

# MEGANE

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## 8 Electrical equipment

### 87F PARKING DISTANCE CONTROL

#### Vdiag No: 04-08

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## 1. SCOPE OF THIS DOCUMENT

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

**Vehicle(s):** CLIO III, Laguna II ph 1 and 2  
Vel-Satis ph1 and 2,  
Espace IV ph1 and 2,  
Mégane II, Scénic II, Modus ph2

**Computer name:** Parking distance control  
**Vdiag No:** 04-08

## 2. PREREQUISITES FOR FAULT FINDING

### Documentation type

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

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

**Wiring Diagrams:**

- Visu-Schéma (CD-ROM), paper.

### Type of diagnostic tools

- CLIP + multiplex line sensor

### Special tooling required

Special tooling required	
Multimeter	
Elé. 1681	Universal bornier

## 3. RECAP

To run fault finding on the vehicle computers, switch on the ignition.

Depending on the type of vehicle equipment, proceed as follows:

**For vehicles with radio frequency remote control/key,**  
switch on the ignition with the key.

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

To cut off the + after ignition feed, proceed as follows:

**For vehicles with key/radiofrequency remote control,** use the key to switch off the ignition.

**For vehicles with a Renault card,**  
press the Start button twice briefly (less than **3 seconds**),  
ensure that the + after ignition feed has been cut off by checking that the computer indicator lights on the instrument panel have gone out.

### Faults

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

The **present** or **stored** status of faults should be taken into consideration when the **diagnostic tool** is used following the + after ignition supply being 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 instructions in the **Notes** section.

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

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

- the electrical 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).

### Conformity check

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

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

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

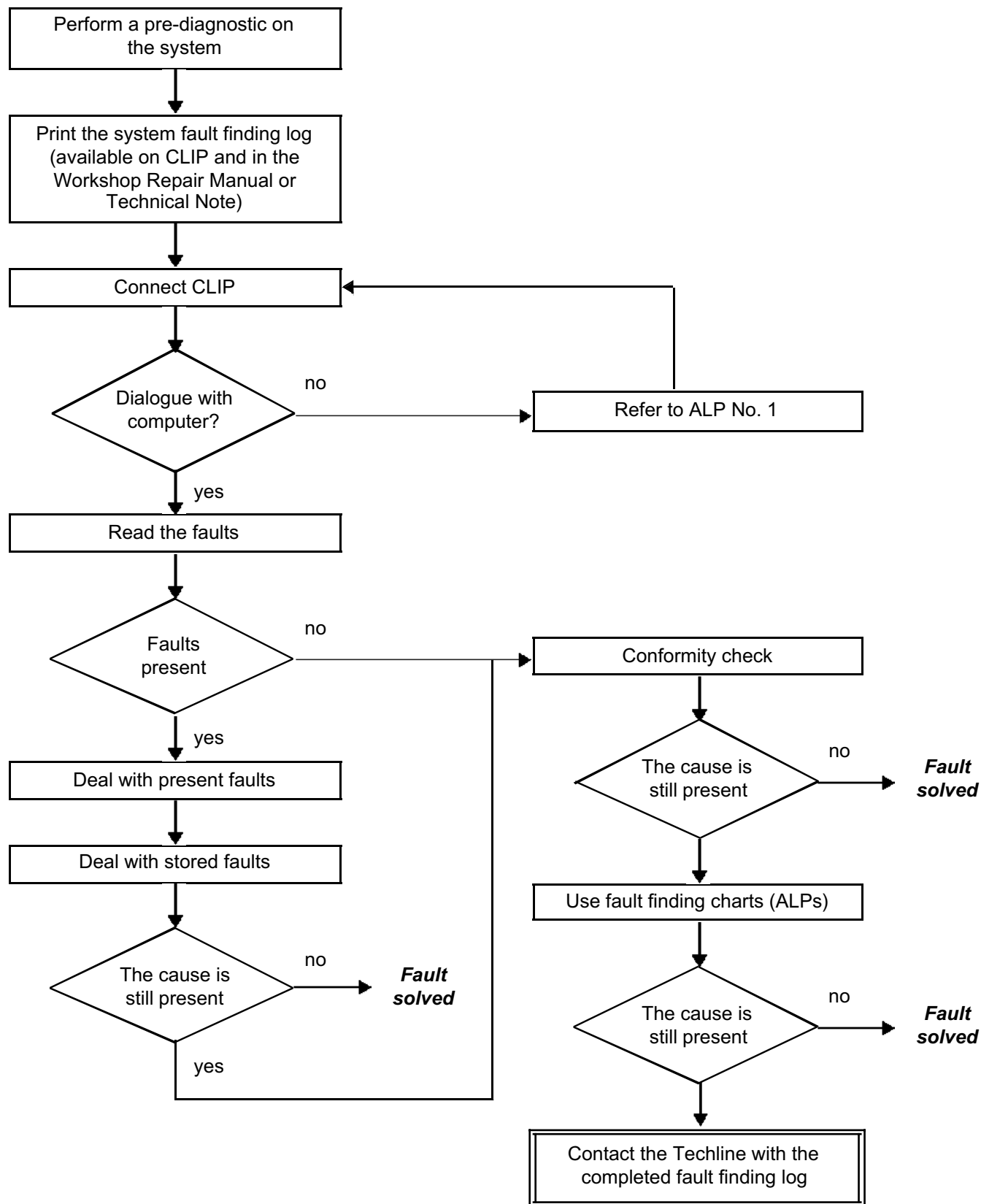
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

### Customer complaints - Fault finding chart

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

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

### 4. FAULT FINDING PROCEDURE



**4. FAULT FINDING PROCEDURE (continued)****Wiring check****Fault finding problems**

Disconnecting the connectors and/or manipulating the wiring harness 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.

**Tactile inspection**

While manipulating the wiring harness, 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 to another wire.

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

**5. FAULT FINDING LOG****IMPORTANT****IMPORTANT**

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

**IT IS THEREFORE ESSENTIAL THAT THE FAULT FINDING LOG IS FILLED OUT EVERY TIME IT IS REQUESTED BY TECHLINE OR THE WARRANT 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.

**6. SAFETY ADVICE**

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

- check the battery voltage to avoid incorrect operation of computer functions,
- use the appropriate tools,
- do not touch the xenon bulbs, and do not work on the COSLAD system when it is in operation, as the voltage can be above 20,000 V.

**Description of operation**

The system consists of four sensors built into the rear bumper, a computer and a buzzer.

The system assists the driver during parking manoeuvres by warning of any obstacles to the rear of the vehicle.

