

MEGANE

1 Engine and peripherals

17B

PETROL INJECTION

S3000 Injection

Program No.: AD

Vdiag No.: 5C

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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: **Kangoo 2, Mégane II, Scénic II**
Engines: **K4M 830,
K4M 831,
K7M 750,
K4M 834 super ethanol E85,
K4M 768 Flex Fuel**
Function concerned: **Petrol injection**

Computer name: **S3000**
Program no.: **AD**
Vdiag No.: **5C**

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedure (this manual):

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

Wiring Diagrams:

- Vis. diagram

Type of diagnostic tools

- CLIP

Special tooling required

Special tooling required	
Diagnostic tool	
Multimeter	
Elé. 1481	Bornier
Elé. 1681	Universal bornier

3. SAFETY INSTRUCTIONS

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

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

4. FAULT FINDING LOG

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

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

Fault finding – List and location of components

Injection computer:

The injection computer is located in the engine compartment, behind the battery.

TDC sensor:

This sensor is located on the gearbox casing, behind the engine.

Pinking sensor:

This sensor is located between the four injectors.

Refrigerant pressure sensor:

This sensor is located on the air conditioning circuit.

Fuel vapour recirculation solenoid valve:

This is located on the left-hand side of the engine compartment, near the engine support.

Injection coolant temperature sensor:

This sensor is located on the engine water chamber.

Injection air temperature sensor:

The air temperature sensor is located at the air circuit inlet.

Downstream oxygen sensor:

The downstream oxygen sensor is located on the exhaust pipe downstream of the catalytic converter.

Upstream oxygen sensor:

The upstream oxygen sensor is located on the exhaust pipe after the manifold.

Accelerator potentiometer:

The potentiometer is located on the accelerator pedal.

Clutch pedal switch:

The switch is located on the clutch pedal.

Brake light switch:

The switch is located on the brake pedal.

Oil pressure sensor:

The oil pressure sensor is located under the exhaust manifold to the left of the engine compartment.

Injectors 1, 2, 3, 4:

The injectors are mounted on the engine.

Fault finding – List and location of components

Motorised throttle valve:

The damper valve is located in front of the inlet manifold.

Cylinder 1, 2, 3, 4 pencil coils (for K4M 768 / 830 / 831 / 834):

They are located on the cylinder head.

Quadruple ignition coil module (for K7M 750):

The coil module is located in the engine compartment.

Cruise control/speed limiter control:

The cruise control / speed limiter is located on the steering wheel.

Cruise control/speed limiter on/off switch:

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

Catalytic converter:

The catalytic converter is located on the exhaust pipe downstream of the catalytic pre-converter.

Fan unit relay:

The relay is located on the cooling radiator.

TDC sensor:

This sensor allows the computer to provide synchronisation as well as to know the position Top Dead Centre for injection phasing.

Pinking sensor:

This sensor allows the computer to correct the ignition advance under high engine load to avoid damaging the engine.

Refrigerant pressure sensor:

The role of the sensor is to measure the refrigerant fluid pressure in the air conditioning circuit.

Fuel vapour recirculation solenoid valve:

This solenoid valve allows petrol vapour to be recirculated.

Injection coolant temperature sensor:

The engine coolant temperature sensor provides the computer with the engine coolant temperature.

Injection air temperature sensor:

The air temperature sensor provides the computer with the temperature of air taken in by the engine.

Oxygen sensors:

The oxygen sensors allow the catalytic converter to correctly perform engine emission control tasks.

Accelerator potentiometer:

The potentiometer allows the computer to take into account driver requests expressed using the accelerator pedal.

Clutch pedal switch:

This switch allows the computer to convert to anti-jerking mode when the clutch pedal is depressed.

Brake light switch:

The brake light switch informs the computer of the brake pedal status.
Two gangs are used if the cruise control function exists.

Oil pressure sensor:

The oil pressure sensor allows the computer to be informed of engine oil pressure values.

Injectors:

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

Motorised throttle valve:

The throttle valve allows engine air flow to be managed according to driver requests.

Cylinder 1, 2, 3, 4 pencil coils (for K4M 768 / 830 / 831 / 834):

The pencil coils enable ignition (explosion timing control).

Quadruple ignition coil module (for K7M 750):

The ignition unit enables ignition (explosion timing control).

Steering column control:

The steering wheel controls allow the driver to operate the cruise control/speed limiter functions.

Cruise control switch:

The cruise control switch allows the cruise control/speed limiter functions to be activated or deactivated.

Fan unit relay:

The engine cooling fan unit relay supplies power to the engine cooling fan.

Fault finding – List and location of components

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 Passenger Compartment Control Unit (UCH) exchange authentication data via the multiplex network. This determines whether the engine start is authorised or denied.

After more than five 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 leaves this mode when the following sequence of operations is carried out:

- the ignition is left on for at least **20 seconds**,
- the message is switched off,
- the end of the injection computer self-feed is adhered to (the length of time varies depending on engine temperature).

After this, one and 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, turn off the ignition for **10 seconds**, then switch it back on to start the engine. Clear the faults using the control **RZ001 Fault memory**.

WARNING

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

Torque management

The torque structure is the system for managing engine torque. It is necessary for some functions such as the electronic stability program (ESP) and the automatic transmission.

Each inter-system (ESP and automatic transmission) sends a request for torque via the multiplex network to the injection computer. It arbitrates between the inter-system torque requests and the driver's request (pedal or cruise control/speed limiter). The result of the arbitration gives the torque setpoint. The torque structure uses the torque setpoint to calculate the throttle position setpoint, the advance and, if there is turbocharging, the turbocharger valve setpoint (wastegate) for engines fitted with a turbocharger.

Motorised throttle valve

The throttle valve carries out idle speed regulation and engine air intake modulation functions. It is composed of 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 been unused for a long time.

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

Control of the fuel pump relay can be viewed via status **ET047 Fuel 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. It enters the inlet plenum via a hose, whose section is controlled by a bleed valve. It is controlled by the injection computer via the opening cyclic 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 **8Hz**,
- a high frequency **20Hz**.

The frequency of the control opening cyclic 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.

Air supply management

The idle speed regulator performs all of the calculations that allow the idle speed actuator to be controlled physically: 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 Idle speed regulation theoretical OCR***:

This parameter uses two parameters in particular that can be accessed via the diagnostic signal: **PR444 Idling speed regulation integral correction**, and **PR090 Idling speed regulation programming value**, which is the adaptive integral action.

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

* OCR: opening cycle ratio

Adaptive idle speed correction

Under normal hot-engine operating conditions, the idle speed regulation 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 operating dispersion (running in, engine fouling, etc.), the opening cyclic ratio value may be closer 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 effective only if the water temperature is greater than **75°C** and **1 min** after the engine start and during an idle regulation phase.

Idle speed setpoint calculation

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

The idling speed regulation setpoint depends on the coolant temperature, the emission control programs, the climate control requirements, the position of the gearbox selector, any power-assisted steering action, the passenger compartment heating resistors, the oil temperature (engine protection) and the electrical power balance calculated by the injection software (the engine speed is increased by **160 rpm** maximum if the battery voltage remains below **12.7 V**).

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 initialisation (clearing the programming) and have the following limit values.

* OCR: opening cycle ratio

Fault finding – List and location of components

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. It is disabled above **84 mph (140 km/h)** or with the engine under load.

The downstream sensor is also used for richness regulation via the double loop program. It works by describing the upstream sensor status and compensating for any upstream sensor dynamic richness drift.

The vehicle is fitted with a downstream sensor if the configuration reading **LC004 Downstream oxygen sensor** is **WITH**.

For the double loop **ET056 Double richness loop** to be **ACTIVE**, the vehicle must be driven with the engine warm for approximately **1 minute 30 seconds** in the absence of no load conditions.

The downstream sensor is also heated. The command is not immediate when the engine is started. **ET053 Downstream O2 sensor heating** is **ACTIVE** after a time that depends on the latest coolant temperature with the engine running and in the absence of no load conditions. The heating of the downstream sensor is deactivated under **84 mph (140 km/h)** or when the engine is under load.

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.

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.

In rare cases it is possible for the engine to run incorrectly phased if the Memo phasing program failed during the last engine stop. When the system enters sequential injection mode and if the cylinder 1 detection program did not run, the injections are offset by 2 cylinders. They therefore inject in the order 4-2-1-3 rather than the expected 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.

Fault finding – List and location of components

OBD management

Managed OBD programming is as follows:

- catalytic converter operational fault finding,
- 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.

The operational fault finding for the upstream sensor and the catalytic converter can be only be carried out once per journey, and can never occur at the same time.

OBD fault manager

The OBD faults manager does not replace or modify conventional electrical fault management.

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:

<ul style="list-style-type: none">– pressure,– coolant temperature,– air temperature,– upstream sensor,– downstream sensor,– upstream sensor heating,– downstream sensor heating,– injector 1,– injector 2,– injector 3,– injector 4,	<ul style="list-style-type: none">– ignition coil 1,– ignition coil 2,– ignition coil 3,– ignition coil 4,– petrol pump,– canister bleed,– air line system,– pinking sensor.
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Fault finding – List and location of components

Catalytic converter:

Purpose:

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

Principle:

The oxygen storage capacity of the catalytic converter 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. This, in turn, sends bursts of oxygen into the catalytic converter.

If the catalytic converter is in good condition it will absorb the oxygen sent to it and the downstream sensor voltage will remain at its average value.

If it is damaged, it rejects the oxygen that it cannot store and the downstream sensor starts knocking. The more the catalytic converter is damaged, the more the downstream oxygen sensor will oscillate.

Sensors:

Purpose:

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

There are two 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 sensor response time and to an increase in the average reaction time.

Description of programming:

When the conditions for starting fault finding are confirmed, read the upstream sensor signal periods are read and remove any glitches (interference phenomena), then take the average and compare it with an EOBD (European On Board Diagnostic) 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.

Engine coolant temperature management

Engine cooling is provided by 1 or 2 fan assemblies (depending on the vehicle layout). The injection computer requests the UPC to actuate them via the multiplex network.

To provide cooling:

With the engine running, fan assembly 1 is activated when the coolant temperature exceeds **99°C** and is shut down when it falls below **96°C**. Fan unit 2 is activated when the coolant temperature exceeds **102°C** and is shut down 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 activated if the coolant temperature exceeds approximately **100°C** and is shut down if it drops below approximately **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 drops back below **115°C**.

In addition to the engine requirements, the injection computer centralises the cooling requirements for the Air conditioning and BVA/BVR functions.

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,
- 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 to appropriately adapt 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,
- to assist 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.

Defect modes

Motorised throttle valve

In defect mode, the motorised throttle valve can have 5 different statuses.

- Type 1** The valve opening is below the "Safe mode" position. The valve is not longer under control and 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 valve opening is no longer control. 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 related defect mode is a valve opening limitation. Maximum throttle valve opening produces a speed of less than **56 mph (90 km/h)**.
- Type 5** The computer no longer processes torque changes requested by the ESP, distance control, cruise control/speed limiter and automatic transmission systems. This defect mode appears following a computer malfunction or manifold pressure sensor fault. The system uses only the accelerator pedal signal. The ESP, distance control and cruise control/speed limiter systems are disabled. The automatic transmission is in "Safe mode".

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Fault finding – Defect and safe modes

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Table of defect modes:

	Type 1	Type 2	Type 3	Type 4	Type 5
DF011 Sensor supply voltage no. 1	1.DEF	1.DEF	-	1.DEF	-
DF012 Sensor supply voltage no. 2	-	-	-	1.DEF	1.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
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	-	-	1.DEF	CO.0/CC.1/ 1.DEF	-
DF198 Pedal potentiometer circuit gang 2	-	-	CC.0/ CC.1	CC.0/CC.1	-
DF650 Accelerator pedal position signal	-	-	1.DEF	1.DEF	-

OPERATING SAFETY

Warning light activation

The S3000 injection system manages the lighting of three warning lights and the display of the warning messages according to the severity of the faults detected, with the aim of informing the customer and directing fault finding. The injection computer controls the illumination of warning lights and message displays on the instrument panel. These warning lights are lit during the starting phase, in the event of an injection fault or engine overheating. The signals to light the warning lights reach the instrument panel via the multiplex network.

Warning light illumination principle

During the starting phase (start button pressed) the **"OBD" (On Board Diagnostic)** warning light comes on for approximately 3 seconds and then goes out.

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

The driver should have the repairs carried out 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 (**severity 2**), the red engine symbol and the word **"STOP"** appear (display with information display only), with the **"ENGINE OVERHEATING"** written message followed by the **"STOP"** warning light and a buzzer. If this happens, the vehicle will stop immediately.

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

- **flashes** in the event of a fault which might cause damage to the catalytic converter (destructive misfires). If this happens, the vehicle will stop 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).

Mileage travelled with fault

These two parameters **PR105 "Distance travelled with OBD fault warning light on"** and **PR106 "Distance travelled with fault warning light on"** are used to count the distance travelled with one of the injection fault warning lights lit: **level 1 fault warning light** (amber) as well as the **OBD warning light**.

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

1- CONFIGURATION

Computer configuration by automatic detection

LC001	Vehicle speed connection type
	→ Multiplex → Wire
LC003	Upstream oxygen sensor
	→ WITH → WITHOUT
LC004	Downstream oxygen sensor
	→ WITH → WITHOUT
LC005	Gearbox type
	→ automatic gearbox → sequential gearbox → manual gearbox
LC007	Cylinder 1 detection
	→ WITH → WITHOUT
LC008	Camshaft dephaser
	→ WITH → WITHOUT
LC009	Air conditioning
	→ WITH → WITHOUT
LC010	Electronic stability program
	→ not connected →connected
LC024	OBD warning light management
	→ WITH → WITHOUT
LC096	Closed brake switch
	→ YES → NO

Fault finding – Configurations and programming

LC158	Air conditioning heating resistor management
	→ WITH → WITHOUT
LC162	Controlled coolant thermostat
	→ WITH → WITHOUT
LC170	Electric coolant pump
	→ WITH → WITHOUT
LC120	Cruise control
	→ WITH → WITHOUT
LC121	Speed limiter
	→ WITH → WITHOUT

2- PROGRAMMING

Flywheel target programming

- Decelerate a first time with injection cut-off (i.e. feet off the brake, accelerator pedal and clutch pedals) between **3500** and **3000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic transmission, for at least **5 seconds**.
- Decelerate a second time with injection cut-off (i.e. feet off the brake, accelerator pedal and clutch pedals) between **2400** and **2000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic transmission, for at least **5 seconds**.

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 when, during deceleration with no load, the engine drops to idle speed and recovers torque.

Programming the level of alcohol

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**.

1. COMPUTER REPLACEMENT OR REPROGRAMMING OPERATIONS

The system can be programmed and reprogrammed via the diagnostic socket using the RENAULT CLIP **diagnostic tool** (Refer to **Technical Note 3585A, Computer programming and reprogramming procedure** or follow the instructions provided by the diagnostic tool).

IMPORTANT

- Switch on the **diagnostic tool** (mains or cigarette lighter supply).
- Connect a battery charger (during the entire computer (re)programming procedure, the engine fan assemblies are triggered automatically).
- Comply with the engine coolant temperature instructions provided in the **diagnostic tool** before any (re)programming.
- Switch off all the electrical consumers (interior lights, radio, air conditioning, etc.).

Operations to be carried out before the injection computer is reprogrammed:

Before reprogramming the injection computer:

Note the value of the **PR879 Maximum authorised speed**.

Move the main Cruise control/Speed limiter switch to the rest position. The information about the cruise control or the speed limiter displayed on the instrument panel disappears.

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

The procedure for resetting the function is as follows:

Vehicle ignition on.

- Position the main switch in rest position (the computer then detects the rest position).
- Move the switch to Cruise control position to activate the Cruise control function.
- Move the switch to Speed limiter position to activate the Speed limiter function.

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

- **Switch off the ignition.**
- **Start and then stop the engine (to initialise the computer) and wait 30 seconds.**

Switch the ignition on again and use the diagnostic tool to carry out the following steps:

- deal with any faults displayed by the **diagnostic tool**. Clear the computer memory.
- program the flywheel sensor target and throttle stops,
- reconfigure the speed restriction, if necessary, to the same value that the **PR879 Maximum speed authorised** recorded before reprogramming using the control **SC040 Speed limiter** (see **Interpretation of commands**),
- carry out a road test followed by another check with the **diagnostic tool**.

IMPORTANT

It is not possible to try an injection computer coming from the Parts Department because it will no longer be possible to use it on another vehicle.

1. REPLACING OR REMOVING THE TDC SENSOR

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

IMPORTANT

- the injection computer retains the immobiliser code for life,
- the system has no security code,
- it is forbidden to perform tests with computers borrowed from the Parts Department or from another vehicle which must then be returned. These computers are hard-coded.

2. 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 the programming using status **ET051 Throttle stop programming is DONE**.

IMPORTANT

Never drive the vehicle without having programmed the throttle stop.

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Fault finding – Fault summary table

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Tool fault	Associated DTC code	Description	Level 2 fault warning light (red STOP warning light)	Level 1 fault warning light (orange SERVICE warning light)	No warning light on	OBD warning light
DF001	0115	Coolant temperature sensor circuit				1.DEF 2.DEF 3.DEF
DF002	0110	Air temperature sensor circuit				1.DEF 2.DEF
DF011	0641	Sensor supply voltage no. 1		1.DEF		
DF012	0651	Sensor feed voltage no. 2		1.DEF		
DF026	0201	Cylinder 1 injector control circuit				CO / CC.0 / CC.1 / 1.DEF
DF027	0202	Cylinder 2 injector control circuit				CO / CC.0 / CC.1 / 1.DEF
DF028	0203	Cylinder 3 injector control circuit				CO / CC.0 / CC.1 / 1.DEF
DF029	0204	Cylinder 4 injector control circuit				CO / CC.0 / CC.1 / 1.DEF
DF038	0606	Computer		1.DEF		
DF046	0560	Battery voltage		1.DEF		
DF059	0301	Misfiring on cylinder 1				1.DEF / 2.DEF / 3.DEF
DF060	0302	Misfiring on cylinder 2				1.DEF / 2.DEF / 3.DEF
DF061	0303	Misfiring on cylinder 3				1.DEF / 2.DEF / 3.DEF
DF062	0304	Misfiring on cylinder 4				1.DEF / 2.DEF / 3.DEF

PETROL INJECTION

Fault finding – Fault summary table

17B

Tool fault	Associated DTC code	Description	Level 2 fault warning light (red STOP warning light)	Level 1 fault warning light (orange SERVICE warning light)	No warning light on	OBD warning light
DF078	2101	Motorised throttle control circuit		1.DEF		
DF079	0638	Motorised throttle valve automatic control		2. DEF / 3. DEF / 4. DEF / CO / 6. DEF	1.DEF - 5DEF - 7DEF - 8DEF	
DF081	0443	Canister bleed solenoid valve circuit			CC.O / 1.DEF	CO/ CC.1
DF084	0685	Actuator relay control circuit			CO / CC.0 CC.1	
DF085	0627	Fuel pump relay control circuit			CO.0 / CC.1 / 1.DEF	
DF088	0325	Pinking sensor circuit			1.DEF / 2.DEF	
DF089	0105	Inlet manifold pressure sensor circuit		1.DEF / 2.DEF / 3.DEF		1.DEF 2.DEF 3.DEF
DF091	0500	Vehicle speed signal			1.DEF / 2.DEF	
DF092	0130	Upstream oxygen sensor circuit				CO.0/CO/ CC.1/ 1.DEF / 2.DEF
DF093	0136	Downstream oxygen sensor circuit				CO.0/ CO/ CC.1/1.DEF
DF095	0120	Throttle potentiometer circuit gang1		CO.0 / CC.1 / 1.DEF / 2.DEF		
DF096	0220	Throttle potentiometer circuit gang 2		CC.0 / CO.1		
DF099	C101	Automatic transmission or sequential gearbox connection via the multiplex network			1.DEF / 2.DEF / 3.DEF / 4.DEF	
DF101	C122	ESP multiplex connection			1.DEF	

*ATX: Automatic transmission

PETROL INJECTION

Fault finding – Fault summary table

17B

Tool fault	Associated DTC code	Description	Level 2 fault warning light (red STOP warning light)	Level 1 fault warning light (orange SERVICE warning light)	No warning light on	OBD warning light
DF102	2502	Alternator power available info*			1.DEF	
DF105	0585	Cruise control/speed limiter on/off circuit			1.DEF	
DF106	0575	CC/SL selector switch on steering wheel			1.DEF	
DF109	0313	Low fuel level misfiring				1.DEF / 2.DEF / 3.DEF
DF126	1604	Passenger compartment heating resistor (RCH)			1.DEF	
DF127	0703	Brake switch no. 1 circuit			1.DEF	
DF128	0571	Brake switch 2 circuit			1.DEF	
DF138	0830	Clutch pedal circuit			1.DEF	
DF154	0335	Flywheel signal sensor circuit			1.DEF / 2.DEF / 3.DEF	
DF196	0225	Pedal sensor circuit track 1	1.DEF / CO.0 / CC.1	CO.0 / CC.1 / 2.DEF		
DF198	2120	Pedal sensor circuit gang 2	CC.0 / CC.1	CC.0 / CC.1		
DF228	0504	Brake signal			1.DEF / 2.DEF	
DF232	0530	Refrigerant pressure sensor circuit			1.DEF	
DF361	0351	Ignition coil circuit cylinders 1-4		CO.0 / CC.1 / 1.DEF		CO.0 / CC.1 / 1.DEF
DF362	0352	Ignition coil circuit cylinders 2-3		CO.0 / CC.1 / 1.DEF		CO.0 / CC.1 / 1.DEF

* sig.: signal

PETROL INJECTION

Fault finding – Fault summary table

17B

Tool fault	Associated DTC code	Description	Level 2 fault warning light (red STOP warning light)	Level 1 fault warning light (orange SERVICE warning light)	No warning light on	OBD warning light
DF394	0420	Catalytic converter operating fault				1.DEF / 2.DEF
DF398	0170	Fuel circuit operating fault				1.DEF / 2.DEF
DF404	C302	ATX* or sequential gearbox multiplex connection			1.DEF / 2.DEF / 3.DEF	
DF410	C155	Instrument panel connection				1.DEF
DF436	0300	Detection of engine misfiring				1.DEF / 2.DEF / 3.DEF
DF455	0460	Low fuel level signal			1.DEF / 2.DEF	
DF457	0315	Flywheel target				1.DEF / 2.DEF
DF601	0135	Circ*. O2 sensor heating power circuit				CO.0 / CC.1 / 1.DEF
DF602	0141	Downstream O2 sensor heating power circuit				CO.0/CC.1/ 1.DEF
DF603	C167	UCH multiplex connection			1.DEF	

*ATX: Automatic transmission

* Circ: circuit

PETROL INJECTION

Fault finding – Fault summary table

17B

Tool fault	Associated DTC code	Description	Level 2 fault warning light (red STOP warning light)	Level 1 fault warning light (orange SERVICE warning light)	No warning light on	OBD warning light
DF623	C315	Closing brake signal			1.DEF	
DF624	C111	UPC multiplex connection			1.DEF / 2.DEF	
DF650	2299	Accelerator pedal position signal	1.DEF			
DF884	1627	Additional petrol circuit pump relay (only for Flex fuel)			CO / CO.0 / CC.1	
DF894	1001	Additional petrol circuit solenoid valve (only for Flex fuel)			CO / CO.0 / CC.1	
DF1067	1335	After-sales tooth signal sensor circuit.*				

*APV: After-Sales

**DF001
PRESENT
OR
STORED**

COOLANT TEMPERATURE SENSOR CIRCUIT

1. DEF: Signal inconsistency
2. DEF: Abnormal voltage
3. DEF: Non-compliance with emission control standards

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**.

Special notes:

- 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**.

