



Type and version

Subsection

**TWINGO**

XXX X

82

82

## ENGINE IMMOBILISER WITH CHANGING INFRA RED PLIP CODE AND KEY RECOGNITION SYSTEM - FAULT FINDING

- Engine: **C3G**
  - Gearbox: **XXX**
- Basic manual:  
**Workshop Repair Manual 302 - NT 2300**

Fault finding charts for the engine immobiliser with changing Plip infra red code and key recognition system fitted to the **TWINGO** range.

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Fault finding for Plip engine immobiliser system

**CUSTOMER COMPLAINTS**

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

**CHART 1**

When the ignition is turned on the red immobiliser warning light remains illuminated or does not illuminate.

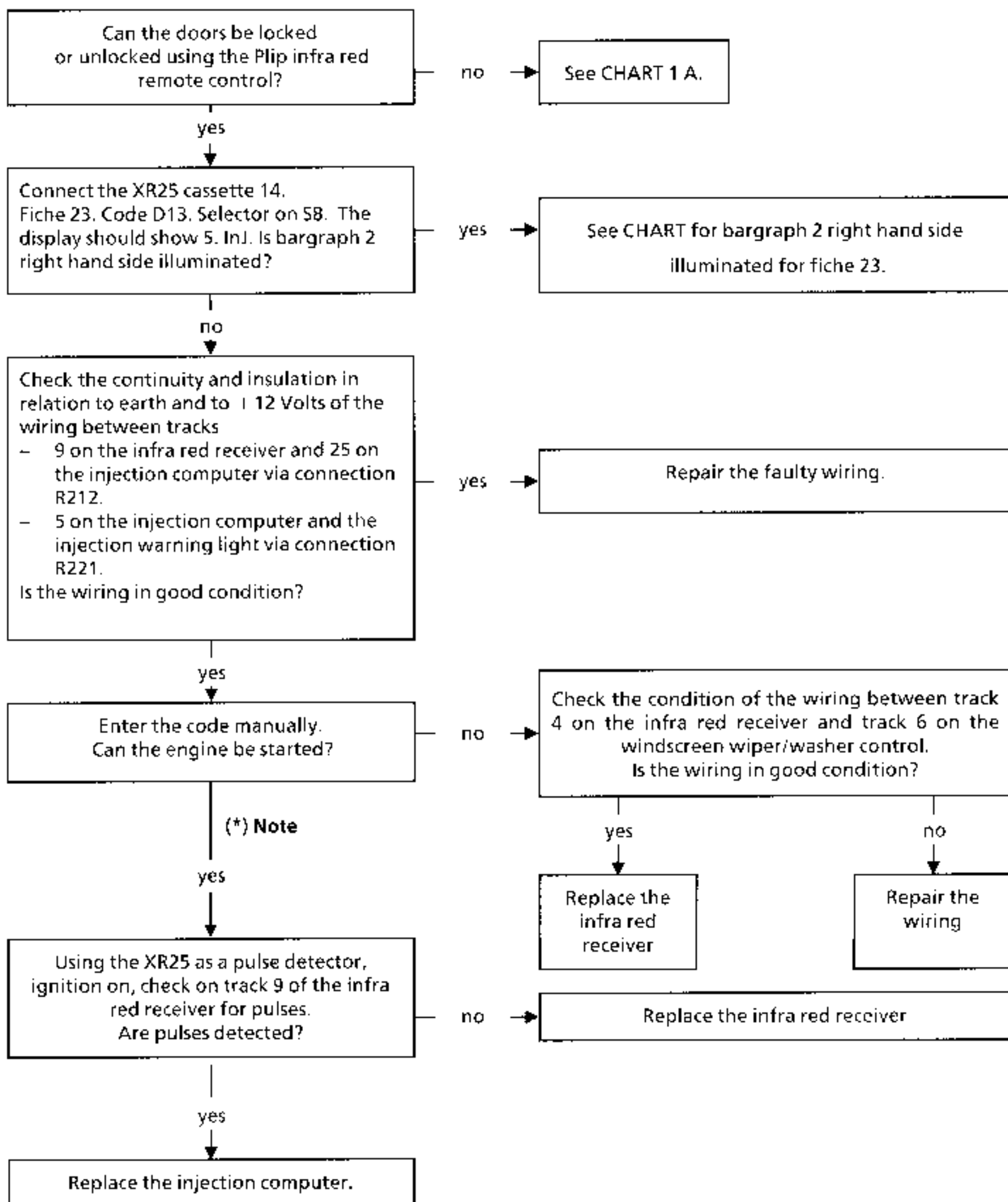
**CHART 2**

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

**CHART 3**

## Plip engine immobiliser system

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



(\*) Note : If the manual code cannot be obtained, move on to the next stage.