- The sensors and the computer calculate the distance between the vehicle and any obstacles. The sensors operate over a distance range from **20 - 30 cm minimum to 150 cm maximum**.
- The driver is informed of the distances by a **buzzer**.
- The system only works when the vehicle **is in reverse gear**. Activation is indicated by a **brief 0.5 second activation sound**.

The buzzer is activated when the vehicle is **150 cm** from the obstacle. As the distance diminishes, the frequency of the buzzer increases. When the distance reaches **20 - 30 cm**, the buzzer becomes continuous.

- The system can only be **activated in + after ignition feed**.

**DEACTIVATING THE SYSTEM:**

- The parking distance control can be deactivated in two ways:
- **Temporary deactivation:** briefly **pressing (1 second)** the parking distance control switch on the dashboard deactivates the system (the red warning light on the switch comes on). The function can be switched on again by pressing **briefly** for a second time (the red indicator light on the switch goes out) or by switching the ignition off and back on.
- **Permanent deactivation:** the parking distance control system can be deactivated **for a longer period** by **pressing and holding** (for approximately **3 seconds**) the parking distance control switch on the dashboard (the red warning light on the switch comes on). The function can be switched on again only by **pressing and holding** the switch again (the red warning light on the switch goes out).

**Note:**

Using the **diagnostic tool** statuses, it is possible to find out the function status (ready, detecting, suspended or disabled) by using status **ET003 Parking distance control function** (see **conformity check** or **the relevant status interpretation**).

**Fault finding:**

**A low pitched, 5-second continuous warning sound upon switching on the ignition informs the driver that a system fault has occurred.**

Computer with 1 connector (Clio III, Laguna II ph1 and 2, Vel Satis ph1 and 2 Espace IV ph 1 and 2 Mégane II, Scénic II, Modus ph2):

Track	Description
1	+ 12 V after ignition feed
2	+ 12 V buzzer
3	Computer earth
4	Reverse gear signal (+ 12 V)
5	Warning light control
6	Buzzer earth
7	Not used
8	Diagnostic line K
9	+ 12 V rear sensors
10	Rear sensors earth
11	Not used
12	Parking distance control On/Off switch signal
13	Right-hand inner sensor signal
14	Left-hand inner sensor signal
15	Left-hand outer sensor signal
16	Right-hand outer sensor signal

**Note:**

For Scénic II, the computer and buzzer are located on the left-hand side of the luggage compartment behind the interior trim.



Computer with 2 connectors (Laguna II ph1, Vel Satis ph1, Espace IV ph1):

**12-TRACK CONNECTOR**

Track	Description
1	Not used
2	Right-hand inner sensor signal
3	Left-hand inner sensor signal
4	Right-hand outer sensor signal
5	Left-hand outer sensor signal
6	Not used
7	Not used
8	Rear sensors earth
9	Not used
10	Not used
11	+ 12 V rear sensors
12	Not used

**16-TRACK CONNECTOR**

Track	Description
1	+ 12 V after ignition
2	Buzzer earth
3	Not used
4	Parking distance control On/Off switch signal
5	Not used
6	Reverse gear signal (+ 12 V)
7	Not used
8	Computer earth
9	Not used
10	+ 12 V buzzer
11	Not used
12	Diagnostic line K
13	Warning light control
14	Not used
15	Not used
16	Not used

### REPLACING THE PARKING DISTANCE CONTROL COMPUTER

**BEFORE REPLACING ANY COMPUTER IT IS ESSENTIAL THAT YOU CONTACT TECHLINE.**

When replacing the computer, apply the following procedure:

- switch off the ignition,
- replace the parking distance control computer (see **MR 392, 385, 405, 395, 364, 370 or 470 mechanical systems 87F parking distance control, parking distance control computer: Removal - Refitting**),
- configure the vehicle identification using command **CF005 Vehicle identification** (refer to **Configurations and Programming**),
- configure the volume of the buzzer and adjust the pitch using commands **CF001 Buzzer volume** and **CF006 Adjusting the pitch** (refer to **Configurations and Programming**),
- enter the VIN using command **VP001 Enter VIN**,
- check that the system is operating correctly and make sure that there are no faults.

### CONFIGURATION AFTER REPLACING THE COMPUTER

After replacing the computer, configure the parking distance control computer with the vehicle type using configuration **CF005 Vehicle identification** (repair mode menu, diagnostic tool configuration function). The configuration adapts the sensors' detection field to the type of body.

Depending on a vehicle's gearbox type (automatic or manual), the parking distance control can be delayed from working. Activation of the parking distance control is indicated by a **brief 0.5 second activation sound** (vehicle in reverse gear). On vehicles with an automatic transmission, the **3-second** delay prevents the activation noise from sounding every time the driver shifts from Park to Drive.

After having configured the computer, check that the configuration has taken effect by reading the configuration **LC005 Vehicle identification**.

#### Special note (Vdiag 08 only):

If a vehicle is fitted with a caravan towbar and if there is a continuous beeping noise, take the towbar out of the detection field for the rear sensors, run the command for parameter **VP003 Caravan towbar distance**, then increase the detection area centimetre by centimetre. To avoid impairing the detection, the parameter **PR026 Caravan towbar distance** must not exceed **40 cm**.

### SETTING OPTIONS

The volume and the tone of the buzzer can be changed if the customer desires. Configuration **CF001 Buzzer volume** is used to adjust the **volume** of the buzzer.

Configuration function **CF006 Pitch adjustment** is used to adjust the **pitch** of the buzzer.

After configuring the computer, check that the configurations have been registered correctly using configuration readings **LC001 Buzzer volume** and **LC006 Tone adjustment**.

**Fault finding - Fault summary table**

Summary of sensors and actuators on which fault finding can be performed by the parking distance control computer (with corresponding Design Office codes)

<b>Tool fault</b>	<b>Associated DTC</b>	<b>Diagnostic tool title</b>
<b>DF002</b>	<b>9001</b>	Left-hand outer sensor
<b>DF003</b>	<b>9002</b>	Left-hand inner sensor
<b>DF004</b>	<b>9004</b>	Right-hand outer sensor
<b>DF005</b>	<b>9003</b>	Right-hand inner sensor
<b>DF006</b>	<b>9006</b>	Buzzer
<b>DF007</b>	<b>9007</b>	Sensor feed voltage
<b>DF008</b>	<b>9005</b>	Computer fault
<b>DF012</b>	<b>9009</b>	Parking distance control switch indicator light

# PARKING DISTANCE CONTROL

## Fault finding - Interpretation of faults

87F

<b>DF002 PRESENT OR STORED</b>	<u>LEFT-HAND OUTER SENSOR</u> CC.1 : Short circuit to + 12 V CO.0 : Open circuit or short circuit to earth 1.DEF: Internal electronic fault
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present following selection of reverse gear if the parking distance control function is <b>ACTIVE (READY)</b> : the parking distance control warning light is not lit, see the interpretation of status <b>ET003 Parking distance control function</b> .
	<b>Special notes:</b> This fault is indicated by the buzzer (a <b>5 second</b> warning sound) and the system shuts down.