See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

Check the **cleanliness** and the **condition** of the coolant temperature sensor, component code **244** and of its connections (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 19A, Cooling, Coolant temperature sensor: Removal - Refitting**).

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

connection code 3C between components **120** and **244**,

connection code 3JK between components **120** and **244**.

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

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**.

DF001
CONTINUED

Measure the **resistance** between connections **3C** and **3JK** of component 244.

If the resistance of the coolant temperature sensor is not:

12.6 k Ω \pm 1.1 k Ω at a coolant temperature of -10°C,

2200 Ω \pm 112 Ω at a coolant temperature of 25°C,

810 Ω \pm 39 Ω at a coolant temperature of 50°C,

283 Ω \pm 8 Ω at a coolant temperature of 80°C,

1156 Ω \pm 3 Ω at a coolant temperature of 110°C,

88 Ω \pm 2 Ω at a coolant temperature of 120°C.

Replace the coolant temperature sensor (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**,
Mechanical, 19A, Cooling, Coolant temperature sensor: Removal - Refitting).

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

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**.

DF002 PRESENT OR STORED	<u>AIR TEMPERATURE SENSOR CIRCUIT</u> 1. DEF: Abnormal voltage 2. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal with fault DF012 Sensor feed no. 2 voltage first, if it is present or stored.
	Special notes: – 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 . See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the **cleanliness and condition** of the air temperature sensor, component code **272** and its connections. Disconnect the battery and the injection computer.

Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- **Connection code 3JQ** between components **120** and **272**,
- **Connection code 3B** between components **120** and **272**.

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

AFTER REPAIR	Deal with any 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
CONTINUED

Measure the **resistance** between connections **3JQ** and **3B** of component 272.

If the resistance of the air temperature sensor is not:

- **9.6 k Ω \pm 1 k Ω at an air temperature of -10°C,**
- **2000 Ω \pm 120 Ω at an air temperature of 25°C,**
- **810 Ω \pm 47 Ω at an air temperature of 50°C,**
- **309 Ω \pm 17 Ω at an air temperature of 80°C,**

replace the air temperature sensor.

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

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**.

DF011 PRESENT OR STORED	SENSOR FEED VOLTAGE NO. 1 1. DEF: Open circuit or short circuit
--	---

NOTES	Priority when dealing with a number of faults: Deal first with fault DF084 Actuator relay control circuit or DF046 Battery voltage if they are present or stored .
	Special note: <ul style="list-style-type: none">– level 1 fault warning light illuminated.– throttle valve defect mode types 1, 2 or 4. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the **cleanliness** and **condition** of the throttle valve connections, component code **1076** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**).

Check the **cleanliness** and **condition** of the pedal potentiometer connections, component code **921** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal - Refitting**).

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- manifold pressure sensor, component code **147**,
- pedal potentiometer (gang 2), component code **921**,
- refrigerant pressure sensor, component code **1202**,
- cruise control/speed limiter buttons, component code **1081**,
- upstream and downstream O2 sensors, component code **887** and **242** (for **Mégane II** and **Scénic II**).

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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DF011
CONTINUED

To locate any internal fault on 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 changes status from "**present**" to "**stored**".

If the defective sensor is located, check its connections and its conformity (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection: List and location of components**).

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

Replace the faulty sensor if necessary.

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

- **connection code 3LU** between components **120** and **921**,
- **connection code 3GL** between components **120** and **242**,
- **connection code 3GK** between components **120** and **887**,
- **connection code 38Y** between components **120** and **1202**,
- **connection code 3PD** between components **120** and **1081**,
- **connection code 3LG** between components **120** and **147**.

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

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

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**.

DF012 PRESENT OR STORED	<u>SENSOR SUPPLY VOLTAGE NO. 2</u> 1. DEF: Open circuit or short circuit
--	--

NOTES	Special notes: <ul style="list-style-type: none">– 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. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .
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Check the **cleanliness** and **condition** of the throttle valve connections, component code **1076** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**).

Check the **cleanliness** and **condition** of the pedal potentiometer connections, component code **921** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal - Refitting**).

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Sensor feed no. 2 is reserved for the following components:

- pedal potentiometer (gang 1), component code **921**,
- motorised throttle potentiometer gangs 1 and 2, component code **1076**.

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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DF012
CONTINUED

To locate any internal fault on 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 changes status from "**present**" to "**stored**".

If the faulty sensor is located, check its connections and that it is in order.

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

Replace the faulty sensor if necessary (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection: List and location of components**).

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

- **connection code 3LR** between components **120** and **921**,
- **connection code 3MN** between components **120** and **1076**.

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

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

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**.

DF026 PRESENT OR STORED	<u>CYLINDER 1 INJECTOR CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1.DEF: Non-compliance with emission control standards
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NOTES	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 .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present after the engine has been running for a timed period of 10 seconds .
	Special notes: – OBD warning light comes on. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

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

Check the **cleanliness** and **condition** of the cylinder 1 injector, component code **193** and its connections (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

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	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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DF026
CONTINUED

With the ignition on, check for **+ 12 V** on connection **3FB3** of component **193**.

If there is no **+ 12 V** feed, use the universal bornier to check for **continuity** on the following connection:

– **3FB3** between components **1337** and **193**.

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

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

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Use the "Universal bornier" to check the insulation and continuity on the following connection:

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

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

Measure the **resistance** between the connections:

- **3FB3** and **3CR** of component **193** (For **Kangoo 2**).
- **3FB1** and **3CR** of component **193** (For **Mégane II** and **Scénic II**).

If the resistance of the cylinder 1 injector is not **14.5 Ω \pm 0.7 Ω at 20°C**, replace the cylinder 1 injector (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

If the fault is still present, replace the cylinder injector 1, component code **193** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

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

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**.

DF027 PRESENT OR STORED	<u>INJECTOR CYLINDER 2 CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Non-compliance with emission control standards
--	--

NOTES	Priority when dealing with a number of faults: Deal with faults DF084 Actuator relay control circuit or DF046 Battery voltage first if it is present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present after the engine has been running for a timed period of 10 seconds .
	Special notes: – OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

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

Check the **cleanliness** and **condition** of the cylinder 2 injector, component code **194** and its connections (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

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	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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DF027
CONTINUED

With the ignition on, check for **+ 12 V** on connection **3FB3** of component **194**.

If there is no **+12 V feed**, use the universal bornier to check for **continuity** on the following connection:

- **3FB3** between components **1337** and **194** (for **Kangoo 2**).
- **3FB1** between components **1337** and **194** (For **Mégane II** and **Scénic II**).

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

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Use the universal bornier to check for **insulation and continuity** on the following connection:

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

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

Measure the **resistance** between the following connections:

- **3FB3** and **3CS** of component **194** (For **Kangoo 2**)
- **3FB1** and **3CS** of component **194** (For **Mégane II** and **Scénic II**)
- If the resistance of the cylinder 2 injector is not **14.5 Ω \pm 0.7 Ω at 20°C**, replace the cylinder 2 injector (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

If the fault is still present, replace the cylinder 2 injector, component code **194** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

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

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**.

DF028 PRESENT OR STORED	<u>CYLINDER 3 INJECTOR CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Non-compliance with emission control standards
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NOTES	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 .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present after the engine has been running for a timed period of 10 seconds .
	Special notes: OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

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

Check the **cleanliness** and **condition** of the cylinder 3 injector, component code **195**, and its connections (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

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	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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DF028
CONTINUED

With the ignition on, check for **+12 V** on connection **3FB3** (for **Kangoo 2**) or **3FB1** (for **Mégane II** and **Scénic II**) of component **195**.

If there is no **+12 V feed**, use the universal bornier to check for **continuity** on the following connection:

- **3FB3** between components **1337** and **195** (for **Kangoo 2**)
- **3FB1** between components **1337** and **195** (for **Mégane II** or **Scénic II**).

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

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

If the connector(s) are 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.

Use the "Universal bornier" to check the **insulation and continuity** on the following connection:

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

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

Measure the **resistance** between the following connections:

- **3FB3** and **3CT** of component **195** (for **Kangoo 2**)
- **3FB1** and **3CT** of component **195** (for **Mégane II** and **Scénic II**)

If the resistance of the cylinder 3 injector is not **14.5 Ω \pm 0.7 Ω at 20°C**, replace the cylinder 3 injector (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

If the fault is still present, replace the cylinder 3 injector, component code **195** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).
If the fault is still present, contact the Techline.

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**.

DF029 PRESENT OR STORED	<u>CYLINDER 4 INJECTOR CONTROL CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 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 is considered present after the engine has been running for a timed period of 10 seconds .
	Special notes: – OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

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

Check the **cleanliness** and **condition** of the cylinder 4 injector, component code **196** and its connections (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

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.

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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DF029
CONTINUED

With the ignition on, check for **+12 V** on connection **3FB3** (for **Kangoo 2**) or **3FB1** (for **Mégane II** and **Scénic II**) of component **196**.

If there is no **+ 12 V** feed, use the universal bornier to check for **continuity** on the following connection:

- **3FB3** between components **1337** and **196** (for **Kangoo 2**)
- **3FB1** between components **1337** and **196** (for **Mégane II** and **Scénic II**)

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

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Use the "Universal bornier" to check the **insulation and continuity** on the following connection:

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

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

Measure the **resistance** between the following connections:

- **3FB3** and **3CU** of component **196** (for **Kangoo 2**)
- **3FB3** and **3CU** of component **196** (for **Mégane II** and **Scénic II**)

If the resistance of the cylinder 4 injector is not **14.5 Ω \pm 0.7 Ω at 20°C**, replace the cylinder 4 injector (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).

If the fault is still present, replace the cylinder 4 injector, component code **196** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting**).
If the fault is still present, **contact Techline**.

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**.

DF038 PRESENT OR STORED	<u>COMPUTER</u> 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 notes: <ul style="list-style-type: none">– the OBD warning light is lit,– throttle valve defect mode types 1, 2 or 5 present or stored. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Make sure there is a supply to the injection computer, component code **120**:

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

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

- Reconnect the battery.

Use the universal bornier to **check for + 12 V** on the following connections:

- **AP15** between components **120** and **1337**,
- **3FB1** between components **196** and **1337**.

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

AFTER REPAIR	Deal with any 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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DF038
CONTINUED

Make sure there are earths on the injection computer, component code **120**:

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

If the connector(s) are 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.

- reconnect the battery.

Use the universal bornier to check for **earths** on the following connections:

- **NF** of component **120** (for **Kangoo 2**)
- **N** of component **120** (**Mégane II** and **Scénic II**)

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

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

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**.

DF046 PRESENT OR STORED	BATTERY VOLTAGE 1. DEF: Abnormal voltage
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NOTES	Priority when dealing with a number of faults: Deal with fault DF084 Actuator relay control circuit first if it is present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present when the engine is running.
	Special notes: 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. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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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DF046
CONTINUED

Disconnect the electrical **connectors** for component **1337**.

Check the **cleanliness** and **condition** of the connectors for component **1337**.

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

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

– **3FB1** between components **120** and **1337**.

– **3AA** between components **120** and **1337**.

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

– clean the battery terminals and all connections to **+** and the **earth**.

– check the battery voltage,

– Check the charge circuit (see **87G Engine compartment connection unit**).

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

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

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**.

DF059 PRESENT OR STORED	<u>COMBUSTION MISFIRES ON CYLINDER 1</u> 1. DEF: Destructive misfiring 2. DEF: Polluting misfiring 3. DEF: Non-compliance with emission control standards
NOTES	Priority when dealing with a number of faults: <ul style="list-style-type: none">– ignition:<ul style="list-style-type: none">– DF361 Ignition coil circuit cylinders 1-4,– DF362 Ignition coil circuit cylinders 2-3.– fuel supply circuit:<ul style="list-style-type: none">– 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:<ul style="list-style-type: none">– DF154 Flywheel signal sensor circuit,– DF457 Engine flywheel target. <p>Check whether there are other cylinders with a “combustion misfire” fault reported by the diagnostic tool before starting the fault finding procedure below.</p>
	Conditions for applying the fault finding procedure to stored faults: <p>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.
	Special note: <ul style="list-style-type: none">– OBD warning light illuminated.

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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DF059 CONTINUED 1	
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1.DEF	NOTES	Special note: <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 there is a fault present, the OBD warning light will flash.
2.DEF 3.DEF		Special note: <ul style="list-style-type: none"> – the OBD warning light remains continuously lit.

Misfiring on cylinder 1 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 1 pencil coil, – check the condition and conformity of the spark plugs (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting), – check the cylinder 1 injector, <p>If everything is in order, check the same components on cylinder 4 (to cover a possible cylinder recognition error).</p>
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Combustion misfires in cylinders 1 and 4 (see DF059) Combustion misfires in cylinder 1 and DF062 Combustion misfires in cylinder 4)	<p>The fault is probably due to a component that affects a pair of cylinders:</p> <ul style="list-style-type: none"> – check the ignition coil circuit concerned (apply the interpretation of fault DF361 Ignition coil circuit 1-4), – check the condition and conformity of the spark plugs.
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AFTER REPAIR	<p>Deal with any faults displayed by the diagnostic tool.</p> <p>Clear the computer memory.</p> <p>Carry out a road test followed by another check with the diagnostic tool.</p>
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DF059 CONTINUED 2

**Combustion misfires
on all four cylinders
(see DF060, DF061
and DF062)**

The fault is probably due to a component affecting all the cylinders:

- check that the correct fuel is being used,
- check the conformity and condition of the spark plugs (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting**).

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 entire petrol supply system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
- check the entire ignition system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Ignition: Specifications**),
- check the hydraulic tappets if there is camshaft noise.

If the fault is still present, contact the Techline

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**.

DF060 PRESENT OR STORED	<u>MISFIRING ON CYLINDER 2</u> 1. DEF: Destructive misfiring 2. DEF: Polluting misfiring 3. DEF: Non-compliance with emission control standards
NOTES	Priority when dealing with a number of faults: <ul style="list-style-type: none">– ignition:<ul style="list-style-type: none">– DF361 Ignition coil circuit cylinders 1-4,– DF362 Ignition coil circuit cylinders 2-3.– fuel supply circuit:<ul style="list-style-type: none">– 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:<ul style="list-style-type: none">– DF154 Flywheel signal sensor circuit,– DF457 Engine flywheel target. <p>Check whether there are other cylinders with a "combustion misfire" fault reported by the diagnostic tool before starting the fault finding procedure below.</p>
	Conditions for applying the fault finding procedure to stored faults: <p>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 idle speed with all electrical consumers on for approximately 15 minutes.
	Special note: <ul style="list-style-type: none">– OBD warning light illuminated.

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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DF060 CONTINUED 1	
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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 will flash .
2.DEF 3.DEF		Special note: – the OBD warning light remains continuously lit .

Misfiring on cylinder 2 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 2 pencil coil, – check the condition and conformity of the spark plugs (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting), – check the cylinder 2 injector <p>If everything is in order, check the same components on cylinder 3 (to correct a possible cylinder identification error).</p>
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Misfires in cylinders 2 and 3 (see DF060 Misfires in cylinder 2 and DF061 Misfires in cylinder 3)	<p>The fault is probably due to a component that affects a pair of cylinders:</p> <ul style="list-style-type: none"> – check the ignition coil circuit concerned (apply the interpretation of DF362 Ignition coil circuit 2-3), – check the condition and conformity of the spark plugs.
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AFTER REPAIR	<p>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.</p>
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DF060 CONTINUED 2

**Combustion misfires
on all four cylinders
(see DF059, DF060
DF061 and DF062)**

The fault is probably due to a component affecting all the cylinders:

- check that the correct fuel is being used,
- check the conformity and condition of the spark plugs (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting**).

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 entire petrol supply system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
- check the entire ignition system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Ignition: Specifications**),
- check the hydraulic tappets if there is camshaft noise.

If the fault is still present, contact the Techline

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**.

DF061 PRESENT OR STORED	<u>MISFIRING ON CYLINDER 3</u> 1. DEF: Destructive misfiring 2. DEF: Polluting misfiring 3. DEF: Non-compliance with emission control standards
NOTES	Priority when dealing with a number of faults: <ul style="list-style-type: none">– ignition:<ul style="list-style-type: none">– DF361 Ignition coil circuit cylinders 1-4,– DF362 Ignition coil circuit cylinders 2-3.– fuel supply circuit:<ul style="list-style-type: none">– 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:<ul style="list-style-type: none">– 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>
	Conditions for applying the fault finding procedure to stored faults: <p>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 idle speed with all electrical consumers on for approximately 15 minutes.
	Special note: <ul style="list-style-type: none">– OBD warning light illuminated.

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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DF061 CONTINUED 1	
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1.DEF	NOTES	Special note: <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 will flash.
2.DEF 3.DEF		Special note: <ul style="list-style-type: none"> – the OBD warning light remains continuously lit.

Misfire only on cylinder 3	<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 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting), – 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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Misfiring on Misfires in cylinders 2 and 3 (see DF060 Misfires in cylinder 2 and DF061 Misfires in cylinder 3)	<p>The fault is probably due to a component that affects a pair of cylinders:</p> <ul style="list-style-type: none"> – check the ignition coil circuit concerned (apply the interpretation of DF362 Ignition coil circuit 2-3), – check the condition and conformity of the spark plugs.
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AFTER REPAIR	<p>Deal with any faults displayed by the diagnostic tool.</p> <p>Clear the computer memory.</p> <p>Carry out a road test followed by another check with the diagnostic tool.</p>
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DF061 CONTINUED 2

**Combustion misfires
on all four cylinders
(see DF059, DF060
DF061 and DF062)**

The fault is probably due to a component affecting all the cylinders:

- check that the correct fuel is being used,
- check the conformity and condition of the spark plugs (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting**).

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 signal sensor mounting,
- check the flywheel/sensor air gap,
- check the cylinder compressions,
- check the entire petrol supply system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
- check the entire ignition system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Ignition: Specifications**),
- check the hydraulic tappets if there is camshaft noise.

If the fault is still present, contact the Techline

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**.

DF062 PRESENT OR STORED	<u>MISFIRING ON CYLINDER 4</u> 1. DEF: Destructive misfiring 2. DEF: Polluting misfiring 3. DEF: Non-compliance with emission control standards
NOTES	Priority when dealing with a number of faults: <ul style="list-style-type: none">– ignition:<ul style="list-style-type: none">– DF361 Ignition coil circuit cylinders 1-4,– DF362 Ignition coil circuit cylinders 2-3.– fuel supply circuit:<ul style="list-style-type: none">– 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:<ul style="list-style-type: none">– 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>
	Conditions for applying the fault finding procedure to a stored fault: <p>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 idle speed with all electrical consumers on for approximately 15 minutes.
	Special note: <ul style="list-style-type: none">– OBD warning light illuminated.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF062 CONTINUED 1	
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1.DEF	NOTES	Special note: <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 will flash.
2.DEF 3.DEF		Special note: <ul style="list-style-type: none"> – the OBD warning light remains continuously lit.

Misfiring on cylinder 4 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 4 pencil coil, – check the condition and conformity of the spark plugs (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting), – check the cylinder 4 injector, <p>If everything is in order, check the same components on cylinder 1 (to correct a possible cylinder identification error).</p>
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Combustion misfires in cylinders 1 and 4 (see DF059 Combustion misfires in cylinder 1 and DF062 Combustion misfires in cylinder 4)	<p>The fault is probably due to a component that affects a pair of cylinders:</p> <ul style="list-style-type: none"> – check the ignition coil circuit concerned (apply the interpretation of DF361 Ignition coil circuit 1-4), – check the condition and conformity of the spark plugs.
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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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DF062 CONTINUED 2

**Combustion misfires
on all four cylinders
(see DF059, DF060
DF061 and DF062)**

The fault is probably due to a component affecting all the cylinders:

- check that the correct fuel is being used,
- check the conformity and condition of the spark plugs (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting**).

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 entire petrol supply system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
- check the entire ignition system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Ignition: Specifications**),
- check the hydraulic tappets if there is camshaft noise.

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

AFTER REPAIR

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

**DF078
PRESENT
OR
STORED**

MOTORISED THROTTLE CONTROL CIRCUIT

1. DEF: Component in poor condition

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:

If faults **DF095 Throttle potentiometer circuit gang 1** or **DF096 Throttle potentiometer circuit gang 2** are **present**, deal with these first.

Conditions for applying the fault finding procedure to stored faults:

The fault is considered **present** if:

- the engine speed varies,
- the **AC027 Motorised throttle** command is activated,
- the engine air temperature should be between **5°C** and **105°C**.

Special notes:

- **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.
- See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

Check the **cleanliness and condition** of the throttle valve, component code **1076** and of its connections (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**).

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.

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

AFTER REPAIR

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

DF078
CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Petrol injection computer: Removal - Refitting**).

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

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

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

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

If the fault is still present, measure the **resistance** between the engine connections : **3AJB** and **3AJC** on component **1076**.

If the resistance of the throttle valve is not **2.2 Ω \pm 0.2 Ω at 23°C** (for **K7M 750**) or **1.6 Ω \pm 0.2 Ω at 23°C** (for **K4M 736 - 830 - 831 - 834**), replace the throttle valve (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **12A**, **Fuel mixture**, **Throttle valve: Removal - Refitting**).

If the fault is still present, contact the Techline

AFTER REPAIR

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

<p>DF079 PRESENT OR STORED</p>	<p><u>MOTORISED THROTTLE VALVE SERVO</u> CO: Open circuit</p> <ol style="list-style-type: none"> 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 control fault 7. DEF: Intake supply circuit 8. DEF: Non-compliance with emission control standards
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<p>NOTES</p>	<p>Priority when dealing with a number of faults: If faults DF011 Sensor 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 a stored fault: The fault is considered present if:</p> <ul style="list-style-type: none"> – the engine speed varies, – the engine air temperature is between 5°C and 105°C.
	<p>Special note: See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.</p>

<p>CO 6.DEF</p>	<p>NOTES</p>	<p>Special note:</p> <ul style="list-style-type: none"> – level 1 fault warning light illuminated. – defect mode type 1 and 2: vehicle and engine speed restriction, ESP and the cruise control/speed limiter are deactivated.
<p>2.DEF 3.DEF 4.DEF</p>		<p>Special note:</p> <ul style="list-style-type: none"> – level 1 fault warning light illuminated. – throttle valve defect mode type 4: speed limiter at 54 mph (90 km/h) and loss of power during acceleration.

<p>AFTER REPAIR</p>	<p>Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.</p>
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DF079
CONTINUED 1

Check the **cleanliness, condition and fitting** of the throttle valve, component code **1076** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**)

Repair if necessary.

If the fault is still present, manually check that the throttle valve **rotates correctly**.

Repair if necessary (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 12A, Fuel mixture, Throttle valve: Cleaning**).

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 connection of the connectors of the injection computer, component code **120** and the motorised throttle valve, component code **1076**.

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

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

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

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

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

If the fault is still present, measure the **resistance** between the engine connections : **3AJB** and **3AJC** on **component 1076**.

If the resistance of the throttle valve is not **2.2 Ω ± 0.2 Ω at 23°C** (for **K7M 750**) or **1.6 Ω ± 0.2 Ω at 23°C** (for **K4M 736 - 830 - 831 - 834**), replace the throttle valve (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**).

AFTER REPAIR

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the **stored** faults.

DF079
CONTINUED 2

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

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

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

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

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

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

AFTER REPAIR

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

DF081 PRESENT OR STORED	<u>CANISTER BLEED SOLENOID VALVE CIRCUIT</u> CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V 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 .
	Special note: See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.

CO CC1	NOTES	Special note: – the valve remains locked shut ; there is a smell of petrol, – the OBD warning light is lit.
CO.1		Special note: The valve remains jammed open : bucking when driving, risk of stalling and difficult restarting.

