Read Measuring Value Block (function 08)

The control module can transmit measured values. These measured values provide information about the operational status of the system and the sensors connected to it. In many cases the data supplied can be used to troubleshoot and repair malfunctions. The measured values from the ABS/EDL Bosch 5.3 series are contained in four display groups, which can be accessed via their display group numbers.

- Observe safety precautions that apply to road tests.

- Connect the VAG1551 Scan Tool (ST) and select address word 03 "Brake Electronics".

Notes:

- *When the printer is switched on, the contents of the display will be printed out on the scan tool log.*

- *When reading the measuring value block, also check wiring and connectors for loose terminals.*

- Check the control module version ⇒ page 01-128 and press the →button.

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Rapid data transfer	**HELP**
Select function XX	

Indicated on display:

- Press buttons -0- and -8- to select "Read measuring value block" function 08.

Rapid data transfer	**Q**
08 - Read measuring value block	

Indicated on display:

- Press -Q- button to confirm input.

Read measuring value block	**HELP**
Input display group number	**XXX**

Indicated on display:

- Press buttons -0-, -0- and -1-.
- Press -Q- button to confirm input.

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Test table: display group 1

Notes:

- *Display fields 1 through 4 show the current wheel circumference speeds in km/h. These are calculated by the ABS control module -J104- on the basis of the signals received from the wheel speed sensors. If one of the display fields shows no reading, proceed as for DTCs 00283, 00285, 00287, 00290 "ABS Wheel Speed Sensor" Diagnostic Trouble Code (DTC) table*

- *In order to check whether wheel speed sensors are properly allocated to each wheel, the vehicle must be raised. On vehicles with manual transmission put the gear shift lever in neutral. On vehicles with automatic transmission move the selector lever to position "N". Turn appropriate wheel by hand. Remaining drive wheels must be secured against turning.*

- *When a vehicle is accelerated uniformly on a dry surface, the displayed value will increase continuously by whole numbers; e.g. 6 km/h, 7 km/h, 8 km/h ... . The difference between displayed values 1-4 should not be more than ± 1 km/h (error from out-of-round wheels). If the values jump, for instance from ...6km/h, 7 km/h, to 12 km/h...or if the difference between the displayed values is greater than ± 1 km/h, then check the installation of the wheel speed sensors and rotors.*

⇒ *Repair Manual, Brake System, Repair Group 45*

Read measuring value block			1 →	◀ Indicated on display
1 to 19 [1)] km/h	1 to 19 [1)] km/h	1 to 19 [1)] km/h	1 to 19 [1)] km/h	
			Right rear ABS wheel speed sensor	
		Left rear ABS wheel speed sensor		
	Right front ABS wheel speed sensor			

Left front ABS wheel speed sensor

1) On Board Diagnostic (OBD) is terminated by the ABS control module -J104- if road speed exceeds 19 km/h.

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Note:

The display group numbers can be selected in sequence by pressing buttons <-1 and 3-> on the VAG1551 scan tool, or the arrow buttons ↑ and ↓ on the VAG1552 mobile scan tool.

- Press -C- button to input display group number manually.

Read Measuring Value Block

Enter display group number XXX

Indicated on display:

- Press buttons -0-, -0- and -2-.
- Press -Q- button to confirm input.

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Test table: display group 2

Read measuring value block			2 →	◀ Indicated on display
0 or 1	0 or 1	0 or 1	---	

ABS solenoid valve relay:

♦ 0 → not permitted during "Read measuring value block", the relay was not activated during "ignition on".

- Electrical test, steps 1 and 2, check voltage supply ⇒ page 01-166 . If no malfunction can be found here, replace hydraulic control unit.

♦ 1 → specified value, relay was activated by ABS control module -J104- during ignition on.

Voltage at motor for ABS return flow pump:

♦ 0 → specified value, there is no voltage at the motor for the ABS return flow pump.