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## Plip engine immobiliser system

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

Check the operation of the Plip remote control.

Test using a second Plip.

Can the doors be locked or unlocked?

yes

Repair or replace the first Plip.

no

Check the continuity and insulation in relation to earth and to + 12 Volts of the wiring between the infra red receiver tracks:

- 7 and the 10 A diagnostic socket fuse,
- 3 and the 20A heated rear screen fuse,
- 12 and the 20 A central door locking fuse,
- 6 and electrical earth NG.

Check the condition of the corresponding fuses.

Are the wiring and fuses in good condition?

no

Repair the wiring and replace the faulty fuse if necessary.

yes

Replace the infra red receiver.

## Plip engine immobiliser system

**CHART 2 :** When the ignition is turned on the red immobiliser warning light remains illuminated or does not illuminate

Can the doors be locked or unlocked using the Plip infra red remote control?

no

See CHART 1 A.

yes

Check the continuity and insulation in relation to earth and to + 12 Volts of the wiring between:

- track 11 on the infra red receiver and the immobiliser warning light via connection R221.
- the immobiliser warning light and the 10 A horn fuse via connection R212 and the stalk.

Are the wiring and the fuses in good condition?

no

Repair the faulty wiring and replace the horn fuse if necessary.

yes

Replace the infra red receiver.

## Plip engine immobiliser system

**CHART 3:** While driving (deceleration) and at idle speed, the injection warning light flashes permanently

Connect the XR25. Cassette 14.  
Fiche 23. Code D13. Selector on S8.  
The display should show 5.Inj.  
Is bargraph 2 right hand side illuminated?

yes

See CHART for bargraph 2 right hand side illuminated on fiche 23.

no

Using the XR25 as a pulse detector, ignition on, check on track 9, of the infra red receiver for pulses.  
Do you note any pulses?

no

Replace the infra red receiver.

yes

Replace the injection computer.

# ELECTRICAL SYSTEMS

## Plip engine immobiliser system

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### BARGRAPH 2 RIGHT HAND SIDE ILLUMINATED *Immobiliser fault*

- XR25 : \* 22 : 1. dEF : Coded line fault  
2. dEF : Code not programmed
- Use fiche 23, Code D13, Selector on S8. The display should show 5. InJ.

#### 1. dEF : Coded line fault

Open circuit  
Short circuit to earth  
Short circuit to + 12 Volts

on the wiring between track 9 on the infra red receiver and track 25 on the injection computer via connection R212.

Check the continuity and insulation in relation to earth and to + 12 Volts of the wiring between track 9 on the infra red receiver and track 25 on the injection computer via connection R212.  
Is the wiring correct?

no

Repair the wiring between track 9 on the infra red receiver and track 25 on the injection computer

yes

Using the XR25 as a pulse detector, ignition on, check on track 9, of the infra red receiver for pulses.  
Do you note any pulses?

no

Replace the infra red receiver.

yes

Replace the injection computer.

**Note :** - After repairing the engine immobiliser system, on the XR25 wait for the flashing of bargraph 2 right hand side then enter GO \*\* to erase the memory or disconnect the battery for approximately 30 seconds.

- After repairing, check the immobiliser system operates correctly.

