

Diagnosis - Diagnostic Trouble Code (DTC) Memory

Preliminary work: Engine Test, Adjustment, Engines (SMS, Job No. 07-1100)

Note regarding diagnostic trouble code (DTC) readout:

The engine control module (N3/10) for the ME-SFI system is equipped with diagnostic trouble code (DTC) memory. Malfunctions are recognized and stored as DTC's and are distinguished as follows:

- Malfunctions which are constantly present,
- Intermittent contact malfunctions which have occurred during a trip.

The DTC memory is erased when the vehicle's battery is disconnected.

Malfunctions which are no longer present, are automatically erased as follows:

- After three trips the "CHECK ENGINE" MIL goes out.
- After an additional 40 warm-up periods the DTC is automatically erased.

A warm-up period or trip is defined as follows:

Warm-up period

- Engine coolant temperature at start < 35° C,
- Engine coolant temperature increases to > 80° C.

Trip

- Engine running for > 20 minutes,
- Engine temperature > - 7° C,
- Engine speed > 500 rpm,
- All emission related logic chain functions already were checked during previous trips.

The stored DTC's can be read at the data link connector (X11/4) using the HHT only, with the ignition switched "ON" or with the "engine running".

Readout via an on-off ratio readout or impulse counter scan tool has been eliminated.

Note regarding mixture preparation self-adaptation:

The Lambda control system determines the fuel injection duration so precisely that the fuel/air ratio is kept constant at Lambda level 1 (equals 14.7 kg air to 1 kg fuel) under all operating conditions.

Should malfunctions occur in the form of:

- Intake air leaks,
- Injector wear or carbon build-up,
- Engine wear,
- Transition resistance in MAF sensor,
- Defective diaphragm pressure regulator,
- Defective purge control valve,

the engine control module automatically performs a mixture adjustment.

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The degree of correction is constantly calculated and permanently stored. The self-adaptation is performed additive at idle and multiplicative under partial load. The correction towards rich or lean at idle speed is ± 1.0 milliseconds (injection duration) and at partial load the factor is 0.77 - 1.28. After repair work is performed, the engine control module ME 1.0 will automatically adapt itself again.

Note regarding version coding:

The engine control module is equipped with a version coding feature. The coding must be performed with the Hand-Held Tester (automatically or manually, see Notes for HHT "Version coding" 11/5).

The following vehicle version data must be determined for coding:

- Vehicle model,
- Catalytic converter (TWC),
- Non-catalytic converter (non-TWC),
- Country version.

Note regarding drive authorization system (DAS) stage 2 and stage X:

Vehicles with ME-SFI are equipped with a drive authorization system (DAS). The activation/deactivation of the drive authorization system takes place from the RCL control module (stage 2) or from the DAS control module (stage X) via CAN data bus to the engine control module (ME-SFI). After activating the drive authorization system, the engine control module renders the fuel injection system inoperative.

On vehicles till 05/96 a drive authorization system stage 2 is installed. This drive authorization system can only be activated/deactivated with the IR transmitter or the master key.

On vehicles as of 06/96 a drive authorization system stage X is installed. The activation or deactivation is accomplished with transponder technology via the ignition key. As soon as the ignition key is turned in the steering lock the DAS control module receives a signal and the fuel injection system is made operative via the CAN data bus.

The engine control module and the RCL or the DAS control module are "locked" to one another through identification codes. The identification codes can not be erased (see HHT nominal values "DAS", menu selection 3/7).

Therefore, swapping the engine and RCL or DAS control modules from one vehicle to another is not possible!



If an exchange engine control module is installed for test purposes, only 40 start attempts can be performed before the engine and RCL or DAS control modules "lock" to one another. Prior to performing the first start, the engine control module must be version coded using the HHT. Additionally, the code number and VIN must be entered (see HHT nominal values "DAS", menu selection 3/7).

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Notes regarding automatic recognition of the mechanical end stop and wide open position of the throttle valve from the actuators:

The end stops of the throttle valves are determined by the actuator and stored in the engine control module.

After replacing the control module or actuator, the mechanical end stop and wide open throttle position must be determined and recorded.

After connecting the new engine control module for the first time to circuit 30 (B+), the engine control module performs a self adaptation of the actuator with the ignition ON (lower mechanical end stop).

