

# MEGANE

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## 8 Electrical equipment

**82A**

### ENGINE IMMOBILISER

SVT

Vdiag No.: 04

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V1

Edition Anglaise

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

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

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## 1. SCOPE OF THIS DOCUMENT

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

*Vehicle(s):* **LOGAN, SANDERO, MEGANE II, SCENIC II, MASTER II.**

*Function concerned:* **Anti-Theft Tracking Unit**

*Computer name:* **SVT**

*Vdiag No.:* **04**

## 2. PREREQUISITES FOR FAULT FINDING

### Documentation type

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

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

**Wiring Diagrams:**

- Visu - Schéma.

### Type of diagnostic tools

- **CLIP + multiplex line sensor**

### Special tooling required

Special tooling required
Diagnostic tool
Multimeter
<b>Elé. 1681</b> 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.
- **It is forbidden to carry out a road test with the diagnostic tool in dialogue with the ECU because the ABS and Electronic Brake Distribution functions are deactivated. Braking pressure is identical on both vehicle axles (risk of a spin under heavy braking).**

#### 4. REMINDER

##### Procedure

To run fault finding on the vehicle computers, switch on the ignition. Connect the diagnostic tool and perform the required operations.

##### SCENIC II and MEGANE II:

To run fault finding on the vehicle computers, switch on the forced + after ignition feed.  
Proceed as follows:

##### Switch on the forced + after ignition feed:

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

##### Switching off the forced + after ignition feed:

Press the Start button twice briefly (**less than 3 seconds**).

Ensure that the + after ignition feed has been cut off by checking that the computer warning lights on the instrument panel have gone out.

##### MASTER II, LOGAN and SANDERO:

To run fault finding on the vehicle computers, switch on the + after ignition feed.  
Proceed as follows:

**For vehicles with key/radiofrequency remote control unit,**  
switch on the ignition with the key.

### Faults

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

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

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

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

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

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

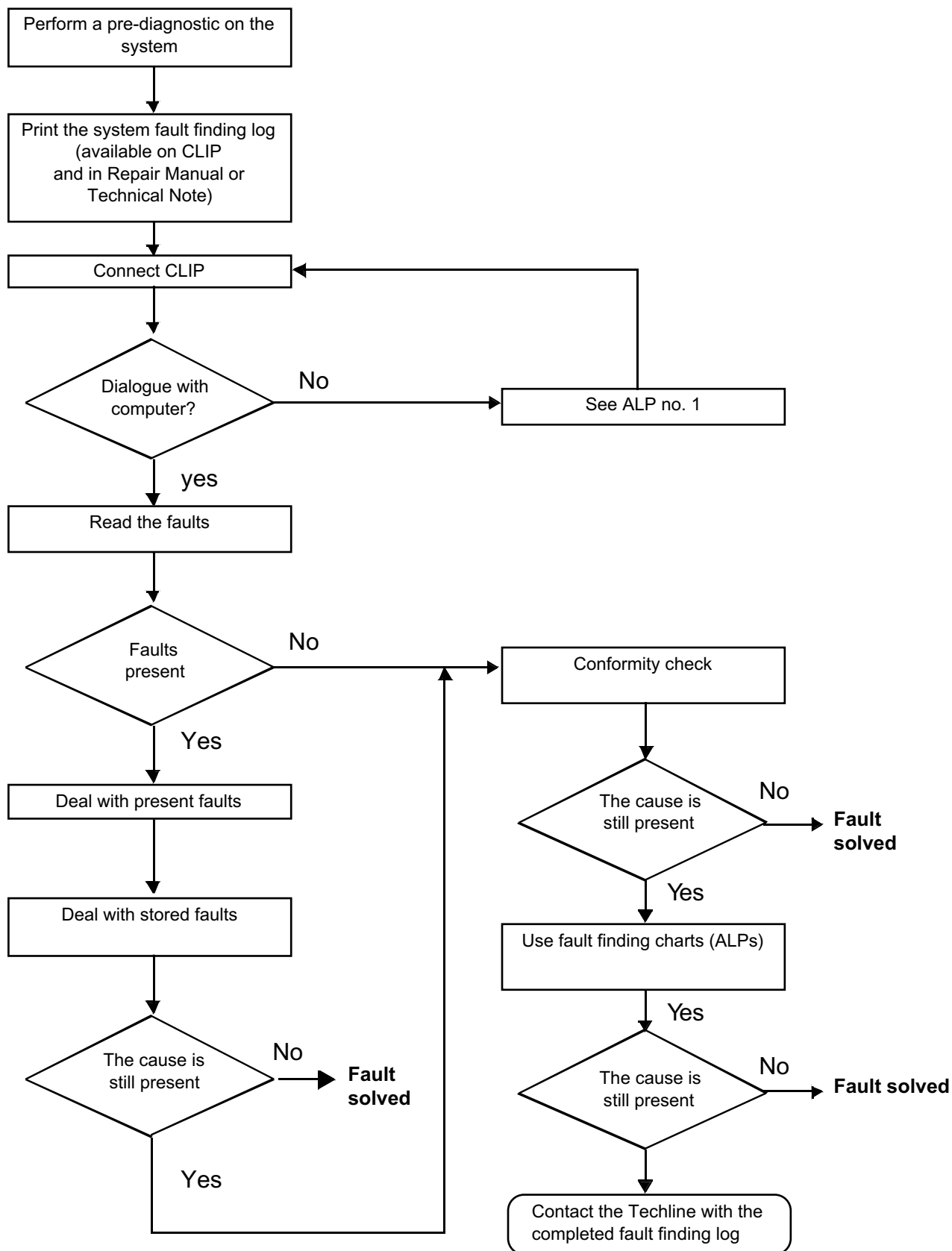
- the electrical lines which correspond to the fault,
- the connectors for these lines (for oxidation, bent pins, etc.),
- the resistance of the component detected as faulty,
- the condition of the wires (melted or split insulation, wear).

