






# Chapter 12 Body electrical system

## Contents

Airbag supplementary restraint system - general information . . . . .	26	Headlight beam alignment - checking and adjustment . . . . .	8
Aerial amplifier - removal and refitting . . . . .	22	Horn - removal and refitting . . . . .	14
Anti-theft system - general information . . . . .	24	Instrument panel - removal and refitting . . . . .	9
Anti-theft system components - removal and refitting . . . . .	25	Instrument panel components - removal and refitting . . . . .	10
Battery - removal and refitting . . . . .	See Chapter 5	Power amplifier - removal and refitting . . . . .	23
Battery check, maintenance and charging . . . . .	See Chapter 1	Radio/cassette player - removal and refitting . . . . .	19
Bulbs (exterior lights) - renewal . . . . .	5	Speakers - removal and refitting . . . . .	21
Bulbs (interior lights) - renewal . . . . .	6	Switches - removal and refitting . . . . .	4
Central control unit - description, removal and refitting . . . . .	11	Tailgate wiper motor and linkage - removal and refitting . . . . .	17
Clock - removal and refitting . . . . .	12	Trip computer - removal and refitting . . . . .	13
Compact disc player - removal and refitting . . . . .	20	Windscreen/tailgate and headlight washer system and wiper blade check . . . . .	See Chapter 1
Electrical fault finding - general information . . . . .	2	Windscreen/tailgate/headlight washer system components - removal and refitting . . . . .	18
Electrical system check . . . . .	See Chapter 1	Windscreen wiper motor and linkage - removal and refitting . . . . .	16
Exterior light units - removal and refitting . . . . .	7	Wiper arms - removal and refitting . . . . .	15
Fuses and relays - general information . . . . .	3		
General information and precautions . . . . .	1		

## Degrees of difficulty

<b>Easy</b> , suitable for novice with little experience		<b>Fairly easy</b> , suitable for beginner with some experience		<b>Fairly difficult</b> , suitable for competent DIY mechanic		<b>Difficult</b> , suitable for experienced DIY mechanic		<b>Very difficult</b> , suitable for expert DIY or professional	
--	---	---	---	---	---	--	---	---	---

## Specifications

Bulbs	Wattage
Headlight dipped beam . . . . .	60/55
Headlight main beam . . . . .	55
Sidelights . . . . .	5
Direction indicators . . . . .	21
Side repeater lights . . . . .	5
Front fog light . . . . .	55
Stop/tail lights . . . . .	21/5
Reversing lights . . . . .	21
Rear fog light . . . . .	21
Number plate light . . . . .	5
Engine compartment light . . . . .	5
Interior courtesy lights . . . . .	5 or 10
Map reading and courtesy light . . . . .	4
Footwell and glovebox lights . . . . .	3 or 5
Vanity mirror light . . . . .	3
Luggage compartment light . . . . .	10
Instrument panel illumination and warning lights . . . . .	1.2
Ignition warning light . . . . .	2
Switch illumination bulbs . . . . .	0.36
Heater control illumination bulbs . . . . .	0.36 and 1.2

## 1 General information and precautions

### General information

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

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

### Precautions



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

**Caution:** Prior to working on any component in the electrical system, the battery negative lead should first be disconnected, to prevent the possibility of electrical short-circuits and/or fires.

Disconnection of the battery will, however, erase the audio unit anti-theft security code and also erase the memories of many of the electrical system electronic control units. Refer to Chapter 5, Section 1 for additional information on the effects of battery disconnection.

## 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 engine management systems, anti-lock braking systems, etc), particularly where an electronic control module is used. Also refer to the precautions given in Chapter 5, Section 1.

### 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 at the end of this manual.

2 Before attempting to diagnose an electrical fault, first study the appropriate wiring diagram, to obtain a complete understanding of the

components included in the particular circuit concerned. The possible sources of a fault can be narrowed down by noting if 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. 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); an ohmmeter (to measure resistance and check for continuity); 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.

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 the negative lead of a voltmeter either to the battery negative terminal or to a known good earth.

10 Connect the other lead to a connector in the circuit being tested, preferably nearest to the battery or fuse. At this point, battery voltage should be present, unless the lead

from the battery or the fuse itself is faulty (bearing in mind that some circuits are live only when the ignition switch is moved to a particular position).

11 Switch on the circuit, then connect the tester lead to the connector nearest the circuit switch on the component side.

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 switch 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 test bulb lighting or a voltmeter reading, as applicable), this means that there is a short-circuit.

19 If no voltage is present during this test, but the fuse still blows with the load(s) reconnected, 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 unit and the vehicle body - and many 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 failure. 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.

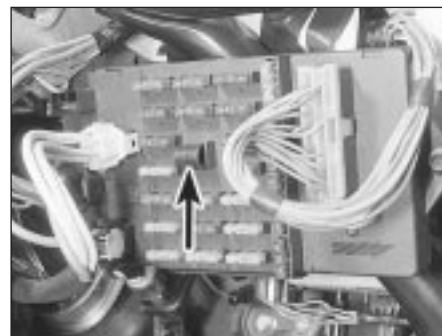
21 To check whether a component is properly earthed, disconnect the battery (refer to Chapter 5, Section 1) and connect one lead of an ohmmeter to a known good earth point. Connect the other lead to the wire or earth



3.2a Lift away the trim panel for access to the fusebox . . .



3.2b . . . noting the fuse identification on the rear of the panel



3.3a Use the fuse removal tool (arrowed) . . .

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 both the bodyshell and the wire terminal (or the component earth connection mating surface) back to bare metal. 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



**Note:** It is important to note that the ignition switch and the appropriate electrical circuit must always be switched off before any of the fuses (or relays) are removed and renewed. In the event of the fuse/relay unit having to be removed. When disconnecting the battery, reference should be made to Chapter 5, Section 1.

#### General

**1** Two or three fuseboxes are used on Rover 800 models. One is located inside the car

under the facia on the driver's side with an auxiliary fusebox alongside it, another is located on the left-hand side of the engine compartment and, on later models, a third is located in the luggage compartment on the left-hand side. The main vehicle system relays are located on a relay panel behind the interior fusebox, and also in the engine compartment fuse and relay box. Additional relays are located in various locations according to model and equipment fitted.

#### Interior fusebox

**2** To gain access to the fuses, release the turnbuckles at the base of the trim panel beneath the steering column, and lift away the panel. The fuse locations, current rating and circuits protected are shown on a label attached to the inside of the panel. Each fuse is also colour-coded, and has its rating stamped on it (see illustrations).

**3** To remove a fuse from its location, withdraw the removal tool from the fusebox, push the tool over the fuse to be removed and pull out the fuse (see illustrations). Refit the fuse by pressing it firmly into position. Spare fuses are located in a vertical row on the right-hand side of the fusebox, or in marked vacant spaces.

**4** Always renew the fuse with one of an identical rating. Never renew a fuse more than once without finding the source of the trouble.

**5** To gain access to the relays behind the fusebox, undo the two fusebox retaining bolts, one at each end, and ease the unit away from its location. For greater access, mark the various wiring multiplugs to avoid

confusion when refitting, then disconnect them and remove the fusebox completely.

**6** The relays can be removed by simply pulling them from their respective locations. If a system controlled by a relay becomes inoperative, and the relay is suspect, operate the system and if the relay is functioning it should be possible to hear it click as it is energised. If this is the case, the fault lies with the components of the system. If the relay is not being energised, then the relay is either not receiving a main supply voltage, a switching voltage, or the relay itself is faulty.

#### Engine compartment fuse and relay box

**7** The engine compartment fuse and relay box contains additional fuses, some vehicle system relays, and the main wiring loom fusible links.

**8** To gain access, press the upper edge of the retaining catch on the fuse and relay box cover, lift the cover at the front and disengage the rear tags (see illustration). A symbol identifying the function of each fuse is marked on the cover.

**9** The fuses and relays can be renewed in the same way as for the interior fusebox described previously. The fuse removal tool, together with the spare fuses, is located at the front of the box. On certain models, additional fuses and relays are located on the outside edge of the box, with the fuses under a protective cover. Lift off the cover to renew each individual fuse (see illustration).



3.3b . . . to withdraw the fuses from their locations



3.8 Removing the engine compartment fuse and relay box cover



3.9 Additional fuse located under a cover on the outside of the fuse and relay box



3.10 Lift off the protective cover for access to the fusible links



3.11 Luggage compartment fusebox (arrowed) located behind the left-hand side interior trim panel



4.3a Undo the three lower screws . . .

10 To gain access to the wiring loom fusible links, lift off the protective cover on the right-hand side of the fuse and relay box (see illustration). A blown fusible link indicates a serious wiring or system fault, which must be diagnosed before renewing the link.

### Luggage compartment fusebox

11 On later models an additional fusebox is located in the luggage compartment either behind the left-hand rear light cluster or behind the left-hand side interior trim panel (see illustration).

12 To gain access to the rear fusebox, either remove the protective cover at the rear of the light cluster, or release the trim panel on the side of the luggage compartment. Fuse

renewal is the same as described previously for the other fuseboxes.

## 4 Switches - removal and refitting



**Note:** Disconnect the battery negative (earth) lead before removing any switch and reconnect the lead after refitting the switch (refer to Chapter 5, Section 1).

### Ignition switch/steering column lock

1 The ignition switch is an integral part of the steering column lock, and reference should be made to Chapter 10.

### Steering column switches

#### Pre-1992 model year

2 Remove the steering wheel as described in Chapter 10.

3 Undo the three lower screws and the single upper screw, and remove the upper and lower steering column shrouds (see illustrations).

4 Release the fibre optic lead from the bulbholder by carefully prising up the plastic tag (see illustration).

5 Depress the retainers at the top and bottom of the switch, then pull the switch out of the steering column boss (see illustrations).

6 Disconnect the wiring multiplug and remove the switch from the car.

7 The switch on the other side of the column is removed in the same way.

8 Refitting is a reversal of removal.

#### 1992 model year onwards

9 Remove the steering wheel as described in Chapter 10.

10 Undo the three lower screws, and remove the upper and lower steering column shrouds (see illustration).

11 Release the turnbuckles and lower the fusebox cover at the base of the steering column.

12 On models without cruise control or airbag supplementary restraint system, remove the slip ring from the centre of the switch assembly.

13 On models with cruise control, and/or



4.3b . . . and single upper screw . . .



4.3c . . . then lift off the steering column shrouds



4.4 Release the fibre optic lead from the bulbholder

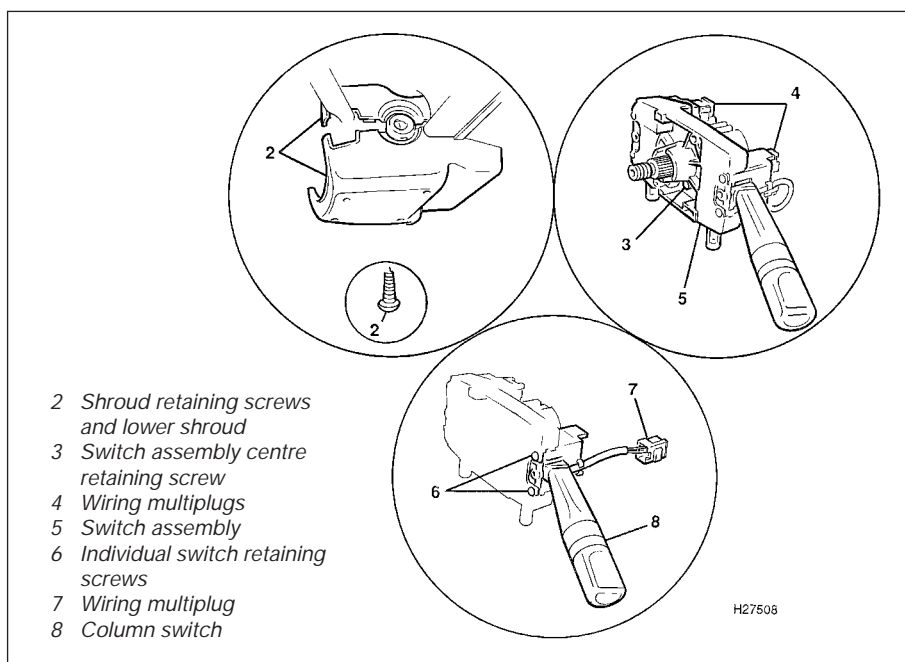


4.5a Depress the top and bottom switch retainers . . .



4.5b . . . and remove the switch





4.10 Steering column switch details on later models

airbag supplementary restraint system, remove the rotary coupler as described in Chapter 10.

14 Slacken the retaining screw in the front centre of the switch assembly.

15 Disconnect the four wiring multiplugs at the rear, then withdraw the switch assembly from the steering column.

16 Undo the two screws securing the individual switch to the main assembly.

17 Disconnect the wiring multiplug at the rear and withdraw the switch from the main assembly. Use a thin flat blade to release the switch from its location as it is withdrawn.

18 The switch on the other side of the column is removed in the same way.

19 Refitting is a reversal of removal. Refer to Chapter 10 when refitting the rotary coupler and steering wheel.

### Centre console switches

20 Carefully prise up the coin holder or switch panel as applicable from the side of the centre console.



4.27 Courtesy light door pillar switch location

21 If individual switches are fitted, disconnect the wiring multiplug, depress the lugs on the side of the switch and withdraw the switch from the coin holder panel (see illustration).

