

MEGANE

1 Engine and peripherals

17B PETROL INJECTION

S3000 Injection
Program No.: AD
Vdiag No.: 50, 58

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V3

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 method applicable to all computers with the following specifications:

Vehicle(s): **MEGANE II phase 1 and 2**

Engines: **K4M 762/768 Flex Fuel
K4M 856 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
Elé. 1481	Bornier
Elé. 1681	Universal bornier

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 the Start button (longer than **5 seconds**) with start-up conditions not fulfilled,
- connect the diagnostic tool and perform the required operations.

To **cut off the + after ignition feed**, 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 present or stored (depending on whether they appeared in a certain context and have disappeared since, or whether they remain present but are not diagnosed within the current context).

The **present** or **stored** status of faults should be considered when using the **diagnostic tool** after the + after ignition feed is switched on (without any action on the system components).

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

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

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

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

- the electrical connections that correspond to the fault,
- the connectors for this connection,
- the resistance of the faulty component,
- 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** when the data is inconsistent. Therefore, this stage is used to:

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

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

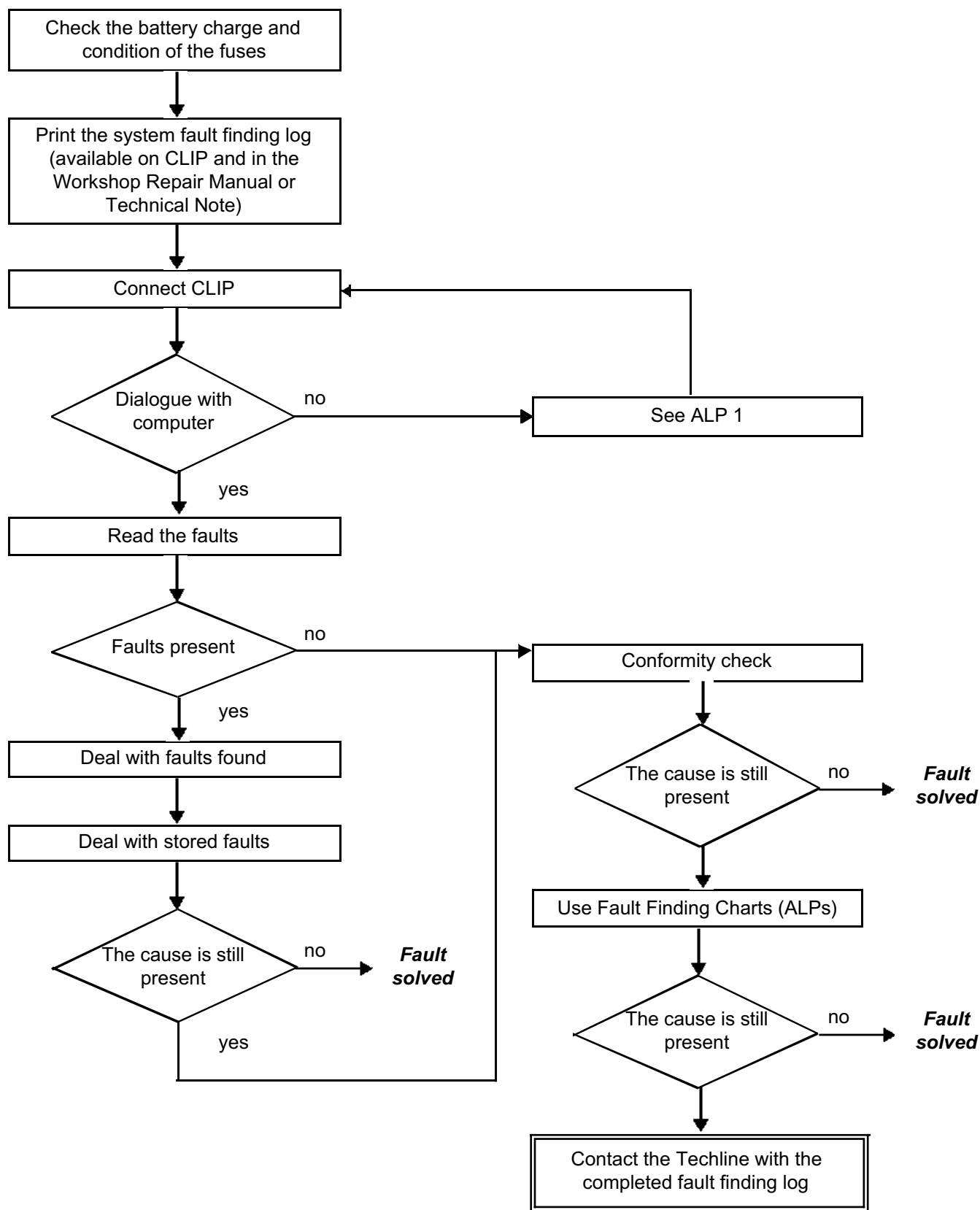
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

Customer complaints - Fault finding chart

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

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

4. FAULT FINDING PROCEDURE



4. FAULT FINDING PROCEDURE (CONTINUED)

Wiring check

Fault finding problems

Disconnecting the connectors and/or manipulating the wiring 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.

Physical 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 (with the multimeter in voltmeter mode) between the suspect connection and the **12 V** or **5 V**. The correct measured value should be 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 should be 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 connection:

- Connector/Connector.
- Connector/Device.

1. Visual inspection of the connection:

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

2. Visual inspection of the area around the connection:

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

Disconnect the connector to continue the checks.

3. Visual inspection of the plastic casing:

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

4. Visual inspection of the metal contacts:

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

- Check that there are no bent contacts (the contact is not inserted correctly and can come out of the back of the connector). The contact comes out of the connector when the wire is 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 fault finding procedure, ensures a record is kept of the procedure carried out. It is an essential document when consulting the manufacturer.

IT IS THEREFORE 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 **E85** type injection system.

The special feature of 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** type **S3000 FLASH EEPROM** 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** 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 is designed to inject petrol from the additional tank (**approximately 1 l**), in addition to the petrol injected 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: Control

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 Idling speed regulation programming value** is a stored parameter designed to program dispersion and engine ageing for the idling 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 warm operating conditions, the idle speed opening cyclic 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 cyclic ratio compensates for the gradual variations in the engine's air requirement, by bringing the idle speed opening cyclic 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 idling speed regulation phase.

Idle speed setpoint calculation:

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

The idling 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 Cyclic 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 in order to obtain a mixture which is as close as possible to a richness of 1. The richness correction value **PR138 Richness correction** is close to **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 inhibited above **84 mph (140 km/h)** or when the engine is under load.

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:

With the engine running, fan assembly 1 is activated when the coolant temperature exceeds **99°C** and stops when it falls below **96°C**. Fan assembly 2 is activated when the coolant temperature exceeds **102°C** and stops when it falls below **99°C**.

With the engine off, only GMV1 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 stops when 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)**.
- The computer no longer processes torque changes requested by the ESP, Distance control, or cruise control/speed limiter.
- Type 5** 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.

Table of defect modes:

	Type 1	Type 2	Type 3	Type 4	Type 5
DF011 Sensor feed voltage no. 1	1.DEF 2.DEF	1.DEF 2.DEF	-	1.DEF 2.DEF	-
DF012 Sensor feed voltage no. 2	-	-	-	1.DEF 2.DEF	1.DEF 2.DEF
DF038 Computer	1.DEF	1.DEF	-	-	1.DEF
DF046 Battery voltage	1.DEF	1.DEF	-	-	-
DF078 Motorised throttle control circuit	1.DEF	1.DEF	-	-	-
DF079 Motorised throttle valve automatic control	6.DEF/CO	6.DEF/CO	-	2.DEF 3.DEF 4.DEF	-
DF089 Inlet manifold pressure sensor circuit	-	-	-	-	1.DEF 2.DEF 3.DEF
DF095 Throttle potentiometer circuit gang 1	CO.0/CC.1	CO.0/CC.1	-	CO.0/CC.1	-
DF096 Throttle potentiometer circuit gang 2	CO.0/CC.1	CO.0/CC.1	-	CO.0/CC.1	-
DF196 Pedal potentiometer circuit gang 1	-	-	CO/ 1.DEF	CO/CC.0/ CC.1 1.DEF	-
DF198 Pedal potentiometer gang 2 circuit	-	-	CC.0/ CC.1	CO/CC.0/ CC.1	-
DF650 Accelerator pedal position signal	-	-	1.DEF	1.DEF	-

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:

- **flashes** in the event of a fault which might cause damage to 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 to warn of the engine overheating,
- 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

LC001	Vehicle speed connection type
	→ Multiplex → Wire
LC003	Upstream oxygen sensor
	→ WITH → WITHOUT
LC007	Cylinder 1 recognition
	→ WITH → WITHOUT
LC095	Camshaft cold loop mode in injection
	→ YES → NO

2. PROGRAMMING

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.

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.

Alcohol level programming (For Flex Fuel engines only)

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

This can only be performed if the 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 minutes,**
- **check that the programming has been carried out using status ET671 Programming the level of alcohol 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

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

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

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

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

DF001 PRESENT	<u>COOLANT TEMPERATURE SENSOR CIRCUIT</u> 1.DEF: Inconsistent signal 2.DEF: Abnormal voltage 3.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal with fault first if it is DF011 Sensor feed voltage no. 1 first if it is present or stored.
	Special note: – the OBD warning light is lit, – low-speed fan is operating continuously. – Refer to parameter PR064 Coolant temperature: if PR064 = 120°C , short circuit to + 12 V , if PR064 = - 40°C , short circuit to earth.
	Use the Wiring Diagrams Technical Note for the Mégane II.

<p>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.</p>												
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3C between components 244 and 120. – 3JK between components 244 and 120. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>												
<p>Measure the resistance of the coolant temperature sensor between connections 3C and 3JK Replace the coolant temperature sensor if the resistance is not:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">12.6 kΩ ± 1.1 kΩ</td> <td style="text-align: center;">at a coolant temperature of -10°C</td> </tr> <tr> <td style="text-align: center;">2200 Ω ± 112 Ω</td> <td style="text-align: center;">at a coolant temperature of 25°C</td> </tr> <tr> <td style="text-align: center;">810 Ω ± 39 Ω</td> <td style="text-align: center;">at a coolant temperature of 50°C</td> </tr> <tr> <td style="text-align: center;">283 Ω ± 8 Ω</td> <td style="text-align: center;">at a coolant temperature of 80°C</td> </tr> <tr> <td style="text-align: center;">1156 Ω ± 3 Ω</td> <td style="text-align: center;">at a coolant temperature of 110°C</td> </tr> <tr> <td style="text-align: center;">88 Ω ± 2 Ω</td> <td style="text-align: center;">at a coolant temperature of 120°C</td> </tr> </table>	12.6 kΩ ± 1.1 kΩ	at a coolant temperature of -10°C	2200 Ω ± 112 Ω	at a coolant temperature of 25°C	810 Ω ± 39 Ω	at a coolant temperature of 50°C	283 Ω ± 8 Ω	at a coolant temperature of 80°C	1156 Ω ± 3 Ω	at a coolant temperature of 110°C	88 Ω ± 2 Ω	at a coolant temperature of 120°C
12.6 kΩ ± 1.1 kΩ	at a coolant temperature of -10°C											
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283 Ω ± 8 Ω	at a coolant temperature of 80°C											
1156 Ω ± 3 Ω	at a coolant temperature of 110°C											
88 Ω ± 2 Ω	at a coolant temperature of 120°C											
<p>If the fault is still present, deal with the other faults then proceed to the conformity check.</p>												

