rpm</p> <p>In the event of a fault, consult the interpretation of faults DF195 Camshaft sensor - engine speed consistency, DF119 Camshaft sensor signal, and DF120 Engine speed sensor signal.</p> <p>The difference between the engine idle speed and its setpoint must be less than 50 rpm.</p>
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR209	<u>TURBOCHARGING PRESSURE LOOP DIFFERENCE</u>
--------------	---

PARAMETER DEFINITION	This parameter indicates the turbocharging pressure loop difference in bar .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine running, engine coolant temperature > 80 °C
--

PR209 = PR009 – PR041 = ~ 0 If PR209 is significant, apply the interpretation of command AC004 Turbocharging solenoid valve .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR213	<u>RAIL PRESSURE LOOP DIFFERENCE</u>
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PARAMETER DEFINITION	This parameter indicates the turbocharging pressure loop difference in bar .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

PR213 = PR008 - PR038 In the event of a fault, consult the interpretation of fault DF007 Rail pressure sensor circuit .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR224	<u>TURBOCHARGING PRESSURE SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the turbocharging pressure sensor voltage in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

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

0 V < PR224 < 5 V In the event of a fault, consult the interpretation of faults DF011 Sensor supply voltage no. 1 , DF012 Sensor supply voltage no. 2 , and DF013 Sensor supply voltage no. 3 .
--

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

PR358	<u>SENSOR REFERENCE VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the reference voltage of the sensors in volts .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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The sensor reference voltage must be between 3.4 V < PR358 < 3.8 V

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR364	<u>CYLINDER NO. 1 FUEL FLOW CORRECTION</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the cylinder's fuel flow correction in mg/st .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

PR364 = 0.0 mg/st. In the event of a fault, consult test 10 Poor injector operation .
--

Conformity check with engine running, engine coolant temperature > 80°C

- 6 mg/st < PR364 < 6 mg/st. In the event of a fault, consult test 10 Poor injector operation .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR365	<u>CYLINDER NO. 4 FUEL FLOW CORRECTION</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the cylinder's fuel flow correction in mg/st .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

PR365 = 0.0 mg/st. In the event of a fault, consult test 10 Poor injector operation .
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Conformity check with engine running, engine coolant temperature > 80°C

- 6 mg/st < PR365 < 6 mg/st. In the event of a fault, consult test 10 Poor injector operation .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR381

PARTICLE FILTER DOWNSTREAM TEMPERATURE

PARAMETER DEFINITION

This parameter indicates the exhaust gas air temperature downstream of the particle filter in °C.

NOTES

This parameter exists on certain vehicles in **Vdiag48** (depending on equipment), if the vehicle not equipped with this sensor, the default value is **PR381 = 250°C**

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

PR381 ≈ PR382 "Temperature upstream of the particle filter " ≈ ± 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

AFTER REPAIR

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

PR382	<u>PARTICLE FILTER UPSTREAM TEMPERATURE</u>
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PARAMETER DEFINITION	This parameter indicates the exhaust gas air temperature upstream of the particle filter in °C.
-----------------------------	---

NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumer

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

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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EDC16C36_V48_PR382/EDC16C36_V50_PR382/EDC16C36_V58_PR382

PR383	<u>WEIGHT OF SOOT IN PARTICLE FILTER</u>
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PARAMETER DEFINITION	This parameter indicates the weight of soot contained in the particle filter in g .
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NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumer

PR383 < 70 g.

If the weight is greater than 70 g carry out an After-Sales regeneration.

Run command **SC017 Particle filter regeneration** and follow the procedure (see **Interpretation of commands**).

In the event of a fault, refer to the interpretation of fault **DF315 Particle filter diff* pressure sensor**.

diff: differential

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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EDC16C36_V48_PR383/EDC16C36_V50_PR383/EDC16C36_V58_PR383

PR385	<u>EXHAUST PIPE FLOW</u>
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PARAMETER DEFINITION	This parameter indicates the exhaust pipe flow in m³/h .
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NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on

Stationary PR385 = 0 m³/h

Conformity check with engine running, engine coolant temperature > 80°C, without electrical consumers

20 m³/h < PR385 < 80 m³/h
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR391	<u>DISTANCE SINCE PARTICLE FILTER REPLACEMENT</u>
--------------	---

PARAMETER DEFINITION	This parameter indicates the distance travelled since particle filter replacement in miles (kms) .
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NOTES	This parameter only exists on engines F9Q816
--------------	---

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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Indicates the mileage travelled since replacement of the particle filter.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR405	<u>CYLINDER NO. 2 FUEL FLOW CORRECTION</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the cylinder's fuel flow correction in mg/st .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

PR405 = 0.0 mg/st. In the event of a fault, consult test 10 Poor injector operation .
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Conformity check with engine running, engine coolant temperature > 80°C

- 6 mg/st < PR405 < 6 mg/st. In the event of a fault, consult test 10 Poor injector operation .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR406	<u>CYLINDER NO. 3 FUEL FLOW CORRECTION</u>
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PARAMETER DEFINITION	This parameter indicates the cylinder's fuel flow correction in mg/st .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

PR406 = 0.0 mg/st. In the event of a fault, consult test 10 Poor injector operation .
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Conformity check with engine running, engine coolant temperature > 80°C

- 6 mg/st < PR406 < 6 mg/st. In the event of a fault, consult test 10 Poor injector operation .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR412	<u>DISTANCE VALUE AT LAST SUCCESSFUL REGENERATION</u>
--------------	---

PARAMETER DEFINITION	This parameter indicates the vehicle's mileage at the last successful regeneration in miles (kms) .
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NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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This parameter indicates the vehicle's mileage at the last successful regeneration.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR414	<u>PARTICLE FILTER DIFF* PRESSURE</u>
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PARAMETER DEFINITION	This parameter indicates the particle filter differential pressure in mbar .
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NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on

PR414 = 0 ± 1 mbar In the event of a fault, refer to the interpretation of fault DF315 Particle filter diff* pressure sensor .

Conformity check with engine running, engine coolant temperature > 80°C, without electrical consumers

10 mbar < PR414 < 100 mbar In the event of a fault, refer to the interpretation of fault DF315 Particle filter diff* pressure sensor .

*diff: differential

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR415	<u>TIME SINCE LAST REGENERATION</u>
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PARAMETER DEFINITION	This parameter indicates the time since the last regeneration in hours .
---------------------------------	---

NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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Time counter since last regeneration (in hours).
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR420	<u>DAMPER VALVE ERROR COUNTER</u>
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PARAMETER DEFINITION	This parameter indicates the number of damper valve errors.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

PR420 = 0 In the event of a fault, refer to the interpretation of fault DF226 Damper valve circuit .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR667	<u>TURBINE UPSTREAM TEMPERATURE</u>
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PARAMETER DEFINITION	This parameter indicates the turbine upstream temperature in °C.
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NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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Indicates the turbine upstream air temperature in °C, PR667 ≈ 200°C. In the event of a fault, consult the interpretation of fault DF652 Turbine upstream temperature sensor circuit .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR668

TURBINE UPSTREAM TEMPERATURE SENSOR VOLTAGE

**PARAMETER
DEFINITION**

This parameter indicates the turbine upstream temperature sensor voltage in **volts**.

NOTES

This parameter only exists on engines **F9Q816**

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

PR668 ≈ 5 V

In the event of a fault, refer to the interpretation of **DF652 Turbine upstream temperature sensor circuit**.

AFTER REPAIR

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

PR669	<u>VOLTAGE OF PARTICLE FILTER DIFF.* PRESS* SENS*</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the particle filter differential pressure sensor in volts .
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NOTES	This parameter only exists on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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PR669 ≈ 5 V In the event of a fault, refer to the interpretation of fault DF315 Particle filter diff* pressure sensor .
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*diff: differential

*sens: sensor

*press: pressure

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR670	<u>VOLTAGE OF PARTICLE FILTER UPSTREAM OF TEMP* SENS*</u>
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PARAMETER DEFINITION	This parameter indicates the voltage of the particle filter temperature sensor in volts .
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NOTES	This parameter exists only on engines F9Q816
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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PR670 ≈ 5 V In the event of a fault, refer to the interpretation of fault DF310 Particle filter upstream temp* sensor .
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*temp: temperature

*sens: sensor

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

PR671

PARTICLE FILTER DOWNSTREAM TEMPERATURE SENS*
VOLTAGE

**PARAMETER
DEFINITION**

This parameter indicates the voltage of the temperature sensor downstream of the particle filter in **volts**.

NOTES

This parameter exists only on certain engines **F9Q816** in **Vdiag48**

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

PR671 ≈ 5 V

In the event of a fault, consult the interpretation of fault **DF309 Particle filter downstream temp.* sensor**.

*temp: temperature

*sens: sensor

AFTER REPAIR

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

PR672	<u>DAMPER VALVE POSITION SETPOINT</u>
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PARAMETER DEFINITION	This parameter indicates the damper valve position setpoint as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

PR672 < 5% In the event of a fault, refer to the interpretation of fault DF226 Damper valve circuit .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR747	<u>DAMPER VALVE POSITION</u>
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PARAMETER DEFINITION	This parameter indicates the damper valve position as a percentage.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on

When stopped PR747 = 0% In the event of a fault, refer to the interpretation of fault DF226 Damper valve circuit .

Conformity check with engine running, engine coolant temperature > 80°C

At idle speed PR747 ≈ 5 % In the event of a fault, refer to the interpretation of fault DF226 Damper valve circuit .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR777	<u>RICHNESS RATIO SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the richness ratio sensor in volts .
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NOTES	Special notes: This status only concerns certain F9Q818 engines . Check that the vehicle is definitely equipped with a richness ratio sensor.
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Conformity check with engine stopped and ignition on

PR777 = 0 ± 0.1 V In the event of a fault, consult the interpretation of DF967 Richness ratio sensor circuit .
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Conformity check with engine running, engine coolant temperature > 80°C

PR777 = 2 ± 0.1 V In the event of a fault, consult the interpretation of DF967 Richness ratio sensor circuit .
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AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR778	<u>RICHNESS RATIO SENSOR TEMP.*</u>
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PARAMETER DEFINITION	This parameter indicates the richness ratio sensor temperature.
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NOTES	Special notes: This status only concerns certain F9Q818 engines . Check that the vehicle is definitely equipped with a richness ratio sensor.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

PR778 ≈ 780°C In the event of a fault, consult the interpretation of DF970 Richness ratio sensor circuit .

*temp: temperature

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR779	<u>RATIO SENSOR RICHNESS</u>
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PARAMETER DEFINITION	This parameter indicates the ratio sensor richness.
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NOTES	Special notes: This status only concerns certain F9Q818 engines . Check that the vehicle is indeed equipped with a richness ratio sensor.
--------------	--

Conformity check with engine stopped and ignition on

PR779 \approx 1 In the event of a fault, refer to the interpretation of fault DF980 Richness ratio sensor function .
--

Conformity check with engine running, engine coolant temperature > 80°C

0.20 < PR779 < 0.40 In the event of a fault, refer to the interpretation of fault DF980 Richness ratio sensor function .

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

PR784	<u>DF312 RECORD No. 1</u>
PR785	<u>DF312 RECORD No. 2</u>
PR786	<u>DF312 RECORD No. 3</u>
PR787	<u>DF312 RECORD No. 4</u>
PR788	<u>DF312 RECORD No. 5</u>
PR789	<u>DF312 RECORD No. 6</u>
PR790	<u>DF312 RECORD No. 7</u>
PR791	<u>DF312 RECORD No. 8</u>
PR792	<u>DF312 RECORD No. 9</u>
PR793	<u>DF312 RECORD No. 10</u>

PARAMETER DEFINITION	These parameters are shown in Km .
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NOTES	Special notes: Interpret these parameters only if DF312 Speed request is present or stored. These parameters only exist in Vdiag48 .
--------------	---

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

In the event of a fault, consult the interpretation of fault **DF312 Speed request**.

These parameters are used for looking up the history of the last ten particle filter warning light activations

Each parameter from **PR784** to **PR793** contains a record of the vehicle mileage when the particle filter warning light comes on. These parameters are associated with the appearance of fault **DF312 Speed request**. **PR784** to **PR793** operate through successive copying (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 DF312 Record no. 10** 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 no recording was made. 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 .
---------------------	---

EDC16C36_V48_PR784/EDC16C36_V48_PR785/EDC16C36_V48_PR786/EDC16C36_V48_PR787/EDC16C36_V48_PR788/
EDC16C36_V48_PR789/EDC16C36_V48_PR790/EDC16C36_V48_PR791/EDC16C36_V48_PR792/EDC16C36_V48_PR793/
EDC16C36_V58_PR784/EDC16C36_V58_PR785/EDC16C36_V58_PR786/EDC16C36_V58_PR787/EDC16C36_V58_PR788/
EDC16C36_V58_PR789/EDC16C36_V58_PR790/EDC16C36_V58_PR791/EDC16C36_V58_PR792/EDC16C36_V58_PR793

PR794	<u>STORED REGENERATION FAILURE NO. 1</u>
PR795	<u>STORED REGENERATION FAILURE NO. 2</u>
PR796	<u>STORED REGENERATION FAILURE NO. 3</u>
PR797	<u>STORED REGENERATION FAILURE NO. 4</u>
PR798	<u>STORED REGENERATION FAILURE NO. 5</u>
PR799	<u>STORED REGENERATION FAILURE NO. 6</u>
PR800	<u>STORED REGENERATION FAILURE NO. 7</u>
PR801	<u>STORED REGENERATION FAILURE NO. 8</u>
PR802	<u>STORED REGENERATION FAILURE NO. 9</u>
PR803	<u>STORED REGENERATION FAILURE NO. 10</u>

PARAMETER DEFINITION	These parameters are shown in Km .
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NOTES	<p>Special notes: For Vdiag48: Interpret these parameters only if DF312 Speed request is present or stored.</p>
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<p>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers</p>

<p>These parameters are used so that the history of the last ten regeneration failures when driving can be found.</p> <p>Each parameter between PR794 and PR803 contains the vehicle mileage when the particle filter regeneration fails when driving. Each parameter relates to an engine status. They are recorded simultaneously (for example PR797 Stored regeneration failure no. 4 is associated with ET709 Stored engine status no. 4).</p> <p>PR794 to PR803 operate through successive copying (when regeneration fails whilst driving, the value of PR794 is copied to PR795, the value of PR795 is copied to PR796, and so on).</p> <p>When there are more than ten records, the value of PR803 Stored regeneration failure no. 10 is overwritten. The new mileage is allocated to PR794.</p> <p>If none of parameters PR794 to PR803 is available in the sub-function, this means that no recording was made. The parameters appear in the sub-function when they have a value above zero.</p>

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

EDC16C36_V48_PR794/EDC16C36_V48_PR795/EDC16C36_V48_PR796/EDC16C36_V48_PR797/EDC16C36_V48_PR798/
EDC16C36_V48_PR799/EDC16C36_V48_PR800/EDC16C36_V48_PR801/EDC16C36_V48_PR802/EDC16C36_V48_PR803/
EDC16C36_V50_PR794/EDC16C36_V50_PR795/EDC16C36_V50_PR796/EDC16C36_V50_PR797/EDC16C36_V50_PR798/
EDC16C36_V50_PR799/EDC16C36_V50_PR800/EDC16C36_V50_PR801/EDC16C36_V50_PR802/EDC16C36_V50_PR803/
EDC16C36_V58_PR794/EDC16C36_V58_PR795/EDC16C36_V58_PR796/EDC16C36_V58_PR797/EDC16C36_V58_PR798/
EDC16C36_V58_PR799/EDC16C36_V58_PR800/EDC16C36_V58_PR801/EDC16C36_V58_PR802/EDC16C36_V58_PR803

PR816	<u>STORED REGENERATION START NO. 1</u>
PR817	<u>STORED REGENERATION START NO. 2</u>
PR818	<u>STORED REGENERATION START NO. 3</u>
PR819	<u>STORED REGENERATION START NO. 4</u>
PR820	<u>STORED REGENERATION START NO. 5</u>
PR821	<u>STORED REGENERATION START NO. 6</u>
PR822	<u>STORED REGENERATION START NO. 7</u>
PR823	<u>STORED REGENERATION START NO. 8</u>
PR824	<u>STORED REGENERATION START NO. 9</u>
PR825	<u>STORED REGENERATION START NO. 10</u>

PARAMETER DEFINITION	These parameters are shown in Km .
---------------------------------	---

NOTES	Special notes: For Vdiag48 : Interpret these parameters only for ALP11 Particle filter warning light comes on too often .
--------------	--

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

These parameters are used so that the history of the last ten regeneration starts when driving can be found.

