

# RENAULT

## Workshop Repair Manual

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**N.T. 2376 A**

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Basic manual : **MR 295**

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## ENGINE IMMOBILISERS

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JULY 1995

Edition anglaise

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"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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### GENERAL

The engine immobiliser system for Clio (petrol versions) is now controlled either:

- **by a PLIP with rolling infrared code** for versions fitted with electric door locking (known as PLIP engine immobiliser) which is progressively replacing the first fitting as described in N. T. 2197.

The engine immobiliser with rolling infrared code avoids copying (of the infrared code) which could lead to the theft of the vehicle.

The infrared code transmitted by one or other of the vehicle PLIPs will therefore be different each time the PLIP remote control is pressed (changing code).

The engine immobiliser may be activated either by using the PLIP to lock the doors or automatically (see conditions on page 82-4). Activation of the system is shown by the flashing of the injection warning light when the ignition is turned on.

**NOTE :** on vehicles fitted with this engine immobiliser system, it is no longer possible to lock or unlock all of the doors using the driver's door lock.

- **by a KEY recognition system** for versions without a PLIP (known as coded key immobiliser system).

A coded electronic chip (which operates without batteries) is included in each head of the vehicle keys. When the ignition is turned on, a ring around the ignition switch interrogates and captures the code emitted by the key and transmits it to the decoder unit. If the decoder unit recognises the code, the vehicle may be started. The engine immobiliser is activated a few seconds after removing the key from the ignition switch.

Activation of the system is shown by the flashing of the injection warning light when the

If there is a fault in the engine immobiliser system (PLIP or coded key), an emergency code may be entered using the button at the end of the windscreen wiper stalk, the injection warning light and the accelerator pedal.

This code is available to the Renault Dealer Network for repair purposes (contact Technical Services (UK)), depending on country, for example **DELTA Assistance** telephone 05 05 15 15 for France).

If the security code is entered, the vehicle will remain unprotected until the system is repaired. To comply with the British Insurance Industry criteria, the vehicle must not remain unprotected (UK).

**NOTE :** For reasons of confidentiality, no record of the emergency code number will be delivered with the vehicle.

### IDENTIFICATION

Vehicles fitted with these systems may be identified using the XR25:

- For vehicles fitted with the **PLIP engine immobiliser with rolling infrared code**, set the ISO selector switch to position S8, enter code D39, bargraph 2 **left hand side** should be illuminated (engine immobiliser 1).  
In addition, the infrared code identification number has 7 characters instead of 5 (number in key head).
- For vehicles fitted with the **coded key engine immobiliser**, set the ISO selector switch to position S8, enter code D38, bargraph 2 **left hand side** should be illuminated (engine immobiliser 1).

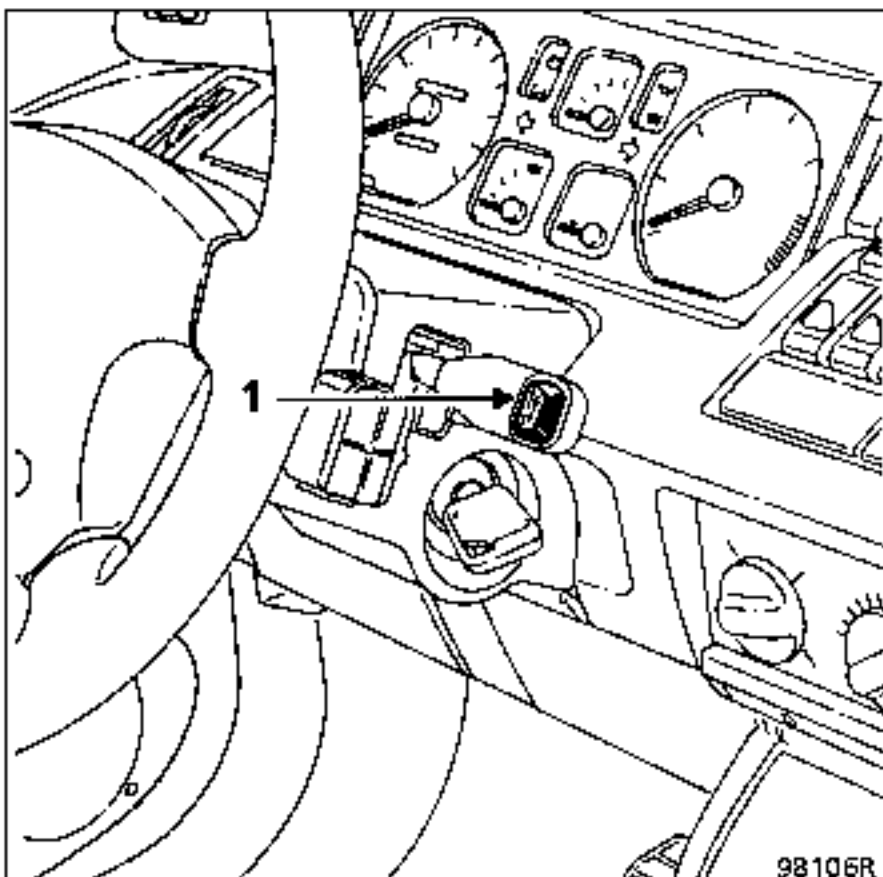
## PLIP engine immobiliser system

## DESCRIPTION OF THE PLIP ENGINE IMMOBILISER SYSTEM

For this system, the engine immobiliser may be activated either when the PLIP is used to lock the doors, or automatically.

The system comprises:

- 2 special matched PLIPs with different rolling codes.
- an injection warning light which:
  - indicates an injection fault,
  - indicates an engine immobiliser fault when the engine is running (flashes on deceleration and at idle speed),
  - shows the engine immobiliser system is active (flashes when the ignition is turned on),
  - assists in entering the emergency code.
- a button (1) at the end of the wiper stalk which is used for entering the emergency code.



- 1 specific decoder unit (2) independently controlling 2 PLIPs with different rolling codes, fitted with:

- two new connectors of 15 and 18 tracks,
- new conditions for automatic setting,
- fault finding using the XR25,
- gradual extinguishing of the courtesy lights after a set period (depending on equipment).

The following functions are ensured:

- Decoding of the infrared signal from the PLIP.
- Management of the engine immobiliser system by the sending of a code to the injection computer to authorise or prevent the vehicle from being started.
- Locking or unlocking of the doors and tailgate.
- Timed illumination of the courtesy light (depending on equipment):
  - when one of the doors is opened (without + after ignition present),
  - after the PLIP has been used to unlock the doors.

The timed period lasts for approximately 15 seconds. It starts again each time the PLIP is pressed (lock, unlock) and each time a door is opened manually.

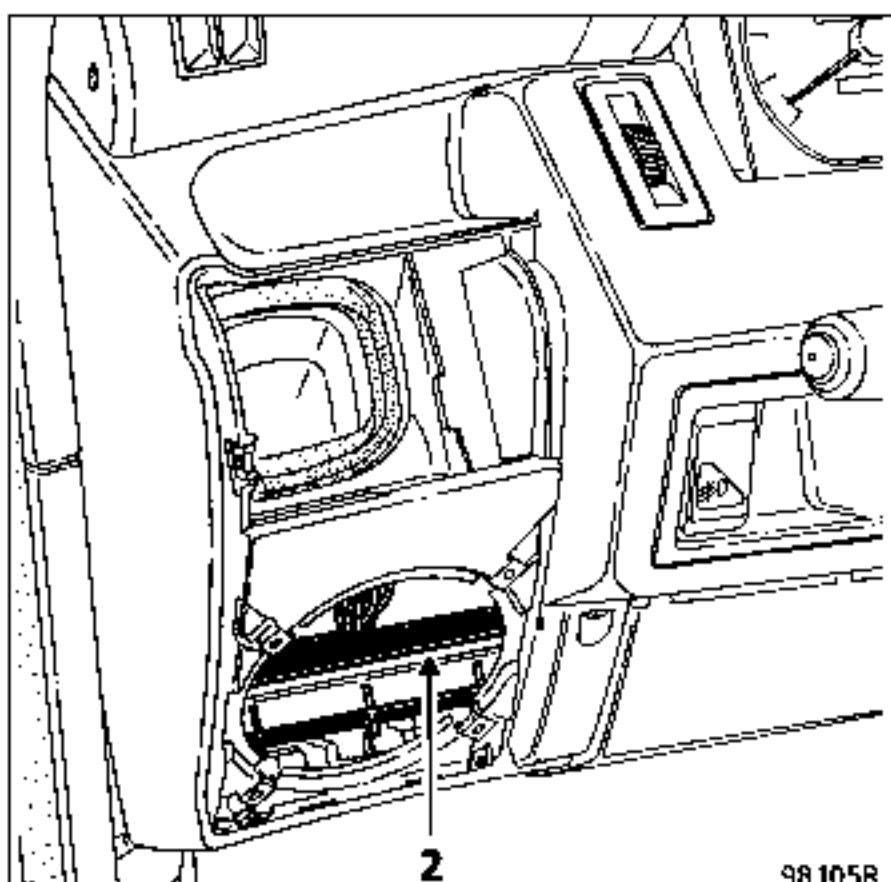
- The extinguishing of the courtesy light when + after ignition feed appears, with all doors closed, and after locking the doors using the PLIP even if a timed period is currently elapsing.

# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

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The unit is located in the dashboard behind the left hand speaker.



- a specific injection computer which may be coded.

### AUTOMATIC SETTING OF THE ENGINE IMMOBILISER SYSTEM

If the vehicle doors have not been locked using the PLIP, the engine immobiliser system will be set automatically (+ after ignition feed absent).

New conditions :

1. If, after turning the ignition off, the front doors remain closed, the engine immobiliser system will be set automatically after 10 or 30 minutes, depending on country, if + accessories or + after ignition feed has not appeared in the meantime.
2. If, after turning the ignition off, one of the front doors is opened, the engine immobiliser system will be set automatically after 10 or 30 minutes, depending on country, if + accessories or + after ignition feed has not appeared in the meantime.  
The period of 1 or 10 minutes starts, depending on country, from when one of the front doors was opened. If one of the front doors was already open when the ignition was turned off, the timed period will begin immediately.

3. The engine immobiliser system will be set automatically 10 minutes after unlocking the doors using the PLIP if + accessories or + after ignition feed has not appeared in the meantime.

### REMINDER:

- To start the vehicle after the engine immobiliser system has been set automatically, the doors must be locked then unlocked using the PLIP.
- To start the vehicle after disconnecting the battery (or cutting + before ignition feed to the decoder unit), the doors must be unlocked using the PLIP.
- Activation of the engine immobiliser system (other than automatically) is carried out by locking the doors using the PLIP.

**IMPORTANT :** if the battery charge is low, the drop in voltage caused by activation of the starter may reset the engine immobiliser.

### OPERATION

When information is received that the doors are being unlocked by the PLIP, the decoder unit (2) identifies the infrared code received (rolling code).

If the code is recognised, the system unlocks the doors and when the ignition is turned on, it sends a code to the computer via the coded line.

At this precise moment, one of several cases may arise:

- The injection computer has no reference code in its memory :
  - the code sent to it is stored in its memory
- The injection computer has a reference code in its memory:
  - the code sent to it is compared with the code in its memory.
  - if the two codes match, the computer unlocks the injection system and the engine may be started.

When the ignition is turned on, the injection warning light on the instrument panel flashes for a few seconds then remains permanently illuminated before extinguishing, showing that the system is operating correctly.

- if the two codes do not match, the computer leaves the injection system locked to prevent the engine from being started.

When the ignition is turned on, the injection warning light flashes and the vehicle may not be started.

**NOTE :** all actions on the PLIP will remain without effect if + after ignition feed is present.

### REPLACING A PLIP REMOTE CONTROL

#### The PLIP is faulty:

Order a replacement PLIP using the number in the key head (7 characters) and resynchronise the PLIPs (see resynchronisation procedure).

If the customer requires a solution immediately he could be offered a kit (decoder unit + 2 PLIPs) (see replacing a kit).

#### The PLIP has been lost:

Order a replacement PLIP using the number in the key head of the 2nd PLIP (7 characters) or on the bar code label (normally attached to the keys when the vehicle is delivered) and resynchronise the PLIPs (see resynchronisation procedure).

In this case, remember to order a new key for the replacement PLIP key head.

**NOTE :** if the key head number cannot be located (both PLIPs and bar code lost), the complete kit must be replaced (decoder unit and 2 PLIPs, plus injection computer).

**IMPORTANT:** this system cannot operate with three PLIPs (the decoder unit can only control 2 different changing codes).

### RESYNCHRONISATION PROCEDURE

This procedure must be followed when a PLIP has to be replaced or when the PLIP code is no longer within the range of the decoder unit (more than 1 000 consecutive presses on the PLIP, not received by the decoder).

This procedure realigns the 2 PLIPs with the decoder unit (rolling code).

**IMPORTANT :** so that both PLIPs are operational after a resynchronisation procedure, the operation must be carried out on both PLIPs, even if only one is faulty. Otherwise, only the PLIP present at the time of the procedure will be operational. In the case of a customer a long distance from his home, having only one PLIP, both PLIPs must be resynchronised again on his return home.

Resynchronisation requires the use of the XR25 with cassette N° 14 and the corresponding fault finding fiche N° 39 together with the emergency code number for the vehicle, which can be obtained from Technical Services in the UK or for example, Delta Assistance for France).

1. The engine immobiliser system must be operational (use the 2nd PLIP or ensure the system has been set automatically).
2. Connect the XR25 to the diagnostic socket (ISO selector on position 5B).
3. Turn the ignition on and enter code D39 on the XR25 (bargraph 10 left hand side should be illuminated).

**IMPORTANT:** if the battery has been disconnected and the doors were unable to be unlocked using the PLIP, wait for 5 minutes, ignition on, before continuing with resynchronisation.

# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

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4. Enter command mode **G40\*** and the emergency code number for the vehicle and validate using key \* (this procedure does not decode the injection computer) :
  - if the code number is correct, "bon" is displayed and bargraph 10 left hand side extinguishes,
  - if the code number is incorrect, "def" is displayed and bargraph 10 left hand side remains illuminated.

**NOTE :** 3 attempts may be made to enter the code. If the code is invalid after the 3rd attempt, you must wait for 5 minutes, ignition on, before another attempt may be made.

5. Turn the ignition off.
6. Press and hold the central door locking button for more than 2 seconds (the side is not important). The doors will lock then unlock. From this moment, the operator has 15 seconds to carry out the following two operations (7 and 8).
7. Press the first PLIP twice within 3 seconds (the doors will lock and unlock after the second press).
8. Press the second PLIP twice within 3 seconds (the doors will lock and unlock after the second press).

**IMPORTANT:** in order for the infrared code to be correctly transmitted, ensure the PLIP is pointing directly at the receiver during operations 7 and 8. If the procedure fails, the complete operation must be started again.

**REMINDER:** resynchronisation of the second PLIP should be carried out if it is available. Otherwise, the customer will have to have both PLIPs resynchronised again afterwards to ensure both are operational.

9. The procedure is complete, disconnect the XR25 and check the operation of the door locking and engine immobiliser systems.

**NOTE :** Using a PLIP during the procedure could cause the XR25 / decoder unit dialogue to be broken. In this case, enter code **D39** again after the PLIP has been used.

### REPLACING THE DECODER UNIT ALONE

A new decoder unit is not coded. Once fitted to the vehicle, the codes of both PLIPs must be programmed so that it is operational (see programming procedure).

**NOTE :** In this case, no operation is carried out on the injection computer. The computer retains the same engine immobiliser code.

**IMPORTANT :** when a decoder unit has been programmed with the PLIP code, the code cannot be erased and no other code may be memorised in its place.

### PROGRAMMING PROCEDURE

This procedure may only be carried out once by the decoder unit. As long as this procedure has not been carried out, the vehicle cannot be started (unless the injection computer is not coded).

**IMPORTANT :** for the decoder unit to authorise starting of the vehicle, the programming procedure must be carried out using the 2 PLIPs.

