

9.3 Traction Systems (ABS, ASR, ETS) and SPS

Diagnosis - Diagnostic Trouble Code (DTC) Memory

Preparation for DTC Readout



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

1. Connect Hand-Held Tester (HHT) to data link connector (X11/4) according to connection diagram (see section 0).



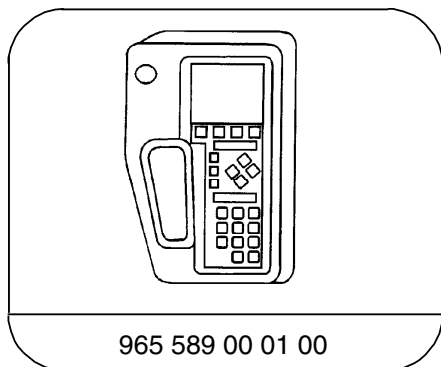
Test cables are not to be hooked up to the HHT while performing function tests.



Read out DTC memory from ABS, ASR OR ETS control modules before starting repair procedures. DTC memory must also be read out from ME-SFI and EA control modules on vehicles with ASR.

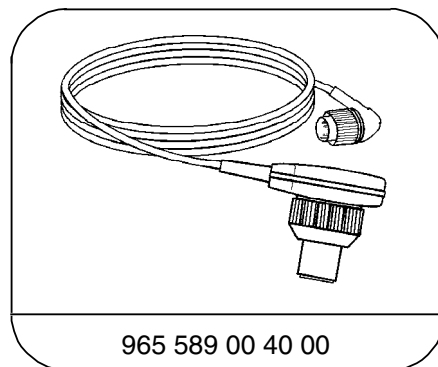
2. Ignition: **ON**
3. Read out DTC memory for control modules.

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	Traction system control module (N47)	N47
C 1010	Battery voltage too low, circuit 87	23 ⇒ 1.0
C 1011	Voltage supply for ASR/ETS/ESP hydraulic unit (A7/3) solenoid valves, short/open circuit	23 ⇒ 5.0 23 ⇒ 2.0
C 1012	Battery voltage too high, circuit 87	23 ⇒ 1.0
C 1020	CAN communication overall faulty	Wiring.
C 1021	CAN communication with EA/CC/ISC control module (N4/1) interrupted	Read out DTC's from (N4/1).
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 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 ⇒ 11.0
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 ⇒ 13.0

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.
If DTC appears only after repair work, it was caused by applying the brakes or driving vehicle on a dynamometer, erase DTC.

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C 1102	ETS/ASR: 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⁾ ABS: Left axle VSS sensor (L6), open circuit Left axle VSS sensor (L6), loose connection Left axle VSS sensor (L6), implausible ²⁾	23 ⇒ 16.0 23 ⇒ 15.0
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 ⇒ 19.0
C 1104	Left front axle VSS sensor (L6/1), implausible ²⁾	23 ⇒ 11.0
C 1105	Right front axle VSS sensor (L6/2), implausible ²⁾	23 ⇒ 13.0
C 1106	ETS/ASR: Left rear axle VSS sensor (L6/3), implausible ²⁾ ABS: Rear axle VSS sensor (L6), implausible ²⁾	23 ⇒ 16.0 23 ⇒ 15.0
C 1107	Right rear axle VSS sensor (L6/4), implausible ²⁾	23 ⇒ 19.0
C 1142	ABS lateral acceleration sensor (B24/2), short/open circuit	23 ⇒ 8.0
C 1143	ABS lateral acceleration sensor (B24/2), implausible	23 ⇒ 8.0
C 1200	Stop lamp switch (S9/1) short/open circuit S9/1 implausible	Wiring S/91

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C 1300	Left front axle solenoid valve (hold) (A7/3y6), short/open circuit	23 ⇒ 21.0
C 1301	Left front axle solenoid valve (release) (A7/3y7), short/open circuit	23 ⇒ 22.0
C 1302	Right front axle solenoid valve (hold) (A7/3y8), short/open circuit	23 ⇒ 23.0
C 1303	Right front axle solenoid valve (release) (A7/3y9), short/open circuit	23 ⇒ 24.0
C 1304	Left rear axle solenoid valve (hold) (A7/3y10), short/open circuit	23 ⇒ 25.0 23 ⇒ 26.0
C 1305	Left rear axle solenoid valve (release) (A7/3y11), short/open circuit	23 ⇒ 27.0 23 ⇒ 28.0
C 1306	Right rear axle solenoid valve (hold) (A7/3y12), short/open circuit	23 ⇒ 29.0
C 1307	Right rear axle solenoid valve (release) (A7/3y13), short/open circuit	23 ⇒ 30.0
C 1311	Switchover/solenoid valve (A7/3y5), short/open circuit	23 ⇒ 31.0
C 1312	Master brake cylinder switchover valve (Y61)	23 ⇒ 9.0
C 1313	Solenoid valve relay (A7/3k1)	N47

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C 1314	Solenoid valve relay (A7/3), voltage supply	23 ⇒ 5.0 23 ⇒ 2.0
C 1315	Inlet solenoid valve (A7/3y15)	23 ⇒ 32.0
C 1401	High pressure return pump (A7/3m1), short/open circuit High pressure return pump (A7/3m1), will not shut off	23 ⇒ 6.0
C 1500	VSS sensor implausible ²⁾	23 ⇒ 11.0, 13.0, 15.0, 16.0, 19.0
C 1501	SPS P-valve (Y10)	23 ⇒ 7.0
C 1511	ETS/SPS control module (N47-2), not version coded	N47-2
C 1512	Brakes overheated	Brakes were momentarily overloaded, erase DTC.
C 1513	ASR/SPS (N47-1) OR ME-SFI (N3/10), engine control module, version coding incorrect	N47-1 N3/10
C 1514	SPS P-valve (Y10), adjustment data	23 ⇒ 7.0 N47
C 1515	Version coding, SPS	N47
C 1600	Temperature after engine is turned off	N47

¹⁾ Observe Preparation for Test, see 2.

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