

TWINGO

8 Electrical equipment

82D ACCESS/SAFETY

Fault finding - Introduction	82D - 2
Fault finding - List and location of components	82D - 7
Fault finding - Role of components	82D - 8
Fault finding - Operating diagram	82D - 9
Fault finding - Function	82D - 14
Fault finding - Configurations and programming	82D - 20
Fault finding - Conformity check	82D - 21
Fault finding - Customer complaints	82D - 31
Fault finding - Fault Finding Chart	82D - 32

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 procedure applicable to all computers with the following specifications:

Vehicle(s): **New TWINGO**

Function concerned: **Access/Safety**

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**

Special tooling required

Special tooling required	
Multimeter	
Elé. 1681	Universal bornier

3. REMINDERS

To run fault finding on the vehicle's computers, switch on the ignition in fault finding mode (+ after ignition feed).

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 switched on after the + after ignition feed (without any system components being active).

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 on these lines (corrosion, 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.

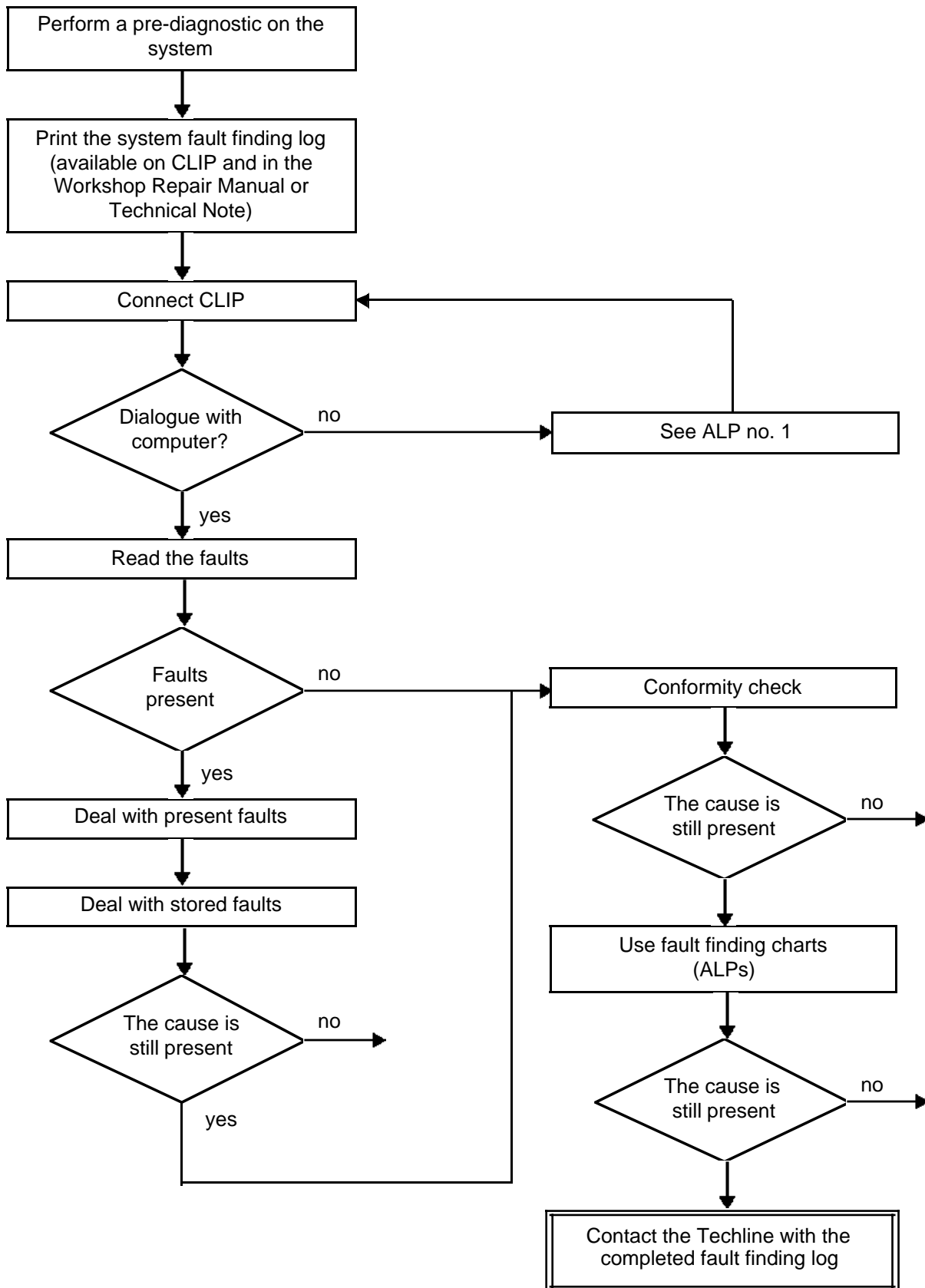
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

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 complaints**.

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

4. FAULT FINDING PROCEDURE



4. FAULT FINDING PROCEDURE (CONTINUED)

Wiring check

Fault finding problems

Disconnecting the connectors and/or manipulating the wiring 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 MANDATORY TO FILL OUT A FAULT FINDING LOG EACH TIME FAULT FINDING IS CARRIED OUT.

You will always be asked for this log:

- when requesting technical assistance from the Techline,
- for approval requests when replacing parts for which approval is obligatory
- 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

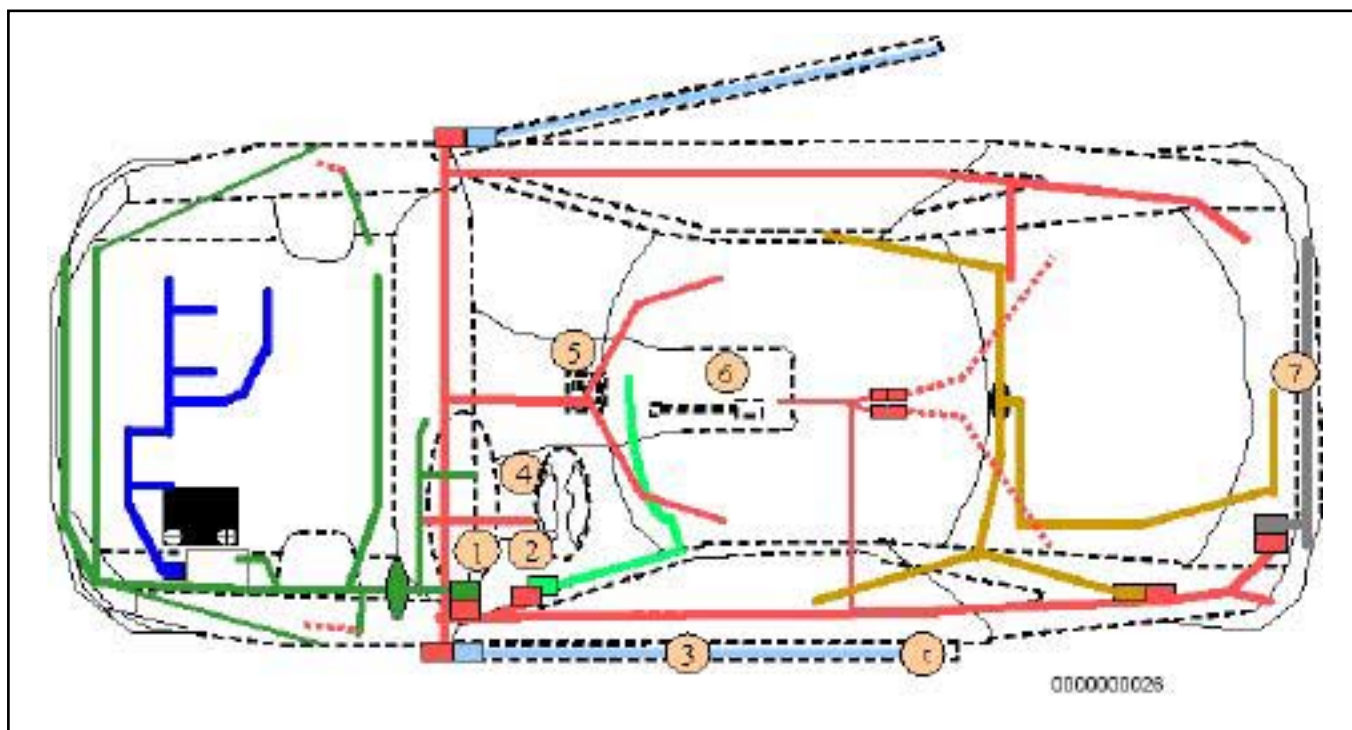
All work on components requires the observation of safety rules to prevent damage or injury:

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

- ENGINE HARNESS
- FRONT ENGINE WIRING & ADDITIONAL HEADLIGHTS
- DOOR WIRING
- CEILING WIRING
- PASSENGER COMPARTMENT WIRING
- REAR BUMPER WIRING
- TAILGATE WIRING



- 1 UCH
- 2 Passenger Compartment Fuse and Relay Box
- 3 One touch window/anti-pinch module
- 4 Transponder ring
- 5 Rain/light sensor & interior temperature sensor
- 6 Sunroof/anti-pinch
- 7 Tailgate lock
- 8 Door lock

ACCESS/SAFETY

Fault finding - Role of components

82D

The system comprises the following components, according to whether or not it features the deadlocking function:

Access - Protection	Without deadlocking activation/deactivation	With deadlocking activation/deactivation
Transponder key	X	
Transponder and radiofrequency key		X
Locking and unlocking using locking button		X
Tailgate electric lock	X	X
Tailgate opening switch	X	X
Tailgate locking switch (with key)	X	

Electric central door locking:

Electric central door locking is operated using the locking button.

Tailgate lock: The electric tailgate lock is also used to open the tailgate. The tailgate locking and unlocking function is controlled by the UCH.

