

## 3 Fuses and relays - general information

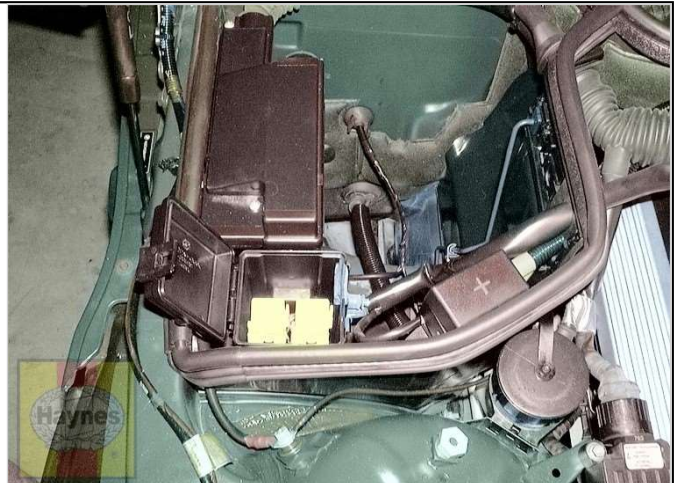
### Main fuses

1 Most of the fuses are located behind the fuse box in the left-hand rear corner of the engine compartment (see illustration) . On Z3 models, there are also some fuses and relays in the E-box in the right-hand rear corner of the engine compartment (see illustration) and above the left kick panel (see illustration) .

**3.1a Most of the fuses and relays are located in the front power distribution box in the left rear corner of the engine compartment (Z3 model shown, other models similar)**



**3.1b Other fuses and relays are located in the E-box, in the right rear corner of the engine compartment (Z3 model shown, other models similar)**



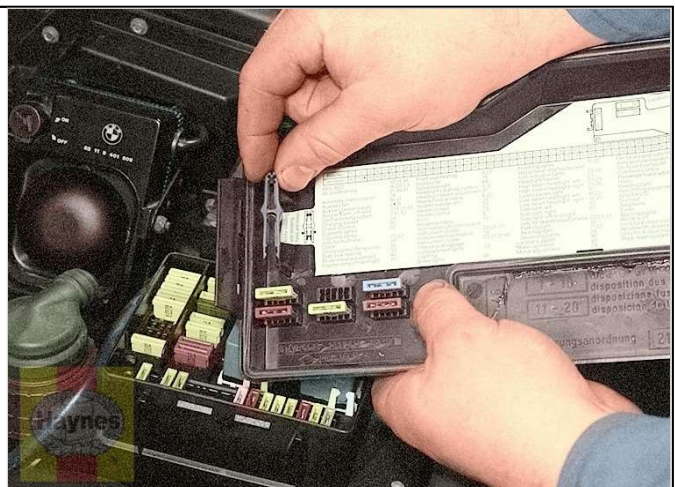
**3.1c Some fuses and relays are also located above the left kick panel (Z3 model shown, other models similar)**



2 To remove the fuse box cover, release its front retaining clip then unclip the cover.

3 A list of the circuits each fuse protects is given on the label attached to the inside of the fuse box cover. A pair of tweezers for removing the fuses is also clipped to the lid (see illustration) .

**3.3 Fuses can be removed using the tweezers which are clipped to the fuse box lid. Fuse locations are given on the sticker attached to the lid**



4 To remove a fuse, first switch off the circuit concerned (or the ignition), then pull the fuse out of its terminals using the tweezers which are clipped to the inside of the fuse box cover. The wire within the fuse should be visible; if the fuse is blown it will be broken or melted.

5 Always replace a fuse with one of an identical rating; never use a fuse with a different rating from the original or substitute anything else. Never replace a fuse more than once without tracing the source of the trouble. The fuse rating is stamped on top of the fuse; note that the fuses are also color-coded for easy recognition.

6 If a new fuse blows immediately, find the cause before replacing it again; a short to ground as a result of faulty insulation is most likely. Where a fuse protects more than one circuit, try to isolate the defect by switching on each circuit in turn (if possible) until the fuse blows again. Always carry a supply of spare fuses of each relevant rating on the vehicle, a spare of each rating should be clipped into the base of the fuse box.

## Relays

7 The majority of relays are located in the fuse box in the left-hand rear corner of the engine compartment. Additional relays can be found in the relay carrier under the left-hand side of the dash or attached to the connector strips under the left and right-hand sides of the dash (see illustrations) .