22 If a multi-switch pack is fitted, disconnect the wiring multiplug and remove the switch panel complete.

23 Refitting is a reversal of removal.

### Door switches

24 Remove the front or rear door inner trim panel as described in Chapter 11.



4.21 Centre console switch removal

25 Release the switch pack assemblies from the rear of the trim panel and withdraw them. Note that the individual switches in the switch packs cannot be removed separately. If any are faulty, or if renewal of a switch is necessary, the complete switch pack must be obtained.

26 Refitting is a reversal of removal.

### Courtesy light door pillar switches

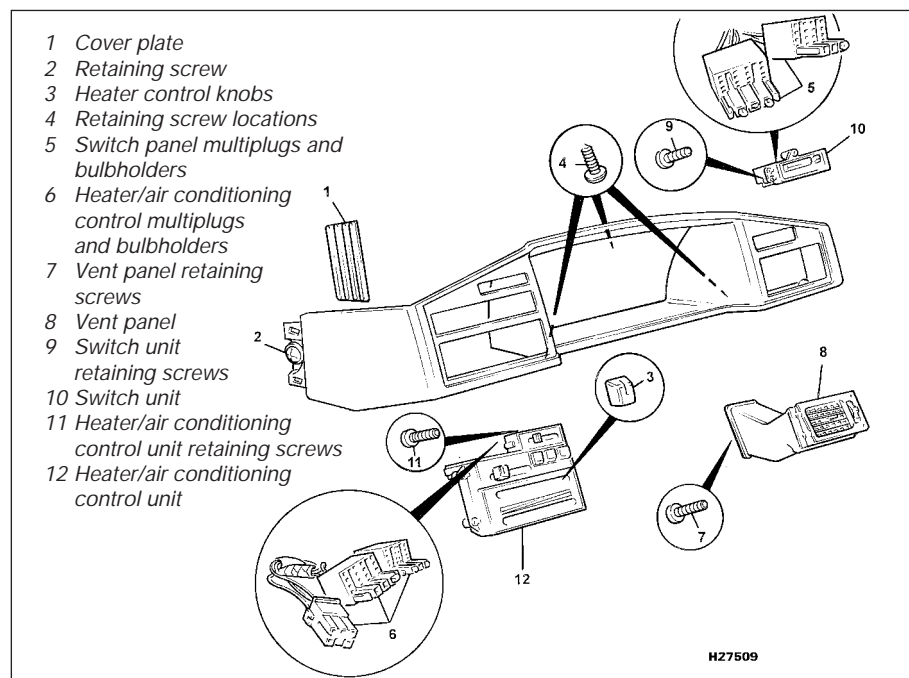
27 Undo the retaining screw and withdraw the switch from the door pillar (see illustration).

28 Disconnect the wiring and remove the switch. Tie the wiring to the door striker plate while the switch is removed to prevent the wires dropping into the pillar.

29 Refitting is a reversal of removal.

### Instrument cowl switch units

30 Carefully prise out the rear of the cover plate at the extreme left-hand side of the cowl and push the plate forward to release the front clips (see illustration). Undo the screw behind the plate, now exposed.



4.30 Exploded view of the instrument cowl switch units



5.1 Disconnect the headlight dipped beam bulb multiplug



5.2 Release the wire clip and withdraw the bulb from the headlight unit



5.6 Withdraw the sidelight bulbholder from the headlight unit

- 31 Pull off the knobs on the heater controls.
- 32 Undo the three screws securing the cowl to the fascia above the instrument panel.
- 33 Undo the two screws below the vent panel on the driver's side and the two screws below the heater/air conditioning control panel.
- 34 Release the clips at the top, at each end, ease the cowl away from the fascia slightly, and disconnect the switch panel and heater control/air conditioning wiring multiplugs.
- 35 Remove the cowl from the car.
- 36 Undo the four screws and remove the driver's vent panel.
- 37 Undo the three screws and remove the switch unit.
- 38 Undo the four screws and remove the heater and air conditioning control unit.
- 39 Refitting is a reversal of removal.

### Lower fascia switches

- 40 Refer to Section 12 for removal of the switches on the clock console.

## 5 Bulbs (exterior lights) - renewal



**Note:** Ensure that all exterior lights are switched off before disconnecting the wiring connectors to any exterior light bulbs.

### Headlight dipped beam bulb

**Note:** On 1992 model year onwards vehicles,

remove the headlight lens unit first, as described in Section 7, for access to the bulb.

- 1 From within the engine compartment, disconnect the wiring multiplug at the rear of the headlight bulb, then pull off the rubber cover (see illustration).

- 2 Release the wire retaining clip and withdraw the bulb from its location in the headlight lens unit (see illustration). Take care not to touch the bulb glass with your fingers; if touched, clean the bulb with methylated spirit.

- 3 Fit the bulb, ensuring that the lugs in the bulb engage with the slots in the lens unit.

- 4 Refit the retaining clip, rubber cover and wiring plug. Ensure that the tab marked TOP on the cover is uppermost.

### Sidelight bulb

**Note:** On 1992 model year onwards vehicles, remove the headlight lens unit first, as described in Section 7, for access to the bulb.

- 5 From within the engine compartment, disconnect the wiring multiplug at the rear of the headlight bulb, then pull off the rubber cover.

- 6 Withdraw the sidelight bulbholder from the headlight lens unit and remove the bulb from the holder (see illustration).

- 7 Fit a new bulb to the holder and fit the holder to the lens unit.

- 8 Refit the rubber cover and headlight wiring plug. Ensure that the tab marked TOP on the cover is uppermost.

### Headlight main beam bulb

**Note:** On 1992 model year onwards vehicles, remove the headlight lens unit first, as described in Section 7, for access to the bulb.

- 9 Withdraw the plastic cover, release the wire clip and withdraw the bulb from the headlight lens unit (see illustration). Take care not to touch the bulb glass with your fingers; if touched, clean the bulb with methylated spirit.

- 10 Disconnect the wiring connectors and remove the bulb.

- 11 Connect the wiring to the new bulb and place the bulb in the light unit, ensuring that the flange cut-out locates in the housing ridge.

- 12 Refit the wire clip and the plastic cover.

### Front direction indicator bulb

- 13 From within the engine compartment, unhook the retaining spring and withdraw the lens unit and seal from the wing (see illustration).

- 14 Press and turn the bulbholder anti-clockwise to remove it from the lens unit; remove the bulb from the holder in the same way (see illustration).

- 15 Refit the bulb and holder, locate the lens unit in position and secure with the retaining spring.

### Direction indicator side repeater bulb

- 16 Press the light unit to the right, free the left-hand retainer and withdraw the unit from the front wing.



5.9 Withdraw the main beam bulb from the headlight unit



5.13 Unhook the direction indicator lens retaining spring



5.14 Withdraw the lens assembly and remove the bulbholder



5.25 Press the retainer on the access panel and remove the panel



5.26a Lift the top retainer on the bulb panel, press the two bottom retainers and withdraw the panel



5.26b On the alternative bulb panel, press the top and bottom retainers together and remove the panel

17 Turn the bulbholder anti-clockwise to remove it from the light unit, then remove the push-fit bulb from the holder.

18 Fit a new bulb, refit the bulbholder, and push the light unit into position in the wing.

### Front fog light bulb

19 Undo the two upper screws and remove the light unit surround.

20 Disconnect the wiring multiplug and remove the light unit from the front bumper assembly

21 Release the rubber cover at the base of the light unit and disconnect the wiring at the connector.

22 Release the retaining spring clip and withdraw the bulb and holder.

23 Fit a new bulb then refit the components.

### Rear light cluster bulbs

#### Rear wing light cluster

24 From within the luggage compartment, release the trim covering (where fitted) for access to the light cluster.

25 On early models, press the retainer on the access panel and remove the panel (see illustration).

26 Lift the top retainer on the bulb panel, press the two bottom retainers and withdraw the panel (see illustration). On the later type bulb panel, press the top and bottom retainers together and remove the panel (see illustration).

27 Remove the bulbs as required by

depressing and turning anti-clockwise (see illustration).

28 Fit the new bulb(s), push the bulb panel into position and refit the access panel and/or trim panel.

#### Boot lid/tailgate light cluster

29 On Saloon and Coupe models, unscrew the plastic fasteners to release the boot lid trim lining. On Fastback models, remove the plastic cover.

30 Squeeze the plastic lever and withdraw the bulbholder.

31 Remove the bulbs as required by depressing and turning anti-clockwise.

32 Fit the new bulb(s), push the bulbholder into position and refit the lining or cover.

### Number plate light bulb

#### Saloon models - pre-1992 model year

33 Open the boot lid, turn the bulbholder anti-clockwise and withdraw the bulb and holder (see illustration).

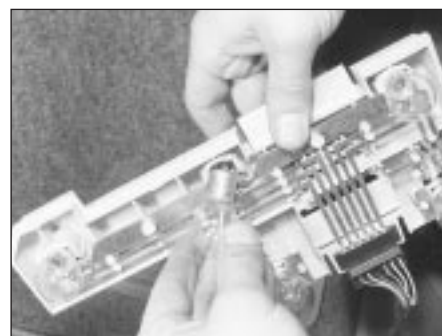
34 Remove the push-fit bulb from the holder.

35 Fit the new bulb and refit the bulbholder.

#### Fastback models - pre-1992 model year

36 Open the tailgate, release the plastic retaining screws and remove the inner trim.

37 Turn the bulbholder anti-clockwise and withdraw the bulb and holder (see illustration).



5.27 Rear light cluster bulb renewal

38 Remove the push-fit bulb from the holder.  
39 Fit the new bulb and refit the bulbholder and trim.

#### All models - 1992 model year onwards

40 Undo the two screws and withdraw the number plate light unit from its location (see illustration).

41 Squeeze the two plastic tags together and release the bulbholder from the light unit (see illustration).

42 Remove the festoon bulb from the holder.

43 Fit the new bulb and refit the bulbholder and light unit.

### Engine compartment light bulb

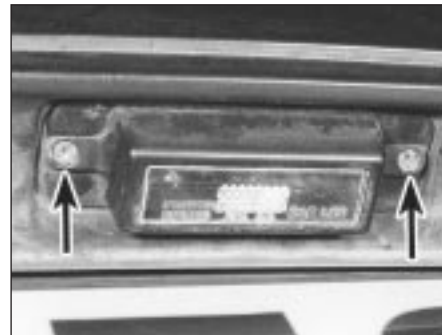
44 Open the bonnet, undo the two retaining screws and remove the light lens.



5.33 Number plate light bulbholder on early Saloon



5.37 Number plate light bulbholder on early Fastback models



5.40 On later models, undo the number plate light unit retaining screws (arrowed) . . .





5.41 . . . squeeze the two plastic tags together and release the bulbholder from the light unit

45 Push and turn the bulb anti-clockwise to remove it from the holder.

46 Fit the new bulb, lens and retaining screws.

## 6 Bulbs (interior lights) - renewal



### Interior courtesy light

1 Carefully prise the lens from the light body using a thin blade (see illustration).

2 Remove the festoon-type bulb from the contacts.

3 Fit the new bulb and push the lens into place.

### Map reading and courtesy light

4 To renew the courtesy light bulb, carefully prise the light lens from its housing using a small screwdriver.

5 Remove the festoon-type bulb from the contacts.

6 Fit the new bulb and push the lens into place.

7 To renew the map reading light bulb, remove the courtesy light lens as just described, and undo the two light unit retaining screws.

8 Withdraw the light unit and remove the push-fit or bayonet-fit bulb.

9 Fit the new bulb and refit the light unit.

### Vanity mirror light

10 Move the light switch to the down position.

11 Carefully prise off the mirror surround from the light unit taking care that the mirror does not drop out as the surround is removed.

12 Lift the mirror out and remove the festoon bulb(s) from the holder(s).

13 Fit the new bulb(s), locate the mirror in position and refit the surround. Ensure that the switch mechanism is aligned as the surround is fitted.

### Footwell and glovebox lights

14 From within the glovebox or under the footwell as applicable, carefully prise the light from its location using a small screwdriver.

15 Release the festoon-type bulb from its contacts.

16 Fit the new bulb and push the light back into position.



6.1 Prise off the courtesy light lens

### Luggage compartment light

17 Using a small screwdriver, carefully prise the right-hand end of the light from its location under the rear parcel shelf on Saloon models, or on the rear side panels on Fastback models.

18 Withdraw the light unit, turn the bulb anti-clockwise and remove it from the light unit.

19 Fit the new bulb and push the light back into position.

### Instrument panel illumination and warning lights

20 Refer to Section 10.

### Switch illumination

#### Facia switches and heater/air conditioner control switches

21 Remove the instrument cowl as described in Section 9.

22 With the wiring multiplugs disconnected, remove the relevant bulb, which is a push-fit in the multiplug holder.

23 Fit a new bulb, then refit the instrument cowl as described in Section 9.

#### Hazard warning switch

24 Lift off the switch lens on the steering column upper shroud, and remove the push-fit bulb.

25 Fit a new bulb, and press the lens into place.

#### Steering column switches (early models)

26 Undo the three lower screws and the single upper screw, and remove the upper and lower steering column shrouds.

27 Withdraw the bulbholder from the rear of



7.3 Separate the headlight main beam wiring at the connector



6.27 Withdraw the bulbholder from the fibre optic diffuser unit

the fibre optic diffuser unit then remove the bulb from the holder (see illustration).

