



- 9.2 Model 202 as of 06/94 up to 08/95
- Model 210 with engines 104, 606 up to 05/96

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9.2 Traction Systems (ASR, ETS)

Diagnosis - Function Test (ASR only)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 1.0 Brake torque control circuit	<p>Lift rear of vehicle so that both rear wheels can be rotated freely.</p> <p> Secure vehicle!</p> <p>Engine: at Idle</p> <p>Selector lever in transmission range "D".</p> <p>Apply WOT using accelerator pedal.</p> <p> CAUTION!</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>23, DM, Engines, Vol. 3, section 6.4.</p>
⇒ 2.0 Switching off ASR using ASR OFF switch (S76/5)	<p>Engine: at idle</p> <p>Selector lever in transmission range "N".</p> <p>Press ASR Off switch (S76/5).</p> <p>Selector lever in transmission range "D".</p> <p>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>23⇒ 31.1</p>

¹⁾ Observe Preparation for Test

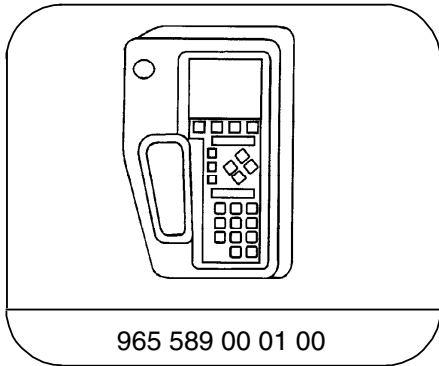
9.2 Traction Systems (ASR, ETS)

Diagnosis - Diagnostic Trouble Code (DTC) Memory

Preparation for DTC Readout

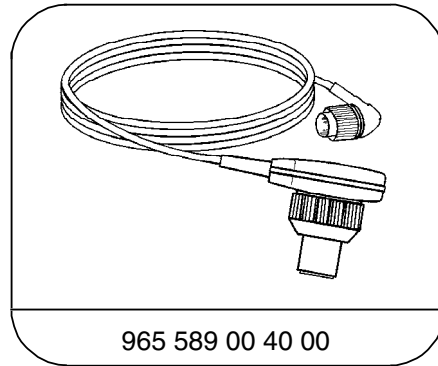
1. Connect Hand-Held Tester (HHT) to data link connector (X11/4) according to connection diagram (see section 0).
2. Ignition: **ON**
3. Read out DTC memory for control modules.

Special Tools



965 589 00 01 00

Hand-Held-Tester




965 589 00 40 00

Test cable

9.2 Traction Systems (ASR, ETS)

Diagnosis - Diagnostic Trouble Code (DTC) Memory


DTC 	Possible cause	Test step/Remedy ¹⁾
–	No fault in system	In case of complaint: 23 (entire test)
002	ASR/SPS (N47-1) or ETS/SPS (N47-2) control module	Replace control module.
003	Left front axle VSS sensor (L6/1), open circuit	23 ⇒ 13.0
004	Right front axle VSS sensor (L6/2), open circuit	23 ⇒ 15.0
005	Left rear axle VSS sensor (L6/3), open circuit	23 ⇒ 17.0
006	Right rear axle VSS sensor (L6/4), open circuit	23 ⇒ 19.0
007	Left front axle VSS sensor (L6/1), implausible ²⁾	23 ⇒ 13.0
008	Right front axle VSS sensor (L6/2), implausible ²⁾	23 ⇒ 15.0
009	Left rear axle VSS sensor (L6/3), implausible ²⁾	23 ⇒ 17.0
010	Right rear axle VSS sensor (L6/4), implausible ²⁾	23 ⇒ 19.0
011	VSS (L6/1, L6/2, L6/3, L6/4), implausible ²⁾	23 ⇒ 13.0, 15.0, 17.0, 19.0 Visually inspect.
012	ASR/ETS hydraulic unit, solenoid valve relay (A7/3k1)	23 ⇒ 8.0

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.

9.2 Traction Systems (ASR, ETS)


Diagnosis - Diagnostic Trouble Code (DTC) Memory

DTC 	Possible cause	Test step/Remedy ¹⁾
013	ASR/ETS hydraulic unit, left front axle solenoid valve (hold) (A7/3y6)	23 ⇒ 21.0
014	ASR/ETS hydraulic unit, left front axle solenoid valve (release) (A7/3y7)	23 ⇒ 22.0
015	ASR/ETS hydraulic unit, right front axle solenoid valve (hold) (A7/3y8)	23 ⇒ 23.0
016	ASR/ETS hydraulic unit, right front axle solenoid valve (release) (A7/3y9)	23 ⇒ 24.0
017	ASR/ETS hydraulic unit, left rear axle solenoid valve (hold) (A7/3y10)	23 ⇒ 25.0
018	ASR/ETS hydraulic unit, left rear axle solenoid valve (release) (A7/3y11)	23 ⇒ 26.0
019	ASR/ETS hydraulic unit, right rear axle solenoid valve (hold) (A7/3y12)	23 ⇒ 27.0
020	ASR/ETS hydraulic unit, right rear axle solenoid valve (release) (A7/3y13)	23 ⇒ 28.0
021	ASR/ETS hydraulic unit, switchover/solenoid valve (A7/3y5)	23 ⇒ 29.0
022	ASR/ETS hydraulic unit, inlet solenoid valve (A7/3y15)	23 ⇒ 30.0
023	ASR only: ASR system pressure too low	ASR hydraulic unit (A7/3)
024	ASR/ETS hydraulic unit, high-pressure/return pump relay (A7/3k2)	23 ⇒ 9.0 High-pressure/return pump (A7/3m1)
027	Stop lamp switch (S9/1)	23 ⇒ 11.0
028	Battery voltage too low, circuit 87	23 ⇒ 1.0

¹⁾ Observe Preparation for Test, see 22.

