

### Diagnosis - Diagnostic Trouble Code (DTC) Memory

#### Preparation for DTC Readout

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

#### Note:

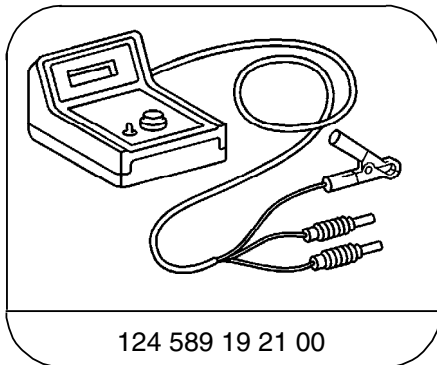
Connect yellow wire from impulse counter scan tool to:

ABS/ASR control module (N30/1)	socket 6
BM (N16/1)	socket 8
SPS control module (N49/1)	socket 12
ADS control module (N51)	socket 11
TCM (N15/1)	socket 10
EA/CC/ISC control module (N4/1)	socket 7

Engine (N3/4), LH-SFI (N3/1) or	
Right LH-SFI control module (N3/3)	socket 4
Left LH-SFI control module (N3/2)	socket 5
DI (N1/3) or Right DI control module (N1/5)	socket 17
Left DI control module (N1/4)	socket 18

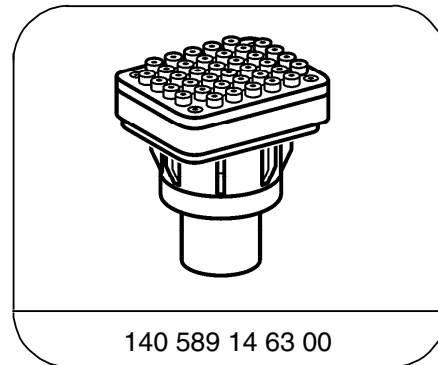
2. Ignition: **ON**
3. Read out DTC's for control modules listed.

#### Special Tools



124 589 19 21 00

Pulse counter



140 589 14 63 00



Adapter

#### Equipment

Hand-Held Tester (HHT)



See S.I. in groups 58 and 99.

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Diagnostic trouble code (DTC)  	Possible cause	Test step/Remedy <sup>1)</sup>
1 -	No fault in system.	In case of complaint: 23 and 33 (entire test)
2 002	Left front axle VSS sensor (L6/1), open circuit	23⇒ 14.0
3 003	Right front axle VSS sensor (L6/2), open circuit	23⇒ 16.0
4 004	Left rear axle VSS sensor (L6/3), open circuit	23⇒ 18.0
5 005	Right rear axle VSS sensor (L6/4), open circuit	23⇒ 20.0
6 006	ABS/ASR hydraulic unit, left front axle solenoid valve (A7/3y1)	23⇒ 23.0
7 007	ABS/ASR hydraulic unit, right front axle solenoid valve (A7/3y2)	23⇒ 24.0
8 008	ABS/ASR hydraulic unit, left rear axle solenoid valve (A7/3y3)	23⇒ 25.0
9 009	ABS/ASR hydraulic unit, right rear axle solenoid valve (A7/3y4)	23⇒ 26.0
10 010	ABS/ASR hydraulic unit, high-pressure/return pump relay (A7/3k2), ABS/ASR hydraulic unit, high-pressure/return pump (A7/3m1)	23⇒ 8.0 23⇒ 2.0
11 011	ABS/ASR hydraulic unit, solenoid valve relay (A7/3k1)	23⇒ 7.0
<b>Models 124.036 (02/92 →), 129.076, 140.04/05/07</b>		
12 012	Master brake cylinder switchover valve (Y61)	23⇒ 9.0
13 013	Stop lamp switch (S9/1)	23⇒ 10.0

<sup>1)</sup> Observe Preparation for Test, see 22.

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Diagnostic trouble code (DTC)  	Possible cause	Test step/Remedy <sup>1)</sup>
<b>Model 124.036 (02/93 →), 129.076, 140.04/04/07</b> 14            014	ABS lateral acceleration sensor (B24/2), open circuit	23⇒ 13.0
15            015	ABS/ASR control module (N30/1)	Replace N30/1
16            016	Vehicle speed signal (VSS) (L6/1, L6/2, L6/3, L6/4), implausible <sup>2) 3)</sup>	23⇒ 14.0 23⇒ 16.0 23⇒ 18.0 23⇒ 20.0 Visually inspect
17            017	Battery voltage too low	23⇒ 1.0
20            020	ABS/ASR hydraulic unit, switchover/solenoid valve (A7/3y5)	23⇒ 27.0
21            021	ABS/ASR hydraulic unit, pressure switch (A7/3s1), charge	23⇒ 1.0, 2.0 23⇒ 22.0
22            022	ABS/ASR hydraulic unit, pressure switch (A7/3s1), leakage	23⇒ 1.0, 2.0 23⇒ 22.0
23            023	ABS/ASR hydraulic unit, pressure switch (A7/3s1), hydraulic	23⇒ 1.0, 2.0 23⇒ 22.0

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.

3) 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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24            024	ASR charging pump (M15)	Wiring, 33⇒ 1.0, 2.0
25            025	Left front axle VSS sensor (L6/1), implausible <sup>2)</sup>	23⇒ 14.0 Visually inspect.
26            026	Right front axle VSS sensor (L6/2), implausible <sup>2)</sup>	23⇒ 16.0 Visually inspect.
27            027	Left rear axle VSS sensor (L6/3), implausible <sup>2)</sup>	23⇒ 18.0 Visually inspect.
28            028	Right rear axle VSS sensor (L6/4), implausible <sup>2)</sup>	23⇒ 20.0 Visually inspect.
<b>Model 124.036 (02/93 →), 129.076, 140.04/04/07</b> 29            029	ABS lateral acceleration sensor (B24/2), implausible	23⇒ 13.0
30            030	CAN data bus to EA/CC/ISC control module (N4/1), interrupted	23⇒ 28.0 Read out DTC for N4/1: see DM, Engines, Vol. 2, sections 6.2 or 6.3 11

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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Diagnostic trouble code (DTC) 	Possible cause	Test step/Remedy <sup>1)</sup>
31      031	CAN data bus to LH-SFI control module (N3/1), Left LH-SFI control module (N3/2), Right LH-SFI control module (N3/3), or Engine control module (N 3/4), interrupted	23⇒ 28.0 Read out DTC for N3/1, N3/2, N3/3, N3/4: see DM, Engines, Vol. 2, sections 1.1, 3.1 or 3.2 11
32      032	CAN data bus to DI control module (N1/3), Left DI control module (N1/4), Right DI control module (N1/5), interrupted	23⇒ 28.0 Read out DTC for N1/3, N1/4, N1/5: see DM, Engines, Vol. 2 sections 5.2 or 5.3 11
33      033	CAN data bus, interrupted	23⇒ 28.0 Read out DTC for N4/1: see DM, Engines, Vol. 2, sections 6.2 or 6.3 11 Read out DTC for N1/3, N1/4, N1/5: see DM, Engines, Vol. 2 sections 5.2 or 5.3 11 Read out DTC for N3/1, N3/2, N3/3, N3/4: see DM, Engines, Vol. 2, sections 1.1, 3.1 or 3.2 11 Read out DTC for N15/1: see DM, Chassis & Drivetrain, Vol. 1 section 2.2 12

<sup>1)</sup> Observe Preparation for Test, see 22.