

# MEGANE

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## 1 Engine and peripherals

### 17B PETROL INJECTION

#### S3000 Injection

Program No.: AD

Vdiag No.: 50, 58

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V2

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 1 and 2**  
*Engines:* **K4M 762/768 HI-FLEX**  
**K4M 856 super ethanol and E85**  
*Function concerned:* **Petrol injection**

*Name of computer:* **Sagem S3000**  
*Program no.:* **AD**  
*Vdiag No.:* **50, 58**

## 2. PREREQUISITES FOR FAULT FINDING

### Documentation type

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

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

**Wiring Diagrams:**

- Visu-Schéma (CD-ROM), paper.

### Type of diagnostic tools

- **CLIP + multiplex line sensor**

### Special tooling required

Special tooling required	
Multimeter	
<b>Elé. 1481</b>	<b>Bornier</b>
<b>Elé. 1681</b>	<b>Universal bornier</b>

## 3. REMINDERS

### Procedure

To run fault finding on the vehicle's computers, switch on the ignition in fault finding mode (forced + after ignition feed).

Proceed as follows:

- vehicle card in reader,
- press and hold start button (longer than **5 seconds**) with start-up conditions not fulfilled,
- connect the diagnostic tool and perform the required operations.

To **cut off + after ignition**, proceed as follows:

- disconnect the **diagnostic tool**,
- press the Start button twice briefly (less than **3 seconds**),
- ensure that the + after ignition feed has been cut off by checking that the computer indicator lights on the instrument panel have gone out.

### Faults

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

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

For a **present fault**, apply the procedure described in the **Interpretation of faults** section.

For a **stored fault**, note the faults displayed and apply the instructions in the **Notes** section.

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

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

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

**Refer to paragraphs 4.1 Checking wiring and 4.2 Checking connectors**

### Conformity check

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

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

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

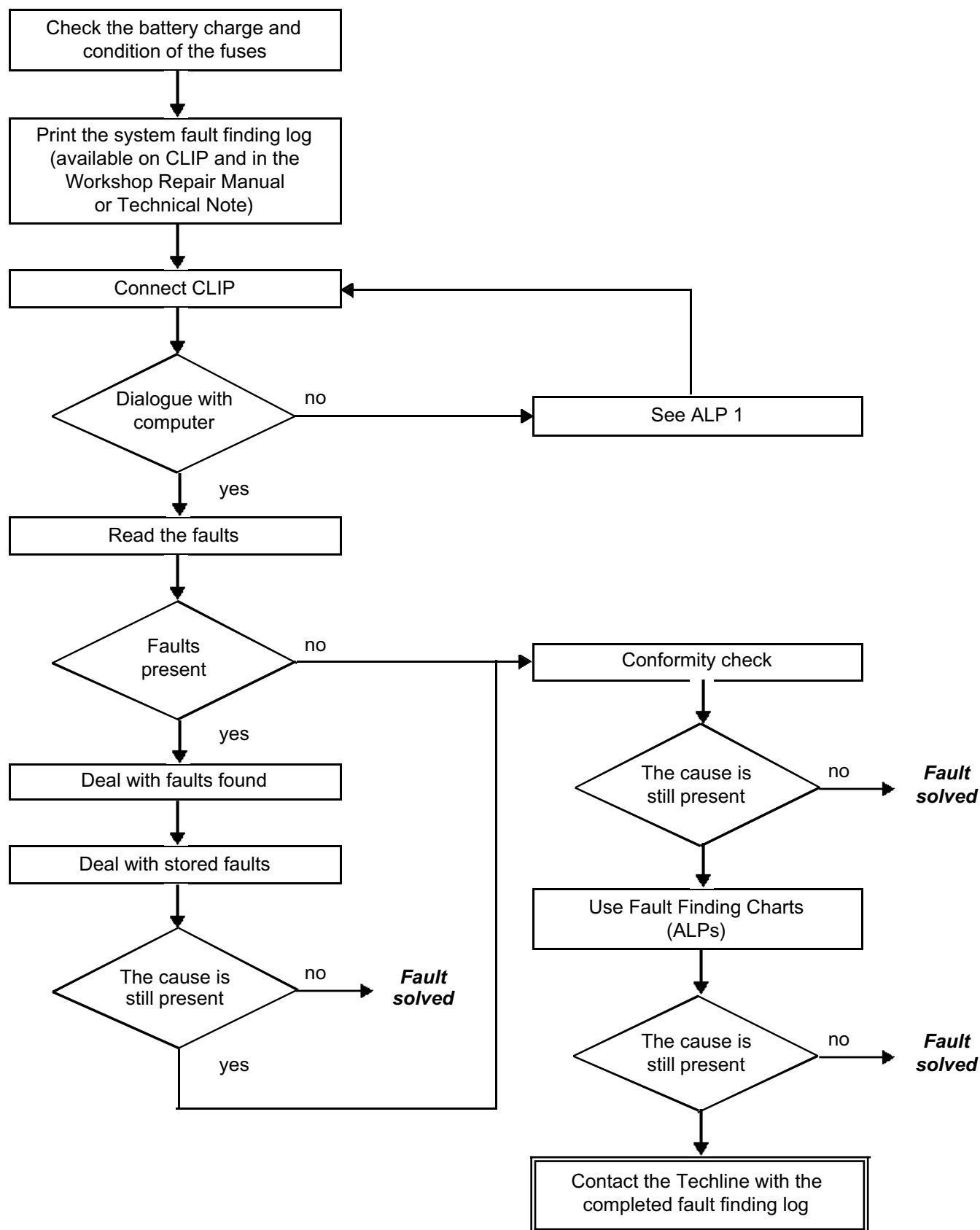
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

### Customer complaints - Fault finding chart

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

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

### 4. FAULT FINDING PROCEDURE



#### 4. FAULT FINDING PROCEDURE (CONTINUED)

##### Wiring check

##### Fault finding problems

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

##### Visual inspection

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

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

##### Tactile inspection

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

Make sure that the connectors are properly locked.

Apply light pressure to the connectors.

Twist the wiring harness.

##### Checking earth insulation

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

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

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

##### Continuity check

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

##### Checking the supply

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

#### 4.2 Checking the connectors

**Note:**

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

**Note:**

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

**Note:**

The check is carried out on the 2 parts of the connection. There may be two types of 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, split, broken, etc.), in particular to the fragile components (lever, lock, sockets, etc.).
- Check that there is no heat damage (casing melted, darker, deformed, etc.).
- Check that there are no stains (grease, mud, liquid, etc.).

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

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

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

**Visual inspection of the sealing:**

*(Only for watertight connectors)*

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

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

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

## 5. FAULT FINDING LOG



### IMPORTANT

#### IMPORTANT

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

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

You will always be asked for this log:

- when requesting technical assistance from Techline,
- for approval requests when replacing parts with mandatory approval, and to be enclosed when returning monitored parts on request. 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.

## 7. FAULT FINDING

Stored faults are managed the same way for all sensors and actuators.

A stored fault is cleared after 128 recurrence-free starts.

## 1. SYSTEM OPERATION

### Composition

**Two types of injection system are described within this system:**

The **Hi-Flex** type injection system.

The specific feature of Hi-Flex vehicles is their capacity to run with a fuel whose composition varies from petrol to ethanol.

The system recognises the level of alcohol in the fuel and consequently adapts the engine operation. To enable this, the vehicle is fitted with an additional **Hi-Flex** type petrol circuit.

The **Super Ethanol or E85** injection system.

The special feature of Super Ethanol or E85 vehicles is their ability to run on fuel that is 85% ethanol.

The system recognises the level of alcohol in the fuel and consequently adapts the engine operation. This injection system does not have an additional petrol circuit.

The injection system consists of the:

- accelerator potentiometer,
- clutch pedal switch,
- TDC sensor,
- atmospheric pressure sensor,
- air temperature sensor,
- coolant temperature sensor,
- coolant pressure sensor,
- upstream oxygen sensor,
- downstream oxygen sensor,
- cruise control switch,
- steering column switch,
- cruise control on/off switch,
- fuel vapour absorber,
- fuel gauge,
- injection computer,
- motorised throttle valve,
- 4 injectors,
- 4 pencil coils,
- pinking sensor,
- additional fuel pump (only K4M 762/768),
- additional fuel pump relay (only K4M 762/768).

### Computer

128-track **SAGEM S3000 FLASH EEPROM** type computer controlling injection and ignition.

Multipoint injection in sequential mode.

Connections to the other computers:

- sequential gearbox (BVR),
- radionavigation (RNAV),
- UCH,
- Protection and Switching Unit (UPC),
- airbag,
- ABS/ESP,
- instrument panel.



The **Hi-Flex** system:

The system is used to check the level of alcohol in fuel coming from the main fuel tank.

With a high alcohol level, the engine cannot start properly at low ambient temperature without taking petrol from the additional tank (generally from petrol with an alcohol level of **24 %** in the main tank).

To do this, the **Hi-Flex** system is composed of:

In terms of hardware:

- additional fuel pump,
- additional fuel tank (**1 L**),
- additional fuel pump relay,
- additional fuel circuit solenoid valve.

In terms of software:

- recognition of Hi-Flex vehicles,
- recognition of the fuel by observing the richness variance,
- control of the additional system for starting the engine based on the level of alcohol.

The **E85 and Super Ethanol** system:

This system enables operation with a fixed alcohol level in the petrol coming from the main tank.

At low ambient temperatures, the engine may not start satisfactorily. In terms of equipment, the system does not have an additional petrol circuit like the Hi-Flex system.

## **2. ROLE OF COMPONENTS, OPERATION PROGRAMMING**

### **Engine immobiliser**

The Verlog 4 type immobiliser function is managed by the UCH computer and the engine management computer.

Before any starting request, the engine management computer is protected.

When a starting request is made, the injection computer and the UCH exchange authentication data via the multiplex network; this determines whether the engine start is authorised.

After more than 5 consecutive failed authentication attempts, the engine management computer goes into protection (anti-scanning) mode and no longer tries to authenticate the UCH computer. It only exits this mode when the following sequence of operations occurs:

- the ignition is left on for at least **20 seconds**,
- the message is switched off,
- the injection computer self-feed deactivates when it should (the time varies according to engine coolant temperature).

After this, only one authentication attempt is allowed. If this fails again, repeat the sequence of operations described above.

If the engine management computer still fails to unlock, contact the Techline.

### **Impact detected**

If an impact has been stored by the injection computer, switch off the ignition for **10 seconds**, then switch it back on so that the engine can be started. Clear the faults.

### **WARNING**

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

### **Torque management**

The torque structure is the system for managing engine torque. The torque structure is required by certain functions such as the electronic stability program (ESP).

Each inter-system (ESP) sends a request for torque via the multiplex network to the injection computer. The injection computer arbitrates between the intersystem torque requests and the driver's request (consisting of the pedal or the cruise control/speed limiter function). The result of the arbitration gives the torque setpoint. Using the torque setpoint, the torque structure calculates the throttle position and advance setpoints.

### **Motorised throttle valve**

The throttle valve carries out idle speed regulation and engine air intake modulation functions. It comprises an electric motor and two throttle position potentiometers.

When the engine is idle, the throttle position is regulated according to the idle speed setpoint. This setpoint takes into account the major power consumers (air conditioning) and operating conditions (air temperature and coolant temperature).

### **Fuel supply management**

Fuel is supplied by the fuel pump. It is controlled each time the ignition is switched on, for 1 second, to provide a certain pressure level in the circuit, and thereby achieve a correct start, particularly if the vehicle has not been used for a long time.

When the engine is running, the fuel pump relay is always controlled.

Control of the petrol pump relay can be viewed via status **ET047 Petrol pump control circuit**.

The petrol tank is vented by way of a canister filled with activated charcoal that traps the vapour from the petrol tank. This canister is bled via the engine vacuum pipe. The canister bleed arrives at the inlet plenum chamber via a hose whose section is controlled by a bleed valve. The canister bleed is controlled by the injection computer via an opening cycle ratio. For reasons of engine instability or canister bleed solenoid valve operating noise emitted by the vehicle, there are two possible frequencies for controlling the canister bleed solenoid valve:

- a low frequency **8 Hz**,
- a high frequency **20 Hz**.

The frequency of the control opening cycle ratio depends on the engine speed.

Bleed the canister to drain it as it fills, to limit vapour release into the air if a canister is saturated for example.

### **Additional petrol pump (only for Flex fuel):**

The additional petrol pump's role is to inject the petrol from the additional tank (**approximately 1 l**), in addition to the petrol from the main tank.

The additional petrol pump only operates during the **cold starting phase** according to the parameters relating to the composition of the petrol in the main tank and the engine coolant temperature.

Control of the additional petrol pump relay can be viewed via status **ET670 "Additional petrol pump relay CTRL"**.

\*CTRL:

### **Air supply management**

The idle speed regulator performs all of the calculations required for physical control of the idle speed actuator: the motorised throttle. The functional component of the regulator is adaptive (variation programming and ageing).

If the idle speed regulation conditions are respected, status **ET054 "Idle speed regulation"** is **ACTIVE**, and the idle speed regulator continually positions the motorised throttle to maintain the engine speed at its idle setpoint. The motorised throttle opening ratio necessary to keep to the engine speed setpoint is given by parameter **PR091 Theoretical OCR\* for idle speed regulation**.

Note on parameter **PR091**:

This parameter uses only 2 parameters accessible in fault finding: **PR444 "Idle speed regulation integral correction"** and **PR090 "Idle speed regulation programming value"**, which is the integral adaptive action.

- **PR090 Idle speed regulation programming value** is a stored parameter designed to program variation and engine ageing for the idle speed regulator. The programming is carried out only when the engine is idle and warm, and no electrical consumer (air conditioning, fan assembly, power assisted steering) is operating. Therefore it adjusts slowly.
- **PR444 Idle speed regulation integral correction** is continuously calculated to take into account the air required by consumers.

### **Adaptive idle speed correction:**

Under normal hot-engine operating conditions, the idle speed regulation opening cycle ratio value **PR091 Idle speed regulation theoretical OCR\*** varies between a high value and a low value to obtain the nominal idle speed.

After a variation in the operation of the vehicle (running in, engine contamination, etc.), the idle opening cycle ratio value may be close to the high or low values.

The adaptive correction **PR090 Idle speed regulation programming value** on the idle speed opening cycle ratio compensates for the gradual variations in the engine's air requirement, by bringing the idle speed opening cycle ratio back to an average nominal value.

This correction is only effective if the coolant temperature is greater than **75 °C** and **1 min** after the engine starts if this is in idle speed regulation phase.

### **Idle speed setpoint calculation:**

The idle speed setpoint is given by parameter **PR010 Idle speed regulation setpoint**.

The idle speed setpoint depends on the coolant temperature, the emission control programming, the air conditioning requirements, the position of the gearbox selector, any action on power-assisted steering, the passenger compartment heating resistors, the oil temperature (engine protection) and the electric power balance calculated by the injection software (engine speed is increased by **160 rpm** max if the battery voltage remains less than **12.7 V**).

\* OCR: Opening Cycle Ratio.

### **Richness management**

For optimal operation of the catalytic converter, the richness must be maintained around 1.

Richness regulation is controlled by the upstream sensor. The sensor gives voltage according to the difference between the partial oxygen pressures contained in the exhaust and a cavity filled with a reference mixture (atmosphere).

As the partial oxygen pressure in the exhaust is representative of the richness, the voltage supplied to the computer represents a Rich - Lean signal.

### **Adaptive richness correction:**

In loop mode, the richness regulation corrects the injection duration to obtain metering as close as possible to richness 1. The richness correction value of **PR138 Richness correction** is around **50 %**, with limits of **0** and **100 %**. The richness adaptive corrections **PR143 Self-adapting richness gain** and **PR144 Self-adapting richness offset** are used to offset the injection mapping to centre richness regulation on **50 %**.

Adaptive corrections take **50 %** as an average value after computer reinitialisation (clearing the programming) and have limit values.

A vehicle is fitted with an upstream sensor if the configuration reading **LC003 Upstream oxygen sensor** is **WITH**.

For the upstream sensor to be operational very rapidly, it is heated. Sensor heating **ET052 Upstream O2 sensor heating** is **ACTIVE** only when the engine is running. Sensor heating is disabled above **84 mph (140 km/h)** or when the engine is at high loads.

### **Type of sensor:**

**BOSCH LSF 4.2 (known as "PLANAR")**: Each time the engine is started, the control is first executed by means of an opening cycle ratio type signal of **20 Hz** in frequency, for approximately **20 seconds**, then it becomes continuous.

### **Ignition management**

The advance is calculated for each cylinder. This may have a negative value, and is limited to between - 23.625 ° and + 72 ° and includes any corrections due to pinking.

The slow loop anti-pinking correction is the maximum advance value that is deducted from the advance of one of the cylinders. If none of the cylinders is pinking, this correction is zero.

It can be viewed via parameter **PR095 anti-pinking correction**.

### **Injectors**

The injectors are controlled according to several modes. In particular, the engine is started in semi-full group mode (injectors 1 and 4, then injectors 2 and 3 simultaneously), then it enters sequential mode, to ensure a correct start whether or not it is correctly phased.

In fact in rare cases it is possible for the engine to run incorrectly phased if the Memo phasing program failed during the last engine stop. So after switching to sequential injection mode and until the cylinder 1 recognition program is executed, the injection is offset by 2 cylinders, hence injecting in the order 4-2-1-3 while the expected order is 1-3-4-2.

The injection time is constantly calculated and may be zero, in the event of cut-off during deceleration or overspeed for example.

### 3. OBD MANAGEMENT

Managed OBD programming is as follows:

- upstream oxygen sensor operational fault finding,
- misfiring fault finding with two levels of detection: pollutant misfiring and catalytic converter breakage misfiring,
- fuel supply system fault finding.

The misfiring and fuel supply system fault finding is performed continuously.

Operational fault finding on the upstream sensor can only be carried out once per trip.

#### ***OBD fault manager:***

The OBD faults manager does not replace or modify conventional electrical fault management. It is an additional extra to satisfy the EOBD standard. The requirements are:

- storing OBD faults,
- illuminate the OBD warning light for all faults where the OBD emission thresholds are exceeded,
- flash the OBD warning light for misfire faults damaging the catalytic converter.

#### **Operating principle**

If a fault is detected and confirmed during **3** consecutive journeys then:

- an OBD stored fault is raised,
- the OBD fault warning light receives a request to be lit continuously. This request is only recognised if the fault in question is authorised to activate the OBD warning light.

To deactivate the warning light, no OBD faults should be detected for **3 consecutive** journeys.

**The electrical fault finding checks taken into consideration by the OBD faults manager are as follows:**

- |                            |                    |
|----------------------------|--------------------|
| – pressure,                | – ignition coil 1, |
| – coolant temperature,     | – ignition coil 2, |
| – air temperature          | – ignition coil 3, |
| – upstream sensor,         | – ignition coil 4, |
| – upstream sensor heating, | – petrol pump,     |
| – injector 1,              | – canister bleed,  |
| – injector 2,              | – air line system, |
| – injector 3,              | – pinking sensor.  |
| – injector 4,              |                    |

### **Catalytic converter:**

#### Principle

**The ability of the catalytic converter to store oxygen indicates the condition of the catalytic converter.** As the catalytic converter ages, its ability to store oxygen reduces along with its ability to treat pollutants. The principle lies in using the correlation between the oxygen storage capacity and the HC emissions.

When the conditions for starting fault finding are confirmed, richness excitation peaks are applied, which has the effect of sending bursts of oxygen into the catalytic converter.

If the catalytic converter is sound, it absorbs the oxygen sent to it.

If it has deteriorated, it rejects the oxygen that it cannot store.

### **Sensor:**

#### Purpose

Sensor operational fault finding should detect a malfunction which would cause pollutant emissions to exceed the EOBD (European On Board Diagnostic) limit.

There are 2 kinds of oxygen sensor damage:

- mechanical damage to the component (breakage, cut in wire) which leads to an electrical fault,
- chemical or thermal damage to the component leading to a slower response time of the sensor and to the increase in the average reaction time.

#### Description of programming

When the conditions for starting fault finding are confirmed, read the upstream sensor signal periods by removing the glitches (interference phenomena), then take the average, and compare with an EOBD limit average period.

The fault finding check may be staggered, i.e. divided over several consecutive engine stability phases, and its duration will vary according to the condition of the sensor.

#### 4. ENGINE COOLANT TEMPERATURE MANAGEMENT

Engine cooling is provided by 1 or 2 fan assemblies (depending on the vehicle layout). The injection computer requests their activation by the air conditioning computer via the multiplex network.

To provide cooling:

**Engine running**, GMV1 is requested when the coolant temperature exceeds **99 °C** and stops when the coolant temperature falls below **96 °C**. GMV2 is requested when the coolant temperature exceeds **102 °C** and stops when the coolant temperature falls below **99 °C**.

**With the engine off**, only fan assembly 1 may be activated to provide the anti-percolation function (if engine is stopped when very hot). The anti-percolation function is active with the ignition off for a determined period. During this period, fan assembly 1 is requested if the coolant temperature exceeds approximately **100 °C** and is shut down if the coolant temperature drops below around **95 °C**.

If a fault is detected on the coolant temperature sensor circuit, then fan assembly 1 is requested to operate continuously.

If the engine coolant temperature exceeds the warning threshold of **118 °C**, the injection computer requests the instrument panel computer, via the multiplex network, to illuminate the coolant temperature warning light until the coolant temperature falls back below **115 °C**.

In addition to the engine requirements, the injection computer centralises the cooling requirements for the air conditioning functions.

#### 5. AIR CONDITIONING FUNCTION

The S3000 computer manages a cold loop air conditioning system.

- heating and air conditioning system request via multiplex connection,
- acquisition of air conditioning circuit pressure,
- vehicle speed
- air conditioning compressor control by multiplex network,
- fan assembly control request by Protection and Switching Unit.

The injection computer recovers the power absorbed by the air conditioning compressor and the fast idle speed request using the pressure acquired in the air conditioning circuit.

This information is necessary for adapting the engine management (idle speed increase, air flow correction, etc.), for several reasons:

- air conditioning compressor efficiency,
- sturdier engine to torque bucking caused by compressor activation,
- helping the alternator.

Requests for fan assembly 1 and/or fan assembly 2 are recovered based on the air conditioning circuit pressure and the vehicle speed. In short, the lower the speed and the higher the pressure, the greater the fan assembly requests.



## 6. DEFECT MODES

- Type 1** The throttle opening is less than the Safe mode position. The throttle is no longer activated and is automatically in Safe mode. The ESP, distance control and cruise control/speed limiter systems are disabled. The automatic transmission is in "Safe mode".
- Type 2** The throttle opening is no longer actuated. The engine speed is limited by injection cut-off.
- Type 3** Defect mode is associated with restructuring of the pedal setpoints (constant pedal setpoint for each gear).
- Type 4** The associated defect mode restricts the throttle opening. The maximum throttle valve opening threshold results in a speed of under **54 mph (90 km/h)**.
- Type 5** The computer no longer processes torque changes requested by the ESP, Distance control, or cruise control/speed limiter.  
This defect mode appears following a computer malfunction or manifold pressure sensor fault. The system then only uses the accelerator pedal signal.  
The ESP, distance control and cruise control/speed limiter systems are disabled.



## 7. OPERATING SAFETY

### Warning lights illumination

The S3000 injection system manages the illumination of three warning lights and the display of warning messages according to the severity of the faults detected, with the aim of informing the customer and guiding fault finding.

The injection computer manages the illumination of warning lights and warning messages displayed on the instrument panel. These warning lights illuminate during the starting phase and in the event of an injection fault or engine overheating.

The warning light illumination signals reach the instrument panel via the multiplex network.

### Warning light illumination principle

During the starting phase (start button pressed) the **OBD** warning light (On Board Diagnostic) is lit for approximately **3 secs** and then goes out.

If there is an injection fault (**level 1**), the message **CHECK INJECTION** is lit, followed by the **SERVICE** warning light. It indicates a reduced level of operation and a limited safety level.

The driver should carry out repairs as soon as possible.

Components involved:

- motorised throttle valve,
- accelerator pedal potentiometer,
- inlet manifold pressure sensor,
- computer,
- actuator feed,
- computer feed.

If there is a serious injection fault (**level 2**), the red engine symbol and the word **STOP** (display with information display only), appears with the message **ENGINE OVERHEATING** followed by the **STOP** warning light and a buzzer. If this happens, the vehicle must be stopped immediately.

When a fault causing excessive pollution in the exhaust gases is detected, the **orange OBD warning light** engine symbol is lit:

- **flashing** in the event of a fault which might cause destruction of the catalytic converter (destructive misfires).  
If this happens you must stop the vehicle immediately,
- **constantly** in the case of non-compliance with the anti-pollution standards (polluting misfires, catalytic converter fault, oxygen sensor faults, inconsistency between the oxygen sensors and canister fault).

## 8. COUNTER FOR KILOMETRES TRAVELLED WITH THE FAULT

The two parameters **PR105 Mileage with OBD fault warning light lit** and **PR106 Mileage with fault warning light lit** are used to count the mileage travelled with one of the injection fault warning lights lit: **level 1 fault warning light** (amber) and the **OBD warning light**.

These counters can be reset to 0 using the **diagnostic tool** (clear faults command).

## 9. INTERSYSTEM ENGINE FUNCTIONS

The inter-system connections concerning the particular requirements of engine management are as follows:

- **OBD warning light** activation request by the instrument panel computer to warn of a pollution fault,
- **level 1 warning light** illumination request to warn of an operating safety fault relating to the injection system,
- **level 2 warning light** illumination request to warn of an operating safety fault or provide an engine overheating alert,
- request to start the GMV for engine cooling and also for air conditioning purposes,
- air conditioning compressor shut-down request for engine programming requirements such as pulling away, performance, anti-stalling, overspeed, etc.
- passenger compartment heating resistor shut-down or fixing request for engine programming requirements such as pulling away, performance, anti-stall, overspeed, etc.

## 1. COMPUTER REPLACEMENT OR REPROGRAMMING OPERATIONS

The system can be programmed and reprogrammed via the diagnostic socket using the RENAULT CLIP **diagnostic tool** (**Consult Technical Note 3585A or follow the instructions provided by the diagnostic tool**).

### IMPORTANT

- Switch on the diagnostic tool (mains or cigarette lighter feed).
- Connect a battery charger (during the entire computer (re)programming procedure, the engine fan assemblies are triggered automatically).
- Observe the engine temperature setpoints given on the diagnostic tool before (re)programming.
- Switch off all the electrical consumers (interior lights, radio, air conditioning, etc.).

### Operations to be carried out before reprogramming the injection computer:

Before reprogramming the injection computer, position the main cruise control/speed limiter switch in 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:

Ignition switched on,

and main switch in rest position (the computer detects rest position at that moment).

Switch in Cruise control position to activate the Cruise control function.

Switch in Speed limiter position to activate the Speed limiter function.

### After programming, reprogramming or replacing the computer:

- Switch off the ignition.
- Start and then stop the engine (to initialise the computer) and wait **30 seconds**.
- Turn on the ignition and use the diagnostic tool to carry out the following steps:
- Run command **VP10 Enter VIN**,
- deal with any faults declared by the **diagnostic tool**. Clear the computer memory.
- program the flywheel sensor target and throttle stops,
- carry out a road test followed by another check with the **diagnostic tool**.