#### 2. dEF : Code not programmed

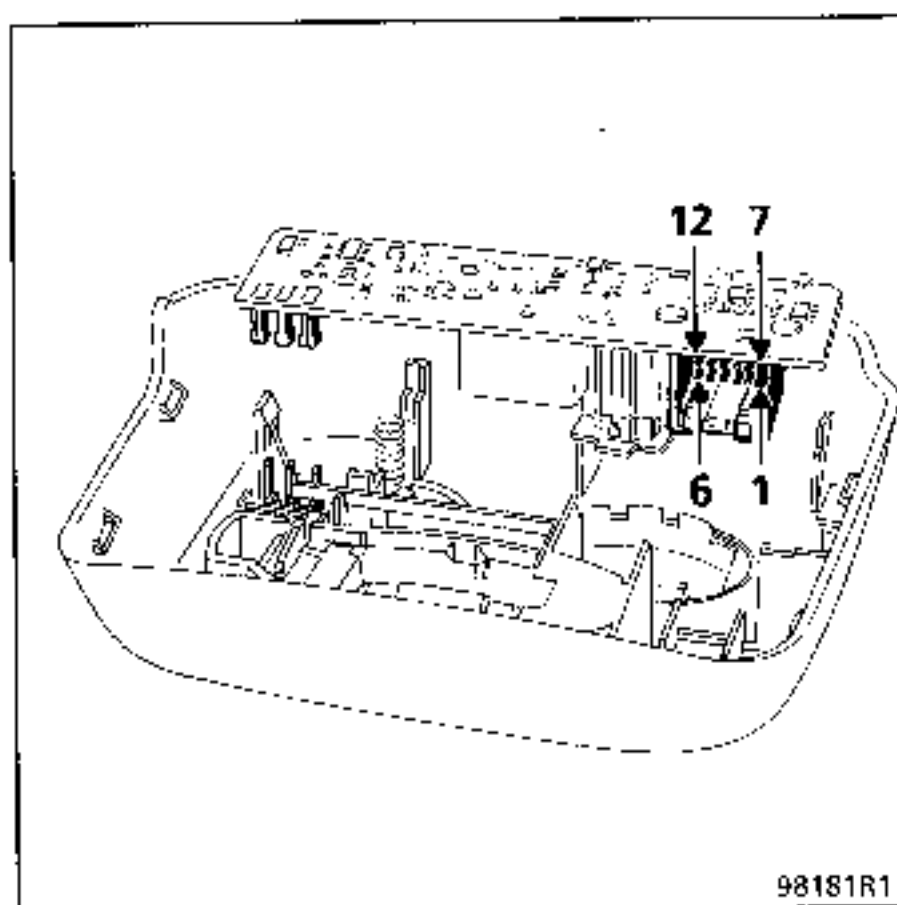
See code programming procedure

# ELECTRICAL SYSTEMS

## Plip engine immobiliser system

**82**

### PRINTED CIRCUIT CONNECTIONS (decoder unit)



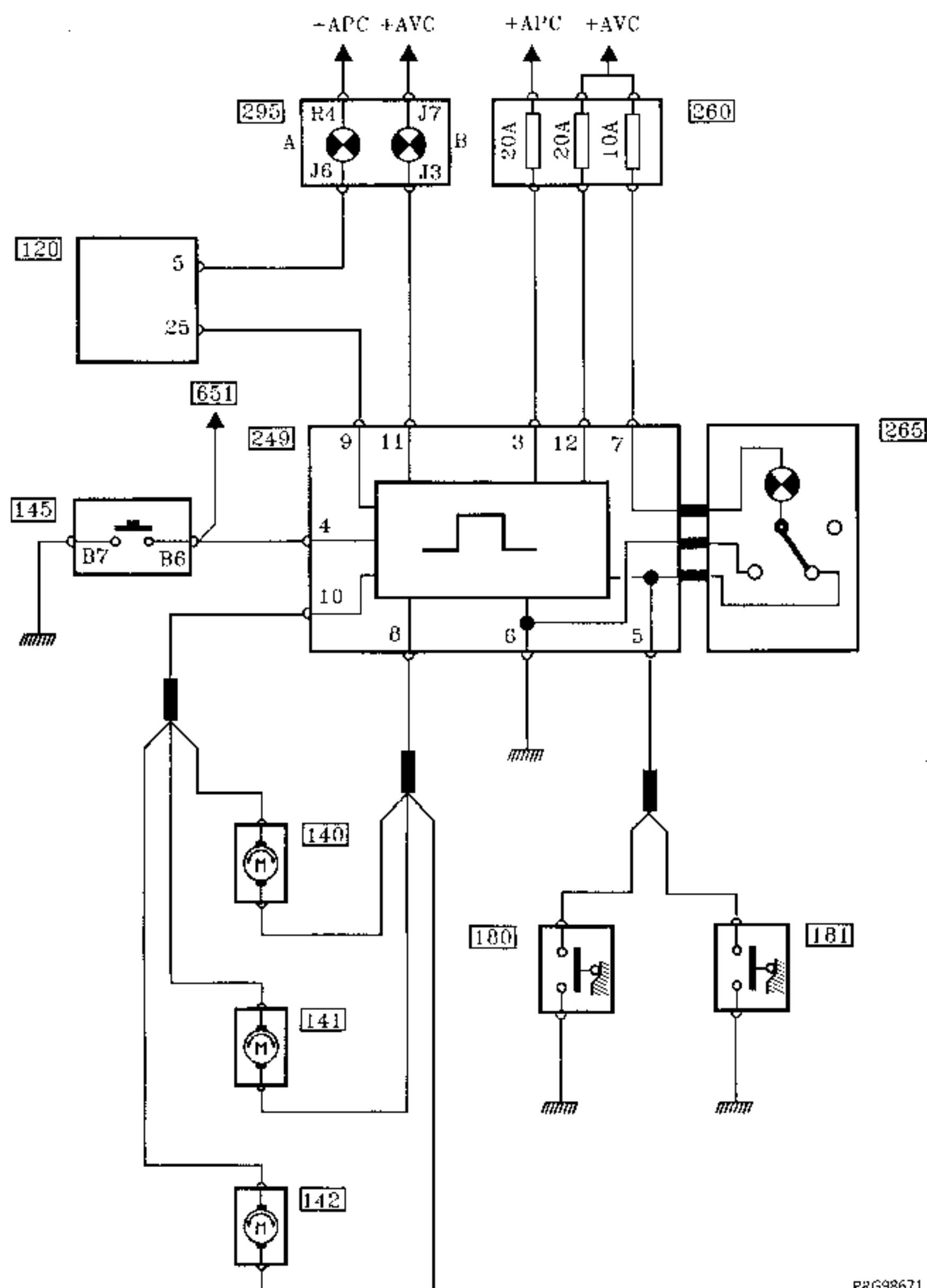
### 12 track connector

Track	Allocation
1	Door unlocking information*
2	Door locking information*
3	+ after ignition
4	Multifunction display sequence key
5	Internal lighting via door switches
6	Earth
7	Courtesy light feed (+ before ignition)
8	Door opening
9	Coded information to injection computer
10	Door locking
11	Red immobiliser warning light
12	Receiver feed (+ before ignition)

\* Information for accessory alarm



DIAGRAM



### KEY

- 120** Injection computer
- 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
- 249** Infra red receiver
- 260** Fuse box
- 265** Courtesy light console
- 295** Warning light strip
- 651** Instrument panel (multifunction display)
  
- A** Injection warning light
- B** Red immobiliser warning light

**Coded key engine immobiliser transponder system**

Fault finding for coded key engine immobiliser transponder system

**CUSTOMER COMPLAINTS**

When the ignition is turned on the injection warning light flashes permanently, remains illuminated or does not illuminate.  
(The vehicle may or may not be able to be started).

**CHART 1**

When the ignition is turned on the red immobiliser warning light flashes permanently (the vehicle may not be started).

**CHART 2**

When the ignition is turned on the red immobiliser warning light remains illuminated for approximately 3 seconds or does not illuminate.

**CHART 3**

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

**CHART 4**

## Coded key engine immobiliser transponder system

**CHART 1 :** When the ignition is turned on the injection warning light flashes permanently, remains illuminated or does not illuminate (The vehicle may or may not be able to be started).

Check the key recognition function. Try to start the vehicle using the second key. Can the vehicle be started?

