

16.3 Models 129, 140, 202 (as of 07/93) ¹⁾,
170, 208, 210 (up to 07/98)

	Page	
Diagnosis (driver/passenger-side airbag/side airbag)		Effective Serial Numbers for new control modules, as of 07/93
Function Test	11/1	Model
Diagnostic Trouble Code (DTC) Memory	12/1	Chassis End Number
Fault Frequency, Time Span	13/1	129 1F 087104
Actual Values	14/1	140 1A 150711
Complaint Related Diagnostic Chart	15/1	202 1A 008130
		1F 003 878
		As of approximately 04/95 production, only the ETR's of buckled seat belts will deploy in a severe rear impact (previously the AB's would also deploy).
Electrical Test Program (driver/passenger-side airbag/ side airbag)		
Component Locations	20/1	New control module for side airbag, Model 210
Connection of Components	21/1	As of model introduction, only the ETR's of buckled seat belts will deploy.
Preparation for Test	22/1	Automatic child seat recognition (ACSR) for model 170, as of model introduction. Functions only with child seat model: " Babysafe ".
Test	23/1	
Control Module Programming		
Vehicle Equipment	31/1	
Parameters	32/1	

¹⁾ Used as of chassis end Number, see "Effective Serial Number for new control modules, as of 07/93" table.

Diagnosis - Function Test (driver/passenger-side airbag/side airbag)**⚠ CAUTION!**

Risk of Injury when performing Diagnostic Tests and repairs on components of the SRS system.

Store both airbags and side airbags with opening surface pointing upward.

Do not expose to temperatures above 100°C.

Interrupt any electrical current from reaching the airbag unit.

⚠ CAUTION!

Risk of injury if airbag units and ETR units are ignited accidentally or if stored with the opening end facing downward which may cause the accidentally ignited components to fly about causing injury. Danger to persons also exists if the components are disposed of by cutting apart with cutting torches or other cutting/separation devices. Danger also exists if disposing the untriggered units via refuse collection or via smelting/carbonizing companies.

Protective measures/Supervision

- Place removed airbag unit with the opening side facing upward.
- Allow only **properly trained dealer staff** to supervise, purchase, transport, store, test/replace any of the SRS components.
- Install all airbag or ETR units once pulled from the parts department.
- Protect all airbag or ETR units from any sparks, open flame, or temperatures above 100°C.
- Do not transport airbag or ETR units in the passenger compartment, rather transport securely in their **original packaging** in the trunk.
- Do not allow oil, grease or cleaning agents come in contact with the airbag or ETR units
- Perform SRS tests only with approved test equipment (such as HHT), while installed in the vehicle **without** occupants.

- When reconnecting the vehicle battery or any outside electrical source, with the ignition turned ON, do not allow any occupants inside the vehicle.
- Airbag or ETR units which have been dropped from a height greater than 18 inches must be replaced.
- Prior to disposing the airbag or ETR units, the units must be made un-useable by discharging.
- In order to render the airbag and ETR unit un-useable, the specially made discharge harness must be used and at the same time maintain a **safe distance of at least 33 feet** from the units being discharged.

Prior to undertaking any chassis/body repairs, installation/repair work on airbag and ETR units, or any components which come in contact with the airbag and ETR units, or are part of the electrical circuit of airbag and ETR units (such as installation of the steering wheel), the following conditions must be met:

- Remove ignition key.
- Disconnect any outside source of electrical circuit (i.e. battery charger).
- When performing interior repairs or welding operations, disconnect the connector from the SRS control module.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

CAUTION!

Risk of Injury when performing Diagnostic Tests and repairs on components of the SRS system.

Store both airbags and side airbags with opening surface pointing upward.

Do not expose to temperatures above 100°C.

Interrupt any electrical current from reaching the airbag unit.

Preparation for Test:

1. Review 11, 12, 13, 20, 21, 22, 23, 31, 32
2. Please see 11/3 for function of SRS MIL (A1e15).

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 1.0 Supplemental Restraint System (SRS)	Ignition key in position "1".	SRS MIL (A1e15) comes on and then extinguishes after approximately 4 – 20 seconds.	DTC Memory 12
⇒ 2.0 Automatic Child Seat Recognition (ACSR)	Ignition key in position "1".	Automatic child seat recognition warning lamp (N72e1) illuminates and then goes out after approx. 4 seconds. (MB child seat model: "Babysafe" not installed).	Automatic child seat recognition warning lamp (N72e1) illuminates and does not go out: 12 Automatic child seat recognition warning lamp (N72e1) does not illuminate: 23 ⇒ 22.0, 23 ⇒ 20.0

¹⁾ Observe Preparation for Test, see 22.

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

Function of the SRS MIL (A1e15):

- SRS system is fully functional, if the SRS MIL goes out after 4 seconds.
- SRS MIL goes out after 2 minutes, system fault noted, occupant protection not affected.
Vehicle without side airbag:
 - Low battery voltage
 - SRS MIL
 - Seat belt buckle latch (USA)
Vehicle with side airbag:
SRS system is fully functional, if SRS MIL goes out after approx. 4 – 20 seconds.
SRS MIL remains illuminated as long as the following faults are present:
 - Low battery voltage
 - SRS MIL
 - Communication fault in the side bag sensors
 - Seat belt buckle latch (USA)
 - Seat occupation recognition
- SRS MIL remains illuminated continuously, which may result in a non-deployment or a possible false airbag deployment.
- SRS MIL blinks after the replacement of the control module, the control module has not been programmed/parametered.

Note: SRS MIL illumination can only be erased via the HHT, if no current DTC's are stored in memory.

The following applies to vehicles which have the Automatic Child Seat Recognition (ACSR) system installed.

- Function of automatic child seat recognition warning lamp (E13, N72e1) (AIRBAG OFF):
If the **"Babysafe" child seat is installed:**
The automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF) is illuminated and verifies the recognition of the **"Babysafe"** child seat.
The passenger-side airbag is turned off.
Side airbag and ETR remain in use.
- If the **"Babysafe" child seat** is **NOT** installed:
Automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF) goes out after approx. 4 seconds.
If the automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF) **does not go out** after approx. 4 seconds, this indicates a fault in the ACSR system.

When turning on the vehicle illumination, the automatic child seat recognition warning lamp (N72e1) is dimmed as well.

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

Preliminary work:
 Diagnosis - Function Test 11

Preparation for DTC readout

1. Review 11, 12, 13, 20, 21, 22, 23, 31, 32
2. Fuses OK.
3. Battery voltage 11 – 14 V
4. SRS MIL (A1e15) illuminates.
5. Connect Hand-Held Tester (HHT) as per connection diagram, see section 0, and readout DTC memory.

 **CAUTION!**

Do not connect battery trickle charger.

 **CAUTION!**

Risk of Injury when performing Diagnostic Tests and repairs on components of the SRS system.

Store both airbags and side airbags with opening surface pointing upward.

Do not expose to temperatures above 100°C.

Interrupt any electrical current from reaching the airbag unit.

Note:

As of 07/93, diagnostic trouble codes (DTC's) can only be read out and erased **using the Hand-Held Tester (HHT)**.

Determine MB number of the SRS control module via HHT (see DTC chart on page 12/3):

The SRS control modules beginning with the number **000**, the fault code **1** is valid.

Those beginning with **001**, the fault code **2** is valid.



When installing additional accessories, observe harness clearances near SRS sensor lines.

DTC's for Lower Control Field Control Module (N72) see 12/6

Test equipment; See MBUSA Standard Service Equipment Program

Hand-Held Tester (HHT) ¹⁾	See S.I. in groups 58 and 99.
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¹⁾ Available through the MBUSA Standard Equipment Program.

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)



A current fault is indicated by the DTC being highlighted in black. Additional detailed information is given with most DTC's, which will indicate possible faults conditions or portions thereof:

- > Ω Resistance too great.
- < Ω Resistance too low.
- Γ - Short circuit to ground (GND)
- Γ + Short circuit to positive (POS).
- //- Open circuit.

Fault frequency and time span of the fault can be read by pressing the  key.

Fault frequency:

Faults are noted by frequency of occurrence, i.e.: 5 periodic faults, 5 occurrences, eliminated 5 times.

Time span:

The amount of time elapsed since last fault, or since fault eliminated itself.

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

DTC		Possible cause	Test step/Remedy ¹⁾
with fault code 1	with fault code 2		
001	001	SRS control module (N2/2)	23 ⇒ 2.0
002	004	Driver AB squib (R12/3)	23 ⇒ 3.0, 4.0
003	005	Left front ETR squib (R12/1)	23 ⇒ 5.0, 6.0
004	006	Right front ETR squib (R12/2)	23 ⇒ 7.0, 8.0
005	007	Front passenger AB squib (R12/8)	23 ⇒ 9.0, 10.0
	008	Left side airbag squib (R12/9)	23 ⇒ 15.0, 16.0
	009	Right side airbag squib (R12/10)	23 ⇒ 17.0, 18.0
010	004-009 016, 017 026, 029 034	Programming does not comply with vehicle version	31.0, verify vehicle version, repeat programming.
017	003	Circuit 15R, voltage supply (low voltage)	23 ⇒ 1.0
019	002	SRS MIL (A1e15)	23 ⇒ 11.0
020	025	Front passenger seat occupied recognition sensor (B41/1) ²⁾ or (B48)	23 ⇒ 19.0

1) Observe Preparation for Test, see 22.

2) As of model introduction (USA), other models as of approx. 06/96

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

DTC 		Possible cause	Test step/Remedy ¹⁾
with fault code 1	with fault code 2		
024 	016 	Left front seat belt buckle switch (AB/ETR) (S68/3)	23 ⇒ 12.0
025 	017 	Right front seat belt buckle switch (AB/ETR) (S68/4)	23 ⇒ 13.0
073		Squib short circuit (ΓΓ) (to each other)	23 ⇒ 14.0
	018	Left side airbag (A53), harness fault	23 ⇒ 16.0
	019	Left side air bag (A53), sensor defective	Replace sensor
	020	Left side air bag (A53), sensor defective	Replace sensor
	021	Right side airbag (A54)	23 ⇒ 18.0
	022	Right side airbag (A54), sensor defective	Replace sensor
	023	Right side airbag (A54), sensor defective	Replace sensor
	027	Front passenger seat occupied recognition with automatic child seat recognition (B48) (ACSR), communication, -//-, ΓΓ	23 ⇒ 20.0
	028	Front passenger seat occupied recognition with automatic child seat recognition (B48) (ACSR), Improperly positioned child seat or faulty, Connection between passenger seat and child seat faulty, B48, Metallic objects on passenger seat or child seat, Short term electromagnetic interference in immediate area such as electronic transmitters, telephones etc.	Position child seat properly or replace, Replace B48

¹⁾ Observe Preparation for Test, see 22.

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

DTC 		Possible cause	Test step/Remedy ¹⁾
with fault code 1	with fault code 2		
	031	Front passenger seat occupied recognition with automatic child seat recognition (B48) (ACSR)	Replace B48
	032	Left side airbag (A53), communication interference	Electromagnetic interference, check harness routing if accessories installed ²⁾
	033	Right side airbag (A54), communication interference	Electromagnetic interference, check harness routing if accessories installed ²⁾
	034	Digital crash output, harness fault (TELE AID) ³⁾	
	035	Analoge crash output, harness fault (model 170 Kompressor)	

1) Observe Preparation for Test, see 22.

2) Observe clearances near sensors, if additional accessories are being installed.

3) Currently only on model 170

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)**⚠ CAUTION!**

Risk of Injury when performing Diagnostic Tests and repairs on components of the SRS system.

Store both airbags and side airbags with opening surface pointing upward.

Do not expose to temperatures above 100°C.

Interrupt any electrical current from reaching the airbag unit.

⚠ CAUTION!

Risk of injury if airbag units and ETR units are ignited accidentally or if stored with the opening end facing downward which may cause the accidentally ignited components to fly about causing injury. Danger to persons also exists if the components are disposed of by cutting apart with cutting torches or other cutting/separation devices. Danger also exists if disposing the untriggered units via refuse collection or via smelting/carbonizing companies.