* rege: regeneration

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

EDC16C36_V48_PR816/EDC16C36_V48_PR817/EDC16C36_V48_PR818/EDC16C36_V48_PR819/EDC16C36_V48_PR820/
EDC16C36_V48_PR821/EDC16C36_V48_PR822/EDC16C36_V48_PR823/EDC16C36_V48_PR824/EDC16C36_V48_PR825/
EDC16C36_V50_PR816/EDC16C36_V50_PR817/EDC16C36_V50_PR818/EDC16C36_V50_PR819/EDC16C36_V50_PR820/
EDC16C36_V50_PR821/EDC16C36_V50_PR822/EDC16C36_V50_PR823/EDC16C36_V50_PR824/EDC16C36_V50_PR825/
EDC16C36_V58_PR816/EDC16C36_V58_PR817/EDC16C36_V58_PR818/EDC16C36_V58_PR819/EDC16C36_V58_PR820/
EDC16C36_V58_PR821/EDC16C36_V58_PR822/EDC16C36_V58_PR823/EDC16C36_V58_PR824/EDC16C36_V58_PR825

PR816 PR817 PR818 PR819 PR820 PR821 PR822 PR823 PR824 PR825 CONTINUED	
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Each parameter from **PR816** to **PR825** records the mileage at the start of the particle filter regeneration, for which the request status is recorded by **ET742 Stored regen* request status no. 1** to **ET751 Stored regen* request status no. 10** (for example **PR819 Stored regeneration start no. 4** is associated with **ET745 Stored regen* request status 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 Stored regen* request status no. 1**.

PR816 to **PR825** operate through successive copying (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 Stored regeneration start no. 10** is overwritten. The new mileage is allocated to **PR816**.

If only parameter **PR816 Stored regeneration start no. 1** is available in the sub-function and it has a value of zero, this means that no recording was made.

If a recording has been made, it will have a value above zero.

* rege: regeneration

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR848	<u>NUMBER OF REGENERATION FAILURES</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the number of regeneration failures.
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NOTES	Only on engine F9Q816 .
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
--

This parameter indicates the number of failed regenerations when driving.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check with the diagnostic tool .
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EDC16C36_V48_PR848/EDC16C36_V50_PR848/EDC16C36_V58_PR848

PR873	<u>OIL OXIDATION SIGNAL</u>
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PARAMETER DEFINITION	This parameter indicates the distance of the vehicle when the oil dilution threshold is reached.
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NOTES	Apply the interpretation of this parameter only if the OCS (oil control system) program is activated on the instrument panel. In the instrument panel computer, check the reading of configuration LC106 OCS: WITH This parameter is not operational in Vdiag44
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers
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<p>The oil condition is calculated by the oxidation program in the injection computer, according to the number of engine revolutions.</p> <p>When this count reaches a certain threshold before the end of the oil service period, the injection computer sends a signal to the instrument panel, which will display service due. Parameter PR873 corresponds to the vehicle mileage at the time this signal is sent.</p> <p>Then the instrument panel computer deducts 900 miles (1500 km) before displaying the message Service required.</p>

<p>IMPORTANT</p> <p>When the message Service required appears on the instrument panel, the customer must arrange an oil change within the remaining 900 miles (1500 km).</p>

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check with the diagnostic tool .
---------------------	--

EDC16CP36_V4C_PR873/EDC16CP36_V48_PR873/EDC16CP36_V50_PR873/EDC16CP36_V54_PR873/EDC16CP36_V58_PR873

PR874	<u>LAST SERVICE</u>
PARAMETER DEFINITION	<p>This parameter indicates the vehicle mileage the last time a service was carried out. The vehicle mileage is updated when the oil change parameters are reinitialised on the instrument panel.</p> <p>This parameter is not operational in Vdiag44.</p>
NOTES	None.

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check with the diagnostic tool.</p>
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EDC16CP36_V4C_PR874/EDC16CP36_V48_PR874/EDC16CP36_V50_PR874/EDC16CP36_V54_PR874/EDC16CP36_V58_PR874

PR875	<u>OIL DILUTION SIGNAL</u>
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PARAMETER DEFINITION	This parameter indicates the vehicle mileage when the oil dilution threshold is reached.
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NOTES	This parameter should be interpreted only if the OCS (Oil Control System) program is activated on the instrument panel. On the instrument panel computer, check the reading of configuration LC106 O.C.S.: WITH .
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C, without electrical consumers

The injection computer estimates the degree of engine oil dilution according to the customer's driving style. When the dilution level reaches a certain threshold before the end of the oil change interval, the injection computer sends a signal to the instrument panel, which then displays **Service required**. Parameter **PR875** corresponds to the vehicle mileage at the time this signal is sent.

IMPORTANT

When the message **service required** appears on the instrument panel, the customer must carry out an oil service immediately to prevent damage to their engine.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition until the end of the power-latch phase, and carry out a road test followed by a check with the diagnostic tool .
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EDC16CP36_V50_PR875

PR1012	<u>WEIGHT OF SOOT AFTER REGENERATION</u>
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PARAMETER DEFINITION	This parameter indicates the weight of soot in g present in the particle filter after a regeneration.
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NOTES	This parameter is to be consulted after using SC017 Particle filter regeneration .
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Conformity check: Engine stopped and the ignition on, or the engine running and the engine coolant temperature > 80°C without electrical consumers.

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 command **SC017 Particle filter regeneration**.

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 perform a routine oil change before a second After-Sales regeneration (see **SC017 Particle filter regeneration**).

DIESEL INJECTION

Fault finding – Command summary table

13B

Tool command	Diagnostic tool title	comments
SC001	Write saved data	See Interpretation of commands .
SC002	Enter injector codes	See Interpretation of commands .
SC003	Save computer data	See Interpretation of commands .
SC017	Particle filter regeneration	See Interpretation of commands .
SC031	Operational fault finding of cylinders	See Interpretation of commands .
SC035	High pressure fuel circuit fault finding	See Interpretation of commands .
SC036	Reinitialise programming	See Interpretation of commands .
RZ001	Fault memory	See Interpretation of commands .
RZ005	Programming	See Interpretation of commands .
RZ034	Computer memory	See Interpretation of commands .
LC009	Air conditioning	See configuration and programming .
LC056	Heating elements	See configuration and programming .
LC065	Water in diesel fuel sensor	See configuration and programming .
LC120	Cruise control	See configuration and programming .
LC121	Speed limiter	See configuration and programming .
AC004	Turbocharging solenoid valve	See Interpretation of commands .
AC011	Rail pressure regulator	See Interpretation of commands .
AC012	Damper valve	See Interpretation of commands .
AC037	Preheating relay	See Interpretation of commands .
AC038	Low speed GMV relay	See Interpretation of commands .
AC039	High speed GMV relay	See Interpretation of commands .
AC103	EGR by-pass	See Interpretation of commands .
AC231	Richness ratio sensor heating	See Interpretation of commands .
VP010	Write VIN	See Interpretation of commands .
VP036	Fuel supply inhibited	See Interpretation of commands .
VP037	Lift fuel supply inhibition	See Interpretation of commands .

SC001	<u>WRITE SAVED DATA</u>
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NOTES	<p>To use this command, first save the data with the SC003 Save computer data command.</p> <p>The writing is carried out after the computer has been reprogrammed or replaced Ignition on and engine stopped.</p>
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The validation of this command leads to the entering of the saved data saved using command **SC003 Save computer data**.

The data is as follows:

- injector codes,
 - the EGR valve data programming;
- options available on the vehicle and managed by the computer (e.g. air conditioning);

This data will configure the computer and will prevent:

- engine malfunction after (re)programming or replacing the computer;
- faulty interpretation of information provided by the **CLIP tool**.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

SC002	<u>ENTER INJECTOR CODES</u>
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NOTES	<p>This command is run after replacing the injectors and only if the vehicle is IMA configured (ET104 Injector code use is YES).</p> <p>If this command is not realised, the DF276 Injection code programming fault will be present.</p> <p>Ignition on and engine stopped.</p>
-------	--

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 at the engine flywheel end.

Procedure to be followed:

- Read the **7-character** alphanumeric codes engraved on the upper section of the injector body.
- Use command **SC002**.
- Select the cylinder number concerned in the **Desired** column, then confirm.
- Enter the injector code noted 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 appear in neither the **Current** column nor the **Desired** column, check the conformity of the codes read, and make sure the data has been entered correctly.

The possible confusions are:

the figure "1" with the letter "I" and "L",

the figure "2" with the letter "Z",

the figure "5" with the letter "S",

the figure "6" with the letter "G",

the figure "8" with the letter "B".

- Exit fault finding mode.
- Switch off the ignition and wait for **the diagnostic tool** message (maximum time **8 minutes**) **Communication lost with computer: EDC16 C36, check the tool connection and computer power supply** before switching the ignition back on.
- Switch the ignition back on and check for faults.
- **DF276 Injector code programming** should be stored.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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SC002 CONTINUED	
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If the **DF276 Injector code programming** fault persists, the command has not been carried out correctly. Start the procedure again and follow the instructions.

If the codes are still not accepted, check that the computer has been correctly placed on standby.

Switch off the ignition and wait for **the diagnostic tool** message (maximum time **8 minutes**) **Communication lost with computer: EDC16 C36, check the tool connection and computer power supply** before switching the ignition back on.

If all these checks still do not enable the command to be confirmed, contact the Techline.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

SC003	<u>SAVE COMPUTER DATA</u>
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NOTES	This save is performed before reprogramming or replacing the computer. Ignition on and engine stopped.
--------------	--

On the CLIP tool, select the **SC003 Save computer data**.

If the following message appears:

"a saved file exists, do you want to overwrite this data?"

*(this file corresponds to the last save made on the **diagnostic 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).

This information will be saved in **the CLIP 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.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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SC017	<u>PARTICLE FILTER REGENERATION</u>
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NOTES	<p>Only run this command after interpretation of the following faults:</p> <ul style="list-style-type: none">– DF308 Clogged particle filter,– DF311 "Failed regenerations limit exceeded",– DF312 Speed request.
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WARNING

It is essential to follow the safety and cleanliness instructions (see MR364 (Mégane II ph2), MR370 (Scénic 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 that can withstand the 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.**

IMPORTANT

- 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:

The regeneration can be stopped (less than **3 seconds**) by briefly pressing twice on the engine start button.

Switch off the ignition and wait for the **diagnostic tool** message (maximum time **8 minutes**): **Communication lost with computer: EDC16C36, 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, and what operations need to be carried out (**filter replacement, whether an oil service is required, etc.**).

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
--------------	--

SC017 CONTINUED 1

DESCRIPTION OF THE PROCESS

Particle filter regeneration takes place in 3 stages (values given as a guide only):

– **Heating phase:** the engine speed is fixed or fluctuating around **2000 rpm**.

This phase lasts between **8 and 14 min**, until the coolant temperature is greater than **70°C**.

– **Regeneration phase:** the speed is fixed or varies around **2000 rpm**. Engine injection is retarded. The exhaust fumes rise in temperature and burn the soot retained in the particle filter. The combustion of accumulated soot in the particle filter leads to an increase in the **temperature upstream of the particle filter** that can reach, depending on the load level of the particle filter, **600°C**. This phase lasts **28 minutes**.

– **Cooling phase:** the engine speed decreases to **1250 rpm** then increases to **1750 rpm**.

Engine injection returns to normal and the exhaust gases cool the particle filter.

This phase lasts **3 minutes**.

The procedure takes at least **40 minutes** and varies depending on the time taken to reach a coolant temperature of **70°C**.

VALIDATING 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**.

AFTER REPAIR

Repeat the conformity check in the interpretation of statuses and parameters

SC017 CONTINUED 2

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 necessarily perform an oil change before a second After-Sales regeneration.

For **Vdiag 50**:

- Change the engine oil if a message on the instrument panel requests it.

For other **Vdiag**:

- Consult **PR848 Number of regeneration failures**. If **PR848** is greater than **3**, change the engine oil.

- **Particle filter too full - replace the particle filter**: the 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**.

For **Vdiag 50**:

- Change the engine oil if a message on the instrument panel requests it.

For other **Vdiag**:

- 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**.

AFTER REPAIR

Repeat the conformity check in the interpretation of statuses and parameters

SC017 CONTINUED 3

- **Particle filter regeneration failed - use test Temperature upstream of turbine too low:** regeneration failed because the temperature upstream of the turbine is too low. Run **Test 8 Temperature upstream of turbine too low**.

In all cases, the following actions must be carried out:

- switch off the ignition and wait for the **diagnostic tool** message (maximum time **8 minutes**): **Communication lost with computer: EDC16C36, check the tool connection and the computer supply**.
- switch on the ignition and re-establish dialogue with the injection computer,
- run command **SC036 Reinitialise 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 time **8 minutes**): **Communication lost with computer: EDC16C36, 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 Particle filter clogged** or **DF312 Speed request** are 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,
- following particle filter replacement,
- following a second regeneration (in the case of two successive regenerations).

AFTER REPAIR

Repeat the conformity check in the interpretation of statuses and parameters

SC031	<u>OPERATIONAL FAULT FINDING OF CYLINDERS</u>
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NOTES	This command is used to run fault finding on the performance of each cylinder and each injector.
--------------	--

To run this command, in **the diagnostic tool**, select scenario **SC031**.

Reminder: cylinder no. 1 is located at the timing end.

Procedure to be followed:

- select scenario **SC031**,
- once the conditions have been met, press the **confirm** button; the test will take approximately **5 minutes**,
- the tool displays “**cylinder no. 1 cut-off**” and there will be a perceptible engine speed variation when the cylinder is cut off; then the same procedure for the other three cylinders,
- **the diagnostic tool** displays the results,
- end of test.

Interpretation of correct results:

- If the displayed results are “**VALID**”, it means that the entire cylinder and injector assembly is in order. There is no need for any operation.

	Results	Interpretation of results
Cylinder 1	VALID	No operation
Cylinder 2	VALID	No operation
Cylinder 3	VALID	No operation
Cylinder 4	VALID	No operation

- If a displayed result is “**INVALID**”, it means the cylinder or injector is not correct.

	Difference compared to average	Results	Interpretation of results
Cylinder X	Negative number or Positive number	INVALID	Carry out the checks described below.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

EDC16C36_V4C_SC031/EDC16C36_V48_SC031/EDC16C36_V50_SC031/EDC16C36_V54_SC031/EDC16C36_V58_SC031

SC031 CONTINUED	
----------------------------------	--

If the result of scenario **SC031** is not valid, check the engine compressions:
Use a compression gauge and apply command **VP036 Fuel supply inhibition (see Interpretation of Commands)**.
Run the compressions on all cylinders.
Are the compressions correct?

NO
↓

YES
↓

Check the cylinder block.	Check the injector fitting and repair if necessary. Otherwise change the concerned injector. After replacing the injector, follow the injector code programming procedure (see Replacement of components), run SC036 Reinitialise programming , and select the number of the injector replaced.
---------------------------	---

IMPORTANT

When removing or refitting injectors, follow the cleanliness and safety instructions (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical, 13B, Diesel injection, Diesel injector: Removal - Refitting**).