Requirements for learning process:

- Selector lever in position P/N,
- Vehicle at rest,
- Engine off,
- Engine coolant temperature between 5° C and 100° C,
- Accelerator pedal not applied.

When all requirements are met, turn **ignition ON for at least 60 seconds**, then turn **ignition OFF for at least 10 seconds**.

The learned value is stored in memory, only after the first 10 start cycles, provided the voltage supply has not been interrupted. Should the battery be disconnected after the 9th start cycle, the re-learning process must be performed again.

Notes regarding the engine control module after interruption of voltage supply, circuit 30:

If a rough running engine is noticed after a voltage interruption, the following conditions must be met:

- Engine coolant temperature approx. > 80 °C,
- Drive vehicle on dynamometer in selector lever position 4 or on the road in selector lever position 3.
- Increase engine rpm to approx. > 3500 rpm and then coast until engine rpm is approx. < 1200 rpm.
- Repeat procedure at least 3 times.

Notes regarding performance/speedometer test:

Disconnecting the ESP/ASR/ETS/ABS control modules is not allowed. The engine control module and transmission control module rely on these modules to supply the VSS data via the CAN bus.

To disable the brake and engine regulation function of the ESP/ASR/ETS/ABS control modules proceed as follows:

A. Working without HHT

- Ignition: **OFF**.
- Connect HHT adapter to data link connector (X11/4).
- Bridge sockets 1 and 6.
- Engine: **Start** (ESP/ASR/ETS/ABS MIL must illuminate!).

B. Working with HHT

- Ignition: **OFF**.
- Disconnect front axle VSS sensor connector (ESP/ASR/ETS/ABS MIL must illuminate!).

When work is completed, reconnect VSS sensor connector and erase DTC's with HHT!

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Notes regarding activation of CHECK ENGINE MIL

With combustion misses (e.g. ignition or fuel mixture) the CHECK ENGINE MIL is activated intermitantly (blinking). Affected are the DTC's P0 300 to P0 30B.

With all other malfunctions, the MIL is illuminated continuously.

Notes regarding CKP sensor (L5) adaption

After the replacement of the ME-SFI control module and for the uneven running engine test, the toothed wheel sensor (CKP sensor) adaption must be performed as follows:

- ECT approx. 70°C
- Drive vehicle with transmission selector lever in 3rd gear
- Increase engine rpm to > 3500 rpm and then coast until engine rpm attains 1200 rpm.

After the replacement of the CKP sensor (L5), the starter ring gear or the replacement of the engine, the toothed wheel sensor (CKP sensor) adaption must be first reset using the HHT, then perform the driving cycle as indicated above.

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Notes for HHT

- **Fault search with HHT**

Diagnostic trouble code (DTC) memory: Select "Current DTC's".
If the actual condition changes, e.g. when wiggling a connector, the change is reported optically and acoustically so that troubleshooting can be performed directly with the HHT.
- **Loose connections**

Loose connections are stored if they occur several times in a certain time period. Therefore, they can appear only as "Stored DTC's" and never as "Current DTC's".
- **Nominal values**

All nominal values relative to the actual values shown on the HHT are listed in the Diagnostic Manual, Engines, Volume 1, section A.
- **Actual value for engine speed**

For engine speed, the HHT display indicates the closed throttle speed (CTP) nominal value calculated by the control module on the left, and the rpm actual value on the right. Both values should differ from each other only slightly. Permissible tolerances are not yet determined.
- **Version coding with HHT**
 - a) Before replacement of the engine control module, the existing code number must be read and stored with the HHT (menu selection 5 "Version coding"). After installation of the new control module, the previously read code number must be entered.

Note:
If returning a new control module to a PDC, the code number must be erased.
 - b) If the code number can **not** be read, the vehicle equipment/version must be determined, the corresponding code number obtained from the Spare Parts Microfiche (group 54) and manually entered with the HHT.
- **Drive authorization system (DAS)**

Upon replacement of the engine control module it must be version coded using the HHT. Additionally, the code number and VIN must be entered (see HHT nominal values "DAS", menu selection 3/7).