28 Fit a new bulb, push the bulbholder into place and refit the steering column shrouds.

## 7 Exterior light units - removal and refitting



**Note:** Ensure that all exterior lights are switched off before disconnecting the wiring connectors to any exterior light bulbs.

### Headlight lens unit

1 On pre-1992 model year vehicles, remove the radiator grille as described in Chapter 11.

2 Remove the front direction indicator light assembly as described in Section 5.

3 Disconnect the wiring multiplug at the rear of the headlight dipped beam bulb, and separate the main beam wiring at the connector (see illustration).

4 Undo the two bolts securing the headlight lens unit to the front body panel. On later models, undo the additional screw on the side of the unit accessible through the direction indicator light aperture.

5 Release the unit from the lower lugs and remove it from the car (see illustration).

6 Refitting is a reversal of removal.

### Rear light cluster assembly

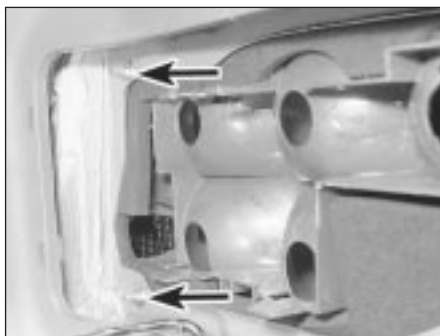
#### Rear wing light cluster

7 Remove the bulb panel from the light unit as described in Section 5.



7.5 Release the lens unit from the lower lugs





7.8a Rear light cluster side retaining nuts (arrowed)



7.8b Removing the rear light cluster assembly



7.14 Remove the rear lens reflector and number plate assembly

8 Undo the four nuts securing the light cluster to the rear wing, and withdraw the unit from the car (see illustrations).

9 Refitting is a reversal of removal.

### Boot lid/tailgate light cluster

10 Remove the bulbholder from the light unit as described in Section 5.

11 Undo the nuts securing the light cluster to the boot lid/tailgate and withdraw the unit from the car.

12 Refitting is a reversal of removal.

### Number plate light unit

#### Pre-1992 model year

13 On Fastback models, remove the trim panel on the inside of the tailgate.

14 Undo the six retaining screws and remove the rear lens reflector and number plate assembly (see illustration).

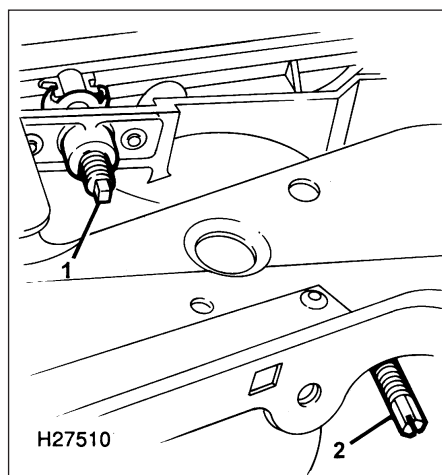
15 Undo the two screws securing each number plate light unit and withdraw the unit(s) (see illustration).

16 Turn the bulbholder anti-clockwise to remove the bulb, then remove the light unit from the car.

17 Refitting is a reversal of removal.

#### 1992 model year onwards

18 Refer to Section 5.



8.2 Headlight beam horizontal adjustment screw (1) and vertical adjustment screw (2)

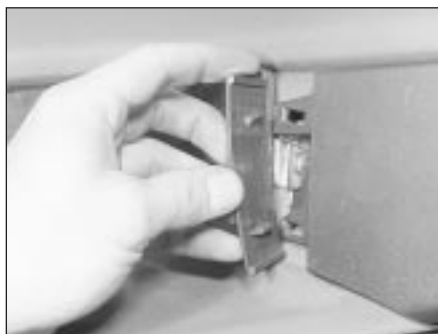
## 8 Headlight beam alignment - checking and adjustment

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 Rover dealer or service station with the necessary facilities.

2 Temporary adjustment can be made when the headlight unit has been removed and refitted, or to compensate for normal adjustment whenever a heavy load is being carried. Turn the adjustment screws at the rear of the headlight unit to make the adjustment (see illustration).

3 Before making any adjustments to the headlight settings, it is important that the tyre pressures are correct and that the vehicle is standing on level ground. Bounce the front of the vehicle a few times to settle the suspension. Ideally somebody of normal size should sit in the driver's seat during the adjustment and the vehicle should have a full tank of fuel.

4 Whenever temporary adjustments are made, the settings must be reset as soon as possible once the vehicle is in normal use.



9.3a Prise out the instrument cowl cover plate . . .



7.15 Undo the two screws securing each number plate light unit

## 9 Instrument panel - removal and refitting

### Removal

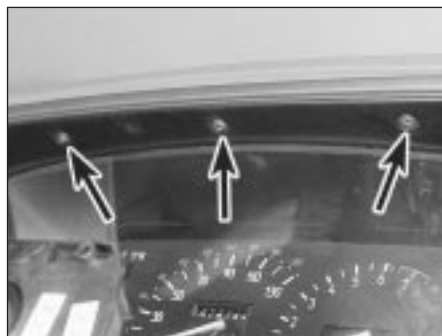
1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

2 Undo the three lower screws and the single upper screw, or three lower screws only on later models, and remove the upper and lower steering column shrouds.

3 Carefully prise out the rear of the cover plate at the extreme left-hand side of the cowl and push the plate forward to release the front clips. Undo the screw behind the plate, now exposed (see illustrations).



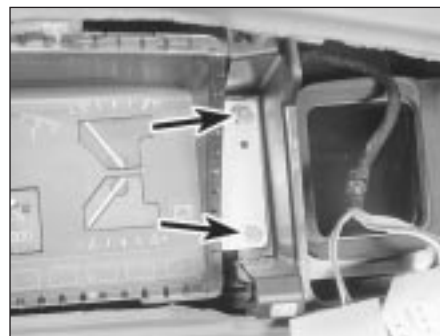
9.3b . . . and undo the screw behind



9.5 Undo the three cowl screws (arrowed) above the instrument panel . . .



9.6 . . . and the two screws each side at the bottom



9.10 Instrument panel right-hand side retaining screws

4 Pull off the knobs on the heater controls.  
5 Undo the three screws securing the cowl to the facia above the instrument panel (see illustration).

6 Undo the two screws below the vent panel on the driver's side and the two screws below the heater/air conditioning control panel (see illustration).

7 Release the clips at the top, at each end, ease the cowl away from the facia slightly, and disconnect the switch panel and heater control/air conditioning wiring multiplugs.

8 Remove the cowl from the car.

9 Lower the steering column as far as it will go by means of the rake adjuster.

10 Undo the two screws at each end of the instrument panel (see illustration).

11 Ease the panel away from the facia, then disconnect the wiring multiplugs and the earth lead Lucar connector from the rear of the panel.

12 Remove the instrument panel from the car.

### Refitting

13 Refitting is a reversal of removal.

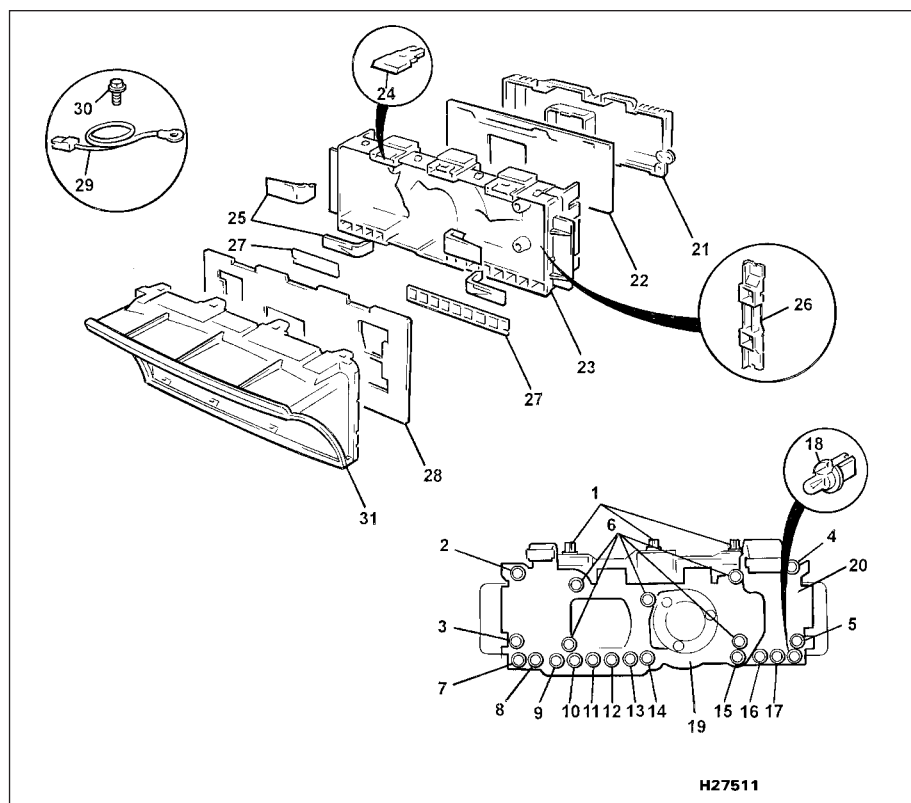
## 10 Instrument panel components - removal and refitting

### Early models

1 Remove the instrument panel from the car as described in Section 9.

### Panel illumination and warning light bulbs

2 The bulbholders are secured to the rear of the instrument panel by a bayonet fitting, and are removed by turning the holders anti-clockwise (see illustrations). Note that the

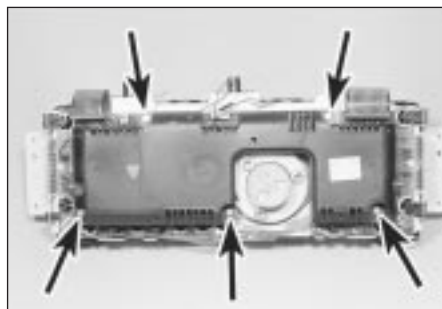


10.2a Exploded view of the instrument panel fitted to early models

- |  |   |                                |
|--|---|--------------------------------|
| 1 Panel front illumination bulbs             | 10 Spare bulb                                     | 19 Secondary printed circuit   |
| 2 Low oil pressure warning light bulb        | 11 ABS warning light bulb                         | 20 Main printed circuit        |
| 3 Ignition warning light bulb                | 12 Spare bulb                                     | 21 ECU cover                   |
| 4 High engine temperature warning light bulb | 13 Spare bulb                                     | 22 ECU                         |
| 5 Low fuel warning light bulb                | 14 Spare bulb                                     | 23 Instrument panel body       |
| 6 Panel rear illumination bulb               | 15 Sidelight warning light bulb                   | 24 Front illumination prism    |
| 7 R/H direction indicator warning light bulb | 16 Main beam warning light bulb                   | 25 Gauge illumination prism    |
| 8 Spare bulb                                 | 17 Trailer direction indicator warning light bulb | 26 Side housing                |
| 9 Brake warning light bulb                   | 18 L/H direction indicator warning light bulb     | 27 Warning light colour strips |
|  |   | 28 Faceplate                   |
|  |   | 29 Earth strap                 |
|  |   | 30 Screw                       |
|  |   | 31 Cowl and faceplate          |



10.2b Instrument panel warning light bulb renewal



**10.3 Instrument panel ECU retaining screws (arrowed)**

illumination and warning light bulbs are renewed complete with their holders.

3 If a faulty bulb is not accessible, undo the five screws securing the ECU to the rear of the panel, and carefully lift the ECU upwards (see illustration). Take care not to strain the ribbon connectors. The remaining bulbs are now accessible.

4 Refit the bulbholders by turning clockwise to lock. Where applicable, lay the ECU in position and secure with the five screws.

#### Instrument panel window and faceplate

5 Carefully release the eight clips, four at the top and four at the bottom, securing the window to the instrument panel body (see illustration).

6 Withdraw the window and remove the faceplate.

7 Refitting is a reversal of removal.

#### Electronic control unit (ECU)

8 Disconnect the two ribbon connector multiplugs and the centre wiring multiplug from the top of the ECU.

9 Undo the five screws and withdraw the ECU from the rear of the instrument panel.

10 Refitting is a reversal of removal.

#### Secondary printed circuit

11 Remove the ECU as described previously.

12 Undo the two voltmeter retaining nuts.

13 Remove the bulbholders as applicable.

14 Undo the five printed circuit retaining screws.

15 Release the five retaining studs.

16 Ease the printed circuit off the two locating pins, and remove it from the rear of the panel.

17 Refitting is a reversal of removal.

#### Main printed circuit

18 Remove the instrument panel window and faceplate, the ECU and the secondary printed circuit as described previously

19 Withdraw the warning light colour strips from the front of the panel.

20 Pull off the trip reset button.

21 Disconnect the ribbon connector from the tachometer by carefully levering off the metal retainer with a small screwdriver. Remove the metal retainer from the ribbon.