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool .
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DF002 PRESENT	<p>AIR TEMPERATURE SENSOR CIRCUIT</p> <p>1.DEF: Abnormal voltage 2.DEF: Non-compliance with emission control standards</p>
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NOTES	<p>Priority when dealing with a number of faults: Deal with fault DF012 Sensor feed voltage no. 2 first if it is present or stored.</p>
	<p>Special note:</p> <ul style="list-style-type: none"> – OBD warning light illuminated. – Refer to parameter PR058 Air temperature: if PR058 = 120°C, short circuit to + 12 V, if PR058 = - 40°C, short circuit to earth.
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</p>

<p>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.</p>								
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections:</p> <ul style="list-style-type: none"> – 3JQ between components 272 and 120. – 3B between components 272 and 120. <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>								
<p>Measure the resistance of the air temperature sensor between connections 3B and 3JQ. Replace the air temperature sensor if the resistance is not:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">9.6 kΩ ± 1</td> <td style="text-align: center;">at an air temperature of - 10°C.</td> </tr> <tr> <td style="text-align: center;">2000 Ω ± 120</td> <td style="text-align: center;">at an air temperature of 25°C.</td> </tr> <tr> <td style="text-align: center;">810 Ω ± 47</td> <td style="text-align: center;">at an air temperature of 50°C.</td> </tr> <tr> <td style="text-align: center;">309 Ω ± 17</td> <td style="text-align: center;">at an air temperature of 80°C.</td> </tr> </table>	9.6 kΩ ± 1	at an air temperature of - 10°C.	2000 Ω ± 120	at an air temperature of 25°C.	810 Ω ± 47	at an air temperature of 50°C.	309 Ω ± 17	at an air temperature of 80°C.
9.6 kΩ ± 1	at an air temperature of - 10°C.							
2000 Ω ± 120	at an air temperature of 25°C.							
810 Ω ± 47	at an air temperature of 50°C.							
309 Ω ± 17	at an air temperature of 80°C.							
<p>If the fault is still present, deal with the other faults then proceed to the conformity check.</p>								

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

<p>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.</p>
<p>Sensor feed No. 1 is reserved for the following components:</p> <ul style="list-style-type: none"> – inlet manifold pressure sensor – pedal potentiometer gang 2, – coolant pressure sensor, – Cruise control/Speed limiter buttons, – upstream O2 sensors.
<p>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.</p>
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections:</p> <ul style="list-style-type: none"> – 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. <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, there is a computer fault, contact the Techline.</p>

AFTER REPAIR	Deal with any faults declared 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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DF012 PRESENT OR STORED	<u>SENSOR SUPPLY VOLTAGE NO. 2</u> 1.DEF: Open circuit or short circuit 2.DEF: Fault on potentiometer supply 2
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NOTES	Special note: – level 1 fault warning light illuminated, – throttle valve defect mode types 4 and 5 : vehicle and engine speed restriction, ESP and the cruise control/speed limiter are deactivated.
	Use the Wiring Diagrams Technical Note for the Mégane II.

<p>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.</p>
<p>Sensor feed no. 2 is reserved for the following components:</p> <ul style="list-style-type: none"> – pedal potentiometer gang 1, – motorised throttle potentiometer gang 1 and 2.
<p>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.</p>
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections:</p> <ul style="list-style-type: none"> – 3LR between components 921 and 120. – 3MN between components 1076 and 120. <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

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

CO/ CC.1	NOTES	<p>Special note: No injection on cylinder 1, severe deterioration in performance.</p>
CC.0		<p>Special note: The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.</p>
1.DEF		<p>Special note: None.</p>

Check the **cleanliness** and **condition** of the cylinder 1 injector 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 a **+ 12 V** on **connection 3FB1** of the cylinder 1 injector connector.
If there is no **+ 12 V** feed, use the universal bornier to check the **continuity** of the following connections:

- **3FB1** between components **193** and **120**.
- **3FB1** between components **1337** and **193**.

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

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

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** on the following connection:
– **3CR** between components **193** and **120**.
If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

Measure the **resistance** of the cylinder 1 injector between **connections 3CR and 3FB1**.
Replace the injector of cylinder 1 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

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

CO/ CC.1	NOTES	<p>Special note: No injection on cylinder 2 and marked loss of performance.</p>
CC.0		<p>Special note: The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.</p>
1.DEF		<p>Special note: None.</p>

Check the **cleanliness** and **condition** of the cylinder 2 injector 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 a **+ 12 V** on **connection 3FB1** of the cylinder 2 injector connector.
If there is no **+ 12 V** feed, use the universal bornier to check the **continuity** of the following connections:
– **3FB1** between components **194** and **120**.
– **3FB1** between components **1337** and **194**.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

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** on the following connection:
– **3CS** between components **194** and **120**.
If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

Measure the **resistance** of the cylinder 2 injector between **connections 3CS and 3FB1**.
Replace the injector of cylinder 2 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

DF028 PRESENT OR STORED	CYLINDER 3 INJECTOR CONTROL CIRCUIT 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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NOTES	Order of priority in the event of more than one fault: Deal with faults DF084 Actuator relay control circuit or DF046 Battery voltage first if they are present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault appears after the engine has been running for a timed period of 10 seconds .
	Special note: – OBD warning light illuminated.
	Use the Wiring Diagrams Technical Note for the Mégane II.

CO/ CC.1	NOTES	Special note: No injection on cylinder 3, severe deterioration in performance.
CC.0		Special note: The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.
1.DEF		Special note: None.

Check the **cleanliness and condition** of the cylinder 3 injector 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 3FB1** of the cylinder 3 injector connector.
If there is no **+ 12 V** feed, use the universal bornier to check the **continuity** of the following connections:
– **3FB1** between components **195** and **120**.
– **3FB1** between components **1337** and **195**.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any faults declared 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**

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** on the following connection:
– **3CT** between components **195** and **120**.
If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

Measure the **resistance** of the cylinder 3 injector between **connections 3CT and 3FB1**.
Replace the injector of cylinder 3 if the **resistance** is not $14.5 \Omega \pm 0.7 \Omega \text{ à } 20^\circ\text{C}$.

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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

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

CO/ CC.1	NOTES	<p>Special note: No injection on cylinder 4, severe deterioration in performance.</p>
CC.0		<p>Special note: The injector is always open: risk of stalling and damage to the engine on starting, severe deterioration in performance.</p>
1.DEF		<p>Special note: None.</p>

Check the **cleanliness** and **condition** of the cylinder 4 injector 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 3FB1** of the cylinder 4 injector connector.
If there is no **+ 12 V** feed, use the universal bornier to check the **continuity** of the following connections:
– **3FB1** between components **196** and **120**.
– **3FB1** between components **1337** and **196**.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

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** on the following connection:
– **3CU** between components **196** and **120**.
If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

Measure the **resistance** of the cylinder 4 injector between **connections 3CU and 3FB1**.
Replace the injector of cylinder 4 if the **resistance** is not **14.5 Ω ± 0.7 Ω 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

DF038 PRESENT	COMPUTER 1.DEF: Internal electronic fault
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NOTES	Priority when dealing with a number of faults: Deal with the other faults first.
	Special note: – OBD warning light illuminated, – throttle valve defect mode types 1, 2 or 5 present or stored.
	Use the Wiring Diagrams Technical Note for the Mégane II.

<p>Make sure there is a supply to the injection computer:</p> <ul style="list-style-type: none">– disconnect the battery and the injection computer,– check the cleanliness and condition of the connections,– reconnect the battery. <p>Using the "universal bornier", check for + 12 V on the following computer tracks:</p> <ul style="list-style-type: none">– connection AP15, connector A– connection 3FB1, connector B <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Make sure there is an earth on the injection computer:</p> <ul style="list-style-type: none">– disconnect the battery and the injection computer,– check the cleanliness and condition of the connections,– reconnect the battery. <p>Using the "universal bornier", check for earths on connections N of the computer.</p> <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If all the supplies and earths are correct, contact the Techline.</p>

AFTER REPAIR	<p>Deal with any faults declared by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.</p>
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DF046 PRESENT	BATTERY VOLTAGE 1.DEF: Abnormal voltage
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NOTES	Priority when dealing with a number of faults: Apply the procedure for dealing with fault DF084 Actuators relay control circuit first if it is present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present with the engine running.
	Special note: – level 1 fault warning light illuminated, – throttle valve defect mode types 1 and 2 in the event of undervoltage: vehicle and engine speed restriction, the ESP and cruise control/speed limiter are deactivated.
	Use the Wiring Diagrams Technical Note for the Mégane II.

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. Use the Universal bornier to check the continuity of the following connections: – 3FB1 between components 1337 and 120 . – 3AA between components 1337 and 120 . If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
– clean the battery terminals and all connections to the + and the 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.

AFTER REPAIR	Deal with any faults declared 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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DF059 PRESENT OR STORED	COMBUSTION MISFIRES ON CYLINDER 1 1.DEF: Destructive misfiring 2.DEF: Polluting misfiring 3.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: – ignition: DF361 Ignition coil circuit cylinders 1-4, DF362 Ignition coil circuit cylinders 2-3. – fuel supply circuit: DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit; DF028 Cylinder 3 injector control circuit, DF029 Cylinder 4 injector control circuit, DF085 Fuel pump relay control circuit. – engine flywheel signal: DF154 Flywheel signal sensor circuit, DF457 Engine flywheel target. Check whether there are other cylinders with a "combustion misfire" fault reported by the diagnostic tool before starting the fault finding procedure below.
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present under the following conditions: – there must be no further electrical faults, – programming must be carried out. – warm engine (coolant temperature 75°C minimum), – engine running at idling speed with all electrical consumers on for approximately 15 minutes.
	Special note: – OBD warning light illuminated.

1.DEF	NOTES	Special note: – 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 OBD warning light flashes.
2.DEF 3.DEF		Special note: – the OBD warning light remains continuously lit.

Misfiring on cylinder 1 only	The fault is probably due to a component that can only affect this cylinder: – check the cylinder 1 pencil coil, – check the condition and conformity of the spark plugs, – check the cylinder 1 injector. If everything is in order, check the same components on cylinder 4 (to cover a possible cylinder recognition error).
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AFTER REPAIR	Deal with any faults declared 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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**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 control 1-4**),
– 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 Mechanical, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanical, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanical, 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

DF060 PRESENT OR STORED	COMBUSTION MISFIRING ON CYLINDER 2 1.DEF: Destructive misfiring 2.DEF: Polluting misfiring 3.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: – ignition: DF361 Ignition coil circuit cylinders 1-4, DF362 Ignition coil circuit cylinders 2-3. – fuel supply circuit: DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit, DF028 Cylinder 3 injector control circuit, DF029 Cylinder 4 injector control circuit, DF085 Fuel pump relay control circuit. – engine flywheel signal: DF154 Flywheel signal sensor circuit, DF457 Engine flywheel target. Check whether there are other cylinders with a combustion misfire fault detected by the tool before starting the following fault finding procedure.
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present under the following conditions: – there must be no further electrical faults, – programming must be carried out. – warm engine (coolant temperature 75°C minimum), – engine running at idling speed with all electrical consumers on for approximately 15 minutes.
	Special note: – the OBD warning light is lit.

1.DEF	NOTES	Special note: – 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 OBD warning light flashes.
2.DEF 3.DEF		Special note: – the OBD warning light remains continuously lit.