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

SC035	<u>HIGH PRESSURE FUEL CIRCUIT FAULT FINDING</u>
--------------	---

NOTES	This command is used to interpret the state of the high pressure fuel circuit (high pressure pump, rail, injectors and high pressure supply pipes).
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To run this command, in **the diagnostic tool**, select scenario **SC035**.

Procedure to be followed:

- select application **SC035 High pressure fuel circuit fault finding**,
- follow the instructions then “**confirm**”,
- with the command in progress: do not operate on the vehicle,
- switch off the engine at the end of the test,
- the tool displays the results,
- end of test.

Interpretation of correct results:

- If the results displayed are OK, the entire high pressure fuel circuit is in order. There is no need for any operation.

Stage X (X is the variable from 1 to 4)	Rising time Rail pressure	Drop off time Rail pressure	Interpretation of results
Stage X	OK	OK	No operation
Step 5		OK	No operation

Interpretation of incorrect results:

- Is one of the value definitions for the various displayed stages is “**TOO SLOW**” or “**TOO FAST**”, see the following table:

Stage X (X is the variable from 1 to 4)	Rising time Rail pressure	Drop off time Rail pressure	Interpretation of results
Stage X	TOO SLOW	TOO SLOW	Check 1
Stage X	TOO SLOW	TOO FAST	Check 2
Stage X	TOO SLOW	OK	Check 3
Stage X	OK	TOO SLOW	Check 4
Stage X	OK	TOO FAST	Check 5
Step 5		TOO FAST	Check 5

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

SC035 CONTINUED

Explanation of results interpretation:

Check 1:

- Use scenario **SC031: Fault finding procedure of cylinders**.
- For **Vdiag 44**, run **Test 10 "Poor injector operation"**.
- Apply **ALP6 Fuel circuit external leaks**.
- Run **Test 3 Low pressure circuit check**.
- Replace the high pressure pump.

Check 2:

- Use scenario **SC031: Fault finding procedure of cylinders**.
- For **Vdiag 44**, run **Test 10 "Poor injector operation"**.
- Apply **ALP6 Fuel circuit external leaks**.
- Run the part of **Test 3 Low pressure circuit check** which concerns the fuel filter.
- Replace the high pressure pump.
- Check the injector return flow and the injectors, run **Test 10 Poor injector operation**.
- Check the rail pressure regulator by running command **AC011 "Rail pressure regulator"**.

Check 3:

- Use scenario **SC031: Fault finding procedure of cylinders**.
- For **Vdiag 44**, run **Test 10 "Poor injector operation"**.
- Apply **ALP6 Fuel circuit external leaks**.
- Run **Test 3 Low pressure circuit check**.
- Replace the high pressure pump.

Check 4:

Replace the high pressure pump.

Check 5:

- Check the flow return injector and the injectors (apply the **Test 10 "Poor injector operation"**).
 - Check the rail pressure regulator by running command **AC011 "Rail pressure regulator"**.
- Consult the repair manual according to the various checks (from 1 to 5), see **MR 364 (Mégane II ph2)**, **MR 370 (Scénic II ph2)**, **Mechanical, 13B, Diesel injection, Injector rail, Removal - Refitting**.
Repair if necessary.

AFTER REPAIR

Repeat the conformity check in the interpretation of statuses and parameters

SC036	<u>REINITIALISE PROGRAMMING</u>
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NOTES	<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"> – the injectors – the EGR valve, – damper valve; – after replacing the particle filter (only Vdiag 48, 50), – after regenerating the particle filter with the diagnostic tool (only Vdiag 48, 50), – after replacing the injection computer without backup possibility (only Vdiag 48, 50). <p>Ignition on and engine stopped.</p>
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To run this command, select the **SC036 Reinitialise programming** scenario on the CLIP 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 **end** on the **configuration completed** screen to return to the main screen,
- switch off the ignition and wait for the **diagnostic tool** message (maximum time **8 minutes**) **Communication lost with computer: EDC16 C36, check the tool connection and computer power supply**. before switching the ignition back on.

End of procedure.

IMPORTANT

When reinitialising injectors, do not forget that **cylinder no. 1 is located at the flywheel end**.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

RZ005	<u>PROGRAMMING</u>
--------------	--------------------

NOTES	This command enables you to reinitialise the entire computer configuration according to the vehicle. Ignition on and engine stopped.
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Command **RZ005** reconfigures the computer.
If the computer has no configuration data,
run command **RZ005** to enter the options fitted on the vehicle:

- air conditioning,
- 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.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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RZ034	<u>COMPUTER MEMORY</u>
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NOTES	IMPORTANT Only use this command if DF107 Computer Memory is Present . Ignition on and engine stopped.
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Command **RZ034** reinitialises 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.
- Configure the injector codes using command **SC002 Enter injector codes**
- 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.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

AC004	<u>TURBOCHARGING SOLENOID VALVE</u>
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NOTES	<p>Perform this fault finding procedure:</p> <ul style="list-style-type: none"> – following interpretation of an unresolved fault or – after processing the interpretation of PR041 Turbocharging pressure or – after a customer complaint (loss of power, smoke etc.). <p>Ignition on and engine stopped.</p>
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

<p>1. The following procedure is for checking that the turbocharger and its control circuit are working properly.</p> <p>Check the high-pressure air circuit sealing: run Test 3 Low-pressure circuit check. Pipe not joined or pierced, pressure sensor disconnected or poorly fitted (seal present), exchanger pierced. To test the exchanger: stabilise the engine speed between 3500 and 4000 rpm with the vehicle stopped and check that there are no leaks.</p>
<p>Measure the resistance of the turbocharging pressure solenoid valve between the following connections:</p> <ul style="list-style-type: none"> – Connection code 3MG, – Connection code 3FB, <p>of component 1475.</p> <p>Replace the solenoid valve if its resistance is not: 20 Ω ± 2 to + 23°C.</p> <p>Check the continuity, insulation, and the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – Connection code 3MG between components 1475 and 120. – Connection code 3FB between components 1475 and 983.
<p>Run command AC004, if a faint whistling noise is heard along with a clicking from the solenoid valve, go to step 2, otherwise check the operation of the computer output stage:</p> <p>Vehicle with + after ignition, clear the faults displayed by the diagnostic tool.</p> <p>With the voltmeter in the direct current position:</p> <p>With the turbocharging solenoid valve connected, connect the voltmeter earth lead to connection 3MG of component 1475 and the positive lead to connection 3FB.</p> <p>Run command AC004, the voltmeter should display four successive voltages of 2.4 V ± 0.2 V.</p> <p>If the measurement is not correct, contact the Techline.</p>

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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**AC004
CONTINUED**

2. Turbocharger control circuit check:

- With the engine stopped, make sure that the control rod is in the resting position.
 - Start the engine and make sure that the control rod actuates to the upper stop.
(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) Control vacuum 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 pressure does not reach **400 mbar ± 150**: check the vacuum pressure circuit from the vacuum pump.
- Stop the engine, reconnect the intake 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, contact the Techline.

3) Solenoid valve operation check:

- Connect the pressure gauge to the solenoid valve outlet **union**.
- Start the engine and run it at a stable idle speed.

If the vacuum pressure does not reach **400 mbar ± 150**, replace the solenoid valve

AFTER REPAIR

Repeat the conformity check in the interpretation of statuses and parameters

AC011	<u>RAIL PRESSURE REGULATOR</u>
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NOTES	<p>Perform this fault finding procedure:</p> <ul style="list-style-type: none"> – following interpretation of an unresolved fault – following an inconsistency recorded in the parameters, – following a customer complaint (starting problems, engine speed instability, injection noise). <p>Ignition on and engine stopped.</p>
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

Step 1

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

- Connection code **3HI** between components **1105** and **120**.
- Connection code **3FB** between components **1105** and **983**.

Run command **AC011**, if a faint whistling noise is heard along with a clicking from the pressure regulator, go to **step 2**, otherwise check the operation of the computer output stage:

Vehicle with + after ignition, clear the faults displayed by the diagnostic tool.

With the voltmeter in the direct current position:

With the pressure regulator connected, connect the voltmeter earth lead to **connection 3HI of component 1105** and the positive lead to **connection 3FB**.

Run command **AC011**, the voltmeter should display four successive voltages of **2.2 V ± 0.2 V**.

If the measurement is not correct, contact the Techline.



STEP 2

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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AC011 CONTINUED	
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Step 2

In the event of rail overpressure:

Check that there are no air bubbles in the diesel fuel low pressure circuit.

Check that the rail pressure sensor is operating correctly.

Consult the interpretation of parameter **PR038 Rail pressure**.

If these checks reveal no irregularities, replace the regulator.

In the event of rail underpressure:

Check that the rail pressure sensor is operating correctly.

Consult the interpretation 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 circuits for leaks: use **ALP6 External leaks on the fuel circuit** (visual inspections, touch tests, odours, etc.) on:

pump body, pressure release valve, pipes, rail and injectors unions, injector wells, etc.

Check the conformity of the seal fitting on the pressure regulator.

Check the operation of the injectors: run **Test 10 Poor injector operation**.

Carry out the necessary repairs.

If the engine starts:

Clear any faults.

Check the pressure regulator by applying (**see ALP7 Rough idle speed**).

With the engine warm, leave it to idle for a few minutes (**3 to 5 minutes**):

– If it stalls and the fault reappears, replace the regulator.

– If it does not stall, stabilise the engine speed at **2000 rpm(1 minute)** then accelerate at full load until it cuts out.

If the engine stalls, contact the Techline

If the engine does not start or there is no timing:

first replace the regulator, and if the fault is still present, contact the Techline

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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AC012	<u>DAMPER VALVE</u>
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NOTES	<p>Carry out this interpretation:</p> <ul style="list-style-type: none"> – after DF226 Damper valve – or after a customer complaint (starting faults, poor performance). <p>Ignition on and engine stopped.</p>
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

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

- Connection code **3VN**,
- Connection code **3VM**,

between components **1461** and **120**.

Check for **+ 12 V** on connection **3FB** of component **1461**.

Check for **earth** on connection **NT** of component **1461**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

With the vehicle ignition on, and the engine stopped:

Check that the **damper valve** is **open**.

If not, clean or replace the damper valve.

Actuate the valve using command **AC012** and check the damper valve travel and the rest position of the valve.

Check the operation of the computer output stage with a voltmeter:

Actuate the valve with command **AC012**.

Positive lead to connection **3FB** and negative lead to connection **3VN** of component **1461**.

The voltmeter should display **three cycles** of ON-OFF (**12.5 V** then return to **0 V**).

If the measurement is correct, replace the damper valve.

If the measurement does not show any lights, contact the Techline.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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AC037	<u>PREHEATING RELAY</u>
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NOTES	This command is only run if fault DF025 Preheating unit diagnostic connection or DF017 Preheating unit control circuit is present or stored and if no other fault is present. Ignition on and engine stopped.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

Before applying the following fault finding procedure, check that the battery voltage is not below 12 V. Otherwise, recharge the battery.

Check the connections on the preheating unit, heater plugs and injection computer.

If 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 heater plugs. If this resistance is **> 2 Ω**, replace the defective plug(s).

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

- Connection code **37AA** between components **257** and **681**.
- Connection code **37AB** between components **257** and **682**.
- Connection code **37AC** between components **257** and **683**.
- Connection code **37AZ** between components **257** and **680**.

Check the **condition** of fuse **FM12 (70 A)** of the preheating unit supply. Replace it if necessary.

Then check for **+12 V** on connection **BP35** of component **257**.

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

- Connection code **3FF**,
 - Connection code **3FY**,
- between components **257** and **120**.

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

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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AC038	<u>LOW-SPEED FAN ASSEMBLY RELAY</u>
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NOTES	<p>There must be no present or stored faults. Perform this fault finding after an engine cooling fault or air conditioning fault. Refer to the Wiring Diagram Technical Notes for the vehicle to locate the fuses and relays concerned. Ignition on and engine stopped.</p>
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

If the **low speed fan assembly relay** does not operate when command **AC038** is run:
Check the **low-speed fan assembly** relay mounting and the connections of the engine management computer.
Check the fan assembly connections.
If 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 relay is actuated by the engine management computer as follows:
Disconnect the **low-speed fan assembly** relay, and fit a **50 to 100 Ω** resistor on the relay mounting in place of the coil, and connect a voltmeter as follows:
– positive terminal to **+12 V** battery,
– negative terminal to connection **3JN** of component **336**.
Run command **AC038**.
If the voltmeter shows the battery voltage (4 ON-OFF cycles of **10 seconds**), replace the relay.

If the **low speed fan assembly** relay is supplied using command **AC038**, but there is still a fan assembly activation fault, check using the wiring diagram.
the conformity of the fan assembly **FM15** maxi-fuse;

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

AC038 CONTINUED

- Check for **+12 V** on connection **49B** of component **262** and on connection **BP71** of component **188**.
- Check for earth on connection **MAS** of component **262**.

If the tests are ok, replace the defective fan.

If not, carry out the following operations:

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

- Connection code **49B** between components **262** and **336**.
- Connection code **MAS** between components **262** and **MAS**.
- Connection code **49A** between components **188** and **337**.
- Connection code **BP71** between components **188** and **597**.
- Connection code **49T** between components **336** and **337**.
- Connection code **3FB**
- Connection code **3JN**,

between components **336** and **120**.

If 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 fan assembly.

Carry out the necessary repairs.

AFTER REPAIR

Repeat the conformity check in the interpretation of statuses and parameters

AC039	<u>HIGH SPEED FAN ASSEMBLY</u>
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NOTES	<p>No fault should be present or stored: Perform this fault finding after an engine cooling fault. Refer to the Wiring Diagram Technical Notes for the vehicle to locate the fuses and relays concerned. Ignition on and engine stopped.</p>
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

If, when running command **AC039**, the **high-speed fan assembly relay** is not activated:
Check the **high-speed fan assembly** relay mounting and the connectors of the engine management computer.
Check the fan assembly connections.
Repair if necessary.

If the fault is still present, check that the relay is actuated by the engine management computer as follows:
Disconnect **high-speed fan assembly relay 335** and fit a **50 to 100 Ω** resistor on its mounting in place of the coil and connect a voltmeter as follows:
- positive terminal to **+ 12 V** battery,
- negative terminal to **connection 3JP** of component **335**.
Run command **AC039**.
If the voltmeter shows the battery voltage (4 ON-OFF cycles of **10 seconds**), replace the relay.
Disconnect **relay 337 for high-speed fan assembly**, and install a **50 to 100 Ω** resistance on its mounting in place of the coil, and connect a voltmeter as follows:
– positive terminal to **+ 12 V** battery,
– negative terminal to **connection 3JP of component 337**.
Run command **AC039**.
If the voltmeter shows the battery voltage (4 ON-OFF cycles of **10 seconds**), replace the relay.

If the **high-speed fan assembly** relays are fed using command **AC153**, but there is still a fan activation fault, check using the wiring diagram:
the conformity of the fan assembly **FM15** maxi-fuse;

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
---------------------	--

AC039 CONTINUED

- Check for **+12 V** on connection **BP71** of component **188** and on connection **49B** of component **262**.
- Check for **earth** on connection **49A** of component **188** and on connection **MAS** of component **262**.

If the tests are ok, replace the defective fan.

If not, carry out the following operations:

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

- Connection code **49B** between components **262** and **335**.
 - Connection code **MAS** between components **262** and **MAS**.
 - Connection code **49A** between components **188** and **337**.
 - Connection code **BP71** between components **188** and **597**.
 - Connection code **BP71** between components **335** and **597**.
 - Connection code **3FB**,
 - Connection code **3JP**,
- between components **335** and **120**.
- Connection code **MAS** between components **337** and **MAS**.
 - Connection code **3FB**,
 - Connection code **3JP**,
- between components **337** and **120**.