Check that fuse F14 (15A) is in good condition and working correctly (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 81C, Fuses, Fuses: List and location of components). Repair if necessary.
Check the cleanliness and condition of the connections of the fuel vapour absorber bleed solenoid valve, component code 371 (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 14A, Emission control, Fuel vapour absorber: Check). 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 resistance of the fuel vapour absorber bleed solenoid valve . If the resistance of the fuel vapour absorber bleed solenoid valve is not 26 Ω ± 4 Ω at 23°C , then replace the fuel vapour absorber bleed solenoid valve (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 14A, Emission control, Fuel vapour absorber: Removal - Refitting).

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF081
CONTINUED

With the ignition on, check for **+12 V** on connection **3FB3** (for **Kangoo 2**) or **3FB2** (for **Mégane II** and **Scénic II**) of component **371**.

Check the continuity and insulation of the following connection:

- **connection code 3FB3** between components **371** and **1337** (for **Kangoo 2**)
- connection code **3FB2** between components **371** and **1337** (for **Mégane II** and **Scénic II**).

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

Disconnect the battery.

Disconnect the computer. Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Use the "Universal bornier" to check the **insulation** and **continuity** on the following connection:

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

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

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.

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 considered present when the engine is running.
	Special note: This relay supplies the following actuators: <ul style="list-style-type: none">– the injectors– the petrol fuel vapour absorber,– the injection computer supply on connection 3FB1,– the low-speed and high-speed fan assembly relays. CO/CC.1: Actuators no longer supplied: the vehicle stalls and restart is impossible. CC.0: The actuators are supplied constantly: high electrical consumption when stationary. Intermittent CO: Intermittent relay cut-off: jerking while driving. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

<p>Disconnect the battery and the injection computer.</p> <p>Check the cleanliness and condition of the injection computer connections, component code 120 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.</p>
<p>Disconnect the connectors from the Protection and Switching Unit.</p> <p>Check the cleanliness and condition of the Protection and Switching Unit connections, component code 1337.</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.</p> <p>Use the "Universal bornier" to check the insulation and continuity on the following connection:</p> <ul style="list-style-type: none">– 3AA between components 1337 and 120. <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</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>

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	<u>FUEL PUMP RELAY CONTROL CIRCUIT</u> CC.1: Short circuit to + 12 V CO.0: Open circuit or short circuit to earth 1. 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 ignition is switched on or command AC079 Actuator static test is activated.
	Special notes: – OBD warning light illuminated. CC.1: The vehicle stalls and restart is impossible. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

If the relay does not click:

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Disconnect the **connectors** from the Protection and Switching Unit.

Check the **cleanliness** and **condition** of the Protection and Switching Unit connections, component code **1337**.

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

Use the "Universal bornier" to 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 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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**DF085
CONTINUED**

IF THE PUMP DOES NOT OPERATE

Disconnect the **connectors** from the Protection and Switching Unit.
Check the **cleanliness** and **condition** of the Protection and Switching Unit connections, component code **1337**.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.
Using command **AC079 Actuator static test** check for **+ 12 V** on connection **3N** of component **833**.

If there is no **+ 12 V feed**, check using the universal bornier **the insulation** and the **continuity** on the following connection:
– **3N** between components **833** and **1337**.
If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

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

AFTER REPAIR

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

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 present during a warm engine road test at an engine speed of more than 1500 rpm .
	Special notes: The wiring harness connecting the injection computer to the pinking sensor is shielded, therefore a short circuit at + 12V is unlikely. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the **cleanliness and condition** of the pinking sensor, component code **146** 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.
Check the **tightness** of the pinking sensor.

Disconnect the battery and the injection computer.
Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.
Using the universal bornier, check the insulation and **continuity** on the following connections:
– **3S** between components **120** and **146**,
– **3DQ** between components **120** and **146**,
– **TB1** of component **120**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the **conformity** of the fuel in the tank.
Check the **conformity** of the spark plugs (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting**).

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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DF089 PRESENT OR STORED	<u>INLET MANIFOLD PRESSURE SENSOR CIRCUIT</u> 1. DEF : Signal inconsistency 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 feed voltage no. 1 first if it is present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present after the ignition is switched off and back on, wait for 10 seconds with the engine idling.
	Special notes: – OBD fault warning light and level 1 fault warning light illuminated. – Type 5 defect mode: ESP and the cruise control/speed limiter are deactivated and the vehicle stalls at idle speed. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check **the cleanliness and condition** of the manifold pressure sensor, component code **147** , 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** of component **120** and check for **earth** on connection **3CK** , component **120**.
Contact the Techline if it is not correct.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF089
CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- **3LG** between components **120** and **147**,
- **3F** between components **120** and **147**,
- **3CK** between components **120** and **147**.

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

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

AFTER REPAIR

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

DF091 PRESENT OR STORED	<u>VEHICLE SPEED SIGNAL</u> 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 considered present when the engine is running.
	Special notes: – OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Run a multiplex network test (see 88B, Multiplexing).
Disconnect the battery and the injection computer. Check the cleanliness and condition of the battery and of the injection computer connections, component code 120 (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
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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DF092 PRESENT OR STORED	<u>UPSTREAM OXYGEN SENSOR CIRCUIT</u> CC.1: Short circuit to + 12 V CO: Open circuit CC.0: Short circuit to earth 1. DEF: Component in poor condition 2. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: If the following faults: DF011 Sensor supply voltage no. 1, DF046 Battery voltage, 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 considered present after the engine has been running for at least 5 minutes .
	Special notes: – OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

<p>Check the cleanliness and condition of the upstream oxygen sensor connections, component code 887 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting).</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 injection computer connections, component code 120 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting).</p> <p>If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair) repair the connector(s); 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">– 3GH between components 120 and 887,– 3GK between components 120 and 887. <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, 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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DF093 PRESENT OR STORED	<u>DOWNSTREAM OXYGEN SENSOR CIRCUIT</u> CC.1: Short circuit to + 12 V CC.0: Short circuit to earth. CO: Open circuit 1. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: If the following faults: DF011 Sensor supply 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 smooth driving road test after the fan assembly has been running, and the 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 notes: – OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.

Check the **cleanliness** and **condition** of the downstream oxygen sensor connections, component code **242** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

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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DF093
CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Petrol injection computer: Removal - Refitting**).

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

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

- **3GJ** between components **120** and **242**,
- **3GL** between components **120** and **242**.

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

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

AFTER REPAIR

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

DF095 PRESENT OR STORED	<u>THROTTLE POTENTIOMETER CIRCUIT GANG 1</u> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Component in poor condition 2. DEF: Signal inconsistency
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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 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 notes: – level 1 fault warning light illuminated, – throttle valve defect mode types 1, 2 and 4 . See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the **cleanliness** of the throttle valve, component code **1076** and that the throttle **rotates properly** (no resistance point)
Check the **cleanliness** and **condition** of the throttle valve connections (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**).
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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DF095
CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Petrol injection computer: Removal - Refitting**).

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

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

- **3MO** between components **120** and **1076**,
- **3MP** between components **120** and **1076**,
- **3MN** between components **120** and **1076**.

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

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

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

AFTER REPAIR

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

**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

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** 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 notes:

- **level 1 fault warning light** illuminated.
- throttle valve defect mode **types 1, 2 and 4**.

See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

Check the **cleanliness** of the throttle valve, component code **1076** and that the throttle **rotates properly** (no resistance point).

Check the **cleanliness** and **condition** of the throttle valve connections, (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting**).

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.

DF096
CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- **3MQ** between components **120** and **1076**,
- **3MN** between components **120** and **1076**,
- **3MO** between components **120** and **1076**.

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

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

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

AFTER REPAIR

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

DF099 PRESENT OR STORED	<u>TA* OR SEQUENTIAL GEARBOX CONNECTION VIA THE MULTIPLEX NETWORK</u> 1. DEF : Signal inconsistency 2. FAULT: CAN connection fault 3. DEF: Automatic gearbox fault detected 4. DEF: Non-compliance with emission control standards
--	--

NOTES	Priority when dealing with a number of faults: Apply the procedure for dealing with fault DF046 Battery voltage or DF084 Actuator relay control circuit first if it is present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present when the engine is running.

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

If the fault is still present, run fault finding on the **automatic transmission** system (see **23A, Automatic transmission**).

*TA: Automatic transmission

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. FAULT: CAN connection fault
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NOTES	None.
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Run a multiplex network test (see **88B, Multiplex**).

If the fault is still present, carry out fault finding on the **ABS - ESP system** (see **38C, Anti-lock braking system**).
If the fault is still present, **contact Techline**.

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	<u>INVALID ALTERNATOR POWER AVAILABLE</u> 1. DEF: Multiplex network
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NOTES	Special notes: – Absent signal or invalid value. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.
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Run a multiplex network test (see **88B, Multiplexing**).

Disconnect the **connectors** from the Protection and Switching Unit.
Check the **cleanliness** and **condition** of the Protection and Switching Unit connections, component code **1337**.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.
If the fault is still present, check the **insulation** and **continuity** of the following connections:
– **AP15** between components **120** and **1337**,
– **2K** between components **103** and **1337**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

*info: information

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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S3000_V5C_DF102

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 a stored fault: The fault is present after a road test using the cruise control then the speed limiter function.
	Special note: See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.

<p>Check the cleanliness and condition of the cruise control - speed limiter on - off switch, component code 1081 and its connections. If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.</p>
<p>With the ignition on, check for + 12 V on connection 3FX of component 1081. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Disconnect the battery. Disconnect the injection computer. Check the cleanliness and condition of the injection computer connections, component code 120 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3FX between components 120 and 1081, – 3PD between components 120 and 1081. If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>If the fault is still present, contact the Techline.</p>

*RV/LV: Cruise control/speed limiter function
M/A: On/Off button

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**

CRUISE CONTROL/SPEED LIMITER SELECTOR SWITCH ON STEERING WHEEL

1. DEF: No signal

IMPORTANT

To remove or check the **cruise control - speed limiter control switches** you need to remove the airbag (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 88C, Airbag and pretensioners, Driver's front airbag, 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.

Special note:

See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

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

Disconnect the battery.

Disconnect the injection computer.

Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- **86G** between components **120** and **331**,
- **86M** between components **120** and **331**.

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

If the fault is still present, contact the Techline.

*RV/LV: Cruise control/speed limiter function

AFTER REPAIR

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the **stored** faults.

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 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 at idle speed with all electrical consumers on for approximately 15 minutes .
	Special note: – OBD warning light illuminated.

Check the presence and conformity of the fuel in the tank.

If no misfire fault is **present or stored**, the misfiring was caused by a low fuel level.
Clear fault **DF109**.
If the fault is still present, contact the Techline.

AFTER REPAIR	Check that all 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). – running at idle speed with all electrical consumers drawing power for 15 minutes . If the fault reappears, continue the fault finding procedure.
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**DF126
PRESENT
OR
STORED**

PASSENGER COMPARTMENT HEATING RESISTOR

1. DEF: Multiplex network

NOTES

Conditions for applying the fault finding procedure to stored faults:
The fault is **present** when the ignition is switched on.

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

If the fault is still present, carry out fault finding on the UCH (see **87B, Passenger compartment connection unit**).
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.

DF127 PRESENT OR STORED	<u>BRAKE SWITCH 1 CIRCUIT</u> 1. DEF: No signal
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is present after the ignition has been switched on and the brake pedal has been depressed.
	Special notes: The fault appears after a fault on one of the two brake switch contacts. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check:

- the consistency of statuses **ET704 Brake switch no. 1** and **ET705 Brake switch no. 2** becoming **ACTIVE - INACTIVE** when the brake pedal is depressed,
- **the condition and cleanliness** of the brake lights switch, component code **160**.

Disconnect the battery and the injection computer, check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Check the **insulation and continuity** of the following 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 it.

If the fault is still present, carry out a fault finding procedure on the **Anti-lock braking system** (see **38C, Anti-lock braking system**).

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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DF128 PRESENT OR STORED	<u>BRAKE SWITCH 2 CIRCUIT</u> 1.DEF: No signal
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is present after the ignition has been switched on and the brake pedal has been depressed.
	Special notes: The fault appears after a fault on both two contacts of the brake switch. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check:

- the consistency of statuses **ET704 Brake switch no. 1** and **ET705 Brake switch no. 2** becoming **ACTIVE - INACTIVE** when the brake pedal is depressed,
- **the condition and cleanliness** of the brake lights switch, component code **160**.

Disconnect the battery and the injection computer, check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Check the **insulation and continuity** of the following 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 it.

If the fault is still present, carry out a fault finding procedure on the **Anti-lock braking system** (see **38C, Anti-lock braking system**).

If the fault is still present, contact the Techline.

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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**DF138
PRESENT
OR
STORED**

CLUTCH PEDAL CIRCUIT

1. DEF: Component in poor condition

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 notes:

- engine speed surges when changing gear,
- the acquisition is made if the vehicle is not fitted with an automatic transmission,
- in the event of a fault, before replacing any component, use the **diagnostic tool** to ensure that the clutch contact is operational and that the recommended clutch pedal clearance is still valid.
- In the event of an **open circuit** or **short circuit** to **+ 12 V**, the clutch pedal is detected as continually depressed. This makes it impossible to select a cruising speed in cruise control mode. The speed limiter remains operational in defect mode (inaccurate speed restriction),
- If **short circuit** to **earth**, status **ET405 Clutch pedal switch** is **INACTIVE**. See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

Check the **cleanliness, condition and fitting** of the clutch pedal switch, component code **675**.
Repair if necessary.

If the fault is still present, disconnect the clutch pedal switch. With the clutch pedal depressed, check that there is no continuity between connections **86D** and **MAM** of component **675**, and with the clutch pedal released, that there is continuity between connections **86D** and **MAM** of component **675**.
Replace the switch if necessary (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 37A, Mechanical component controls, Clutch pedal position sensor: Removal - Refitting**).

If the fault is still present, manipulate the harness so that the status changes.
Look for any damage to the wiring harness, and check the **condition** and **connection** of the injection computer and clutch pedal switch connectors.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

AFTER REPAIR

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

**DF138
CONTINUED**

If the fault is still present, check for earth on connection **MAM** of component **675**.

If there is no **earth** on connection **MAM** of component **675**, check the **insulation**, continuity and absence of interference resistance on the following connection:

– **MAM** of the component **675**.

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

If the fault is still present, check the **insulation, continuity and the absence of interference resistance** between the following connections:

– **86D** between components **120** and **675**.

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

If the fault is still present, contact the Techline.

AFTER REPAIR

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

DF154 PRESENT OR STORED	<u>FLYWHEEL SIGNAL SENSOR CIRCUIT</u> 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 present after the starter motor has been running for 10 seconds or at an engine speed above 600 rpm .
	Special notes: – the OBD warning light is lit, – In the event of flywheel signal loss, the injection and ignition are cut off: the vehicle stalls and cannot be restarted. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

1.DEF	NOTES	None.
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Check the cleanliness, condition and fitting of the flywheel. Repair if necessary.
If the flywheel has been replaced or removed, the flywheel target has to be reinitialised, then reprogrammed.
Programming reinitialisation: Use command RZ005 Programming . Carrying out the flywheel target programming: – Decelerate a first time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between 3500 and 3000 rpm , in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least 5 seconds . – Decelerate a second time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between 2400 and 2000 rpm , in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least 5 seconds . 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 idling speed and recovers torque).

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF154 CONTINUED	
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2.DEF	NOTES	None.
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Check the **mounting and the positioning** of the engine speed sensor (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Engine speed and position sensor**, **Removal - Refitting**).

Check the **cleanliness and condition** of the engine speed sensor, component code **149**.
Repair if necessary.

Disconnect the battery and the injection computer.

Check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Petrol injection computer: Removal - Refitting**).

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

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

- **3BL** between components **120** and **149**,
- **3BG** between components **120** and **149**.

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

Measure the **resistance** between the following connections:

- **3BL** and **3BG** of component **149**.

If the engine speed sensor resistance is not **235 ± 60 Ω at 20°C**, replace the engine speed sensor (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Engine speed and position sensor**, **Removal - Refitting**).

If the engine speed sensor has been replaced, the flywheel target programming has to be reinitialised, then reprogrammed.

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 a first time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **3500** and **3000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least **5 seconds**.
- Decelerate a second time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least **5 seconds**.

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

(This is 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.

DF196 PRESENT OR STORED	PEDAL SENSOR CIRCUIT GANG 1 CC.1: Short circuit to + 12 V CO.0: Open circuit or short circuit to earth 1. DEF: Inconsistency 2. DEF: Component in poor condition
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NOTES	Priority when dealing with a number of faults: Deal with fault DF012 Sensor feed voltage no. 2 first if it is present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is present after the accelerator pedal goes from no load to full load.
	Special notes: – level 1 or 2 fault warning light illuminates, CO.0/CC.1: defect mode type 4: speed limiter at 54 mph (90 km/h) and loss of power during acceleration (pedal feels soft). 1.DEF: defect mode types 3 and 4: regulation of pedal's engine or vehicle speed setpoint, speed limiter at 54 mph (90 km/h) and loss of power during acceleration (pedal feels soft). See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check that the pedal mechanism has not seized.
Check the cleanliness and condition of the pedal potentiometer connections, component code 921 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal - Refitting), Disconnect the battery and the injection computer. Check the cleanliness and condition of the injection computer connections, component code 120 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), 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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DF196
CONTINUED

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

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

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

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

- **3LS** et **3LT** of component **921**.

If the accelerator potentiometer resistance is not **1.7 kΩ ± 0.9 kΩ**, replace the accelerator potentiometer (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal - Refitting**).

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.

DF198 PRESENT OR STORED	PEDAL SENSOR CIRCUIT GANG 2 CC.0: Short circuit to earth CC.1: Short circuit to + 12 V
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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 present after the accelerator pedal goes from no load to full load.
	Special notes: <ul style="list-style-type: none">– level 1 or 2 fault warning light illuminated.– defect mode types 3 and 4: regulation of pedal's engine or vehicle speed setpoint, speed limiter at 54 mph (90 km/h) and loss of power during acceleration (pedal feels soft).– See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.

Check that the pedal mechanism has not seized.

Check the **cleanliness** and **condition** of the pedal potentiometer connections, component code **921** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal - Refitting**).

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

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

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

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF198
CONTINUED

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

– **3LW** and **3LV** of component **921**.

If the accelerator potentiometer resistance is not **2.8 kΩ ± 2.05 kΩ**, replace the accelerator potentiometer (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal - Refitting).

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.

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 notes: – cruise control and speed limiter deactivated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.
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Check:

- the consistency of statuses **ET704 Brake switch no. 1** and **ET705 Brake switch no. 2** becoming **ACTIVE - INACTIVE**,
- **the condition and cleanliness** of the brake lights switch, component code **160**.

Disconnect the battery and the injection computer, check the **cleanliness and condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

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

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

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

If the fault is still present, carry out a fault finding procedure on the **Anti-lock Braking System** (see **38C, Anti-lock Braking System**).

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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DF232 PRESENT OR STORED	<u>REFRIGERANT PRESSURE SENSOR CIRCUIT</u> 1. DEF: Voltage outside tolerances
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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 note: See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the **cleanliness** and **condition** of the refrigerant pressure sensor, code component **1202** and its connections (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 62A, Air conditioning, Air conditioning: List and location of components**).

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 injection computer connections, component code **120** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

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

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

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

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	<u>CYLINDER 1 - 4 IGNITION COIL CIRCUIT</u> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal first with faults DF046 Battery voltage , DF084 Actuator relay control circuit or DF085 Fuel pump relay control circuit if they are present or stored .
	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 .
	Special notes: <ul style="list-style-type: none">– 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 1 and 4, destruction of the catalytic converter possible and prevention of OBD fault finding. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Disconnect the cylinder 1 pencil coil connector.

Check the cleanliness and condition of the pencil coil and of its connections, (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17A, Ignition, Coils: Removal - Refitting**).

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 **primary** and **secondary** resistance of the cylinder 1 pencil coil.

If the primary resistance of the cylinder 1 coil is not **540 mΩ ± 30 mΩ** or the secondary resistance is not **10.7 kΩ ± 1.6 kΩ (K4M 736 - 830 - 831 - 834)**, replace the coil (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17A, Ignition, Coils: Removal - Refitting**).

If the primary resistance of the cylinder 1 coil is not **520 mΩ ± 50 mΩ (K7M 750)**, replace the coil (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17A, Ignition, Coils: Removal - Refitting**).

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

Switch off the ignition and disconnect the injection computer.

Check the cleanliness and condition of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- **3CV** between components **120** and **1077**,
- **3CZ** between components **1080** and **1077**.

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

If the fault is still present, contact the Techline.

With the ignition on, check for **+ 12 V** on connection **3BS** of component **1080**.

If there is no **+ 12 V**:

Switch off the ignition,

- disconnect the **3BS** connector in the Protection and Switching Unit,
- Check the cleanliness and condition of the Protection and Switching Unit connections, component code **1337**.

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

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

- **3BS** between components **1337** and **1080**.

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

Reconnect the Protection and Switching Unit connector, component code **1337**.

With the ignition on, if there is still not **+ 12 V** at component **1080** connector, there is a fault with the Protection and Switching Unit.

Contact Techline.

Check the operation of the fuel pump relay using command **AC079 Actuator static test**.

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

If the fault is still present, contact the Techline.

AFTER REPAIR

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the **stored** faults.

DF362 PRESENT OR STORED	<u>CYLINDER 2 - 3 IGNITION COIL CIRCUIT</u> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal first with faults DF046 Battery voltage , DF084 Actuator relay control circuit or DF085 Fuel pump relay control circuit if they are present or stored .
	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 .
	Special notes: <ul style="list-style-type: none">– 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 prevention of OBD fault finding. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

<p>Disconnect the cylinder 2 pencil coil connector. Check the cleanliness and condition of the pencil coil and of its connections, (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Coils: Removal - Refitting).</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.</p>
<p>Measure the primary and secondary resistance of the cylinder 2 pencil coil. Replace the cylinder 2 coil if the primary resistance is not 540 mΩ ± 30 mΩ or if the secondary resistance is not 10.7 kΩ ± 1.6 kΩ (K4M 768 - 830 - 831 - 834) (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Coils: Removal - Refitting).</p> <p>Replace the cylinder 2 coil if the primary resistance is not 520 mΩ ± 50 mΩ (K7M 750) (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Coils: Removal - Refitting).</p>

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF362
CONTINUED

Switch off the ignition and disconnect the injection computer.

Check the cleanliness and condition of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

- **3CW** between components **120** and **1078**,
- **3CP** between components **1079** and **1078**.

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

If the fault is still present, contact the Techline.

With the ignition on, check for **+ 12 V** on connection **3BS** of component **1079**.

If there is no **+ 12 V**:

Switch off the ignition,

- disconnect the **3BS** connector in the Protection and Switching Unit,
- check the cleanliness and the condition of the the Protection and Switching Unit connections,

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

- **3BS** between components **1337** and **1079**.

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

Reconnect the Protection and Switching Unit connector, component code **1337**.

With the ignition on, if there is still not **+ 12 V** at component **1079** connector, there is a fault with the Protection and Switching Unit.

Contact Techline.

Check the operation of the fuel pump relay using command **AC079 Actuator static test**.

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

If the fault is still present, contact the Techline.

AFTER REPAIR

Follow the instructions to confirm repair.

Deal with any other faults.

Clear the **stored** faults.

