

DUSTER

8 Electrical equipment

85A

WIPERS - WASHERS

UCH

Vdiag No.: 09

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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): **DUSTER**
Function concerned: **Wiping / washing**

Name of computer: **UCH**
Vdiag No.: **09**

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**

Special tooling required

Special tooling required	
Diagnostic tool	
Multimeter	
Elé. 1622	Bornier
Elé. 1681	Universal bornier

If the information obtained by the diagnostic tool requires the electrical continuity to be checked, connect bornier **Elé. 1622** or universal bornier **Elé. 1681**.

WARNING:

- All tests with bornier **Elé. 1622** or **Elé. 1681** must be conducted with the battery disconnected.
- The bornier is only designed to be used with a multimeter. Never power the test points with **12 V**.

3. SAFETY INSTRUCTIONS

The safety instructions must be followed at all times when working on components, to avoid damage or injury:

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

Procedure for disconnecting the battery:

- switch off the ignition,
- switch off all electrical consumers,
- wait at least **1 minute** for the electronic systems to switch off,
- disconnect the battery, starting with the negative terminal.

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).

Consider the fault status, **present** or **stored** when the **diagnostic tool** is used after the + after ignition feed (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 are applied, the fault is present. Deal with the fault.

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

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

Refer to paragraphs 4.1 Checking wiring and 4.2 Checking connectors

Conformity check

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

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

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

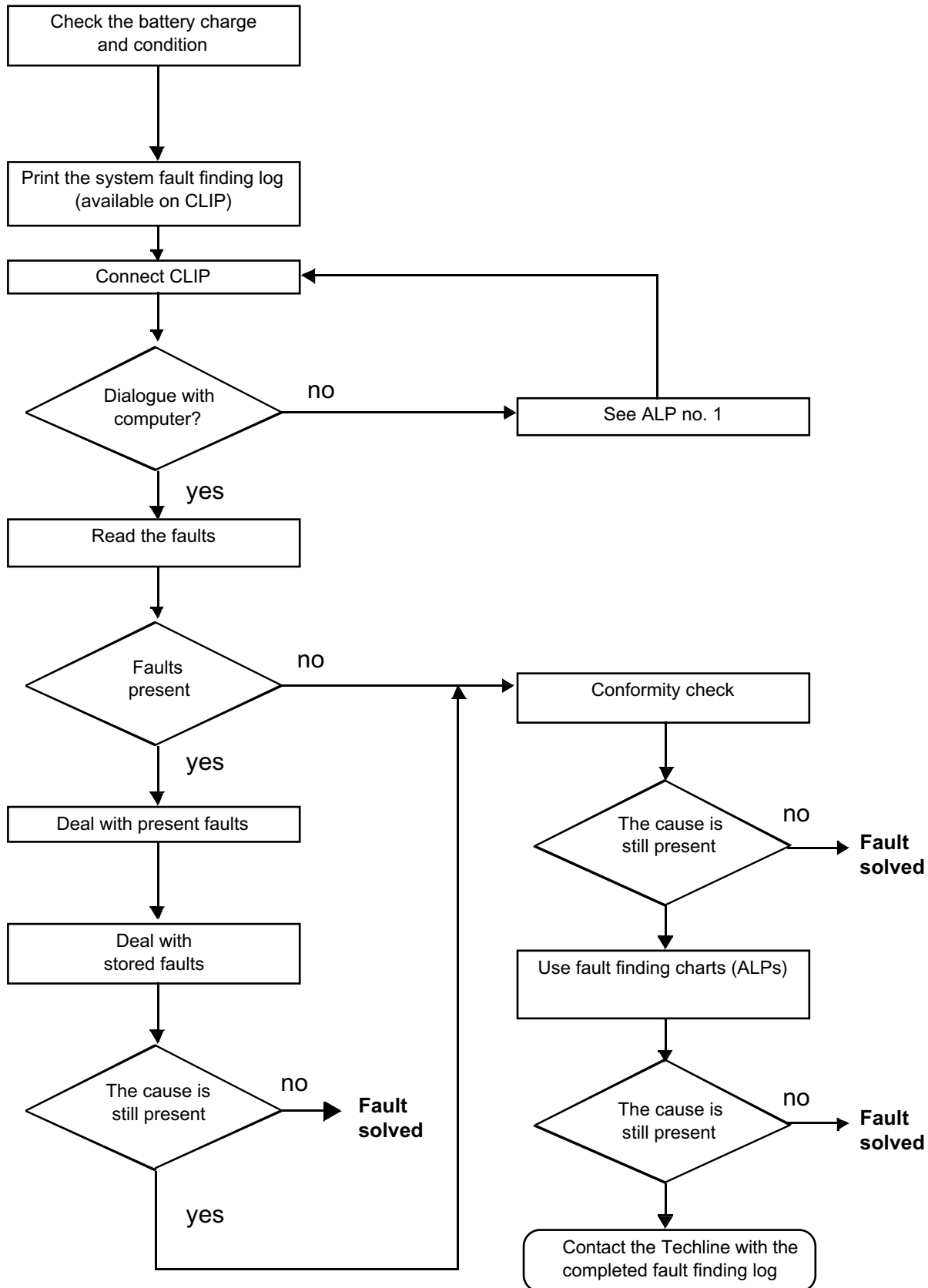
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