Combustion misfires in cylinder 2 only	The fault is probably due to a component that can only affect this cylinder: – check the cylinder 2 pencil coil, – check the condition and conformity of the spark plugs, – check the cylinder 2 injector. If everything is in order, check the same components on cylinder 3 (to correct a possible cylinder identification error).
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AFTER REPAIR	Deal with any faults declared 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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**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 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 sensor/flywheel air gap,
- check the cylinder compressions,
- check the complete petrol supply circuit (see **MR 364 Mechanical, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanical, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanical, 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

DF061 PRESENT OR STORED	<p>COMBUSTION MISFIRING ON CYLINDER 3</p> <p>1.DEF: destructive misfiring 2.DEF: polluting misfiring 3.DEF: Non-compliance with emission control standards</p>
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NOTES	<p>Priority when dealing with a number of faults:</p> <ul style="list-style-type: none"> – ignition: DF361 Ignition coil circuit cylinders 1-4, DF362 Ignition coil circuit cylinders 2-3. – fuel supply circuit: DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit; DF028 Cylinder 3 injector control circuit, DF029 Cylinder 4 injector control circuit, DF085 Fuel pump relay control circuit. – engine flywheel signal: DF154 Flywheel signal sensor circuit, DF457 Engine flywheel target. <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>Conditions for applying the fault finding procedure to stored faults: The fault is considered present under the following conditions:</p> <ul style="list-style-type: none"> – there must be no further electrical faults, – programming must be carried out. – warm engine (coolant temperature 75°C minimum), – engine running at idling speed with all electrical consumers on for approximately 15 minutes.
	<p>Special note:</p> <ul style="list-style-type: none"> – OBD warning light illuminated.

1.DEF	NOTES	<p>Special note:</p> <ul style="list-style-type: none"> – 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 OBD warning light flashes.
2.DEF 3.DEF		<p>Special note:</p> <ul style="list-style-type: none"> – the OBD warning light remains continuously lit.

Combustion misfires in cylinder 3 only	<p>The fault is probably due to a component that can only affect this cylinder:</p> <ul style="list-style-type: none"> – check the cylinder 3 pencil coil, – check the condition and conformity of the spark plugs, – check the cylinder 3 injector. <p>If everything is in order, check the same components on cylinder 2 (to correct a possible cylinder identification error).</p>
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AFTER REPAIR	<p>Deal with any faults declared by the diagnostic tool. Clear the computer memory. Carry out a road test followed by another check with the diagnostic tool.</p>
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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 Mechanical, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanical, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanical, 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

DF062 PRESENT OR STORED	COMBUSTION MISFIRING ON CYLINDER 4 1.DEF: Destructive misfiring 2.DEF: Polluting misfiring 3.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: – ignition: DF361 Ignition coil circuit cylinders 1-4, DF362 Ignition coil circuit cylinders 2-3. – fuel supply circuit: DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit, DF028 Cylinder 3 injector control circuit, DF029 Cylinder 4 injector control circuit, DF085 Fuel pump relay control circuit. – engine flywheel signal: DF154 Flywheel signal sensor circuit, DF457 Engine flywheel target. Check whether there are other cylinders with a combustion misfire fault detected by the tool before starting the following fault finding procedure.
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present under the following conditions: – there must be no further electrical faults, – programming must be carried out. – warm engine (coolant temperature 75°C minimum), – engine running at idling speed with all electrical consumers on for approximately 15 minutes.
	Special note: – OBD warning light illuminated.

1.DEF	NOTES	Special note: – 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 OBD warning light flashes.
2.DEF 3.DEF		Special note: – the OBD warning light remains continuously lit.

Misfiring on cylinder 4 only	The fault is probably due to a component that can only affect this cylinder: – check the pencil coil of cylinder 4, – check the condition and conformity of the spark plugs, – check the cylinder 4 injector. If everything is okay, check the same components on cylinder 1 (to correct a possible cylinder identification error).
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AFTER REPAIR	Deal with any faults declared 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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**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 control 1-4**),
– 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 Mechanical, 13A, Fuel supply, Petrol supply circuit**),
- check the complete ignition system (see **MR 364 Mechanical, 17A, Ignition, Spark plugs**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanical, 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 declared by the diagnostic tool.
Clear the computer memory.
Carry out a road test followed by another check with the diagnostic tool.

DF078 PRESENT OR STORED	MOTORISED THROTTLE CONTROL CIRCUIT 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.

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

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.
 Use the "Universal bornier" to check the **insulation and continuity** of the following connections:

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

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

If the fault is still present, 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.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF079 PRESENT OR STORED	<p><u>MOTORISED THROTTLE VALVE SERVO</u> 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.</p>
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NOTES	<p>Priority when dealing with a number of faults: 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.</p>
	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared as present if: – the engine speed varies, – the engine air temperature is between 5°C and 105°C.</p>
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</p>
	<p>– Level 1 fault warning light illuminated. – Defect mode type 1, 2 or 4.</p>

<p>Check the cleanliness, condition and fitting of the throttle valve. Repair if necessary.</p>
<p>If the fault is still present, manually check that the throttle valve rotates correctly. Repair if necessary.</p>
<p>If the fault is still present, manipulate the harness to detect a change in status (present ↔ stored). Look for possible damage to the wiring harness, check the condition and the connection of the connectors of the injection computer and motorised throttle valve. 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.</p>

AFTER REPAIR	<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**.
- **3MO** between components **1076** and **120**.

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

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

If the 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.

DF084 PRESENT OR STORED	<u>ACTUATOR RELAY CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present with the engine running.
	Special note: This relay supplies the following actuators: <ul style="list-style-type: none"> – 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.
	Use the Wiring Diagrams Technical Note for the Mégane II.

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

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF085 PRESENT OR STORED	<p><u>FUEL PUMP RELAY CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to +12 volts 1.DEF: Non-compliance with emission control standards</p>
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NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the ignition is switched on or after running command AC211 Petrol pump.</p>
	<p>Special note: – OBD warning light illuminated. CO/CC.1: The vehicle stalls and impossible to restart CC.0: Risk of fire in the event of an accident: petrol leak Intermittent CO: Intermittent relay cut-off: risk of draining the battery.</p>
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</p>

If the relay does not click:	<p>Disconnect the battery and the injection computer. Check the cleanliness and condition of the injection computer connections. Check the cleanliness and condition of the connections of the fuel pump relay connector. 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.</p> <p>Disconnect connector MT1 of the Protection and Switching Unit Check the cleanliness and condition of its connections. Using the Universal bornier, check the insulation and continuity on the following connection: – 3AC between components 1337 and 120. If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p>
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IF THE PUMP DOES NOT OPERATE	<p>Disconnect connector CN of the Protection and Switching Unit. Check the cleanliness and condition of its connections. During command AC211 Petrol pump check for + 12 V on connection 3N of the petrol pump. If there is no +12 V, check (using the universal bornier) the insulation and the continuity on the following connection: – connection 3N between component 833 and 1337 If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p> <p>If the fault is still present, carry out fault finding on the Protection and Switching Unit (see 87G, Engine compartment connection unit, General information).</p> <p>If the fault is still present, contact your Techline.</p>
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AFTER REPAIR	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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DF088 PRESENT OR STORED	<u>PINKING SENSOR CIRCUIT</u> 1.DEF: Abnormal voltage 2.DEF: Non-compliance with emission control standards
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present in a warm engine during a road test at an engine speed above 1500 rpm .
	Special Note: The wiring harness connecting the injection computer to the pinking sensor is "shielded", from this a short circuit to + 12 V is improbable.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the **cleanliness and condition** of the pinking sensor and its connections.
Check the **tightness** of the pinking sensor.

Disconnect the battery and the injection computer.
Check the **cleanliness and condition** of the connections.
Use the "Universal bornier" to check the **insulation and continuity** of the following connections:
– **3S** between components **146** and **120**.
– **3DQ** between components **146** and **120**.
– **TB1** between components **146** and **120**.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check that the **correct** fuel is in the tank.
Check that the spark plugs are **correct**.

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.
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DF089 PRESENT OR STORED	INLET MANIFOLD PRESSURE SENSOR CIRCUIT 1.DEF: Signal incoherent 2.DEF: Abnormal voltage 3.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal with fault DF011 Sensor supply voltage no. 1 first if it is present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault appears after: – the ignition is switched off and back on again, waiting 10 seconds with the engine running at idling speed.
	Special note: – OBD warning light and level 1 fault warning light comes on. – Defect mode type 5 : the ESP and the cruise control/speed limiter are deactivated and the vehicle stalls at idle speed.
	Use the Wiring Diagrams Technical Note for the Mégane II.

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.

If the fault is still present, check for **+ 5 V** on connection **3LG** and for **earth** on **connection 3CK** of connector **B** of the injection computer.
Contact the Techline if it is not correct.

Disconnect the battery and the injection computer.
Check the **cleanliness and condition** of the connections.
Use the "Universal bornier" to 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 connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, 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.
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DF091 PRESENT OR STORED	VEHICLE SPEED SIGNAL 1.DEF: Multiplex network 2.DEF: Non-compliance with emission control standards
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present with the engine running.
	Special note: – OBD warning light illuminated.
	Use the Wiring Diagrams Technical Note for the Mégane II.

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 from the instrument panel (see 83A, instrument panel). If the fault is still present, carry out fault finding on the Anti-lock braking system - Electronic stability program system (see 38C, Anti-lock braking system).

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF092 PRESENT OR STORED	<p>UPSTREAM OXYGEN SENSOR CIRCUIT 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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NOTES	<p>Priority when dealing with a number of faults: If faults DF011 Sensor feed voltage no. 1, DF046 Battery voltage, DF084 Actuator relay control circuit, are present or stored, deal with these first.</p>
	<p>Conditions for applying the fault finding procedure to stored faults: If the fault is declared as present after the engine has been running for at least 5 minutes.</p>
	<p>Special note: – OBD warning light illuminated.</p>
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</p>

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

AFTER REPAIR	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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DF093 PRESENT OR STORED	<u>DOWNSTREAM OXYGEN SENSOR CIRCUIT</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
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NOTES	Priority when dealing with a number of faults: If faults DF011 Sensor feed voltage no. 1 , DF046 Battery voltage , DF601 Upstream oxygen sensor heating power circuit , DF084 Actuator relay control circuit , are present or stored, deal with these first.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after: – a road test driving smoothly after the fan assembly has been running, and ET056 Double richness loop is ACTIVE . – 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).
	Special note: – OBD warning light illuminated.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the cleanliness and condition of the downstream 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. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3GJ between components 242 and 120 . – 3GL between components 242 and 120 . If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, 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.
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DF095 PRESENT OR STORED	THROTTLE POTENTIOMETER CIRCUIT GANG 1 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.

NOTES	Priority when dealing with a number of faults: Deal with fault DF012 Sensor supply voltage no. 2 first if it is present or stored.
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present after a change in the engine speed.
	Special note: – level 1 fault warning light illuminated, – throttle valve defect mode types 1, 2 and 4 .
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the **cleanliness** of the throttle valve and that the throttle **rotates properly** (no hard 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.
Use the "Universal bornier" to check the **insulation** and **continuity** of the following connections:
– **3MP** between components **1076** and **120**.
– **3MN** between components **1076** and **120**.
– **3MO** between components **1076** and **120**.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the 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.
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DF096 PRESENT OR STORED	THROTTLE POSITION POTENTIOMETER CIRCUIT GANG 2 CO.1: Open circuit or short 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.

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

Check the **cleanliness** of the throttle valve and that the throttle **rotates properly** (no hard 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.
Use the "Universal bornier" to check the **insulation** and **continuity** of the following connections:
– **3MN** between components **1076** and **120**.
– **3MQ** between components **1076** and **120**.
– **3MO** between components **1076** and **120**.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the 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.
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DF101 PRESENT OR STORED	<u>ELECTRONIC STABILITY PROGRAM MULTIPLEX CONNECTION</u> 1.DEF: Multiplex line connection fault
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NOTES	None.
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Run a multiplex network test (see 88B, Multiplex, Interpretation of faults).

If the fault is still present, carry out fault finding on the **ABS system / Electronic Stability Program (see 38C, ABS system)**.