**If a combination of faults are present on the sensors:**

Check the connection and condition of the intermediate connectors (the sensors up to the computer). Repair if necessary.

Check for **+ 12 V**, after ignition, between **tracks 1 and 3** of all the sensors.

Computer with 1 connector:

Check the **insulation, continuity and the absence of interference resistance** of the supply for each sensor (between **Tracks 1 and 3**) and for the computer (between **tracks 9 and 10**).

Computer with 2 connectors:

Check the **insulation, continuity and absence of interference resistance** of the supply between **tracks 1 and 3** for each sensor and between **tracks 8 and 11** of the computer **12-track** connector.

**In the case where only one sensor is faulty:**

Swap the defective sensor with a non-defective sensor.

Check for faults:

If the sensor is no longer faulty, replace the defective sensor.

If the fault is still present, **with the ignition off**, disconnect the parking distance control computer connector to check **the insulation, continuity and the absence of interference resistance** on the following connections:

**1 connector:**


Parking distance control computer	→	Left-hand outer sensor
Track 9	→	Track 1
Track 15	→	Track 2
Track 10	→	Track 3

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
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**DF002**  
**(CONTINUED)****2 connectors:****12-track** parking distance control computer  
connector

Left-hand outer sensor

**Track 11**            **Track 1****Track 5**            **Track 2****Track 8**            **Track 3**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**),  
repair the wiring, otherwise replace the wiring.

If the fault is still present, contact the Techline.

**AFTER REPAIR**

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

<b>DF003 PRESENT OR STORED</b>	<b><u>LEFT-HAND INNER SENSOR</u></b> CC.1 : Short circuit to + 12 V CO.0 : Open circuit or short circuit to earth 1.DEF: Internal electronic fault
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present following selection of reverse gear if the parking distance control function is <b>ACTIVE (READY)</b> : the parking distance control warning light is not lit, see the interpretation of status <b>ET003 Parking distance control function</b> .
	<b>Special notes:</b> This fault is indicated by the buzzer (a <b>5 second</b> warning sound) and the system shuts down.

**When dealing with a combination of faults on the sensors:**

Check the connection and the status of the intermediate connectors (the sensors up to the computer). Repair if necessary.

Check for **+ 12 V**, after ignition, between **Tracks 1 and 3** of all the sensors.

Computer with 1 connector:

Check the **insulation, continuity and the absence of interference resistance** of the supply for each sensor (between **Tracks 1 and 3**) and for the computer (between **tracks 9 and 10**).

Computer with 2 connectors:

Check the **insulation, continuity and absence of interference resistance** of the supply between **tracks 1 and 3** for each sensor and between **tracks 8 and 11** of the computer **12-track** connector.

**In the case where only one sensor is faulty:**

Swap the defective sensor with a non-defective sensor.

Check for faults:

If the sensor is no longer faulty, replace the defective sensor.

If the fault is still present, **with the ignition off**, disconnect the parking distance control computer connector to check **the insulation, continuity and the absence of interference resistance** on the following connections:

**1 connector:**


Parking distance control computer		Left-hand inner sensor
Track 9	→	Track 1
Track 14	→	Track 2
Track 10	→	Track 3

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
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**DF003**  
**(CONTINUED)****2 connectors:****12-track** parking distance control computer  
connector

Left-hand inner sensor

**Track 11**            **Track 1****Track 3**            **Track 2****Track 8**            **Track 3**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**),  
repair the wiring, otherwise replace the wiring.

If the fault is still present, contact the Techline.

**AFTER REPAIR**

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



<b>DF004 PRESENT OR STORED</b>	<b><u>RIGHT-HAND OUTER SENSOR</u></b> CC.1 : Short circuit to + 12 V CO.0 : Open circuit or short circuit to earth 1.DEF: Internal electronic fault
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present following selection of reverse gear if the parking distance control function is <b>ACTIVE (ready)</b> : the parking distance control warning light is not lit, see the interpretation of status <b>ET003 Parking distance control function</b> .
	<b>Special notes:</b> This fault is indicated by the buzzer (a <b>5 second</b> warning sound) and the system shuts down.

**When dealing with a combination of faults on the sensors:**

Check the connection and the status of the intermediate connectors (the sensors up to the computer). Repair if necessary.

Check for **+ 12 V**, after ignition, between **tracks 1 and 3** of all the sensors.

Computer with 1 connector:

Check the **insulation, continuity and the absence of interference resistance** of the supply for each sensor (between **tracks 1 and 3**) and for the computer (between **tracks 9 and 10**).

Computer with 2 connectors:

Check the **insulation, continuity and absence of interference resistance** of the supply between **tracks 1 and 3** for each sensor and between **tracks 8 and 11** of the computer **12-track** connector.

**In the case where only one sensor is faulty:**

Swap the defective sensor with a non-defective sensor.

Check for faults:

If the sensor is no longer faulty, replace the defective sensor.

If the fault is still present, **with the ignition off**, disconnect the parking distance control computer connector to check **the insulation, continuity and the absence of interference resistance** on the following connections:  
**1 connector:**

Parking distance control computer		Right-hand outer sensor
Track 9	→	Track 1
Track 16	→	Track 2
Track 10	→	Track 3

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
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**DF004**  
**(CONTINUED)****2 connectors:****12-track** parking distance control computer  
connector

Right-hand outer sensor

**Track 11** —————> **Track 1****Track 4** —————> **Track 2****Track 8** —————> **Track 3**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the fault is still present, contact the Techline.

**AFTER REPAIR**

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

## Fault finding - Interpretation of faults

<b>DF005 PRESENT OR STORED</b>	<b><u>RIGHT-HAND INNER SENSOR</u></b> CC.1 : Short circuit to + 12 V CO.0 : Open circuit or short circuit to earth 1.DEF: Internal electronic fault
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present following selection of reverse gear if the parking distance control function is <b>ACTIVE (READY)</b> : the parking distance control warning light is not lit, see the interpretation of status <b>ET003 Parking distance control function</b> .
	<b>Special notes:</b> This fault is indicated by the buzzer (a <b>5 second</b> warning sound) and the system shuts down.

**If a combination of faults are present on the sensors:**

Check the connection and condition of the intermediate connectors (the sensors up to the computer). Repair if necessary.

Check for **+ 12 V**, after ignition, between **tracks 1 and 3** of all the sensors.