22 Remove the bulbholders.



**10.5 Instrument panel window upper retaining clips (arrowed)**

23 Undo the nuts from the gauge studs.

24 Release the two printed circuit retaining studs.

25 Ease the printed circuit off the locating pins, and remove it from the rear of the panel.

26 Refitting is a reversal of removal.

#### Speedometer

27 Remove the instrument panel window and faceplate, and the ECU as described previously.

28 Undo the three speedometer retaining screws, release the wiring harness and remove the speedometer from the instrument panel.

29 Refitting is a reversal of removal.

#### Tachometer

30 Remove the instrument panel window and faceplate, and the ECU as described previously.

31 Undo the two tachometer retaining screws.

32 Disconnect the ribbon connector from the tachometer by carefully levering off the metal retainer with a small screwdriver. Remove the metal retainer from the ribbon.

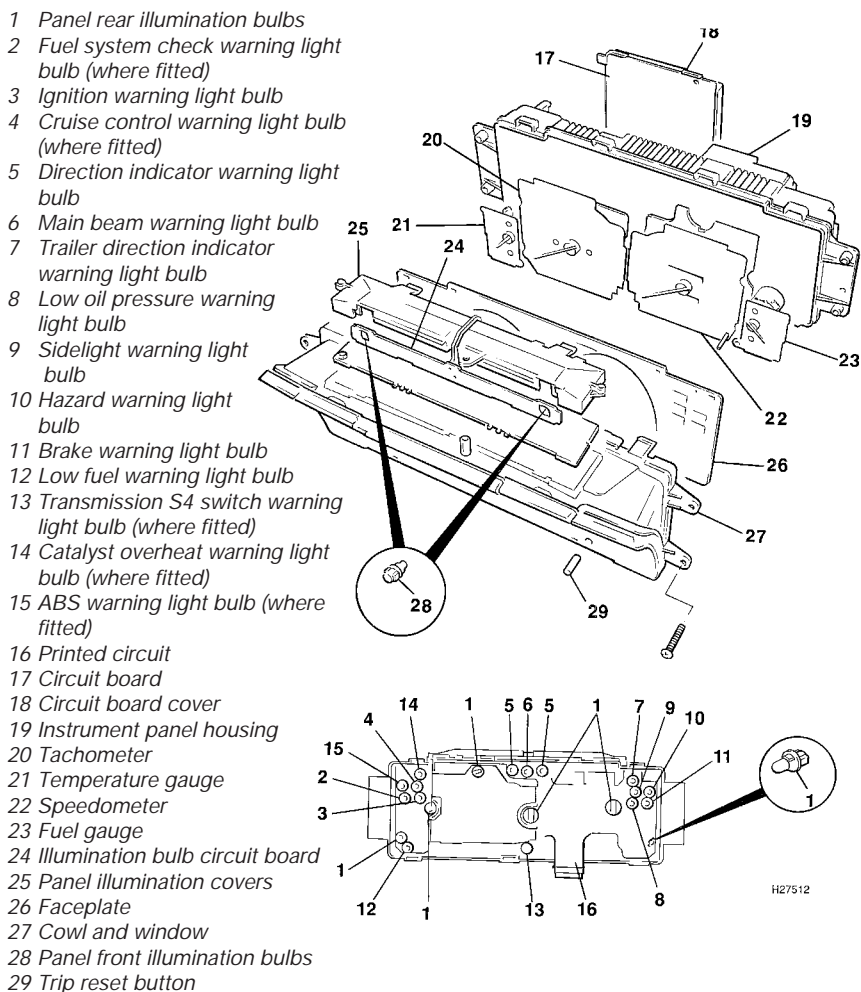
33 Remove the tachometer from the instrument panel.

34 Refitting is a reversal of removal.

#### Voltmeter, oil pressure, coolant temperature and fuel gauges

35 Remove the instrument panel window and faceplate, and the ECU as described previously.

36 Undo the two retaining nuts and remove the relevant gauge as applicable.



**10.39 Exploded view of the instrument panel fitted to later models**



37 Refitting is a reversal of removal.

### Later models

38 Remove the instrument panel from the car as described in Section 9.

### Panel illumination and warning light bulbs

39 The bulbholders are secured to the front rear of the instrument panel by a bayonet fitting, and are removed by turning the holders anti-clockwise (see illustration). Note that the illumination and warning light bulbs are renewed complete with their holders.

40 If a faulty bulb is not accessible, undo the three screws securing the circuit board and its cover to the rear of the panel. Remove the cover and carefully lift the circuit board upwards. Take care not to strain the ribbon connectors. The remaining bulbs are now accessible.

41 Refit the bulbholders by turning clockwise to lock. Where applicable, lay the circuit board in position and secure with the cover and retaining screws.

### Instrument panel window and faceplate

42 Carefully release the eight clips, four at the top and four at the bottom, securing the window to the instrument panel body.

43 Undo the four screws, two at each end of the instrument panel.

44 Withdraw the window and release the additional bulbholder at the rear.

45 Pull off the trip reset button and remove the faceplate.

46 Refitting is a reversal of removal.

### Circuit board

47 Disconnect the ribbon connector multiplug from the circuit board.

48 Undo the three screws and withdraw the cover and circuit board from the rear of the instrument panel.

49 Refitting is a reversal of removal.

### Tachometer

50 Remove the instrument panel window and faceplate, and the circuit board as described previously.

51 Undo the three tachometer retaining screws and withdraw the tachometer from the instrument panel.

52 Refitting is a reversal of removal.

### Speedometer

53 Remove the instrument panel window and faceplate, and the circuit board as described previously.

54 Undo the four small screws, and three large screws at the rear of the speedometer and withdraw it from the instrument panel.

55 Refitting is a reversal of removal.

### Coolant temperature and fuel gauges

56 Remove the instrument panel window and faceplate and, if the temperature gauge is being removed, the circuit board, as described previously.

57 Undo the three gauge retaining screws and remove the relevant gauge from the instrument panel.

58 Refitting is a reversal of removal.

### Printed circuit

59 Remove all the components from the instrument panel as described previously.

60 Release the printed circuit from the thirty retaining pins and remove it carefully from the instrument panel.

61 Refitting is a reversal of removal.

## 11 Central control unit - description, removal and refitting

### Description

1 Later models are equipped with a central control unit (CCU) located under the fascia behind the fusebox (see illustration). The function of the unit is to replace the various control units located behind the relay tower on earlier models, and to reduce the complexity of the wiring harness previously required.

2 The CCU incorporates a diagnostic feature for connection to a Rover dedicated test appliance.

### Removal

3 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

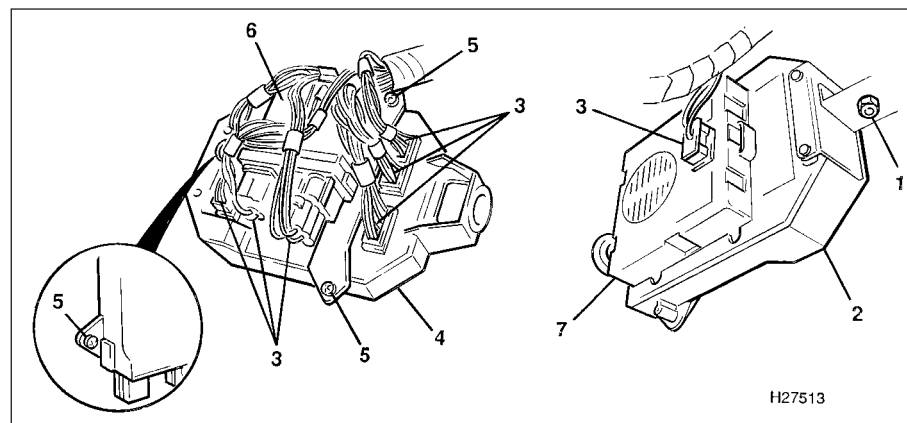
4 Detach the access panel or fusebox cover below the steering column.

5 Undo the retaining nut then withdraw the unit from the mounting pin.

6 Disconnect the wiring multiplugs at the rear of the unit and remove the unit from the car.

### Refitting

7 Refitting is a reversal of removal.



11.1 Central control unit attachments and connections

- |                                     |                                    |                                     |
|-------------------------------------|------------------------------------|-------------------------------------|
| 1 Unit retaining nut                | 3 Wiring multiplugs                | 5 Multifunction unit bracket screws |
| 2 Central control unit (front face) | 4 Central control unit (underside) | 6 Multifunction unit                |
|                                     |                                    | 7 Audible signal unit               |

## 12 Clock - removal and refitting



### Digital clock - early models

#### Removal

1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

2 Undo the two screws at the base of the oddment tray opening.

3 Withdraw the oddment tray and disconnect the clock wiring multiplug.

4 Remove the oddment tray. Undo the two clock retaining screws and remove the clock.

#### Refitting

5 Refitting is a reversal of removal.

### Digital clock - later models

#### Removal

6 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

7 Carefully prise the clock assembly from the lower fascia. The unit is retained by moulded clips which compress as the unit is withdrawn.

8 Disconnect the multiplug and remove the clock from the lower fascia.

9 To renew the illumination bulb, turn the bulbholder anti-clockwise to remove.

#### Refitting

10 Refitting is a reversal of removal.

### Analogue clock

#### Removal

11 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

12 Carefully prise the clock assembly from the lower fascia. The unit is retained by moulded clips on each side which compress as the unit is withdrawn.

**13** Disconnect the wiring connector from the rear of the illumination bulb. If the bulb is to be renewed, simply pull it from its location and fit a new bulb.

**14** Disconnect the wiring multiplugs from the clock and side switches.

**15** Undo the four nuts and remove the wood finishers from the panel. Carefully ease the finishers from the panel which are secured by double sided tape.

**16** Release the clips and withdraw the clock and switches from the panel.

#### Refitting

**17** Refitting is a reversal of removal.

### 13 Trip computer - removal and refitting



#### Trip computer and vehicle map - early models

##### Removal

**1** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**2** In order to release the trip computer retaining clips, two U-shaped rods (of the type used for radio/cassette player removal) must be inserted into the special holes on each side of the unit. If possible, it is preferable to obtain purpose made rods from an audio specialist as these have cut-outs which snap firmly into the clips so that the unit can be pulled out.

**3** Insert the special rods into the holes in the side of the unit until they engage the internal retaining clip lugs.

**4** Withdraw the unit from the lower fascia sufficiently to gain access to the wiring at the rear.

**5** Disconnect the wiring multiplugs and remove the complete assembly from the car.

**6** Release the eight retaining clips and remove the front panel.

**7** Extract the two metal clips at the top, and one at the bottom and separate the vehicle map from the trip computer.

**8** Undo the retaining screw on the side of each unit and remove the locating plates.

#### Refitting

**9** Refitting is a reversal of removal.

#### Trip computer - later models

##### Removal

**10** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**11** Carefully prise the trip computer assembly from the lower fascia. The unit is retained by moulded clips which should compress as the unit is withdrawn.

**12** Disconnect the multiplug and remove the unit from the lower fascia.

**13** To renew the illumination bulbs, turn the bulbholders anti-clockwise to remove.

#### Refitting

**14** Refitting is a reversal of removal.

### 14 Horn - removal and refitting



#### Removal

**1** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**2** From under the left-hand wheelarch, undo the two screws and one bolt securing the access panel and remove the panel.

**3** Disconnect the electrical leads, undo the retaining nut and remove the horn(s) from the mounting bracket.

#### Refitting

**4** Refitting is a reversal of removal.

### 15 Wiper arms - removal and refitting



#### Windscreen wiper arms

##### Removal

**1** Open the bonnet, lift the wiper arm slightly and retain it in the raised position by inserting a pop-rivet, small drill bit or similar item through the hole in the side of the arm (see illustration).

**2** Unscrew the arm-to-spindle retaining nut and withdraw the arm from the spindle.

**3** If required, remove the blade from the arm (see Chapter 1) and pull out the rivet or drill bit. Relieve the spring tension of the arm as the rivet or bit is withdrawn.

#### Refitting

**4** Refitting is a reversal of removal, but adjust the wiper arm park setting as follows during the refitting sequence.

**5** Switch on the ignition. Turn the wiper switch on and off, so that the motor operates then stops in the park position. Switch off the ignition.

**6** On early models, position the wiper arms so



15.1 Insert a pop-rivet through the hole in the wiper arm

that they are resting on the top of the stop-pegs on the windscreen finisher.

**7** On later models position the wiper arms so that their top edge is 15 mm below the upper edge of the windscreen finisher.

**8** Engage the end of the arms with their respective spindles, and refit the retaining nut.

**9** Refit the wiper blades, remove the rivet or drill bit, and position the arms in the normal park position.

**10** Operate the washers to wet the screen, then operate the wipers.

**11** Switch the wipers off, and check that they park with the blades in the position described in paragraph 6 or 7, as applicable.

### Tailgate wiper arm (Fastback models)

#### Removal

**12** Lift off the cover over the wiper arm spindle.

**13** Unscrew the wiper arm-to-spindle retaining nut and withdraw the arm from the blade.

#### Refitting

**14** Refitting is a reversal of removal, but position the arm along the bottom of the screen with the motor in the park position.

