17-pin SD connector

9 Use a jumper lead to bridge terminals TEN and GND in the 17-pin SD connector **(see illustration 21.5)**. On models without a warning light, connect an LED diode light **(see illustration 21.6)** or analogue voltmeter **(see illustration 21.7)** between the FEN and the B+ terminal in the SD connector or the FEN terminal and the battery positive terminal.
Note: *Up to and including 1987, the fault codes are generated as a straight count. For example, 15 flashes indicates code number 15, or 5 flashes indicate code number 5. Please refer to the correct fault code table for these models.*

Models with SD warning light, or retrieval with the aid of an LED test light

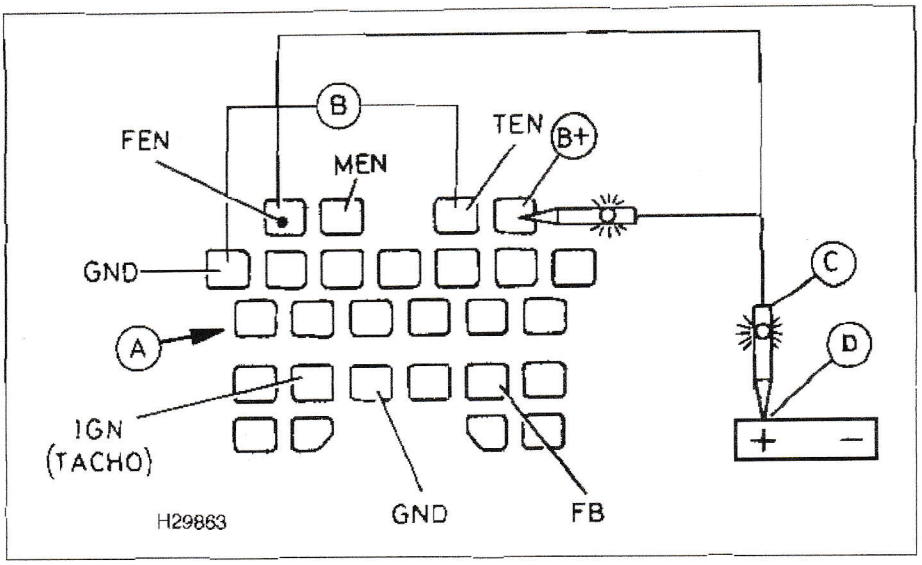
10 Switch on the ignition, but do not start the engine.
11 Fault codes are displayed on the LED light or the SD warning light as 2-digit flash codes. Codes 1 to 9 are displayed as a series of short pulses 0.4 seconds in duration, with a 0.4-second pause between each pulse; thus, 8 flashes indicates code number 8.
12 The numbers from 10 to 69 are displayed by two series of flashes:

a) The first series of flashes indicates the multiples of ten, the second series of flashes indicates the single units.
b) Tens are indicated by 1.2-second flashes, separated by a short pause.
c) A pause of 1.6 seconds separates tens and units (the light remains extinguished during pauses).
d) Units are indicated by 0.4-second flashes, separated by short pauses.
e) Code 41 is displayed by four long flashes and one short flash.
f) After a 4-second pause, the code is repeated.
g) A pause of 4 seconds separates the transmission of each individual code.

13 Count the number of flashes in each series, and record each code as it is transmitted. Refer to the tables at the end of the Chapter to determine the meaning of the fault code.
14 Continue retrieving codes until all stored codes have been retrieved and recorded.
15 Turn off the ignition and remove the jumper lead and test light (where used) to end fault code retrieval.

Retrieval with the aid of an analogue voltmeter

16 Switch on the ignition, but do not start the engine.
17 Fault codes are displayed on the analogue voltmeter as needle sweeps; the number of needle sweeps indicates the fault code.
18 Count the number of sweeps in each series, and record each code as it is transmitted. Refer to the tables at the end of the Chapter to determine the meaning of the fault code.
19 Continue retrieving codes until all stored codes have been retrieved and recorded.
20 Turn off the ignition and remove the jumper lead and voltmeter to end fault code retrieval.

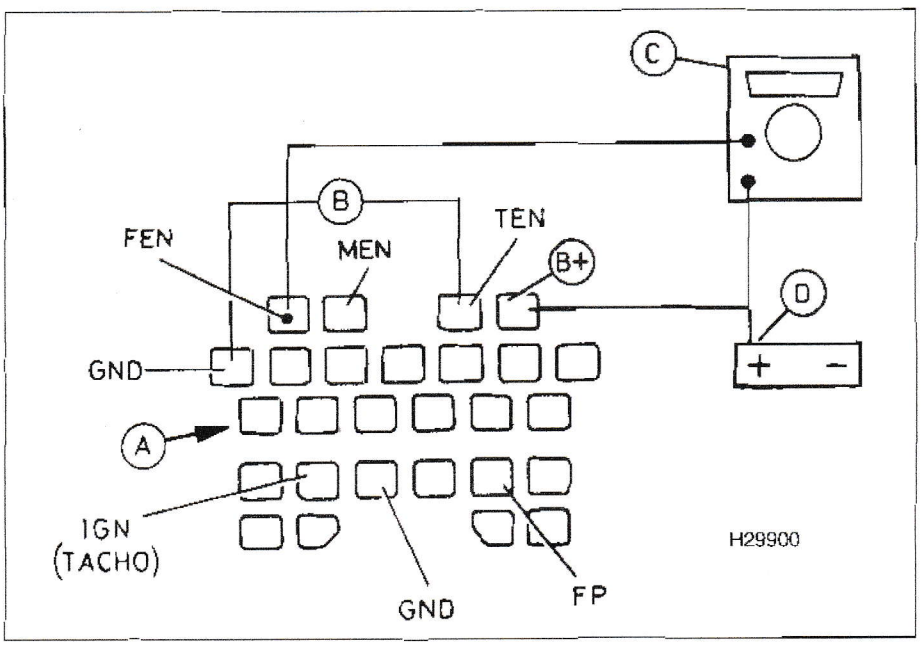


21.6 Connect an LED test light and a jumper lead to the correct pins in the SD connector in order to retrieve flash codes. The positive probe must be connected either to the B+ terminal in the 17-pin SD connector or the battery positive terminal

A 17-pin SD connector
B Jumper lead
C LED test light
D Battery positive terminal

4-digit fault codes

21 Some Mazda models from 1995 onwards have a 4-digit fault code structure. The code tables at the end of the Chapter indicate the meaning for both 2- and 4-digit codes, but at the time of going to press, we do not have information on whether 4-digit codes can be retrieved by manual means.



21.7 Connect an analogue voltmeter and a jumper lead to the correct pins in the SD connector in order to retrieve flash codes. The positive probe must be connected either to the B+ terminal in the 17-pin SD connector or the battery positive terminal

A 17-pin SD connector
B Jumper lead
C Analogue voltmeter
D Battery positive terminal