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Special Tools



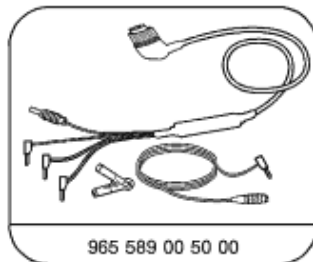
965 589 00 01 00

Hand-Held-Tester



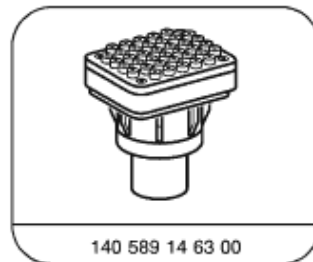
965 589 00 40 00

Test cable



965 589 00 50 00

Adapter cable



140 589 14 63 00

Adapter

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Connection Diagram - Hand-Held Tester (HHT)

Engine control module (N3/10) socket 4
RPM signal (TN) socket 13

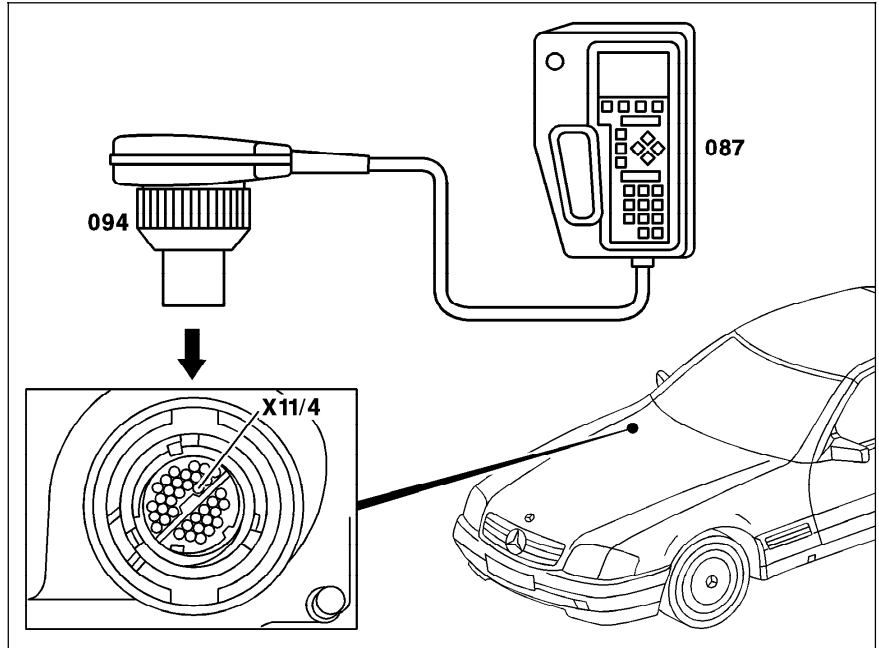


Figure 1

- 087 Hand-Held Tester
- 094 Multiplexer cable
- X11/4 Data link connector (DTC readout) (38-pole)

P07-6751-57

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Prerequisites for readout of DTC memory

1. Connect Hand-Held Tester to data link connector (DTC readout) (X11/4) according to connection diagram (see 11/7)
2. Ignition: **ON**




Readout via the impulse counter scan tool is not possible.

Note:

Symbol for emission related malfunctions which lead to the activation of the CHECK ENGINE MIL when a certain test cycle was performed and a failure was recognized.




Before starting with test observe Trouble Code Description >>.

DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
–	No malfunction in system			In case of complaint, perform 23, 24, 25 or 26 in its entirety
P0100	MAF circuit malfunction	Hot film MAF sensor (B2/5)	13 >> 1	23⇒ 4.0 – 5.0
P0105	MAP circuit malfunction	Pressure sensor (B28)	13 >> 2	23⇒ 6.0
P0110	IAT circuit malfunction	IAT sensor (B17)	13 >> 3	23⇒ 9.0
P0115	ECT circuit malfunction	ECT sensor (B11/4)	13 >> 4	23⇒ 8.0
P0120	Throttle position circuit malfunction	Actual value potentiometer in EA/CC/ISC actuator (M16/1)	13 >> 5	25⇒ 6.0
P0130	O2S 1 circuit malfunction, bank 1 (right)	Right O2S 1 (before TWC) (G3/4)	13 >> 6	23⇒ 12.0


¹⁾ Observe Preparation for Test, see 22.