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

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

*SIGNAL: Signal

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

<p>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.</p>
<p>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 if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p>
<p>Disconnect the battery. Disconnect the computer. Check the cleanliness and condition of the connections. Use the "Universal bornier" to check the insulation and continuity of the following connections:</p> <ul style="list-style-type: none"> – 3FX between components 1081 and 120. – 3PD between components 1081 and 120. <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, deal with the other faults then proceed to the conformity check.</p>

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF106 PRESENT OR STORED	<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, the airbag must be removed (see MR 364 Mechanical, 88C, Airbag and pretensioner, Removal - Refitting).

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

Check the **cleanliness and condition** of the incrementing switches on 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 if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

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

If the fault is still present, 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.
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DF109 PRESENT OR STORED	<u>LOW FUEL LEVEL MISFIRING</u> 1.DEF: Destructive misfiring 2.DEF: Polluting misfiring 3.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: – fuel supply circuit: DF085 Fuel pump relay control circuit, DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit; DF028 Cylinder 3 injector control circuit DF029 Cylinder 4 injector control circuit. – combustion misfiring: DF059 Combustion misfire in cylinder 1, DF060 Combustion misfire in cylinder 2, DF061 Combustion misfire in cylinder 3, DF062 Combustion misfire in cylinder 4.
	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after starting the engine and under the following conditions: – there must be no further electrical faults, – programming must be carried out. – warm engine (coolant temperature 75°C minimum), – engine running with electrical consumers on for 15 minutes .
	Special note: – OBD warning light illuminated.

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**.

AFTER REPAIR	Ensure that all the faults have been dealt with. Do not clear the programming. To check that the system has been repaired correctly: – there must be no further electrical faults, – programming has been carried out, – the engine must be warm (minimum 75°C). – leave the engine idle with all the electrical consumers activated for 15 mins. If the fault reappears, continue the fault finding procedure.
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DF110 PRESENT OR STORED	CATALYTIC CONVERTER 1.DEF: Component in bad condition 2.DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal with the other faults first. There must be no other injection system faults, either present or stored. – combustion misfiring: DF059 Combustion misfire in cylinder 1, DF060 Combustion misfire in cylinder 2, DF061 Combustion misfire in cylinder 3, DF062 Combustion misfire in cylinder 4, in 1.DEF or 2.DEF.
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present under the following conditions: – there must be no further electrical faults, – programming done, – warm engine (coolant temperature 75°C minimum), – engine running at idling speed with all electrical consumers on for approximately 15 minutes.
	Special note: – OBD warning light illuminated.

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.

AFTER REPAIR	Deal with any faults declared 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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DF138 PRESENT OR STORED	CLUTCH PEDAL CIRCUIT 1.DEF: Component in bad condition
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is 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.
	Special note: – engine speed surges when changing gear, – in the event of a fault, before replacing any component, check using the diagnostic tool that the clutch contact is operational and that the recommended clutch pedal clearance is still valid. – In the event of CO or CC to + 12 V : 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 ET233 Clutch pedal will be DEPRESSED . – If CC to earth, status ET233 Clutch pedal is RELEASED .
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the **cleanliness, condition and fitting** 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 **condition** and **connection** of the connectors of the injection computer and clutch pedal switch.
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, check for **earth** on **connection MAM** of the switch.
If there is no **earth** on **connection MAM**, check the **insulation, continuity and the absence of resistance** on the following connection:
– **86D** between components **675** and **120**.
If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the fault is still present, check the **insulation, continuity and the absence of interference resistance** between the following connection:
– **MAM** between components **675** and **MAM**
If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

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

<p>Check that the engine speed sensor is correctly mounted and positioned (see MR 364, Mechanical, 17B, Petrol injection, Engine speed and position sensor, Removal - Refitting).</p>
<p>Check the cleanliness and condition of the engine speed sensor. Repair if necessary.</p>
<p>Disconnect the battery and the injection computer. Check the cleanliness and condition of the connections. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3BG between components 149 and 120. – 3BL between components 149 and 120. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Measure the resistance of the engine speed sensor between connections 3BG and 3BL. Replace the engine speed sensor if the resistance is not between 235 Ω ± 60 Ω at 20°C.</p>
<p>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.</p>

AFTER REPAIR	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. 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. foot 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.

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

<p>Check that the pedal mechanism has not seized.</p>
<p>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.</p>
<p>Use the "Universal bornier" to 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. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>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 kΩ ± 0.9 kΩ. If necessary replace the sensor.</p>
<p>If the fault is still present, contact your Techline.</p>

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

<p>Check that the pedal mechanism has not seized.</p>
<p>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.</p>
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3LU between components 921 and 120. – 3LW between components 921 and 120. – 3LV between components 921 and 120. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>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 kΩ ± 2.05 kΩ. If necessary replace the sensor.</p>
<p>If the fault is still present, contact your Techline.</p>

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

<p>Check:</p> <ul style="list-style-type: none">– the consistency of status ET039 Brake pedal (DEPRESSED/RELEASED) when depressing and releasing the pedal.– the condition and cleanliness of the brake lights switch. <p>Disconnect the battery and the injection computer, check the condition and cleanliness of the connections. Check the insulation and continuity of the following connection:</p> <ul style="list-style-type: none">– 5A between components 160 and 120. <p>If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p>
<p>Run a multiplex network test (see 88B, Multiplex).</p>
<p>If the fault is still present, run fault finding on the UCH system (see 87B, Passenger compartment connection unit).</p> <p>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).</p>

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

Check **cleanliness** and **condition** of the refrigerant pressure sensor and its connections.

Disconnect the battery and the injection computer.

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

Use the "Universal bornier" to check the **insulation** and **continuity** of the following connections:

- **38Y** between components **1202** and **120**.
- **38X** between components **1202** and **120**.
- **38U** between components **1202** and **120**.

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

If the fault is still present, 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.
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DF361 PRESENT OR STORED	<p>CYLINDER 1 - 4 IGNITION COIL CIRCUIT 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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NOTES	<p>Priority when dealing with a number of faults: Deal with faults DF046 Battery voltage, DF084 Actuator relay control circuit or DF085 Fuel pump relay control circuit first whether they are present or stored.</p>
	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present with the engine running for 4 seconds at 600 rpm or 0.4 seconds at 6000 rpm.</p>
	<p>Special note: – OBD warning light illuminated, – level 1 fault warning light illuminated, CC.0: The coil is continuously supplied, risk of destruction CC.1: The coil is not supplied, injection cut-off on cylinders 1 and 4, destruction of the catalytic converter possible and prevention of OBD fault finding.</p>
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</p>

<p>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 (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</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 (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3CV between components 1077 and 120. – 3CZ between components 1077 and 1080. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. If the fault is still present, replace the defective pencil coil.</p>

AFTER REPAIR	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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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 **MN** connector 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 if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

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.

Check the ignition coils using tool **Elé.1808** (see **Technical Note 6505, Ignition coils on K4 and F4 engines**)

AFTER REPAIR

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

DF362 PRESENT OR STORED	<p><u>CYLINDER 2 - 3 IGNITION COIL CIRCUIT</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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NOTES	<p>Priority when dealing with a number of faults: Deal with faults DF046 Battery voltage, DF084 Actuator relay control circuit or DF085 Fuel pump relay control circuit first whether they are present or stored.</p>
	<p>Conditions for applying the fault finding procedure to stored faults: The fault is present with the engine running for 4 seconds at 600 rpm or 0.4 seconds at 6000 rpm.</p>
	<p>Special note: – the OBD warning light is lit, – level 1 fault warning light illuminated. CC.0: The coil is continuously supplied, risk of destruction CC.1: The coil is not supplied, injection cut-off on cylinders 2 and 3, destruction of the catalytic converter possible and inhibition of OBD fault finding.</p>
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</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 (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</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 (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3CV between components 1078 and 120. – 3CP between components 1079 and 1078. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. If the fault is still present, replace the defective pencil coil.</p>

AFTER REPAIR	<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 the **MN connector** 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 **1079** and **1337**.

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

Reconnect the Protection and Switching Unit connector.

If, with the ignition on, there is still no **+ 12 V** on the connector of the cylinder 3 coil, there is a fault in 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.

Check the ignition coils using tool **Elé.1808** (see **Technical Note 6505, Ignition coils on K4 and F4 engines**).

AFTER REPAIR

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

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

Check the **cleanliness, condition and fitting** of the fuel vapour absorber.
Check the **connections and correct 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 Mechanical, 13A, Fuel supply, Petrol supply circuit**).

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.
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DF410 PRESENT OR STORED	<u>INSTRUMENT PANEL CONNECTION</u> 1.DEF: Multiplex line connection fault
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NOTES	Special note: <ul style="list-style-type: none">– Cruise control/Speed limiter deactivated.– OBD warning light not illuminated when ignition switched on.
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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**).

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

AFTER REPAIR	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 correct fuel is being used.

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 Mechanical, 13A, Fuel supply, Petrol supply circuit**),
- check the entire ignition system (see **MR 364, Mechanical, 17A, Ignition**),
- check the hydraulic tappets if there is camshaft noise (see **MR 364 Mechanical, 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.

DF455 PRESENT OR STORED	<u>LOW FUEL LEVEL SIGNAL</u> 1.DEF: Multiplex network 2.DEF: Non-compliance with emission control standards
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NOTES	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**).

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

Check the cleanliness and condition of the engine 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: <ul style="list-style-type: none">– 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. foot 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.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF549 PRESENT OR STORED	CANISTER BLEED CIRCUIT 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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NOTES	Priority when dealing with a number of faults: Apply the procedure for dealing with faults DF046 Battery voltage or DF084 Actuators relay control circuit first if they are present or stored.
	Use the Wiring Diagrams Technical Note for the Mégane II.

CO CC1	NOTES	Special note: – the valve remains jammed shut and there is a smell of petrol, – the OBD warning light is lit.
CC.0		Special note: The valve remains jammed open : bucking when driving, risk of stalling and restarting difficult.
1.DEF		Special note: None.

Check that fuse BF37 (30A) is in good condition and working correctly. Repair if necessary.
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 fuel vapour absorber bleed solenoid valve. Replace the fuel vapour absorber bleed solenoid valve if the resistance is not 26 Ω ± 4 Ω ατ 23]X .

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF549
CONTINUED**

With the ignition on, check for + 12 V on connection **3FB2** of the fuel vapour absorber bleed solenoid valve connector.

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

- **3FB2** between components **371** and **120**.
- **3FB2** between components **1337** and **371**.

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

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:

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

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

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.

DF601 PRESENT OR STORED	<p>UPSTREAM O2 SENSOR HEATING POWER CIRCUIT 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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NOTES	<p>Priority when dealing with a number of faults: Deal with faults DF046 Battery voltage or DF084 Actuator relay control circuit first if they are present or stored.</p>
	<p>Conditions for applying the fault finding procedure to stored faults: The fault is present after a delay of 10 seconds with the engine running or when command AC018 Upstream O2 sensor heating is activated.</p>
	<p>Special note: – OBD warning light illuminated. CO/CC1: Upstream O2 sensor heating no longer working. CO.1: Upstream O2 sensor heating on permanently as soon as the ignition is switched on: risk of irreparable damage to the sensor.</p>
	<p>Use the Wiring Diagrams Technical Note for the Mégane II.</p>

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

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

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

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

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

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

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

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

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

1.DEF	NOTES	Special note: – defect mode types 3 and 4 : 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 6-track connector for the accelerator pedal potentiometer. 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 the connection and condition of computer connector A . 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.

AFTER REPAIR	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.

Use the "Universal bornier" to 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 connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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 Ω \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 Ω \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.