Transponder and radiofrequency key:

- **The transponder** in the key enables the following signals to be sent to the UCH:
 - Key identifier signal.
 - Immobiliser code signal.
- **The key radiofrequency (for top of the range vehicles)** enables the key identifier to be transmitted when the button is pressed. A radiofrequency wave is sent to the UCH to perform the user's request if the key is allocated to the vehicle (opening the doors and the tailgate).

One touch window/anti-pinch module:

- **One-touch window:** the window is raised by pulling the button up and it is lowered by pressing down on the button; pressing the button again has no effect on the initial operation.
- **Anti-pinch:** if an object prevents the window from closing, the anti-pinch function triggers the window to be lowered by **50 mm**.

ACCESS/SAFETY

Fault finding - Operating diagram

82D

List of components and associated component codes:

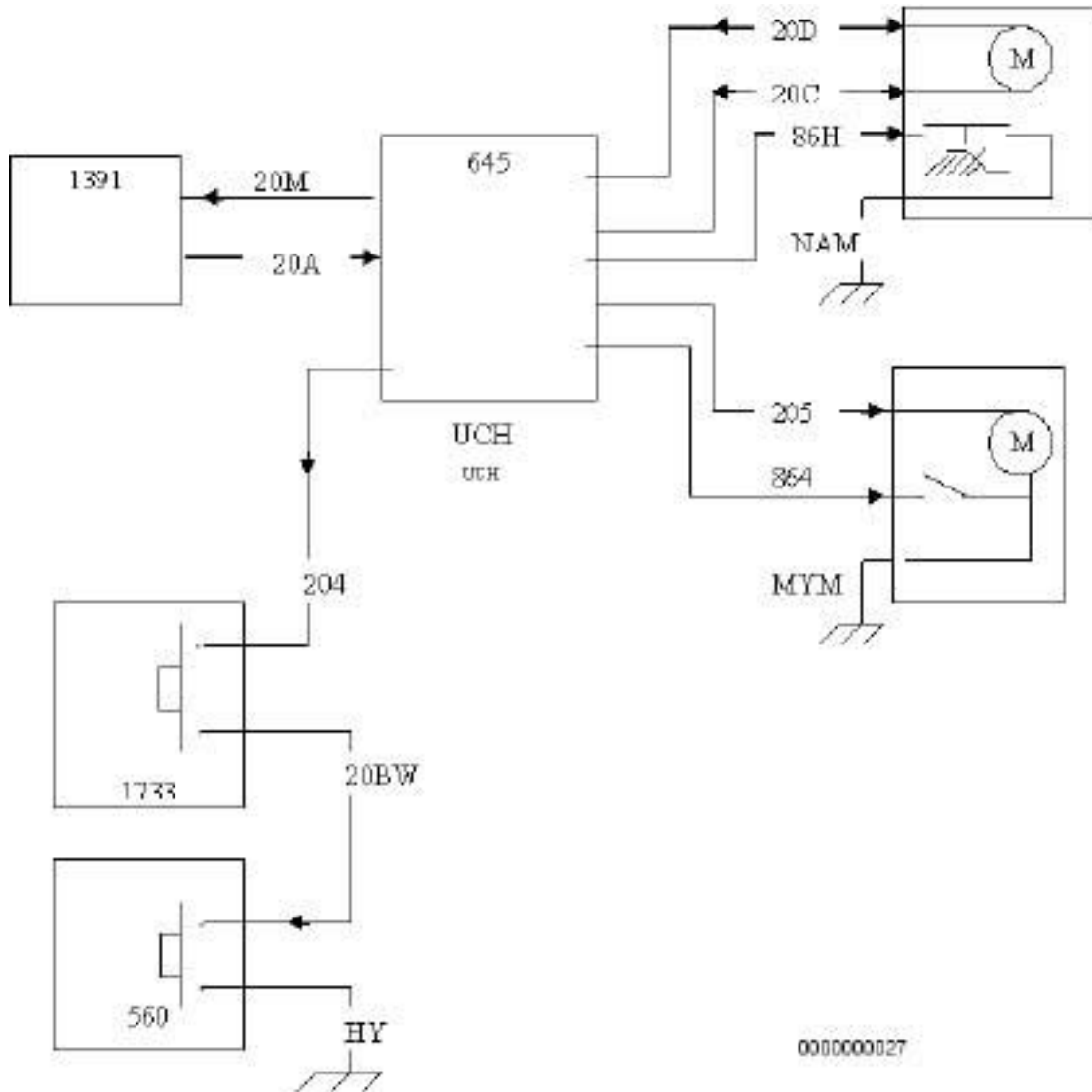
Component code	Components
140	Driver's door central locking
141	Passenger's door central locking
560	Tailgate switch
645	UCH
1016	Passenger compartment fuse and relay box
1042	Deadlocking activation/deactivation relay
1391	Central door locking switch
1733	Tailgate locking switch (with lock barrel)

ACCESS/SAFETY

Fault finding - Operating diagram

82D

Locking without deadlocking:



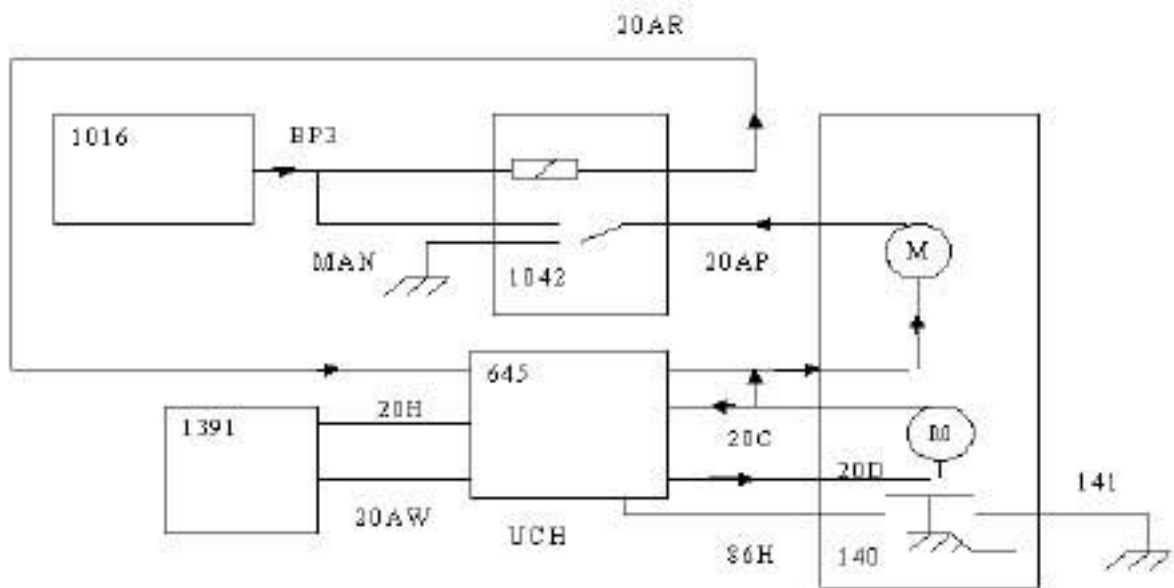
ACCESS/SAFETY

Fault finding - Operating diagram

82D

Locking with deadlocking:

Simple door locking:



