

Workshop 29

Accessing, Reading & Erasing Engine Trouble Codes 2.7tdi.

General information

Trouble codes are displayed by the malfunction indicator lamp (MIL). [Fig. 1](#)

The ECM fault memory can also be checked using diagnostic equipment connected to the Data link connector (ELC). [Fig. 1 \(A\)](#)

Switch ignition on.

Check that MIL illuminates.

Start engine. Allow to idle.

If MIL extinguishes: No trouble codes have been recorded.

If MIL remains illuminated: Access trouble codes.

[Fig. 1](#)



[Fig. 1\(A\)](#)



Accessing Codes

Switch ignition ON.

Bridge data link connector (DLC) terminals IGN and CHK (a paperclip will do the job). [Fig. 2](#).

Wait 2 seconds.

Disconnect bridge wire from data link connector (DLC) [Fig. 2](#).

Count ML flashes. Compare with trouble code table.

Long flashes indicate the 'tens' of the trouble code [Fig. 3 \[A\]](#).

Short flashes indicate the 'units' of the trouble code [Fig. 3 \[C\]](#).

A short pause separates each flash [Fig. 3 \[B\]](#).

A long pause separates each trouble code [Fig. 3 \[D\]](#).

For example: Trouble code 12 displayed [Fig. 3](#).

Switch ignition OFF. Rectify faults as necessary.

Fig. 2

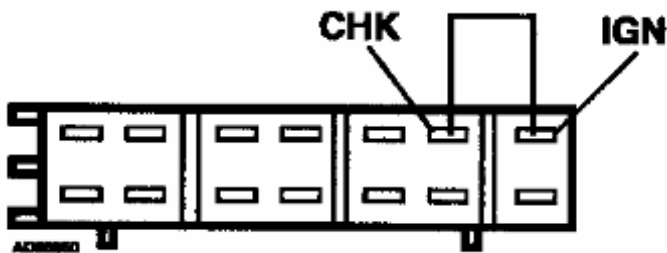
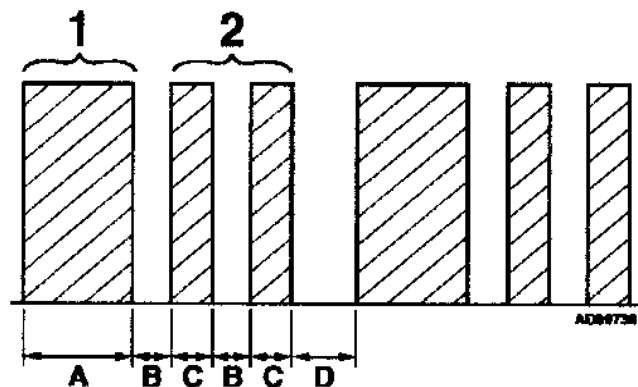


Fig. 3



Erasing Codes from ECM Memory.

Switch ignition on.

Bridge data link connector (DLC) terminals IGN and CF-CHK [Fig. 2](#).

Wait 2 seconds.

Disconnect bridge wire from data link connector (DLC) [Fig. 2](#).

Check that MIL flashes.

Bridge data link connector (DLC) terminals IGN and CHK [Fig. 2](#).

Wait 2 seconds.

Disconnect bridge wire from data link connector (DLC) [Fig. 2](#).

Switch ignition OFF.

Repeat checking procedure to ensure no data remains in ECM fault memory.

Trouble code Identification

Flash Type	Fault Location	Probable Cause
11	Fuel injection pump position sensor - incorrect signal	Wiring open/short circuit, fuel injection pump position sensor
12	Mass air flow (MAF) sensor - circuit malfunction	Wiring open/short circuit MAF sensor
13	Engine coolant temperature (ECT) sensor . circuit malfunction	Wiring open/short circuit, ECT sensor
14	Vehicle speed sensor (VSS) - circuit malfunction	Wiring open/short circuit, VSS
15	Fuel quantity adjuster position sensor - circuit malfunction	Wiring open/short circuit, fuel quantity adjuster position sensor
17	Module coding plug - circuit malfunction	Wiring open/short circuit, module coding plug
18	Fuel quantity adjuster/position sensor - malfunction	Wiring, supply voltage, fuel quantity adjuster/position sensor, ECM, fuel injection pump
21	Fuel injection timing solenoid/injector needle lift sensor-malfunction	Wiring, fuel injection timing solenoid, injector needle lift sensor, CKP sensor, air in fuel
22	Fuel quantity adjuster/position sensor - malfunction	Wiring, supply voltage, fuel quantity adjuster/position sensor, ECM, fuel injection pump
23	Accelerator pedal position (APP) switch - incorrect signal	Wiring open/short circuit, APP switch
25	Fuel quantity adjuster - circuit malfunction	Wiring, fuel quantity adjuster
27	Engine control module (ECM) - defective	ECM
28	Engine coolant blower motor - malfunction	Wiring, engine coolant blower motor, coolant system
31	Engine control module (ECM) - defective	ECM
34	Injector needle lift sensor - incorrect signal	Wiring, injector needle lift sensor, air in fuel
36	Fuel shut-off solenoid 1 - malfunction	Wiring open/short circuit, fuel shut-off solenoid
37	Fuel shut-off solenoid 'I - circuit malfunction	Wiring short circuit
38	Fuel shut-off solenoid 2 - malfunction	Wiring open circuit, ECM
42	Fuel temperature sensor - incorrect signal	Wiring open/short circuit, fuel temperature sensor
43	Accelerator pedal position (APP) sensor/accelerator pedal position (APP) switch - incorrect signa	Wiring open/short circuit, APP sensor/switch
47	Crankshaft position (CKP) sensor - incorrect signal	Wiring open/short circuit, CKP sensor
48	Accelerator pedal position (APP) switch/fuel injection pump position sensor - circuit malfunction	Wiring open/short circuit, APP switch, fuel injection pump position sensor, ECM
55	No fault found	
82	Barometric pressure (BARO) sensor, in ECM - incorrect signal	ECM
83	Glow plug relay - circuit malfunction	Wiring open/short circuit, glow plug relay
84	Engine control module (ECM), reference voltage - incorrect	ECM
85	AC relay - circuit malfunction	Wiring open/short circuit,AC relay
86	Exhaust gas recirculation (ECR) solenoid - circuit malfunction	Wiring open/short circuit, EGR solenoid
87	Brake pedal position (BPP) switch I/li - circuit malfunction	Wiring open/short circuit, BPP switch
91	Engine control module (ECM) - defective	ECM
92	Engine control relay, shut-off time - too late	Wiring open/short circuit, engine control relay, ECM
93	Ignition switch/ECM voltage supply - circuit malfunction	Wiring short circuit
94	Fuel injection timing solenoid - circuit malfunction	Wiring open/short circuit, fuel injection timing solenoid

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