### IMPORTANT

If replacing a computer, program the **FLEX-FUEL** configuration (see **configuration and programming**).

It is not possible to test an injection computer from the Parts Department because it cannot be fitted on any other vehicle.

### 3. REPLACING OR REMOVING THE TDC SENSOR

When replacing or removing the TDC sensor, program the engine flywheel ring (see **Configurations and programming**).

#### **IMPORTANT**

- The injection computer retains the immobiliser code for life,
- the system has no security code,
- carrying out tests with computers borrowed from the Parts Department or from another vehicle, which later need to be returned, is prohibited. These computers are hard-coded.

### 4. REPLACING THE MOTORISED THROTTLE VALVE

When replacing the throttle valve, the throttle stops are automatically programmed.

- **PR058 Air temperature** between **0 °C** and **105 °C**,
- wait for the end of power latch for the programming to be stored in the computer memory.

Check that the programming using status **ET051 Throttle stop programming**, is **COMPLETE**

#### **IMPORTANT**

Never drive the vehicle without having programmed the throttle stops.

## 1. CONFIGURATION

### Computer configuration by automatic detection

<b>LC001</b>	Vehicle speed connection type
	→ Multiplex → Wire
<b>LC003</b>	Upstream oxygen sensor
	→ WITH → NONE
<b>LC007</b>	Cylinder 1 recognition
	→ WITH → NONE
<b>LC095</b>	Camshaft cold loop mode in injection
	→ YES → NO

## 2. PROGRAMMING

### Programming the flywheel target

- Decelerate first with injection cut off (i.e. foot off the brake, accelerator and clutch pedals) between **3,500** and **3,000 rpm**, in 3rd gear.
- Then decelerate with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm** in 3rd gear.

Check the programming using **ET089 Flywheel target programming**.

### Programming the throttle end stops

When replacing the computer or the motorised throttle valve, with the ignition on, wait **30 seconds** so that the computer may program the MAX and MIN limits, then switch off the ignition and wait **30 seconds** for the end of the Power Latch, so that the computer may **store** the programmed limits.

Check the programming using **ET051 Throttle stop programming**.

\* This is the moment when, during deceleration with no load, the engine drops to idle speed and recovers torque.

### Hi-Flex configuration programming

After the computer is replaced, with the ignition on, the computer is configured as NON Hi-Flex.

- Turn on the ignition, without starting the engine: the Hi-flex configuration is automatically programmed and detects the solenoid valve and additional pump.
- If the programming is not carried out, it is possible to start the engine but driving the vehicle is prohibited.

Check the programming using status **ET652 Hi-flex configuration**.

Programming conditions for engine adaptive variables:

- battery voltage above **10 V** for the additional fuel pump,
- battery voltage above **6 V** for the additional fuel pump solenoid valve.

### Important note

When switching on the ignition, the computer detects the relay and not the additional pump. Hi-flex detection does not guarantee that the pump is connected and operational.

### Programming the level of alcohol

Fuel recognition is carried out by observing the drift of the richness controller.

So it can only be carried out if richness regulation is looped (**ET300 Richness regulation**).

Programming procedure:

- **start the engine,**
- **allow the engine coolant temperature to reach 75 °C, check using parameter PR064 Coolant temperature,**
- **run the engine at 1500 rpm for at least 5 mins,**
- **check that the programming has been carried out using status ET671 Alcohol level programming and parameter PR743 Estimated alcohol level in tank,**
- **the programming is saved when the ignition is switched off.**

### Note:

When the injection computer has not recognised the fuel composition, operation is **faulty**.



# PETROL INJECTION

## Fault finding - Fault summary table

17B

Tool fault	Associated DTC code	Description
DF001	0115	Coolant temperature sensor circuit
DF002	0110	Air temperature sensor circuit
DF011	0641	Sensor feed voltage no. 1
DF012	0651	Sensor feed voltage no. 2
DF026	0201	Cylinder 1 injector control circuit
DF027	0202	Cylinder 2 injector control circuit
DF028	0203	Cylinder 3 injector control circuit
DF029	0204	Cylinder 4 injector control circuit
DF038	0606	Computer
DF046	0560	Battery voltage
DF059	0301	Misfiring on cylinder 1
DF060	0302	Misfiring on cylinder 2
DF061	0303	Misfiring on cylinder 3
DF062	0304	Misfiring on cylinder 4
DF078	2101	Motorised throttle control circuit
DF079	0638	Motorised throttle valve automatic control

# PETROL INJECTION

## Fault finding - Fault summary table

17B

Tool fault	Associated DTC code	Description
DF084	0685	Actuator relay control circuit
DF085	0627	Fuel pump relay control circuit
DF088	0325	Pinking sensor circuit
DF089	0105	Inlet manifold pressure sensor circuit
DF091	0500	Vehicle speed signal
DF092	0130	Upstream oxygen sensor circuit
DF093	0136	Downstream oxygen sensor circuit
DF095	0120	Throttle potentiometer circuit gang 1
DF096	0220	Throttle potentiometer circuit gang 2
DF101	C122	ESP multiplex connection
DF102	2502	Invalid power sig.* available
DF105	0585	Cruise control/speed limiter on/off circuit
DF106	0575	CC/SL selector switch on steering wheel

\*sig.: signal

# PETROL INJECTION

## Fault finding - Fault summary table

17B

Tool fault	Associated DTC code	Description
DF109	0313	Low fuel level misfiring
DF110	0420	Catalytic converter
DF138	0830	Clutch pedal circuit
DF154	0335	Flywheel signal sensor circuit
DF196	0225	Pedal sensor circuit track 1
DF198	2120	Pedal sensor circuit track 2
DF228	0504	Brake signal
DF232	0530	Refrigerant pressure sensor circuit
DF361	0351	Ignition coil control - cylinders 1 - 4
DF362	0352	Ignition coil control - cylinders 2 - 3
DF398	0170	Fuel circuit operating fault
DF410	C155	Instrument panel connection
DF436	0300	Detection of engine misfiring

# PETROL INJECTION

## Fault finding - Fault summary table

17B

Tool fault	Associated DTC code	Description
DF455	0460	Low fuel level signal
DF457	0315	Flywheel target
DF549	0443	Canister bleed circuit
DF601	0135	Upstream O2 sensor heating power circ*
DF602	0141	Downstream O2 sensor heating power circ*
DF623	C315	Closing brake signal
DF624	C111	UPC multiplex connection
DF650	2299	Accelerator pedal position signal
DF884	1627	Additional petrol circuit pump relay (only for Flex fuel)
DF894	1001	Additional petrol circuit solenoid valve (only for Flex fuel)
DF1067	1335	AS* tooth signal sensor circuit
DF1070	0534	Air conditioning compressor sticking

\*Circ: Circuit

\*AS: After-Sales

<b>DF001 PRESENT</b>	<b>COOLANT TEMPERATURE SENSOR CIRCUIT</b> 1.DEF : Inconsistent signal 2.DEF : Abnormal voltage 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<p><b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF011 Sensor feed voltage no. 1</b> first if it is present or stored.</p> <p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– <b>OBD warning light</b> lit,</li> <li>– low-speed fan is operating continuously.</li> <li>– Refer to parameter <b>PR064 Coolant temperature:</b> if <b>PR064 = 120 °C</b>, short circuit to <b>+ 12 V</b>, if <b>PR064 = - 40 °C</b>, short circuit to earth.</li> </ul> <p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>
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Check the **cleanliness** and **condition** of the coolant temperature sensor and its connections.  
Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3C** between components **244** and **120**.  
– **3JK** between components **244** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Measure the **resistance** of the coolant temperature sensor between **connections 3C and 3JK**.  
Replace the coolant temperature sensor if the resistance is not:

<b>12.6 kΩ ± 1.1 kΩ</b>	<b>at a coolant temperature of - 10 °C</b>
<b>2200 Ω ± 112 Ω</b>	<b>at a coolant temperature of 25 °C</b>
<b>810 Ω ± 39 Ω</b>	<b>at a coolant temperature of 50 °C</b>
<b>283 Ω ± 8 Ω</b>	<b>at a coolant temperature of 80 °C</b>
<b>1156 Ω ± 3 Ω</b>	<b>at a coolant temperature of 110 °C</b>
<b>88 Ω ± 2 Ω</b>	<b>at a coolant temperature of 120 °C</b>

If the fault is still present, deal with the other faults, then proceed to the conformity check.

<b>AFTER REPAIR</b>	Deal with any faults displayed by the <b>diagnostic tool</b> . Clear the computer memory. Carry out a road test followed by another check with the <b>diagnostic tool</b> .
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<b>DF002 PRESENT</b>	<b>AIR TEMPERATURE SENSOR CIRCUIT</b> 1.DEF : Abnormal voltage 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF012 Sensor feed voltage no. 2</b> first, if it is present or stored.
	<b>Special note:</b> – OBD warning light comes on. – Refer to parameter <b>PR058 Air temperature:</b> if <b>PR058 = 120 °C</b> , short circuit to + 12 V, if <b>PR058 = - 40 °C</b> , short circuit to earth.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the air temperature sensor and its connections.  
Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3JQ** between components **272** and **120**.  
– **3B** between components **272** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

<b>9.6 kΩ ± 1</b>	<b>at an air temperature of - 10 °C.</b>
<b>2000 Ω ± 120</b>	<b>at an air temperature of 25 °C.</b>
<b>810 Ω ± 47</b>	<b>at an air temperature of 50 °C.</b>
<b>309 Ω ± 17</b>	<b>at an air temperature of 80 °C.</b>

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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<b>DF011 PRESENT OR STORED</b>	<b>SENSOR FEED VOLTAGE NO. 1</b> 1.DEF : Open circuit or short circuit 2.DEF : Fault on potentiometer supply 1
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal firstly with fault <b>DF084 Actuator relay control circuit</b> or <b>DF046 Battery voltage</b> if they are present or stored.
	<b>Special note:</b> – level 1 fault warning light lit, – throttle valve defect mode <b>types 1, 2 or 4.</b>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the throttle valve connections.  
Check the **cleanliness** and **condition** of the pedal potentiometer connections.  
Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Sensor feed No. 1 is reserved for the following components:

- inlet manifold pressure sensor
- pedal potentiometer gang 2,
- coolant pressure sensor,
- Cruise control/Speed limiter buttons,
- upstream O2 sensors.

To locate a possible fault inside one of the sensors with a **+ 5 V** feed (short circuit), disconnect each of the sensors on the list above in turn, checking after each disconnection whether the fault status changes from “present” to “stored”.  
If the faulty sensor is located, check its connections and that it is in order.  
Replace the faulty sensor if necessary.

Using the “Universal bornier”, check the **insulation** and **continuity** of the following connections:

- **3LU** between components **921** and **120**.
- **3GK** between components **887** and **120**.
- **3PD** between components **1081** and **120**.
- **3GK** between components **887** and **120**.
- **3LG** between components **147** and **120**.

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

**If the fault is still present, there is a computer fault**, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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<b>DF012 PRESENT OR STORED</b>	<b>SENSOR FEED VOLTAGE NO. 2</b> 1.DEF : Open circuit or short circuit 2.DEF : Fault on potentiometer supply 2
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<b>NOTES</b>	<b>Special note:</b> – <b>level 1 fault warning light</b> lit, – throttle valve defect mode <b>types 4 and 5</b> : vehicle and engine speed restriction, ESP and the Cruise control/Speed limiter are deactivated.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the throttle valve connections.  
Check the **cleanliness** and **condition** of the pedal potentiometer connections.  
Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Sensor feed No. 2 is reserved for the following components:  
– pedal potentiometer gang 1,  
– motorised throttle potentiometer ganged circuit 1 and 2.

To locate a possible internal failure on one of the sensors with a **+ 5 V** supply (short circuit), disconnect each of the sensors in the list above in turn, checking after each disconnection if the fault with "present" status becomes "stored".  
If the faulty sensor is located, check its connections and that it is in order.  
Replace the faulty sensor if necessary.

Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3LR** between components **921** and **120**.  
– **3MN** between components **1076** and **120**.  
If the connection(s) are faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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<b>DF026 PRESENT OR STORED</b>	<b>CYLINDER 1 INJECTOR CONTROL CIRCUIT</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with faults <b>DF084 Actuator relay control circuit</b> or <b>DF046 Battery voltage</b> first if they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the engine has been running for a timed period of <b>10 seconds</b> .
	<b>Special note:</b> – <b>OBD warning light</b> lit.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>CO/ CC.1</b>	<b>NOTES</b>	<b>Special note:</b> No injection on cylinder 1, severe deterioration in performance.
<b>CC.0</b>		<b>Special note:</b> The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.

Check the <b>cleanliness</b> and <b>condition</b> of the cylinder 1 injector and its connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
With the ignition on, check for a <b>+ 12 V feed</b> on <b>connection 3FB1</b> of the cylinder 1 injector connector. If there is no <b>+ 12 V feed</b> , using the “universal bornier”, check the <b>continuity</b> of the following connections: – <b>3FB1</b> between components <b>193</b> and <b>120</b> . – <b>3FB1</b> between components <b>1337</b> and <b>193</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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**DF026  
CONTINUED**

Using the universal bornier, check for **insulation and continuity** on the following connection:

– **3CR** between components **193** and **120**.

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

Measure the **resistance** of the cylinder 1 injector between **connections 3CR and 3FB1**.

Replace the cylinder 1 injector if the **resistance** is not **14.5  $\Omega$   $\pm$  0.7  $\Omega$  at 20 °C**.

If the fault is still present, replace the cylinder 1 injector.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

Deal with any faults detected by the diagnostic tool.

Clear the computer memory.

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

<b>DF027 PRESENT OR STORED</b>	<b>CYLINDER 2 INJECTOR CONTROL CIRCUIT</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with faults <b>DF084 Actuator relay control circuit</b> or <b>DF046 Battery voltage</b> first if they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the engine has been running for a timed period of <b>10 seconds</b> .
	<b>Special note:</b> – <b>OBD warning light</b> lit.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>CO/ CC.1</b>	<b>NOTES</b>	<b>Special note:</b> No injection on cylinder 2, severe deterioration in performance.
<b>CC.0</b>		<b>Special note:</b> The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.

Check the <b>cleanliness</b> and <b>condition</b> of the cylinder 2 injector and its connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
With the ignition on, check for a <b>+ 12 V feed</b> on <b>connection 3FB1</b> of the cylinder 2 injector connector. If there is no <b>+ 12 V feed</b> , using the “universal bornier”, check the <b>continuity</b> of the following connections: – <b>3FB1</b> between components <b>194</b> and <b>120</b> . – <b>3FB1</b> between components <b>1337</b> and <b>194</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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**DF027  
CONTINUED**

Using the universal bornier, check for **insulation and continuity** on the following connection:

– **3CS** between components **194** and **120**.

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

Measure the **resistance** of the cylinder 2 injector between connections **3CS** and **3FB1**.

Replace the cylinder 2 injector if the **resistance** is not **14.5  $\Omega$   $\pm$  0.7  $\Omega$  at 20 °C**.

If the fault is still present, replace the cylinder 2 injector.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

Deal with any faults detected by the diagnostic tool.

Clear the computer memory.

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

<b>DF028 PRESENT OR STORED</b>	<b>INJECTOR CYLINDER 3 CONTROL CIRCUIT</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Order of priority in the event of more than one fault:</b> Deal with faults <b>DF084 Actuator relay control circuit</b> or <b>DF046 Battery voltage</b> if they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the engine has been running for a timed period of <b>10 seconds</b> .
	<b>Special note:</b> – <b>OBD warning light</b> comes on.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>CO/ CC.1</b>	<b>NOTES</b>	<b>Special note:</b> No injection on cylinder 3, severe deterioration in performance.
<b>CC.0</b>		<b>Special note:</b> The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.

Check the <b>cleanliness and condition</b> of the cylinder 3 injector and its connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
With the ignition on, check for a <b>+ 12 V feed</b> on <b>connection 3FB1</b> of the cylinder 3 injector connector. If there is no <b>+ 12 V feed</b> , using the “universal bornier”, check the <b>continuity</b> of the following connections: – <b>3FB1</b> between components <b>195</b> and <b>120</b> . – <b>3FB1</b> between components <b>1337</b> and <b>195</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery and the injection computer. Check the <b>cleanliness and condition</b> of the connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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**DF028**  
**CONTINUED**

Using the universal bornier, check for **insulation and continuity** on the following connection:

– **3CT** between components **195** and **120**.

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

Measure the **resistance** of the cylinder 3 injector between connections **3CT** and **3FB1**.

Replace the cylinder 3 injector if the **resistance** is not **14.5  $\Omega$   $\pm$  0.7  $\Omega$  at 20 °C**.

If the fault is still present, replace the cylinder 3 injector.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

Deal with any faults detected by the diagnostic tool.

Clear the computer memory.

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

<b>DF029 PRESENT OR STORED</b>	<b>INJECTOR CYLINDER 4 CONTROL CIRCUIT</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Order of priority in the event of more than one fault:</b> Deal with faults <b>DF084 Actuator relay control circuit</b> or <b>DF046 Battery voltage</b> first if they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the engine has been running for a timed period of <b>10 seconds</b> .
	<b>Special note:</b> – <b>OBD warning light</b> lit.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>CO/ CC.1</b>	<b>NOTES</b>	<b>Special note:</b> No injection on cylinder 4, severe deterioration in performance.
<b>CC.0</b>		<b>Special note:</b> The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.

Check the <b>cleanliness</b> and <b>condition</b> of the cylinder 4 injector and its connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
With the ignition on, check for a <b>+ 12 V feed</b> on <b>connection 3FB1</b> of the cylinder 4 injector connector. If there is no <b>+ 12 V feed</b> , using the “universal bornier”, check the <b>continuity</b> of the following connections: – <b>3FB1</b> between components <b>196</b> and <b>120</b> . – <b>3FB1</b> between components <b>1337</b> and <b>196</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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**DF029**  
**CONTINUED**

Using the universal bornier, check for **insulation and continuity** on the following connection:

– **3CU** between components **196** and **120**.

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

Measure the **resistance** of the cylinder 4 injector between connections **3CU** and **3FB1**.

Replace the cylinder 4 injector if the **resistance** is not **14.5  $\Omega$   $\pm$  0.7  $\Omega$  at 20 °C**.

If the fault is still present, replace the cylinder 4 injector.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

Deal with any faults detected by the diagnostic tool.

Clear the computer memory.

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



<b>DF038 PRESENT</b>	<u><b>COMPUTER</b></u> 1.DEF : Internal electronic fault
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with the other faults first.
	<b>Special note:</b> <ul style="list-style-type: none"><li>– OBD warning light lit,</li><li>– throttle valve defect mode <b>types 1, 2 or 5</b> present or stored.</li></ul>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Make sure there is a supply to the injection computer:

- disconnect the battery and the injection computer,
- check the cleanliness and condition of the connections,
- reconnect the battery.

Using the “universal bornier”, check for **+ 12 V** on the following computer tracks:

- **connection AP15, connector A**
- **connection 3FB1, connector B.**

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

Make sure there is an earth on the injection computer:

- disconnect the battery and the injection computer,
- check the cleanliness and condition of the connections,
- reconnect the battery.

**Using the “universal bornier”, check for earths on connections N of the computer.**

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

If all the supplies and earths are correct, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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<b>DF046 PRESENT</b>	<b>BATTERY VOLTAGE</b> 1.DEF : Abnormal voltage
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Apply the procedure for dealing with fault <b>DF084 Actuators relay control circuit</b> first if it is present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears when the engine is running.
	<b>Special note:</b> <ul style="list-style-type: none"><li>– <b>level 1 fault warning light</b> lit,</li><li>– throttle valve defect mode <b>types 1 and 2</b> in the event of undervoltage: vehicle and engine speed restriction, the ESP and cruise control/speed limiter are deactivated.</li></ul>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Disconnect the battery and the injection computer.  
Check **the cleanliness** and **condition** of the computer connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the **CN and MN connector** of the Protection and Switching Unit.  
Check **the cleanliness** and **condition** of its connections.  
Using the Universal bornier, check the **continuity** of the following connections:

- **3FB1** between components **1337** and **120**.
- **3AA** between components **1337** and **120**.

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

- clean the battery terminals and all connections to the **+** and to **Earth**,
- check the battery voltage,
- check the charging circuit (see **Technical Note 6014A Checking the charging circuit**).

Repair or replace the faulty components, if necessary.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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<b>DF059</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b>	<b>COMBUSTION MISFIRES ON CYLINDER 1</b> 1.DEF : destructive misfiring 2.DEF : polluting misfiring 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<p><b>Priority when dealing with a number of faults:</b></p> <ul style="list-style-type: none"> <li>– ignition: <b>DF361 Ignition coil circuit cylinders 1-4,</b>  <b>DF362 Ignition coil circuit cylinders 2-3.</b></li> <li>– fuel supply circuit:  <b>DF026 Cylinder 1 injector control circuit,</b>  <b>DF027 Cylinder 2 injector control circuit;</b>  <b>DF028 Cylinder 3 injector control circuit,</b>  <b>DF029 Cylinder 4 injector control circuit,</b>  <b>DF085 Fuel pump relay control circuit.</b></li> <li>– engine flywheel signal: <b>DF154 Flywheel signal sensor circuit,</b>  <b>DF457 Engine flywheel target</b></li> </ul> <p>Check whether there are other cylinders with a “combustion misfire” fault reported by the <b>diagnostic tool</b> before starting the fault finding procedure below.</p>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  <b>The fault appears under the following conditions:</b></p> <ul style="list-style-type: none"> <li>– there must be no further electrical faults,</li> <li>– programming must be carried out.</li> <li>– warm engine (coolant temperature 75 °C minimum),</li> <li>– engine running at idle speed with all electrical consumers on for approximately 15 minutes.</li> </ul>
	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– <b>OBD warning light lit.</b></li> </ul>

<b>1.DEF</b>	<b>NOTES</b>	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– As soon as the fault is detected, the injection is cut off on the faulty cylinder(s) to limit the temperature increase in the catalytic converter,</li> <li>– if a fault is present, the <b>OBD warning light flashes.</b></li> </ul>
<b>2.DEF</b> <b>3.DEF</b>		<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– the <b>OBD warning light</b> remains <b>continuously lit.</b></li> </ul>

<b>Misfiring on cylinder 1 only</b>	<p>The fault is probably due to a component that can only affect this cylinder:</p> <ul style="list-style-type: none"> <li>– check the cylinder 1 pencil coil,</li> <li>– check the condition and conformity of the spark plugs,</li> <li>– check the cylinder 1 injector.</li> </ul> <p>If everything is in order, check the same components on cylinder 4 (to cover a possible cylinder recognition error).</p>
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<b>AFTER REPAIR</b>	<p>Deal with any faults detected by the diagnostic tool.</p> <p>Clear the computer memory.</p> <p>Carry out a road test followed by another check with the diagnostic tool.</p>
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**DF059  
CONTINUED**

**Combustion misfires on cylinders 1 and 4 (see DF059 Combustion misfires on cylinder 1 and DF062 Combustion misfires on cylinder 4)**

The fault is probably due to a component that affects a pair of cylinders:  
– check the ignition coil circuit concerned (apply the interpretation of fault **DF361 Ignition coil 1-4 control**),  
– check the condition and conformity of the spark plugs.

**Combustion misfires on the four cylinders (see DF059 Combustion misfire on cylinder 1, DF060 Combustion misfire on cylinder 2, DF061 Combustion misfire on cylinder 3 and DF062 Combustion misfire on cylinder 4)**

The fault is probably due to a component affecting all the cylinders:  
– check that the correct fuel is being used,  
– check the condition and conformity of the spark plugs.

**If the fault is still present, carry out the following checks:**

- check the flywheel sensor,
- check the condition and cleanliness of the flywheel,
- check the flywheel sensor mounting,
- check the sensor/flywheel air gap,
- check the cylinder compressions,
- check the complete petrol supply circuit (see **MR 364 Mechanics, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanics, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanics, 11A, top and front of engine**).

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

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

<b>DF060 PRESENT OR STORED</b>	<b><u>COMBUSTION MISFIRES ON CYLINDER 2</u></b> 1.DEF : destructive misfiring 2.DEF : polluting misfiring 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<p><b>Priority when dealing with a number of faults:</b></p> <ul style="list-style-type: none"> <li>– ignition: <b>DF361 Ignition coil circuit cylinders 1-4,</b> <b>DF362 Ignition coil circuit cylinders 2-3.</b></li> <li>– fuel supply circuit: <b>DF026 Cylinder 1 injector control circuit,</b> <b>DF027 Cylinder 2 injector control circuit;</b> <b>DF028 Cylinder 3 injector control circuit,</b> <b>DF029 Cylinder 4 injector control circuit,</b> <b>DF085 Fuel pump relay control circuit.</b></li> <li>– engine flywheel signal: <b>DF154 Flywheel signal sensor circuit,</b> <b>DF457 Engine flywheel target.</b></li> </ul> <p>Check whether there are other cylinders with a combustion misfire fault detected by the tool before starting the following fault finding procedure.</p>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b></p> <p>The fault appears under the following conditions:</p> <ul style="list-style-type: none"> <li>– there must be no further electrical faults,</li> <li>– programming must be carried out.</li> <li>– warm engine (coolant temperature 75 °C minimum),</li> <li>– engine running at idle speed with all electrical consumers on for approximately 15 minutes.</li> </ul>
	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– <b>OBD</b> warning light is on.</li> </ul>

<b>1.DEF</b>	<b>NOTES</b>	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– As soon as the fault is detected, the injection is cut off on the faulty cylinder(s) to limit the temperature increase in the catalytic converter,</li> <li>– if a fault is present, the <b>OBD warning light flashes.</b></li> </ul>
<b>2.DEF 3.DEF</b>		<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– the <b>OBD warning light</b> remains <b>continuously lit.</b></li> </ul>

<b>Misfiring on cylinder 2 only</b>	<p>The fault is probably due to a component that can only affect this cylinder:</p> <ul style="list-style-type: none"> <li>– check the cylinder 2 pencil coil,</li> <li>– check the condition and conformity of the spark plugs,</li> <li>– check the cylinder 2 injector.</li> </ul> <p>If everything is in order, check the same components on cylinder 3 (to cover a possible cylinder recognition error).</p>
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<b>AFTER REPAIR</b>	<p>Deal with any faults detected by the diagnostic tool.</p> <p>Clear the computer memory.</p> <p>Carry out a road test followed by another check with the diagnostic tool.</p>
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**DF060  
CONTINUED**

**Misfires in  
cylinders 2 and 3  
(see DF060 Misfires  
in cylinder 2 and  
DF061 Misfires in  
cylinder 3)**

The fault is probably due to a component that affects a pair of cylinders:  
– check the ignition coil circuit concerned (apply the interpretation of fault **DF362 Ignition coil control 2-3**),  
– check the condition and conformity of the spark plugs.

**Combustion  
misfires on the four  
cylinders (see  
DF059 Combustion  
misfire on  
cylinder 1, DF060  
Combustion  
misfire on  
cylinder 2, DF061  
Combustion  
misfire on  
cylinder 3 and  
DF062 Combustion  
misfire on  
cylinder 4)**

The fault is probably due to a component affecting all the cylinders:  
– check that the correct fuel is being used,  
– check the condition and conformity of the spark plugs.