9.2 Traction Systems (ASR, ETS)

Diagnosis - Diagnostic Trouble Code (DTC) Memory

DTC 	Possible cause	Test step/Remedy ¹⁾
029	ETS only: Circuit 30, voltage supply	23 ⇒ 2.0
030	ASR only: CAN communication with EA/CC/ISC control module (N4/1), faulty	23 ⇒ 33.0 Read out DTC (N4/1), see DM, Engines, Vol. 3, section 6.4 11.
031	ASR only: CAN communication with engine control module (N3/4), faulty	23 ⇒ 33.0, Read out DTC (N3/4), see DM, Engines, Vol. 2, section 1.1 11.
033	ASR only: CAN communication, faulty in general	23 ⇒ 33.0, Read out DTC (N4/1), see DM, Engines, Vol. 3, section 6.4 11 (ASR). Read out DTC (N3/4), see DM, Engines, Vol. 2, section 1.1 11 (HFM-SFI).
034	ETS only: Brakes overheated	Brakes were momentarily overloaded, erase DTC.
038	ETS only: ETS/SPS control module (N47/2) not coded	Input code data into control module with HHT.
039	210 only: ASR/ SPS (N47-1) or ETS/SPS (N47-2) control module	N47-1 or N47-2
041	210 only: ASR/ SPS (N47-1) or ETS/SPS (N47-2) control module	N47-1 or N47-2

¹⁾ Observe Preparation for Test, see 22.

9.2 Traction Systems (ASR, ETS)

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy ¹⁾
ASR MIL (A1e22), ETS MIL (A1e35) or ABS MIL (A1e17) come when engine is running		Read out DTC 12
ETS MIL (A1e35) comes on while driving and then after a while goes out	Rear brakes at one time were overloaded	Read out DTC 12 Erase DTC 12
ASR MIL (A1e22), ETS MIL (A1e35) or ABS MIL (A1e17) comes on while driving and does not go out		Read out DTC 12
ASR MIL (A1e22), ETS MIL (A1e35) or ABS MIL (A1e17) comes on while driving and then goes out	Vehicle system voltage < 11 V, too many electrical consumers in use.	Check generator (G2), Read out DTC 12
ABS MIL (A1e17) does not come on with ignition turned on		23 ⇒ 3.0
ASR MIL (A1e22) or ETS MIL (A1e35) does not come on with ignition turned on		23 ⇒ 5.0
ABS MIL (A1e17) comes on with engine running after brake test or dynamometer use	Nonplausible rpm signal due to different rpm at front and rear axles.	Read out DTC 12, erase

¹⁾ Observe Preparation for Test, see 22.

9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Component Locations

Model 202

Figure 1

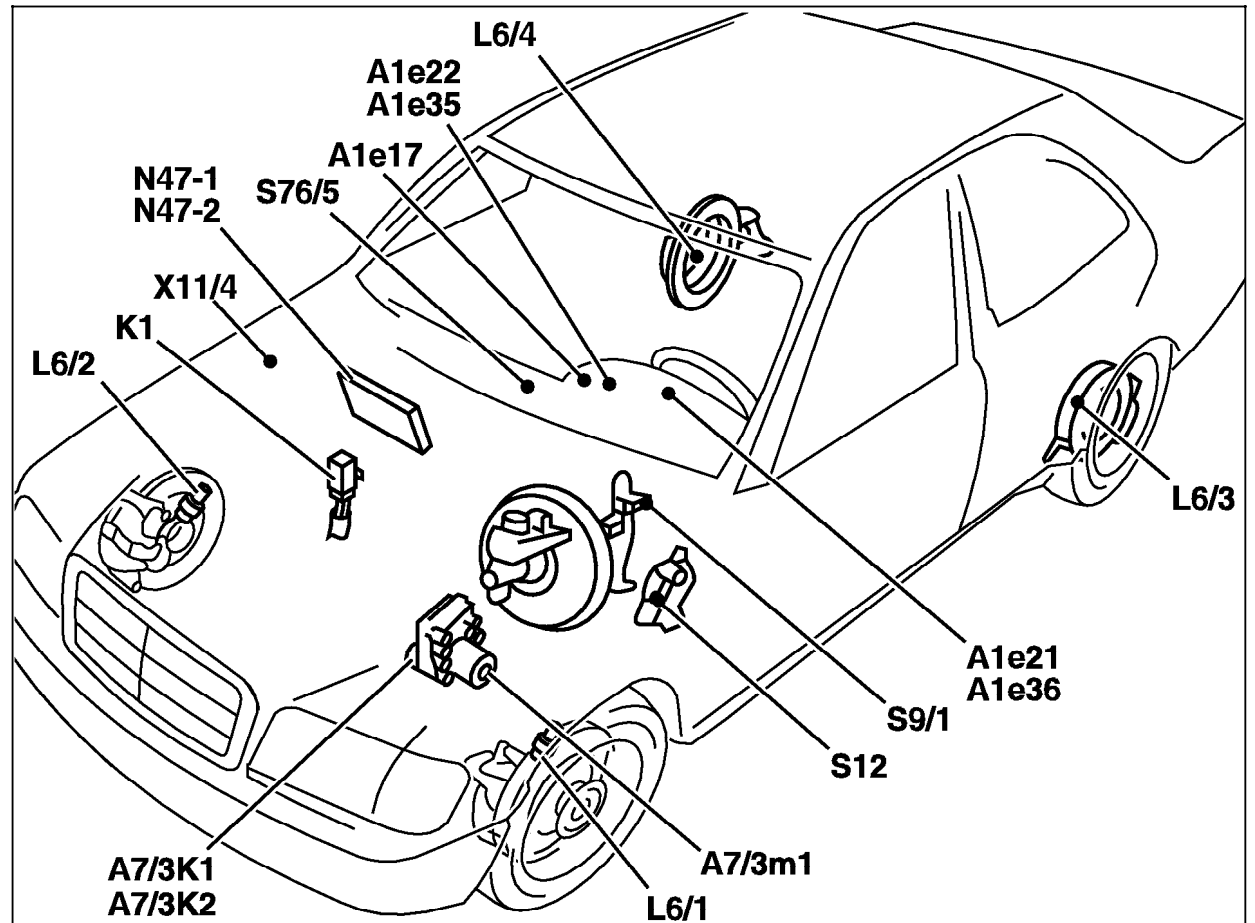
- A1e17 ABS MIL
- A7/3k1 ETS/ASR hydraulic unit, solenoid valve relay
- A7/3k2 ETS/ASR hydraulic unit, high-pressure/return pump relay
- A7/3m1 ETS/ASR hydraulic unit, high-pressure/return pump
- K1 Overvoltage protection relay
- L6/1 Left front axle VSS sensor
- L6/2 Right front axle VSS sensor
- L6/3 Left rear axle VSS sensor
- L6/4 Right rear axle VSS sensor
- S9/1 Stop lamp switch (4 pole)
- X11/4 Data link connector