DF884 PRESENT OR STORED	<u>ADDITIONAL FUEL CIRCUIT PUMP RELAY</u> CO: Open circuit CO.0 : Open circuit or short circuit to earth. CC.1: Short circuit to +12 volts
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after starting from cold (using the Hi-Flex system) or when running command AC224 Additional petrol circuit pump relay .
	Special note: Status ET670 Additional fuel pump relay ctrl* may help deal with this fault.
	Only for Flex fuel.
	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 cleanliness and condition of the injection computer connections. Check the cleanliness and condition of the connections of the additional petrol pump relay connector. 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.</p> <p>Disconnect connector MT1 of the Protection and Switching Unit. Check the cleanliness and condition of its connections. Using the Universal bornier, check the insulation and continuity on the following connection: – 3FB2 between components 1337 and 120. If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p>
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AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF884 CONTINUED	
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IF THE PUMP DOES NOT OPERATE	<p>Disconnect connector CN of the Protection and Switching Unit. 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 no + 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 if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p> <p>If the fault is still present, carry out fault finding on the Protection and Switching Unit system (see 87G, Engine interconnection unit).</p> <p>If the fault is still present, contact the Techline.</p>
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*ctrl: control

AFTER REPAIR	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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DF894 PRESENT OR STORED	ADDITIONAL FUEL CIRCUIT SOLENOID VALVE CO: Open circuit CO.0: Open circuit or short circuit to earth. CC.1: short-circuit to + 12 V
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after starting from cold (using the Hi-Flex system) or when running command AC217 Additional petrol circuit solenoid valve .
	Only for Flex fuel.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the **cleanliness** and the **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** 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 petrol circuit solenoid valve connector.

Use the "Universal bornier" to check the **insulation** and **continuity** of the following connections:

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

– **3FB2** between components **1640** and **1337**.

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

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

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.
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DF1067 PRESENT OR STORED	AFTER-SALES TOOTH SIGNAL SENSOR CIRCUIT. 1.DEF: Tooth lost.
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is declared present after the engine has been started.
	Special note: This fault has been added to allow the After-Sales department to detect the possible cause of engine jerking. Fault DF154 Flywheel signal sensor circuit is used to manage the defect modes related 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 DF154 Flywheel signal sensor circuit and DF1067 After-Sales tooth signal sensor circuit with 1.DEF or 2.DEF Tooth lost correspond to the same fault but with a different function.
	Use the Wiring Diagrams Technical Note for the Mégane II.

Check the cleanliness and condition of the engine speed 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.
Measure the resistance of the engine speed sensor between connections 3BG and 3BL . Replace the engine speed sensor if the resistance is not between 235 Ω ± 60 Ω at 20°C .
Check the cleanliness and condition of connector B of the injection computer. 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. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3BG between components 149 and 120 . – 3BL between components 149 and 120 . If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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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. foot 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	<u>AIR CONDITIONING COMPRESSOR STICKING</u>
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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.
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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, 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 .
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NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
The values shown in this conformity check are given as a guide.
Application condition: 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	In the event of a fault, apply the interpretation of DF046 Battery voltage .
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 for DF091 Vehicle speed signal .
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. WITHOUT
7	Faults	PR105: OBD fault warning light lit mileage counter	Indicates the mileage covered with the OBD warning light lit.	WITHOUT
8		PR106: Mileage counter fault warning light lit	Shows the distance covered with the warning light lit.	
9	Flex fuel	ET652: Configuration "HI-FLEX"	YES	In the event of a fault, apply the interpretation of ET652 HI-FLEX configuration .
10		ET671: Programming the level of alcohol	COMPLETED	In the event of a fault, apply the interpretation of ET671 Alcohol level programming .
11	E85 Flex fuel	PR743: Alcohol level estimated in the tank	100%	In the event of a fault, apply the interpretation of PR743 Estimated alcohol level in tank .

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
The values shown in this conformity check are given as a guide.
Application condition: Engine off, ignition on.

SUB FUNCTION: SUB-FUNCTION (TURBOCHARGING/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 PR035 = PR312 = local atmospheric pressure , with the engine stopped and ignition on.
2		PR312: Inlet manifold vacuum	PR312 = 1000 mbar ± 100	If there is a fault, apply the interpretation of PR312 Manifold pressure .
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.	If there is a fault, apply the interpretation of DF002 Air temperature sensor circuit .
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.	If there is a fault, apply the interpretation of DF001 Coolant temperature sensor circuit .
5	Engine speed	PR055: Engine speed	Shows the engine's speed of rotation in RPM PR055 = 0 rpm	If there is a fault, apply the interpretation of DF154 Flywheel signal sensor circuit .
6	Idle speed	ET054: Idle speed regulation	INACTIVE	None
7		PR010: Idle speed regulation setting	700 < X < 750 rpm Indicates the rotation speed 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 faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
 The values shown in this conformity check are given as a guide.
Application condition: 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	Shows the engine's speed of rotation in RPM PR055 = 0 rpm	If there is a fault, apply the interpretation of DF154 Flywheel signal sensor circuit.
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	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide. Application condition: Engine off, ignition on.</p>
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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 idling and warm, and no electrical consumers (electrical windscreen, air conditioning, GMV, power steering) have been selected. Therefore it adjusts slowly.	WITHOUT
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 idling speed setting. The motorised throttle opening ratio required to adhere to the engine speed setpoint is then given by parameter PR091 .	
7		PR444: Integral idle speed regulation correction.		

OCR*: Opening Cyclic Ratio

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
The values shown in this conformity check are given as a guide.
Application condition: 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 to obtain a fuel mixture as close as possible to a richness of 1. The richness correction value varies around 50 between 0 and 100. $0\% < PR138 < 100\%$	WITHOUT
9		ET300: Richness regulation	INACTIVE	WITHOUT
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.	WITHOUT
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 μ 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	If ACTIVE, apply the interpretation of DF085 Fuel pump relay control circuit (when the + after ignition feed is switched on, the pump control circuit is ACTIVE for 1 second then becomes INACTIVE).
15		AC211: Fuel pump	The petrol pump should run.	In the event of a fault, apply the interpretation of DF085, Petrol pump relay control circuit.

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
The values shown in this conformity check are given as a guide.
Application condition: 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	ET652: Configuration "HI-FLEX"	YES	If NO , apply the interpretation of ET652 .
17		ET671: Programming the level of alcohol	NOT COMPLETED	In the event of a fault, apply the interpretation of ET671 .
18	Flex fuel / E85	PR743: Alcohol level estimated in the tank	0 % < PR743 < 100 %	In the event of a fault, apply the interpretation of PR743 .
19	Flex fuel	PR748: Injection duration correction	0%	In the event of a fault, apply the interpretation of PR748 .
20		ET670: Additional petrol pump relay ctrl*	INACTIVE	In the event of a fault, apply the interpretation of ET670 .
21		PR742: Additional petrol circuit SV* OCR*	0%	In the event of a fault, apply the interpretation of PR742 .
22		AC217: Additional fuel circuit solenoid valve	You should be able to hear the additional petrol circuit solenoid valve working.	If there is a fault, apply the interpretation of DF894 Additional petrol circuit solenoid valve .
23		AC224: Additional fuel circuit pump relay	The additional petrol pump should be running.	If there is a fault, apply the interpretation of DF884 Additional petrol pump relay .

*CTRL: control.

*OCR = Opening Cyclic Ratio.

*SV: Solenoid valve.

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
 The values shown in this conformity check are given as a guide.
Application condition: 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 PR098.
2	Canister	ET050: Canister bleed control	INACTIVE	In the event of a fault, apply the interpretation of DF549 Canister bleed circuit.
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 DF601 Upstream oxygen sensor heating power circ*.
5	Richness	ET300: Richness regulation	INACTIVE	WITHOUT
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 DF549 Canister bleed circuit.
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 DF601 Upstream oxygen sensor heating power circuit.

*OCR: Opening Cycle Ratio.

NOTES	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide.</p> <p>Application condition: Engine off, ignition on.</p>
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DRIVER PARAMETERS SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding	
1	Motorised throttle	ET051: Throttle stop programming	COMPLETED	<p>Run command RZ005 programming. If the parameters and statuses are still incorrect, contact the Techline.</p>	
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%		If there is a fault, apply the interpretation of DF095 Throttle potentiometer circuit gang 1.
9		PR119: Measured throttle position gang 2	No load ≈ 15% Full load ≈ 60% Default value: 100%		If there is a fault, apply the interpretation of DF096 Throttle potentiometer circuit gang 2.
10	Accelerator pedal and motorised throttle	ET075: Pedal released and throttle closed	YES	<p>If NO, apply the interpretation for PR030 Accelerator pedal position followed by the interpretation for fault DF079 Motorised throttle valve servo control.</p>	

* mot: motorised

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
The values shown in this conformity check are given as a guide.
Application condition: 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	If there is 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 1 and 2.
16		PR568: Pedal position gang 1	Approximately 16 % Safety 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	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide. Application condition: Engine off, ignition on.</p>
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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 faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .
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 faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .
27		PR113: Throttle lower stop after applying. offset	PR113 ≈ 10%	
28	Motorised throttle	ET0564: Type 1 defect mode	NO	WITHOUT
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.	

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
The values shown in this conformity check are given as a guide.
Application condition: 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	WITHOUT
1	Cylinder recognition	ET061: Cylinder 1 recognition	NOT PERFORMED COMPLETED	In the event of a fault, apply the interpretation of status ET061 Cylinder no. 1 recognition.
2	Engine speed	PR055: Engine speed	Shows the engine's speed of rotation in rpm. PR055 = 0 rpm	If there is a fault, apply the interpretation of DF154 Flywheel signal sensor circuit.
3	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1	STATUS 1: Flywheel target fault. WITHOUT
4	Flywheel signal	ET062: Flywheel signal	NOT DETECTED	In the event of a fault, apply the interpretation of status ET062 Flywheel signal.
5	Ignition	PR448: Ignition advance	PR448 = 0 °V	WITHOUT
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	
9	Combustion misfire	ET057: Misfiring on cylinder 1	NO	In the event of a fault, apply the interpretation of faults 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.
10		ET058: Misfiring on cylinder 2	NO	
11		ET059: Misfiring on cylinder 3	NO	
12		ET060: Misfiring on cylinder 4	NO	

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool. The values shown in this conformity check are given as a guide.
Application condition: 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	<p>States whether the vehicle is fitted with air conditioning or not. YES: Air conditioning is detected by the injection computer. NO: Air conditioning is not detected by the injection computer.</p>	<p>If inconsistent with the vehicle equipment, carry out a multiplex network test and apply the relevant procedure. (see 88B, Multiplexing)</p> <p>WITHOUT</p>
2		ET018: Air conditioning request	<p>PRESENT ABSENT</p>	
3		ET088: Compressor actuation request	<p>The injection requests the UCH (via the multiplex network) to start the compressor. ACTIVE: 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.). INACTIVE: One of the above conditions has not been met.</p>	
4		ET004: Air conditioning authorisation	<p>YES NO</p>	
5	Idle speed	ET023: Fast idle speed request	<p>UCH requests the injection system to increase the idling speed. INACTIVE: The UCH has not formulated a request. ACTIVE: The UCH has formulated a request.</p>	<p>If ET023 is inconsistent, run a multiplex network test using the diagnostic tool; then if the test is in order, consult the UCH.</p>

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool. The values shown in this conformity check are given as a guide.
Application condition: 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 for DF154 Flywheel signal sensor circuit .
7	Air conditioning	PR037: Refrigerant pressure	2 bar < PR037 < 35 bar Default value: 0 bar	If 1.DEF, apply interpretation of PR037 Refrigerant pressure .
8		ET674: Refrigerant pressure status	CORRECT TOO LOW	
9		PR125: Power used by the AC compressor	PR125 = 300 W	WITHOUT
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 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	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. ACTIVE INACTIVE	In the event of a fault, run a multiplex network test using the diagnostic tool then, if the test is in order, consult the Protection and Switching Unit .
13		ET021: High speed fan assembly request	If the coolant temperature reaches 102°C, the high-speed fan assembly is activated, and is shut down at 99°C. ACTIVE INACTIVE	