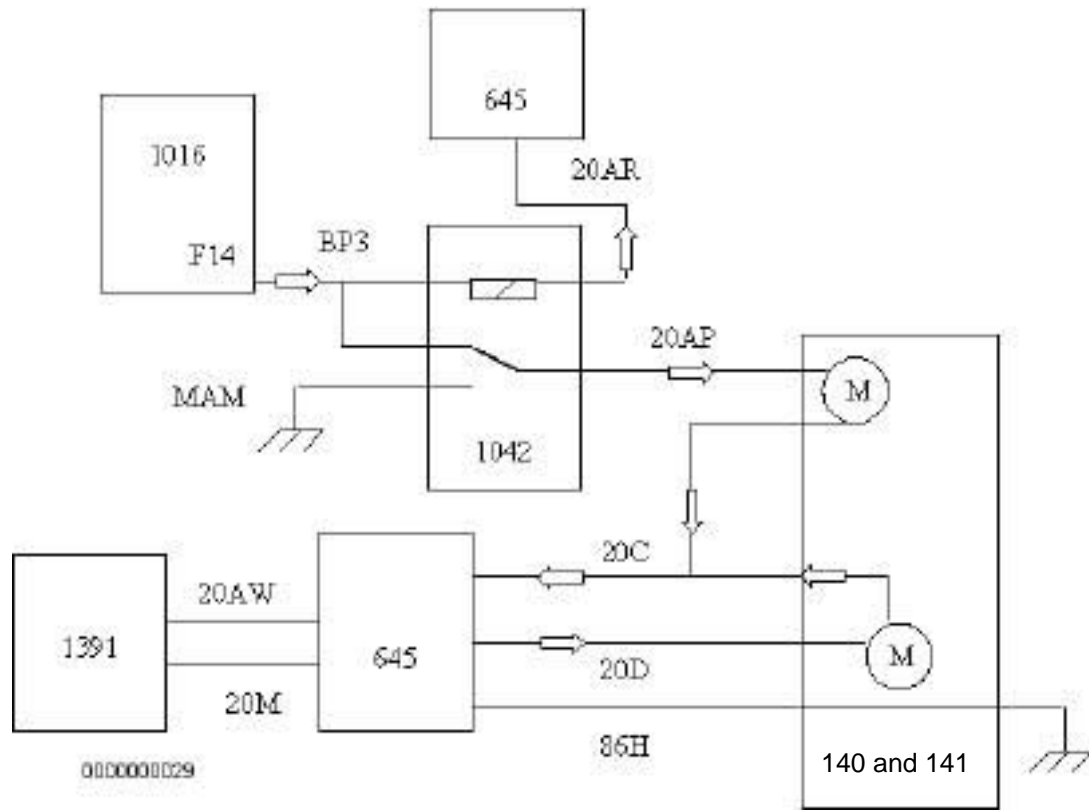
000000026

ACCESS/SAFETY

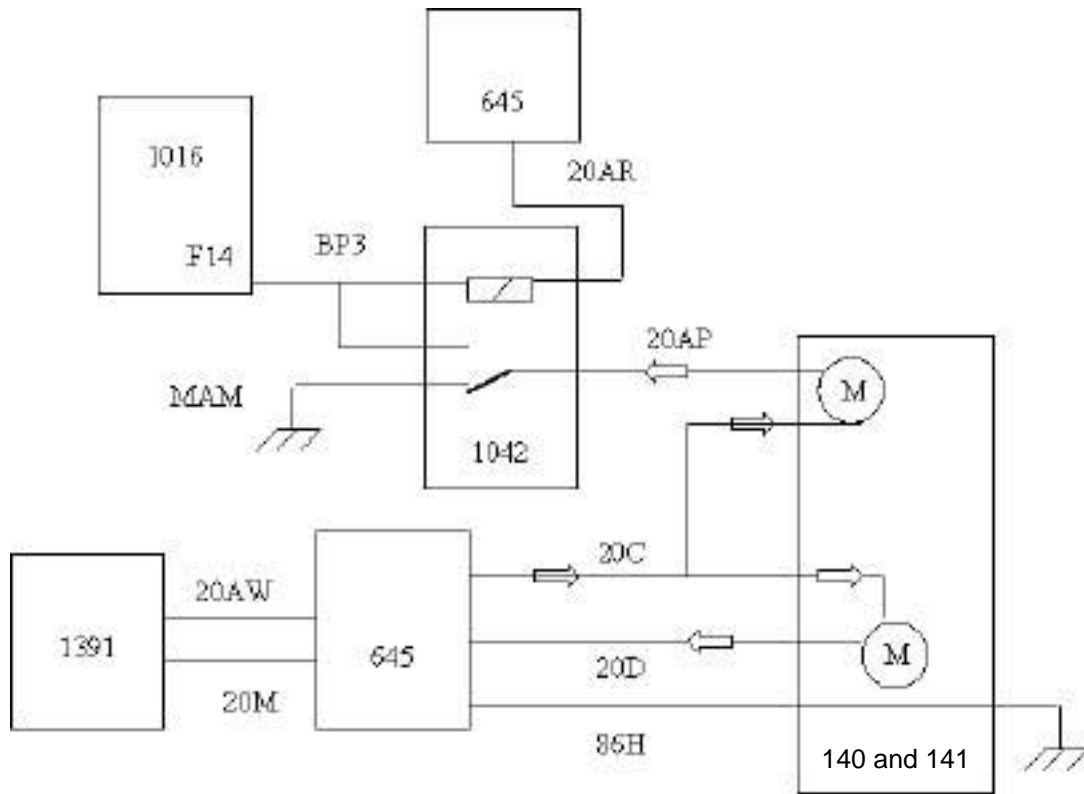
Fault finding - Operating diagram

82D

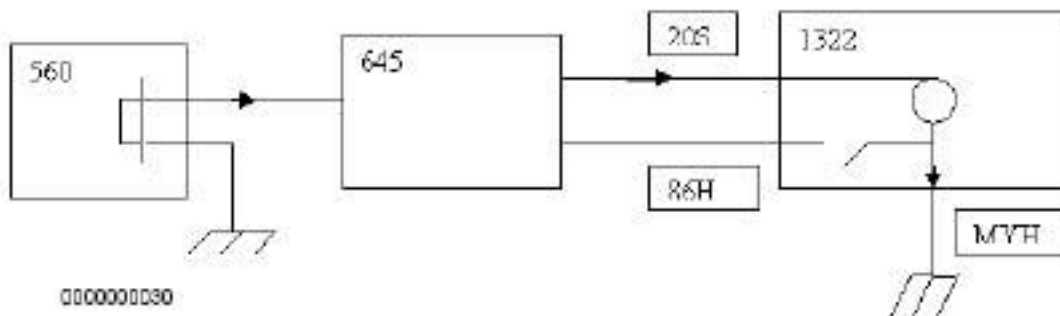
Door deadlocking:



Door unlocking:



Tailgate opening control



Access/Safety function layout

Access (RF*) and protection (immobiliser) middle and top of the range vehicles:

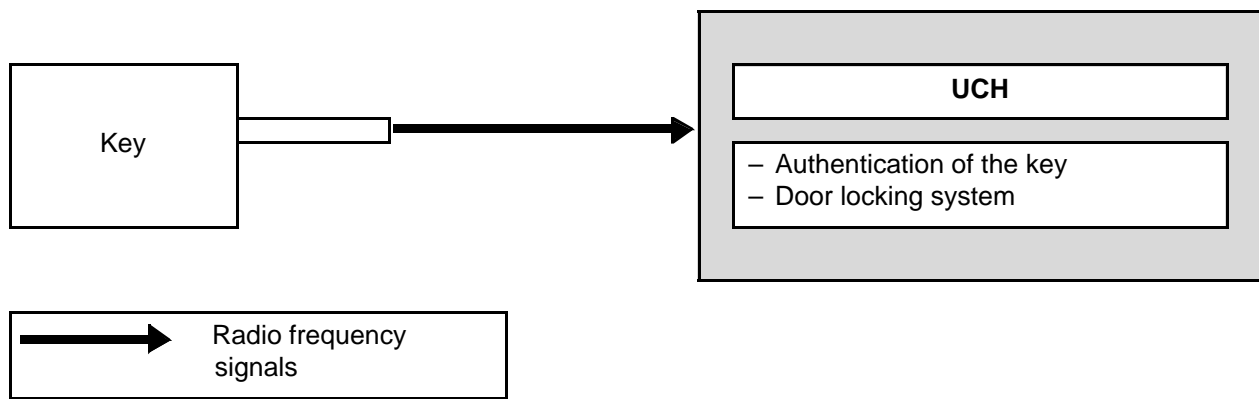
The access function (locking/unlocking) is provided by the UCH and the key.

Exchanges between the key and the UCH are carried by radio frequency transmission at **433 MHz**.

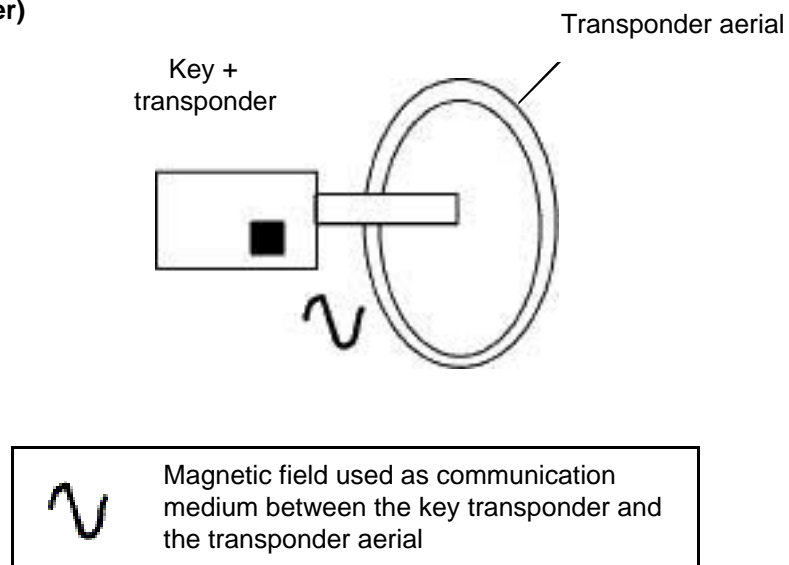
When the switch is pressed, the key sends out a radiofrequency wave signal. The UCH receives the signal via its built-in aerial.

The UCH authenticates the key and performs the user request if the key is allocated to the vehicle.

Access via radiofrequency:



PROTECTION (Immobiliser)



