Chapter 12
Body electrical system

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Degrees of difficulty

Easy, suitable for novice with little experience 

Fairly easy, suitable for beginner with some experience 

Fairly difficult, suitable for competent DIY mechanic 

Difficult, suitable for experienced DIY mechanic 

Very difficult, suitable for expert DIY or professional 

Specifications

General

System type	12-volt negative earth
Fuses	see Wiring Diagrams

Bulbs

	Type	**Wattage**
Headlights:		
Dip/main beam	H4	60/55
Driving light	H1	55
Front foglight/spoiler-mounted driving light	H3	55
Front sidelights	Push-fit	5
Direction indicator light	Bayonet	21
Direction indicator side repeater	Bayonet	5
Stop/tail light	Bayonet	21/5
Rear tail light	Bayonet	5
Rear foglight	Bayonet	21
Reversing light	Bayonet	21
Number plate light	Push-fit	5

Torque wrench setting

	Nm	**lbf ft**
Air bag unit securing screws	8	6

1 General information and precautions

Warning: Before carrying out any work on the electrical system, read the precautions in “Safety first!” at the beginning of this manual, and in Chapter 5.

The electrical system is of 12-volt negative earth type. Power for the lights and all electrical accessories is supplied by a lead/acid type battery, which is charged by the alternator.

This Chapter covers repair and service procedures for the various electrical components not associated with the engine. Information on the battery, alternator and starter motor can be found in Chapter 5.

It should be noted that, prior to working on any component in the electrical system, the battery negative terminal should first be disconnected, to prevent the possibility of electrical short-circuits and/or fires.

Caution: If the radio/cassette player fitted has an anti-theft security code, (the standard unit has), refer to the precaution in the Reference section of this manual before disconnecting the battery.

2 Electrical fault finding - general information

Note: *Refer to the precautions given in "Safety first!" and in Section 1 of this Chapter before starting work. The following tests relate to testing of the main electrical circuits, and should not be used to test delicate electronic circuits (such as anti-lock braking systems), particularly where an electronic control module is used.*

General

1 A typical electrical circuit consists of an electrical component, any switches, relays, motors, fuses, fusible links or circuit breakers related to that component, and the wiring and connectors which link the component to both the battery and the chassis. To help to pinpoint a problem in an electrical circuit, wiring diagrams are included after this chapter.

2 Before attempting to diagnose an electrical fault, first study the appropriate wiring diagram, to obtain a more complete understanding of the components included in the particular circuit concerned. The possible sources of a fault can be narrowed down by noting whether other components related to the circuit are operating properly. If several components or circuits fail at one time, the problem is likely to be related to a shared fuse or earth connection.

3 Electrical problems usually stem from simple causes, such as loose or corroded connections, a faulty earth connection, a blown fuse, a melted fusible link, or a faulty relay (refer to Section 3 for details of testing relays). Visually inspect the condition of all fuses, wires and connections in a problem circuit before testing the components. Use the wiring diagrams to determine which terminal connections will need to be checked, in order to pinpoint the trouble-spot.

4 The basic tools required for electrical fault-finding include a circuit tester or voltmeter (a 12-volt bulb with a set of test leads can also be used for certain tests); a self-powered test light (sometimes known as a continuity tester); an ohmmeter (to measure resistance); a battery and set of test leads; and a jumper wire, preferably with a circuit breaker or fuse incorporated, which can be used to bypass suspect wires or electrical components. Before attempting to locate a problem with test instruments, use the wiring diagram to determine where to make the connections.

5 To find the source of an intermittent wiring fault (usually due to a poor or dirty connection, or damaged wiring insulation), a "wiggle" test can be performed on the wiring. This involves wiggling the wiring by hand, to see if the fault occurs as the wiring is moved. It should be possible to narrow down the source of the fault to a particular section of wiring. This method of testing can be used in conjunction with any of the tests described in the following sub-Sections.

6 Apart from problems due to poor connections, two basic types of fault can occur in an electrical circuit - open-circuit, or short-circuit.

7 Open-circuit faults are caused by a break somewhere in the circuit, which prevents current from flowing. An open-circuit fault will prevent a component from working, but will not cause the relevant circuit fuse to blow.

8 Short-circuit faults are caused by a "short" somewhere in the circuit, which allows the current flowing in the circuit to "escape" along an alternative route, usually to earth. Short-circuit faults are normally caused by a breakdown in wiring insulation, which allows a feed wire to touch either another wire, or an earthed component such as the bodyshell. A short-circuit fault will normally cause the relevant circuit fuse to blow.

Finding an open-circuit

9 To check for an open-circuit, connect one lead of a circuit tester or voltmeter to either the negative battery terminal or a known good earth.

10 Connect the other lead to a connector in the circuit being tested, preferably nearest to the battery or fuse.

11 Switch on the circuit, bearing in mind that some circuits are live only when the ignition switch is moved to a particular position.

12 If voltage is present (indicated either by the tester bulb lighting or a voltmeter reading, as applicable), this means that the section of the circuit between the relevant connector and the battery is problem-free.

13 Continue to check the remainder of the circuit in the same fashion.

14 When a point is reached at which no voltage is present, the problem must lie between that point and the previous test point with voltage. Most problems can be traced to a broken, corroded or loose connection.

Finding a short-circuit

15 To check for a short-circuit, first disconnect the load(s) from the circuit (loads are the components which draw current from a circuit, such as bulbs, motors, heating elements, etc).

16 Remove the relevant fuse from the circuit, and connect a circuit tester or voltmeter to the fuse connections.

17 Switch on the circuit, bearing in mind that some circuits are live only when the ignition switch is moved to a particular position.

18 If voltage is present (indicated either by the tester bulb lighting or a voltmeter reading, as applicable), this means that there is a short-circuit.

19 If no voltage is present, but the fuse still blows with the load(s) connected, this indicates an internal fault in the load(s).

Finding an earth fault

20 The battery negative terminal is connected to "earth" - the metal of the engine/transmission and the car body - and most systems are wired so that they only receive a positive feed, the current returning via the metal of the car body. This means that the component mounting and the body form part of that circuit. Loose or corroded mountings can therefore cause a range of electrical faults, ranging from total failure of a circuit, to a puzzling partial fault. In particular, lights may shine dimly (especially when another circuit sharing the same earth point is in operation), motors (eg wiper motors or the radiator cooling fan motor) may run slowly, and the operation of one circuit may have an apparently-unrelated effect on another. Note that on many vehicles, earth straps are used between certain components, such as the engine/transmission and the body, usually where there is no metal-to-metal contact between components, due to flexible rubber mountings, etc.

21 To check whether a component is properly earthed, disconnect the battery, and connect one lead of an ohmmeter to a known good earth point. Connect the other lead to the wire or earth connection being tested. The resistance reading should be zero; if not, check the connection as follows.

22 If an earth connection is thought to be faulty, dismantle the connection, and clean back to bare metal both the bodyshell and the wire terminal or the component earth connection mating surface. Be careful to remove all traces of dirt and corrosion, then use a knife to trim away any paint, so that a clean metal-to-metal joint is made. On reassembly, tighten the joint fasteners securely; if a wire terminal is being refitted, use serrated washers between the terminal and the bodyshell, to ensure a clean and secure connection. When the connection is remade, prevent the onset of corrosion in the future by applying a coat of petroleum jelly or silicone-based grease, or by spraying on (at regular intervals) a proprietary ignition sealer.

3 Fuses and relays - general information

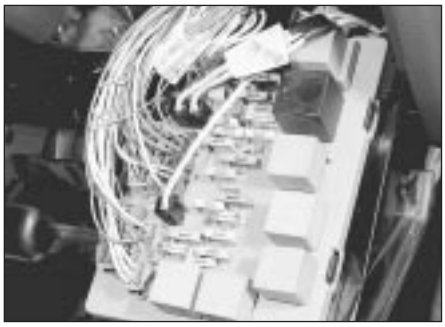
Fuses

1 Fuses are designed to break a circuit when a predetermined current is reached, in order to protect the components and wiring which could be damaged by excessive current flow. Any excessive current flow will be due to a fault in the circuit, usually a short-circuit (see Section 2).

2 The main fuses are located in the fusebox, below the steering column on the driver's side of the facia.

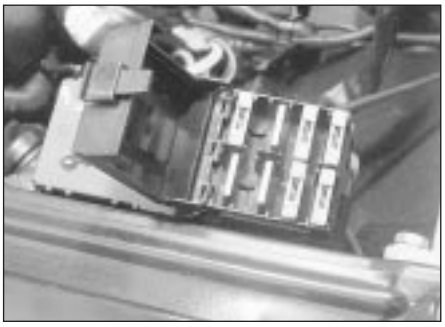
3 For access to the fuses, on models up to 1992, turn the two securing clips through a quarter-turn, then drop the fusebox panel down from the facia. On models from 1993,

3.3a Release the securing clips (arrowed) . . .



3.3b . . . and lower the fusebox panel - early models

3.3c Removing the fusebox cover - later models



3.4 Fusebox location on right-hand side of engine compartment

3.7 Removing a fuse using the plastic tool

3.11a Pull out the securing clip . . .

3.11b . . . to release the fusebox - models from 1993

prise off the cover to expose the fusebox **(see illustrations)**.

4 Additional fuses may be located in the fusebox on the right-hand side of the engine compartment, in front of the suspension strut, and/or at the front left-hand corner of the engine compartment **(see illustration)**.

5 A blown fuse can be recognised from its melted or broken wire.

6 To remove a fuse, first ensure that the relevant circuit is switched off.

7 Using the plastic tool provided in the fusebox, pull the fuse from its location **(see illustration)**.

8 Spare fuses are provided in the blank terminal positions in the fusebox.

9 Before renewing a blown fuse, trace and rectify the cause, and always use a fuse of the correct rating. Never substitute a fuse of a higher rating, or make temporary repairs using wire or metal foil; more serious damage, or even fire, could result.

10 Note that the fuses are colour-coded as follows. Refer to the wiring diagrams for details of the fuse ratings and the circuits protected.

Colour	Rating
Orange	5A
Red	10A
Blue	15A
Yellow	20A
Clear or white	25A
Green	30A

11 If desired, on models from 1993, the fusebox can be withdrawn from the facia as follows.

a) Pull off the fusebox cover.

*b) Locate the red plastic clip at the left-hand side of the fusebox, and pull the clip to release **(see illustration)**.*

*c) Slide the fusebox to the left, and then pull the assembly out from the facia **(see illustration)**.*

12 The following fuses are located in the engine compartment fusebox(es).

a) Cooling fan.
b) ABS.
c) Fuel pump (petrol engines).
d) Oxygen sensor (petrol engines).
e) Engine management electronic control unit (petrol engines).

Relays

13 A relay is an electrically-operated switch, which is used for the following reasons:

a) A relay can switch a heavy current remotely from the circuit in which the current is flowing, allowing the use of lighter-gauge wiring and switch contacts.
b) A relay can receive more than one control input, unlike a mechanical switch.
c) A relay can have a timer function - for example, the intermittent wiper relay.

14 Most of the relays are located under the facia, behind the main fusebox, and mounted on various brackets around the steering column. The rear wiper motor relay is located in the tailgate, behind the tailgate trim panel. On some models, additional engine-related relays are located in the relay box mounted at the front left-hand corner of the engine compartment, or in the left-hand corner of the scuttle **(see illustrations)**.

15 If a circuit or system controlled by a relay develops a fault, and the relay is suspect, operate the system. If the relay is functioning,

3.14a Removing a relay from the main fusebox - models up to 1992

3.14b Unscrewing a relay bracket securing screw from under the steering column - models from 1993 (viewed with steering column shrouds removed)

3.14c Main relay box located behind fusebox at rear of facia - models from 1993 (viewed with facia removed and inverted)

3.14d Relays in engine compartment relay box - models up to 1992

it should be possible to hear it "click" as it is energised. If this is the case, the fault lies with the components or wiring of the system. If the relay is not being energised, then either the relay is not receiving a main supply or a switching voltage, or the relay itself is faulty. Testing is by the substitution of a known good unit, but be careful - while some relays are identical in appearance and in operation, others look similar but perform different functions.

16 To remove a relay, first ensure that the relevant circuit is switched off. The relay can then simply be pulled out from the socket, and pushed back into position.

4 Switches - removal and refitting

Ignition switch/ steering column lock

1 Refer to Chapter 10.

Steering column combination switches

Models up to 1992

2 Remove the steering column shrouds, as described in Chapter 11.

3 Working under the switch, unscrew the two screws securing the switch to the steering column bracket **(see illustration)**.

4 Withdraw the switch, and disconnect the wiring connector(s). Note the routing of the wiring to aid refitting.

5 Refitting is a reversal of removal, ensuring the wiring is routed as noted before removal.

Models from 1993

6 Proceed as described previously for models up to 1992, but note that the securing screws are accessed from the front of the switch **(see illustrations)**.

Radio/cassette player remote control and cruise control stalk switches

7 Remove the lower steering column shrouds as described in Chapter 11.

8 Remove the securing screws, and withdraw the switch from the column shroud.

9 Disconnect the wiring plug(s) and remove the switch.

4.3 Steering column combination switch screws (arrowed) - models up to 1992

4.6a Remove the securing screws . . .

4.6b . . . and withdraw the steering column combination switch - models from 1993

4.11 Removing a driver's side facia-mounted switch - models up to 1992

10 Refitting is a reversal of removal; to refit the steering column shroud, see Chapter 11.

Facia-mounted pushbutton switches

Models up to 1992

11 Use a small flat-bladed screwdriver at the sides of the switch to release the plastic retaining tabs, then carefully prise the switch from the facia **(see illustration)**.

12 Disconnect the wiring plug and withdraw the switch.

13 To refit, reconnect the wiring plug, then push the switch into position in the facia.

Models from 1993

14 Proceed as described previously for models up to 1992, but note that the securing clips are released by prising at the top and bottom of the switch **(see illustration)**.

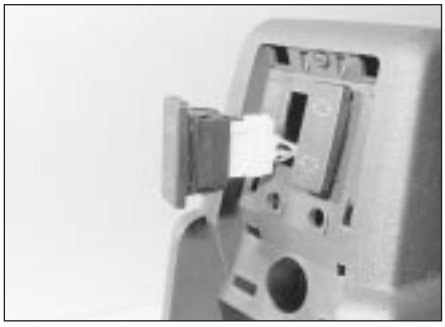
4.14 Prising out a facia-mounted switch - models from 1993

4.19 Prise the trim panel from the bottom of the oddments tray . . .

4.20 . . . then prise off the switch trim panel . . .

4.21 . . . and remove the switch

4.24 Prising off a rear centre console switch trim panel . . .



4.25 . . . for access to the switches

Headlight beam adjustment switch

Models up to 1992

15 The switch is integral with the adjustment mechanism. Refer to Section 8 for details of how to remove the mechanism.

Models from 1993

16 Carefully prise the switch from the facia panel using a small screwdriver (take care not to damage the trim), then disconnect the wiring plug and withdraw the switch.
17 Refitting is a reversal of removal.

Heater blower motor switch

18 The switch is integral with the heater control panel, and cannot be renewed separately. Removal and refitting details for the heater control panel are given in Chapter 3.

Centre console-mounted switches

Front switches

19 Prise out the trim panel from the bottom of the oddments tray below the handbrake lever **(see illustration)**.
20 Prise off the switch trim panel **(see illustration)**.
21 Prise the switch from the centre console, and disconnect the wiring plug **(see illustration)**.
22 Refitting is a reversal of removal.

Rear switches

23 Prise the rear ashtray from the centre console.
24 Prise off the switch trim panel **(see illustration)**.
25 Prise the switch from the centre console, and disconnect the wiring plug **(see illustration)**.
26 Refitting is a reversal of removal.

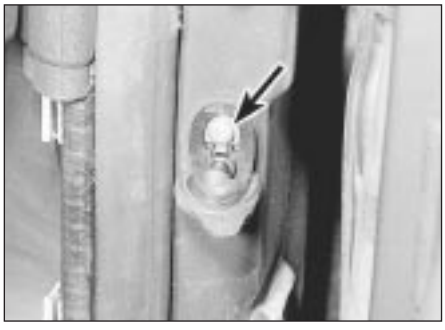
Door-mounted switches

27 Prise the switch from its location in the door, and disconnect the wiring plug.
28 Refitting is a reversal of removal.

Courtesy light switches

Door-pillar-mounted switches

29 Open the door, then prise the rubber gaiter from the switch **(see illustration)**.
30 Remove the securing screw, then carefully withdraw the switch from the door pillar. Disconnect the wiring connector as it becomes accessible, bearing in mind the danger of losing the wiring connector **(see Haynes Hint)**.



4.29 Rubber gaiter pulled back to expose courtesy light securing screw (arrowed)

HAYNES HiNT

Tape the wiring to the door pillar, to prevent it falling back into the door pillar. Alternatively, tie a piece of string to the wiring, to retrieve it.

31 Refitting is a reversal of removal, but ensure that the rubber gaiter is correctly seated on the switch.

Roof panel-mounted switches

32 The switches are integral with the lights, and cannot be renewed separately.

Luggage compartment light switch

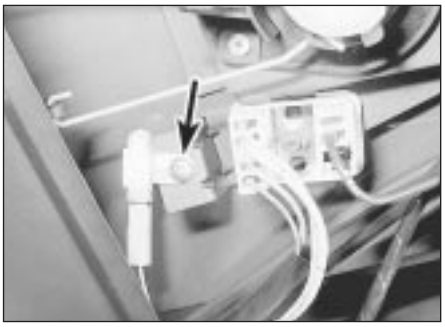
Saloon models

33 Open the boot lid.
34 The switch is located in a bracket at the rear of the boot, and is operated by the boot lid hinge.
35 Release the clips, and pull the switch from the bracket **(see illustration)**.
36 Disconnect the wiring plug and withdraw the switch.
37 Refitting is a reversal of removal.

Estate models

38 The light is operated by a tilt-sensitive switch fitted inside the tailgate.
39 Open the tailgate.
40 Remove the screws, and withdraw the plastic trim panel from inside the tailgate.
41 Working around the edge of the carpeted trim panel, release the securing clips, ideally using a forked tool to avoid breaking the clips. Withdraw the carpeted panel.

4.35 Removing the luggage compartment courtesy light switch - Saloon model



4.42 Luggage compartment courtesy light switch screw (arrowed) - Estate model

4.46 Prise out the blanking plate . . .

4.47 . . . then prise out the sunroof switch

42 Remove the screw securing the switch to the tailgate. Where applicable, recover the lockwasher **(see illustration)**.
43 Disconnect the wiring plug and withdraw the switch.
44 Refitting is a reversal of removal.

Map reading light switch

45 The switch is integral with the light, and cannot be renewed separately.

Electric sunroof switch

46 Carefully prise the blanking plate (fitted next to the sunroof switch) from the centre console **(see illustration)**.
47 Reach in through the aperture left by removal of the blanking plate, then push out the switch and disconnect the wiring plug **(see illustration)**.
48 Refitting is a reversal of removal.

5 Bulbs (exterior lights) - renewal

1 Whenever a bulb is renewed, note the following points.

a) Disconnect the battery negative lead before starting work.
b) Remember that, if the light has just been in use, the bulb may be extremely hot.
c) Always check the bulb contacts and holder, ensuring that there is clean metal-to metal contact between the bulb and its live(s) and earth. Clean off any corrosion or dirt before fitting a new bulb.
d) Wherever bayonet-type bulbs are fitted (see Specifications), ensure that the live contact(s) bear firmly against the bulb contact.
e) Always ensure the new bulb is of the correct rating, and that it is completely clean before fitting it; this applies particularly to headlight/foglight bulbs (see below).

Headlight

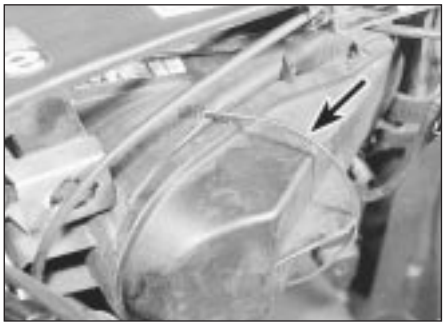
2 Working in the engine compartment, release the clip securing the cover to the rear of the headlight unit. Withdraw the cover **(see illustration)**.
3 Disconnect the wiring plug from the rear of the headlight bulb.
4 Release the spring clip securing the bulb in the light unit, then withdraw the bulb **(see illustrations)**.
5 When handling the new bulb, use a tissue or clean cloth, to avoid touching the glass with the fingers; moisture and grease from the skin can cause blackening and rapid failure of this type of bulb. If the glass is accidentally touched, wipe it clean using methylated spirit.
6 Install the new bulb, ensuring that it locates correctly in the light unit. Secure the bulb in position with the spring clip, and reconnect the wiring plug.
7 Refit the cover to the rear of the light unit, and secure with the clip.

Front sidelight

8 The sidelight bulb is located in the rear of the headlight housing.
9 Working in the engine compartment, release the clip securing the cover to the rear of the headlight unit.
10 On models up to 1992, pull the bulbholder from the rear of the headlight unit. On models from 1993, it will be necessary to twist the bulbholder through a quarter turn before it can be removed **(see illustration)**.
11 The bulb is a push-fit in the bulbholder **(see illustration)**.
12 Refitting is the reverse of the removal procedure, ensuring that the bulbholder seal is in good condition.

Front direction indicator

13 Working in the engine compartment, unhook the indicator light unit retaining spring from the lug behind the light **(see illustration)**.
14 Pull the light forwards from the wing panel.
15 Twist the bulbholder anti-clockwise to release it from the light unit **(see illustration)**.



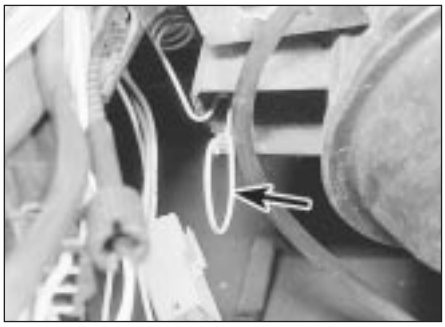
5.2 Headlight rear cover securing clip (arrowed)

5.4a Release the spring clip (arrowed) . . .

5.4b . . . then withdraw the headlight bulb

5.10 Pull out the sidelight bulbholder . . .

5.11 . . . and withdraw the bulb



5.13 Front direction indicator light retaining spring (arrowed)

5.15 Withdrawing the bulbholder from the front direction indicator light

5.20 Removing the bulbholder from the front direction indicator side repeater light

16 The bulb is a bayonet-fit in the bulbholder.
17 Refitting is a reversal of removal, but ensure that the light unit retaining spring is correctly engaged.

Front direction indicator side repeater

18 Twist the light unit a quarter-turn anti-clockwise, and carefully pull the unit from the wing panel, taking care not to damage the paint.
19 Twist the bulbholder anti-clockwise, and remove it from the light unit.
20 The bulb is a bayonet-fit in the bulbholder **(see illustration)**.
21 Refitting is a reversal of the removal procedure.

Headlight-mounted front driving light

22 On certain models, a driving light is mounted in the headlight unit. The light operates when the headlights are switched to main beam.
23 Proceed as described previously in this Section for the headlight bulb **(see illustrations)**.

Front spoiler-mounted driving light/foglight

Note: *Some models are fitted with front foglights which have no securing screws visible from the front of the lens. At the time of writing, no information was available for this type of foglight.*
24 Two alternative types of light assembly may be fitted, depending on model. On some models, access to the bulb can be obtained from the behind the spoiler. On other models, the light unit must be removed for access to the bulb.
25 On models where the light unit can be reached from behind the spoiler, reach up behind the spoiler and disconnect the wiring from the light. Prise the rubber cover from the light, then release the spring clip and withdraw the bulb.
26 On models where the rear of the light unit is covered by the spoiler, remove the two securing screws from the front of the light unit and withdraw the reflector/lens assembly. Disconnect the wiring from the bulb, then release the spring clip and withdraw the bulb.
27 When handling the new bulb, use a tissue or clean cloth, to avoid touching the glass with the fingers; moisture and grease from the skin can cause blackening and rapid failure of this type of bulb. If the glass is accidentally touched, wipe it clean using methylated spirit.
28 Refitting is the reverse of the removal procedure, ensuring that the bulb locates correctly in its housing.

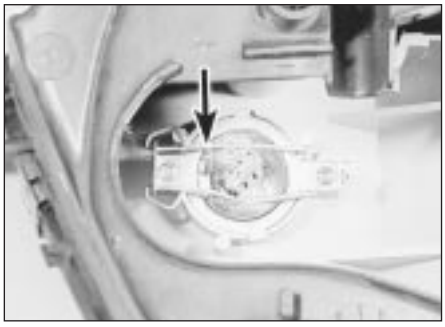
Rear light cluster

Saloon models

29 Open the boot lid.
30 Squeeze the two retaining clips, and withdraw the bulbholder from the rear of the light unit **(see illustration)**.
31 The bulbs are a bayonet-fit in the bulbholder **(see illustration)**.
32 Fit the new bulb using a reversal of the removal procedure.

Estate models

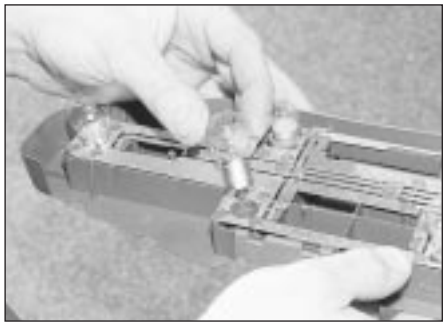
33 The stop/tail lights and the direction indicator lights are located in the rear wing panels. The remaining rear lights are located in the tailgate.



5.23a Headlight-mounted driving light bulb securing clip (arrowed)

5.23b Removing a headlight-mounted driving light bulb

5.30 Removing a rear light cluster bulbholder - Saloon model



5.31 The bulbs are a bayonet-fit in the bulbholder

5.36a Removing a rear wing-mounted light bulbholder - Estate model

5.36b Removing a tailgate-mounted light bulbholder - Estate model

5.39 Prise the lens from the bumper . . .

5.40 . . . and withdraw the number plate light bulb - Saloon model

5.42 Prise out the number plate light unit . . .

5.43 . . . and unclip the bulbholder from the lens - Estate model

34 Open the tailgate.
35 Turn the retaining clip and open the light unit cover flap.
36 Squeeze the two retaining clips, and withdraw the bulbholder from the rear of the light unit **(see illustrations)**.
37 The bulbs are a bayonet-fit in the bulbholder.
38 Fit the new bulb using a reversal of the removal procedure.