Protective measures/Supervision

- Place removed airbag unit with the opening side facing upward.
- Allow only **properly trained dealer staff** to supervise, purchase, transport, store, test/replace any of the SRS components.
- Install all airbag or ETR units once pulled from the parts department.
- Protect all airbag or ETR units from any sparks, open flame, or temperatures above 100°C.
- Do not transport airbag or ETR units in the passenger compartment, rather transport securely in their **original packaging** in the trunk.
- Do not allow oil, grease or cleaning agents come in contact with the airbag or ETR units
- Perform SRS tests only with approved test equipment (such as HHT), while installed in the vehicle **without** occupants.

- When reconnecting the vehicle battery or any outside electrical source, with the ignition turned ON, do not allow any occupants inside the vehicle.
- Airbag or ETR units which have been dropped from a height greater than 18 inches must be replaced.
- Prior to disposing the airbag or ETR units, the units must be made un-useable by discharging.
- In order to render the airbag and ETR unit un-useable, the specially made discharge harness must be used and at the same time maintain a **safe distance of at least 33 feet** from the units being discharged.

Prior to undertaking any chassis/body repairs, installation/repair work on airbag and ETR units, or any components which come in contact with the airbag and ETR units, or are part of the electrical circuit of airbag and ETR units (such as installation of the steering wheel), the following conditions must be met:

- Remove ignition key.
- Disconnect any outside source of electrical circuit (i.e. battery charger).
- When performing interior repairs or welding operations, disconnect the connector from the SRS control module.

Preparation for DTC readout for Lower Control Field Control Module (N72) follows on next page.

Diagnosis - Diagnostic Trouble Code (DTC) Memory (driver/passenger-side airbag/side airbag)

Preparation for DTC readout for Lower Control Field Control Module (N72) only

1. Connect Hand-Held Tester (HHT) as per connection diagram, see section 0, and readout DTC memory for lower control field control module (N72),
2. Review 12, 13,
2. Listed below are only the DTC's pertaining to SRS,
3. Fuses OK,
4. Battery voltage 11 – 14 V,
5. SRS MIL (A1e15) illuminates.

DTC 	Possible cause	Test step/Remedy ¹⁾
B 1558	Automatic child seat recognition warning lamp (N72e1) Γ1- short circuit to ground, -//- open circuit	23 ⇒ 22.0
B 1559	ACSR signal line Γ1- short circuit to ground	23 ⇒ 20.0

1) Observe Preparation for Test, see 22.

Diagnosis - Fault Frequency, Time Span (driver/passenger-side airbag/side airbag)

For each fault a fault time span is provided, showing start and end of fault

AB	DTC Memory
Fault Frequency 4 Time span since first fault is: 6 h. 11 min. 14 sec. Time span since last fault noted is: 4 h. 35 min. 12 sec.	
	<<

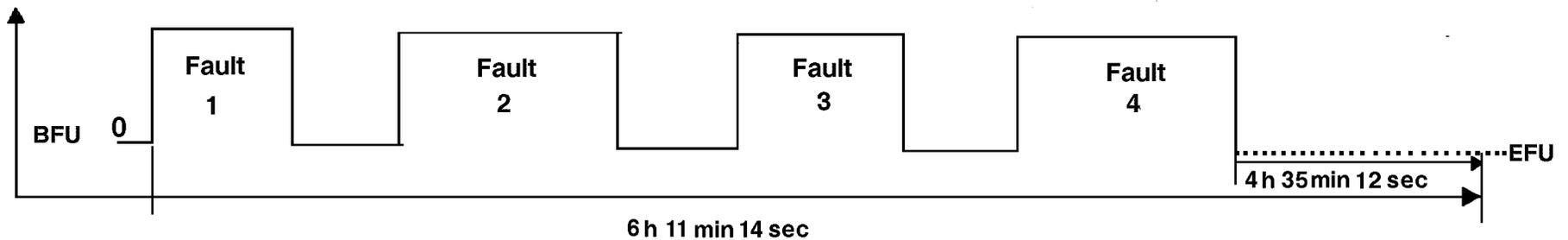
Example:

- Fault frequency:
- Time span since the first fault is:
- Time span since last fault noted is:

Periodic Faults:

- Fault noted 4 times.
- 6 h. 11 min. 14 sec.
- 4 h. 35 min. 12 sec.

Fault Frequency (count)



Time span (h, min, sec.) 0 Fault not present.
 BFU: Start of Fault Time Span. 1, 2, 3, 4 Fault present (occured 4 times, did not occur 4 times).
 EFU: End of Fault Time Span.

U00-0001-JH

Diagnosis - Actual Values (driver/passenger-side airbag/side airbag)

Four displays are possible:

✓, F, ON, OFF.

✓ : Noted values are within the nominal values.

F : Noted values are **outside** the nominal values.

ON: Seat belt buckle **latched** (USA), front passenger seat occupied, MB "**Babysafe**" child seat recognized.

OFF: Seat belt buckle **not** latched (USA), front passenger seat **not occupied**, MB "**Babysafe**" child seat **not** recognized.

Contrary to DTC memory, actual values are updated continuously, even during diagnosis. This allows intermittent faults to be recognized by moving/shaking components, connectors or wiring harnesses.

Control Module Versions

Information regarding the AB control modules and Side airbag sensors can be readout:

- Model
- Manufacture location
- Manufacture date
- Daily manufacture number (as of 12/96 only)

Diagnosis - Complaint Related Diagnostic Chart (driver/passenger-side airbag/side airbag)**⚠ CAUTION!**

Risk of Injury when performing Diagnostic Tests and repairs on components of the SRS system.

Store both airbags and side airbags with opening surface pointing upward.

Do not expose to temperatures above 100°C.

Interrupt any electrical current from reaching the airbag unit.

⚠ CAUTION!

Risk of injury if airbag units and ETR units are ignited accidentally or if stored with the opening end facing downward which may cause the accidentally ignited components to fly about causing injury. Danger to persons also exists if the components are disposed of by cutting apart with cutting torches or other cutting/separation devices. Danger also exists if disposing the untriggered units via refuse collection or via smelting/carbonizing companies.

Protective measures/Supervision

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- Protect all airbag or ETR units from any sparks, open flame, or temperatures above 100°C.
- Do not transport airbag or ETR units in the passenger compartment, rather transport securely in their **original packaging** in the trunk.
- Do not allow oil, grease or cleaning agents come in contact with the airbag or ETR units
- Perform SRS tests only with approved test equipment (such as HHT), while installed in the vehicle **without** occupants.

- When reconnecting the vehicle battery or any outside electrical source, with the ignition turned ON, do not allow any occupants inside the vehicle.
- Airbag or ETR units which have been dropped from a height greater than 18 inches must be replaced.
- Prior to disposing the airbag or ETR units, the units must be made un-useable by discharging.
- In order to render the airbag and ETR unit un-useable, the specially made discharge harness must be used and at the same time maintain a **safe distance of at least 33 feet** from the units being discharged.

Prior to undertaking any chassis/body repairs, installation/repair work on airbag and ETR units, or any components which come in contact with the airbag and ETR units, or are part of the electrical circuit of airbag and ETR units (such as installation of the steering wheel), the following conditions must be met:

- Remove ignition key.
- Disconnect any outside source of electrical circuit (i.e. battery charger).
- When performing interior repairs or welding operations, disconnect the connector from the SRS control module.

Diagnosis - Complaint Related Diagnostic Chart (driver/passenger-side airbag/side airbag)

Preparation for Test:

1. Review 11, 12, 13, 20, 21, 22, 23, 31, 32

Complaint/Problem	Possible cause	Test step/Remedy
SRS MIL (A1e15) with ignition key in position "1": <ul style="list-style-type: none"> • does not come on • does not go out after approximately 4 – 20 seconds • flickers • comes on for 2 minutes • remains illuminated continuously 		DTC Memory 12
SRS MIL (A1e15) blinks with ignition key in position "1", after the control module has been replaced.	SRS control module not reprogrammed.	Control Module Programming Programming Vehicle Equipment 31 Setting Parameters 32
Automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF), Automatic child seat recognition (ACSR) indicator lamp (E16), does not illuminate and does not go out, (MB "Babysafe" seat NOT installed).	Automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF), Automatic child seat recognition (ACSR) indicator lamp (E16, N72e1), Transponder system in child seat, Seat occupied recognition transponder with child seat recognition (B48), SRS control module	31 32

Diagnosis - Complaint Related Diagnostic Chart (driver/passenger-side airbag/side airbag)

Complaint/Problem	Possible cause	Test step/Remedy
Automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF), Automatic child seat recognition (ACSR) indicator lamp (E16), does not illuminate, (MB "Babysafe" seat IS installed).	Automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF), Automatic child seat recognition (ACSR) indicator lamp (E16, N72e1), Transponder system in child seat, Seat occupied recognition transponder with child seat recognition (B48), SRS control module	31 32

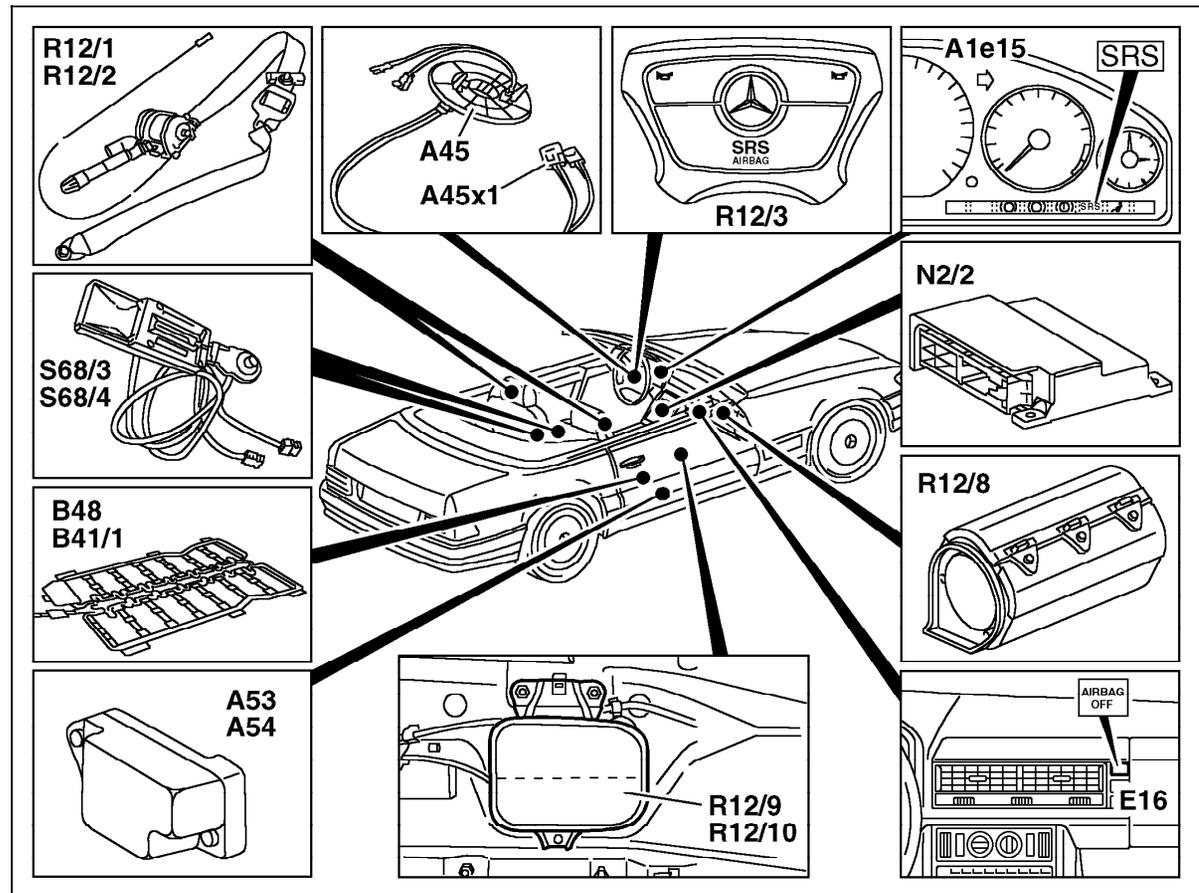
Electrical Test Program - Component Locations

Driver/passenger-side airbag/side airbag

Model 129

Figure 1

- A1e15 SRS MIL
- A45 Horn/airbag clock spring contact
- A45x1 Horn/airbag clock spring contact connector
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B41/1 Front passenger seat occupied recognition sensor
- B48 Front passenger seat occupied recognition with automatic child seat recognition (ASCR)
- E16 Automatic child seat recognition (ASCR) indicator lamp
- N2/2 SRS control module
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) 
- S68/4 Right front seat belt buckle switch (airbag/ETR) 