*RF: Radio frequency

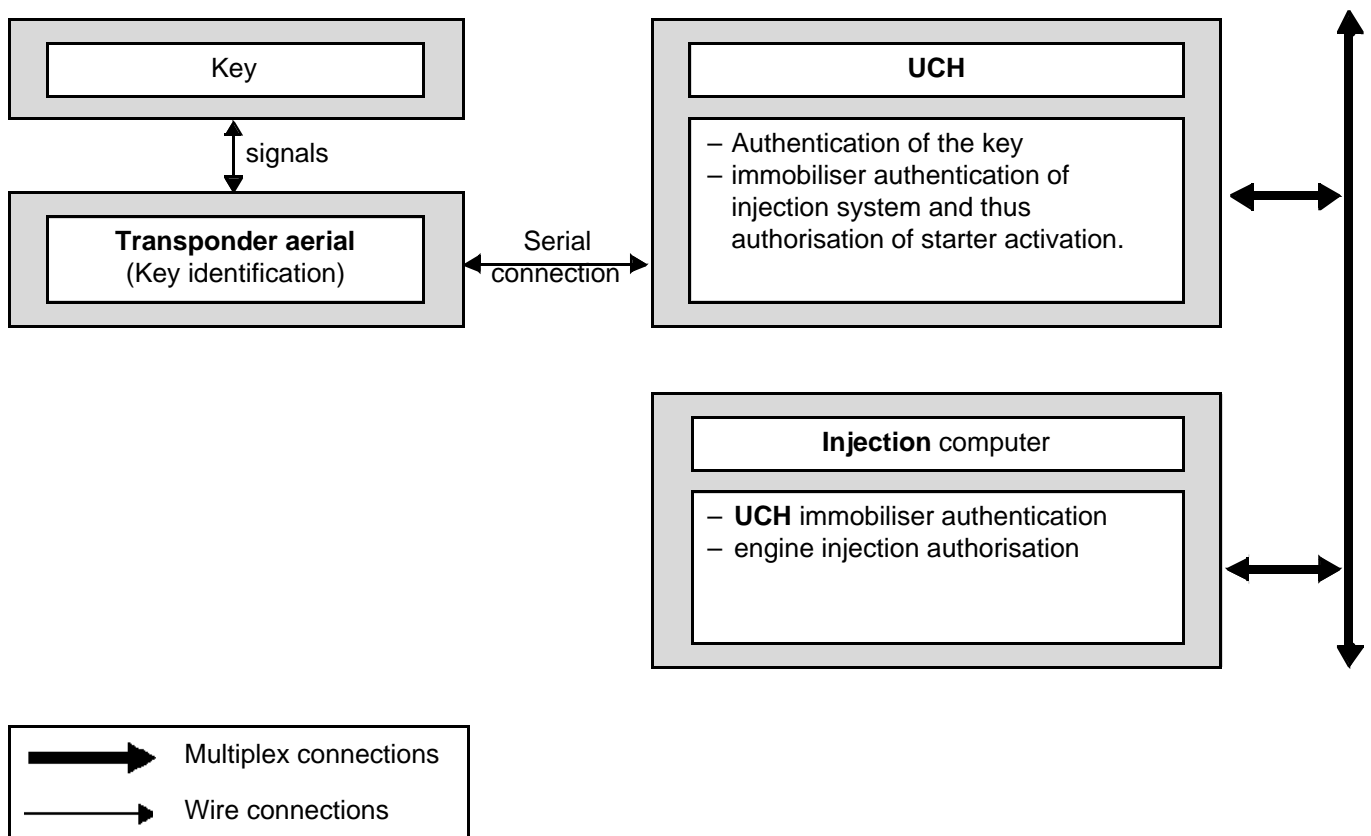
The immobiliser function is divided between three coded computers (UCH, injection and the key). The key and the UCH are linked by a magnetic field created by the transponder aerial. The UCH and the injection system are linked by the multiplex network.

When the + After ignition is switched on, the key sends its identifier to the UCH via the transponder aerial located on the ignition switch. The UCH goes through an authentication procedure with the key via the transponder aerial. If the key is allocated to the vehicle, the starter command is authorised.

The UCH then carries out a coded exchange with the injection computer.

When the authentication messages with the UCH have been exchanged, the injection can be unlocked and authorise the starting of the engine injection.

The injection is unlocked and engine starting authorised as soon as the UCH has authenticated the injection computer.



The **ACCESS/SAFETY** function is divided into three sub-functions: **Access, Protection and Starting**

1. Access

a) Locking/unlocking by the user

The UCH receives the request from the user via the key.
When the key has been authenticated, the UCH executes the user's request (locking, unlocking, etc.).

Locking is indicated by 2 flashes of the direction indicators.
The direction indicators flash once when **unlocking** takes place (idem when unlocking the tailgate).

The maximum number of keys allocated to one vehicle is **4**.

b) Electric Central Door Locking Button

This button enables the vehicle to be locked or unlocked and has no effect if the vehicle has been locked from the outside.

Pressing the radiofrequency electric central door locking button when a door is unlocked will lock all the doors and the electric central door locking indicator light will come on.

c) Deadlocking

To have this function, it is necessary to have a top of the range UCH on a right-hand drive vehicle, and configuration **LC003 Deadlocking** must be **WITH** (see **Configuration and programming**).

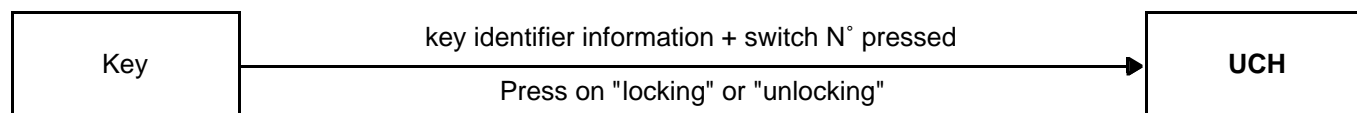
This function is activated by pressing the locking button on the key and holding it down for more than **2 seconds**.
This function enables the interior and exterior door opening control to be deactivated.

It is impossible to deadlock the vehicle if the + accessories feed is active, if the lights are switched on or if the hazard warning lights are activated.

The following statuses can be viewed:

- **ET044 Electric central door locking button**
- **ET061 Tailgate unlocking request**
- **ET463 "Door(s) or tailgate"**
- **ET061 Tailgate unlocking request**
- **ET186 Door locking button short press**
- **ET189 Door unlocking button press**

Exchanges between access function components



d) Automatic locking

Automatic relocking takes place **2 minutes** after an unlocking which is not followed by the opening of a door or the tailgate.

The RAID function locks the vehicle as soon as the speed signal is above approximately **3 mph (5 km/h)**.

A road test can be used to check whether the RAID function is active or inactive.

The RAID function can be activated or deactivated by pressing and holding the electric door locking switch for approximately **5 s** while the engine is running. Acknowledgement is indicated by a buzzer.

Note:

Unlocking can be performed by the UCH if the airbag computer has detected an impact or if it is faulty (not recognised on the multiplex network, internal fault, etc.).

(See **88C, Airbag - Seat belt pretensioners**).

Lock motor operation and feed via the UCH can be checked using the following actuator commands:

- **AC004 Central door locking**
- **AC005 Central door unlocking**
- **AC061 Unlocking the tailgate**
- **AC035 Deadlocking**

Entry level vehicle access and safety. This function is also divided into another three sub-functions:

- **Access:**

This feature is not controlled by the UCH and comprises the following components:

- 2 side door mechanical locks.
- 1 tailgate electric lock.
- 1 tailgate locking switch (with lock barrel).
- 1 tailgate switch

Note:

Entry level vehicles are equipped with this system and these vehicles do not have electric central door locking.

- **Safety and starting:**

Identical to top of the range vehicles.

2. Protection

PROCESS FOR REMOVING VEHICLE PROTECTION

When the + after ignition is switched on, the key and the UCH communicate via the transponder aerial and the key code is sent to the UCH.

By means of an exchange of codes, the UCH checks that the key belongs to the vehicle.

When the key has been identified, the UCH and the injection identify each other by an exchange of codes via the multiplex system.

If the UCH and the injection computer authenticate each other, the UCH authorises the engine to start and the injection is unlocked.

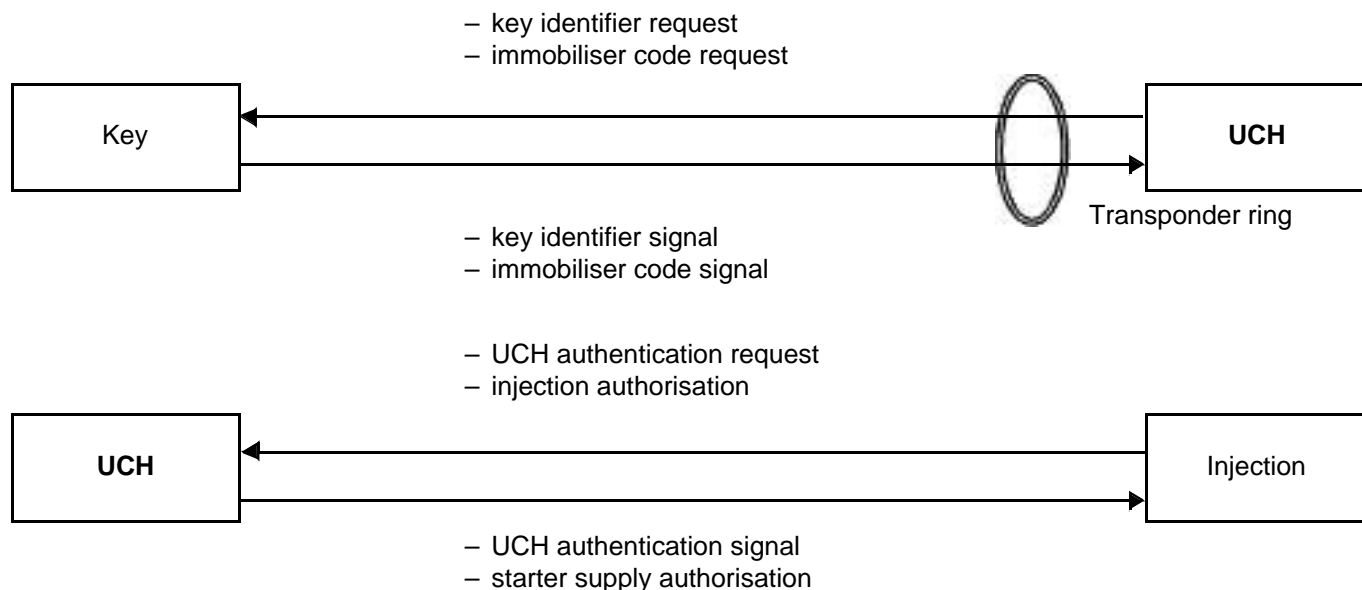
The immobiliser statuses can be viewed using the following statuses:

- ET046 Immobiliser
- ET008 Blank UCH
- ET185 Key Code received
- ET181 Key allocated to vehicle
- ET045 RF signal received
- ET193 RF signal from a key allocated to the vehicle
- ET240 Key frequency (MHz)
- PR056 Number of keys allocated
- ET229 Injection immobiliser code
- ET250 Injection code
- ET239 Ignition switch position

Special cases

If the key code and the UCH code do not match, the system remains locked. The vehicle cannot be started.

Exchanges between protection function components



Note:

- The UCH authorises the operation of the starter.
- The injection system authorises the operation of the injectors.