### 16 Windscreen wiper motor and linkage - removal and refitting



#### Wiper motor

##### Removal

**1** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**2** Remove the wiper arms as described in Section 15.

**3** Carefully prise up the screw caps over the windscreen finisher retaining screws at the base of the windscreen (see illustration).

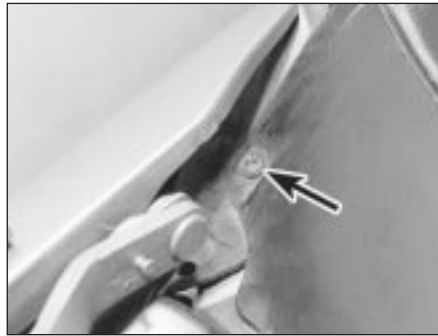
**4** Undo the screws on the finisher front face



16.3 Prise up the windscreen finisher screw caps



16.4a Undo the screws on the finisher front face . . .



16.4b . . . and at the extreme edges



16.5a Release the rubber sealing strip retaining clips . . .

and on the extreme edges, then remove the finisher from the car (*see illustrations*).

5 Using pointed-nose pliers, release the rubber sealing strip retaining clips (*see illustrations*). Be prepared for some of these clips to break during removal.

6 Lift off the centre grille and the left-hand plenum moulding (*see illustrations*).

7 Working through the left-hand plenum chamber aperture, undo the retaining nut and remove the wiper linkage rotary link from the motor spindle (*see illustration*).

8 Disconnect the wiper motor wiring multiplug (*see illustration*).

9 Undo the three bolts and remove the wiper motor and mounting bracket from the car (*see illustration*).

10 Withdraw the seal from the motor spindle, then remove the seal from the mounting plate.

11 Undo the three bolts and remove the motor from the mounting plate.

#### Refitting

12 Refitting is a reversal of removal.

#### Wiper linkage

##### Removal

13 Remove the wiper motor as previously described.

14 Disconnect the primary link arm from the centre spindle assembly by pushing down to release the ball-and-socket joint. Remove the primary link.

15 Undo the four bolts securing the centre spindle assembly, and the three bolts securing the right-hand spindle assembly, to the scuttle (*see illustrations*).

16 Feed the right-hand spindle assembly through the scuttle aperture, and draw out the linkage from the centre spindle opening. Remove the complete linkage assembly from the car.

17 Further dismantling is not possible, and if any of the parts are worn, a complete linkage assembly must be obtained.

#### Refitting

18 Refitting is a reversal of removal, ensuring correct orientation of the linkage components.



16.5b . . . and withdraw the sealing strip



16.6a Lift off the centre grille . . .



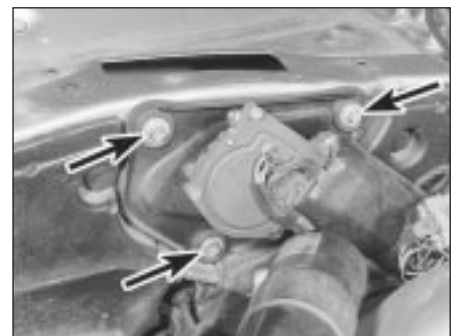
16.6b . . . and the left-hand side plenum moulding



16.7 Undo the nut securing the linkage rotary link to the motor spindle



16.8 Disconnect the motor wiring multiplug



16.9 Undo the motor mounting bracket retaining nuts (arrowed)

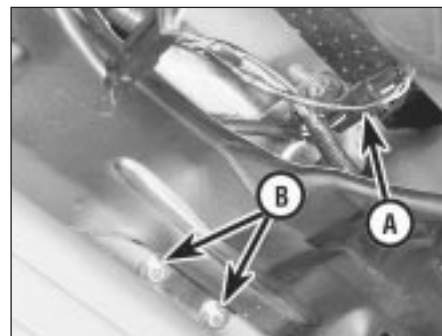




16.15a Wiper linkage centre spindle assembly . . .



16.15b . . . and right-hand spindle assembly



17.5 Tailgate wiper motor multiplug (A) and mounting plate retaining bolts (B)

## 17 Tailgate wiper motor and linkage - removal and refitting



### Removal

- 1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).
- 2 Remove the wiper arm as described in Section 15.
- 3 Release the plastic clip screws and remove the trim panel from inside the tailgate.
- 4 Undo the large retaining nut from the wiper motor spindle.
- 5 Disconnect the wiper motor multiplug, and release the wiring from its cable clip (see illustration).
- 6 Undo the two bolts securing the motor mounting plate to the tailgate, then withdraw the motor and mounting plate.
- 7 Undo the three bolts and remove the motor from the mounting plate.
- 8 Withdraw the seal, spacer and washer components from the motor spindle.

### Refitting

- 9 Refitting is a reversal of removal.

## 18 Windscreen/tailgate/headlight washer system components - removal and refitting



### Washer reservoir and pumps

#### Removal

- 1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).
- 2 Undo the screw securing the washer reservoir filler neck to the inner wing valance.
- 3 Withdraw the filler neck from the reservoir, and disconnect the breather hose.
- 4 From under the wheelarch, undo the two screws and one bolt securing the access panel, and remove the panel.
- 5 Undo the three reservoir retaining bolts and lower the unit slightly.
- 6 Disconnect the fluid hoses and wiring multiplugs and remove the reservoir, complete with pumps, from under the wheelarch.

- 7 Remove the pumps as required from the reservoir by pulling them out of their locations.

#### Refitting

- 8 Refitting is a reversal of removal.

### Headlight washer jet

#### Removal

- 9 Prise off the cover plate on the washer jet to expose the two retaining screws.
- 10 Undo the two screws and withdraw the jet from the front bumper.
- 11 Release the water hose clip, disconnect the hose and remove the jet.

#### Refitting

- 12 Refitting is a reversal of removal.

## 19 Radio/cassette player - removal and refitting



**Note:** The following procedure applies to the interior mounted radio/cassette, or radio/cassette/CD players. For procedures applicable to the luggage compartment located CD player, refer to Section 20.

### Removal

- 1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).
- 2 In order to release the radio retaining clips, two U-shaped rods must be inserted into the special holes on each side of the radio (see illustration). If possible, it is preferable to obtain purpose made rods from an audio



19.2 Insert the radio removal tools into the holes on the edges of the unit

specialist as these have cut-outs which snap firmly into the clips so that the radio can be pulled out. Note that on later models, it will be necessary to remove the two side bezels first, to allow access to the holes for insertion of the U-shaped removal tools.

- 3 Insert the removal tools into each pair of holes at the edge of the unit, and push the tools fully home to engage the radio retaining clips.

- 4 Move the tools outward to depress the retaining clips, and withdraw the radio from the lower fascia sufficiently to gain access to the wiring at the rear (see illustration).

- 5 Note the location of the speaker wiring by recording the cable colours and their positions, then disconnect the speaker leads, aerial lead and wiring multiplug(s). Remove the unit from the car.

- 6 Disengage the removal tools from the retaining clips on the side of the radio, and remove the tools.

### Refitting

- 7 Refitting is a reversal of removal.

## 20 Compact disc player - removal and refitting

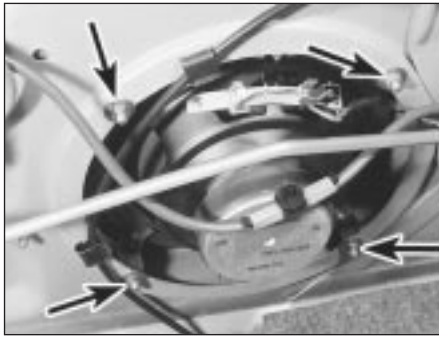


### Removal

- 1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).
- 2 From within the luggage compartment,



19.4 Withdraw the radio, using the tools to release the retaining clips



21.1 Rear speaker retaining nuts (arrowed) on Saloon and Coupe models

disconnect the wiring multiplug from the side of the unit.

3 Undo the four nuts and remove the unit from its location.

### Refitting

4 Refitting is a reversal of removal.

## 21 Speakers - removal and refitting



### Rear speaker - Saloon and Coupe models

#### Removal

1 From inside the luggage compartment, disconnect the two leads and undo the four retaining nuts (see illustration).



21.6 Undo the six screws and remove the speaker assembly



21.10 Undo the main door speaker retaining screws



21.2 Removing the rear speaker from the parcel shelf

2 Withdraw the speaker upwards into the car, and remove it from the rear parcel shelf (see illustration).

### Refitting

3 Refitting is a reversal of removal.

### Rear speaker - Fastback models

#### Removal

4 Undo the three screws securing the trim panel to the parcel tray support and remove the trim panel (see illustration).

5 Remove the speaker grille.

6 Undo the six speaker retaining screws, lift the speaker from its location and disconnect the wiring connectors (see illustration).

7 Remove the speaker from the car.

### Refitting

8 Refitting is a reversal of removal.

### Front main speaker and filter

#### Removal

9 Remove the front door inner trim panel as described in Chapter 11.

10 Undo the four screws securing the speaker to the door (see illustration).

11 Withdraw the speaker, disconnect the leads and remove the speaker from the door (see illustration).

12 To remove the filter, cut off the tape securing it to the wiring harness adjacent to the main speaker location.

13 Disconnect the leads at each end and remove the filter.



21.11 Withdraw the speaker and disconnect the wiring



21.4 Remove the trim panel over the rear speaker on Fastback models

### Refitting

14 Refitting is a reversal of removal.

### Tweeter

#### Removal

15 Refer to Chapter 11, Section 21 and remove the escutcheon around the door inner release handle.

16 Rotate the tweeter clockwise to release it from the escutcheon, then disconnect the leads and remove the tweeter (see illustration).

### Refitting

17 Refitting is a reversal of removal.

## 22 Aerial amplifier - removal and refitting



### Saloon and Coupe models

#### Removal

**Note:** The aerial amplifier is located below the rear parcel shelf on pre-1992 models, and above it on later models.

1 Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

2 On later models, remove the rear speakers (Section 21), fold the seat squabs forward and remove the parcel tray and insulation pad.

3 From inside the luggage or passenger compartment, as applicable, disconnect the



21.16 Disconnect the wiring and remove the tweeter



**22.3 Aerial amplifier unit located under the rear parcel shelf on early Saloon models**



**22.13 Aerial amplifier unit retaining bolts (arrowed) on Fastback models**

two leads at the amplifier unit (see illustration).

**4** Disconnect the two amplifier leads at the connections to the rear screen demisting element.

**5** Disconnect the aerial co-axial lead at the amplifier.

**6** Undo the two screws and remove the amplifier from under the parcel shelf.

#### Refitting

**7** Refitting is a reversal of removal.

#### Fastback models

##### Removal

**8** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**9** Remove the trim panel from inside the tailgate.

**10** Disconnect the leads at the amplifier unit located behind the stiffener panel in the tailgate.

**11** Disconnect the leads at the connector to the rear screen demisting element.

**12** Disconnect the aerial co-axial lead at the amplifier.

**13** Undo the two bolts and remove the amplifier from the tailgate (see illustration). Note that one bolt also secures the wiring earth cable.

#### Refitting

**14** Refitting is a reversal of removal.

### 23 Power amplifier - removal and refitting



#### Facia-mounted amplifier - early models

##### Removal

**1** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**2** Release the turnbuckles and remove the trim panel over the fusebox, beneath the steering column.

**3** Remove the radio cassette player as described in Section 19.

**4** Disconnect the four multiplugs connecting

the speaker leads from the power amplifier to the wiring harness. Record the colour codes of each lead to ensure correct connection on reassembly.

**5** Release the retaining stud and remove the small centre console trim panel from the footwell on the driver's side.

**6** Working through the trim panel aperture, disconnect the power amplifier wiring multiplug.

**7** Undo the nut and two screws securing the power amplifier mounting bracket under the facia.

**8** Withdraw the amplifier, release the wiring harness, and remove the unit from under the facia.

#### Refitting

**9** Refitting is a reversal of removal.

#### Luggage compartment-mounted amplifier - later models

##### Removal

**10** Disconnect the battery negative (earth) lead (refer to Chapter 5, Section 1).

**11** Remove the trim panel from the right-hand side of the luggage compartment.

**12** Disconnect the rear speaker leads at the speakers or at the wiring connectors, and pass the disconnected leads through to the amplifier.

**13** Disconnect the two multiplugs and the DIN socket connector at the amplifier.

**14** Undo the two amplifier mounting bracket screws, and remove the unit from the luggage compartment.

#### Refitting

**15** Refitting is a reversal of removal.

### 24 Anti-theft system - general information

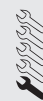
Later models are fitted with an anti-theft system as an additional security measure. The system is armed automatically whenever the vehicle is locked (by key or infra-red handset); the system cannot be armed by pressing the internal door lock buttons.

In the event of the vehicle being broken into, the alarm will be activated. It will also sound if the ignition key is inserted into the ignition switch whilst the alarm is armed, and additionally, when the system is being armed and a door is not fully closed. Note that the bonnet must also be fully closed to enable the system to be armed.

On later models, an additional ultrasonic space protection feature is incorporated into the system. This uses two sensors mounted at the top of the left-hand door pillars to detect movement inside the vehicle (such as entry being gained through a broken window). In the event of such movement being detected, the alarm will be activated. This feature can be disabled if required (for example, if the car is to be briefly locked with animals inside).