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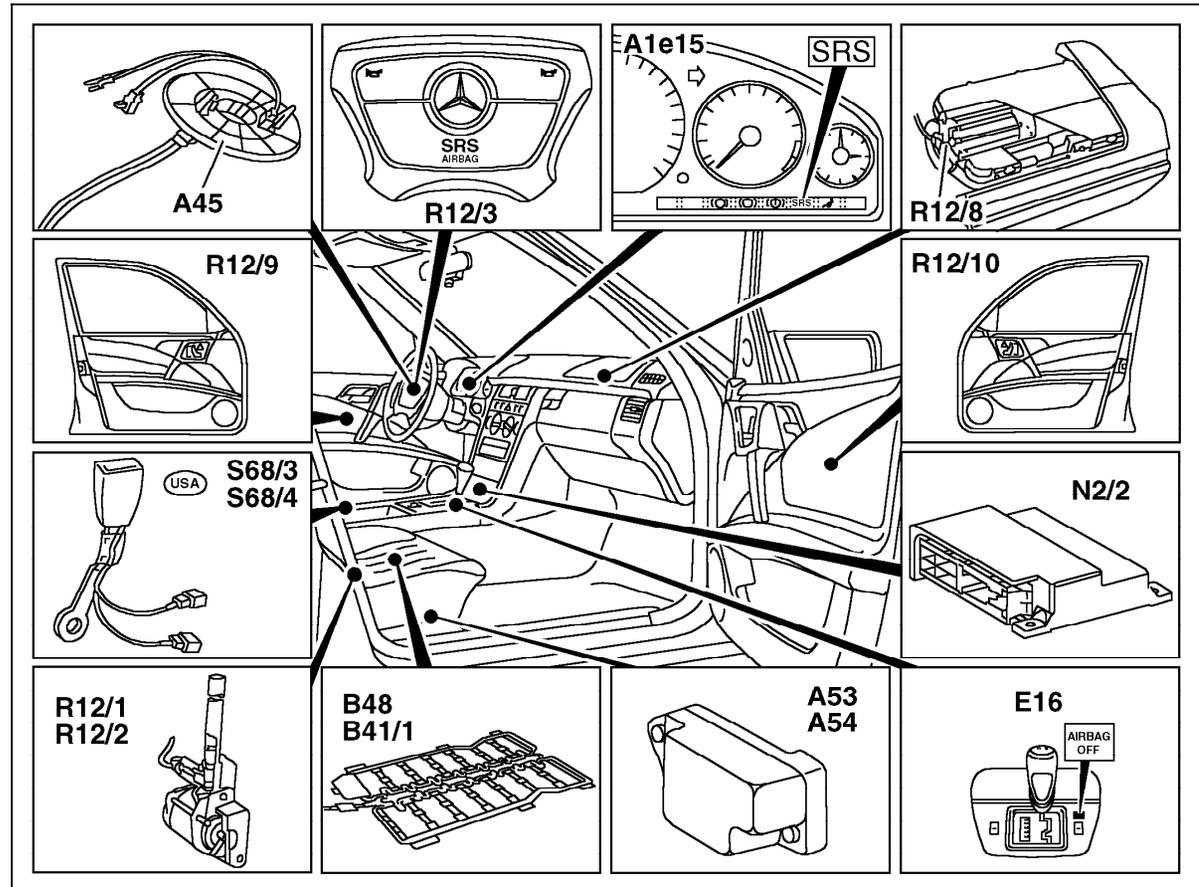
Electrical Test Program - Component Locations

Driver/passenger-side airbag/side airbag

Model 140

Figure 2

- A1e15 SRS MIL
- A45 Horn/airbag clock spring contact
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B48 Front passenger seat occupied recognition with automatic child seat recognition (ASCR)
- E16 Automatic child seat recognition (ASCR) indicator lamp
- N2/2 SRS control module
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) (USA)
- S68/4 Right front seat belt buckle switch (airbag/ETR) (USA)



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16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Component Locations

Driver/passenger-side airbag/side airbag

Model 170, 208

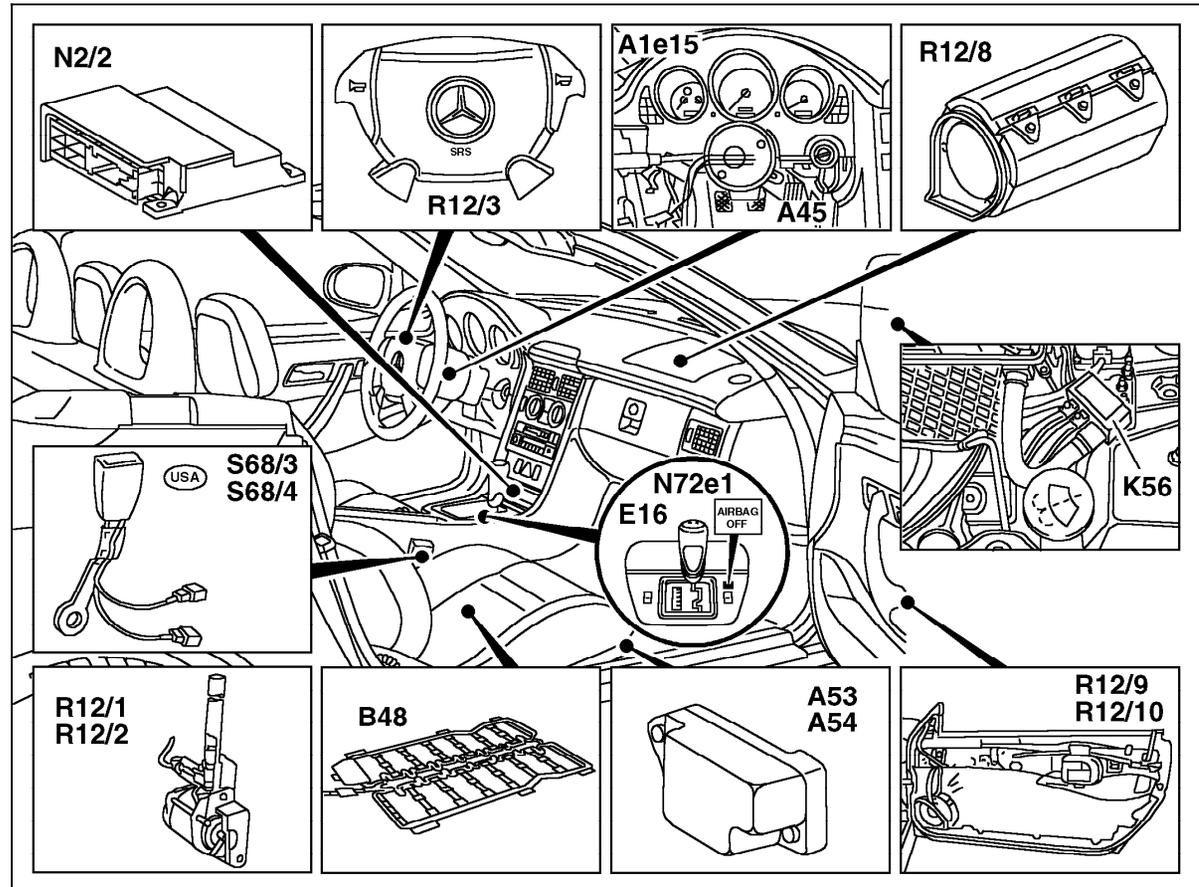


Figure 3

- A1e15 SRS MIL
- A45 Horn/airbag clock spring contact
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B48 Front passenger seat occupied recognition with automatic child seat recognition (ACSR)
- E16 Automatic child seat recognition (ACSR) indicator lamp
- K56 Crash separation relay module (generator/battery) (Kompressor model only)
- N2/2 SRS control module
- N72e1 Automatic child seat recognition warning lamp
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) (USA)
- S68/4 Right front seat belt buckle switch (airbag/ETR) (USA)

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16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

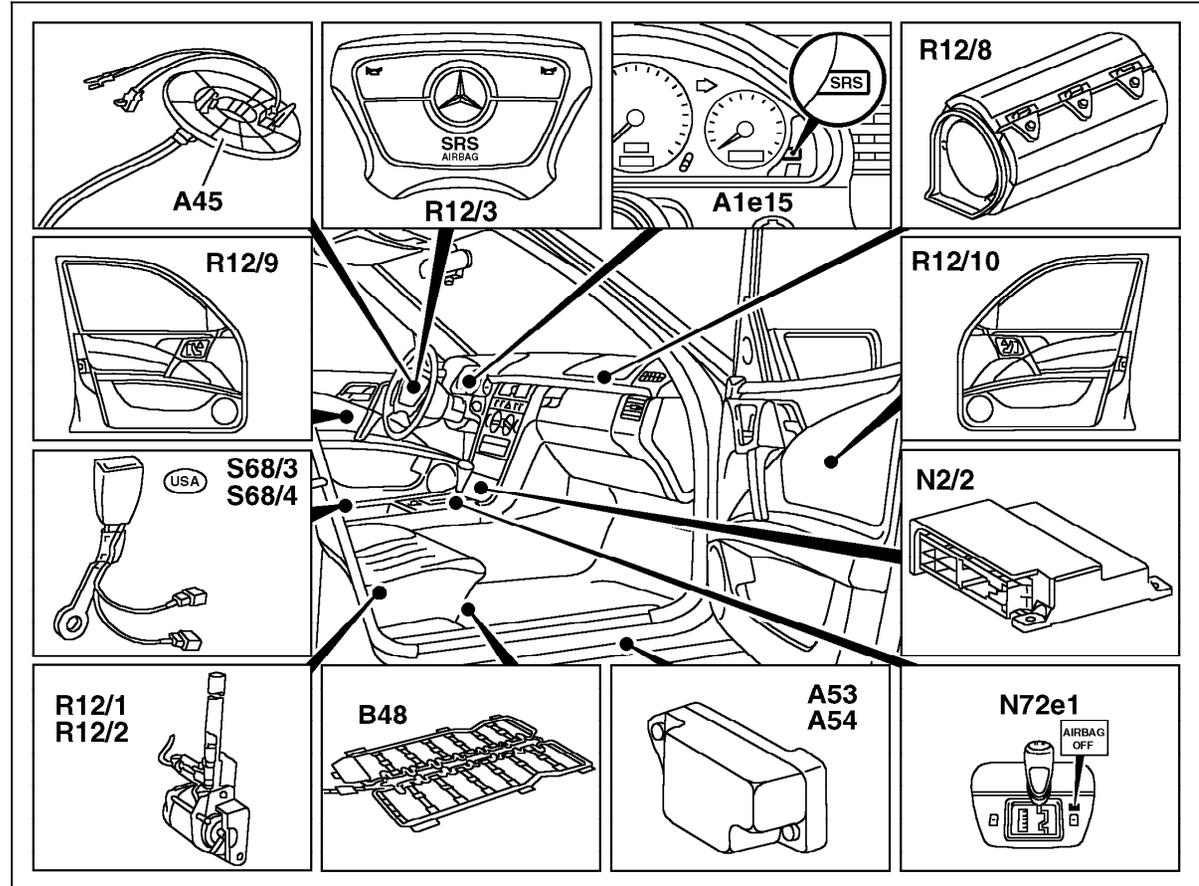
Electrical Test Program - Component Locations

Driver/passenger-side airbag/side airbag

Model 202
As of 07/97

Figure 4

- A1e15 SRS MIL
- A45 Horn/airbag clock spring contact
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B48 Front passenger seat occupied recognition with automatic child seat recognition (ACSR)
- N2/2 SRS control module
- N72e1 Automatic child seat recognition warning lamp
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) (USA)
- S68/4 Right front seat belt buckle switch (airbag/ETR) (USA)



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Electrical Test Program - Component Locations

Driver/passenger-side airbag/side airbag

Model 210
Up to 03/97
With seat occupied recognition (SOR)

