Diagnosis - Diagnostic Trouble Code (DTC) Memory

Preparation for recalling diagnostic trouble code (DTC) memory

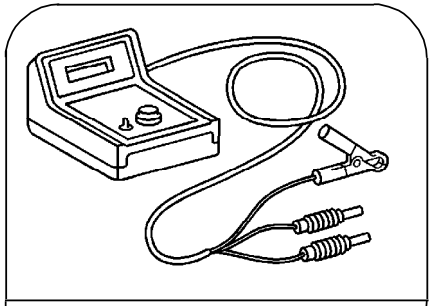
1. Connect impulse counter scan tool and adaptor for impulse counter to test connection for diagnosis (X11/4) according to connection diagram (see section 0).
   Note:
   Connect impulse counter scan tool as follows:
   red wire to socket 16,
   black wire to socket 1 and
   yellow wire to:

Diagnostic module	socket 3
Engine control module	socket 8
EA/CC/ISC control module	socket 14

2. Recall control modules' diagnostic trouble code memory and clear stored trouble codes (see section 0).

   Note
   The retained diagnostic trouble code (DTC) memory feature of the diagnostic module has been replaced with DTC memory which is cleared after disconnecting the vehicle's battery (DM voltage supply). In addition, the DTC readout "1" (no malfunction in system) **does not** appear after clearing the DTC memory (disconnecting the vehicle's battery). DTC readout "1" only reappears during the vehicle's subsequent trip after the diagnostic module has confirmed that all monitored systems and their respective components are ok (no malfunctions).

Special Tools



124 589 19 21 00

Pulse counter

Diagnosis - Diagnostic Trouble Code (DTC) Memory

Diagnostic Trouble Code (DTC) Readout, Diagnostic Module

Diagnostic Trouble Code (DTC)	Possible Cause	Remedy/Test Step 1)
1	No malfunction in systems monitored	–
2	Heated oxygen sensor inoperative	Test HFM-SFI, Engines Vol.2, section 1.
3	Lambda control inoperative	Test HFM-SFI, Engines Vol.2, section 1.
4	Air injection inoperative	Test HFM-SFI, Engines Vol.2, section 1.
5	Exhaust gas recirculation inoperative	Test HFM-SFI, Engines Vol.2, section 1.
6	Idle speed control inoperative	Test EA/CC/ISC, sections 6/7.
7	Ignition system defective	Test HFM-SFI, Engines Vol.2, section 1.
8	Engine coolant temperature sensor, open/short circuit	Test HFM-SFI, Engines Vol.2, section 1.
9	Intake air temperature sensor, open/short circuit	Test HFM-SFI, Engines Vol.2, section 1.
10	Voltage at hot wire mass air flow sensor too high/low	Test HFM-SFI, Engines Vol.2, section 1.
11	TN-signal (rpm) at engine control module (N3/4) defective	Test HFM-SFI, Engines Vol.2, section 1.
12	Heated oxygen sensor heater, open/short circuit	Test HFM-SFI, Engines Vol.2, section 1.
15	Wide open throttle information defective	Test EA/CC/ISC, sections 6/7.

1) Observe Preparation for Test, see 22.

Diagnosis - Diagnostic Trouble Code (DTC) Memory

Diagnostic Trouble Code (DTC)	Possible Cause	Remedy/Test Step [1]
16	Closed throttle position information defective	Test EA/CC/ISC, section 6/7.
17	Data exchange malfunction between individual control modules	23 ⇒ 6.0.
18	Adjustable camshaft timing solenoid, open/short circuit	Test HFM-SFI, Engines, Vol. 2, section 1
19	Fuel injectors open/short circuit or self-adaptation in engine control module (N3/4) at limit	Test HFM-SFI and reset engine control module adaptation to mean value, Engines, Vol. 2, section 1
20	Speed signal not present	Test HFM-SFI, Engines, Vol. 2, section 1
21	Purge switchover valve, open/short circuit	Test HFM-SFI, Engines, Vol. 2, section 1
22	Camshaft position sensor signal defective	Test HFM-SFI, Engines, Vol. 2, section 1
23	Intake manifold pressure (in base module pressure sensor- B5/2) with engine running too low/high	23 ⇒ 7.0.
24	Starter ring gear segments and/or crankshaft position sensor defective	Test HFM-SFI, Engines, Vol. 2, section 1
25	Knock sensors or engine control module defective	Test HFM-SFI, Engines, Vol. 2, section 1
26	Upshift delay defective	Test HFM-SFI, Engines, Vol. 2, section 1
27	Not used	–
28	Engine coolant temperature sensor (coolant temperature change monitor)	Test HFM-SFI, Engines, Vol. 2, section 1

[1] Observe Preparation for Test, see 22.