3. Starting

The UCH controls the command and supply part of the start-up function while the start-up-charging process is controlled by the UCH. For this function to operate normally, the protection function must have been successfully completed.

To enable the starting command the UCH needs information about the following statuses and parameters:

- **ET142 Engine operating phase**
- **ET239 Ignition switch position**
- **PR025 "Engine speed"**

IMPORTANT

When the vehicle battery has a low charge, the drop in voltage caused by operating the starter could reactivate the immobiliser. If the voltage is too low, the engine cannot be started, even by pushing the vehicle.

Note:

If several, i.e. three or four, attempts have been made using a key not allocated to the vehicle, the injection computer locks. Insert a key allocated to the vehicle for **20 seconds** in **+ after ignition feed**, then switch off the ignition and wait for the end of "powerlatch*" (**20 minutes**) to allow the injection computer to unlock.

*Powerlatch: Time required for injection computer supply after **+ 12 V** APC cut-off to the ignition switch.

Extended memory key:

In this case, the UCH sends data to the key at specific times to provide the key with up-to-date application data when the **+ after ignition feed** is cut off.

The following information can be retrieved on the multiplex line:

- The vehicle identification number.
- If entered by customer services: the customer's contact details.
- The total vehicle mileage.
- The fuel level.
- The mileage before oil service.

The UCH sends this information to the key under the following conditions:

- Every time the vehicle is started.
- Every time the vehicle speed drops below **3 mph (5 km/h)** and if **1 mile (2 km)** have been travelled since the last record.

Replacing the computer

After the injection computer or UCH has been replaced, program the immobiliser code into the new computer (see 87B, **Passenger compartment connection unit, Configuration and programming**).

Equipment required	
Diagnostic tool	Clip

Access/Safety function configurations in the UCH

– Individual configuration available using the **diagnostic tool**, and the associated configuration should be read

Configuration	Configuration reading	Name of configuration	Option
CF009	LC003	Deadlocking	WITH/WITHOUT
-	LC089	Memory key function	WITH/WITHOUT
CF108	LC040	"Renault Anti-Intruder Device"	WITH/WITHOUT
CF009	LC003	"Deadlocking"	WITH/WITHOUT
CF192	LC093	"Central door locking"	WITH/WITHOUT
CF195	LC097	"Type of key"	STANDARD/RF*
CF229	LC126	"Alarm"	WITH/WITHOUT
CF031	-	"Calibration"	-
CF173	LC070	"One-touch window(s)/SR"	WITH/WITHOUT

Note:

If configuration **LC089 "Memory key function"** is **WITH** and if status **ET407 "Memory key"** is **YES**, the UCH allows the vehicle information stored in the key to be used.

Procedure to follow for modifying these configurations

- establish dialogue with the computer corresponding to the desired configuration.
- select the **"repair mode"** menu,
- select the **"enter configuration"** menu,
- select the line corresponding to the configuration to be modified,
- in the drop-down menu, select the line corresponding to the vehicle equipment level or to the customer selection and click on **"confirm"**,
- In the **"Read configuration"** menu, check that the configuration has been completed.

SR.*: Sunroof

*RF: radio frequency

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: ACCESS

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	1	Tailgate	ET061: Open tailgate request	PRESENT ABSENT	In the event of a fault, apply the interpretation of status ET061 (see 87B, UCH).
	2		ET463: Door(s) or tailgate	OPEN CLOSED	In the event of a fault, apply the interpretation of status ET463 (see 87B, UCH).
	3	Locking/unlocking button	ET186: Short press on door closing button	Signal can be interpreted if the ignition is switched off (key removed from the ignition switch). ACTIVE INACTIVE	In the event of a fault, refer to the interpretation of status ET186 (see 87B, UCH).
	4		ET189: Long press on door opening button	Signal can be interpreted if the ignition is switched off (key removed from the ignition switch). ACTIVE INACTIVE	In the event of a fault, refer to the interpretation of status ET189 (see 87B, UCH).
	5	Electric central locking button	ET044: Central Locking button	PRESSED RELEASED	In the event of a fault, refer to the interpretation of status ET044 (see 87B, UCH).
	6	One-touch window/SR*	ET087: One-touch window/SR* authorisation	PRESENT ABSENT	In the event of a fault, apply the interpretation of status ET087 (see 87B, UCH).

SR.*: Sunroof

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: ACCESS (CONTINUED)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	7	Locking command	AC004: Central door locking	This command is used to test whether central door locking is working	In the event of a fault, refer to the procedure for command AC004 (see 87B, UCH) .
	8	Deadlocking control	AC035: Deadlocking	This command is used to test whether the deadlocking is working if the vehicle is configured "WITH" deadlocking.	In the event of a fault, refer to the procedure for command AC035 (see 87B, Passenger compartment connection unit) .
	9		AC005: Central door unlocking	This command is used to test whether the 4 doors, tailgate and fuel filler flap unlocking function is operating correctly.	In the event of a fault, refer to the procedure for command AC005 (see 87B, Passenger compartment connection unit) .
	10	Tailgate opening control	AC061: Tailgate opening	This command is used to test whether the tailgate opening motor is working.	In the event of a fault, refer to the procedure for command AC061 (see 87B, Passenger compartment connection unit) .

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: PROTECTION

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	1	Engine immobiliser	ET046: Engine immobiliser	INACTIVE = Vehicle unprotected, ready to start. ACTIVE = Vehicle protected, starting impossible.	In the event of a fault, refer to the interpretation of status ET046 (see 87B, Passenger compartment connection unit).
	2		ET008: blank UCH	YES = If the UCH is blank. NO = if the UCH has been programmed with an immobiliser code.	In the event of a fault, refer to the interpretation of status ET008 (see 87B, Passenger compartment connection unit).
	3	Key	ET185: Key code received	YES = If the UCH has received the immobiliser code from the key. NO = If the UCH does not receive the immobiliser code from the key.	In the event of a fault, refer to the interpretation of status ET185 (see 87B, Passenger compartment connection unit).
	4		ET181: Key allocated to the vehicle	YES = The key is allocated to the vehicle. NO = The key is not allocated to the vehicle.	In the event of a fault, refer to the interpretation of status ET181 (see 87B, Passenger compartment connection unit).

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: PROTECTION (CONTINUED 1)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	5	Key	ET045: Radiofrequency signal received	YES = When the UCH receives a radiofrequency signal. NO = When the UCH does not receive a Radiofrequency signal.	In the event of a fault, refer to the interpretation of status ET045 (see 87B, Passenger compartment connection unit).
	6		ET193: Radiofrequency signal from a key allocated to the vehicle	PRESENT = Reception of a radiofrequency signal from a key allocated to the vehicle. ABSENT = No reception of frequency signal or reception of frequency signal from a key not allocated to the vehicle.	In the event of a fault, refer to the interpretation of status ET193 (see 87B, Passenger compartment connection unit).
	7		ET240: Key frequency (in MHz)	433 NONE	If " NONE ", check that there is a radiofrequency key by trying with another key (see 87B, Passenger compartment connection unit).
	8		PR056: Number of keys allocated	X key(s)	In the event of a fault, refer to the interpretation of PR056 (see 87B, Passenger compartment connection unit).

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: PROTECTION (CONTINUED 2)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	9	Injection	ET229: Injection immobiliser code	PROGRAMMED NOT PROGRAMMED UNDETERMINED	In the event of a fault, refer to the interpretation of status ET229 (see 87B, Passenger compartment connection unit).
	10		ET250: Injection	NOT PROTECTED PROTECTED	In the event of a fault, refer to the interpretation of status ET250 (see 17B, Petrol injection, Conformity check, Protection) (see 13B, Diesel injection, Conformity check, Protection) (see 87B, Passenger compartment connection unit).
	11	Starter actuator	ET239: Ignition switch position	INACTIVE + ACCESSORIES + after ignition feed. + START FEED	In the event of a fault, refer to the interpretation of status ET239 (see 87B, Passenger compartment connection unit).

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: PROTECTION (CONTINUED 3)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
Diesel Injection (see 13B, Diesel Injection)	1	Computer + after ignition feed	ET001: Computer + after ignition feed	<p style="text-align: center;">PRESENT</p> <p>Indicates + after ignition computer feed.</p> <p style="text-align: center;">PRESENT/ABSENT</p>	In the event of a fault, use the interpretation of faults DF047 "Computer feed voltage" and DF015 "Main relay control circuit" .
	2	Engine immobiliser	ET003: Engine immobiliser	<p style="text-align: center;">INACTIVE</p> <p>- INACTIVE: The injection computer has recognised the immobiliser code transmitted by the UCH.</p> <p>- ACTIVE: The injection computer has not recognised the immobiliser code transmitted by the UCH.</p>	If ACTIVE , use the " help " for ET003 on the tool.
	3	Code programmed	ET006: Code programmed	<p style="text-align: center;">YES</p> <p>States whether the immobiliser code has been programmed by the computer or not.</p> <p>YES: Code programmed</p> <p>NO: Code not programmed into the injection computer</p>	If NO , test the multiplex network.
	4	Starting	ET076: Starting	<p style="text-align: center;">AUTHORISED</p> <p>Indicates whether or not starting has been authorised by the injection</p> <p>AUTHORISED: injection authorises starting.</p> <p>PROHIBITED: Injection does not authorise starting</p>	If PROHIBITED , carry out a complete fault finding procedure on the preheating system.