DF394 PRESENT OR STORED	<u>CATALYTIC CONVERTER OPERATING FAULT</u> 1. DEF: Component in poor 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 . <ul style="list-style-type: none">– combustion misfiring:– DF059 Misfiring on cylinder 1,– DF060 Misfiring on cylinder 2,– DF061 Misfiring on cylinder 3,– DF062 Misfiring on 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: <ul style="list-style-type: none">– there must be no further electrical faults,– programming done,– warm engine (coolant temperature 75°C minimum),– engine running at idle speed with all electrical consumers on for approximately 15 minutes.
	Special note: <ul style="list-style-type: none">– 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	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF398 PRESENT OR STORED	<u>FUEL CIRCUIT OPERATING FAULT</u> 1. DEF: Non-compliance with emission control standards 2. DEF: Component in poor condition
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NOTES	Priority when dealing with a number of faults: If faults DF085 Fuel pump relay control circuit and injector faults: DF026 Cylinder 1 injector control circuit, DF027 Cylinder 2 injector control circuit, DF028 Cylinder 3 injector control circuit, DF029 Cylinder 4 injector control circuit, are present or stored , deal with these first.
	Special notes: – the OBD warning light is lit, – a fuel supply system fault can lead to starting difficulties, and loss of comfort and power. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.

<p>Check the cleanliness, condition and fitting of the petrol vapour absorber, component code 371. Check the connections and operation of the petrol pump. 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 cleanliness, condition and fitting of the injectors and their sealing (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting).</p>
<p>Check:</p> <ul style="list-style-type: none">– 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. <p>Repair the faulty component(s) if necessary (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply).</p>
<p>If the fault is still present, 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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DF404 PRESENT OR STORED	<u>AUTOMATIC TRANSMISSION OR SEQUENTIAL GEARBOX MULTIPLEX CONNECTION</u> 1. DEF: Incorrect gear 2. DEF: Incorrect torque signal from automatic gearbox computer 3. DEF: No multiplex frames or invalid values (fault on computer transmitting signal or multiplex line connection).
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NOTES	Priority when dealing with a number of faults: Deal with fault DF046 Battery voltage first if it is present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is considered present when the engine is running.

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

If the fault is still present, run fault finding on the **Automatic transmission** (see **23A, Automatic transmission**).
If the fault is still present, contact the Techline.

*TA: Automatic transmission (automatic gearbox)

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. FAULT: CAN 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, Multiplexing**).

If the fault is still present, run fault finding on the **Instrument panel** system (see **83A, Instrument panel**).
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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DF436 PRESENT OR STORED	<u>DETECTION OF ENGINE MISFIRING</u> 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: – 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 Misfiring on cylinder 1, DF060 Misfiring on cylinder 2, DF061 Misfiring on cylinder 3, DF062 Misfiring on cylinder 4.
	Conditions for applying the fault finding strategy to a stored fault The fault is considered present under the following conditions: – there must be no further electrical faults, – programming must be carried out. – warm engine (minimum 75°C), – engine running at idle speed with all electrical consumers on for approximately 15 minutes .
	Special notes: – catalytic converter misfire: OBD warning light flashes when the fault is present then is continuously illuminated, – 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 (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting**).

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 entire petrol supply system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 13A, Fuel supply**),
- check the entire ignition system (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17A, Ignition**),
- check the hydraulic tappets if there is a camshaft noise (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 11A, Top and front of engine**).

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.

PETROL INJECTION

Fault finding – Interpretation of faults

17B

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, Multiplexing**).

If the fault is still present, carry out fault finding on the **Instrument panel** system (see **83A, Instrument panel**).
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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DF457 PRESENT OR STORED	<u>FLYWHEEL TARGET</u> 1. DEF: Component in poor condition 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 considered present when the engine is running.
	Special note: – 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:

- Decelerate a first time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **3500** and **3000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least **5 seconds**.
- Decelerate a second time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic gearbox for at least **5 seconds**.

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 idling 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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DF601 PRESENT OR STORED	<u>CIRC*. O2 SENSOR HEATING POWER CIRCUIT</u> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal with faults DF046 Battery voltage or DF084 Actuators relay control circuit first if they are present or stored .
	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.
	Special notes: – OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the **cleanliness** and **condition** of the upstream oxygen sensor connections, component code **887** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

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 **3FB3 (for Kangoo 2)** or **3FB2 (for Mégane II and Scénic II)** of component **887**.

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

- **3FB3** between components **1337** and **887** (for **Kangoo 2**)
- **3FB2** between components **1337** and **887** (for **Mégane II** and **Scénic II**)

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 it.

*Circ: Circuit

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF601
CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

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

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 it.

Measure the **heating resistance** between connections:

- **3FB3** and **3GF** of component **887** (for **Kangoo 2**)
- **3FB2** and **3GF** of component **887** (for **Mégane II** and **Scénic II**)

If the resistance of the upstream oxygen sensor is not **9 Ω at 20°C**, replace the upstream oxygen sensor (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

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.

DF602 PRESENT OR STORED	<u>DOWNSTREAM O2 SENSOR HEATING POWER CIRCUIT</u> CO.0: Open circuit or short circuit to earth CC.1: Short circuit to + 12 V 1. DEF: Non-compliance with emission control standards
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NOTES	Priority when dealing with a number of faults: Deal with faults DF046 Battery voltage or DF084 Actuator relay control circuit first if it is present or stored .
	Conditions for applying the fault finding procedure to a stored fault: The fault is present after a delay of 10 seconds with the engine running or when command AC019 Downstream O2 sensor heating is activated.
	Special notes: OBD warning light illuminated. See Wiring Diagrams Technical Note for Kangoo 2 , Mégane II or Scénic II .

Check the **cleanliness** and **condition** of the downstream oxygen sensor connections, component code **242** (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **17B**, **Petrol injection**, **Oxygen sensors: Removal - Refitting**).

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 **3FB3 (for Kangoo 2)** or **3FB2 (for Mégane II and Scénic II)** of the downstream oxygen sensor connector.

Use the "Universal bornier" to check the **insulation and continuity** on the following connection:

- **3FB3** between components **1337** and **242** (for **Kangoo 2**)
- **3FB2** between components **1337** and **242** (for **Mégane II** and **Scénic II**)

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 it.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF602
CONTINUED**

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

Use the "Universal bornier" to check the **insulation and continuity** on the following connection:

– **3GG** between components **120** and **242**

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 it.

Measure the heating resistance between connections:

– **3FB3** and **3GF** of component **242** (for **Kangoo 2**)

– **3FB2** and **3GG** of component **242** (for **Mégane II and Scénic II**)

If the resistance of the downstream oxygen sensor is not **9 Ω at 20°C**, replace the downstream oxygen sensor (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

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.

DF603 PRESENT OR STORED	<u>UCH MULTIPLEX CONNECTION</u> 1. FAULT: CAN connection fault
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is considered present when the ignition is switched on.
	Special notes: If the fault is present : – cruise control/speed limiter function cut off.

Test the multiplex network (see **88B, Multiplexing**).

If the fault is not resolved, carry out 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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DF623 PRESENT OR STORED	<u>CLOSING BRAKE SIGNAL</u> 1. FAULT: CAN connection fault
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NOTES	Special notes: – cruise control and speed limiter deactivated. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .
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Check the **condition** and **cleanliness** of the pedals.
Check the **condition** and **cleanliness** of the dual-contact brake and its connections, component code **160**.
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector(s), otherwise, replace the wiring.

Check that fuse **F20 (15A)** is in **good condition and working properly**.
Repair if necessary (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 81C, Fuses, Fuses: List and location of components**).
With the ignition on, check for **+12 V** on connections **65A** and **SP17** of component **160**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Disconnect the battery and the injection computer.
Check the **cleanliness** and **condition** of the injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.
Using the Universal bornier, check the **insulation** and **continuity** on the following 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 it.

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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DF624 PRESENT OR STORED	<u>UPC MULTIPLEX CONNECTION</u> 1. FAULT: CAN connection fault 2. DEF: Non-compliance with emission control standards
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NOTES	Special notes: If this fault appears during the engine starting phase, followed by a high idle speed (warm engine), check the conformity of the alternator and its configuration in the UPC according to the procedure below: Check that the part number of the alternator fitted on the vehicle conforms with the part number in the World Vehicle Database. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic 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 injection computer connections, component code 120 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3SN between components 120 and 1337 , – 3SM between components 120 and 1337 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, carry out fault finding on the Protection and Switching Unit system (see 87G, Engine interconnection unit). 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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DF650 PRESENT OR STORED	<u>ACCELERATOR PEDAL POSITION SIGNAL</u> 1. DEF: Accelerator pedal sensor locked
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NOTES	Priority when dealing with a number of faults: Deal with faults DF011 Sensor supply voltage no. 1 , DF012 Sensor supply voltage no. 2 , DF196 Pedal sensor circuit gang 1 , DF198 Pedal sensor circuit gang 2 if these are present or stored .
	Conditions for applying the fault finding procedure to stored faults: The fault is present when brake and accelerator pedals are depressed simultaneously for 30 seconds .
	Special notes: – level 2 fault warning light illuminated. – defect mode types 3 and 4 . See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic 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 connector of the accelerator pedal potentiometer, component code 887 (for Kangoo 2) or component code 921 (for Mégane II and Scénic II) (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal - Refitting). 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 component 120 (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), 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 injection computer connections, component code **120** (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

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

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

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

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

If the fault is still present, contact the Techline.

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> OC: Open circuit CC.0: 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 command AC224 Additional fuel circuit pump relay is run.
	Special note: Status ET670 Additional fuel pump relay ctrl* may help deal with this fault.
	Only for Flex fuel .
	Special note: Use the Wiring Diagrams Technical Note for Mégane II or Scénic II .

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF884 CONTINUED 1	
If the relay does not click:	<p>Disconnect the battery and the injection computer. Check the cleanliness and condition of the injection computer connections, component code 120, and of the additional fuel pump relay connector, component code 1639.</p> <p>If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
	<p>Disconnect connector CN of the Protection and Switching Unit, component code 1337. Check the cleanliness and condition of 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>Check the insulation and continuity of the following connection:</p> <ul style="list-style-type: none">• 3ACK between components 120 and 1639. <p>Use the "Universal bornier" to check the insulation and continuity on the following connection:</p> <ul style="list-style-type: none">• 3FB2 between components 1337 and 1639. <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

*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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DF884 CONTINUED 2	
IF THE PUMP DOES NOT OPERATE	Check the cleanliness and condition of the additional fuel pump connections, component code 283 . 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 command AC224 Additional fuel circuit pump relay running, check for +12 V on connection 3ACL of the additional fuel 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 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 (see 87G, Engine compartment connection unit.)
	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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DF894 PRESENT OR STORED	<u>ADDITIONAL FUEL CIRCUIT SOLENOID VALVE</u> OC: Open circuit CC.0: 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 command AC217 Additional fuel circuit solenoid valve is run.
	Only for Flex fuel .
	Special note: Use the Wiring Diagrams Technical Note for Mégane II or Scénic II .

Check the cleanliness and condition of the additional fuel circuit solenoid valve connections, component code 1640 and of the injection computer connections, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Measure the resistance of the additional fuel circuit solenoid valve. If the resistance is not in the range: 26 Ω < X < 30 Ω at 24°C , replace the additional fuel circuit solenoid valve.
With the ignition on, check for +12 V on connection 3FB2 of the additional fuel circuit solenoid valve connector, component code 1640 .
Using the Universal bornier, check for insulation and continuity on the following connections: <ul style="list-style-type: none">• 3ACM between components 1640 and 120,• 3FB2 between components 1640 and 1337. If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

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	<u>AFTER-SALES TOOTH SIGNAL SENSOR CIRCUIT</u> 1. DEF: Tooth lost
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NOTES	Conditions for applying the fault finding procedure to stored faults: The fault is present after the starter motor has been running for 10 seconds or at an engine speed above 600 rpm .
	Special note: See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .

Check the mounting and positioning of the engine speed sensor (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Engine speed and position sensor, Removal - Refitting).
Check the cleanliness and condition of the engine speed sensor, component code 149 . Repair if necessary.
Disconnect the battery and the injection computer. Check the cleanliness and condition of the injection computer connections, component code 120 (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Using the universal bornier, check the insulation and continuity on the following connections: – 3BL between components 120 and 149 , – 3BG between components 120 and 149 . If the connection or 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 the wiring.
Measure the resistance between connections 3BL and 3BG of component 149 . If the engine speed sensor resistance is not 235 ± 60 Ω at 20°C , replace the engine speed sensor (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection, Engine speed and position sensor, Removal - Refitting).

*APV: After-Sales

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 programming has to be reinitialised, then reprogrammed.

Programming reinitialisation:

Use command **RZ005: Programming**.

Carrying out the flywheel target programming:

- Decelerate a first time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **3500** and **3000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least **5 seconds**.
- Decelerate a second time with injection cut-off (i.e. feet off the brake, accelerator and clutch pedals) between **2400** and **2000 rpm**, in 3rd gear for a manual gearbox and 2nd for automatic gearbox, for at least **5 seconds**.

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

(This is 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.

The global **conformity check** for the functions and sub-functions of this system is no longer interpreted in the conformity check. Instead, all information available in the functions and sub-functions can be found in the following chapters:

For **STATUSES**, refer to the "**INTERPRETATION OF STATUSES**" section.

For **PARAMETERS**, refer to the "**INTERPRETATION OF PARAMETERS**" section.

For **COMMANDS**, refer to the "**INTERPRETATION OF COMMANDS**" section.

PETROL INJECTION

Fault finding – Status summary table

17B

Tool status	Diagnostic tool title
ET001	+ After ignition computer feed
ET003	Engine immobiliser
ET004	Air conditioning authorisation
ET006	Code programmed
ET021	High speed fan assembly request
ET022	Low speed fan assembly request
ET023	Fast idle speed request
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
ET053	Downstream O2 sensor heating
ET054	Idle speed regulation
ET056	Richness double loop
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
ET063	Park/Neutral position
ET064	Injection fault severity 1
ET065	Injection fault severity 2

PETROL INJECTION

Fault finding – Status summary table

17B

Tool status	Diagnostic tool title
ET075	Pedal released and throttle closed
ET076	Starting
ET077	Impact detected
ET079	Air conditioning present
ET081	Accelerator pedal position
ET082	Motorised throttle position
ET085	Motorised throttle in defect mode
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
ET233	Clutch pedal
ET286	Injection connection - Air conditioning
ET289	Injection connection - Instrument panel
ET293	Compressor control
ET300	Richness regulation
ET340	Request by automatic transmission to light up the OBD warning light
ET351	Injection connection - Electronic Stability Program (ESP)
ET377	Engine status
ET405	Clutch pedal switch
ET413	Cruise control/speed limiterfunction
ET415	Deactivation of cruise control/speed limiter
ET460	Coolant temperature warning light
ET556	Driver deactivation of the cruise control/speed limiter
ET557	Cruise control/speed limiter deactivation by function

*RCH: Passenger Compartment Heating Resistors

PETROL INJECTION

Fault finding – Status summary table

17B

Tool status	Diagnostic tool title
ET560	Controlled coolant thermostat
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
ET581	Petrol combustion misfiring fault finding
ET616	Exhaust air injection OBD fault finding
ET617	Upstream oxygen sensor OBD fault finding
ET618	Catalytic converter On-board diagnostics
ET619	Fuel circuit OBD fault finding
ET670	Additional petrol pump relay cde*
ET671	Programming the level of alcohol
ET673	Jammed accelerator pedal detected
ET674	Refrigerant pressure
ET703	Cruise control/speed limiter buttons
ET704	Brakecontact No 1
ET705	Brakecontact No 2
ET741	Optional vehicle speed restriction

*ctrl: control

ET001

COMPUTER + AFTER IGNITION FEED

STATUS DEFINITION

PRESENT: This status indicates that the + after ignition feed is active.
ABSENT: This status indicates that the + after ignition feed is not active.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

"PRESENT"

Ignition on and engine running warm at idle speed with the + after ignition feed activated.
In the event of a fault, apply the interpretation of the **DF046 Battery voltage** then perform fault finding on **the UPC** (see 87G, **Engine compartment connection unit**).

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**.

ET003	<u>ENGINE IMMOBILISER</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the immobiliser is active. INACTIVE: This status indicates that the immobiliser is inactive.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
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"ACTIVE"	If status ET003 is ACTIVE (see 82A, Engine immobiliser).
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"INACTIVE"	When switching the ignition on and when driving, status ET003 should be INACTIVE , if this is not the case (see 82A, Engine immobiliser).
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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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ET004	<u>AC AUTHORISED</u>
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STATUS DEFINITION	YES: This status indicates that the air conditioning is active. NO: This status indicates that the air conditioning is inactive.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
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YES	The air conditioning authorisation only changes to YES if: <ul style="list-style-type: none">– the air conditioning request has been made by the driver (air conditioning switch in AC position with minimum ventilation),– the engine is not under full load,– the air conditioning system is not faulty.
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NO	Status ET004 remains at NO under the following conditions: <ul style="list-style-type: none">– the vehicle is stopped with the ignition on,– faults are present in the air conditioning circuit,– no air conditioning request has been made by the driver,– the engine is under full load. If status ET004 remains NO then the air conditioning should be authorised, Check: <ul style="list-style-type: none">– that the air conditioning compressor is activated correctly,– the air conditioning system feed fuses,– the presence of refrigerant in the air conditioning circuit.
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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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ET006	<u>CODE PROGRAMMED</u>
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STATUS DEFINITION	" YES : This status indicates that the immobiliser code has been programmed. " NO : This status indicates that the immobiliser code has not been programmed.
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NOTES	Special note: Only perform the tests if the statuses do not correspond with the system programming functions.
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Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

YES	Status ET341 is YES if dialogue is possible between the UCH computer and the injection computer and the key code is recognised. Authorisation for engine starting is only issued if the code is recognised and the status ET003 Engine immobiliser is INACTIVE . In the event of a fault, (see 87B, Passenger compartment connection unit, conformity check).
NO	Status ET341 is NO if dialogue is not possible between the UCH computer and the injection computer (status ET003 Engine immobiliser remains ACTIVE). This fault may be caused by incorrect key programming or a lack of key programming. (see 87B, Passenger compartment connection unit) and follow the key programming procedure. If the key programming is not the cause, run a multiplex network test (see 88B, Multiplexing) and check that dialogue between the UCH and the injection computer is possible. If dialogue is not established, 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 .
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ET021

HIGH-SPEED FAN REQUEST

STATUS DEFINITION

ACTIVE: This status indicates that the high-speed fan is active.

INACTIVE: This status indicates that the high-speed fan is inactive.

NOTES

Special note:

Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

**ACTIVE
or
INACTIVE**

Fan assembly 2 starts when the coolant temperature exceeds **102°C** and stops when it falls below **99°C**.

If the status is incoherent, first deal with the **DF001 Coolant temperature sensor circuit** then check the consistency of **PR064 Coolant temperature**.

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**.

ET022

LOW-SPEED FAN REQUEST

STATUS DEFINITION

ACTIVE: This status indicates that the high-speed fan is active.

INACTIVE: This status indicates that the high-speed fan is inactive.

NOTES

Special note:

Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

**ACTIVE
or
INACTIVE**

To ensure cooling, **with the engine running**, fan assembly 1 is activated when the coolant temperature exceeds **99°C** or when an air conditioning request has been made, and stops when the temperature drops below **96°C**.
If the status is incoherent, first deal with the **DF001 Coolant temperature sensor circuit** then check the consistency of **PR064 Coolant temperature**.

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**.

ET023

FAST IDLE SPEED REQUEST

STATUS DEFINITION

ACTIVE: The status indicates that the fast idle speed request is active.
INACTIVE: The status indicates that the fast idle speed request is inactive.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

ACTIVE
or
INACTIVE

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, Multiplexing) then if the test is in order, run fault finding on the UCH (see 87B, Passenger compartment connection unit).

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**.

ET039

BRAKE PEDAL

STATUS DEFINITION

DEPRESSED: This status indicates that the brake pedal is in the depressed position.
RELEASED: This status indicates that the brake pedal is in the released position.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system operation.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

DEPRESSED

Status **ET039** is DEPRESSED when there is pressure on the brake pedal.
In the event of a fault, see the interpretation of statuses **ET704 Brake contact no. 1** and **ET705 Brake contact no. 2**.

RELEASED

Status **ET039** is RELEASED when there is no action on the brake pedal.
In the event of a fault, see the interpretation of statuses **ET704 Brake contact no. 1** and **ET705 Brake contact no. 2**.

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	<u>CRUISE CONTROL/SPEED LIMITER</u>
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STATUS DEFINITION	<p>NOT DETECTED: This status indicates that the cruise control or speed limiter function is not present on the vehicle.</p> <p>INACTIVE: This status indicates that the cruise control/speed limiter main On/Off switch is in the rest (or neutral) position.</p> <p>LIMITER: This status indicates that the driver has used the main switch to select the speed limiter.</p> <p>CRUISE CONTROL: This status indicates that the driver has used the main switch to select the cruise control.</p>
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NOTES	<p>Special notes:</p> <p>Only perform the tests if the statuses do not correspond with the system programming functions.</p> <p>See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II.</p>
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

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 buttons, the main switch is in the rest position (or neutral) and after the injection computer has been programmed or reprogrammed, status ET042 is NOT DETECTED.</p> <p>To activate the cruise control/speed limiter function, press the main switch in cruise control position then in speed limiter position. Return to rest position. For status ET042: the tool displays INACTIVE.</p> <p>If not, several steps must be checked:</p> <ol style="list-style-type: none">1. Return to the page on testing the multiplex network with the CLIP program. Repeat the multiplex network test. Re-establish dialogue with the injection computer. Check ET042. If ET042 is INACTIVE, the injection computer has detected the various positions of the main switch. The cruise control/speed limiter is active.2. If ET042 is NOT DETECTED, check that the owner of the vehicle has not requested, sometime in the past, for the cruise control/speed limiter function to be inhibited. Contact Techline.
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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<p>ET042 CONTINUED 1</p>	
<p>INACTIVE</p>	<p>When the main switch is in rest position (or neutral), status ET042 is INACTIVE. If CRUISE CONTROL or SPEED LIMITER appears despite the main switch being in the rest (or neutral) position, carry out the following operations: Check the connections of the cruise control/speed limiter main 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. Check for + 12 V APC on the main switch connector. Disconnect the main switch, and when it is in the rest position, check the insulation between:</p> <ul style="list-style-type: none"> – 3FX between components 120 and 1081, – 3PD between components 120 and 1081. <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Check the continuity on the following connection:</p> <ul style="list-style-type: none"> – 3PD between components 120 and 1081. <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Check the continuity on the following connection:</p> <ul style="list-style-type: none"> – 3FX between components 120 and 1081. <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If these checks are not in order, replace the switch. Check the continuity, insulation and the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none"> – 3FX between components 120 and 1081, – 3PD between components 120 and 1081. <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Repair if necessary.</p> <p>Check the engine management computer connections.</p>

<p>AFTER REPAIR</p>	<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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ET042 CONTINUED 2

SPEED LIMITER

When the driver presses the main speed limiter switch, status **ET042** becomes **SPEED LIMITER**.

If **CRUISE CONTROL** or **INACTIVE** appears although the switch was pressed in the speed limiter position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

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 for **+ 12 V** APC on the main switch connector.

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

- **3FX** between components **120** and **1081**,
- **3PD** between components **120** and **1081**.

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

Check the continuity on the following connection:

- **3PD** between components **120** and **1081**.

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

Check the continuity on the following connection:

- **3FX** between components **120** and **1081**.

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

If these checks show incorrect values, replace the main switch.

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

- **3FX** between components **120** and **1081**,
- **3PD** between components **120** and **1081**.

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

Check the engine management computer connections.

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

CRUISE CONTROL

When the driver presses the main cruise control button, status **ET042** becomes **CRUISE CONTROL**.

If **SPEED LIMITER** or **INACTIVE** appears although the driver pressed the switch in the cruise control position, carry out the following operations:

Check the connections of the cruise control/speed limiter main switch.

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 for **+ 12 V APC** on the main switch connector.

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

- **3FX** between components **120** and **1081**,
- **3PD** between components **120** and **1081**.

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

- Check the continuity between the following connections:

- **3PD** between components **120** and **1081**.
- **3FX** between components **120** and **1081**.