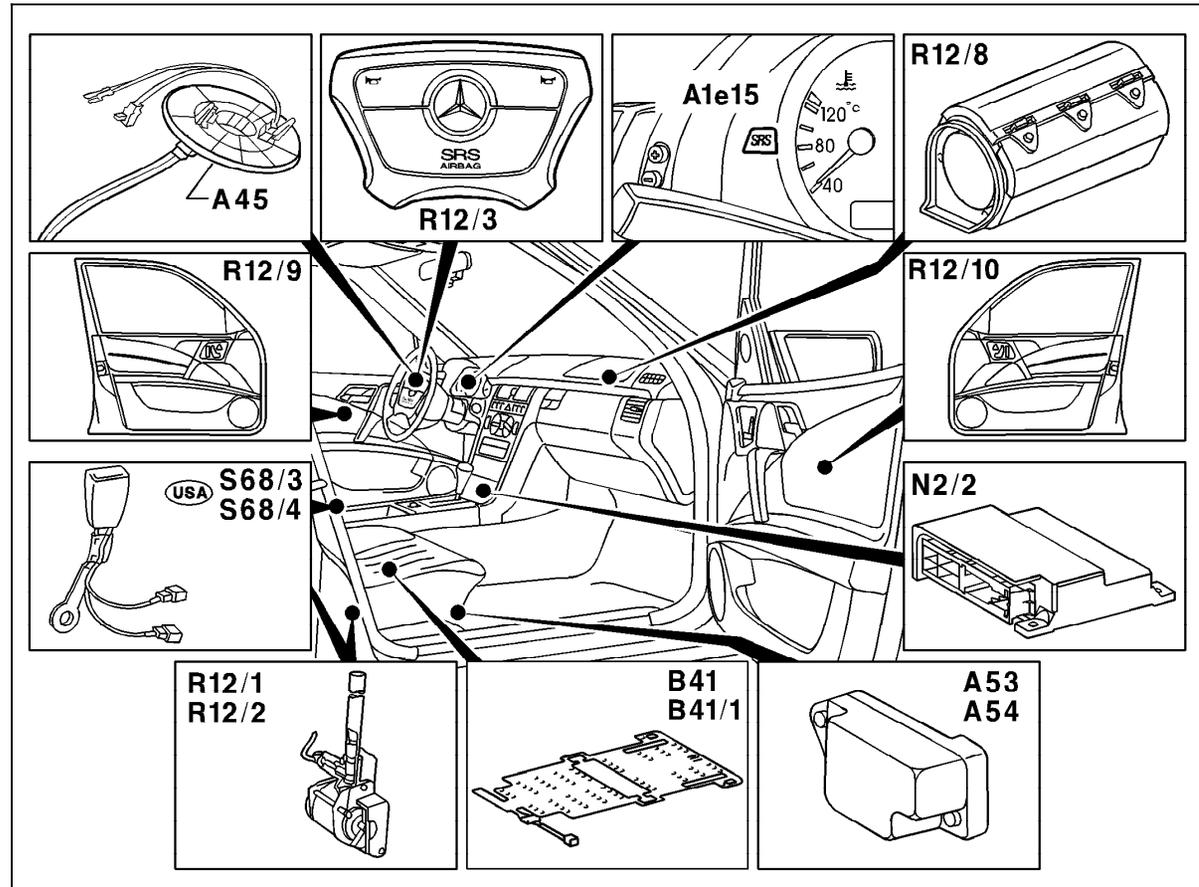


Figure 5

- A1e15 SRS MIL
- A45 Horn/airbag clock spring contact
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B41/1 Front passenger seat occupied recognition sensor
- N2/2 SRS control module
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) USA
- S68/4 Right front seat belt buckle switch (airbag/ETR) USA

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Electrical Test Program - Component Locations

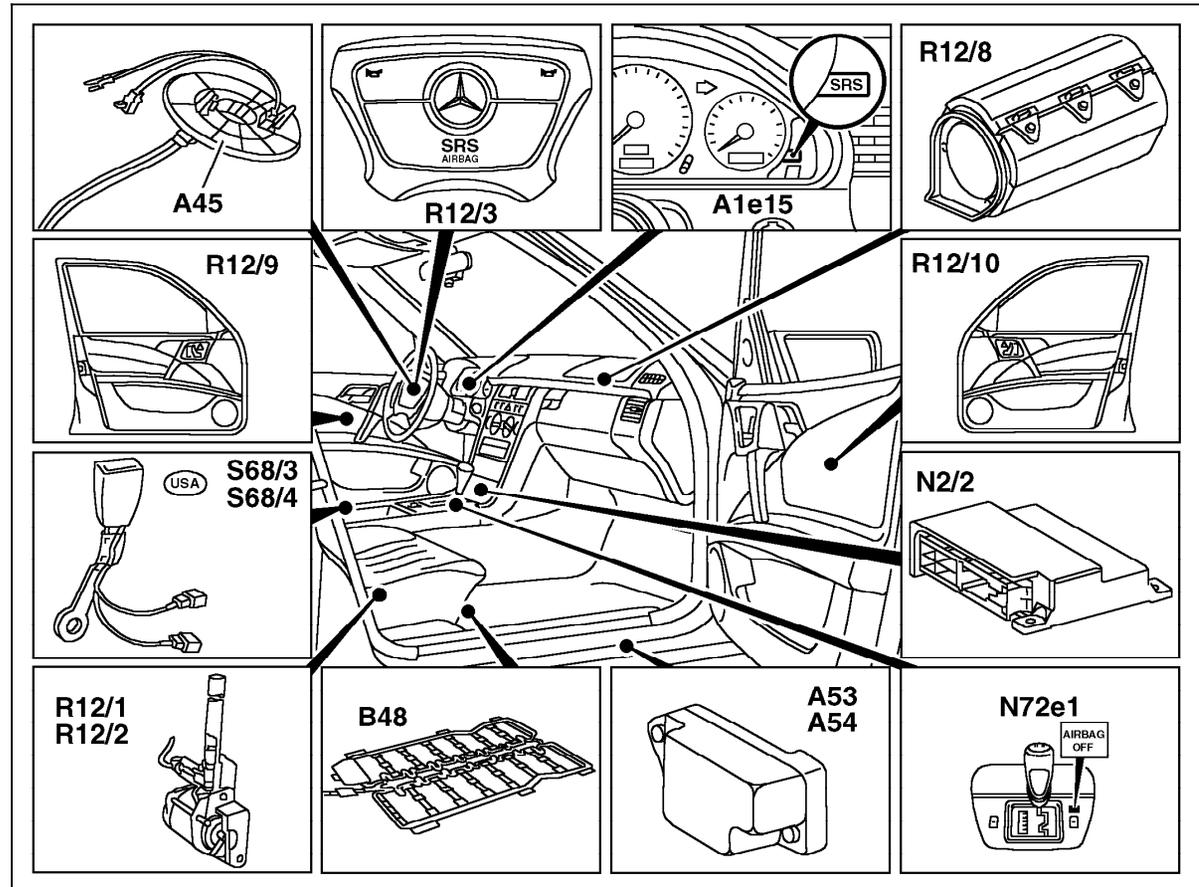
Driver/passenger-side airbag/side airbag

Model 210

As of 03/97 and up to 07/98

Figure 5

- A1e15 SRS MIL
- A45 Horn/airbag clock spring contact
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B48 Front passenger seat occupied recognition with automatic child seat recognition (ACSR)
- N2/2 SRS control module
- N72e1 Automatic child seat recognition warning lamp
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) 
- S68/4 Right front seat belt buckle switch (airbag/ETR) 



P91.60-0498-06

Electrical Test Program – Connection of Components

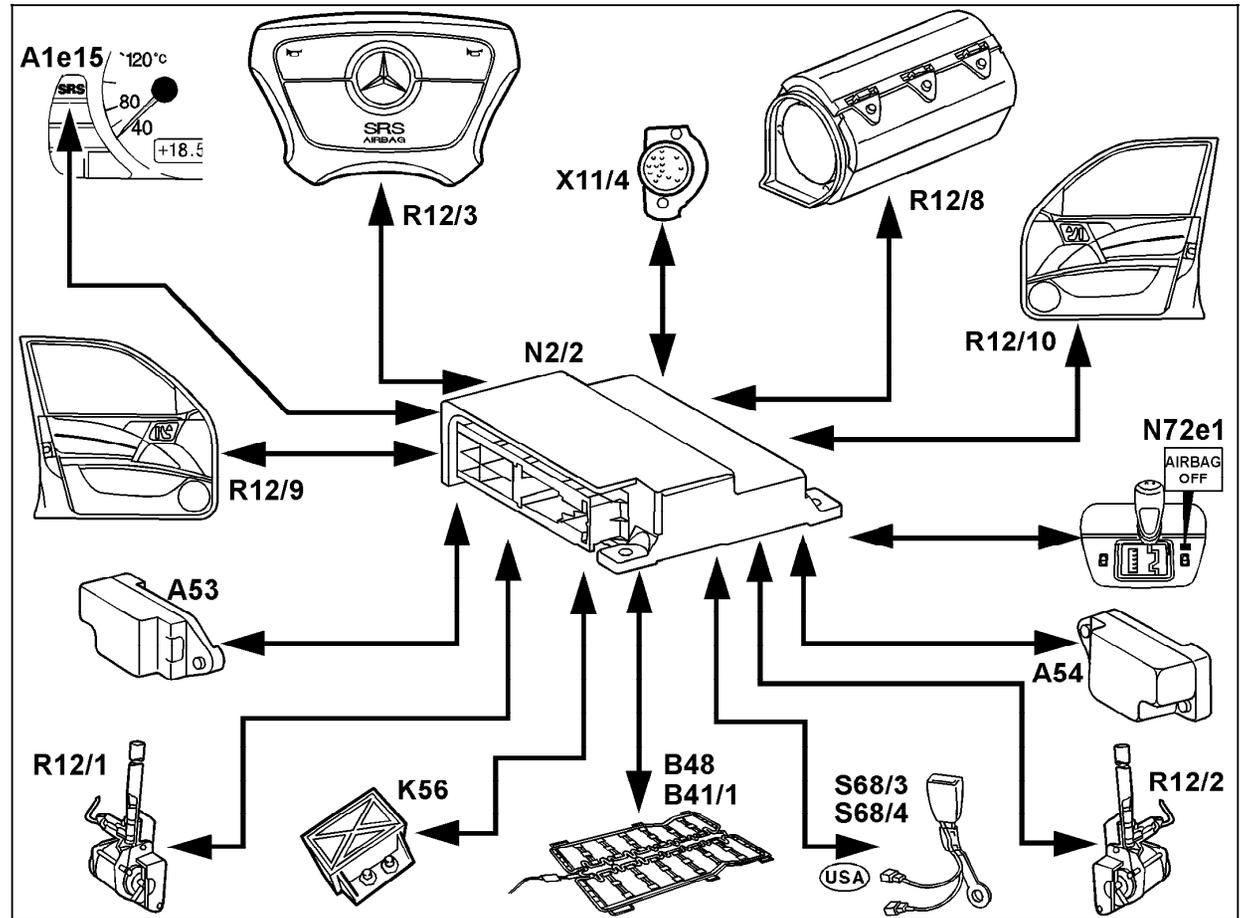
Driver/passenger-side airbag/side airbag/passenger seat occupied recognition with child seat recognition
Shown on Model 170



E16 Automatic child seat recognition (ASCR) indicator lamp not shown (however like N72e1).

Figure 1

- A1e15 SRS MIL
- A53 Left side airbag sensor
- A54 Right side airbag sensor
- B41/1 Front passenger seat occupied recognition sensor
- B48 Front passenger seat occupied recognition with automatic child seat recognition (ACSR) (model 170 only)
- K56 Crash separation relay module (generator/battery) (Kompressor model only)
- N2/2 SRS control module
- N72e1 Automatic child seat recognition warning lamp
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver airbag squib
- R12/8 Front passenger airbag squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib
- S68/3 Left front seat belt buckle switch (airbag/ETR) (USA)
- S68/4 Right front seat belt buckle switch (airbag/ETR) (USA)
- X11/4 Data link connector (DTC readout)



P91.60-0373-06

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Preliminary work:

Diagnosis - Diagnostic Trouble Code (DTC) Memory	12
Diagnosis - Fault Frequency, Time Span	13
Diagnosis - Actual Values	14

 **CAUTION!**

Risk of injury if airbag units and ETR units are ignited accidentally or if stored with the opening end facing downward which may cause the accidentally ignited components to fly about causing injury. Danger to persons also exists if the components are disposed of by cutting apart with cutting torches or other cutting/separation devices. Danger also exists if disposing the untriggered units via refuse collection or via smelting/carbonizing companies.