**NOTE :** the XR25 may be used for this procedure but is not vital.

1. The ignition must be turned off.
2. Press and hold the central door locking button for more than 2 seconds (the side is not important). The doors will lock then unlock.

From this moment, the operator has 15 seconds to carry out the following 2 operations (3 and 4) (on the XR25 bargraph **19 left hand side** illuminates for these 15 seconds).

3. Press the first PLIP twice within 3 seconds (the doors will lock and unlock after the second press).
4. Press the second PLIP twice within 3 seconds (the doors will lock and unlock after the second press).
5. The procedure is complete, check the operation of the door locking and engine immobiliser systems (bargraph **19 right hand side** must be extinguished).

**IMPORTANT:** in order for the infrared code to be correctly transmitted, ensure the PLIP is pointing directly at the receiver during operations 3 and 4. If the procedure fails, the complete operation must be started again.

### NOTE

The appearance of + after ignition feed will cause the procedure to be terminated and this is shown by unlocking of the doors. The decoder unit will then be in its initial state.

The procedure will fail if the second PLIP is identical to or incompatible with the first PLIP. This ensures that the 2 PLIPs are matched.

**NOTE :** Using a PLIP during the procedure could cause the XR25 / decoder unit dialogue to be broken. In this case, enter code **D39** again after the PLIP has been used.



### REPLACING A KIT (decoder unit plus 2 PLIPs)

If a kit is replaced it will be necessary to:

- Erase the old code in the injection computer using the emergency procedure (code number should be obtained from Technical Services in the UK or for example **DELTA Assistance** for France).
  - Programme the codes of the 2 new PLIPs in the new decoder unit (supplied uncoded) and the injection computer.
1. Remove the decoder unit to be replaced.
  2. Fit the new decoder unit.
  3. Erase the old code memorised in the injection computer using the emergency procedure and the code number corresponding to the old kit (see procedure for entering the emergency code).

**IMPORTANT** : in this case the code must be entered using the wiper stalk button (1), not the XR25.

4. Programme the codes of the 2 new PLIPs in the decoder unit (see programming procedure).
5. Programme the new code in the injection computer by turning the ignition on (the doors must be unlocked using the PLIP).
6. The procedure is complete, check the operation of the door locking and engine immobiliser systems.

### REPLACING THE INJECTION COMPUTER

The injection computer is supplied uncoded. The engine immobiliser code must be programmed in when the computer is fitted.

Carry out the following operations:

- Unlock the doors with the PLIP.
- Turn the ignition on for a few seconds.
- Lock the doors using the PLIP, the engine immobiliser function is operational.

**NOTE** : to check the operation of the system, lock the doors using the PLIP from inside the vehicle and then turn the ignition on. The injection warning light should flash and the vehicle should be prevented from being started.

### TESTING AN INJECTION COMPUTER (test part)

**IMPORTANT** : if an uncoded injection computer is being tested from stock or from another vehicle (test part), the doors **MUST** be locked using the PLIP when the computer is fitted (do not use the PLIP during the test).

If the doors are unlocked, turning the ignition on sends a coded signal from the decoder unit to the injection computer (which will then be coded).

To avoid memorising a code which could render the injection computer unusable after the test, the doors must be locked using the PLIP. A coded signal will therefore not be sent when the ignition is turned on (the computer remains uncoded).

The injection computer used for the test **MUST** have the same part number as the original computer on the vehicle (risk of damaging the test computer).

### SYSTEM FAULT, ENGINE RUNNING

If a fault in the system is noted by the injection computer when the engine is running, the injection warning light on the instrument panel will flash during deceleration and at idle speed (engine speed less than 1500 rpm).

**IMPORTANT:** In this case, after repair, the fault memorised in the injection computer must be erased to allow the engine immobiliser system to operate again.

1. Unlock the doors using the PLIP.
2. Connect the XR25 and use the fault finding fiche corresponding to the injection type for the vehicle.
3. Turn the ignition on. Ensure the ISO selector switch is in the correct position and enter the injection code on the XR25.
4. The fault bargraph for the "engine immobiliser" should be permanently illuminated. Ignition on, wait for this bargraph to flash (= 70 seconds). Enter the code to erase the memory G0\*\* then turn the ignition off.
5. Lock and unlock the doors using the PLIP then turn the ignition on.
6. Turn the ignition off, lock the doors using the PLIP and check the engine immobiliser system operates correctly.

**NOTE :** on certain generations of injection computer, the fault maybe erased by disconnecting the battery. In this case, only actions 5 and 6 need to be carried out.

**PROCEDURE FOR ENTERING THE EMERGENCY CODE** (now carried out by the breakdown agent only - Renault Dealer in the UK).

**IMPORTANT :** in this case the code **must** be entered using the button at the end of the wiper stalk, not using the XR25.

Turn the ignition on, the injection warning light flashes on the instrument panel (the engine immobiliser must be active).

After noting the code number:

1. Depress the accelerator pedal and hold it down, the injection warning light will extinguish.
2. Press the wiper stalk button the number of times of the first figure of the code, checking the injection warning light illuminates each time the button is pressed.
3. Release the accelerator pedal, the injection warning light flashes.

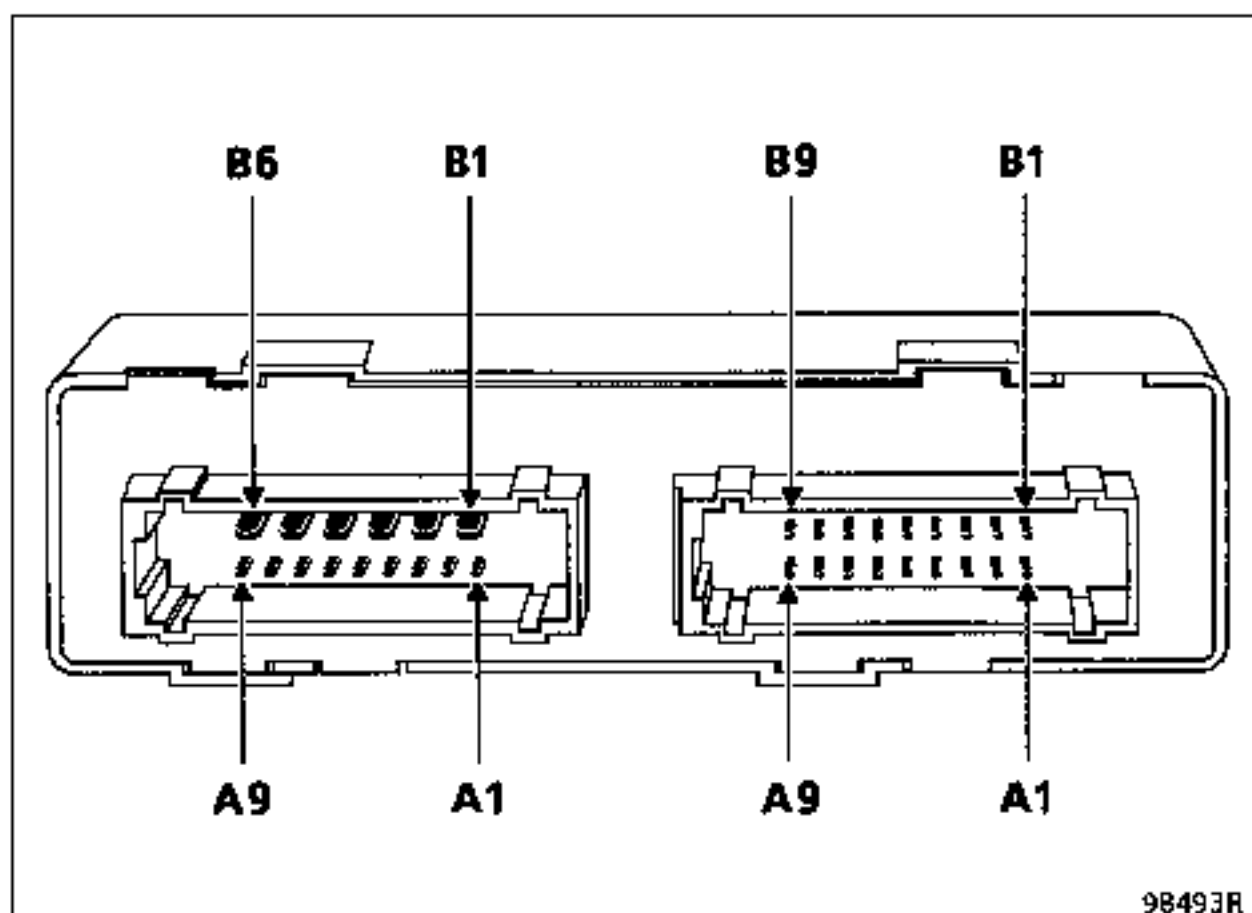
Repeat operations 1, 2 and 3 to enter the 3 remaining code figures one after the other.

When the code has been entered, the injection warning light should illuminate permanently then extinguish. If the warning light flashes, the code is incorrect. Turn the ignition off, then repeat the procedure for entering the code.

**IMPORTANT :** you may make 3 attempts to enter the code. If, after the third attempt, the code is invalid, you must wait for 5 minutes, ignition on, before making another attempt.

Once the code is validated, the vehicle is no longer protected by the engine immobiliser function and is used as a conventional vehicle.

### DECODER UNIT CONNECTIONS



#### 15 track connector

Track	Allocation
A1	+ after ignition
A2	Door open information
A3	Door close information
A4	Not used
A5	Diagnostic socket information (line L)
A6	Not used
A7	Not used
A8	Not used
A9	Not used
B1	Door close
B2	Coded information to injection computer
B3	Door open
B4	Diagnostic socket information (line K)
B5	+ before ignition
B6	Earth

#### 18 track connector

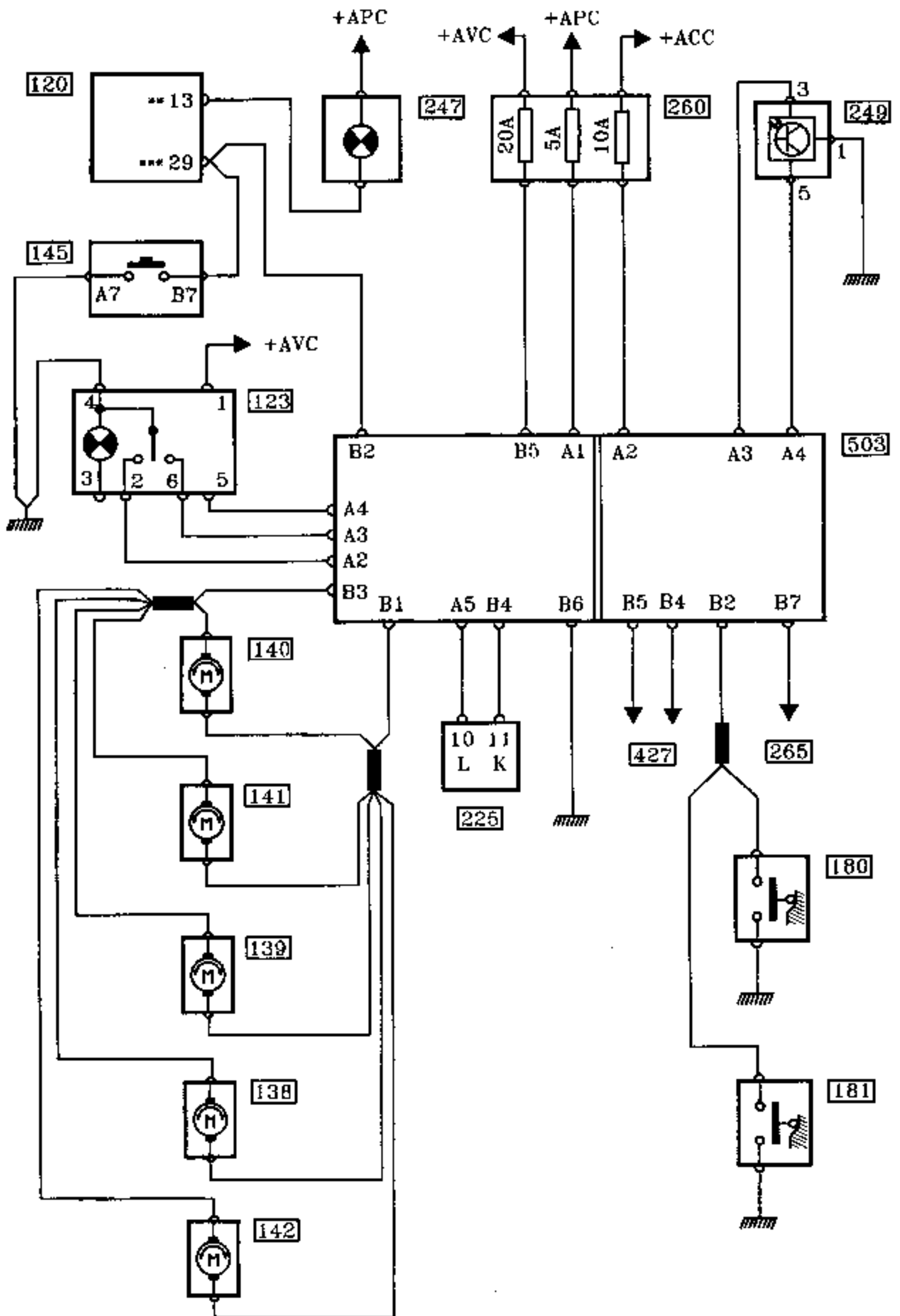
Track	Allocation
A1	Not used
A2	+ Accessories
A3	Infrared input
A4	Infrared receiver feed
A5	Not used
A6	Not used
A7	Not used
A8	Not used
A9	Not used
B1	Not used
B2	Front door switch
B3	Not used
B4	Door open / alarm information*
B5	Door close / alarm information*
B6	Not used
B7	Timer / courtesy light*
B8	Not used
B9	Not used

\* Depending on equipment

# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

DIAGRAM (CUIO high specification)



**KEY**

- 120** Injection computer
- 123** Door locking button
- 138** Rear right hand door locking motor
- 139** Rear left hand door locking motor
- 140** Driver's door locking motor
- 141** Passenger's door locking motor
- 142** Tailgate locking motor
- 145** Wiper stalk
- 180** Driver's door switch
- 181** Passenger's door switch
- 225** Diagnostic socket
- 247** Injection warning light on instrument panel
- 249** Infrared receiver
- 260** Fuse box
- 265** Roof console
- 427** Alarm unit
- 503** Decoder unit

- \*\*** 10 for engines E7J 601, F3P 710
- 13 for engines E7F 708/750, E7J 710/754/  
711/719, F3P 758, F7P 722
- 18 for engines E7J 716

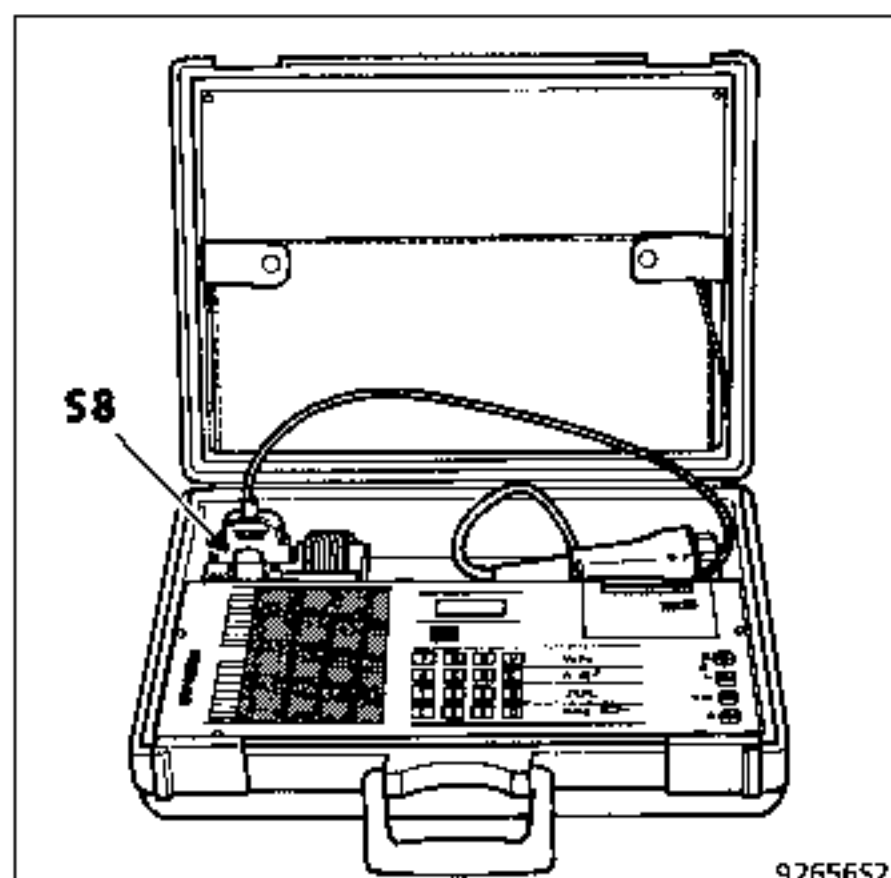
- \*\*\*** 23 for engines E7J 716
- 25 for engines F3P 758, F7P 722
- 29 for engines E7F 708/750, E7J 710/754/  
601/711/719, F3P 710.