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

Repeat the conformity check in the interpretation of statuses and parameters

AC103	<u>EGR BY-PASS</u>
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NOTES	Carry out this fault finding procedure after an unresolved interpretation of fault DF304 EGR by-pass circuit. Ignition on and engine stopped.
	Use Wiring Diagram Technical Note, Mégane II ph2, Scénic II ph2.

Measure **the resistance** of the EGR bypass solenoid valve between the following connections:

- Connection code **3TP**,
 - Connection code **3FB**,
- of component **1301**.
43 Ω to 49 Ω at + 25°C.
32 Ω to 37 Ω at - 40°C

If the resistance is not correct, replace the EGR by-pass solenoid valve.

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

- Connection code **3TP** between components **1301** and **120**.
- Connection code **3FB** between components **1301** and **983**.

If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If you notice no valve movement when running command **AC103**, ensure that the computer output stage is functioning:

Vehicle with + after ignition, clear the faults displayed by the diagnostic tool.

With the voltmeter in the direct current position:

With the EGR BY-PASS solenoid valve connected, connect the voltmeter earth lead to connection **3TP** of component **1301** and the positive lead to connection **3FB**.

Run command **AC103**, the voltmeter should display four successive readings which are approximately equal to the **12 V** battery voltage.

If the voltmeter indicates no control or a continuous voltage, contact the Techline.

If activation has run correctly, check the control vacuum:

- 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 pressure does not reach **800 mbar \pm 100**: check the vacuum pressure circuit from the vacuum pump.

Repair if necessary.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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VP036	<u>INHIBIT FUEL SUPPLY</u>
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NOTES	This command enables you to disable the supply to the injectors. This command is carried out with the engine switched off, and ignition on.
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This command allows the injectors to be locked, so that starting is not possible.
Command **VP036** allows the engine compressions to be checked in complete safety **without disconnecting the injector connectors or the TDC sensor**.

Procedure to follow: (cylinder no. 1 is located on the flywheel end).

- Remove **all the heater plugs**, connect the **compression gauge**.
- Position the gear lever into neutral (manual gearbox) or to position P (sequential gearbox).
- Depress the brake pedal and keep in depressed position.
- Activate command **VP036**.
- Try to start the vehicle.
- Check the engine compressions.

Repeat the procedure for another cylinder.

Important

Keep the brake pedal depressed for the duration of the test.

Re-establish control of the injectors using command **VP037 Stop fuel supply inhibition**.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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VP037	<u>CANCEL FUEL SUPPLY INHIBITION</u>
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NOTES	This command restores the fuel supply to the injectors. This command is carried out with the engine switched off, and ignition on.
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The command allows the supply to the injectors to be re-established, following an engine compression test. Run command VP037 , and try to start the vehicle. If the vehicle does not start, start the procedure again.

AFTER REPAIR	Repeat the conformity check in the interpretation of statuses and parameters
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NOTES

Only refer to these customer complaints after a **complete check** with the diagnostic tool.

No dialogue with engine management computer

ALP1

Starting difficult or impossible

ALP2

Poor performance

ALP4

Irregular engine operation

ALP5

External leaks from the fuel circuit

ALP6

Rough idle

ALP7

Oil leaks from the turbocharger

ALP8

Noises of the turbocharger

ALP9

Exhaust fumes

ALP10

Particle filter warning light comes on too often

ALP11

ALP1	No dialogue with engine management computer
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STEP 1

Check the conformity of the vehicle type and the domain selected on the tool.

Check that the tool is not faulty by trying to establish dialogue with a computer on another vehicle.

Check the supply to the diagnostic socket:

+ Before ignition.

+ After ignition.

Earth.

Check (according to wiring diagram and equipment):

- The conformity of the after ignition fuse.
- The conformity of the injection relay mounting.

The conformity of the injection relay:

65 Ω ± 5 between the following connections:

- Connection code **BP37** of component **983**.
- Connection code **3AA** of component **983**.

infinite resistance between connections (open contact):

- Connection code **BP37** of component **983**.
- Connection code **3FB** of component **983**.

resistance **< 0.2 Ω** between the following connections (contact closed):

- Connection code **BP37** of component **983**.
- Connection code **3FB** of component **983**.

Disconnect the engine management computer and check that there are no conducting parts on the computer studs.

If this reveals any kind of impurity, rectify it and try to establish dialogue.

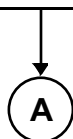
If the fault persists, place the bornier **Elé. 1681** on the engine harness:

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

- Connection code **133B** between components **120** and **225**.
- Connection code **133C** between components **120** and **225**.

Check for **+12 V** on connections **3FB** and **AP29** of component **120**.

Check for **earth** on connections **NT** of component **120**.



AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
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**ALP1
CONTINUED**



If there is no **+12 V**, carry out the following operations:

Shunt the "normally open" contact of the central injection unit supply relay, i.e. **connections BP37 and 3FB of component 983**.

Check for **+12 V** on connections **3FB and AP29** of component **120**.

Check the continuity of the connection between:

– Connection code **3AA** between components **120 and 983**.

Try to establish dialogue with another computer on the same vehicle.

If dialogue is established with **another computer on the same vehicle**, go to **step 2**.

If dialogue cannot be established **with any other computer on the same vehicle** (see 88B, Multiplexing, ALP).

STEP 2

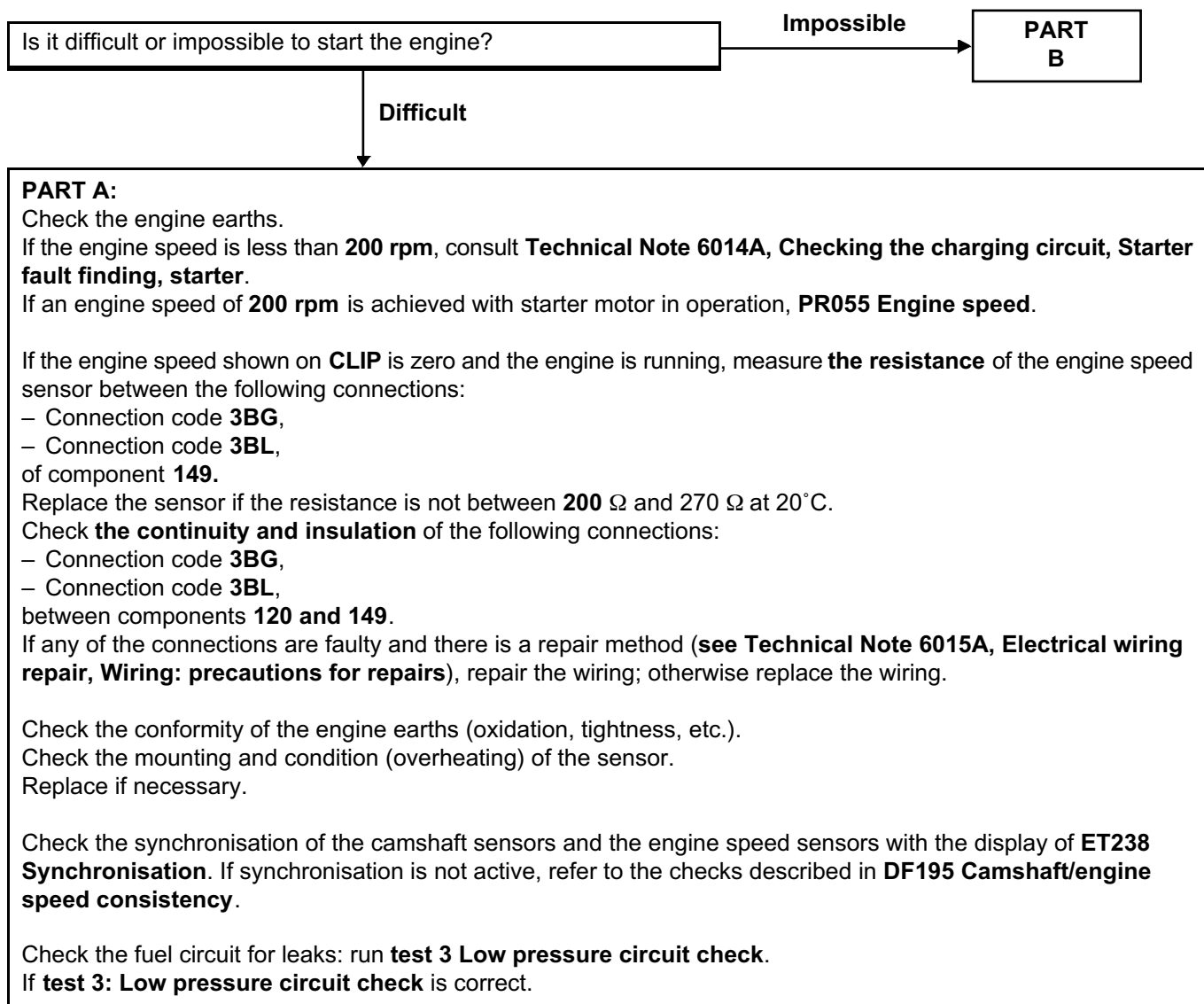
Contact Techline.

AFTER REPAIR

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

ALP2	Starting difficult (or impossible)
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NOTES	<p>Before analysing 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>
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AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
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**ALP2
CONTINUED 1**

Test the high pressure fuel circuit:

Run the scenario **SC035 High pressure fuel circuit fault finding** (see **Interpretation of commands**).

Check that the heater plugs are actuated using the **AC037 Preheating relay** command.

Check the tightness and the condition of the inlet circuit: run **test 4: Turbocharged air inlet circuit check** and follow the procedure.

Check that the exhaust is not blocked: run **test 1: Exhaust system check** and follow the procedure.

Check the consistency of the signal from the engine coolant temperature sensor.

Check the operation of the rail pressure regulator (DRV) using command **AC011 Rail pressure regulator**.

Check the timing setting.

End of part A

AFTER REPAIR

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

ALP2 CONTINUED 2

PART B

Is there diesel fuel in the fuel tank?

NO

Fill the tank with diesel fuel.
Bleed the low and high pressure diesel circuit.

YES

Does the starter motor work properly?

(Ensure that the engine speed reaches **PR055 Engine speed** > ~ 200 rpm with starter motor in operation,)

NO

Consult **Technical Note 6014A, Checking the charging circuit, 16A, Starter fault finding, Starter.**

YES

Using **the diagnostic tool**, check the conformity of the immobiliser: **ET003 Immobiliser** must be **INACTIVE**.

**ET003 not in order, or
immobiliser warning light
permanently on**

Consult the fault finding procedure for the immobiliser.

**ET003 in order
(immobiliser code
warning light off)**

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**.

ALP4	Poor performance
-------------	-------------------------

NOTES	<p>Before analysing 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>
--------------	---

IMPORTANT

In the case of engine overheating to above **118°C**, the computer deliberately limits the fuel flow (overheating warning light lights up from **115°C**).

Please observe the cleanliness guidelines and safety advice.

Is the poor performance accompanied by smoke?

NO

A

YES

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.

Test the high pressure fuel circuit:

Run the scenario **SC035 High pressure fuel circuit fault finding** (see **Interpretation of commands**).

Check that the injectors are correctly fitted (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 that the washer is present.
- Clean the injector wells and the injector, refit the injector with the correct sealing washer.
- The tightness seal and the condition of the inlet circuit: run **test 4: Turbocharged air inlet circuit check**.
- The condition of the air flowmeter: run **test 5 Air flowmeter**.
- The turbocharger, run the following tests:
 - **test 2 Air line at the turbocharger**,
 - **test 6 Turbocharger control solenoid valve check**,
 - **test 7 Turbocharger**.

AFTER REPAIR

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

ALP4 CONTINUED

A

Is the engine running on all cylinders?

NO

Check the operation of the injectors: run **test 10: Poor injector operation**.

YES

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 (**see Status and parameter interpretation**).

Check the consistency of the air flowmeter, the engine coolant temperature sensor, the fuel temperature sensor and the engine speed signals.

Check the connections, the continuity and the absence of interference resistance of the air flow sensor (run **DF056 Air flow sensor circuit**), of the engine coolant temperature sensor (run **DF001 Coolant temperature circuit**), of the fuel temperature sensor (run **DF098 Fuel temperature sensor circuit**), and of the engine speed (run **DF195 Camshaft sensor/engine speed consistency**).

Check:

- That the diesel filter is not clogged.
- That there are no leaks on the high and low pressure diesel circuits: run **test 3 Low pressure circuit check**.
- The connection of the oil vapour rebreathing circuit.
- The rail pressure regulator (MPROP) (jammed/seized); apply the interpretation of command **AC011 Rail pressure regulator**.

Check the engine timing (and the position of the high pressure pump sprocket). (See the procedure in the **Workshop Repair Manual** if necessary).

Test the high pressure fuel circuit:

Run the scenario **SC035 High pressure fuel circuit fault finding** (see **Interpretation of commands**).

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**.

ALP5	Irregular engine operation
-------------	-----------------------------------

NOTES	<p>Before analysing 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>
--------------	---

If the engine races during gear changes, if there is a floor carpet, check that this is not blocking the accelerator pedal, the brake pedal and 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 the following connections:

- Connection code **3BG**,
 - Connection code **3BL**,
- of component **149**.

Replace the sensor if the resistance is not **200 Ω** to **270 Ω** at +20°C.

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

- Connection code **3BG**,
 - Connection code **3BL**,
- between components **120** and **149**.

Check the conformity of the engine earths (oxidation, tightness, etc.).

Check the mounting and condition (overheating) of the sensor.

Replace if necessary.

Check the low pressure circuit, run **test 3 Low pressure circuit check**.

Apply the air flow test procedure (**see Status and parameter interpretation**).

Check the turbocharger, run the following tests:

- **test 2 Air line at the turbocharger**,
- **test 6 Turbocharger control solenoid valve check**,
- **test 7 Turbocharger**.

Test the high pressure fuel circuit:

Run the scenario **SC035 High pressure fuel circuit fault finding** (see Interpretation of commands).

If the customer complaint is still present, contact Techline.

