



Twingo

Type

S/Section

C06 X

87

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87 CENTRAL LOCKING WHEN MOVING AND RADIO FREQUENCY

Other sub-section concerned:

88

- Engine: XXX
- Gearbox: XXX

Basic manual: NT 3022A

From now on the phase II Twingo will be equipped with an automatic locking system for when the vehicle is moving and with new dual-function key heads allowing the immobiliser to be controlled by a key recognition system (key-operated immobiliser) and the locking and unlocking of the doors to be controlled by radio frequency remote control unit.

This note describes the automatic doors locking system for when the vehicle is moving and the features of the radio frequency remote control unit.

For the key-operated immobiliser system, see Section 82 of Technical Note 3022A, which is now identical to that relating to vehicles without remote control.

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

The methods 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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ELECTRICAL ASSISTANCE EQUIPMENT

Automatic locking when vehicle is moving

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GENERAL

This device is driven by the decoder unit.

If the system is activated, it automatically locks the doors of the vehicle once it exceeds a speed of around **8 km/h**.

This function may be activated or deactivated by the client (with ignition on) by pressing the central locking/unlocking button and keeping pressed for approx. **5 seconds** (until the doors lock and unlock).

Once they have been locked by the system, the doors may be opened as follows:

- when the driver or passenger opens a front door from the inside, the doors of the vehicle are unlocked automatically,
- the doors may be unlocked by means of the central locking button.

Once the speed reaches **8 km/h** again, the doors will re-lock automatically.

in the case of accident, a security device will automatically unlock the doors and activate the vehicle's hazard lights.

DESCRIPTION

In order to function, this system uses:

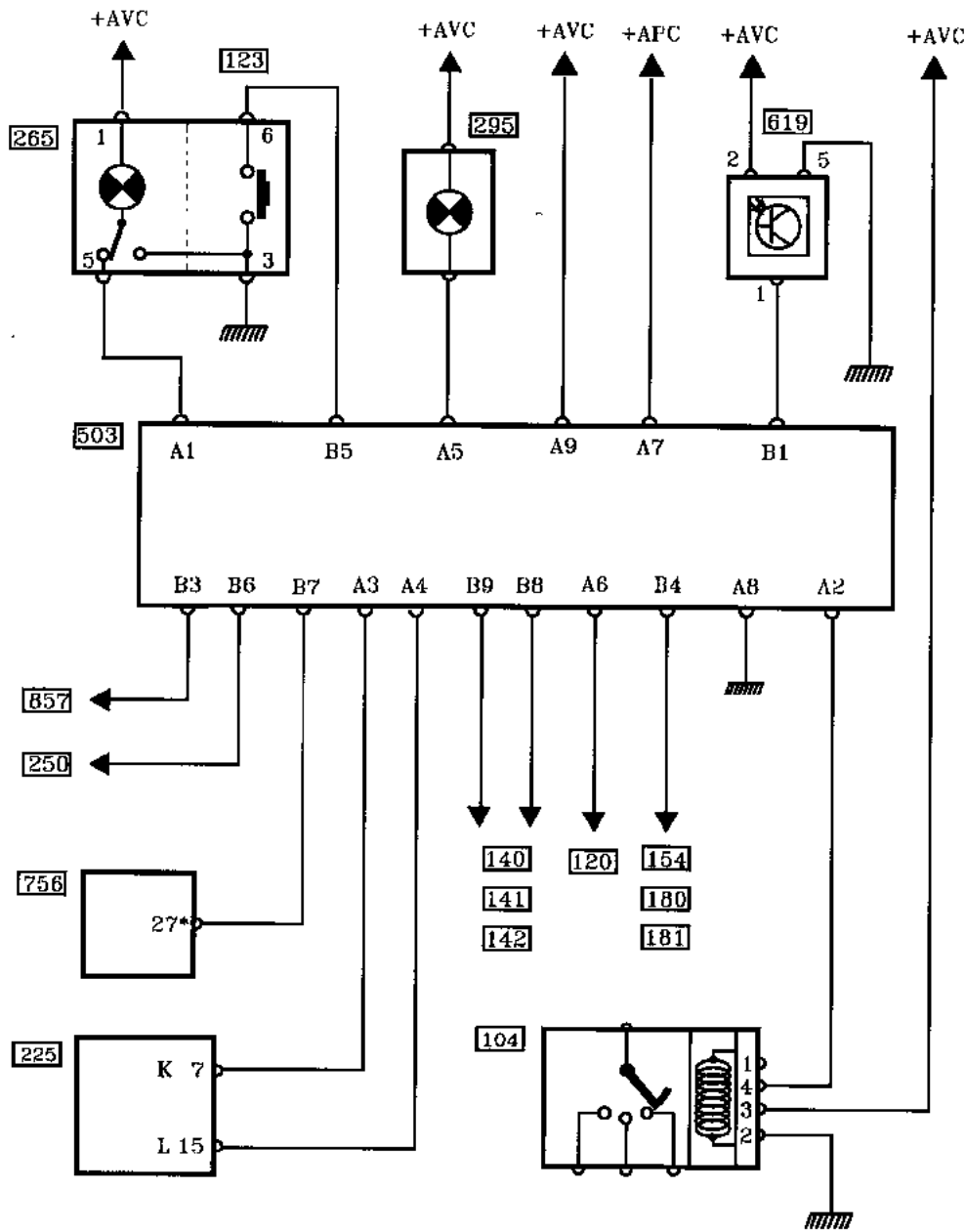
- the vehicle speed information, to lock the doors automatically once the threshold of **8 km/h** has been reached,
- the "impact" information provided by the "airbags/pretensioners" electronic unit, to unlock the doors in the case of accident.