Customer complaints - Fault finding chart

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

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

4. FAULT FINDING PROCEDURE



4. FAULT FINDING PROCEDURE (CONTINUED)

4.1 Wiring check

Fault finding problems

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

Visual inspection

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

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

Physical inspection

While manipulating the wiring, use either the **diagnostic tool** to detect a change in status from "stored" to "present", or use the multimeter to view the status changes.

Make sure that the connectors are properly locked.

Apply light pressure to the connectors.

Twist the wiring harness.

Checking earth insulation

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

Checking insulation against + 12 V or + 5 V

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

Continuity check

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

Checking the supply

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

4.2 Checking the connectors

Note:

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

Note:

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

Note:

The check is carried out on the 2 parts of the connection. There may be two types of connection:

- Connector/Connector.
- Connector/Device.

Visual inspection of the connection:

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

Visual inspection of the area around the connection:

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

Disconnect the connector to continue the checks.

Visual inspection of the plastic casing:

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

Visual inspection of the metal contacts:

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

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

Visual inspection of the sealing:

(Only for watertight connectors)

- Check for the seal on the connection (between the 2 parts of the connection).
 - Check the seal at the back of the connectors:
 - For *unit* joints (1 for each wire), check that the unit joints are present on each electrical wire and that they are correctly positioned in the opening (level with the housing). Check that plugs are present on openings which are not used.
 - For a *grommet* seal (one seal which covers the entire internal surface of the connector), check that the seal is present.
 - For *gel* seals, check for gel in all of the sockets without removing the excess or any protruding sections (it does not matter if there is gel on the contacts).
 - For *hotmelt* sealing (heat-shrink sheath with glue), check that the sheath has contracted correctly on the rear of the connectors and the electrical wires, and that the hardened glue comes out of the side of the wire.
- Check that there is no damage to any of the seals (cuts, burns, significant deformation, etc.).

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

5. FAULT FINDING LOG



IMPORTANT!

IMPORTANT

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

IT IS THEREFORE ESSENTIAL THAT THE FAULT FINDING LOG IS FILLED OUT EVERY TIME IT IS REQUESTED BY TECHLINE OR THE WARRANTY RETURNS DEPARTMENT.