ASR only

- A1e21 ASR warning lamp
- A1e22 ASR MIL
- N47-1 ASR/SPS control module
- S12 Parking brake switch
- S76/5 ASR Off switch

ETS only

- A1e35 ETS MIL
- A1e36 ETS warning lamp
- N47-2 ETS/SPS control module



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9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Component Locations

Model 210

Figure 1

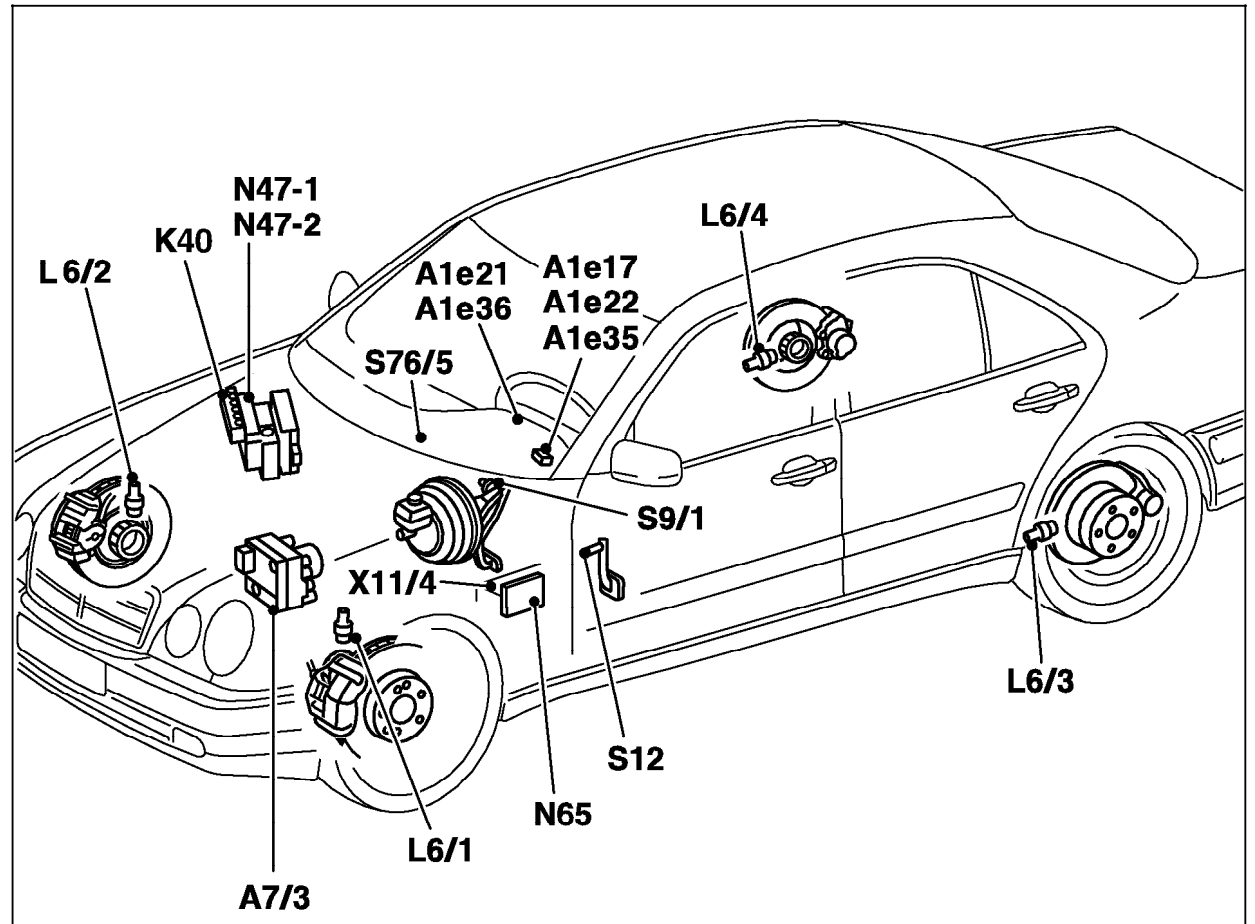
- A1e17 ABS MIL
- A7/3 ETS/ASR hydraulic unit,
- K40 Relay module (Base function)
- L6/1 Left front axle VSS sensor
- L6/2 Right front axle VSS sensor
- L6/3 Left rear axle VSS sensor
- L6/4 Right rear axle VSS sensor
- S9/1 Stop lamp switch (4 pole)
- S12 Parking brake switch
- X11/4 Data link connector