ELECTRICAL ASSISTANCE EQUIPMENT

Automatic locking when vehicle is moving

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DIAGRAM



PARTS LIST

104	Immobiliser ring
120	Injection computer
123	Door locking/unlocking button
140	Driver's door locking/unlocking motor
141	Passenger's door locking/unlocking motor
142	Luggage compartment door locking/unlocking motor
154	Luggage compartment door switch
180	Driver's door switch
181	Passenger's door switch
225	Diagnostic socket
250	Vehicle speed sensor
265	Front courtesy light
295	Warning lights terminal block
503	Decoder unit
619	Radio frequency receiver
756	Airbag computer
857	Hazard lights relay

GENERAL

These vehicles may now be equipped with a remote control of "**radio frequency**" type for locking the doors.

The radio frequency code transmitted to the decoder unit is a rolling code in order to avoid possible copying.

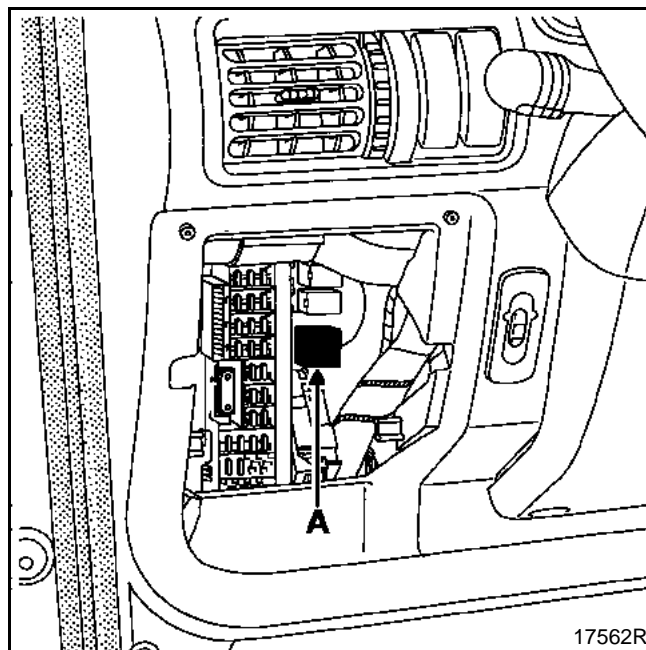
When a transmitter is replaced it will therefore be necessary to resynchronise it so that the transmitters are returned to phase with the decoder unit.

This remote control is only used for locking and unlocking the doors; it does not have any effect on the immobiliser (for the immobiliser function see Section **82** of Technical Note **3022A**).