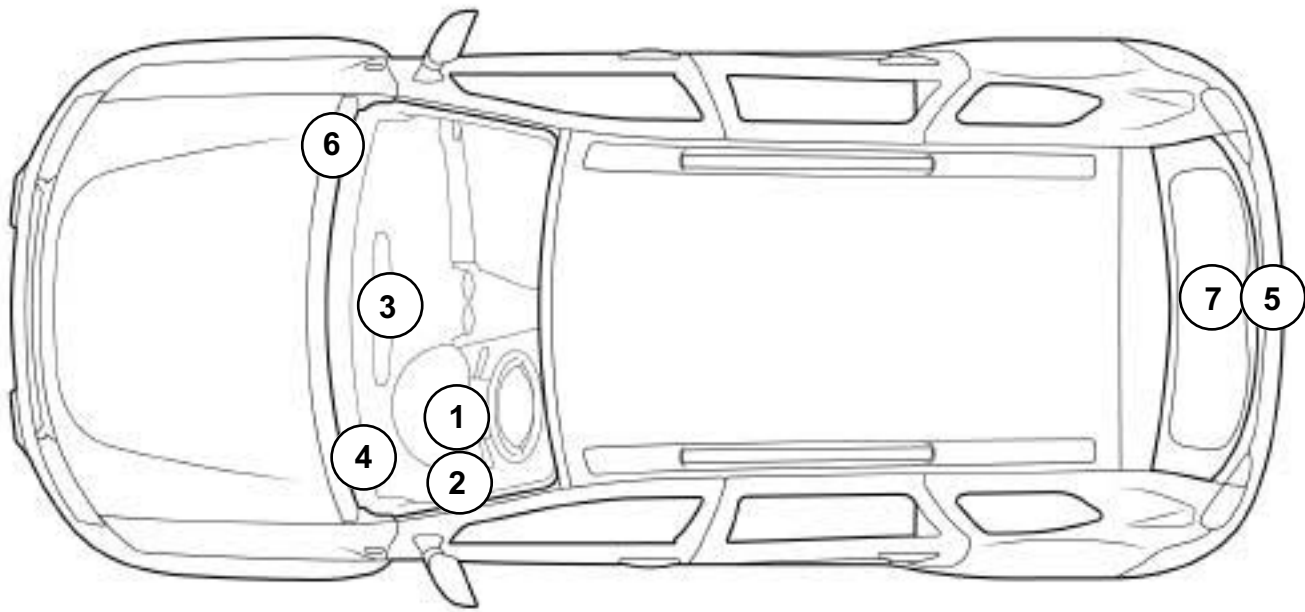
You will always be asked for this log:

- 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.

6. 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.



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- | | | | |
|---|--------------------------------|---|-------------------------|
| 1 | UCH | 5 | Rear screen wiper motor |
| 2 | Passenger compartment fuse box | 6 | Washer pump |
| 3 | Combined wiper-washer | 7 | Heated rear screen |
| 4 | Windscreen wiper motor | | |

Screen wiper motor:

The role of the windscreen wiper motor is to provide windscreen cleaning.

Rear screen wiper motor:

The role of the rear screen wiper motor is to provide rear screen cleaning.

Combined wiper-washer:

The role of the combined wiper-washer control is to control the various washing and wiping functions.

Screen washer pump:

– Without rear screen wiping:

The role of the screen washer pump is to supply washer fluid to the windscreen.

– With rear screen wiping:

The role of the bi-directional screen washer pump is to supply washer fluid from the same reservoir to either the windscreen or the rear screen.

Heated rear screen:

The role of the heated rear screen is to defrost the rear screen.

UCH:

The UCH is used to manage all wiper functions (activation, wiper speed, etc).

Windscreen washing/wiping

The UCH receives the intermittent wiper speed and the windscreen wiper park information.

This provides the following functions:

- intermittent wiper speed,
- extended wiper time after washing,
- return to park position.

In the park position, the switch is closed to **earth**, and the UCH receives logical information **0**.

This function is only active if **+ after ignition feed** is present.

When the **+ after ignition feed** is switched on, if the windscreen wiper park position is not detected, the wiper motor relay is held.

Operation is interrupted in the following cases:

- wiper request stopped or no request,
- **+ after ignition** switched off,
- UCH reads park information.

Detection of the park position should be made on transition and not level, that is, if the wiper stalk is moved from the intermittent position to the park position while the wiper blade is in the park position and the wiper motor is running, it will not be stopped until the next reading of the park position. This condition is necessary in order to obtain an exact park position.

Intermittent

The intermittent wiper speed function is only active if the **+ after ignition** is present and if the switch is in the intermittent position.

The time delay between two wipes is **5 seconds**, and this cannot be modified by the **diagnostic tool**.

When the windscreen intermittent speed function is activated, the windscreen intermittent speed relay is held by the UCH until the park position is detected. When the intermittent speed time delay has elapsed, the relay is held again and the cycle begins again.

Rear screen washing/wiping

The UCH does not control the rear screen wiper, this function is managed by a direct command.

Heated rear screen time delay

This output controls a diode relay external to the UCH, delivering the power to supply the heated rear screen.

The de-icing time delay is activated by pressing the heated rear screen button located on the central console panel.

The heated rear screen time delay is deactivated:

- by pressing the button again if the time delay between activation and deactivation is less than **50 seconds**,
- automatically if the time delay has elapsed,
- directly if there is a cut in the **+ after ignition** or engine speed signal.

The minimum time delay between two presses of the button so that the command is taken into account, should not be less than **200 ms**.