**If the fault is still present, carry out the following checks:**

- check the flywheel sensor,
- check the condition and cleanliness of the flywheel,
- check the flywheel sensor mounting,
- check the sensor/flywheel air gap,
- check the cylinder compressions,
- check the complete petrol supply circuit (see **MR 364 Mechanics, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanics, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanics, 11A, top and front of engine**).

**If the fault is still present, deal with the other faults then proceed with the conformity check.**

**AFTER REPAIR**

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

<b>DF061 PRESENT OR STORED</b>	<b>COMBUSTION MISFIRES ON CYLINDER 3</b> 1.DEF : destructive misfiring 2.DEF : polluting misfiring 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> – ignition: <b>DF361 Ignition coil circuit cylinders 1-4,</b> <b>DF362 Ignition coil circuit cylinders 2-3.</b> – fuel supply circuit: <b>DF026 Cylinder 1 injector control circuit,</b> <b>DF027 Cylinder 2 injector control circuit;</b> <b>DF028 Cylinder 3 injector control circuit,</b> <b>DF029 Cylinder 4 injector control circuit,</b> <b>DF085 Fuel pump relay control circuit.</b> – engine flywheel signal: <b>DF154 Flywheel signal sensor circuit,</b> <b>DF457 Engine flywheel target.</b> Check whether there are other cylinders with a combustion misfire fault detected by the tool before starting the following fault finding procedure.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> <b>The fault appears under the following conditions:</b> – there must be no further electrical faults, – programming must be carried out. – warm engine (coolant temperature 75 °C minimum), – engine running at idle speed with all electrical consumers on for approximately 15 minutes.
	<b>Special note:</b> – <b>OBD warning light lit.</b>

<b>1.DEF</b>	<b>NOTES</b>	<b>Special note:</b> – As soon as the fault is detected, the injection is cut off on the faulty cylinder(s) to limit the temperature increase in the catalytic converter, – if a fault is present, the <b>OBD warning light flashes.</b>
<b>2.DEF 3.DEF</b>		<b>Special note:</b> – the <b>OBD warning light</b> remains <b>continuously lit.</b>

<b>Misfiring on cylinder 3 only</b>	The fault is probably due to a component that can only affect this cylinder: – check the cylinder 3 pencil coil, – check the condition and conformity of the spark plugs, – check the cylinder 3 injector. If everything is in order, check the same components on cylinder 2 (to cover a possible cylinder recognition error).
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<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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**DF061  
CONTINUED**

**Misfires in  
cylinders 2 and 3  
(see DF060 Misfires  
in cylinder 2 and  
DF061 Misfires in  
cylinder 3)**

The fault is probably due to a component that affects a pair of cylinders:  
– check the ignition coil circuit concerned (apply the interpretation of fault **DF362 Ignition coil 2-3 control**),  
– check the condition and conformity of the spark plugs.

**Combustion  
misfires on the four  
cylinders (see  
DF059 Combustion  
misfire on  
cylinder 1, DF060  
Combustion  
misfire on  
cylinder 2, DF061  
Combustion  
misfire on  
cylinder 3 and  
DF062 Combustion  
misfire on  
cylinder 4)**

The fault is probably due to a component affecting all the cylinders:  
– check that the correct fuel is being used,  
– check the condition and conformity of the spark plugs.

**If the fault is still present, carry out the following checks:**

- check the flywheel sensor,
- check the condition and cleanliness of the flywheel,
- check the flywheel sensor mounting,
- check the flywheel/sensor air gap
- check the cylinder compressions,
- check the complete petrol supply circuit (see **MR 364 Mechanics, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanics, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanics, 11A, top and front of engine**).

**If the fault is still present, deal with the other faults then proceed with the conformity check.**

**AFTER REPAIR**

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



<b>DF062 PRESENT OR STORED</b>	<b><u>COMBUSTION MISFIRES ON CYLINDER 4</u></b> 1.DEF : destructive misfiring 2.DEF : polluting misfiring 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<p><b>Priority when dealing with a number of faults:</b></p> <ul style="list-style-type: none"> <li>– ignition: <b>DF361 Ignition coil circuit cylinders 1-4,</b>  <b>DF362 Ignition coil circuit cylinders 2-3.</b></li> <li>– fuel supply circuit:  <b>DF026 Cylinder 1 injector control circuit,</b>  <b>DF027 Cylinder 2 injector control circuit;</b>  <b>DF028 Cylinder 3 injector control circuit,</b>  <b>DF029 Cylinder 4 injector control circuit,</b>  <b>DF085 Fuel pump relay control circuit.</b></li> <li>– engine flywheel signal: <b>DF154 Flywheel signal sensor circuit,</b>  <b>DF457 Engine flywheel target.</b></li> </ul> <p>Check whether there are other cylinders with a combustion misfire fault detected by the tool before starting the following fault finding procedure.</p>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b></p> <p>The fault appears under the following conditions:</p> <ul style="list-style-type: none"> <li>– there must be no further electrical faults,</li> <li>– programming must be carried out.</li> <li>– warm engine (coolant temperature 75 °C minimum),</li> <li>– engine running at idle speed with all electrical consumers on for approximately 15 minutes.</li> </ul>
	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– <b>OBD warning light lit.</b></li> </ul>

<b>1.DEF</b>	<b>NOTES</b>	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– As soon as the fault is detected, the injection is cut off on the faulty cylinder(s) to limit the temperature increase in the catalytic converter,</li> <li>– if a fault is present, the <b>OBD warning light flashes.</b></li> </ul>
<b>2.DEF 3.DEF</b>		<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– the <b>OBD warning light</b> remains <b>continuously lit.</b></li> </ul>

<b>Misfiring on cylinder 4 only</b>	<p>The fault is probably due to a component that can only affect this cylinder:</p> <ul style="list-style-type: none"> <li>– check the pencil coil of cylinder 4,</li> <li>– check the condition and conformity of the spark plugs,</li> <li>– check the cylinder 4 injector.</li> </ul> <p>If everything is in order, check the same components on cylinder 1 (to cover a possible cylinder recognition error).</p>
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<b>AFTER REPAIR</b>	<p>Deal with any faults detected by the diagnostic tool.</p> <p>Clear the computer memory.</p> <p>Carry out a road test followed by another check with the diagnostic tool.</p>
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**DF062  
CONTINUED**

**Combustion misfires on cylinders 1 and 4 (see DF059 Combustion misfires on cylinder 1 and DF062 Combustion misfires on cylinder 4)**

The fault is probably due to a component that affects a pair of cylinders:  
– check the ignition coil circuit concerned (apply the interpretation of fault **DF361 Ignition coil 1-4 control**),  
– check the condition and conformity of the spark plugs.

**Combustion misfires on the four cylinders (see DF059 Combustion misfire on cylinder 1, DF060 Combustion misfire on cylinder 2, DF061 Combustion misfire on cylinder 3 and DF062 Combustion misfire on cylinder 4)**

The fault is probably due to a component affecting all the cylinders:  
– check that the correct fuel is being used,  
– check the condition and conformity of the spark plugs.

**If the fault is still present, carry out the following checks:**

- check the flywheel sensor,
- check the condition and cleanliness of the flywheel,
- check the flywheel sensor mounting,
- check the flywheel/sensor air gap
- check the cylinder compressions,
- check the complete petrol supply circuit (see **MR 364 Mechanics, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanics, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanics, 11A, top and front of engine**).

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

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

<b>DF078 PRESENT OR STORED</b>	<b>MOTORISED THROTTLE CONTROL CIRCUIT</b> 1.DEF : component in bad condition
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### WARNING

Never drive the vehicle without having confirmed that no faults involving the throttle valve are present.

<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> <b>DF095 “Throttle potentiometer circuit gang 1” or DF096 “Throttle potentiometer circuit gang 2”.</b>
	<b>Conditions for applying the fault finding procedure to stored faults:</b> <b>The fault is declared as present if:</b> <ul style="list-style-type: none"> <li>– the engine speed varies,</li> <li>– the <b>AC027 Motorised throttle</b> command is activated,</li> <li>– the engine air temperature should be between <b>5 °C</b> and <b>105 °C</b>.</li> </ul>
	<b>Special note:</b> <ul style="list-style-type: none"> <li>– <b>level 1 fault warning light</b> lit,</li> <li>– <b>throttle valve defect mode</b> types 1 and 2: <b>vehicle and engine speed restriction, ESP and the cruise control/speed limiter are deactivated.</b></li> </ul>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness and condition** of the throttle valve and its connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Manually check that the throttle **rotates properly**.

Disconnect the battery and the injection computer.  
Check the **cleanliness and condition** of the connections.  
Using the Universal bornier, check the **insulation and continuity** of the following connections:

- **3AJB** between components **1076** and **120**.
- **3AJC** between components **1076** and **120**.

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

If the fault is still present, measure the **resistance** of the throttle motor between connections **3AJB** and **3AJC**.  
Replace the throttle valve if the **resistance** is not **1.6 Ω ± 0.2 Ω at 23 °C**.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF079 PRESENT OR STORED</b>	<b><u>MOTORISED THROTTLE VALVE SERVO</u></b> CO : Open circuit 1.DEF : Micro-breaks, 2.DEF : Motorised throttle stop search fault, 3.DEF : Faulty flap return spring, 4.DEF : Safe mode, 5.DEF : Motorised throttle valve flap vibrating, 6.DEF : Motorised throttle servo fault, 7.DEF : Inlet supply circuit. 8.DEF : Non-compliance with pollution standards.
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<b>NOTES</b>	<p>Priority when dealing with a number of faults:  <b>If faults DF011 Sensors feed voltage no. 1, DF078 Motorised throttle control circuit, DF095 Throttle potentiometer circuit gang 1, DF096 Throttle potentiometer circuit gang 2, are present or stored, deal with these first.</b></p>
	<p>Stored fault diagnostic application conditions:  <b>The fault is declared as present if:</b>  – the engine speed varies,  – the air temperature is between <b>5 °C</b> and <b>105 °C</b> inclusive.</p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>

<b>CO/ 6.DEF</b>	<b>NOTES</b>	<b>Special note:</b> – <b>level 1 fault warning light</b> illuminated. – defect mode <b>type 1 and 2</b> : vehicle and engine speed restriction, ESP and the cruise control/speed limiter are deactivated.
<b>2.DEF/ 3.DEF/ 4.DEF</b>		<b>Special note:</b> – <b>level 1 fault warning light</b> illuminated. – throttle valve defect mode <b>type 4</b> : speed limiter at 66 mph (110 km/h) and loss of power during acceleration.

<p>Check the <b>cleanliness</b>, <b>condition</b> and <b>fitting</b> of the throttle valve.  Repair if necessary.</p>
<p>If the fault is still present, manually check that the throttle valve <b>rotates correctly</b>.  Repair if necessary.</p>
<p>If the fault is still present, manipulate the harness so that the status changes (present ↔ stored).  Look for possible damage to the harness, check the <b>condition</b> and the <b>connection</b> of the injection computer and motorised throttle valve connectors.  If the connector is faulty and there is a repair method (<b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>

<b>AFTER REPAIR</b>	<p>Follow the instructions to confirm repair.  Deal with any other faults.  Clear the stored faults.</p>
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**DF079**  
**CONTINUED**

If the fault is still present, disconnect the battery and the injection computer.

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

- **3AJB** between components **1076** and **120**.
- **3AJC** between components **1076** and **120**.
- **3MP** between components **1076** and **120**
- **3MN** between components **1076** and **120**.
- **3MQ** between components **1076** and **120**.
- **3MC** between components **1076** and **120**.

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

If the fault is still present, measure the **resistance** of the throttle motor between connections **3AJB** and **3AJC**. Replace the throttle valve if the **resistance** is not **1.6 Ω ± 0.2 Ω** at **23 °C**.

If the fault is still present, disconnect the battery and the injection computer.

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

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

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

If the throttle valve has been replaced, reinitialise the programming by running command **RZ005 "programming"**.

If the fault is still present, deal with the other faults, then proceed to the conformity check.

**AFTER REPAIR**

Follow the instructions to confirm repair.  
Deal with any other faults.  
Clear the stored faults.

<b>DF084</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b>	<b><u>ACTUATOR RELAY CONTROL CIRCUIT</u></b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears when the engine is running.
	<b>Special note:</b> This relay supplies the following actuators: – the injectors – the petrol fuel vapour absorber, – throttle control, – upstream sensor heating, – injection computer supply on connection 3FB1, of connector B, – the low-speed and high-speed fan assembly relays. CO/CC.1: Actuators no longer supplied: the vehicle stalls and restart impossible. CC.0: The actuators are supplied all the time: high electrical consumption when stationary. Intermittent CO: Intermittent relay cut-off: bucking when driving.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the injection computer connections. Check the <b>cleanliness</b> and <b>condition</b> of the UCH computer connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Disconnect the Protection and Switching Unit <b>connector MN</b> . Check <b>the cleanliness</b> and <b>condition</b> of its connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: – <b>3AA</b> between components <b>1337</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, run fault finding on the Protection and Switching Unit (see <b>87G, Engine compartment connection unit</b> ).
Contact the Techline.

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<p><b>DF085 PRESENT OR STORED</b></p>	<p><b><u>FUEL PUMP RELAY CONTROL CIRCUIT</u></b>  CO : Open circuit  CC.0 : Short circuit to earth  CC.1 : Short circuit to + 12 V  1.DEF : Non-compliance with emission control standards</p>
<p><b>NOTES</b></p>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault is declared present after the ignition is switched on or after command <b>AC211</b> Petrol pump is run.</p>
	<p><b>Special note:</b>  – OBD warning light lit.  <b>CO/CC.1:</b> The vehicle stalls and restart impossible  <b>CC.0:</b> Risk of fire in the event of an accident: petrol leak.  <b>Intermittent CO:</b> Intermittent relay cut-off: risk of draining the battery.</p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>
<p><b>If the relay does not click:</b></p>	<p>Disconnect the battery and the injection computer.  Check the <b>cleanliness</b> and <b>condition</b> of the injection computer connections.  Check the <b>cleanliness</b> and <b>condition</b> of the petrol pump relay connector and its connections.  If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p> <p>Disconnect <b>connector MT1</b> of the Protection and Switching Unit.  Check the <b>cleanliness</b> and <b>condition</b> of its connections.  Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection:  – <b>3AC</b> between components <b>1337</b> and <b>120</b>.  If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p><b>IF THE PUMP DOES NOT OPERATE</b></p>	<p>Disconnect the Protection and Switching Unit <b>connector CN</b>.  Check the <b>cleanliness</b> and <b>condition</b> of its connections.  During command <b>AC211 "Petrol pump"</b> check for <b>+ 12 V</b> on connection <b>3N</b> of the petrol pump.  If there is not <b>+ 12 V</b>, check (using the universal bornier) the <b>insulation</b> and the <b>continuity</b> on the following connection:  – connection <b>3N</b> between components <b>833</b> and <b>1337</b>  If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p> <p>If the fault is still present, <b>run fault finding on the Protection and Switching Unit</b> (see <b>87G, Engine compartment connection unit, general information</b>).</p> <p>If the fault is still present, <b>contact Techline</b>.</p>
<p><b>AFTER REPAIR</b></p>	<p>Follow the instructions to confirm repair.  Deal with any other faults.  Clear the stored faults.</p>

<b>DF088 PRESENT OR STORED</b>	<b><u>PINKING SENSOR CIRCUIT</u></b> 1.DEF : Abnormal voltage 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present in a warm engine road test at an engine speed above <b>1,500 rpm</b> .
	<b>Special note:</b> The wiring harness connecting the injection computer to the pinking sensor is "shielded", from this a short circuit to <b>+ 12 V</b> is improbable.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the <b>cleanliness and condition</b> of the pinking sensor and its connections. Check the pinking sensor <b>tightness</b> .
Disconnect the battery and the injection computer. Check the <b>cleanliness and condition</b> of the connections. Using the Universal bornier, check the <b>insulation and continuity</b> of the following connections: – <b>3S</b> between components <b>146</b> and <b>120</b> . – <b>3DQ</b> between components <b>146</b> and <b>120</b> . – <b>TB1</b> between components <b>146</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Check that the <b>correct</b> fuel is in the tank. Check the <b>conformity</b> of the spark plugs.
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF089 PRESENT OR STORED</b>	<b>INLET MANIFOLD PRESSURE SENSOR CIRCUIT</b> 1.DEF : Signal incoherence 2.DEF : Abnormal voltage 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF011 Sensor feed voltage No. 1</b> as a priority if it is present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after: – the ignition is switched off and back on again, then wait <b>10 seconds</b> with the engine running at idle speed.
	<b>Special note:</b> – <b>OBD fault warning light</b> and <b>level 1 fault warning light</b> comes on. – Defect mode <b>type 5</b> : the ESP and the cruise control/speed limiter are deactivated and the vehicle stalls at idle speed.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the <b>cleanliness and condition</b> of the manifold pressure sensor and its connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
If the fault is still present, check for <b>+ 5 V</b> on connection <b>3LG</b> and for <b>earth</b> on <b>connection 3CK</b> of connector <b>B</b> of the injection computer. Contact the Techline if it is not correct.
Disconnect the battery and the injection computer. Check the <b>cleanliness and condition</b> of the connections. Using the Universal bornier, check the <b>insulation and continuity</b> of the following connections: – <b>3LG</b> between components <b>147</b> and <b>120</b> . – <b>3F</b> between components <b>147</b> and <b>120</b> . – <b>3CK</b> between components <b>147</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF091 PRESENT OR STORED</b>	<u>VEHICLE SPEED SIGNAL</u> 1.DEF : Multiplex network 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears when the engine is running.
	<b>Special note:</b> – OBD warning light lit.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

**Run a multiplex network test (see 88B, Multiplex).**

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the battery and the injection computer connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

If the fault is still present, run fault finding on the **Instrument panel** system, since the signal originates in the instrument panel (see **83A, instrument panel**).  
If the fault is still present, run fault finding on the **Anti-lock braking system - Electronic stability program** system (see **38C, Anti-lock braking system**).

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<p><b>DF092</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b></p>	<p><u><b>UPSTREAM OXYGEN SENSOR CIRCUIT</b></u>  CO.0 : Open circuit or short circuit to earth  CC.1 : Short circuit to + 12 volts  1.DEF : Component in bad condition  2.DEF : Non-compliance with emission control standards</p>
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<p><b>NOTES</b></p>	<p><b>Priority when dealing with a number of faults:</b>  If faults <b>DF011 Sensor supply voltage no. 1</b>,  <b>DF046 Battery voltage</b>,  <b>DF084 Actuator relay control circuit</b>,  are present or stored, deal with these first.</p>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  If the fault is declared as present after the engine has been running for at least <b>5 minutes</b>.</p>
	<p><b>Special note:</b>  – <b>OBD warning light</b> comes on.</p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>

<p>Check the <b>cleanliness</b> and <b>condition</b> of the upstream oxygen sensor connections.  If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Disconnect the battery and the injection computer.  Check the <b>cleanliness</b> and <b>condition</b> of the connections.  Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections:  – <b>3GH</b> between components <b>887</b> and <b>120</b>.  – <b>3GK</b> between components <b>887</b> and <b>120</b>.  If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p><b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b></p>

<p><b>AFTER REPAIR</b></p>	<p>Follow the instructions to confirm repair.  Deal with any other faults.  Clear the stored faults.</p>
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<p><b>DF093</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b></p>	<p><u><b>DOWNSTREAM OXYGEN SENSOR CIRCUIT</b></u>  CO.0 : Open circuit or short circuit to earth  CC.1 : Short circuit to + 12 volts  1.DEF : Non-compliance with emission control standards</p>
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<p><b>NOTES</b></p>	<p>Priority when dealing with a number of faults:  If faults <b>DF011 Sensor supply voltage no. 1</b>,  <b>DF046 Battery voltage</b>,  <b>DF601 Upstream oxygen sensor heating power circuit</b>,  <b>DF084 Actuator relay control circuit</b>,  are present or stored, deal with these first.</p>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault appears after:  – a road test driving smoothly after the motor-driven fan assembly has been running, and <b>ET056 Double richness loop</b> is <b>ACTIVE</b>.  – a smooth driving road test after the fan assembly has been in operation, immediately followed by a road test on a slope at no load (injection cut-off in the deceleration phase).</p>
	<p><b>Special note:</b>  – <b>OBD warning light</b> lit.</p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>

<p>Check the <b>cleanliness</b> and <b>condition</b> of the downstream oxygen sensor connections.  If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Disconnect the battery and the injection computer.  Check the <b>cleanliness</b> and <b>condition</b> of the connections.  Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections:  – <b>3GJ</b> between components <b>242</b> and <b>120</b>.  – <b>3GL</b> between components <b>242</b> and <b>120</b>.  If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p><b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b></p>

<p><b>AFTER REPAIR</b></p>	<p>Follow the instructions to confirm repair.  Deal with any other faults.  Clear the stored faults.</p>
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<b>DF095 PRESENT OR STORED</b>	<b>THROTTLE POTENTIOMETER CIRCUIT GANG 1</b> CO.0 : Open circuit or short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Component in bad condition 2.DEF : Inconsistent signal
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### WARNING

Never drive the vehicle without having confirmed that no faults involving the throttle valve are present.

<b>NOTES</b>	Priority when dealing with a number of faults: Deal with fault <b>DF012 Sensor feed voltage No. 2</b> as a priority if it is present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after a change in the engine speed.
	Special note: – <b>level 1 fault warning light</b> lit, – throttle valve defect mode <b>types 1, 2 and 4</b> .
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** of the throttle valve and the **correct rotation** of the throttle (no resistance point).  
Check the **cleanliness** and **condition** of the throttle valve connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness and condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3MP** between components **1076** and **120**  
– **3MN** between components **1076** and **120**.  
– **3MC** between components **1076** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**If the throttle valve has been replaced, reinitialise the programming by running command RZ005 "programming".**

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF096 PRESENT OR STORED</b>	<b>THROTTLE POTENTIOMETER CIRCUIT GANG 2</b> CO.1 : Short circuit or open circuit to + 12 V CC.0 : Short circuit to earth
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### WARNING

Never drive the vehicle without having confirmed that no faults involving the throttle valve are present.

<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with fault DF012 Sensor feed voltage No. 2 as a priority if it is present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after a change in the engine speed.
	<b>Special note:</b> – level 1 fault warning light lit, – throttle valve defect mode <b>types 1, 2 and 4.</b>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** of the throttle valve and the **correct rotation** of the throttle (no resistance point).  
Check the **cleanliness** and **condition** of the throttle valve connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3MN** between components **1076** and **120**.  
– **3MQ** between components **1076** and **120**.  
– **3MC** between components **1076** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the throttle valve has been replaced, reinitialise the programming by running command RZ005 "programming".

If the fault is still present, deal with the other faults, then proceed to the conformity check.

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF101 PRESENT OR STORED</b>	<u><b>ELECTRONIC STABILITY PROGRAM MULTIPLEX CONNECTION</b></u> 1.DEF : Multiplex line connection fault
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<b>NOTES</b>	None
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**Carry out a multiplex network test** (see **88B**, Multiplex, interpretation of faults).

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

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF102 PRESENT OR STORED</b>	<b>INVALID ALTERNATOR POWER AVAILABLE</b> 1.DEF : Multiplex line connection fault
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<b>NOTES</b>	<b>Special note:</b> – Absent signal or invalid value.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>Run a multiplex network test (see 88B, Multiplex).</b>
Disconnect <b>connector CT1</b> of the Protection and Switching Unit. Check <b>the cleanliness</b> and <b>condition</b> of its connections. If the fault is still present, check the <b>insulation</b> and <b>continuity</b> of the following connections: – <b>Connection AP15 between components 1337 and 120.</b> – <b>Connection 2JD between components 1337 and 103.</b> If the connection(s) are faulty and there is a repair method (see Technical Note <b>6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
<b>If the fault is still present</b> , contact the Techline.

\*SIGNAL: Signal

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF105 PRESENT OR STORED</b>	<b><u>CRUISE CONTROL/SPEED LIMITER ON/OFF CIRCUIT</u></b> 1.DEF : Cruise control/Speed limiter ON/OFF button inconsistency
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a road test using the cruise control then the speed limiter function.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness and condition** of the cruise control/speed limiter On/Off switch and its connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

With the ignition on, check for **+ 12 V** on **connection AP43** of the cruise control or speed limiter selector switch connector.  
If the connection is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Disconnect the battery. Disconnect the computer. Check the **cleanliness and condition** of the connections.  
Using the Universal bornier, check the **insulation and continuity** of the following connections:  
– **3FX** between components **1081** and **120**.  
– **3PD** between components **1081** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF106 PRESENT OR STORED</b>	<u>CRUISE CONTROL/SPEED LIMITER SELECTOR SWITCH ON STEERING WHEEL</u> 1.DEF : No signal.
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**IMPORTANT**

To remove or check the Cruise control/speed limiter control switches you need to remove the airbag (see **MR 364 Mechanical, 88C, Airbag and pretensioner, removal/refitting**).

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a road test using the cruise control then the speed limiter function.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness and condition** of the incrementing switches at the steering wheel and their connections. If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check that the **earth** is present on **connection MAM** of the incrementing switches on the steering wheel. If the connection is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Disconnect the battery.  
Disconnect the computer. Check the **cleanliness and condition** of the connections.  
Using the Universal bornier, check the **insulation and continuity** of the following connections:  
– **86M** between components **1519** and **120**.  
– **86G** between components **1519** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF109 PRESENT OR STORED</b>	<b><u>LOW FUEL LEVEL MISFIRING</u></b> 1.DEF : destructive misfiring 2.DEF : polluting misfiring 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<p><b>Priority when dealing with a number of faults:</b></p> <ul style="list-style-type: none"> <li>– fuel supply circuit: <p style="margin-left: 40px;"> <b>DF085 Fuel pump relay control circuit,</b>  <b>DF026 Cylinder 1 injector control circuit,</b>  <b>DF027 Cylinder 2 injector control circuit;</b>  <b>DF028 Cylinder 3 injector control circuit</b>  <b>DF029 Cylinder 4 injector control circuit.</b> </p> </li> <li>– combustion misfiring: <p style="margin-left: 40px;"> <b>DF059 Combustion misfire in cylinder 1,</b>  <b>DF060 Combustion misfire in cylinder 2,</b>  <b>DF061 Combustion misfire in cylinder 3,</b>  <b>DF062 Combustion misfire in cylinder 4.</b> </p> </li> </ul>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>  The fault is declared present after starting the engine and under the following conditions:</p> <ul style="list-style-type: none"> <li>– there must be no further electrical faults,</li> <li>– programming must be carried out.</li> <li>– warm engine (coolant temperature <b>75 °C</b> minimum),</li> <li>– engine running with electrical consumers on for <b>15 minutes</b>.</li> </ul>
	<p><b>Special note:</b></p> <ul style="list-style-type: none"> <li>– <b>OBD warning light lit.</b></li> </ul>

Check the presence and conformity of fuel in the tank.

If there is no present or stored combustion misfire fault, the misfire was caused by the low fuel level.  
Clear fault **DF109**.