IMPORTANT: this system cannot operate with three remote controls (the decoder unit can only manage two different rolling codes).

Features of this new system

- The central door locking button is blocked once the doors have been locked by the remote control.
- The locking of the doors by remote control may be detected visually by two flashes of the hazard lights (provided all the doors are closed properly). If one or more of the doors are not closed properly, the hazard lights remain off after remote control locking.
The unlocking of the doors may be detected visually by a flash of the hazard lights. A specific relay (A) is fitted to the side of the fuse board to support this function.



- Automatic relocking of the doors (according to the programming of the decoder unit)

If the doors are unlocked but none of the doors is opened within the next **30 seconds**, the system will automatically relock the doors of the vehicle (without the hazard lights flashing).

This function may be activated or deactivated using the diagnostic tools (other than XR25), selecting the appropriate configuration sequence

IDENTIFICATION OF THIS SYSTEM

This system may be identified by:

- The remote control key head (no longer has an infrared emitter diode).
- The absence of the infrared receiver (located on the courtesy light console).
- The flashing of the hazard lights after locking (with all doors closed) or unlocking of the doors.

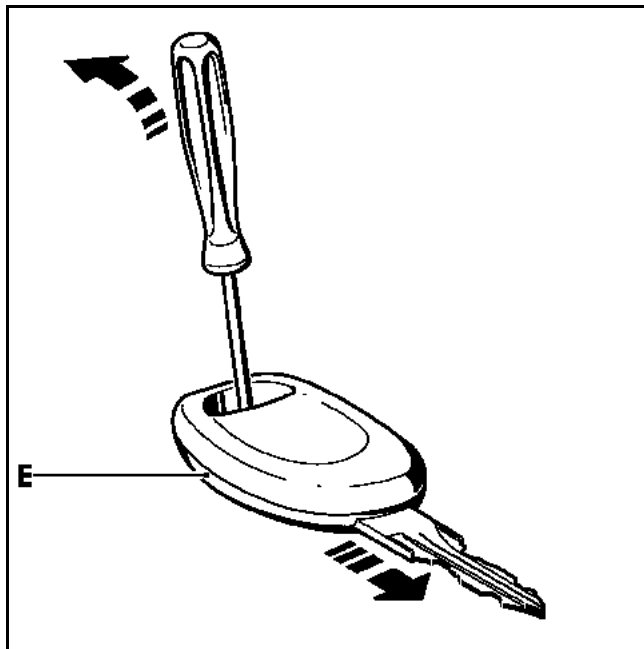
NOTE: the identification number of the key heads equipped with an immobiliser always consists of eight characters beginning with the letter **E**.

THE TRANSMITTER

Opening a key head

Place the key head on a table with the metal insert facing downwards.

Use a small screwdriver as a lever as shown below, ensuring that the end of the screwdriver is placed on the lower section (E) of the key head. This allows the upper section to slide off the lower section.



NOTE: To remove the metal insert, move the retaining tab aside before removing it. When refitting, check the insert is correctly clipped into position.

NOTE: the electronics for the immobiliser are incorporated into the remote control printed circuit.

Radio frequency remote control

Replacing or adding a remote control without replacing the decoder unit.

Order a replacement key head using the number in one of the old key heads or on the label usually attached to the keys when the vehicle is delivered (eight alphanumeric characters beginning with the letter E).

If a key is being added or has been lost, remember to order the insert with the key number.

Carry out the specific resynchronisation procedure described below using the diagnostic tool.

This procedure resets the remote control into sequence with the decoder unit (rolling code) and should only be used if the decoder unit is not being replaced.

Procedure using XR25 diagnostic tool (form n° 56)

1. Ignition off, connect the **XR25** (ISO selector on **S8**, code **D56**).
2. Select command mode **G32***.

From this moment, the operator has **10 seconds** to carry out the next operation.

NOTE: The **10 seconds** are shown by the illumination of the red immobiliser warning light and bargraph **17 LH** on the **XR25**.

3. Press the remote control once (the doors lock and unlock and the red warning light extinguishes).
4. The procedure is complete - check that the doors lock correctly.