**FAULT FINDING**

If there is a fault in this engine immobiliser system, fault finding may be carried out using the XR25.

**CONNECTION**

Use cassette N° 14 and the corresponding fault finding fiche N° 39.



9265652

Connect the XR25 to the diagnostic socket.

Position the ISO selector switch on **S8**.

Enter the specific code for the engine immobiliser with PLIP - **D39**.

# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

**FAULT FINDING**

+	N° 38	S8	code : D 3 9	lign : I. t. l. r	+
1				CODE PRESENT	<input type="checkbox"/>
2	<input type="checkbox"/> ANTIDEMARRAGE 1	<b>CONFIGURATION DU CALCULATEUR (AFFICHAGE FIXE)</b>		ANTIDEMARRAGE 2	<input type="checkbox"/>
3	<input type="checkbox"/> ANTIDEMARRAGE DIESEL 1			ELECTROVANNE (EV) DIESEL CODEE	<input type="checkbox"/>
4	<input type="checkbox"/> FONCTIONALITE VOYANT (LED) ANTI-DEMARRAGE 1 SEULEMENT				
5	<input checked="" type="checkbox"/> + APC PRESENT			+ ACCESSOIRES PRESENT	<input checked="" type="checkbox"/>
6	<input checked="" type="checkbox"/> ACQUITTEMENT EV DIESEL	<b>DEFAUTS</b>		LIGNE CODEE	<input checked="" type="checkbox"/>
7	<input checked="" type="checkbox"/> CONTACT CLE				
8	<input type="checkbox"/> SI <input checked="" type="checkbox"/> CONTACTEUR PRESENCE CLE SI <input type="checkbox"/> PAS DE CONTROLE	→		CLE INSEREE	<input checked="" type="checkbox"/>
9	<input type="checkbox"/> SI <input checked="" type="checkbox"/> CONTROLER SI <input type="checkbox"/> PAS DE CONTROLE	→		RELECTURE ACQUITTEMENT EV DIESEL	<input checked="" type="checkbox"/>
10	<input type="checkbox"/> ANTIDEMARRAGE ACTIF			DEFAUT RELECTURE LIGNE CODEE	<input checked="" type="checkbox"/>
<b>ANTI DEMARRAGE (TIR)</b>					
		<b>MODE COMMANDES : GL *</b>			
		01 Contrôle Mécanique de EV diesel (uniquement si ligne 3 droite <input checked="" type="checkbox"/> ou ligne 6 droite/basche <input type="checkbox"/> )			
		Test : Couper le contact, lever 001s. Retenir le contact, le vanne s'ouvre et se ferme pendant 30 sec. (Contrôle auxiliaire)			
		03 Commande platonier			
		05 Mouvement d'ouverture			
		08 Mouvements de fermeture			
		10 Relevage - Arrêt vite électrique			
		<b>04 LPP / 070 *</b>			
11	<input checked="" type="checkbox"/> AGIR SUR TIR (OUVERTURE) SIGNAL RECU	SIGNAL BON			<input type="checkbox"/>
12	<input type="checkbox"/> PRESENCE DE COUPURE ECLAIRAGE INTERIEUR APRES TIR (Optionnel suivant équipement)				<input type="checkbox"/>
13	<input type="checkbox"/> Si <input checked="" type="checkbox"/> contrôler → ETAT VOYANT Si <input type="checkbox"/> pas de contrôle ANTIDEMARRAGE				<input checked="" type="checkbox"/>
14	<input checked="" type="checkbox"/> AGIR SUR LA CDE : CPE DECONDAMNATION	CONDAMNATION			<input checked="" type="checkbox"/>
15	<input checked="" type="checkbox"/> AGIR SUR LE TIR (3 sec) OUVERTURE (Signal)	FERMETURE			<input checked="" type="checkbox"/>
16	<input checked="" type="checkbox"/> ACTION DES MOTEURS OUVERTURE (Mouvement)	FERMETURE			<input checked="" type="checkbox"/>
17	<input checked="" type="checkbox"/> AUTORISATION	LEVE-VITRE ELECTRIQUE (TIR) (AVEC ANTI-PINCEMENT)		RELEVAGE EN COURS	<input type="checkbox"/>
18	<input checked="" type="checkbox"/> AVANT	CONTACTS PORTES (ALLUME SI PORTE OUVERTE)		ARRIERE	<input checked="" type="checkbox"/>
19	<input type="checkbox"/> APPRENTISSAGE EN COURS			APPRENTISSAGE NON EFFECTUE	<input type="checkbox"/>
20				MEMOIRE XR25 (0)	<input type="checkbox"/>
					<input checked="" type="checkbox"/> FRA
+					+

Bargraphs on a coloured background are fault bargraphs.  
Bargraphs on a white background are status bargraphs.












# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

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### Interpretation of the bargraphs













#### Bargraph

<p><b>1 Right</b></p> 	<p>Code present. Should illuminate after entering code D39 (ISO selector switch on S8). Shows the connection has been made between the XR25 and the decoder unit.</p>
<p><b>2 Left</b></p> 	<p>Illuminates if a 1st generation engine immobiliser system is being tested (only with PLIP with rolling infrared code)</p>
<p><b>2 Right</b></p> 	<p>Illuminates if a 2nd generation engine immobiliser system is being tested.</p>
<p><b>3 Left</b></p> 	<p>Not used</p>
<p><b>3 Right</b></p> 	<p>Illuminates if a 2nd generation diesel engine immobiliser system with coded solenoid is being tested</p>
<p><b>4 Left</b></p> 	<p>Illuminates if the red engine immobiliser warning light is configured (G38*)</p>
<p><b>5 Left</b></p> 	<p>Illuminates if + after ignition feed is present at the decoder unit</p>
<p><b>5 Right</b></p> 	<p>Illuminates if + accessories feed is present at the decoder unit</p>
<p><b>6 Left</b></p> 	<p>Not used</p>
<p><b>6 Right</b></p> 	<p>Not used</p>
<p><b>7 Left</b></p> 	<p>Not used</p>

# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

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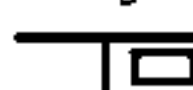
<b>8 Left</b> 	Not used
<b>8 Right</b> 	Not used
<b>9 Left</b> 	Not used
<b>9 Right</b> 	Not used
<b>10 Left</b> 	Illuminates if the engine immobiliser system is active
<b>10 Right</b> 	Not used
<b>11 Left</b> 	Illuminates when the PLIP is pressed. Shows the PLIP is operational.
<b>11 Right</b> 	Illuminates when the PLIP is pressed if the infrared code is correct.
<b>12 Right</b> 	Not used
<b>13 Left</b> 	Illuminates if the red engine immobiliser warning light is configured (G38*)
<b>13 Right</b> 	Illuminates if the engine immobiliser warning light is illuminated ( shows warning light status)
<b>14 Left</b> 	Illuminates when door unlocking information is received from the central door locking button.



# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

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<p><b>14 Right</b></p> 	Illuminates when door locking information is received from the central door locking button.
<p><b>15 Left</b></p> 	Illuminates when door unlocking information is sent to the alarm unit
<p><b>15 Right</b></p> 	Illuminated when the door locking information is sent to the alarm unit
<p><b>16 Left</b></p> 	Illuminates when door unlocking information is sent to the locking micromotors
<p><b>16 Right</b></p> 	Illuminates when door locking information is sent to the locking micromotors
<p><b>17 Left</b></p> 	Not used
<p><b>17 Right</b></p> 	Not used
<p><b>18 Left</b></p> 	Illuminates if one of the front doors is open
<p><b>18 Right</b></p> 	Not used
<p><b>19 Left</b></p> 	Illuminates ≈ 15 seconds during the programming or resynchronisation procedures
<p><b>19 Right</b></p> 	Illuminates if the decoder unit is uncoded (new unit)
<p><b>20 Right</b></p> 	XR25 memory function

### LIST OF VARIOUS # COMMANDS

**#01** Read the last opening element command

- 1 → unlock
- 2 → lock

**#02** Source of last opening element command

- 1 → PLIP
- 2 → central door locking button

**#06** Selection of courtesy light timer (configuration of decoder unit)

- 0 → no courtesy light timer
- 1 → with courtesy light timer (operational for high specification vehicles only)

**#07** Selection of gradual courtesy light extinguishing (if # 06 = 1 on high specification vehicles only)

- 0 → no gradual extinguishing
- 1 → with gradual extinguishing

### COMMAND MODES G--\*

To use this function , enter G on the XR25 then the number of the command mode followed by a star.

- 03 Courtesy light control (illuminates the courtesy light 3 times on high specification vehicles only)
- 05 Engine immobiliser warning light control (illuminates the red engine immobiliser warning light 3 times, if fitted)
- 06 Activation of "door unlock" information to the alarm unit
- 07 Activation of "door lock" information to the alarm unit
- 08 Door unlock command (activates the micromotors 3 times, unlock side)
- 09 Door lock command (activates the micromotors 3 times, lock side)
- 38 Engine immobiliser warning light configuration shown by bargraph 4 left hand side (not used currently)

0 → non configured } validate with \* (the activation will be carried out after using the PLIP)  
1 → configured }

- 40 Entering the emergency code (bargraph 10 left hand side should be illuminated and the ignition must be on).  
This command mode is used for the resynchronisation procedure (see page 5). It cannot be used to decode the injection unit.

Enter the vehicle's emergency code number on the XR25 and validate by pressing \* (turn the ignition off then on again to be able to start the vehicle).

If the code number is correct, "bon" is displayed on the XR25 and bargraph 10 left hand side extinguishes.

If the code number is incorrect, "def" is displayed on the XR25 and bargraph 10 left hand side remains illuminated.

**IMPORTANT:** you may make three attempts to enter the code. If, after the third attempt, the code is invalid, you must wait for 5 minutes, ignition on, before attempting to enter the code again.

- 70 Reading the Part Number (decoder unit Part Number)

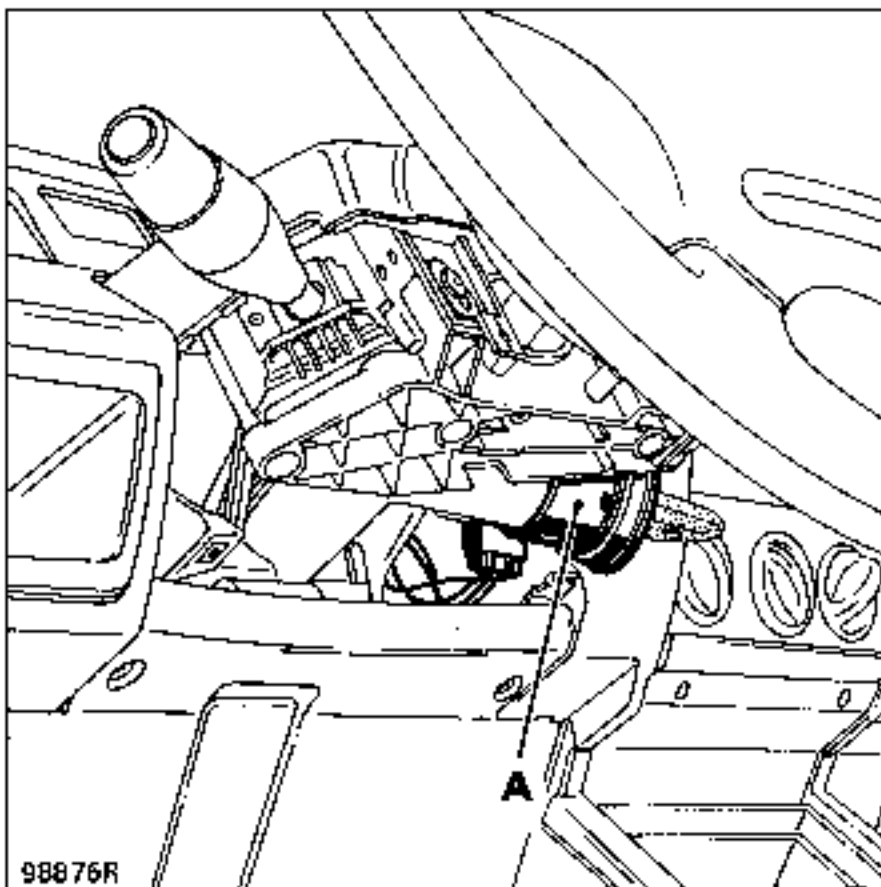
## Coded key engine immobiliser system

## DESCRIPTION OF THE CODED KEY ENGINE IMMOBILISER SYSTEM

With this system, the engine immobiliser is activated 10 seconds after the + after ignition feed is cut.