Number plate light

Saloon models

39 Prise the lens from the underside of the bumper for access to the bulb **(see illustration)**.
40 The bulb is a bayonet-fit in the bulbholder **(see illustration)**.
41 Fit the new bulb using a reversal of the removal procedure.

Estate models

42 Carefully prise the light unit from the tailgate **(see illustration)**.
43 Unclip the bulbholder from the lens assembly **(see illustration)**.
44 The bulb is a bayonet-fit in the bulbholder.
45 Fit the new bulb using a reversal of the removal procedure.

6 Bulbs (interior lights) - renewal

General

1 Refer to Section 5, paragraph 1.

Courtesy light, glovebox and luggage compartment lights

2 Carefully prise the lens from the light unit.

Note that in some cases, it may prove necessary to prise out the complete light unit to enable the lens to be removed **(see illustrations)**.
3 The bulb is a push-fit in the holder.
4 Refitting is a reversal of removal.

Map reading light

5 Prise the map reading light from the roof console.
6 The festoon-type bulb is held between the spring contacts **(see illustration)**.
7 Refitting is a reversal of removal.

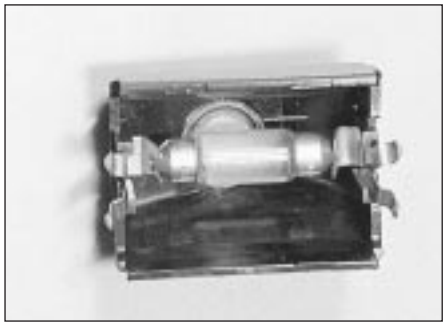
Heater/ventilation control unit illumination bulbs

Models up to 1992

8 For access to the bulbs, the control unit must be removed as described in Chapter 11, but note that there is no need to disconnect the control cables from the unit. Once the

6.2a Prising out a courtesy light

6.2b Prise off the lens for access to the bulb



6.6 Map reading light removed for access to bulb

6.19 Unclip the front panel from the heater control unit

6.23 Removing the clock illumination bulb - models from 1993

securing screws have been removed, the control unit can be pulled forwards sufficiently for access to the bulbs without disconnecting the cables.

Models from 1993

9 Disconnect the battery negative lead.
10 Remove the centre console as described in Chapter 11, Section 29.
11 Unscrew the two screws located at the bottom of the ashtray housing.
12 Where applicable, remove the radio/cassette player as described in Section 20. On models not fitted with a radio/cassette player, prise out the oddments tray.
13 Remove the two securing screws from the top of the radio/cassette player/oddments tray housing, then withdraw the housing from the facia. Where applicable, disconnect the wiring plug(s) from the rear of the panel.
14 Prise the blanking plate from the top corner of the facia centre ventilation nozzle housing. Remove the now-exposed securing screw.
15 Remove the four housing securing screws located under the heater control panel. Two screws are accessible from the front of the housing, and two screws from underneath.
16 Carefully prise the switches from below the centre facia ventilation nozzles to reveal the remaining housing securing screw. Remove the screw.
17 Pull the housing forwards, and disconnect the wiring from the clock, then withdraw the housing.
18 Carefully pull the knobs from the heater control levers.

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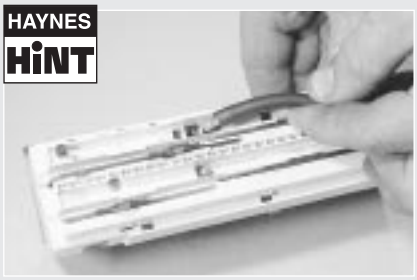
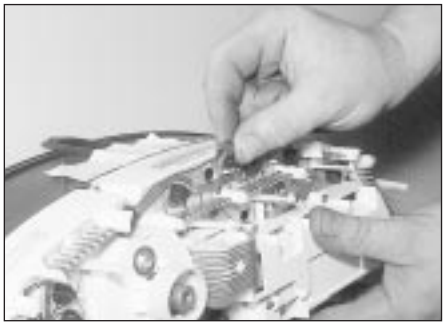


A length of rubber tubing can be used to remove and refit the bulbs



6.27 Removing an instrument panel illumination bulb

19 Unclip the front panel from the heater control unit to expose the bulbs **(see illustration)**.
20 The bulbs are a push-fit in the bulbholders **(see Haynes Hint)**.
21 Refitting is a reversal of removal.

Clock illumination bulb

22 For access to the clock illumination bulb, remove the clock as described in Section 11. Note that on models from 1993, access to the bulb can be gained once the housing has been removed from the facia - there is no need to remove the clock from the housing.
23 To remove the bulbholder, twist it anti-clockwise **(see illustration)**. The bulb is integral with the bulbholder.
24 Fit the new bulb using a reversal of the removal procedure.

Facia switch illumination bulbs

25 The bulbs are integral with the switches, and cannot be renewed independently.

Instrument panel illumination and warning light bulbs

26 Remove the instrument panel as described in Section 9.
27 Twist the relevant bulbholder anti-clockwise to remove it from the rear of the panel **(see illustration)**.
28 The bulbs are a push-fit in the bulbholders.
29 On completion, refit the instrument panel with reference to Section 9.

7 Exterior light units - removal and refitting

Note: *Disconnect the battery negative lead before removing any light unit, and reconnect the lead after refitting the unit.*

Headlight

Removal

1 Working in the engine compartment, release the clip securing the cover to the rear of the headlight unit.
2 Disconnect the wiring plugs from the bulbs located in the headlight unit.
3 Remove the direction indicator light as described during the bulb renewal procedure in Section 5.
4 On models with cable-operated headlight adjusters, disconnect the adjuster from the headlight as follows.

a) Tun the adjuster and pull it from the bracket on the body front panel.
*b) Carefully pull the balljoint from the socket in the rear of the headlight **(see illustration)**.*

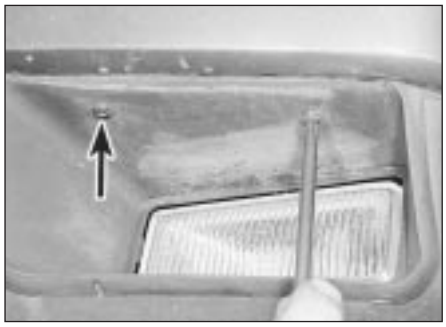
5 On models with electrically-operated headlight adjusters, disconnect the wiring plug from the adjuster in the rear of the headlight.
6 Remove the radiator grille panel as described in Chapter 11.
7 Carefully prise the lower trim plate from the bottom of the headlight **(see illustration)**.

7.4 Removing a cable-operated headlight adjuster

7.7 Removing the trim plate from the bottom of the headlight

7.8 Outer headlight securing bolts (arrowed)

7.9 Removing a headlight lens securing clip



7.16 Remove the front driving light/ foglight cowl securing screws

8 Unscrew the two outer headlight securing bolts, and pull the unit forwards from the body panel **(see illustration)**.
9 If desired, the headlight lens can be renewed by prising off the metal securing clips and withdrawing the lens from the front of the light unit **(see illustration)**.
10 Before fitting a new lens, ensure that the seal located in the groove around the front of the headlight is in good condition, and renew if necessary.

Refitting

11 Refitting is a reversal of removal, but on completion have the headlight beam alignment checked at the earliest opportunity.

Front direction indicator

12 The procedure is described as part of the bulb renewal procedure in Section 5.

Front direction indicator side repeater

13 The procedure is described as part of the bulb renewal procedure in Section 5.

Front spoiler-mounted driving light/foglight

14 Two alternative types of light assembly may be fitted, depending on model. The light may be mounted either directly in the front spoiler, or in a cowl screwed to the front spoiler.

Cowl-mounted light

15 Reach up behind the spoiler, and disconnect the wiring from the light.
16 Remove the two screws securing the light cowl to the spoiler, then withdraw the cowl/light assembly rearwards from the bumper **(see illustration)**.
17 The light unit can be removed from the cowl after unscrewing the knurled securing nut at the rear of the unit **(see illustration)**.
18 Refitting is a reversal of removal, but on completion, check and if necessary adjust the light beam alignment. Adjustment can be made using the knurled nuts at the rear of the unit.

Light mounted directly in spoiler

Note: *Some models are fitted with front foglights which have no securing screws visible from the front of the lens. At the time of writing, no information was available for this type of foglight.*
19 To improve access, jack up the front of the vehicle and support securely on axle stands (see *"Jacking and Vehicle Support"*).
20 Trace the wiring back from the rear of the foglight, and disconnect the wiring connector.
21 Slacken and remove the foglight securing nut, and withdraw the light unit from the spoiler. Recover any washers and spacers, noting their locations to ensure correct refitting.
22 Refitting is a reversal of removal, ensuring that any washers and spacers on the securing stud are positioned as noted before removal.

Rear light cluster

Saloon models

23 Open the boot lid.
24 Squeeze the two retaining clips, and withdraw the bulbholder from the rear of the light unit.
25 Disconnect the wiring plug from the bulbholder.
26 Pull up the luggage compartment weather-strip, and release the luggage compartment inner trim panel from the rear panel to expose the light unit securing nuts.
27 Unscrew the securing nuts, then withdraw the unit from outside the vehicle. Withdraw the outboard side of the unit first, then disengage the inboard edge from the body **(see illustrations)**.
28 Refitting is a reversal of removal

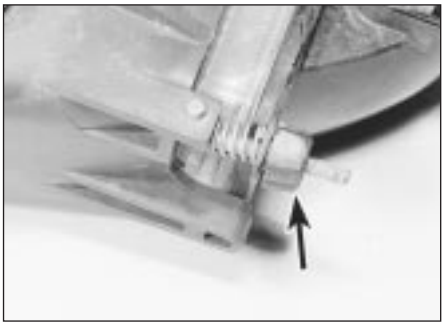
Estate models

29 The stop/tail lights and the direction indicator lights are located in the rear wing panels. The remaining rear lights are located in the tailgate.
30 Open the tailgate.
31 Turn the retaining clip and open the light unit cover flap.
32 Squeeze the two retaining clips, and withdraw the bulbholder from the rear of the light unit.
33 Disconnect the wiring plug from the bulbholder.
34 Unscrew the securing nuts and withdraw the light unit from outside the vehicle **(see illustrations)**.
35 Refitting is a reversal of removal.

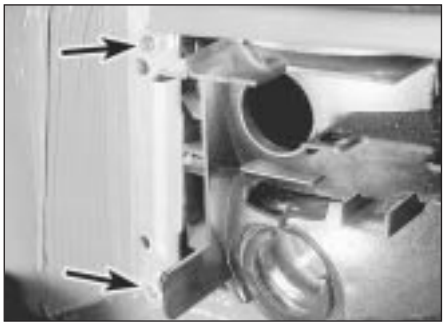
Number plate light

Saloon models

36 Remove the two securing screws, then



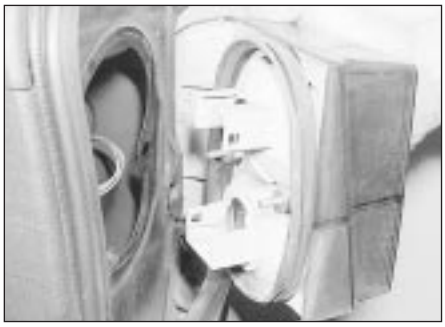
7.17 Unscrew the nut (arrowed) to separate the light from the cowl



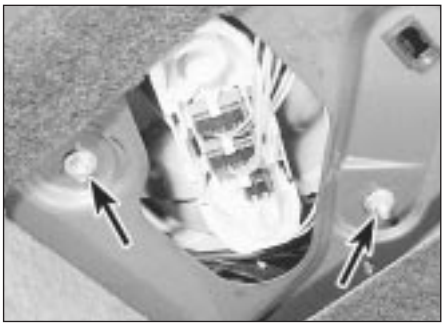
7.27a Unscrew the securing nuts (arrowed) . . .

7.27b . . . then withdraw the rear light unit - Saloon model

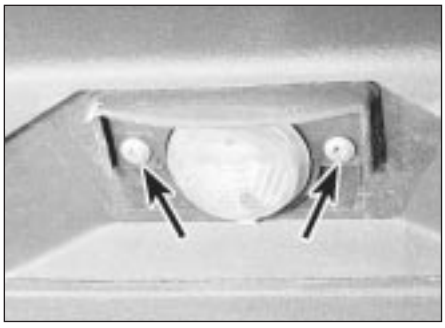
7.34a Rear wing-mounted light cluster securing nuts (arrowed) - Estate model



7.34b Withdrawing a rear wing-mounted light cluster - Estate model



7.34c Tailgate-mounted rear light cluster securing nuts (arrowed) - Estate model



7.36 Number plate light securing screws (arrowed) - Saloon model

withdraw the light unit from the bumper and disconnect the wiring plug **(see illustration)**.

37 Refitting is a reversal of removal.

Estate models

38 Carefully prise the unit from the tailgate and disconnect the wiring plug.

39 Refitting is a reversal of removal.

8 Headlight beam alignment - general information and component renewal

1 Accurate adjustment of the headlight beam is only possible using optical beam-setting equipment, and this work should therefore be carried out by a Peugeot dealer or suitably-equipped workshop.

2 For reference, the headlights can be finely adjusted using a suitable-sized Allen key to rotate the adjuster assemblies fitted to the rear of each light unit. The outer adjuster alters the vertical height of the beam, whilst the inner adjuster alters the horizontal position of the beam **(see illustrations)**. Prior to adjustment, ensure the vehicle is unladen, and that the adjuster units (see below) are both set to position "0", or "1", as applicable.

3 Each headlight unit is equipped with a three- or four-position vertical beam adjuster unit (depending on model) - this can be used to adjust the headlight beam, to compensate for the relevant load which the vehicle is carrying. The adjuster units may be incorporated into the vertical beam adjuster on the back of the headlight, or on certain models, an adjuster switch is provided on the facia. On models with adjusters mounted on the headlights, access to them can be gained with the bonnet open. The adjusters should be positioned as follows according type, and the load being carried in the vehicle.

Headlight-mounted adjusters - models up to 1992

Position 1 No load
Position 2 Medium load
Position 3 Maximum load

Headlight-mounted adjusters - models from 1993

Position 1 Front seat occupied
Position 2 All seats occupied and luggage compartment full
Position 3 Driver's seat occupied and luggage compartment full

Facia-mounted adjuster

Position 0 Front seats occupied
Position 1 All seats occupied
Position 2 All seats occupied and luggage compartment full
Position 3 Driver's seat occupied and luggage compartment full

4 Where applicable, ensure both adjusters are set to the same position, and be sure to reset if the vehicle load is altered.

Component renewal

Mechanical remote adjuster mechanism

5 Working beneath the facia ventilation nozzles, prise out the three blanking plates covering the instrument panel visor screws.

6 Remove the screws, and lift off the instrument panel visor.

7 Move the steering column to its lowest position.

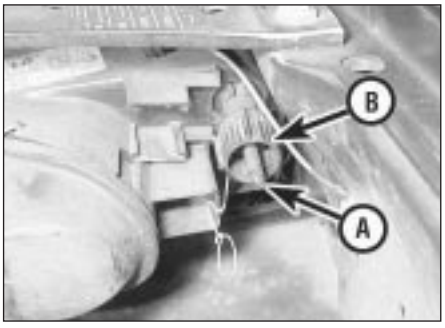
8 Carefully prise off the headlight adjuster switch knob.

9 Remove the securing screws, and withdraw the driver's side upper facia panel. Disconnect the wiring from the switches in the panel as the panel is removed.

10 Remove the two screws securing the adjuster switch to the facia **(see illustration)**.

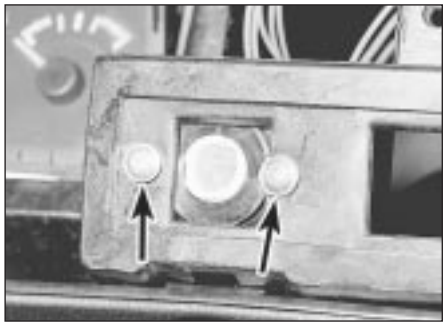
11 Working in the engine compartment, turn and pull the adjusters from the brackets behind the headlights. The ends of the adjusters are a push-fit (balljoints) in the rear of the headlights.

12 Unclip the adjuster cables from the brackets and clips in the engine bay. Feed the switch cable through the bulkhead into the engine bay **(see Haynes Hint overleaf)**.



8.2a Headlight beam vertical height fine adjuster (A) and adjuster unit knob (B)

8.2b Headlight beam horizontal fine adjuster (arrowed)



8.10 Headlight adjuster switch securing screws (arrowed)

HAYNES HiNT ***Tie a length of string to the end of the adjuster cable before pulling it through the bulkhead. Untie the string and leave it in position to aid refitting.***

13 Refitting is a reversal of removal. Where applicable, use the string to pull the cable into position through the bulkhead into the passenger compartment.

Electric adjuster switch

14 Refer to Section 4.

Electric adjuster unit

15 Disconnect the battery negative lead.
16 Working at the rear of the headlight, disconnect the wiring plug from the adjuster unit (mounted in the rear of the headlight).
17 Twist the adjuster unit (or the locking collar, as applicable) to release the adjuster from the aperture in the headlight unit.

9 Instrument panel - removal and refitting

Models up to 1992

Removal

1 Disconnect the battery negative lead.
2 Working beneath the facia ventilation nozzles, prise out the three blanking plates covering the instrument panel visor securing screws **(see illustration)**.
3 Remove the screws, and lift off the instrument panel visor **(see illustrations)**.
4 Move the steering column to its lowest position.
5 Where applicable, carefully prise off the headlight adjuster switch knob **(see illustration)**.
6 Remove the securing screws, and withdraw the driver's side upper facia panel **(see illustration)**. Disconnect the wiring from the switches in the panel as the panel is removed.
7 Unclip the trim panel from the lower edge of the instrument panel to expose the upper centre facia panel securing screw. Remove the screw **(see illustration)**.
8 Remove the instrument panel screws from the top corners of the panel **(see illustration)**.
9 Tilt the instrument panel forwards, and disconnect the speedometer cable from the rear of the panel. Give the cable end fitting a sharp tug to free it from the speedometer.
10 Disconnect the wiring plugs from the rear of the instrument panel, noting their locations to ensure correct refitting.
11 Lift the instrument panel from the facia.

Refitting

12 Refitting is a reversal of removal, but ensure that the wiring plugs are correctly reconnected, and make sure that the cable is securely reconnected to the speedometer, before securing the instrument panel in position in the facia.

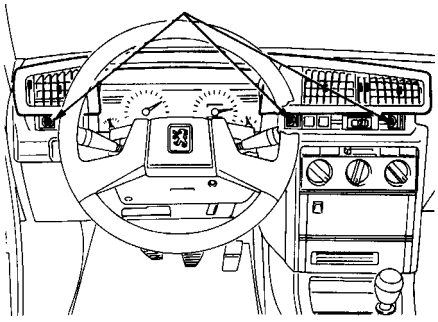
Models from 1993

Removal

13 Disconnect the battery negative lead.
14 Release the securing clips, and remove the lower trim panel from the driver's footwell.
15 Where applicable, move the steering column adjuster lever to the released position.
16 Working under the steering column loosen, but do not remove, the lower steering column securing bolts (note that on some models, it will be necessary to remove the steering column shrouds for access to the steering column securing bolts - see Chapter 11).
17 Similarly, unscrew and remove the two upper steering column securing nuts.
18 Cover the upper steering column shroud with cloth to protect it during the following procedure.
19 Working under the instrument panel, prise the ends of the trim panel upwards to release it from the facia, and withdraw the panel **(see illustration)**. If necessary, unscrew the lower steering column fixings further to enable the column to be lowered sufficiently for access.

9.2 Prise out the blanking plates . . .

9.3a . . . and remove the visor securing screws



9.3b Instrument panel visor securing screw locations (arrowed)

9.5 Prise off the headlight adjuster switch knob

9.6 Withdrawing the driver's side upper facia panel

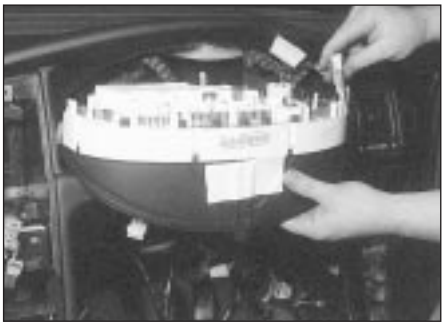
9.7 Remove the upper centre facia panel securing screw

9.8 Instrument panel securing screw (arrowed)

9.19 Prise the trim panel from the facia

9.21 Unscrew the lower instrument panel securing screws

9.22 Lever the upper securing clip down . . .



9.23 . . . until the instrument panel can be withdrawn

20 Working in the engine compartment, locate the speedometer cable ball, which rests in a grommet in the engine compartment bulkhead, then pull the ball sharply to release the cable from the speedometer.
21 Unscrew the two lower and single upper instrument panel securing screws **(see illustration)**.
22 Insert a soft plastic or wooden lever between the top instrument panel securing clip (the upper securing screw location) and the facia, and carefully lever the clip down until the instrument panel can be withdrawn forwards **(see illustration)**.
23 Disconnect the wiring plugs from the rear of the panel, and withdraw the panel from the facia **(see illustration)**.

Refitting

24 Refitting is a reversal of removal, bearing in mind the following points.

a) Before refitting, ensure that the Velcro strip, which retains the wiring looms, is in position at the top of the instrument panel aperture.
b) Reconnect the speedometer cable by pushing the cable ball into position in the bulkhead grommet.

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Coat the ball with soapy water to aid refitting.

c) Tighten the steering column securing nuts to the specified torque.

10 Instrument panel components - removal and refitting

General

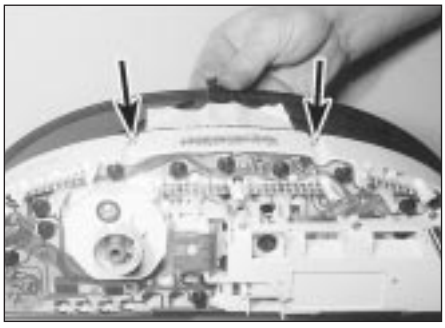
1 Remove the instrument panel as described in Section 9, then proceed as described under the relevant sub-heading.

Gauges - models up to 1992

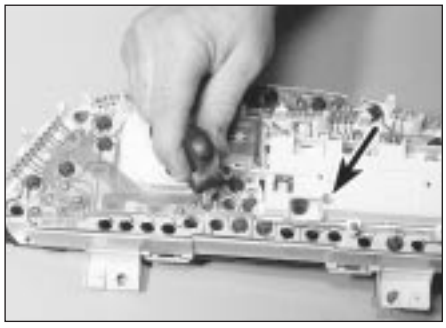
2 Release the securing clips, and unscrew the three securing screws, then remove the panel surround/lens assembly from the instrument panel.
3 Unscrew the relevant securing screws or nuts, then withdraw the gauge from the front of the panel.
4 Refitting is a reversal of removal.

Gauges - models from 1993

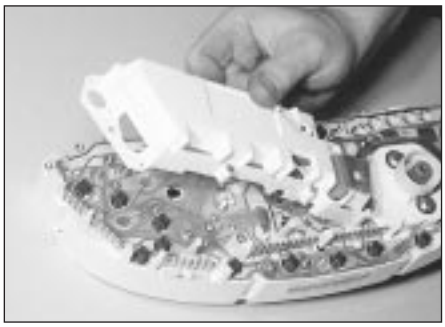
5 Working at the rear of the panel, remove the lens securing screws from around the edge of the panel **(see illustration)**.
6 Remove the two recessed lens securing screws from the rear of the panel **(see illustration)**.
7 Release the securing clips by carefully prising with a screwdriver, then withdraw the lens assembly.
8 Where necessary, for access to the gauge fixings at the rear of the gauge, remove the screws and withdraw the cover from the rear of the instrument panel **(see illustration)**.
9 Unscrew the nuts from the gauge contact studs, or remove the gauge securing screws, as applicable **(see illustration)**.
10 Where applicable, working at the front of the gauge, remove the gauge securing screws **(see illustration)**.



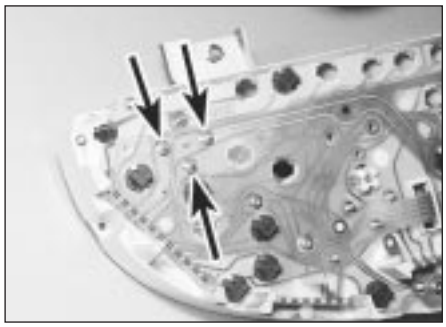
10.5 Two of the instrument panel lens securing screws (arrowed)



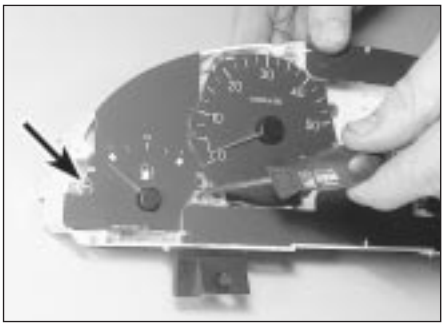
10.6 Remove the two recessed lens securing screws



10.8 Removing the cover from the rear of the instrument panel

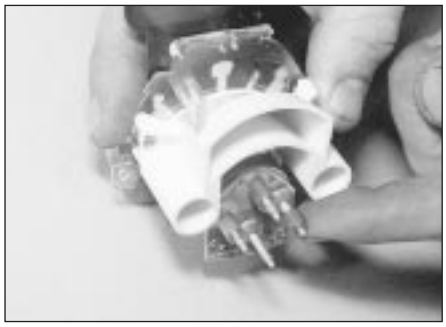


10.9 Fuel gauge securing nuts (arrowed)



10.10 Remove the gauge securing screws . . .

10.11a . . . then withdraw the gauge . . .



10.11b . . . and recover the spacers from the studs

11 Carefully withdraw the gauge from the front of the instrument panel, taking care not to damage the circuit board. Where applicable, recover the spacers from the gauge studs **(see illustrations)**.

12 Refitting is a reversal of removal. Make sure that the spacers are in position on the gauge studs, where applicable.

Illumination and warning light bulbs

13 Twist the relevant bulbholder anti-clockwise to release it from the rear of the panel. The bulbs are integral with the bulbholders.

11 Clock - removal and refitting

Models up to 1992

Removal

1 Disconnect the battery negative lead.

2 Working beneath the facia ventilation nozzles, prise out the three blanking plates covering the instrument panel visor securing screws.

