

# ELECTRICAL FAULT DIAGNOSIS

## HEADLAMP WASH WIPE

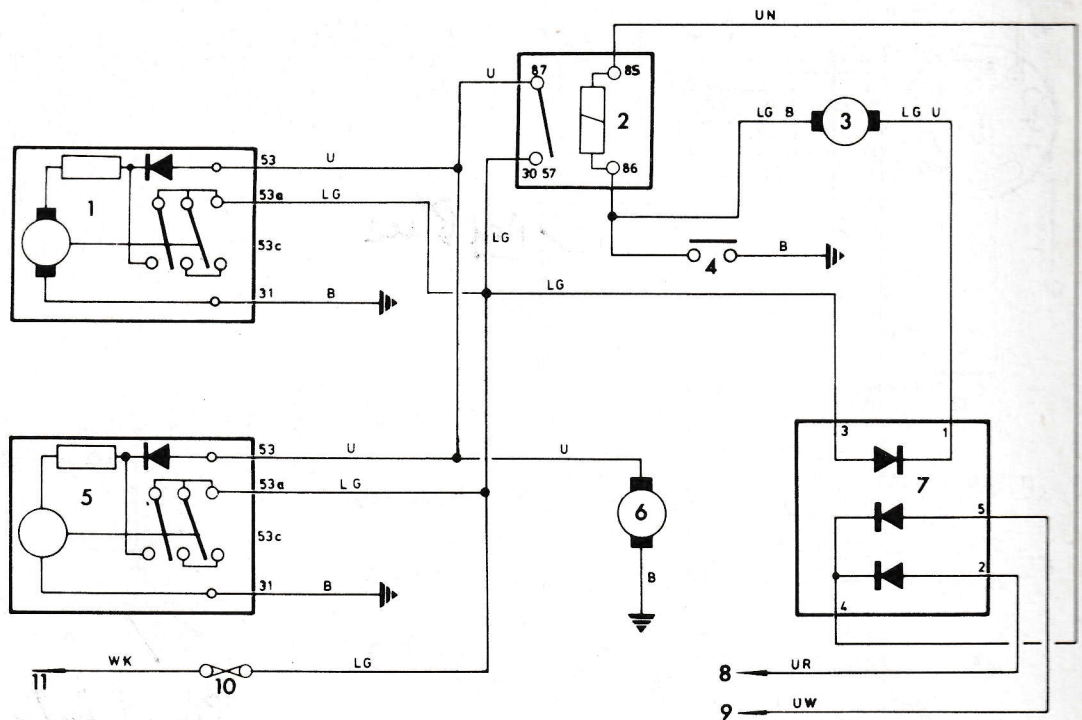


Fig. 11

### KEY TO DIAGRAM

1. RH headlamp wiper motor
2. Wash wipe relay
3. Windscreen washer pump
4. Windscreen washer switch
5. LH headlamp wiper motor
6. Headlamp washer pump
7. Diode pack
8. To headlamp dip beam
9. To headlamp main beam
10. Fuse No 11

## HEADLAMP WASH WIPE

### Description

The headlamp wash wipe circuits will only be activated with headlamps switched to main or dip beam. When the headlamps are switched on power is applied to the wash wipe relay via a diode in the wash wipe diode unit. Power is also supplied to the windscreen washer motor via a diode in the wash wipe diode unit. When the windscreen washer switch is operated the circuit is completed to earth energising the wash wipe relay and the headlamp washer motor. Power is now supplied to the headlamp wiper motors via the relay contacts. When the windscreen washer switch is released the relay is de-energised thus switching off the headlamp washer motor. The headlamp wiper motors will continue to operate via power being applied to terminal 53a on the wipers until the wiper internal switch contacts open.

### Fault Finding

Check that all connections are clean and tight. Check the fuse.

Ensure the earth connections are clean and tight.

With the ignition switched on. Battery voltage should be obtained at terminals 1 and 3 of the diode module. If battery voltage is obtained at terminal 3 but a zero reading at terminal 1 a faulty diode is indicated in the diode module.

With the headlamps switched to main beam. Battery voltage should be obtained at terminals 5 and 4 of the diode module. With the headlamps switched to dip beam. Battery voltage should be obtained at terminals 2 and 4 of the diode module. A zero reading at terminal 4 in either main or dip beam position indicates a faulty diode in the module.

With the ignition switched on. Battery voltage should be obtained at terminal 30/51 of the wipe/wash relay. With headlamps switched on. Battery voltage should be obtained at terminals 85 and 86 of the relay. When the windscreen washer is operated the terminal 86 of the relay should drop to zero, and battery voltage should then be obtained at terminal 87 of the relay. If the voltage remains at 12 volts at terminal 86 of the relay. Check the wash/wipe switch, and wiring. If the terminal voltage drops to zero voltage replace the relay.

With the ignition switched on, battery voltage should be obtained at terminal 53a of the headlamp wiper motor. With headlamps switched on, battery voltage should be obtained at terminal 53 of the wiper motor. Terminal 31 of the motor should be earthed. If the voltage reading and the earth are satisfactory remove the wiper motor and bench check.