Computer with 1 connector:

Check the **insulation, continuity and the absence of interference resistance** of the supply for each sensor (between **tracks 1 and 3**) and for the computer (between **tracks 9 and 10**).

Computer with 2 connectors:

Check the **insulation, continuity and absence of interference resistance** of the supply between **tracks 1 and 3** for each sensor and between **tracks 8 and 11** of the computer **12-track** connector.

**In the case where only one sensor is faulty:**

Swap the defective sensor with a non-defective sensor.

Check for faults:

If the sensor is no longer faulty, replace the defective sensor.

If the fault is still present, **with the ignition off**, disconnect the parking distance control computer connector to check **the insulation, continuity and the absence of interference resistance** on the following connections:

**1 connector:**

Parking distance control computer

Right-hand inner sensor

Track 9 —————> Track 1

Track 13 —————> Track 2

Track 10 —————> Track 3

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
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**DF005**  
**(CONTINUED)****2 connectors:****12-track** parking distance control computer  
connector

Right-hand inner sensor

<b>Track 11</b>	————→	<b>Track 1</b>
<b>Track 2</b>	————→	<b>Track 2</b>
<b>Track 8</b>	————→	<b>Track 3</b>

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the fault is still present, contact the Techline.

**AFTER REPAIR**

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

<b>DF006 PRESENT OR STORED</b>	<b><u>BUZZER</u></b> CC.1 : Short circuit to + 12 V CO.0 : Open circuit or short circuit to earth
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault is declared present following selection of reverse gear if the parking distance control function is <b>ACTIVE (READY)</b> : the parking distance control warning light is not lit, see the interpretation of status <b>ET003 Parking distance control function</b> .
	<b>Special notes:</b> The fault is indicated by the absence of the <b>1-second</b> beep normally emitted by the buzzer when reverse gear is selected.

**Computer with 1 connector:**

**Switch off the ignition** and disconnect the computer's **16-track connector**.

Measure the internal resistance of the computer between **tracks 2 and 6**.

If the value measured is not **314 Ω** or if there is a short circuit across the specified **tracks**, contact your Techline.

**Computer with 2 connectors:**

**Switch off the ignition** and disconnect the computer's **16-track connector**.

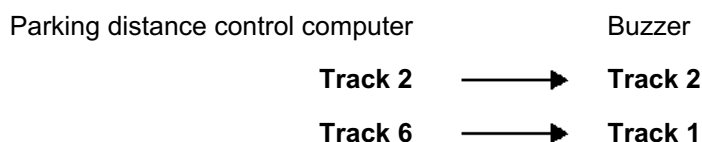
Measure the internal resistance of the computer between **tracks 2 and 10**.

If the value measured is not **314 Ω** or if there is a short circuit across the specified **tracks**, contact your Techline.

Check **the connection and condition of the connector** on the buzzer.

Replace the connector if necessary.

**Switch off the ignition**, and disconnect the parking distance control computer **16-track** connector to check the **insulation and continuity and ensure the absence of interference resistance** on the following connections:  
**1 connector:**



Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
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**DF006**  
**(CONTINUED)****2 connectors:****16-track** parking distance control computer  
connector

Buzzer

**Track 10** —————→ **Track 2****Track 2** —————→ **Track 1**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

Measure the buzzer resistance between **tracks 1 and 2**.  
Replace the buzzer if its resistance is not approximately **48 Ω**.

If the fault is still present, replace the buzzer.

**AFTER REPAIR**

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

<b>DF007 PRESENT OR STORED</b>	<u>SENSOR SUPPLY VOLTAGE</u> CO.0 : Open circuit
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<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault reappears present or stored after its has been cleared, the ignition is switched on and off again and reverse gear is selected.
	<b>Special notes:</b> The sensors are directly supplied with <b>+ 12 V</b> by the computer.

**Computer with 1 connector:**

With the parking distance control computer **16-track** connector **connected** and with the **ignition on**, measure the sensor **power supply** coming from the computer. The voltage should be equal to the battery voltage ( $\pm 0.5$  V) when measured across **track 9 (+ 12 V)** and **track 10 (earth)**.

If there is not a **+ 12 V** power supply between the **tracks** specified above, remove the rear bumper to access the sensors.

**Computer with 2 connectors:**

With the parking distance control computer **12-track** connector **connected** and with the **ignition on**, measure the sensor **power supply** from the computer outlet. The voltage should be equal to the battery voltage ( $\pm 0.5$  V) when measured across **track 11 (+ 12 V)** and **track 8 (earth)**.

If there is not a **+ 12 V** power supply between the **tracks** specified above, remove the rear bumper to access the sensors.

**Switch off the ignition**, and disconnect the parking distance control computer connector to check the **insulation and continuity and the absence of interference resistance** on the following connections:

**1 connector:**

Parking proximity sensor computer connector

Sensors

Track 9 —————> Track 1 of the four sensors

Track 10 —————> Track 3 of the four sensors

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
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**DF007**  
**(CONTINUED)****2 connectors:**12-track parking distance control computer  
connector

Right-hand inner sensor

**Track 11**            **Track 1****Track 8**            **Track 3**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the sensor power supply is correct (no short circuit), reconnect the computer connector and four sensor connectors.

Turn on the ignition and disconnect the sensors, one at a time, to see if any of the sensors causes the power supply to drop. Replace the defective sensor.

If the fault is still present, contact the Techline.

**AFTER REPAIR**

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



<b>DF008 PRESENT OR STORED</b>	<b>COMPUTER FAULT</b> 1.DEF: Internal electronic fault 2.DEF: Internal electronic fault 3.DEF: Internal electronic fault 4.DEF: Internal electronic fault
--	---

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> The fault reappears present or stored after its has been cleared, the ignition is switched on and off again and reverse gear is selected.
	<b>Special notes:</b> If the fault is present and is represented by <b>1.DEF</b> or <b>2.DEF</b> , the system operates in defect mode (substitute values are used). If the fault is present and characterised <b>3.DEF</b> and the buzzer fails to sound when shifting into reverse, contact your Techline.

<b>1.DEF 2.DEF</b>	<b>NOTES</b>	None
------------------------	--------------	------

After following the instructions, if the fault recurs, switch off the ignition and disconnect the parking distance control computer supply fuse (see vehicle diagram).  
 Reconnect the fuse, switch the ignition back on, and perform a fault reading.

If the fault recurs, check **the connections and condition** of the parking distance control computer **16-track** connector (no damage to the connections).  
 Repair if necessary.

