

volt bulb and test lead as follows.

6 Detach the horn wires and connect the voltmeter leads of the bulb and test lead across them. On horns having only a single supply wire, connect the other voltmeter lead or the bulb to a good earth.

7 With the horn push depressed, there should be a reading on the voltmeter or the bulb should light. If it does the horn is faulty and should be renewed.

8 If there is no reading at the voltmeter or the test bulb does not light, check the appropriate fuse. If the fuse has not blown, the fault is likely to be in the wiring from the horn push to the horn or the horn push itself.

**31 Fuses – general**

1 The fuses are located in a block which is mounted on the right-hand wing valance on early models, and on the right-hand side of the engine compartment bulkhead on later models (photo). The fuse block is covered by a plastic push-on cover. Upon inspection it will be seen that there are two main fuses on early models and four main fuses on later versions. In both cases, two spare fuses are contained within the fuse block or cover.

2 Fuse failure may be diagnosed by the simultaneous failure of two or more electrical systems.

3 If a fuse blows it must be renewed with a fuse of the same rating. If the new fuse blows immediately the particular electrical service is operated, there is a fault in the system and the circuit must be carefully inspected to find the cause of the trouble.

4 To renew a fuse, simply withdraw it from the contacts in the fuse block. Before refitting a new fuse ensure that the contacts are clean and free from corrosion. If necessary the contacts may be cleaned with a fine grade emery paper.

5 The fuses and their respective circuits are as follows:

**Early models**

Fuse connecting	Rating	Function
1 and 2	35 amp	The auxiliary units are protected by this fuse, as are the interior light and horn which will operate without the ignition switched on. The fitting of additional accessories which are required to operate independently of the ignition circuit should be connected to the '2' terminal.
3 and 4	35 amp	This fuse protects the auxiliary units which operate only when the ignition is switched on. The units connected into the circuit are the direction indicators, windscreen wiper motor, heater blower and stop lights. The fitting of additional accessories which are required to operate only when the ignition is switched on should be connected to the '4' terminal.

**Line fuses**

A line fuse is fitted to protect an individual unit or circuit. To change a line fuse, hold one end of the container, press and twist off the other end. Line fuses will be found in the following positions:

Side and tail lights (8 amp)	Located adjacent to the wiring connectors on the engine bulkhead
Hazard flasher (35 amp)	Located adjacent to the fuse block

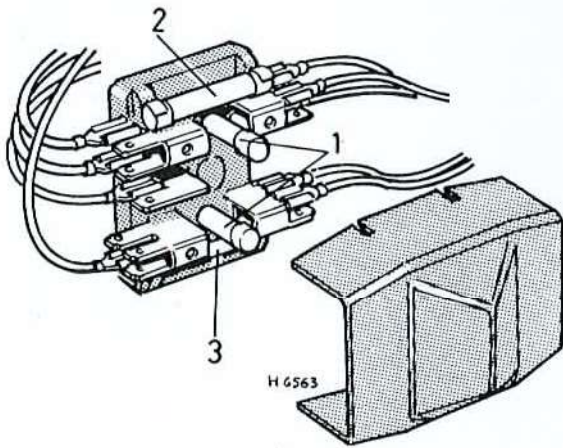
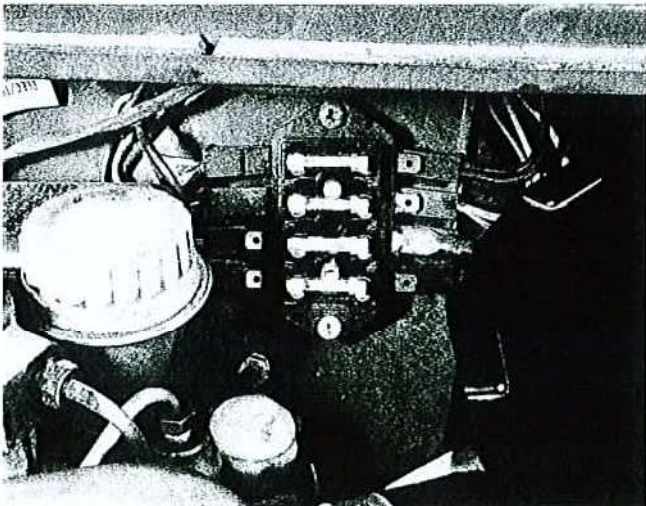


Fig. 10.13 The fuse block fitted to early models (Sec 31)

- 1 Spare fuses
- 2 35 amp fuse
- 3 35 amp fuse



31.1 Location of the fuse block on later models

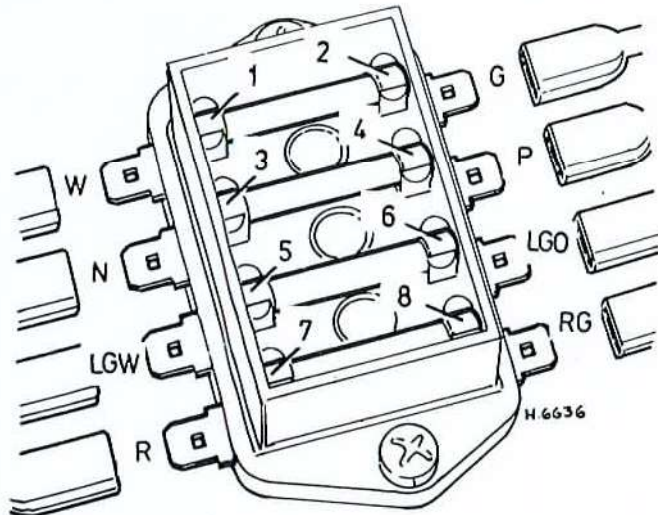


Fig. 10.14 The fuse block fitted to later models showing the wiring colour codes (Sec 31)

- |                         |                          |
|-------------------------|--------------------------|
| W – white               | G – green                |
| N – brown               | P – purple               |
| LGW – light green/white | LGO – light green/orange |
| R – red                 | RG – red/green           |



**Later models**

Fuse connecting	Rating	Function
1 and 2	35 amp	Stop lights, reversing lights, direction indicators, heated rear window. These systems will only operate with the ignition switch at II.
3 and 4	25 amp	Horn, headlight flasher, brake failure circuit. These systems operate independently of the ignition switch.
5 and 6	25 amp	Heater blower motor, windscreen wipers and washers, radio. These systems will operate with the ignition switch at I or II.
7 and 8	15 amp	Side and tail lights, panel lights.