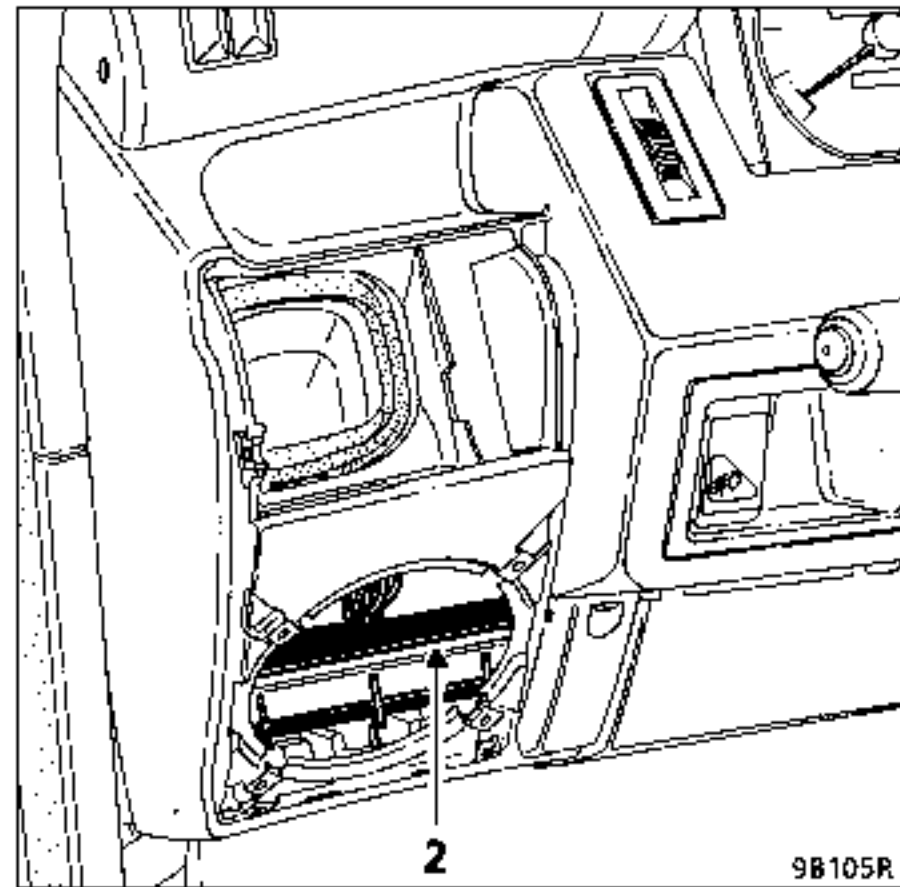
The system comprises:

- two special matched key heads, each with a coded chip,
- a receiving ring (A) around the ignition switch, with an electronic system which transmits the key code to the decoder unit (2),



- a decoder unit (2) located behind the front left hand speaker which has the following functions:

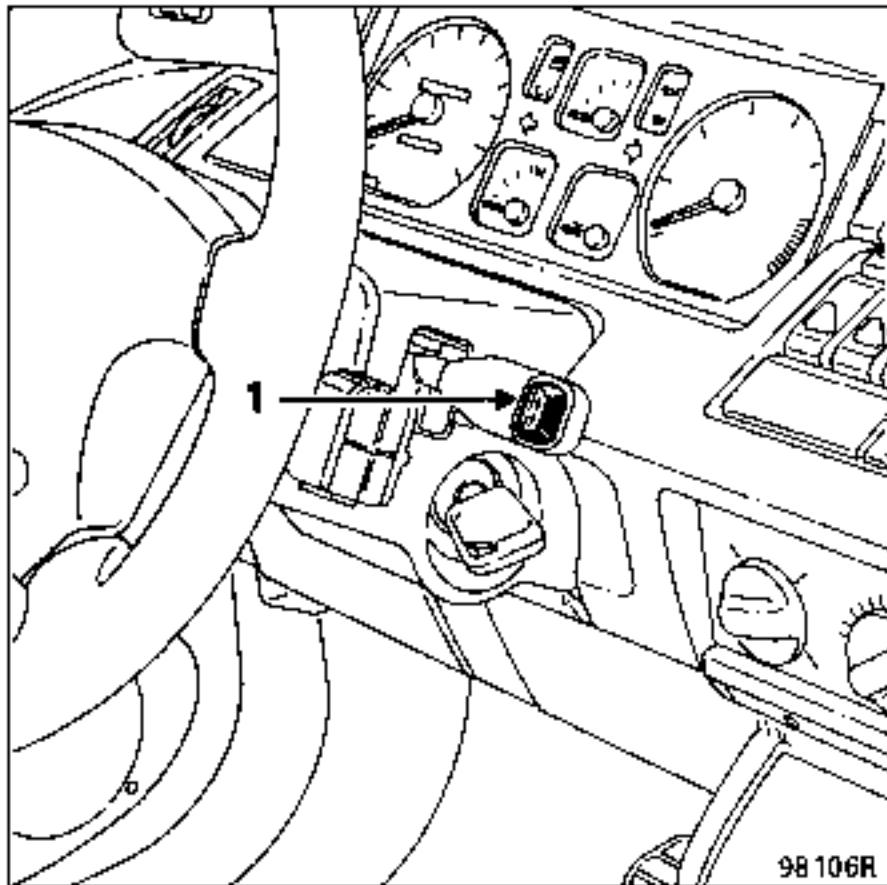
- Decoding of the signal from the key from the receiving ring,
- Management of the engine immobiliser system by the sending of a code to the injection computer to authorise the vehicle being started.



- an injection warning light which is used :
  - to indicate an injection fault,
  - to indicate a fault in the engine immobiliser system when the engine is running (flashes on deceleration and at idle speed).
  - to indicate the activation of the engine immobiliser (flashes when the ignition is turned on),
  - to enter the emergency code.

## Coded key engine immobiliser system

- a button on the end of the wiper stalk (1) which is used to enter the emergency code.



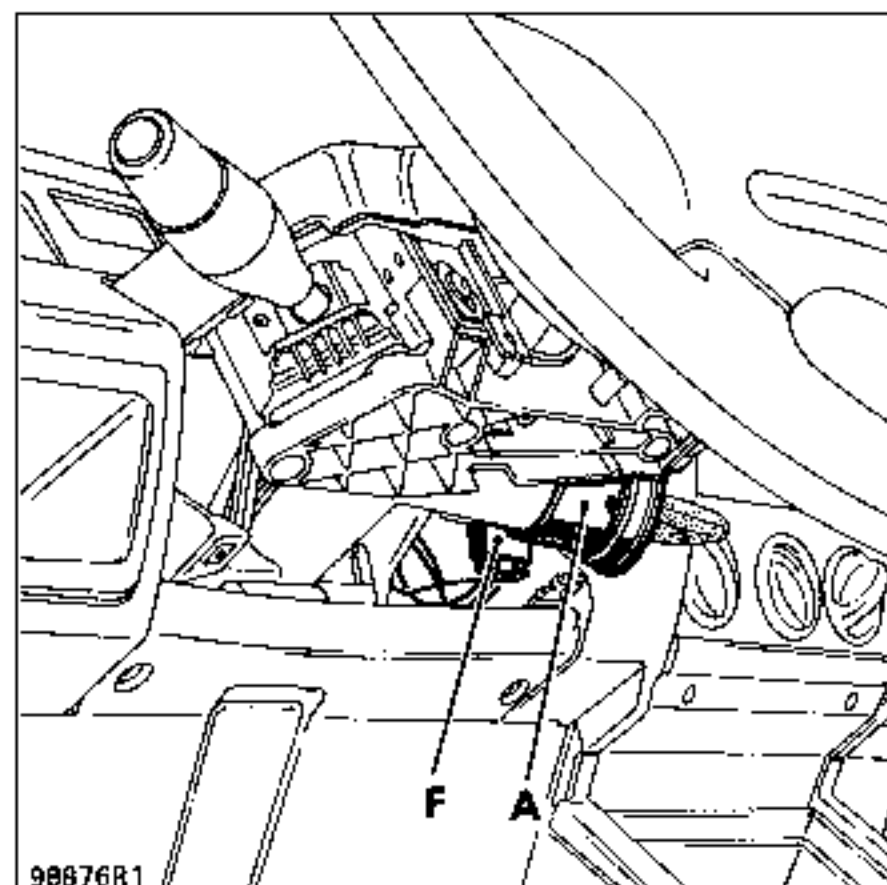
- a special injection computer which may be coded.

## REMOVING - REFITTING THE RECEIVING RING

## REMOVAL:

Disconnect connector (F).

Release the ring (A) from the ignition switch.



When refitting, ensure the ring is correctly positioned and correctly secured.

**NOTE :** this ring is not coded.

## OPERATION

After turning the ignition on, the receiving ring analyses the key code and transmits it to the decoder unit.

If the code is recognised by the decoder unit, it sends a code to the injection computer on the coded line.

At this precise moment, one of several cases may arise:

- The injection computer has no reference code in its memory :
  - the code sent to it is stored in its memory
- The injection computer has a reference code in its memory:
  - the code sent to it is compared with the code in its memory.
  - if the two codes match, the computer unlocks the injection system and the engine may be started.

When the ignition is turned on, the injection warning light on the instrument panel flashes for a few seconds, remains permanently illuminated, then extinguishes, showing that the system is operating correctly.
- if the two codes do not match, the computer leaves the injection system locked to prevent the engine from being started .When the ignition is turned on, the injection warning light flashes and the vehicle may not be started.

**NOTE :** to ensure the system operates correctly never insert an object (Eg. : key ring) between the key and the receiving ring.

**IMPORTANT :** if the battery charge is low, the drop in voltage when the starter is activated may reset the engine immobiliser. If the voltage is less than 6 volts, the vehicle will not be able to be started, even by pushing the vehicle.

**Coded key engine immobiliser system****REPLACING A KEY HEAD**

If the chip in the key head is faulty:

- order a new key head using the number in the faulty key head ( alphanumeric characters),
- if the customer requires a solution immediately (2nd key not available) he could be offered a kit (decoder unit + 2 key heads) (see replacing a kit).

If the key has been lost:

- Order a replacement key head using the number in the 2nd key head or on the bar code label (normally attached to the keys when the vehicle is delivered). In this case, remember to order a new metal key for the replacement key head.

**IMPORTANT:** do not touch the electronics in the key when making a note of the number in the key head. If the electronics of any key head are touched, the key head must be replaced.

**NOTE :** if the key head number cannot be located (both keys and bar code lost), the complete kit must be replaced (decoder unit and 2 keys, plus injection computer).

**REPLACING THE DECODER UNIT ALONE**

A new decoder unit is not coded. Once fitted to the vehicle, the codes of both keys must be programmed so that it is operational (see programming procedure).

**IMPORTANT :** if the customer has not left the second key, the decoder unit may be programmed using just one key and the XR25.

To programme the decoder unit:

- connect the XR25 to the vehicle,
- set the ISO selector switch to S8 and enter code D38 (coded key engine immobiliser system),
- enter G05\* and proceed with programming using one key.

**NOTE :** if the decoder unit alone is replaced, no operation is carried out on the injection computer. The computer retains the same engine immobiliser code.

**IMPORTANT :** when a decoder unit has been programmed with the key code, the code cannot be erased and no other code may be memorised in its place.

**PROGRAMMING PROCEDURE**

This procedure may only be carried out once by the decoder unit. As long as this procedure has not been carried out, the vehicle cannot be started (unless the injection computer is not coded).

The procedure may be carried out:

- with both keys if a kit is being fitted (which permits verification that the keys are matched).

**NOTE :** the procedure will not work if the same key is used twice or if the keys are not matched.

- with a single key if the decoder unit alone is being replaced, using the XR25 (where the customer has not left both keys with the workshop).

The XR25 may be used for this procedure but is not vital (except for programming using a single key, see replacement of the decoder unit alone).

- 1 - Connect the XR25 to the vehicle, set the ISO selector switch to S8 and enter code D38 (fault finding fiche 38); bargraph 19 right hand side should be illuminated (decoder unit un-coded).
- 2 - Using the 1st key, turn the ignition on for approximately 2 seconds (but do not start the engine). Bargraphs 18 and 19 Left-hand side illuminate. From this moment, the operator has 30 seconds to carry out the following operation.

## Coded key engine immobiliser system

3 - Using the 2nd key, turn the ignition on (but do not start the engine) (approximately 2 seconds). Bargraphs 19 right and left hand sides extinguish.

**NOTE :** as long as bargraph 19 right is illuminated, ignore the illumination of bargraphs 6, 10, 11, 12 and 13 right hand side (illuminated as long as the decoder unit is not coded).

**IMPORTANT:** ignore the illumination of bargraph 7 left hand side (erase using G0\*\*).

Bargraph 18 left hand side may remain illuminated after this command, but this should be ignored (it will be erased after disconnecting the battery).

4 - Turn the ignition on for a few seconds without starting the engine, using one of the two coded keys.

5 - The procedure is complete. After turning the ignition off and on again, check that the vehicle can be started.

**NOTE :** check the engine immobiliser system is operating correctly:

- to simulate prevention from starting, before turning the ignition on, enter G04\* (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates) and wait for approximately 10 seconds before turning the ignition on. The vehicle should be prevented from starting.
- the procedure is complete. After turning the ignition off and on again, check that the vehicle can be started.

**IMPORTANT:** if the programming procedure fails, wait for bargraph 19 left hand side to extinguish before starting again to programme with both keys.

#### REPLACING A KIT (decoder unit plus 2 keys)

If a kit is replaced it will be necessary to:

- Programme the codes of the 2 new keys in the new decoder unit (supplied uncoded).

- Erase the old code in the injection computer using the emergency procedure (the code number for the old kit should be obtained from Technical Services in the UK or for example, from DELTA Assistance for France).

1 - Note the numbers of the old keys to obtain the emergency code number.

2 - Erase the old code number in the injection computer using the emergency code procedure and the code corresponding to the old kit (see emergency code procedure).

3 - Fit the metal inserts from the old keys into the new key heads.

4 - Remove the decoder unit.

5 - Fit the new decoder unit.

6 - Programme the codes of the 2 new keys in the decoder unit (supplied uncoded) (see programming procedure).

7 - Programme the engine immobiliser code of the new kit into the injection computer by turning the ignition off then on again for several seconds without starting the engine.

8 - Check the engine immobiliser system is operating correctly:

- to simulate prevention from starting, before turning the ignition on, enter G04\* (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates) and wait for approximately 10 seconds. The vehicle should be prevented from starting.

9 - After turning the ignition off and on again, check that the vehicle can be started.

## Coded key engine immobiliser system

## REPLACING THE INJECTION COMPUTER

The injection computer is supplied uncoded. The engine immobiliser code must be programmed in when the computer is fitted.

Carry out the following operations:

- turn the ignition on using the vehicle's coded key for a few seconds but do not start the engine.
- turn the ignition off. The immobiliser will be activated after approximately 10 seconds.

**NOTE :** prevention from starting may be verified using the XR25.

- Use fiche 38 and enter code D38 on the XR25.
- Ignition off, enter G04\* (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates).
- When the ignition is turned on, the injection warning light should flash and the vehicle should be prevented from starting.

## TESTING AN INJECTION COMPUTER

**IMPORTANT:** if an uncoded injection computer is being tested from stock or from another vehicle (test part), the decoder unit **MUST** not be supplied during the operation.

If the decoder unit is supplied, when the ignition is turned on a coded signal is sent from the decoder unit to the injection computer (which will then be coded).

To prevent the injection computer from memorising a code which could render it unusable after the test the decoder unit fuse (+ before ignition) must be removed (fuse with door locking symbol). The coded signal will now not be sent when the ignition is turned on (the injection computer will remain uncoded).

The injection computer used for the test **MUST** have the same Part Number as the original computer on the vehicle (risk of damage to the test computer).

## SYSTEM FAULT, ENGINE RUNNING

If a fault in the system is noted by the injection computer when the engine is running, the injection warning light on the instrument panel will flash during deceleration and at idle speed (engine speed less than 1500 rpm).

**IMPORTANT:** In this case, after repair, the fault memorised in the injection computer must be erased to allow the engine immobiliser system to operate again.

- 1 - Connect the XR25 and use the fault finding fiche corresponding to the injection type for the vehicle.
- 2 - Turn the ignition on. Ensure the ISO selector switch is correctly positioned and enter the injection code on the XR25.
- 3 - The "engine immobiliser" fault bargraph should be permanently illuminated. Ignition on, wait for this bargraph to flash (= 70 seconds). Enter the code to erase the memory G0\*\* and turn the ignition off.
- 4 - Turn the ignition off then on again for a few seconds without starting the engine.
- 5 - Check the engine immobiliser system is operating correctly:
  - to simulate prevention from starting, before turning the ignition on, enter G04\* (forced protection mode) on the XR25 (bargraph 8 right hand side illuminates) and wait for approximately 10 seconds. The vehicle should be prevented from starting.
- 6 - After turning the ignition off and on again, check that the vehicle can be started.

**NOTE :** on certain generations of injection computer, the fault may be erased by disconnecting the battery. In this case, simply carry out operations 4, 5 and 6.



## Coded key engine immobiliser system

**PROCEDURE FOR ENTERING THE EMERGENCY CODE**, supplied to Renault Dealers in the UK for repair purposes only (depending on country, now carried out by breakdown agent only)

Turn the ignition on, the injection warning light should flash on the instrument panel (the engine immobiliser should be active).

After noting the code number:

1. Press and hold the accelerator pedal, the injection warning light extinguishes.
2. Press the wiper stalk button the number of times of the first figure of the emergency code, checking that the injection warning light illuminates each time the button is pressed.
3. Release the accelerator pedal, the injection warning light flashes.

Repeat operations 1, 2 and 3 to enter the remaining code figures in succession.