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: PROTECTION (CONTINUED 4)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
Petrol Injection (see 17B, Petrol Injection)	1	Computer + after ignition feed	ET001: Computer + after ignition feed	<p style="text-align: center;">PRESENT</p> <p style="text-align: center;">Indicates + after ignition computer feed. PRESENT/ABSENT</p>	<p>In the event of a fault, use the interpretation of faults DF047 "Computer feed voltage" and DF015 "Main relay control circuit".</p>
	2	Engine immobiliser	ET003: Engine immobiliser	<p style="text-align: center;">INACTIVE</p> <p style="text-align: center;">- INACTIVE: The injection computer has recognised the immobiliser code transmitted by the UCH. - ACTIVE: The injection computer has not recognised the immobiliser code transmitted by the UCH.</p>	<p>If ACTIVE, use "the help" for ET003 on the tool.</p>
	3	Code programmed	ET341: Immobiliser code programmed	<p style="text-align: center;">YES</p> <p style="text-align: center;">States whether the immobiliser code has been programmed by the computer or not. YES: Code programmed NO: Code not programmed into the injection computer</p>	<p>In the event of a fault, refer to the interpretation of status ET341 "Immobiliser code programmed".</p>
	4	Starting	ET076: Starting	<p style="text-align: center;">AUTHORISED</p> <p style="text-align: center;">Indicates whether or not starting has been authorised by the injection AUTHORISED: injection authorises starting. PROHIBITED: Injection does not authorise starting</p>	<p>If PROHIBITED, carry out a complete fault finding procedure on the preheating system.</p>

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: STARTING

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	1	Engine	ET239: Ignition switch position	INACTIVE + ACCESSORIES + after ignition feed. + START FEED	In the event of a fault, refer to the interpretation of status ET239 (see 87B, Passenger compartment connection unit). And (see 17B, Petrol Injection, Conformity check, Protection) (see 13B, Diesel Injection, Conformity check, Protection).
	2		ET142: Engine operating phase	STOPPED STARTING RUNNING STALLED	In the event of a fault, refer to the interpretation of status ET142 (see 87B, Passenger compartment connection unit). And (see 17B, Petrol Injection, Conformity check, Protection) (see 13B, Diesel Injection, Conformity check, Protection).
	3		PR025: Engine speed	0 rpm	In the event of a fault, carry out a fault finding on the multiplex network (see 88B). And (see 17B, Petrol Injection, Conformity check, Protection) (see 13B, Diesel Injection, Conformity check, Protection).

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: STARTING (CONTINUED):1

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
Diesel Injection (see 13B, Diesel Injection)	1	Engine	ET038: Engine	- NOT RUNNING - RUNNING	NONE
	2	Starting	ET076: Starting	AUTHORISED Indicates whether or not starting has been authorised by the injection AUTHORISED: injection authorises starting. PROHIBITED: Injection does not authorise starting	If PROHIBITED , carry out a complete fault finding procedure on the preheating system.
	3	Airbag	ET077: Impact detected	NO YES (impact stored by the injection computer).	If ET077 is YES : Switch off the ignition for 10 seconds , then switch it back on, so the engine can be restarted. Then clear any faults.

ACCESS/SAFETY

Fault finding - Conformity check

82D

NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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SUB-FUNCTION: STARTING (CONTINUED 2)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
Petrol Injection (see 17B, Petrol Injection)	1	Engine	ET038: Engine	– NOT RUNNING – RUNNING	NONE
	2		ET048: Actuator relay control	– ACTIVE – INACTIVE	In the event of a fault, consult the interpretation of status ET048 "Actuator control relay".
	3	Starting	ET076: Starting	AUTHORISED Indicates whether or not starting has been authorised by the injection AUTHORISED: injection authorises starting. PROHIBITED: Injection does not authorise starting	If PROHIBITED , carry out a complete fault finding procedure on the preheating system.
	4	Airbag	ET077: Impact detected	NO YES (impact stored by the injection computer).	If ET077 is YES : Switch off the ignition for 10 seconds , then switch it back on, so the engine can be restarted. Then clear any faults.

ACCESS/SAFETY

Fault finding - Customer complaints

82D

NOTES

Only consult these customer complaints after a complete check with the diagnostic tool.

ACCESS

82D

FAULT WITH LOCKING AND UNLOCKING WITH THE RADIOFREQUENCY KEY CONTROL

ALP 20

TAILGATE OPENING PROBLEM

ALP 21

CENTRAL LOCKING/UNLOCKING FAULT ON ONE OR MORE DOOR(S)

ALP 22

RENAULT ANTI-INTRUDER DEVICE FUNCTION FAULT

ALP 23

OPENING FROM THE INSIDE NOT POSSIBLE

ALP 24

PROTECTION - STARTING

82D

STARTING PROTECTION (VEHICLE DOES NOT START WHEN IGNITION KEY TURNED)

ALP 25

ACCESS/SAFETY

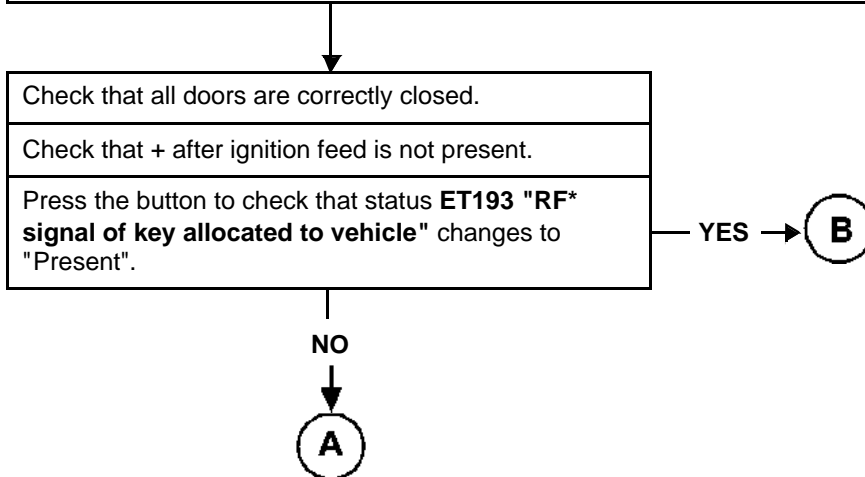
Fault finding - Fault Finding Chart

82D

ALP 20	Fault locking and unlocking with the radio frequency key switch
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>In particular, check the operation of statuses ET186 "Short press on door closing button", ET189 "Short press on door opening button", ET045 "RF* signal received", ET181 "Key allocated to vehicle", ET240 "Key frequency (in MHz)", ET044 "CPE* button", ET463 "Door(s) or tailgate" and commands AC004 "Central door locking" and AC005 "Central door unlocking".</p> <p>Check the following conformities: CF009 "Deadlocking" with LC003 "Deadlocking" (depending on equipment). CF108 "Renault Anti-Intruder Device" with LC040 "Renault Anti-Intruder Device". CF192 Central door locking with LC093 Central door locking. CF195 "Type of key" with LC097 "Type of key" is "Standard".</p>
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Check the correct operation of status **ET463 "Door(s) or tailgate"**.



*RF: radio frequency

*CPE: Electric central door locking

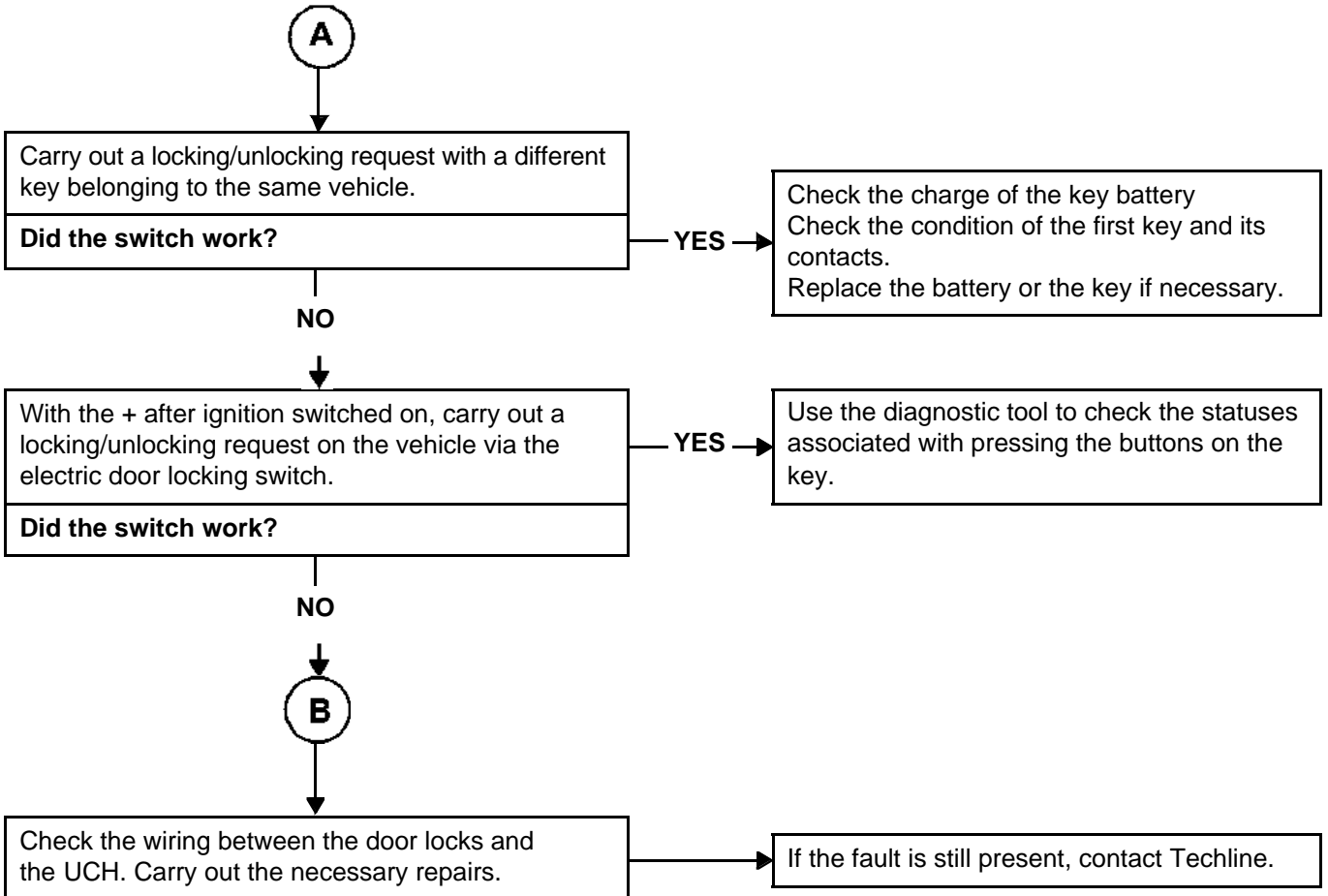
AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 20 CONTINUED	
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AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ACCESS/SAFETY