yes

Repair or replace the first key

no

Turn the ignition on (– APC) using the key.  
Is the key recognised?  
(On fiche 38, is bargraph 10 left hand side

no

See CHART 2

yes

Connect the XR25. Cassette 14.  
Fiche 23. Code D13. Selector on S8. The display should show 5. InJ.  
Is bargraph 2 right hand side illuminated?

yes

See bargraph 2 right hand side illuminated for injection fiche 23.

no

With the XR25 still connected.  
Fiche 38. Code D38. Selector on S8. The display should show 1. cLE.  
Are bargraphs 6 and 10 right hand side illuminated?

yes

See bargraphs 6 and 10 right hand side illuminated for immobiliser (key) fiche 38.

yes



## Coded key engine immobiliser transponder system

**CHART 1 :** When the ignition is turned on the injection warning light flashes permanently, remains illuminated or does not illuminate (The vehicle may or may not be able to be started) (cont)

**A**

Enter the manual code.  
Can the vehicle be started (bargraph 10 left hand side extinguished on fiche 38) ?

(\*) Note

yes

Using the XR25 as a pulse detector,  
ignition on, check on track A2 of the  
decoder unit for pulses.  
Are pulses detected?

no

Check the condition of the wiring between track  
A2 on the decoder unit and the central door  
locking switch. Is the wiring correct?

yes

no

yes

no

Replace the injection  
computer

Replace the  
decoder unit

Replace the  
decoder unit

Repair the  
wiring

(\*) Note : If the manual code cannot be obtained, move on to the next stage.

## Coded key engine immobiliser transponder system

**CHART 2:** When the ignition is turned on the red immobiliser warning light flashes permanently (the vehicle may not be started).