ASR only

- A1e21 ASR warning lamp
- A1e22 ASR MIL
- N47-1 ASR/SPS control module
- S76/5 ASR OFFswitch

ETS only

- A1e35 ETS MIL
- A1e36 ETS warning lamp
- N47-2 ETS/SPS control module



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9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Preparation for Test

1. Ignition: **OFF**
2. Disconnect ASR/SPS or ETS/SPS control module (N47/1 or N47/2).
3. Connect socket box with test cable as per connection diagram (Figure 1).

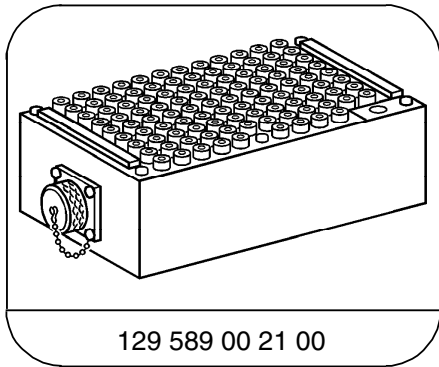
Electrical Wiring Diagrams:

Electrical Troubleshooting Manual, Model 202.



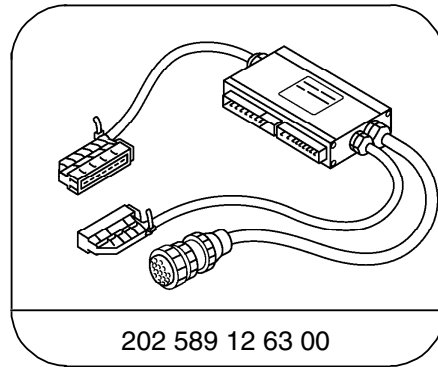
When exchanging an ETS/SPS control module, the replacement module must have the code data entered via the HHT. Follow instructions on HHT display.

Special Tools



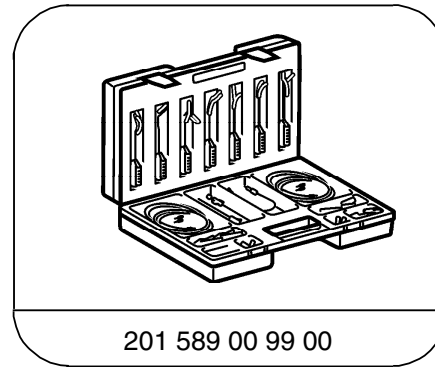
129 589 00 21 00

126-pin socket box



202 589 12 63 00

Test cable, 61-pin



201 589 00 99 00

Electrical connecting set

Conventional tools, test equipment

Description	Brand, model, etc.
Digital multimeter ¹⁾	Fluke models 23, 83, 85, 87

¹⁾ Available through the MBUSA Standard Equipment Program.

