# RENAULT

## **Technical Note 3864A**

## **XXXX**

Subsection concerned: 01B

## **Using the Wiring Diagrams**

Technical Note 3864A is an explanatory note for the use of wiring diagrams on CD-ROM (Visu Schéma). The Technical Note helps in understanding how Visu Schéma works and gives help in navigating and searching Visu Schéma.

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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 their vehicles are constructed."

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The Wiring Diagrams Technical Notes allow selection of the Applied Principle Diagram.

Marked by: significant of the corresponding to a defective function.

Each diagram is marked according to the identification of the vehicle concerned, i.e.:

- the vehicle family (for instance, J64),
- the engine as described on the engine plate and the engine suffix (e.g. E7J 764),
- the date the vehicle was manufactured. On every Wiring Diagrams Technical Note there is a FROM WHICH date which determines the production cut-off of the vehicles for which the Technical Note is valid,
- more generally, the vehicle criteria (for example, left-hand drive, air conditioning).

A Quick Guide to Visu Schéma gives some tips on how to use the Visu Schéma software.

There will be little, or no, documentation on paper from 2004.

#### STRUCTURE OF THE TECHNICAL NOTE

## 1.1 The index of functions



This index allows the user to find the title of the corresponding function quickly from the number of a circuit diagram. The index is listed in numerical order of the diagrams.

### 1.2 The diagrams 🗐

The diagrams section gathers together all the Applied Principle Diagrams.

The Applied Principle Diagrams show in detail the internals of simple components (switch, relay) and thus aid understanding of the operation of the system and the fault finding routines. Here you will find:

- the components labelled with a number.
- the connectors, labelled with a letter followed by a number (R107),
- the earths, labelled with a letter followed by a number or a letter (e.g. M4 or MG).

The Applied Principle Diagrams are complemented by:

- the functions of the conductors on each connector (see
- the wiring routing, which allows the user to find the components on the vehicle,
- lists of criteria, components, junctions, earths, connections, allowing easy identification of all the components on the diagrams.

Since version 2, it has been possible to print the diagrams directly to A3 format or to two A4 sheets, in colour or black and white.

### 1.3 Fuse and relay boxes



The boxes section illustrates and describes in detail the various fuse and relay boxes on the vehicle. The following are described for each vehicle:

- a graphical representation of the front and/or rear of the box,
- a list of fuses, their use, their position, their rating.

## 1.4 Earth location diagrams

The earth locations diagrams show and identify the location of the earthing points present on the vehicle.

### 1.5 Lists of parts



The lists of parts list and describe all the connectors used in the vehicle wiring harnesses. Each list of parts gives:

- a graphical representation of the connector (the representation may be simplified), and the assignment to the pinouts in the connector,
- the list of conductors connected to the connector with their allocation to the pinouts,
- the cross-section of each conductor,
- the function of each conductor.

There is one list of parts per connector. The connectors are indexed in the lists provided on each Wiring Diagrams Technical Note.

#### **Conductor colours**

• The basic electrical states are:

Red	+ 12 volts before ignition
Yellow	+ 12 volts after ignition
Blue	monitoring circuit or identifiers
Black	free earth

• The following colours are used for the other conductors and the other connectors: white, blue, beige, clear, grey, yellow, brown, black, orange, red, salmon pink, green, violet. These colours may vary for the same wiring harness depending on the supplier.

ВА	White	JA	Yellow	RG	Red
BE	Blue	MA	Brown	SA	Salmon pink
BJ	Beige	NO	Black	VE	Green
CY	Clear or White	OR	Orange	VI	Violet
GR	Grey				

- + starter, intermittent earths, polarity inversions are not fundamental electrical states.
- Protective devices (fuses and thermal cut-outs) do not change the electrical state of the conductors.
- Wiring supplied with devices does not always follow these rules.



### 1.6 Wiring routing

- The wiring routings identify the location on the vehicle of devices, connectors and wiring routing points.
- In the wiring routing, the letter N indicates the label identifying the wiring.

### **IMPORTANT**

The wiring routing points may be slightly modified and may vary from one vehicle to the next. Always check the correctness of the routing before any work on the vehicle or before any operation liable to cause damage to the wiring.

## 1.7 The lists



- List of links: for identifying the function of a conductor from its code.
- List of components: for identifying a component on a diagram from its code.
- List of earths: for identifying an earth on a diagram from its code.
- List of connections: for identifying a connector on a diagram from its code.
- List of criteria: for identifying a criterion on a diagram from its abbreviation. The list explains the meaning in non-abbreviated terms.

## 1.8 On-line help



On-line help assists in understanding the use of the Visu Wiring Diagram Technical Notes and is a complement to the CBT.