Check the key recognition function. Try to start the vehicle using the second key. Can the vehicle be started?

yes

Repair or replace the first key

no

Is the ring correctly mounted on the ignition switch?

no

Refit the ring correctly.

yes

Connect the XR25. Fiche 38. Code D38. Selector on 58. The display should show 1. cLE. When the ignition is turned on, is bargraph 5 left hand side illuminated?

no

Check the condition of the + after ignition wiring on the decoder unit track A1. Repair the wiring if necessary.

yes

Check the continuity and insulation in relation to earth and to +12 Volts of the wiring between tracks:

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

Is the wiring correct?

no

Repair the wiring

yes

Wait for 10 seconds before turning the ignition on (+ APC). On fiche 38, is bargraph 11 right hand side illuminated?

no

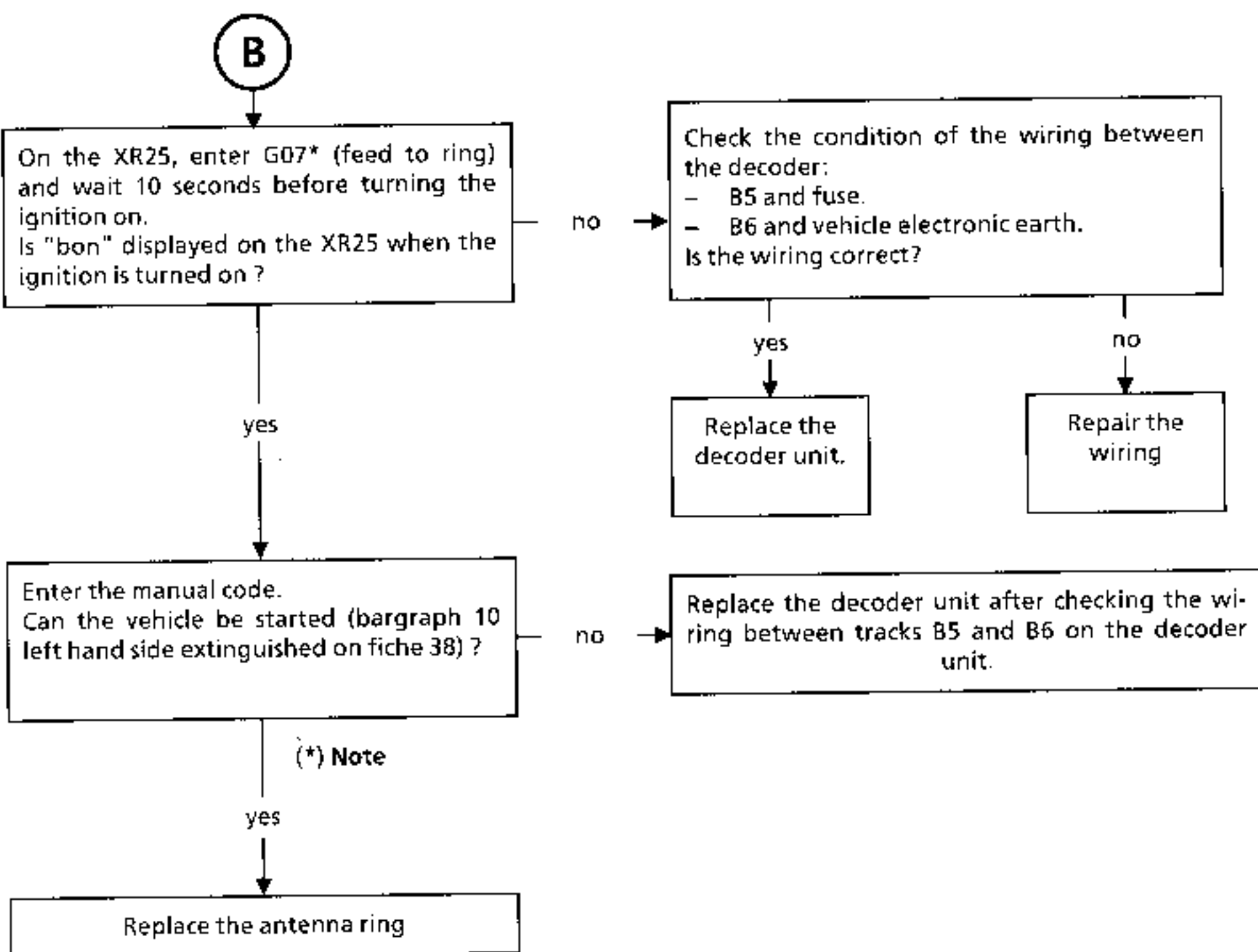
Replace the antenna ring

yes

B

## Coded key engine immobiliser transponder system

**CHART 2:** When the ignition is turned on the red immobiliser warning light flashes permanently (the vehicle may not be started) (cont).