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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0133	O2S 1 circuit slow response, bank 1 (right)	A Right O2S 1 (before TWC) (G3/4), ageing correction value exceeded B Right O2S 1 (before TWC) (G3/4), ageing time period too long	13 \geq 7	23 \Rightarrow 12.0
P0135	O2S 1 heater circuit malfunction, bank 1 (right)	Right O2S 1 heater (before TWC) (G3/4)	13 \geq 8	23 \Rightarrow 13.0
P0136	O2S 2 circuit malfunction, bank 1 (right)	Right O2S 2 (after TWC) (G3/6)	13 \geq 6	23 \Rightarrow 15.0
P0141	O2S 2 heater circuit malfunction, bank 1 (right)	Right O2S 2 heater (after TWC) (G3/6)	13 \geq 8	23 \Rightarrow 16.0
P0150	O2S 1 circuit malfunction, bank 2 (left)	Left O2S 1 (before TWC) (G3/3)	13 \geq 6	23 \Rightarrow 11.0
P0153	O2S 1 circuit slow response, bank 2 (left)	A Left O2S 1 (before TWC) (G3/3), ageing correction value exceeded B Left O2S 1 (before TWC) (G3/3), ageing time period too long	13 \geq 7	23 \Rightarrow 11.0
P0155	O2S 1 heater circuit malfunction, bank 2 (left)	Left O2S 1 heater (before TWC) (G3/3)	13 \geq 8	23 \Rightarrow 13.0
P0156	O2S 2 circuit malfunction, bank 2 (left)	Left O2S 2 (after TWC) (G3/5)	13 \geq 6	23 \Rightarrow 14.0
P0161	O2S 2 heater circuit malfunction, bank 2 (left)	Left O2S 2 heater (after TWC) (G3/5)	13 \geq 8	23 \Rightarrow 16.0


1) Observe Preparation for Test, see 22.

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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0170	Fuel trim malfunction	A Self adaptation of fuel mixture "partial load" of right cylinder bank at limit from engine control module (N3/10). B Self adaptation of fuel mixture "CTP" of right cylinder bank at limit from engine control module (N3/10).	13 \geq 9	Intake air leak, injectors, diaphragm pressure regulator, engine wear.
P0173	Fuel trim malfunction	A Self adaptation of fuel mixture "partial load" of left cylinder bank at limit from engine control module (N3/10). B Self adaptation of fuel mixture "CTP" of left cylinder bank at limit from engine control module (N3/10).	13 \geq 9	Intake air leak, injectors, diaphragm pressure regulator, engine wear.
P0201	Injector circuit malfunction - cyl. 1	Injector (Y62y1) – cylinder 1	13 \geq 10	23 \Rightarrow 17.0
P0202	Injector circuit malfunction - cyl. 2	Injector (Y62y2) – cylinder 2	13 \geq 10	23 \Rightarrow 18.0
P0203	Injector circuit malfunction - cyl. 3	Injector (Y62y3) – cylinder 3	13 \geq 10	23 \Rightarrow 19.0
P0204	Injector circuit malfunction - cyl. 4	Injector (Y62y4) – cylinder 4	13 \geq 10	23 \Rightarrow 20.0
P0205	Injector circuit malfunction - cyl. 5	Injector (Y62y5) – cylinder 5	13 \geq 10	23 \Rightarrow 21.0
P0206	Injector circuit malfunction - cyl. 6	Injector (Y62y6) – cylinder 6	13 \geq 10	23 \Rightarrow 22.0
P0207	Injector circuit malfunction - cyl. 7	Injector (Y62y7) – cylinder 7	13 \geq 10	23 \Rightarrow 23.0
P0208	Injector circuit malfunction - cyl. 8	Injector (Y62y8) – cylinder 8	13 \geq 10	23 \Rightarrow 24.0


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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0300	Random misfire detected	A Random misfire B Random misfire, TWC damaging	13 \geq 11	Smooth running Sensor gear adaption Mixture adaptation Fault freeze frame data readout using HHT
P0301	Cylinder 1 misfire detected	A Cylinder 1 misfire B Cylinder 1 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 22.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0302	Cylinder 2 misfire detected	A Cylinder 2 misfire B Cylinder 2 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 23.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0303	Cylinder 3 misfire detected	A Cylinder 3 misfire B Cylinder 3 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 24.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0304	Cylinder 4 misfire detected	A Cylinder 4 misfire B Cylinder 4 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 25.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure






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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0305	Cylinder 5 misfire detected	A Cylinder 5 misfire B Cylinder 5 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 26.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0306	Cylinder 6 misfire detected	A Cylinder 6 misfire B Cylinder 6 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 27.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0307	Cylinder 7 misfire detected	A Cylinder 7 misfire B Cylinder 7 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 28.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0308	Cylinder 8 misfire detected	A Cylinder 8 misfire B Cylinder 8 misfire, TWC damaging	13 \geq 11	24 \Rightarrow 29.0 24 \Rightarrow 30.0 36 \Rightarrow 1.0 – 2.0 Compression pressure
P0325	KS 1 circuit malfunction (right side of engine)	Right KS 1 (A16g1)	13 \geq 12	Wiring, connector, A16 g1
P0330	KS 2 circuit malfunction (left side of engine)	Left KS 2 (A16g2)	13 \geq 12	Wiring, connector, A16 g2





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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0335	CKP sensor circuit malfunction	CKP sensor (L5)	13 \geq 13	24 \Rightarrow 12.0
P0341	CMP sensor circuit range/performance	Camshaft Hall-effect sensor (B6/1)	13 \geq 14	24 \Rightarrow 13.0
P0410	Only  Air injection system malfunction	AIR system malfunction (logic chain)	13 \geq 15	23 \Rightarrow 25.0 – 26.0
P0422	TWC efficiency below threshold, right	Right TWC efficiency below threshold	13 \geq 16	Replace right TWC
P0432	TWC efficiency below threshold, left	Left TWC efficiency below threshold	13 \geq 16	Replace left TWC
P0440	Only  Mod. 140/210 and 129 as of 09/97	EVAP system malfunction	13 \geq 17	23 \Rightarrow 31.0 – 33.0
P0441	EVAP system incorrect purge flow	EVAP not functioning	13 \geq 18	23 \Rightarrow 31.0 – 32.0
P0442	Only  Mod. 140/210 and 129 as of 09/97	EVAP system leak detected (small leak)	13 \geq 17	23 \Rightarrow 33.0
P0443	EVAP system purge control valve circuit malfunction	Purge control valve (Y58/1)	13 \geq 19	23 \Rightarrow 31.0
P0446	Only  Mod. 140/210 and 129 as of 09/97	EVAP system vent control malfunction	13 \geq 20	23 \Rightarrow 31.0 23 \Rightarrow 33.0 23 \Rightarrow 35.0 23 \Rightarrow 34.0
		A Charcoal canister shut-off valve, output stage B Charcoal canister shut-off valve (Y58/4)		


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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0450 Only  Mod. 140/210 and 129 as of 09/97 Only  Model 129 up to 08/97	EVAP system pressure sensor malfunction	Fuel tank pressure sensor (B4/3)	13 \geq 21	23 \Rightarrow 35.0 Charcoal canister plugged.
		Purge monitoring pressure sensor (B4/4)	13 \geq 22	23 \Rightarrow 36.0
P0455 Only  Mod. 140/210 and 129 as of 09/97	EVAP system leak detected (large leak)	EVAP system, large leak	13 \geq 17	23 \Rightarrow 33.0
		Fuel tank press. sensor (B4/3)	13 \geq 21	23 \Rightarrow 35.0
P0462	Fuel level sensor circuit low input	Fuel tank level too low		Fill fuel tank
P0500	VSS sensor malfunction	A VSS left front B VSS left rear	13 \geq 23	25 \Rightarrow 8.0 25 \Rightarrow 9.0
P0507	ISC rpm higher than expected	Idle control system	13 \geq 24	25 \Rightarrow 4.0 – 7.0
P0560	System voltage malfunction	Voltage supply to engine control module (N3/10)	13 \geq 25	23 \Rightarrow 1.0 – 3.0
P0565	Cruise control switch	CC switch (S40)		26 \Rightarrow 1.0


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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0600	Serial communication link malfunction	CAN bus from ESP/SPS control module (N47-5)	13 \geq 26	23 \Rightarrow 37.0
P0604	Internal control module random Access memory (RAM) error	A Control module B Control module		(N3/10)
P0605	Internal control module random Access memory (RAM) error	Engine control module (N3/10)		(N3/10)
P0700	Transmission control system malfunction	Read DTC memory of transmission control module	13 \geq 27 13 \geq 28	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0702	Transmission control system electrical	Read DTC memory of transmission control module	13 \geq 29 13 \geq 30	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0715	Input/turbine speed sensor circuit malfunction	Read DTC memory of transmission control module	13 \geq 31	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0720	Output speed sensor circuit malfunction	Read DTC memory of transmission control module	13 \geq 32	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.