**Line fuses**

Line fuses will be found in the following positions:

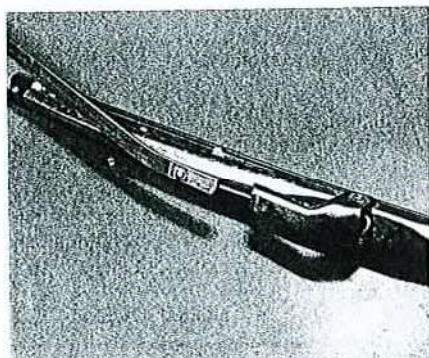
Hazard warning, interior light (15 amp)	Located on the engine compartment bulkhead
Radio	Located in the main feed line to the radio. The fuse rating should be as specified by the manufacturer.

**32 Windscreen wiper arms and blades – removal and refitting**

- To remove the wiper blades from the arms, lift up the arms and ease back the small metal clip that secures the blade to the arm. Now slide the blade off the end of the arm (photo).
- To refit the blade, slide it onto the arm until the retaining clip clicks into position and locks the blade in place.
- Before removing a wiper arm, turn the windscreen wiper switch on and off, to ensure the arms are in their normal parked position with the blades parallel to the bottom of the windscreen.
- To remove the arm, pivot the arm back and pull the wiper arm head off the splined drive, at the same time easing back the clip with a screwdriver (photo).
- When refitting an arm, place it so it is in the correct relative parked position and then press the arm head onto the splined drive until the retaining clip clicks into place.

**33 Windscreen wiper mechanism – fault tracing and rectification**

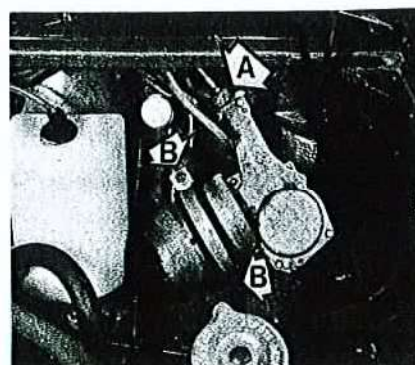
- Should the windscreen wipers fail, or work very slowly, then check the terminals for loose connections, and make sure the insulation of the external wiring is not cracked or broken. If this is in order, then check the current the motor is taking by connecting up an ammeter in the circuit and turning on the wiper switch. Consumption should be approximately 2 to 3 amps.
- If no current is passing through, check the fuse. If the fuse has blown, renew it after having checked the wiring of the motor and other electrical circuits serviced by this fuse for short circuits. If the fuse is in good condition check the wiper switch.



32.1 Wiper blade removal from wiper arm



32.4 The wiper arm is a push fit on the wiper spindle splines



34.4 Cable rack guide tube retaining nut A and motor strap retaining screws B

- If the wiper motor takes a very high current, check the wiper blades for freedom of movement. If this is satisfactory, check the gearbox cover and gear assembly for damage and measure the armature endfloat, which should be as shown in the specifications. The endfloat is set by the adjusting screw. Check that excessive friction in the cable guide tubes caused by too small a curvature is not the cause of the high current consumption.
- If the motor takes a very low current and the battery is fully charged, the fault is likely to be the motor brush gear. To check this it will be necessary to remove the motor from the car for dismantling and inspection as described in the following Sections.
- Should the wiper fail to park, or operate on only one speed where two-speed wipers are fitted, the fault will probably lie in the limit switch assembly. Renewal of this switch is described in Section 36.

**34 Windscreen wiper motor – removal and refitting**

- Disconnect the battery earth terminal.
- Remove the wiper arms from the spindles as described in Section 32.
- Withdraw the electrical cable terminal connector from the motor, and if a separate earth wire is fitted, detach this from the wing valance.
- Undo the nut securing the cable rack guide tube to the wiper motor gearbox (photo).
- Undo and remove the two motor strap retaining screws and lift off the strap.
- Carefully withdraw the motor assembly pulling the cable rack from the guide tubes.
- To refit the motor, lightly lubricate the cable rack with a general-purpose grease.
- Enter the cable rack into the guide tubes and carefully push it through, ensuring that it engages the wheelbox gear teeth.
- Refit the motor retaining strap and the guide tube retaining nut.
- Reconnect the electrical leads and the battery terminal.
- Switch on the wipers, check the function of the motor and then turn it off. With the motor now in the 'park' position, refit the wiper blades.

**35 Windscreen wiper wheelbox – removal and refitting**

- Remove the windscreen wiper motor as described in the previous Section.
- Carefully lift back the engine compartment bulkhead insulation to provide access to the wheelboxes.
- Undo and remove the retaining nut and spacer from each wheelbox.
- Slacken the nuts that clamp the guide tubes between the wheelbox plates and then lift out the guide tubes.
- The wheelboxes can now be lifted out.
- With the wheelboxes removed, withdraw the wheelbox plates and lift out the spindle and gear. Examine the gear teeth for wear and renew as necessary.
- Refitting is the reverse sequence to removal; bearing in mind the following points.