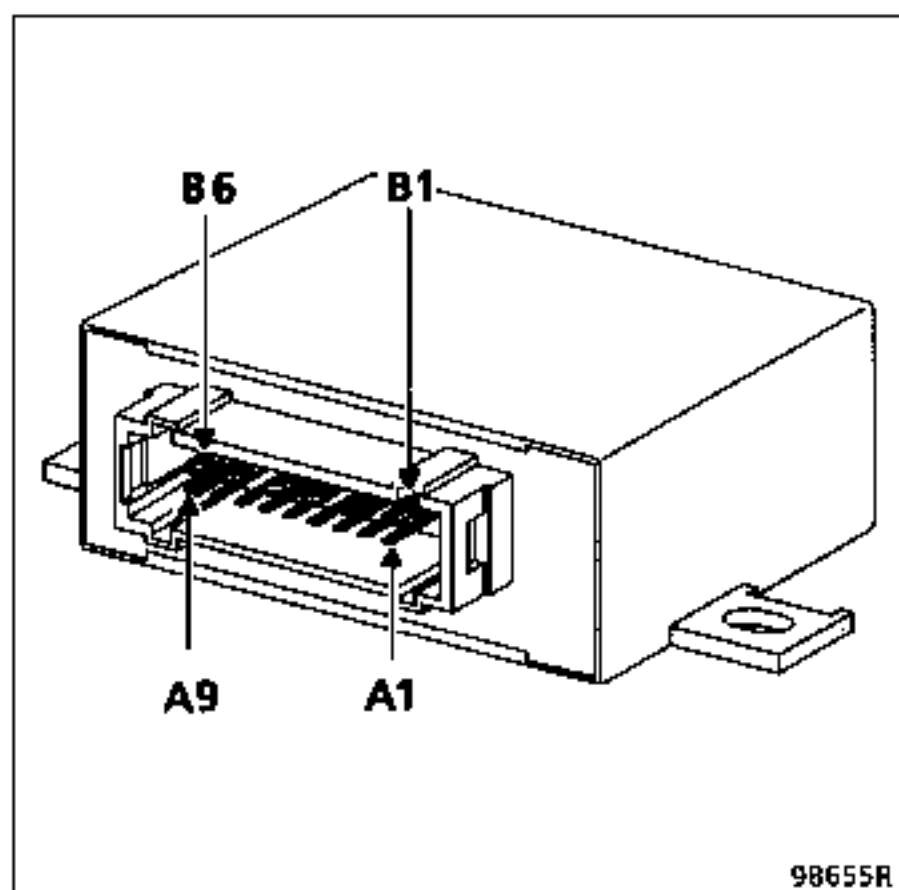
Once the code has been entered, the injection warning light should be permanently illuminated then extinguish. If it flashes, the code is incorrect. Turn the ignition off then repeat the procedure for entering the code.

**IMPORTANT** : you may make 3 attempts to enter the code. If, after the third attempt, the code is invalid, you must wait for 5 minutes with the ignition on before making another attempt or disconnecting the battery.

When the injection computer memory has been erased, the code may be entered again by hand.

**REMINDER**: once the code has been validated, the vehicle is no longer protected by the engine immobiliser and is used as a conventional vehicle until the system is repaired.

## DECODER UNIT CONNECTIONS



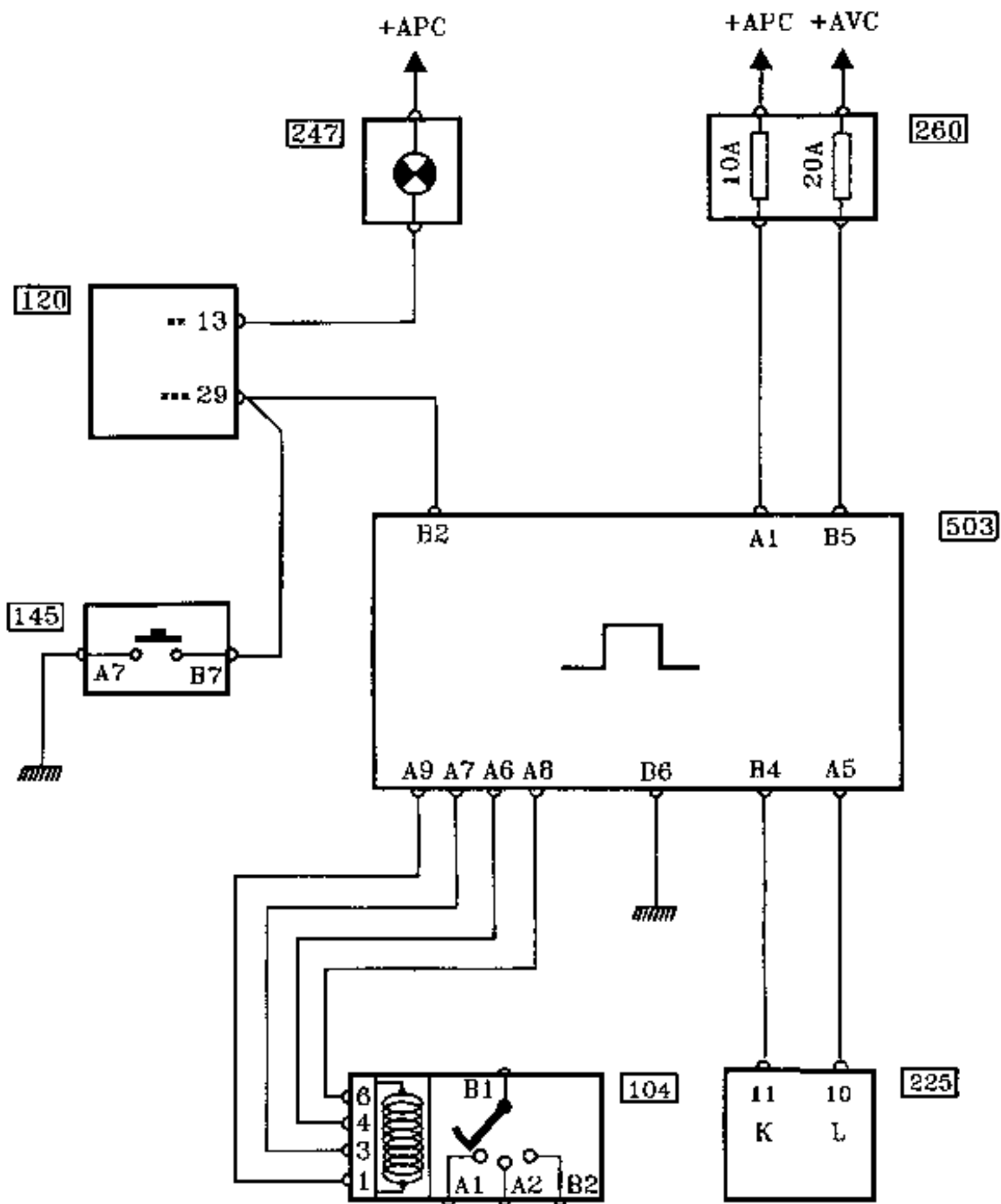
## 15 track connector

Track	Allocation
A1	+ after ignition
A2	Not used
A3	Not used
A4	Not used
A5	Diagnostic socket information (line L)
A6	Coded line - ring / decoder unit
A7	Ring interrogation
A8	Ring earth
A9	Ring feed
B1	Not used
B2	Coded information to injection computer
B3	Not used
B4	Diagnostic socket information (line K)
B5	+ before ignition
B6	Earth

# ELECTRICAL SYSTEMS

## Coded key engine immobiliser system

**DIAGRAM**



### KEY

- 104** Ignition switch  
(receiving ring)
- 120** Injection computer
- 145** Wiper stalk
- 225** Diagnostic socket
- 247** Injection warning light on instrument panel
- 260** Fuse box
- 503** Decoder unit

- \*\*** 10 for engines E7J 601, F3P 710
- 13 for engines E7F 708/750, E7J 710/754/  
711/719, F3P 758, F7P 722
- 18 for engines E7J 716

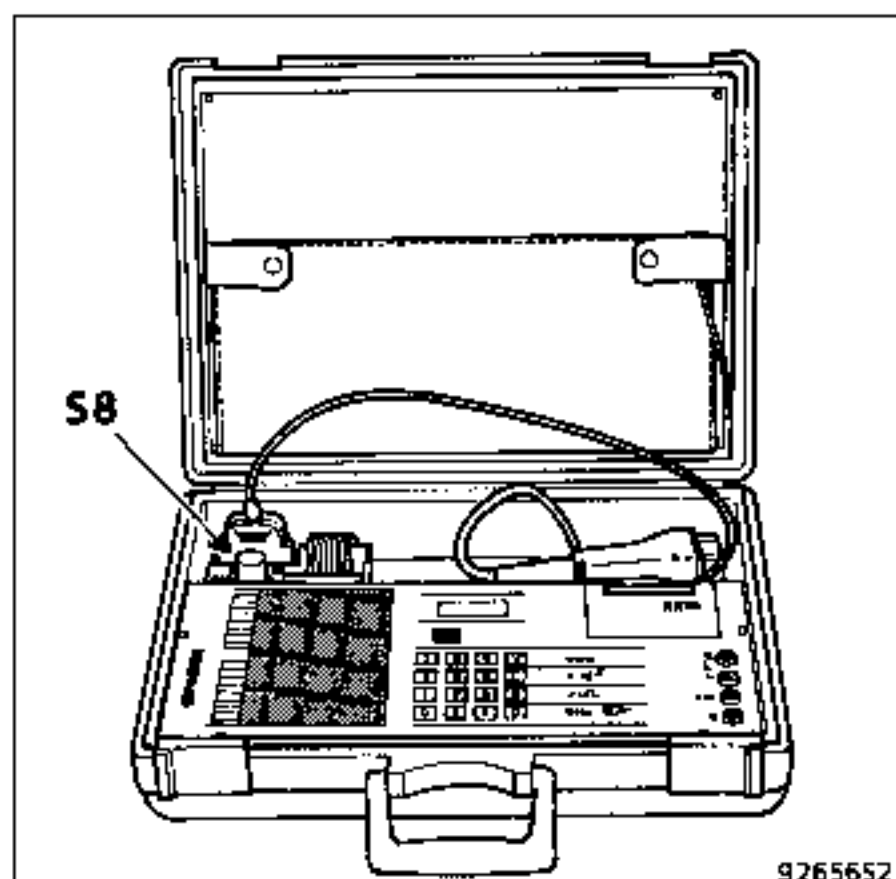
- \*\*\*** 23 for engines E7J 716
- 25 for engines F3P 758, F7P 722
- 29 for engines E7F 708/750, E7J 710/754/  
601/711/719, F3P 710.

### FAULT FINDING

If there is a fault in this engine immobiliser system, fault finding may be carried out using the XR25.

### CONNECTION

Use cassette N° 14 and the corresponding fault finding fiche N° 38.



Connect the XR25 to the diagnostic socket.

Position the ISO selector switch on **S8**.

Enter the specific code for the engine immobiliser with coded key - **D38**.

# ELECTRICAL SYSTEMS

## Coded key engine immobiliser system

**FAULT FINDING**

<b>F</b>	<b>N° 38</b>	<b>S8</b>	code: <b>D 3 8</b>	lire: <b>I.cLE</b>
1				CODE PRESENT <input type="checkbox"/>
2	<input type="checkbox"/> ANTIDEMARRAGE 1	<b>CONFIGURATION DU CALCULATEUR (AFFICHAGE FIXE)</b>		ANTIDEMARRAGE 2 <input type="checkbox"/>
3				ELECTROVANNE (EV) DIESEL CODEE <input type="checkbox"/>
4	<input type="checkbox"/> FONCTIONALITE VOYANT (LED) ANTIDEMARRAGE 1 SEULEMENT			
5	<input checked="" type="checkbox"/> + APC PRESENT			
6	<input checked="" type="checkbox"/> ACQUITTEMENT EV DIESEL			LIGNE CODEE * 27 <input type="checkbox"/>
7	<input checked="" type="checkbox"/> INTERROGATION CLE (G)	<b>DEFAUTS</b>		VOYANT LED * 27 <input type="checkbox"/>
8	<input type="checkbox"/> MODE TEST EV FORCE			MODE PROTEGE FORCE <input type="checkbox"/>
9	<input type="checkbox"/> SI <input checked="" type="checkbox"/> CONTROLER SI <input type="checkbox"/> PAS DE CONTROLE	→		RELECTURE ACQUITTEMENT EV DIESEL <input type="checkbox"/>
10	<input type="checkbox"/> ANTIDEMARRAGE ACTIF			DEFAULT RELECTURE LIGNE CODEE <input type="checkbox"/>
<b>ANTI DEMARRAGE (CLE)</b>		<b>MODE COMMANDE : G</b>		
Effacement mémoire : G 0 ** Fin de diagnostic : G 1 3 *		01 Contrôle Mécanisme de la EV diesel (uniquement pour 3 cylindres <input checked="" type="checkbox"/> et ligne 6 droite gauche <input type="checkbox"/> ) Test : Couper le contact avec l'obturateur Pendant le contact de la clé à ouvrir et se fermer pendant 30 sec. (Contrôle auditif)		
11	CLE PRESENTE	<input type="checkbox"/>		
12	CODE CLE	→	RECU	<input type="checkbox"/>
13		→	VALIDE	<input type="checkbox"/>
14	12 ET 13 INTERPRETABLES QUE SI PRESENCE DU + APC (5 G <input checked="" type="checkbox"/> )			
15				
16	RAL MRR : 070*			
17	<input checked="" type="checkbox"/> BOUTON "MODE MANUEL" PRESSE (FONCTION FUTURE)			DEFAULT BOUTON <input type="checkbox"/>
18	<input type="checkbox"/> APPRENTISSAGE DE LA 1 <sup>ère</sup> CLE			
19	<input type="checkbox"/> APPRENTISSAGE AUTORISE			APPRENTISSAGE NON EFFECTUE <input type="checkbox"/>
20				MEMOIRE XR25 <input type="checkbox"/>
				<input type="checkbox"/> FRA









Bargraphs on a coloured background are fault bargraphs.  
Bargraphs on a white background are status bargraphs.