9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Preparation for Test

Connection Diagram – Socket Box Model 202

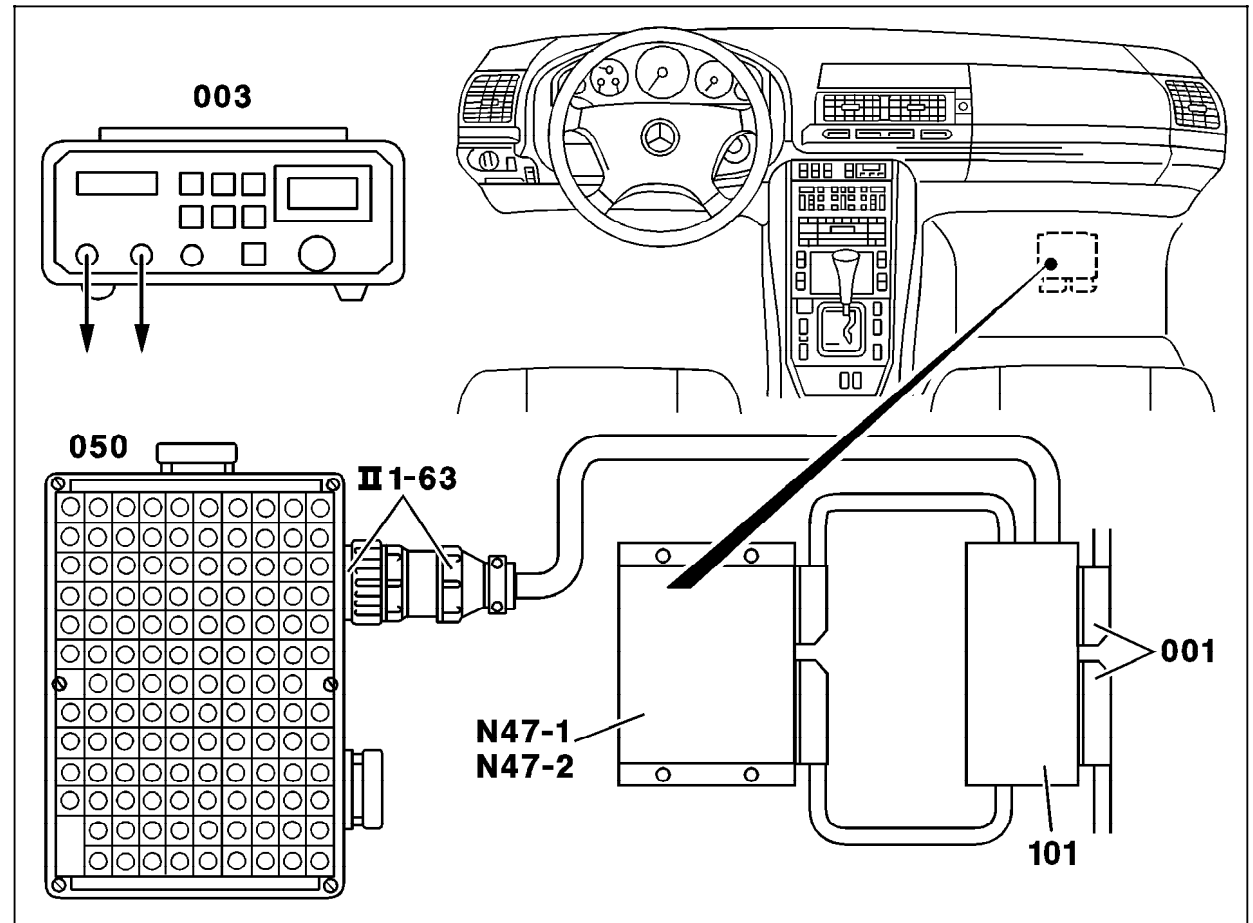


Figure 1

- 001 Control module connector
- 003 Digital multimeter
- 050 Socket box, 126-pole
- 101 Test cable, 1404 589 39 63 00
- N47-1 ASR/SPS control module
- N47-2 ETS/SPS control module

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9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Preparation for Test

Connection Diagram – Socket Box Model 210

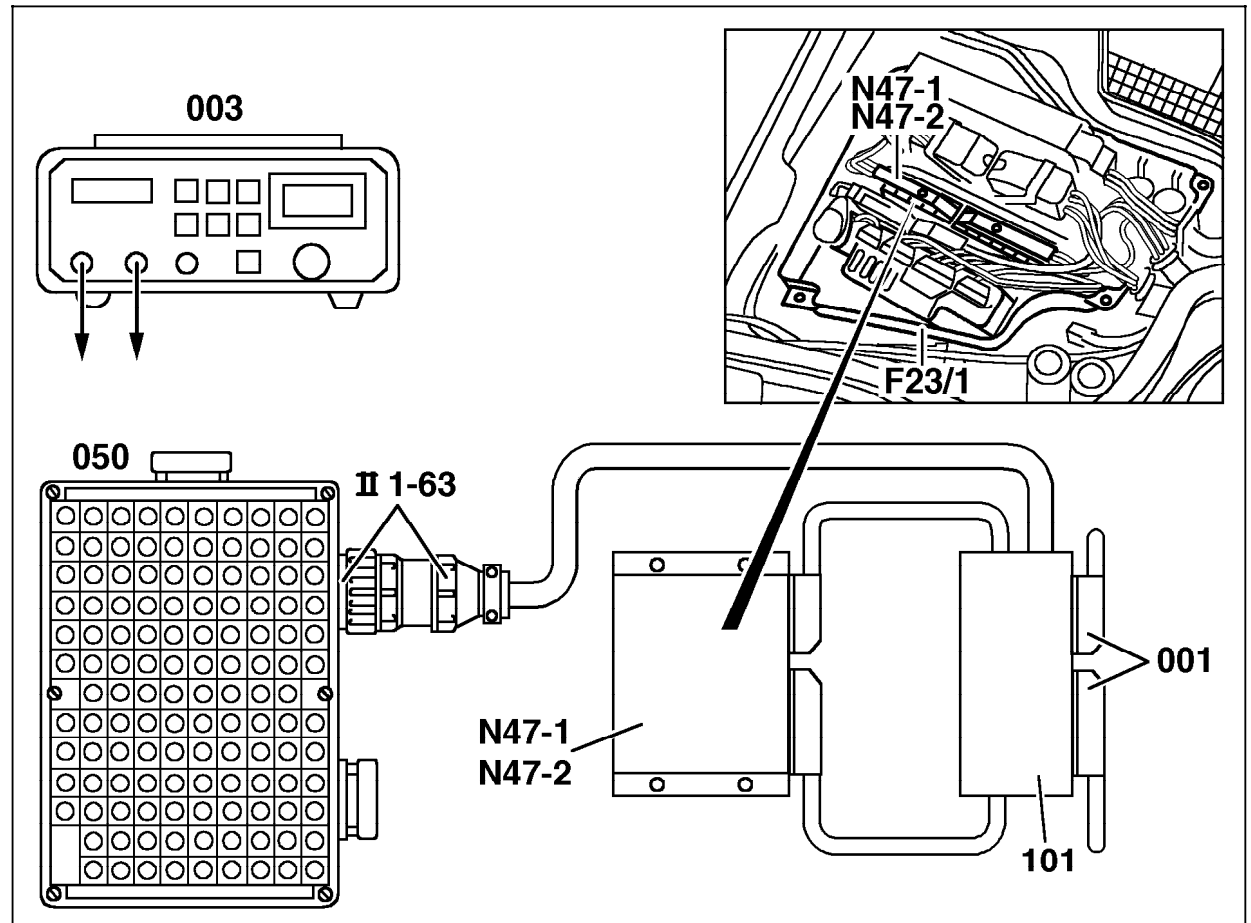




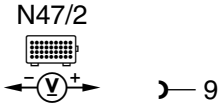
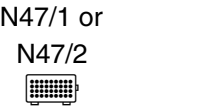
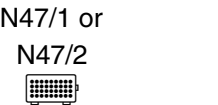
Figure 2