**With the ignition switched off**, disconnect the parking distance control computer **16-track** connector to check the **conformity of the supplies** and to check the **insulation, continuity and the absence of interference resistance** on the following connections:

16-track parking distance control computer connector with 1 connector:

**Track 1**            + after ignition feed


**Track 3**            earth

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
---------------------	---

### DF008 (CONTINUED)

16-**track** parking distance control computer with 2 connectors:

**Track 1**            + after ignition feed

**Track 8**            earth

Repair if necessary (refer to vehicle wiring diagrams).

If the fault is still present, contact the Techline.

**3.DEF**

**NOTES**

None

Contact the Techline.

**4.DEF**

**NOTES**

Only for Vdiag 08

Contact the Techline.

### AFTER REPAIR

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

<b>DF012 PRESENT OR STORED</b>	<b><u>PARKING DISTANCE CONTROL SWITCH INDICATOR LIGHT</u></b> CC.0 : short circuit to earth or open circuit CO.1 : open circuit or short circuit to + 12 volts
--	--

<b>NOTES</b>	<b>Conditions for applying the fault finding procedure to stored faults:</b> A fault is declared present after reverse gear is engaged and the parking distance control deactivation switch is pressed.
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Remove the parking distance control switch and check the connections and condition of its connector.  
Repair if necessary.

Check for an earth on **track B3** of the parking distance control switch connector.  
Repair if necessary.

**Switch off the ignition**, and disconnect the parking distance control computer **16-track** connector to check the **insulation and continuity and the absence of interference resistance** on the following connection:  
**Laguna II ph2, Espace IV ph2, Vel-Satis ph2, Mégane II, Scénic II, Laguna II ph1 (1 connector), Espace IV ph1 (1 connector), Vel-Satis ph1 (1 connector), Laguna II ph1 (2 connectors), Vel-Satis ph1 (2 connectors), Clio III, Modus ph2:**

Parking distance control switch connector		→	Parking proximity sensor computer connector
<b>Track B2</b>			<b>Track 5</b>

Repair if necessary.

**Espace IV ph1 (2 connectors):**

Parking distance control switch connector		→	16-track parking distance control computer connector
<b>Track B2</b>			<b>Track 13</b>

Repair if necessary.

If the fault is still present, replace the parking distance control switch.

<b>AFTER REPAIR</b>	Clear the stored faults. Follow the instructions to confirm repair. Deal with any faults.
---------------------	---

# PARKING DISTANCE CONTROL

## Fault finding - Conformity check

87F

**NOTES**

Only perform this conformity check after a thorough check with the **diagnostic tool**.  
**Conditions for applying the fault finding procedure:** ignition on.

Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
1	Parking distance control system status	<b>ET003:</b> Parking distance control function	<b>READY</b> (system operating and ready to detect)	For further information or, if there is a fault, consult the interpretation of status <b>ET003</b> .
			<b>DETECTING</b> (if the system is detecting)	
			<b>SUSPENDED</b> (if the system is temporarily switched off)	
			<b>OFF</b> (if the system is completely switched off)	
2	Parking distance control deactivation switch.	<b>ET004:</b> Parking distance control switch	<b>PRESS DETECTED</b> when the switch is pressed, <b>RELEASED</b> when released.	In the event of a fault, consult the interpretation of status <b>ET004</b> .
3	Feeds	<b>PR006:</b> Sensor feed voltage	<b>10.5 V &lt; X &lt; 14.4 V</b>	In the event of a fault, apply the fault finding procedure for <b>DF007 Sensor supply voltage</b> .
		<b>PR020:</b> Computer feed voltage	<b>10.5 V &lt; X &lt; 14.4 V</b>	If there is a fault with this parameter, check the <b>insulation, continuity and the absence of interference resistance</b> on the computer power feed and earth (see wiring diagram). If the fault is still present, carry out <b>fault finding on the charging circuit</b> .
4	Reverse gear selection	<b>ET001:</b> Reverse gear engaged	<b>YES</b> or <b>NO</b>	If there is a fault, refer to the interpretation of status <b>ET001</b> .

**NOTES**

Only perform this conformity check after a thorough check with the **diagnostic tool**.  
**Conditions for applying the fault finding procedure:** ignition on.

Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
5	Buzzer control	<b>ET002:</b> Buzzer control	<b>ACTIVE</b> when the buzzer sounds. <b>INACTIVE</b> if not.	In the event of a fault, consult the interpretation of status <b>ET002</b> .
6	Proximity sensors	<b>PR001:</b> Left-hand outer sensor distance	<b>20 cm &lt; X &lt; 150 cm</b> depending on the distance from the obstacle ("out of range" value: <b>255 cm</b> ).	In the event of a fault, refer to the interpretation of the parameter <b>PR001</b> .
		<b>PR002:</b> Left-hand inner sensor distance	<b>20 cm &lt; X &lt; 150 cm</b> depending on the distance from the obstacle ("out of range" value: <b>255 cm</b> ).	If there is a fault, refer to the interpretation of parameter <b>PR002</b> .
		<b>PR003:</b> Right-hand outer sensor distance	<b>20 cm &lt; X &lt; 150 cm</b> depending on the distance from the obstacle ("out of range" value: <b>255 cm</b> ).	In the event of a fault, consult the interpretation of parameter <b>PR003</b> .
		<b>PR004:</b> Right-hand inner sensor distance	<b>20 cm &lt; X &lt; 150 cm</b> depending on the distance from the obstacle ("out of range" value: <b>255 cm</b> ).	If there is a fault, refer to the interpretation of parameter <b>PR004</b> .
		<b>PR005:</b> Shortest distance calculated	<b>20 cm &lt; X &lt; 150 cm</b> depending on the distance from the obstacle ("out of range" value: <b>255 cm</b> ).	If there is a fault, refer to the interpretation of parameter <b>PR005</b> .
7	<b>Vdiag 08 only:</b> Caravan attachment detection zone	<b>PR026:</b> Distance from the caravan attachment	<b>By default: 35 cm</b> Beyond <b>40 cm</b> , the function is less effective, (setting the detection area of the rear centre sensors so that the presence of a caravan towbar is not detected)	If the caravan attachment is detected, increase the non-detection value using parameter <b>VP003</b> .
		<b>VP003:</b> Distance from the caravan attachment	Enables the non-detection area for the caravan attachment to be modified.	

# PARKING DISTANCE CONTROL

## Fault finding - Status summary table

**87F**

Tool status	Diagnostic tool title
ET001	Reverse gear engaged
ET002	Buzzer control
ET003	Parking distance control function
ET004	Parking distance control switch

ET001	<u>REVERSE GEAR ENGAGED</u>
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<b>NOTES</b>	<b>Special note:</b> Only carry out the checks if the YES and NO statuses are not consistent with the position of the gear lever.
--------------	--

### 1 connector:

Check that the reversing lights are working correctly: they should come on when reverse gear is selected and go out when it is not.