Procedure using diagnostic tools other than XR25

1. With ignition off, select menu "**Diag**".
2. Select and confirm vehicle type (Twingo)
3. Select and confirm system for diagnosis, "**Immobiliser**".
4. Select the "**command**" menu.
5. Select and confirm the "**Control actuator**" function then sequence **32** (programming of 2nd key).

From this moment, the operator has **10 seconds** to carry out the next operation.

NOTE: the 10 seconds are shown by the illumination of the red immobiliser warning light.

6. Press the remote control once (the doors lock and unlock and the red warning light extinguishes).
7. The procedure is complete - check that the doors lock correctly.

NOTE:

- When replacing a key head, resynchronisation of the second remote control (if fitted) is not always necessary. Check that the second control operates, otherwise resynchronise it.
- If both remote controls (if fitted) are desynchronised, two resynchronisation procedures will have to be carried out (one for each remote control).

Radio frequency remote control

Simple resynchronisation procedure

This procedure allows the remote controls to be reset with the decoder unit (rolling code).

This procedure is used:

- when the remote control code no longer lies within the reception range of the decoder unit (over **1 000** consecutive presses on the remote control, away from the vehicle),
- when replacing a decoder unit alone (new unit),
- when replacing a remote control if the decoder unit is new (replacing a kit).

Ignition off:

1. Press and hold the central door locking button for a few seconds until the doors lock and unlock. From this moment, the operator has **10 seconds** to carry out the next operation.

NOTE: the **10 seconds** are shown by the illumination of the red immobiliser warning light.

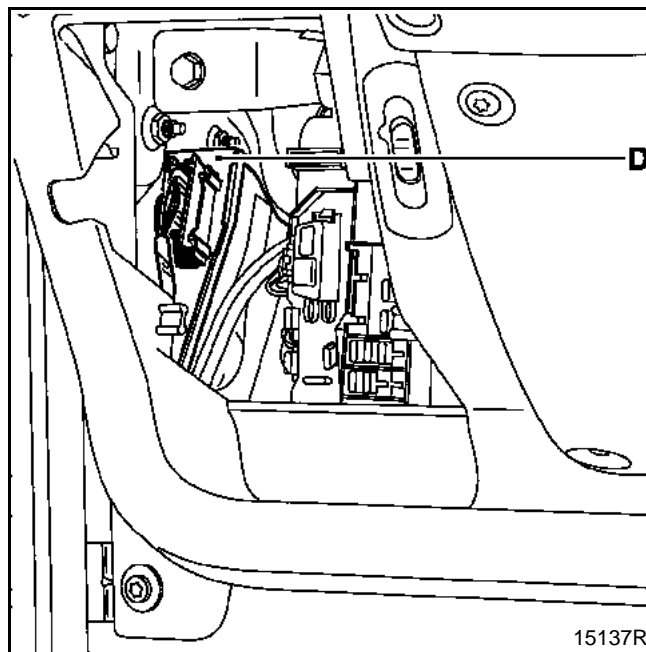
2. Press the remote control once (the doors lock and unlock and the red warning light extinguishes).

NOTE: if both remote controls (if fitted) are desynchronised, two resynchronisation procedures will have to be carried out (one for each remote control).

3. The procedure is complete - check that the doors lock correctly.

THE DECODER UNIT

The decoder unit (D) is located in the left hand side of the dashboard.



This has the following functions:

- the control of the engine immobiliser system,
- the locking / unlocking of the doors,
- the automatic locking of the doors when moving
- the courtesy light timer,
- the control of the remote control for the doors.

Removal - Refitting

Remove the driver's side glove compartment by twisting at the base, and remove the metal fixing screws of the unit.

Radio frequency remote control

Replacement

When a decoder unit is replaced it will therefore be necessary, with the aid of a diagnostic tool, to:

- check that the decoder unit is correctly configured to the radio frequency,
- carry out key programming.

ATTENTION: it will be impossible to start the engine of the vehicle until the programming of the immobiliser has been carried out (unless the injection computer or solenoid valve is not coded). See Section **82** of

Technical Note 3022A.