NOTES	<p>Only perform this conformity check after a complete check with the diagnostic tool. The values shown in this conformity check are given as a guide. Application conditions: Engine stopped, ignition on.</p>
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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	NOT DETECTED INACTIVE CRUISE CONTROL SPEED LIMITER	In the event of a fault, use the interpretation of ET042 Cruise control/ Speed limiter.
2		ET703: Cruise control/ speed limiter buttons	INACTIVE DECREASE INCREASE SUSPEND RESUME	In the event of a fault, apply the interpretation of ET703 Cruise control/ speed limiter buttons.
3	Brake pedal switch	ET704: Brake switch no. 1 ET705: Brake contact no. 2	ACTIVE INACTIVE	In the event of a fault, apply the interpretation of statuses ET704 Brake contact no.1 and ET705 Brake contact no.2.
4	Clutch pedal switch	ET405: Clutch pedal switch	Indicates recognition of clutch pedal contacts. INACTIVE: Clutch pedal released. ACTIVE: Clutch pedal depressed. If the vehicle is fitted with automatic transmission, ET405 must be ACTIVE	In the event of a fault, apply the interpretation of ET405.
5	Cruise control/ Speed limiter	ET415: Deactivation of cruise control/speed limiter	WITHOUT STATUS 1: Traction control request STATUS 2: Brake pedal depressed STATUS 3: Clutch pedal depressed STATUS 4: Suspend button pressed STATUS 5: Cruise control or speed limiter monitoring STATUS 6: Gear lever in neutral (manual gearbox) or neutral position (automatic transmission) STATUS 7: Inconsistency between the request and the vehicle speed STATUS 8: Automatic transmission in defect mode STATUS 9: Vehicle speed monitoring STATUS 10: Injection computer monitoring	In the event of a fault, apply the interpretation of ET415.

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool.
 The values shown in this conformity check are given as a guide.
Application condition: Engine off, ignition on.

STARTING SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	Engine	ET038: Engine	STOPPED	WITHOUT
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 INACTIVE , apply the interpretation of DF084 Actuator relay control circuit .
4	Battery voltage	PR074: Battery voltage	11 V < PR074 < 15 V	If there is a fault, apply the interpretation of DF046 Battery voltage .

NOTES

Only carry out this conformity check after a **complete check** using the diagnostic tool. The values shown in this conformity check are given as a guide.
Application condition: 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. PROGRAMMED: Code programmed NOT PROGRAMMED: 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. INACTIVE	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	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).

NOTES

Only carry out this conformity check after a **complete check** using 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 DF046 Battery voltage .
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 DF091 Vehicle speed signal .
4	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1	STATUS 1: Flywheel target fault. WITHOUT
5	Motorised throttle	ET051: Throttle stop programming	COMPLETED	Run command RZ019 Reinitialise programming. 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.	WITHOUT
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 DF650 Accelerator pedal position signal .
9	Flex fuel	ET652: HI-FLEX configuration	YES	In the event of a fault, apply the interpretation of ET652 HI-FLEX configuration .
10		ET671: Programming the level of alcohol	COMPLETED	In the event of a fault, apply the interpretation of ET671 Alcohol level programming .
11	Flex fuel / E85	PR743: Alcohol level estimated in the tank	0 % < PR743 < 100 %	In the event of a fault, apply the interpretation of PR743 Estimated alcohol level in tank .

NOTES	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide.</p> <p>Application conditions: Engine warm at idle speed.</p>
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SUB FUNCTION: SUB-FUNCTION (TURBOCHARGING/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	In the event of an inconsistency, check PR035 = PR312 = Local atmospheric pressure , with the engine stopped and ignition on. If there is a fault, apply the interpretation of PR312 Manifold pressure .
2		PR312: Inlet manifold vacuum	240 mb < PR312 < 410 mb	
3	Engine speed	PR055: Engine speed	Shows the engine's speed of rotation in RPM PR055 = 0 rpm	If there is a fault, apply the interpretation of DF154 Flywheel signal sensor circuit .
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	If there is a fault, apply the interpretation of DF002 Air temperature sensor circuit .
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	If there is a fault, apply the interpretation of DF001 Coolant temperature sensor circuit .
8	Air flow	PR018: Estimated air flow	Indicates the air flow value estimated by the motorised throttle valve. ≈ 9 kg/h	In the event of a fault, apply the interpretation of faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .

NOTES

Only carry out this conformity check after a **complete check** using 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 for DF154 Flywheel signal sensor circuit.
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 for DF154 Flywheel signal sensor circuit.
3	Idle speed	ET054: Idle speed regulation	ACTIVE	WITHOUT
4		PR010: Idle speed regulation setting	700 < X < 750 rpm Indicates the rotational speed setpoint in rpm.	None

NOTES	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide.</p> <p>Application conditions: Engine warm at idle speed.</p>
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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	PR090 ≈ 0% 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 idling and warm, and no electrical consumers (electrical windscreen, air conditioning, GMV, power steering) have been selected. Therefore it adjusts slowly.	WITHOUT
6		PR091: OCR* Theoretical idle speed regulation	5% < PR091 < 50% When the conditions for regulation are met, the idle regulator continually repositions the motorised throttle to keep the engine speed at the idling speed setting. The motorised throttle opening ratio required to adhere to the engine speed setpoint is then given by parameter PR091 .	
7		PR444: Idle speed regulation integral correction		

*ocr = opening cyclic ratio

NOTES

Only carry out this conformity check after a **complete check** using 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 to obtain a fuel mixture as close as possible to a richness of 1. The richness correction value varies around 50 between 0 and 100. 0 < PR138 < 100%	WITHOUT
8		ET300: Richness regulation	ACTIVE INACTIVE	
9	Richness	PR144: Self-adapting richness offset	PR624 ≈ 50% This parameter is used to detect any tendency of the injection system to increase or decrease the richness.	WITHOUT
10		PR143: Self-adapting richness gain	PR625 ≈ 50% This parameter is used to detect any tendency of the injection system to increase or decrease the richness.	
11	Injection	PR101: Duration of injection	At idle speed 2.4 μs < PR101 < 4.3 μs	
12	Fuel consumption	PR103: Instantaneous fuel consumption	0 l/h < PR103 < 50 l/h	
13	Fuel pump	ET047: Fuel pump control circuit	ACTIVE	If INACTIVE , apply the interpretation for DF085 Fuel pump relay control circuit .
14		AC211: Fuel pump	The petrol pump should run.	In the event of a fault, apply the interpretation of DF085 Fuel pump relay control circuit .

NOTES	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide.</p> <p>Application conditions: Engine warm at idle speed.</p>
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FUEL CIRCUIT SUB-FUNCTION: CONTINUED 3

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

* CTRL: Control.

* OCR = Opening Cycle Ratio.

* SV: SOLENOID VALVE.

NOTES

Only carry out this conformity check after a **complete check** using 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	If there is a fault, apply the interpretation of PR098 Upstream oxygen sensor voltage .
2	Canister	ET050: Canister bleed control	INACTIVE	If there is a fault, apply the interpretation of DF549 Canister bleed circuit .
3		PR102: Canister bleed solenoid valve OCR*	0% < PR102 < 100%	
4	Oxygen sensor	ET052: Circ*. upstream oxygen sensor heating	INACTIVE	If there is a fault, apply the interpretation of DF601 Upstream oxygen sensor heating power circuit .
5	Richness	ET300: Richness regulation	ACTIVE INACTIVE	WITHOUT
6	Canister	AC017: Canister bleed solenoid valve	The canister bleed solenoid valve should be heard running.	If there is a fault, apply the interpretation of DF549 Canister bleed circuit .
7	Oxygen sensor	AC018: Upstream O2 sensor heating	The upstream oxygen sensor should heat up.	If there is a fault, apply the interpretation of DF601 Upstream oxygen sensor heating power circuit .

* Circ: circuit

* OCR = Opening Cycle Ratio.

NOTES

Only carry out this conformity check after a **complete check** using 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	<p>Run command RZ005 programming. If the parameters or statuses are not correct, contact the Techline.</p>	
2		PR082: 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 valve position	5% < PR096 < 25%		
8		PR118: Measured throttle position gang 1	PR118 ≈ 12%		<p>If there is a fault, apply the interpretation of DF095 Throttle potentiometer circuit gang 1.</p>
9		PR119: Measured throttle position gang 2	PR119 ≈ 12 %		<p>If there is a fault, apply the interpretation of DF096 Throttle potentiometer circuit gang 2.</p>
10	Accelerator pedal and motorised throttle	ET075: Pedal released and throttle closed	YES	<p>If NO, apply the interpretation of PR030 Accelerator pedal position, then the interpretation of ET082 Motorised throttle position.</p>	

*mot: motorised

NOTES	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide.</p> <p>Application conditions: Engine warm at idle speed.</p>
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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 RZ019 Reinitialise programming. If the parameters or statuses are still not correct, contact the Techline.
12		PR593: Motorised throttle in safe mode gang 1	PR593 ≈ 1 V	
13		PR594: Motorised throttle in safe mode gang 2	PR594 ≈ 1 V	
14	Accelerator pedal	ET081: Accelerator pedal position	No load Full load: Intermediate full load	If there is 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 DF008 and DF009 Pedal potentiometer circuit gang 1 and gang 2 , then DF011 and DF012 Sensor supply voltage no.1 and no.2.
16		PR568: Pedal position gang 1	PR568 ≈ 16%. Safety 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	PR569 ≈ 16% Default 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 RZ019 Reinitialise programming. If the parameters are still not correct, contact the Techline.

NOTES

Only carry out this conformity check after a **complete check** using 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

NOTES

Only carry out this conformity check after a **complete check** using 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	WITHOUT
1	Cylinder recognition	ET061: Cylinder 1 recognition	NOT PERFORMED COMPLETED	In the event of a fault, apply the interpretation of ET061 Cylinder 1 recognition .
2	Engine speed	PR055: Engine speed	Shows the speed of rotation in rpm. 700 rpm < PR055 < 800 rpm	If there is a fault, apply the interpretation of DF154 Flywheel signal sensor circuit .
3	Flywheel target	ET089: Flywheel target programming	NOT COMPLETED COMPLETED STATUS 1: Flywheel target fault.	WITHOUT
4	Flywheel	ET062: Flywheel signal	DETECTED	In the event of a fault, apply the interpretation of ET062 Flywheel signal .
5	Ignition	PR448: Ignition advance	- 23.6 °V < PR448 < 72 °V	WITHOUT
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	
9	Combustion misfire	ET057: Misfiring on cylinder 1	NO	In the event of a fault, apply the interpretation of faults 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 .
10		ET058: Misfiring on cylinder 2	NO	
11		ET059: Misfiring on cylinder 3	NO	
12		ET060: Misfiring on cylinder 4	NO	

NOTES

Only carry out this conformity check after a **complete check** using 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. YES: Air conditioning is detected by the injection computer. NO: 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	PRESENT ABSENT	WITHOUT
3		ET004: Air conditioning authorisation	YES NO	
4		ET088: Compressor actuation request	The injection computer sends the UCH computer a compressor activation request (via the multiplex network). ACTIVE: The multiplex network must not be faulty. 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.). INACTIVE: If one of the above conditions has not been fulfilled.	
5		ET023: Fast idle speed request	UCH requests the injection system to increase the idling speed. INACTIVE: The UCH has not formulated a request. ACTIVE: 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).