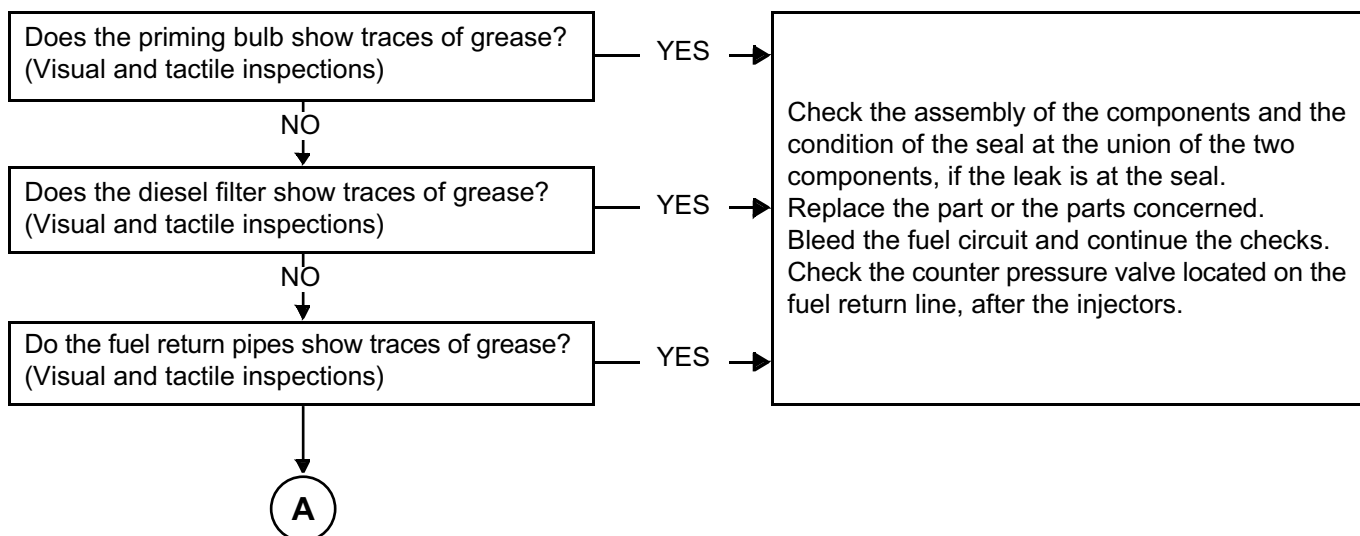
AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool.
---------------------	---

ALP6	External leaks from the fuel circuit
-------------	---

NOTES	<p>Before analysing 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> <p>IMPORTANT</p> <p>Please observe the cleanliness guidelines and safety advice.</p>
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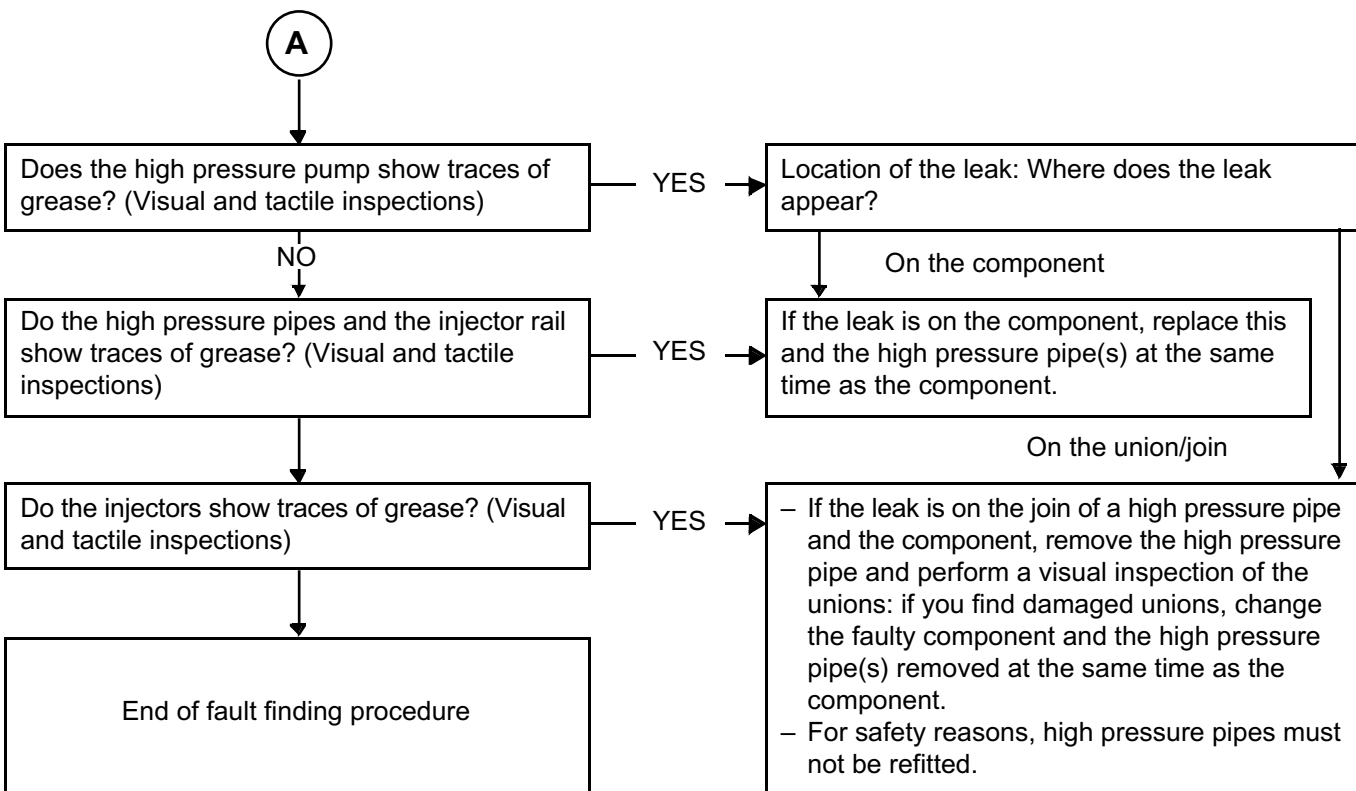
Procedure for checking for an external leak on the fuel circuit:

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 temperature until the diesel fuel reaches **40/50°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.



AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
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ALP6 CONTINUED	
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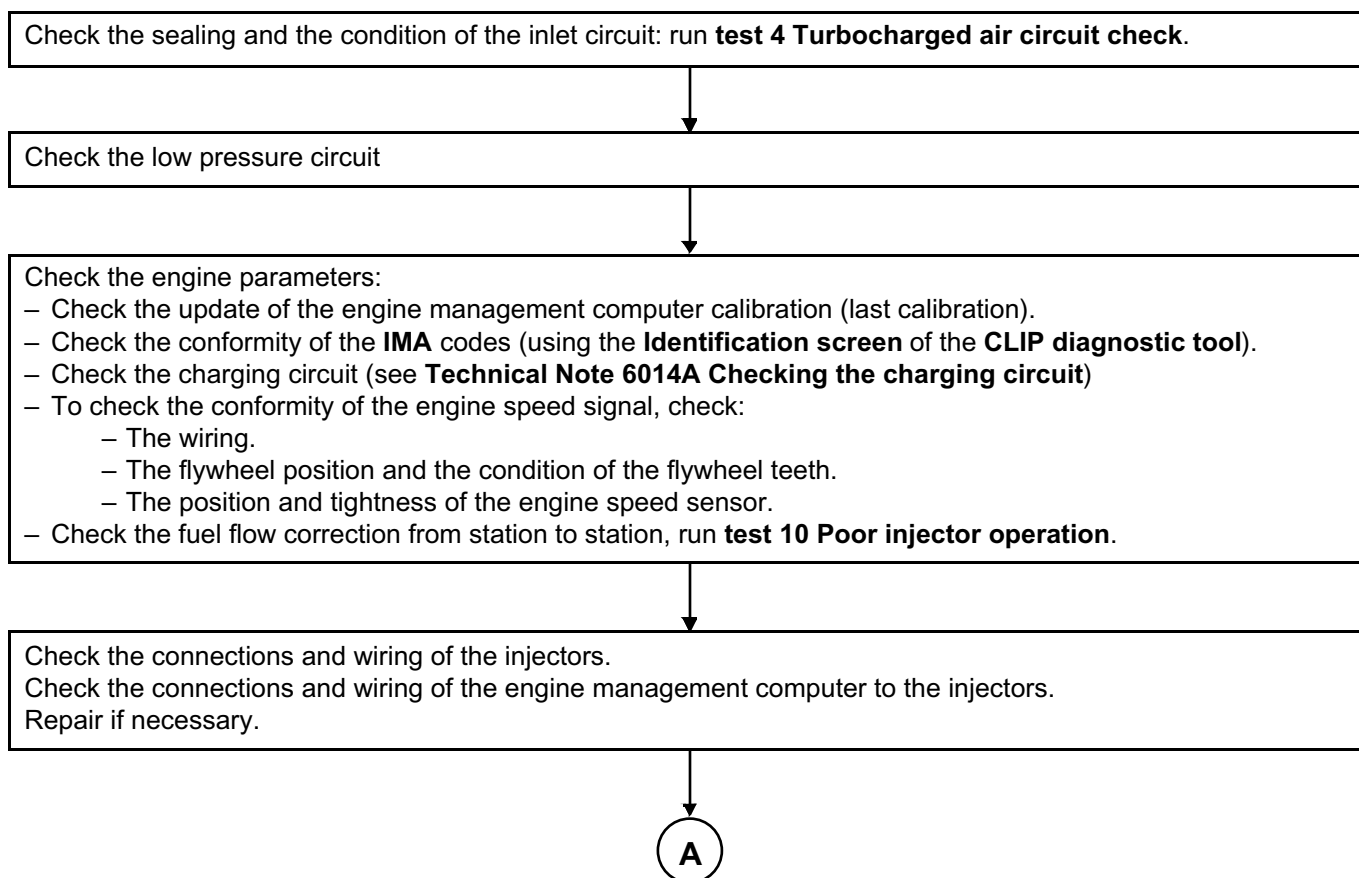
Reminder:

Only replace the rail, the pump or the injector if union damage is visible during checks.
Bleed the fuel circuit and continue the checks.

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

ALP7	Rough idle
-------------	-------------------

NOTES	<p>Before analysing 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>
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AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
---------------------	--

**ALP7
CONTINUED**

A

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 diagnostic tool**, use the command **VP036 Fuel supply inhibition**.
– 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**.

ALP8	Oil leaks from the turbocharger
-------------	--

NOTES	<p>Before analysing 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>
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Check the area around the turbocharger

Note:

An oil leak does not correspond always to a fault of the turbocharger, 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



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

**ALP8
CONTINUED 1**

A

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 was laden with oil from the engine rebreathing circuit.

Is the suspected interface properly tightened?

NO

Tighten the interface or the
concerned pipe.
End of the procedure

YES

Replace the pipe concerned (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 12B, turbocharging**).

AFTER REPAIR

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

ALP8 CONTINUED 2

B

Is an oil leak present only at the casing of the compressor section?

YES

The turbocharger is not faulty. The oil leak is from another engine component and the oil is flowing onto the turbocharger.

NO

Is an oil leak present at the turbocharger oil supply inlet or outlet?

YES

NO

C

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 concerned section (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 12B, turbocharging**).

AFTER REPAIR

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

**ALP8
CONTINUED 3**

C

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)** or **370 (Scénic II), 10A Engine and peripherals**).

AFTER REPAIR

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

ALP9	Turbocharger noise
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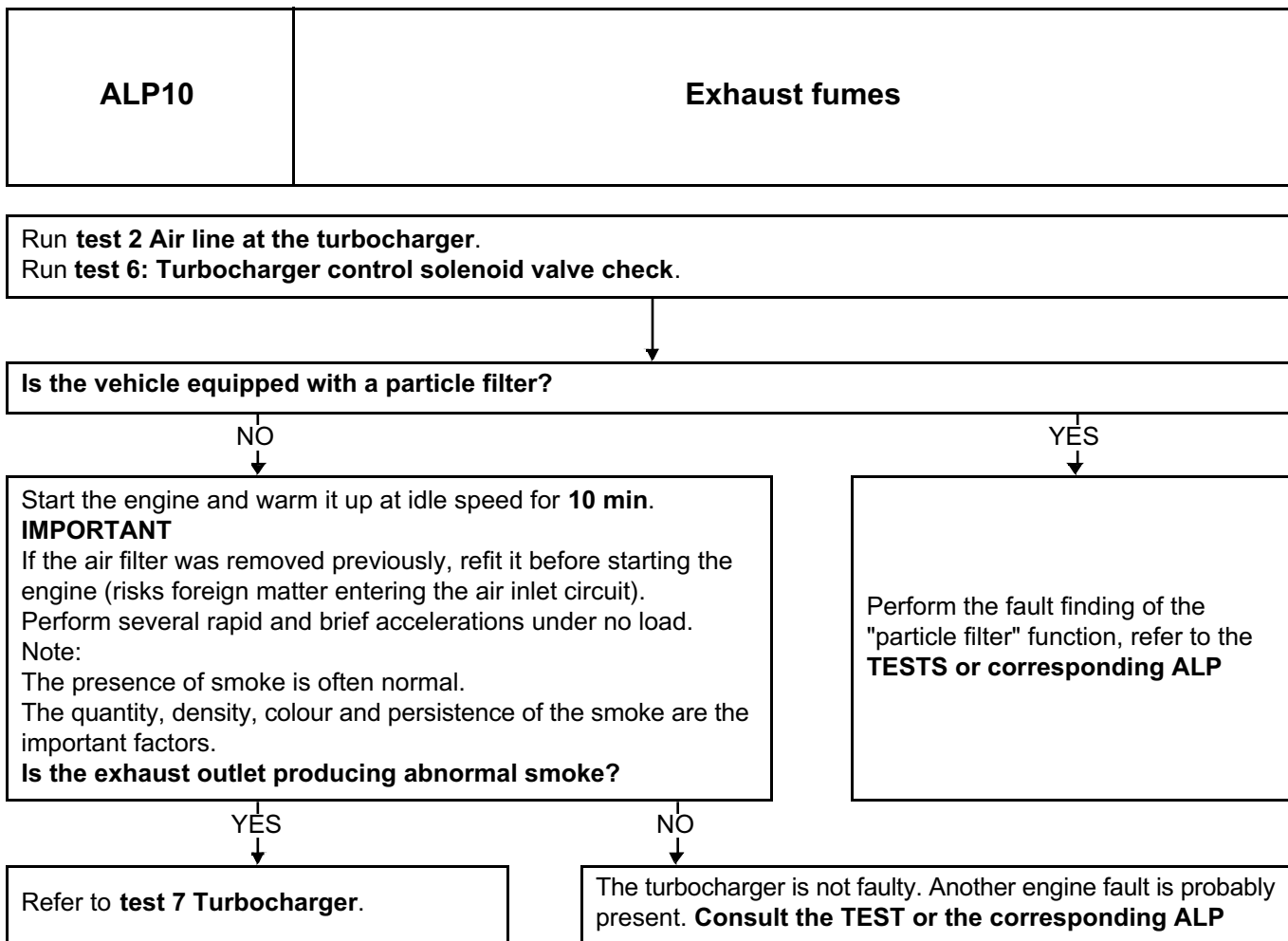
Apply the Technical Note 5164A, Noise fault finding.

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**.



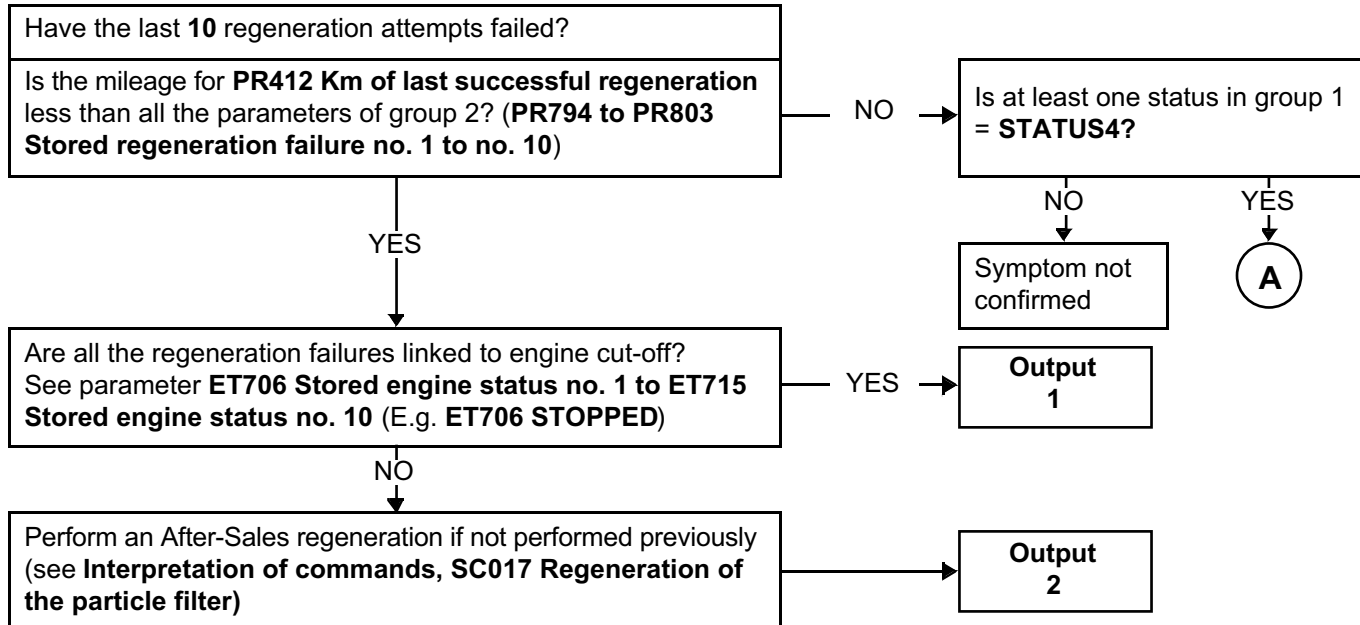
AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
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ALP11

Particle filter warning light comes on too often

NOTES

This ALP is specific to the Vdiag48.
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.