Equipment required:

CLIP diagnostic tool

Configurations of the wiper function in the UCH

Individual configuration available on **diagnostic tool**, with the associated configuration reading:

Configuration	CF069
Configuration reading	LC116
Name of configuration	Intermittent variation according to speed
Option	WITH or WITHOUT
Configuration	SC008 UCH type

DF099 PRESENT OR STORED	<u>WINDSCREEN WIPER PARK POSITION CIRCUIT</u>
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NOTES	<p>Conditions for applying the fault finding procedure to stored faults: The fault is declared present following operation of the windscreen wiper. Special notes: random operation of the wipers in intermittent speed position (time delay not respected).</p>
	Use the Wiring Diagrams Technical Note for DUSTER .

Check the connection and condition of the connectors of the UCH, component code **645**, of the windscreen wiper motor, component code **212** and of the combined wiper-washer, component code **145**.
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check that the windscreen wipers function correctly in the intermittent position and that status **ET558** is **YES**; if status is **NO**, refer to the interpretation of this status.

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

- **14C** between components **645** and **212**,
- **14D** between components **645** and **145**,
- **MB** between component **212** and **earth**.

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	<p>Follow the instructions. Deal with any other faults. Clear the stored faults.</p>
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DF099 CONTINUED

Check that the windscreen wiper functions correctly in the low speed position using command **AC056**

Otherwise check the **insulation and continuity** of the following connections:

- **14A** between components **212** and **145**,
- **MB** between component **212** and **earth**.

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12V** (when the low speed combined wiper-washer is requested) on connection **14A** of the combined wiper-washer, component code **145**.

If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Otherwise replace the combined wiper-washer, component code **145** (see **MR 451 Mechanical, 84A, Wiper switch: Removal - Refitting**).

Check the operation and fitting of the windscreen wiper motor, component code **212**.

The windscreen wiper motor may need to be replaced (see **MR 451 Mechanical, 85A, Wiping - Washing, Windscreen wiper motor: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

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

WIPERS - WASHERS

Fault finding – Conformity check

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NOTES

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

SUB-FUNCTION: WIPER CONTROL

Function	Parameter or status Checked or action		Display and notes	Fault finding
Wiper	ET004	+ 12 V after ignition	YES NO	In the event of a fault, consult the interpretation of status ET004 .
	ET027:	Windscreen wiper park position	When the wiper control is in the intermittent position, the status is ACTIVE during the park phases of the wiper and INACTIVE during the wiping phases	In the event of a fault, apply the interpretation of the fault DF097 Windscreen wiper park position .
	ET558:	Windscreen wiper speed setting selection	YES when the wiper control is in the intermittent position. NO when the wiper control is in position 0 or low speed or high speed	In the event of a fault, apply the interpretation of status ET558 .

WIPERS - WASHERS

Fault finding – Conformity check

85A**NOTES**

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

SUBFUNCTION: WIPER CONTROL (CONTINUED)

Function	Parameter or status Checked or action	Display and notes	Fault finding
Wiper	PR001: Battery voltage	12 V < X < 12.5 V	In the event of a fault , run fault finding on the charging circuit (see Technical Note 6014A, Checking the charging circuit).
	AC056 Low-speed wiper	This command activates the low speed wiper.	In the event of a fault , apply the interpretation of the fault DF097 Windscreen wiper park position .
	ET547: Heated rear screen button	PRESSED when the heated rear screen button is pressed. RELEASED if the heated rear screen button is not pressed	In the event of a fault , apply the interpretation of status ET547 .

ET004	<u>+ 12 VOLTS AFTER IGNITION</u>
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NOTES	Special note: Use the Wiring Diagrams Technical Note for DUSTER .
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ET004: "NO" with the ignition on

<p>Check fuse F04 (10 A) in the passenger compartment fuse box, component code 1016 (see MR 451, Mechanical, 81C, Fuses, Fuses: List and location of components).</p> <p>Using a multimeter, check for + 12 V after ignition on connection AP10 of the UCH connector, component code 645.</p> <p>Using a multimeter, check for + 12 V on connection BP56 of the UCH connector, component code 645.</p> <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 there is no voltage, check the continuity and the insulation to earth on the following connection:</p> <ul style="list-style-type: none"> • AP10 between components 645 and 1016. <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>

AFTER REPAIR	Carry out another fault finding check on the system. Deal with any other faults. Clear the stored faults.
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**ET004
CONTINUED**

ET004: "YES" with the ignition off

Using a multimeter, check that there is no **+12 V** with the ignition off on connection **AP10** of the UCH connector, component code **645**.