NOTES

Only carry out this conformity check after a **complete check** using 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 for DF154 Flywheel signal sensor circuit.
7	Air conditioning	PR037: Refrigerant pressure	2 bar < PR037 < 35 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 air conditioning compressor	0 < PR125 < 300 W	WITHOUT
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	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. ACTIVE INACTIVE	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. ACTIVE INACTIVE	

NOTES

Only carry out this conformity check after a **complete check** using 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	NOT DETECTED INACTIVE CRUISE CONTROL SPEED LIMITER	In the event of a fault, use the interpretation of ET042 Cruise control/Speed limiter .
2		ET703: Cruise control/speed limiter buttons	INACTIVE DECREASE INCREASE SUSPEND RESUME	In the event of a fault, apply the interpretation of ET703 Cruise control/speed limiter buttons .
3	Brake pedal switch	ET704: Brake switch no. 1 ET705: Brake contact no. 2	ACTIVE INACTIVE	In the event of a fault, apply the interpretation of statuses ET704 Brake contact no. 1 and ET705 Brake contact no. 2 .
4	Clutch pedal switch	ET405: Clutch pedal switch	Indicates recognition of clutch pedal contacts. INACTIVE: Clutch pedal released. ACTIVE: Clutch pedal depressed. If the vehicle is fitted with an automatic transmission, ET405 should be ACTIVE .	In the event of a fault, apply the interpretation of ET405 Clutch pedal switch .
5	Cruise control/ Speed limiter	ET415: Deactivation of cruise control/speed limiter	WITHOUT STATUS 1: Traction control request STATUS 2: Brake pedal depressed STATUS 3: Clutch pedal depressed STATUS 4: Suspend button pressed STATUS 5: Cruise control or speed limiter monitoring STATUS 6: Gear lever in neutral (manual gearbox) or neutral position (automatic transmission) STATUS 7: Inconsistency between the request and the vehicle speed STATUS 8: Automatic transmission in defect mode STATUS 9: Vehicle speed monitoring STATUS 10: Monitoring by injection computer	In the event of a fault, apply the interpretation of ET415 Cruise control/speed limiter deactivation .

NOTES	<p>Only carry out this conformity check after a complete check using the diagnostic tool. The values shown in this conformity check are given as a guide. Application conditions: Engine warm at idle speed.</p>
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STARTING SUB-FUNCTION:

Order	Function	Parameter, Status checked or Action	Display and notes	Fault finding
1	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).
2	Actuator relay control	ET048: Actuator relay control	ACTIVE	If INACTIVE , apply the interpretation of DF084 Actuator relay control circuit .
3	Battery voltage	PR074: Battery voltage	11 V < PR074 < 15 V	If there is a fault, apply the interpretation of DF046 Battery voltage .
4	Impact signal	ET077: Impact detected	NO	In the event of a fault, carry out a multiplex network test using the diagnostic tool (see 88B, Multiplex) then, if the test is in order, run fault finding on the airbag computer (see Electrical equipment, 88C Airbags and pretensioners).

NOTES

Only carry out this conformity check after a **complete check** using 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 88B Multiplex) then if the test is in order, carry out fault finding on the airbag computer (see 88C Airbag).
2	Code programmed	ET006: Code programmed	Indicates whether or not the immobiliser code has been programmed by the computer. PROGRAMMED: Code programmed NOT PROGRAMMED: 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. INACTIVE	If ET003 is inconsistent, run a multiplex network test using the diagnostic tool (see 88B, Multiplex) then if the test is in order, carry out fault finding on the UCH (see 87B, Passenger compartment connection unit).
4	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).

Tool status	Diagnostic tool title
ET001	Computer + After ignition
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

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 misfire
ET556	Driver deactivation of the cruise control/speed limiter
ET557	Cruise control/speed limiter deactivation by 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	"HI-FLEX" configuration (only for Flex Fuel)
ET670	Additional petrol pump relay ctrl (only for Flex fuel)
ET671	Alcohol level programming (only for Flex Fuel)
ET674	Refrigerant pressure
ET703	Cruise control/speed limiter buttons
ET704	Brake switch No. 1
ET705	Brake switch No. 2

*RCH: heating resistor

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

NOT DETECTED	<p>If the vehicle is not fitted with cruise control - speed limiter function buttons, status ET042 is permanently NOT DETECTED. 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 function buttons, the main switch is in rest (or neutral) position and the injection computer has just been programmed or reprogrammed, then status ET042 is NOT DETECTED.</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 ET042: the tool displays INACTIVE.</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 ET042. If ET042 is INACTIVE, the injection computer has detected the various positions of the main switch. The cruise control/speed limiter is active.</p> <p>2 - If ET042 is NOT DETECTED, 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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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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**ET042
CONTINUED 1**

INACTIVE

When the main switch is in the 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 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 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: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

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

**ET042
CONTINUED 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 procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

AFTER REPAIR

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

ET042 CONTINUED 3	
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**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 even though the cruise control button is pressed, 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 procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET052	<u>UPSTREAM O2 SENSOR HEATING</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.

<p>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.</p>
<p>With the ignition on, check for + 12 V on connection 3FB2 of the upstream oxygen sensor. If no + 12 V:</p> <ul style="list-style-type: none"> – 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 the continuity on the following connection: – 3FB2 between components 887 and 1337. <p>Reconnect the Protection and Switching Unit connector and reconnect the battery. With the ignition on, if there is still no + 12 V on the upstream oxygen sensor connector, there is a fault in the Protection and Switching Unit. Contact the Techline.</p>
<p>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:</p> <ul style="list-style-type: none"> – 3GF between components 887 and 120. <p>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.</p>
<p>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 or 20 Ω.</p>
<p>If the fault is still present, replace the upstream oxygen sensor.</p>

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

IDLING SPEED TOO HIGH	<p>Check:</p> <ul style="list-style-type: none"> – engine oil level (too high => oil combustion), – that the restrictions are present in the oil vapour rebreathing circuit, – 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 sealing between the inlet manifold and cylinder head, – the oil vapour recovery circuit sealing between the inlet manifold and cylinder head, – the fuel pressure and flow (see MR 364 Mechanical, 17B, Petrol injection), – the condition and cleanliness of the injectors, – the cylinder compression's, – the timing adjustment, – the hydraulic tappets if there is camshaft noise (see MR 364 Mechanical, 11A, Top and front of engine). <p>Repair the defective component if necessary.</p>
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AFTER REPAIR	Repeat the conformity check from the start.
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ET061	CYLINDER 1 RECOGNITION COMPLETED NOT PERFORMED STATUS 1: Flywheel target fault.
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NOTES	Special notes: Carry out the checks only if the COMPLETED and NOT COMPLETED 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 flywheel target (see **Configuration and programming**).

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

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

<p>Check the mounting and positioning of the TDC sensor (see MR 364 Mechanical, 11A, Top and front of engine).</p> <p>Repair if necessary.</p>
<p>Check the cleanliness and condition 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 Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Disconnect the battery and the injection computer.</p> <p>Check the cleanliness and condition of the connections.</p> <p>Using the Universal bornier, check the insulation and continuity of the following connections:</p> <ul style="list-style-type: none"> – 3BG between components 149 and 120. – 3BL between components 149 and 120. <p>If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Measure the resistance of the TDC sensor between connections 3BG and 3BL.</p> <p>Replace the TDC sensor if the resistance is not between 200 and 270 Ω at 23°C.</p>
<p>If the sensor has been replaced, reset the flywheel signal programming.</p> <p>Carrying out the flywheel target programming:</p> <ul style="list-style-type: none"> – 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. foot off the brake, accelerator and clutch pedals) between 2400 and 2000 rpm in 3rd gear. <p>After the operation, check that status ET089 Flywheel target programming is COMPLETED.</p>

AFTER REPAIR	Repeat the conformity check from the start.
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ET405	<u>CLUTCH PEDAL SWITCH</u>
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NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions.
	Use the Wiring Diagrams Technical Note for the Mégane II.

ACTIVE	Check the condition and fitting of the clutch pedal switch. Remove the clutch pedal switch, and check the insulation between connections MAM and 86D in rest position. Restart this operation with the switch pressed and check the continuity between connections MAM and 86D . If these two checks are not in order, replace the switch.
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INACTIVE	Check the condition and fitting of the clutch pedal switch. Remove the clutch pedal switch, and check the insulation between connections MAM and 86D in rest position. Restart this operation with the switch pressed and check the continuity between connections MAM and 86D . If these two checks are not in order, replace the switch. Then check the continuity and absence of interference resistance of the following connection: 86D between components 675 and 120 . Check for earth on connection MAM of the clutch switch connector. If the connection(s) are faulty, and if there is a repair method (see Technical Note 6015A, Repairing electrical wiring, wiring: Precautions for repair), repair the wiring, otherwise replace it.
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET415	<u>CRUISE CONTROL/SPEED LIMITER DEACTIVATION</u>
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NOTES	Special notes: 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.

WITHOUT	This status is present on the diagnostic tool if: The computer has been reinitialised. The computer has been reprogrammed.
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STATUS 1	Traction control request If the vehicle is fitted with a traction control system, the cruise control function is deactivated every time the ABS computer calls for traction control. Status ET415 becomes STATUS1 when driving, with cruise control active (ET042 Cruise control/Speed limiter: CRUISE CONTROL) and upon a traction control request. This deactivates cruise control. Reinitialise status ET415 of the injection computer by applying command RZ001 Fault memory. If status ET415 becomes STATUS 1 without a traction control request (see MR 364 Fault finding, 38C, ABS).
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET415 CONTINUED1	
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STATUS 2	Brake pedal depressed <p>The cruise control function is deactivated when the brake pedal is depressed. Status ET415 becomes STATUS 2 when driving with the cruise control active (ET042 Cruise control/Speed limiter: CRUISE CONTROL) and the brake pedal depressed. This deactivates cruise control.</p> <p>Reinitialise status ET415 of the injection computer by applying command RZ001 Fault memory.</p> <p>If status ET415 becomes STATUS 2 without depressing the brake pedal, consult the interpretation of statuses ET704 and ET705 Brake contact No.1 and No.2.</p>
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STATUS 3	Clutch pedal depressed <p>Manual gearbox ONLY</p> <p>The cruise control function is deactivated when the gearbox is not coupled to the engine (clutch pedal depressed). Status ET415 becomes STATUS 3 when driving with cruise control active (ET042 Cruise control/speed limiter: CRUISE CONTROL) and the clutch pedal depressed. This deactivates cruise control.</p> <p>Reinitialise status ET415 of the injection computer by applying command RZ001 Fault memory.</p> <p>If status ET415 becomes STATUS 3 without the clutch pedal being depressed, consult the interpretation of status ET405 Clutch pedal.</p> <p>If the vehicle is fitted with an 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).</p>
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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**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** while 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 of the injection computer by applying command RZ001
Fault memory.**

If status **ET415** becomes **STATUS 4** without pressing the **0** button, refer to the interpretation of status **ET703 Cruise control/speed limiter buttons** and run 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**, refer to the interpretation of:

- status **ET042 Cruise control/Speed limiter**,
- status **ET703 Cruise control/speed limiter buttons**,
- status **ET704 Brake contact no. 1**,
- status **ET705 Brake contact 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 shown on the diagnostic tool relating to this component. Deal with them if necessary.

**Reinitialise status ET415 of the injection computer by applying command RZ001
Fault memory.**

If status **ET415** becomes **STATUS 5**, deal with any faults that are present or stored in the injection computer.