- 001 Control module connector
- 003 Digital multimeter
- 050 Socket box, 126-pole
- 101 Test cable, 1404 589 39 63 00
- N47-1 ASR/SPS control module
- N47-2 ETS/SPS control module

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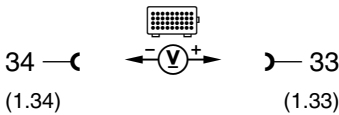
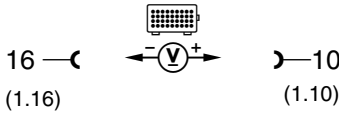

9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
2.0		ETS/SPS control module (N47-2) Circuit 30 Voltage supply	<p>N47/2</p> 	Ignition: OFF	11 – 14 V	Wiring. Model 210 only Fuse F1 on relay module (K40)
3.0		ABS MIL (A1e17)	<p>N47/1 or N47/2</p> 	Ignition: ON Engine: at Idle	< 2 V A1e17: ON 10 – 14 V A1e17: OFF	A1e17 Read out DTC, 12, Wiring, ASR/SPS or ETS/SPS control module (N47-1 or N47-2).
4.0		ASR or ETS warning lamp (A1e21 or A1e36)	<p>N47/1 or N47/2</p> 	Ignition: ON Engine: at Idle	< 2 V A1e21 or A1e36: ON 10 – 14 V A1e17: OFF A1e36: OFF	Wiring A1e21 or A1e36 Wiring











9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0		ASR or ETS warning lamp (A1e22 or A1e35)	N47-1 or N47-2 	Ignition: ON Engine: at Idle	< 2 V A1e22 or A1e35: ON 10 – 14 V A1e22 or A1e35: OFF	A1e22 or A1e35. Read out DTC 12 Wiring. ASR/SPS or ETS/SPS control module (N47-1 or N47-2).
6.0		Diagnostic output	N47-1 or N47-2 	Ignition: ON	10 – 14 V	Wiring. ASR/SPS or ETS/SPS control module (N47-1 or N47-2).
7.0		Voltage circuit 61		Ignition: ON Engine: at Idle	OFF ON	Wiring Generator (G2)



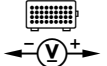
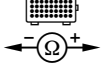

9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0		Solenoid valve relay: Model 202 (A7/3k1) Model 210: (N65k3) Voltage supply Control	N47-1 or N47-2 16 —  —  — 51 (1.16) (2.17) N47-1 or N47-2 37 —  —  — 51 — (2.3) (2.17)	Ignition: ON	11 – 14 V	Read out DTC, 12, Wiring, ⇒ 8.1.
8.1		Coil resistance	N47-1 or N47-2 37 —  —  — 51 (2.3) (2.17)	Ignition: OFF Disconnect ASR/SPS or ETS/SPS control module (N47/1 or N47/2).	40 - 80 Ω	Wiring Model 202: (A7/3k1) Model 210 (N65) ⇒ 8.2.
8.2		Working contact	N47-1 or N47-2 16 —  —  — 41 (1.16) (2.7)	Ignition: ON	11 – 14 V	Wiring, Model 202: A7/3k1. Model 210: (N65)

9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.0		ASR/ETS hydraulic unit, high-pressure/return pump relay Model 202: (A7/3k2) Model 210: (N65k4) Voltage supply	N47-1 or N47-2  16 —((1.16) —) 51 (2.17)	Ignition: ON	11 – 14 V	Wiring, ⇒ 9.1.
9.1		Coil resistance	N47-1 or N47-2  57 —((2.23) —) 51 (2.17)	Ignition: OFF Disconnect control module (N47/1 or N47/2).	40 – 80 Ω	Wiring, Model 202: A7/3k2. Model 210: N65
10.0 ASR only		Parking brake switch (S12)		Engine: at Idle Apply parking brake Release parking brake	ON Parking brake indicator lamp (A1e7): ON OFF A1e7: OFF	Wiring, S12, A1e7.



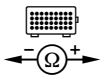


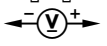


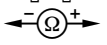



9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.0		Stop lamp switch (S9/1) Normally open (N.O.) contact Normally closed (N.C.) contact		Ignition: ON Brakes not applied Brakes applied Brakes not applied Brakes applied	OFF ON OFF ON	Wiring, S9/1.
12.0 ETS only		ETS signal	N47-2 16 — (1.16) 21 — (1.21)	Ignition: ON Engine: at Idle	< 1 V ETS MIL (A1e35): ON 11 – 14 V A1e35: OFF	Wiring, N47-2.
13.0		Left front axle VSS sensor (L6/1)		Raise front of vehicle Ignition: ON Rotate left front tire by hand (> 1 rev./sec.)	> 3 km/h	⇒ 13.1 ⇒ 13.2
13.1		Internal resistance	N47-1 or N47-2 48 — (2.14) 35 — (2.1)	Ignition: OFF Disconnect control module (N47/1 or N47/2).	0.8 – 2.3 kΩ	Wiring, L6/1.