<b>AFTER REPAIR</b>	<p>Ensure that all the faults have been dealt with. Do not clear the programming. To check that the system has been repaired correctly:</p> <ul style="list-style-type: none"> <li>– there must be no further electrical faults,</li> <li>– programming has been carried out,</li> <li>– warm engine (minimum 75 °C),</li> <li>– leave the engine idle with all the electrical consumers activated for 15 mins.</li> </ul> <p>If the fault reappears, continue the fault finding procedure.</p>
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<b>DF110 PRESENT OR STORED</b>	<b>CATALYTIC CONVERTER</b> 1.DEF : component in bad condition 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with the other faults first. There must be no other injection system faults, either present or stored. – combustion misfiring: <b>DF059 Combustion misfire in cylinder 1,</b> <b>DF060 Combustion misfire in cylinder 2,</b> <b>DF061 Combustion misfire in cylinder 3,</b> <b>DF062 Combustion misfire on cylinder 4, in 1.DEF or 2.DEF.</b>
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears under the following conditions: – there must be no further electrical faults, – programming done, – warm engine (coolant temperature <b>75 °C</b> minimum), – engine running at idle speed with all electrical consumers on for approximately <b>15 minutes</b> .
	<b>Special note:</b> – <b>OBD warning light</b> comes on.

Check **the appearance and condition** of the catalytic converter.  
Check that there is no air leaking in, heat shock, misfires, consumption of coolant or oil.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults detected by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.
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<b>DF138 PRESENT OR STORED</b>	<b>CLUTCH PEDAL CIRCUIT</b> 1.DEF : component in bad condition
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present with the engine running and following a check on the number of times the clutch pedal is depressed in relation to the number of gear changes calculated by the computer.
	<b>Special note:</b> <ul style="list-style-type: none"> <li>– engine speed surges when changing gear,</li> <li>– in the event of a fault, before replacing any component, check using the <b>diagnostic tool</b> that the clutch contact is operational and that the recommended clutch pedal clearance is still valid.</li> <li>– In the event of an <b>open circuit</b> or <b>short circuit to + 12 V</b>: the clutch pedal is detected as still depressed, which makes it impossible to select a cruising speed in cruise control mode. The speed limiter remains operational in defect mode (imprecise speed limiting), status <b>ET233 clutch pedal</b> will be <b>DEPRESSED</b>.</li> <li>– In the event of a <b>short circuit to earth</b>, status <b>ET233 Clutch pedal</b> is <b>RELEASED</b>.</li> </ul>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check <b>the cleanliness, condition and fitting</b> of the clutch pedal switch. Repair if necessary.
If the fault is still present, disconnect the switch. Check that with the clutch pedal depressed, the switch is conducting and that with the clutch pedal released, the switch is open (non-conducting). Replace the switch if necessary.
If the fault is still present, manipulate the harness to see if the status changes. Look for any damage to the wiring harness, and check the <b>condition</b> and <b>connection</b> of the injection computer and clutch pedal switch connectors. If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
If the fault is still present, check for <b>earth</b> on <b>connection MAM</b> of the switch. If there is no <b>earth</b> on <b>connection MAM</b> , check the <b>insulation, continuity and the absence of resistance</b> on the following connection: – <b>86D</b> between components <b>675</b> and <b>120</b> . If the connection is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, check <b>for insulation, continuity and the absence of interference resistance</b> between the following connection: – <b>MAM</b> between components <b>675</b> and <b>MAM</b> If the connection is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF154 PRESENT OR STORED</b>	<b>FLYWHEEL SIGNAL SENSOR CIRCUIT</b> 1.DEF : Abnormal voltage 2.DEF : Tooth lost 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after the starter motor has been running for <b>10 seconds</b> or at an engine speed above <b>600 rpm</b> .
	<b>Special note:</b> – <b>OBD warning light</b> lit, – in the event of flywheel signal loss, the injection and ignition are cut: the vehicle stalls and cannot be restarted.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check that the engine speed sensor is correctly <b>mounted</b> and <b>positioned</b> (see <b>MR 364, Mechanics, 17B, Petrol injection, engine speed and position sensor, removal/refitting</b> ).
Check the <b>cleanliness and condition</b> of the engine speed sensor. Repair if necessary.
Disconnect the battery and the injection computer. Check the <b>cleanliness and condition</b> of the connections. Using the universal bornier, check the <b>insulation and continuity</b> on the following connections: – <b>3BG</b> between components <b>149</b> and <b>120</b> . – <b>3BL</b> between components <b>149</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Measure the <b>resistance</b> of the engine speed sensor between <b>connections 3BG and 3BL</b> . Replace the engine speed sensor if the <b>resistance</b> is not between <b>235 Ω ± 60 Ω at 20 °C</b> .
If the engine speed sensor has been replaced, the flywheel target has to be reinitialised, then reprogrammed. Disconnect the computer, use the universal bornier to check the signal from the flywheel signal sensor. Using the oscilloscope if it is fitted on the clip tool, check that the square pulse signal is not faulty (interference, missing tooth, etc.). If there is interference on the signal, check the TDC sensor air gap.

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF154  
CONTINUED**

**Programming reinitialisation:**

Use command **RZ005 Programming**.

**Carrying out the flywheel target programming:**

- Decelerate first with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **3500** and **3000 rpm**, in 3rd gear.
- Then decelerate with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm** in 3rd gear.

When the work is completed, check that status **ET089 Flywheel target programming** is **COMPLETED**.

(\*This is the moment when, during deceleration with no load, the engine drops to idle speed and recovers torque).

**AFTER REPAIR**

Follow the instructions to confirm repair.  
Deal with any other faults.  
Clear the stored faults.

<b>DF196 PRESENT OR STORED</b>	<b>PEDAL SENSOR CIRCUIT GANG 1</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Inconsistency 2.DEF : component in bad condition
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF012 Sensor feed voltage no. 2</b> first, if it is present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the accelerator pedal goes from no load to full load.
	<b>Special note:</b> – level 1 fault warning light lit for CO, CC.0, CC.1 – level 2 fault warning light lit for 1.DEF, 2.DEF <b>CC.0/CC.1:</b> defect mode <b>type 4:</b> speed limiter at <b>66 mph (110 km/h)</b> and loss of power during acceleration (pedal feels soft). <b>CO/1.DEF:</b> defect mode <b>types 3 and 4:</b> engine or vehicle speed regulation of pedal setpoint, speed limiter at <b>48 mph (80 km/h)</b> and loss of power during acceleration (pedal feels soft).
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check that the pedal mechanism has not seized.
Check the <b>cleanliness</b> and <b>condition</b> of the throttle valve connections. Check the <b>cleanliness</b> and <b>condition</b> of the pedal potentiometer connections. Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections: – <b>3LR</b> between components <b>921</b> and <b>120</b> . – <b>3LS</b> between components <b>921</b> and <b>120</b> . – <b>3LT</b> between components <b>921</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Measure the <b>resistance</b> of the pedal sensor gang 1 between <b>connections 3LR and 3LT</b> . Replace the accelerator potentiometer if the <b>resistance</b> is not <b>1.7 kΩ ± 0.9 kΩ</b> . If necessary replace the sensor.
If the fault is still present, <b>contact Techline</b> .

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF198 PRESENT OR STORED</b>	<b>PEDAL SENSOR CIRCUIT GANG 2</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with fault <b>DF011 Sensor feed voltage no. 1</b> first if it is present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears after the accelerator pedal goes from no load to full load.
	<b>Special note:</b> – level 1 or 2 fault warning light lit. <b>CC.0/CC.1:</b> defect mode <b>type 4</b> : speed limiter at <b>66 mph (110 km/h)</b> and loss of power during acceleration (pedal feels soft). <b>CO:</b> defect mode <b>types 3 and 4</b> : engine or vehicle speed regulation of pedal setpoint, speed limiter at <b>48 mph (80 km/h)</b> and loss of power during acceleration (pedal feels soft).
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check that the pedal mechanism has not seized.
Check the <b>cleanliness</b> and <b>condition</b> of the throttle valve connections. Check the <b>cleanliness</b> and <b>condition</b> of the pedal potentiometer connections. Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections: – <b>3LU</b> between components <b>921</b> and <b>120</b> . – <b>3LW</b> between components <b>921</b> and <b>120</b> . – <b>3LV</b> between components <b>921</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Measure the <b>resistance</b> of the pedal sensor gang 2 between <b>connections 3LU and 3LV</b> . Replace the accelerator potentiometer if the <b>resistance</b> is not <b>2.8 kΩ ± 2.05 kΩ</b> . If necessary replace the sensor.
If the fault is still present, <b>contact Techline</b> .

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF228 PRESENT OR STORED</b>	<b><u>BRAKE SIGNALS</u></b> 1.DEF : component in bad condition 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Special note:</b> – cruise control and speed limiter deactivated.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check:

– the consistency of status **ET039 Brake pedal (DEPRESSED”/“RELEASED”)** when depressing and releasing the pedal.

– **the condition and cleanliness** of the brake lights switch.

Disconnect the battery and the injection computer, check **the condition and cleanliness** of the connections.

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

– **5A** between components **160** and **120**.

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

**Run a multiplex network test** (see **88B, Multiplex**).

If the fault is still present, run fault finding on the **UCH** system (see **87B, passenger compartment connection unit**).

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

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF232 PRESENT OR STORED</b>	<b>REFRIGERANT PRESSURE SENSOR CIRCUIT</b> 1.DEF : Voltage outside tolerance range
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with <b>DF012 Sensor feed voltage No. 2</b> as a priority if it is present or stored. <b>Special notes:</b> if the fault is present or stored, parameter <b>PR037 Refrigerant pressure</b> displays a safe value of 0 bar, and the air conditioning no longer operates.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check <b>cleanliness</b> and <b>condition</b> of the refrigerant pressure sensor and its connections.
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. Using the universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connections: – <b>38Y</b> between components <b>1202</b> and <b>120</b> . – <b>38X</b> between components <b>1202</b> and <b>120</b> . – <b>38U</b> between components <b>1202</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF361 PRESENT OR STORED</b>	<b>CYLINDER 1 - 4 IGNITION COIL CIRCUIT</b> CO.0 : Open circuit or short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Deal with faults <b>DF046 Battery voltage</b> , <b>DF084 Actuator relay control circuit</b> or <b>DF085 Fuel pump relay control circuit</b> first whether they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present with the engine running for <b>4 seconds</b> at <b>600 rpm</b> or <b>0.4 seconds</b> at <b>6000 rpm</b> .
	<b>Special note:</b> – <b>OBD warning light</b> lit, – <b>level 1 fault warning light</b> lit, <b>CC.0:</b> The coil is continuously supplied, risk of destruction <b>CC.1:</b> The coil is not supplied, injection cut-off on cylinders 1 and 4, destruction of the catalytic converter possible and prevention of On board diagnostics.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Disconnect the cylinder 1 pencil coil connector. Check the cleanliness and condition of the pencil coil and its connections. If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Measure the <b>primary</b> and <b>secondary resistance</b> of the cylinder 1 pencil coil. Replace the cylinder 1 coil if the primary resistance is not <b>540 mΩ ± 30 mΩ</b> or if the secondary resistance is not <b>10.7 kΩ ± 1.6 kΩ</b> .
Switch off the ignition and disconnect the injection computer. Check the cleanliness and condition of the connections. If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Using the universal bornier, check the <b>insulation and continuity</b> on the following connections: – <b>3CV</b> between components <b>1077</b> and <b>120</b> . – <b>3CZ</b> between components <b>1077</b> and <b>1080</b> . If the connection(s) are faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it. If the fault is still present, replace the defective pencil coil.

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF361  
CONTINUED**

With the ignition on, check for **+ 12 V** on **connection 3BS** of the cylinder 4 pencil coil connector.

If **+ 12 V** is not present:

Switch off the ignition,

- disconnect the connector **MN** in the Protection and Switching Unit,
- check the cleanliness and condition of the connections,
- using the Universal bornier, check the **continuity** on the following connection:
- **3BS** between components **1080** and **1337**.

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

Reconnect the Protection and Switching Unit connector.

With the ignition on, if the **+ 12 V** feed is still not present on the cylinder 4 coil connector, there is a fault with the Protection and Switching Unit.

Contact the Techline.

Check that the petrol pump relay is operating correctly by running command **AC211 Petrol pump**.

Deal with fault **DF085 Petrol pump relay control circuit** if it is present or stored after the command is activated.

If the fault is still present, replace the defective pencil coil.

If the fault is still present, deal with the other faults then proceed to the conformity check.

**AFTER REPAIR**

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the stored faults.

<p><b>DF362 PRESENT OR STORED</b></p>	<p><b>CYLINDER 2 - 3 IGNITION COIL CIRCUIT</b>            CO.0 : Open circuit or short circuit to earth            CC.1 : Short circuit to + 12 volts            1.DEF : Non-compliance with emission control standards</p>
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<p><b>NOTES</b></p>	<p><b>Priority when dealing with a number of faults:</b>            Deal with faults <b>DF046 Battery voltage</b>, <b>DF084 Actuator relay control circuit</b> or <b>DF085 Fuel pump relay control circuit</b> first whether they are present or stored.</p>
	<p><b>Conditions for applying the fault finding procedure to stored faults:</b>            The fault is declared present with the engine running for <b>4 seconds</b> at <b>600 rpm</b> or <b>0.4 seconds</b> at <b>6000 rpm</b>.</p>
	<p><b>Special note:</b>            – <b>OBD warning light</b> illuminated,            – <b>level 1 fault warning light</b> illuminated.  <b>CC.0:</b> The coil is continuously supplied, risk of destruction  <b>CC.1:</b> The coil is not supplied, injection cut-off on cylinders 2 and 3, destruction of the catalytic converter possible and prevention of On board diagnostics.</p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>

<p>Disconnect the cylinder 2 pencil coil connector.            Check the cleanliness and condition of the pencil coil and its connections.            If the connector is faulty and there is a repair method (<b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Measure the <b>primary</b> and <b>secondary</b> resistance of the cylinder 2 pencil coil.            Replace the cylinder 2 coil if the primary resistance is not <b>540 mΩ ± 30 mΩ</b> or if the secondary resistance is not <b>10.7 kΩ ± 1.6 kΩ</b>.</p>
<p>Switch off the ignition and disconnect the injection computer.            Check the cleanliness and condition of the connections.            If the connector is faulty and there is a repair method (<b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Using the universal bornier, check the <b>insulation and continuity</b> on the following connections:            – <b>3CV</b> between components <b>1078</b> and <b>120</b>.            – <b>3CP</b> between components <b>1079</b> and <b>1078</b>.            If the connection(s) are faulty and there is a repair method (<b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.            If the fault is still present, replace the defective pencil coil.</p>

<p><b>AFTER REPAIR</b></p>	<p>Follow the instructions to confirm repair.            Deal with any other faults.            Clear the stored faults.</p>
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**DF362  
CONTINUED**

With the ignition on, check for **+ 12 V** on **connection 3BS** of the cylinder 3 pencil coil connector.

If **+ 12 V** is not present:

Switch off the ignition,

- disconnect **connector MN** in the Protection and Switching Unit,
- check the cleanliness and condition of the connections,
- using the Universal bornier, check for **continuity** on the following connection:  
– **3BS** between components **1079** and **1337**.

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

Reconnect the Protection and Switching Unit connector.

With the ignition on, if the **+ 12 V** is still not present on the cylinder 3 coil connector, there is a fault with the Protection and Switching Unit.

Contact the Techline.

Check that the petrol pump relay is operating correctly by running command **AC211 Petrol pump**.

Deal with fault **DF085 Petrol pump relay control circuit** if it is present or stored after the command is activated.

If the fault is still present, replace the defective pencil coil.

If the fault is still present, deal with the other faults then proceed to the conformity check.

**AFTER REPAIR**

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the stored faults.

<b>DF398 PRESENT OR STORED</b>	<b><u>FUEL CIRCUIT OPERATING FAULT</u></b> 1.DEF : Component in poor condition. 2.DEF : Non-compliance with pollution standards.
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> If the following faults: <b>DF085 Fuel pump relay control circuit,</b> <b>DF549 Canister bleed circuit.</b> and injector faults: <b>DF026 Cylinder 1 injector control circuit,</b> <b>DF027 Cylinder 2 injector control circuit;</b> <b>DF028 Cylinder 3 injector control circuit,</b> <b>DF029 Injector control circuit cylinder 4,</b> are present or stored, deal with these first.
	<b>Special note:</b> – <b>OBD warning light</b> illuminated, – a fuel supply system fault can lead to starting difficulties, and loss of comfort and power.

Check the **cleanliness, condition and fitting** of the petrol vapour absorber.  
Check the **connections and operation** of the petrol pump.  
Check the **cleanliness, condition and fitting** of the injectors and their sealing.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

**Check:**

- that the fuel is present and correct,
- the tank vent,
- that there are no leaks on the petrol circuit (from the tank to the injectors),
- that there are no kinked hoses (especially after dismantling),
- the fuel flow rate and pressure.

Repair the faulty component(s) if necessary (see **MR 364 Mechanics, 13A, Fuel supply, Petrol supply circuit**).

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF410 PRESENT OR STORED</b>	<b><u>INSTRUMENT PANEL CONNECTION</u></b> 1.DEF : Multiplex line connection fault
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<b>NOTES</b>	<b>Special note:</b> <ul style="list-style-type: none"><li>– Cruise control/Speed limiter deactivated.</li><li>– <b>OBD warning light</b> not illuminated when ignition switched on.</li></ul>
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**Run a multiplex network test (see 88B, Multiplex).**

If the fault is still present, run fault finding on the **Instrument panel** system (see **83A, Instrument panel**).

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF436 PRESENT OR STORED</b>	<b><u>DETECTION OF ENGINE MISFIRING</u></b> 1.DEF : Destructive misfiring 2.DEF : Pollutant misfiring 3.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> <ul style="list-style-type: none"><li>– ignition: <b>DF361 Ignition coil circuit cylinders 1-4,</b> <b>DF362 Ignition coil circuit cylinders 2-3,</b></li><li>– fuel supply circuit: <b>DF026 Cylinder 1 injector control circuit,</b> <b>DF027 Cylinder 2 injector control circuit;</b> <b>DF028 Cylinder 3 injector control circuit,</b> <b>DF029 Cylinder 4 injector control circuit,</b> <b>DF085 Fuel pump relay control circuit.</b></li><li>– flywheel signal: <b>DF154 Flywheel signal sensor circuit,</b> <b>DF457 Engine flywheel target</b></li><li>– cylinder combustion misfires: <b>DF059 Combustion misfire in cylinder 1,</b> <b>DF060 Combustion misfire in cylinder 2,</b> <b>DF061 Combustion misfire in cylinder 3,</b> <b>DF062 Combustion misfire in cylinder 4.</b></li></ul>
	<b>Conditions for applying the fault finding procedure to stored faults</b> <b>The fault appears under the following conditions:</b> <ul style="list-style-type: none"><li>– there must be no further electrical faults,</li><li>– programming must be carried out.</li><li>– warm engine (minimum 75 °C),</li><li>– engine running at idle speed with all electrical consumers on for approximately 15 minutes.</li></ul>
	<b>Special note:</b> <ul style="list-style-type: none"><li>– catalytic converter misfire: <b>OBD warning light</b> flashes when the fault is present then is continuously lit,</li><li>– pollutant combustion misfire: <b>OBD warning light</b> lit continuously.</li><li>– engine unstable, loss of power and vibrations.</li></ul>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF436  
CONTINUED**

Check the injectors.  
Check the condition and conformity of the spark plugs.  
Check the ignition pencil coils.  
Check that the fuel is correct.

**If the fault is still present, carry out the following checks:**

- check the flywheel sensor,
- check the condition and cleanliness of the flywheel,
- check the flywheel sensor mounting,
- check the sensor/flywheel air gap,
- check the cylinder compression's,
- check the complete petrol supply circuit (see **MR 364 Mechanics, 13A, Fuel supply, Petrol supply circuit**),
- check the entire ignition system (see **MR 364, Mechanics, 17A, Ignition**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanics, 11A, top and front of engine**).

**If the fault is still present, deal with the other faults, then proceed to the conformity check.**

**AFTER REPAIR**

Follow the instructions to confirm repair.  
Deal with any other faults.  
Clear the stored faults.

<b>DF455 PRESENT OR STORED</b>	<u>LOW FUEL LEVEL SIGNAL</u> 1.DEF : Multiplex network 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	None
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**Run a multiplex network test (see 88B, Multiplex).**

If the fault is still present, run fault finding on the **Instrument panel** system (see **83A, Instrument panel**).

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF457 PRESENT OR STORED</b>	<b><u>FLYWHEEL TARGET</u></b> 1.DEF : Flywheel target fault: <ul style="list-style-type: none"><li>– Missing tooth.</li><li>– Tooth length outside tolerances.</li><li>– Eccentricity on the target.</li><li>– Air gap outside tolerances.</li></ul> 2.DEF : Non-compliance with pollution standards.
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault appears when the engine is running.
	<b>Special note:</b> <ul style="list-style-type: none"><li>– <b>OBD warning light</b> comes on.</li></ul>

Check **the cleanliness** and **condition** of the flywheel.  
Repair or replace the engine flywheel if necessary.

If the flywheel has been replaced or removed, the flywheel target has to be reinitialised, then reprogrammed.

**Reinitialise programming:**

Use command **RZ005 Programming**.

**Carrying out the flywheel target programming:**

- Decelerate first with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **3500** and **3000 rpm**, in 3rd gear.
- Then decelerate with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm** in 3rd gear.

When the work is completed, check that status **ET089 Flywheel target programming** is **COMPLETED**.

(\*This is the moment when, during deceleration with no load, the engine drops to idle speed and recovers torque).

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF549 PRESENT OR STORED</b>	<b>CANISTER BLEED CIRCUIT</b> CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	Priority when dealing with a number of faults: <b>Apply the procedure for dealing with faults DF046 Battery voltage or DF084 Actuators relay control circuit first if they are present or stored.</b>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>CO CC1</b>	<b>NOTES</b>	<b>Special note:</b> – the valve remains <b>jammed shut</b> and there is a smell of petrol, – the <b>OBD warning light</b> is on.
<b>CC.0</b>		<b>Special note:</b> The valve remains <b>jammed open</b> : bucking when driving, risk of stalling and restarting difficult.

Check <b>that</b> fuse <b>BF37 (30A)</b> is in good condition and working correctly. Repair if necessary.
Check <b>the cleanliness</b> and <b>condition</b> of the fuel vapour absorber bleed solenoid valve connections. If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Measure the <b>resistance</b> of the petrol vapour absorber bleed solenoid valve. Replace the fuel vapour absorber bleed solenoid valve if the <b>resistance</b> is not <b>26 Ω ± 4 Ω at 23 °C</b> .
With the ignition on, check for <b>+ 12 V</b> on <b>connection 3FB2</b> of the fuel vapour absorber bleed solenoid valve connector. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections: – <b>3FB2</b> between components <b>371</b> and <b>120</b> . – <b>3FB2</b> between components <b>1337</b> and <b>371</b> . If the connection(s) are faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery. Disconnect the computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connection: – <b>3BB</b> between components <b>371</b> and <b>120</b> . If the connection is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF601 PRESENT OR STORED</b>	<b>UPSTREAM O2 SENSOR HEATING POWER CIRCUIT</b> CO.0 : Open circuit or short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Apply the procedure for dealing with faults <b>DF046 Battery voltage or DF084 Actuators relay control circuit</b> first if they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a delay of <b>10 seconds</b> with the engine running or when command <b>AC018 Upstream O2 sensor heating</b> is activated.
	<b>Special note:</b> – <b>OBD warning light</b> lit. <b>CO/CC1:</b> Upstream O2 sensor heating no longer working. <b>CO.1:</b> Upstream O2 sensor heating on permanently from when the ignition is switched: risk of irreparable damage to the sensor.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the <b>cleanliness</b> and <b>condition</b> of the upstream oxygen sensor connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
With the ignition on, check for <b>+ 12 V</b> on <b>connection 3FB2</b> of the upstream oxygen sensor connector. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: – <b>3FB2</b> between components <b>887</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: – <b>3GF</b> between components <b>887</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Measure the heating <b>resistance</b> between <b>connections 3FB2 and 3GF</b> of the upstream oxygen sensor. Replace the upstream oxygen sensor if the <b>resistance</b> is not <b>9 Ω ± 0.5 Ω at 20 °C</b> .
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF602 PRESENT OR STORED</b>	<b><u>DOWNSTREAM O2 SENSOR HEATING POWER CIRC.</u></b> CO.0 : Open circuit or short circuit to earth CC.1 : Short circuit to + 12 volts 1.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> Apply the procedure for dealing with faults <b>DF046 Battery voltage or DF084 Actuators relay control circuit</b> first if they are present or stored.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after a delay of <b>10 seconds</b> with the engine running or when command <b>AC019 Downstream O2 sensor heating</b> is activated.
	<b>Special note:</b> – <b>OBD warning light</b> lit. <b>CO/CC1:</b> Downstream O2 sensor heating no longer working. <b>CO.1:</b> Downstream O2 sensor heating on permanently from when the ignition is switched: risk of irreparable damage to the sensor.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the <b>cleanliness</b> and <b>condition</b> of the downstream oxygen sensor connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
With the ignition on, check for <b>+ 12 V</b> on <b>connection 3FB2</b> of the downstream oxygen sensor connector. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: – <b>3FB2</b> between components <b>242</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: – <b>3GG</b> between components <b>242</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Measure the heating <b>resistance</b> between <b>connections 3FB2 and 3GG</b> of the downstream oxygen sensor. Replace the downstream oxygen sensor if the <b>resistance</b> is not <b>9 Ω ± 0.5 Ω at 20 °C</b> .
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF623 PRESENT OR STORED</b>	<b><u>CLOSING BRAKE SIGNAL</u></b> 1.DEF : Multiplex line connection fault
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<b>NOTES</b>	<b>Special note:</b> – cruise control and speed limiter deactivated.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check **the condition and cleanliness** of the pedals.  
Check **the cleanliness and condition** of the dual-contact brake and its connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

With the ignition on, **check for + 12 V** on **connections BPT and SP17** of the brake pedal switch connector.  
If the connection(s) are faulty and there is a repair method (see Technical Note **6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** on the following connection:  
– Connection **5A** between components **120** and **160**.  
If the connection is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**Run a multiplex network test** (see **88B, Multiplex**).  
If the fault is still present, run fault finding on the **UCH** system (see **87B, passenger compartment connection unit**).

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF624 PRESENT OR STORED</b>	<b><u>PROTECTION AND SWITCHING UNIT MULTIPLEX CONNECTION</u></b> 1.DEF : Multiplex line connection fault 2.DEF : Non-compliance with emission control standards
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<b>NOTES</b>	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>
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<b>Run a multiplex network test (see 88B, Multiplex).</b>
Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Using the universal bornier, check the <b>insulation and continuity</b> on the following connections: – <b>3SM</b> between components <b>1337</b> and <b>120</b> . – <b>3SN</b> between components <b>1337</b> and <b>120</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, run fault finding on the <b>Protection and Switching Unit</b> system (See <b>87G, Engine interconnection unit</b> ).