If the reversing lights fail to function as specified:

**With the ignition switched off**, disconnect the parking distance control computer connector to check the **insulation** (against + 12 V), **and the continuity and absence of interference resistance** on the following connection:

**Laguna II ph1 ph2, Espace IV ph1 ph2, Vel-Satis ph2, Clio III, Modus ph2:**

Parking distance control computer connector

Rear lights connector


Track 4            Track 3

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

### Vel-Satis ph1, Scénic II:

Parking distance control computer connector

Rear left hand lights connector

Track 4            Track 2

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

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

**ET001**  
**(CONTINUED 1)**

### Mégane II:

#### Only for 3 and 5-door hatches:

Parking distance control computer connector  
(white)

Left-hand rear light connector

**Track 4** —————→ **Track 5**

Parking distance control computer connector  
(white)

Right-hand rear light connector

**Track 4** —————→ **Track 1**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

#### Only for 4-door hatches:

Parking distance control computer connector  
(white)

Left-hand rear light connector

**Track 4** —————→ **Track 5**

Parking distance control computer connector  
(white)

Right-hand rear light connector

**Track 4** —————→ **Track 2**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

#### Only for cabriolets:

Parking distance control computer connector  
(white)

Left-hand rear light connector

**Track 4** —————→ **Track 6**

Parking distance control computer connector  
(white)

Right-hand rear light connector

**Track 4** —————→ **Track 1**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

### AFTER REPAIR

Repeat the conformity check from the start.



**ET001**  
**(CONTINUED 2)****Only for estates:**Parking distance control computer connector  
(white)

Left-hand rear light connector

**Track 4** → **Track 5**Parking distance control computer connector  
(white)

Right-hand rear light connector

**Track 4** → **Track 5**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**),  
repair the wiring, otherwise replace the wiring.

**2 connectors:****Laguna II ph1, Espace IV ph1, Vel-Satis ph2, Clio III:**

Parking distance control computer connector

Rear light connector

**Track 6** → **Track 3**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**),  
repair the wiring, otherwise replace the wiring.

**Vel Satis ph1:**

Parking distance control computer connector

Rear light connector

**Track 6** → **Track 2**

Repair if necessary (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**),  
repair the wiring, otherwise replace the wiring.

**AFTER REPAIR**

Repeat the conformity check from the start.

<b>ET002</b>	<u><b>BUZZER CONTROL</b></u>
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<b>NOTES</b>	There must be no present or stored faults.
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<b>ET002</b> remains OFF	<p>Check that the parking distance control system is switched on using status <b>ET003 "Parking distance control function"</b> (parking distance control switch warning light goes out). If the status displays "suspended" or "deactivated", restart the system by pressing for <b>1 or 3 seconds</b>, consult the interpretation of status <b>ET003 "Parking distance control function"</b>.</p>
	<p>Check that the parking distance control configuration is correct for the vehicle on which it is fitted (<b>LC005 Vehicle identification</b>). If necessary, reconfigure the computer using command <b>CF005 Vehicle identification</b>.</p>
	<p>Check, when the vehicle is close to an obstacle (between <b>20 and 150 cm</b>), that the distance evaluated corresponds to the distance displayed by the <b>diagnostic tool (PR001 to PR004)</b>. If the distance reading does not match or the distance parameters stay at <b>255 cm</b>, contact your Techline.</p>

<div>ET002</div> <div>ON but buzzer does not sound</div>	<div>Check that the buzzer volume is not at a zero setting <b>LC001 Buzzer volume</b>. If the configured volume is <b>ZERO or DEACTIVATED</b>, reconfigure the computer using command <b>CF001 Buzzer volume</b>. Select the volume required by the customer.</div> <div><div>Switch off the ignition, and disconnect the parking distance control computer 16-track connector to check the <b>insulation and continuity and ensure the absence of interference resistance</b> on the following connections: <b>Laguna II ph2, Espace IV ph2, Espace IV ph1 (1 connector), Vel-Satis ph2, Vel-Satis ph1 (1 connector), Laguna II ph1 (1 connector),</b></div><div><div><div>Parking distance control computer</div><div>Track 2</div><div>Track 6</div></div><div><div>→</div><div>→</div></div><div><div>Buzzer</div><div>Track 1</div><div>Track 2</div></div></div><div>Repair if necessary (refer to vehicle wiring diagrams).</div></div>
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<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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**ET002**  
**(CONTINUED)****Mégane II, Scénic II, Clio III, Modus ph2:**

Parking distance control computer

Buzzer

**Track 2** → **Track 2****Track 6** → **Track 1**

Repair if necessary (refer to vehicle wiring diagrams).

**Laguna II ph1 (2 connector), Espace IV ph1 (1 connector), Vel-Satis ph1 (1 connector):**

Parking distance control computer

Buzzer

**Track 10** → **Track 2****Track 2** → **Track 1**

Repair if necessary (refer to vehicle wiring diagrams).

Measure the resistance between the buzzer's 2 **tracks**.Replace the buzzer if its resistance is not approximately **48 Ω**.

If the fault is still present, replace the buzzer.

**AFTER REPAIR**

Repeat the conformity check from the start.

ET003	<u>PARKING DISTANCE CONTROL FUNCTION</u>
-------	--

<b>NOTES</b>	<b>Special note:</b> If the parking distance control system is suspended or deactivated, the parking distance control switch indicator light comes on.
--------------	--

This status indicates whether the parking distance control system is on or off:

- |                           |  |
|---------------------------|--|
| <b>ET003: READY</b>       | → This means that, when reversing, the parking distance control detects obstacles and the buzzer sounds (the parking distance control switch indicator light goes out).  |
| <b>ET003: DETECTING</b>   | → This information is displayed when in reverse gear and indicates that the parking distance control has detected an obstacle.   |
| <b>ET003: SUSPENDED</b>   | → This means the parking distance control system is switched off (no detection possible). The suspension is <b>temporary</b> because the parking distance control system will come back on after the ignition is switched off and on. To suspend or reactivate the system manually, <b>briefly press (1 second)</b> the parking distance control switch. |
| <b>ET003: DEACTIVATED</b> | → This means the parking distance control system is switched off (no detection possible). This suspension is <b>permanent</b> (switching the + after ignition off and on again will not reactivate the system). To deactivate or reactivate the system manually, <b>press and hold (3 seconds)</b> the parking distance control switch.                  |

If the status is not as specified, check for an **earth** on **track A2** of the parking distance control switch. Repair if necessary.