The anti-theft alarm system is controlled by the ignition/starter circuit, the door courtesy light switches, the boot/tailgate light switches and the central control unit (CCU).

### 25 Anti-theft system components - removal and refitting



**Note:** The following procedures apply to those components dedicated to the anti-theft alarm system. Removal and refitting procedures for the central control unit (CCU) and the door/boot/tailgate light switches will be found in Sections 11 and 4 respectively. At the time of writing no information was available relating to the ultrasonic space detection sensor.

#### Alarm siren

##### Removal

**1** Remove the wiper arms as described in Section 15.

**3** Carefully prise up the screw caps over the windscreen finisher retaining screws at the base of the windscreen (see illustration overleaf).

**4** Undo the screws on the finisher front face and on the extreme edges, then remove the finisher from the car.

**5** Using pointed-nose pliers, release the rubber sealing strip retaining clips. Be prepared for some of these clips to break during removal.

**6** Lift off the centre grille and the right-hand plenum moulding.

**7** Release the wiring harness from the support bracket and disconnect the wiring multiplug.

**8** Undo the two retaining screws and remove the siren from the plenum chamber.

#### Refitting

**9** Refitting is a reversal of removal. Adjust the wiper arm park position as described in Section 15, when refitting the arms.



**Bonnet switch****Removal**

10 Open the bonnet and disconnect the in-line wiring connector to the switch.

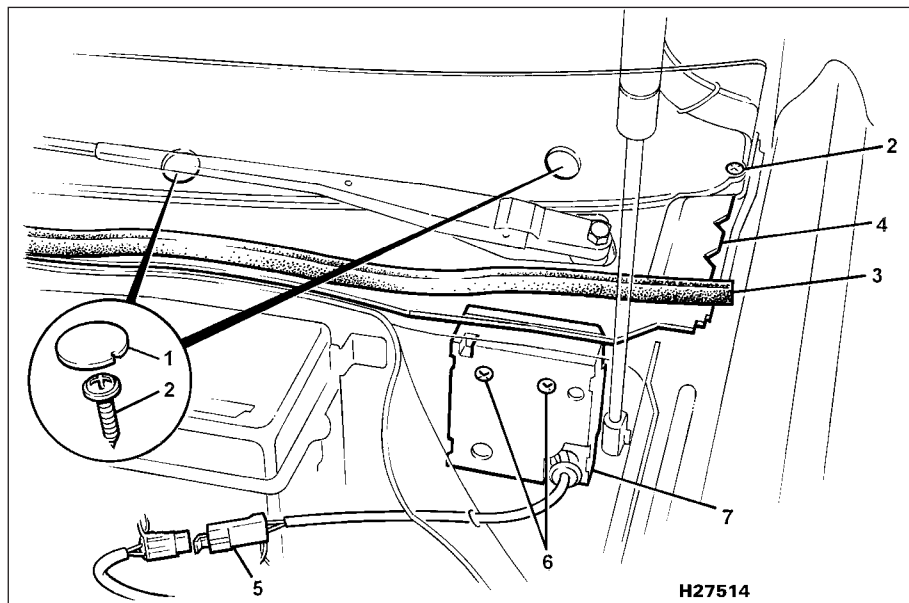
11 Compress the retaining clips and withdraw the bonnet switch from the mounting panel.

**Refitting**

12 Refitting is a reversal of removal.

## 26 Airbag supplementary restraint system - general information

Later models are fitted with a driver's airbag, which is designed to prevent serious chest and head injuries to the driver during an accident. A similar bag for the front seat passenger is also available. The two crash sensors which detect frontal impact are located on either side of the engine compartment while the electronic control unit for the airbag is located in the passenger compartment in front of the centre console. The airbag is inflated by an igniter, which forces the bag out of the module cover in the centre of the steering wheel, or out of a cover on the passenger's side of the fascia. A rotary coupler behind the steering wheel at the top of the steering column, ensures that a good electrical connection is maintained with the airbag at all times as the steering wheel is turned in each direction.

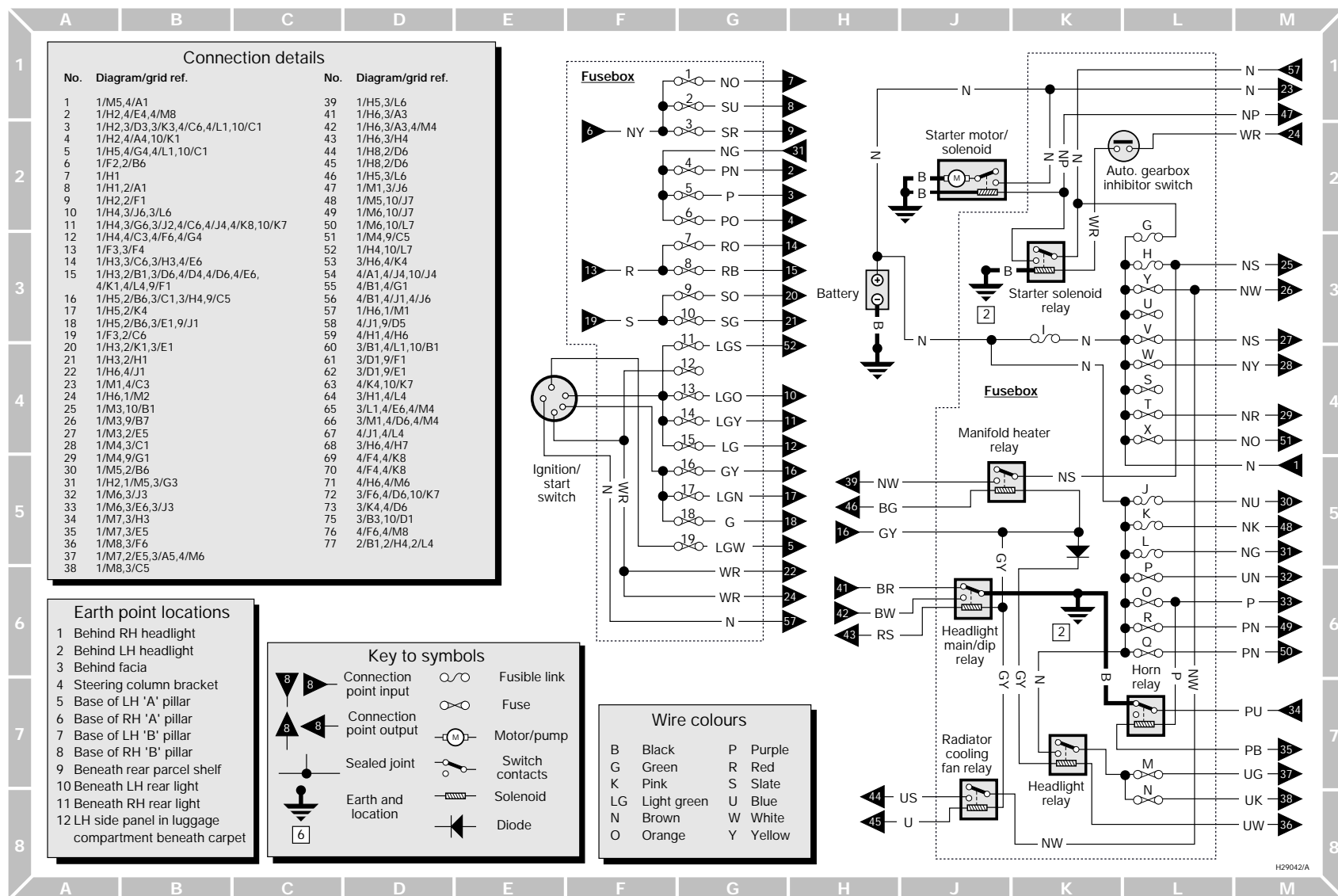


25.3 Anti-theft alarm siren unit location

- |  |                        |                               |
|--|------------------------|-------------------------------|
| 1 Screw caps                           | 3 Rubber sealing strip | 6 Siren unit retaining screws |
| 2 Windscreen finisher retaining screws | 4 Plenum moulding      | 7 Siren unit                  |
|  | 5 Wiring multiplug     |                               |



**Warning:** Procedures for removal and refitting of the driver's side airbag module and rotary coupler are given in Chapter 10, Sections 18 and 19 respectively. Those procedures are provided solely to allow removal and refitting of the steering wheel and associated components as part of a normal repair operation. Do not attempt to carry out any other work whatsoever on the airbag supplementary restraint system components. Any diagnosis or repair necessary, must be carried out by a Rover dealer.



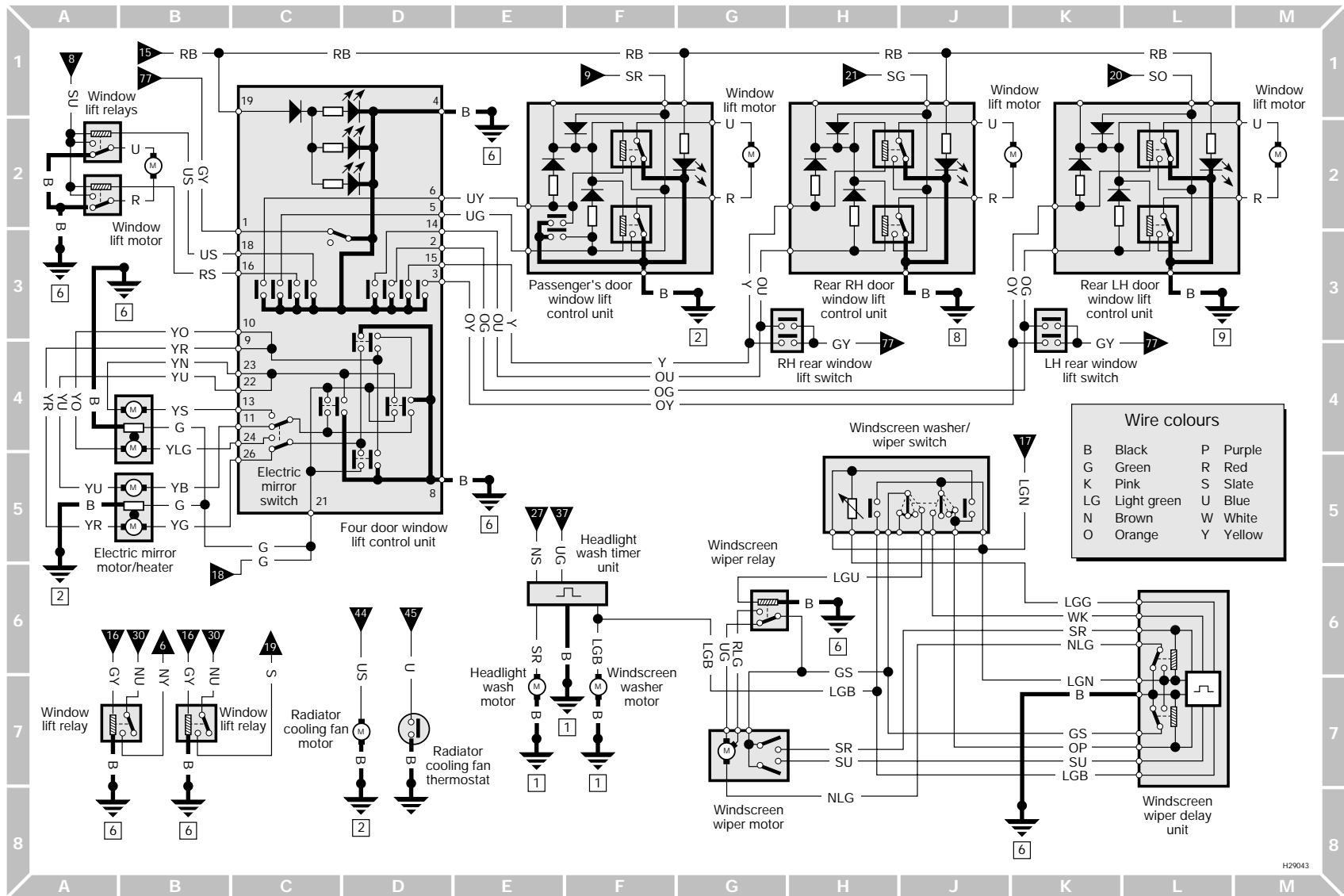


Diagram 2: Main wiring diagram (typical) - single-point fuel injection models (continued)