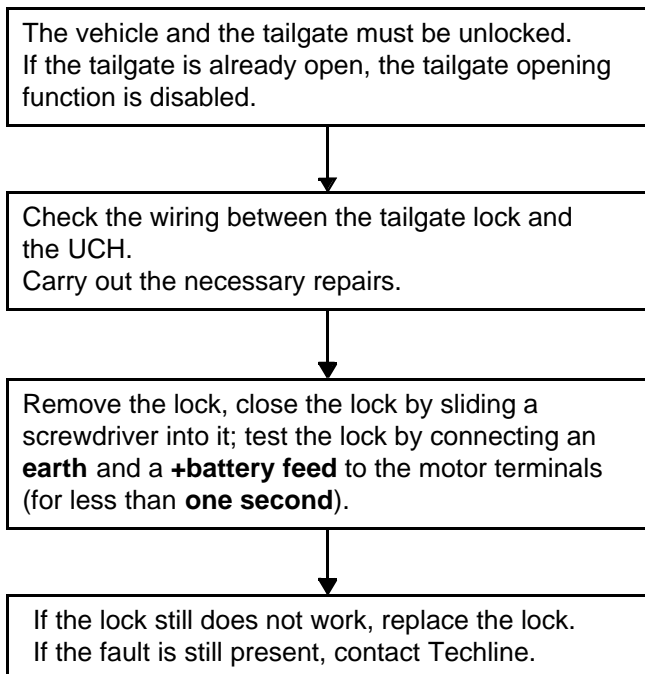
Fault finding - Fault Finding Chart

82D

ALP 21	Tailgate opening fault
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>In particular, check the operation of statuses ET463 "Door(s) or tailgate", ET157 "Tailgate opening request" and command AC061 "Tailgate opening".</p> <p>Check the following conformities:</p> <p>CF009 Deadlocking with LC003 Deadlocking.</p> <p>CF108 "Renault Anti-Intruder Device" with LC040 "Renault Anti-Intruder Device".</p> <p>CF192 Central door locking with LC093 Central door locking.</p> <p>Check that DF133 "Deadlocking motor(s) circuit" is not present.</p>
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Vehicle which is equipped with deadlocking function:



AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 21 CONTINUED 1	
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Vehicle which is not equipped with deadlocking function:

<p>Check the following conformity: CF192 Central door locking with LC093 Central door locking.</p>		
<p>Check that fuses F14 (20 A) are sound and correctly fitted in the passenger compartment fuse and relay box (for vehicles equipped with deadlocking function). Replace the fuse if necessary.</p>		
<p>Check the condition and connection of the PE1, PE2 and PE3 connectors of the UCH (tabs bent, broken, oxidised etc.). If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>		
<p>Check the condition and connection of the electric central door locking connectors for the driver's and passenger's doors and the tailgate (tabs bent, oxidised, bent etc.). If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>		
<p>Lock component 1391 to check the status of the signal on the following connections using an oscilloscope (refer to test 1 "Central door locking" (See 87B, Passenger compartment connection unit, test 1)).</p>		
<p>Tailgate locks:</p>		
<p>Oscilloscope red test pin on connection 20S of component 1322</p>	<p>—————▶</p>	<p>Oscilloscope black test pin on connection MHY of component 1322</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>		

AFTER REPAIR	<p>Carry out a complete check with the diagnostic tool.</p>
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 21 CONTINUED 2

Checking the tailgate electric central locking function:

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

Tailgate lock:

- Connection code **20S** between components **1322** or **645**.
- Connection code **86H** between components **1322** or **645**.
- Connection code **MYH** between component **1322** and earth **MYH**.

For manual gearbox:

- Connection code **86H** between components **1322**.

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

If the **feeds** and the tailgate electric central locking connections are correct, check the **tailgate switch**, the **tailgate locking switch** (with Neman) and the **central door locking/warning switch**.

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

Checking the **tailgate switch** and the **tailgate locking switch** (with Neman):

- Connection code **20WB** between components **560** and **1733**.
- Connection code **MYH** between component **560** and earth **MYH**.
- Connection code **20G** between components **1733** and **645**.

Check the **central door locking/warning** switch:

- Connection code **20AW** between components **645** and **1391**.
- Connection code **20M** between components **645** and **1391**.

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

If the connections are correct, replace the component concerned (tailgate switch, tailgate locking switch or central door locking/warning switch).

If the fault is still present, contact Techline.

AFTER REPAIR

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

ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 22	Door(s) locking/unlocking fault
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>Check the following conformities:</p> <p>CF009 Deadlocking with LC003 Deadlocking.</p> <p>CF108 "Renault Anti-Intruder Device" with LC040 "Renault Anti-Intruder Device".</p> <p>CF192 Central door locking with LC093 Central door locking.</p>
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Use commands **AC004 "Central door locking"** and **AC005 "Central door unlocking"** to confirm the fault.
Apply the fault finding procedure associated with these commands.

If the fault is still present, contact Techline.

AFTER REPAIR	Carry out another fault finding check on the system.
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ACCESS/SAFETY

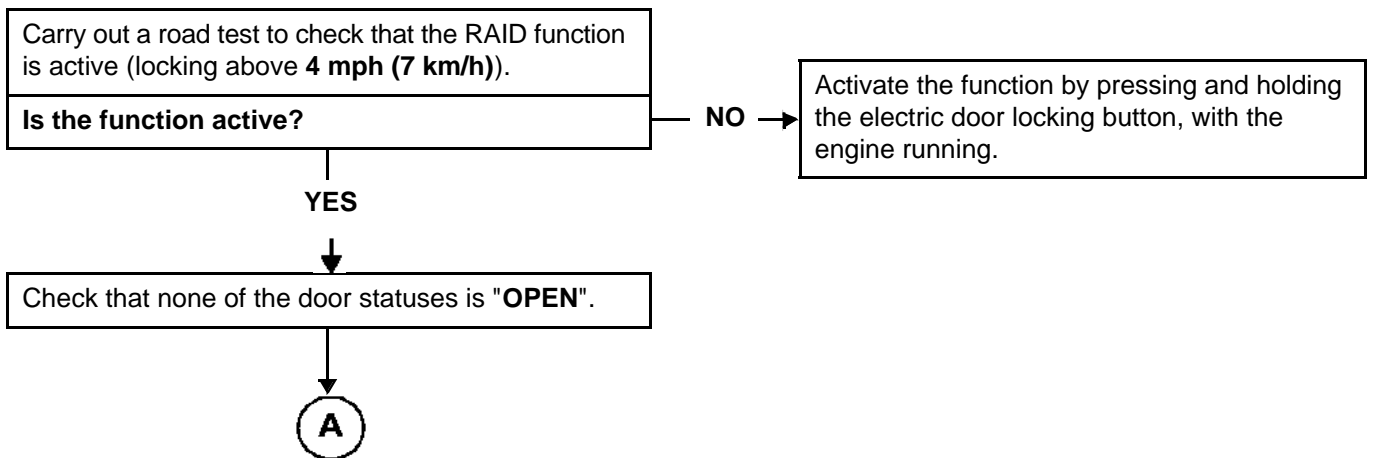
Fault finding - Fault Finding Chart

82D

ALP 23	Renault Anti-Intruder Device operating fault
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>Run a multiplex network test (see 88B, Multiplex).</p> <p>Note: When this function is activated and if all the doors are closed, the vehicle can be locked automatically when driving over speeds of 4 mph (7 km/h).</p> <p>To activate or deactivate this function, the user must press and hold the central door locking button, with the engine running.</p> <p>The function is deactivated with a single beep, and is activated with 2 beeps.</p> <p>Whenever a door is opened then closed over this limit, the UCH automatically locks the vehicle.</p> <p>The RAID function can only be performed a maximum of 5 times per trip.</p>
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Check the following conformities:
CF009 Deadlocking with LC003 Deadlocking.
CF108 "Renault Anti-Intruder Device" with LC040 "Renault Anti-Intruder Device".
CF192 Central door locking with LC093 Central door locking.