### Customer complaints - Fault finding chart

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

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

## 5. FAULT FINDING PROCEDURE



## **5. FAULT FINDING PROCEDURE (continued)**

### **Wiring check**

#### **Fault finding problems**

Disconnecting the connectors and/or manipulating the wiring may temporarily remove the cause of a fault. Electrical measurements of voltage, resistance and insulation are generally correct, especially if the fault is not present when the analysis is made (stored fault).

#### **Visual inspection**

Look for damage under the bonnet and in the passenger compartment.  
Carefully check the fuses, insulators and wiring harness routing.  
Look for signs of oxidation.

#### **Physical inspection**

While manipulating the wiring, use the diagnostic tool to note any change in fault status from stored to present. Make sure that the connectors are properly locked.  
Apply light pressure to the connectors.  
Twist the wiring harness.  
If there is a change in status, try to locate the source of the fault.

#### **Inspection of each component**

Disconnect the connectors and check the appearance of the clips and tabs, as well as the crimping (no crimping on the insulating section).  
Make sure that the clips and tabs are properly locked in the sockets.  
Check that no clips or tabs have been dislodged during connection.  
Check the clip contact pressure using an appropriate model of tab.

#### **Resistance check**

Check the continuity of entire lines, then section by section.  
Look for a short circuit to earth, to **+ 12 V** or with another wire.

If a fault is detected, repair or replace the wiring harness.

### 6. FAULT FINDING LOG



#### IMPORTANT!

#### IMPORTANT

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

**IT IS THEREFORE COMPULSORY TO COMPLETE A FAULT FINDING LOG  
EACH TIME IT IS REQUESTED BY TECHLINE OR THE WARRANTY RETURNS DEPARTMENT.**

You will always be asked for this log:

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

### 7. INSTRUCTIONS TO BE FOLLOWED FOR ANY WORK CARRIED OUT ON THE INJECTION SYSTEM

#### Instructions to be followed before opening of the fuel circuit

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

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

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

Blast compressed air over the cleaned parts (tools, workbench, and the parts, unions and injection system area).

Check that no bristles remain.

Wash your hands before and during the operation if necessary.

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

#### Instructions to be followed during the operation

As soon as the circuit is open, all openings must be plugged to prevent impurities from entering the system. The plugs to be used are available from the Parts Department. The plugs must not be reused under any circumstances. Seal the pouch shut, even if it has to be opened shortly afterwards. Ambient air carries impurities.

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

The use of a brush, cleaning agent, bellows, sponge or normal cloth is strictly forbidden once the circuit has been opened. These items could allow contamination to enter the system.

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

### SVT computer:

For **MEGANE II** and **SCENIC II**:

With its attached support, it is bolted on the existing support of the dashboard cross member.

For **MASTER II**:

The computer support is bolted on the existing support of the dashboard cross member.

For **LOGAN** and **SANDERO**:

The computer support is welded to the dashboard cross member.