3 Remove the screws, and lift off the instrument panel visor **(see illustration 9.3b)**.

4 Working at the rear of the clock, release the securing clips, then pull the clock from the rear of the facia panel.

5 Disconnect the wiring plug and withdraw the clock **(see illustration)**.

Refitting

6 Refitting is a reversal of removal.

Models from 1993

Removal

7 Disconnect the battery negative lead.

8 Remove the centre console as described in Chapter 11, Section 29.

9 Open the ashtray cover, and unscrew the two screws located at the bottom of the ashtray housing.

10 Where applicable, remove the radio/cassette player as described in Section 20. On models not fitted with a radio/cassette player, prise out the oddments tray.

11 Remove the two securing screws from the top of the radio/cassette player/oddments tray housing, then withdraw the housing from the facia. Where applicable, disconnect the wiring plug(s) from the rear of the housing.

12 Prise the blanking plate from the top corner of the facia centre ventilation nozzle housing. Remove the now-exposed securing screw.

13 Remove the four housing securing screws located under the heater control panel. Two screws are accessible from the front of the housing, and a two screws from underneath.

14 Carefully prise the switches from below the centre facia ventilation nozzles to reveal the remaining housing securing screw. Remove the screw **(see illustration)**.

15 Pull the housing forwards, and disconnect the wiring from the clock, then withdraw the housing **(see illustration)**.

16 Working at the rear of the clock, remove the two securing screws, then withdraw the clock from the housing.

Refitting

17 Refitting is a reversal of removal. Refit the radio/cassette player, referring to Section 20.

12 Cigarette lighter - removal and refitting

Front cigarette lighter - models up to 1992

Removal

1 Disconnect the battery negative lead.

2 Prise the lower stowage tray from the centre console.

3 Prise the side panels from the front of the console.

4 Working behind the ashtray housing, disconnect the wiring from the cigarette lighter and the illumination bulb.

5 Again working behind the housing, depress the cigarette lighter securing clips, and push the unit forwards from the housing.

Refitting

6 Refitting is a reversal of removal.

Front cigarette lighter - models from 1993

7 Disconnect the battery negative lead.

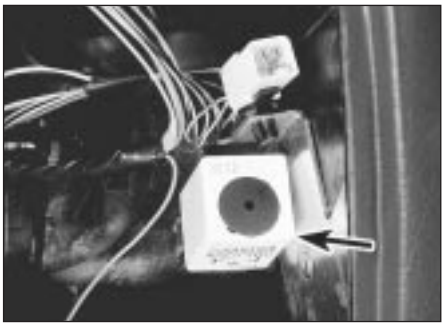
8 Remove the centre console as described in Chapter 11, Section 29.

9 Open the ashtray cover, and unscrew the

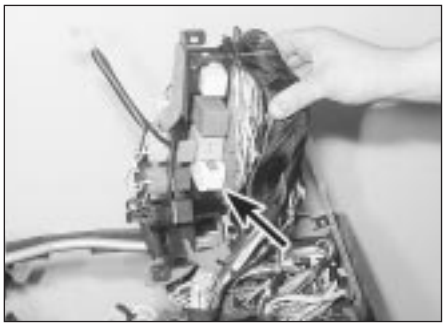
11.5 Removing the clock - models up to 1992

11.14 Remove the centre facia ventilation nozzle housing lower securing screw . . .

11.15 . . . then withdraw the housing



13.2 "Lights on" warning buzzer (arrowed) - models up to 1992



13.3 "Lights on" warning buzzer (arrowed) - models from 1993 (viewed with facia removed and inverted)

two screws located at the bottom of the ashtray housing.
10 Where applicable, remove the radio/cassette player as described in Section 20. On models not fitted with a radio/cassette player, prise out the oddments tray.
11 Remove the two securing screws from the top of the radio/cassette player/oddments tray housing, then withdraw the housing from the facia. Disconnect the wiring plug(s) from the rear of the housing.
12 Working behind the housing, depress the cigarette lighter securing clips, and push the unit forwards from the housing.

Rear cigarette lighter

13 The procedure is similar to that described previously for the front lighter, except that access is obtained by removing the rear ashtray from the centre console.

13 "Lights-on" warning system - general information

1 The purpose of this system is to inform the driver that the lights have been left on once the ignition has been switched off; the buzzer will sound when a door is opened. The system consists of a buzzer unit which is linked to the driver's door courtesy light switch.
2 On models up to 1992, the buzzer unit is located behind the fuses in the facia fusebox, and access can be obtained once the fusebox cover has been removed. The unit is a push-fit in the panel, and can be identified by the slots in its cover **(see illustration)**.
3 On models from 1993, the buzzer unit is located in the relay block, behind the fusebox **(see illustration)**.
4 Refer to Section 4 for information on courtesy light switch removal.

14 Horn - removal and refitting

Removal

1 There may be a single horn or double horns mounted behind the front bumper (on some models, one horn is mounted on each side of the vehicle).
2 Disconnect the battery negative lead.
3 Where applicable, remove the wheel arch liner(s) to improve access.
4 Reach up behind the bumper, and disconnect the wiring from the horn.
5 Unscrew the nut securing the horn to the mounting bracket, and withdraw the horn **(see illustration)**.

Refitting

6 Refitting is a reversal of removal.

15 Speedometer cable - removal and refitting

Removal

1 Working in the engine compartment, locate the speedometer cable ball, which rests in a grommet in the engine compartment bulkhead, then pull the ball sharply to release the cable from the speedometer.
2 Remove the instrument panel (Section 9).
3 Tie a length of string to the end of the speedometer cable at the speedometer end.
4 Working at the gearbox/transmission end of the cable, remove the pin securing the cable end fitting to the gearbox/transmission housing.
5 Pull the cable through the bulkhead grommet into the engine compartment, then withdraw the cable from the vehicle. If desired, access to the bulkhead grommet can be obtained from the driver's footwell after unclipping the carpet trim panel from the lower facia.
6 Untie the string from the end of the cable, and leave the string in position to aid refitting.

14.5 Horn securing nut (arrowed) - viewed from underneath vehicle

Refitting

7 Refitting is a reversal of removal, but use the string to pull the cable into position, and make sure that the cable ball is correctly located in the bulkhead grommet. Coat the ball with soapy water to aid refitting. If it proves difficult to engage the speedometer cable with the rear of the speedometer, proceed as follows.

a) Cut the two clips securing the ball/sleeve assembly to the speedometer cable, and slide the ball/sleeve down the cable.
b) Push the cable until it engages with the speedometer, then slide the ball sleeve into position, and engage it with the bulkhead grommet.
c) Fit a hose clip or cable-tie to the lower end of the ball/sleeve to secure it in position on the cable.
d) If it still proves difficult to engage the cable with the speedometer, remove the instrument panel, then carry out the above procedure, engaging the end of the cable with the speedometer directly by hand, before refitting the instrument panel.

16 Wiper arm - removal and refitting

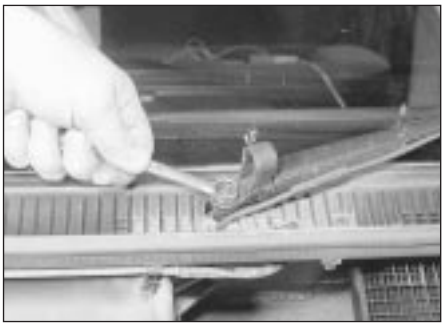
Removal

1 Operate the wiper motor, then switch it off so that the wiper arm returns to the at-rest position.

> **HAYNES HiNT** ***Stick a piece of masking tape along the edge of the wiper blade, to use as an alignment aid on refitting.***

2 Where applicable, disconnect the washer fluid hose from the end of the connector on the scuttle grille panel **(see illustration)**.
3 Lift up the wiper arm spindle nut cover, then

16.2 Disconnect the washer fluid hose from the connector



16.3 Slackening the wiper arm nut

slacken and remove the spindle nut **(see illustration)**. Lift the blade off the glass, and pull the wiper arm off its spindle. If necessary, the arm can be levered off the spindle using a suitable flat-bladed screwdriver.

Refitting

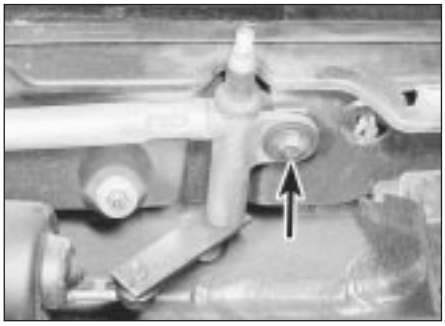
4 With the wiper arm and spindle splines clean, refit the arm to the spindle. Align the wiper blade with the tape used on removal.
5 Refit the spindle nut, tightening it securely, and clip the nut cover back into position.
6 Reconnect the washer fluid hose.

17 Windscreen wiper motor and linkage - removal and refitting

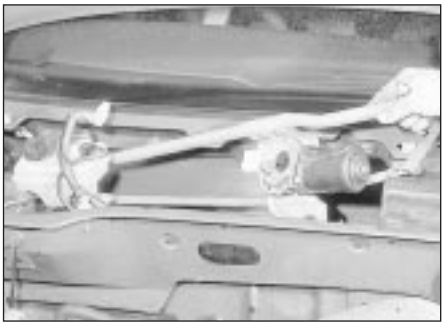
Removal

1 The assembly is located in the scuttle at the rear of the engine compartment.

17.8a Windscreen wiper motor securing nut (arrowed)

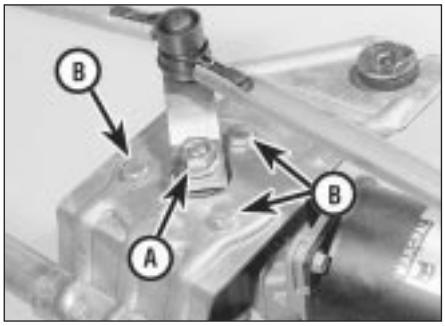


17.8b Windscreen wiper linkage securing nut (arrowed)



17.8c Withdrawing the windscreen wiper motor and linkage assembly

2 Disconnect the battery negative lead.
3 Remove the scuttle grille panel as described in Chapter 11.
4 Where applicable, unscrew the securing bolts, and withdraw the cover from the motor.
5 Disconnect the motor wiring connector.
6 On models where there is insufficient clearance for the wiper linkage to pass between the brake master cylinder and the scuttle, move the master cylinder to one side as follows. Remove the nuts securing the brake master cylinder to the vacuum servo unit, then lift the master cylinder from the studs, and pull it back slightly. Do not disconnect any brake pipes.
7 On models with an electronic control module housing located in the rear corner of the engine compartment, which obscures the end wiper linkage securing bolt, the housing must be removed as follows. Lift off the housing cover, then detach the control modules, and remove the housing. Take great care not to damage the control modules - ideally, they should be removed from the vehicle and stored in a safe place (alternatively, temporarily refit the housing and the control modules, once the wiper mechanism has been removed.
8 Unscrew the nuts securing the motor and linkage to the scuttle, then manipulate the assembly out from the engine compartment **(see illustrations)**.
9 If desired, the motor can be separated from the linkage after unscrewing the nuts securing the linkage to the motor spindle, and the three bolts securing the motor to the mounting bracket **(see illustration)**.



17.9 Wiper motor spindle-to-linkage nut (A) and motor securing bolts (B)

Refitting

10 Refitting is a reversal of removal.

18 Tailgate wiper motor - removal and refitting

Removal

1 Disconnect the battery negative lead.
2 Remove the wiper arm (see Section 16).
3 Unscrew the large spindle nut, and recover the washer and seal.
4 Open the tailgate.
5 Remove the screws, and withdraw the plastic trim panel from inside the tailgate.
6 Working around the edge of the carpeted trim panel, release the securing clips, ideally using a forked tool to avoid breaking the clips. Withdraw the carpeted panel.
7 Unscrew the motor bracket securing bolts, then withdraw the motor assembly from the tailgate, and disconnect the wiring plug **(see illustration)**.

Refitting

8 Refitting is a reversal of removal.

19 Washer system components - removal and refitting

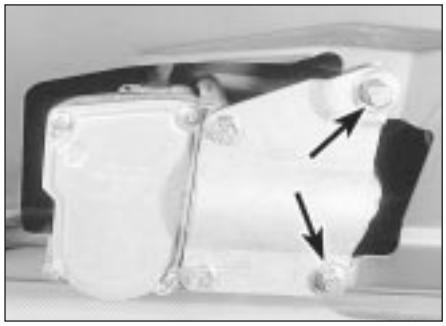
Windscreen/headlight washer fluid reservoir

Removal

1 The reservoir is located in the right-hand corner of the scuttle at the rear of the engine compartment.
2 Disconnect the battery negative lead, then disconnect the wiring from the fluid pump(s).
3 Unscrew the two securing bolts, and lift the reservoir from the scuttle.
4 If the reservoir still contains fluid, empty out the contents into a container, then disconnect the fluid hose from the pump, and withdraw the reservoir.

Refitting

5 Refitting is a reversal of removal.



18.7 Tailgate wiper motor securing bolts (arrowed)

19.8a Remove the two securing screws (arrowed) . . .

19.8b . . . and lift out the tailgate washer fluid reservoir

Tailgate washer fluid reservoir

6 Disconnect the battery negative lead.
7 Open the tailgate, then turn the securing clip and open the access panel at the right-hand corner of the luggage compartment for access to the reservoir.
8 Remove the two securing screws, then lift out the reservoir **(see illustrations)**.
9 If the reservoir still contains fluid, empty out the contents into a container, then disconnect the wiring plug and the fluid hose from the pump, and withdraw the reservoir.
10 Refitting is a reversal of removal.

Windscreen/headlight washer pump

Note: *Prior to removing the pump, empty the contents of the reservoir, or be prepared for fluid spillage.*
11 Disconnect the battery negative lead.
12 Disconnect the wiring connector and the fluid hose from the pump, then carefully ease the pump out of its sealing grommet in the reservoir.
13 Refitting is a reversal of removal.

Tailgate washer pump

14 Disconnect the battery negative lead.
15 Remove the reservoir as described previously in this Section.
16 Disconnect the wiring connector and the fluid hose from the pump, then carefully ease the pump out of its sealing grommet in the reservoir.
17 Refitting is a reversal of removal.

Tailgate washer jet

18 Pull the washer jet from the rear of the tailgate and disconnect the fluid hose.

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Tie a length of string to the end of the fluid hose to prevent it from falling back into the tailgate.

19 Refitting is a reversal of removal.

20 Radio/cassette player - removal and refitting

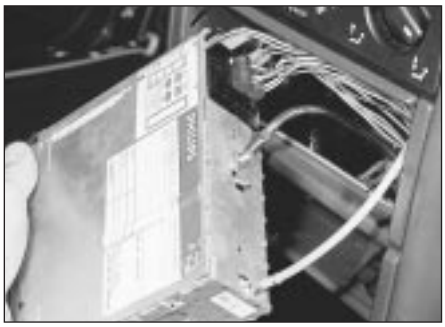
Radio/cassette player with DIN fittings

Removal

1 Disconnect the battery negative lead.
2 Carefully prise out and remove the small plastic trim panels at each side of the radio/cassette player **(see illustration)**.
3 Insert the removal tools into the holes provided at each side of the unit, until they lock into position. This will release the securing clips **(see illustration)**.
4 Using the tools, pull the unit forwards from the housing, and disconnect the wiring connectors and the aerial lead **(see illustration)**.

20.2 Remove the plastic trim panels from the sides of the radio/cassette player . . .

20.3 . . . then insert the removal tools . . .



20.4 . . . and withdraw the unit

5 Withdraw the unit from the facia.
6 Note that some units may have a bracket and rubber buffer fitted to the rear panel. If a new unit is being fitted, transfer these components to the new unit. The buffer sets the depth of the unit in the housing, and prevents the security cover fouling the cassette during insertion and ejection. These parts are available from dealers if they are not fitted.

Refitting

7 To refit the unit, reconnect the wiring plugs and the aerial lead, and push the unit into position until the securing clips lock. Ensure that the wiring harness and aerial lead are routed so that they cannot rub against the unit casing.
8 Refit the plastic covers to each side of the unit, and reconnect the battery negative lead.
9 Where applicable, to activate the unit, enter the security code in accordance with the manufacturer's instructions.

Radio/cassette player with "Peugeot" fixings

Removal

10 Disconnect the battery negative lead.
11 Open the radio/cassette player cover panel.
12 Working at the top of the unit, carefully prise off the trim panel to expose the two holes provided for the removal tools **(see illustration)**.
13 Two removal tools will now be required. These tools can be made by cutting a standard DIN radio/cassette player removal

20.12 Prise the trim panel from the top of the radio/cassette player

20.13 Make up two removal tools - note slot (arrowed) in end of tool

tool in half. Alternatively, use two pieces of thin metal rod, with grooves cut in the ends to engage with the retaining clips **(see illustration)**.

14 Insert the removal tools into the holes provided above the unit, until they lock into position. This will release the securing clips **(see illustration)**.

15 Using the tools, pull the unit forwards from the housing, and disconnect the wiring connectors and the aerial lead.

16 Withdraw the unit from the facia.

Refitting

17 Proceed as described in paragraph 7, then refit the trim panel to the top of the unit, and reconnect the battery negative lead.

18 Where applicable, to activate the unit, enter the security code in accordance with the manufacturer's instructions.

20.14 Insert the removal tools in the holes at the top of the radio/cassette player

21 Loudspeakers - removal and refitting

Door-mounted loudspeakers

1 Disconnect the battery negative lead.

2 Remove the loudspeaker cover panel, either by depressing the securing clip at the lower edge of the panel, or by removing the three securing screws from the edge of the panel, as applicable **(see illustrations)**.

3 Unscrew the securing screws, then withdraw the loudspeaker from the door, and disconnect the wiring plug **(see illustration)**.

4 Refitting is a reversal of removal.

Facia-mounted loudspeakers - models up to 1992

5 Disconnect the battery negative lead.

6 Carefully prise the loudspeaker cover panel from the top of the facia **(see illustration)**.

7 Remove the two securing screws, then withdraw the loudspeaker from the facia, and disconnect the wiring **(see illustration)**.

Facia-mounted loudspeakers - models from 1993

8 Disconnect the battery negative lead.

9 Carefully prise the loudspeaker from the top of the facia, and disconnect the wiring plug **(see illustrations)**. The loudspeaker is integral with the cover panel.

10 Refitting is a reversal of removal.

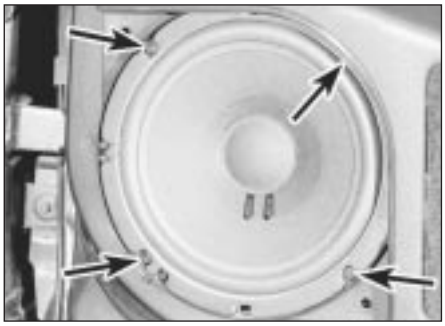
Rear parcel shelf-mounted loudspeakers - Saloon models

11 Disconnect the battery negative lead.

12 Working in the luggage compartment, on the underside of the parcel shelf, disconnect the wiring from the loudspeaker.

21.2a Release the securing clip . . .

21.2b . . . and remove loudspeaker cover panel from the door - models up to 1992



21.3 Door-mounted loudspeaker securing screws (arrowed)

21.6 Remove the loudspeaker cover panel from the top of the facia . . .

21.7 . . . for access to the loudspeaker screws (arrowed) - models up to 1992

21.9a Prise the loudspeaker from the facia . . .

21.9b . . . and disconnect the wiring plug - models from 1993

21.13 Removing the rear loudspeaker - Saloon models

13 Release the plastic securing clips, and push the speaker up through the parcel shelf into the vehicle interior. Remove the unit **(see illustration)**.
14 Refitting is a reversal of removal, but ensure that the locating lug on the loudspeaker engages with the hole in the parcel shelf.

22 Radio aerial - removal and refitting

Roof-mounted aerial

1 Note that the aerial mast can simply be unscrewed from the base. To remove the complete aerial assembly, proceed as follows.
2 Disconnect the battery negative lead.
3 Unclip the sun visors from the roof console.
4 Carefully prise the courtesy light assembly from the console to expose the two roof console front securing screws. Disconnect the wiring plug and remove the light.
5 Similarly, prise the map reading light an the light surround from the console to expose one of the front securing screws. Disconnect the wiring plug and remove the light.
6 Prise the blanking plate from the console then, where applicable, push the sunroof switch from the console.
7 Remove the two console screws exposed by removal of the map reading light and sunroof switch, then lower the console from the roof, and disconnect the wiring plugs.
8 Prise the metal insulator from the base of the aerial **(see illustration)**.
9 Unscrew the securing nut and disconnect the aerial lead, then withdraw the aerial from the top of the roof.
10 Refitting is a reversal of removal.

Rear wing-mounted aerial

Saloon models

11 Fully retract the aerial.
12 Working in the luggage compartment, remove the trim panels from the left-hand side of the wing panel.
13 Disconnect the aerial lead connector and the earth wire from the bottom of the aerial **(see illustration)**. On models with an electric aerial, disconnect the motor wiring plug.
14 Unscrew the aerial mounting bracket lower fixing bolt.
15 Working at the top of the aerial, unscrew the ring nut securing the assembly to the top of the rear wing. Recover the sealing grommet **(see illustrations)**.
16 Withdraw the aerial assembly down into the luggage compartment.
17 Refitting is a reversal of removal.

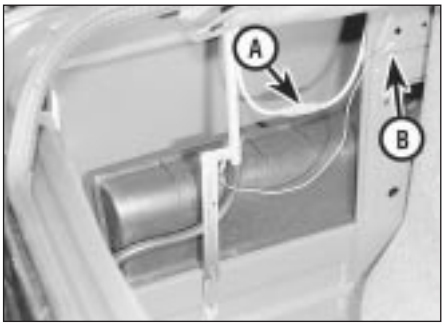
22.8 Roof-mounted radio aerial metal insulator (arrowed)

Estate models

18 The procedure is as described previously for Saloon models, but the upper end of the aerial is retained by a grommet arrangement instead of a ring nut. When removing the aerial, simply pull the top of the aerial down through the grommet **(see illustrations)**.

23 Anti-theft alarm system - general information

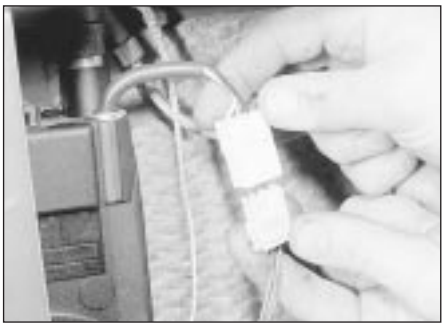
Note: *This information is applicable only to the anti-theft alarm system fitted by Peugeot as standard equipment.*



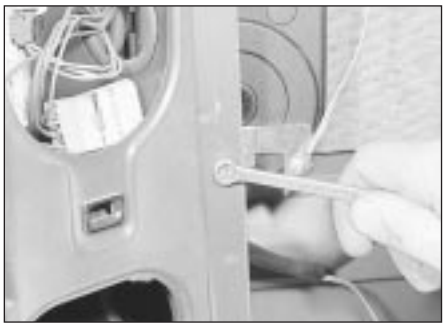
22.13 Aerial lead (A) and earth wire (B) - Saloon (rear wing-mounted manual aerial)

22.15a Unscrew the ring nut . . .

22.15b . . . and recover sealing grommet - Saloon (rear wing-mounted manual aerial)



22.18a Disconnecting aerial motor wiring plug - Estate (rear wing-mounted aerial)



22.18b Unscrew the aerial motor securing bolt . . .

22.18c . . . and withdraw aerial assembly - Estate (rear wing-mounted aerial)

General

1 Some models in the range are fitted with an anti-theft alarm system as standard equipment. The alarm is automatically armed and disarmed using the remote central locking transmitter (where applicable). When the system is activated, the alarm indicator light, located on the facia, will flash continuously. In addition to the alarm function, the system also incorporates an engine immobiliser.
2 Additionally, certain petrol engine models are fitted with a coded engine immobiliser device, operated by a key pad in the centre console.

Anti-theft alarm system

Early models

3 Note that if the doors are operated using the key, the alarm will not be armed or disarmed (as applicable). Locking the doors with the central locking remote transmitter is the only means of activating the alarm system.
4 The alarm system protects the doors and boot or tailgate, as applicable.
5 Should the alarm system become faulty, the vehicle should be taken to a Peugeot dealer for examination.

Later models

6 Note that if the doors are operated using the key, the alarm will not be armed or disarmed (as applicable). If for some reason the remote central locking transmitter fails whilst the alarm is armed, the vehicle must be unlocked using the key. In this case, the alarm system will activate, and must be disarmed using the master switch (see paragraph 8).
7 The alarm system has switches on the bonnet, tailgate and each of the doors. It also has ultrasonic sensing, which detects movement inside the vehicle, via sensors mounted on either side of the vehicle interior. If required, the ultrasonic sensing facility can be switched off, whilst retaining the switched side of the system. To switch off the ultrasonic sensing, with the ignition switch off, depress the alarm switch (mounted on the right of the steering column) until the alarm indicator light on the facia is continuously lit. Now, when the doors are locked using the remote central locking transmitter, and the alarm is armed, only the switched side of the alarm system is operational (and the alarm indicator light will revert to its flashing mode). This facility is useful, as it allows you to leave the windows/sunroof open, and still arm the alarm. If the windows/sunroof are left open with the ultrasonic sensing not switched off, the alarm may be falsely triggered by a gust of wind.
8 To deactivate the complete alarm system, a master switch is provided in the engine compartment, behind the left-hand headlight. The switch is operated by a dedicated key, and is protected by a plastic cover.
9 Should the alarm system become faulty, the vehicle should be taken to a Peugeot dealer for examination.

Coded engine immobiliser

Warning: Do not forget the immobiliser code - if the correct code cannot be entered, the engine management electronic control unit must be renewed.

10 This device cuts out the engine management system, and prevents the engine from being started unless a confidential code is keyed into the pad located in the centre console.
11 The code can be chosen by the owner, and full details are given in the vehicle handbook.
12 When the ignition is turned on, if the green light on the key pad is illuminated, the system is not working, and the engine can be started normally. If the red light is illuminated, the system is working (the engine cannot be started, and the alarm will sound if starting is attempted).
13 To de-activate the system, enter the correct code, which should be confirmed by four flashes from the green light, and four beeps. The red light should go out, and the engine can them be started.
14 If the wrong code is entered, the red light will stay on, and the engine cannot be started.

Disconnecting the battery

Early models

15 If the battery has been disconnected, when it is reconnected, the alarm will be activated.
16 The alarm must be de-activated using the remote central locking transmitter.

Later models

17 The following precautions should be observed when disconnecting and reconnecting the battery leads on a vehicle equipped with an alarm system.
18 Before disconnecting the battery, de-activate the alarm siren, using the dedicated key.
19 When reconnecting the battery, as soon as the battery is connected, the alarm is automatically activated. Use the remote transmitter to turn off the alarm, then activate the alarm siren using the dedicated key.