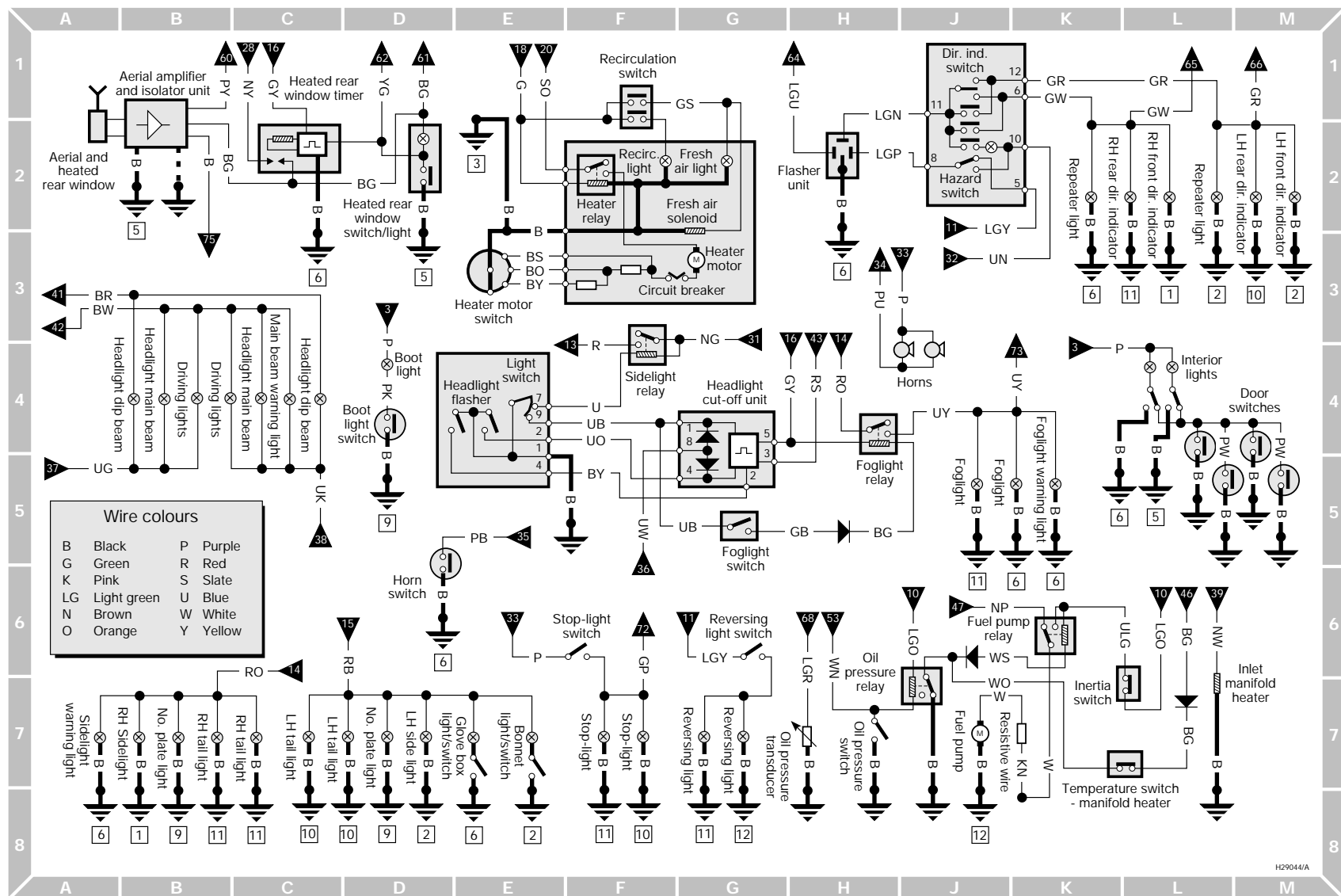


Diagram 3: Main wiring diagram (typical) - single-point fuel injection models

Diagram 3: Main wiring diagram (typical) - single-point fuel injection models (continued)

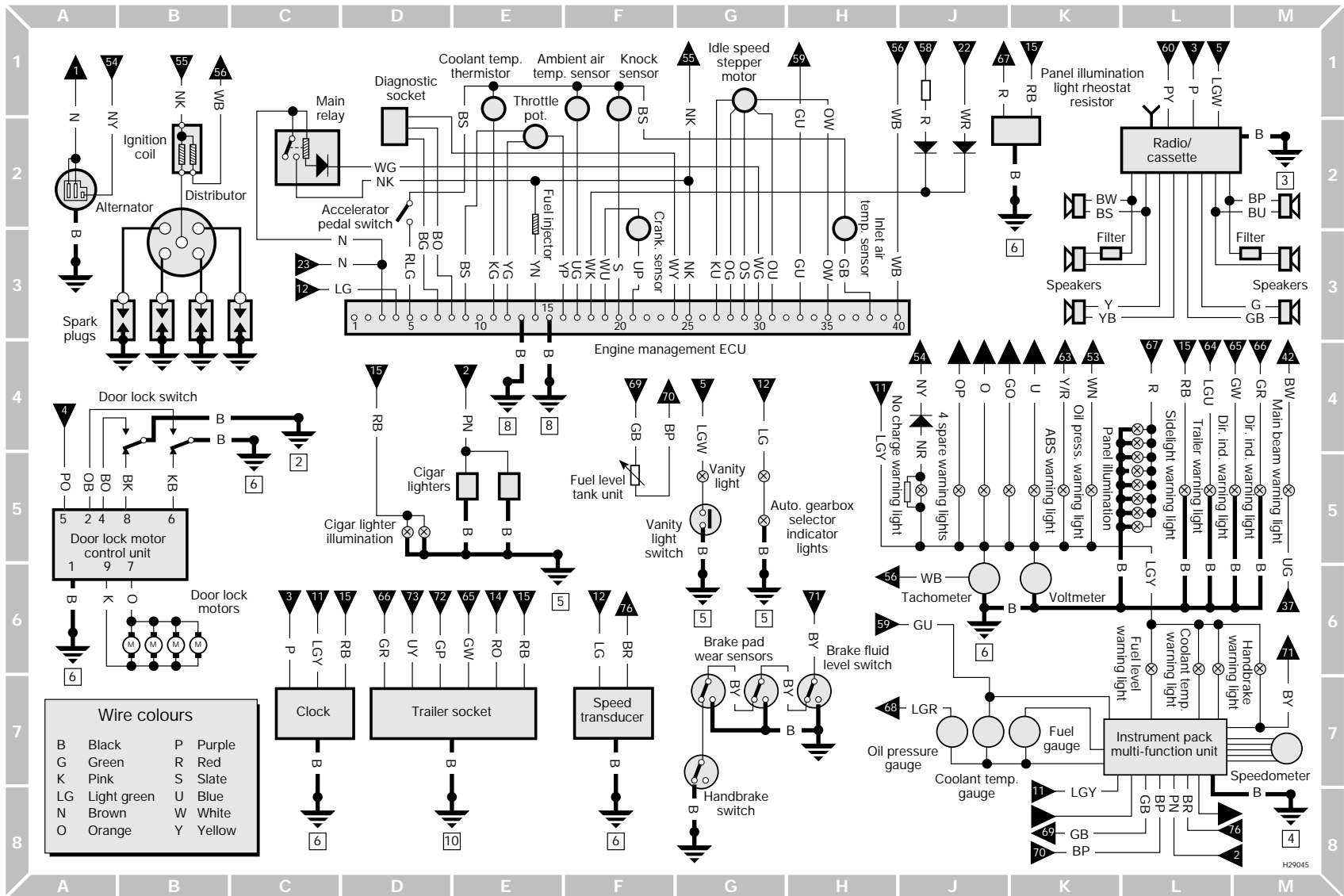
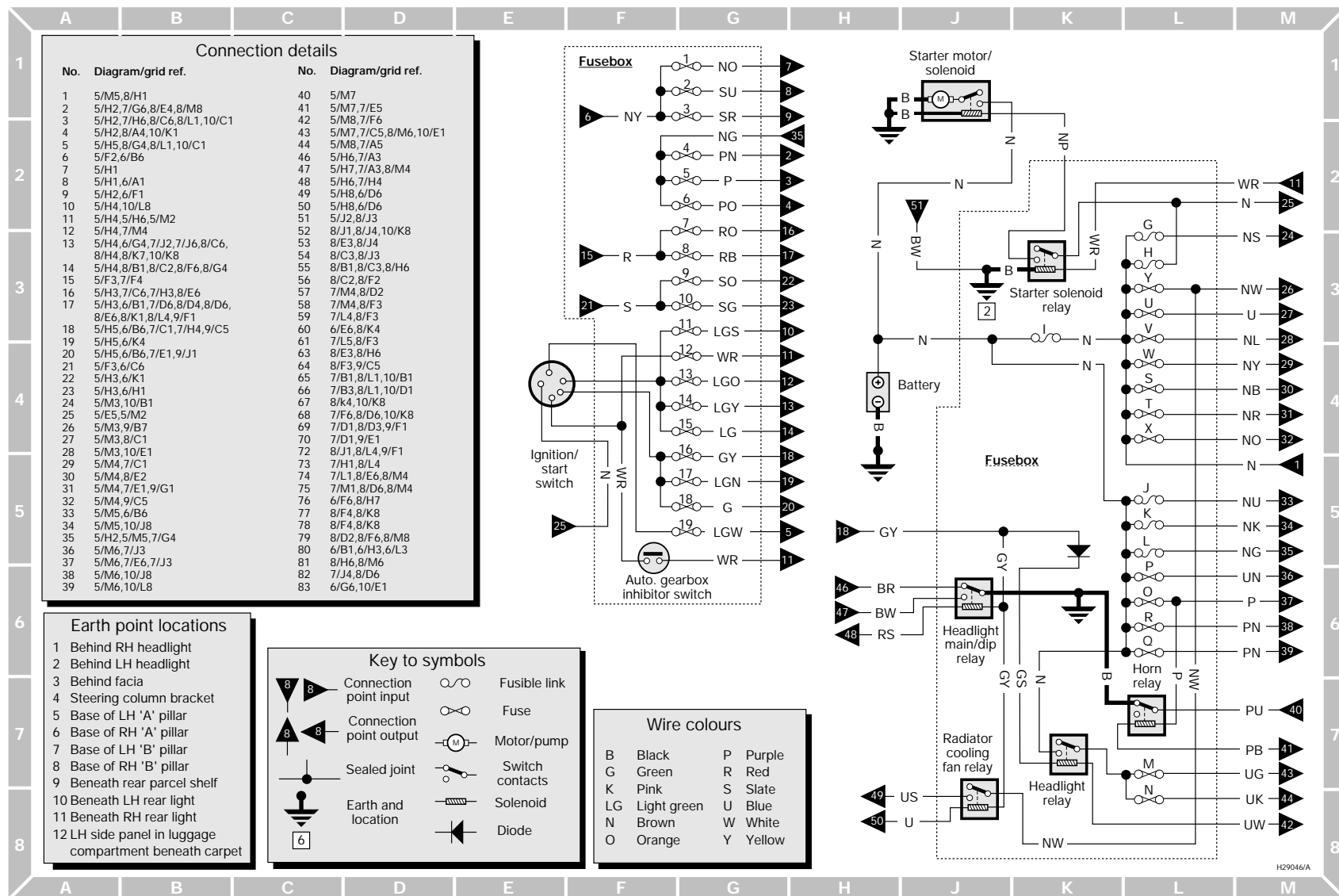


Diagram 4: Main wiring diagram (typical) - single-point fuel injection models (continued)





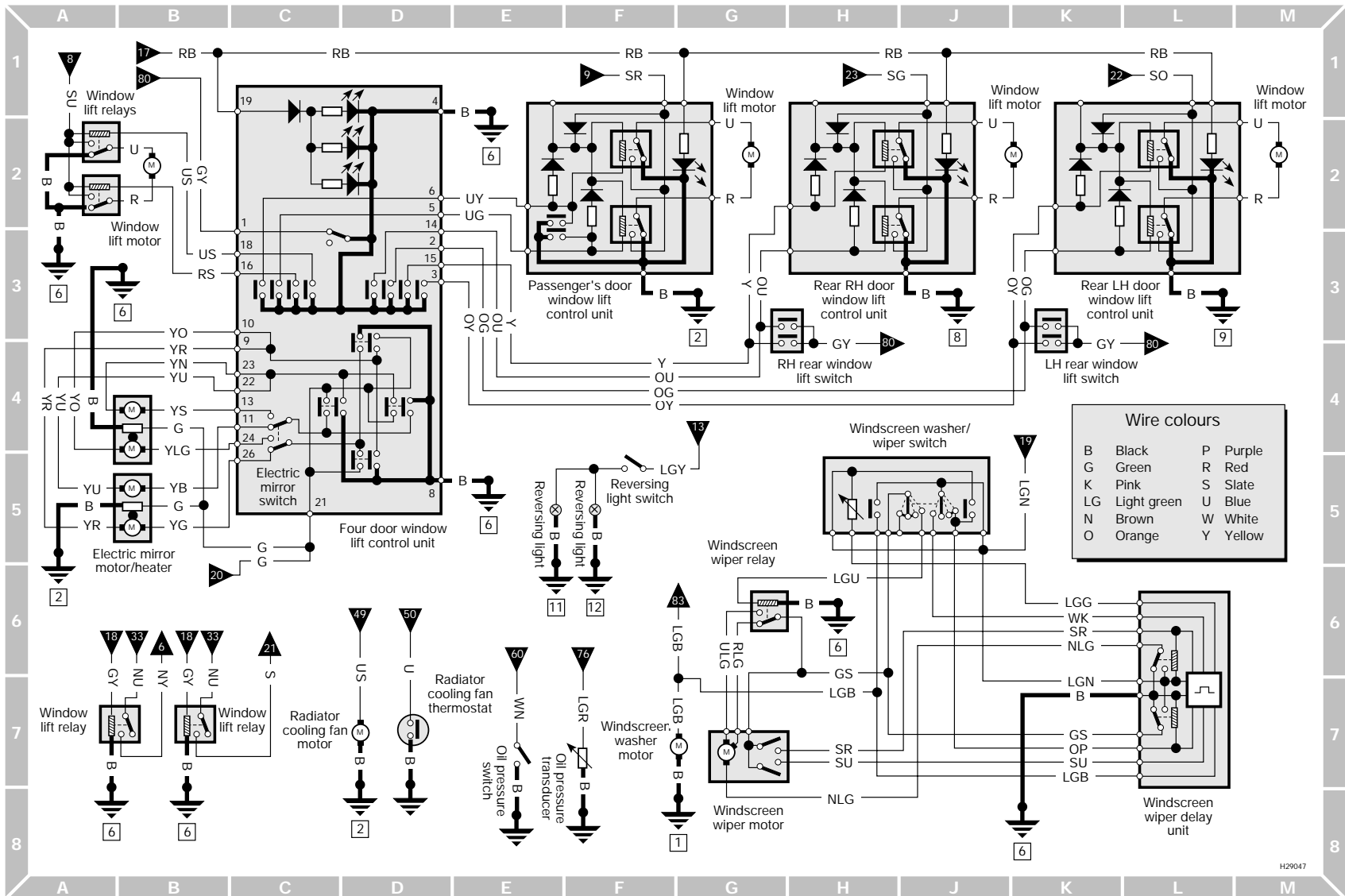


Diagram 6: Main wiring diagram (typical) - multi-point fuel injection models (continued)