### 3.7a Typical fuse box relay locations (fuse locations also numbered) (3-Series model shown)

1 Fuel pump relay

2 DME relay

3 Oxygen sensor relay

4 Horn relay

5 Foglight relay

6 Headlight relay

7 Main beam relay

8 Hazard warning light relay

9 Blower motor relay

10 Heated rear window relay

11 ABS overvoltage protection relay

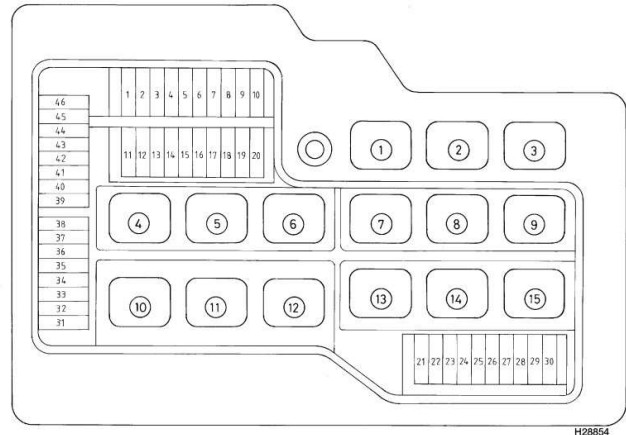
12 ABS pump motor relay

13 Auxiliary cooling fan stage 2 relay

14 Air conditioning compressor relay

15 Auxiliary cooling fan stage 1 relay

\*Not all relays present on all models



### 3.7b Typical relay carrier under behind left-hand side of dash (3-Series model shown)

1 Independent ventilation relay

2 Double relay module

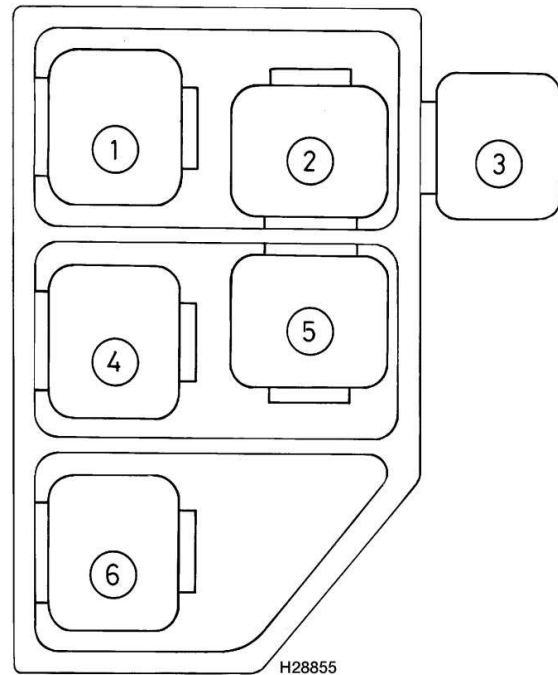
3 Rear window opening relay - coupe models

4 Crash alarm sensor relay

5 Headlight washer module relay

6 Comfort relay

\*Not all relays present on all models



### 3.7c Typical connector strip behind the left-hand side of the dash (3-Series model shown)

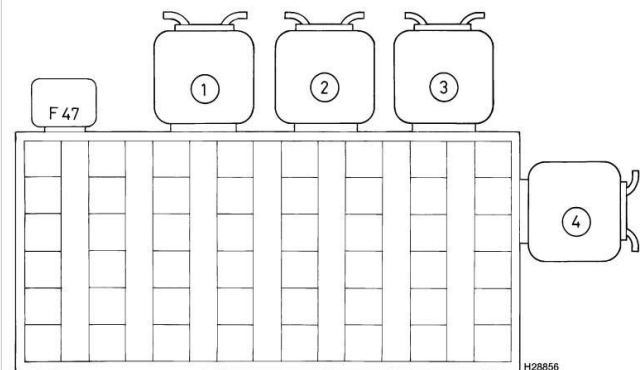
1 Unloader relay or starter interlock relay (depending on model)

2 Wiper relay

3 Wiper motor relay

4 Unloader relay or starter interlock relay (depending on model)

\*Not all relays present on all models





### 3.7d Typical connector strip behind the right-hand side of dash (3-Series model shown)

1 Alarm horn relay

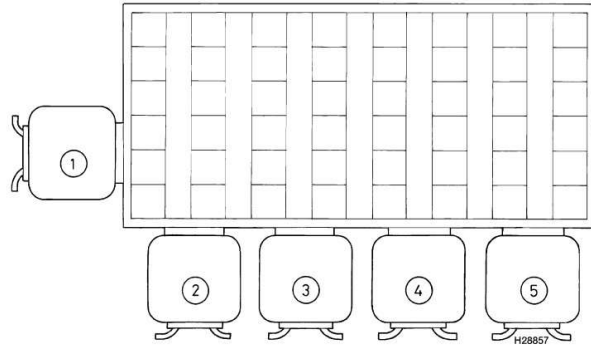
2 Right-hand parking light/license plate light relay

3 Left-hand parking light relay

4 Central locking relay

5 Rear window blower motor relay

\*Not all relays present on all models



8 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 it should be possible to hear it click as it is energized. If this is the case the fault lies with the components or wiring of the system. If the relay is not being energized 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.

9 To replace a relay first ensure that the ignition switch is off. The relay can then simply be pulled out from the socket and the new relay pressed in (see illustration) .

### 3.9 Removing a relay from the fuse box