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<b>DF650 PRESENT OR STORED</b>	<b>ACCELERATOR PEDAL POSITION SIGNAL</b> 1.DEF : Accelerator pedal sensor locked
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<b>NOTES</b>	<b>Priority when dealing with a number of faults:</b> If faults <b>DF012 Sensor supply voltage no. 2</b> , <b>DF012 Sensor supply voltage no. 2</b> , <b>DF196</b> and <b>DF198 Pedal sensor circuit gang 2</b> are present or stored, deal with these.
	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present when brake and accelerator pedals are depressed simultaneously for <b>30 seconds</b> .
	<b>Special note:</b> – level 2 fault warning light lit, – defect mode <b>types 3 and 4</b> .
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>1.DEF</b>	<b>NOTES</b>	<b>Special note:</b> – defect mode <b>types 3 and 4</b> : vehicle and engine speed restriction, ESP and the cruise control/speed limiter are deactivated.
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Check that the accelerator pedal is not jammed or that there is nothing impeding its operation (floor carpet, etc.).
Check the connection and condition of the <b>6-track connector</b> for the accelerator pedal potentiometer. If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Check the connection and condition of computer <b>connector A</b> . If the connector is faulty and there is a repair method ( <b>see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF650  
CONTINUED**

Disconnect the battery and the injection computer.

Check the **cleanliness and condition** of the connections.

Using the Universal bornier, check the **insulation** and **continuity** of the following connections:

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

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

Measure the **resistance** of the pedal sensor gang 1 between connections **3LR** and **3LT**.

Replace the accelerator potentiometer if the **resistance** is not **1.7 k $\Omega$   $\pm$  0.9** (see **DF196, Pedal sensor circuit gang 1.**)

Measure the **resistance** of the pedal sensor gang 2 between connections **3LU** and **3LV**.

Replace the accelerator potentiometer if the **resistance** is not **2.8 k $\Omega$   $\pm$  2.05** (see **DF198, Pedal sensor circuit gang 2.**)

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

**AFTER REPAIR**

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the stored faults.

<p><b>DF884</b> <b>PRESENT</b> <b>OR</b> <b>STORED</b></p>	<p><u><b>ADDITIONAL FUEL CIRCUIT PUMP RELAY</b></u> CO : Open circuit CO.0 : Open circuit or short circuit to earth CC.1 : Short circuit to + 12 volts</p>
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<p><b>NOTES</b></p>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after starting from cold (using the Hi-Flex system) or when command <b>AC224 Additional petrol circuit pump relay</b> is run.</p>
	<p><b>Special note:</b> Status <b>ET670 Additional petrol pump relay ctrl*</b> may help deal with this fault.</p>
	<p><b>Only for Flex fuel.</b></p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>

<p><b>If the relay does not click:</b></p>	<p>Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the injection computer connections. Check the <b>cleanliness</b> and <b>condition</b> of the additional petrol pump relay connector's connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p> <p>Disconnect the Protection and Switching Unit connector <b>MT1</b>. Check <b>the cleanliness</b> and <b>condition</b> of its connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: – <b>3FB2</b> between components <b>1337</b> and <b>120</b>. If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
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<p><b>AFTER REPAIR</b></p>	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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**DF884  
CONTINUED**

**IF THE PUMP DOES  
NOT OPERATE**

Disconnect the Protection and Switching Unit **connector CN**.  
Check **the cleanliness** and **condition** of its connections.  
With command **AC224 Additional petrol circuit pump relay** running, check for **+ 12 V** on **connection 3ACL** of the additional petrol pump.  
If there is not **+ 12 V**, check (using the universal bornier) **the insulation** and the **continuity** on the following connection:  
– **3ACL** between components **283** and **1639**.  
If the connection is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, **run fault finding on the Protection and Switching Unit (see 87G, Engine compartment connection unit.)**

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

\*ctrl: control

**AFTER REPAIR**

Follow the instructions to confirm repair.  
Deal with any other faults.  
Clear the stored faults.

<b>DF894 PRESENT OR STORED</b>	<b>ADDITIONAL FUEL CIRCUIT SOLENOID VALVE</b> CO : Open circuit CO.0 : Open circuit or short circuit to earth CC.1 : Short circuit to + 12 volts
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after starting from cold (using the Hi-Flex system) or when command <b>AC217 Additional petrol circuit solenoid valve</b> is run.
	<b>Only for Flex fuel.</b>
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the <b>cleanliness</b> and the <b>condition</b> of the additional petrol circuit solenoid valve connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the connector, otherwise replace the wiring.
Measure the <b>resistance</b> of the additional petrol circuit solenoid valve. Replace the additional petrol circuit solenoid valve if the <b>resistance</b> is not <b>28 Ω ± 2 Ω at 24 °C</b> .
With the ignition on, check for <b>+ 12 V</b> on <b>connection 3FB2</b> of the additional petrol circuit solenoid valve connector. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections: – <b>3ACM</b> between components <b>1640</b> and <b>120</b> . – <b>3FB2</b> between components <b>1640</b> and <b>1337</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery. Disconnect the computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connection: – <b>3ACM</b> between components <b>1640</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
<b>If the fault is still present, deal with the other faults, then proceed to the conformity check.</b>

<b>AFTER REPAIR</b>	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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<p><b>DF1067 PRESENT OR STORED</b></p>	<p><u>AFTER-SALES TOOTH SIGNAL SENSOR CIRCUIT.</u> 1.DEF : Tooth lost.</p>
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<p><b>NOTES</b></p>	<p><b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present after the engine has been started.</p>
	<p><b>Special note:</b> This fault has been added to allow the After-Sales department to detect the possible cause of engine jerking. Fault <b>DF154 Flywheel signal sensor circuit</b> can be useful in managing the defect modes linked to this fault. However, customer complaints may arise before the fault is stored. This is the reason for a new fault tracing the occurrence of the fault, in order to allow better fault finding on vehicles. The two faults <b>DF154 Flywheel signal sensor circuit</b> and <b>DF1067 After-sales tooth signal sensor circuit</b> with <b>1.DEF or 2.DEF Tooth lost</b> correspond to the same fault but with a different function.</p>
	<p><b>Use the Wiring Diagrams Technical Note for the Mégane II.</b></p>

<p>Check the <b>cleanliness</b> and <b>condition</b> of the engine speed sensor connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Measure the <b>resistance</b> of the engine speed sensor between <b>connections 3BG and 3BL</b>. Replace the engine speed sensor if the <b>resistance</b> is not between <b>235 Ω ± 60 Ω at 20 °C</b>.</p>
<p>Check the <b>cleanliness</b> and <b>condition</b> of connector B of the injection computer. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Disconnect the battery and the injection computer. Using the universal bornier, check the <b>insulation and continuity</b> on the following connections: – <b>3BG</b> between components <b>149</b> and <b>120</b>. – <b>3BL</b> between components <b>149</b> and <b>120</b>. If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>

<p><b>AFTER REPAIR</b></p>	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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**DF1067  
CONTINUED**

If the engine speed sensor has been replaced, the flywheel target has to be reinitialised, then reprogrammed. Disconnect the computer, use the universal bornier to check the signal from the flywheel signal sensor. Using the oscilloscope if it is fitted on the clip tool, check that the square pulse signal is not faulty (interference, missing tooth, etc.).  
If there is interference on the signal, check the TDC sensor air gap.

**Programming reinitialisation:**

Use command **RZ005 Programming**.

**Carrying out the flywheel target programming:**

- Decelerate first with injection cut off (i.e. foot off the brake, accelerator and clutch pedals) between **3,500** and **3,000 rpm**, in 3rd gear.
- Then decelerate with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm** in 3rd gear.

When the work is completed, check that status **ET089 Flywheel target programming** is **COMPLETED**.

(\*This is the moment when, during deceleration with no load, the engine drops to idle speed and recovers torque).

**AFTER REPAIR**

Follow the instructions to confirm repair.  
Deal with any other faults.  
Clear the stored faults.

**DF1070  
PRESENT**

**AIR CONDITIONING COMPRESSOR STICKING**

**NOTES**

**Conditions for applying the fault finding procedure to stored faults:**

The fault is declared present when the ignition is switched on or with the engine running.

If the fault is present or stored, the heating and air conditioning system is inhibited. There is no heating and air conditioning: the compressor is stuck.

Check the air conditioning compressor connector

Check the air conditioning compressor wiring

Replace the air conditioning compressor (see **MR 364, Mechanical systems 62A, Air conditioning, Compressor: Removal - Refitting**).

**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 another check with the **diagnostic tool**.

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### MAIN COMPUTER STATUSES AND PARAMETERS

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Battery voltage	ET001: Computer + after ignition feed	Present	If there is a fault, apply the interpretation of <b>DF046 Battery voltage</b> .
2		PR074: Battery voltage	11 V < PR074 < 15 V	
3		ET038: engine		
4	Vehicle speed	PR089: vehicle speed	Gives the vehicle speed in mph (km/h). This parameter is sent to the injection by the ABS computer via the multiplex network. PR089 = 0 mph (km/h)	In the event of a fault apply the interpretation of <b>DF091 Vehicle speed signal</b> .
5	Motorised throttle	ET051: Throttle stop programming	COMPLETED	Run command RZ005 programming. If the parameters and statuses are still incorrect, contact the Techline.
6	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1	STATUS 1: Flywheel target fault. NONE
7	Faults	PR105: OBD fault warning light lit mileage counter	Indicates the mileage covered with the OBD warning light lit.	NONE
8		PR106: Mileage counter fault warning light lit	Shows the distance covered with the warning light lit.	
9	Flex fuel and Super ethanol/E85	ET652: HIFLEX configuration	YES	In the event of a fault, apply the interpretation of <b>ET652 HI-FLEX configuration</b> .
10		ET671: Programming the level of alcohol	COMPLETED	In the event of a fault, apply the interpretation of <b>ET671 Alcohol level programming</b> .
11		PR743: Alcohol level estimated in the tank	100 %	In the event of a fault, apply the interpretation of <b>PR743 Estimated alcohol level in tank</b> .

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### AIR CIRC. SUB-FUNCTION (TURBO/INLET):

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Air circuit pressure	PR035: Atmospheric pressure	PR035 = 1000 mbar ± 100	If not consistent, check that <b>PR035 = PR312 = local atmospheric pressure</b> , with the engine stopped and ignition on.
2		PR312: Inlet manifold vacuum	PR312 = 1000 mbar ± 100	In the event of a fault apply the interpretation of <b>PR312 Manifold pressure</b> .
3	Air temperature	PR058: Air temperature	- 40 °C < PR058 < 120 °C Safety value: - 40 °C for short circuit to earth. 120 °C for short circuit to + 12 V.	In the event of a fault apply the interpretation of <b>DF002 Air temperature sensor circuit</b> .
4	Coolant temperature	PR064: Coolant temperature	- 40 °C < PR064 < 120 °C Safety value: - 40 °C for short circuit to earth. 120 °C for short circuit to + 12 V.	In the event of a fault apply the interpretation of <b>DF001 Coolant temperature sensor circuit</b> .
5	Engine speed	PR055: Engine speed	Indicates the engine's speed of rotation in rpm. PR055 = 0 rpm	In the event of a fault apply the interpretation of <b>DF154 Flywheel signal sensor circuit</b> .
6	Idle speed	ET054: Idle speed regulation	INACTIVE	None
7		PR010: Idle speed regulation setting	700 < X < 750 rpm Indicates the speed of rotation setpoint before last engine stop in rpm.	None
8	Air flow	PR018: estimated air flow	Indicates the air flow value estimated by the motorised throttle valve. PR018 = 0 kg/h	In the event of a fault, apply the interpretation of <b>DF095 Throttle potentiometer circuit gang 1</b> and <b>DF096 Throttle potentiometer circuit gang 2</b> .

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### FUEL CIRCUIT SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Engine speed	PR055: Engine speed	Indicates the engine's speed of rotation in rpm. PR055 = 0 rpm	In the event of a fault, apply the interpretation of <b>DF154 Flywheel signal sensor circuit</b> .
2	Idle speed	PR014: Idle speed Correction	Indicates the correction of the engine's rotational speed in rpm. 0 rpm	None
3		ET054: Idle speed regulation	INACTIVE	None
4		PR010: Idle speed regulation setting	700 < X < 750 rpm Indicates the speed of rotation setpoint before last engine stop in rpm.	None

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### FUEL CIRCUIT SUB-FUNCTION: CONTINUED 1

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
5	Motorised throttle	PR090: Idle speed regulation programming value	- 12 % < PR090 < 12 % PR090, an adaptive built-in action, is a stored parameter designed to program variation and engine ageing for the idle speed regulator. These are programmed only when the engine is idle and warm, and no electrical consumers (electrical windscreen, air conditioning, GMV, power steering) have been selected. Therefore it adjusts slowly.	NONE
6	Motorised throttle	PR091: OCR* Theoretical idle speed regulation	0 % < PR091 < 60 % When the conditions for regulation are met, the idle regulator continually repositions the motorised throttle to keep the engine speed at the idle speed setting. The motorised throttle opening ratio required to adhere to the engine speed setpoint is then given by parameter <b>PR091</b> .	
7		PR444: Integral idle speed regulation correction.		

OCR\*: Opening Cycle Ratio

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### FUEL CIRCUIT SUB-FUNCTION: CONTINUED 2

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
8	Richness	PR138: Richness correction	In loop mode, the richness correction corrects the injection duration so as to obtain metering as close as possible to richness 1. The richness correction value varies around 50, between 0 and 100. $0 \% < PR138 < 100 \%$	NONE
9		ET300: Richness regulation	INACTIVE	NONE
10	Oxygen sensor	PR144: Self-adapting richness offset	$0 \% < PR624 < 100 \%$ This parameter is used to detect any tendency of the injection system to increase or decrease the richness.	NONE
11		PR143: Self-adapting richness gain	$0 \% < PR625 < 100 \%$ This parameter is used to detect any tendency of the injection system to increase or decrease the richness.	
12	Injection	PR101: Duration of injection	0 $\mu$ s	
13	Fuel consumption.	PR103: Instantaneous fuel consumption	PR103 = 0 l/h	
14	Fuel pump	ET047: Fuel pump control circuit	ACTIVE for 1 second when the ignition is switched on then INACTIVE	
15		AC211: Fuel pump	The petrol pump should run.	If <b>ACTIVE</b> , apply the interpretation of <b>DF085 Petrol pump relay control circuit</b> (when the + after ignition feed is switched on, the pump control circuit is <b>ACTIVE</b> for 1 second then becomes <b>INACTIVE</b> ).  In the event of a fault, apply the interpretation of <b>DF085, Petrol pump relay control circuit</b> .

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### FUEL CIRCUIT SUB-FUNCTION: CONTINUED 3

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
16	Flex fuel and Super ethanol/E85	<b>ET652:</b> HIFLEX configuration	<b>YES</b>	If <b>NON</b> , apply the interpretation of <b>ET652</b> .
17		<b>ET671:</b> Programming the level of alcohol	<b>NOT COMPLETED</b>	In the event of a fault, apply the interpretation of <b>ET671</b> .
18		<b>PR743:</b> Alcohol level estimated in the tank	<b>0 % &lt; PR743 &lt; 100 %</b>	In the event of a fault, apply the interpretation of <b>PR743</b> .
19		<b>PR748:</b> Injection duration correction	<b>0 %</b>	In the event of a fault, apply the interpretation of <b>PR748</b> .
20		<b>ET670:</b> Additional petrol pump relay ctrl*	<b>INACTIVE (only for Flex fuel).</b>	In the event of a fault, apply the interpretation of <b>ET670</b> .
21		<b>PR742:</b> Additional petrol circuit SV* OCR*	<b>0 % (only for Flex fuel).</b>	In the event of a fault, apply the interpretation of <b>PR742</b> .
22		<b>AC217:</b> Additional fuel circuit solenoid valve	<b>The additional petrol circuit solenoid valve should be heard operating (only for Flex fuel).</b>	In the event of a fault, apply the interpretation of <b>DF894 Additional petrol circuit solenoid valve</b> .
23		<b>AC224:</b> Additional fuel circuit pump relay	<b>The additional petrol pump should operate (only for Flex fuel).</b>	In the event of a fault, apply the interpretation of <b>DF884 Additional petrol pump relay</b> .

\*CTRL: control.

\*OCR: Opening Cycle Ratio.

\*SV: Solenoid valve.



# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### EMISSION CONTROL/OBD SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Oxygen sensor	PR098: Upstream oxygen sensor voltage	50 mV < PR098 < 800 mV	In the event of a fault, apply the interpretation of <b>PR098</b> .
2	Canister	ET050: Canister bleed control	INACTIVE	In the event of a fault, apply the interpretation of <b>DF549 Canister bleed circuit</b> .
3		PR102: Canister bleed solenoid valve OCR*	0 % < PR102 < 100 %	
4	Oxygen sensor	ET052: Upstream O2 sensor heating	INACTIVE	In the event of a fault, apply the interpretation of <b>DF601 Upstream oxygen sensor heating power circ.</b>
5	Richness	ET300: Richness regulation	INACTIVE	NONE
6	Canister	AC017: Canister bleed solenoid valve	You should be able to hear the canister bleed solenoid valve working	In the event of a fault, apply the interpretation of <b>DF549 Canister bleed circuit</b> .
7	Oxygen sensor	AC018: Upstream O2 sensor heating	The upstream oxygen sensor should heat up	In the event of a fault, apply interpretation of <b>DF601 Upstream oxygen sensor heating power circuit</b> .

\*OCR: Opening Cycle Ratio.

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### DRIVER PARAMETERS SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Motorised throttle	ET051: Throttle stop programming	COMPLETED	Run command RZ005 programming. If the parameters and statuses are still incorrect, contact the Techline.
2		ET082: Motorised throttle position	No load Full load INTERMEDIATE	
3		PR116: Motorised throttle corrected position setpoint	PR116 ≈ 2 %	
4		PR111: Motorised throttle position corrected value	No load < 15 % Full load > 30 %	
5		PR097: Mot* throttle lower stop programmed value.	5.96 % < PR097 < 13.96 %	
6		PR096: Motorised throttle upper stop programmed value	80 % < PR096 < 100 %	
7		PR429: Measured throttle position	5 % < PR429 < 25 %	
8		PR118: Measured throttle position gang 1	No load ≈ 15 % Full load ≈ 60 % Safe value: 0 %	In the event of a fault, apply the interpretation of <b>DF095 Throttle potentiometer circuit gang 1</b> .
9		PR119: Measured throttle position gang 2	No load ≈ 15 % Full load ≈ 60 % Safe value: 100 %	In the event of a fault, apply the interpretation of <b>DF096 Throttle potentiometer circuit gang 2</b> .
10	Accelerator pedal and motorised throttle	ET075: Pedal released and throttle closed	YES	If <b>NO</b> , apply the interpretation of <b>PR030 Accelerator pedal position</b> then the interpretation of fault <b>DF079 Motorised throttle valve servo</b> .

\* mot: motorised

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### DRIVER PARAMETERS SUB-FUNCTION: CONTINUED 1

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
11	Motorised throttle	PR597: Motorised throttle in safe mode	15 % < PR597 < 25 %	Run command RZ005 programming. If the parameters and statuses are still incorrect, contact the Techline.
12		PR593: Motorised throttle in safe mode gang 1	PR593 ≈ 1V	
13		PR594: Motorised throttle in safe mode gang 2	PR594 ≈ 1V	
14	Accelerator pedal	ET081: Accelerator pedal position	No load Full load INTERMEDIATE	In the event of a fault, apply the interpretation of PR030 Accelerator pedal position.
15	Accelerator pedal	PR030: Accelerator pedal position	No load ≤ 16 % Full load ≥ 85 %	In the event of a fault, apply the interpretation of faults DF196 and DF198 Pedal sensor circuit gangs 1 and 2, then DF011 and DF012 Sensor supply voltage nos. 1 and 2.
16		PR568: Pedal position gang 1	Approximately 16 % Safe value: 100 %	In the event of a fault, apply the interpretation of fault DF196 Pedal sensor circuit gang 1.
17		PR569: Pedal position gang 2	Approximately 16 % Safe value: 0 %	In the event of a fault, apply the interpretation of fault DF198 Pedal sensor circuit gang 2.
18		PR147: Pedal potentiometer voltage gang 1	PR147 ≈ 15 V	In the event of a fault, apply the interpretation of fault DF196 Pedal sensor circuit gang 1.
19		PR148: Pedal potentiometer voltage gang 2	PR148 ≈ 7.5 V	In the event of a fault, apply the interpretation of fault DF198 Pedal sensor circuit gang 2.
20		PR424: Programming the no-load position value	PR424 ≈ 15 %	Run command RZ005 Programming. If the parameters are still not correct, contact the Techline.

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### DRIVER PARAMETERS SUB-FUNCTION: CONTINUED 2

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
21	Motorised throttle	PR539: Measured throttle voltage, gang circuit 1	PR539 ≈ 1 V	In the event of a fault, apply the interpretation of <b>DF095 Throttle potentiometer circuit gang 1</b> and <b>DF096 Throttle potentiometer circuit gang 2</b> .
22		PR538: Measured throttle voltage, gang circuit 2	PR538 ≈ 0.5 V	
23		PR587: Motorised throttle lower stop gang 1	PR587 ≈ 0.5 V	
24		PR588: Motorised throttle lower stop gang 2	PR588 ≈ 0.5 V	
25		PR589: Motorised throttle upper stop gang 1	PR589 ≈ 4.5 V	
26	Motorised throttle	PR590: Motorised throttle upper stop gang 2	PR590 ≈ 4.40 V	In the event of a fault, apply the interpretation of <b>DF095 Throttle potentiometer circuit gang 1</b> and <b>DF096 Throttle potentiometer circuit gang 2</b> .
27		PR113: Lower throttle stop after applying offset	PR113 ≈ 10 %	
28	Motorised throttle	ET0564: Type 1 defect mode	NO	NONE
29		ET0565: Type 2 defect mode	NO	
30		ET0566: Type 3 defect mode	NO	
31		ET0567: Type 4 defect mode	NO	
32		ET0568: Type 5 defect mode	NO	
33		AC027: Motorised throttle	You should be able to hear the motorised throttle working.	In the event of a fault, apply the interpretation of <b>AC027 Motorised throttle</b> .

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### PRE-HEATING/IGNITION SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Engine	ET038: "engine"	STOPPED	NONE
1	Cylinder recognition	ET061: Cylinder 1 recognition	NOT COMPLETED COMPLETED	In the event of a fault, apply the interpretation of status <b>ET061 Cylinder 1 detection.</b>
2	Engine speed	PR055: Engine speed	Indicates the engine's speed of rotation in rpm. PR055 = 0 rpm	In the event of a fault, apply the interpretation of <b>DF154 Flywheel signal sensor circuit.</b>
3	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1	<b>STATUS 1:</b> Flywheel target fault. <b>NONE</b>
4	Flywheel signal	ET062: Flywheel signal	NOT DETECTED	In the event of a fault, apply the interpretation of status <b>ET062 Flywheel signal.</b>
5	Ignition	PR448: Ignition advance	PR448 = 0 °V	NONE
6		PR095: Anti-pinking correction	PR095 = 0 °V	
7		PR126: advance after anti-pinking correction	- 23.6 °V < PR126 < 72 °V	
8		PR427: Average pinking signal	0	In the event of a fault, apply the interpretation of <b>DF088 Pinking sensor circuit.</b>
9	Combustion misfiring	ET057: Misfiring on cylinder 1	NO	In the event of a fault, apply the interpretation of faults <b>DF059 Combustion misfire in cylinder 1, DF060 Combustion misfire in cylinder 2, DF061 Combustion misfire in cylinder 3 and DF062 Combustion misfire in cylinder 4.</b>
10		ET058: Misfiring on cylinder 2	NO	
11		ET059: Misfiring on cylinder 3	NO	
12		ET060: Misfiring on cylinder 4	NO	

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### COLD LOOP SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Air conditioning	ET079: Air conditioning present	States whether the vehicle is fitted with air conditioning or not. <b>YES:</b> Air conditioning is detected by the injection computer. <b>NO:</b> Air conditioning is not detected by the injection computer.	If inconsistent with the vehicle equipment, carry out a multiplex network test and apply the relevant procedure. (see 88B, multiplex)
2		ET018: Air conditioning request	<b>PRESENT</b> <b>ABSENT</b>	NONE
3		ET088: Compressor actuation request	The injection requests the UCH (via the multiplex network) to start the compressor. <b>ACTIVE:</b> The multiplex network must not be faulty on the UCH system. The UCH must send a compressor starting request to the injection. The coolant pressure sensor must not be defective. Satisfactory engine operating conditions (coolant temperature, engine load etc.). <b>INACTIVE:</b> One of the above conditions has not been met.	
4		ET004: Air conditioning authorisation	<b>YES</b> <b>NO</b>	
5	Idle speed	ET023: Fast idle speed request	<b>UCH requests the injection system to increase the idle speed.</b> <b>INACTIVE:</b> The UCH has not formulated a request. <b>ACTIVE:</b> The UCH has formulated a request	If ET023 is inconsistent, run a multiplex network test using the diagnostic tool; then if the test is in order, consult the UCH.

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### COLD LOOP SUB-FUNCTION: CONTINUED

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
6	Engine speed	PR055: Engine speed	Shows the speed of rotation in rpm. PR055 = 0 rpm	In the event of a fault apply the interpretation of <b>DF154 Flywheel signal sensor circuit</b>
7	Air conditioning	PR037: Refrigerant pressure	2 bar < PR037 < 27 bar Default value: 0 bar	If 1.DEF, apply the interpretation of <b>PR037 Refrigerant pressure.</b>
8		ET674: Refrigerant pressure status	CORRECT TOO LOW	
9		PR125: Power absorbed by the air conditioning compressor	PR125 = 300 W	NONE
10	Coolant temperature	PR064: Coolant temperature	- 40 °C < PR064 < 120 °C Safety value: 120 °C for short circuit to + 12 V. - 40 °C for short circuit to earth.	In the event of a fault, apply the interpretation of <b>DF001 Coolant temperature sensor circuit.</b>
11	Vehicle speed	PR089: Vehicle speed	Gives the vehicle speed in mph (km/h). This parameter is sent to the injection by the ABS computer via the multiplex network.	In the event of a fault, apply the interpretation of <b>DF091 Vehicle speed signal.</b>
12	Motor-driven fan assembly	ET022: Low speed fan assembly request	If the coolant temperature reaches 98 °C, the low-speed fan assembly is activated, and is shut down at 96 °C <b>ACTIVE</b> <b>INACTIVE</b>	In the event of a fault, run a multiplex network test using the diagnostic tool then, if the test is in order, consult the <b>Protection and Switching Unit.</b>
13		ET021: High speed fan assembly request	If the coolant temperature reaches 102 °C, the low-speed fan assembly is activated, and is shut down at 99 °C <b>ACTIVE</b> <b>INACTIVE</b>	

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine off, ignition on.

