

Diagnosis – Diagnostic Trouble Code (DTC) Memory

Preparation for DTC Readout

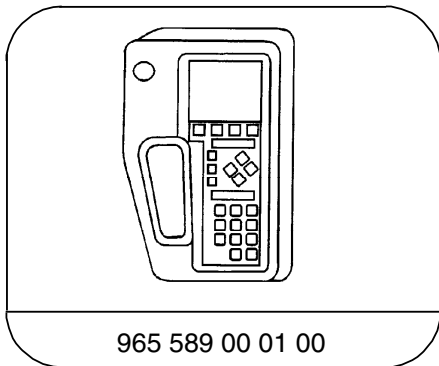
WARNING!

Life threatening injuries possible due to vehicle slipping or toppling off while on lift.

Prior to lift vehicle completely (wheels still in contact with floor), ensure that the vehicle is centered within the lift columns and lift arm supports are correctly placed onto the vehicle contact points.

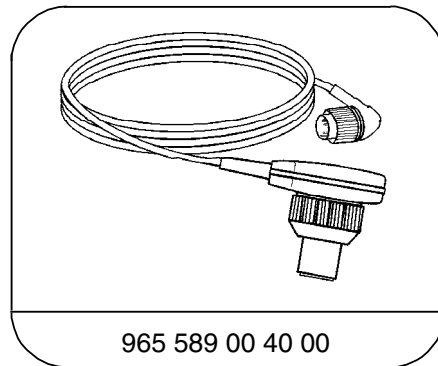
1. Review 11/1 before continuing work.
2. Review section 13, 21, 22, 23
3. Connect Hand-Held Tester (HHT) to data link connector (X11/4) according to connection diagram (see section 0). Read out DTC memory.
4. Ignition: **ON**
5. Read out DTC memory for the BAS, ETS, ME and ETC systems.

Special Tools



965 589 00 01 00

Hand-Held-Tester



965 589 00 40 00

Test cable



DTC readout is not possible using an impulse counter scan tool.

DTC s, Actual values, and activation for the BAS system are contained within the HHT menu: ESP


Control module adaption:

After replacing either the ESP/SPS control module (N47-5) or the brake booster (A7/7), it is absolutely necessary to perform an adaption of the ESP/SPS control module (N47-5) as well.

The ESP/SPS control module (N47-5) has to learn the values for the BAS solenoid valve (A7/7y1), see HHT menu.

In case of complaint, and no fault is present in system, perform 23 in its entirety.

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DTC 	Possible cause	Test step/Remedy ¹⁾
–	No fault in system.	In case of complaint: ESP and SPS, 23, perform entire test
C 1000	ESP/SPS control module (N47-5) ³⁾	Replace N47-5
C 1003	ESP/SPS control module (N47-5) BAS processor faulty ³⁾	Replace N47-5
C 1010	Battery voltage too low, circuit 87	23 ⇒ 1.0
C 1011	Solenoid valve voltage supply, open/short circuit	23 ⇒ 2.0, 17.0
C 1012	Battery voltage too high, circuit 87	23 ⇒ 1.0
C 1020	CAN communication faulty in general	23 ⇒ 36.0
C 1022	CAN communication with right engine control module (ME-SFI, N3/12), interrupted	23 ⇒ 36.0 Read DTC (ME-SFI) memory, see DM, Engines, Vol. 4, section 9 12. Check version coding of ME control module, using HHT.
C 1025	CAN communication with BAS control module (N48), interrupted ³⁾	Replace N47-5
C 1100	Left front axle VSS sensor (L6/1), open circuit Left front axle VSS sensor (L6/1), loose contact Left front axle VSS sensor (L6/1), implausible ²⁾	23 ⇒ 8.0

1) Observe Preparation for Test, see 22.

2) Rotor with incorrect tooth count, dirt accumulation on or damage to rotor, incorrect rear axle ratio, wrong wheel or tire size.
If DTC appears only after repair work, it may be caused by applying the brakes or driving vehicle on a dynamometer, erase DTC.