# ELECTRICAL SYSTEMS









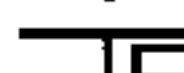
## Coded key engine immobiliser system

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### Interpretation of the bargraphs

Bargraph	
<p><b>1 Right</b></p> 	<p>Code present. Should illuminate after entering code D38 (ISO selector switch on 58). Shows the connection has been made between the XR25 and the decoder unit.</p>
<p><b>2 Left</b></p> 	<p>Illuminates if a 1st generation engine immobiliser system is being tested (illuminates after entering code D38)</p>
<p><b>2 Right</b></p> 	<p>Not used</p>
<p><b>3 Right</b></p> 	<p>Not used</p>
<p><b>4 Left</b></p> 	<p>Illuminates if the engine immobiliser warning light is configured (G38*) (not used currently)</p>
<p><b>5 Left</b></p> 	<p>Illuminates if + after ignition feed is present at the decoder unit</p>
<p><b>6 Left</b></p> 	<p>Not used</p>
<p><b>6 Right</b></p> 	<p>Illuminates if a fault is noted on the coded line (connection between the decoder unit and the injection computer) If the fault is present when the test is carried out, bargraph 10 right hand side will be illuminated If this bargraph is flashing, the fault is no longer present (memorised fault). *26 indicates the origin of the fault on the XR25 display :  <ul style="list-style-type: none"> <li>- CO.0 indicates either a break in the coded line. a short circuit on the coded line to earth.</li> <li>- CC.1 indicates a short circuit to +</li> </ul> <p><b>Important :</b> after repairing, it will be necessary to wait for bargraph 6 right hand side to flash (approximately 16 seconds) before erasing the fault memorised in the decoder unit using G0**, and also before erasing the fault stored in the injection computer by disconnecting the battery ≈ 30 seconds (see D13 fiche N° 23 bargraph 2 right hand side).</p> </p>

## Coded key engine immobiliser system

<p><b>7 Left</b></p> 	<p>Illuminates if a short circuit is noted on the receiving ring interrogation line (between track 3 on the ring and track A7 on the decoder unit). If this bargraph is flashing, the fault is no longer present (memorised fault).</p> <p><b>Important:</b> if this bargraph illuminates during a programming procedure, ignore it (erase it).</p> <p><b>NOTE :</b> Only take the illumination of this bargraph into account after the ignition has been turned on.</p>
<p><b>7 Right</b></p> 	<p>Not used</p>
<p><b>8 Left</b></p> 	<p>Not used</p>
<p><b>8 Right</b></p> 	<p>Illuminates when command mode G04* is used (forced protection mode)</p>
<p><b>9 Left</b></p> 	<p>Not used</p>
<p><b>9 Right</b></p> 	<p>Not used</p>
<p><b>10 Left</b></p> 	<p>Illuminates if the engine immobiliser system is active</p>
<p><b>10 Right</b></p> 	<p>Illuminates if there is a fault on the coded line. Extinguishes when the fault disappears. (Connection between the decoder unit and the injection computer).</p> <p><b>NOTE :</b> the illumination of this bargraph is only significant if the key is recognised.</p>
<p><b>11 Right</b></p> 	<p>Illuminates when the ignition is turned on by a coded key (on condition that the vehicle was protected before the ignition was turned on, engine immobiliser warning light flashing). This bargraph will remain illuminated when the ignition is turned off. Ignore this.</p> <p><b>NOTE :</b> For normal operation, bargraphs 11, 12 and 13 should be illuminated together.</p>

## Coded key engine immobiliser system

<b>12 Right</b> 	<p>Illuminates if the ignition is turned on by a coded key of the correct format (on condition that the vehicle was protected before the ignition was turned on, engine immobiliser warning light flashing). This bargraph will remain illuminated when the ignition is turned off. Ignore this.</p> <p><b>NOTE :</b> For normal operation, bargraphs 11, 12 and 13 should be illuminated together.</p>
<b>13 Right</b> 	<p>Illuminates if the ignition is turned on by a coded key of the correct format with the correct code (key corresponding to the vehicle). On condition that the vehicle was protected before the ignition was turned on, engine immobiliser warning light flashing This bargraph will remain illuminated when the ignition is turned off. Ignore this.</p> <p><b>NOTE :</b> For normal operation, bargraphs 11, 12 and 13 should be illuminated together.</p>
<b>17 Left</b> 	<p>Not used for 1st generation coded key engine immobiliser system</p>
<b>17 Right</b> 	<p>Not used for 1st generation coded key engine immobiliser system</p>
<b>18 Left</b> 	<p>Illuminates when the 1st key is programmed (see programming procedure). When programming is complete, the battery must be disconnected to extinguish the bargraph.</p>
<b>19 Left</b> 	<p>Illuminates during the programming procedure (see programming procedure).</p>
<b>19 Right</b> 	<p>Illuminates if the decoder unit is not coded as long as programming has not been carried out (new unit).</p> <p><b>NOTE :</b> ignore the illumination of bargraphs 6, 10, 11, 12 and 13 right hand side when programming has not been successful.</p>
<b>20 Right</b> 	<p>XR25 memory function</p>

## Coded key engine immobiliser system

## COMMAND MODES G--\*

To use this function, enter G on the XR25 then the number of the command mode followed by a star.

- 04** Forced protection mode: Activates the engine immobiliser function even if the key is correct, which allows verification of starting prevention and entering of the emergency code in some cases (example: replacing a kit - decoder unit plus 2 key heads). Bargraph 8 right hand side illuminates. This command mode must be entered a minimum of 10 seconds before the ignition is turned on.
- 05** Programming a single key: permits programming using a single key when replacing a decoder unit alone (if the customer does not have both keys with him). This command mode must be entered before beginning the programming procedure (ignition off).
- 07** Ring feed: Permits verification that the decoder unit is correctly feeding the receiving ring when the ignition is turned on. This command mode must be entered when the ignition is turned off with the engine immobiliser system active (≈ 10 seconds after turning the ignition off, bargraph 10 left hand side illuminated). The XR25 display will show "?".

Turn the ignition on, "bon" should be displayed. This indicates that the decoder unit is correctly feeding the receiving ring when the ignition is turned on.

if the display still shows "?" this indicates that either:

- the system was not active before the ignition was turned on,
- the decoder unit has not received + after ignition information (shown by bargraph 5 left hand side),
- or the decoder unit is faulty.

- 38** Engine immobiliser configuration shown by bargraph 4 left hand side (not used currently)

0	→	non configured	} validate with * (the activation will be carried out after turning the ignition on)
1	→	configured	

- 70** Reading the Part Number (decoder unit Part Number)

- 72** Entering the After Sales date: Allows entering of the date of the last operation on the system.

After entering G72\* : display shows "J?" J = Day

Enter the day, example: 10; enter \* : display shows "M?" M = Month

Enter the month: 2; enter \* : display shows "A?" A = Year

Enter the year, example: 95.

Enter \*, the complete date is displayed: "J10" then "M02" then "A95" twice.  
A beep indicates validation.

- 73** Reading the After Sales date: Allows the date of the last operation on the system to be read from the decoder unit memory.



# ELECTRICAL SYSTEMS

## PLIP engine immobiliser system

82

Fault finding for PLIP engine immobiliser system

### CUSTOMER COMPLAINTS

When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate.

Chart 1

While driving (deceleration) and at idle speed, the injection warning light flashes permanently.

Chart 2

## PLIP engine immobiliser system

**Chart 1 : When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate.**

Can the vehicle doors be locked or unlocked using the PLIP?

no

See Chart 1A

yes

Connect the XR25  
Fiche 39 - Code D39 - ISO selector on S8.  
The display should show "1.1r".  
Is bargraph 5 left hand side illuminated?

no

Repair the wiring between track A2 on the ignition switch and track A1 on the 15 track decoder unit connector.

yes

Connect the XR25

- Fiche 3 or 28 for engines with SIEMENS injection.
- Fiche 22 for engines with AC DELCO injection.
- Fiche 23 for engines with Magneti Marelli injection.

On injection fiche 22, 23 or 28, is bargraph 2 right hand side illuminated?  
On injection fiche 3, is bargraph 2 left hand side illuminated?

yes

See Chart for bargraph 2 right hand side illuminated for injection fiche 22 or 23 or 28.  
Bargraph 2 left hand side illuminated for injection fiche 3.

no

Check the condition of the 10A interior lighting fuse.  
Check the continuity and insulation from earth and from +12 V of the wiring between track B2 on the 15 track decoder unit connector and track:

- 23 for E7J engines, AC DELCO,
- 29 for E7F and E7J engines, SIEMENS,
- 25 for F3P and F7P engines, SIEMENS and C3G engines, Magneti Marelli, on the injection computer.

Also check between track:

- 18 for E7J engines, AC DELCO,
- 13 for E7F, E7J, F3P and F7P engines, SIEMENS,
- 5 for C3G engines, Magneti Marelli on the injection computer and the interior lighting fuse via the injection warning light.

Is the wiring correct?

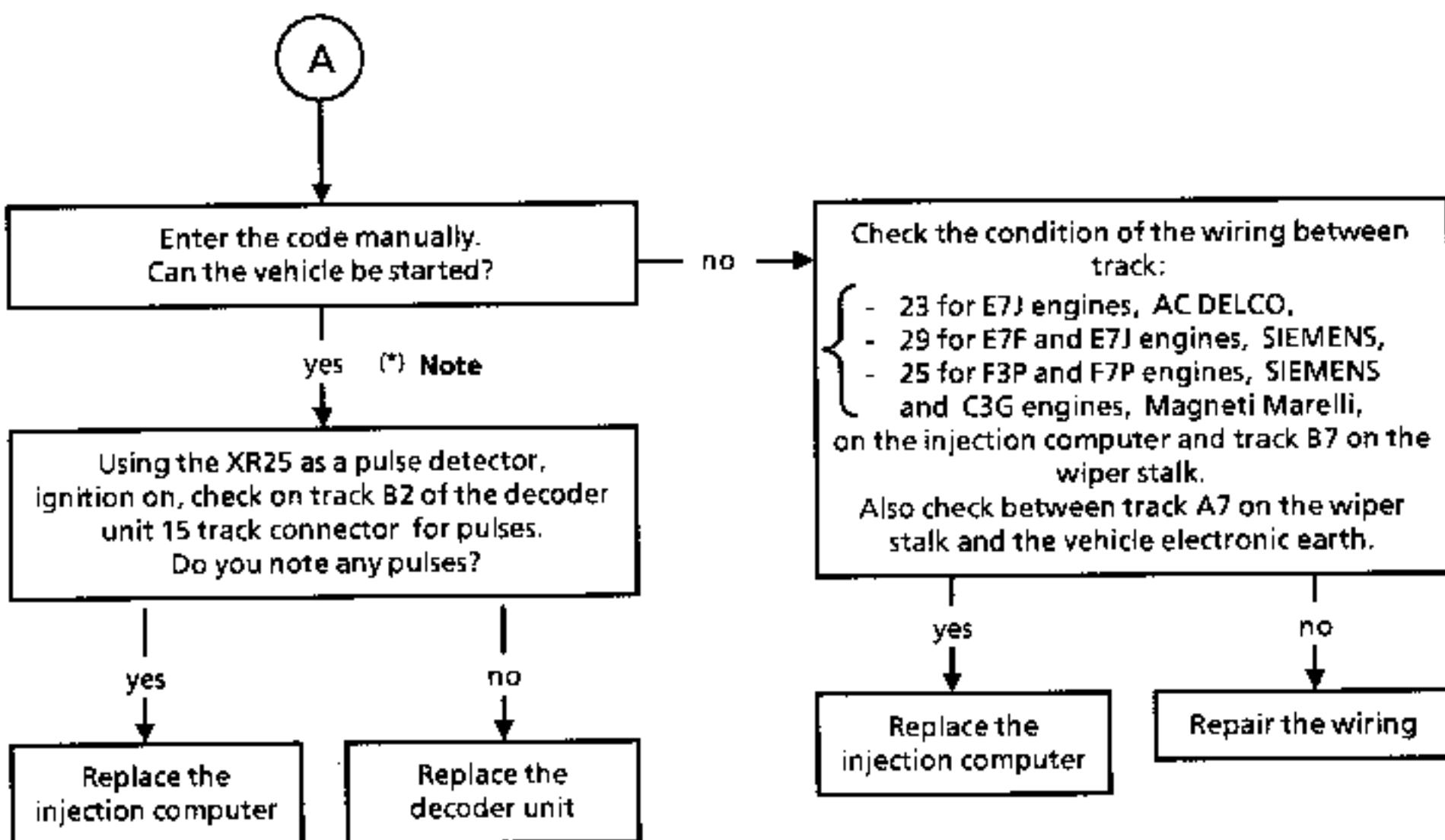
no

Repair the faulty wiring

yes

A

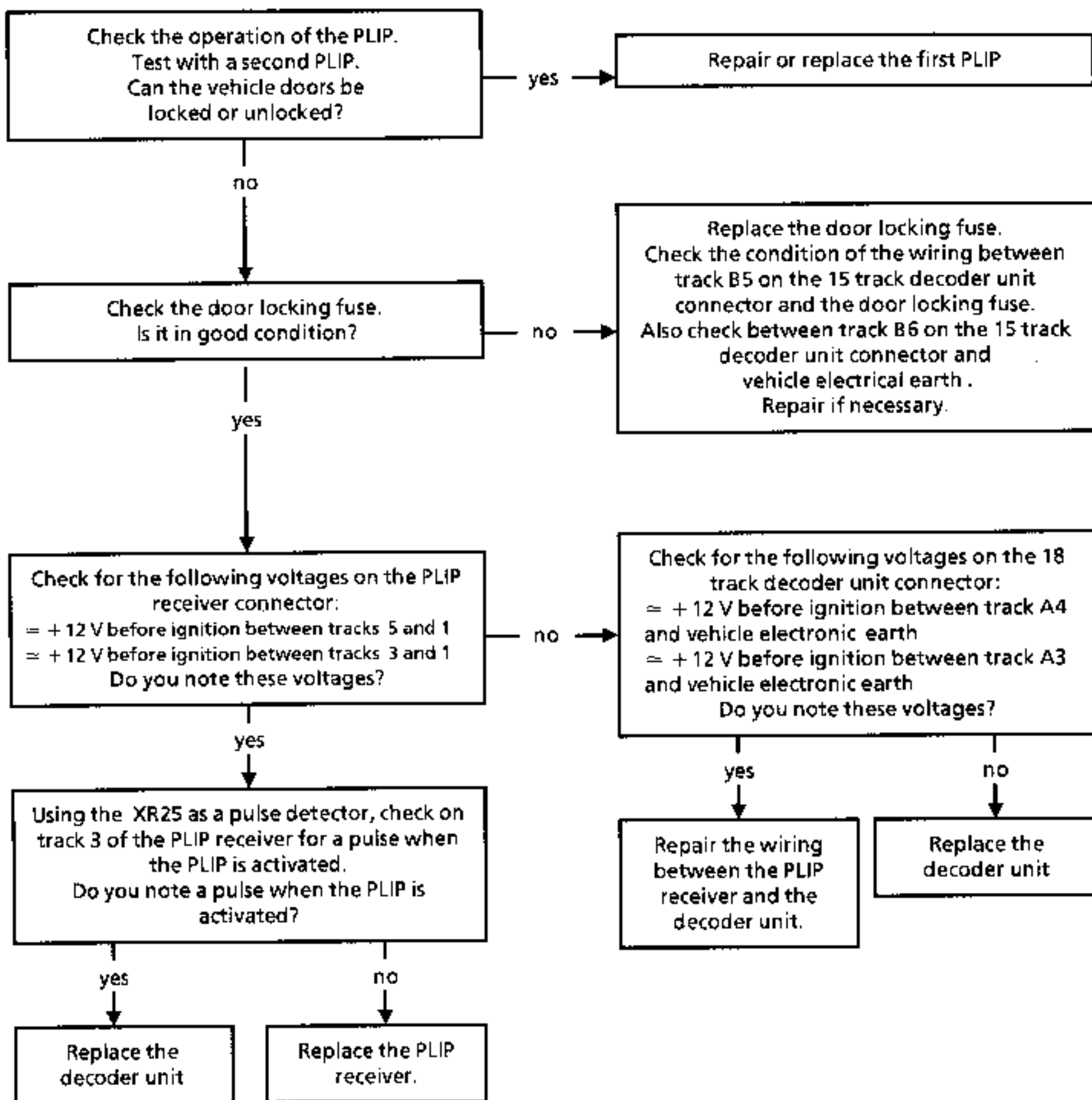
Chart 1 : When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate (cont).



(\*) **Note** : if the code cannot be obtained from Delta Assistance (tel. : 05 05 15 15 for France), go on to the next step.