Protective measures/Supervision

- Place removed airbag unit with the opening side facing upward.
- Allow only **properly trained dealer staff** to supervise, purchase, transport, store, test/replace any of the SRS components.
- Install all airbag or ETR units once pulled from the parts department.
- Protect all airbag or ETR units from any sparks, open flame, or temperatures above 100°C.
- Do not transport airbag or ETR units in the passenger compartment, rather transport securely in their **original packaging** in the trunk.
- Do not allow oil, grease or cleaning agents come in contact with the airbag or ETR units
- Perform SRS tests only with approved test equipment (such as HHT), while installed in the vehicle **without** occupants.

Electrical Wiring Diagrams:

- Electrical Troubleshooting Manual, Model 129, Vol. 2, group 91,
- Electrical Troubleshooting Manual, Model 140, Vol. 2, group 91,
- Electrical Troubleshooting Manual, Model 170, Vol. 2, group 91,
- Electrical Troubleshooting Manual, Model 202/208 Vol. 2, group 91,
- Electrical Troubleshooting Manual, Model 210, Vol. 2, group 91

- When reconnecting the vehicle battery or any outside electrical source, with the ignition turned ON, do not allow any occupants inside the vehicle.
- Airbag or ETR units which have been dropped from a height greater than 18 inches must be replaced.
- Prior to disposing the airbag or ETR units, the units must be made un-useable by discharging.
- In order to render the airbag and ETR unit un-useable, the specially made discharge harness must be used and at the same time maintain a **safe distance of at least 33 feet** from the units being discharged.

Prior to undertaking any chassis/body repairs, installation/repair work on airbag and ETR units, or any components which come in contact with the airbag and ETR units, or are part of the electrical circuit of airbag and ETR units (such as installation of the steering wheel), the following conditions must be met:

- Remove ignition key.
- Disconnect any outside source of electrical circuit (i.e. battery charger).
- When performing interior repairs or welding operations, disconnect the connector from the SRS control module.

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Preparation for Test (continued):

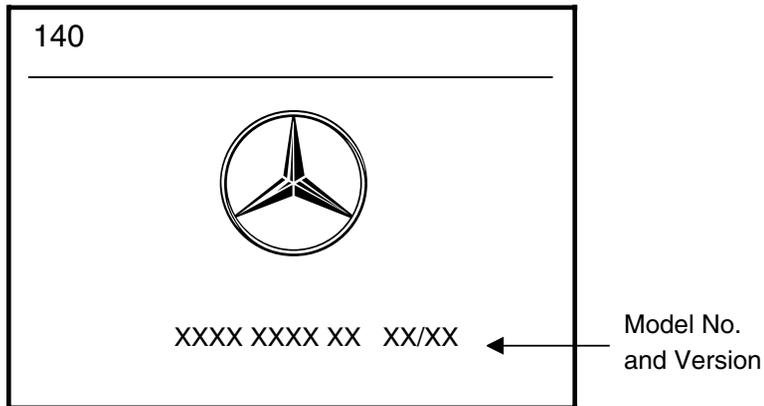
1. Review section 0, 11, 12, 13, 20, 21, 22, 23, 31, 32
2. Check fuses.
3. Battery voltage > 11 V.
4. Insert vehicle specific test module into Hand-Held Tester (HHT).
5. Connect (HHT) as per connection diagram, see section 0

CAUTION!

Do not connect battery trickle charger.

Initial Display

Display appears approximately 5 seconds after the HHT is connected to the vehicle (example: Model 140).

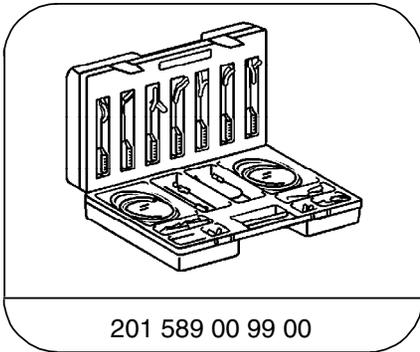


Pressing the return () key will start the test program.

Further information on use of the HHT will now appear on the display.

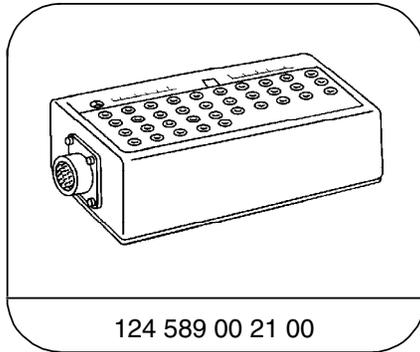
Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Special Tools



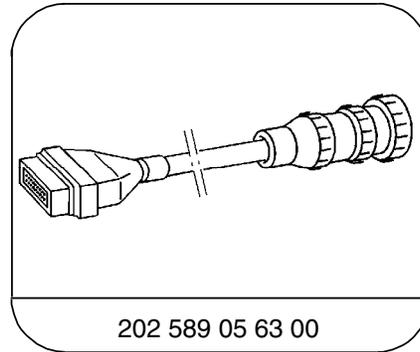
201 589 00 99 00

Electrical connecting set



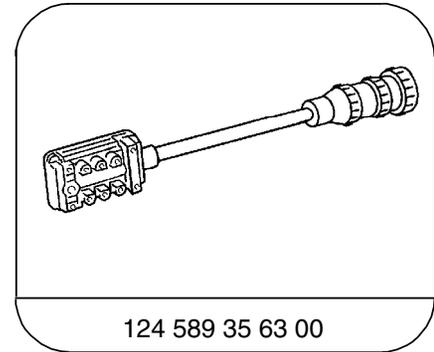
124 589 00 21 00

35-pin socket box



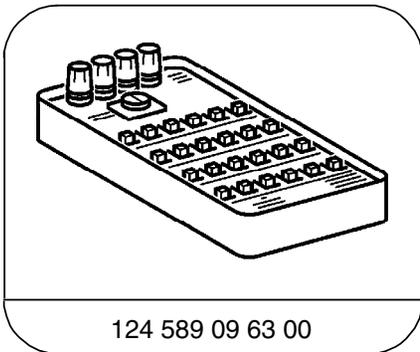
202 589 05 63 00

Test cable



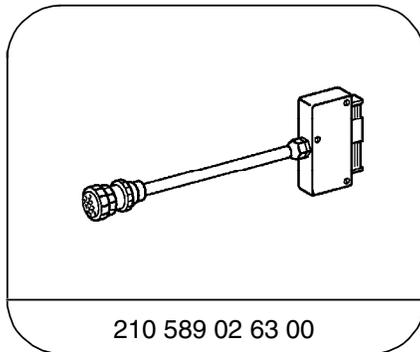
124 589 35 63 00

Test cable



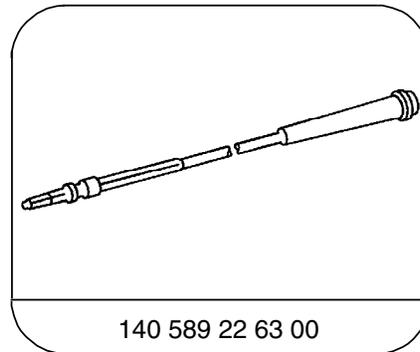
124 589 09 63 00

Ohm decade



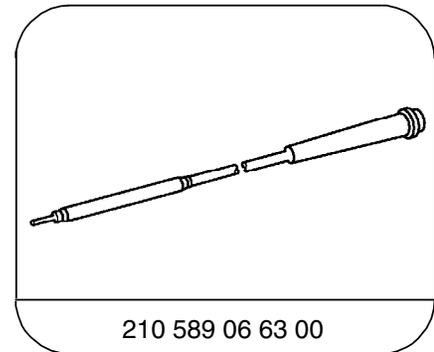
210 589 02 63 00

36-pin test cable



140 589 22 63 00

Adapter cable



210 589 06 63 00

Adapter cable

Test equipment; See MBUSA Standard Service Equipment Program

Description	Brand, model, etc.
Digital multimeter	Fluke models 23, 77 III, 83, 85, 87

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Shop-made Test Cables for connecting Airbag Squibs

Parts Required for Test:

- | | | |
|---|-------------------------|---------------------------------|
| 1 | Connection piece | 034 545 63 28 |
| 1 | Connector | 019 545 19 28 |
| 2 | Wire with 2.5 mm socket | (from electrical connector set) |
| 2 | Wire with 2.5 mm pin | (from electrical connector set) |

CAUTION!

All red colored connectors and connections of the airbag squibs are constructed with a short-circuiting bridge. Upon disconnecting, the squib wire and squib are automatically short-circuited, to prevent airbag deployment.

Review corresponding ETM document for each model for location/identification of Airbag Squibs and also prior to connecting any test cables.

Thus all repairs can be accomplished with only the ignition key removed.

Accessories (for vehicles with ASCR installed only):

Child seat "**Babysafe**"

CAUTION!

The battery minus cable must be disconnected and covered, as well as the SRS control module (N2/2) disconnected prior to use of any electrical welding equipment.

Additionally, the previously used SRS test connection is no longer present.

Model 140

10-pole connector, (X11/13, Figure 2) between cockpit and frame floor.

Models 202, 210

2-pole connector, (X28/12, Figure 4) for front passenger airbag between cockpit and frame floor.

Models 170, 210

2-pole connectors, (X35/1 [left front door separation point], X35/2 [right front door separation point]) for left/right side airbag.

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Socket Box Tester/SRS Control Module Connector

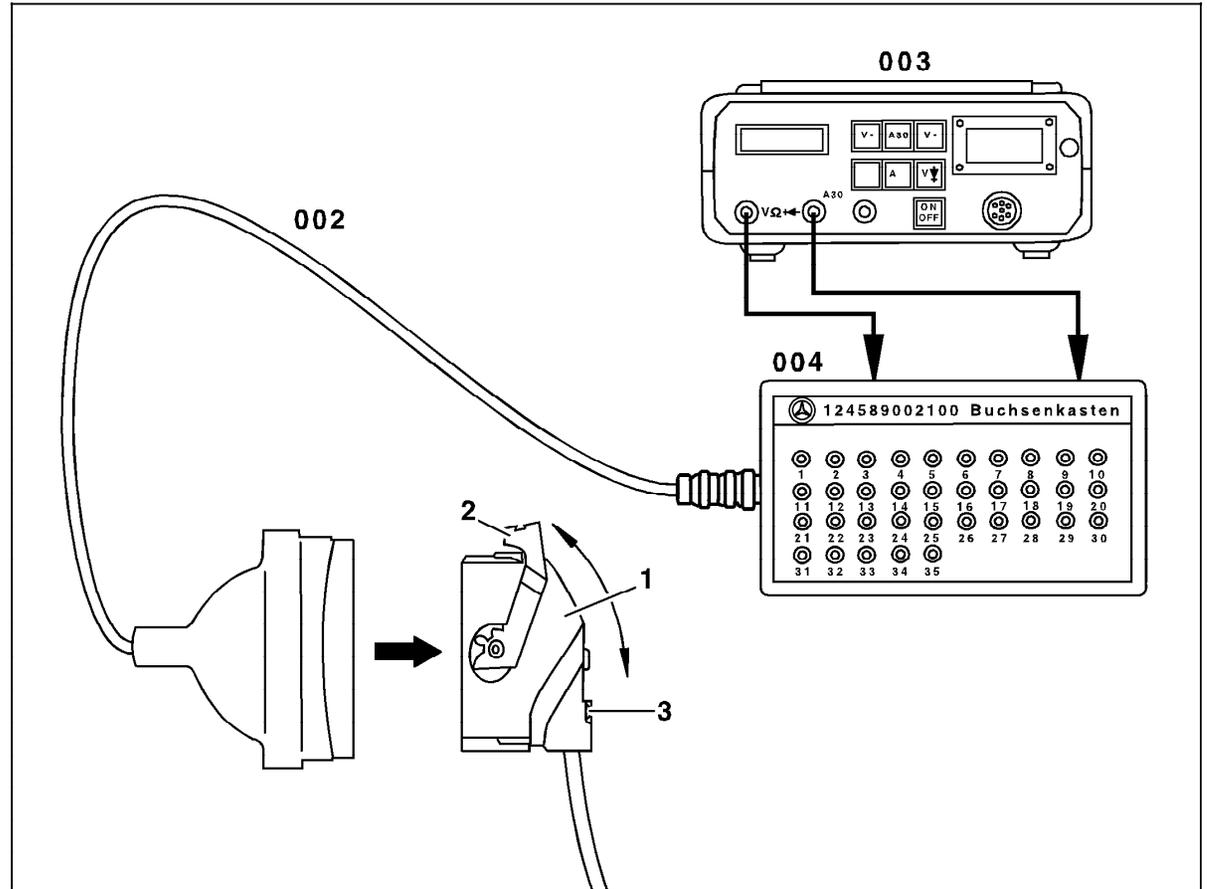


Figure 1

- 002 Test cable
- 003 Multimeter
- 004 Socket box (36-pole socket box shown as example)
- 1 SRS control module connector
- 2 Connect and disconnect aid
- 3 Connect and disconnect lock