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

If these checks show incorrect values, replace the main switch.

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

- **3FX** between components **120** and **1081**,
- **3PD** between components **120** and **1081**.

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

Check the engine management computer connections.

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**.

ET047

FUEL PUMP CONTROL CIRCUIT

STATUS DEFINITION

ACTIVE: This status indicates that the fuel pump control is active.
INACTIVE: This status indicates that the fuel pump control is inactive.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

**ACTIVE
or
INACTIVE**

This status becomes active when the engine is started.
In the event of a fault, apply the interpretation of **DF085 Fuel pump relay control circuit**.

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**.

ET048

ACTUATOR RELAY CONTROL

STATUS DEFINITION

ACTIVE: The status indicates that the control is active.

INACTIVE: The status indicates that the control is inactive.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

**ACTIVE
or
INACTIVE**

This relay supplies the following actuators: the injectors, the throttle control, the oxygen sensor heaters, and the fuel vapour absorber bleed solenoid valve on **connection 3FB3** (for **Kangoo 2**) or **3FB1** (for **Mégane II** and **Scénic II**) of the injection computer.

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**.

ET050

CANISTER BLEED CONTROL

STATUS DEFINITION

ACTIVE: The status indicates that the control is active.

INACTIVE: The status indicates that the control is inactive.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

"INACTIVE"

The petrol vapour rebreather bleed does not operate at idle speed.

Use command **AC017 Canister bleed solenoid valve** to check its operation.

In the event of a fault, see interpretation of fault **DF081 Canister bleed solenoid valve circuit**.

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**.

ET051

THROTTLE STOP PROGRAMMING

STATUS DEFINITION

"**COMPLETED**": This status indicates that programming has been completed.
"**NOT COMPLETED**": This status indicates that programming has not been completed.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

When programming is in progress, the injection system prevents the engine from starting, until the operation is completed.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

PERFORMED
or
NOT
COMPLETED

Even though this programming is automatic, take particular care when performing the first motorised throttle stop programming operation.
This can be carried out on several occasions:
– when a computer is switched on for the first time,
– at the end of computer programming (see **Configurations and programming**).
The air temperature must be above **0°C** during programming, then, at the end of programming, switch off the ignition and wait **30 seconds** for the end of Power Latch so that the computer can store the programmed stops.

AFTER REPAIR

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

ET052	<u>UPSTREAM O2 SENSOR HEATING</u>
--------------	-----------------------------------

STATUS DEFINITION	ACTIVE: This status indicates that the upstream oxygen sensor is active. INACTIVE: This status indicates that the upstream oxygen sensor is inactive.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions. The heating works only when the engine is running. It is disabled above 84 mph (140 km/h)
--------------	--

Conformity check with engine stopped and ignition on.
--

INACTIVE	The status is inactive when the engine is off. In the event of a fault, apply interpretation of DF601 Upstream O2 sensor heating power circuit .
-----------------	--

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C
--

ACTIVE	The status becomes active when the engine is started and its operation increases according to the heating temperature. In the event of a fault apply the interpretation of DF601 Upstream. O2 sensor heating power circuit .
---------------	--

*Circ: Circuit

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 .
---------------------	---

S3000_V5C_ET052

ET053	<u>DOWNSTREAM O2 SENSOR HEATING</u>
--------------	-------------------------------------

STATUS DEFINITION	ACTIVE: This status indicates that the downstream oxygen sensor is active. INACTIVE: This status indicates that the downstream oxygen sensor is inactive.
--------------------------	--

NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions. The command is not immediate when the engine is started. It is activated after a period which is dependent on the coolant temperature with the engine running and in the absence of no load conditions. The heating of the downstream sensor is deactivated under 84 mph (140 km/h) or when the engine is under load.
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Conformity check with engine stopped and ignition on.
--

INACTIVE	The status is inactive when the engine is off. In the event of a fault, apply the interpretation of DF602. downstream O2 sensor heating power circuit
-----------------	---

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C
--

ACTIVE	The status becomes active when the engine is started and its operation increases according to the heating temperature. In the event of a fault, apply the interpretation of DF602. downstream O2 sensor heating power circuit.
---------------	--

*Circ: Circuit

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 .
---------------------	---

S3000_V5C_ET053

ET054

IDLING SPEED REGULATION

STATUS DEFINITION

ACTIVE: This status indicates that idle speed regulation is active.

INACTIVE: This status indicates that idle speed regulation is inactive.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

ACTIVE
or
INACTIVE

The status becomes active when the engine is started.

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.

Check that all these parameters are completely correct.

AFTER REPAIR

Repeat the conformity check from the start.

**ET054
CONTINUED**

IDLING SPEED TOO HIGH

Check:

- 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 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 17B, Petrol injection**),
 - the condition and cleanliness of the injectors,
 - the cylinder compression's,
 - the timing adjustment,
 - the hydraulic tappets if there is a camshaft noise (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 11A, Top and front of engine**).
- Repair the defective component if necessary.

AFTER REPAIR

Repeat the conformity check from the start.

ET056	<u>DOUBLE RICHNESS LOOP</u>
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STATUS DEFINITION	ACTIVE: The status indicates that the double richness loop is active. INACTIVE: The status indicates that the double richness loop is active.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
--------------	--

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C
--

ACTIVE or INACTIVE	This status is only inactive if one of the two oxygen sensors is in poor condition. In the event of a fault, apply the interpretation of faults DF601. upstream O2 sensor heating power circ* , DF602 downstream O2 sensor heating power circ* , DF092 Upstream oxygen sensor circuit and DF093 Downstream oxygen sensor circuit .
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* Circ: circuit

AFTER REPAIR	Repeat the conformity check from the start.
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ET057
ET058
ET059
ET060

MISFIRING ON CYLINDER 1
MISFIRING ON CYLINDER 2
MISFIRING ON CYLINDER 3
MISFIRING ON CYLINDER 4

STATUS DEFINITION

YES: This status indicates that a combustion misfire has been detected on the cylinder.
NO: This status indicates that a combustion misfire has not been detected on the cylinder.

NOTES

Special note:

Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

YES
or
NO

For normal engine operation, the status must be **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** according to the cylinder in question.

AFTER REPAIR

Repeat the conformity check from the start.

S3000_V5C_ET057/S3000_V5C_ET058/S3000_V5C_ET059/S3000_V5C_ET060

ET061	<u>CYLINDER 1 RECOGNITION</u>
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STATUS DEFINITION	<p>COMPLETED: This status indicates that the cylinder 1 injector command has been recognised.</p> <p>“NOT COMPLETED”: This status indicates that the cylinder 1 injector command has not been recognised.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

COMPLETED or NOT DONE	<p>Recognition is performed at start-up if engine phasing is coherent. Run command RZ005 Programming and program the engine flywheel target (see Configurations and Programming). Check the programming with ET089 Programming flywheel target.</p>
---	--

Engine phasing:

On engines without a camshaft sensor, the engine phasing is performed by software. A "Memo-phasing" program is run first to phase the engine management on starting according to the data saved from the previous setting. Wait **30 seconds** (for the data to be saved) before disconnecting the computer.

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

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

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

AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET062

FLYWHEEL SIGNAL

STATUS DEFINITION

DETECTED: This status indicates that the engine flywheel signal is detected.
NOT DETECTED: This status indicates that the engine flywheel signal is not detected.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on.

NOT DETECTED

The engine flywheel signal is detected after the engine is started.
In the event of a fault apply the interpretation for **DF154 Flywheel signal sensor circuit**.

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

"DETECTED"

The engine flywheel signal is detected after the engine is started.
In the event of a fault, apply the interpretation for **DF154 Flywheel signal sensor circuit**.

AFTER REPAIR

Repeat the conformity check from the start.

ET063

PARK/NEUTRAL POSITION

STATUS DEFINITION

YES: This status indicates that the gearbox is Park or Neutral.

NO: This status indicates that the gearbox is not in Park or Neutral.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

**YES
or
NO**

The position is detected when gears are shifted into Park or Neutral.
If the status is not coherent with the gear lever position, test the multiplex network (**see 88B, Multiplexing**).
If the vehicle is equipped with an automatic transmission, run fault finding on the automatic transmission (**see 23A, Automatic transmission**).
If the vehicle is fitted with a manual gearbox, check that the neutral sensor and its connections are **clean** and in **good condition**.

AFTER REPAIR

Repeat the conformity check from the start.

ET064

LEVEL 1 INJECTION FAULT

STATUS DEFINITION

YES: This status indicates that the injection fault warning light level 1 is lit.
NO: This status indicates that the injection fault warning light level 1 is not lit.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

YES
or
NO

Test the instrument panel (see **83A, Instrument panel**).

AFTER REPAIR

Repeat the conformity check from the start.

ET065

LEVEL 2 INJECTION FAULT

STATUS DEFINITION

YES: This status indicates that the injection fault warning light level 2 is illuminated.
NO: This status indicates that the injection fault warning light level 2 is not illuminated.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

YES
or
NO

Test the instrument panel (see **83A, Instrument panel**).

AFTER REPAIR

Repeat the conformity check from the start.

ET075

PEDAL NO LOAD AND THROTTLE VALVE CLOSED

STATUS DEFINITION

YES: This status indicates that the motorised throttle is closed and that there is no load on the accelerator pedal.

NO: This status indicates that the motorised throttle is definitely not closed and/or that there is some load on the accelerator pedal.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

"YES"

If **NO**, apply the interpretation of **PR030 Accelerator pedal position**.

AFTER REPAIR

Repeat the conformity check from the start.

ET076	<u>STARTING</u>
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STATUS DEFINITION	PROHIBITED: This status indicates that starting is not possible. AUTHORISED: This status indicates that starting is possible.
--------------------------	--

NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
--------------	--

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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"PROHIBITED"	Refer to the fault finding note for the UCH (see 87B, Passenger compartment connection unit).
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"AUTHORISED"	Refer to the fault finding note for the UCH (see 87B, Passenger compartment connection unit).
---------------------	---

AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET077	<u>IMPACT DETECTED</u>
--------------	-------------------------------

STATUS DEFINITION	NO: This status indicates that the airbag computer has not detected an impact. YES: This status indicates that the airbag computer has detected an impact.
--------------------------	---

NOTES	There must be no present or stored faults.
	Special notes: The fault appears when the UCH control unit receives a frontal impact signal from the Airbag computer via the multiplex network. As soon as the UCH receives this signal, engine operation is prohibited.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

"NO"	The status is usually NO as no impact has been detected. Otherwise, check the airbag computer (see 88C, Airbags and pretensioners).
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"YES"	If YES an impact must be present. Otherwise, check the airbag computer (see 88C, Airbags and pretensioners).
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If the vehicle has been involved in an accident:

Carry out any necessary repairs:

- switch off the ignition for **10 seconds**,
- switch on the ignition again.

If status **ET077** is **Yes**, run fault finding on the **Airbag** computer.

If the vehicle has not been involved in an accident, carry out fault finding on the **Airbag** computer.

AFTER REPAIR	Repeat the conformity check from the start.
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ET079	<u>AIR CONDITIONING PRESENT</u>
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STATUS DEFINITION	YES: This status indicates that air conditioning is present on the vehicle. NO: This status indicates that air conditioning is not present on the vehicle.
--------------------------	---

NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
	The heating and air conditioning system is present depending on the vehicle's equipment level.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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"YES" or "NO"	YES or NO , depending on the vehicle equipment.
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AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET081	<u>ACCELERATOR PEDAL POSITION</u>
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STATUS DEFINITION	<p>NO LOAD: This status indicates that the accelerator pedal is raised. FULL LOAD: This status indicates that the accelerator pedal is raised. INTERMEDIATE: This status indicates that the accelerator pedal is lightly depressed but not at FULL LOAD.</p>
--------------------------	--

NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	--

<p>Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C</p>
--

<p>FULL LOAD or NO LOAD or INTERMEDIATE</p>	<p>If the status is not consistent with the position of the pedal, to apply the interpretation of the DF196 Pedal sensor circuit gang 1 and DF198 Pedal sensor circuit gang 2.</p>
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AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET082	<u>MOTORISED THROTTLE POSITION</u>
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STATUS DEFINITION	<p>LOWER END STOP: This status indicates that the motorised throttle is at the lower end stop.</p> <p>UPPER END STOP: This status indicates that the motorised throttle is at the upper end stop.</p> <p>INTERMEDIATE: This status indicates that the accelerator pedal is lightly depressed but not at FULL LOAD.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	--

<p>Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C</p>

<p>FULL LOAD or NO LOAD or INTERMEDIATE</p>	<p>Depending on the load on the accelerator pedal, the throttle stop must be at the lower or upper or intermediate end stop.</p> <p>In the event of a fault, apply the interpretation of DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2.</p>
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AFTER REPAIR	Repeat the conformity check from the start.
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ET085

MOTORISED THROTTLE BODY IN DEFECT MODE

NOTES

NO: This status indicates that the motorised throttle is operating in defect mode.

STATUS 1: This status covers faults that disable control of the motorised throttle (mechanical Limp Home position)

STATUS 2: This status covers faults where the system has lost control of air flow modulation. The associated defect mode limits the engine speed through injection cut-off.

STATUS 3: This status covers faults indicating that the system no longer recognises the driver's demands, but still controls the air flow modulation (throttle servo control operational). It uses the pedal mode reconstructed by calibration.

STATUS 4: This status covers faults affecting the monitoring system, or for which there is an emergency operating mode viable for the system (scenario of using the second gang of a pedal or throttle potentiometer as backup if there is a fault on the main gang). Its effect is to restrict the throttle opening (limited performance).

STATUS 5: This status covers faults affecting the monitoring system, or for which there is an emergency operating mode viable for the system (scenario of using the second gang of a pedal or throttle potentiometer as backup if there is a fault on the main gang). Its effect is to restrict the throttle opening.

STATUS 6: This status covers faults affecting actuation of the turbocharging valve. The valve is no longer under servo control, and opens freely. The vehicle runs without turbocharging.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

"NO"

If the motorised throttle does not operate in defect mode, the status must be **NO**. In the event of a fault, to apply the interpretation of faults **DF095 Throttle potentiometer circuit gang 1**, **DF096 Throttle potentiometer circuit gang 2**, **DF079 Motorised throttle valve servo control** and **DF078 Motorised throttle control circuit**.

AFTER REPAIR

Repeat the conformity check from the start.

ET088

REQUEST TO START COMPRESSOR

STATUS DEFINITION

ACTIVE: This status indicates that the compressor is engaged.
INACTIVE: This status indicates that the compressor is not engaged.

NOTES

Special notes:
Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on.

"INACTIVE"

When the driver deactivates the air conditioning, status **ET088** must become **INACTIVE**.
If the status **ET088** does not become **INACTIVE** (see 62B, Climate control or 62C, Manual air conditioning).
Note:
Compressor operation is only authorised when the engine is running.

Conformity check with engine running and engine coolant temperature > 80°C

"ACTIVE"

The air conditioning request has been made by the driver when pressing one of the air conditioning controls (Auto, or AC).
Status **ET088 becomes ACTIVE** and the computer authorises or does not authorise air conditioning depending on the operating conditions.
If status **ET088** does not become **ACTIVE** after the control button is pressed (see 62B, Climate control or 62C, Manual air conditioning).
Note:
Compressor operation is only authorised when the engine is running.

AFTER REPAIR

Repeat the conformity check from the start.

ET089

PROGRAMMING THE ENGINE FLYWHEEL TARGET

STATUS DEFINITION

COMPLETED: This status indicates that the engine flywheel target programming has been completed.

NOT COMPLETED: This status indicates that the engine flywheel target programming has not been completed.

STATUS1: This status indicates that there has been an engine flywheel target fault.

NOTES

Special note:

Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

STATUS1
or
NOT COMPLETED
or
PERFORMED

This status may be **COMPLETED** or **NOT COMPLETED** or **STATUS1** with the ignition on or the engine running.
It varies according to the engine flywheel target status.
In the event of a fault, program the engine flywheel target (see **Configurations and programming**)
If this status is **STATUS1**, refer to the interpretation of fault **DF457 Engine flywheel target**.

AFTER REPAIR

Repeat the conformity check from the start.

ET111

SET NUMBER OF PASSENGER COMPARTMENT HEATING RESISTORS

STATUS DEFINITION

YES: This status indicates that the number of activated passenger compartment heating resistors is set by the injection computer.

NO: This status indicates that the number of passenger compartment heating resistors can be freely controlled by the UCH.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

"YES"

Depending on the requirements of the injection system (e.g. torque reduction, power requirements), the injection computer sets the number of activated passenger compartment heating resistors (no more or no fewer than required)
Status **ET111** becomes **YES** when the number of activated passenger compartment heating resistors is set by the injection computer.

"NO"

Depending on the requirements of the injection system (e.g. torque reduction, power requirements), the injection computer sets the number of activated passenger compartment heating resistors (no more or no fewer than required)
Status **ET111** becomes **NO** if the number of passenger compartment heating resistors engaged can be freely controlled by the UCH.

AFTER REPAIR

Repeat the conformity check from the start.

ET112	<u>RCH* CUT-OFF</u>
--------------	---------------------

STATUS DEFINITION	<p>YES: This status indicates that the passenger compartment heating resistors are switched off at the request of the injection computer.</p> <p>NO: This status indicates that the passenger compartment heating resistors can be freely controlled by the UCH.</p>
--------------------------	--

NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
--------------	--

Conformity check: Engine switched off and ignition on, or engine running at idle speed and engine coolant temperature > 80°C

"YES"	<p>Depending on the requirements of the injection system (e.g. torque reduction, power requirements), the injection computer cuts off the passenger compartment heating resistors.</p> <p>Status ET112 becomes YES if the number of passenger compartment heating resistors are cut-off by request of the injection computer.</p>
"NO"	<p>Depending on the requirements of the injection system (e.g. torque reduction, power requirements), the injection computer cuts off the passenger compartment heating resistors.</p> <p>Status ET112 becomes NO when the passenger compartment heating resistors can be freely controlled by the UCH.</p>

*RCH: Passenger Compartment Heating Resistors

AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET143

LOW-SPEED FAN ASSEMBLY RELAY CONTROL

STATUS DEFINITION

ACTIVE: This status indicates that the low-speed fan assembly relay is being actuated.
INACTIVE: This status indicates that the low-speed fan assembly relay is not being actuated.

NOTES

Special notes:

- Only perform these tests if the statuses do not correspond with the system programming functions.
- If the vehicle is equipped with air conditioning, the engine cooling fan will run at 1st speed as soon as the air conditioning compressor is activated.

Conformity check with engine stopped and ignition on.

"INACTIVE"

For a cold engine with climate control switched off the status is **INACTIVE**.
In the event of a fault, perform fault finding on the UPC (see **87G, Engine compartment connection unit**).

Conformity check with engine idling and engine coolant temperature > 80°C

"ACTIVE"

The status **ET143** becomes **ACTIVE** according to the engine temperature and the climate control requirements.
In the event of a fault, perform fault finding on the UPC (see **87G, Engine compartment connection unit**).

AFTER REPAIR

Repeat the conformity check from the start.

ET144

HIGH-SPEED FAN ASSEMBLY RELAY CONTROL

STATUS DEFINITION

ACTIVE: This status indicates that the high-speed fan assembly relay is being actuated.
INACTIVE: This status indicates that the low-speed fan assembly relay is not being actuated.

NOTES

Special notes:
Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on.

"INACTIVE"

For a cold engine with climate control switched off the status is **INACTIVE**.
In the event of a fault, perform fault finding on the UPC (see **87G, Engine compartment connection unit**).

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

"ACTIVE"

The status **ET144** becomes **ACTIVE** according to the engine temperature and the climate control requirements.
In the event of a fault, perform fault finding on the UPC (see **87G, Engine compartment connection unit**).

AFTER REPAIR

Repeat the conformity check from the start.

ET233	<u>CLUTCH PEDAL</u>
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STATUS DEFINITION	DEPRESSED: This status indicates that the clutch pedal is depressed. INACTIVE: This status indicates that the clutch pedal is released.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

DEPRESSED	Clutch pedal depressed. Non-conformity of the brake signals and/or the clutch switch signals can cause the engine to race during gear changes. In the event of a fault, apply the interpretation of DF138 Clutch pedal circuit .
RELEASED	Clutch pedal released. Non-conformity of the brake signals and/or the clutch switch signals can cause the engine to race during gear changes. In the event of a fault, apply the interpretation of DF138 Clutch pedal circuit .

AFTER REPAIR	Repeat the conformity check from the start.
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ET286	<u>INJECTION</u> → <u>AIR CONDITIONING CONNECTION</u>
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STATUS DEFINITION	<p>CONNECTED : This status indicates that the connection between the injection computer and climate control system is not defective.</p> <p>DISCONNECTED: This status indicates that the connection between the injection computer and climate control system is defective.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

NOT CONNECTED	The connection between the injection computer and climate control system is defective, run a multiplex network test (see 88B, Multiplexing).
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AFTER REPAIR	Repeat the conformity check from the start.
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ET289	<u>INJECTION</u> → <u>INSTRUMENT PANEL CONNECTION</u>
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STATUS DEFINITION	<p>CONNECTED: This status indicates that the connection between the injection computer and the instrument panel is not defective.</p> <p>DISCONNECTED: This status indicates that the connection between the injection computer and the instrument panel is defective.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

NOT CONNECTED	The connection between the injection computer and the instrument panel is defective, test the instrument panel (see 83A, Instrument panel) and multiplex network (see 88B, Multiplexing).
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AFTER REPAIR	Repeat the conformity check from the start.
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ET293

COMPRESSOR CONTROL

STATUS DEFINITION

ACTIVE: This status indicates that the compressor is engaged.

INACTIVE: This status indicates that the compressor is not engaged.

NOTES

Special notes:

Only perform these tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on.

"INACTIVE"

When the driver deactivates the air conditioning, status **ET088** must become **INACTIVE**.

If it does not, refer to the air conditioning fault finding note (see **62B, Climate control** or **62C, Manual air conditioning**).

Note:

Compressor operation is only authorised when the engine is running.

Conformity check with the engine running at idle speed and engine coolant temperature > 80°C

"ACTIVE"

The air conditioning request has been made by the driver when pressing one of the air conditioning controls (Auto or AC).

Status **ET088 becomes ACTIVE** and the computer authorises or does not authorise air conditioning depending on the operating conditions.

If the status **ET088** does not become "ACTIVE" after the control button is pressed (see **62B, Climate control** or **62C, Manual air conditioning**).

Note:

Compressor operation is only authorised when the engine is running.

AFTER REPAIR

Repeat the conformity check from the start.