NOTE: the diagnostic procedure for the decoder unit may be carried out with the aid of the diagnostic tools.

NOTE: the decoder units for the recharger are usually supplied with the radio frequency already configured.

Configuration of the remote control function (if the configuration is not correct)

- **By means of the XR25 diagnostic tool** using command mode **G48*2*** (radio frequency configuration using form n° **56**).
- **Using diagnostic tools other than XR25** selecting sequence **4802** (radio frequency configuration by means of computer configuration function).

NOTE:

Configuration is effected following the programming procedure once the decoder unit receives a signal (infrared or radio frequency) which corresponds to its configuration.

The configuration may therefore not be changed without having selected and confirmed sequence 66, "**deprogramming of infrared key**" (computer configuration function), of the diagnostic tool (other than XR25).

Programming procedure:

The procedure is carried out using one key.

The diagnostic tool must be used for this procedure to lock the key programming.

- **Using XR25 diagnostic tool**

1. With ignition off, connect the **XR25** to the vehicle, set the ISO selector to **S8** and enter code **D56** (diagnostic fiche no. **56**); bargraphs **19 RH** and **19 LH** should light up (programming not carried out). If both of these bargraphs are not illuminated, replace the decoder unit (this unit has already been used).
2. With one of the keys switch the ignition on for approximately 2 seconds (without starting the engine). Bargraph **18 LH** illuminates and bargraph **19 LH** extinguishes. The red immobiliser warning light flashes.
3. Switch the ignition off and start command "**G60***" to lock the programming. The red immobiliser warning light should flash (slow flashing). Bargraphs **19 RH** and **18 LH** should be extinguished.
4. Maintain the contact for several seconds (without starting the engine) to send the code to the injection computer.
5. Check the immobiliser system operates correctly with both keys:

Ignition off, the red immobiliser warning light should flash for **10 seconds** after switching the ignition off (slow flashing). Bargraph **10 LH** should be illuminated. The vehicle should not start when other keys are used.

6. The procedure is complete. After switching the ignition off and on again (for more than **2 seconds**), check that the vehicle can be started with both keys.

• **Using a diagnostic tool (other than XR25)**

1. With ignition off, connect the tool to the vehicle, select the vehicle type and "Immobiliser" function, then check in the status menu whether bargraphs **19 RH** and **19 LH** are illuminated (programming not carried out). If both of these bargraphs are not illuminated, replace the decoder unit (this unit has already been used).

2. With one of the keys switch the ignition on for approximately 2 seconds (without starting the engine). The red immobiliser warning light flashes.

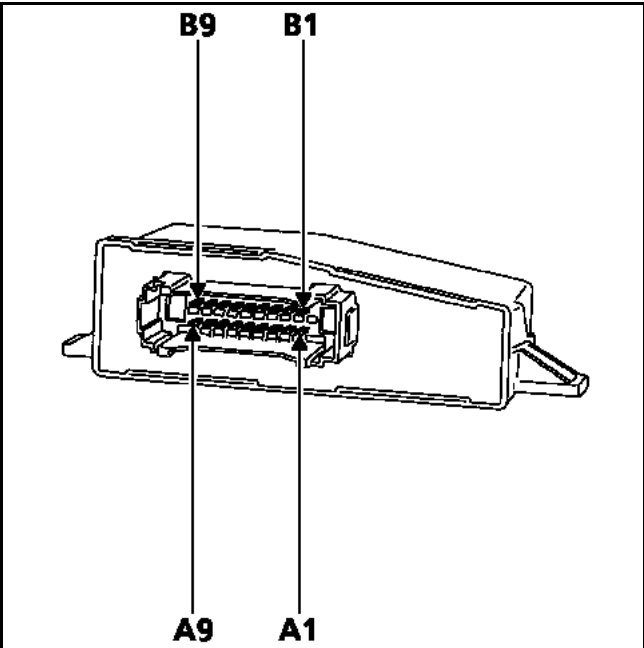
3. Switch off ignition and check sequence **60** of the "Actuator command" function of the "Command" menu to lock the programming. The red immobiliser warning light should flash (slow flashing).

