

Brakes - ABS

FAULT FINDING

Follow the fault finding procedure in the sequence below:

1. Use Microcheck and associated corrective service to diagnose fault.
2. If Microcheck is not available see 'Self-diagnosis function' on the following page.
3. If no fault found with Microcheck or self-diagnosis and the fault is of an intermittent nature, check the following;
 - security of all connections in the ABS loom
 - discontinuity in associated wiring and sensor leads whilst flexing loom and sensor leads.
 - internal ECU continuity between pins 2, 5, 7, 14 in C12 and the earth path pin 3 in C11. If no continuity exists replace ECU.
 - Clean/check ABS ECU to body earth point.
4. If the ABS system will not communicate with Microcheck or display self diagnosis codes check connections and wiring between the diagnostic socket and ECU.

FAULT FINDING GUIDE

Fault

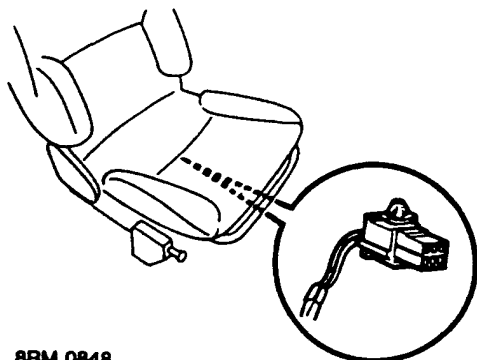
ABS operates under light braking on dry road surfaces or over bumps.

ABS warning light inoperative when ignition switched on

Action

See step 3 above.

Check fuse 1.
Check continuity of G wire from fuse 1 to the warning light.
Check warning light bulb.
Check continuity from warning light on a U/R wire to ECU
Check ECU earth



8RM 0848

Diagnostic connector position

Self-diagnosis function

The ECU has a built in self-diagnosis function. The ABS warning light will illuminate if there is a fault. The fault code is shown by the ABS warning light flashing in the following described sequence.

To access the ECU memory to obtain the fault code firstly gain access to the serial link diagnostic connector which is situated under the drivers seat. Disconnect bridging connector for access to diagnostic connector.

Turn off the ignition, bridge the Y/G wire to the B wire, switch on the ignition. The ABS warning light will now commence a sequence of flashes. Firstly it will initiate the start identification by flashing the code '1-2' three times in succession. Then after a 3 second pause the fault code will be flashed three times in succession. Up to three separate fault codes may be stored at one time.

The first digit of the code is shown by the warning light flashing a number of times in succession, then after a 1 second pause the warning light flashes again to give the second digit of the code.

For example: Code '2-5'. The warning light will flash twice in succession then after a 1 second pause will give a further 5 flashes.

Clearing the fault code

The memory code must be cleared once the fault has been rectified, in the following way;

1. Remove the Y/G to B bridging wire and refit bridging connector.
2. Turn ignition ON

3. Wait for warning light in the instrument pack to extinguish
4. Turn ignition OFF
5. Repeat procedure 20 times.

Note: If the memory has been cleared successfully the start identification code '1-2' will continually flash until the Y/G to B wires are bridges again.

Ensure the bridging connector is refitted when the system check has been completed.

ECU fault codes

Note: Fault could be in the specific component or in the associated wiring.

| Fault | Code |
|---------------------------------------|------|
| Start identification | 1-2 |
| Front left wheel solenoid valve | 1-6 |
| Front right wheel solenoid valve | 1-7 |
| Rear wheels solenoid valve | 1-8 |
| Relays or relay power supply | 1-9 |
| Pulser ring | 2-5 |
| Return pump | 3-5 |
| Brake lamp switch | 3-7 |
| Front left wheel speed sensor signal | 3-9 |
| Front left sensor continuity | 4-1 |
| Front right wheel speed sensor signal | 4-2 |
| Front right sensor continuity | 4-3 |
| Rear left wheel speed sensor signal | 4-4 |
| Rear left sensor continuity | 4-5 |
| Rear right wheel speed sensor signal | 4-6 |
| Rear right sensor continuity | 4-7 |
| Battery voltage too low | 4-8 |
| Electronic control unit | 5-5 |
| Interruption of fault codes | 5-6 |