(\*) Note : If the manual code cannot be obtained, move on to the next stage.

## Coded key engine immobiliser transponder system

**CHART 3 :** When the ignition is turned on the red immobiliser warning light remains illuminated for approximately 3 seconds or does not illuminate.

Connect the XR25.  
Fiche 38. Code D38. Selector on S8.  
The display should show I.cLE.  
Is bargraph 7 right hand side illuminated?

yes

See bargraph 7 right hand side illuminated on immobiliser (key) fiche 38.

no

With the XR25 still connected.  
On fiche n° 38, is bargraph 17 right hand side illuminated?

yes

See bargraph 17 right hand side illuminated on immobiliser (key) fiche 38.

no

Check the condition of the wiring on tracks B5 and B6 of the decoder unit:  
Is the wiring correct?

no

Repair the wiring

yes

Check the decoder unit petrol / diesel configuration.  
On fiche n° 38, bargraph 3 right hand side is illuminated for a diesel configuration and remains extinguished for a petrol configuration.  
Is the configuration correct for the engine type?

no

Replace the decoder unit, specifying the key marking and the configuration fault.

yes

Replace the decoder unit



## Coded key engine immobiliser transponder system

**CHART 4:** While driving (deceleration) and at idle speed, the injection warning light flashes permanently.

Connect the XR25. Cassette 14.  
Fiche 23. Code D13. Selector on 58.  
The display should show 5.Inj.  
Is bargraph 2 right hand side illuminated?

yes

See CHART for bargraph 2 right hand side illuminated on fiche 23

no

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

no

Replace the decoder unit.

yes

Replace the injection computer

## FAULT CHARTS

The illumination of the following bargraphs indicates a fault . Fiche 38.

— Bargraph 6 and 10 right hand side illuminated

— Bargraph 7 right hand side illuminated

— Bargraph 7 left hand side illuminated

— Bargraph 17 right hand side illuminated

The illumination of the following bargraph indicates a fault. Fiche 23.

— Bargraph 2 right hand side illuminated on injection fiche 23.

## Coded key engine immobiliser transponder system

**BARGRAPHS 6 AND 10 RIGHT HAND SIDE ILLUMINATED**  
*Coded line fault and coded line reading fault*

Check the continuity and insulation in relation to earth and to 1-12 Volts of the wiring between track B2 on the decoder unit and track 25 on the injection computer via connection R212.  
Is the wiring correct?

no

Repair the wiring between track B2 of the decoder unit and track 25 of the injection computer.

yes

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

no

Replace the decoder unit

yes

Replace the injection computer

## Coded key engine immobiliser transponder system

**BARGRAPH 7 RIGHT HAND SIDE ILLUMINATED**  
*Immobiliser warning light fault*

Open circuit  
Short circuit to earth  
Short circuit to +12 Volts

on the wiring between track A4 on the decoder unit and the immobiliser warning light via connection R221 or between the immobiliser warning light and the 10 A horn fuse via connection R221 and the stalk.

Check the continuity and insulation in relation to earth and to +12 Volts of the wiring between track A4 on the decoder unit and track 25 on the injection computer via connection R212.  
Is the wiring correct?

no

Repair the wiring between track A4 on the decoder unit and the immobiliser warning light or between the immobiliser warning light and the 10 A horn fuse.

yes

Test the immobiliser warning light output. Turn the ignition off, use command G02\* and set the XR25 to pulse detection to check on track A4 of the decoder unit for pulses (4 HZ).  
Do you note any pulses?

no

Replace the decoder unit

yes

Replace the immobiliser warning light diode.

## Coded key engine immobiliser transponder system

**BARGRAPH 7 LEFT HAND SIDE ILLUMINATED**  
*Key interrogation fault (cc)*

Open circuit  
Short circuit to earth  
Short circuit to +12 Volts

of the wiring between track A7 on the decoder unit and track 3 on the immobiliser ring.