4. Check the immobiliser system operates correctly with both keys:

Ignition off, the red immobiliser warning light should flash for **10 seconds** after switching the ignition off (slow flashing). The vehicle is protected.

6. The procedure is complete. After switching the ignition off and on again (for more than **2 seconds**), check that the vehicle can be started with both keys.

Connection



Track	Description
A1	Courtesy light timer
A2	Coded connection of antenna ring
A3	Diagnostic socket information (line K)
A4	Diagnostic socket information (line L)
A5	Red immobiliser warning light
A6	Coded information to injection system
A7	+ After ignition
A8	Earth
A9	+ before ignition
B1	Radio frequency entry
B2	Not in use
B3	Hazard warning lights switch
B4	Door switches
B5	Door opening/closing switch
B6	Vehicle speed information
B7	Airbag computer (impact information)
B8	Door opening
B9	Door closing

REMOTE CONTROL RECEIVER

The remote control receiver (B) is fixed in the central console behind the ashtray.

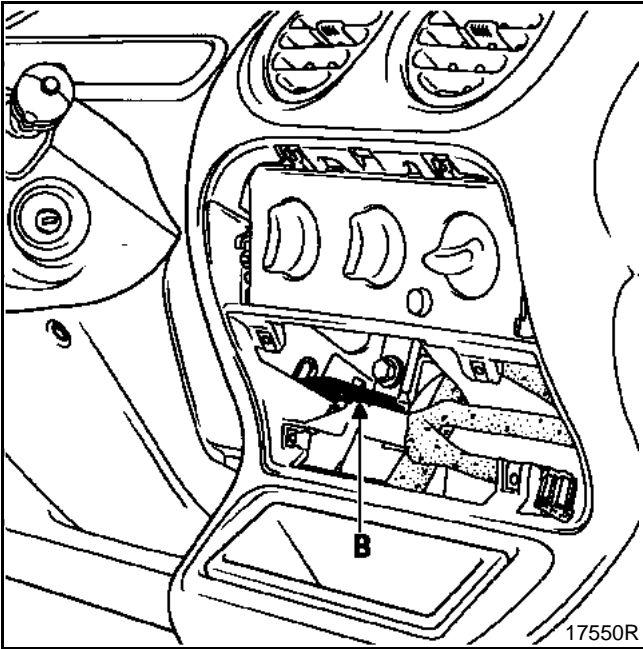
It receives the remote control code and transmits it to the decoder unit. Its function is to amplify the signal.

The receiver is replaced independently of the remote control and the decoder unit (it is not coded).

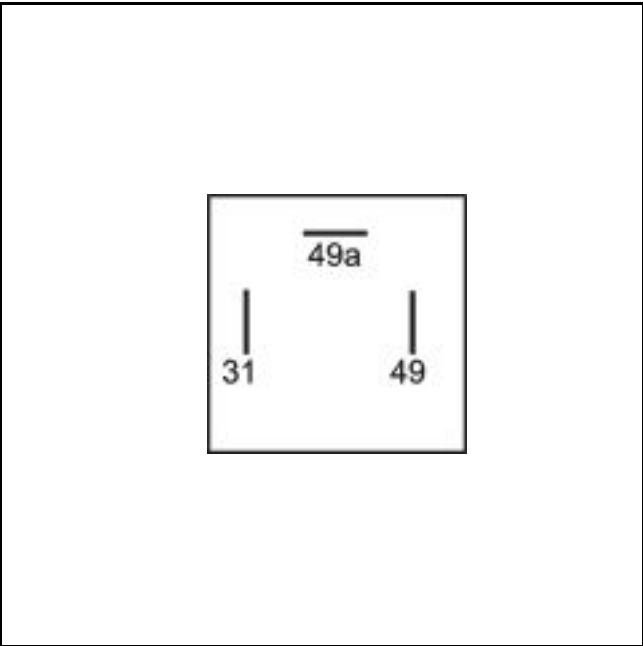
Removal - Refitting

Remove the ashtray mounting.

The radio frequency receiver is fixed to the heater unit.



Connection



Track	Description
31 (1)	Radio frequency signal
49 (2)	+ before ignition
49a (5)	Earth

NOTE: for diagram see page 87-2.