### CRUISE CONTROL/SPEED LIMITER SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Cruise control/ Speed limiter	<b>ET042:</b> Cruise control/ Speed limiter	<b>NOT DETECTED</b> <b>INACTIVE</b> <b>CRUISE CONTROL</b> <b>SPEED LIMITER</b>	If there is a fault, use the interpretation for <b>ET042 Cruise control/Speed limiter</b> .
2		<b>ET703:</b> Cruise control/ speed limiter buttons	<b>INACTIVE</b> <b>DECREASE</b> <b>INCREASE</b> <b>SUSPEND</b> <b>RESUME</b>	In the event of a fault, apply the interpretation of <b>ET703 Cruise control/speed limiter buttons</b> .
3	Brake pedal switch	<b>ET704:</b> Brake contact no. 1 <b>ET705:</b> Brake contact no. 2	<b>ACTIVE</b> <b>INACTIVE</b>	In the event of a fault, apply the interpretation of statuses <b>ET704 Brake contact no. 1</b> and <b>ET705 Brake contact no. 2</b> .
4	Clutch pedal switch	<b>ET405:</b> Clutch pedal switch	<b>Indicates recognition of clutch pedal contacts</b> <b>INACTIVE:</b> Clutch pedal released. <b>ACTIVE:</b> Clutch pedal depressed. If the vehicle is fitted with an automatic transmission, <b>ET405</b> should be <b>ACTIVE</b> .	In the event of a fault, apply the interpretation of <b>ET405</b> .
5	Cruise control/ Speed limiter	<b>ET415:</b> Deactivation of cruise control/speed limiter	<b>NONE</b> <b>STATUS 1:</b> Traction control request <b>STATUS 2:</b> Brake pedal depressed <b>STATUS 3:</b> Clutch pedal depressed <b>STATUS 4:</b> Cancel button pressed <b>STATUS 5:</b> Cruise control or speed limiter monitoring <b>STATUS 6:</b> Gear lever in neutral (manual gearbox) or neutral (automatic transmission) <b>STATUS 7:</b> Inconsistency between the request and the vehicle speed <b>STATUS 8:</b> Automatic transmission in defect mode <b>STATUS 9:</b> Vehicle speed monitoring <b>STATUS 10:</b> Injection computer monitoring	In the event of a fault, apply the interpretation of <b>ET415</b> .



# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### STARTING SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Engine	ET038: Engine	STOPPED	NONE
2	Starting	ET076: Starting	AUTHORISED	Authorisation to start is given once the petrol pump is pressurised and if the motorised throttle has emerged from the stop and limp-home position programming phase (safe mode in case of failure).
3	Actuator relay control	ET048: Actuator relay control	ACTIVE	If <b>INACTIVE</b> apply the interpretation of <b>DF084 Actuator relay control circuit</b> .
4	Battery voltage	PR074: Battery voltage	11 V < PR074 < 15 V	In the event of a fault, apply the interpretation of <b>DF046 Battery voltage</b> .

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **off**, ignition **on**.

### PROTECTION SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Impact signal	ET077: Impact detected	NO	In the event of a fault, run a multiplex network test using the diagnostic tool then, if the test is in order, run fault finding on the airbag computer (see 88C, airbags and pretensioners).
2	Code programmed	ET006: Code programmed	Indicates whether or not the immobiliser code has been programmed by the computer. <b>PROGRAMMED:</b> Code programmed. <b>NOT PROGRAMMED:</b> Code not programmed by the injection computer.	If NOT PROGRAMMED, contact the Techline
3	Engine immobiliser	ET003: Engine immobiliser	Indicates the status of the immobiliser system. <b>INACTIVE</b>	If ET003 is inconsistent, run a multiplex network test using the diagnostic tool (see 88B, multiplex) then if the test is in order, run fault finding on the UCH (see 87B, passenger compartment connection unit).
4	Starting	ET076: Starting	<b>AUTHORISED</b>	Authorisation to start is given once the petrol pump is pressurised and if the motorised throttle has emerged from the stop and limp-home position programming phase (safe mode in case of failure).

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine warm, at idle speed.

### MAIN COMPUTER STATUSES AND PARAMETERS

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Battery voltage	ET001: Computer + after ignition feed	Present	In the event of a fault, apply the interpretation of <b>DF046 Battery voltage</b> .
2		PR074: Battery voltage	11 V < PR074 < 15 V	
3	Vehicle speed	PR089: Vehicle speed	Gives the vehicle speed in mph (km/h). This parameter is sent to the injection by the ABS computer via the multiplex network.	In the event of a fault, apply the interpretation of fault <b>DF091 "Vehicle speed signal"</b> .
4	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1	<b>STATUS 1:</b> Flywheel target fault. <b>NONE</b>
5	Motorised throttle	ET051: Throttle stop programming	COMPLETED	Run command <b>RZ019 Reinitialise programming</b> . If the parameters or statuses are not correct, contact the Techline.
6	Faults	PR105: OBD fault warning light lit mileage counter	Indicates the mileage covered with the OBD warning light lit.	NONE
7		PR106: Mileage counter fault warning light lit	Shows the distance covered with the warning light lit.	
8	Accelerator pedal	ET673: Jammed accelerator pedal detected	NO	In the event of a fault, apply the interpretation of <b>DF650 Accelerator pedal position signal</b> .
9	Flex fuel and Super ethanol/E85	ET652: HIFLEX configuration	YES	In the event of a fault, apply the interpretation of <b>ET652 HI-FLEX configuration</b> .
10		ET671: Programming the level of alcohol	COMPLETED	In the event of a fault, apply the interpretation of <b>ET671 Alcohol level programming</b> .
11		PR743: Alcohol level estimated in the tank	0 % < PR743 < 100 %	In the event of a fault, apply the interpretation of <b>PR743 Estimated alcohol level in tank</b> .

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### AIR CIRC. SUB-FUNCTION (TURBO/INLET):

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Air circuit pressure	PR035: Atmospheric pressure	200 mb < PR035 < 1047 mb	If not consistent, check that <b>PR035 = PR312 = local atmospheric pressure</b> , with the engine stopped and ignition on. In the event of a fault apply the interpretation for <b>PR312 Inlet manifold vacuum</b> .
2		PR312: Inlet manifold vacuum	240 mb < PR312 < 410 mb	
3	Engine speed	PR055: Engine speed	Indicates the engine's speed of rotation in rpm. PR055 = 0 rpm	In the event of a fault, apply the interpretation of <b>DF154 Flywheel signal sensor circuit</b> .
4	Idle speed	ET054: Idle speed regulation	INACTIVE	None
5		PR010: Idle speed regulation setting	700 < X < 750 rpm Indicates the rotational speed setpoint in rpm.	None
6	Air temperature	PR058: Air temperature	- 40 °C < PR058 < 120 °C Safety value: - 40 °C for short circuit to earth. 120 °C for short circuit to + 12 V	In the event of a fault apply the interpretation of <b>DF002 Air temperature sensor circuit</b> .
7	Coolant temperature	PR064: Coolant temperature	- 40 °C < PR064 < 120 °C Safety value: - 40 °C for short circuit to earth. 120 °C for short circuit to + 12 V	In the event of a fault, apply the interpretation of <b>DF001 Coolant temperature sensor circuit</b> .
8	Air flow	PR018: Estimated air flow	Indicates the air flow value estimated by the motorised throttle valve. ≈ 9 kg/h	If there is a fault, apply the interpretation of faults <b>DF095 Throttle potentiometer circuit gang 1</b> and <b>DF096 Throttle potentiometer circuit gang 2</b> .

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### FUEL CIRCUIT SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Engine speed	PR055: Engine speed	Shows the speed of rotation in rpm. 700 rpm < PR055 < 800 rpm	In the event of a fault, apply the interpretation of <b>DF154 Flywheel signal sensor circuit</b> .
2		PR014: Idle speed Correction	Indicates the correction of the engine's rotational speed in rpm. 0 rpm	In the event of a fault, apply the interpretation of <b>DF154 Flywheel signal sensor circuit</b> .
3	Idle speed	ET054: Idle speed regulation	ACTIVE	NONE
4		PR010: Idle speed regulation setting	700 < X < 750 rpm Indicates the rotational speed setpoint in rpm.	None

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine warm, at idle speed.

### FUEL CIRCUIT SUB-FUNCTION: CONTINUED 1

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
5	Motorised throttle	<b>PR090:</b> Idle speed regulation programming value	<b>PR090 ≈ 0 %</b> <b>PR090</b> , an adaptive built-in action, is a stored parameter designed to program variation and engine ageing for the idle speed regulator. These are programmed only when the engine is idle and warm, and no electrical consumers (electrical windscreen, air conditioning, GMV, power steering) have been selected. Therefore it adjusts slowly.	NONE
6		<b>PR091:</b> OCR* Theoretical idle speed regulation	<b>5 % &lt; PR091 &lt; 50 %</b> When the conditions for regulation are met, the idle regulator continually repositions the motorised throttle to keep the engine speed at the idle speed setting. The motorised throttle opening ratio required to adhere to the engine speed setpoint is then given by parameter <b>PR091</b> .	
7		<b>PR444:</b> Idle speed regulation integral correction		

\*OCR = Opening Cycle Ratio

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### FUEL CIRCUIT SUB-FUNCTION: (CONTINUED 2)

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
7	Richness	PR138: Richness correction	In loop mode, the richness correction corrects the injection duration so as to obtain metering as close as possible to richness 1. The richness correction value varies around 50, between 0 and 100. <b>0 &lt; PR138 &lt; 100 %</b>	NONE
8		ET300: Richness regulation	<b>ACTIVE</b> <b>INACTIVE</b>	NONE
9	Richness	PR144: Self-adapting richness offset	<b>PR624 ≈ 50 %</b> This parameter serves to determine the trend towards increasing or decreasing richness in the injection system.	NONE
10		PR143: Self-adapting richness gain	<b>PR625 ≈ 50 %</b> This parameter serves to determine the trend towards increasing or decreasing richness in the injection system.	
11	Injection	PR101: Duration of injection	<b>At idle speed 2.4 μs &lt; PR101 &lt; 4.3 μs</b>	
12	Fuel consumption.	PR103: Instantaneous fuel consumption	<b>0 l/h &lt; PR103 &lt; 50 l/h</b>	
13	Fuel pump	ET047: Fuel pump control circuit	<b>ACTIVE</b>	
14		AC211: Fuel pump	<b>The petrol pump should run.</b>	In the event of a fault, apply the interpretation of <b>DF085, Petrol pump relay control circuit.</b>

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### FUEL CIRCUIT SUB-FUNCTION: CONTINUED 3

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
15	Flex fuel and Super ethanol/E85	<b>ET652:</b> HIFLEX configuration	YES	If <b>NO</b> , apply the interpretation of <b>ET652 HI-FLEX configuration</b> .
16		<b>ET671:</b> Programming the level of alcohol	COMPLETED	If <b>NOT COMPLETED</b> , apply the interpretation of <b>ET671 Alcohol level programming</b> .
17		<b>PR743:</b> Alcohol level estimated in the tank	0 % < PR743 < 100 %	In the event of a fault, apply the interpretation of <b>PR743 Estimated alcohol level in tank</b> .
18		<b>PR748:</b> Injection duration correction	It fluctuates between 0 % and 100 %. 0 %: MAX injection duration correction, 100 %: MIN injection duration correction, 0 % < PR748 < 100 %	In the event of a fault, apply the interpretation of <b>PR748 Injection duration correction</b> .
19		<b>ET670:</b> Additional petrol pump relay ctrl*	INACTIVE, warm engine (only for Flex fuel).	In the event of a fault, apply the interpretation of <b>ET670 Additional petrol pump relay ctrl*</b> .
20		<b>PR742:</b> Additional petrol circuit SV* OCR*	0 % < PR742 < 100 % (only for Flex fuel).	In the event of a fault, apply the interpretation of <b>PR742 Additional petrol circuit SV* OCR*</b> .
21		<b>AC217:</b> Additional fuel circuit solenoid valve	The additional petrol circuit solenoid valve should be heard operating (only for Flex fuel).	In the event of a fault, apply the interpretation of <b>DF894 Additional petrol circuit solenoid valve</b> .
22		<b>AC224:</b> Additional fuel circuit pump relay	The additional petrol pump should operate (only for Flex fuel).	In the event of a fault, apply the interpretation of <b>DF884 Additional petrol pump relay</b> .

\* CTRL: Control.

\* OCR: Opening Cycle Ratio.

\* SV: SOLENOID VALVE.



### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### EMISSION CONTROL/OBD SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Oxygen sensor	PR098: Upstream oxygen sensor voltage	50 mV < PR098 < 800 mV	In the event of a fault, apply the interpretation of <b>PR098 Upstream oxygen sensor voltage</b> .
2	Canister	ET050: Canister bleed control	INACTIVE	In the event of a fault, apply the interpretation of <b>DF549 Canister bleed circuit</b> .
3		PR102: Canister bleed solenoid valve OCR*	0 % < PR102 < 100 %	
4	Oxygen sensor	ET052: Circ*. upstream oxygen sensor heating	INACTIVE	In the event of a fault, apply the interpretation of <b>DF601 Upstream oxygen sensor heating power circuit</b> .
5	Richness	ET300: Richness regulation	ACTIVE INACTIVE	NONE
6	Canister	AC017: Canister bleed solenoid valve	The canister bleed solenoid valve should be heard running.	In the event of a fault, apply the interpretation of <b>DF549 Canister bleed circuit</b> .
7	Oxygen sensor	AC018: Upstream O2 sensor heating	The upstream oxygen sensor should heat up.	In the event of a fault apply the interpretation of <b>DF601 Upstream oxygen sensor heating power circ*</b> .

\* Circ: circuit

\* OCR: Opening Cycle Ratio.

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine warm, at idle speed.

### DRIVER PARAMETERS SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Motorised throttle	ET051: Throttle stop programming	COMPLETED	Run command RZ005 programming. If the parameters or statuses are not correct, contact the Techline.
2		PR082: Motorised throttle position	No load Full load INTERMEDIATE	
3		PR116: Motorised throttle corrected position setpoint	PR116 $\approx$ 2 %	
4		PR111: Motorised throttle position corrected value	No load < 15 % Full load > 30 %	
5		PR097: Mot* throttle lower stop programmed value.	5.96 % < PR097 < 13.96 %	
6		PR096: Motorised throttle upper stop programmed value	80 % < PR096 < 100 %	
7		PR429: Measured valve position	5 % < PR096 < 25 %	
8		PR118: Measured throttle position gang 1	PR118 $\approx$ 12 %	In the event of a fault, apply the interpretation of <b>DF095 Throttle potentiometer circuit gang 1.</b>
9		PR119: Measured throttle position gang 2	PR119 $\approx$ 12 %	In the event of a fault, apply the interpretation of <b>DF096 Throttle potentiometer circuit gang 2.</b>
10	Accelerator pedal and motorised throttle	ET075: Pedal released and throttle closed	YES	If <b>NO</b> , apply the interpretation of <b>PR030 Accelerator pedal position</b> , then interpretation of <b>ET082 Motorised throttle position.</b>

\* mot: motorised

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine warm, at idle speed.

### DRIVER PARAMETERS SUB-FUNCTION: CONTINUED 1

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
11	Motorised throttle	<b>PR597:</b> Motorised throttle in safe mode	15 % < PR597 < 25 %	Run command <b>RZ019 Reinitialise programming</b> . If the parameters or statuses are still not correct, contact the Techline.
12		<b>PR593:</b> Motorised throttle in safe mode gang 1	PR593 ≈ 1 V	
13		<b>PR594:</b> Motorised throttle in safe mode gang 2	PR594 ≈ 1 V	
14	Accelerator pedal	<b>ET081:</b> Accelerator pedal position	No load Full load: Intermediate full load	In the event of a fault, apply the interpretation of <b>PR030 Accelerator pedal position</b> .
15	Accelerator pedal	<b>PR030:</b> Accelerator pedal position	No load ≈ 16 % Full load ≈ 85 %	In the event of a fault, apply the interpretation of faults <b>DF008</b> and <b>DF009 Pedal potentiometer circuit gang 1 and gang 2</b> , then <b>DF011</b> and <b>DF012 Sensor supply voltage nos. 1 and 2</b> .
16		<b>PR568:</b> Pedal position gang 1	PR568 ≈ 16 % Safe value: 100 %	In the event of a fault, apply the interpretation of fault <b>DF196 Pedal sensor circuit gang 1</b> .
17		<b>PR569:</b> Pedal position gang 2	PR569 ≈ 16 % Safe value: 0 %	In the event of a fault, apply the interpretation of fault <b>DF198 Pedal sensor circuit gang 2</b> .
18		<b>PR147:</b> Pedal potentiometer voltage gang 1	PR147 ≈ 15 V	In the event of a fault, apply the interpretation of fault <b>DF196 Pedal sensor circuit gang 1</b> .
19		<b>PR148:</b> Pedal potentiometer voltage gang 2	PR148 ≈ 7.5 V	In the event of a fault, apply the interpretation of fault <b>DF198 Pedal sensor circuit gang 2</b> .
20		<b>PR424:</b> Programming the no-load position value	PR424 ≈ 15 %	Run command <b>RZ019 Reinitialise programming</b> . If the parameters are still not correct, contact the Techline.

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### DRIVER PARAMETERS SUB-FUNCTION: CONTINUED 2

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
21	Motorised throttle	AC027: Motorised throttle	The motorised throttle should be heard operating.	In the event of a fault, apply the interpretation of AC027 Motorised throttle.
22		PR539: Measured throttle voltage, gang circuit 1	PR539 ≈ 1 V	In the event of a fault, apply interpretation of DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2.
23		PR538: Measured throttle voltage, gang circuit 2	PR538 ≈ 0.5 V	
24		PR587: Motorised throttle lower stop gang 1	PR587 ≈ 0.5 V	
25		PR588: Motorised throttle lower stop gang 2	PR588 ≈ 0.5 V	
26		PR589: Motorised throttle upper stop gang 1	PR589 ≈ 4.5 V	
27	Motorised throttle	PR590: Motorised throttle upper stop gang 2	4.40 V	In the event of a fault, apply interpretation of DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2.
28		PR113: Throttle lower stop after appli*. offset	10 %	
29	Motorised throttle	ET0565: Type 2 defect mode	NO	None
30		ET0566: Type 3 defect mode	NO	
31		ET0567: Type 4 defect mode	NO	
32		ET0568: Type 5 defect mode	NO	
33	Motorised throttle	AC027: Motorised throttle	The motorised throttle should be heard operating	In the event of a fault, apply the interpretation of AC027 Motorised throttle.

\*appli: application

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine warm, at idle speed.

### PRE-HEATING/IGNITION SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Engine	ET038: Engine	STOPPED	NONE
1	Cylinder recognition	ET061: Cylinder 1 recognition	NOT COMPLETED COMPLETED	In the event of a fault, apply the interpretation of <b>ET061 Cylinder 1 detection.</b>
2	Engine speed	PR055: Engine speed	Shows the speed of rotation in rpm. 700 rpm < PR055 < 800 rpm	In the event of a fault apply the interpretation for <b>DF154 Flywheel signal sensor circuit.</b>
3	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1: Flywheel target fault.	NONE
4	Flywheel	ET062: Flywheel signal	DETECTED	In the event of a fault, apply the interpretation for <b>ET062 Flywheel signal.</b>
5	Ignition	PR448: Ignition advance	- 23.6 °V < PR448 < 72 °V	NONE
6		PR095: Anti-pinking correction	0 °V < PR095 < 8 °V	
7		PR126: Advance after anti-pinking correction	- 23.6 °V < PR126 < 72 °V	
8		PR427: Average pinking signal	10.000 < PR427 < 30.000	In the event of a fault, apply the interpretation of <b>DF088 Pinking sensor circuit.</b>
9	Combustion misfiring	ET057: Misfiring on cylinder 1	NO	In the event of a fault, apply the interpretation of faults <b>DF059 Combustion misfire in cylinder 1, DF060 Combustion misfire in cylinder 2, DF061 Combustion misfire in cylinder 3 and DF062 Combustion misfire in cylinder 4.</b>
10		ET058: Misfiring on cylinder 2	NO	
11		ET059: Misfiring on cylinder 3	NO	
12		ET060: Misfiring on cylinder 4	NO	

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### COLD LOOP SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Air conditioning	ET079: Air conditioning present	Shows whether or not the vehicle is equipped with air conditioning. <b>YES:</b> Air conditioning is detected by the injection computer. <b>NO:</b> Air conditioning is not detected by the injection computer.	If this is not consistent with the vehicle equipment, run a multiplex network test (see 88B multiplex) and apply the relevant procedure.
2		ET018: Air conditioning request	<b>PRESENT</b> <b>ABSENT</b>	NONE
3		ET004: Air conditioning authorisation	<b>YES</b> <b>NO</b>	
4		ET088: Compressor actuation request	The injection computer sends the UCH computer a compressor activation request (via the multiplex network). <b>ACTIVE:</b> The multiplex network should not be defective. The UCH must send a compressor starting request to the injection. The coolant pressure sensor must not be defective. The engine operating conditions must be satisfactory (coolant temperature, engine load, etc.). <b>INACTIVE:</b> If one of the above conditions has not been fulfilled.	
5		ET023: Fast idle speed request	<b>UCH requests the injection system to increase the idle speed.</b> <b>INACTIVE:</b> The UCH has not formulated a request. <b>ACTIVE:</b> The UCH has formulated a request	If ET023 is inconsistent, run a multiplex network test using the diagnostic tool (see 88B, multiplex) then if the test is in order, check out the UCH (see 87B, passenger compartment connection unit).

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine warm, at idle speed.

### COLD LOOP SUB-FUNCTION: CONTINUED

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
6	Engine speed	PR055: Engine speed	Shows the speed of rotation in rpm. 700 rpm < PR055 < 800 rpm	In the event of a fault, apply the interpretation of DF154 Flywheel signal sensor circuit.
7	Air conditioning	PR037: Refrigerant pressure	2 bar < PR037 < 27 bar Default value: 0 bar	If 1.DEF, apply the interpretation of PR037 Refrigerant pressure.
8		ET674: Refrigerant pressure status	CORRECT TOO LOW	
9		PR125: Power consumed by the AC compressor	0 < PR125 < 300 W	NONE
10	Coolant temperature	PR064: Coolant temperature	- 40 °C < PR064 < 120 °C Default value: - 39 °C	In the event of a fault, apply the interpretation of DF001 Coolant temperature sensor circuit.
11	Vehicle speed	PR089: Vehicle speed	Gives the vehicle speed in mph (km/h). This parameter is sent to the injection by the ABS computer via the multiplex network.	In the event of a fault, apply the interpretation of DF091 Vehicle speed signal.
12	Motor-driven fan assembly	ET022: Low speed fan assembly request	If the coolant temperature reaches 98 °C, the low-speed fan assembly is activated, and is shut down at 96 °C <b>ACTIVE</b> <b>INACTIVE</b>	In the event of a fault, run a multiplex network test using the diagnostic tool (see 88B, multiplex) then if the test is in order, check out the Protection and Switching Unit (see 87G, engine compartment connection unit).
13		ET021: High speed fan assembly request	If the coolant temperature reaches 102 °C, the low-speed fan assembly is activated, and is shut down at 99 °C <b>ACTIVE</b> <b>INACTIVE</b>	

# PETROL INJECTION

## Fault finding - Conformity check

# 17B

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### CRUISE CONTROL/SPEED LIMITER SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Cruise control/ Speed limiter	ET042: Cruise control/Speed limiter	<b>NOT DETECTED</b> <b>INACTIVE</b> <b>CRUISE CONTROL</b> <b>SPEED LIMITER</b>	If there is a fault, use the interpretation for <b>ET042 Cruise control/Speed limiter</b> .
2		ET703: Cruise control/speed limiter buttons	<b>INACTIVE</b> <b>DECREASE</b> <b>INCREASE</b> <b>SUSPEND</b> <b>RESUME</b>	In the event of a fault, apply the interpretation of <b>ET703 Cruise control/speed limiter buttons</b> .
3	Brake pedal switch	ET704: Brake switch no. 1 ET705: Brake switch no. 2	<b>ACTIVE</b> <b>INACTIVE</b>	In the event of a fault, apply the interpretation of statuses <b>704 ET704 Brake contact no. 1</b> and <b>ET705 Brake contact no. 2</b> .
4	Clutch pedal switch	ET405: Clutch pedal switch	<b>Indicates recognition of clutch pedal contacts</b> <b>INACTIVE:</b> Clutch pedal released. <b>ACTIVE:</b> Clutch pedal depressed. If the vehicle is fitted with automatic transmission, <b>ET405</b> must be <b>ACTIVE</b> .	In the event of a fault, apply the interpretation of <b>ET405 Clutch pedal switch</b> .
5	Cruise control/ Speed limiter	ET415: Deactivation of cruise control/speed limiter	<b>NONE</b> <b>STATUS 1:</b> Traction control request <b>STATUS 2:</b> Brake pedal depressed <b>STATUS 3:</b> Clutch pedal depressed <b>STATUS 4:</b> Cancel button pressed <b>STATUS 5:</b> Cruise control or speed limiter monitoring <b>STATUS 6:</b> Gear lever in neutral (manual gearbox) or neutral (automatic transmission) <b>STATUS 7:</b> Inconsistency between the request and the vehicle speed <b>STATUS 8:</b> Automatic transmission in defect mode <b>STATUS 9:</b> Vehicle speed monitoring <b>STATUS 10:</b> Injection computer monitoring	In the event of a fault, apply the interpretation of <b>ET415 Cruise control/speed limiter deactivation</b> .



### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### STARTING SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Starting	ET076: Starting	<b>AUTHORISED</b>	Authorisation to start is given once the petrol pump is pressurised and if the motorised throttle has emerged from the stop and limp-home position programming phase (safe mode in case of failure).
2	Actuator relay control	ET048: Actuator relay control	<b>ACTIVE</b>	If <b>INACTIVE</b> apply the interpretation of <b>DF084 Actuator relay control circuit</b> .
3	Battery voltage	PR074: Battery voltage	<b>11 V &lt; PR074 &lt; 15 V</b>	In the event of a fault, apply the interpretation of <b>DF046 Battery voltage</b> .
4	Impact signal	ET077: Impact detected	<b>NO</b>	In the event of a fault, carry out a multiplex network test using the <b>diagnostic tool</b> (see 88B, multiplex) then, if the test is in order, run diagnostics on the airbag computer (see <b>Electrical equipment, 88C Airbags and seat belt pretensioners</b> ).

### NOTES

Only perform this conformity check after a **thorough check** with the diagnostic tool.  
The values shown in this conformity check are given as a guide.  
**Application conditions:** Engine **warm**, at **idle speed**.

### PROTECTION SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Impact signal	ET077: Impact detected	NO	In the event of a fault, run a multiplex network test using the diagnostic tool (see <b>88B multiplex</b> ) then if the test is in order, run fault finding on the airbag computer (see <b>88C airbag</b> ).
2	Code programmed	ET006: Code programmed	Indicates whether or not the immobiliser code has been programmed by the computer. <b>PROGRAMMED:</b> Code programmed. <b>NOT PROGRAMMED:</b> Code not programmed by the injection computer.	If <b>NOT PROGRAMMED</b> , contact the Techline.
3	Engine immobiliser	ET003: Engine immobiliser	Indicates the status of the immobiliser system. <b>INACTIVE</b>	If <b>ET003</b> is inconsistent, run a multiplex network test using the diagnostic tool (see <b>88B, multiplex</b> ) then if the test is in order, run fault finding on the UCH (see <b>87B, passenger compartment connection unit</b> ).
4	Starting	ET076: Starting	<b>AUTHORISED</b>	Authorisation to start is given once the petrol pump is pressurised and if the motorised throttle has emerged from the stop and limp-home position programming phase (safe mode in case of failure).

