

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

Diagnosis - Function Test

Preliminary testing

1. Review section 0 entirely before connecting the HHT.



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

2. Connect the HHT to the data link connector (X11/4) according to the connection diagram (refer to section 0).



Test cables are not to be hooked up to the HHT while performing component activations.



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.

The HHT will indicate the defective components in the display or will refer to the proper test step in the diagnostic manual.



Version Coding of control modules

When swapping ETS control modules, the ETS control module must be version coded using the HHT. Follow the directions as indicated in the display of the HHT. By using the test button "?" on the HHT, the version code of the control module will be displayed.

3. Additionally review: 21, 22, 23 (connector connections).

4. Review the following ETM diagrams:

PE00.19-P-1100B

PE42.00-P-1100B

PE00.19-P-1100D

PE42.00-P-1100D

PE00.19-P-1100A

PE42.00-P-1100A

5. Ignition: **ON**
6. Read out DTC memory.
7. Read out nominal/actual value displays.
8. Perform component activations.
9. Perform repairs according to DTC memory readout.
10. After completing repairs erase DTC memory.



The Electrical Test Program, see 23, pertains to the ABS, ETS, ASR and SPS systems.




In order to prevent the listing of all the control modules used in the various systems, for each test step, the following is used:

N47 = Control modules for Traction systems

A7/3 = Hydraulic unit for Traction systems

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

Diagnosis – Function Test (ASR only)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
ASR only ⇒ 1.0 Brake torque control circuit	 <p>Test cables are not to be hooked up to the HHT while performing function tests.</p> <p>Lift rear of vehicle so that both rear wheels can be rotated freely.</p>  <p>Secure vehicle!</p> <p>Engine: at idle Selector lever in transmission range “D”. Apply WOT using accelerator pedal.</p>  <p>Should ASR not come into effect: Release accelerator pedal to idle speed.</p>	<p>The rear wheels are noticeably braked; simultaneously the return/pressure pump can audibly be heard operating. Engine speed is reduced to approx. 1000 rpm. The ASR warning lamp (A1e21) will blink.</p>	<p>Test, using HHT, Engines HFM-SFI, EA, or ME-SFI</p>
⇒ 2.0 Switching off ASR using ASR Off switch (S76/5)	<p>Engine: at idle Selector lever in transmission range “N”. Press ASR OFF switch (S76/5).</p> <p>Selector lever in transmission range “D”. Slowly press on accelerator pedal.</p>	<p>The ASR warning lamp (A1e21) will remain on.</p> <p>The engine speed will not be reduced. The rear brakes will not be applied. The ASR warning lamp (A1e21) will blink.</p>	<p>Test, using HHT.</p>

¹⁾ Observe Preparation for Test, see 22.