24 Air bag system - general information, precautions and system de-activation

General information

1 A driver's side air bag is fitted as standard equipment on later models, and is an option on all other models. The air bag is fitted in the steering wheel centre pad.
2 The system is armed only when the ignition is switched on, however, a reserve power source maintains a power supply to the system in the event of a break in the main electrical supply. The system is activated by a "g" sensor (deceleration sensor), and is controlled by an electronic control unit which is integral with the steering wheel.
3 The air bag is inflated by a gas generator, which forces the bag out from its location in the steering wheel.

Precautions

Warning: The following precautions must be observed when working on vehicles equipped with an air bag system, to prevent the possibility of personal injury.

General precautions

4 The following precautions **must** be observed when carrying out work on a vehicle equipped with an air bag.

a) Do not disconnect the battery with the engine running.
b) Before carrying out any work in the vacinity of the air bag, removal of any of the air bag components, or any welding work on the vehicle, de-activate the system as described in the following sub-Section.
c) Do not attempt to test any of the air bag system circuits using test meters or any other test equipment.
d) If the air bag warning light comes on, or any fault in the system is suspected, consult a Peugeot dealer without delay. ***Do not*** *attempt to carry out fault diagnosis, or any dismantling of the components.*

Precautions to be taken when handling an air bag

a) Transport the air bag by itself, bag upward.
b) Do not put your arms around the air bag.
c) Carry the air bag close to the body, bag outward.
d) Do not drop the air bag or expose it to impacts.
e) Do not try to dismantle the air bag unit.
f) Do not connect any form of electrical equipment to any part of the air bag circuit.

Precautions to be taken when storing an air bag unit

a) Store the unit in a cupboard with the air bag upward.
b) Do not expose the air bag to temperatures above 80ºC.
c) Do not expose the air bag to flames.
d) Do not attempt to dispose of the air bag - consult a Peugeot dealer.
e) Never refit an air bag which is known to be faulty or damaged.

De-activation of air bag system

5 The system must be de-activated before carrying out any work on the air bag components or surrounding area.

a) Switch off the ignition.
b) Remove the ignition key.
c) Switch off all electrical equipment.

d) Disconnect the battery negative lead.
e) Insulate the battery negative terminal and the end of the battery negative lead to prevent any possibility of contact.
f) Wait for at least ten minutes before carrying out any further work.

Activation of air bag system

6 To activate the system on completion of any work, proceed as follows.

a) Ensure that there are no occupants in the vehicle, and that there are no loose objects around the vacinity of the steering wheel. Close the vehicle doors and windows.
b) Insert the ignition key, and switch on the ignition.
c) Reconnect the battery negative lead.
d) Switch off the ignition.
e) Switch on the ignition once more, and check that the air bag warning light in the steering wheel illuminates for approximately 3 seconds and then extinguishes.
f) Switch off the ignition.
g) If the air bag warning light does not operate as described in paragraph e), consult a Peugeot dealer before driving the vehicle.

25 Air bag system components - removal and refitting

Warning: Refer to the precautions given in Section 24 before attempting to carry out work on any of the air bag components.

General

1 The air bag sensors are integral with the electronic control unit, which is itself integral with the steering wheel. The air bag warning light is integral with the air bag unit.
2 Any suspected faults with the air bag system should be referred to a Peugeot dealer - under no circumstances attempt to carry out any work other than removal and refitting of the air bag unit and/or the rotary connector, as described in the following paragraphs.

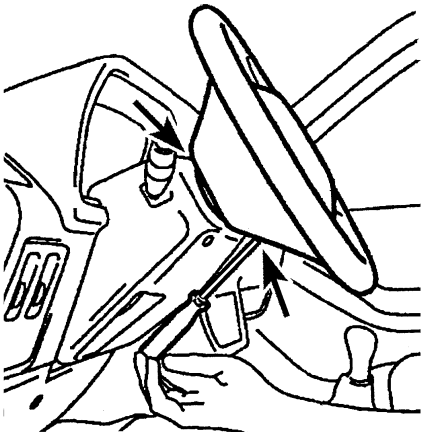
Air bag electronic control unit

3 The unit is integral with the steering wheel, and cannot be removed independently. Refer to Chapter 10 for steering wheel removal.

Air bag unit

Removal

4 The air bag unit is an integral part of the steering wheel centre boss.



25.7 Turn the steering wheel for access to the two air bag unit screws (arrowed)

5 De-activate the air bag system as described in Section 24.
6 Move the steering wheel as necessary for access to the two air bag unit securing screws. The screws are located at the rear of the steering wheel boss.
7 Remove the two air bag unit securing screws **(see illustration)**.
8 Gently pull the air bag unit from the centre of the steering wheel.
9 Carefully unclip the wiring connector from the air bag unit (use the fingers only, and pull the connector upward from the air bag unit).
10 If the air bag unit is to be stored for any length of time, refer to the storage precautions given in Section 24.

Refitting

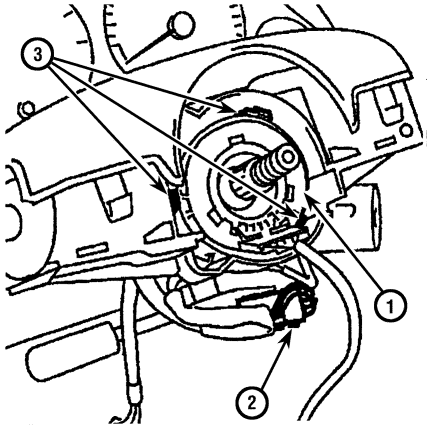
11 Refitting is a reversal of removal, bearing in mind the following points.

a) Do not strike the air bag unit, or expose it to impacts during refitting.
b) Tighten the air bag unit securing screws to the specified torque.
c) On completion of refitting, activate the air bag system as described in Section 24.

Air bag rotary connector

Removal

12 Remove the air bag unit, as described previously in this Section.
13 Remove the steering wheel as described in Chapter 10.
14 Remove the securing screws, and withdraw the lower steering column shroud. Allow the shroud to hang down, there is not need to disconnect the wiring from the components mounted inside the shroud.
15 Lift off the upper column shroud.
16 Disconnect the electrical supply connector from the rotary connector **(see illustration)**.



25.16 Air bag rotary connector details

1 Rotary connector
2 Electrical supply connector
3 Rotary connector securing clips

17 Carefully release the three securing clips using a screwdriver, then withdraw the rotary connector.

Warning: Do not pull out the electrical supply connector when removing the rotary connector.

Refitting

18 Refitting is a reversal of removal, bearing in mind the following points.
19 Before refitting the steering column shrouds and the air bag unit, check that the wiring harness is routed correctly by moving the steering wheel to check that the wiring is not trapped.
20 Refit the steering wheel (see Chapter 10).
21 Refit the air bag as described previously in this Section, but do not activate the air bag at this stage.
22 On completion, move the steering column to its fully raised position, then check that the clearance between the rear face of the steering wheel and the front faces of the steering column shrouds is 8.0 mm. If the clearance is not as specified, proceed as follows.

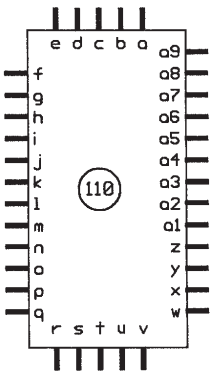
a) Working in the driver's footwell, unclip the carpet trim panel from under the facia for access to the steering column pinch-bolt.
b) Loosen the pinch-bolt, then slide the steering shaft as necessary to give the specified clearance between the steering wheel and the shrouds.
c) Tighten the pinch-bolt, and refit the trim panel.

23 Activate the air bag system as described in Section 24.

NOTES:

1. All diagrams are divided into numbered circuits depending on function e.g. Diagram 2: Exterior lighting.
2. Items are arranged in relation to a plan view of the vehicle.
3. Items may appear on more than one diagram so are found using a grid reference e.g. 2/A1 denotes an item on diagram 2 grid location A1.
4. Complex items appear on the diagrams as blocks and are expanded on the internal connections page.
5. Brackets show how the circuit may be connected in more than one way.
6. Not all items are fitted to all models.
7. Wire identification is not by colour, but by letters or numbers appearing on the wire at each end.

INTERNAL CONNECTION DETAILS

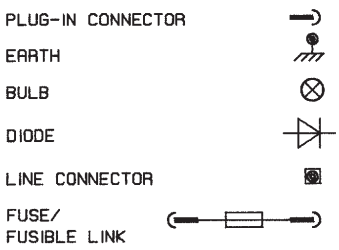


KEY TO INSTRUMENT CLUSTER (ITEM 110)

a = +VE Supply
b = Earth
c = Tachometer
d = Tachometer
e = Oil Level Gauge
f = Oil Level Gauge
g = +VE Supply
h = +VE Supply
i = Diagnosis Warning Lamp
j = Coolant Level Warning Lamp
k = Coolant Temperature Gauge
l = High Temp. Warning Lamp
m = +VE Supply
n = Brake Pad Wear Warning Lamp
o = +VE Supply
p = ABS Warning Lamp
q = Direction Indicator Warning Lamp
r = Sidelamp Warning Lamp
s = Dipped Beam Warning Lamp
t = Main Beam Warning Lamp
u = Clock
v = +VE Supply
w = Direction Indicator Warning Lamp
x = Earth
y = Fuel Gauge
z = Low Fuel Warning Lamp
a1 = No Charge Warning Lamp
a2 = Oil Pressure Warning Lamp
a3 = +VE Supply
a4 = Low Brake Fluid Warning Lamp
a5 = Handbrake Warning Lamp
a6 = Instrument Illumination
a7 = Earth
a8 = Oil Temperature Gauge
a9 = Choke Warning Lamp

FUSE	RATING	CIRCUIT
1	15A PRE '89 20A POST '89	Heated rear window and heated mirrors
2	5A	Tail lamp LH
3	5A	Rear Foglamp
4	10A	Side, number plate, instrument panel, clock lighting and illumination control
5	10A	Ignition positive, courtesy lamp delay, oil level, tachometer, brake warning lamp, reversing lamps, cooling fan relay
6	15A	Accessories positive, wash/wipe, brake lamps, interior illumination
7	15A PRE '89 20A POST '89	Hazard warning lamps
8	20A	Electric windows, sunroof, boot/clock lamps, central locking, front/rear interior lamps, radio memory
9	5A	Radio, battery or accessories positivw
10	15A	Accessories positive, heated rear window, front/rear electric windows, sunroof, clock lamp
11	5A	Tail lamp RH
12	10A	Accessories positive, ABS
13	20A	Electric windows rear
14	25A	Electric windows front, sunroof
15	15A	Electric horn, cigar lighter
	20A	Air horn, cigar lighter
16	5A	Driving lamp LH
17	5A	Driving lamp RH
18	25A	Heater

KEY TO SYMBOLS



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Notes, fuses, internal connection details and key to symbols - early models

ITEM	DESCRIPTION	DIAGRAM/ GRID REF.
1	ABS Additional Regulation Unit Relay A	4a/D4
2	ABS Additional Regulation Unit Relay B	4a/E5
3	ABS Brake Warning Lamp Relay	4/J6
4	ABS ECU	4/G5, 4a/H4
5	ABS Pressure Switches	4/C2
6	ABS Pump	4/D3, 4a/C5
7	ABS Pump Relay	4/C3
8	ABS Solenoid Valve Relay	4/D6
9	ABS Solenoid Valves	4/C5, 4a/B3
10	Accessory Relay	3/G2
11	Air Flow Sensor	1e/A7, 1f/B6, 1g/F4, 1h/B6
12	Air Horn	3/A7
13	Air Horn Compressor Relay	3/B6
14	Alternator	1/C3
15	Ashtray Illumination	2b/E3
16	Audible Warning Device	2b/B1
17	Auto. Trans. Inhibitor Relay	1/F1
18	Auto. Trans. Inhibitor Switch	1/F7
19	Auto. Trans. Switch Stage Illumination	2b/K5
20	Battery	1/D7, 1a/E7, 1b/D7, 1c/E7, 1d/C7, 1e/E7, 1f/C8, 1g/D7, 1h/C7, 2/D7, 2a/E7, 2b/E7, 3/E8, 3a/B7, 3b/C6, 4/C7, 4a/C7
21	Brake Pad Wear Sensor	1/D1, 1/D8
22	Canister Purge Solenoid	1a/B4, 1d/B4, 1f/C7, 1h/C7
23	Canister Simulation Resistor	1f/D7
24	Carburettor Breather Solenoid	1/E6
25	Central Locking Actuator Filler Cap	3a/M1
26	Central Locking Actuator LH Front	3a/K8
27	Central Locking Actuator LH Rear	3a/L8
28	Central Locking Actuator RH Front	3a/K1
29	Central Locking Actuator RH Rear	3a/L1
30	Central Locking Actuator Tailgate	3a/M5
31	Central Locking Control Unit	3a/E7
32	Central Locking Infra-red - Signal Receiver	3a/F5
33	Choke Switch	1/M1
34	Cigar Lighter	2b/F4
35	Clock	2b/F5
36	Combination Switch - Lighting, Direction Indicators And Horn	2/L4, 2a/J4, 2b/J4, 3/K4
37	Combination Switch - Wash/Wipe	3/K3
38	Coolant Level Indicator Unit	1/A2
39	Coolant Temp. Gauge Sender Unit	1/G5
40	Coolant Temp. Sensor	1a/F4, 1b/G4, 1c/G6, 1d/E6, 1e/E4, 1f/H7, 1g/E5, 1h/H7
41	Coolant Temp. Switch	1/H5
42	Cooling Fan Motor	1/A5
43	Cooling Fan Relay	1/A3
44	Cooling Fan Resistor	1/C2
45	Cooling Fan Switch	1/B6
46	Dim/Dip Relay	2/F7
47	Dim/Dip Resistor	2/E8
48	Direction Indicator Flasher Relay	2a/D2
49	Direction Indicator LH Front	2a/A8
50	Direction Indicator RH Front	2a/A1
51	Distributor	1/E4, 1a/B5, 1b/J5, 1c/B5, 1d/B7, 1e/B6, 1f/D4, 1g/C6, 1h/D4
52	Driving Lamp LH	2/A7
53	Driving Lamp Relay	2/F7
54	Driving Lamp RH	2/A2
55	Electric Mirror Control Switch LH	3a/J5
56	Electric Mirror Control Switch RH	3a/J3
57	Electric Mirror LH	3a/G8
58	Electric Mirror RH	3a/G1
59	Electric Window Child Cut-out - (Rear Windows)	3b/L3
60	Electric Window Instantaneous - Lift Unit (One Touch)	3b/F1
61	Electric Window Motor LH Front	3b/K8
62	Electric Window Motor LH Rear	3b/M8
63	Electric Window Motor RH Front	3b/K1
64	Electric Window Motor RH Rear	3b/M1
65	Electric Window Rear Control - Switch (LH Front)	3b/L5
66	Electric Window Rear Control - Switch (LH Rear)	3b/L5
67	Electric Window Rear Control - Switch (RH Front)	3b/L4
68	Electric Window Rear Control - Switch (RH Rear)	3b/L4
69	Electric Window Relay Front	3b/B2
70	Electric Window Relay Rear	3b/C2
71	Electric Window/Sunroof Relay	3b/E3
72	Electric Window Switch LH	3b/J8
73	Electric Window Switch RH (Drivers)	3b/J1
74	Electric Window Switch RH (Drivers - One Touch)	3b/G1
75	Electric Window Switch RH (Passengers)	3b/H1
76	Engine Speed Sensor	1a/A3, 1c/D4, 1d/B5, 1f/E6, 1g/F6, 1h/E6

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ITEM	DESCRIPTION	DIAGRAM/ GRID REF.
77	Foglamp Front	2/A3, 2/A6
78	Foglamp Relay	2/F1
79	Foglamp Switch Front	2/H1
80	Foglamp Switch Rear	2/J2
81	Fuel Gauge Sender Unit	1/M5
82	Fuel Injection ECU	1a/G2, 1b/B6, 1c/G2, 1d/G4, 1e/H3, 1f/J3, 1g/H4, 1h/H3
83	Fuel Injectors	1a/C2, 1b/F5, 1c/C3, 1d/D4, 1e/E4, 1f/F4, 1g/E4, 1h/F4
84	Fuel Pump	1a/M5, 1b/M5, 1c/M5, 1d/M5, 1e/M5, 1f/M5, 1g/L5, 1h/M5
85	Fuse - ABS	4a/B7
86	Fuse - Cooling Fan	1/B7
87	Fuse - Fuel Injection Ecu	1g/D2
88	Fuse - Fuel Pump	1a/G5, 1b/E2, 1c/D1, 1d/E1, 1e/C1, 1f/D1, 1g/C2, 1h/D1
89	Fuse - Lambda Sensor	1a/G6, 1d/D1, 1e/C1, 1f/B1, 1h/E1
90	Glove Box Lamp	2b/G7
91	Glove Box Lamp Switch	2b/G7
92	Handbrake Warning Switch	1/M6
93	Hazard Warning Lamp Switch	2a/J5
94	Headlamp Unit LH	2/A7
95	Headlamp Unit RH	2/A2
96	Heated Rear Window	3/L4
97	Heated Rear Window Relay	3/E2
98	Heated Rear Window Switch	3/H5
99	Heater Blower Motor	3/F5
100	Heater Blower Motor Speed Controller	3/G5
101	Horn	3/A2, 3/A7
102	Idle Solenoid	1a/C2, 1d/C5, 1g/C3, 1h/B4
103	Ignition Coil (Dynamic)	1/C5, 1a/B6, 1b/G6, 1c/B6, 1d/C6, 1e/E4, 1f/C5, 1g/D6, 1h/C5
104	Ignition Coil (Static)	1a/B8, 1c/D4
105	Ignition Module	1/E4, 1b/J5, 1c/A6, 1c/E4, 1e/D6, 1f/B5, 1g/G6, 1h/B5
106	Ignition Switch	1/K2, 1a/L2, 1b/L2, 1c/L2, 1d/L2, 1e/L2, 1f/L1, 1g/K2, 1h/L1, 2/K2, 2a/H2, 2b/J3, 3/K2, 3a/G2, 3b/E1, 4/K1, 4a/K2
107	Injection Supply Relay	1a/G7, 1b/C1, 1c/A1, 1d/C1, 1f/C1, 1g/B1, 1h/C1
108	Inlet Air Temp. Sensor	1a/C3, 1c/B7, 1d/B3
109	Inlet Manifold Pressure Sensor	1a/B2, 1d/B3,
110	Instrument Cluster	1/K4, 1a/L4, 1b/K4, 1c/L5, 1d/L4, 1e/L4, 1f/L4, 1g/K4, 1h/L4, 2/H4, 2a/G4, 2b/G3, 4/J4, 4a/K4
111	Instrument Illumination Control	2b/J1, 3/J2

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Key to wiring diagrams continued - early models

ITEM	DESCRIPTION	DIAGRAM/ GRID REF.
112	Interior Lamp Door Switch LH Front	2b/F8
113	Interior Lamp Door Switch LH Rear	2b/L8
114	Interior Lamp Door Switch RH Front	2b/F1
115	Interior Lamp Door Switch RH Rear	2b/L1
116	Interior Lamp Front	2b/G5
117	Interior Lamp Rear	2b/L5
118	Interior Lamp Timer Relay	2b/A2
119	Knock Sensor	1h/E2
120	Lambda Sensor	1a/D6, 1d/E7, 1e/F6, 1f/F7, 1h/F7
121	Lamp Cluster LH Rear	2/M7, 2a/M7
122	Lamp Cluster RH Rear	2/M2, 2a/M2
123	Low Brake Fluid Sender Unit	1/D2, 4/E2
124	Luggage Comp. Lamp	2b/M5
125	Luggage Comp. Lamp Switch	2b/M5
126	Map Reading Lamp	2b/H5
127	Mixture Adjustment Potentiometer	1c/D6
128	Number Plate Lamp	2/M4, 2/M5
129	Oil Level Sender Unit	1/G5
130	Oil Pressure Switch	1/G5
131	Oil Temp. Sender Unit	1/H5
132	Radio/Cassette Unit	3a/G5
133	Reversing Lamp Switch	2/E5
134	Spark Plugs	1/D4, 1a/A8, 1a/B5, 1b/H5, 1c/B4, 1c/C4, 1d/B6, 1e/A6, 1f/C4, 1g/C6, 1h/C4
135	Speaker LH Front (Dashboard)	3a/D8
136	Speaker LH Front (Door)	3a/D8
137	Speaker LH Rear	3a/M8
138	Speaker RH Front (Dashboard)	3a/D1
139	Speaker RH Front (Door)	3a/D1
140	Speaker RH Rear	3a/M1
141	Starter Motor	1/C7
142	Stop-Lamp Switch	2a/D4
143	Sunroof Motor	3b/H5
144	Sunroof Position Switch	3b/G6
145	Sunroof Relay	3b/F5
146	Sunroof Switch	3b/H4
147	Supplementary Air Device	1b/G5, 1c/F6, 1e/A5, 1f/G7
148	Suppressor	1/C5, 1a/B7, 1a/B8, 1c/B6, 1c/D5, 1f/C6, 1h/C6
149	Tachymetric Relay	1a/G6, 1b/D1, 1c/C1, 1d/D1, 1e/A2, 1f/D1, 1g/C1, 1h/D1
150	Throttle Potentiometer	1a/D3, 1c/D3, 1d/C5
151	Throttle Switch (Idle/Full Load)	1b/F6, 1e/A4, 1f/E6, 1g/F6, 1h/E6
152	Vanity Mirror Illumination	2b/J7
153	Washer Pump Front	3/C3
154	Washer Pump Rear	3/L1
155	Wheel Sensor LH Front	4/C8, 4a/C8
156	Wheel Sensor LH Rear	4/L8, 4a/L8
157	Wheel Sensor RH Front	4/C1, 4a/C1
158	Wheel Sensor RH Rear	4/L1, 4a/L1
159	Wiper Motor Front	3/B5
160	Wiper Motor Rear	3/M4
161	Wiper Relay Front	3/E3
162	Wiper Relay Rear	3/M6

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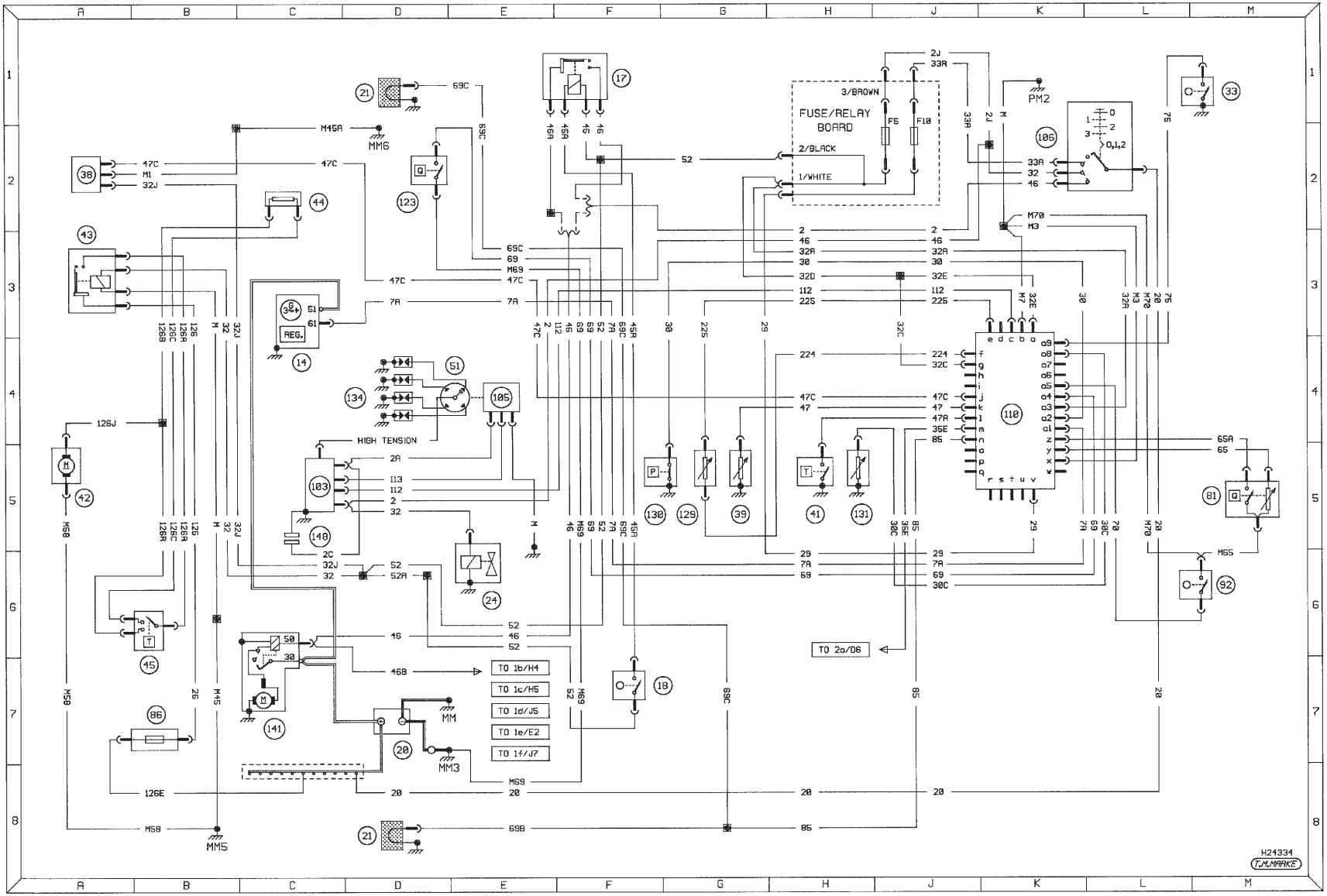


Diagram 1 : Typical starting, charging, ignition (XU52C/XU92C models only), cooling fan, warning lights and gauges - early models