3) When replacing any components, perform control module adaption, see 12/1


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DTC 	Possible cause	Test step/Remedy ¹⁾
C 1101	Right front axle VSS sensor (L6/2), open circuit Right front axle VSS sensor (L6/2), loose contact Right front axle VSS sensor (L6/2), implausible ²⁾	23 ⇒ 10.0
C 1102	Left rear axle VSS sensor (L6/3), open circuit Left rear axle VSS sensor (L6/3), loose contact Left rear axle VSS sensor (L6/3), implausible ²⁾	23 ⇒ 12.0
C 1103	Right rear axle VSS sensor (L6/4), open circuit Right rear axle VSS sensor (L6/4), loose contact Right rear axle VSS sensor (L6/4), implausible ²⁾	23 ⇒ 14.0
C 1120	ESP yaw sensor (N64) signal wire, open/short circuit ESP yaw sensor (N64) reference wire, open/short circuit	23 ⇒ 32.0
C 1140	Steering angle sensor (N49), open/short circuit Steering angle sensor (N49), initialization	23 ⇒ 6.0 Turn steering wheel from left to right stops.
C 1141	ESP brake pressure sensor (B34), open/short circuit ESP brake pressure sensor (B34), plausibility	23 ⇒ 31.0
C 1142	ABS lateral acceleration sensor (B24/2), open/short circuit ABS lateral acceleration sensor (B24/2), voltage supply ABS lateral acceleration sensor (B24/2), plausibility	23 ⇒ 30.0
C 1149	ESP brake pressure sensor (B34), voltage supply ABS lateral acceleration sensor (B24/2), voltage supply Membrane travel sensor (A7/7b1), voltage supply	23 ⇒ 31.0, N47-5 23 ⇒ 30.0, N47-5 23 ⇒ 34.0, N47-5

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DTC 	Possible cause	Test step/Remedy ¹⁾
C 1200	Stop lamp switch (S9/1), plausibility of membrane travel comparison Stop lamp switch (S9/1), plausibility	Wiring, S9/1
C 1201	Release switch (A7/7s1) (BAS), open/short circuit Release switch (A7/7s1) (BAS), plausibility Release switch (A7/7s1) (BAS), redundance, switch over time	Wiring, A7/7s1 ³⁾
C 1204	Membrane travel sensor (A7/7b1) (BAS), membrane speed Membrane travel sensor (A7/7b1) (BAS), plausibility Membrane travel sensor (A7/7b1) (BAS), open circuit Membrane travel sensor (A7/7b1) (BAS), wiring has short to ground	23 ⇒ 34.0
C 1300	Left front axle solenoid valve (hold) (A7/3y6), open/short circuit	23 ⇒ 18.0
C 1301	Left front axle solenoid valve (release) (A7/3y7), open/short circuit	23 ⇒ 19.0
C 1302	Right front axle solenoid valve (hold) (A7/3y8), open/short circuit	23 ⇒ 20.0
C 1303	Right front axle solenoid valve (release) (A7/3y9), open/short circuit	23 ⇒ 21.0
C 1304	Left rear axle solenoid valve (hold) (A7/3y10), open/short circuit	23 ⇒ 22.0
C 1305	Left rear axle solenoid valve (release) (A7/3y11), open/short circuit	23 ⇒ 23.0
C 1306	Right rear axle solenoid valve (hold) (A7/3y12), open/short circuit	23 ⇒ 24.0
C 1307	Right rear axle solenoid valve (release) (A7/3y13), open/short circuit	23 ⇒ 25.0

¹⁾ Observe Preparation for Test, see 22.

³⁾ When replacing any components, perform control module adaption, see 12/1

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DTC 	Possible cause	Test step/Remedy ¹⁾
C 1308	Front axle inlet solenoid valve (A7/3y22), open/short circuit	23 ⇒ 26.0
C 1309	Rear axle inlet solenoid valve (A7/3y23), open/short circuit	23 ⇒ 27.0
C 1310	Front axle switchover valve (A7/3y18), open/short circuit	23 ⇒ 28.0
C 1311	Rear axle switchover valve (A7/3y19), open/short circuit	23 ⇒ 29.0
C 1332	Solenoid valve (BAS) (A7/7y1) ³⁾ , open/short circuit	23 ⇒ 35.0
C 1401	High-pressure/return pump (A7/3m1), open/short circuit High-pressure/return pump (A7/3m1), does not turn off High-pressure/return pump (A7/3m1), shuts off too quickly	23 ⇒ 4.0
C 1406	Brake booster (BAS) (A7/7), booster faulty Brake booster (BAS) (A7/7): membrane travel sensor (BAS) (A7/7b1) or solenoid valve (BAS) (A7/7y1) are faulty	A7/7 ³⁾ 23 ⇒ 34.0 23 ⇒ 35.0
C 1500	VSS (L6/1, L6/2, L6/3, L6/4) implausible ²⁾	23 ⇒ 8.0, 10.0, 12.0, 14.0
C 1501	SPS P-valve (Y10)	23 ⇒ 5.0
C 1504	System has turned off Steering angle sensor (N49), initialization needs to be performed. Low voltage at ESP yaw rate sensor (N64) ESP brake pressure sensor (B34) faulty	Turn steering wheel from left to right stops. 23 ⇒ 32.0 23 ⇒ 31.0

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