### **USING THE TECHNICAL NOTE**

#### 2.1 How to read an Applied Principle Diagrams:

(a sample diagram is shown on the following page)

1	Vehicle family.
2	Criteria for the selection of the diagram.
3	Current year
4	Colour of the connector or the module if it is a module socket.
5	Representation of the connector (number of tracks marked on the front or rear of the connector).
6	Representation of the connection (square for a male connector and round for a female connector). The connection will have a foolproofing device, and the colour is not necessarily the same for the male and female parts.
7	Colour of the connection or the module socket.
8	Number of the board to which the device is connected.
9	Standardised device number
10	Fuse rating.
11	Position of the fuse on the board.

12	Colour of the module socket.
13	Number of the connection.
14	Name of the splice not located in the wiring routing.
15	Earth name (M for earth and N for neutral).
16	Secondary device.
17	Section number.
18	Sheet number.
19	Representation of a link.
20	Link code (for identifying the function of a conductor), see the list of links.
21	Pinout number.
22	Representation of a twisted conductor.
23	Representation of a shield.

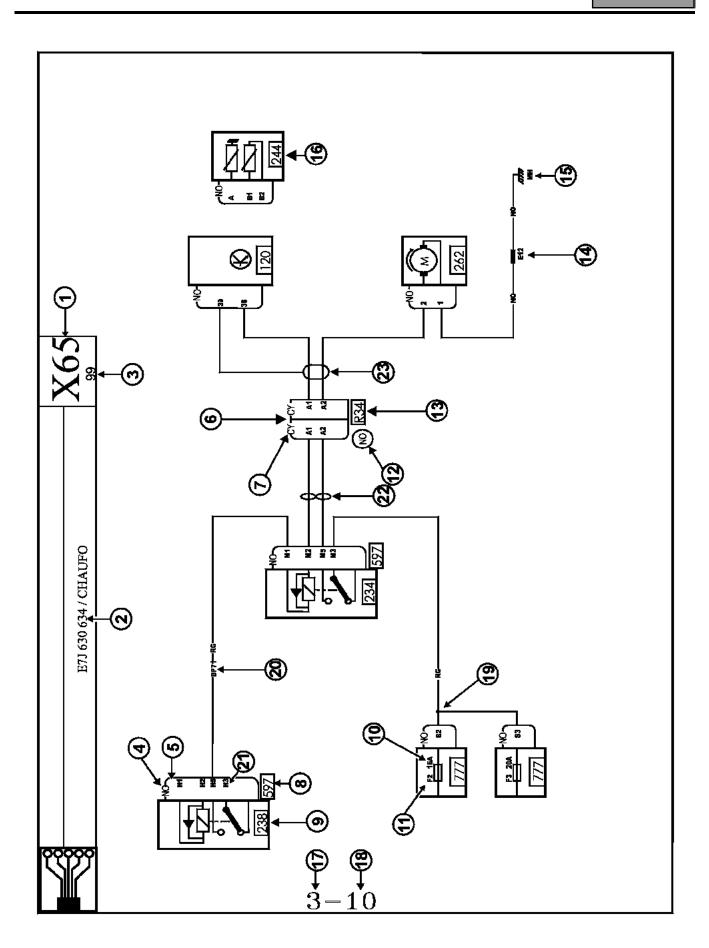
#### Note:

The secondary device, in this diagram, supplies the signal to the computer which controls the relay. Refer to the corresponding diagram for details of the link between the device and the computer.

#### **Definition of selection criteria:**

A characteristic of the criteria field is that a combination of criteria is permitted:

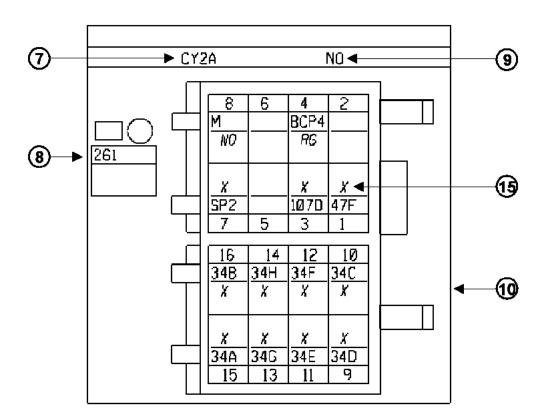
- ➤ The / (forward slash) represents **OR**.
- > The , (comma) represents AND.
- > S or SS as the first letter(s) of a criterion mean WITHOUT or WITH.