DIESEL INJECTION

Fault finding – Fault finding chart

13B

**ALP11
CONTINUED 1**

A

Recognition of parameters corresponding to the start of successful regenerations.
Make adjustments to align the parameter groups.

Group 1 Stored regeneration start no. 1 to 10

and

Group 2 Stored regeneration failure no. 1 to 10

For each group 1 parameter, if there is no group 2 parameter in the next 30 miles (50 km), then note that this means a successful regeneration (R). If there is one, this means a failure (E).

Note group 1 here:

PR816: ____ ET742 ____
PR817: ____ ET743 ____
PR818: ____ ET744 ____
PR819: ____ ET745 ____
PR820: ____ ET746 ____
PR821: ____ ET747 ____
PR822: ____ ET748 ____
PR823: ____ ET749 ____
PR824: ____ ET750 ____
PR825: ____ ET751 ____

Note group 2 here:

PR794: ____
PR795: ____
PR796: ____
PR797: ____
PR798: ____
PR799: ____
PR800: ____
PR801: ____
PR802: ____
PR803: ____

Type of regeneration:

PR816: R E
PR817: R E
PR818: R E
PR819: R E
PR820: R E
PR821: R E
PR822: R E
PR823: R E
PR824: R E
PR825: R E

For each successful regeneration (R) look in group 1 for the next parameter in order of distance whose status is **STATUS4**. Is there at least one status?

NO

**Output
3**

YES

C

(To be calculated for each successful regeneration)

Successful regeneration parameter= _____

Next parameter at **STATUS 4** = _____

Interval = Next parameter at **STATUS 4** –; PR412

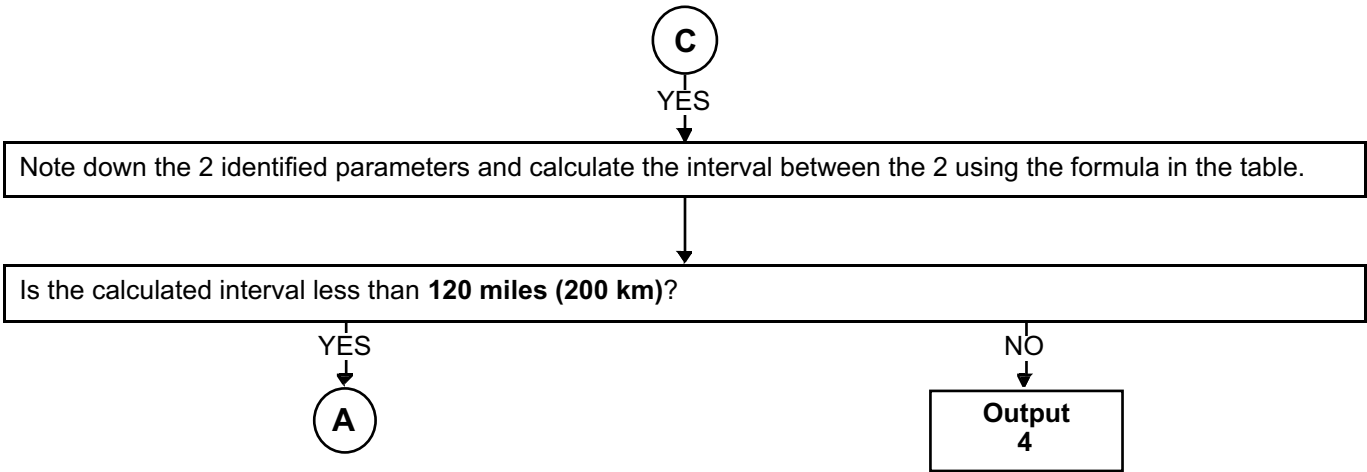
= _____ – _____

= _____

AFTER REPAIR

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

ALP11 CONTINUED 2	
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AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
--------------	---

**ALP11
CONTINUED 3**

A

- Check the consistency between the **IMA** codes read on the **CLIP diagnostic tool** and the codes engraved on the injector casings,
- Check that the particle filter differential pressure sensor is correctly positioned and connected (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 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 6 Turbocharger control solenoid valve check and Test 7 Turbocharger)**,
- Check the injectors, see **(Test 10: 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**.

DIESEL INJECTION

Fault finding – Fault finding chart

13B

ALP11 CONTINUED 4

Outcome analysis for **ALP11 Particle filter warning light comes on too frequently**

ALP output no.	ALP 11 output conditions	Cause - type of driving	Regeneration frequency	What to tell the customer?
Output 1	The last 10 regeneration attempts have failed due to the engine cutting out.	Regeneration failures caused by engine cut-off .	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.
Output 2	The last 10 regeneration attempts have failed, but not because of the engine cutting out.	Unsuitable driving conditions	No regeneration frequency analysis.	Explain to the customer the driving criteria for when the warning light comes on.
Output 3	After successful regenerations stored in the memory, the warning light did not come on. An interval cannot be calculated.	Since the last successful stored regenerations, the driving conditions have not allowed the warning light to come on.	Should be normal	Vehicle correct
Output 4	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.	Unfavourable driving (urban zone, underspeed, etc.)	Normal	Vehicle correct

AFTER REPAIR

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

Exhaust system check:	→	TEST 1
Air line at the turbocharger	→	TEST 2
Low pressure circuit check	→	TEST 3
Checking the turbocharged air inlet circuit	→	TEST 4
Air flow sensor	→	TEST 5
Turbocharger control solenoid valve test	→	TEST 6
Turbocharger	→	TEST 7
Temperature upstream of turbine too low	→	TEST 8
High pressure fuel circuit test	→	TEST 9
Incorrect injector operation	→	TEST 10
Diesel fuel conformity check	→	TEST 11

TEST1	Exhaust system check:
--------------	------------------------------

Engine stopped: Check that the silencer outlet is not blocked.
Repair or replace the silencer, if necessary.

YES

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 pipe is not the cause of
the fault, repeat the engine fault
finding (see Customer complaints -
Fault finding chart (ALP)).

YES

Retighten the catalytic converter.
Loosen or disconnect the intermediate chamber 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 intermediate chamber.
Loosen or disconnect the silencer on the intermediate chamber
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 intermediate chamber.

YES

Replace the silencer.

AFTER REPAIR

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

TEST2

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) or 370 (Scénic 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 until the compressor inlet,
- mountings of the air flowmeter.

Is one of these components incorrect (pipes dislodged, torn, bent, pierced or kinked)?

YES →

Replace the defective parts (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 12B, Turbocharging**).

NO

A

AFTER REPAIR

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

TEST2 CONTINUED 1



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) or
370 (Scénic 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 test**.

AFTER REPAIR

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

TEST3

Low pressure circuit check

HIGH PRESSURE PUMP

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 pipe to the fuel filter inlet and insert the other end in a **clean** container of approximately **5 litres**.
- Disconnect the diesel return pipe at the diesel temperature sensor (pump return and injector return join), and block it using a plug.
- Connect a transparent pipe to the union of the diesel temperature sensor, and insert the other end in the container.
- 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?

YES →

If the low pressure circuit is in order, reconnect the various pipes of the low pressure circuit and repeat the fault finding chart fault finding or of the fault that referred you to this test.

NO

Are the low pressure circuit connections in order and in good condition?

NO →

Carry out the necessary repairs.

YES

A

AFTER REPAIR

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

**TEST3
CONTINUED**

A

Check the condition and operation of the priming bulb.
Perform repairs if necessary and continue the test.

Check the condition of all the low pressure diesel pipes from the tank to the injection pump (in particular no pinching of pipes).

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 transfer pump is supplied via a Venturi pipe mounted underneath 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**:
– Compare the fuel with some clean diesel in order to detect petrol, solvent, thinners, sulphuric acid (fuel will have a whitish appearance), water or fuel oil.
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.

AFTER REPAIR

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

TEST4

Checking the turbocharged air inlet circuit

Engine stopped:

Check **the sealing** of the low and high pressure air circuits (air leaks in or out, upstream/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 bodies, clogged, displaced, kinked, broken, pierced, cut, tightness of the mounting bolts, etc.).
- the presence, condition and fitting of the seals,
- the presence and tightening of the clamps,
- the fitting of the turbocharger pressure sensor.
- the pipe and take-off point between the air duct and the turbocharging 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, etc.),
- the cleanliness, conformity and the non-distortion of the filter element,
- The air flowmeter: run **test 5: Air flowmeter**.

Carry out the necessary repairs.



AFTER REPAIR

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

**TEST4
CONTINUED**

A

Check:

- the condition of the damper valve,
- the tightening of the mounting bolts,
- cracks in the damper valve.

Carry out the necessary repairs.

Replace if necessary.

Check that there is no leak at the exhaust manifold, in particular at the exhaust manifold/turbocharger connection.
Check the exhaust system: **run test 1 Exhaust pipe check in ALP2.**

Carry out the necessary repairs.

Carry out a visual inspection of the EGR circuit sealing.

Note: the operating play in the EGR heat exchanger valve shaft produces small black marks due to a slight leak of no importance. Do not replace this part.

Replace if necessary.

Check the condition of the intercooler:

- clogging,
- leaks (vehicle stationary, stabilise the engine speed between **3,500 rpm** and **4.000 rpm** and check that there are no leaks).

Replace if necessary.

Check that the take-off point for the turbocharging pressure sensor is not blocked.

Replace if necessary.

END OF TEST.

AFTER REPAIR

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

TEST5

Air flowmeter

Damage to electrical components

Visual inspection: remove the flow sensor - the components should not be broken.
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: idling,
 - Air temperature between **30 and 70°C**.
 - Air flow measurement: **24 ± 4 kg/h**.
 - EGR valve OCR*: **26 ± 4%**,
 - **PR023 Air flow difference** between - 50 and + 50 mg/stroke.
 - Apply the procedure for **DF056 Air flow sensor circuit** for the checks on the air flowmeter.
- Replace the air flowmeter if necessary.

END OF TEST.

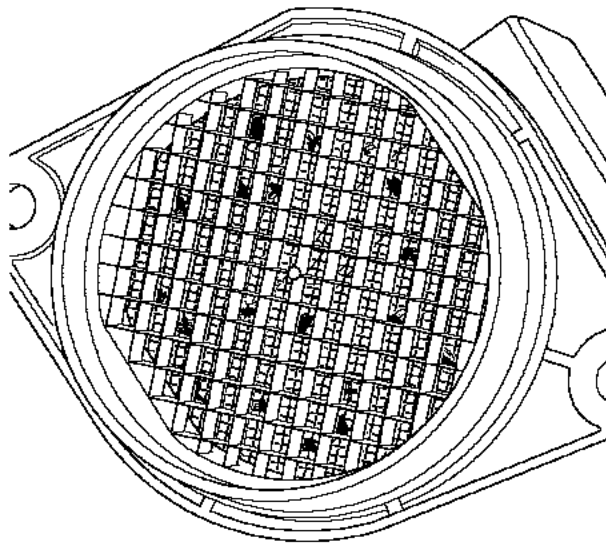
* OCR: Opening Cyclic Ratio

AFTER REPAIR

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

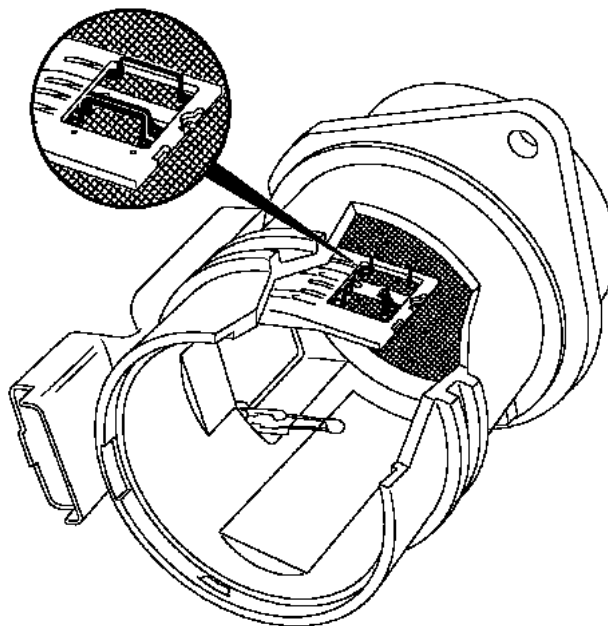
**TEST5
CONTINUED**

Contamination of the grille



110734

Damage to the electrical sensors



110736

END OF TEST5.

AFTER REPAIR

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

TEST6

Turbocharger control solenoid valve test

Start the engine and let it run at idle speed for **1 min.**
Check the battery voltage.
If the value of the **PR071 Computer power 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.

Check the vacuum at the pressure regulator inlet

Run the engine at idle speed.
Check the engine temperature using the parameter **PR064 Coolant temperature**.
Let the engine warm up until the temperature reaches **80°C**.
Disconnect the vacuum pipe of 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 s**.
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, posted by the pressure gauge within the tolerance interval?

NO



YES

The solenoid valve is in order.
If the customer complaint is of the type **Smoke from the exhaust**, run the **ALP 10 Smoke from the exhaust**. Otherwise, run the **test 7 Turbocharger**.

AFTER REPAIR

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

TEST6 CONTINUED 1

A

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 s**.

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

B

YES

Replace the vacuum pipe between the solenoid valve and the turbocharging pressure regulator (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 12B, turbocharging**).

AFTER REPAIR

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

TEST6 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 installation.

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?

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.

NO

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

C

YES

D

AFTER REPAIR

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

TEST6
CONTINUED 3

C

NO

D

YES

Replace the solenoid valve (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 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) or 370 (Scénic II), Mechanical systems, 12B turbocharging**).

