

9.5 Traction Systems (ETS)

Diagnosis - Diagnostic Trouble Code (DTC) Memory

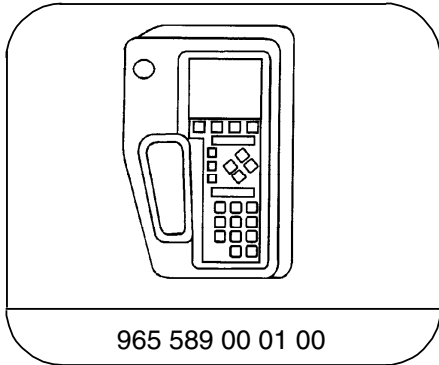
Preparation for DTC Readout

1. Review section 0 and 21, 22, 23
2. Connect Hand-Held Tester (HHT) to data link connector (X11/4) according to connection diagram (see section 0).
3. Ignition: **ON**
4. Read out DTC memory for the ETS, ME-SFI and ETC control modules.
5. Perform nominal/actual values comparison.
6. Perform activations.
7. Follow-up and repair all displayed DTCs.
8. After successful repairs, erase all DTCs.



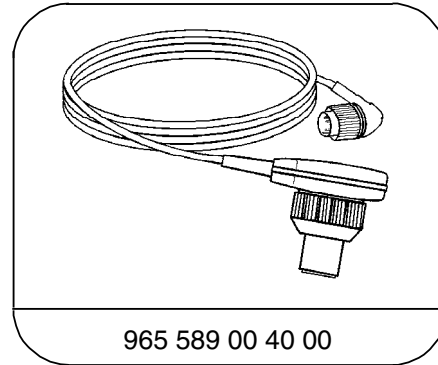
- DTC readout is no longer possible using the impulse counter scan tool.

Special Tools



965 589 00 01 00

Hand-Held-Tester




965 589 00 40 00

Test cable

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DTC 	Possible cause	Test step/Remedy ¹⁾
–	No fault in system	In case of complaint: 23 (entire test).
C 1000	ETS/SPS control module (N47-2)	N47-2
C 1010	Battery voltage too low, circuit 15	23 ⇒ 1.0
C 1012	Battery voltage too high, circuit 15	23 ⇒ 1.0
C 1020	CAN communication faulty overall	Wiring, 23 ⇒ 3.0
C 1022	CAN communication with engine control module (ME-SFI) (N3/10) interrupted	Read out DTC's from (N3/10).
C 1024	CAN communication with transmission control module (N15/3) interrupted	Read out DTC's from (N15/3).
C 1029	CAN communication with All-Activity control module (AAM) (N10) interrupted	Read out DTC's from (N10).
C 1030	CAN communication with Transfer case control module (N78) interrupted	Read out DTC's from (N78).
C 1100	Left front axle VSS sensor (L6/1), open circuit Left front axle VSS sensor (L6/1), loose connection Left front axle VSS sensor (L6/1), implausible ²⁾	23 ⇒ 6.0
C 1101	Right front axle VSS sensor (L6/2), open circuit Right front axle VSS sensor (L6/2), loose connection Right front axle VSS sensor (L6/2), implausible ²⁾	23 ⇒ 7.0

¹⁾ Observe Preparation for Test, see 22.

²⁾ Rotor with incorrect tooth count, dirt accumulation on or damaged rotor, incorrect rear axle ratio, wrong wheel or tire size.
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DTC 	Possible cause	Test step/Remedy ¹⁾
C 1102	Left rear axle VSS sensor (L6/3), open circuit Left rear axle VSS sensor (L6/3), loose connection Left rear axle VSS sensor (L6/3), implausible ²⁾	23 ⇒ 8.0
C 1103	Right rear axle VSS sensor (L6/4), open circuit Right rear axle VSS sensor (L6/4), loose connection Right rear axle VSS sensor (L6/4), implausible ²⁾	23 ⇒ 9.0
C 1200	Stop lamp switch (S9/1) short/open circuit S9/1 implausible	Wiring, S/91
C 1210	Brake fluid level switch (S11) short/open circuit	Wiring, S/11
C 1300	Left front axle solenoid valve (hold) (A7/3y6), short/open circuit	23 ⇒ 11.0
C 1301	Left front axle solenoid valve (release) (A7/3y7), short/open circuit	23 ⇒ 12.0
C 1302	Right front axle solenoid valve (hold) (A7/3y8), short/open circuit	23 ⇒ 13.0
C 1303	Right front axle solenoid valve (release) (A7/3y9), short/open circuit	23 ⇒ 14.0
C 1304	Left rear axle solenoid valve (hold) (A7/3y10), short/open circuit	23 ⇒ 15.0

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DTC 	Possible cause	Test step/Remedy ¹⁾
C 1305	Left rear axle solenoid valve (release) (A7/3y11), short/open circuit	23 ⇒ 16.0
C 1306	Right rear axle solenoid valve (hold) (A7/3y12), short/open circuit	23 ⇒ 17.0
C 1307	Right rear axle solenoid valve (release) (A7/3y13), short/open circuit	23 ⇒ 18.0
C 1314	Solenoid valves (A7/3), voltage supply	23 ⇒ 10.0 23 ⇒ 2.0
C 1316	Pressure circuit 1 switchover solenoid valve (A7/3y24) short/open circuit	23 ⇒ 19.0
C 1317	Pressure circuit 1 vacuum solenoid valve (A7/3y26)	23 ⇒ 21.0
C 1318	Pressure circuit 2 switchover solenoid valve (A7/3y25) short/open circuit	23 ⇒ 20.0
C 1319	Pressure circuit 2 vacuum solenoid valve (A7/3y27) short/open circuit	23 ⇒ 22.0
C 1401	High pressure return pump (A7/3m1), short/open circuit High pressure return pump (A7/3m1), will not shut off	23 ⇒ 5.0
C 1512	Brakes overheated	Brakes were momentarily overloaded, erase DTC.

¹⁾ Observe Preparation for Test, see 22.