P91.60-0564-06

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Model 140 (as of 07/93)
 Connection Diagram - Socket Box
 Tester/SRS Control Module Connection (10-pole)

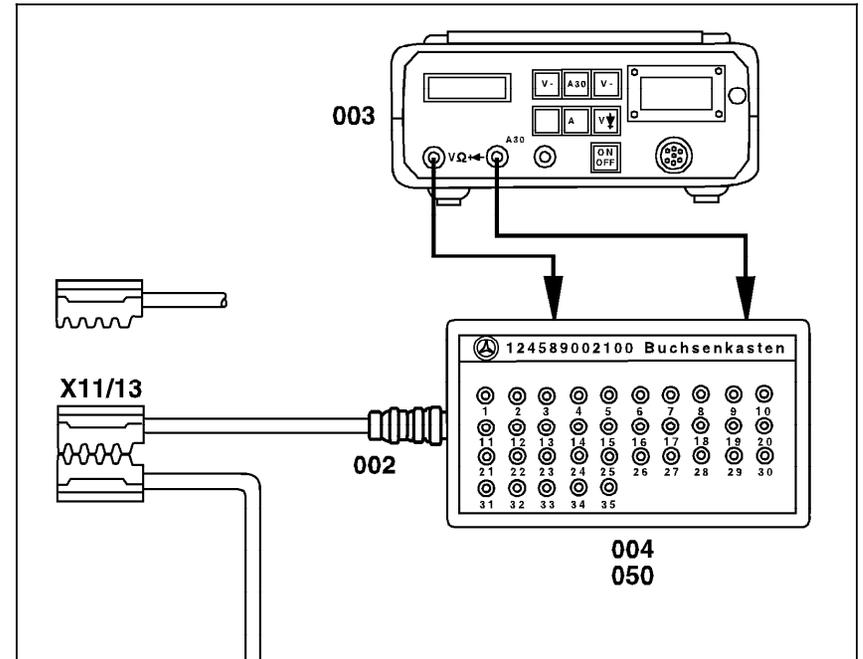


Figure 2

- 002 Test cable
- 003 Multimeter
- 004 Socket box
- 050 Socket box
- X11/13 SRS test connection (10-pole)

P91.60-0565-11

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Test Cables/Squib Plug Connections

Model 129 as of 07/93

Model 140 as of 07/93

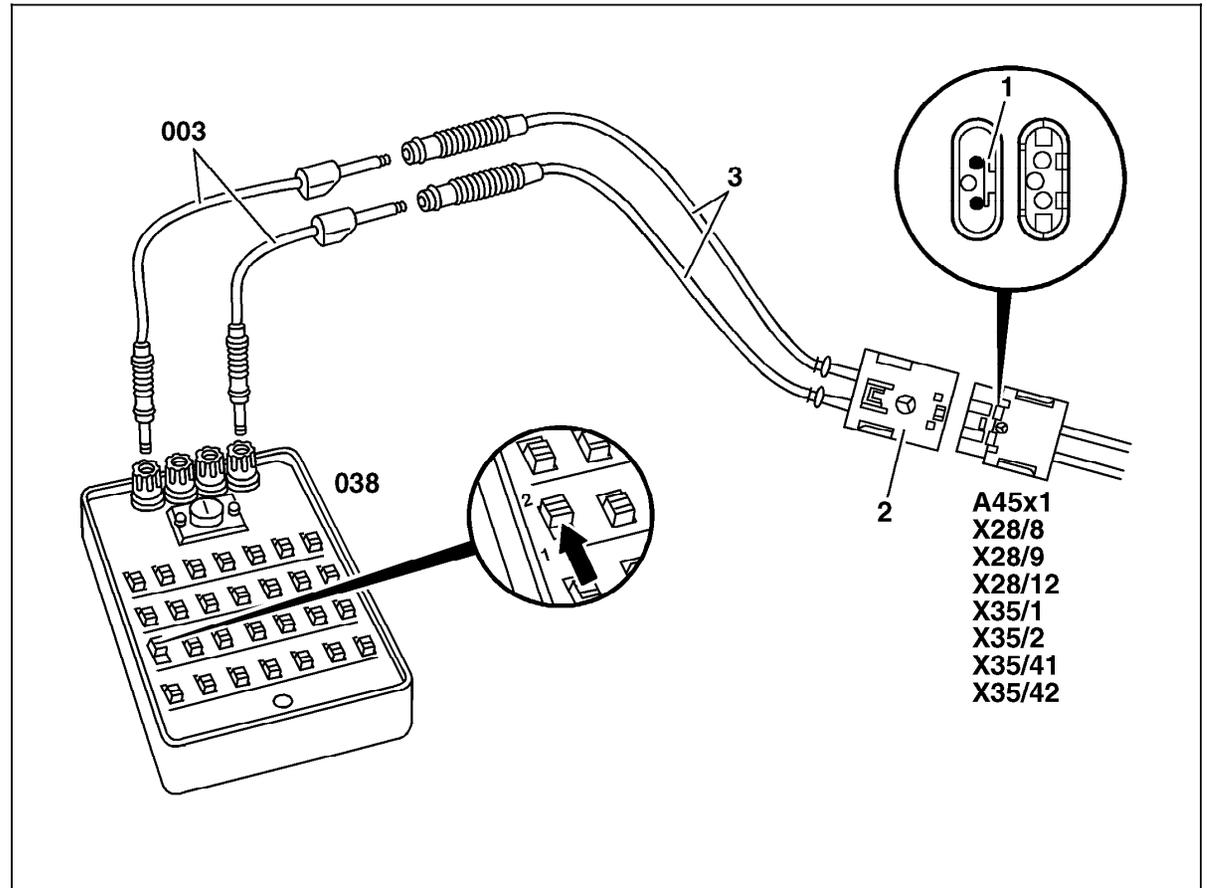
Model 202 as of 07/93

Model 170, 208

Model 210 up to 03/97

Figure 3

- 003 Test cables with banana plugs
- 038 Resistance substitution unit
- 1 Short circuit bridge
- 2 Connector, part no. 019 545 19 28
- 3 Test cables with 2.5 mm sockets
- A45x1 Horn/airbag clock spring contact connector
- X28/8 ETR connector (left seat plug connection) (2-pole)
- X28/9 ETR connector (right seat plug connection) (2-pole)
- X28/12 Passenger airbag connector
- X35/1 Left front door separation point
- X35/2 Right front door separation point
- X35/41 Left front door separation point
- X35/42 Right front door separation point



P91.60-0521-06

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Test Cables/Squib Plug Connections

Model 210 as of 03/97 up to 06/99 with windowbag and side airbag in rear

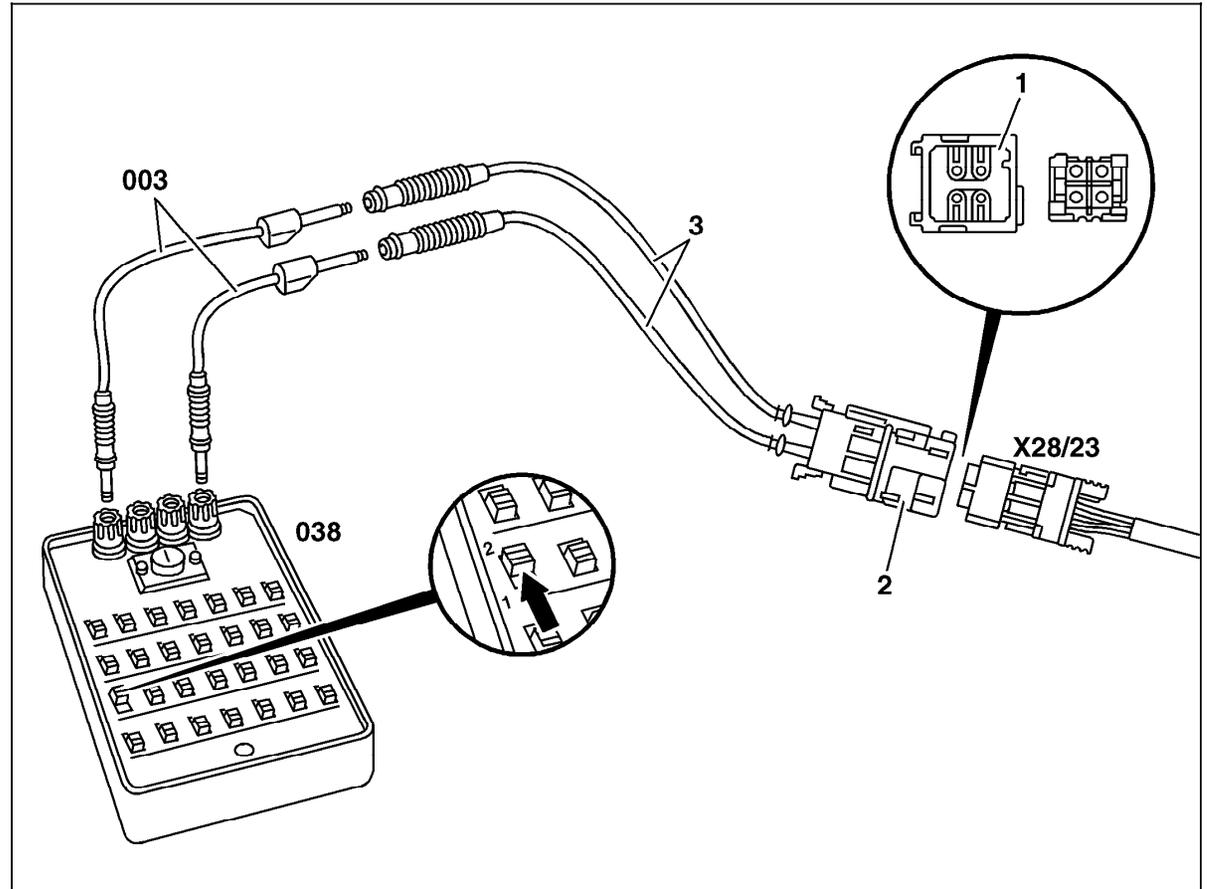


Figure 4

- 003 Test cables with banana plugs
- 038 Resistance substitution unit
- 1 Short circuit bridge
- 2 Connector, part no. 026 545 63 28
- 3 Test cables with 2.5 mm sockets
- X28/23 AB driver/passenger connector

P91.60-0522-06

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Resistance Substitution Unit/Squib Connectors

Review corresponding ETM document for each model for location/identification of Airbag Squibs and also prior to connecting any test cables.