If the voltage is present, check the insulation to **+ 12 V** on the following connection:

- **AP10** between components **645** and **1016**.

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

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out another fault finding check on the system.
Deal with any other faults.
Clear the **stored** faults.

ET558	<u>WINDSCREEN WIPER SPEED SETTING SELECTION</u>
NOTES	There must be no present or stored faults. Switch on the ignition.
	Special note: Use the Wiring Diagrams Technical Note for DUSTER .
ET558 "NO" WITH THE CONTROL STALK IN THE INTERMITTENT POSITION	Check the presence and condition of fuse F01 (20 A) in the passenger compartment fuse box, component code 1016 (see MR 451 Mechanical, 81C, Fuses, Fuses: List and location of components).
	Check the connection and condition of the combined wiper-washer connector, component code 145 and check the UCH connector, component code 645 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
	Check for + 12 V after ignition feed on connection AP7 of component 145 , If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
AFTER REPAIR	Carry out another fault finding check on the system. Deal with any other faults. Clear the stored faults.

<p>ET558 CONTINUED 1</p>	
<p>ET558 "NO" WITH THE CONTROL STALK IN THE INTERMITTENT POSITION (CONTINUED)</p>	<p>Ensure the continuity and the insulation of the following connection:</p> <ul style="list-style-type: none"> • AP7 between components 145 and 1016. <p>If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Check for + 12 V (when the intermittent speed combined wiper-washer is requested) on connection 14E of component 645. If the connection is faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Check the continuity and insulation to earth of the following connection:</p> <ul style="list-style-type: none"> • 14E between components 645 and 145, <p>If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>Check for + 12 V (when the intermittent speed combined wiper-washer is requested) on connection 14E of component 145. Otherwise replace the combined wiper-washer, component code 145 (see MR 451 Mechanical, 84A, Wiper switch: Removal - Refitting).</p> <p>If the fault is still present, contact the Techline.</p>
<p>AFTER REPAIR</p>	<p>Carry out another fault finding check on the system. Deal with any other faults. Clear the stored faults.</p>

ET558 CONTINUED 2

ET558 "YES" WITH THE CONTROL STALK IN A POSITION OTHER THAN INTERMITTENT SPEED

Check the connection and condition of the combined wiper-washer connector, component code **145** and check the UCH connector, component code **645**.
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

With the wiper switch in the rest position, check the **insulation to + 12V** of the following connection:

- **14E** between components **645** and **145**

If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), 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 another fault finding check on the system.
Deal with any other faults.
Clear the **stored** faults.

NOTES	Only consult these customer complaints after a complete check with the diagnostic tool.
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WIPERS - WASHERS

The windscreen wiper does not work at high speed	→	ALP 16
Incorrect operation of the rear screen wiper	→	ALP 17
The front and rear bidirectional washer pump does not rotate when its control is activated	→	ALP 18

WIPERS - WASHERS

Fault finding – Fault Finding Chart

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ALP 16	The windscreen wiper does not work at high speed
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NOTES	Only consult this customer complaint after a full check with the diagnostic tool . There must be no present or stored faults.
	Special note: Use the Wiring Diagrams Technical Note for DUSTER .

Check the presence and condition of fuse F01 (20 A) in the passenger compartment fuse box, component code 1016 (see MR 451 Mechanical, 81C, Fuses, Fuses: List and location of components).
Check the connection and condition of the connectors of the wiper stalk, component code 145 and of the rear screen wiper motor, component code 211 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the + 12 V after ignition supply on connection AP7 of the stalk, component code 145 . If the connection is faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check for + 12 V (when the high speed combined wiper-washer is requested) on the following connection: <ul style="list-style-type: none"> • 14B of component 212, Check for earth on the following connection: <ul style="list-style-type: none"> • MB of component 212. If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

AFTER REPAIR	Carry out another fault finding check on the system. Deal with any other faults. Clear the stored faults.
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WIPERS - WASHERS

Fault finding – Fault Finding Chart

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ALP 16 CONTINUED

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

- **14B** between components **145** and **212**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check that the motor operates correctly.

Check the operation of the wiper control.

Check for **+ 12 V** (when the high speed combined wiper-washer is requested) on connection **14B** of component **145**.

Otherwise replace the combined wiper-washer, component code **145** (see **MR 451 Mechanical, 84A, Wiper switch: Removal - Refitting**).