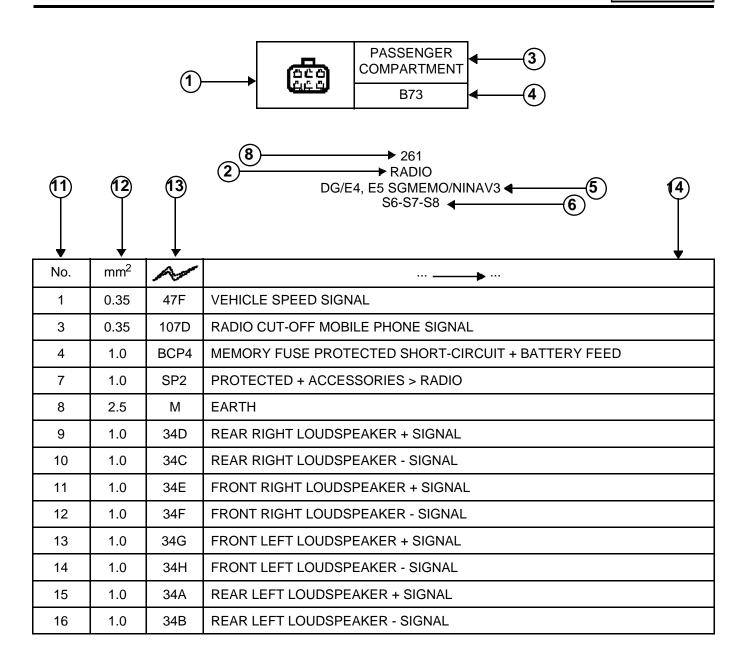


### 2.2 How to read a list of parts

(a sample list of parts is shown on the following page)

1	Symbol for list of parts sheets.
2	Connector description.
3	Wiring harness description.
4	General wiring harness criterion.
5	Particular criterion for the connector.
6	Number of the wiring harness where the connector may be found.
7	Connection coding (only for manufacture).
8	Number of the device.
9	Colour of the connector or the module.
10	Graphical representation of the connector (seen from the rear).
11	Pinout number used inscribed on the unit.
12	Cross-section of the conductor connected to this pin.
13	Link code of connector (for identifying the function of a conductor), see the list of links.
14	Description of the function of the conductor.
15	The cross indicates the presence of a wire in a pin, two crosses = two wires. In the new lists of parts, only the colours of conductors with a fundamental state are shown (red, yellow, black, blue).  A cross in the pin indicates the presence of a conductor of a different colour.





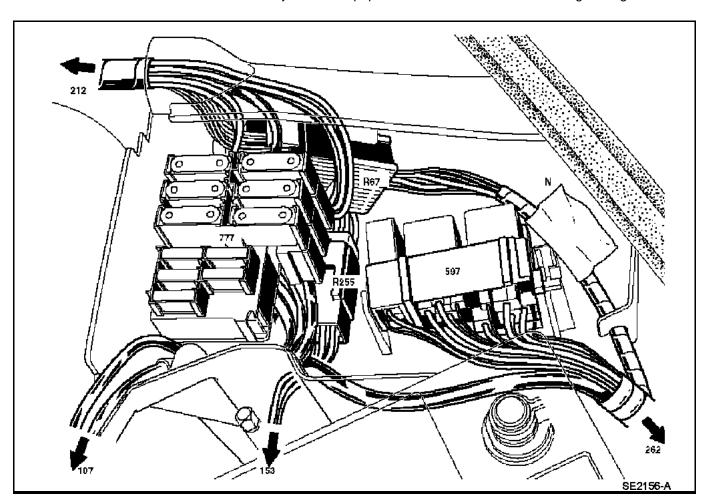


### 3. WIRING ROUTING

Example of wiring routing associated with component 597 of the previous wiring diagram.

In Visu Schéma, click on the wiring icon to obtain a list of wiring routings available as a function of the component selected.

Refer to the index of connectors and index of joints in the paper documentation for a list of wiring routings.



#### 4. CORRESPONDENCE BETWEEN VISU SYMBOL AND WIRING DIAGRAM TECHNICAL NOTE SECTION

A SE	Function index	Section 1
4	Diagrams	Section 3
10	Fuse boxes and fuses	Section 4
ana .	Earth location diagram	Section 5
900	Lists of parts	Section 7
<u>₹</u>	Wiring routings	Section 8

#### 5. NOTE FOR USERS OF THE PAPER DOCUMENTATION

The moving tab is an aide-mémoire, specific to this NT, which allows the user to go directly to the connector and wiring routing pages without having to refer to the lists of parts. The moving tab lists the numbers of the components and the connections, the numbers of the connector and wiring routing sheets.

Note:

The tab is valid only for the note for which it is issued. It is updated for each issue.