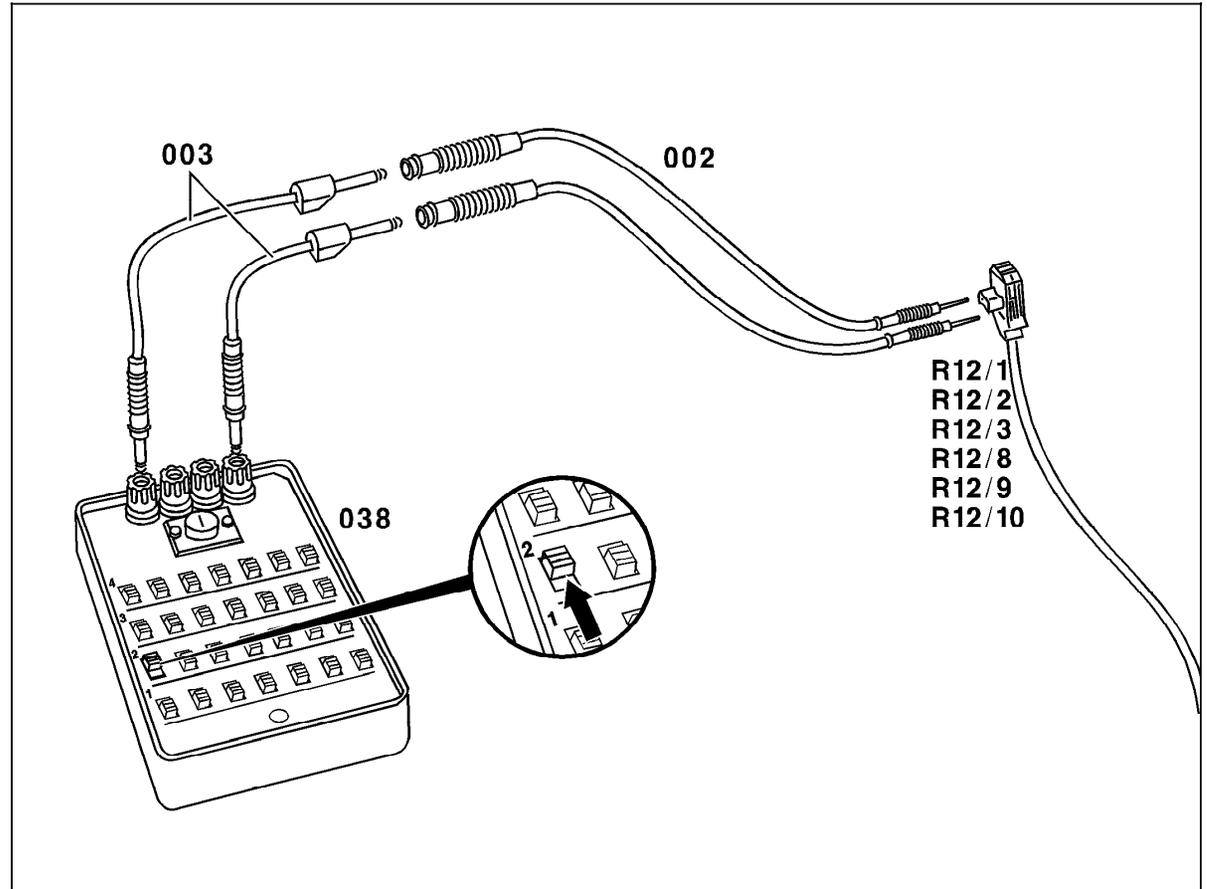


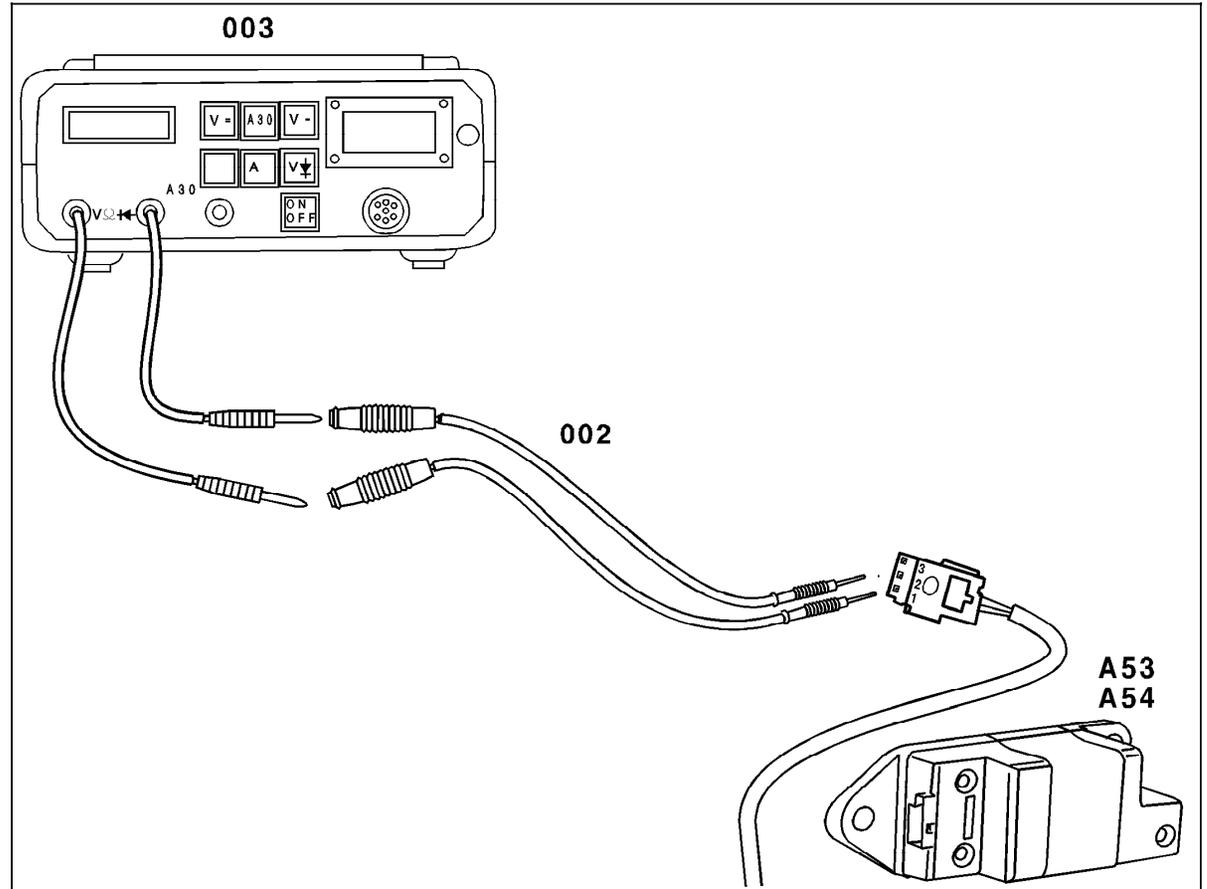
Figure 5

- 002 Test cable, part no. 140 589 22 63 00
- 003 Test cables with banana plugs
- 038 Resistance substitution unit
- R12/1 Left front ETR squib
- R12/2 Right front ETR squib
- R12/3 Driver AB squib
- R12/8 Front passenger AB squib
- R12/9 Left side airbag squib
- R12/10 Right side airbag squib

P91.60-0251-06

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Side Airbag Sensors
 Model 129 as of 07/93, with front side airbag
 Model 140 as of 07/93, with front side airbag
 Model 202 as of 07/93, with front side airbag
 Model 170, 208, with front side airbag
 Model 210 up to 05/98 with front side airbag



P91.60-0253-06

Figure 6

- 002 Test cable, part no. 140 589 22 63 00
- 003 Multimeter
- A53 Left side airbag sensor
- A54 Right side airbag sensor

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Resistance Substitution Unit with Diode for Simulation of Seat Occupation Recognition

Model 140 as of 07/93
 Model 202 as of 07/93
 Model 170
 Model 210 up to 03/97

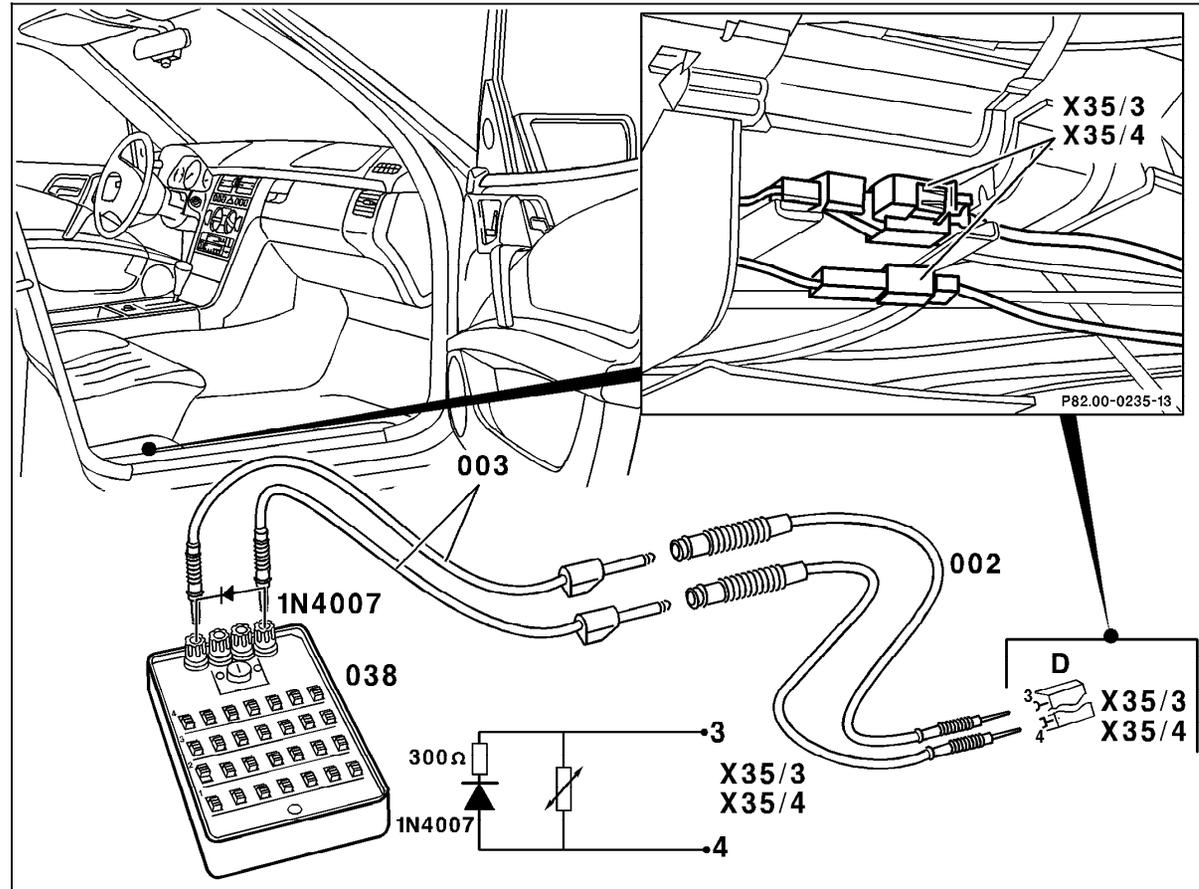


Figure 7

- 002 Test cable, part no. 140 589 22 63 00
- 003 Test cable with banana plugs
- 038 Resistance substitution unit
- 1N4007 Diode
- X55/3 Left ESA connector block
- X55/4 Right ESA connector block

Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Connection Diagram - Resistance Substitution Unit with Diode for Simulation of Seat Occupation Recognition

Model 129 asof 07/93

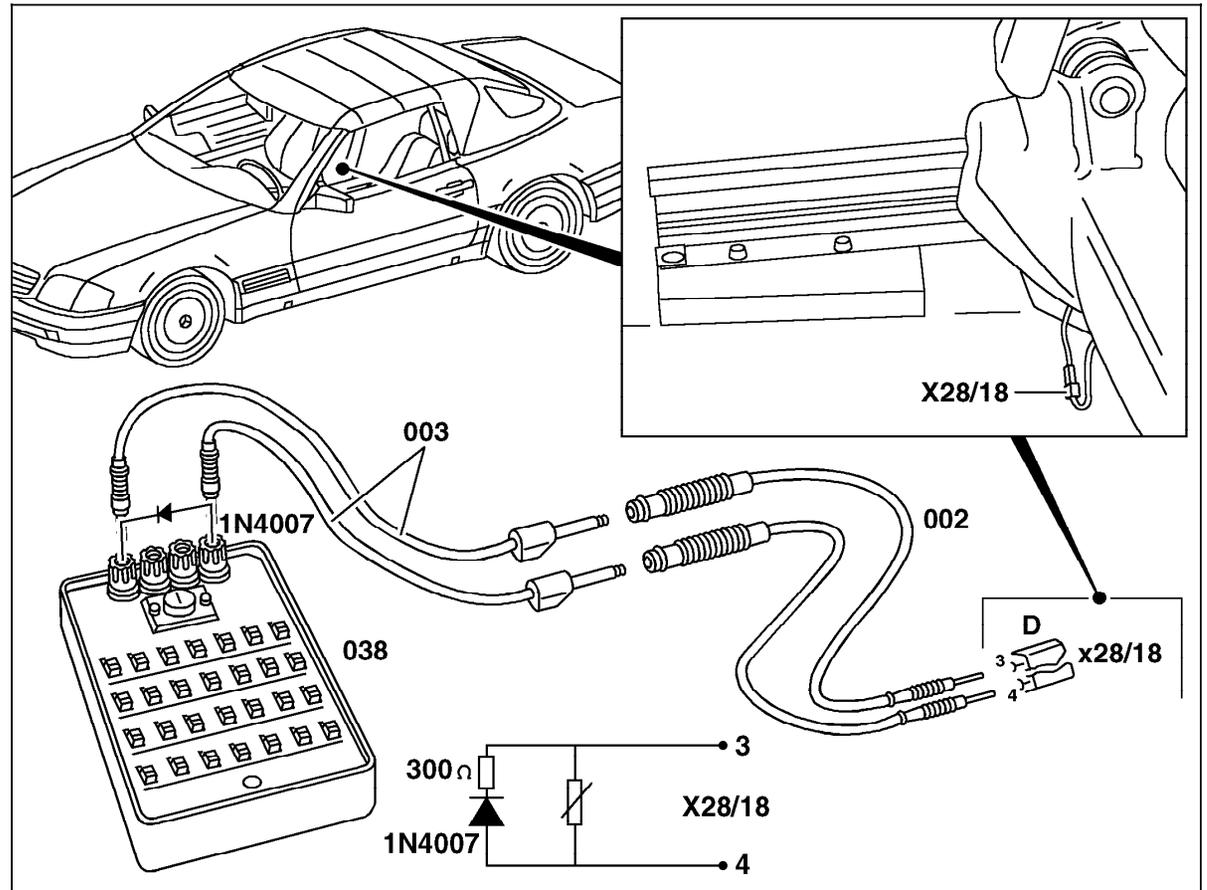


Figure 8

- 002 Test cable, part no. 140 589 22 63 00
- 003 Test cable with banana plugs
- 038 Resistance substitution unit
- 1N4007 Diode
- X28/18 Occupied seat recognition connector/ACSR