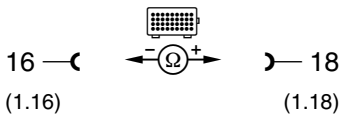
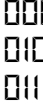

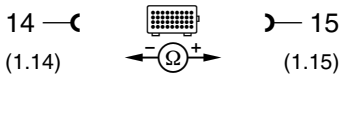
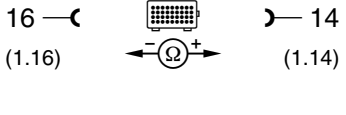
9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
13.2		Insulation resistance	N47-1 or N47-2 16 —  (1.16)   — 48 (2.14)	Ignition: OFF Disconnect control module (N47/1 or N47/2).	> 20 kΩ	Wiring, L6/1.
14.0		Left front axle VSS sensor (L6/1) output	N47-1 or N47-2 16 —  (1.16)   — 26 (1.26)	Raise front of vehicle Ignition: ON Rotate left front tire by hand (> 1 rev./sec.)	> 3 V	Wiring, ⇒ 14.1, N47-1 or N47-2.
14.1		Load with control modules connected	N47-1 or N47-2 16 —  (1.16)   — 26 (1.26)	Ignition: OFF Disconnect control module (N47-1 or N47-2).	> 5 kΩ	Wiring, Connected control modules (N4/1, N4/2, N22, etc.), ⇒ 13.0.
15.0		Right front axle VSS sensor (L6/2)		Raise front of vehicle Ignition: ON Rotate right front tire by hand (> 1 rev./sec.)	> 3 km/h	⇒ 15.1, ⇒ 15.2.














9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
18.1		Load with control modules connected	<p>N47-1 or N47-2</p> 	Ignition: OFF Disconnect control module (N47-1 or N47-2).	> 5 kΩ	Wiring, Connected control modules (N3/4, N4/1, etc.), ⇒ 17.0.
19.0		Right rear axle VSS sensor (L6/4)		Raise rear of vehicle Ignition: ON Rotate right rear tire by hand (> 1 rev./sec.)	> 3 km/h	⇒ 19.1, ⇒ 19.2.
19.1		Internal resistance	<p>N47-1 or N47-2</p> 	Ignition: OFF Disconnect control module (N47-1 or N47-2).	0.6 – 1.6 kΩ	Wiring, L6/4.
19.2		Insulation resistance	<p>N47-1 or N47-2</p> 	Ignition: OFF Disconnect control module (N47-1 or N47-2).	> 20 kΩ	Wiring.














9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
22.0		ASR/ETS hydraulic unit, left front axle solenoid valve (release) (A7/3y7) Internal resistance	A7/3 (202) — 1 ←  → — 13 (210) — 15 ←  → — 6	Ignition: OFF Disconnect electrical connector on A7/3.	2.8 – 6.6 Ω	Wiring, A7/3.
23.0		ASR/ETS hydraulic unit, right front axle solenoid valve (hold) (A7/3y8) Internal resistance	A7/3 (202) — 1 ←  → — 3 (210) — 15 ←  → — 8	Ignition: OFF Disconnect electrical connector on A7/3.	5.4 – 12.6 Ω	Wiring, A7/3.
24.0		ASR/ETS hydraulic unit, right front axle solenoid valve (release) (A7/3y9) Internal resistance	A7/3 (202) — 1 ←  → — 14 (210) — 15 ←  → — 5	Ignition: OFF Disconnect electrical connector on A7/3.	2.8 – 6.6 Ω	Wiring, A7/3.
25.0		ASR/ETS hydraulic unit, left rear axle solenoid valve (hold) (A7/3y10) Internal resistance	A7/3 (202) — 1 ←  → — 19 (210) — 15 ←  → — 10	Ignition: OFF Disconnect electrical connector on A7/3.	5.4 – 12.6 Ω	Wiring, A7/3.






9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
26.0		ASR/ETS hydraulic unit, left rear axle solenoid valve (release) (A7/3y11) Internal resistance	A7/3 202 1 —  — 18 210 15 —  — 11	Ignition: OFF Disconnect electrical connector on A7/3.	2.8 – 6.6 Ω	Wiring, A7/3.
27.0		ASR/ETS hydraulic unit, right rear axle solenoid valve (hold) (A7/3y12) Internal resistance	A7/3 202 1 —  — 20 210 15 —  — 9	Ignition: OFF Disconnect electrical connector on A7/3.	5.4 – 12.6 Ω	Wiring, A7/3.
28.0		ASR/ETS hydraulic unit, right rear axle solenoid valve (release) (A7/3y13) Internal resistance	A7/3 202 1 —  — 17 210 15 —  — 13	Ignition: OFF Disconnect electrical connector on A7/3.	2.8 – 6.6 Ω	Wiring, A7/3.
29.0		ASR/ETS hydraulic unit, switchover/solenoid valve (A7/3y5) Internal resistance	A7/3 202 1 —  — 21 210 15 —  — 1	Ignition: OFF Disconnect electrical connector on A7/3.	5.4 – 12.6 Ω	Wiring, A7/3.


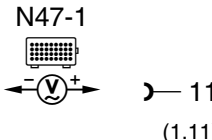
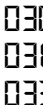
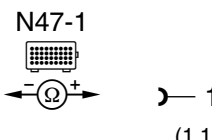
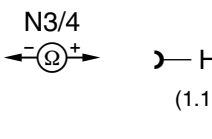
9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
30.0		ASR/ETS hydraulic unit, inlet solenoid valve (A7/3y15) Internal resistance	A7/3 202 1 210 15  	Ignition: OFF Disconnect electrical connector on A7/3.	5.4 – 12.6 Ω	Wiring, A7/3.
31.0 ASR only		ASR Off switch (S76/5)		Ignition: ON Press and hold switch S76/5: ON Release switch Press and hold switch S76/5: OFF	1 – 2 V 3.5 – 5 V < 1 V	Wiring, S76/5, N47/1.