♦ 1 → not permitted during "Read measuring value block", there is voltage at the motor for the ABS return flow pump. Replace hydraulic control unit.

Brake light switch:

♦ 0 → Brake pedal not operated

♦ 1 → Brake pedal operated

- Check brake light switch if there are deviations. Carry out "Electrical test", step 3 ⇒ page 01-166 .

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Note:

The display group numbers can be selected in sequence by pressing buttons <-1 and 3-> on the VAG1551 scan tool, or the arrow buttons ↑ and ↓ on the VAG1552 mobile scan tool.

- Press -C- button to input display group number manually.

Read Measuring Value Block

Enter display group number XXX

➢ Indicated on display:

Note:

For display group 3 (005):

- *To read the display fields for engine speed and current engine torque with the engine running, communication between the scan tool and the control module must be terminated via the "End Output" function ⇒ page 01-16 . Start the engine and reinitiate communication between the scan tool and the control module.*

- Press buttons -0- and -8- to select "Read measuring value block" function 08.
- Press -Q- button to confirm input.
- Press buttons -0-, -0- and -3-.
- Press -Q- button to confirm input.

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Test table: display group 3

Read measuring value block			3 →	◀ Indicated on display
60 to 8000 1 RPM	0 to 100 %	0 or 1	---	

Traction control (ASR) button: (Only for vehicles equipped with ASR)

♦ 0 → Traction control button not operated.

♦ 1 → The traction control button is operated, operational condition of ASR alternates, i.e. "ASR OFF" and "ASR ON".

- Check traction control button if there are deviations. Carry out "Electrical test", step 11 ⇒ page 01-166 .

Actual engine torque (AET): (Only for vehicles equipped with ASR)

♦ 0% → vehicle is in deceleration mode.

♦ 20% - 30% → represents engine idle.

♦ 100% → engine is offering its maximum torque.

- If no indication is displayed, proceed according to DTC 00647 "ABS-ASR engine electrical connection 2". Diagnostic Trouble Code (DTC) table

Engine speed: (Only for vehicles equipped with ASR)

♦ Engine speed is displayed in increments of 60 RPM, starting at 60 RPM.

- If no indication is displayed, proceed according to DTC 00529 "Wheel speed information missing. No signal". Diagnostic

Trouble Code (DTC) table

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Note:

The display group numbers can be selected in sequence by pressing buttons <-1 and 3-> on the VAG1551 scan tool, or the arrow buttons ↑ and ↓ on the VAG1552 mobile scan tool.

- Press -C- button to input display group number manually.

Read Measuring Value Block

Enter display group number XXX

Indicated on display:

- Press buttons -0-, -0- and -4-.
- Press -Q- button to confirm input.

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Test table: display group 4

Read measuring value block			4 →	◀ Indicated on display
Std:min or too large or ERROR or invalid	0 or 1	0 or 1	---	

EDL/ASR shut-off: (Only for vehicles equipped with EDL or ASR)

- This possibility is only provided for development purposes.
- 0 → EDL/ASR available
- 1 → EDL/ASR not available

EDL shut-off due to excessive brake temperature: (Only for vehicles with EDL)

- 0 → EDL was not shut off during the last 20x "ignition switched on and off".
- 1 → EDL was shut off during the last 20x "ignition switched on and off".

Standing time: (Only for vehicles equipped with EDL)

- too large: A standing time larger than 255 hours and 59 minutes is not indicated on the display.
- ERROR: Two valid and matching time transmissions from the instrument cluster to the ABS control module (w/EDL) - J104- did not occur after ignition was switched on and engine was started. Check whether the DTC 01203 "ABS/instrument cluster electrical connection" is stored in DTC memory.

- Invalid: Standing time could not be obtained during this ignition cycle. Standing time calculation must be activated for at least 20 seconds when the first component is operated for the first time when ignition is switched on after the instrument cluster or the hydraulic control module have been replaced. The standing time will be indicated the next time ignition is switched on.