# PETROL INJECTION

## Fault finding - Status summary table

17B

Tool status	Diagnostic tool title
ET001	+ After ignition computer feed
ET003	Engine immobiliser
ET004	Air conditioning authorisation
ET006	Code programmed
ET018	Air conditioning request
ET021	High speed fan assembly request
ET022	Low speed fan assembly request
ET023	Fast idle speed request
ET027	Coolant temperature warning light request
ET038	Engine
ET039	Brake pedal
ET042	Cruise control/speed limiter
ET047	Fuel pump control circuit
ET048	Actuator relay control
ET050	Canister bleed control
ET051	Throttle stop programming
ET052	Upstream O2 sensor heating
ET054	Idle speed regulation
ET057	Misfiring on cylinder 1
ET058	Misfiring on cylinder 2
ET059	Misfiring on cylinder 3
ET060	Misfiring on cylinder 4
ET061	Cylinder 1 detection
ET062	Flywheel signal
ET075	Pedal released and throttle closed
ET076	Starting
ET077	Impact detected
ET079	Air conditioning present

# PETROL INJECTION

## Fault finding - Status summary table

# 17B

Tool status	Diagnostic tool title
ET081	Accelerator pedal position
ET082	Motorised throttle position
ET088	Compressor actuation request
ET089	Flywheel target programming
ET111	RCH* number set
ET112	RCH* cut-off
ET143	Low speed fan assembly relay control
ET144	High-speed fan assembly relay control
ET215	Redundant brake pedal
ET233	Clutch pedal
ET286	Injection -> Air conditioning connection
ET289	Injection -> Instrument panel connection
ET300	Richness regulation
ET351	Injection -> Electronic stability program connection
ET405	Clutch pedal switch
ET413	Cruise control/speed limiter function
ET415	Deactivation of cruise control/speed limiter
ET460	Coolant temperature warning light
ET493	Combustion misfiring
ET556	Driver deactivation of the cruise control/speed limiter
ET557	Deactivation by cruise control/speed limiter function
ET564	Type 1 defect mode
ET565	Type 2 defect mode
ET566	Type 3 defect mode
ET567	Type 4 defect mode
ET568	Type 5 defect mode
ET652	HIFLEX configuration
ET670	Additional fuel pump relay ctrl ( <b>only for Flex fuel</b> )
ET671	Programming the level of alcohol
ET674	Refrigerant pressure
ET703	Cruise control/speed limiter buttons
ET704	Brake switch No. 1
ET705	Brake switch No. 2

\*RCH: heating resistor

<b>ET042</b>	<u>CRUISE CONTROL/SPEED LIMITER</u>
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<b>NOTES</b>	<b>Special notes:</b> Only perform the tests if the statuses do not correspond with the system programming functions.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>NOT DETECTED</b>	<p>If the vehicle is not fitted with cruise control/speed limiter function buttons, status <b>ET042</b> is permanently <b>NOT DETECTED</b>. Confirmation of the absence of the cruise control or speed limiter function on the vehicle.</p> <p>If the vehicle is fitted with cruise control or speed limiter buttons, the main switch is in the rest position (or neutral) and after the injection computer has been programmed or reprogrammed, status <b>ET042</b> is <b>NOT DETECTED</b>.</p> <p>To activate the cruise control or speed limiter function, press the main switch in the cruise control position and then in the speed limiter position.</p> <p>Return to rest position.</p> <p>For status <b>ET042</b>: the tool displays <b>INACTIVE</b>.</p> <p>If not, several steps must be checked:</p> <p>1 - Return to the page about testing the multiplex network with the CLIP program. Repeat the multiplex network test. Re-establish dialogue with the injection computer. Check status <b>ET042</b>. If <b>ET042</b> is <b>INACTIVE</b>, the injection computer has detected the various positions of the main switch. The cruise control/speed limiter is active.</p> <p>2. If <b>ET042</b> is <b>NOT DETECTED</b>, check that the owner of the vehicle has not, sometime in the past, asked for the cruise control/speed limiter function to be deactivated. Contact the Techline.</p>
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<b>AFTER REPAIR</b>	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 <b>diagnostic tool</b> .
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**ET042  
CONTINUED 1**

**INACTIVE**

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** APC on the main switch connector.

- Connection code **AP43 of component 1081**.

Disconnect the main switch and with it in the rest position, check the insulation between:

- Connection code **AP43 and 3FX for component 1081**.
- Connection code **AP43 and 3PD for 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 **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **3FX**,
- Connection code **3PD**,

**between components 1081 and 120**.

Also check the engine management computer connectors.  
If there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Repair precautions**), 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**.

**ET 042  
CONTINUED 2**

**SPEED LIMITER**

When the driver presses the main switch in the speed limiter position, status **ET042** becomes **SPEED LIMITER**.  
If **CRUISE CONTROL** or **INACTIVE** appears although the driver pressed the switch in the speed limiter position, carry out the following operations:  
Check the connections of the cruise control/speed limiter main switch.  
Check for **+ 12 V APC** on the main switch connector.

- Connection code **AP43 of component 1081**.

Disconnect the main switch and with it in the rest position, check the insulation between:

- Connection code **AP43 and 3FX of component 1081**.
- Connection code **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 main switch.  
Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **3FX**,
- Connection code **3PD**,

**between components 1081 and 120.**  
Also check the engine management computer connectors.  
If there is a repair method (See **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

**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**.

**ET 042  
CONTINUED 3**

**CRUISE  
CONTROL**

When the driver presses the main switch in the cruise control position, status **ET042** becomes **CRUISE CONTROL**.  
If **SPEED LIMITER** or **INACTIVE** appears although the driver pressed the switch in the cruise control position, carry out the following operations:  
Check the connections of the cruise control/speed limiter main switch.  
Check for **+ 12 V APC** on the main switch connector.

- Connection code **AP43 of component 1081**.

Disconnect the switch and when it is in the rest position, check the insulation between:

- Connection code **AP43 and 3FX of component 1081**.
- Connection code **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 main switch.  
Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **3FX**,
- Connection code **3PD**,

between components **1081 and 120**.  
Also check:  
The engine management computer connections.  
If there is a repair method (See **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

**AFTER REPAIR**

Deal with any other faults. Clear the fault memory.  
Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.



ET052	<u>UPSTREAM O2 SENSOR</u> ACTIVE INACTIVE
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NOTES	There must be no present or stored faults.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the **cleanliness** and **condition** of the upstream oxygen sensor and its connections.  
 If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

With the ignition on, check for **+ 12 V** on **connection 3FB2** of the upstream oxygen sensor.

If **+ 12 V** is not present:

- disconnect the battery,
- disconnect the **CN connector** in the Protection and Switching Unit,
- check the **cleanliness** and **condition** of the connections,
- using the universal bornier, check for **continuity** on the following connection:
- **3FB2** between components **887** and **1337**.

Reconnect the **Protection and Switching Unit** connector and reconnect the battery.

With the ignition on, if there is still no **+ 12 V** at the upstream oxygen sensor connector, there is a fault in the **Protection and Switching Unit**.

Contact the Techline.

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the connections.

Using the Universal bornier, check the **insulation** and **continuity** of the following connection:

- **3GF** between components **887** and **120**.

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

Measure the heating **resistance** between **connections 3FB2 and 3GF** of the upstream oxygen sensor.

Replace the upstream oxygen sensor if the **resistance** is not approximately **9 Ω at 20 °C**.

**If the fault is still present, replace the upstream oxygen sensor.**

AFTER REPAIR	Repeat the conformity check from the start.
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<b>ET054</b>	<u>IDLE SPEED REGULATION</u> ACTIVE INACTIVE
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Check parameters</b> <b>PR030 Accelerator pedal position,</b> <b>PR035 Atmospheric pressure,</b> <b>PR058 Air temperature,</b> <b>PR064 Coolant temperature,</b> <b>PR118 Measured throttle position gang 1,</b> <b>PR119 Measured throttle position gang 2.</b>  Check that all these parameters are correct.

<b>IDLE SPEED TOO HIGH</b>	<b>Check:</b> <ul style="list-style-type: none"><li>– engine oil level (too high =&gt; oil combustion),</li><li>– that the restrictions are present in the oil vapour rebreathing circuit,</li><li>– the sealing between the throttle valve and inlet manifold,</li><li>– the manifold pressure sensor sealing,</li><li>– the fuel vapour absorber bleed, which must not be jammed open,</li><li>– the fuel vapour absorber bleed system sealing,</li><li>– the brake servo system sealing,</li><li>– the sealing between the inlet manifold and cylinder head,</li><li>– the oil vapour recovery circuit sealing between the inlet manifold and cylinder head,</li><li>– the fuel pressure and flow (see <b>MR 364 Mechanics, 17B, Petrol injection</b>),</li><li>– the condition and cleanliness of the injectors,</li><li>– the cylinder compressions,</li><li>– the timing adjustment,</li><li>– the hydraulic tappets if there is camshaft noise (see <b>MR 364 Mechanics, 11A, Top and front of engine</b>).</li></ul> Repair the defective component if necessary.
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<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET061</b>	<u>CYLINDER 1 RECOGNITION</u> COMPLETE NOT COMPLETE STATUS 1: Flywheel target fault.
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<b>NOTES</b>	<b>Special notes:</b> Carry out the checks only if the <b>COMPLETED</b> and <b>NOT COMPLETED</b> statuses are inconsistent.
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**Engine phasing:**

On engines without a camshaft sensor, the engine phasing is performed by software. A "Memo-phasing" program is run first to phase the engine management on starting according to the data saved from the previous setting.

Wait **30 seconds** (for the data to be saved) before disconnecting the computer.

Then, a second program confirms the first decision. It is based on torque analysis.

The torque calculation is based on the analysis of the time taken for the engine flywheel teeth to pass by. The engine speed should be between **320 rpm and 5,000 rpm**.

Run command **RZ005 Programming** and program the engine flywheel target (see **Configurations and Programming**). Check the programming using **ET089 Flywheel target programming**.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET062</b>	<u>FLYWHEEL SIGNAL</u> DETECTED NOT DETECTED
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Information:</b> if the flywheel has been replaced or removed, reinitialise the flywheel target programming using command <b>RZ005 Programming</b> .
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<p>Check the <b>mounting</b> and <b>positioning</b> of the TDC sensor (see <b>MR 364 Mechanics, 11A, top and front of engine</b>).</p> <p>Repair if necessary.</p>
<p>Check the <b>cleanliness</b> and <b>condition</b> of the TDC sensor and its connections.</p> <p>Check the condition of the wire.</p> <p>If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
<p>Disconnect the battery and the injection computer.</p> <p>Check the <b>cleanliness</b> and <b>condition</b> of the connections.</p> <p>Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections:</p> <ul style="list-style-type: none"> <li>– <b>3BG</b> between components <b>149</b> and <b>120</b>.</li> <li>– <b>3BL</b> between components <b>149</b> and <b>120</b>.</li> </ul> <p>If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<p>Measure the <b>resistance</b> of the TDC sensor between <b>connections 3BG and 3BL</b>.</p> <p>Replace the TDC sensor if the <b>resistance</b> is not between <b>200 and 270 Ω at 23 °C</b>.</p>
<p>If the sensor has been replaced, reset the flywheel signal programming.</p> <p><b>Carrying out the flywheel target programming:</b></p> <ul style="list-style-type: none"> <li>– Decelerate first with injection cut off (i.e. foot off the brake, accelerator and clutch pedals) between <b>3,500</b> and <b>3,000 rpm</b>, in 3rd gear.</li> <li>– Then decelerate with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between <b>2400</b> and <b>2000 rpm</b> in 3rd gear.</li> </ul> <p>When the work is completed, check that status <b>ET089 Flywheel target programming</b> is <b>COMPLETED</b>.</p>

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET405</b>	<u>CLUTCH PEDAL SWITCH</u>
<b>NOTES</b>	<b>Special notes:</b> Only perform the tests if the statuses do not correspond with the system programming functions.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>
<b>ACTIVE</b>	<p>Check the condition and fitting of the clutch pedal switch. Remove the clutch pedal switch, and check the <b>insulation</b> between <b>connections MAM and 86D</b> in rest position. Restart this operation with the switch pressed and check the <b>continuity</b> between <b>connections MAM and 86D</b>. If these two checks are not in order, replace the switch.</p>
<b>INACTIVE</b>	<p>Check the condition and fitting of the clutch pedal switch. Remove the clutch pedal switch, and check the <b>insulation</b> between <b>connections MAM and 86D</b> in rest position. Restart this operation with the switch pressed and check the <b>continuity</b> between <b>connections MAM and 86D</b>. If these two checks are not in order, replace the switch. Then check the <b>continuity and make sure there is no interference resistance</b> on the following connection: <b>86D</b> between components <b>675</b> and <b>120</b>. Check for <b>earth</b> on <b>connection MAM</b> of the clutch switch connector. If the connection(s) are faulty, and if there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
<b>AFTER REPAIR</b>	<p>Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with <b>the diagnostic tool</b>.</p>

<b>ET415</b>	<u>CRUISE CONTROL/SPEED LIMITER DEACTIVATION</u>
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<b>NOTES</b>	<b>Special notes:</b> Only perform the tests if the statuses do not correspond with the system programming functions.
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**Note:**

Cruise control can be activated when the vehicle speed exceeds **18 mph (30 km/h)**.

Status **ET415** shows various factors that cause deactivation of the cruise control/speed limiter function, due to a driver request or the external environment (e.g. STATUS 1).

**IMPORTANT:**

**Clear the fault memory by running command RZ001 "Fault memory", to reset this status to "NONE".**

<b>NONE</b>	This status is present on the <b>diagnostic tool</b> if: The computer has been reinitialised. The computer has been reprogrammed.
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<b>STATUS 1</b>	<b>Traction control request</b>  If the vehicle is fitted with a traction control system, the cruise control function is deactivated every time the ABS computer calls for traction control. Status <b>ET415</b> becomes " <b>STATUS 1</b> " when driving, with cruise control active ( <b>ET042 "Cruise control/Speed limiter": CRUISE CONTROL</b> ) and upon a traction control request. This deactivates cruise control. <b>Reinitialise status ET415 on the injection computer by running command RZ001 "Fault memory".</b> If status <b>ET415</b> becomes <b>STATUS 1</b> without a traction control request (see <b>MR 364 Fault finding, 38C, ABS</b> ).
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<b>AFTER REPAIR</b>	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with <b>the diagnostic tool</b> .
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**ET415  
CONTINUED1**

**STATUS 2**

**Brake pedal depressed**

The cruise control function is deactivated when the brake pedal is depressed.  
Status **ET415** becomes "**STATUS2**", when driving, with cruise control active (**ET042** "**Cruise control/Speed limiter**": **CRUISE CONTROL**) and 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 contact No. 1 and No. 2**.

**STATUS 3**

**Clutch pedal depressed**

**Manual gearbox ONLY**

The cruise control function is deactivated when the gearbox is not coupled to the engine (clutch pedal depressed).

Status **ET415** becomes "**STATUS3**", when driving, with cruise control active (**ET042** "**Cruise control/Speed limiter**": **CRUISE CONTROL**) and clutch pedal 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**.

If the vehicle is fitted with automatic transmission:

Carry out a multiplex network test, check the configuration of the multiplex network according to the vehicle's technical definition and, in particular, the automatic transmission computer configuration (see **MR 364 Fault finding, 88B, multiplex**).

**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**.

**ET415  
CONTINUED 2**

**STATUS 4**

**Cancel button pressed**

The cruise control/speed limiter function is deactivated each time the suspend button is pressed.

Status **ET415** becomes "**STATUS 4**" when driving when:

- Either the cruise control is active, or
- the speed limiter is active
- and the driver presses the **0** button.

This action deactivates the Cruise control/Speed limiter.

**Reinitialise status ET415 on the injection computer by running command 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 Perform fault finding on the "**R/0**" control button located on the steering wheel, to the right.

**STATUS 5**

**Cruise control or speed limiter monitoring**

This status appears when the vehicle brakes or decelerates sharply without the injection computer receiving a signal indicating that the brake pedal switch has been pressed.

If status **ET415** is "**STATUS 5**", consult the interpretation:

- status **ET042 "Cruise control/Speed limiter"**,
- status **ET703 "Cruise control/speed limiter buttons"**,
- status **ET704 "Brake switch no. 1"**,
- status **ET705 "Brake switch no. 2"**,

to test the cruise control/speed limiter system components and identify the faulty component.

Also check the operation of the accelerator pedal, and check for any faults on the diagnostic tool relating to this component. Deal with them if necessary.

**Reinitialise status ET415 on the injection computer by running command RZ001 "Fault memory".**

If status **ET415** becomes "**STATUS5**", deal with the present or stored faults in the injection computer.

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**.



**ET415  
CONTINUED 3**

**STATUS 6**

**Gear lever in neutral (manual gearbox) or neutral (automatic transmission)**

Status **ET415** becomes "**STATUS 6**", when driving with cruise control active (**ET042 "Cruise control/speed limiter": CRUISE CONTROL**) and:

- If the driver puts the gear lever in neutral position on a manual gearbox without declutching or,
- if the gear lever is in neutral on an automatic gearbox.

This deactivates cruise control.

**Reinitialise status ET415 on the injection computer by running command RZ001 "Fault memory".**

If status **ET415** becomes **STATUS 6** without shifting the gear lever into neutral on a manual gearbox without declutching, or into neutral on an automatic transmission, test the ABS computer and check the configuration of the tyre size stored in the computer. If the configuration is correct, contact the Techline.

**STATUS 7**

**Inconsistency between the request and the vehicle speed**

Status **ET415** becomes "**STATUS 7**" if the computer detects too great a difference between the speed requested by the driver and the vehicle speed.

This inconsistency could occur when driving with cruise control active (**ET042 Cruise control/speed limiter: CRUISE CONTROL** when there is a great difference).

This inconsistency deactivates cruise control.

**Reinitialise status ET415 on the injection computer by running command RZ001 "Fault memory".**

If status **ET415** becomes "**STATUS 7**" without a great difference in the speeds, contact the 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**.

**ET415  
CONTINUED 4**

**STATUS 8**

**Automatic transmission in defect mode.**

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, interpretation of faults**).

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.

**STATUS 9**

**Vehicle speed monitoring**

Status **ET415** changes to **STATUS9** if the vehicle speed received by the computer is invalid or absent.

This signal is conveyed on the multiplex line and deactivates the cruise control.

Carry out a multiplex network test, then Perform fault finding on the **ABS** computer.

Deal with any present or stored faults (see **MR, Fault finding, 38C, Anti-lock braking system, 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.

**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**.

**ET415  
CONTINUED 5**

**STATUS 10**

**Monitoring by injection computer**

Status **ET415** becomes "**STATUS 10**" when driving, with cruise control active (**ET042 "Cruise control/Speed limiter": CRUISE CONTROL**) and if the injection computer detects a fault on the engine management system, or excessive or insufficient speed. This signal is conveyed on the multiplex line and deactivates the cruise control.

Carry out a multiplex network test, then Perform fault finding on the injection computer. Deal with any present or stored faults (see **17B, Petrol 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.

**AFTER REPAIR**

Repeat the conformity check from the start.

<b>ET564</b>	<u>DEFECT MODE TYPE 1</u>
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<b>NOTES</b>	There must be no present or stored faults.
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This status covers faults that disable control of the motorised throttle valve.  
This defect mode cuts off the throttle control (mechanical Limp Home position).

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET565</b>	<u>TYPE 2 DEFECT MODE</u>
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<b>NOTES</b>	There must be no present or stored faults.
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This status covers faults which indicate that the system has lost control of air flow modulation. The associated defect mode limits the engine speed through injection cut-off.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET566</b>	<u>TYPE 3 DEFECT MODE</u>
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<b>NOTES</b>	There must be no present or stored faults.
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This status groups together the faults for deducing that the system no longer responds to engine or vehicle speed regulation, but still controls the air flow modulation (throttle servo system operational). It uses the pedal mode reconstructed by calibration.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET567</b>	<u>TYPE 4 DEFECT MODE</u>
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<b>NOTES</b>	There must be no present or stored faults.
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This status covers faults affecting the monitoring system, or for which there is an emergency operating mode viable for the system (scenario of falling back on the second gang of a pedal or throttle potentiometer if there is a fault on the main gang).  
Its effect is to restrict the throttle (limited performance).

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET568</b>	<u>TYPE 5 DEFECT MODE</u>
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<b>NOTES</b>	There must be no present or stored faults.
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This status covers faults affecting the control of the throttle by the torque structure. Its effect is to use the pedal feedback mode, instead of the permanent torque structure.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET652</b>	<u>"HI-FLEX" CONFIGURATION (Only K4M 762/768)</u>
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<b>NOTES</b>	There must be no present or stored faults.
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Status **ET652** is **YES** when the ignition is switched on, if the Hi-Flex system is present on the vehicle and has been detected by the injection computer.

If status **ET652** is **NO** and the Hi-Flex system is present on the vehicle, apply the procedure below.

Program the Hi-Flex configuration (see **Configurations and programming, Hi-Flex configuration programming**):

- Turn on the ignition, without starting the engine: the Hi-flex configuration is automatically programmed and detects the solenoid valve and additional pump.

If status **ET652** remains **NO**, check **the battery voltage and the vehicle earths**.

Repair if necessary.

Check that the additional petrol pump relay and the additional petrol tank solenoid valve are operating correctly using commands **AC224 Additional petrol circuit pump relay** and **AC217 Additional petrol circuit solenoid valve**.

If the commands do not work, apply the interpretation of **DF884 Additional petrol circuit pump relay** and **DF894 Additional petrol circuit solenoid valve**.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET670</b>	<u>ADDITIONAL PETROL PUMP RELAY CTRL (Only K4M 762/768)</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Only for Flex fuel.</b>

Status **ET670** should be **ACTIVE** during a **cold starting phase** if the Hi-flex system is present on the vehicle and has been detected by the injection computer.  
Status **ET670** remains **INACTIVE** if the alcohol level in the tank is low and the ambient air temperature is over 15 °C (the Hi-Flex system is not activated).  
If status **ET670** is **INACTIVE** during a cold starting phase, apply the interpretation of **DF884 Additional petrol pump relay**.

If the fault is still present, contact Techline.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET671</b>	<u>PROGRAMMING THE ALCOHOL LEVEL</u>
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<b>NOTES</b>	There must be no present or stored faults.
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Status **ET671** should be **COMPLETED** if the Hi-Flex system is present on the vehicle, and has been detected by the injection computer.

If status **ET671** is **NOT COMPLETED**, apply the procedure below.

Reprogram the alcohol level (see **Configurations and programming, Alcohol level programming**):

- start the engine,
- allow the engine coolant temperature to reach 75 °C, check using parameter **PR002 Coolant temperature**,
- run the engine **at 1500 rpm** for at least **5 mins**,
- check that the programming has been carried out using status **ET671 Alcohol level programming** and parameter **PR743 Estimated alcohol level in tank**,
- the programming is saved when the ignition is switched off.

If the fault is still present, contact Techline.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>ET703</b>	<u>CRUISE CONTROL/SPEED LIMITER BUTTONS</u>
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<b>NOTES</b>	<b>Special notes:</b> Only perform the tests if the statuses do not correspond with the system programming functions.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

<b>INACTIVE</b>	Status <b>ET703</b> becomes " <b>INACTIVE</b> " when none of the cruise control/speed limiter buttons is pressed. These buttons are located on the steering wheel. If status <b>ET703</b> does not display <b>INACTIVE</b> , <ul style="list-style-type: none"><li>● check the condition of the cruise control/speed limiter <b>+/-</b> button and the condition of its connector.</li></ul> check the condition of the cruise control/speed limiter <b>R/O</b> button and the condition of its connector.
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<b>INCREASE</b>	Status <b>ET703</b> becomes <b>PLUS</b> when the cruise control/speed limiter <b>+</b> button is pressed. This button is on the steering wheel, on the left-hand side. If status <b>ET703</b> does not display <b>INCREASE</b> , check the condition of the " <b>+/-</b> " cruise control/speed limiter button and the condition of its connector. Repair if necessary. To carry out checks and measurements in complete safety, follow the recommendations for removing the driver's front airbag (see <b>MR364 Mechanical, section 8, 88C, Airbags and pretensioners, Driver's front airbag, Removing-Refitting</b> ). Measure the <b>resistance of the following connections while pressing the + button (on the button tracks)</b> : <ul style="list-style-type: none"><li>● Connection code <b>86G</b> of component <b>331</b>.</li><li>● Connection code <b>86M</b> of component <b>331</b>.</li></ul> If the resistance is not approximately <b>300 Ω</b> , check the continuity of the connection when the button is in the rest position. If there is continuity, replace the <b>+/-</b> control button. If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
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<b>AFTER REPAIR</b>	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 <b>diagnostic tool</b> .
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**ET703  
CONTINUED1**

**DECREASE**

Status **ET703** becomes “**MINUS**” when the cruise control/speed limiter “-” button is pressed. This button is on the steering wheel, on the left-hand side.  
If status **ET703** does not change to **MINUS**, check the condition of the cruise control/speed limiter +/- button, and the condition of its connector. Repair if necessary.  
To carry out checks and measurements in complete safety, follow the recommendations for removing the driver's front airbag (see **MR364 Mechanical, section 8, 88C, Airbags and pretensioners, Driver's front airbag, Removing-Refitting**). Measure the resistance of the following connection whilst pressing the - button (on the button tracks):

- Connection code **86G**, of component **331**.
- Connection code **86M** of component **331**.

If the resistance is not approximately **100 Ω**, check the continuity of the connection when the button is in the rest position.  
If there is continuity, replace the +/- control button.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**RESUME**

Status **ET703** becomes **RESUME** when the cruise control/speed limiter **R** button is pressed. This button is located on the steering wheel, to the right.  
If status **ET703** does not change to **RESUME**, check the condition of the cruise control/speed limiter “**R/0**” button, and the condition of its connector. Repair if necessary.  
To carry out checks and measurements in complete safety, follow the recommendations for removing the driver's front airbag (see **MR364 Mechanical, section 8, 88C, Airbags and pretensioners, Driver's front airbag, Removing-Refitting**). Measure the resistance of the following connection whilst pressing the **R** button (on the button tracks):

- Connection code **86G**, of component **331**.
- Connection code **86M** of component **331**.

If the resistance is not approximately **900 Ω**, check the continuity of the connection when the button is not pressed.  
If there is continuity, replace the **R/0** control button.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**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**.

**ET703  
CONTINUED2**

**SUSPEND**

Status **ET703** becomes **SUSPEND** when the cruise control/speed limiter **0** button is pressed. This button is located on the steering wheel, to the right.  
If status **ET703** does not change to "**SUSPEND**", check the condition of the cruise control/speed limiter "**R/0**" button, and the condition of its connector.  
To carry out checks and measurements in complete safety, follow the recommendations for removing the driver's front airbag (see **MR364 Mechanical, section 8, 88C, Airbags and pretensioners, Driver's front airbag, Removing-Refitting**).  
Measure **the resistance of the following connection whilst pressing the 0 button (on the button tracks)**:

- Connection code **86G**, of component **331**.
- Connection code **86M** of component **331**.