**With the ignition off**, disconnect the parking distance control switch to check the **insulation** (against the earth and + 12 V), **continuity and absence of interference resistance** in the following connection:  
**Laguna II ph2, Espace IV ph2, Vel-Satis ph2, Mégane II, Scénic II, Espace IV ph1 (1 connector), Vel-Satis ph1 (1 connector), Clio III, Modus ph2:**

Parking distance control switch connector	→	Parking distance control computer connector
<b>Track B1</b>		<b>Track 12</b>

Repair if necessary



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

**ET003**  
**CONTINUED**



**Espace IV ph1 (2 connectors), Vel-Satis ph1 (2 connectors):**

Parking distance control switch connector  
**Track B1**



Parking distance control computer connector  
**Track 12**

Repair if necessary

If the connection just checked is OK (no open or short circuit), and there is an **earth** on **track A2** of the switch but the fault is still present, check the switch operation with an ohmmeter.

Switch not pressed: **insulation** between **track A2** and **B1**.

Switch pressed: **continuity** between **track A2** and **B1**.

Replace the parking distance control switch if it fails to function as specified.

**AFTER REPAIR**

Repeat the conformity check from the start.

**ET004**PARKING DISTANCE CONTROL SWITCH**NOTES****Special notes:**

Only apply the status interpretation procedure if the parking distance control switch position is not consistent with the information supplied by status ("**Press detected**" or "**Release**").

There must be no present or stored faults.

**With the ignition off**, disconnect the parking distance control switch to check the **insulation** (against the earth and **+ 12 V**), **continuity and absence of interference resistance** in the following connection:

Parking distance control switch connector

Parking distance control computer connector

Track B1 → track 12

Repair if necessary.

If the connection just checked is OK (no open or short circuit), and there is an **earth** on **track A2** of the switch but the fault is still present, check the switch operation with an ohmmeter.

Switch not pressed: **insulation** between **track A2** and **B1**.

Switch pressed: **continuity** between **track A2** and **B1**.

Replace the parking distance control switch if it fails to function as specified.

**AFTER REPAIR**

Repeat the conformity check from the start.

# PARKING DISTANCE CONTROL

## Fault finding - Parameter summary table

**87F**

Tool parameter	Diagnostic tool title
<b>PR001</b>	Left-hand outer sensor distance
<b>PR002</b>	Left-hand inner sensor distance
<b>PR003</b>	Right-hand outer sensor distance
<b>PR004</b>	Right-hand inner sensor distance
<b>PR005</b>	Shortest distance calculated
<b>PR006</b>	Sensor feed voltage
<b>PR020</b>	Computer feed voltage
<b>PR026</b>	Distance from caravan attachment ( <b>Vdiag 08 only</b> )

<b>PR001</b> <b>PR002</b> <b>PR003</b> <b>PR004</b>	<u>LEFT-HAND OUTER SENSOR DISTANCE</u>
	<u>LEFT-HAND INNER SENSOR DISTANCE</u>
	<u>RIGHT-HAND OUTER SENSOR DISTANCE</u>
	<u>RIGHT-HAND INNER SENSOR DISTANCE</u>

<b>NOTES</b>	<b>Special notes:</b> Before searching for a fault with these parameters, make sure no fault is present or stored. If there is a fault, apply the interpretation for the fault detected by the <b>diagnostic tool</b> .
	<b>Note:</b> The ultrasonic sensors are very fragile. Therefore, when removing the rear bumper, be careful not to scratch them. An obstacle which is further than <b>150 cm</b> away cannot be detected, the parameter value is <b>255</b> in this case. For an obstacle which is between <b>20</b> and <b>150 cm</b> away, the parameter value is the distance to the obstacle. For an obstacle which is closer than <b>20 cm</b> away, the value of the parameters is <b>0</b> .

Using the **diagnostic tool** configuration reading screen (repair mode menu), check that the parking distance control system is configured correctly for the vehicle type to which it is fitted (**LC005 Vehicle identification**). If necessary, reconfigure the computer using command **CF005 Vehicle identification**.

Check, when the vehicle is close to an obstacle (between **20** and **150 cm**), that the distance evaluated corresponds to the distance displayed by the **diagnostic tool** (**PR001** to **PR004**).

If the distance is incorrect or if the distance parameters remain at **255**, make sure nothing is interfering with the reading (sticker, mud, snow etc. on the rear bumper).

If the distances displayed by the sensors seem incorrect or if **255** is displayed continuously, check the condition of the sensor(s). There must be no scratches on the detection component (outer metal section) of the sensors. Replace the defective sensor.

If the fault is still present, apply the fault finding procedure to the sensor whose distance parameter is incorrect (even if the **diagnostic tool** does not report a fault).

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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<b>PR005</b>	<u>SHORTEST DISTANCE CALCULATED</u>
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<b>NOTES</b>	<b>Special notes:</b> Before searching for a fault with this parameter, make sure that no fault is present or stored. If there is a fault, apply the interpretation for the fault detected by the <b>diagnostic tool</b> .
	<b>Note:</b> The ultrasonic sensors are very fragile. Therefore, when removing the rear bumper, be careful not to scratch them. <b>This parameter is an average calculated by the computer when an obstacle is placed between two sensors.</b> When below <b>30 cm</b> , the estimated distance is displayed as <b>0 cm</b> (critical detection zone with constant warning sound).

Using the diagnostic tool configuration reading screen, check that the parking distance control system is configured correctly for the body on which it is fitted **LC005 Vehicle identification**). If necessary, reconfigure the computer using command **CF005 Vehicle identification**.

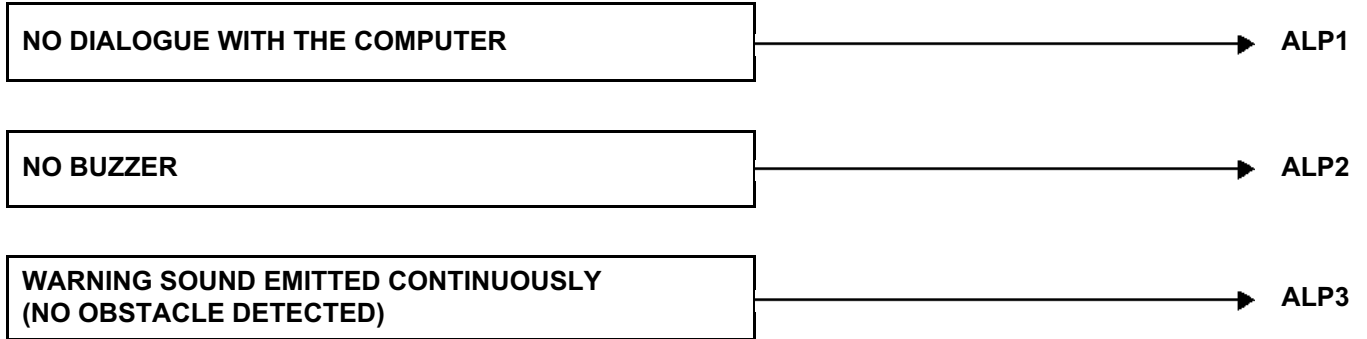
With the vehicle close to an obstacle (between **0 and 150 cm**), check whether the calculated distance is consistent. If the distance is inconsistent or if the parameter remains at 255, ensure that nothing is interfering with the measurement (sticker, mud or snow, etc. on the rear bumper).