AFTER REPAIR

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

TEST7	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 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 for these 2 **questions** the response is **NO**



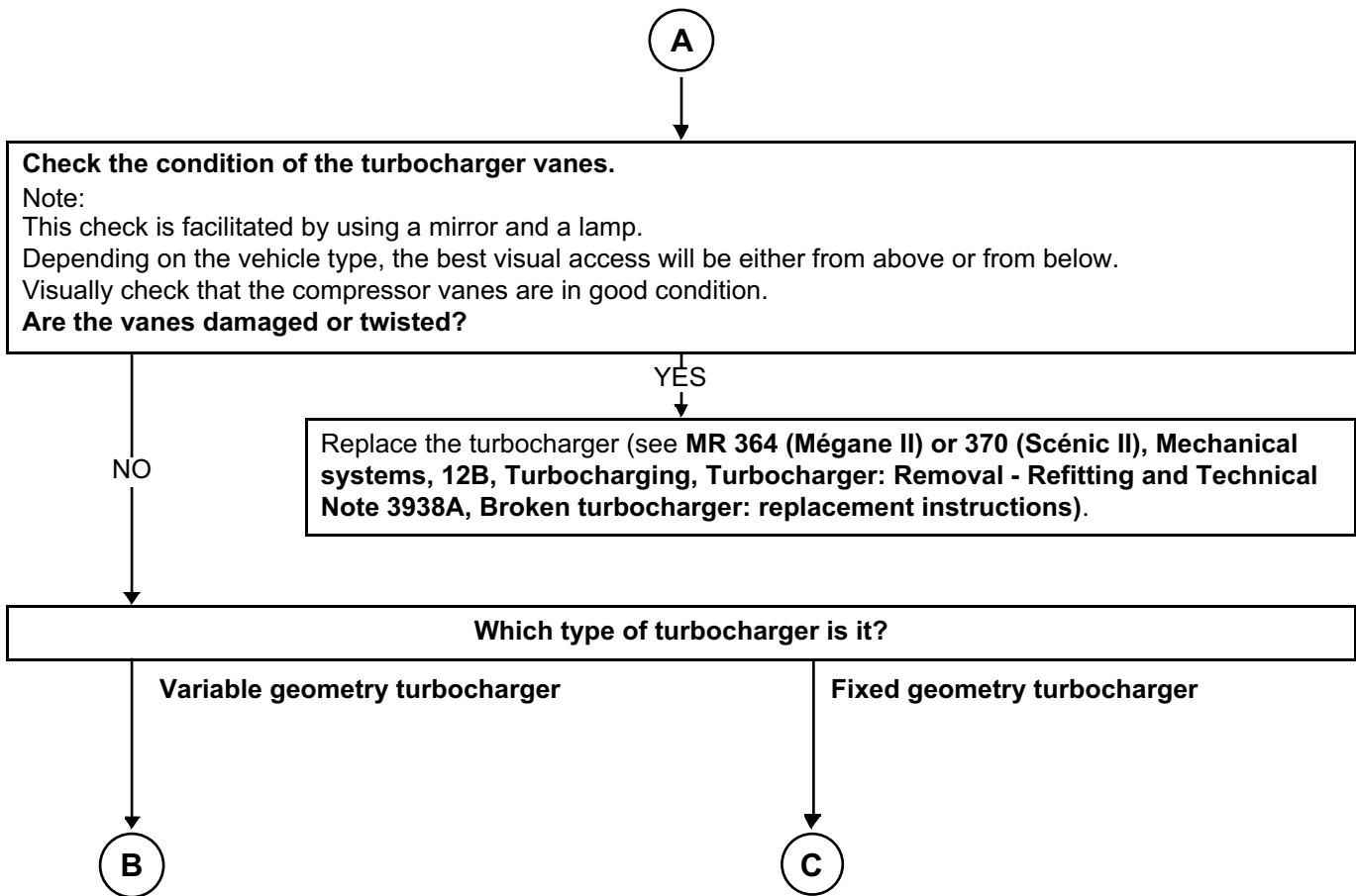
If **YES** for one of these 2 questions

Replace the turbocharger (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 12B, Turbocharging, Turbocharger: Removal - Refitting and Technical Note 3938A, Broken turbocharger: replacement instructions**).

AFTER REPAIR

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

TEST7 CONTINUED 1	
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AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool.
---------------------	---

TEST7
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 on 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 s**.
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) or 370 (Scénic II), Mechanical systems, 12B, Turbocharging, Turbocharger: Removal - Refitting and Technical Note 3938A, Broken turbocharger: replacement instructions**).

AFTER REPAIR

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

TEST7 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 on 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 s**.
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

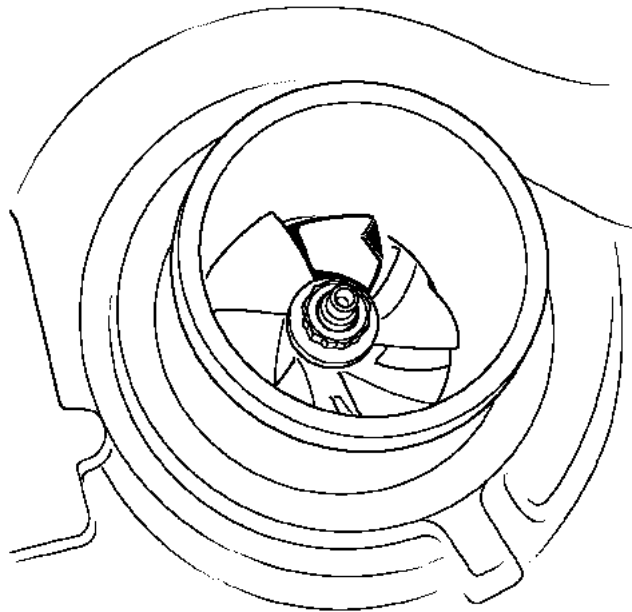
Replace the turbocharger (see **MR 364 (Mégane II) or 370 (Scénic II), Mechanical systems, 12B, Turbocharging, Turbocharger: Removal - Refitting and Technical Note 3938A, Broken turbocharger: replacement instructions**).

AFTER REPAIR

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

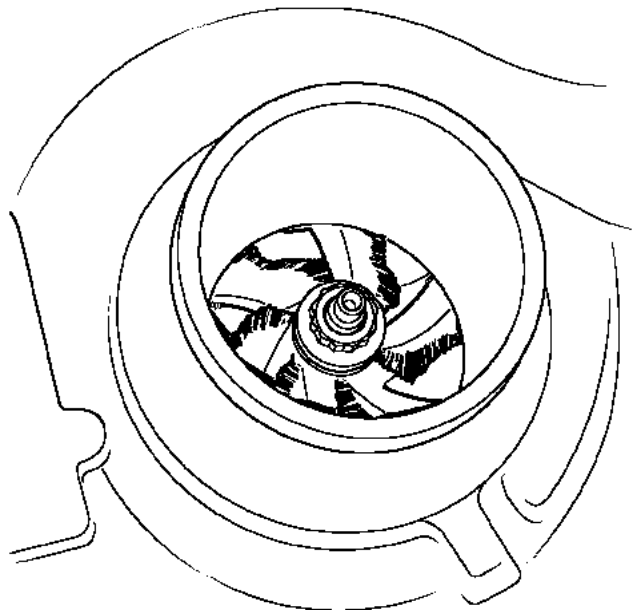
**TEST7
CONTINUED 4**

Deformed, twisted blade (“soft” foreign body)



110737

Broken blades (“hard” foreign body)



110738

AFTER REPAIR

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

TEST8

Temperature upstream of turbine too low

Run a complete multiplex network check using the diagnostic tool.

Is a stored or present fault indicated by **the diagnostic tool**?

YES →

Apply the procedure for dealing with the associated faults.

NO ↓

Run test 4 Turbocharged air inlet circuit check

Is the inlet circuit in order?

NO →

YES ↓

Apply test 5 Air flowmeter

Is the air flowmeter correct?

NO →

YES ↓

Run test 6 Turbocharger control solenoid valve check,

If the turbocharger control solenoid valve is correct, run **test 7 Turbocharger.**

Is the turbocharger in order?

NO →

YES ↓

Apply test 10 Poor injector operation.

Are the injectors correct?

NO →

YES ↓

Apply test 1 Exhaust pipe check

Is the exhaust pipe in order?

NO →

YES ↓

Contact Techline.

Repair then carry out another particle filter regeneration.

Run command **SC017 Regenerate particle filter** (see **Interpretation of commands**).

- 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.

AFTER REPAIR

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

TEST9

High pressure fuel circuit test

Run **SC035 High pressure fuel circuit fault finding**.
Is the **SC035 High pressure fuel circuit fault finding** correct?

YES
↓

The high pressure pump and all the low and high pressure pipes and the injector rail are correct.

NO
↓

Apply **ALP6 Fuel circuit external leaks**.

AFTER REPAIR

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

TEST10	Incorrect injector operation
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Part A: Fuel regulation balance check for each injector (individual correction):

- In the **CLIP diagnostic tool**, choose the **Fuel circuit** sub-function.
- With the engine idling and the fuel temperature > 50°C, display the flow correction values of 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 by injector is between **-5 mg/st and +5 mg/st without reaching these values.**

Check the connections and wiring of the injectors if this has not been done.

- 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, enter the incorrect **IMA** codes using command **SC002 Enter injector codes** (see **Interpretation of commands**).

To validate the repair, consult the **Part B Confirmation of flow correction fault finding for each injector (individual correction)**.

CASE no. 1: If at least one of these values is greater than or equal to + 5 mg/stroke

- Check the valve clearance.
- Check the status of the engine and the compressions (using the CLIP diagnostic tool or using a compression gauge).
- If the compression test reveals a cylinder fault, carry out the necessary repairs.
- If the compression is correct, check the fitting conformity of the injector (see **MR 364 (Mégane II) or 370 (Scénic II), 13B, Diesel injection, Diesel injector: Removal - Refitting**)

Ensure that each injector has only one heat protection washer.

Then check the fuel regulation again for each injector (individual correction).

- Otherwise, replace the injector and check the presence of the sealing washer. Modify the **IMA** code using the command **SC002 Enter injector codes** (see **Interpretation of commands**).
- Apply the **Part B Confirmation of flow correction fault finding for each injector (individual correction)** to confirm the fault finding.

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

TEST10 CONTINUED 1

CASE no. 2: If at least one of these values is less than or equal to - 5 mg/stroke

- Check the valve clearance.
- Check the level and condition of the engine oil.
- Remove the injector with the largest adjustment.
- If there is contamination via the diesel, check the condition of the cylinder concerned (cylinder, piston, valves). Use an endoscope if possible.
- Replace only the removed injector, and modify the **IMA** code using the command **SC002 Enter injector codes** (see **Interpretation of commands**).
- Apply **Part B Confirmation of flow correction fault finding for each injector (individual correction)** 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 with **test 3: Low pressure circuit check**.
 - Check the conformity of the fuel by running **test 11 Diesel fuel conformity check**.
- Apply **Part B Confirmation of flow correction fault finding for each injector (individual correction)** to confirm the fault finding.

CASE no. 4: If the fuel flow correction values are all correct ones (between - 5 mg/stroke and + 5 mg/stroke) Apply **Part C Measure return fuel flow**.

IMPORTANT

When removing/refitting an injector, follow the cleanliness guidelines and safety advice (see **MR 364 (Mégane II)** or **370 (Scénic II)**, **Mechanical systems 13B, Diesel injector: Removal - Refitting**).

Part B: Confirmation of flow correction fault finding for each injector (individual correction):

Clear the faults and perform a test **with the engine idling** during at least **5 min**, fuel temperature > **50°C**.
Check that no fault appears on **the CLIP diagnostic tool** and that the correction values do not reach **±5 mg/st** to confirm the repair.

If the customer complaint is still present and the fuel flow correction values are between **-5 mg/st and +5 mg/st**, apply **part A Fuel regulation balance check for each injector (individual)**, **CASE No. 4**.

If one or more cylinders has a flow correction value per injector that reaches **±5 mg/st**, apply **Part A Fuel regulation balance check for each injector (individual)** because one or more injectors might be defective.

AFTER REPAIR

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

TEST10 CONTINUED 2

Part C: Measuring fuel return flow

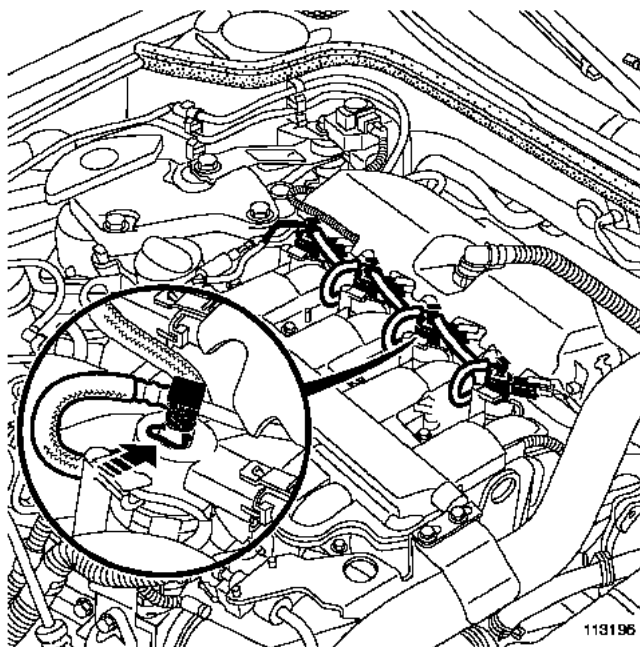
1. Fitting the tool:

Carry out this part only if the PR063 Fuel temperature is greater than 50C (see step 2 of part C of 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 the end piece of the fuel return pipe (see arrow the illustration).



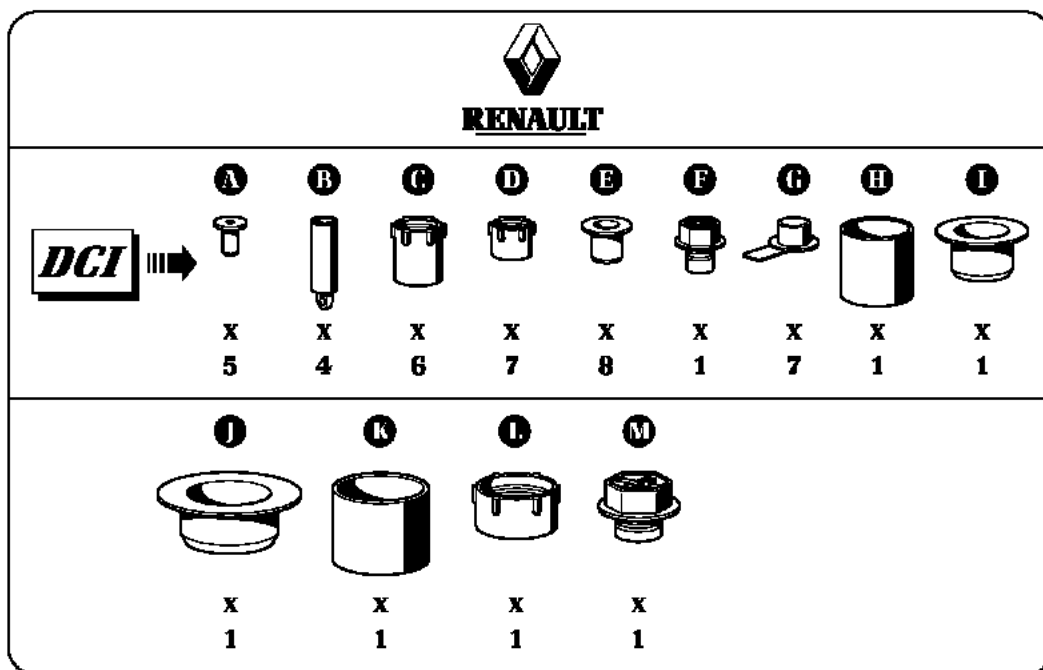
IMPORTANT

The end piece is fragile. Be careful not to break it by pulling it too hard. Replace all removed clips

AFTER REPAIR

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

TEST10 CONTINUED 3	
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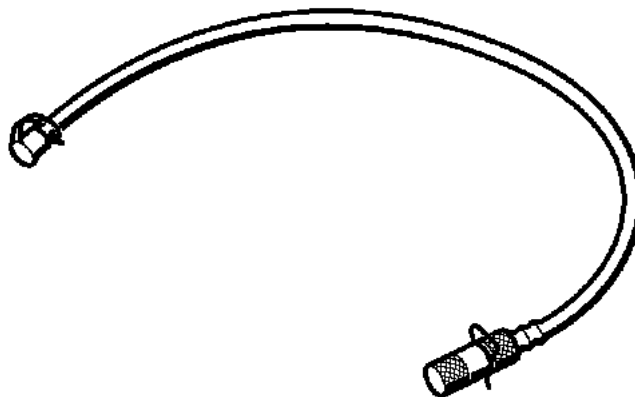


1072

Fit the blanking plugs (**B**), from the kit (**part number 77 01 208 229**), on the end pieces of the fuel return pipe. If fitting of **Mot. 1760** onto the injectors is not being performed immediately, place blanking plugs (**A**) on the injector fuel return openings.