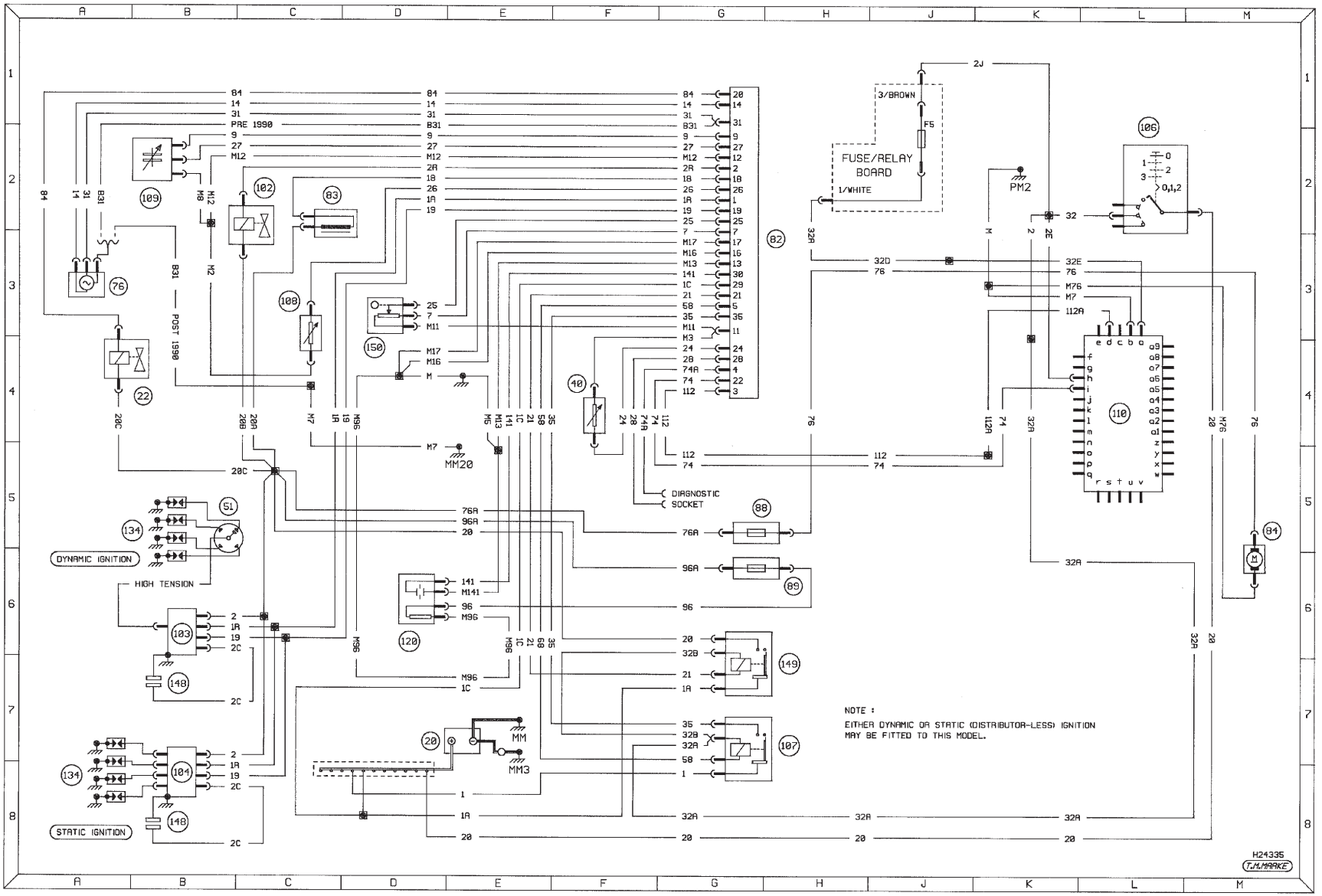


Diagram 1a : Typical fuel injection and ignition (XU5M2-3/Z MMBA G5 monopoint) - early models

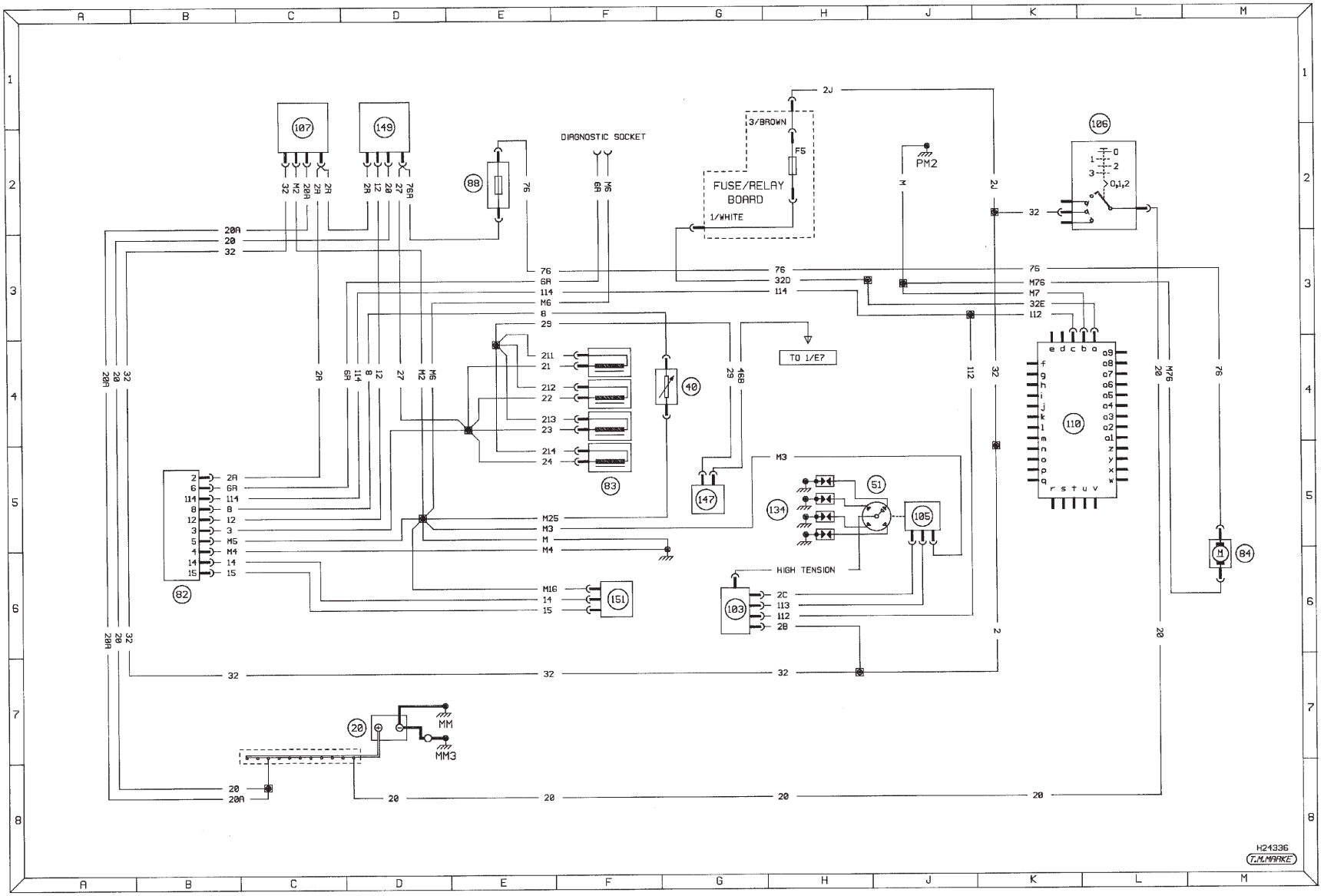


Diagram 1b : Typical fuel injection and ignition (XU9J2 L3.1 Jetronic) - early models

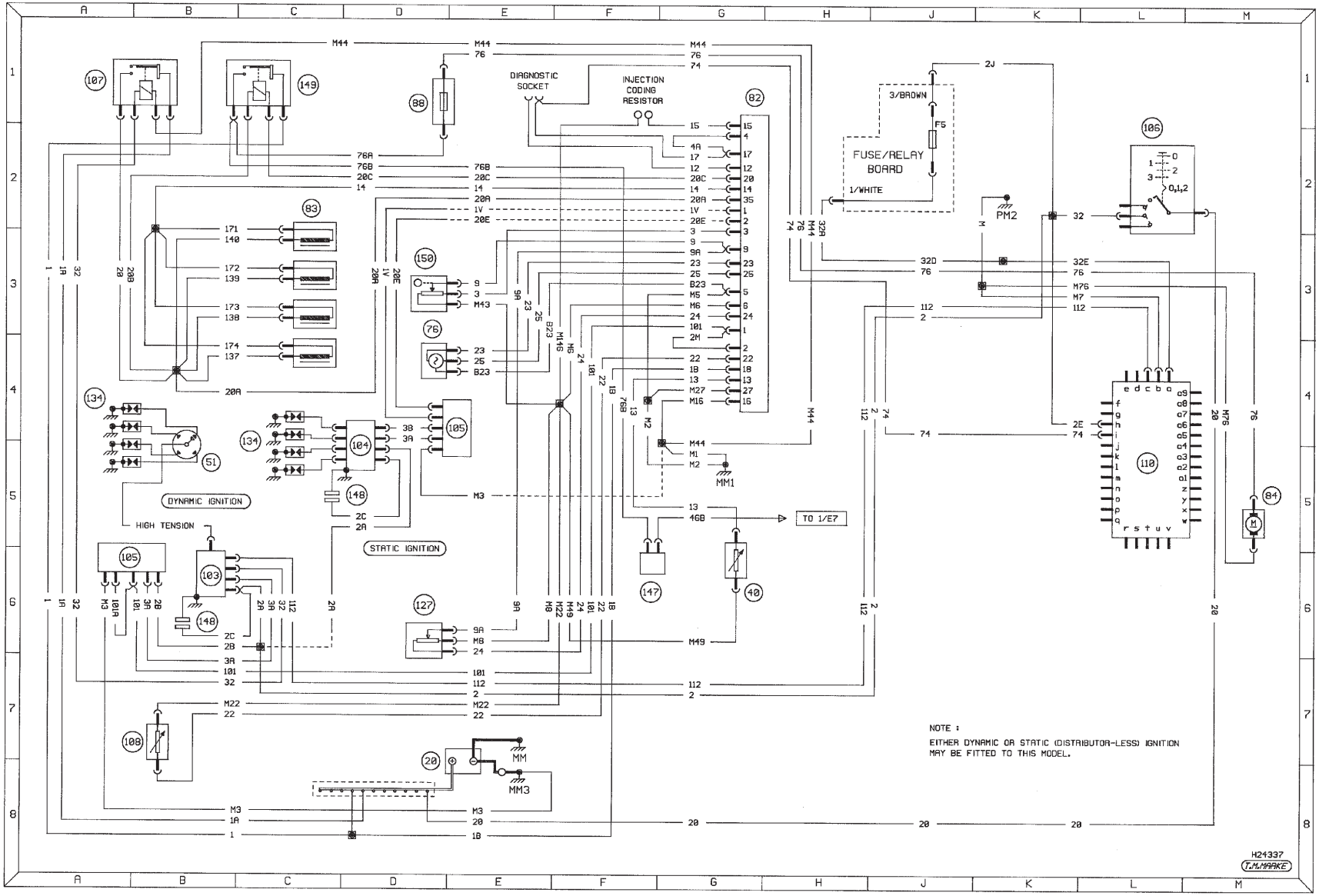


Diagram 1c : Typical fuel injection and ignition (XU9J2 MP3.1 Motronic) - early models

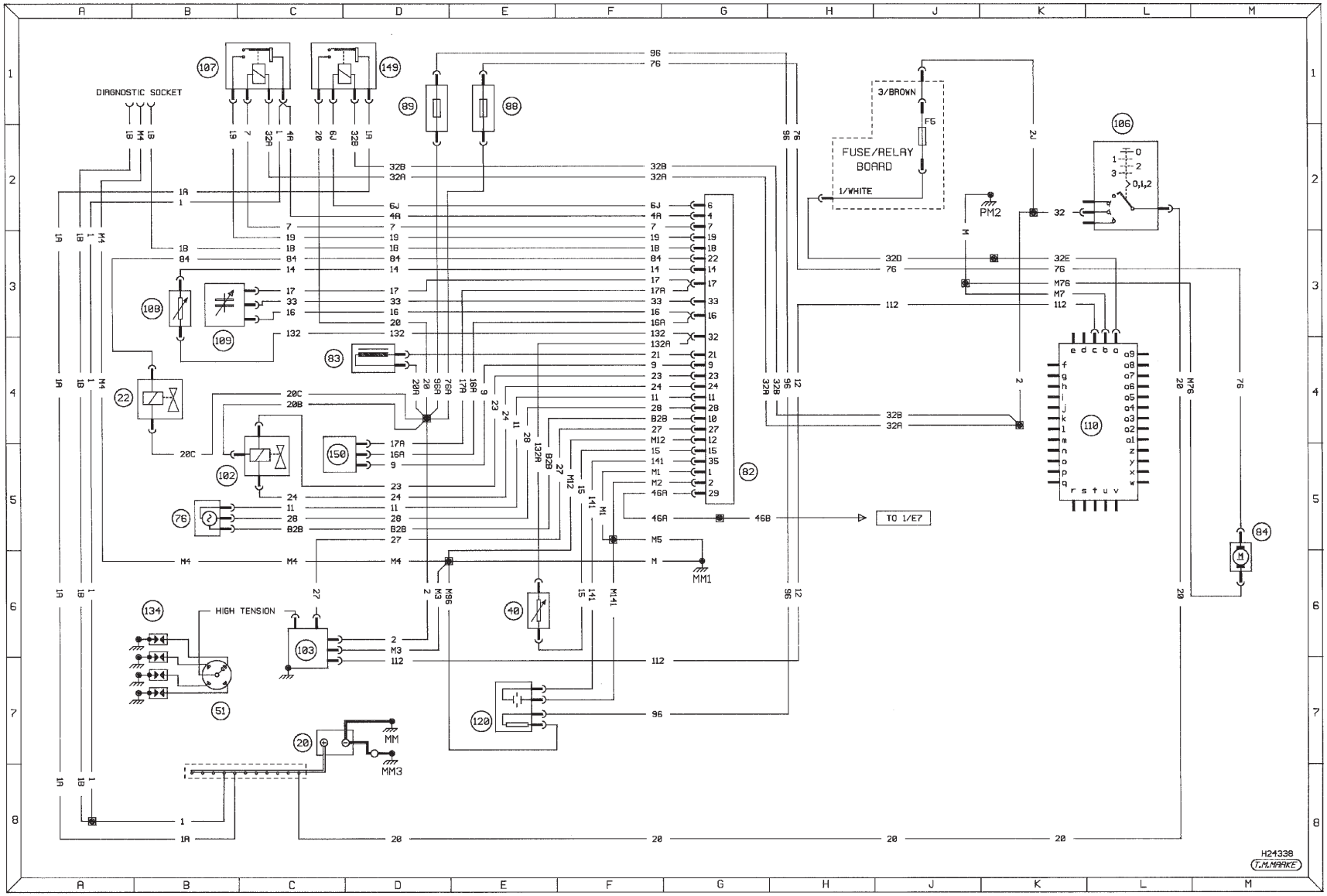


Diagram 1d : Typical fuel injection and ignition (XU9M/Z FENIX 1B) - early models

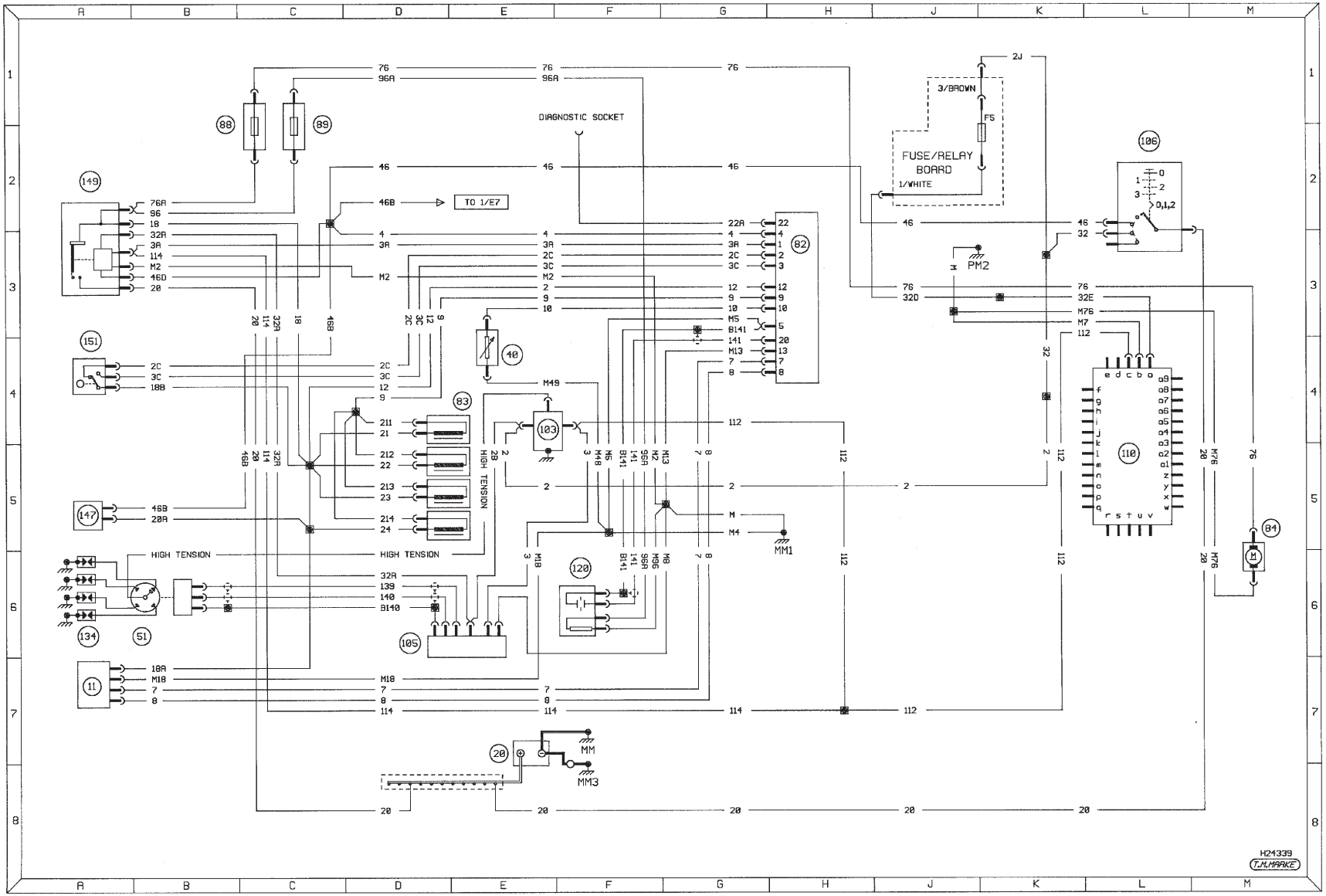


Diagram 1e : Typical fuel injection and ignition (XU9J1/Z LU2 Jetronic) - early models

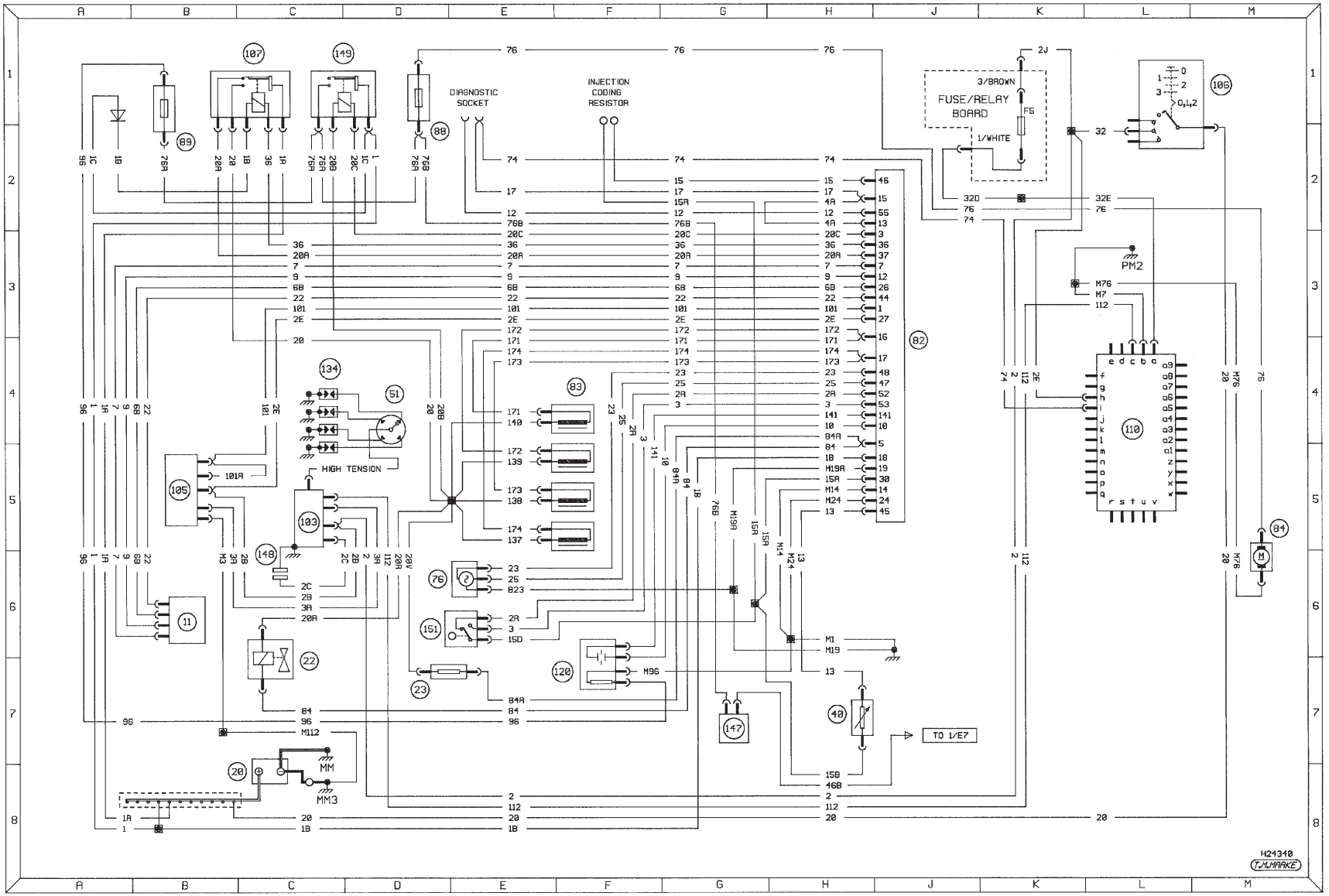


Diagram 1f : Typical fuel injection and ignition (XU9JA/Z M1.3 Motronic) - early models

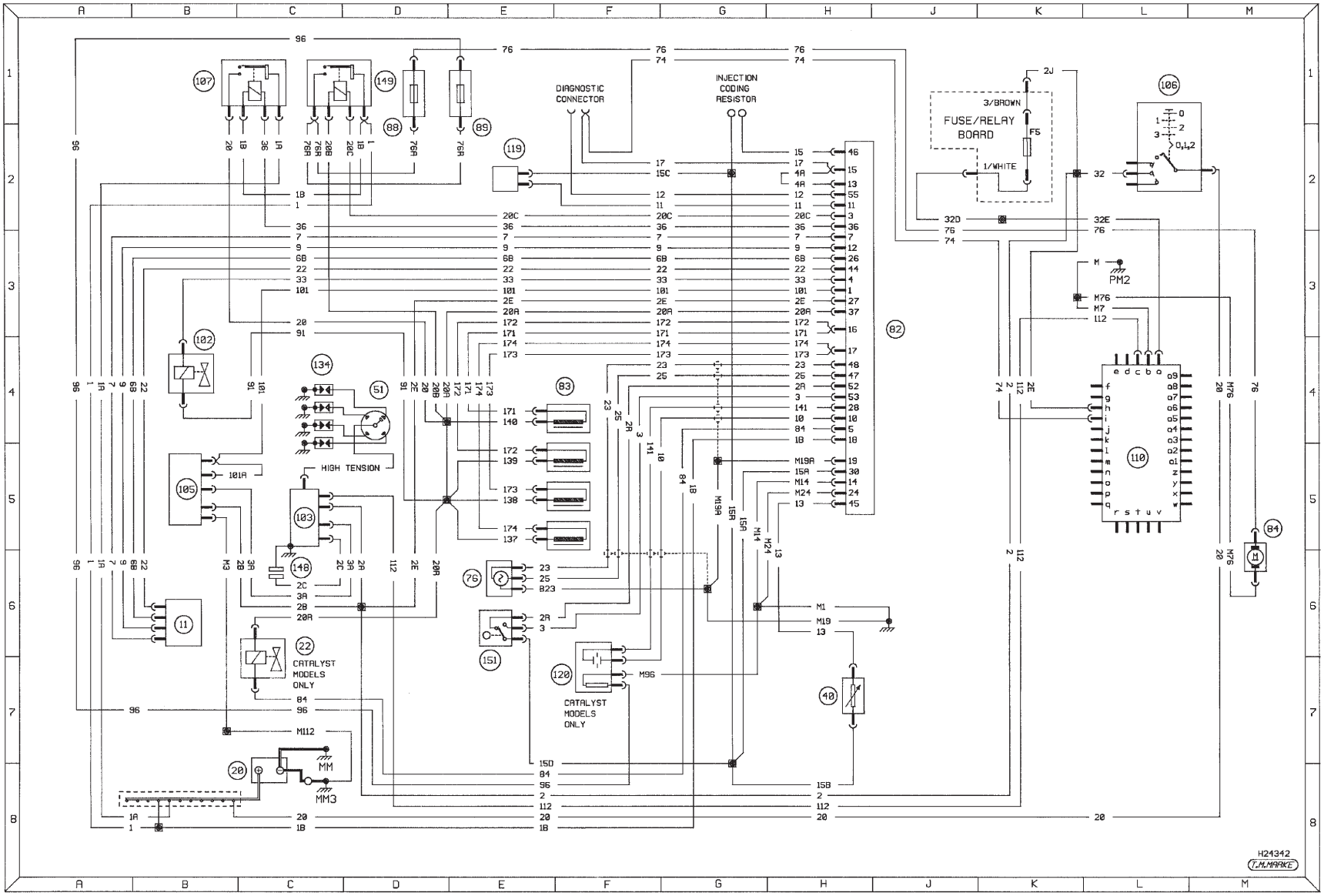


Diagram 1g : Typical fuel injection and ignition (XU9J4 and XU9J4/Z M1.3 Motronic) - early models