ET300	<u>RICHNESS REGULATION</u>
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STATUS DEFINITION	ACTIVE: This status indicates that richness regulation is active. INACTIVE: This status indicates that richness regulation is inactive.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on.
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"INACTIVE"	The status is INACTIVE when the engine is not running.
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Conformity check with the engine running at idle speed and engine coolant temperature > 80°C
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"ACTIVE"	The status is ACTIVE when the engine is running.
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AFTER REPAIR	Repeat the conformity check from the start.
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ET340	<u>AUTOMATIC TRANSMISSION REQUEST TO ACTIVATE OBD WARNING LIGHT</u>
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STATUS DEFINITION	<p>ACTIVE: This status indicates that the automatic transmission request to activate the OBD warning light OBD is active.</p> <p>INACTIVE: This status indicates that the automatic transmission request to activate the OBD warning light OBD is inactive.</p>
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NOTES	<p>Special note: Only perform the tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

ACTIVE or INACTIVE	<p>For normal engine operation, the status must be INACTIVE. If activation of the OBD warning light on the instrument panel is not coherent with the status, test of the instrument panel (see 83A, Instrument panel).</p>
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AFTER REPAIR	Repeat the conformity check from the start.
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ET351	<u>INJECTION → ELECTRONIC STABILITY PROGRAM CONNECTION</u>
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STATUS DEFINITION	<p>CONNECTED: This status indicates that the connection between the injection computer and the ESP (electronic stability program) is not defective.</p> <p>DISCONNECTED: This status indicates that the connection between the injection computer and the ESP (electronic stability program) is defective.</p>
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NOTES	<p>Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

NOT CONNECTED	The connection between the injection computer and the ESP is defective, test the ABS/ESP computer (see 38C, Anti-lock braking system) and multiplex network (see 88B, Multiplexing).
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AFTER REPAIR	Repeat the conformity check from the start.
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ET377	<u>ENGINE STATUS</u>
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STATUS DEFINITION	STALLED: This status indicates that the engine has stalled. RUNNING: This status indicates that the engine is running. STOPPED: This status indicates that the engine is stopped. STARTING: This status indicates that the engine is being started.
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NOTES	Special notes: Only perform these tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on.
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"INACTIVE"	The status is INACTIVE when the engine is not running.
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Conformity check with the engine running at idle speed and engine coolant temperature > 80°C
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"ACTIVE"	The status is ACTIVE when the engine is running.
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AFTER REPAIR	Repeat the conformity check from the start.
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ET405	<u>CLUTCH PEDAL SWITCH</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the clutch pedal is depressed. INACTIVE: This status indicates that the clutch pedal is released.
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NOTES	Special note: Only perform the tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

ACTIVE	Clutch pedal depressed. Non-conformity of the brake signals and/or the clutch switch signals can cause the engine to race during gear changes. If the status is inconsistent with the clutch pedal position, consult the interpretation of the fault DF138 Clutch pedal circuit .
INACTIVE	Clutch pedal depressed. Non-conformity of the brake signals and/or the clutch switch signals can cause the engine to race during gear changes. If the status is inconsistent with the clutch pedal position, consult the interpretation of the fault DF138 Clutch pedal circuit .

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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S3000_V5C_ET405

ET413	<u>CRUISE CONTROL/SPEED LIMITER FUNCTION</u>
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STATUS DEFINITION	<p>RESUME: This status indicates that the R button is pressed.</p> <p>SUSPEND: This status indicates that the 0 is pressed.</p> <p>INCREASE: This status indicates that the increase button is pressed.</p> <p>DECREASE: This status indicates that the decrease button is pressed.</p>
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NOTES	<p>Special notes:</p> <p>Only perform these tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

INCREASE	<p>Status ET413 becomes INCREASE when the cruise control + button is pressed. This button is situated to the left of the steering wheel.</p> <p>If status ET413 does not become INCREASE, check the condition of the +/- cruise control button, component code 331 and the condition of its connector.</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>To be able to remove the driver's airbag and carry out the measurements safely (see 88C, Airbag and pretensioners).</p> <p>Measure the resistance between the following connections after pressing the + button:</p> <ul style="list-style-type: none">● connection code 86G between components 120 and 331,● connection code 86M between components 120 and 331. <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the resistance is not approximately 300 Ω, check the continuity of the connection when the button is not pressed.</p> <p>If there is continuity, replace the ± control button.</p>
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AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET413 CONTINUED	
DECREASE	<p>This button is situated to the left of the steering wheel.</p> <p>If status ET413 does not become DECREASE, check the condition of the +/- cruise control button, component code 331 and the condition of its connector.</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>To be able to remove the driver's airbag and carry out the measurements safely (see 88C, Airbag and pretensioners).</p> <p>Measure the resistance between the following connections after pressing the - button:</p> <ul style="list-style-type: none">● connection code 86G between components 120 and 331● connection code 86M between components 120 and 331 <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the resistance is not approximately 100 Ω, check the continuity of the connection when the button is not pressed.</p> <p>position.</p> <p>If there is continuity, replace the +/- control button.</p>
SUSPEND	<p>Status ET413 becomes SUSPEND when the 0 cruise control button is pressed. This button is situated to the right of the steering wheel.</p> <p>If status ET413 does not change to SUSPEND, check the condition of the cruise control R/0 button, component code 331 and its connector.</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>To be able to remove the driver's airbag and carry out the measurements safely (see 88C, Airbag and pretensioners).</p> <p>Measure the resistance between the following connections after pressing the 0 button:</p> <ul style="list-style-type: none">● connection code 86G between components 120 and 331● connection code 86M between components 120 and 331 <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the resistance is not approximately 0 Ω, replace the R/0 command button.</p>
AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>

ET415	<u>CRUISE CONTROL/SPEED LIMITER DEACTIVATION</u>
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STATUS DEFINITION	<p>WITHOUT: This status indicates that deactivation was not requested.</p> <p>STATUS 1: This status indicates that deactivation is executed after a traction control request.</p> <p>STATUS 2: This status indicates that deactivation is executed after the brake pedal is depressed.</p> <p>STATUS 3: This status indicates that deactivation is executed after the clutch pedal is depressed.</p> <p>STATUS 4: This status indicates that deactivation is executed after the suspend button is pressed.</p> <p>STATUS 5: This status indicates that deactivation is done after cruise control or speed limiter monitoring.</p> <p>STATUS 6: This status indicates that deactivation is executed after gear shift into neutral (manual gearbox) or N (automatic transmission).</p> <p>STATUS 7: This status indicates that deactivation is executed when there is an inconsistency between the request and the vehicle speed.</p> <p>STATUS 8: This status indicates that deactivation is executed when the automatic transmission goes into defect mode.</p> <p>STATUS 9: This status indicates that deactivation is executed after vehicle speed monitoring.</p> <p>STATUS 10: This status indicates that deactivation is executed after monitoring by the injection computer.</p>
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NOTES	<p>Special notes: Only perform the tests if the statuses do not correspond with the system programming functions.</p>
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Note :

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

Status **ET415** displays the various reasons for deactivation of the cruise control/speed limiter function, which are due to driver demand or the exterior environment.

IMPORTANT:

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

AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET415 CONTINUED 1

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

NONE

This status is present on the **diagnostic tool** if:
The computer has been reinitialised.
The computer has been reprogrammed.

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 **STATUS 1** when driving, with cruise control active (**ET042: Cruise control/Speed limiter: CRUISE CONTROL**) and after a traction control request.
This deactivates cruise control.
Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory.
If status **ET415** becomes **STATUS 1** with no traction control request (see **38C, ABS**).

STATUS 2

Brake pedal depressed

The cruise control function is deactivated when the brake pedal is depressed.
Status **ET415** becomes **STATUS 2**, when driving, with cruise control active (**ET042 Cruise control/Speed limiter: CRUISE CONTROL**) and brake pedal depressed.
This deactivates cruise control.
Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory.
If status **ET415** becomes **STATUS 2** without pressing the brake pedal, consult the interpretation of statuses **ET704** and **ET705 Brake contact no. 1 and no. 2**.

AFTER REPAIR

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

ET415 CONTINUED 2

STATUS 3

Clutch pedal depressed

Manual gearbox ONLY

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

Status **ET415** becomes **STATUS 3** when driving with cruise control active (**ET042 Cruise control/speed limiter: CRUISE CONTROL**) and the clutch pedal is depressed.

This deactivates cruise control.

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

If status **ET415** becomes **STATUS 3** without the clutch pedal being depressed, consult the interpretation of status **ET405 Clutch pedal switch**.

If the vehicle is fitted with automatic transmission:

Test the multiplex network: check the configuration of the multiplex network in relation to the vehicle's technical specification, especially the configuration of the automatic transmission computer (see **88B, Multiplexing**).

STATUS 4

Cancel button pressed

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

Status **ET415** becomes **STATUS 4**, when driving if:

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

This action deactivates the Cruise control/Speed limiter.

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

If status **ET415** becomes **STATUS 4** without pressing the **0** button, consult the interpretation of status **ET703 Cruise control/speed limiter buttons** and perform fault finding on the **R/0** control button located on the right-hand side of the steering wheel.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.

ET415 CONTINUED 3

STATUS 5

Cruise control or speed limiter monitoring

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

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

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

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

Also check the operation of the accelerator pedal, and check with the **diagnostic tool** for a fault connected with this component. Deal with them if necessary.

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

If status **ET415** changes to **STATUS 5**, deal with present faults or those stored in the injection computer.

If the fault is still present, contact the Techline.

STATUS 6

Gear lever in neutral (manual gearbox) or the neutral position (automatic gearbox)

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

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

This deactivates cruise control.

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

If status **ET415** becomes **STATUS 6** without shifting the gear lever into neutral on a manual gearbox without declutching, or into neutral on an automatic transmission, 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.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.

ET415 CONTINUED 4	
STATUS 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. STATUS 7 may occur when driving with the cruise control active (ET042 Cruise control/speed limiter: CRUISE CONTROL) and on steep or hilly terrain. This inconsistency deactivates cruise control.</p> <p>Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory.</p> <p>If status ET415 becomes STATUS 7 on flat terrain, contact the Techline.</p>
STATUS 8	<p>Automatic gearbox in defect mode.</p> <p>Status ET415 becomes STATUS 8 when driving with the cruise control active (ET042 Cruise control/speed limiter: CRUISE CONTROL) and the automatic transmission is in defect mode.</p> <p>This signal is conveyed on the multiplex line and deactivates the cruise control.</p> <p>Carry out a multiplex network test, then run fault finding on the automatic transmission computer.</p> <p>Deal with any present or stored faults (see 23A, Automatic transmission, Interpretation of faults).</p> <p>Clear the automatic transmission computer memory by running command RZ001 Fault memory.</p> <p>Reinitialise status ET415 on the injection computer by running command RZ001 Fault memory.</p> <p>If STATUS 8 is still present, contact the Techline.</p>
AFTER REPAIR	<p>Deal with any other faults. Clear the fault memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>

ET415 CONTINUED 5

STATUS 9

Vehicle speed monitoring

Status **ET415** changes to **STATUS 9** if the vehicle speed received by the computer is invalid or absent.

This signal is conveyed on the multiplex line and deactivates the cruise control. Carry out a multiplex network test, then run fault finding on the **ABS** computer. Deal with any **present or stored** faults (see **38C, ABS, Interpretation of faults**).

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

If **STATUS 9** is still present, contact the Techline.

STATUS 10

Monitoring by injection computer

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

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

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

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

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

AFTER REPAIR

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**.

ET460	<u>COOLANT TEMPERATURE WARNING LIGHT</u>
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STATUS DEFINITION	OFF: This status indicates that the coolant temperature warning light is off. ON: This status indicates that the coolant temperature warning light is on.
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NOTES	Special note: Only perform the tests if the statuses do not correspond with the system programming functions.
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

OFF	Under normal operating conditions, the warning light must not be illuminated.
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ON	<p>If the ET460 is ON, check for consistency with the instrument panel warning light.</p> <p>If the ET460 is inconsistent with activation of the warning light, test the instrument panel (see 83A, Instrument panel).</p> <p>If the ET460 is consistent with activation of the warning light, check consistency with PR064 Coolant temperature.</p> <p>In the event of a fault, refer to the interpretation of DF001 Coolant temperature sensor circuit.</p>
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AFTER REPAIR	Repeat the conformity check from the start.
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ET556	<u>DRIVER'S DEACTIVATION OF THE CRUISE CONTROL/SPEED LIMITER</u>
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STATUS DEFINITION	<p>STATUS 1: This status indicates that the cruise control/speed limiter function is deactivated each time the brake pedal is depressed.</p> <p>STATUS 2: This status indicates that the cruise control/speed limiter function is deactivated after a traction control request.</p> <p>STATUS 3: This status indicates that the cruise control/speed limiter function is deactivated after the suspend button is pressed.</p> <p>STATUS 4: This status indicates that the cruise control/speed limiter function is deactivated after the clutch pedal is depressed.</p> <p>STATUS 5: This status indicates that the deactivation of that the cruise control/speed limiter function is deactivated after the gear lever is put into neutral.</p> <p>STATUS 6: This status indicates that that the cruise control/speed limiter function is deactivated due to an inconsistency between the request and the vehicle speed.</p>
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NOTES	<p>Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. To reinitialise this status, delete the fault memory using the control RZ001 Fault memory.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

STATUS 1	<p>Brake pedal depressed</p> <p>If the vehicle being diagnosed is fitted with traction control, the cruise control function is deactivated each time traction control is selected. Status ET556 changes to STATUS 2, when driving, with cruise control active and traction control requested. Status ET556 changes to STATUS 2 without a traction control request (see 38C, Anti-lock braking system).</p>
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AFTER REPAIR	Repeat the conformity check from the start.
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ET556 CONTINUED 1	
STATUS 2	<p>Traction control request</p> <p>If the vehicle being diagnosed is fitted with traction control, the cruise control function is deactivated each time traction control is selected. Status ET556 changes to STATUS 2, when driving, with cruise control active and traction control requested. Status ET556 changes to STATUS 2 without a traction control request (see 38C, Anti-lock braking system).</p>
STATUS 3	<p>Cancel button pressed</p> <p>Status ET556 changes to STATUS 3 when driving, with cruise control active, if the driver presses the cruise control/speed limiter 0 button. If status ET556 becomes STATUS 3 without pressing cruise control/speed limiter button 0, run fault finding on the cruise control/speed limiter control R/0 button.</p>
STATUS 4	<p>Clutch pedal depressed</p> <p>The cruise control function is deactivated if the gearbox is no longer coupled to the engine (clutch pedal depressed). Status ET556 becomes STATUS 4 when driving, with cruise control active and the clutch pedal depressed. Status ET556 becomes STATUS 4 without depressing the clutch pedal; refer to the interpretation of status ET405 Clutch pedal switch.</p>
AFTER REPAIR	Repeat the conformity check from the start.

ET556 CONTINUED 2	
STATUS 5	<p>Gear lever in neutral position</p> <p>Status ET556 changes to STATUS 5, when driving, with cruise control active. If the driver puts the gear lever in neutral without declutching. This deactivates cruise control. If status ET556 becomes STATUS 5 without putting the gear lever in neutral without declutching, contact the Techline.</p>
STATUS 6	<p>Lack of correlation between the request and the vehicle speed</p> <p>Status ET556 changes to STATUS 6 if the computer detects too great a difference between the speed requested by the driver and the vehicle speed. This may occur when driving with cruise control active on a very uneven surface. If status ET556 changes to STATUS 6 on flat terrain, contact the Techline.</p>
AFTER REPAIR	Repeat the conformity check from the start.

ET557	<u>DEACTIVATION BY CRUISE CONTROL/SPEED LIMITER</u>
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STATUS DEFINITION	<p>NO: This status indicates that deactivation was not requested by the cruise control/speed limiter function.</p> <p>STATUS 1: This status indicates that deactivation occurs due to a cruise control/speed limiter fault.</p> <p>STATUS 2: This status indicates that deactivation occurs when the injection computer detects a fault.</p> <p>STATUS 3: This status indicates that deactivation occurs when vehicle speed is considered invalid.</p> <p>STATUS 4: This status indicates that the deactivation occurs when the automatic transmission enters defect mode.</p>
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NOTES	<p>Cruise control remains deactivated as long as the vehicle speed does not exceed a speed V >18 mph (30 km/h).</p> <p>IMPORTANT</p> <p>Certain deactivations are stored by the computer.</p> <p>To reinitialise this status, run RZ001 Fault memory.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

STATUS 1	<p>Cruise control or speed limiter fault</p> <p>If status ET557 is STATUS 1, consult the interpretation of status ET042 Cruise control/speed limiter, to test the cruise control system components and find the faulty component.</p> <p>If status ET557 changes to STATUS 1, deal with the faults present or stored in the computer.</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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ET557 CONTINUED	
STATUS 2	<p>Fault detected by the injection computer</p> <p>If status ET557 changes to STATUS 2 if the injection computer detects a fault on the injection system:</p> <ul style="list-style-type: none">– Faults on the accelerator pedal.– Engine speed sensor or camshaft faults.– Engine speed greater than 4700 rpm.– Engine speed less than 1000 rpm. <p>Carry out a multiplex network test, then an injection system test, and carry out fault finding on any faults.</p> <p>If the fault is still present, contact the Techline.</p>
STATUS 3	<p>Invalid vehicle speed</p> <p>If status ET557 changes to STATUS 3 if the vehicle speed received by the computer is invalid.</p> <p>In the event of any faults, run fault finding on the ABS computer (see 38C, Anti-lock braking system).</p> <p>If the fault is still present, contact the Techline.</p>
STATUS 4	<p>Automatic gearbox in defect mode.</p> <p>If the status ET557 becomes STATUS 4 if the automatic transmission computer detects a fault on the automatic transmission system.</p> <p>Test the automatic transmission computer (see 23A, Automatic transmission).</p> <p>If the fault is still present, contact the Techline.</p>
AFTER REPAIR	Repeat the conformity check from the start.

ET560

CONTROLLED COOLANT THERMOSTAT

STATUS DEFINITION

NO: This status indicates that the vehicle is not equipped with a controlled thermostat.
SAFETY: This status indicates that the controlled coolant thermostat function is in safety mode with 90°C used as the default value for coolant temperature.
SAFETY: This status indicates that the controlled coolant thermostat function is in safety mode with engine torque limited.
ACTIVE: This status indicates that the controlled coolant thermostat is active.

NOTES

Special note:
Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

ACTIVE

According to the engine coolant temperature the status **ET560** is **ACTIVE**.

AFTER REPAIR

Repeat the conformity check from the start.

ET564	<u>DEFECT MODE TYPE 1</u>
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STATUS DEFINITION	YES: This status indicates that the throttle valve is operating correctly. NO: This status indicates that the throttle valve is operating in defect mode.
--------------------------	--

NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. No faults should be present or stored .
--------------	--

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

NO	Normal engine operation.
-----------	--------------------------

YES	This status covers faults that disable control of the motorised throttle valve. This defect mode cuts off the throttle control (mechanical Limp Home position). By depressing the pedal, it is possible to modulate the torque by cylinder cut-off and advance in order to keep the vehicle running. The ESP, cruise control/speed limiter and automatic/sequential gearbox systems go into defect mode . This defect mode is always accompanied by the Type 2 defect mode.
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AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET565	<u>DEFECT MODE TYPE 2</u>
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STATUS DEFINITION	YES: This status indicates air flow control and modulation functions correctly. NO: This status indicates air flow control and modulation has gone into defect mode.
--------------------------	---

NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. No faults should be present or stored .
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.	
---	--

NO	Normal engine operation.
YES	This status covers faults where the system has lost control of the air flow modulation. The associated defect mode limits the engine speed through injection cut-off.

AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET566	<u>DEFECT MODE TYPE 3</u>
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STATUS DEFINITION	YES: This status indicates that driver demand recognition is operating correctly. NO: This status indicates that driver demand recognition is operating in defect mode.
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NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. No faults should be present or stored .
--------------	--

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.	
---	--

NO	Normal engine operation.
-----------	--------------------------

YES	This status groups 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.
---------------------	---

ET567	<u>DEFECT MODE TYPE 4</u>
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STATUS DEFINITION	YES: This status indicates that defect mode type 4 is active. NO: This status indicates that defect mode type 4 is inactive.
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NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. No faults should be present or stored .
--------------	--

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.	
---	--

NO	Normal engine operation.
-----------	--------------------------

YES	This status covers faults affecting the monitoring system, or for which there is an emergency operating mode viable for the system (scenario of using the second gang of a pedal or throttle potentiometer as backup if there is a fault on the main gang). Its effect is to restrict the throttle opening (limited performance).
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AFTER REPAIR	Repeat the conformity check from the start.
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ET568	<u>TYPE 5 DEFECT MODE</u>
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STATUS DEFINITION	YES: This status indicates that defect mode type 5 is active. NO: This status indicates that defect mode type 5 is inactive.
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NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. No faults should be present or stored .
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.	
---	--

NO	Normal engine operation.
-----------	--------------------------

YES	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.
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AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET581	<u>PETROL MISFIRING FAULT FINDING</u>
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STATUS DEFINITION	<p>IN PROGRESS: This status indicates that the computer program is running misfiring fault finding.</p> <p>INACTIVE: This status indicates that the computer program is not running misfiring fault finding.</p> <p>COMPLETED: This status indicates that the computer program has completed misfiring fault finding.</p>
--------------------------	--

NOTES	<p>Special note: Only perform the tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

IN PROGRESS or INACTIVE or COMPLETED	<p>This status varies when the ignition is on or the engine is running, depending on the misfiring fault finding program run by the computer.</p>
---	---

AFTER REPAIR	Repeat the conformity check from the start.
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ET616

EXHAUST AIR INJECTION OBD FAULT FINDING

STATUS DEFINITION

IN PROGRESS: This status indicates that the computer fault finding program is running on the exhaust air injection OBD.

INACTIVE: This status indicates that the computer fault finding program is not running on the exhaust air injection OBD.

COMPLETED: This status indicates that the computer fault finding program has completed fault finding on the exhaust air injection OBD.

NOTES

Special note:

Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

IN PROGRESS
or
INACTIVE
or
COMPLETED

This status varies when the ignition is on or the engine is running, depending on the fault finding program run by the computer.

AFTER REPAIR

Repeat the conformity check from the start.

ET617	<u>UPSTREAM OXYGEN SENSOR OBD FAULT FINDING</u>
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STATUS DEFINITION	<p>IN PROGRESS: This status indicates that the computer fault finding program is being run on the upstream sensor.</p> <p>INACTIVE: This status indicates that the computer fault finding program is not running on the upstream sensor.</p> <p>COMPLETED: This status indicates that the computer fault finding program has completed fault finding on the upstream sensor.</p>
--------------------------	---

NOTES	<p>Special note: Only perform the tests if the statuses do not correspond with the system programming functions.</p>
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Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

IN PROGRESS or INACTIVE or COMPLETED	<p>This status varies when the ignition is on or the engine is running, depending on the fault finding program run on the upstream sensor by the computer.</p> <p>In the event of a fault, apply interpretation of DF092 Upstream oxygen sensor circuit.</p>
---	---

AFTER REPAIR	Repeat the conformity check from the start.
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ET618

CATALYTIC CONVERTER OBD FAULT FINDING

STATUS DEFINITION

IN PROGRESS: This status indicates that the computer fault finding program is being run on the catalytic converter.

INACTIVE: This status indicates that the computer fault finding program is not running on the catalytic converter.

COMPLETED: This status indicates that the computer fault finding program has completed fault finding on the catalytic converter.

NOTES

Special note:
Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

IN PROGRESS
or
INACTIVE
or
COMPLETED

This status varies when the ignition is on or the engine is running, depending on the fault finding program run on the catalytic converter by the computer.

AFTER REPAIR

Repeat the conformity check from the start.

ET619	<u>FUEL CIRCUIT OBD FAULT FINDING</u>
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STATUS DEFINITION	<p>IN PROGRESS: This status indicates that the computer fault finding program is being run on the fuel circuit.</p> <p>INACTIVE: This status indicates that the computer fault finding program is not being run on the fuel circuit.</p> <p>COMPLETED: This status indicates that fuel circuit fault finding has been completed.</p>
--------------------------	---

NOTES	<p>Special note: Only perform the tests if the statuses do not correspond with the system programming functions.</p>
--------------	---

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

IN PROGRESS or INACTIVE or COMPLETED	This status varies when the ignition is on or the engine is running, depending on the fuel circuit fault finding program run by the computer.
---	---

AFTER REPAIR	Repeat the conformity check from the start.
---------------------	---

ET671	<u>PROGRAMMING THE ALCOHOL LEVEL</u>
STATUS DEFINITION	<p>IN PROGRESS: This status indicates that the computer is running the alcohol level programming.</p> <p>INACTIVE: This status indicates that the computer did not run the alcohol level programming.</p> <p>COMPLETED: This status indicates that the computer has completed the alcohol level programming.</p>
NOTES	<p>Special note: Only perform the tests if the statuses do not correspond with the system programming functions.</p>
Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.	
IN PROGRESS	This status indicates that the computer is programming the alcohol level in the fuel.
INACTIVE	This status indicates that the alcohol level programming procedure was not run.
COMPLETED	<p>The status ET671 Programming the alcohol level must be COMPLETED when the PR743 Estimated alcohol level in the tank is greater than or equal to 0%. If the status ET671 Programming the alcohol level is INACTIVE and the PR743 Estimated alcohol level in the tank is greater than or equal to 0%, then repeat the alcohol level programming (see Configurations and programming, Programming the alcohol level).</p>
AFTER REPAIR	Repeat the conformity check from the start.