AFTER REPAIR	Carry out a road test followed by a complete check with the diagnostic tool .
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**TEST10
CONTINUED 4**



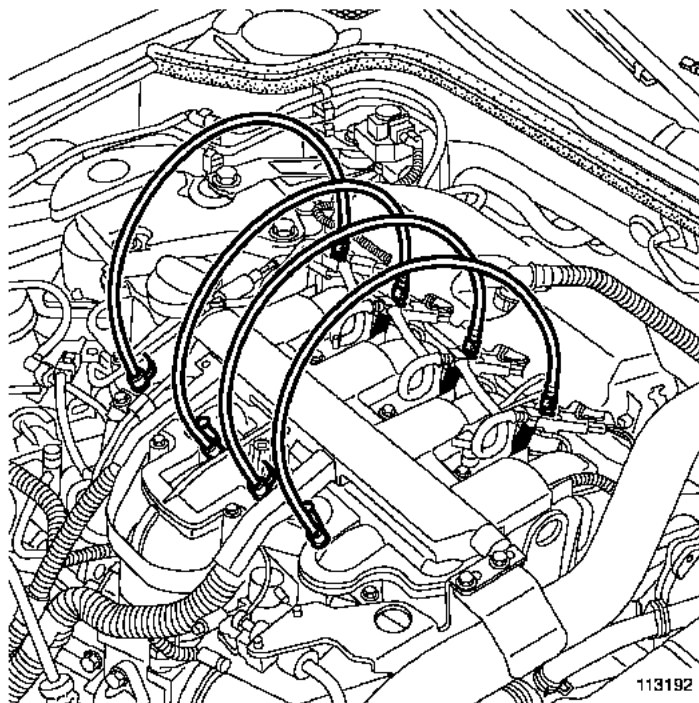
113195

On the pipes of the tool **Mot. 1760** (see **illustration 113195**), remove the clips and the end piece plugs (to right on the picture) and leave the plugs (to the left on the picture) in place.

AFTER REPAIR

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

TEST10 CONTINUED 5



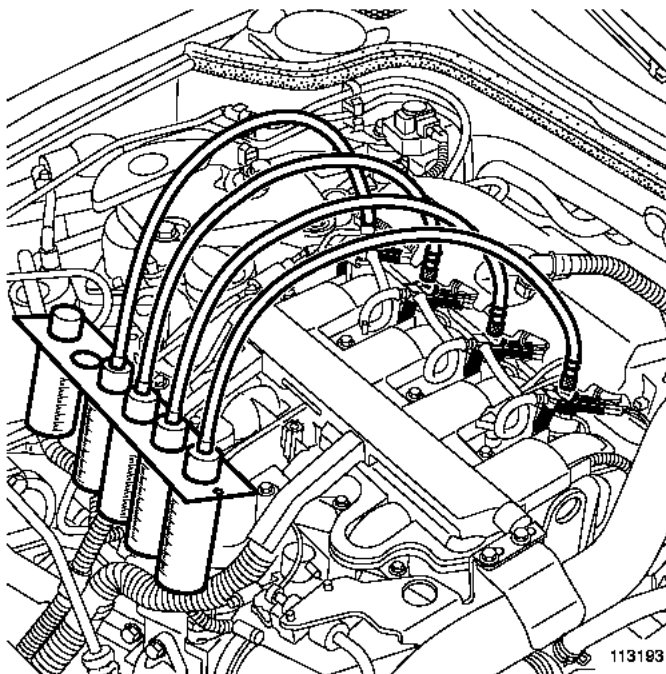
Connect the pipes of the tool **mot. 1760** to the injectors (without removing the clips on the injectors):

- press on the injector clip,
- insert the end piece in the injector fuel return opening.
- remember to fit the end piece plugs to the fuel return orifices using the clips provided.
- Remove the plugs left in place on the tool **mot.1760**

AFTER REPAIR

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

TEST10 CONTINUED 6



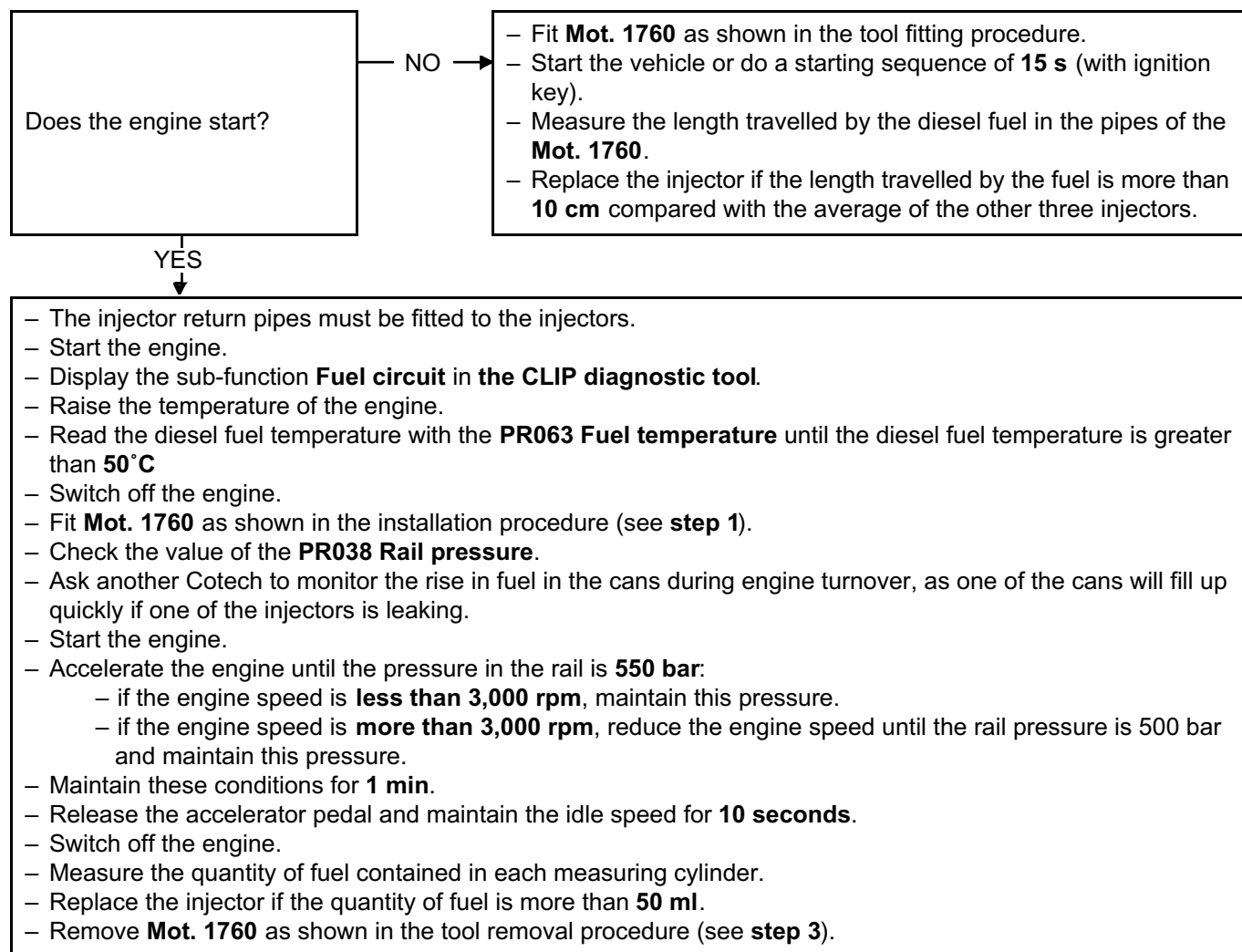
Insert the ends of the pipes into the measuring cylinders of tool **Mot.1760**; the cylinders are taken from tool **Mot. 1711**.

AFTER REPAIR

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

TEST10 CONTINUED 7

2. Check the injector return flow balance:



AFTER REPAIR

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

TEST10
CONTINUED 8

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 the tool **Mot. 1760** while putting a rag on the end piece to prevent drips.

Lift the end piece vertically so that the fuel contained in the pipes flows into the measuring cylinders of tool **Mot. 1760**.

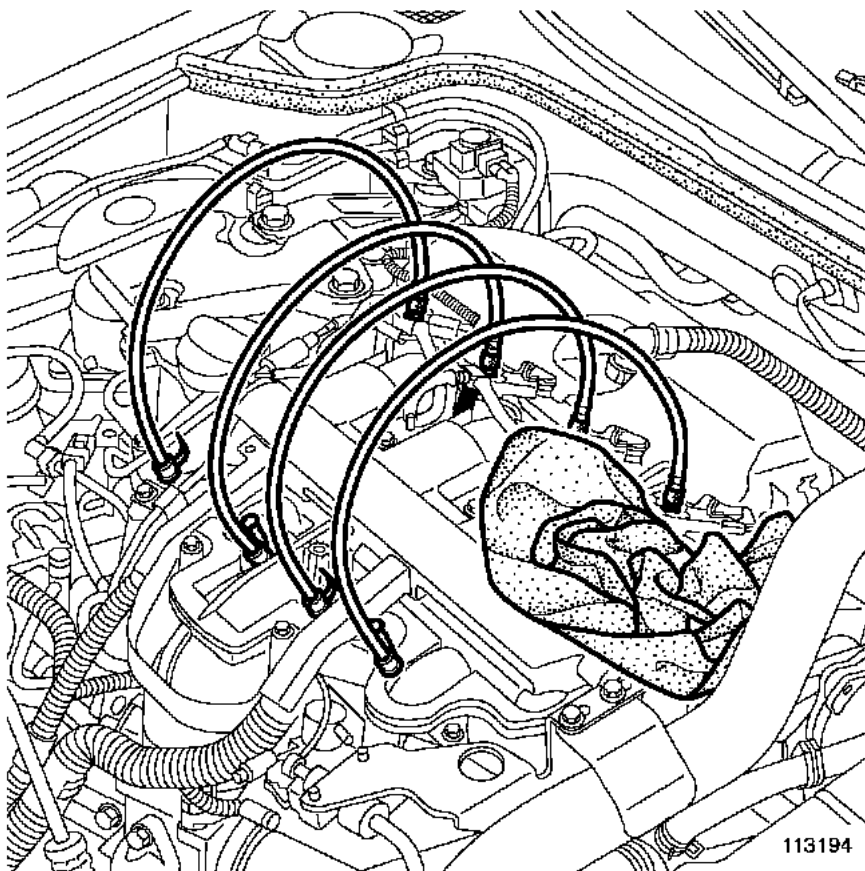
Remove the other 3 pipes using the same procedure.

AFTER REPAIR

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

TEST10
CONTINUED 9

Remove the plugs from the fuel return pipe end pieces.
Connect the complete fuel return pipe to the injectors.
Wipe up any fuel run-off using a cleaning cloth (part number **77 11 211 707**).



END OF TEST 10.

AFTER REPAIR

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

TEST11

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 (for example: **PANDA part no. 77 11 224 995**). Record the weight of the empty 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 ph2), Mechanical, 19C, Tank, Fuel tank: Draining**, or **MR 370 (Scénic II ph2), Mechanical, 19C, Tank, Draining the fuel tank**), using a pneumatic transfer pump (**part no. 634-200**) and place it in the **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 ph2), Mechanical, 19C, Tank, Fuel tank: Draining**, or **MR 370 (Scénic II ph2), Mechanical, 19C, Tank, Draining the fuel tank**).

NO ↓



AFTER REPAIR

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

TEST11 CONTINUED 1



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 ph2), Mechanical, 19C, Tank, Fuel tank: Draining**, or **MR 370 (Scénic II ph2), Mechanical, 19C, Tank, Draining the fuel tank**).

AFTER REPAIR

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

TEST11
CONTINUED 2

Note:

If the measured weight reaches the limit values, the measurement can be performed with a **2230 ml** plastic cup (**part no. 77 11 171 414**) and its cover (**part no. 77 11 171 417**):

- Carry out a quick test drive in order to mix the fuel, then remove 2 l 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.

AFTER REPAIR

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

Injection computer	128-track (BOSCH) Connectors: black A 32-track, brown B 48-track, grey C 48-track
Atmospheric pressure sensor	Integrated into the computer (BOSCH)
Injector	0.25 Ω at +20°C / 2 Ω max (BOSCH) 1600 bar (1800 bar max.)
Flow regulator (high pressure pump)	R = 3 \pm 0.1 Ω at +20°C (BOSCH, CP3.2+ pump)
Rail pressure sensor	Rail pressure limiter: opening at around 1800 bar (BOSCH, bolted on rail)
Engine speed sensor	R = 235 \pm 35 Ω at + 23°C (MGI)
Camshaft sensor	Hall effect sensor (ELECTRICFIL) R = 10250 \pm 500 Ω at +20°C (measured between connections 3CQ and 3FB1 of the sensor)
Turbocharger control solenoid valve	15.4 \pm 0.7 Ω at +20°C (PIERBURG)
Electric EGR valve	Connection code 3VP : +12 V electric motor Connection code 3GC : +5 V potentiometer Connection code 3JM : potentiometer earth Connection code 3VQ : motor earth Connection code 3EL : potentiometer signal DIRECT CURRENT MOTOR: R between connections 3VP and 3VQ = 1 Ω to 400 Ω at +20°C POTENTIOMETER: R between connections 3GC and 3JM : 3.9 kΩ < X < 9.1 kΩ at +20°C (SIEMENS)
EGR by-pass solenoid valve	46 \pm 3 W at +25°C (PIERBURG)
Electric damper valve	DIRECT CURRENT MOTOR (VDO type)
Air flow sensor	Connection code 3ABQ : air temperature signal Connection code 3DW : flowmeter earth Connection code 3KJ : +5 V flowmeter Connection code 3FB2 : +12 V battery Connection code 3DV : air flow signal Connection code 3DU : battery earth (SIEMENS)

Air temperature sensor	R = 3714 Ω \pm 161 at + 10°C/ 2448 Ω \pm 96 at +20°C/ 1671 Ω \pm 59 at +30°C
Coolant temperature sensor	Connection code 3JK: Earth , Connection code 3C: Signal (ELTH type) R = 2252 Ω \pm 112 at 25°C 811 Ω \pm 39 at 50°C 283 Ω \pm 8 at 80°C
Diesel fuel temperature sensor	Connection code 3FAB: Signal , Connection code 3LD: Earth (ELTH type) R = 3820 Ω \pm 282 Ω at +10°C/ 2050 Ω \pm 100 Ω at + 25°C/ 810 Ω \pm 47 Ω at +50°C
Accelerator pedal sensor	R gang 1 = 1700 \pm 900 Ω R gang 2 = 2850 \pm 2050 Ω
Heater plug	R = 0.6 Ω at + 20°C / 2 Ω max Max current drawn: 28 A at 0 s 12 A at 10 s 7 A after 30 s
Turbine upstream temperature sensor	Connection code 3ABT: Earth , Connection code 3ABS: Signal (NTK type)
Particle filter differential pressure sensor	Connection code 3AAQ: 5 V , Connection code 3TM: Earth , Connection code 3TL: Signal (BOSCH)
Temperature sensor upstream of the particle filter	Connection code 3TD: Signal , Connection code 3XT: Earth (DENZO)
Temperature sensor downstream of the particle filter	Connection code 3TG: Signal , Connection code 3XU: Earth (DENZO)
Water in diesel fuel sensor	According to application (ZERTAN)

(R = Resistance)