If the distance calculated is still inconsistent or if it is continuously displayed as **255**, check the condition of the sensors; the detection part (metallic outer part) must not have any scratches.  
Replace the defective sensor.

If the fault is still present, apply the fault finding procedure to the sensor whose distance parameter is incorrect (even if the **diagnostic tool** does not report a fault).

<b>AFTER REPAIR</b>	Repeat the conformity check from the start.
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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<b>ALP1</b>	<b>No dialogue with the computer</b>
-------------	--------------------------------------

<b>NOTES</b>	None
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Try the **diagnostic tool** on another vehicle.

Check:

- The connection between the **diagnostic tool** and the diagnostic socket (lead in good condition).
- The injection, engine and passenger compartment fuses.

Check for the **+ 12 V battery feed** on **track 16**, for a **+ 12 V after ignition feed** on **track 1** and for **earth** on **track 5** and on **track 4** of the diagnostic socket.  
Repair if necessary.

### 1 connector:

Switch off the ignition, and disconnect the parking distance control computer connector to check the **insulation, continuity and absence of interference resistance** on the following connections:

Parking distance control computer connector

**Track 1** —————→ **+ Before ignition** (see vehicle diagram)

**Track 3** —————→ **Earth**

**Track 8** —————→ **track 7** of the diagnostic socket (K line)

Repair if necessary (refer to vehicle wiring diagrams).

### 2 connectors:

Switch off the ignition, and disconnect the parking distance control computer **16-track** connector to check the **insulation and continuity and ensure the absence of interference resistance** on the following connections:

Parking distance control computer connector

**Track 1** —————→ **+ Before ignition** (see vehicle diagram)

**Track 8** —————→ **Earth**

**Track 12** —————→ **track 7** of the diagnostic socket (K line)

Repair if necessary (refer to vehicle wiring diagrams).

<b>AFTER REPAIR</b>	Carry out a complete check using the diagnostic tool.
---------------------	---

ALP2

No buzzer

**NOTES**

Only investigate this customer complaint **after a full check using the diagnostic tool** (no faults must be present or stored).

Using the diagnostic tool Main Data screen, check that the parking distance control system is on. The status **ET003 Parking distance control function** must be READY (and the red warning light on the parking distance control switch must be off).

**Is status ET003 READY?**

NO

Turn on the parking distance control by pressing the switch for **1 or 3** seconds (the red light should go out).

Note:

For more information concerning the activation of the system, consult the interpretation of status **ET003 Parking distance control**.

YES

**Is status ET001 "YES", with reverse gear engaged?**

NO

Apply the interpretation procedure for status **ET001**

YES

Using the diagnostic tool configuration readings screen, check that the buzzer volume has not been switched off (**LC001 Buzzer volume** should not be ZERO)

**Is the LC001 function ZERO**

YES

Reconfigure the buzzer volume using the diagnostic tool (command **CF001 Buzzer volume**).

NO

**AFTER REPAIR**

Check that the system is operating correctly.

**ALP2**  
**CONTINUED 1**

Check the connection and condition of the connector on the buzzer.  
Replace the connector if necessary.

Using the parameter screen of the diagnostic tool (**PR001, PR002, PR003, PR004**), make sure the proximity sensors are detecting obstacles (between 20 and 150 cm).

**Do the parameters specified above display distance values** (with an obstacle in front of the rear bumper)?

NO

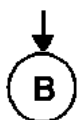
Apply the interpretation of parameters (**PR001, PR002, PR003, PR004**).

YES

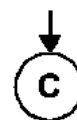
Place an obstacle in front of the rear bumper in order to be able to measure the distance displayed by the **diagnostic tool**. During the detection process, make sure the buzzer has the correct power supply by taking a reading between **tracks 1** and **2** of the buzzer.

**During this test, is the buzzer receiving power?**

YES



NO

**AFTER REPAIR**

Check that the system is operating correctly.

**ALP2**  
**CONTINUED 2**

**B**

Measure the resistance between the buzzer's two tracks. Replace the buzzer if its resistance is not approximately **48 Ω**.

**Is the fault still present?**

YES

Replace the buzzer.

NO

End of fault finding procedure.

**C**

**Switch off the ignition**, and disconnect the parking distance control computer **16-track** connector to check the **insulation and continuity** and ensure the **absence of interference resistance** on the following connections:

Parking distance control computer with 1 connector

Buzzer

**Track 2** → **Track 2**  
**Track 6** → **Track 1**

Parking distance control computer with 2 connectors:

Buzzer

**Track 10** → **Track 2**  
**Track 2** → **Track 1**

Repair if necessary (see vehicle wiring diagrams).

**Is the fault still present?**

NO

YES

Contact the Techline.

**AFTER REPAIR**

Check that the system is operating correctly.

**ALP3****Buzzer sounds constantly (no obstacle detected)****NOTES**

Only investigate this customer complaint **after a full check using the diagnostic tool** (no faults must be present or stored).

**Switch off the ignition**, and disconnect the parking distance control computer connector to check the **insulation and continuity and ensure the absence of interference resistance** on the following connections:

1 connector: Parking distance control computer

Buzzer

Track 2 → Track 2  
Track 6 → Track 1

Note:

The line coming from **track 2** of the computer must be insulated against + 12 V and the line coming from **track 6** of the computer must be insulated against earth.

2 connectors:

Parking distance control computer

Buzzer

**16-track** connector

Track 10 → Track 2  
Track 2 → Track 1

Repair if necessary (see vehicle wiring diagram).

**Is the fault still present?**

NO → End of fault finding procedure.

YES

With no obstacle less than 150 cm in front of the rear bumper, check that the distance parameters on the diagnostic tool are 255 cm out of range (**PR001, PR002, PR003, PR004**).

If the parameters display a setting even though there is no obstacle in front of the rear bumper, make sure nothing is interfering with the reading (sticker, mud, snow etc. on the rear bumper).

Repair if necessary.

End of fault finding procedure.

**AFTER REPAIR**

Check that the system is operating correctly.