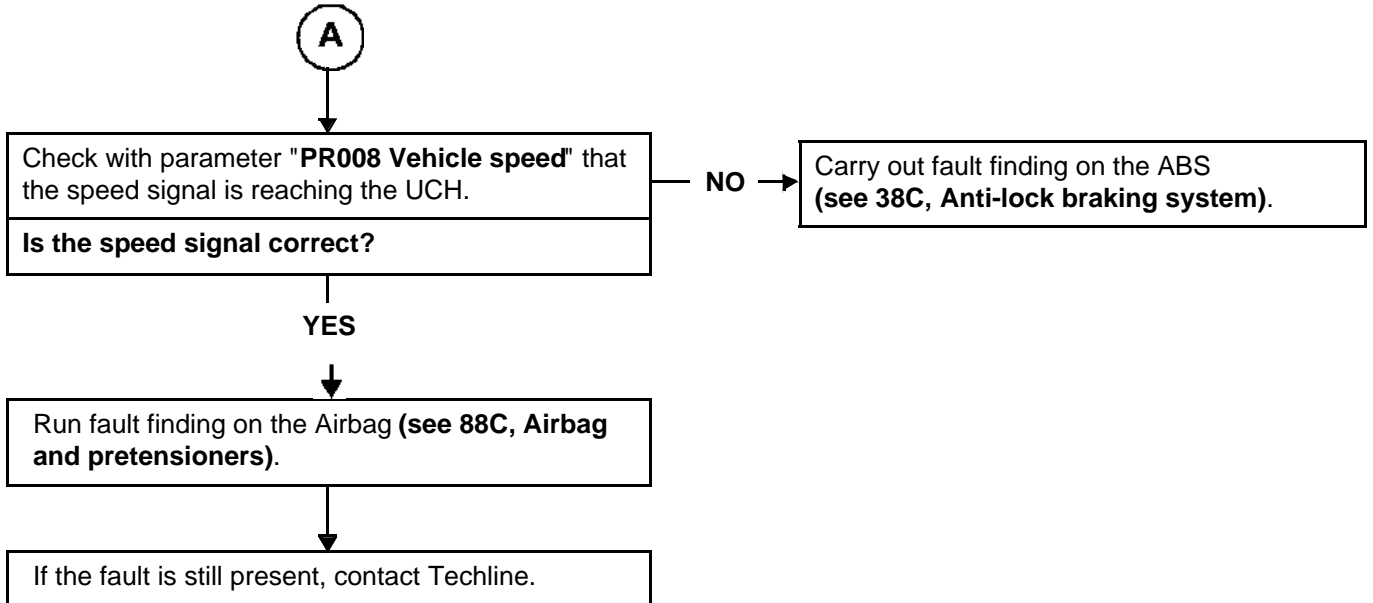
AFTER REPAIR	Carry out another fault finding check on the system.
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 23 CONTINUED	
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AFTER REPAIR	Carry out another fault finding check on the system.
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 24	Impossible to unlock the doors from inside
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool. Check command AC035 "Deadlocking". Check that DF133 "Motor(s) circuit deadlocking" is not present, or refer to the interpretation of fault DF133 "Motor(s) circuit deadlocking". Check the following conformities: CF009 Deadlocking with LC003 Deadlocking. CF108 "Renault Anti-Intruder Device" with LC040 "Renault Anti-Intruder Device". CF192 Central door locking with LC093 Central door locking. Note: if CF009 "Deadlocking" is "With" and when the radiofrequency key is pressed twice for less than 2 seconds it is normal for the vehicle to be locked from the inside and the outside. To unlock the vehicle, press the button twice for less than 2 seconds.</p>
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Check the condition of the mechanism between the interior door opening handle and the lock.
Repair if necessary.



Check the condition of the locking motors.
Replace the faulty lock.

AFTER REPAIR	Carry out another fault finding check on the system.
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 25	Starting protection (vehicle does not start when the ignition key is turned)
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NOTES	<p>Check the battery voltage and the presence of (correct) fuel in the fuel tank. Only consult this customer complaint after a complete check with the diagnostic tool. Check the operation of the following statuses and parameters in particular: ET046 Immobiliser, ET239 Ignition switch position, ET142 Engine operation phase, ET229 Injection immobiliser code and PR025 Engine speed. Carry out a full conformity check on the protection and starting sub-function.</p>
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Note:

If the user makes three consecutive attempts to start the vehicle using a key which does not belong to the vehicle, the injection computer goes into protection mode and there is no dialogue with the UCH.

Use the following procedure to bring the injection computer out of protection mode and to re-establish dialogue between the injection computer and the UCH:

- Obtain a key which belongs to the vehicle.
- Put the key in the ignition switch in the **+ After ignition** position for **20 seconds**.
- Switch off the ignition and wait for the end of powerlatch (**20 minutes**).

If the engine will not start after this operation, apply the following procedure.

Check the battery (see **80A, Battery**) and the charge circuit (see **16A, Starting-charging**).

Carry out fault finding on the multiplex network (see **88B, Multiplexing**).

Check the key using command **SC018 "Checking a key"**.

If the key is allocated, obtain a second key belonging to the vehicle and start the engine.

If the engine starts with the second key, replace the first key with a new key and allocate the new key to the vehicle using command **SC015 "Key allocation"**.

Carry out fault finding on the multiplex network (see **88B, Multiplexing**).

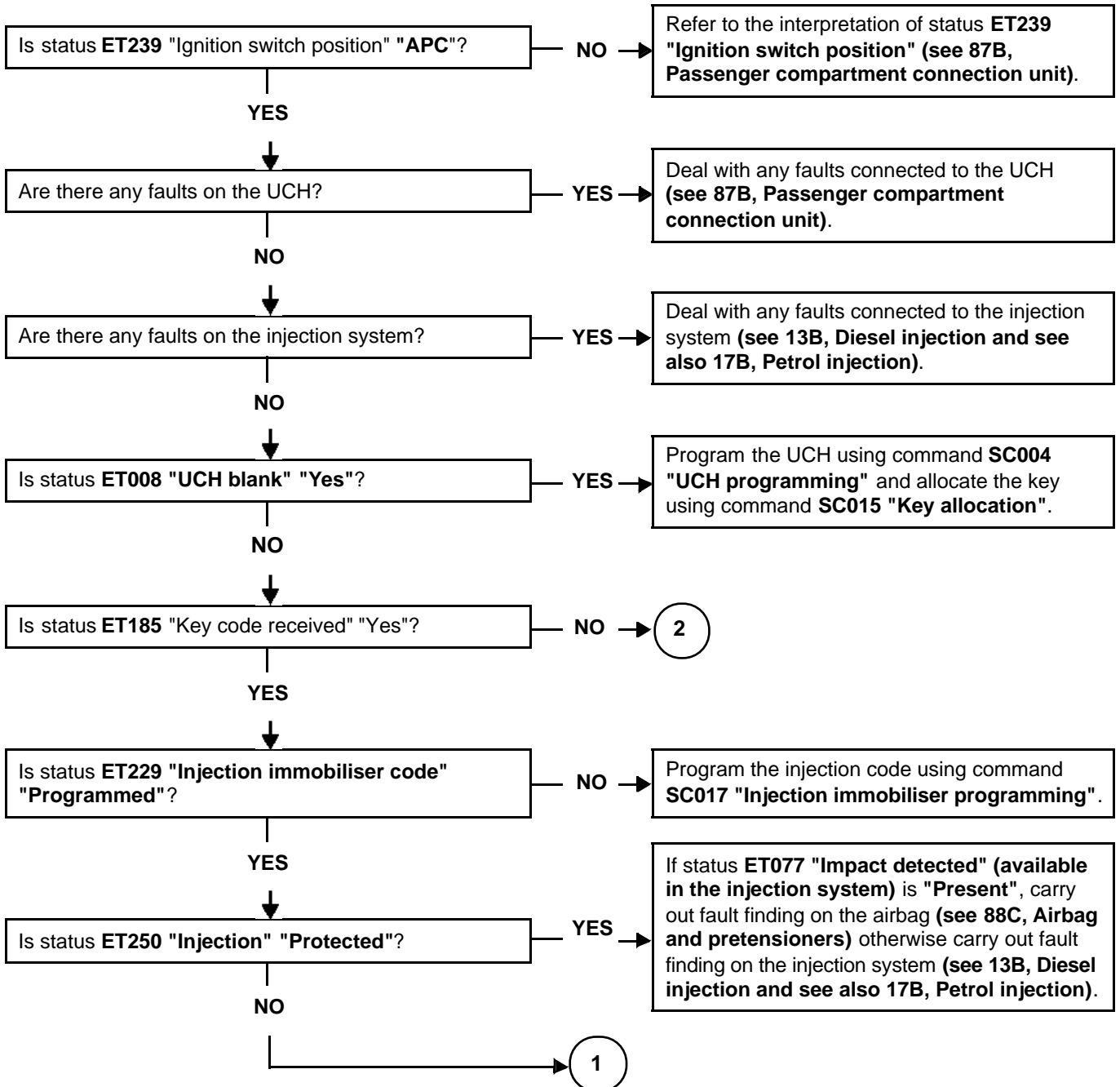
AFTER REPAIR	Carry out another fault finding check on the system.
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ACCESS/SAFETY

Fault finding - Fault Finding Chart

82D

ALP 25 CONTINUED 1	
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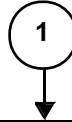
AFTER REPAIR	Carry out another fault finding check on the system.
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ACCESS/SAFETY

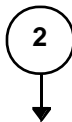
Fault finding - Fault Finding Chart

82D

ALP 25 CONTINUED 2	
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Carry out complete fault finding of the injection system (see 13B, Diesel injection and see also 17B, Petrol injection) (See MR 411 Mechanical systems, 13A, Fuel supply) (see MR 411 Mechanical systems, 13C, Preheating) (See MR 411 Mechanical systems, Ignition).
If the fault is still present, contact Techline.



Check that there are no powerful electromagnetic wave sources (CB (Citizen Band), mobile phone in close proximity to the transponder ring). Switch the ignition off and then on again.
Check that fuse F8 (15 A) is sound and fitted in the passenger compartment fuse and relay box. Replace the fuse if necessary.
Check the condition and connection of the transponder ring 4-track connector (bent, oxidised, broken tabs). Repair if necessary.
Check that the earth on connection NAM of the transponder aerial connector is perfect. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check for + after ignition feed on connection AP43 of the transponder aerial connector. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check the condition and connection of the 40-track UCH connector PE1 (tabs bent, broken, oxidised, etc.). Repair if necessary.
Check the insulation, continuity and absence of interference resistance of the following connections: <ul style="list-style-type: none"> ● Connection code 80Y between components 1618 and 645. ● Connection code 80X between components 1618 and 645. ● Connection code AP43 between components 1618 and 1016. If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the connections are correct but the fault is still present, replace the transponder ring.

AFTER REPAIR	Carry out another fault finding check on the system.
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