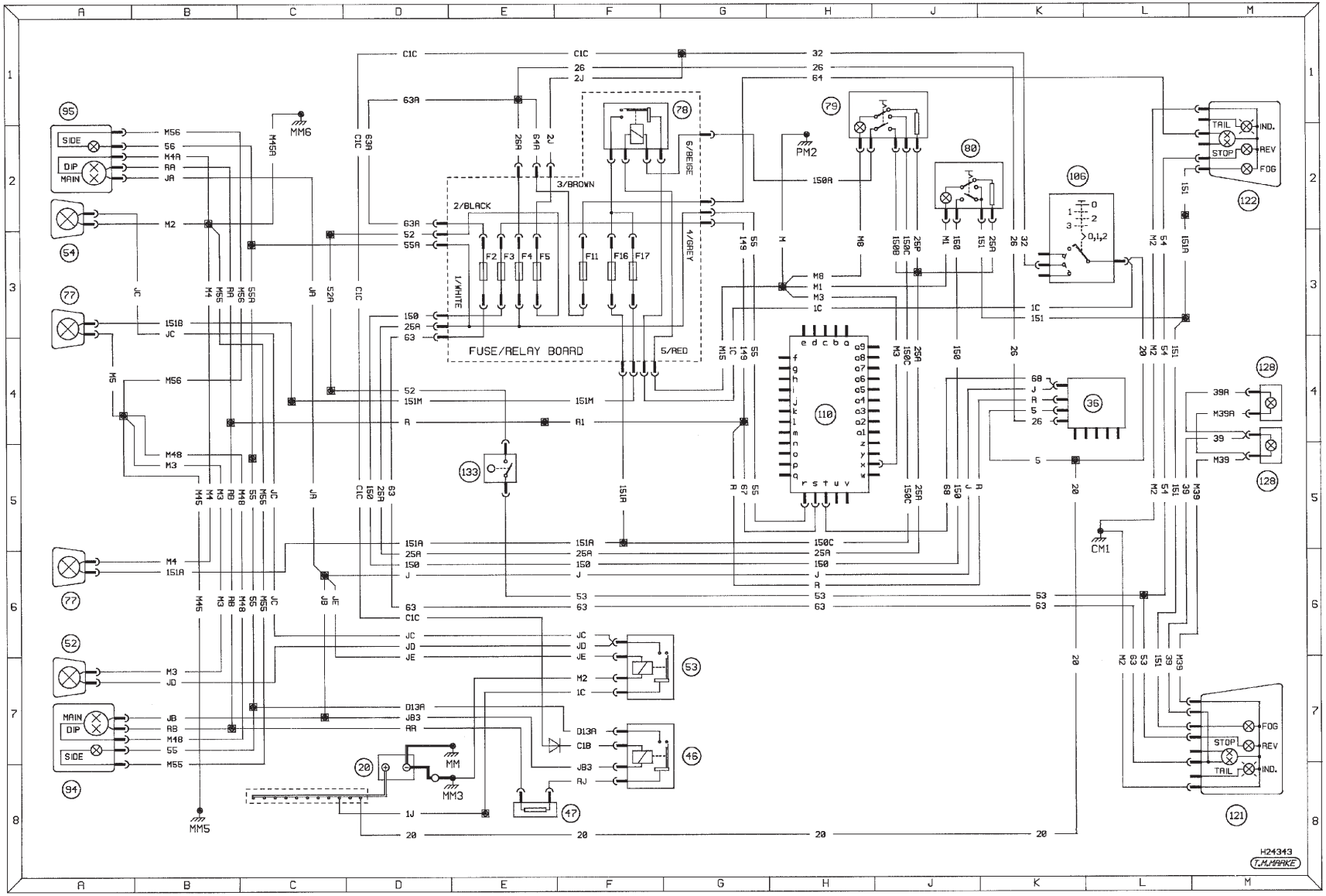


Diagram 2 : Typical exterior lighting (reversing, fog, side and headlights) - early models

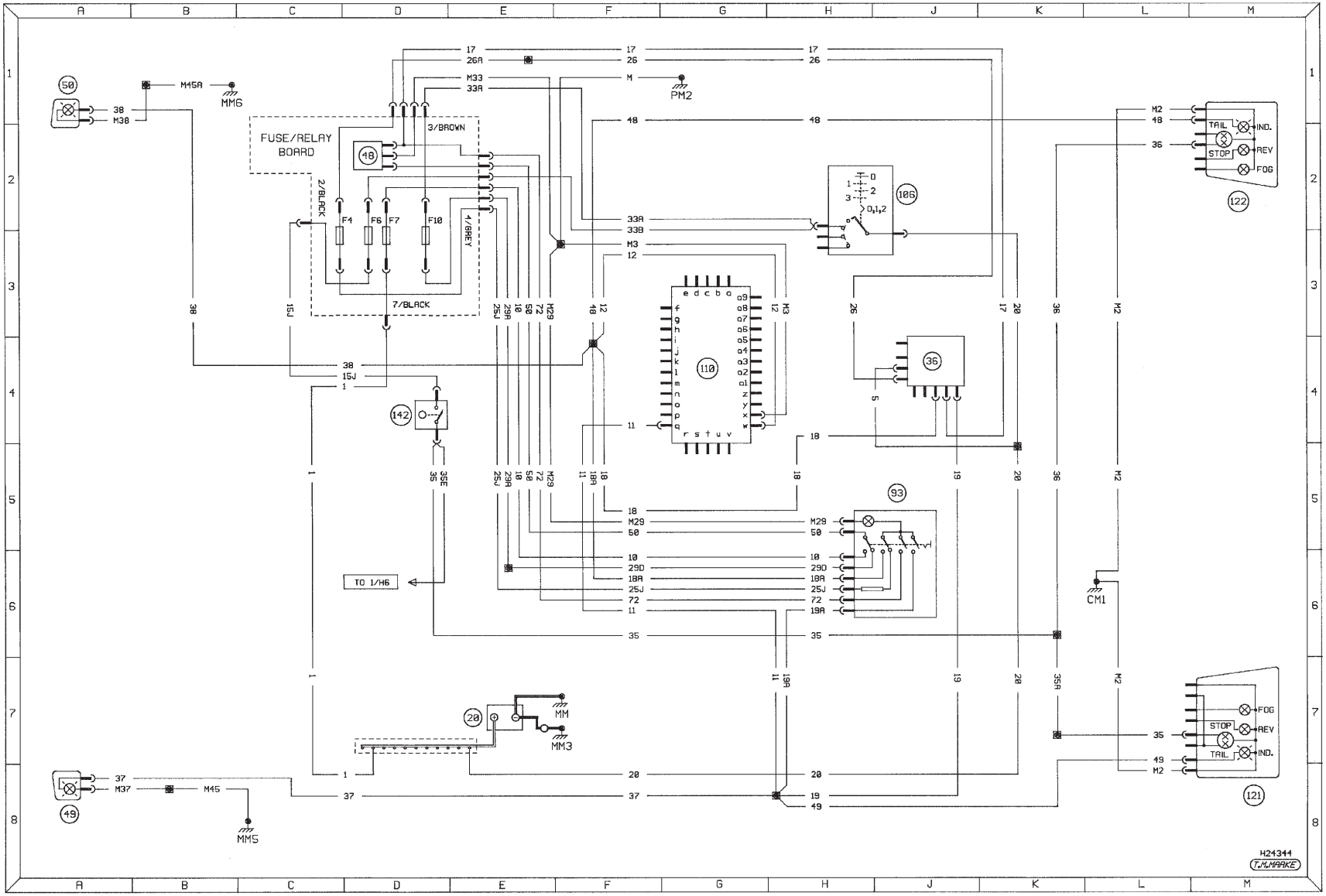


Diagram 2a : Typical exterior lighting (direction indicators and stop-lights) - early models

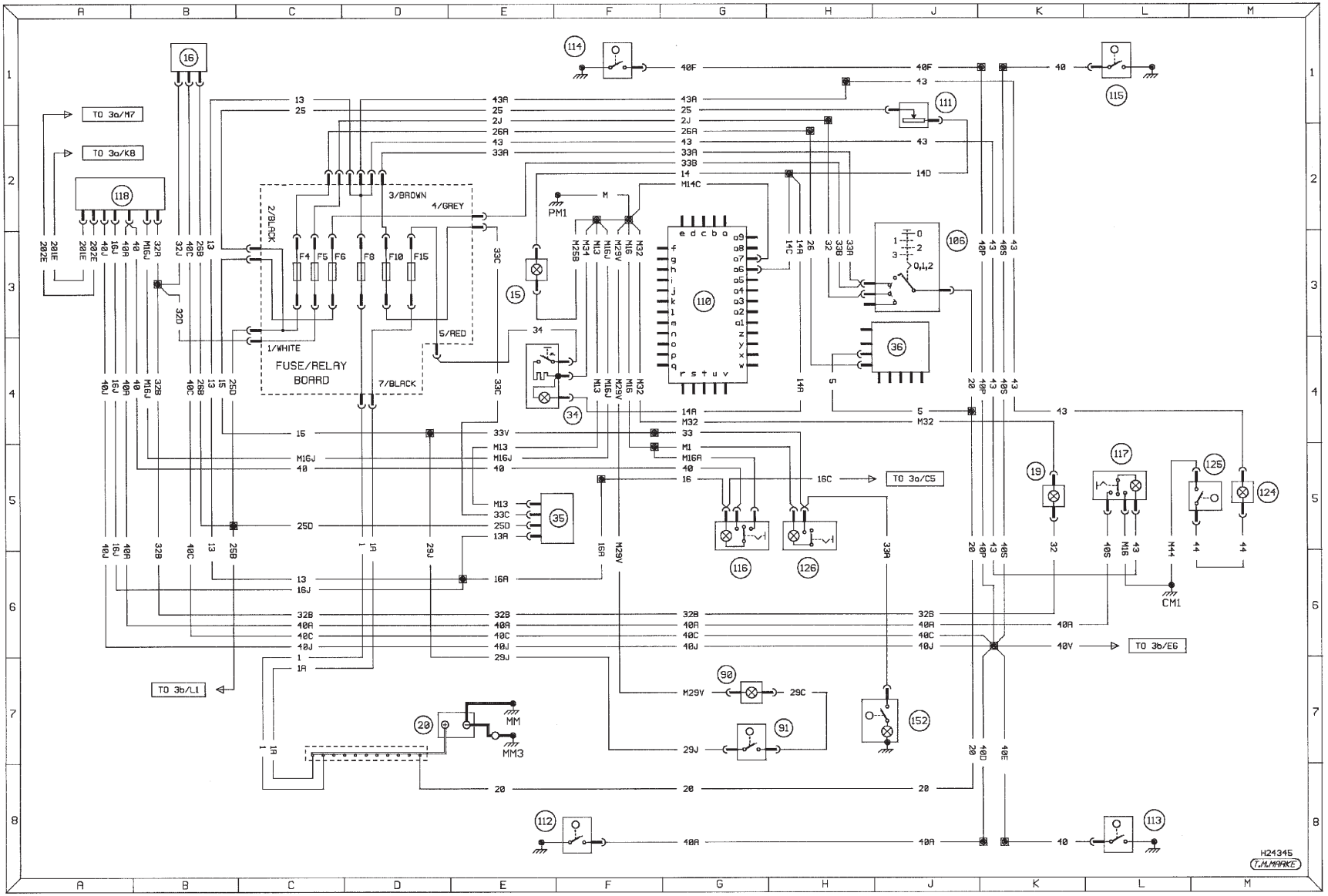


Diagram 2b : Typical interior lighting and associated circuits - early models

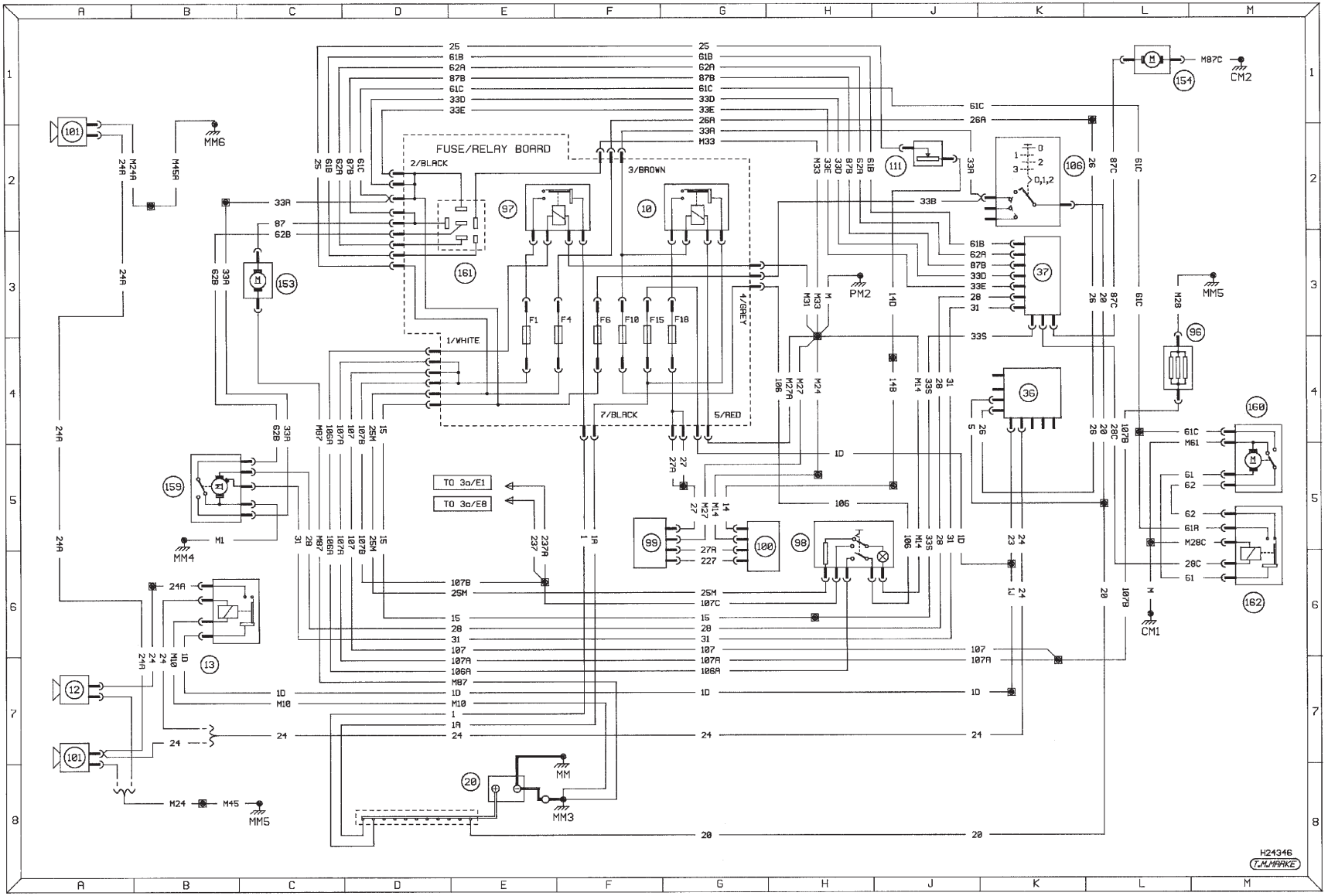


Diagram 3 : Typical ancillary circuits (wash/wipe, horn, heater blower and heated rear window) - early models

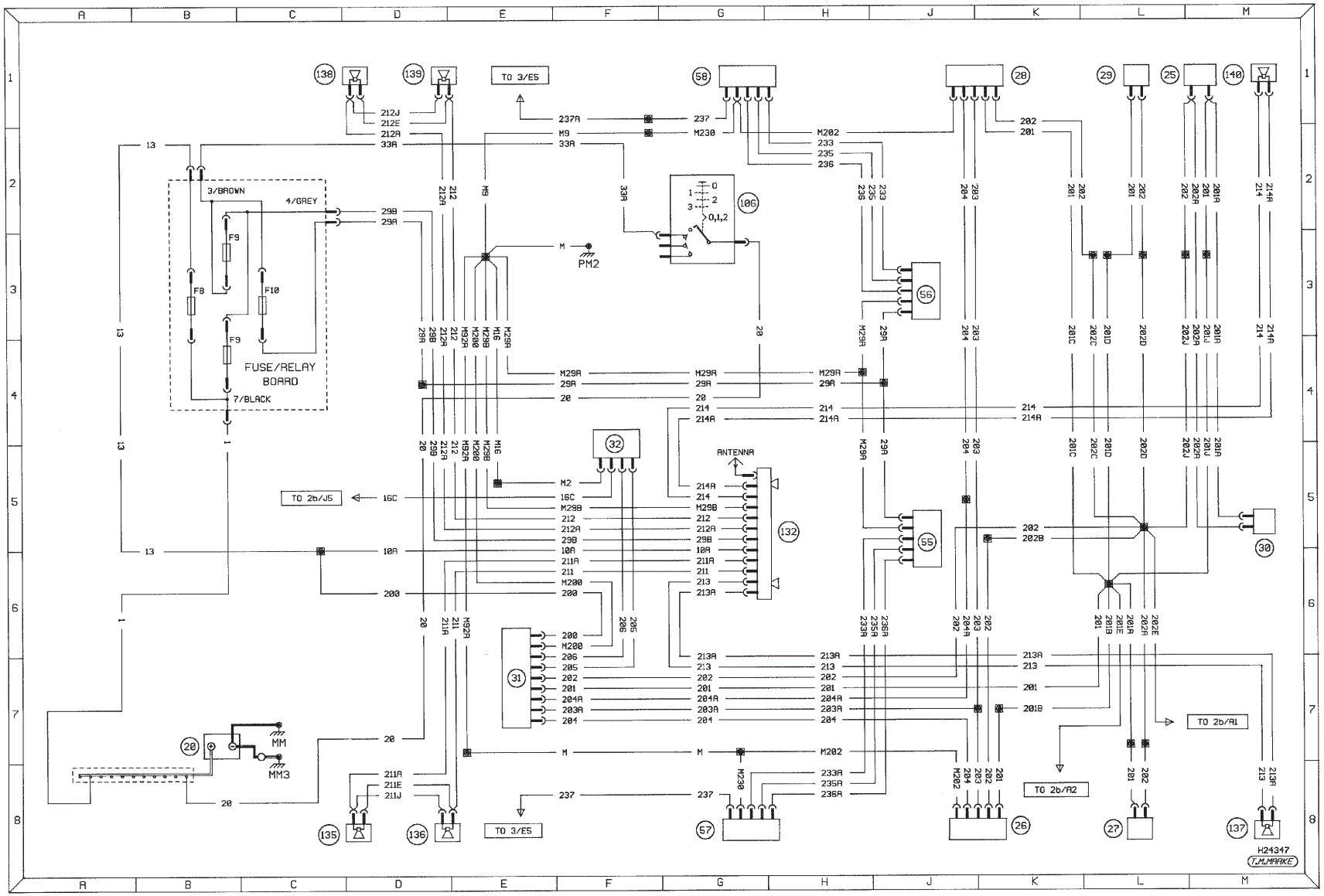


Diagram 3a : Typical ancillary circuits (central locking, electric door mirrors and radio/cassette) - early models

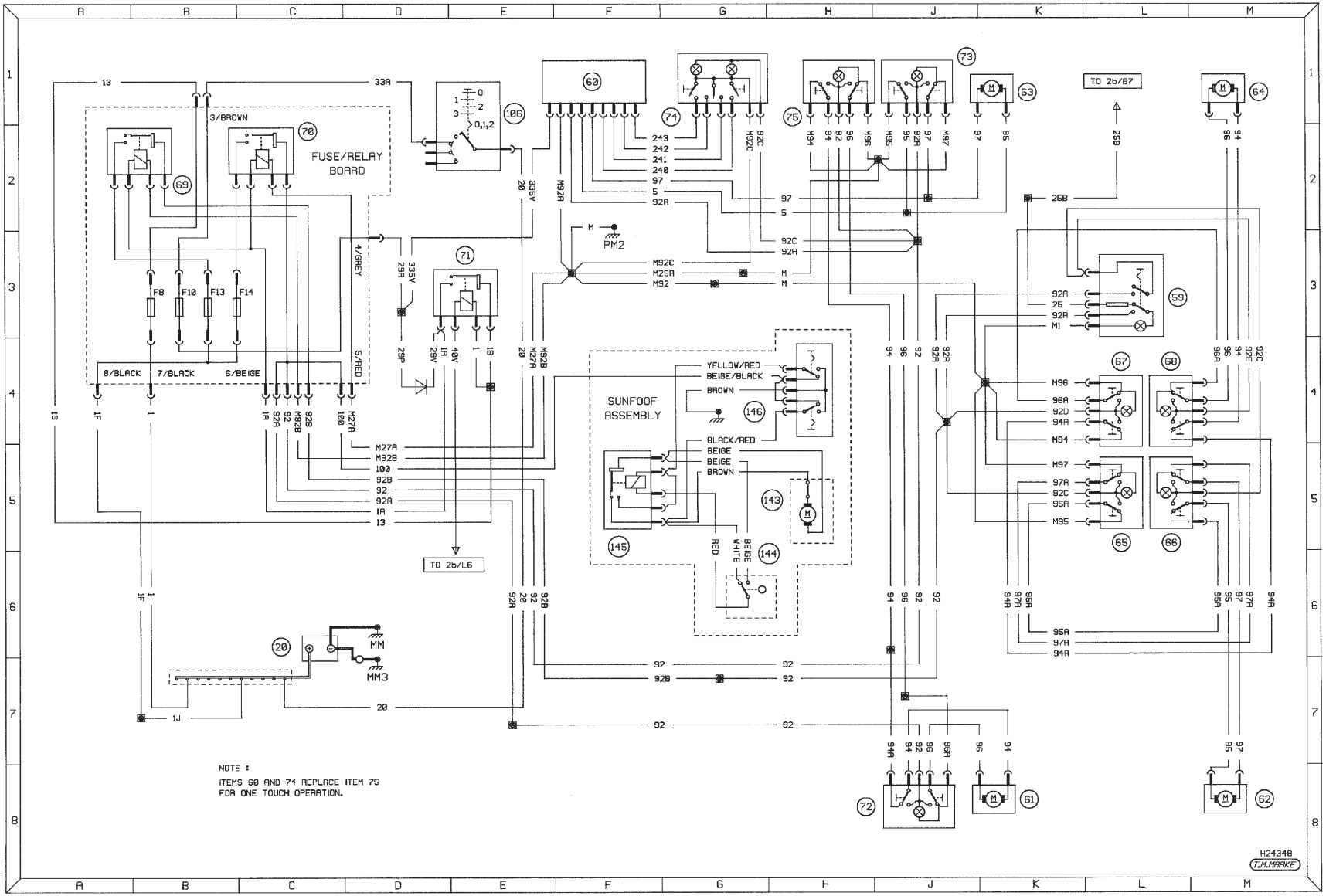


Diagram 3b : Typical ancillary circuits (electric windows and sunroof) - early models