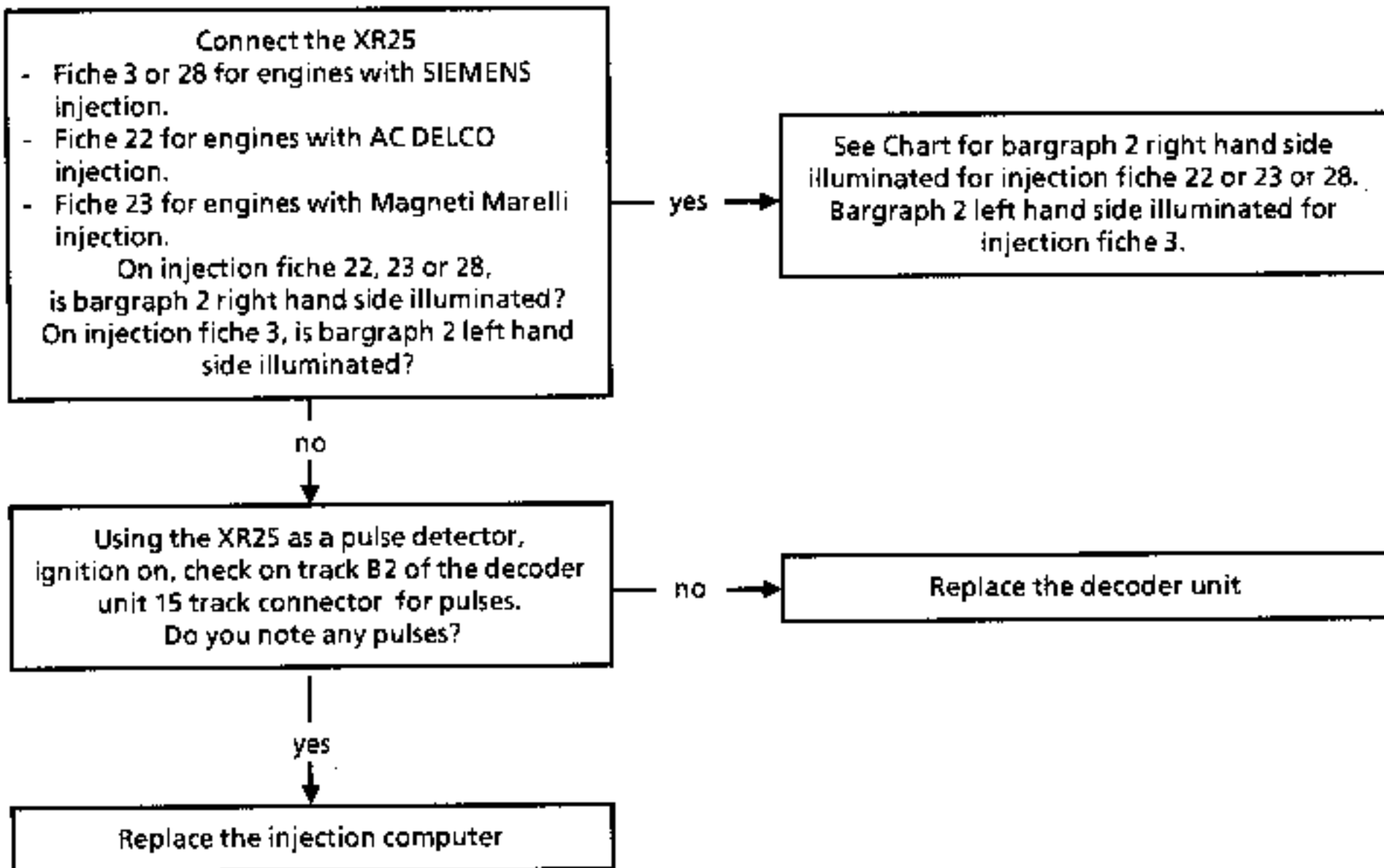
## PLIP engine immobiliser system

**Chart 1A : When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate.**



## PLIP engine immobiliser system

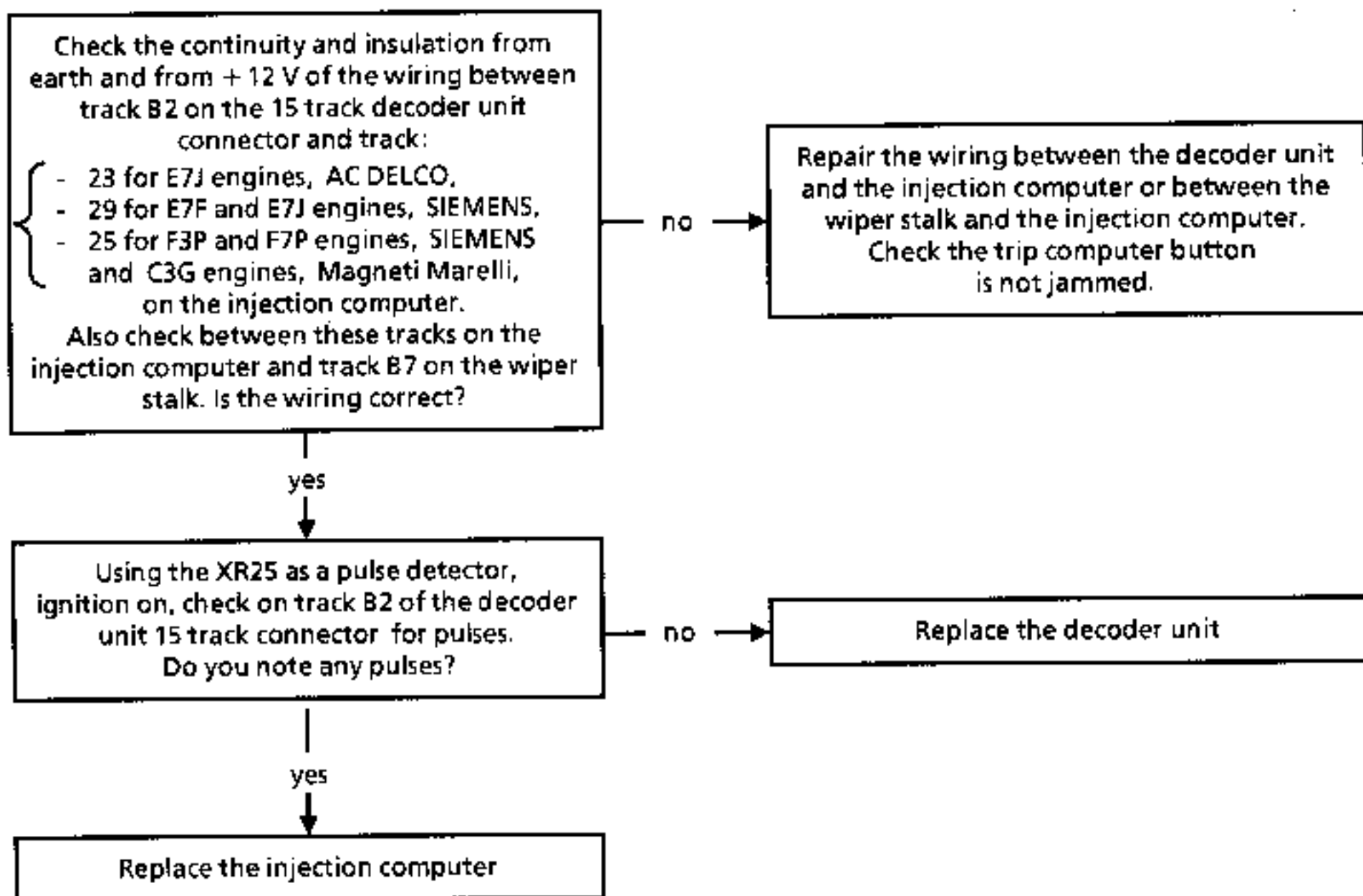
**Chart 2 : While driving (deceleration) and at idle speed, the injection warning light flashes permanently.**



## PLIP engine immobiliser system

**Bargraph 2 right hand side illuminated for injection fiche 22, 23 or 28 : Engine immobiliser fault**  
**Bargraph 2 left hand side illuminated for injection fiche injection 3 : Engine immobiliser fault**

Open circuit Short circuit to earth Short circuit to + 12 V	} on wiring between track	{ 23 for E7J engines, AC DELCO 29 for E7F and E7J engines, SIEMENS 25 for F3P and F7P engines, SIEMENS and C3G engines, Magneti Marelli	} on the injection computer and track B2 on the 15 track decoder unit connector
Short circuit to earth Short circuit to + 12 V	} on wiring between track	{ 23 for E7J engines, AC DELCO 29 for E7F and E7J engines, SIEMENS 25 for F3P and F7P engines, SIEMENS and C3G engines, Magneti Marelli	} on the injection computer and track B7 on the wiper stalk



**Note :**

- after repairing the engine immobiliser system, on the XR25, wait for bargraph 2 right hand side to flash then enter G0\*\* to erase the memory or disconnect the battery for approximately = 30 seconds,
- after repair, check the operation of the engine immobiliser system.

# ELECTRICAL SYSTEMS

## Coded key engine immobiliser system

82

Fault finding for coded key engine immobiliser system

### CUSTOMER COMPLAINTS

When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate.

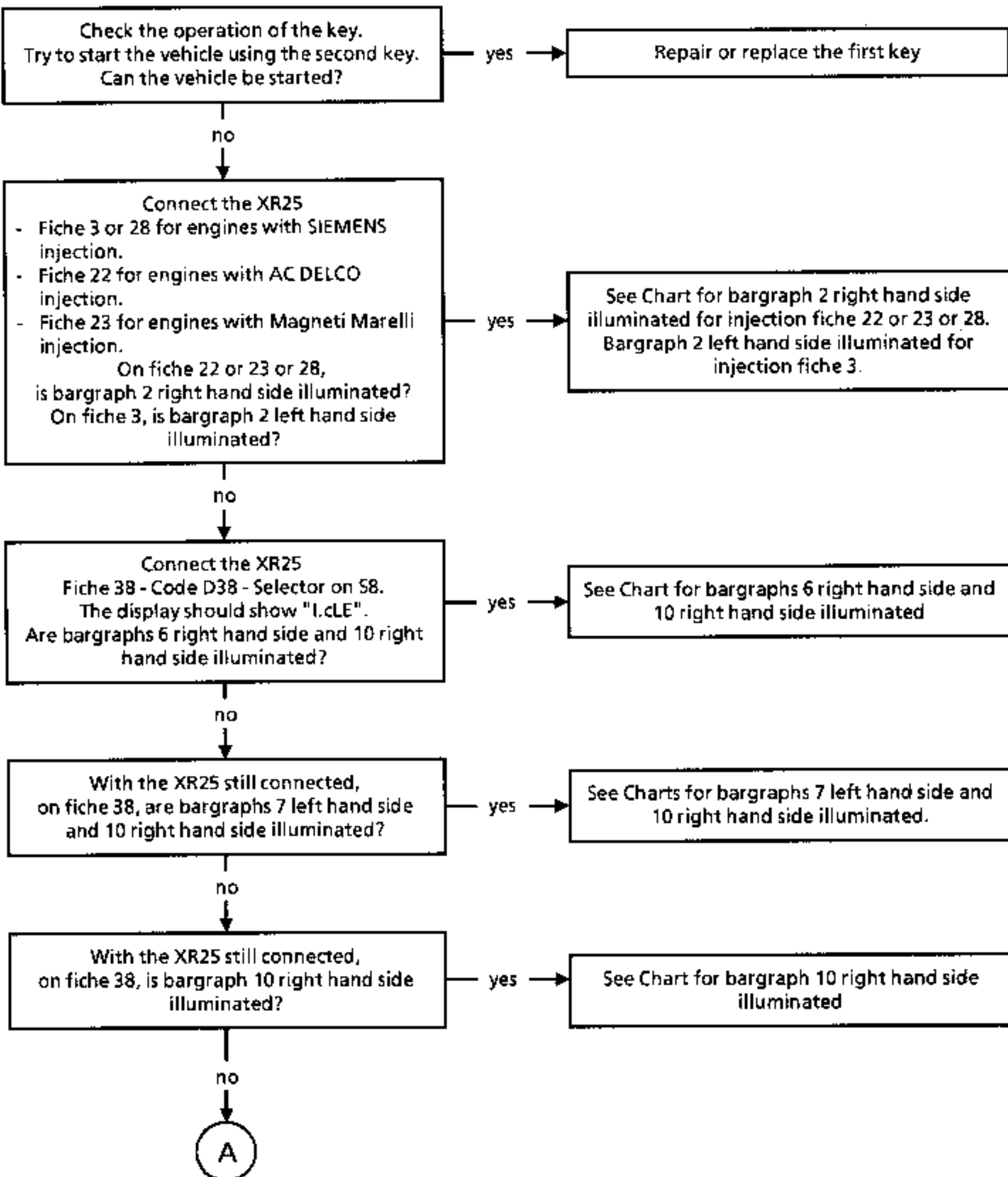
Chart 1

While driving (deceleration) and at idle speed, the injection warning light flashes permanently.

Chart 2

## Coded key engine immobiliser system

**Chart 1 : When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate.**

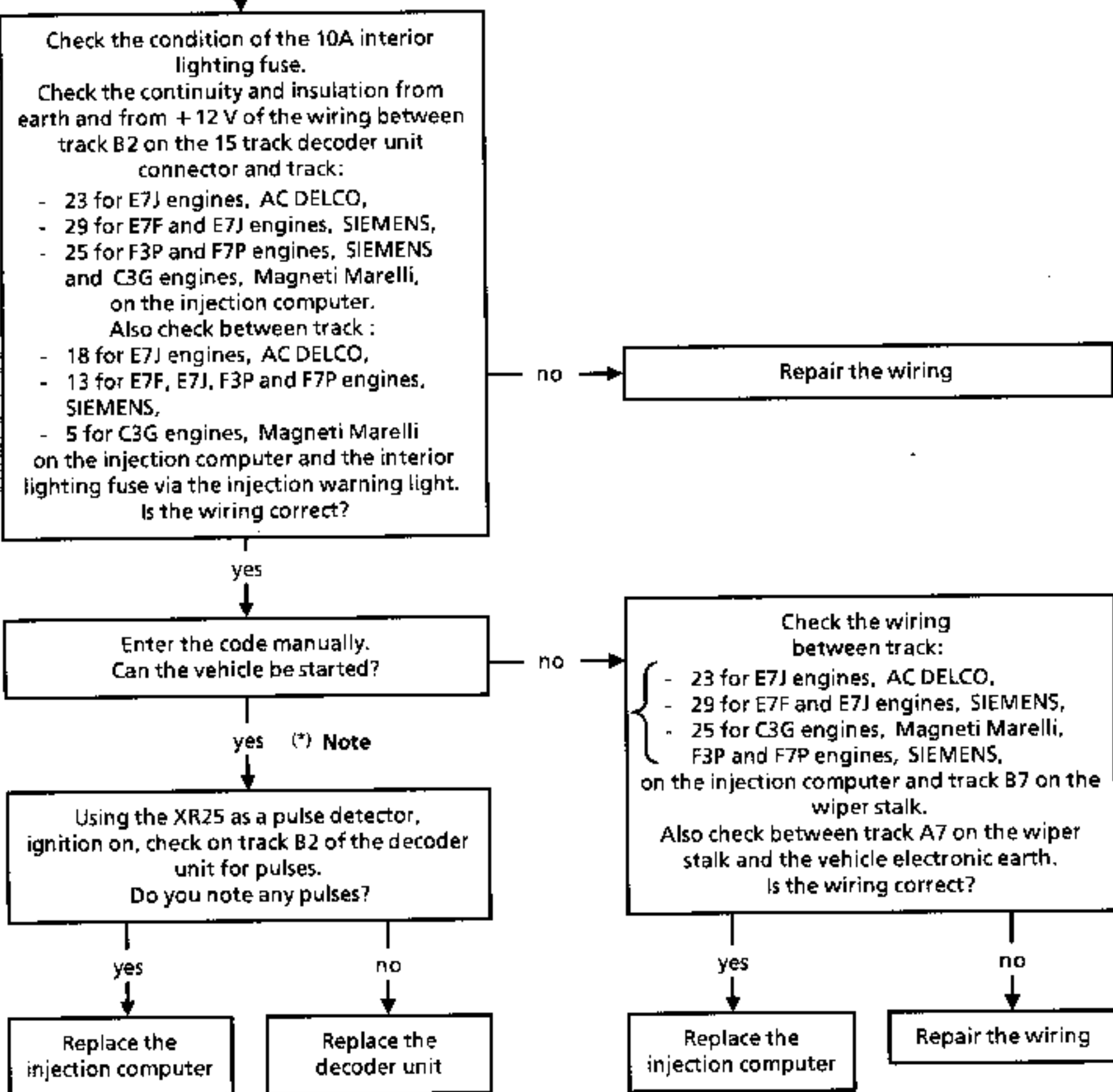




## Coded key engine immobiliser system

**Chart 1 : When the ignition is turned on, the injection warning light flashes, remains permanently illuminated or does not illuminate (cont).**