9.2 Traction Systems (ASR, ETS)

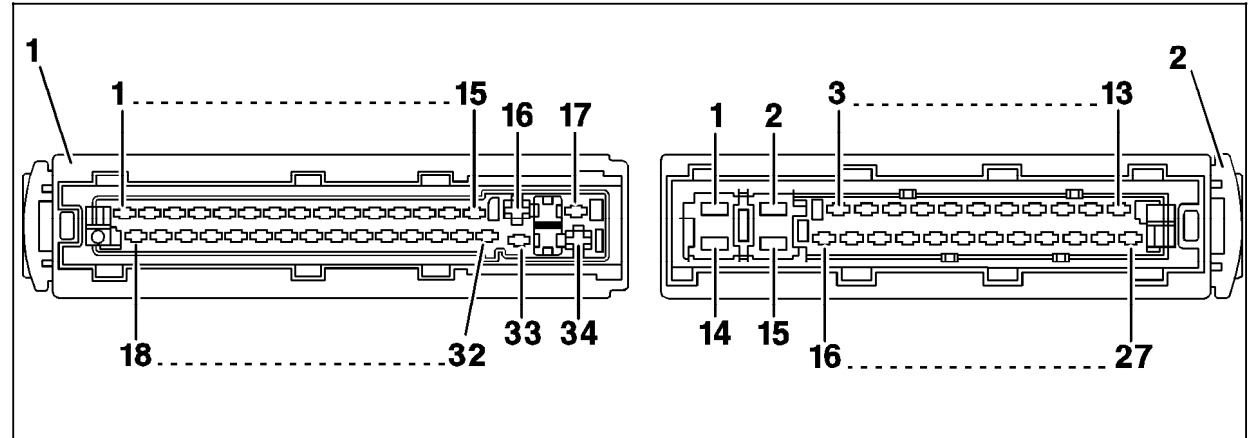
Electrical Test Program - Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
32.0		VSS sensor output status Signal: Vehicle stationary	<p>N47-1</p> 	Engine: at idle	> 3 V	
33		CAN bus (ASR ONLY)	<p>N47-1</p> 	Ignition: OFF Disconnect test cable or control module (N47/1) and test directly on control module using an ohmmeter.	< 115 - 125 Ω	Wiring for CAN BUS ⇒33.1
33.1		CAN element in HFM-SFI control module (N3/4) Resistance	<p>N3/4</p> 	Disconnect control module (N3/4) and test directly on control module using an ohmmeter.	< 115 - 125 Ω	N3/4, DM, Engines, Vol. 2, section 1.1 23.

9.2 Traction Systems (ASR, ETS)

Electrical Test Program - Test

Connector Layout - ASR/SPS or ETS/SPS control module (N47/1 or N47/2)



U42-5309-53

conn. 1 Interior harness connector

1	CAN bus (+)
2	not used
3	CAN bus (-)
4	ASR: Parking brake switch (S12)
5	ASR: ASR Off switch (S76/5)
6	not used
7	Stop lamp switch (S9/1) N.C. contact
8	Right rear axle VSS sensor (L6/4) output
9	ETS: Circuit 30 voltage supply
10	Diagnosis output to DLC (X11/4)
11	VSS sensor output status
12	Left rear axle VSS sensor (L6/3) (-)
13	Left rear axle VSS sensor (L6/3) (+)
14	Right rear axle VSS sensor (L6/4) (-)
15	Right rear axle VSS sensor (L6/4) (+)
16	Ground (W16/4 or W15/1)
17	ABS MIL (A1e17)
18	Left rear axle VSS sensor (L6/3) output
19	ASR or ETS warning lamp (A1e21 or A1e36)
20-21	not used
22	Stop lamp switch (S9/1) N.O. contact
23	Right front axle VSS sensor (L6/2) output
24	not used

25	Circuit 61 voltage
26	Left front axle VSS sensor (L6/1) output
27	Circuit 87 voltage
28-32	not used
33	ASR or ETS MIL (A1e22 or A1e35)
34	Ground (W16/4 or W15/1)

conn. 2 Engine harness connector

1	Left front axle VSS sensor (L6/1) (+)
2	Right front axle VSS sensor (L6/2) (+)
3	ASR/ETS hydraulic unit, solenoid valve relay (A7/3k1) (-)
4-5	not used
6	ASR/ETS hydraulic unit, inlet solenoid valve (A7/3y15) (-)
7	ASR/ETS hydraulic unit, left front axle solenoid valve (hold) (A7/3y6) (-)
8	ASR/ETS hydraulic unit, right front axle solenoid valve (release) (A7/3y9) (-)
9	not used
10	ASR/ETS hydraulic unit, switchover/solenoid valve (A7/3y5) (-)
11	not used

12	ASR/ETS hydraulic unit, left rear axle solenoid valve (release) (A7/3y11) (-)
13	ASR/ETS hydraulic unit, right rear axle solenoid valve (hold) (A7/3y12) (-)
14	Left front axle VSS sensor (L6/1) (-)
15	Right front axle VSS sensor (L6/2) (-)
16	not used
17	ASR/ETS hydraulic unit, high-pressure/return pump relay (A7/3k2) and solenoid valve relay (A7/3k1)
18-19	not used
20	ASR/ETS hydraulic unit, left front axle solenoid valve (release) (A7/3y7) (-)
21	not used
22	ASR/ETS hydraulic unit, right front axle solenoid valve (hold) (A7/3y8) (-)
23	ASR/ETS hydraulic unit, high-pressure/return pump relay (A7/3k2) (-)
24	not used
25	ASR/ETS hydraulic unit, high-pressure/return pump relay (A7/3k2) control
26	ASR/ETS hydraulic unit, left rear axle solenoid valve (hold) (A7/3y10) (-)
27	ASR/ETS hydraulic unit, right rear axle solenoid valve (release) (A7/3y13) (-)