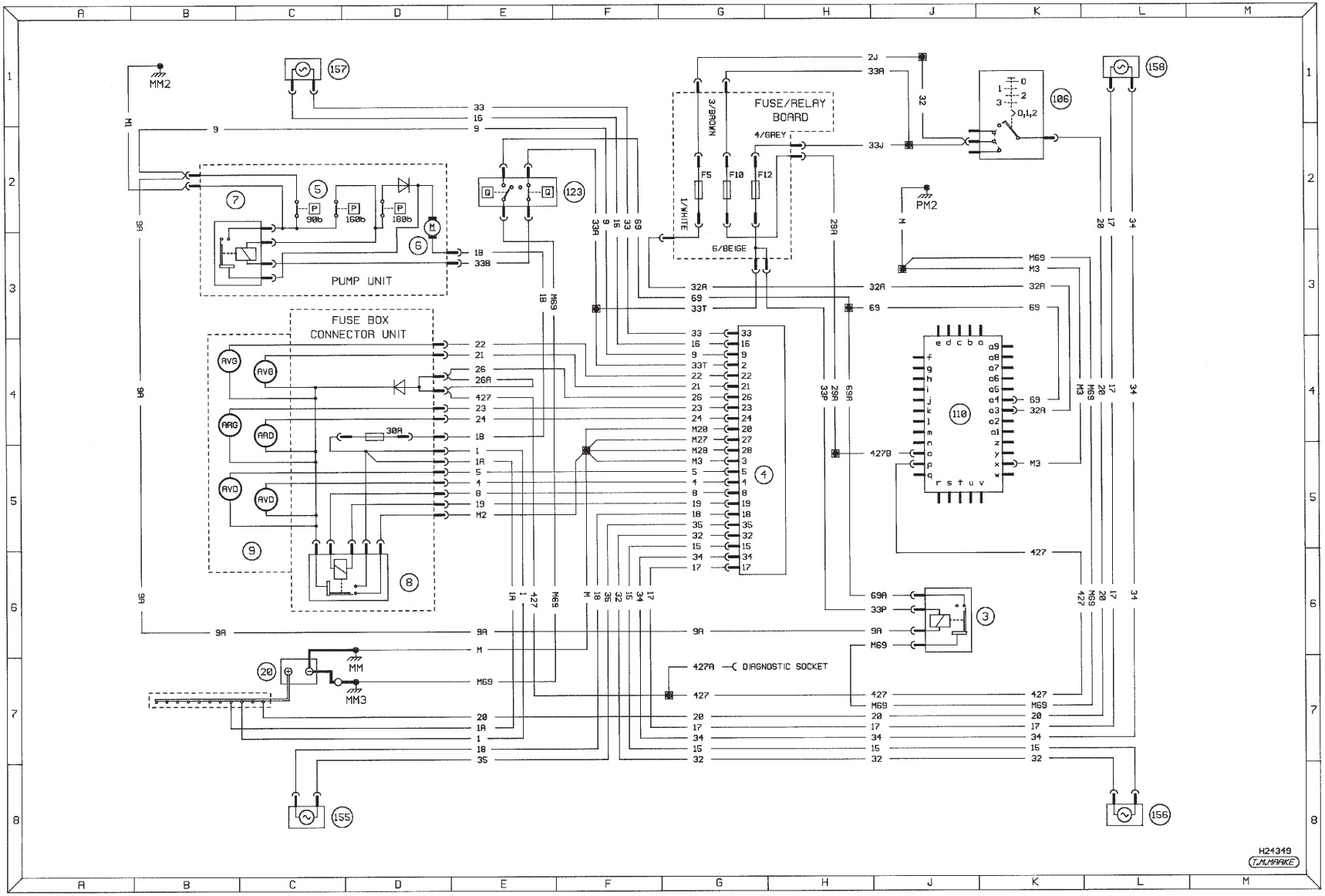


Diagram 4 : Standard anti-lock braking system - early models

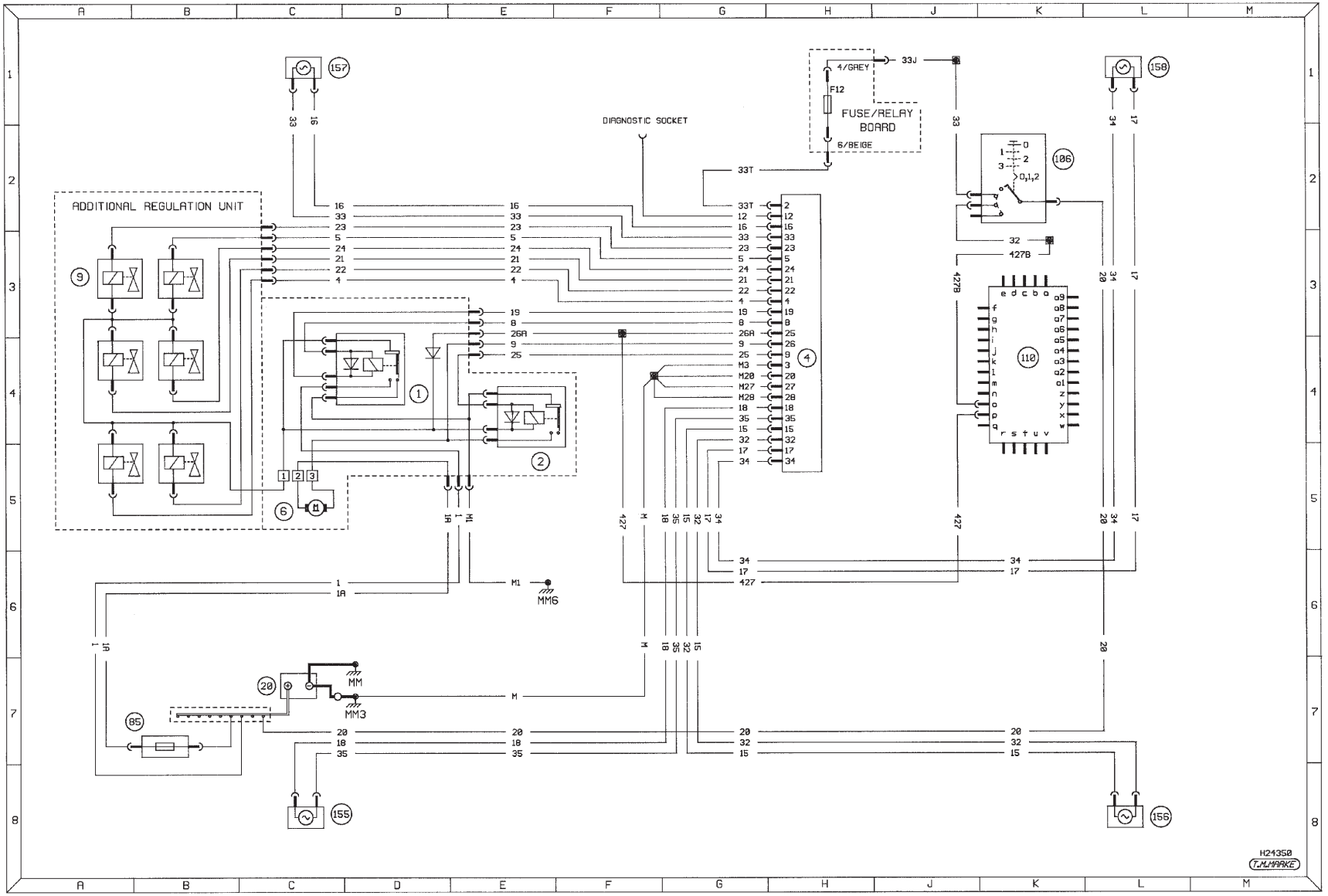
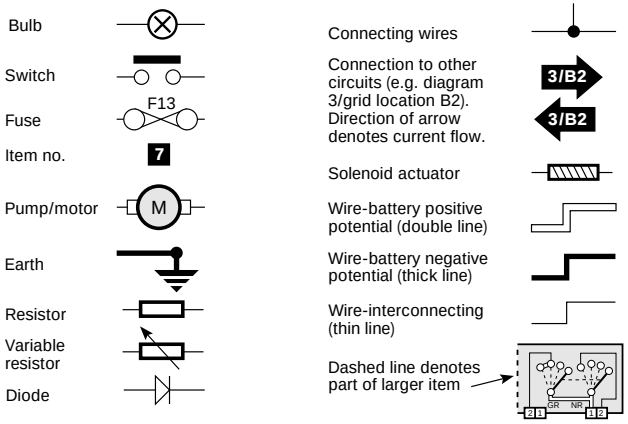


Diagram 4a : Optional anti-lock braking system - early models

Notes

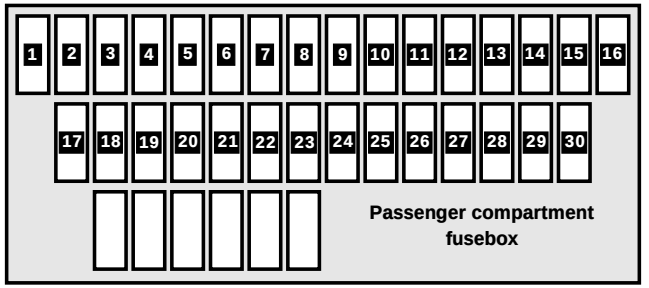
1. Wire identification is not by colour, but by letters or numbers appearing on the wire at each end.
2. Wires may interconnect between diagrams and are located by using a grid reference e.g. 2/A1 denotes a position on diagram 2 grid location A1.
3. Brackets show how circuits may be wired in more than one way.
4. Not all items are fitted to all models.

Key to symbols



Earth locations

E000	Near battery
E001	LH side of front panel (in engine compartment)
E002	RH side of front panel (in engine compartment)
E005	LH side of bulkhead (in engine compartment)
E006	RH side of parcel shelf
E020	LH kick panel (in passenger compartment)
E040	On gearbox
E050	Centre of rear panel (in luggage compartment)
E052	Inside tailgate (estate)
E053	LH rear corner of luggage compartment (estate)
E054	RH rear corner of luggage compartment (estate)
E081	LH side of bulkhead (in engine compartment)



Fuse	Rating	Circuit
F1	10A	Radio (accessories +ve)
F1A	10A	Radio (battery +ve)
F2	5A	Air conditioning, instrument panel, interior light time delay, selector illumination
F3		Spare
F4	10A	Lights on buzzer, RH tail light
F5	15A	Engine cooling fan/coolant temperature control unit relay, air conditioning
F6	10A	ABS control unit
F7	20A	Horn
F8		Shunt
F9	5A	LH tail light, front sidelights, sidelight warning light, number plate light
F10	30A	Rear electric windows
F11		Spare
F12	10A	Reversing light, cruise control, handbrake warning light, alarm siren and control unit
F13		Spare
F14	30A	Electric seats, alarm
F15	30A	Central locking, front/rear interior lights, luggage compartment light, electric aerial, interior light time delay
F16	20A	Cigar lighter (battery +ve)
F16A	20A	Cigar lighter (accessories +ve)
F17		Spare
F18	10A	Rear fog lights
F19	10A	Sidelights, instrument panel illumination, dimmer switch
F20	30A	Heated front seats
F21	30A	Air conditioning
F22	20A	Tailgate wiper
F23	15A	Heated rear window switch
F24	30A	Windscreen wipers, supply to control unit cruise control interface
F25	5A	Radio memory, clock, engine cooling fan relay at low rpm
F26	30A	Hazard warning light switch
F27	30A	Heated rear screen, heated mirrors
F28	15A	Instrument panel, digital clock, height adjustment control unit, stop lights, differential lock, ride height adjustment
F29	30A	Front electric windows, sunroof
F30	15A	Map reading light, courtesy mirror light, glovebox light, lights on buzzer, indicators, electric mirror adjustment, electric window one-touch operation, rear electric window relay

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Diagram 1 : Notes, fuses, key to symbols and earth locations - later models