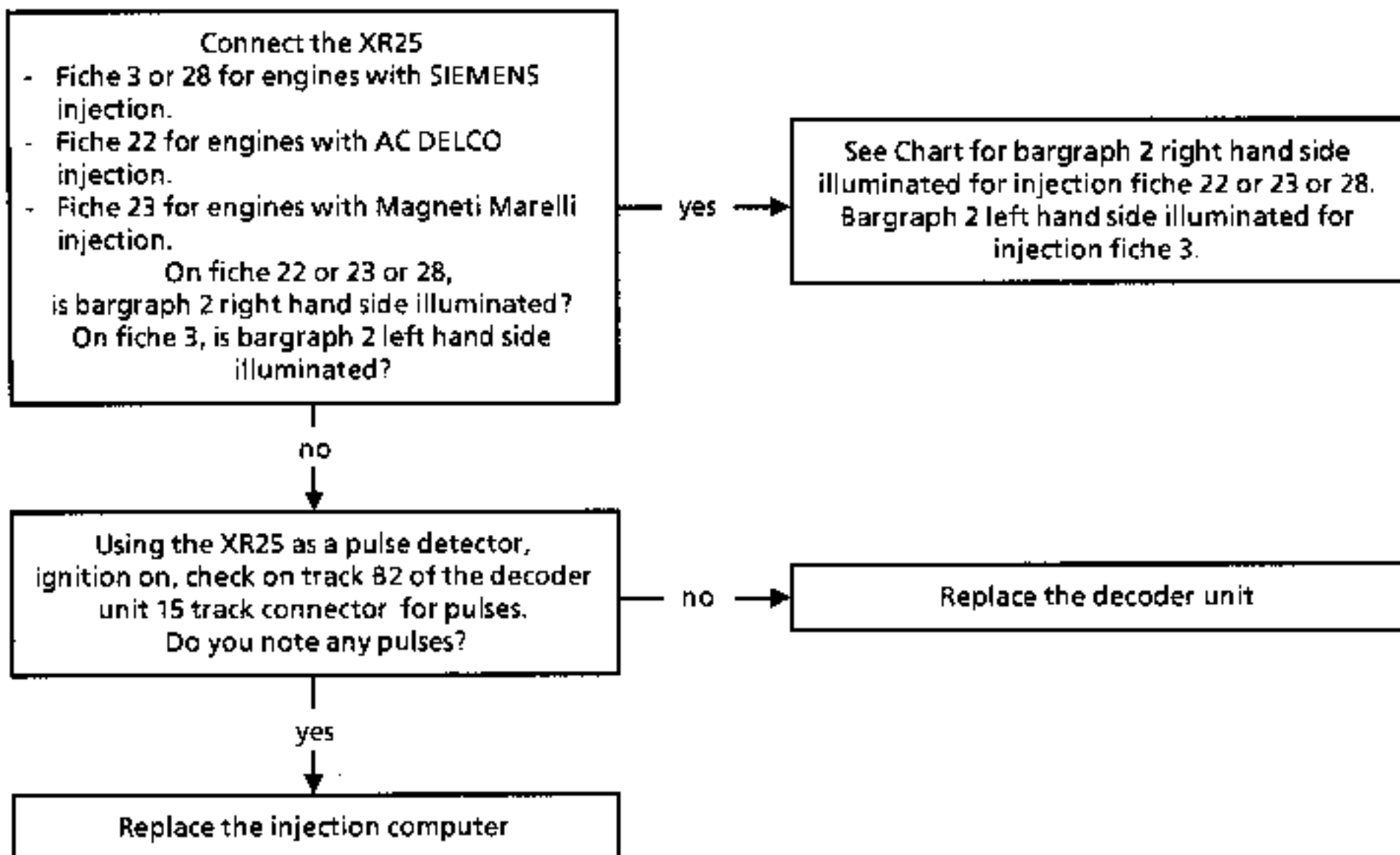
A



(\*) **Note** : If the code has not been obtained from Technical Services in the UK or from Delta Assistance, for France, (tel. : 05 05 15 15 for France), go on to the next step.

## Coded key engine immobiliser system

**Chart 2 : While driving (deceleration) and at idle speed, the injection warning light flashes permanently.**



**FAULT CHART**

**The illumination of the following bargraphs indicates a fault - Fiche 38**

\_\_\_\_\_ Bargraphs 6 right hand side and 10 right hand side illuminated

\_\_\_\_\_ Bargraphs 7 left hand side and 10 right hand side illuminated

\_\_\_\_\_ Bargraph 10 right hand side illuminated

**The illumination of the following bargraphs indicates a status**

\_\_\_\_\_ Bargraph 2 right hand side illuminated on injection fiche 22 or 23 or 28

\_\_\_\_\_ Bargraph 2 left hand side illuminated on injection fiche 3

## Coded key engine immobiliser system

**Bargraphs 6 right hand side and 10 right hand side illuminated**  
*Coded line fault and coded line reading fault*

Check the continuity and insulation from earth and from + 12 V of the wiring between track B2 on the decoder unit and track:

- 23 for E7J engines, AC DELCO,
  - 29 for E7F and E7J engines, SIEMENS,
  - 25 for C3G engines, Magneti Marelli, F3P and F7P engines, SIEMENS,
- on the injection computer.  
Is the wiring correct?

no

Repair the wiring between track B2 on the decoder unit and the injection computer.

yes

Using the XR25 as a pulse detector, ignition on, check on track B2 of the decoder unit 15 track connector for pulses. Do you note any pulses?

no

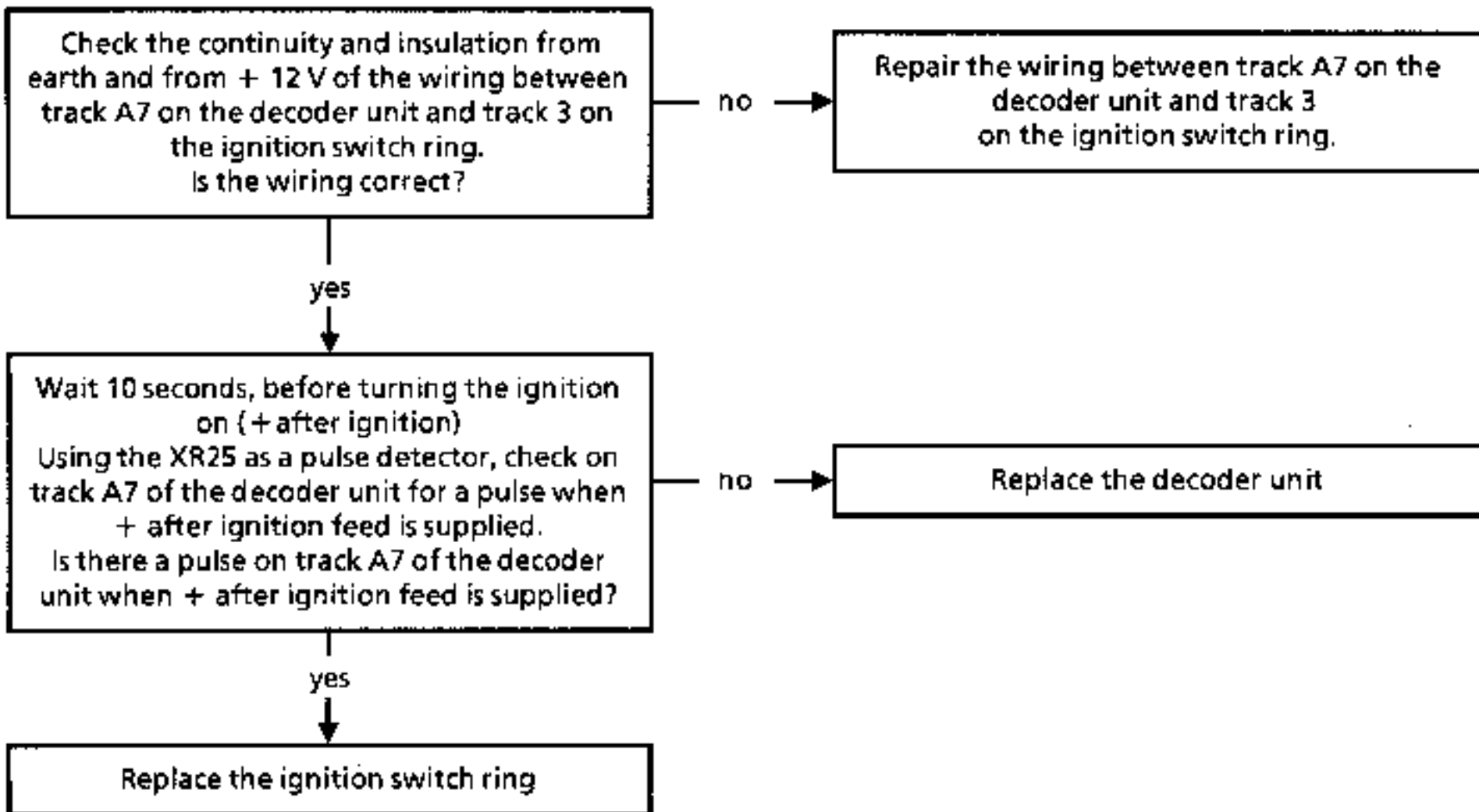
Replace the decoder unit

yes

Replace the injection computer

## Coded key engine immobiliser system

**Bargraphs 7 left hand side and 10 right hand side illuminated**  
*Key interrogation fault and coded line reading fault*



## Coded key engine immobiliser system

**Bargraph 10 right hand side illuminated**  
*Coded line reading fault*

Is the ignition switch ring correctly positioned?

no

Refit the ignition switch ring correctly

yes

Check on the decoder unit for  $\approx +5\text{ V}$  before ignition between track A6 and track A8.  
Is there  $\approx +5\text{ V}$  before ignition between track A6 and track A8 on the decoder unit?

no

Replace the decoder unit

yes

Check the continuity and insulation from earth and from  $+12\text{ V}$  of the wiring between:

decoder unit	{	A6	4	} ignition switch ring
		A7	and 3	
		A8	6	
		A9	1	

Is the wiring correct?

no

Repair the wiring between the decoder unit and the ignition switch ring

yes

Wait 10 seconds before supplying  $+$  after ignition feed. Is there activity on track A6 of the decoder unit? (on fiche 38, is bargraph 11 right hand side illuminated?)

no

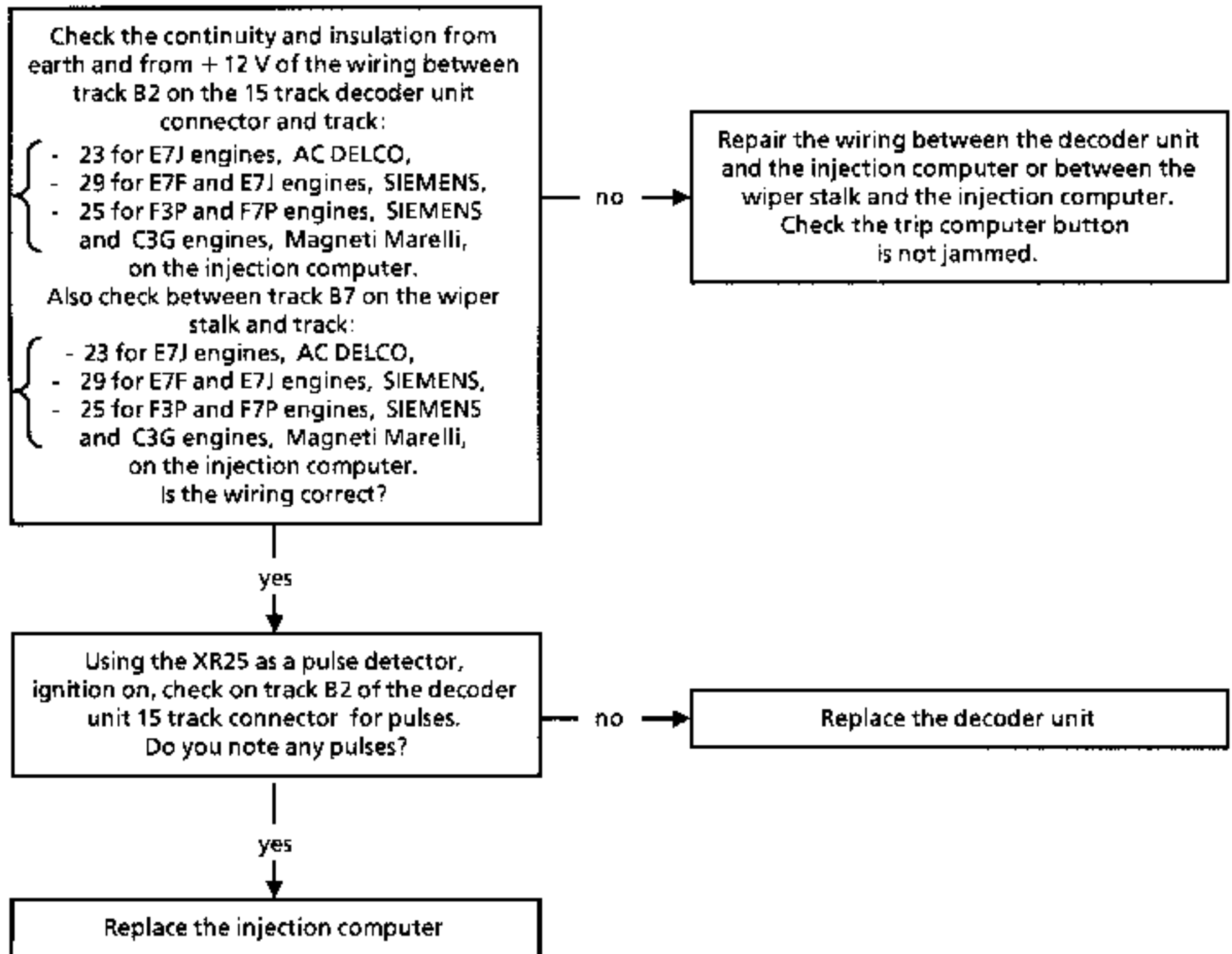
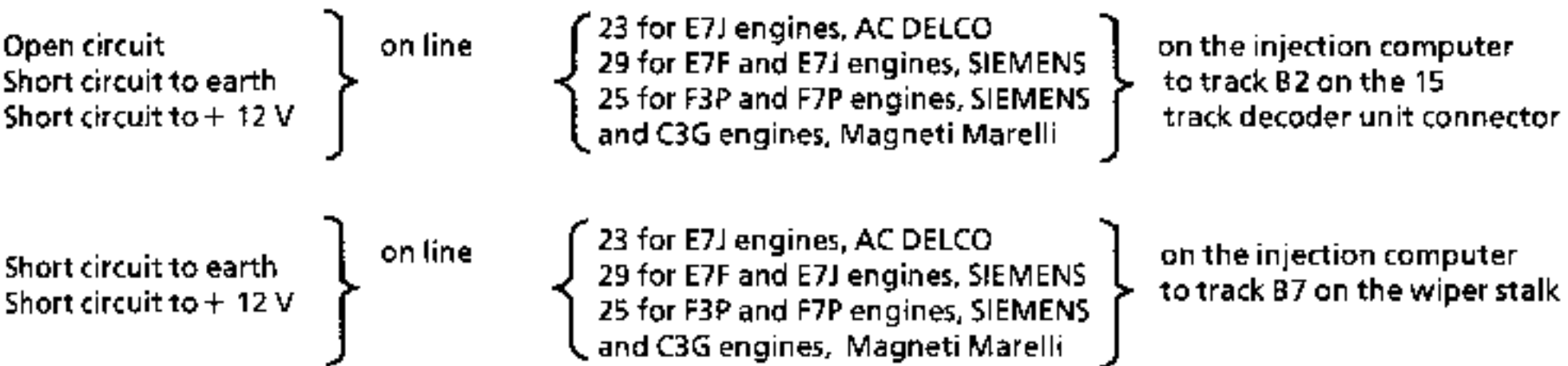
Replace the ignition switch ring

yes

Replace the decoder unit

## Coded key engine immobiliser system

**Bargraph 2 right hand side illuminated for injection fiche 22, 23 or 28 : Engine immobiliser fault**  
**Bargraph 2 left hand side illuminated for injection fiche injection 3 : Engine immobiliser fault**



**Note :** - after repairing the engine immobiliser system, on the XR25, wait for bargraph 2 right hand side to flash then enter G0\*\* to erase the memory or disconnect the battery for approximately = 30 seconds,  
 - after repair, check the operation of the engine immobiliser system.