The anti-theft tracking unit (computer) consists of:

- An integrated **GPS aerial** to locate the vehicle.
- An integrated **GSM aerial** to communicate with a call centre.
- A **locking system** that prevents the vehicle from operating when the owner of the vehicle declares to the call centre that the vehicle has been stolen.
- An **external GPS aerial** can be connected to the anti-theft tracking unit, on certain vehicle types.



For **LOGAN**, **SANDERO** and **MASTER II**:

The computer can switch off the electrical supply of the transponder ring. When the anti-theft tracking unit receives a locking order from the call centre via the GSM network, it switches off the supply of the transponder ring.

For **MEGANE II** and **SCENIC II**:

For "no hands-free opening" vehicles, the computer can switch off the electrical supply of the card reader. When the anti-theft tracking unit receives a locking order from the call centre via the GSM network, it switches off the supply of the card reader.

For "hands-free opening" vehicles, the computer can switch off the electrical supply of both the card reader and the steering column lock. When the anti-theft tracking unit receives a locking order from the call centre via the GSM network, it switches off the supply of these two components.

The computer has several operating modes:

- **NOT FUNCTIONING mode:** The computer is not supplied. No function is available, but the system retains the stored configuration and the recorded data.
- **DEACTIVATED mode:** The ignition is off. The computer is supplied by the vehicle battery. Vehicle tracking by the call centre is not activated and the GSM network does not send the vehicle position to it. The computer stores the satellite position in its memory every 24 hours.
- **FUNCTIONING WITHOUT TRACKING mode:** Ignition on. The computer is supplied by the vehicle battery. Vehicle tracking by the call centre is not activated. The computer is registered on the GSM network in case tracking is activated. The GSM network does not send the vehicle position to the call centre. The computer stores the satellite position in its memory every minute.
- **DEACTIVATED WITH TRACKING mode:** The ignition is off. The computer is supplied by the vehicle battery. Vehicle tracking by the call centre is activated. The computer sends the vehicle position message to the call centre every 24 hours. Each time the computer is activated, it makes a record on the GSM network and communicates it to the call centre, but does not store it in its memory.
- **FUNCTIONING WITH TRACKING mode:** Ignition on. The computer is supplied by the vehicle battery. Vehicle tracking by the call centre is activated. The computer sends the vehicle position message to the call centre every minute. The computer stores in its memory all operations ordered by the call centre.
- **VIOLATION mode:** The computer is supplied by its internal battery. The computer sends the vehicle position message to the call centre every minute. The main supply (+ Battery) is switched off. The GPS module is activated after a position violation is detected.
- **FAULT FINDING mode:** The computer is supplied by the vehicle battery or by its internal battery. The computer communicates with the diagnostic tool.

### SPECIAL COMMANDS

#### SC001: SVT Configuration

Use this command after replacing the computer.

This command is used to configure the computer according to the vehicle.

#### VP001: Enter VIN

This command permits manual entry of the vehicle's VIN into the computer.

Use this command each time the computer is replaced or (re)programmed.

#### Procedure for writing the VIN

- Establish dialogue with the computer.
- Select the menu **repair mode**.
- Select the **other parameters** menu.
- Select the line **VP001**.
- Enter the VIN.
- Exit fault finding mode.
- Switch off the ignition.
- Wait for the end of power latch.
- Reread the VIN in the **Identification** menu for confirmation (**ID001 VIN code**).

#### RZ001: Clear faults

This command is used for clearing the stored faults from the computer.

### CONFIGURATION READING

LC001:      **External GPS aerial**  
              **With or Without**

# ENGINE IMMOBILISER

## Fault finding – Replacement of components

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To remove and refit the computer, consult the Repair Manual for the vehicle concerned:

- **LOGAN and SANDERO: MR 388, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting.**
- **MEGANE II: MR 364, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting.**
- **SCENIC II: MR 370, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting.**
- **MASTER II: MR 377, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting.**

Procedure to be applied **before repair**:

- With the approval of the Techline, read the fault code to determine whether the fault is detected before replacing the computer.
- Switch off the ignition and remove the computer.

Before replacing the computer, **switch off the ignition** and wait **1 minute** for the system to shut down completely. Note the current configuration of the computer by reading the configuration **LC001 External GPS aerial**.

Procedure to be applied **after repair**:

After replacing the computer, run the programming command **VP001 Enter VIN**, check the computer configuration using **LC001**, and configure the new computer if necessary using **SC001 Configure SVT**.