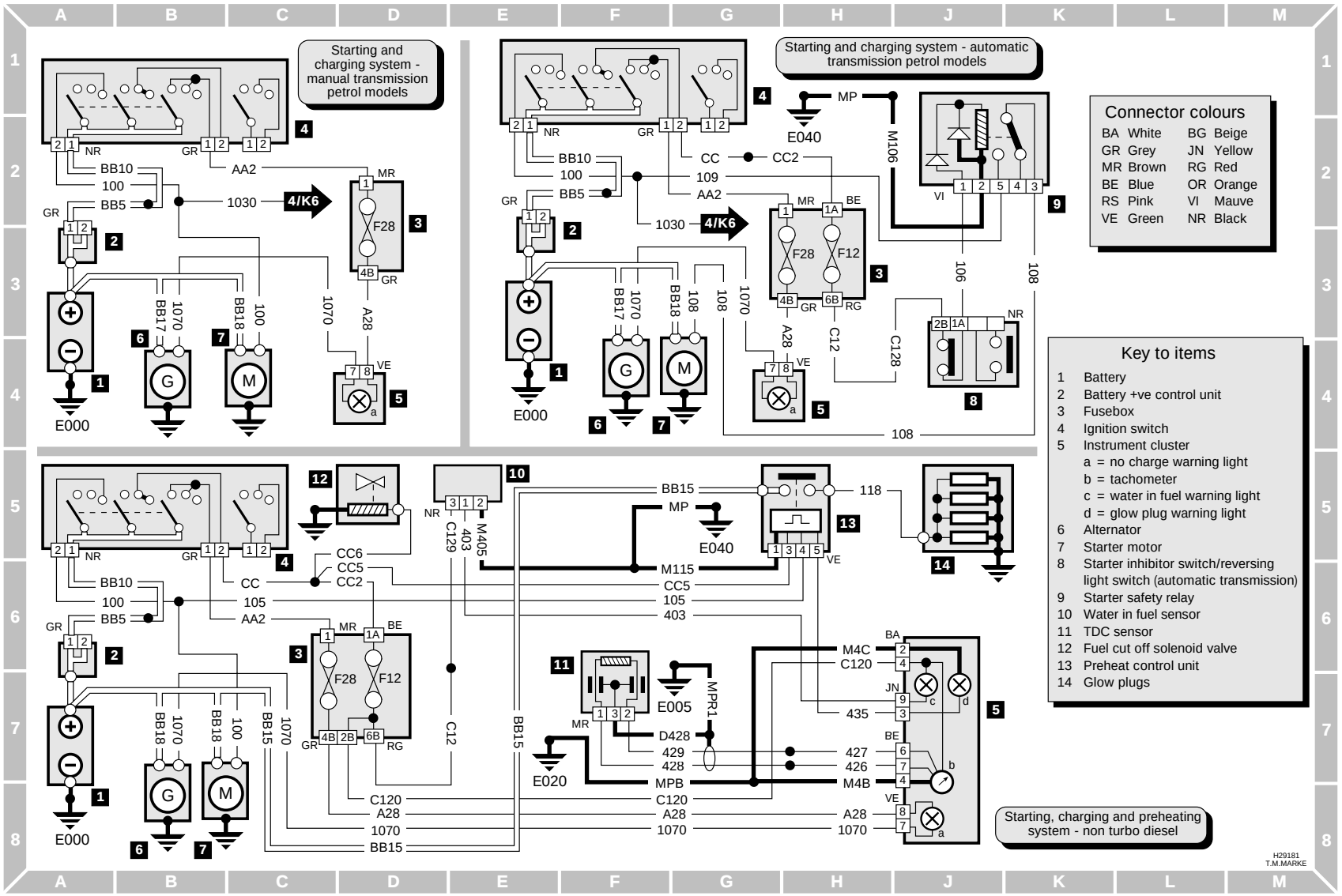

Diagram 2 : Starting, charging and preheating - later models

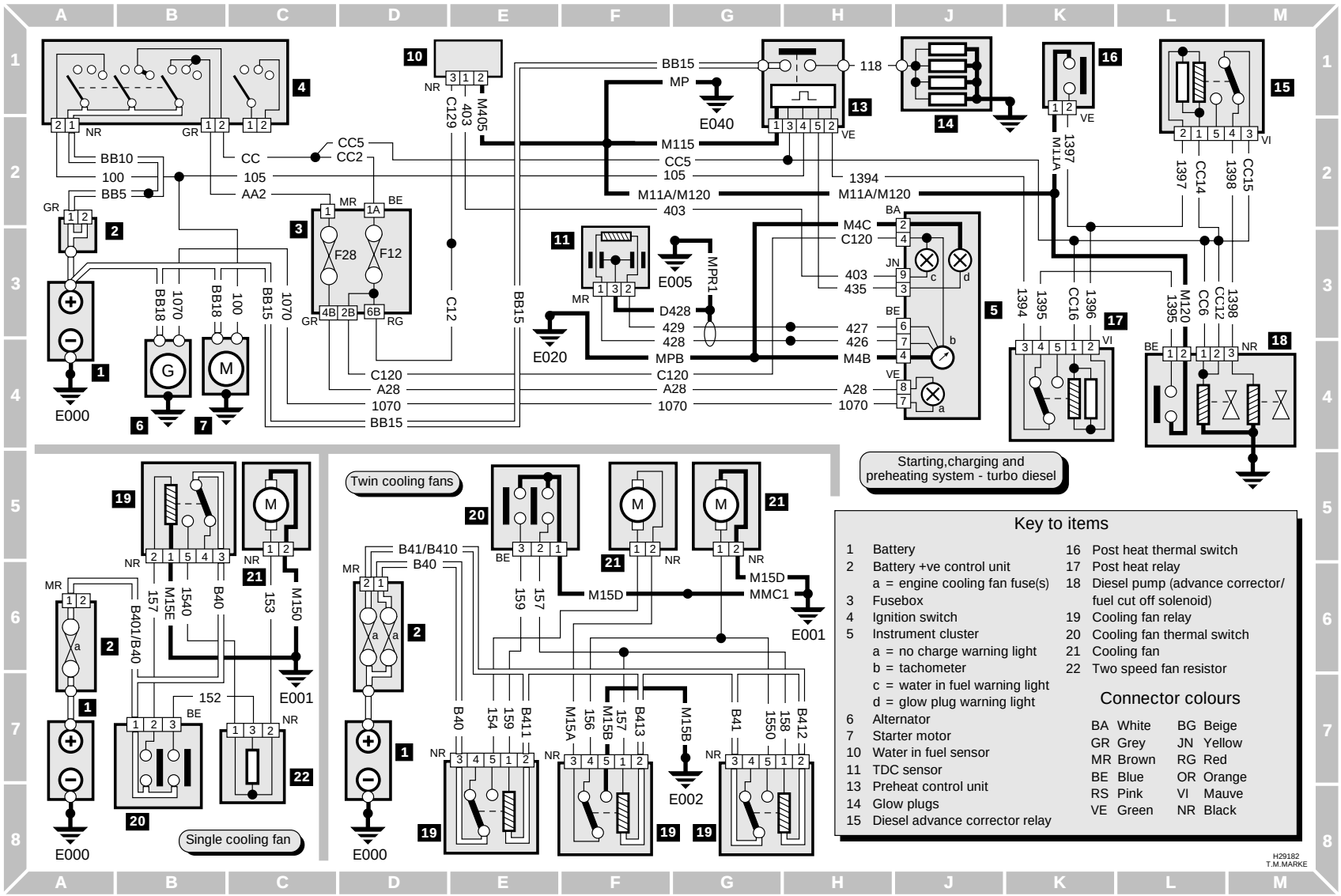

Diagram 3 : Preheating (turbo diesel) and engine cooling fans -later models

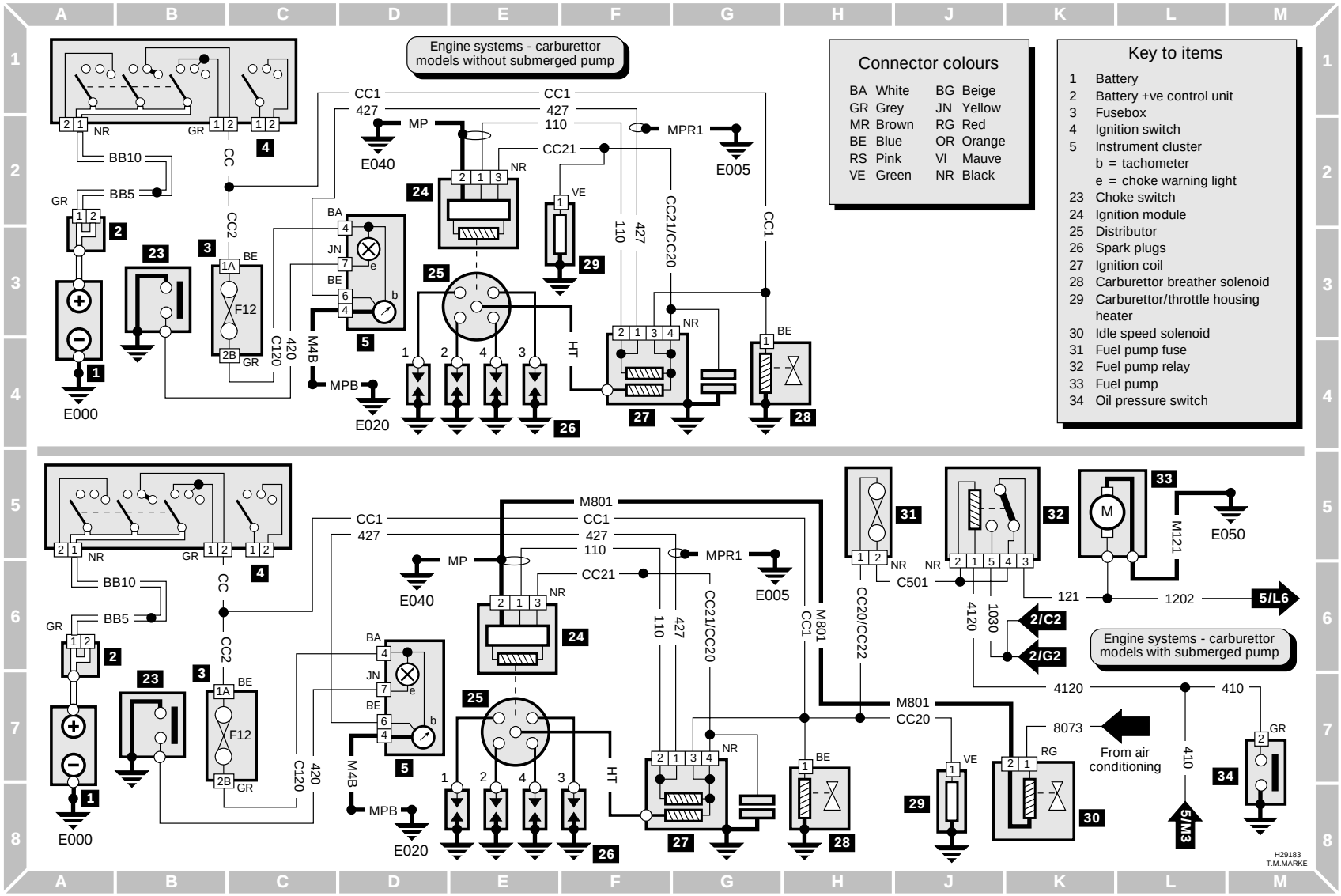

Diagram 4 : Engine systems (carburettor models) - later models

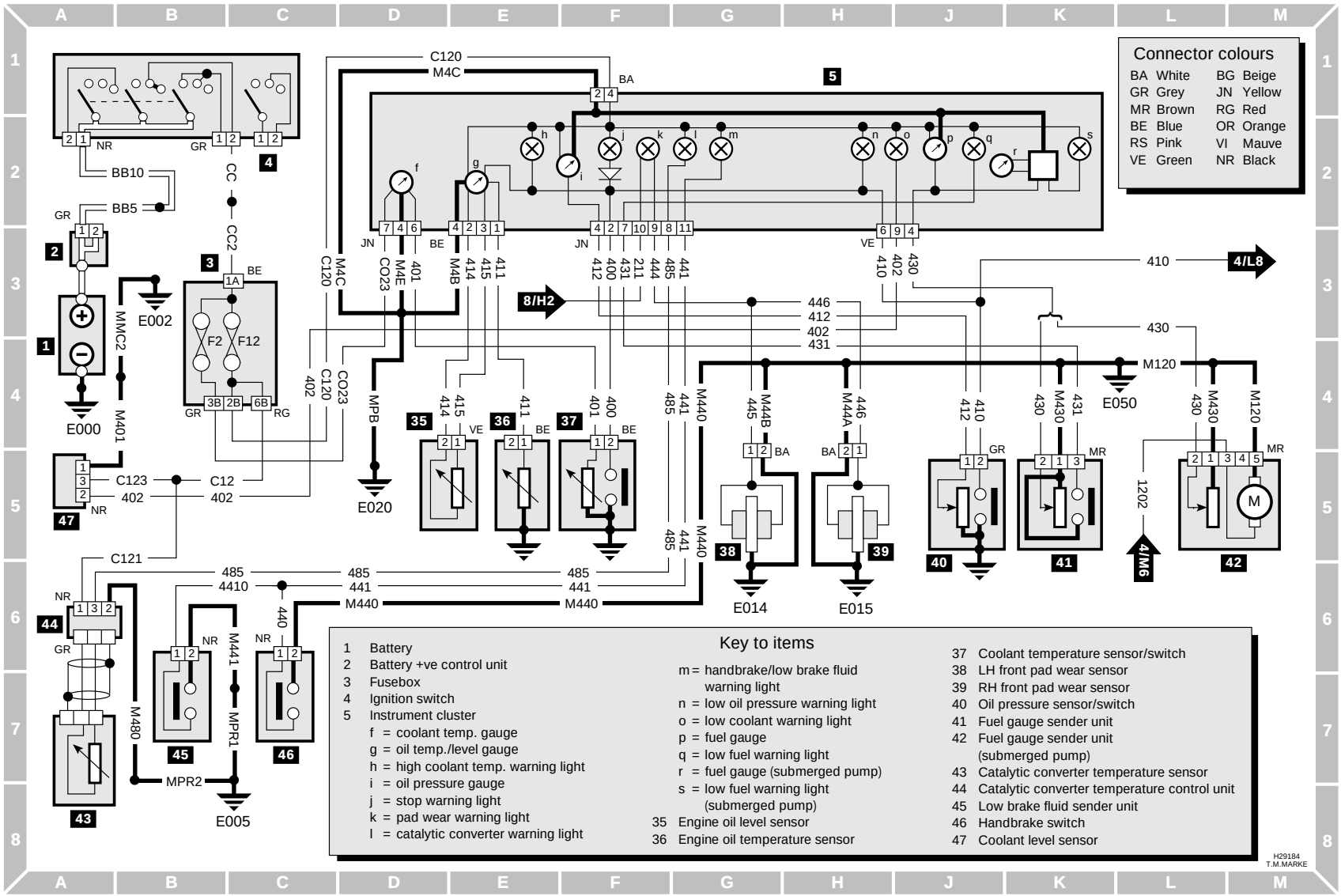

Diagram 5 : Warning lights and gauges - later models

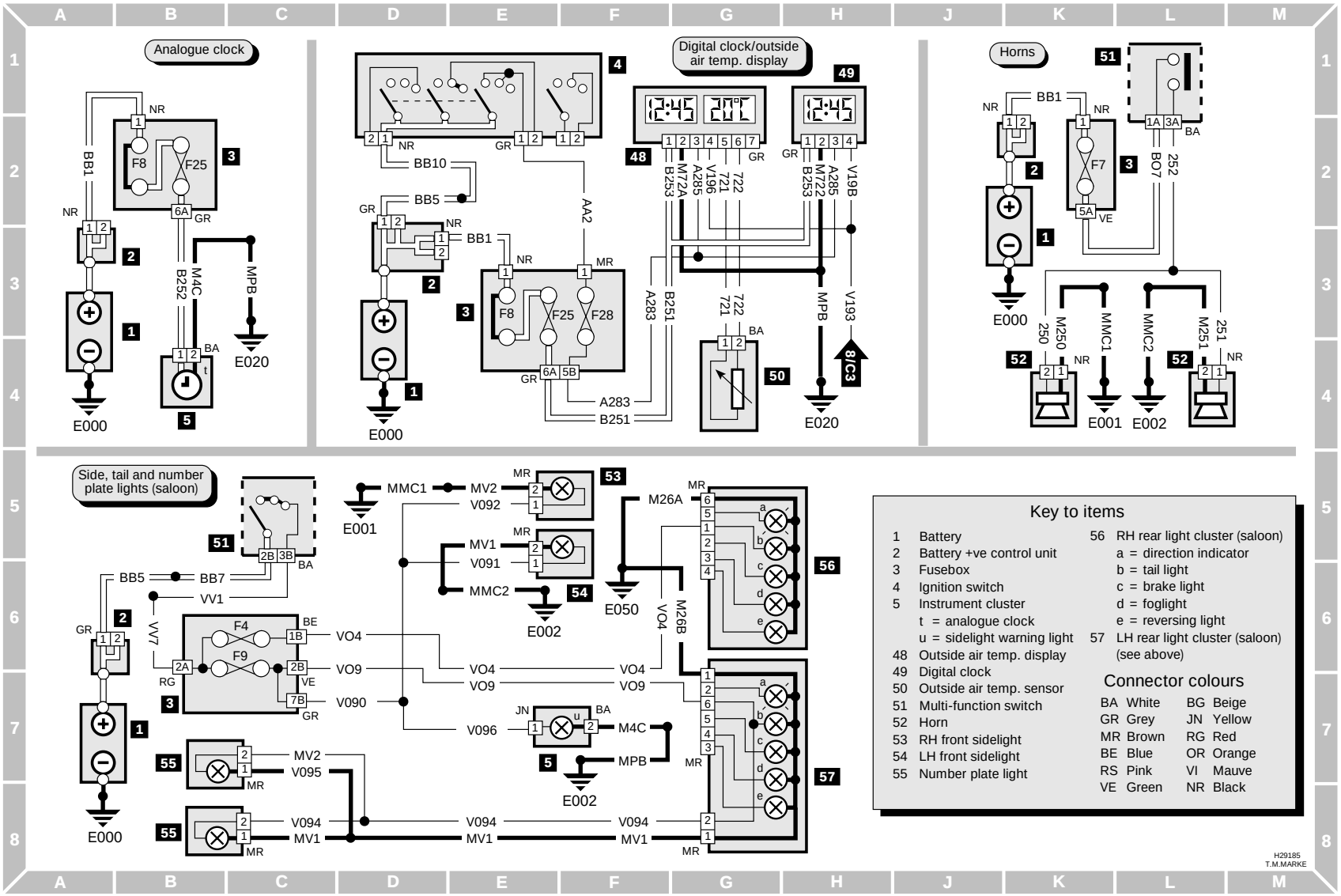

Diagram 6 : External temp. display, clock and exterior lighting - later models

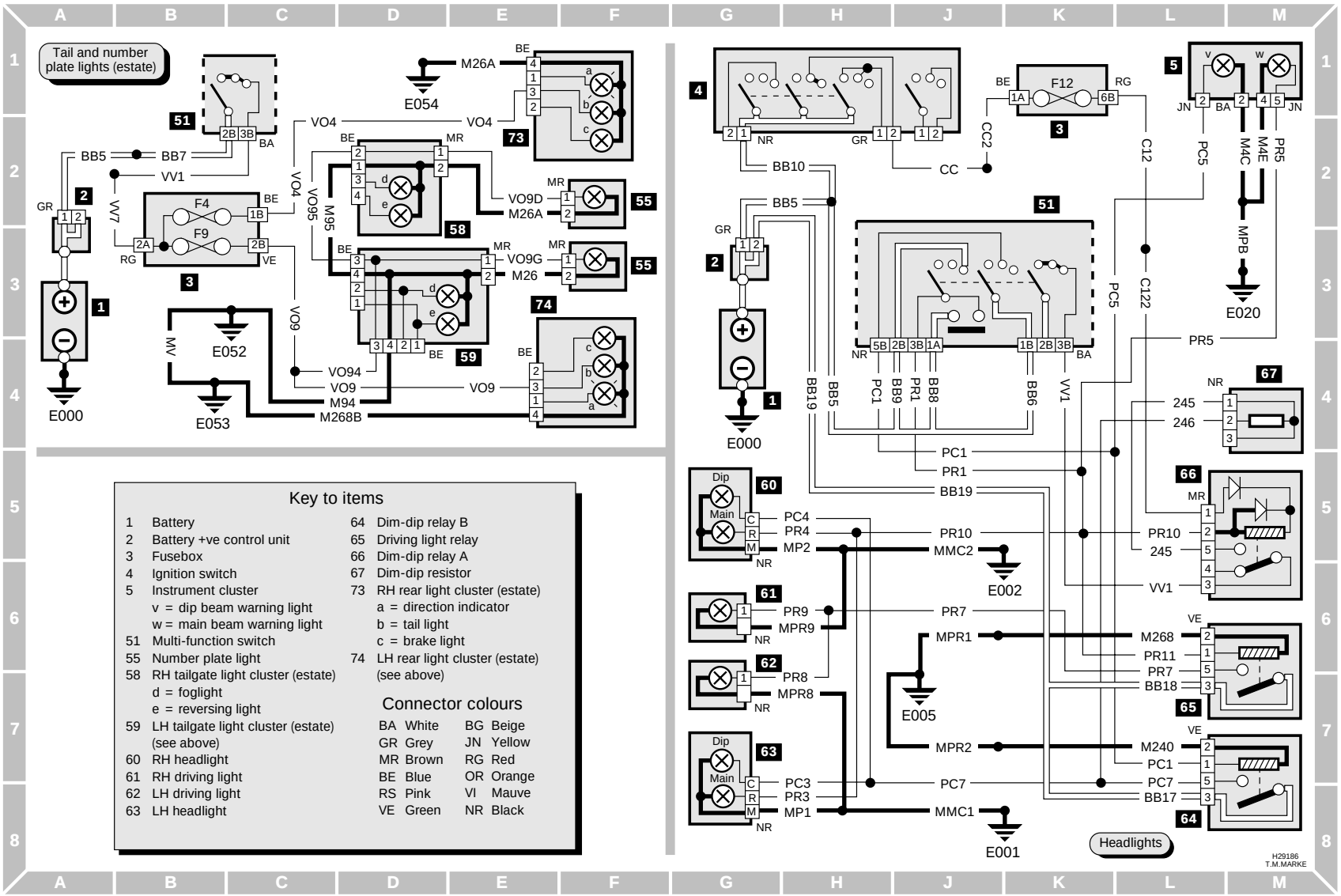

Diagram 7 : Exterior lighting continued - later models

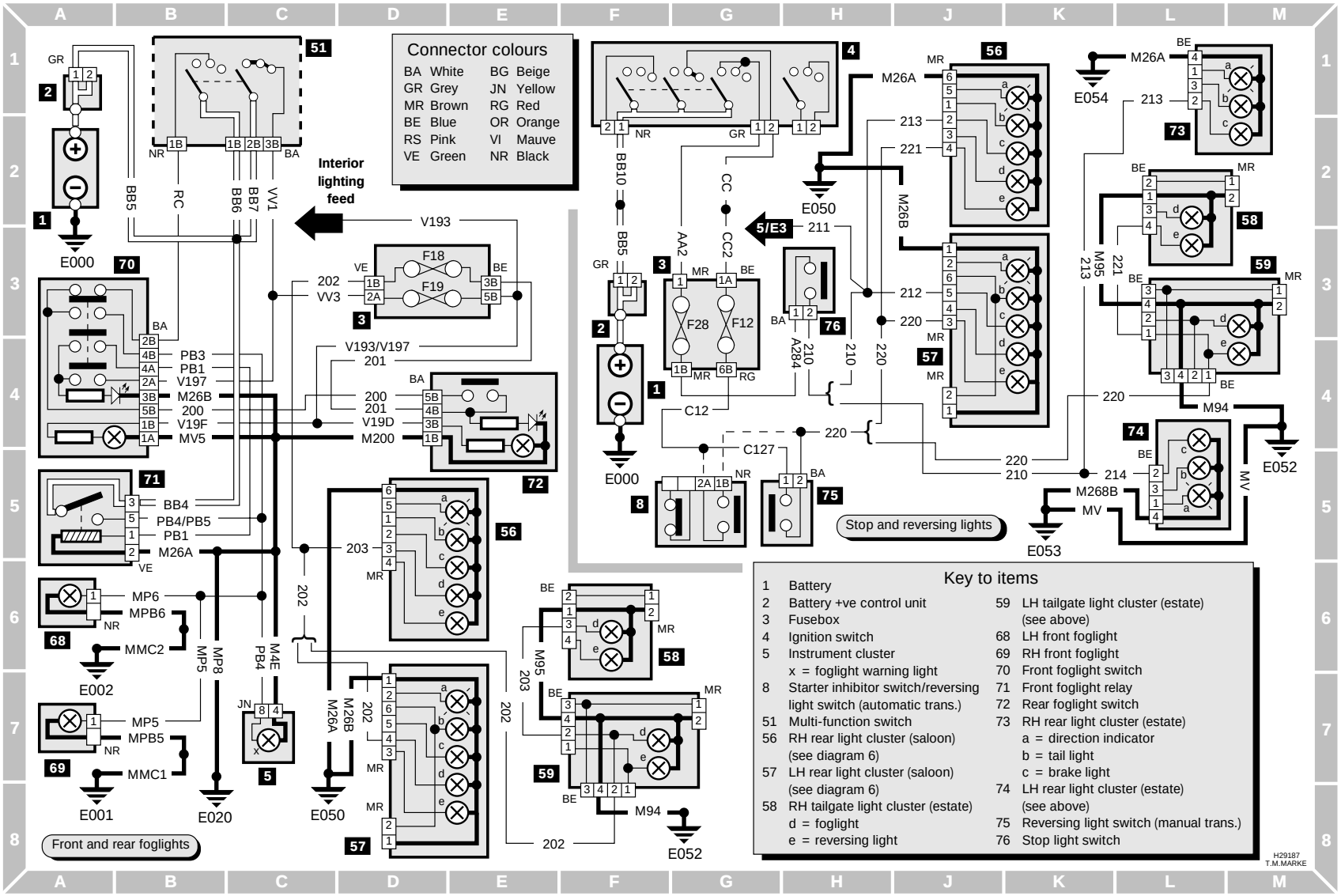

Diagram 8 : Exterior lighting continued - later models

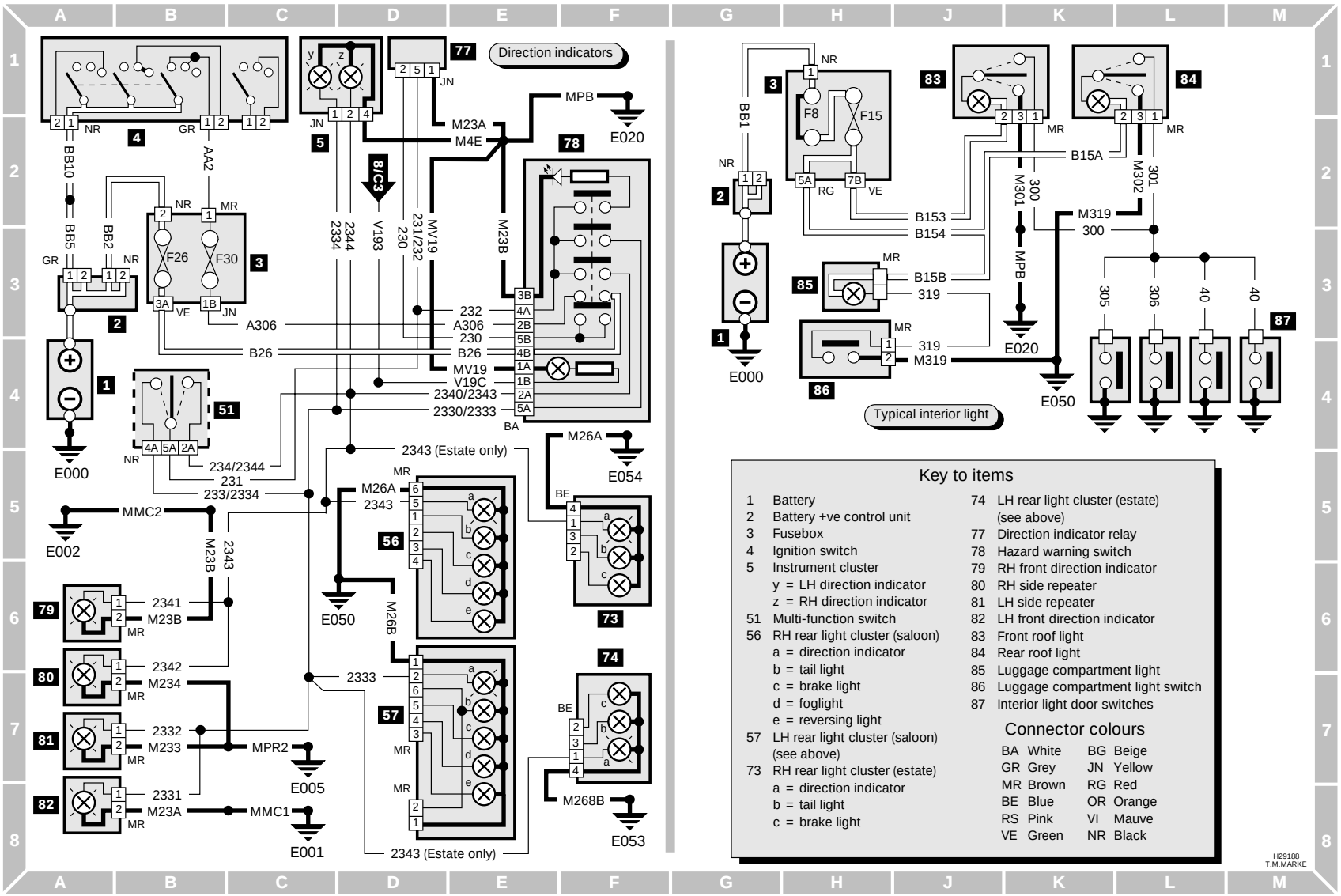

Diagram 9 : Exterior lighting continued and interior lighting - later models

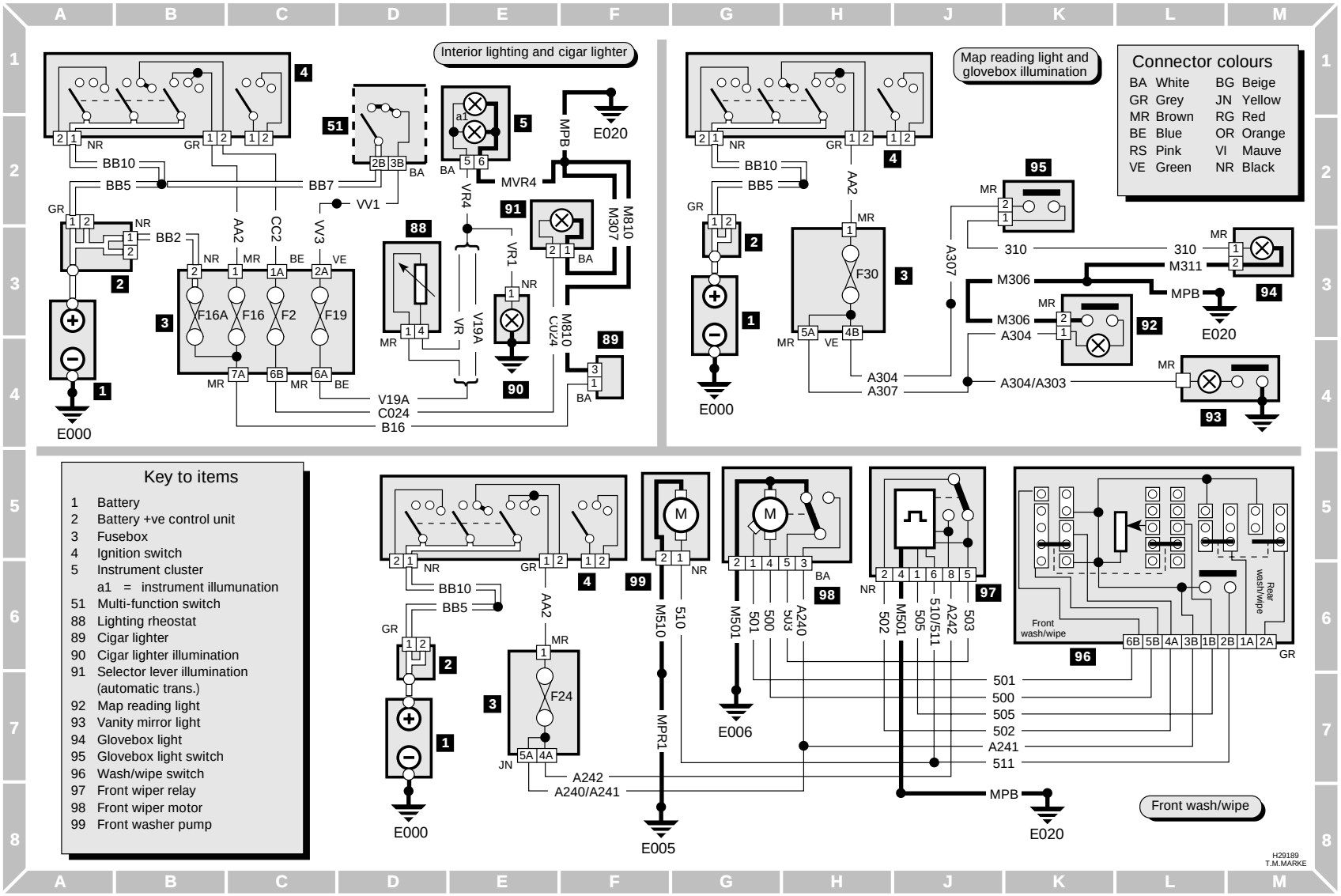

Diagram 10 : Interior lighting continued and front wash/wipe - later models

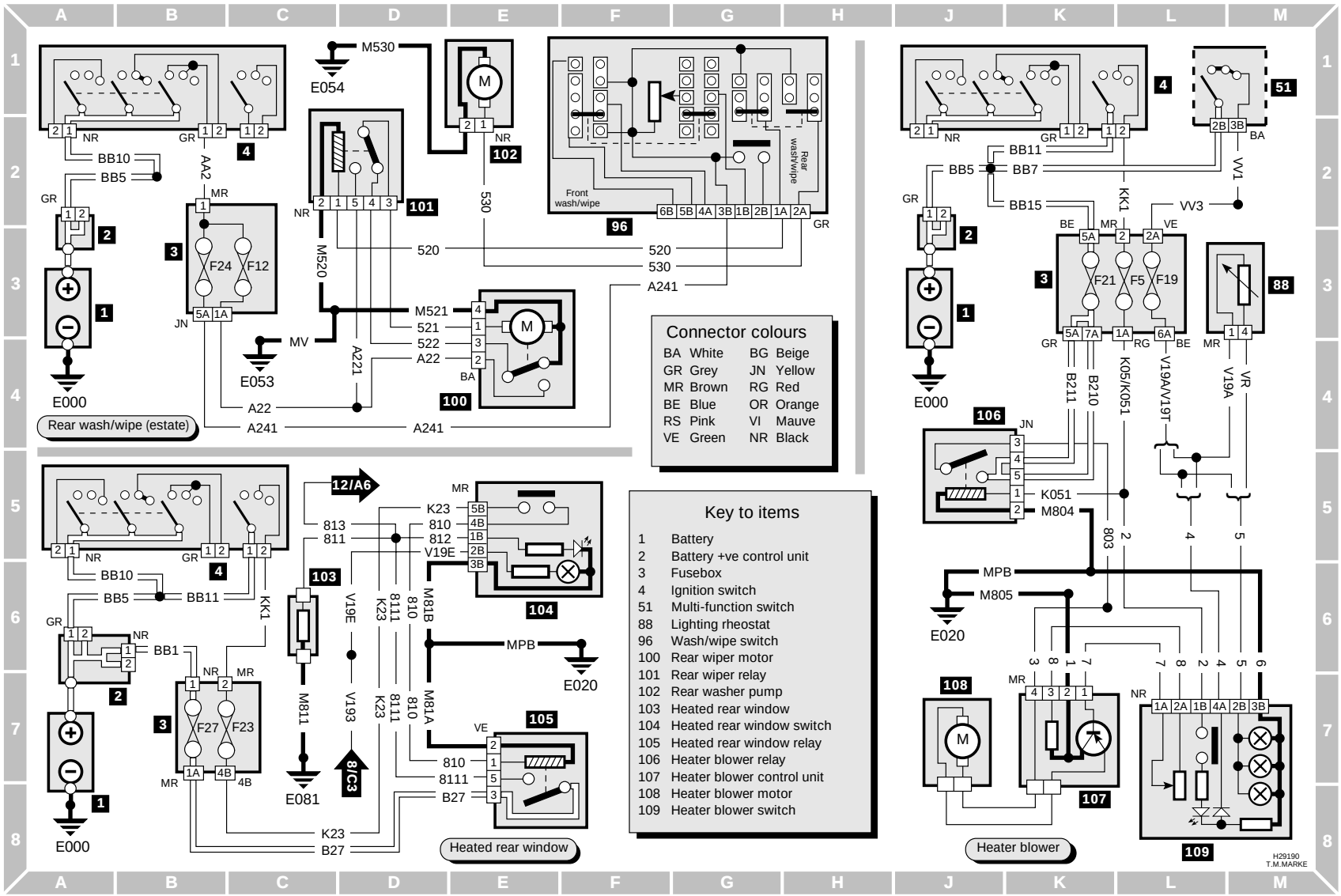

Diagram 11 : Rear wash/wipe, heater blower and heated rear window - later models

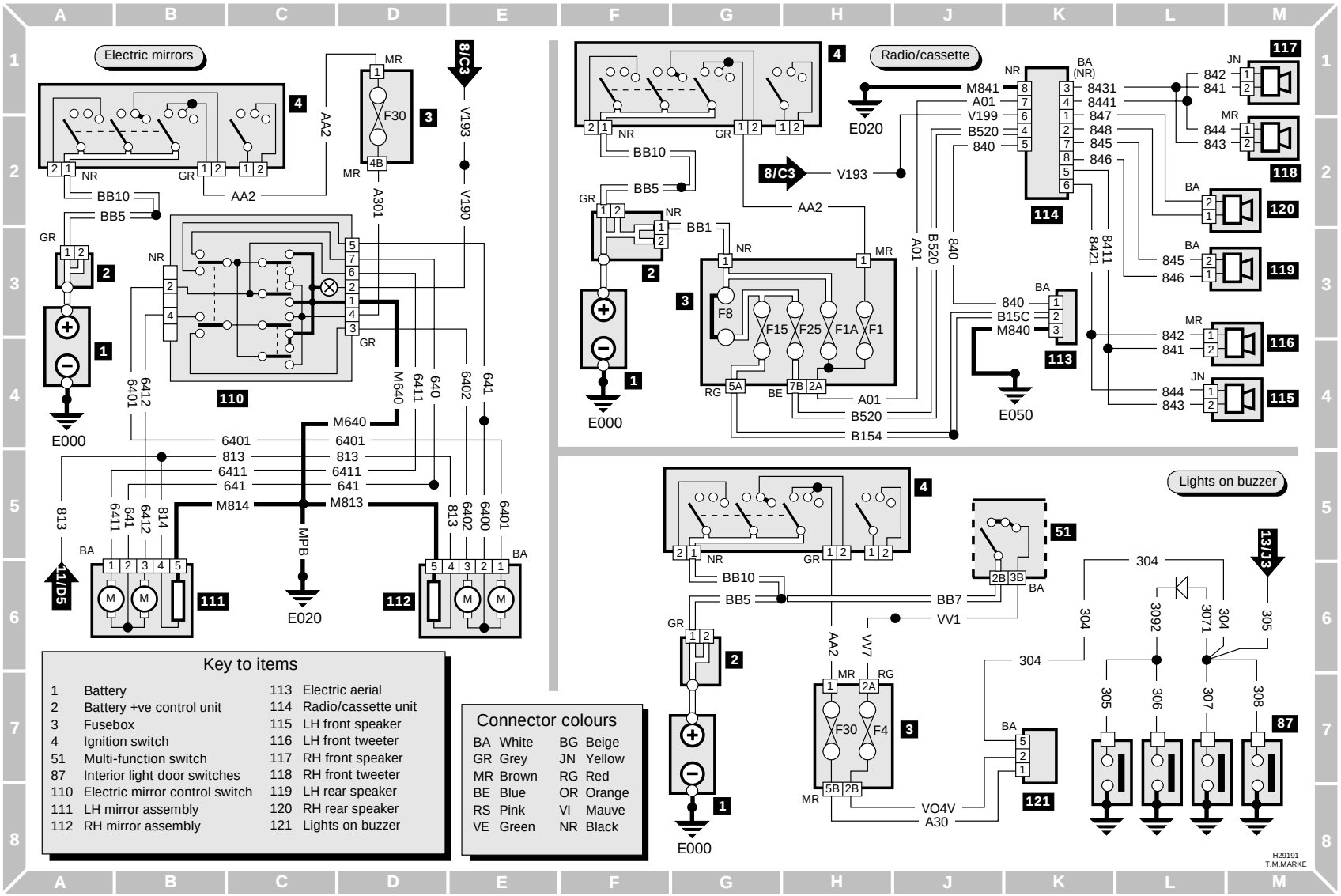

Diagram 12 : Electric mirrors, radio/cassette and lights on buzzer - later models

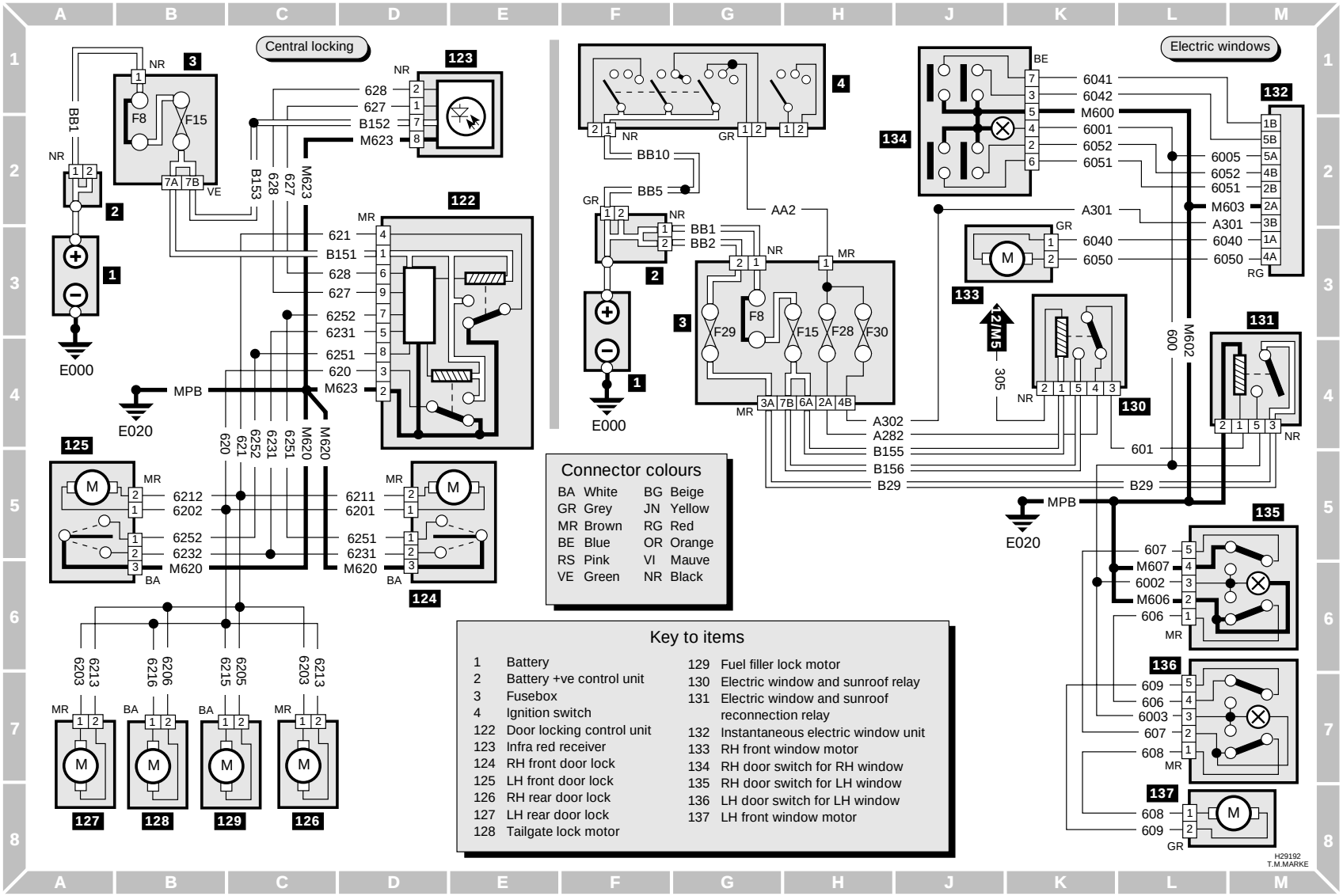

Diagram 13 : Central locking and electric windows - later models