

On-board fault diagnosis capability

An engine fault warning panel is incorporated in the driver information module on the fascia (see fig.

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B2-8 Driver information module

1	Warning panel
2	Dot matrix display

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The warning panel is fitted to alert the driver to a possible engine related fault.

The warning panel displays the message CHECK ENGINE and remains illuminated whenever the ignition is switched on, until the malfunction has been diagnosed and corrected.

The PCME continuously monitors the inputs from sensors critical to emission control system operation.

If a signal is outside the specified limits programmed into the PCME, the engine check lamp is illuminated and a fault message (in the form of a four digit code) is stored within the PCME. This message can be subsequently retrieved and used to inform workshop personnel of the faulty component or system.

The CHECK ENGINE warning panel is not always illuminated when a fault is identified. In these instances however, the fault code is still stored in the PCME and can be retrieved in the usual manner during workshop diagnosis.

When a fault diagnosis is undertaken, the fault will be revealed as a blink code on the CHECK ENGINE warning panel. In addition, the title of the faulty system will be displayed on the driver's information and warning panel.

For details of the fault diagnosis procedure refer to figure

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B2-32 'On-board' fault diagnosis codings

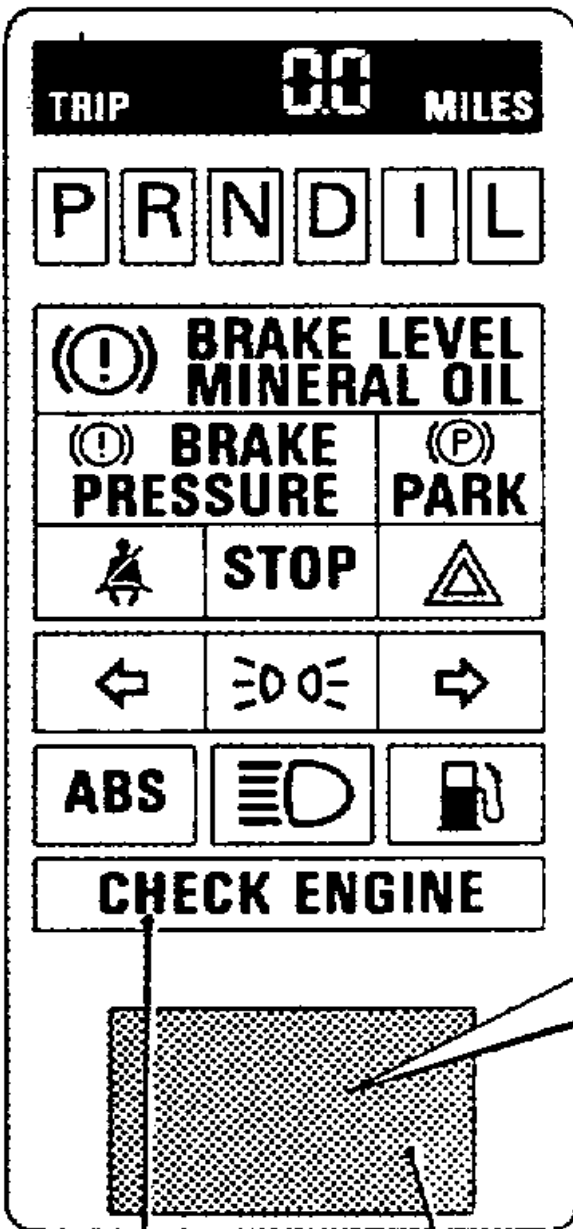
a)	The 'CHECK ENGINE' warning panel situated on the fascia, illuminates during normal engine operation.
b)	A routine 'on-board' diagnostic check is required.
1.	Ensure that the usual workshop precautions are carried out, and the gear range selector lever is in the Park position.
2.	Turn the ignition key to the RUN position on the switchbox, so that the 'CHECK ENGINE' warning panel illuminates (see illustration A).
3.	Depress the TRIP reset and warning CANCEL buttons located on a small panel adjacent to the steering column (see illustration B).
4.	Monitor the blink code on the 'CHECK ENGINE' warning panel, after the initial period of 2.5 seconds lamp on and 2.5 seconds lamp off (Refer to illustration D for an example of the initial period of 'CHECK ENGINE' warning panel operation, followed by the blink code 4.4.3.1.).
5.	Once a blink code has been transmitted via the 'CHECK ENGINE' warning panel, the title of the system at fault will be displayed on the dot matrix (see illustration A).
6.	If there are no more fault codes stored, the condition is identified by the unique code 1.1.1.1. Warning panel on/off periods for this code are of 2.5 seconds duration.
7.	If there are no faults stored, the blink code 4.4.4.4. will register on the 'CHECK ENGINE' warning panel.
8.	To reset the K-Motronic ECU after fault extraction and/or rectification, isolate the vehicle battery for more than 4 seconds.

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ON-BOARD 5001B002E_ON-BOARD B2-32, On-board fault diagnosis codings.

On 1992 and 1993 model year cars, the Mastercheck test equipment and appropriate data card, can be used to interrogate this on-board fault diagnosis capability. Reference should be made to Chapter A, Section A4 for full details.



AIR FLOW SIGNAL

COOLANT TEMP SIGNAL

ENGINE SPEED SENSOR

FULL LOAD SWITCH

IDLE MODE SWITCH

IDLE SPEED CONTROL

LAMBDA OUTSIDE LIMITS

LAMBDA SENSOR FAILURE

MIXTURE CONTROL LEAN

MIXTURE CONTROL RICH

SPARK TIMING SENSOR