Tool fault	Associated DTC	Diagnostic tool title
DF001	9A01	External GPS aerial
DF002	9A02	GPS internal error
DF003	9A03	GSM internal error
DF004	9A05	Battery internal fault
DF005	9A09	SVT internal fault
DF006	9A04	SVT system internal fault
DF007	9A00	SVT configuration

<b>DF001 PRESENT OR STORED</b>	<u>EXTERNAL GPS AERIAL</u>
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<b>NOTES</b>	Switch on the vehicle + after ignition feed.
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Check the configuration of the anti-theft tracking unit by reading configuration **LC001 External GPS aerial**.  
If the check is not correct, run command **SC001 Configure SVT**.

Check the condition of the aerial visually and by hand.  
Disconnect then reconnect the aerial.

If the fault is still present, contact the Techline.

<b>AFTER REPAIR</b>	Deal with any faults declared by the diagnostic tool. Clear the faults from the computer memory using command <b>RZ001 Fault memory</b> .
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DF002  
PRESENT  
OR  
STOREDGPS INTERNAL ERROR**NOTES**

Switch on the vehicle + after ignition feed.

Replace the anti-theft tracking unit (see **MR 388, 364, 370 or 377, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting**).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

After replacing the computer, consult the **Replacement of components** section.  
Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

**DF003  
PRESENT  
OR  
STORED**

GSM INTERNAL ERROR

**NOTES**

Switch on the vehicle + after ignition feed.

Replace the anti-theft tracking unit (see **MR 388, 364, 370 or 377, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting**).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

After replacing the computer, consult the **Replacement of components** section.  
Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

**DF004  
PRESENT  
OR  
STORED**BATTERY INTERNAL FAULT**NOTES**

Switch on the vehicle + after ignition feed.

Replace the anti-theft tracking unit (see **MR 388, 364, 370 or 377, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting**).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

After replacing the computer, consult the **Replacement of components** section.  
Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.



**DF005  
PRESENT  
OR  
STORED**SVT INTERNAL FAULT**NOTES**

Switch on the vehicle + after ignition feed.

Replace the anti-theft tracking unit (see **MR 388, 364, 370 or 377, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting**).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

After replacing the computer, consult the **Replacement of components** section.  
Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

**DF006  
PRESENT  
OR  
STORED**SVT SYSTEM INTERNAL FAULT**NOTES**

Switch on the vehicle + after ignition feed.

Replace the anti-theft tracking unit (see **MR 388, 364, 370 or 377, Mechanical, 82A, Immobiliser, Tracking unit: Removal - Refitting**).

If the fault is still present, contact the Techline.

**AFTER REPAIR**

After replacing the computer, consult the **Replacement of components** section.  
Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

DF007  
PRESENTCONFIGURATION**NOTES**

Switch on the vehicle + after ignition feed.

Configure the system (see **Configuration and programming**).**Note:**After configuring, switch off the ignition, **wait 2 minutes** then switch on the ignition again to allow the configuration to register.Check the computer configuration by reading configuration **LC001 External GPS aerial**.  
If the check is not correct, run scenario **SC001 Configure SVT**.**AFTER REPAIR**Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

Tool status	Diagnostic tool title
ET001	SVT operational
ET002	System activation request

**ET001**

**SVT OPERATIONAL**

**STATUS DEFINITION**

**YES:** indicates that the anti-theft tracking unit is operational  
**NO:** indicates that the anti-theft tracking unit is not operational

**AFTER REPAIR**

Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

**ET002**

**SYSTEM ACTIVATION REQUEST**

***STATUS DEFINITION***

**ACTIVE:** indicates that system activation was requested.  
**INACTIVE:** indicates that system activation was not requested.

***AFTER REPAIR***

Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.

NOTES	Only refer to the customer complaints after performing a complete check using the diagnostic tool.
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# ENGINE IMMOBILISER

## Fault finding – Fault finding chart

**82A**

<b>ALP1</b>	<b>NO DIALOGUE WITH THE COMPUTER</b>
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<b>NOTES</b>	Switch on the vehicle + <b>after ignition feed</b> .
	Use the <b>Wiring Diagrams Technical Note for LOGAN, SANDERO, MEGANE II, SCENIC II, MASTER II</b> .