ET673

JAMMED ACCELERATOR PEDAL

STATUS DEFINITION

YES: This status indicates that the accelerator pedal movement detector is jammed.
NO: This status indicates that the accelerator pedal is operating normally.

NOTES

Special notes:

Only perform the tests if the statuses do not correspond with the system programming functions.

To reinitialise this status, clear the fault memory while executing the command **RZ001 Fault memory**.

Conformity check with engine stopped and ignition on or engine running at idle speed and engine coolant temperature > 80°C.

YES

Check that the accelerator pedal is not jammed and that nothing is impairing its operation (floor carpet, etc.).
Check the brake switch (see **Interpretation of faults, DF228 Brake signals**).

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**.

ET674	<u>REFRIGERANT PRESSURE</u>
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STATUS DEFINITION	TOO LOW: this status indicates that the refrigerant pressure is too low. CORRECT: this status indicates that the refrigerant pressure is correct. STATUS1: this status indicates that the refrigerant pressure is unavailable.
--------------------------	---

NOTES	Special notes: Only perform the tests if the statuses do not correspond with the system programming functions. Deal with DF232 Refrigerant pressure sensor circuit first. There must be no present or stored faults
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Conformity check with engine stopped and ignition on or engine running and engine coolant temperature > 80°C
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TOO LOW or "CORRECT" or STATUS1	The purpose of this status is to check that the circuit is correctly charged with gas. It becomes active when the air conditioning is detected as being connected and there are no faults present. The result of this status is: <ul style="list-style-type: none">– Too low: Pressure below 2 bar.– Correct: Pressure above 2 bar.– STATUS1: Test impossible.
--	---

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

CRUISE CONTROL/SPEED LIMITER BUTTONS

STATUS DEFINITION

RESUME: R button pressed.
SUSPEND: 0 button pressed.
PLUS: Increase button pressed.
MINUS: Decrease button pressed.
INACTIVE: This status indicates that no button has been pressed.

NOTES

Special notes:
Only perform the tests if the statuses do not correspond with the system programming functions.

Conformity check with engine stopped and ignition on or engine running and engine coolant temperature > 80°C

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**,
– check the condition of the cruise control/speed limiter +/- button and its connector
– check the condition of the cruise control/speed limiter R/0 button and its connector.

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 CONTINUED 1

INCREASE

Status **ET703** becomes **PLUS** 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 **PLUS**, check the condition of the cruise control/speed limiter +/- button and its connector. Repair if necessary.

To carry out the checks and measurements in complete safety, observe the driver's front airbag removal recommendations (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag: Removal - Refitting**).

Measure the **resistance of the following connections when pressing the + button**:
– **86M** and **86G** between the components **120** and **331**.

If the resistance is not approximately **300 Ω** check the continuity of the connection when the button is not pressed.

If there is continuity, replace the +/- control button.

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**.

ET703 CONTINUED 2

DECREASE

Status **ET703** becomes **MINUS** when the cruise control/speed limiter - button is pressed. This button is on the steering wheel, on the left-hand side.

If status **ET703** does not change to **MINUS**, check the condition of the cruise control/speed limiter +/- button, and the condition of its connector. Repair if necessary.

To carry out the checks and measurements in complete safety, observe the driver's front airbag removal recommendations (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag: Removal - Refitting**).

Measure **the resistance between the following connections when pressing the - button**:

- **86M** and **86G** between the components **120** and **331**.

If the resistance is not approximately **100 Ω**, check the continuity of the connection when the button is not pressed.

If there is continuity, replace the +/- control button.

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**.

ET703 CONTINUED 3

RESUME

Status **ET703** becomes **RESUME** when the cruise control/speed limiter **R** button is pressed. This button is located on the steering wheel, to the right.

If status **ET703** does not change to **RESUME**, check the condition of the cruise control/speed limiter **R/0** button and its connector. Repair if necessary.

To carry out the checks and measurements in complete safety, observe the driver's front airbag removal recommendations (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag: Removal - Refitting**).

Measure the **resistance of the following connections when pressing the R button**:

- **86M** and **86G** between the components **120** and **331**.

If the resistance is not approximately **900 Ω**, check the continuity of the connection when the button is not pressed.

If there is continuity, replace the **R/0** control button.

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

AFTER REPAIR

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

ET703 CONTINUED 4

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 its connector.

To carry out the checks and measurements in complete safety, observe the driver's front airbag removal recommendations (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **88C**, **Airbag and pretensioners**, **Driver's front airbag: Removal - Refitting**).

Measure the **resistance of the following connections whilst pressing the 0 button**:

- **86M** and **86G** between the components **120** and **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 there is a repair method (see **Technical Note 6015A**, **Repairing electrical wiring**, **Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

Deal with any other faults. Clear the fault memory.

Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.

ET704
ET705

BRAKE SWITCH NO. 1
BRAKE SWITCH NO. 2

STATUS DEFINITION

ACTIVE: This status indicates that the brake pedal is depressed.
INACTIVE: This status indicates that the brake pedal is released.

NOTES

Special note:

Only perform the tests if the statuses do not correspond with the system programming functions.

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 signal**.

Conformity check with engine stopped and ignition on or engine running and engine coolant temperature > 80°C

"ACTIVE"
or
"INACTIVE"

Brake signal non-conformity may cause the engine to race during gear changes.
In the event of inconsistency, refer to the interpretation of fault **DF228 Brake signal**.

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**.

S3000_V5C_ET704/S3000_V5C_ET705

ET741

OPTIONAL VEHICLE SPEED RESTRICTION

STATUS DEFINITION

ACTIVE: This status indicates that the optional speed limiting function is active.
INACTIVE: This status indicates that the optional speed limiting function is inactive.

NOTES

Special notes:
This status indicates whether the vehicle speed restriction is legally required or a customer option, using the command **SC040 Speed limiter function**.

Conformity check with engine stopped and ignition on or engine running and engine coolant temperature > 80°C

"ACTIVE"

Vehicle speed restricted using command **SC040 Vehicle speed limiter function** (see **ET879 Maximum authorised speed** for the restricted speed).

"INACTIVE"

The vehicle has no optional speed restriction.

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**.

PETROL INJECTION

Fault finding – Parameter summary table

17B

Tool Parameter	Diagnostic tool title
PR010	Idle speed regulation setpoint
PR014	Idling speed correction
PR015	Engine torque
PR018	Estimated air flow
PR030	Accelerator pedal position
PR035	Atmospheric pressure
PR037	Refrigerant pressure
PR055	Engine speed
PR058	Air temperature
PR064	Coolant temperature
PR074	Battery voltage
PR089	Vehicle speed
PR090	Idle speed regulation programming value
PR091	OCR* Theoretical idle speed regulation
PR095	Anti-pinking correction
PR096	Motorised throttle upper stop programmed value
PR097	Motorised throttle lower stop programmed value
PR098	Upstream oxygen sensor voltage
PR099	Downstream oxygen sensor voltage

*OCR: Opening Cyclic Ratio

Tool Parameter	Diagnostic tool title
PR101	Duration of injection
PR102	Canister bleed solenoid valve OCR*
PR103	Instantaneous fuel consumption
PR105	OBD fault warning light lit mileage counter
PR106	Mileage counter fault warning light lit
PR111	Motorised throttle position corrected value
PR113	Lower throttle stop after app.* offset
PR116	Motorised throttle corrected position setpoint
PR118	Measured throttle position gang 1
PR119	Measured throttle position gang 2
PR122	Torque received by automatic transmission converter
PR123	Estimated driver demand engine torque
PR124	Resistant engine torque transmitted via multiplex line
PR125	Power consumed by the air conditioning compressor
PR126	Advance after anti-pinking correction
PR127	Heating resistor max authorised power
PR130	Cruise control setpoint
PR138	Richness correction
PR143	Self-adapting richness gain
PR144	Self-adapting richness offset
PR147	Pedal potentiometer voltage gang 1
PR148	Pedal potentiometer voltage gang 2
PR312	Inlet manifold vacuum

*OCR: Opening Cyclic Ratio

*appl. : application

*TA: Automatic transmission

Tool Parameter	Diagnostic tool title
PR424	Programming the no-load position value
PR427	Average pinking signal
PR429	Measured throttle position
PR444	Integral idling speed regulation correction
PR446	Upstream O2 sensor heating resistor
PR447	Downstream O2 sensor heating resistor
PR448	Ignition advance
PR499	Pedal no load programming
PR538	Measured throttle voltage gang 2
PR539	Measured throttle voltage gang 1
PR568	Pedal position gang 1
PR569	Pedal position gang 2
PR587	Motorised throttle lower stop gang 1
PR588	Motorised throttle lower stop gang 2
PR589	Motorised throttle upper stop gang 1
PR590	Motorised throttle upper stop gang 2
PR593	Motorised throttle in safe mode gang 1
PR594	Motorised throttle in safe mode gang 2
PR597	Motorised throttle in safe mode
PR742	Additional petrol circuit S.V* OCR* (only for Flex fuel)
PR743	Alcohol level estimated in the tank
PR879	Maximum authorised speed
PR926	Alcohol fuel adaptive correction

*OCR: Opening Cyclic Ratio

*S.V. : Solenoid valve

PR010

IDLE SPEED REGULATION SETPOINT

PARAMETER DEFINITION

Indicates the speed of rotation setpoint before last engine stop in **rpm**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

It is increased to **160 rpm** maximum if the battery voltage is less than **12.7 V**.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value of the engine's rotational speed must be between **700 rpm < PR010 < 750 rpm**

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR014

IDLE SPEED CORRECTION

PARAMETER DEFINITION

This parameter indicates the engine's rotational speed in **rpm**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The engine idling speed correction value must be between **0 rpm < PR014 < 160 rpm**.

The idle speed regulator performs all of the calculations that allow the idle speed actuator to be controlled physically: the motorised throttle. The functional component of the regulator is adaptive (variation programming and ageing).

In the event of a fault apply the interpretation for **DF154 Flywheel signal sensor circuit**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR015

ENGINE TORQUE

PARAMETER DEFINITION

This parameter indicates the engine torque in **Nm**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

The value must be between **20 Nm < PR015 < 40 Nm**
This parameter is only valid when the engine is running.

AFTER REPAIR

Repeat the conformity check from the start.

PR018	<u>ESTIMATED AIR FLOW</u>
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PARAMETER DEFINITION	This parameter indicates the inlet air flow in kg/h .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	There must be no faults present. Perform this fault finding procedure: – after finding an inconsistency in the parameter, or after a customer complaint (lack of power, smoke etc.).

Conformity check with engine stopped and ignition on.
--

Indicates the inlet air flow in kg/h \approx 0 kg/h If there is a fault, apply the interpretation of faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .
--

Conformity check with engine running, engine coolant temperature > 80°C

Indicates the inlet air flow in kg/h \approx 10 kg/h If there is a fault, apply the interpretation of faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR030	<u>ACCELERATOR PEDAL POSITION</u>
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PARAMETER DEFINITION	This parameter indicates the accelerator pedal position as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

No load = **16%**
Full load: = **85%**
Check that the pedal mechanism has not seized.
Check the **cleanliness** and **condition** of the pedal potentiometer connections, component code **921**.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Disconnect the battery and the injection computer.
Check the **cleanliness** and **condition** of the injection computer connections, component code **120**.
If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.
Using the universal bornier, check the **insulation** and **continuity** on the following connections:
– **3LT** between components **120** and **921**,
– **3LR** between components **120** and **921**,
– **3LS** between components **120** and **921**,
– **3LV** between components **120** and **921**,
– **3LU** between components **120** and **921**,
– **3LW** between components **120** and **921**.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

In the event of a fault, apply the interpretation of **DF196 Pedal sensor circuit gang 1** and **DF198 Pedal sensor circuit gang 2**.

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR035

ATMOSPHERIC PRESSURE

PARAMETER DEFINITION

This parameter indicates the atmospheric pressure in **mbar**. The sensor is integrated in the computer.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The atmospheric pressure value is **PR035 \approx 1000 mbar \pm 200 mbar**

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR037	<u>REFRIGERANT PRESSURE</u>
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PARAMETER DEFINITION	This parameter indicates the refrigerant pressure in bar .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
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The refrigerant pressure must be between 2 bar < PR037 < 27 bar .
Check the cleanliness and condition of the refrigerant pressure sensor, component code 120 , and its connections. If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
Disconnect the battery and the injection computer. Check the cleanliness and condition of the injection computer connections, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Using the universal bornier in place of the computer, check for insulation and continuity on the following connections: <ul style="list-style-type: none">– 38Y between components 120 and 1202,– 38X between components 120 and 1202,– 38U between components 120 and 1202. If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, replace the refrigerant fluid sensor. If the fault is present , check the air conditioning circuit (see MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 62A, Air conditioning).

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR055	<u>ENGINE SPEED</u>
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PARAMETER DEFINITION	This parameter indicates the engine's rotational speed in rpm .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine stopped and ignition on.
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With the ignition on the value must be 0 rpm . In the event of a fault apply the interpretation for DF154 Flywheel signal sensor circuit .

Conformity check with engine running, engine coolant temperature > 80 °C
--

With the engine running at idle speed the value must be ≈ 750 rpm . In the event of a fault apply the interpretation for DF154 Flywheel signal sensor circuit .
--

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

PR058

AIR TEMPERATURE

PARAMETER DEFINITION

This parameter indicates the exterior air temperature in °C.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

Conformity check with engine stopped and ignition on.

With the ignition on the inlet air temperature varies according to the exterior temperature.
In the event of a fault, consult the interpretation of fault **DF002 Air temperature sensor circuit**.
The parameter **PR058** \approx **PR064 Coolant temperature** cold engine.

Conformity check with engine running, engine coolant temperature > 80°C

With the engine running at idle speed the inlet air temperature varies according to the engine coolant temperature.
In the event of a fault, consult the interpretation of fault **DF002 Air temperature sensor circuit**.

AFTER REPAIR

Deal with any faults displayed by the **diagnostic tool**.
Clear the computer memory.
Carry out a road test, then check with the **diagnostic tool**.

S3000_V5C_PR058

PR064	<u>COOLANT TEMPERATURE</u>
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PARAMETER DEFINITION	This parameter indicates the engine coolant temperature in °C.
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NOTES	Special notes: Only apply the checks if the parameter is inconsistent.
	There must be no present or stored faults. Perform this fault finding procedure: <ul style="list-style-type: none">– after finding an inconsistency in the parameter,– after a customer complaint (e.g. lack of power).

Conformity check with engine stopped and ignition on.
--

With the ignition on the coolant temperature varies according to the exterior temperature. In the event of a fault, refer to the interpretation of DF001 Coolant temperature sensor circuit .

Conformity check with engine running, engine coolant temperature > 80°C

With the engine running at idle speed the coolant temperature varies according to the engine temperature. In the event of a fault, refer to the interpretation of DF001 Coolant temperature sensor circuit .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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S3000_V5C_PR064

PR074

BATTERY VOLTAGE

PARAMETER DEFINITION

This parameter indicates the battery voltage in **volts**.

NOTES

No faults should be **present or stored**.
Without electrical consumers (**radio, heating and air conditioning system, fan assembly, headlights, etc.**).

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

Battery voltage must be between **11 V < PR074 < 15 V**
In the event of a fault, apply the interpretation of **DF046 Battery voltage**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR089	<u>VEHICLE SPEED</u>
--------------	----------------------

PARAMETER DEFINITION	Gives the vehicle speed in km/h .
---------------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
	This parameter is transmitted by the ABS computer. This signal is transmitted to the injection on the multiplex network.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
--

In the event of a fault, apply the interpretation of DF091 Vehicle speed signal , run a multiplex network test (see 88B, Multiplexing) then run full fault finding on the ABS computer (see 38C, Anti-lock braking system).
--

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

PR090

IDLE SPEED REGULATION PROGRAMMING VALUE

PARAMETER DEFINITION

This parameter indicates the idle speed regulation programming value as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

PR090 is a stored parameter designed to "program" dispersion and engine ageing for the idle speed regulator. The programming is carried out only when the engine is idle and warm, and no electrical consumer (air conditioning, fan assembly, power assisted steering) is operating. Therefore it adjusts slowly.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR091

OCR* THEORETICAL IDLE REGULATION

PARAMETER DEFINITION

This parameter indicates the theoretical opening cycle ratio for idle speed regulation as a %.

NOTES

Special notes:
Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine stopped and ignition on.

The value must be \approx **36%**

Conformity check with engine running, engine coolant temperature $> 80^{\circ}\text{C}$

The value must be \approx **16%**

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**.

*ocr = opening cyclic ratio

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR095	<u>ANTI-PINKING CORRECTION</u>
--------------	--------------------------------

PARAMETER DEFINITION	This parameter indicates the anti-pinking correction in Volts .
-----------------------------	--

NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming. See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .
--------------	--

Conformity check with engine running, engine coolant temperature > 80 °C
--

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 (see MR 417 (Kangoo 2) , MR 364 (Mégane II) or MR 370 (Scénic II) , Mechanical, 17A, Ignition, Spark plugs: Removal - Refitting).
Check the tightness of the pinking sensor. Repair if necessary.
Check the cleanliness and condition of the pinking sensor connections, component code 146 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

PR095 CONTINUED

Disconnect the battery and the injection computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120**.

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

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

- **3S** between components **120** and **146**,
- **3DQ** between components **120** and **146**,
- **TB1** of component **120**.

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

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR096

MOT* THROTTLE VALVE UPPER STOP PROGRAMMED VALUE

**PARAMETER
DEFINITION**

This parameter indicates the programmed throttle valve upper stop value as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 88\%$.

If there is a fault, apply interpretation for **ET051 Throttle stop programming**.

MOT*: Motorised

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

S3000_V5C_PR096

PR097

MOT* THROTTLE VALVE LOWER STOP PROGRAMMED VALUE

**PARAMETER
DEFINITION**

This parameter indicates the programmed throttle valve upper stop value as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 9\%$.

If there is a fault, apply interpretation for **ET051 Throttle stop programming**.

MOT*: Motorised

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

S3000_V5C_PR097

PR098

UPSTREAM OXYGEN SENSOR VOLTAGE

PARAMETER DEFINITION

This parameter indicates the upstream oxygen sensor voltage in **millivolts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

The upstream oxygen sensor voltage must be between:

50 mV < PR098 < 800 mV.

In the event of a fault, apply interpretation of **DF092 Upstream oxygen sensor circuit**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR099

DOWNSTREAM OXYGEN SENSOR VOLTAGE

PARAMETER DEFINITION

This parameter indicates the downstream oxygen sensor voltage in **millivolts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

the downstream oxygen sensor voltage must be **PR099 ≈ 480 mV**.

In the event of a fault, apply interpretation of **DF093 Downstream oxygen sensor circuit**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR101

INJECTION DURATION

PARAMETER DEFINITION

This parameter indicates the injection duration in **µV**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine stopped and ignition on.

Indicates the injection duration in **mV: 0 µV**

Conformity check with engine running, engine coolant temperature > 80°C

Indicates the injection duration in **mV: 5000 µV**

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR102

CANISTER BLEED SOLENOID VALVE OCR*

**PARAMETER
DEFINITION**

This parameter indicates the canister bleed solenoid valve opening cyclic ratio as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be **between 0% and 100%**.

*ocr = opening cyclic ratio

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR103

CURRENT FUEL CONSUMPTION

PARAMETER DEFINITION

This parameter indicates the current fuel consumption in l/h.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

This value changes according to the engine load.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR105	<u>MILEAGE COUNTER OBD FAULT WARNING LIGHT LIT</u>
--------------	--

PARAMETER DEFINITION	This parameter indicates the mileage travelled with the On Board Diagnostics warning light lit in miles (km) .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
--

The mileage varies according to the time the On Board Diagnostics warning light has been lit.

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

PR106

MILEAGE COUNTER FAULT WARNING LIGHT LIT

PARAMETER DEFINITION

This parameter is for viewing the mileage travelled with one of the injection fault warning lights lit: fault level 1 (amber) and level 2 (red) warning lights.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The mileage varies according to the time a warning light is illuminated: **level 1** (amber) and **level 2** (red) warning lights.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR111	<u>MOT. THROTTLE POSITION CORRECTED VALUE</u>
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PARAMETER DEFINITION	This parameter is for viewing the motorised throttle position corrected value as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
--

No load < 15% Full load > 30% Run command RZ005 Programming . If the parameters or statuses are still not correct, contact the Techline.

MOT*: Motorised

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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S3000_V5C_PR111

PR113	<u>THROTTLE LOWER STOP AFTER OFFSET APP.*</u>
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PARAMETER DEFINITION	This parameter is for viewing the throttle valve lower stop after offset application as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
--

The value must be $\approx 10\%$. If there is a fault, apply the interpretation of faults DF095 Throttle potentiometer circuit gang 1 and DF096 Throttle potentiometer circuit gang 2 .

APPLI*: Application

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

S3000_V5C_PR113

PR116

MOT. THROTTLE POSITION CORRECTED SETPOINT

**PARAMETER
DEFINITION**

This parameter indicates the motorised throttle valve position setpoint as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

With the engine idling, the value must be $\approx 4\%$.

If there is a fault, apply the interpretation of faults **DF095 Throttle potentiometer circuit gang 1** and **DF096 Throttle potentiometer circuit gang 2**.

MOT.: Motorised

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

S3000_V5C_PR116

PR118

MEASURED THROTTLE POSITION GANG 1

PARAMETER DEFINITION

This parameter indicates the motorised throttle valve 1 position setpoint as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

With the engine idling, the value must be $\approx 13\%$.

If there is a fault, use the interpretation of **DF095 Throttle potentiometer circuit gang 1**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR119

MEASURED THROTTLE POSITION GANG 2

PARAMETER DEFINITION

This parameter indicates the motorised throttle valve 2 position setpoint as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

With the engine idling, the value must be $\approx 13\%$.

If there is a fault, use the interpretation of **DF096 Throttle potentiometer circuit gang 2**

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR122	<u>TORQUE RECEIVED BY THE T.A.* CONVERTER</u>
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PARAMETER DEFINITION	This parameter indicates the torque received by the automatic transmission converter in Nm .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine running, engine coolant temperature > 80°C

The value must be between 20 Nm < PR122 < 40 Nm This parameter is only valid when the engine is running.
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T.A.*: Automatic transmission (automatic gearbox)

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR123	<u>ESTIMATED DRIVER DEMAND ENGINE TORQUE</u>
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PARAMETER DEFINITION	This parameter indicates the estimated driver demand engine torque in Nm .
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
--------------	--

Conformity check with engine running, engine coolant temperature > 80°C

The value must be between 20 Nm < PR123 < 40 Nm This parameter is only valid when the engine is running.
--

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

PR124

RESISTANT ENGINE TORQUE SENT VIA MULTIPLEX LINE

**PARAMETER
DEFINITION**

This parameter indicates the resistant engine torque transmitted via the multiplex network in **Nm**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

The value must be between **20 N.m < PR124 < 40 N.m**
This parameter is only valid when the engine is running.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR125

POWER ABSORBED BY THE AIR CONDITIONING
COMPRESSOR*

**PARAMETER
DEFINITION**

This parameter indicates the power consumed by the air conditioning compressor in **W**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

0 < PR125 < 300 W

Heating and air conditioning system engaged only with the engine running.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR126

ADVANCE AFTER ANTI-PINKING CORRECTION

PARAMETER DEFINITION

This parameter indicates the anti-pinking correction in **Volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be - **23 V < PR126 < 72 V**

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR127

HEATING RESISTOR MAXIMUM AUTHORISED POWER

**PARAMETER
DEFINITION**

This parameter indicates the maximum authorised power for heating resistors in **W**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be **0 W < PR127 < 1000 W**

CHAUF.*: Heating

AFTER REPAIR

Repeat the conformity check from the start.