Check that the wiper mechanism or motor are not jammed.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out another fault finding check on the system.
Deal with any other faults.
Clear the **stored** faults.

WIPERS - WASHERS

Fault finding – Fault Finding Chart

85A**ALP 17****Incorrect operation of the rear screen wiper****NOTES**

Only consult this customer complaint after a full check with the **diagnostic tool**.
There must be no **present** or **stored** faults.

Special note:
Use the **Wiring Diagrams Technical Note for DUSTER**.

Check the presence and condition of fuse **F27 (20 A)** in the passenger compartment fuse box, component code **1016** (see **MR 451 Mechanical, 81C, Fuses, Fuses: List and location of components**).

Check the connection and condition of the connectors of the wiper stalk, component code **145** and of the rear screen wiper motor, component code **211**.
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check for the **+ 12 V after ignition feed** on the following connection:

- **AP9** of component **145**,

Check for **earth** on the following connection:

MAM of component **145 (This connection provides the park position function)**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

Carry out a full check with the **diagnostic tool**.

WIPERS - WASHERS

Fault finding – Fault Finding Chart

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ALP 17 CONTINUED 1

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

- **AP9** between components **1016** and **145**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+12 V** (when the rear screen wiper is requested) on the following connections:

- **36G** of component **211**,
- **AP9** of component **211**,

Check for **earth** on the following connection:

- **MG** of component **211**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the **insulation** on the following connections:

- **AP9** between components **1016** and **211** (**This connection provides the park position function**),
- **36G** between components **145** and **211**.

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

Carry out a full check with the **diagnostic tool**.

WIPERS - WASHERS

Fault finding – Fault Finding Chart

85A

ALP 17 CONTINUED 2

Check for **+12 V** (when the rear screen wiper is requested) on the following connection:

- **36G** of component **145**.

Otherwise replace the combined wiper-washer, component code **145** (see **MR 451 Mechanical, 84A, Wiper switch: Removal - Refitting**).

Check the operation and fitting of the rear screen wiper motor.

The rear screen wiper motor may need to be replaced (see **MR 451 Mechanical, 85A, Wiping - Washing, Rear screen wiper motor: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a full check with the **diagnostic tool**.

WIPERS - WASHERS

Fault finding – Fault Finding Chart

85A

ALP 18	The front and rear bidirectional washer pump does not rotate when its control is activated
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NOTES	Only consult this customer complaint after a full check with the diagnostic tool . There must be no present or stored faults.
	Special note: Use the Wiring Diagrams Technical Note for DUSTER .

Check the presence and condition of fuse F27 (20 A) in the passenger compartment fuse box, component code 1016 (see MR 451 Mechanical, 81C, Fuses, Fuses: List and location of components).
Check the connection and condition of the connectors of the front and rear bidirectional screen washer pump, component code 677 and of the wiper stalk, component code 145 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check for + 12 V after ignition feed on the following connection: • AP9 of component 145 , Check for earth on the following connection: • MAM of component 145 , If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A (Renault) or Technical Note 9804A (Dacia), Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

AFTER REPAIR	Carry out a full check with the diagnostic tool .
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WIPERS - WASHERS

Fault finding – Fault Finding Chart

85A

ALP 18 CONTINUED 1

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

- **AP9** between components **1016** and **145**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+12 V** (when the windscreen washer is requested) on the following connection:

- **16A** of component **677**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

- **16A** between components **677** and **145**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

Carry out a full check with the **diagnostic tool**.

WIPERS - WASHERS

Fault finding – Fault Finding Chart

85A

ALP 18 CONTINUED 2

Check for **+12 V** (when the rear screen washer is requested) on the following connection:

- **24A** of component **677**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

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

- **24A** between components **677** and **145**,

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A (Renault)** or **Technical Note 9804A (Dacia)**, **Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+12 V** (when the windscreen washer is requested) on the following connection:

- **16A** of component **145**,

Check for **+12 V** (when the rear screen washer is requested) on the following connection:

- **24A** of component **145**,

Otherwise replace the combined wiper-washer, component code **145** (see **MR 451 Mechanical, 84A, Wiper switch: Removal - Refitting**).

Check the operation and fitting of the front and rear bidirectional screen washer pump.

If the pump is not correct, replace it (see **MR 451 Mechanical, 85A, Wiping – Washing, Screen washer pump: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a full check with the **diagnostic tool**.