Diagram 7: Main wiring diagram (typical) - multi-point fuel injection models (continued)

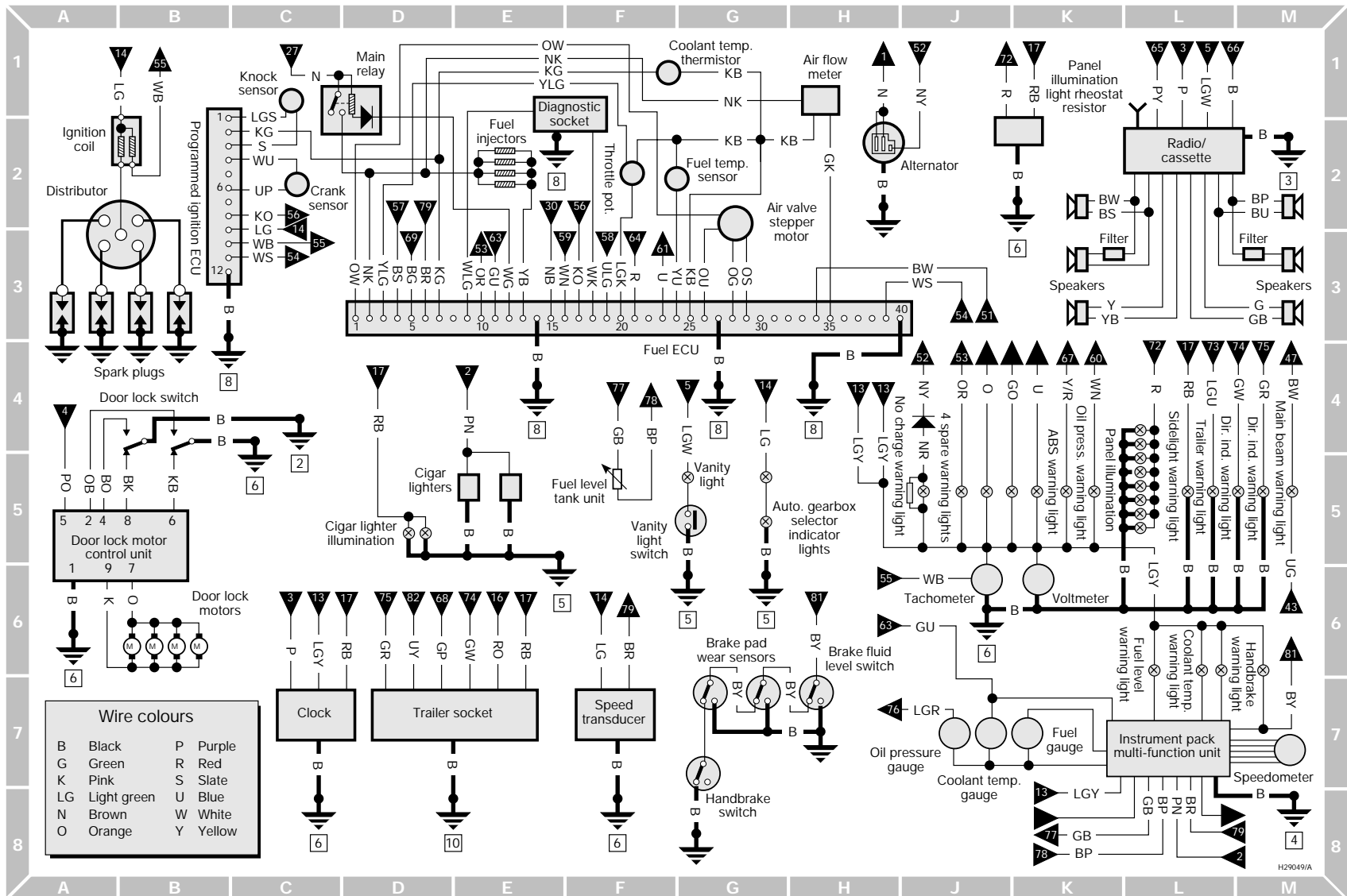


Diagram 8: Main wiring diagram (typical) - multi-point fuel injection models (continued)



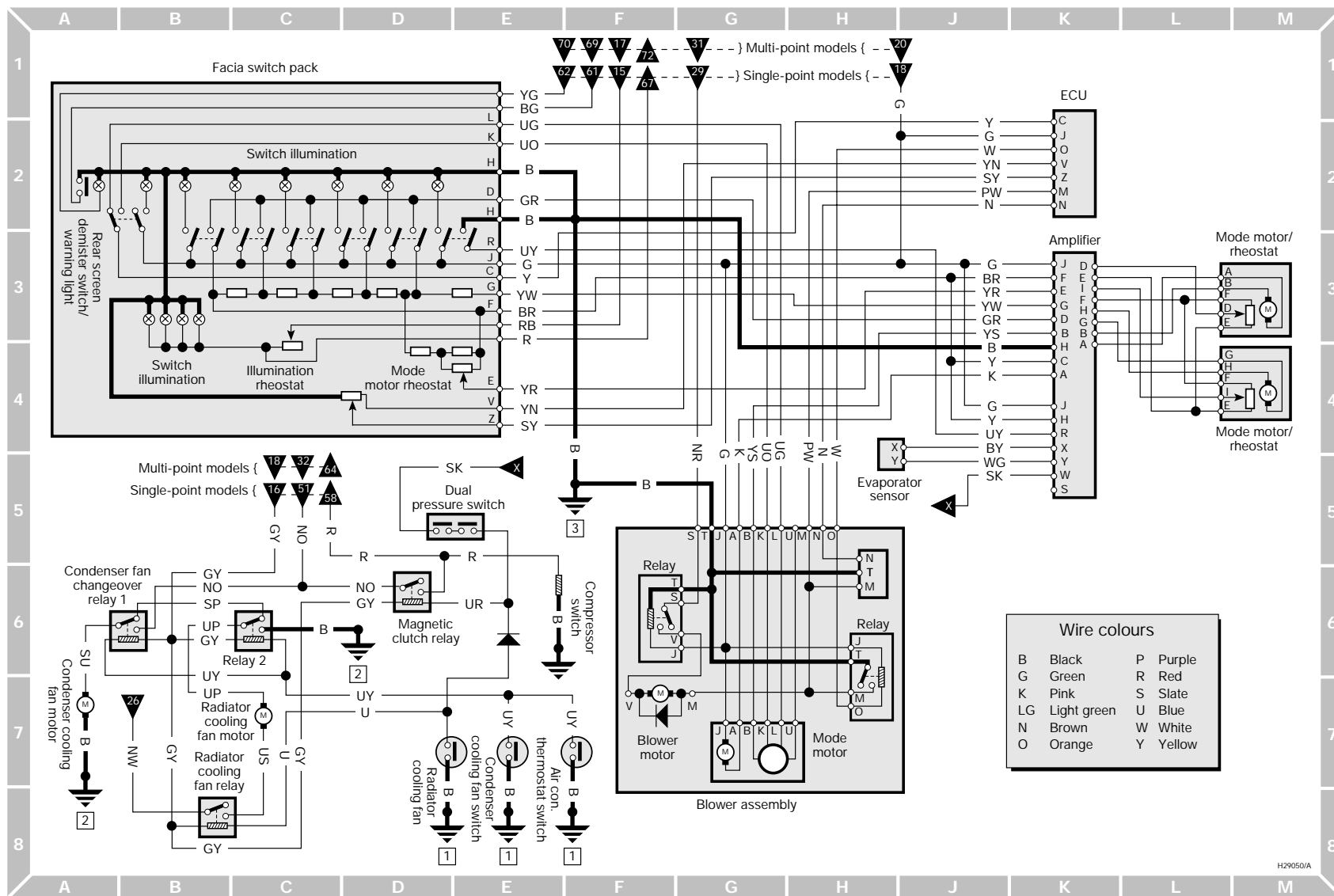


Diagram 9: Typical air conditioning system (including engine cooling fan)

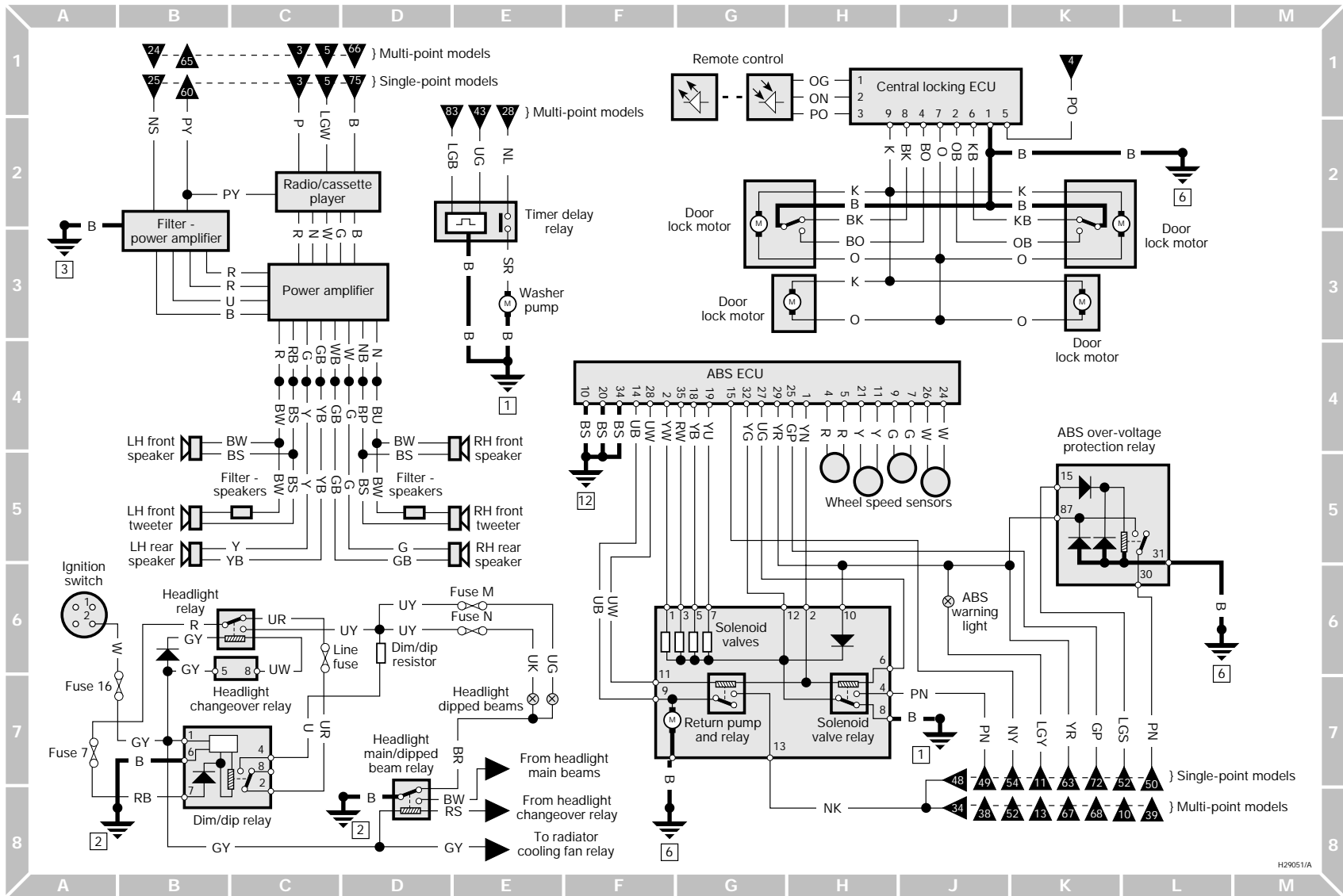


Diagram 10: Supplementary circuits

Diagram 10: Supplementary circuits