PR130

CRUISE CONTROL SETPOINT

PARAMETER DEFINITION

This parameter indicates the cruise control setpoint.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

Indicates the cruise control cruising speed.
Cruise control can only be activated for a speed **V > 18 mph (30 km/h)**.

AFTER REPAIR

Repeat the conformity check from the start.

PR138

RICHNESS CORRECTION

PARAMETER DEFINITION

This parameter indicates the richness correction as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80 °C

This value changes according to the richness signals from the computer.
The richness correction value must be $\approx 50\%$.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR143

SELF-ADAPTING RICHNESS GAIN

PARAMETER DEFINITION

This parameter brings the richness regulation back to an average nominal value, expressed as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The programming carried out and the corrections made by the adaptive control program enable the computer to detect any tendency of the injection system to increase or decrease the richness. This enables the richness to be optimised across all engine operating phases.

0% < PR143 < 255%

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR144	<u>SELF-ADAPTING RICHNESS OFFSET</u>
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PARAMETER DEFINITION	This parameter brings the richness regulation back to an average nominal value, expressed as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with the engine stopped and the ignition on, or the engine running and the engine coolant temperature > 80°C

The programming carried out and the corrections made by the adaptive control program enable the computer to detect any tendency of the injection system to increase or decrease the richness. This enables the richness to be optimised across all engine operating phases.

0% < PR144 < 255%

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
---------------------	--

PR147

PEDAL POTENTIOMETER GANG 1 VOLTAGE

PARAMETER DEFINITION

This parameter indicates the pedal potentiometer gang 1 voltage in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 0.72 \text{ V}$ and varies according to the status of the pedal.
In the event of a fault, apply the interpretation of fault **DF196 Pedal sensor circuit gang 1**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR148

PEDAL POTENTIOMETER GANG 2 VOLTAGE

PARAMETER DEFINITION

This parameter indicates the pedal potentiometer gang 2 voltage in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 0.52 \text{ V}$ and varies according to the status of the pedal.
In the event of a fault, apply the interpretation of fault **DF198 Pedal sensor circuit gang 2**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR312

MANIFOLD PRESSURE

PARAMETER DEFINITION

This parameter indicates the manifold pressure in **mbar**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check with engine running, engine coolant temperature > 80°C

With the engine idling, the value must be \approx **400 mbar**.

With the engine running and throttle open, the value must be \approx **1000 mbar**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR424

PROGRAMMING THE NO-LOAD POSITION VALUE

PARAMETER DEFINITION

This parameter indicates the accelerator pedal no load position value as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be \approx 15%.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR427	<u>AVERAGE PINKING SIGNAL</u>
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PARAMETER DEFINITION	This parameter indicates the average pinking signal.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check with engine running, engine coolant temperature > 80°C

This parameter varies according to the pinking status in the combustion chamber. In the event of a fault, apply the interpretation of fault DF088 Pinking sensor circuit .
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AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR429	<u>MEASURED THROTTLE POSITION</u>
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PARAMETER DEFINITION	This parameter indicates the throttle valve position measured as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
--

Without action on the accelerator pedal, the value must be $\approx 10\%$.
When the accelerator pedal is fully depressed, the value must be $\approx 85\%$.
If there is a fault, apply the interpretation of faults **DF095 Throttle potentiometer circuit gang 1** and **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR444

BUILT-IN CORRECTION FOR IDLE SPEED REGULATION

PARAMETER DEFINITION

This parameter indicates the built-in correction for idle speed regulation.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The built-in idle speed regulation correction is continuously calculated to take into account consumer air demand.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR446

UPSTREAM O2 SENSOR HEATING RESISTOR

PARAMETER DEFINITION

This parameter indicates the heating resistance of the downstream oxygen sensor in **Ohms**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 9 \Omega$ at 20°C.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR447

DOWNSTREAM O2 SENSOR HEATING RESISTOR

PARAMETER DEFINITION

This parameter indicates the heating resistance of the downstream oxygen sensor in **Ohms**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 9 \Omega$ at 20°C.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR448

IGNITION ADVANCE

PARAMETER DEFINITION

This parameter indicates the ignition advance in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 0^\circ \text{ V}$ with the ignition on and **4 V** at idle speed.
In the event of a fault, apply the interpretation of fault **DF154 Flywheel signal sensor circuit**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR499

PROGRAMMING NO-LOAD PEDALS

PARAMETER DEFINITION

This parameter indicates programming the accelerator pedal in the no load position as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 15\%$.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR538

MEASURED THROTTLE VOLTAGE, GANG 2

PARAMETER DEFINITION

This parameter indicates the throttle voltage, gang 2 measured in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 0.60^{\circ} \text{ V}$.

In the event of a fault, apply the interpretation of fault **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR539

THROTTLE VALVE GANG 1 MEASURE VOLTAGE

PARAMETER DEFINITION

This parameter indicates the throttle valve voltage, gang 1 measured in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 0.35 \text{ V}$.

In the event of a fault, apply the interpretation of fault **DF095 Throttle potentiometer circuit gang 1**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR568	<u>PEDAL POSITION (GANG 1)</u>
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PARAMETER DEFINITION	This parameter indicates the accelerator pedal position gang 1 as a %.
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NOTES	Special notes: Only perform these tests if the parameters do not correspond with the system operation programming.
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Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C
--

The value must be $\approx 16\%$, without depressing the brake pedal. In the event of a fault, apply the interpretation of fault DF196 Pedal sensor circuit gang 1 .

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR569

PEDAL POSITION GANG 2

PARAMETER DEFINITION

This parameter indicates the accelerator pedal position gang 2 as a %.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 16\%$, without depressing the brake pedal.
In the event of a fault, apply the interpretation of fault **DF198 Pedal sensor circuit gang 2**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR587

MOTORISED THROTTLE VALVE LOWER STOP, GANG 1

WARNING

Never drive the vehicle without having programmed the throttle stops.

PARAMETER DEFINITION

This parameter indicates the motorised throttle lower stop position for gang 1 in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value without depressing the accelerator pedal must be ≈ 0.5 V.

If there is a fault, apply the interpretation of faults **DF095 Throttle potentiometer circuit gang 1** and **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR588

MOTORISED THROTTLE VALVE LOWER STOP GANG 2

**PARAMETER
DEFINITION**

This parameter indicates the motorised throttle lower stop position for gang 2 in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value without depressing the accelerator pedal must be ≈ 4.5 V.
If there is a fault, apply the interpretation of faults **DF095 Throttle potentiometer circuit gang 1** and **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR589

MOTORISED THROTTLE VALVE UPPER STOP, GANG 1

**PARAMETER
DEFINITION**

This parameter indicates the motorised throttle upper stop position for gang 1 in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be ≈ 0.9 V.

In the event of a fault, apply the interpretation of fault **DF095 Throttle potentiometer circuit gang 1**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR590

MOTORISED THROTTLE VALVE UPPER STOP GANG 2

**PARAMETER
DEFINITION**

This parameter indicates the motorised throttle upper stop position for gang 2 in **volts**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 4 \text{ V}$.

In the event of a fault, apply the interpretation of fault **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR593

MOTORISED THROTTLE IN SAFE MODE, GANG 1

**PARAMETER
DEFINITION**

This parameter indicates the value in **volts** of the motorised throttle gang 1 in safe mode.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be \approx **0.88 V**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR594

MOTORISED THROTTLE IN SAFE MODE, GANG 2

**PARAMETER
DEFINITION**

This parameter indicates the value in **volts** of the motorised throttle gang 2 in safe mode.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be \approx **0.88 V**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR597

MOTORISED THROTTLE IN SAFE MODE

PARAMETER DEFINITION

This parameter indicates the value as a % of the motorised throttle in safe mode.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value must be $\approx 17.5\%$

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR742	<u>ADDITIONAL PETROL CIRCUIT SV** OCR*</u>
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PARAMETER DEFINITION	This parameter indicates the value of the additional petrol circuit SV* OCR* in %.
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NOTES	There must be no present or stored faults.
	Only for Flex fuel .
	Use the Wiring Diagrams Technical Note for Mégane II or Scénic II .

Check the **cleanliness** and **condition** of the additional petrol circuit solenoid valve connections, component code **1640**.

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

Measure the resistance between connections **3FB2** and **3ACM** of the additional petrol circuit solenoid valve.
If the resistance is not in the range: **26 Ω < X < 30 Ω** at **24°C**, replace the additional petrol circuit solenoid valve.

With the ignition on, check for **+12 V** on connection **3FB2** of the additional fuel tank pump solenoid valve connector, component code **1640**.

*OCR: Opening cyclic ratio

*SV: Solenoid valve.

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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PR742 CONTINUED

Use the Universal bornier to check the **insulation** and **continuity** on the following connection:

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

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

Disconnect the battery and the computer.

Check the cleanliness and condition of the injection computer connections, component code **120**.

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

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

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

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

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR743

ALCOHOL LEVEL ESTIMATED IN THE TANK

PARAMETER DEFINITION

This parameter is used to estimate the % level of alcohol present in the tank.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value of this parameter can vary from **0** to **85%**.
In the event of a fault, apply the interpretation of status **ET671 Alcohol level programming**.

Disconnect the battery and the injection computer.

Check the cleanliness and condition of the injection computer connections, component code **120**, and the upstream oxygen sensor connections, component code **887**.

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

If the fault is still present, replace the upstream oxygen sensor, component code **887**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR879

MAXIMUM AUTHORISED SPEED

PARAMETER DEFINITION

This parameter indicates the maximum authorised speed requested by the driver in **mph**. This speed can be modified using the command **SC040 Speed limiter**.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

In the event of a fault, apply the interpretation of status **ET741 Optional vehicle speed restriction**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PR926

ALCOHOL FUEL ADAPTIVE CORRECTION

PARAMETER DEFINITION

This parameter indicates the value in % of the correction of the injection duration when the vehicle is operating with super ethanol E85.
The correction depends on the percentage of alcohol present in the tank.

NOTES

Special notes:

Only perform these tests if the parameters do not correspond with the system operation programming.

Conformity check: Engine switched off and ignition on or engine running, engine coolant temperature > 80°C

The value of **PR926 Alcohol fuel adaptive correction** must be **42%** when the engine is operating on super ethanol E85.

In the event of a fault, apply the interpretation of status **ET671 Alcohol level programming**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

Fault finding – Command summary table

Tool command	Diagnostic tool title	Comments
RZ001	Fault memory	This command is used for clearing the stored faults from the computer.
RZ005	programming	This command enables you to reinitialise the entire vehicle configuration.
AC015	Fuel pump relay	See the interpretation of this command.
AC017	Canister bleed solenoid valve	See the interpretation of this command.
AC018	Upstream O2 sensor heating	See the interpretation of this command.
AC019	Downstream O2 sensor heating	See the interpretation of this command.
AC027	Motorised throttle	See the interpretation of this command.
AC079	Actuator static test	See the interpretation of this command.
AC217	Additional petrol circuit solenoid valve (only for Flex fuel)	See the interpretation of this command.
AC224	Additional petrol circuit pump relay (only for Flex fuel)	See the interpretation of this command.
VP008	Injector control unlocking	This command is used to unlock the injectors.
VP010	enter vin	This command is used to rewrite the VIN.
VP013	Injector control locking	This command is used to lock the injectors.
SC040	Speed limiter	This command is used to modify the maximum speed authorised by the customer option.

AC015	<u>FUEL PUMP RELAY</u>
NOTES	No faults should be present or stored .
	Special note: See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .
IF THE RELAY DOES NOT CLICK	<p>Check the status of the UPC connectors. Check the condition of the engine management computer connector, component code 120. If the connectors are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connectors, otherwise, replace the wiring. Check the insulation and continuity of the following connection: 3AC between components 120 and 1337. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring.</p>
	<p>Carry out fault finding on the UPC (see 87G, Engine interconnection unit). If the fault is still present, contact the Techline.</p>
AFTER REPAIR	Carry out a road test then check with the diagnostic tool .

AC015 CONTINUED	
IF THE PUMP DOES NOT OPERATE	<p>Check the status of the UPC connectors. If the connectors are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connectors, otherwise, replace the wiring. With the ignition on, check for +12 V on connection 3N of component 833. If there is no + 12 V feed, using the universal bornier, check the continuity of the following connections : – 3N between components 833 and 1337, – MYH (for Kangoo 2) or MAQ (for Mégane II and Scénic II) of component 833. If the connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring. If the fault is still present, contact the Techline.</p> <p>Check for earth on connection MYH (for Kangoo 2) or MAQ (for Mégane II and Scénic II) of component 833. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring. If the fault is still present, contact the Techline.</p>
AFTER REPAIR	Carry out a road test then check with the diagnostic tool .

AC017	<u>CANISTER BLEED SOLENOID VALVE</u>
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NOTES	Special notes: No faults should be present or stored . See Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II .
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Check the **cleanliness** and **condition** of the fuel vapour absorber bleed solenoid valve connections, component code **371**.

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 the connections:

- **3BB** and **3FB3** of component **371** (for **Kangoo 2**)
- **3BB** and **3FB2** of component **371** (for **Mégane II** and **Scénic II**)

If the resistance of the fuel vapour absorber bleed solenoid valve is not **26 Ω ± 4 Ω at 23°C**, then replace the fuel vapour absorber bleed solenoid valve (see **MR 417 (Kangoo 2), MR 364 (Mégane II) or MR 370 (Scénic II), Mechanical, 14A, Emission control, Fuel vapour absorber: Removal - Refitting**).

With the ignition on, check for **+12 V** on connection **3FB3** (for **Kangoo 2**) or **3FB2** (for **Mégane II** and **Scénic II**) of component **371**. If there is no **+12 V** feed, use the universal bornier to check the **continuity** of the following connections:

- **3BB** between components **120** and **371**,
- **3FB3** between components **1337** and **371** (for **Kangoo 2**),
- **3FB2** between components **1337** and **371** (for **Mégane II** and **Scénic II**).

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

Disconnect the battery.

Disconnect the computer. Check the **cleanliness** and **condition** of the injection computer connections, component code **120**. If the connector(s) are 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.

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

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

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

If the fault persists, replace the solenoid valve.

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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AC018

UPSTREAM O2 SENSOR HEATING

NOTES

Special notes:

No faults should be **present or stored**.

See **Wiring Diagrams Technical Note** for Kangoo 2, Mégane II or Scénic II.

Run the **AC018** command.

Using a multimeter, check for **earth** on **connection 3GH** of component **887**.

If the problem persists, apply the interpretation of fault **DF601 Upstream O2 sensor heating power circ***.

*Circ: Circuit

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

S3000_V5C_AC018

AC019

DOWNSTREAM O2 SENSOR HEATING

NOTES

Special notes:

No faults should be **present or stored**.

See **Wiring Diagrams Technical Note for Kangoo 2, Mégane II or Scénic II**.

Run the **AC019** command.

Using a multimeter, check for **earth** on **connection 3GJ** of component **242**.

If the problem persists, apply the interpretation of the fault **DF602** Upstream O2 sensor heating power circuit*.

*Circ: Circuit

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

AC027

MOTORISED THROTTLE

WARNING

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

NOTES

Special note:
No faults should be **present or stored**.

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

If the motorised throttle does not work, apply the interpretation of fault **DF079 Motorised throttle valve servo control**.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

AC079

ACTUATOR STATIC TEST

NOTES

Special note:
No faults should be **present or stored**.

Switch on the ignition and run command **AC079**.

If the following actuators are not working, apply the interpretation of the associated fault:

- Fuel pump relay, apply the interpretation of **DF085 Fuel pump relay circuit**.
- The motorised throttle, apply the interpretation of **DF079 Motorised throttle valve servo control**.
- Upstream O2 sensor heating, apply the interpretation of **DF601 Upstream O2 sensor heating power circuit**.
- Downstream O2 sensor heating, apply the interpretation of **DF602 Downstream O2 sensor heating power circ***.

*Circ: Circuit

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

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 Mégane II or Scénic II .

Check the **cleanliness** and **condition** of the additional petrol circuit solenoid valve connections, component code **1640**.

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** of the additional petrol circuit solenoid valve.

If the resistance is not in the range: **26 Ω < X < 30 Ω** at **24°C**, replace the additional petrol circuit solenoid valve.

With the ignition on, check for **+12 V** on connection **3FB2** of the additional fuel circuit solenoid valve connector, component code **1640**.

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

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

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

AFTER REPAIR	Carry out a road test then check with the diagnostic tool .
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AC217 CONTINUED

Disconnect the battery.

Disconnect the computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120**.

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.

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

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

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

If the fault persists, replace the solenoid valve.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

AC224	<u>ADDITIONAL FUEL CIRCUIT 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	Carry out a road test then check with the diagnostic tool .
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SC040	<u>SPEED LIMITER</u>
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NOTES	Conditions of using the command: Use the SC040 command to modify the maximum authorised speed set by the customer option.
	This command allows the vehicle's restricted speed to be read and modified.

Select the special command **SC040** in **the diagnostic tool**.

This command allows you to:

- read the vehicle's restricted speed,
- activate the speed restriction at a predefined speed,
- to deactivate the restricted speed set on the vehicle,
- to modify the vehicle's restricted speed.

The vehicle speed can be restricted or unrestricted using **the diagnostic tool**.

The vehicle's restricted speed may be increased or decreased in increments of **5 km/h**, from **30 km/h** to **250 km/h**.

IMPORTANT

If the vehicle is restricted, the driver of the vehicle must be informed. Consequently, in accordance with current regulations, the vehicle speed restriction must be displayed on a label on the instrument panel.

The label should be changed when any changes to the speed restriction are introduced.

Before all (re)programming or computer replacement, the vehicle's restricted speed must be recorded using the value **PR879 Maximum authorised speed**.

After (re)programming or computer replacement, this same restricted speed value must be rewritten using the command **SC040**.

AFTER REPAIR	Clear the computer fault memory. Carry out a road test then check with the diagnostic tool .
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S3000_V5C_SC040

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

Idle speed faults

ALP 3

Faults occurring while driving

ALP 4

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 1

No dialogue with the computer

NOTES

None.

Test the **diagnostic tool** on another vehicle which is in perfect working order.
Check that the sensor's green indicator light comes on.
If you cannot establish dialogue with the second vehicle, refer to **CLIP diagnostic tool check**.
If there is no dialogue with the second vehicle, follow the instructions in the **Vehicle check** section.

CLIP DIAGNOSTIC TOOL CHECK

Check **the cleanliness and condition** of the contacts of the diagnostic socket 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.
If the connectors are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connectors, otherwise, replace the wiring.
Check the **cleanliness** and **condition** of the CLIP socket.
If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 1 CONTINUED 1

CHECKING ON VEHICLE

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 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 F18 (5 A)** (for **Kangoo 2**) or **F5D (5 A)** (for **Mégane II** and **Scénic II**) and the diagnostic socket supply fuses **F21 (5 A)** and **F17 (7.5 A)**, as well as the **condition** and **cleanliness** of the contacts (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical**, **81C**, **Fuses**, **Fuses: List and location of components**).
Repair if necessary.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 1 CONTINUED 2

CHECKING ON VEHICLE CONTINUED 1

Using the universal bornier, check the following connections on the **vehicle's diagnostic socket**:

- **BP32** between components **225** and **260**,
- **AP43** between components **225** and **1337**,
- **MN** and **NAM** of component **225**.

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

Disconnect the battery and the petrol computer.

Check the **cleanliness** and **condition** of the injection computer connections, component code **120**.

Check the **cleanliness** and **condition** of the UPC computer connections, component code **1337**.

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

Using the universal bornier, check the **continuity** of the **multiplex** communication lines between the following connections:

- **3SN** between components **120** and **1337**,
- **3SM** between components **120** and **1337**,
- **133B** between components **225** and **1337** (for **Kangoo 2**),
- **133C** between components **225** and **1337** (for **Kangoo 2**),
- **133B** between components **225** and **645** (for **Mégane II** and **Scénic II**),
- **133C** between components **225** and **645** (for **Mégane II** and **Scénic II**).

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

Disconnect the computer **earth** terminal connection from the negative battery terminal.

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

- **NF** of component **120** (for **Kangoo 2**)
- **N** of component **120** (for **Mégane II** and **Scénic II**)

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

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 1 CONTINUED 3

CHECKING ON VEHICLE CLIP CONTINUED 2

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

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

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

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

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

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

Check the condition and operation of fuse **F18 (5 A)** (for **Kangoo 2**) or **F5D (5 A)** (for **Mégane II** and **Scénic II**), (see **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, **Mechanical, 81C, Fuses, Fuses: List and location of components**). Repair if necessary.

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

- **AP15** between components **120** and **1337**,
- **3N** between components **833** and **1337**

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

If the fault is still present, contact Techline.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 2

The engine will not start

NOTES

Follow **ALP 2** after a **complete check** with the **diagnostic tool**.

WARNING

Never drive the vehicle without ensuring that there are no throttle valve faults

If the starter motor does not engage, there may be an engine immobiliser fault.
Carry out fault finding on the UCH (see **87B, Passenger Compartment Connection Unit**).

Check the condition of the battery.
Check the cleanliness, condition and tightness of the battery terminals.
Check that the battery is correctly earthed to the vehicle bodywork.
Check that the + battery leads are correctly connected.

Check that the starter motor is properly connected.
Check the correct operation of the starter (see **87G Engine compartment connection unit**)

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.

Check that the air filter is not clogged.
Check that the air inlet circuit is not blocked.

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

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 3

Idle speed faults

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

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 3 CONTINUED

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

Carry out a road test then check with the **diagnostic tool**.

PETROL INJECTION

Fault finding – Fault Finding Chart

17B

ALP 4

Faults occurring while driving

NOTES

Follow **ALP4** after a complete check using the **diagnostic tool**.
(Use the relevant section in the Workshop Repair Manual **MR 417 (Kangoo 2)**, **MR 364 (Mégane II)** or **MR 370 (Scénic II)**, as a guide in carrying out certain operations).

WARNING

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

Check that the oil level is not too high.

Check the condition of the pencil coils and the cleanliness of their connections.
If the connectors are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
Check the electrical resistance of the pencil coil secondary circuits.
Check the condition and conformity of the spark plugs.
Check the mounting, cleanliness and condition of the flywheel signal sensor.
Check the flywheel signal sensor air gap.
Check the condition and cleanliness of the flywheel.

Check that the air filter is not clogged.
Check that the air inlet circuit is not blocked.
Check that throttle valve is not clogged.
Check that the induction system is sealed, from the throttle to the cylinder head.

Check that the fuel vapour absorber bleed is not disconnected or jammed open.
Check that there are no leaks in the fuel vapour absorber bleed system.
Check that there are no leaks in the braking assistance system.
Check that there are no leaks in the oil vapour recovery system (manifold/cylinder head).
Check that there are no leaks around the manifold pressure sensor.
Check that there are no leaks around the air temperature sensor.

Check that the tank vent is not blocked.
Check that the fuel is of the correct type.
Check that there are no leaks in the fuel system, from the tank to the injectors.
Check that there are no kinked hoses (especially after a removal operation).
Check the fuel flow rate and pressure.
Check that the injectors are working properly.

Check that the exhaust system is not blocked and the catalytic converter not clogged.

Check the timing setting.

Check the cylinder compressions.

Check the hydraulic tappets if there is camshaft noise.

AFTER REPAIR

Carry out a road test then check with the **diagnostic tool**.