If the fault 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 3	
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STATUS 6	<p>Gear lever in neutral (manual gearbox) or neutral (automatic transmission)</p> <p>Status ET415 becomes STATUS 6, when driving with the cruise control active (ET042 Cruise control/speed limiter: CRUISE CONTROL) and:</p> <ul style="list-style-type: none">– if the driver puts the gear lever in neutral position on a manual gearbox without declutching or,– if the gear lever is in neutral on an automatic gearbox. <p>This deactivates cruise control.</p> <p>Reinitialise status ET415 of the injection computer by applying command RZ001 Fault memory.</p> <p>If status ET415 becomes STATUS 6 without shifting the gear lever into neutral on a manual gearbox without declutching, or into neutral on an automatic transmission, run fault finding on the ABS computer and check the configuration of the tyre size stored in the computer. If the configuration is correct, contact the Techline.</p>
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STATUS 7	<p>Lack of correlation between the request and the vehicle speed</p> <p>Status ET415 becomes STATUS 7 if the computer detects too great a difference between the speed requested by the driver and the vehicle speed.</p> <p>This inconsistency could occur when driving with cruise control active (ET042 Cruise control/speed limiter: CRUISE CONTROL) and when there is a great difference.</p> <p>This inconsistency deactivates cruise control.</p> <p>Reinitialise status ET415 of the injection computer by applying command RZ001 Fault memory.</p> <p>If status ET415 changes to STATUS 7 without a great difference in speeds, contact the Techline.</p>
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AFTER REPAIR	<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 the diagnostic tool.</p>
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**ET415
CONTINUED 4**

STATUS 8

Automatic gearbox 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 of the injection computer by applying 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 run 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 of the injection computer by applying 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 engine 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 of the injection computer by applying command RZ001 Fault memory.

If **STATUS 10** is still present, contact the Techline.

AFTER REPAIR

Repeat the conformity check from the start.

ET564	<u>DEFECT MODE TYPE 1</u>
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NOTES	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).

AFTER REPAIR	Repeat the conformity check from the start.
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ET565	<u>DEFECT MODE TYPE 2</u>
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NOTES	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.

AFTER REPAIR	Repeat the conformity check from the start.
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ET566	<u>DEFECT MODE TYPE 3</u>
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NOTES	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.

AFTER REPAIR	Repeat the conformity check from the start.
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ET567	<u>DEFECT MODE TYPE 4</u>
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NOTES	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).

AFTER REPAIR	Repeat the conformity check from the start.
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ET568	<u>TYPE 5 DEFECT MODE</u>
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NOTES	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.

AFTER REPAIR	Repeat the conformity check from the start.
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ET652	<u>HI-FLEX CONFIGURATION (Only K4M 762/768)</u>
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NOTES	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**.

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

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 if 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 the Techline.

AFTER REPAIR	Repeat the conformity check from the start.
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ET671	<u>PROGRAMMING THE ALCOHOL LEVEL</u> <u>(only for Flex Fuel engines)</u>
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NOTES	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 the Techline.

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

INACTIVE	Status ET703 becomes INACTIVE when none of the cruise control/speed limiter buttons is pressed. These buttons are located on the steering wheel. If status ET703 does not display INACTIVE , <ul style="list-style-type: none"> ● check the condition of the cruise control/speed limiter +/- button, and the condition of its connector. check the condition of the cruise control/speed limiter R/O button, and the condition of its connector.
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INCREASE	Status ET703 becomes INCREASE 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 display INCREASE , 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 frontal airbag (see MR364 Mechanical, Section 8, 88C, Airbags and pretensioners, Driver's frontal airbag, Removal - Refitting). Measure the resistance on the following connections while pressing the + button (on the button tracks) : <ul style="list-style-type: none"> ● Connection code 86G of component 331. ● Connection code 86M of component 331. If the resistance is not approximately 300 Ω , check the continuity of the connection for the button when the button is in the rest position. If there is continuity, replace the +/- control button. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
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AFTER REPAIR	Deal with any other faults. Clear the fault memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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**ET703
CONTINUED1**

DECREASE

Status **ET703** becomes **DECREASE** 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 display **DECREASE**, 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 frontal airbag (see **MR364 Mechanical, Section 8, 88C, Airbags and pretensioners, Driver's frontal airbag, Removal - Refitting**). Measure the **resistance of the following connection whilst pressing the - button (on the button tracks)**:

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

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

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 become **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 frontal airbag (see **MR364 Mechanical, Section 8, 88C, Airbags and pretensioners, Driver's frontal airbag, Removal - Refitting**). Measure the **resistance on the following connection while pressing the "R" button (on the button tracks)**:

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

If the resistance is not approximately **900 Ω**, check the continuity of the connection when the button is in the rest position.
If there is continuity, replace the R/0 control button.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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 frontal airbag (see **MR364 Mechanical, Section 8, 88C, Airbags and pretensioners, Driver's frontal airbag, Removal - Refitting**).
Measure **the resistance of the following connection whilst pressing the 0 button (on the button tracks)**:

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

If the resistance is not approximately **0 Ω**, replace the **R/0** control button.
If there is continuity, replace the **R/0** control button.
If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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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NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions.
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Note:
 Statuses **ET704** and **ET705** must change specification at the same time. In the event of inconsistency, refer to the interpretation of fault **DF228 Brake signals**.

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

If the 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.

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

* OCR: Opening Cycle Ratio.

* km: kilometre

*appli: application

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

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.
Use the "Universal bornier" to 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 connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

AFTER REPAIR	Repeat the conformity check from the start.
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PR037	<u>REFRIGERANT PRESSURE</u>
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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 refrigerant pressure sensor and its connections.
If the connector is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

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

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

AFTER REPAIR	Repeat the conformity check from the start.
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PR074	<u>BATTERY VOLTAGE</u>
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NOTES	There must be no present or stored faults. Without electrical consumers (radio, heating and air conditioning system, motor-driven fan assembly, headlights, etc.).
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Ignition on engine stopped, then idle	If the voltage is at minimum: Check the battery and the charge circuit (see Technical Note 6014A Checking the charge circuit). If the voltage is at maximum: Check that the charging voltage is correct with and without electrical consumers (see Technical Note 6014A, Charging circuit check).
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AFTER REPAIR	Repeat the conformity check from the start.
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PR095	<u>ANTI-PINKING CORRECTION</u>
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NOTES	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 tightness of the pinking sensor. Repair if necessary.
Check the cleanliness and condition of the pinking sensor connectors. If the connector is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
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 connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, replace the pinking sensor.

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

<p>Check the cleanliness and condition of the upstream oxygen sensor connections. If the connector is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
<p>Disconnect the battery and the injection computer. Check the cleanliness and condition of the connections. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3GH between components 887 and 120. – 3GK between components 887 and 120. If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the tightness of the upstream oxygen sensor. Repair if necessary.</p>
<p>If the vehicle is driven frequently in town, decoke the engine.</p>
<p>Check that there are no leaks in the exhaust system, from the manifold to the catalytic converter. Repair if necessary.</p>

AFTER REPAIR	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 compression's.

Drive the vehicle to check the repair.

AFTER REPAIR

Repeat the conformity check from the start.

PR312	<u>MANIFOLD PRESSURE</u>
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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 manifold pressure sensor and its connections.
If the connector is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Disconnect the battery and the injection computer.
Check the **cleanliness** and **condition** of the connections.
Use the "Universal bornier" to 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 connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the 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.

AFTER REPAIR	Repeat the conformity check from the start.
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PR742	<u>ADDITIONAL PETROL CIRCUIT SV* OCR*</u>
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NOTES	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 procedure (see **Technical Note 6015A, Electrical wiring repair, 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.

Use the "Universal bornier" to check the **insulation** and **continuity** of the following connections:

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

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

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:

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

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

* OCR: opening cycle ratio

* SV: SOLENOID VALVE.

AFTER REPAIR	Repeat the conformity check from the start.
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PR743	<u>ALCOHOL LEVEL ESTIMATED IN THE TANK</u> <u>(only for Flex fuel and E85 engines)</u>
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NOTES	There must be no present or stored faults.
	Use the Wiring Diagrams Technical Note for the Mégane II.

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. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3GH between components 887 and 120 . – 3GK between components 887 and 120 . If the connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, replace the upstream oxygen sensor. If the fault is still present, contact the Techline.

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

AC017	<u>CANISTER BLEED SOLENOID VALVE</u>
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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 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.

AFTER REPAIR	Repeat the conformity check from the start.
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AC027	<u>MOTORISED THROTTLE</u>
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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 cleanliness and condition of the injection computer connections. Check the cleanliness and condition of the fuel pump relay connector 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.</p> <p>Disconnect the Protection and Switching Unit connector MT1. Check the cleanliness and condition of its connections. Using the Universal bornier, check the insulation and continuity on the following connection: 3AC between components 1337 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.</p>
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IF THE PUMP DOES NOT OPERATE	<p>Disconnect the Protection and Switching Unit connector CN. Check the cleanliness and condition of its connections. During command AC211 "Petrol pump" check for + 12 V on connection 3N of the petrol pump. If there is not + 12 V, check (using the "universal bornier") the insulation and the continuity on the following connection:</p> <ul style="list-style-type: none"> ● connection 3N between components 833 and 1337 <p>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.</p> <p>If the fault is still present, run fault finding on the Protection and Switching Unit (see 87G, Engine compartment connection unit.)</p> <p>If the fault is still present, contact the Techline.</p>
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AFTER REPAIR	Repeat the conformity check from the start.
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AC217	<u>ADDITIONAL FUEL CIRCUIT SOLENOID VALVE</u>
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NOTES	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. Repair if necessary.
Measure the resistance 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 petrol circuit solenoid valve connector. Using the Universal bornier, check the insulation and continuity of the following connections: 3FB2 between components 371 and 120 . 3FB2 between components 371 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: 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.

AFTER REPAIR	Repeat the conformity check from the start.
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AC224	<u>ADDITIONAL PETROL PUMP RELAY</u>
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NOTES	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**.

AFTER REPAIR	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

ALP 1	No dialogue with the computer
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NOTES	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.

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

AFTER REPAIR	Repeat the conformity check from the start.
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ALP 1 CONTINUED 2	
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VEHICLE CHECK (CONTINUED 2)	Using the Universal bornier, check the insulation and continuity on the following connection: 3AA between components 1337 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.
	Using the Universal bornier, check the continuity on the following connection: 3FB1 between components 1337 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.
	Check the condition and operation of fuse F18 (5A) . Using the "universal bornier", check for + after ignition feed on connection AP15 connector A of the injection computer. 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 , contact the Techline.

AFTER REPAIR	Repeat the conformity check from the start.
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ALP 2	The engine will not start
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NOTES	Follow ALP 2 after a complete check with the diagnostic tool.
	WARNING Never drive the vehicle without checking first that there are no throttle valve faults.

<p>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).</p>
<p>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.</p>
<p>Check that the starter motor is properly connected. Check that the starter is working correctly (see Technical Note 6014A, Checking the charging circuit)</p>
<p>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 of the flywheel.</p>
<p>Check that the air filter is not clogged. Check that the air inlet circuit is not blocked.</p>
<p>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).</p> <p>For E85 vehicles: 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 - Super ethanol and E85 extreme cold vehicle.</p>

AFTER REPAIR	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.

ALP 3	Idle speed faults
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NOTES	Follow ALP3 after a complete check using the diagnostic tool.
	WARNING 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:

- 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 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.

AFTER REPAIR	Repeat the conformity check from the start.
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ALP 4	Faults occurring while driving
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NOTES	Follow ALP4 after a complete check using the diagnostic tool.
	WARNING Never drive the vehicle without checking first that there are no throttle valve faults.

<p>Check that the Hi-flex system is operating correctly for Flex-Fuel vehicles:</p> <ul style="list-style-type: none"> – check that status ET652 Hi-flex Configuration is YES, – check that status ET671 Alcohol level programming is DONE, 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).
<p>Check that the oil level is not too high.</p>
<p>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.</p>
<p>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.</p>
<p>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.</p>
<p>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.</p>
<p>Check that the exhaust system is not blocked and the catalytic converter not clogged.</p>
<p>Check the timing setting.</p>
<p>Check the cylinder compressions.</p>
<p>Check the hydraulic tappets if there is camshaft noise.</p>

AFTER REPAIR	Repeat the conformity check from the start.
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