Ensure that the **diagnostic tool** is not the cause of the fault by using it to establish dialogue with a computer on another vehicle. If the **diagnostic tool** is not causing the fault and dialogue cannot be established with any other computer on the same vehicle, it may be that a faulty computer is disrupting the fault finding line. Use a process of successive disconnections to locate this computer.  
Check the battery voltage, component code **107**, and perform the necessary operations to obtain the correct voltage (**12 V < X < 15 V**).

Check the condition of the fuses in the passenger compartment fuse and relay box, component code **260** for **MEGANE II and SCENIC II** or component code **1016** for **MASTER II, LOGAN, and SANDERO**.

Check the connection of the anti-theft tracking unit connector, component code **2186**.  
If the connector is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

For **MEGANE II** and **SCENIC II**, check the connection of the Protection and Switching Unit connector, component code **1337**.  
If the connector is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Deal with any faults declared by the diagnostic tool. Clear the faults from the computer memory using command <b>RZ001 Fault memory</b> .
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ALP1  
CONTINUED 1

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

For **SANDERO** and **LOGAN**:

- **BP56** between components **2186** and **1016** (+ before ignition feed),
- **AP10** between components **2186** and **1016** (+ after ignition feed),
- **NC** of component **2186**.

For **MEGANE II** and **SCENIC II**:

- **BP32** between components **2186** and **260** (+ before ignition feed),
- **AP43** between components **2186** and **1337** (+ after ignition feed),
- **MAN** of component **2186**.

For **MASTER II**:

- **BP** between components **2186** and **1016** (+ before ignition feed),
- **AP** between components **2186** and **1016** (+ after ignition feed),
- **Earth** of component **2186**.

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

Check that the anti-theft tracking unit, component code **2186**, is correctly supplied on the following connections:

For **SANDERO** and **LOGAN**:

- **BP56** on component **2186** (+ before ignition feed),
- **AP10** on component **2186** (+ after ignition feed).

For **MEGANE II** and **SCENIC II**:

- **BP32** on component **2186** (+ before ignition feed),
- **AP43** on component **2186** (+ after ignition feed).

For **MASTER II**:

- **BP** on component **2186** (+ before ignition feed),
- **AP** on component **2186** (+ after ignition feed).

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

## AFTER REPAIR

Deal with any faults declared by the diagnostic tool.

Clear the faults from the computer memory using command **RZ001 Fault memory**.

ALP1  
CONTINUED 2

If the fuses are faulty in the passenger compartment fuse and relay box, component code **260** for **MEGANE II** and **SCENIC II** or component code **1016** for **MASTER II**, **LOGAN**, and **SANDERO**, replace them.

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

For **SANDERO** and **LOGAN**:

- **BP56** between components **225** and **1016** (+ before ignition feed),
- **AP10** between components **225** and **1016** (+ after ignition feed),
- **NC** (left-hand drive) or **MAM** and **NC** (right-hand drive) of component **225**.

For **MEGANE II** and **SCENIC II**:

- **BP32** between components **225** and **260** (+ before ignition feed),
- **AP43** between components **225** and **1337** (+ after ignition feed),
- **MAM** and **NAM** of component **225**.

For **MASTER II**:

- **BCP3** between components **225** and **1016** (+ before ignition feed),
- **AP21** between components **225** and **1016** (+ after ignition feed),
- **NC** and **MQ** (left-hand drive) or **NJ** and **MQ** (right-hand drive) of component **225**.

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

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

**HK** between components **225** and **2186**.

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.

## AFTER REPAIR

Deal with any faults declared by the diagnostic tool.

Clear the faults from the computer memory using command **RZ001 Fault memory**.

ALP1  
CONTINUED 3

Check that the diagnostic socket, component code **225**, is correctly supplied by checking the following connections:

For **SANDERO** and **LOGAN**:

- **BP56** on component **225 (+ before ignition feed)**,
- **AP10** on component **225 (+ after ignition feed)**.

For **MEGANE II** and **SCENIC II**:

- **BP32** on component **225 (+ before ignition feed)**,
- **AP43** on component **225 (+ after ignition feed)**.

For **MASTER II**:

- **BCP3** on component **225 (+ before ignition feed)**,
- **AP21** on component **225 (+ after ignition feed)**.

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

If dialogue is still not established after these various checks, replace the anti-theft tracking unit, component code **2186**.

If the fault is still present, contact Techline.

## AFTER REPAIR

Deal with any faults declared by the diagnostic tool.  
Clear the faults from the computer memory using command **RZ001 Fault memory**.