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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0730	Incorrect gear ratio	Read DTC memory of transmission control module	13 \geq 33	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0740	Torque converter clutch system malfunction	Read DTC memory of transmission control module	13 \geq 34	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0743	Torque converter clutch system electrical	Read DTC memory of transmission control module	13 \geq 35	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0748	Pressure control solenoid electrical	Read DTC memory of transmission control module	13 \geq 36 13 \geq 37	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0753	Shift solenoid A electrical	Read DTC memory of transmission control module	13 \geq 38	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0758	Shift solenoid B electrical	Read DTC memory of transmission control module	13 \geq 39	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.
P0763	Shift solenoid C electrical	Read DTC memory of transmission control module	13 \geq 40	Test ETC, see DM, Chassis & Drivetrain, Vol. 1, section 2.


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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P0809	Angle deviation between camshaft and crankshaft	Angle deviation between camshaft and crankshaft		Check basic adjustment of camshaft
P1163	Oil level switch	Oil level switch (S43)		23 ⇒ 39.0
P1186	Fuel safety shut-off recognized	EA/CC/ISC actuator (M16/6)		25 ⇒ 3.0 – 4.0, EA/CC/ISC actuator (M16/6) sticks or jammed, Check intake system for residue.
P1386	Knock sensor control from ECM (N3/10) at end stop	Knock sensor control in engine control module (N3/10) hardware failure	13 ≥ 41	1. Increased knock tendency due to bad fuel, carbon in combustion chamber or mechanical damage. 2. Engine control module (N3/10)
P1420	Only  AIR pump switchover valve	AIR pump switchover valve (Y32)	13 ≥ 42	23 ⇒ 26.0
P1453	Only  AIR relay module	AIR relay module (K17)	13 ≥ 42	23 ⇒ 25.0


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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
P1519	Right adjustable camshaft timing solenoid	Right adjustable camshaft timing solenoid (Y49/2) (logic chain)	13 \geq 43	23 \Rightarrow 28.0
P1522	Left adjustable camshaft timing solenoid	Left adjustable camshaft timing solenoid (Y49/1) (logic chain)	13 \geq 43	23 \Rightarrow 27.0
P1525	Right adjustable camshaft timing solenoid	Right adjustable camshaft timing solenoid (Y49/2)	13 \geq 44	23 \Rightarrow 30.0
P1533	Left adjustable camshaft timing solenoid	Left adjustable camshaft timing solenoid (Y49/1)	13 \geq 44	23 \Rightarrow 29.0
P1542	Pedal value sensor	Pedal value sensor (B37)	13 \geq 45	25 \Rightarrow 4.0 - 5.0

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DTC 	Possible cause		DTC Description	Test step/Remedy ¹⁾
	SAE nomenclature	Explanation		
PI 570 ²⁾	A. Start attempt performed with RCL locked B. CAN signal from DAS control module to engine control module C. Engine control module (ME-SFI) and DAS control module are not compatible	A. Start attempt performed with RCL locked. B. CAN signal from DAS control module (N54/1) to engine control module (N3/10) interrupted. C. Engine control module (ME-SFI) and DAS control module are not compatible.		Check for correct operation of DAS, DM, Body and Accessories, Vol. 1, section 4.8 Check control modules and part no.
PI 580	EA/CC/ISC actuator	EA/CC/ISC actuator (M16/1)	13 \geq 46	25 \Rightarrow 7.0
PI 584	Stop lamp switch	Stop lamp switch (S9/1)		26 \Rightarrow 2.0
PI 605	Body acceleration sensor	Body acceleration sensor (B24) (up to 05/96) Poor road/traction condition recognition signal (via comparison of VSS rpm signals) (as of 06/96)	13 \geq 47	23 \Rightarrow 42.0 Test ASR/ESP see DM, Chassis and Drivetrain, Vol. 3, Section 9, 10
PI 747	CAN signal from ETC	CAN signal from ETC (N15/3) interrupted	13 \geq 26	23 \Rightarrow 37.0

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²⁾ The DTC PI 570 can be displayed on model 140 vehicles produced between 09/95 and 11/95 even if no malfunction is present.