Check the continuity and insulation in relation to earth and to +12 Volts of the wiring between track A7 on the decoder unit and track 3 on the immobiliser ring.  
Is the wiring correct?

no

Repair the wiring between track A7 on the decoder unit and track 3 on the ring.

yes

Using the XR25 as a pulse detector, check on track A7 of the decoder unit for pulses when the ignition is turned on (+APC).  
Is a pulse noted on track A7 of the decoder unit when +APC is supplied?

no

Replace the decoder unit

yes

Replace the ring

## Coded key engine immobiliser transponder system

## BARGRAPH 17 RIGHT HAND SIDE ILLUMINATED

*Button fault*

Check the continuity and insulation in relation to earth and to +12 Volts of the wiring between track A2 on the decoder unit and track B6 on the windscreen washer / wiper stalk. Is the wiring correct?

no

Repair the wiring between track A2 on the decoder unit and track B6 on the windscreen washer / wiper stalk.

yes

Check the condition of the trip computer reset button. Is it jammed?

no

Replace the decoder unit

yes

Repair the trip computer reset button. Disconnect the battery for approximately 30 seconds or supply + after ignition feed 20 times using the ignition key to ensure bargraph 17 right hand side flashes then enter GO \*\* to erase the fault.

## Coded key engine immobiliser transponder system

**BARGRAPH 2 RIGHT HAND SIDE ILLUMINATED ON INJECTION FICHE 23**  
*Immobiliser fault*

- XR25 : \* 22 : 1. dEF : Coded line fault  
 2. dEF : Code not programmed
- Use fiche 23. Code D13. Selector on 58. The display should show 5. InJ.

1. dEF : Coded line fault

Open circuit  
 Short circuit to earth  
 Short circuit to +12 Volts

} on the wiring between track B2 on the decoder unit and track 25 on the injection computer via connection R212.

Check the continuity and insulation in relation to earth and to +12 Volts of the wiring between track B2 on the decoder unit and track 25 on the injection computer via connection R212.  
 Is the wiring correct?

no

Repair the wiring between track B2 on the decoder unit and track 25 on the injection computer via connection R212.

yes

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

no

Replace the decoder unit

yes

Replace the injection computer

**Note :** – After repairing the engine immobiliser system, on the XR25 wait for the flashing of bargraph 2 right hand side then enter GO \*\* to erase the memory or disconnect the battery for approximately 30 seconds.

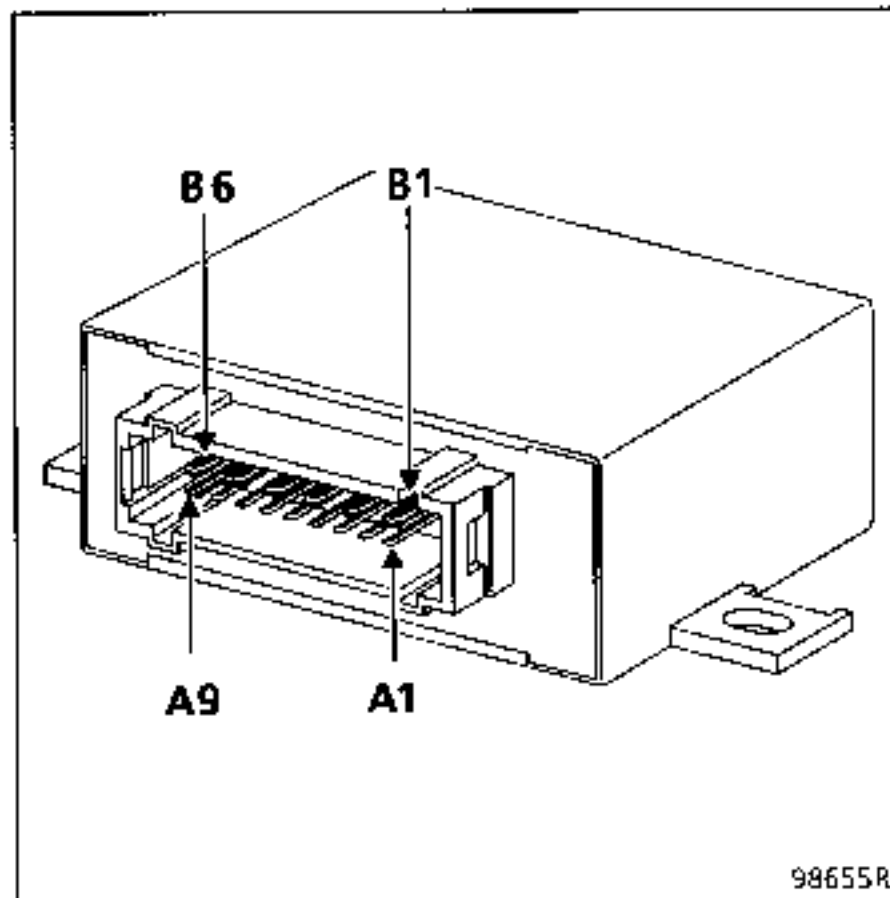
- After repairing, check the immobiliser system operates correctly.