If the resistance is not approximately **0 Ω**, replace the "**R/0**" control button.  
If there is continuity, replace the **R/0** control button.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

**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**.

ET704 ET705	<u>BRAKE SWITCH NO. 1</u> <u>BRAKE SWITCH NO. 2</u>
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<b>NOTES</b>	<b>Special notes:</b> Only perform the tests if the statuses do not correspond with the system programming functions.
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**Note:**

Statuses **ET704** and **ET705** should change specification at the same time. In the event of inconsistency, refer to the interpretation of fault **DF228 Brake signal**.

ACTIVE

or

INACTIVE

If the brake lights are working:  
check the continuity and make sure there is no interference resistance on the following connection:

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

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

If the brake lights are not operational, check:

- the condition and fitting of the brake switch,
- the condition and conformity of the brake lights fuse,

the conformity of the values in the following table.

	Continuity between connections	Insulation between connections
Switch pressed (Brake pedal released)	5A and BPT	65G and SP17 (with ESP) 65A and SP17 (without ESP)
Switch released (Brake pedal depressed)	65G and SP17 (with ESP) 65A and SP17 (without ESP)	5A and BPT

Replace the switch if the values obtained are not correct.

<b>AFTER REPAIR</b>	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 <b>diagnostic tool</b> .
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# PETROL INJECTION

## Fault finding - Parameter summary table

**17B**

Tool parameter	Diagnostic tool title
<b>PR010</b>	Idle speed regulation setpoint
<b>PR014</b>	Idle speed correction
<b>PR015</b>	Engine torque
<b>PR018</b>	Estimated air flow
<b>PR030</b>	Accelerator pedal position
<b>PR035</b>	Atmospheric pressure
<b>PR037</b>	Refrigerant pressure
<b>PR044</b>	Power requested by air conditioning
<b>PR055</b>	Engine speed
<b>PR058</b>	Air temperature
<b>PR064</b>	Coolant temperature
<b>PR074</b>	Battery voltage
<b>PR089</b>	Vehicle speed
<b>PR090</b>	Idle speed regulation programming value
<b>PR091</b>	Theoretical idle speed OCR*
<b>PR095</b>	Anti-pinking correction
<b>PR096</b>	Motorised throttle upper stop programmed value
<b>PR097</b>	Motorised throttle lower stop programmed value
<b>PR098</b>	Upstream oxygen sensor voltage
<b>PR100</b>	Torque lapse
<b>PR101</b>	Duration of injection
<b>PR102</b>	Canister bleed solenoid valve OCR*
<b>PR103</b>	Instantaneous fuel consumption
<b>PR105</b>	Counter for km* with OBD fault warning light lit
<b>PR106</b>	Counter for km* with fault warning light lit
<b>PR111</b>	Motorised throttle position corrected value
<b>PR113</b>	Lower throttle stop after offset appli*
<b>PR116</b>	Motorised throttle corrected position setpoint

\* OCR: Opening Cycle Ratio.

\* km: kilometre

\*appli: application



<b>PR030</b>	<u>ACCELERATOR PEDAL POSITION</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check that the accelerator pedal mechanism has not seized.  
Check the **cleanliness** and **condition** of the pedal potentiometer connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:

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

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

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

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR037</b>	<u>REFRIGERANT PRESSURE</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the refrigerant pressure sensor and its connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the universal bornier in place of the computer, check **for insulation** and **continuity** on the following connections:  
– **38Y** between components **1202** and **120**.  
– **38X** between components **1202** and **120**.  
– **38U** between components **1202** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the refrigerant fluid sensor.  
If the fault is still present, check the air conditioning circuit (see **MR 364, Mechanical, 62A, Air conditioning**).

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR074</b>	<u>BATTERY VOLTAGE</u>
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<b>NOTES</b>	There must be no present or stored faults. <b>Without electrical consumers (radio, heating and air conditioning system, motor-driven fan assembly, headlights, etc.).</b>
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<b>Ignition on engine stopped, then idle</b>	<b>If the voltage is at minimum:</b> Check the battery and the charge circuit (see <b>Technical Note 6014A Checking the charge circuit</b> ). <b>If the voltage is at maximum:</b> Check that the charging voltage is correct with and without electrical consumers (see <b>Technical Note 6014A, Charging circuit check</b> ).
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<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR095</b>	<u>ANTI-PINKING CORRECTION</u>
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<b>NOTES</b>	There must be no present or stored faults.
	Use the Wiring Diagrams Technical Note for the Mégane II.

The pinking sensor must not supply a zero signal, proving that it is recording the mechanical vibrations of the engine.

Check that there is the **correct** fuel in the fuel tank.  
Repair if necessary.

Check the **condition** and **conformity** of the spark plugs.  
Repair if necessary.

Check the pinking sensor **tightness**.  
Repair if necessary.

Check the **cleanliness** and **condition** of the pinking sensor connectors.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the universal bornier, check the **insulation** and **continuity** on the following connections:  
– **3S** between components **146** and **120**.  
– **3DQ** between components **146** and **120**.  
– **3AP** between components **146** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR098</b>	<u>UPSTREAM OXYGEN SENSOR VOLTAGE</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the upstream oxygen sensor connections.  
If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3GH** between components **887** and **120**.  
– **3GK** between components **887** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check **the tightness** of the upstream oxygen sensor.  
Repair if necessary.

If the vehicle is driven frequently in town, **carry out a decoking procedure**.

Check that **there are no leaks** in the exhaust system, from the manifold to the catalytic converter.  
Repair if necessary.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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**PR098  
CONTINUED**

If the fault is still present, replace the upstream oxygen sensor.

If the fault has still not been cured, continue with the checks.

Check:

- the condition of the air filter,
- that the air inlet circuit is not blocked,
- the condition and conformity of the spark plugs,
- that the catalytic converter is not clogged,
- the sealing between the throttle valve and inlet manifold,
- the manifold pressure sensor sealing,
- the fuel vapour absorber bleed, which must not be jammed open,'
- the fuel vapour absorber bleed system sealing,
- the brake servo system sealing,
- the cylinder head oil vapour recovery system sealing,
- the sealing between the inlet manifold and cylinder head,
- the exhaust pipe sealing between the cylinder head and catalytic converter.
- the fuel flow rate and pressure.

If the idle speed is not stable, check:

- the timing adjustment,
- the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanics, 11A, Top and front of engine**),
- the cylinder compressions.

Drive the vehicle to check the repair.

**AFTER REPAIR**

Repeat the conformity check from the start.

<b>PR312</b>	<u>MANIFOLD PRESSURE</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the manifold pressure sensor and its connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3LG** between components **147** and **120**.  
– **3F** between components **147** and **120**.  
– **3CK** between components **147** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

If the fault is still present, carry out the following checks:  
**The inlet line must be perfectly sealed, from the throttle valve to the cylinder head.**  
Check:  
– the condition of the air filter,  
– that the air inlet circuit is not blocked,  
– the sealing between the throttle valve and inlet manifold,  
– the manifold pressure sensor sealing,  
– the fuel vapour absorber bleed, which must not be jammed open,  
– the fuel vapour absorber bleed system sealing,  
– the brake servo system sealing,  
– the cylinder head oil vapour recovery system sealing,  
– the sealing between the inlet manifold and cylinder head,  
– the exhaust pipe sealing between the cylinder head and catalytic converter.  
Repair if necessary.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR742</b>	<u>ADDITIONAL PETROL CIRCUIT SV* OCR*</u>
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<b>NOTES</b>	There must be no present or stored faults.
	Only for Flex fuel.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the **cleanliness** and **condition** of the additional petrol circuit solenoid valve connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** between **connections 3FB2 and 3ACM** of the additional petrol circuit solenoid valve.  
Replace the additional petrol circuit solenoid valve if the **resistance** is not **28 Ω ± 2 Ω at 24 °C**.

**With the ignition on** check for **+ 12 V** on **connection 3FB2** of the additional fuel tank pump solenoid valve connector.

With the ignition on, check for **+ 12 V** on **connection 3FB2** of the additional petrol circuit solenoid valve connector.

Using the Universal bornier, check the **insulation** and **continuity** of the following connections:

- **3FB2** between components **1640** and **120**.
- **3FB2** between components **1640** and **1337**.

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

Disconnect the battery.

Disconnect the computer. Check the **cleanliness** and **condition** of the connections.

Using the Universal bornier, check the **insulation** and **continuity** on the following connection:

- **3ACM** between components **1640** and **120**.

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

\* OCR: opening cycle ratio

\* SV: SOLENOID VALVE.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR743</b>	<u>ALCOHOL LEVEL ESTIMATED IN THE TANK</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Parameter **PR743** is used to estimate the percentage of alcohol contained in the petrol in the main tank.  
This percentage varies between **0** to **100 %**.

This parameter enables the computer to estimate the alcohol level in the fuel in order to be able to **start the engine from cold** with the Hi-Flex system or not.  
Status **ET671 Alcohol level programming** should be **COMPLETED**. This indicates that the percentage of alcohol in the tank has been detected.

If status **ET671 Alcohol level programming** is **NOT COMPLETED**, repeat the programming procedure (see **Configurations and programming, Alcohol level programming**).

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3GH** between components **887** and **120**.  
– **3GK** between components **887** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, **replace** the upstream oxygen sensor.  
If the fault is still present, contact Techline.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR748</b>	<u>INJECTION DURATION CORRECTION</u>
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<b>NOTES</b>	No faults should be present or stored.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

The correction of the injection duration depends on the estimated alcohol level in the main tank, and the **cold starting procedure** for the engine with the Hi-Flex system is carried out accordingly.

Status **ET671 Alcohol level programming** should be **COMPLETED**. This indicates that the percentage of alcohol in the tank has been detected.  
This percentage varies between **0** to **100 %**.

If status **ET671 Alcohol level programming** is **Not done**, repeat the programming procedure (**see Configurations and programming, Alcohol level programming**).

Disconnect the battery and the injection computer.  
Check the **cleanliness** and **condition** of the connections.  
Using the Universal bornier, check the **insulation** and **continuity** of the following connections:  
– **3GH** between components **887** and **120**.  
– **3GK** between components **887** and **120**.  
If the connection(s) are faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, **replace** the upstream oxygen sensor.  
If the fault is still present, contact Techline.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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Tool command	Diagnostic tool title
<b>RZ001</b>	Fault memory
<b>RZ005</b>	Programming
<b>AC017</b>	Canister bleed solenoid valve
<b>AC018</b>	Upstream O2 sensor heating
<b>AC019</b>	Downstream O2 sensor heating
<b>AC027</b>	Motorised throttle
<b>AC211</b>	Fuel pump
<b>AC217</b>	Additional petrol circuit solenoid valve <b>(only for Flex fuel)</b>
<b>AC224</b>	Additional petrol circuit pump relay <b>(only for Flex fuel)</b>
<b>VP008</b>	Injector control unlocking
<b>VP013</b>	Injector control locking
<b>VP010</b>	Enter VIN
<b>LC001</b>	Vehicle speed connection type
<b>LC003</b>	Upstream oxygen sensor
<b>LC004</b>	Downstream oxygen sensor
<b>LC007</b>	Cylinder 1 detection
<b>LC095</b>	Camshaft cold loop mode in injection
<b>LC120</b>	Cruise control
<b>LC121</b>	Speed limiter

<b>AC017</b>	<u>CANISTER BLEED SOLENOID VALVE</u>
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<b>NOTES</b>	There must be no present or stored faults.
	<b>Use the Wiring Diagrams Technical Note for the Mégane II.</b>

Check the **cleanliness** and **condition** of the fuel vapour absorber bleed solenoid valve connections.  
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Measure the **resistance** of the petrol vapour absorber bleed solenoid valve.  
Replace the fuel vapour absorber bleed solenoid valve if the **resistance** is not **26 Ω ± 4 Ω at 23 °C**.

With the ignition on, check for **+ 12 V** on **connection 3FB1** of the fuel vapour absorber bleed solenoid valve.  
If **+ 12 V** is not present:

– Using the Universal bornier, check the **continuity** of the following connections:

**3FB2** between components **371** and **120**.

**3FB2** between components **1639** and **371**.

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

Disconnect the battery.

Disconnect the computer. Check the **cleanliness** and **condition** of the connections.

Using the Universal bornier, check the **insulation** and **continuity** of the following connection:

**3BB** between components **371** and **120**.

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

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

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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**AC027**

MOTORISED THROTTLE

**WARNING**

Never drive the vehicle without checking first that there are no throttle valve faults.

**NOTES**

There must be no present or stored faults.

Switch on the ignition and activate command **AC027**.

If the motorised throttle does not work, apply the interpretation for **DF079 Motorised throttle valve automatic control**.

**AFTER REPAIR**

Repeat the conformity check from the start.

AC211	<u>FUEL PUMP RELAY</u>
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NOTES	There must be no present or stored faults.
	Use the Wiring Diagrams Technical Note for the Mégane II.

If the relay does not click:	<p>Disconnect the battery and the injection computer. Check the <b>cleanliness</b> and <b>condition</b> of the injection computer connections. Check <b>the cleanliness</b> and <b>condition</b> of the fuel pump relay connector connections. If the connector is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the connector, otherwise replace the wiring.</p>
	<p>Disconnect the Protection and Switching Unit <b>connector MT1</b>. Check <b>the cleanliness</b> and <b>condition</b> of its connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: <b>3AC</b> between components <b>1337</b> and <b>120</b>. If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>

IF THE PUMP DOES NOT OPERATE	<p>Disconnect the Protection and Switching Unit <b>connector CN</b>. Check <b>the cleanliness</b> and <b>condition</b> of its connections. During command <b>AC211 "Petrol pump"</b> check for <b>+ 12 V</b> on connection <b>3N</b> of the petrol pump. If there is not <b>+ 12 V</b>, check (using the "universal bornier") <b>the insulation</b> and the <b>continuity</b> on the following connection:</p> <ul style="list-style-type: none"> <li>● connection <b>3N</b> between components <b>833</b> and <b>1337</b></li> </ul> <p>If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p>
	If the fault is still present, <b>run fault finding on the Protection and Switching Unit (see 87G, Engine compartment connection unit.)</b>
	If the fault is still present, contact the Techline.

AFTER REPAIR	Repeat the conformity check from the start.
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<b>AC217</b>	<u>ADDITIONAL FUEL CIRCUIT SOLENOID VALVE</u>
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<b>NOTES</b>	There must be no present or stored faults.
	Only for Flex fuel.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the <b>cleanliness</b> and <b>condition</b> of the additional petrol circuit solenoid valve connections. Repair if necessary.
Measure the <b>resistance</b> of the additional petrol circuit solenoid valve. Replace the additional petrol circuit solenoid valve if the <b>resistance</b> is not <b>28 Ω ± 2 Ω at 24 °C</b> .
With the ignition on, check for <b>+ 12 V</b> on <b>connection 3FB2</b> of the additional petrol circuit solenoid valve connector. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> of the following connections: <b>3FB2</b> between components <b>371</b> and <b>120</b> . <b>3FB2</b> between components <b>371</b> and <b>1337</b> . If the connection(s) are faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
Disconnect the battery. Disconnect the computer. Check the <b>cleanliness</b> and <b>condition</b> of the connections. Using the Universal bornier, check the <b>insulation</b> and <b>continuity</b> on the following connection: <b>3BB</b> between components <b>371</b> and <b>120</b> . If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b> ), repair the wiring, otherwise replace it.
If the fault is still present, replace the solenoid valve.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>AC224</b>	<u>ADDITIONAL PETROL PUMP RELAY</u>
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<b>NOTES</b>	There must be no present or stored faults.
	(only for Flex fuel).

Switch on the ignition and run command **AC224**.  
If the additional petrol pump does not work, apply the interpretation of **DF884 Additional petrol circuit pump relay**.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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**NOTES**

Only refer to the customer complaints after performing a complete check using the diagnostic tool.

**WARNING**

Never drive the vehicle without checking first that there are no throttle valve faults.

**NO DIALOGUE WITH THE COMPUTER**

**ALP 1**

**THE ENGINE WILL NOT START**

**ALP 2**

**IDLING FAULTS**

**ALP 3**

**FAULT WHEN DRIVING**

**ALP 4**

<b>ALP 1</b>	<b>No dialogue with the computer</b>
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<b>NOTES</b>	None
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Test the **diagnostic tool** on another vehicle which is in perfect working order.  
Check that the sensor's green indicator light comes on.  
If communication works with the second vehicle, consult **Vehicle check**.  
If communication does not work with the second vehicle, apply the **CLIP diagnostic tool check** sub-section.

<b>CLIP DIAGNOSTIC TOOL CHECK</b>	<p>Check the <b>cleanliness</b> and <b>condition</b> of the diagnostic socket contacts which connect to the vehicle.</p> <p>Check the <b>condition</b> of the cable from the diagnostic socket to the sensor, and the cleanliness and condition of the connections.</p> <p>Check the sensor connections.</p> <p>Check the <b>condition</b> of the cable from the sensor to the CLIP tool, and the cleanliness and condition of the connections.</p> <p>Check the <b>cleanliness</b> and <b>condition</b> of the CLIP socket.</p> <p>If the fault is still present, contact Techline.</p>
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<b>VEHICLE CHECK</b>	<p>Check the <b>electrical voltage</b> of the battery.</p> <p>Check the <b>cleanliness</b> and <b>condition</b> of the battery terminals.</p> <p>Check the <b>condition</b> and <b>tightness</b> of the cable going from the battery + terminal to the Protection and Switching Unit.</p> <p>Check the <b>condition</b> of the battery earth cable and ensure that there is a <b>good electrical connection</b> with the bodywork.</p>
	Check the injection computer earth terminal for <b>cleanliness</b> and make sure it is <b>properly connected</b> to the bodywork.
	Check <b>the</b> injection computer after ignition feed fuse and the <b>condition</b> and <b>cleanliness</b> of the contacts.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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**ALP 1  
CONTINUED 1**

**VEHICLE  
CHECK  
(CONTINUED 1)**

Using the “universal bornier”, check the following connections on the **vehicle diagnostic socket**:

**Connection AP43** —————> **+ After ignition feed**

**Connection BP32** —————> **+ battery feed**

**Connection MAN and NAM** —————> **Earth**

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.

Disconnect the computer **earth** terminal connection from the negative battery terminal. Check the **continuity** and **insulation** of the following connections:

Injection computer, connector **C**,  
**connection N** —————> **Earth terminal**

Injection computer, connector **C**,  
**connection N** —————> **Earth terminal**

Injection computer, connector **B**,  
**connection N** —————> **Earth terminal**

Injection computer, connector **B**,  
**connection N** —————> **Earth terminal**

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.

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the computer connections.

Using the Universal bornier, check the **continuity** of the **multiplex line** communication lines:

- Connection code **3SM** between components **120** and **1337**.
- Connection code **3SN** between components **120** and **1337**.

Run a multiplex network test (see **88B, multiplex**).

**AFTER REPAIR**

Repeat the conformity check from the start.

<b>ALP 1 CONTINUED 2</b>	
<b>VEHICLE CHECK (CONTINUED 2)</b>	<p>Using the universal bornier, check for <b>insulation</b> and <b>continuity</b> on the following connection: <b>3AA</b> between components <b>1337</b> and <b>120</b>. If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p> <p>Using the Universal bornier, check for <b>continuity</b> on the following connection: <b>3FB1</b> between components <b>1337</b> and <b>120</b>. If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p> <p>Check the condition and operation of fuse <b>F18 (5A)</b>. Using the “universal bornier”, check for <b>+ after ignition feed</b> on connection <b>AP15</b> connector <b>A</b> of the injection computer. If the connection is faulty and there is a repair method (see <b>Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair</b>), repair the wiring, otherwise replace it.</p> <p><b>If the fault is still present</b>, contact the Techline.</p>
<b>AFTER REPAIR</b>	Repeat the conformity check from the start.

<b>ALP 2</b>	<b>The engine will not start</b>
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<b>NOTES</b>	<b>Follow ALP 2 after a complete check with the diagnostic tool.</b>
	<b>WARNING</b> <b>Never drive the vehicle without checking first that there are no throttle valve faults.</b>

If the starter motor does not engage, there may be an engine immobiliser fault.  
Carry out fault finding on the UCH (see **87B, Passenger Compartment Connection Unit**).

Check the condition of the battery.  
Check the cleanliness, condition and tightness of the battery terminals.  
Check that the battery is correctly earthed to the vehicle bodywork.  
Check that the + battery leads are correctly connected.

Check that the starter motor is properly connected.  
Check that the starter is operating correctly (see **Technical Note 6014A, Checking the charging circuit**).

Check the condition and conformity of the spark plugs.  
Check the mounting, cleanliness and condition of the flywheel signal sensor.  
Check the flywheel sensor air gap.  
Check the condition of the flywheel.

Check that the air filter is not clogged.  
Check that the air inlet circuit is not blocked.

Check that the Hi-flex system is operating correctly for Flex-Fuel vehicles:

- check that status **ET652 Hi-flex Configuration** is **YES**,
- check that status **ET671 Alcohol level programming** is **COMPLETED** and check the alcohol level of the fuel in the main tank using parameter **PR743 Estimated alcohol level in the tank**, check the conformity of the fuel in the additional tank,
- check the additional petrol pump relay using command **AC224 Additional petrol circuit pump relay (only for Flex fuel)**,
- check the additional petrol circuit solenoid valve using command **AC217 Additional petrol circuit solenoid valve (only for Flex fuel)**.

For vehicles in Extreme Cold countries Super Ethanol or E85:

If the temperature is low, use parameter **“PR743: estimated alcohol level in the tank”** to check that the percentage of alcohol equals approximately 70 %.

Check that the heating element is operating correctly if it is used to start the engine if the temperature is low: see **Technical Note 6514A “FAULT FINDING - Petrol injection cooling circuit heater - Vehicle - super ethanol and E85 extreme cold”**.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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**ALP 2**  
**Continued**

Check that there is fuel in the tank (fuel sender fault).  
Check that the tank vent is not blocked.  
Check that the fuel is of the correct type.  
Check that there are no leaks in the fuel system, from the tank to the injectors.  
Check that there are no kinked hoses (especially after a removal operation).  
Check the fuel flow rate and pressure.  
Check the sealing of the injectors, and that they are working properly.

Check that the exhaust system is not blocked and the catalytic converter not clogged.

Check the timing setting.

Check the cylinder compressions.

Check the hydraulic tappets if there is camshaft noise.

**AFTER REPAIR**

Repeat the conformity check from the start.

<b>ALP 3</b>	<b>Idle speed faults</b>
<b>NOTES</b>	Fill in ALP 3 after a complete check using the diagnostic tool.
	<b>WARNING</b> Never drive the vehicle without checking first that there are no throttle valve faults.
Check that the Hi-flex system is operating correctly for Flex-Fuel vehicles: <ul style="list-style-type: none"> <li>– check that status <b>ET652 Hi-flex Configuration</b> is <b>YES</b>,</li> <li>– check that status <b>ET671 Alcohol level programming</b> is <b>COMPLETED</b>, and check the fuel alcohol level in the main tank using parameter <b>PR743 Estimated alcohol level in tank</b>,</li> <li>– check the conformity of the fuel in the additional tank,</li> <li>– check the additional petrol pump relay using command <b>AC224 Additional petrol circuit pump relay (only for Flex fuel)</b>,</li> <li>– check the additional petrol circuit solenoid valve using command <b>AC217 Additional petrol circuit solenoid valve (only for Flex fuel)</b>.</li> </ul>	
Check that the oil level is not too high.	
Check the inlet system sealing, from the throttle to the cylinder head. Check that the fuel vapour absorber bleed is not disconnected or jammed open. Check that there are no leaks in the fuel vapour absorber bleed system. Check that there are no leaks in the braking assistance system. Check that there are no leaks in the oil vapour recovery system (manifold/cylinder head). Check that there are no leaks around the manifold pressure sensor. Check that there are no leaks around the air temperature sensor.	
Check that the air filter is not clogged. Check that the air inlet circuit is not blocked. Check that throttle valve is not clogged.	
Check the condition of the pencil coils and the cleanliness of their connections. Check the electrical resistance of the pencil coil secondary circuits. Check the condition and conformity of the spark plugs. Check the mounting, cleanliness and condition of the flywheel signal sensor. Check the flywheel signal sensor air gap. Check the condition and cleanliness of the flywheel.	
Check that the tank vent is not blocked. Check that the fuel is of the correct type. Check that there are no leaks in the fuel system, from the tank to the injectors. Check that there are no kinked hoses (especially after a removal operation). Check the fuel flow rate and pressure. Check that the injectors are working properly.	
Check that the exhaust system is not blocked and the catalytic converter not clogged.	
Check the timing setting.	
Check the cylinder compressions.	
Check the hydraulic tappets if there is camshaft noise.	
<b>AFTER REPAIR</b>	Repeat the conformity check from the start.

<b>ALP 4</b>	<b>Faults occurring while driving</b>
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<b>NOTES</b>	<p><b>Fill in ALP 4 after a complete check using the diagnostic tool.</b></p> <p><b>WARNING</b> Never drive the vehicle without checking first that there are no throttle valve faults.</p>
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Check that the Hi-flex system is operating correctly for Flex-Fuel vehicles:

- check that status **ET652 Hi-flex Configuration** is **YES**,
- check that status **ET671 Alcohol level programming** is **COMPLETED**, and check the fuel alcohol level in the main tank using parameter **PR743 Estimated alcohol level in tank**,
- check the conformity of the fuel in the additional tank,
- check the additional petrol pump relay using command **AC224 Additional petrol circuit pump relay (only for Flex fuel)**,
- check the additional petrol circuit solenoid valve using command **AC217 Additional petrol circuit solenoid valve (only for Flex fuel)**.

Check that the oil level is not too high.

Check the condition of the pencil coils and the cleanliness of their connections.

Check the electrical resistance of the pencil coil secondary circuits.

Check the condition and conformity of the spark plugs.

Check the mounting, cleanliness and condition of the flywheel signal sensor.

Check the flywheel signal sensor air gap.

Check the condition and cleanliness of the flywheel.

Check that the air filter is not clogged.

Check that the air inlet circuit is not blocked.

Check that throttle valve is not clogged.

Check the inlet system sealing, from the throttle to the cylinder head.

Check that the fuel vapour absorber bleed is not disconnected or jammed open.

Check that there are no leaks in the fuel vapour absorber bleed system.

Check that there are no leaks in the braking assistance system.

Check that there are no leaks in the oil vapour recovery system (manifold/cylinder head).

Check that there are no leaks around the manifold pressure sensor.

Check that there are no leaks around the air temperature sensor.

Check that the tank vent is not blocked.

Check that the fuel is of the correct type.

Check that there are no leaks in the fuel system, from the tank to the injectors.

Check that there are no kinked hoses (especially after a removal operation).

Check the fuel flow rate and pressure.

Check that the injectors are working properly.

Check that the exhaust system is not blocked and the catalytic converter not clogged.

Check the timing setting.

Check the cylinder compressions.

Check the hydraulic tappets if there is camshaft noise.

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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