2. dEF : Code not programmed

See code programming procedure

## Coded key engine immobiliser transponder system

## DECODER UNIT CONNECTIONS



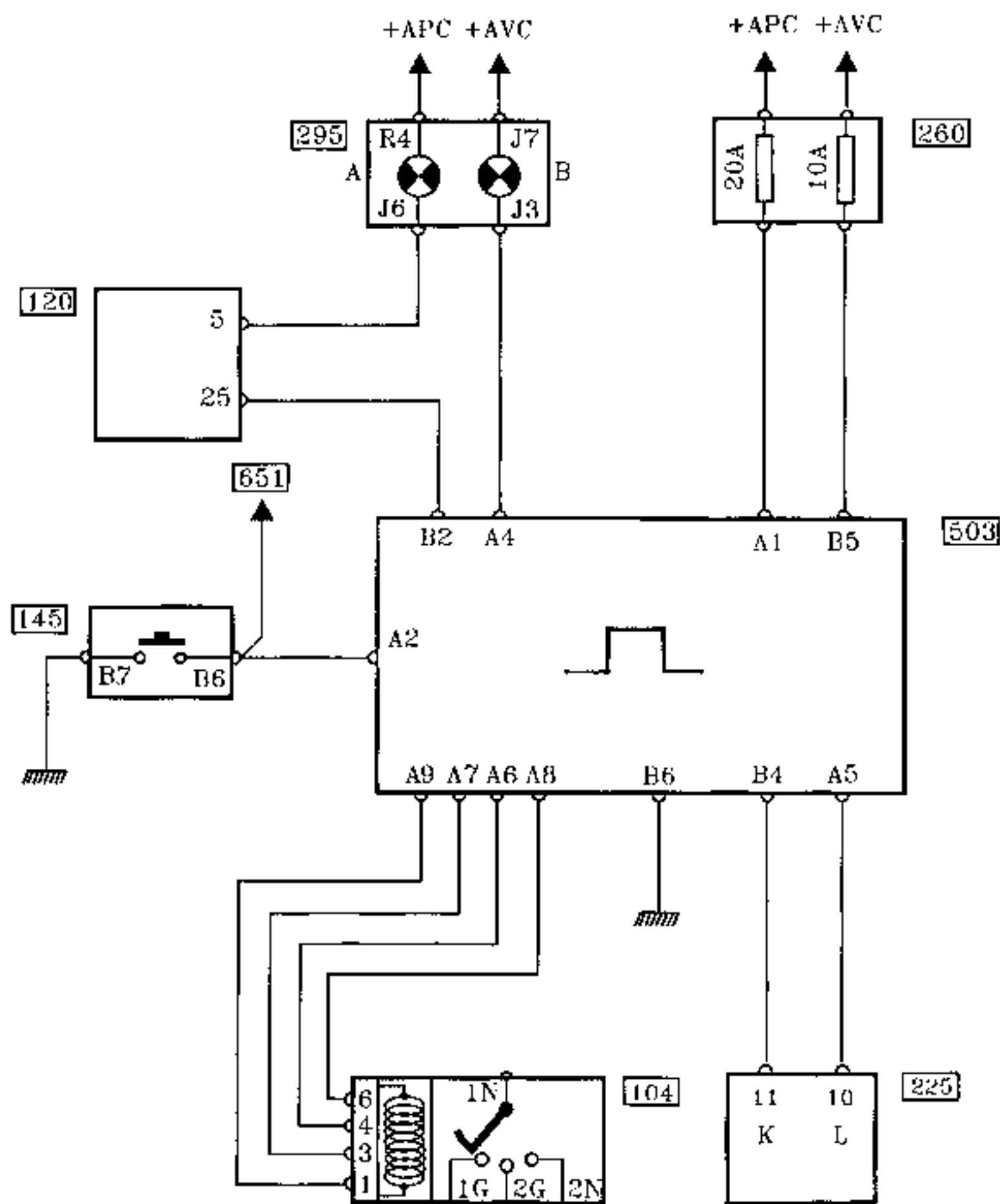
15 track connector

Track	Allocation
A1	+ after ignition
A2	Multifunction display sequence key
A3	Not used
A4	Red immobiliser warning light
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



## Coded key engine immobiliser transponder system

DIAGRAM



**Coded key engine immobiliser transponder system**

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**KEY**

- 104** Ignition switch  
(receiver ring)
- 120** Injection computer
- 145** Wiper stalk
- 225** Diagnostic socket
- 260** Fuse box
- 295** Warning light strip
- 503** Decoder unit
- 651** Instrument panel (multifunction display)
  
- A** Injection warning light
- B** Immobiliser warning light