P91.60-0520-06

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

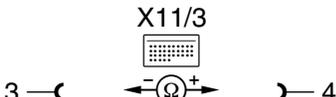
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
1.0	 017 003	Circuit 15R voltage supply Low voltage/ 01 Voltage		Ignition key in position "2".	✓ F	Wiring, Battery.
2.0	 001	SRS control module (N2/2)		Ignition key in position "2".		N2/2
3.0	 002 004	02 Driver AB squib (R12/3) > Ω < Ω		Ignition key in position "2".	✓ F	⇒ 3.1
3.1		02 Driver AB squib (R12/3)	1 ←  R12/3  → 2	Remove ignition key. Remove driver airbag. Disconnect driver AB squib (R12/3). Connect  (22, Figure 5). Set resistance of 2 Ω. Ignition key in position "2".	✓ F	Driver airbag unit. ⇒ 3.2

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

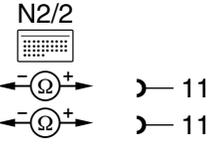
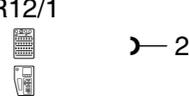
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
3.2		02 Driver AB squib (R12/3) > Ω < Ω (except for Model 202 as of 06/97, Model 210 as of 03/97). (Model 202 as of 07/97, Model 210 as of 04/97).	<p>A45x1</p>  <p>X28/23</p> 	Remove ignition key. Connect  (22, Figure 4). Set resistance of 2 Ω. Ignition key in position "2".	✓ F	Check horn/airbag clock spring contact (A45) for continuity. ⇒ 3.4 Model 140: ⇒ 3.3
3.3		02 Driver AB squib (R12/3) > Ω < Ω Model 140 as of 07/97 only	<p>X11/3</p> 	Remove ignition key. Connect  (22, Figure 2).	2 – 5 Ω	Wiring, ⇒ 3.4
3.4		Driver AB squib (R12/3) > Ω < Ω	<p>N2/2</p> 	Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	2 – 5 Ω	Wiring.

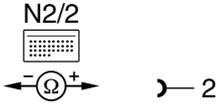
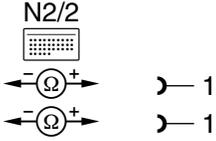
16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

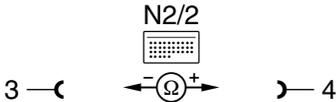
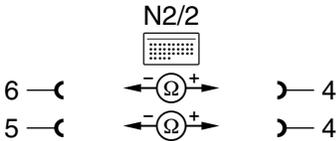
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
4.0	002 004	02 Driver AB squib (R12/3) ┌┐- ┌┐+	 <p>N2/2</p>	 not connected. Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	>20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
5.0	003 005	05 Left front ETR squib (R12/1) > Ω < Ω		Ignition key in position "2".	✓ F	⇒ 5.1
5.1		05 Left front ETR squib (R12/1)	 <p>R12/1</p>	Remove ignition key. Disconnect left front ETR squib (R12/1) connector. Connect  (22, Figure 5). Set resistance of 2 Ω. Ignition key in position "2".	✓ F	Seat belt retractor. ⇒ 5.2

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
5.2	003 005	05 Left front ETR squib (R12/1) > Ω < Ω		Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	2 – 5 Ω	Wiring. Model 129: ETR connector (left seat plug connection, X28/8) not properly connected.
6.0	003 005	05 Left front ETR squib (R12/1) Γ1- Γ1+		 not connected. Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	>20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
7.0	004 006	06 Right front ETR squib (R12/2) > Ω < Ω		Ignition key in position "2".	✓ F	⇒ 7.1

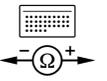
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
7.1	004 006	06 Right front ETR squib (R12/2)		Remove ignition key. Disconnect right front ETR squib (R12/2) connector. Connect  (22, Figure 5). Set resistance of 2 Ω. Ignition key in position "2".	✓ F	Seat belt retractor. ⇒ 7.2
7.2		06 Right front ETR squib (R12/2) > Ω < Ω		Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	2 – 5 Ω	Wiring. Model 129: ETR connector (right seat plug connection, X28/9) not properly connected.
8.0	004 006	06 Right front ETR squib (R12/2) Γ1- Γ1+		 not connected. Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	>20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
9.0	005 007	03 Front passenger AB squib (R12/8) > Ω < Ω		Ignition key in position "2".	✓ F	⇒ 9.1
9.1		03 Front passenger AB squib (R12/8)	1 —  R12/8  — 2 	Remove ignition key. Remove glove box. Disconnect front passenger AB squib (R12/8) connector. Connect  (22, Figure 5). Set resistance of 2 Ω. Ignition key in position "2".	✓ F	Front passenger airbag unit. Model 140: SRS test connector (X11/13) not properly connected. Model 202: Airbag intermediate connector (X28/12) not properly connected. Model 140 ⇒ 9.2, except Model 129, 140, 210 as of 03/97: ⇒ 9.3, All models: ⇒ 9.4
9.2		03 Right front ETR squib (R12/8) > Ω < Ω	5 —  X11/13  — 6 	Remove ignition key. Disconnect X11/13. Connect  (22, Figure 2).	2 – 5 Ω	Wiring, ⇒ 9.4

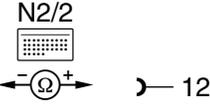
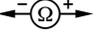
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
9.3		03 Right front ETR squib (R12/B)	X28/12  1 —()— 2	Remove ignition key. Disconnect X28/12. Connect  (22, Figure 4). Set resistance of 2 Ω. Ignition key in position "2".	✓ F	Wiring, ⇒ 9.4
9.4	005 007	03 Front passenger AB squib (R12/B) > Ω < Ω	N2/2  13 —()— 14	Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	2 – 5 Ω	Wiring.
10.0	005 007	03 Front passenger AB squib (R12/B) Γ1– Γ1+	N2/2  6 —()— 14 5 —()— 14	 not connected. Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	>20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒	 1)	Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
11.0	019 002	01 SRS MIL (A1e15) --/ ΓΓ+		Ignition key in position "2". A1e15 comes on.	A1e15 goes out after approx. 4 sec. ✓	F Wiring, A1e15 shorted to +.
12.0	024 016	09 Left front seat belt buckle switch (568/3) --/  only		Ignition key in position "2". Seat belt buckle not latched. Seat belt buckle latched.	✓ OFF 00	F Wiring, Open/short circuit to circuit 31, Left ESA connector block (X55/3) not properly connected.
12.1		09 Left front seat belt buckle switch (568/3)  only ΓΓ- ΓΓ+	  6 ←  → 12 5 ←  → 12	Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).  not connected. Seat belt buckle not latched. Seat belt buckle latched. Seat belt buckle not latched. Seat belt buckle latched.	 280 – 580 Ω 70 – 279 Ω > 20 kΩ > 20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R, Seat belt buckle.

1) A DTC is recognized within 4 seconds after the ignition key is turned to position "2", or if a fault is present.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒	 1)	Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
13.0	025 017	08 Right front seat belt buckle switch (568/4) -//-  only		Ignition key in position "2". Seat belt buckle not latched. Seat belt buckle latched.	✓ F OFF ON	Wiring, Open/short circuit to circuit 31, Right ESA connector block (X55/4) not properly connected.
13.1		08 Right front seat belt buckle switch (568/4)  Γ1- Γ1+	 6 — (— Ω —) — 8 5 — (— Ω —) — 8	Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).  not connected. Seat belt buckle not latched. Seat belt buckle latched.	 280 – 580 Ω 70 – 279 Ω > 20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R, Seat belt buckle.

1) A DTC is recognized within 4 seconds after the ignition key is turned to position "2", or if a fault is present.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒	 1)	Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
14.0		Squibs < Ω > Ω R12/1 R12/2 R12/3 R12/8 Squibs in series R12/1-R12/2 R12/1-R12/3 R12/1-R12/8 R12/2-R12/3 R12/2-R12/8 R12/3-R12/8	 1 —(— Ω —) 2 3 —(— Ω —) 4 10 —(— Ω —) 11 13 —(— Ω —) 14 Γ1 1 —(— Ω —) 3 1 —(— Ω —) 10 1 —(— Ω —) 13 3 —(— Ω —) 10 3 —(— Ω —) 13 10 —(— Ω —) 13	Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).  not connected.	2 – 5 Ω 2 – 5 Ω 3 – 5 Ω 2 – 5 Ω > 20 kΩ > 20 kΩ > 20 kΩ > 20 kΩ > 20 kΩ > 20 kΩ	Wiring, Short circuit.
15.0		 Left side airbag squib (R12/9) > Ω < Ω (only with left/right side airbag equipped vehicles)		 connected. Ignition key in position "2".	✓ F ⇒ 15.1	

1) A DTC is recognized within 4 seconds after the ignition key is turned to position "1", or if a fault is present.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒	 1)	Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
15.1		<p> Left side airbag squib (R12/9)</p> <p>(except Model 202 as of 06/97, Model 210 as of 03/97, Model 208)</p> <p>(Model 202 as of 07/97, Model 210 as of 03/97, Model 208)</p>	<p>X35/1</p> <p>1 —  —  2</p> <p>X35/41</p> <p>1 —  —  2</p>	<p>Remove ignition key. Disconnect left front door separation point. Connect  (22, Figure 4). Set resistance of 2 Ω. Ignition key in position "2".</p>	<p>✓</p> <p>F</p>	<p>⇒ 15.2</p>
15.2		<p> Left side airbag squib (R12/9)</p>	<p>R12/9</p> <p>1 —  —  2</p>	<p>Remove ignition key. Remove interior door panel. Connect  (22, Figure 5). Set resistance of 2 Ω. Ignition key in position "2".</p>	<p>✓</p> <p>F</p>	<p>Left side airbag, ⇒ 15.3</p>
15.3		<p> Left side airbag squib (R12/9)</p> <p>> Ω</p> <p>< Ω</p>	<p>N2/2</p> <p>16 —  —  17</p>	<p>Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).</p>	<p>2 – 5 Ω</p>	<p>Wiring, Contacts.</p>

1) A DTC is recognized within 4 seconds after the ignition key is turned to position "1", or if a fault is present.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

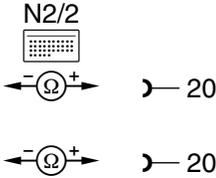
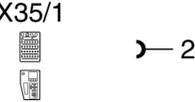
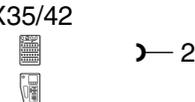
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/ display	Possible cause/Remedy
15.4		010 Left side airbag squib (R12/9) 17- 17+		connected. Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	>20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
16.0	018	012 Left side airbag sensor (A53) Voltage supply (only with left/right side airbag equipped vehicles).		Disconnect connector at A53. Connect test cable: (22, Figure 6).	11 – 14 V	Wiring.
16.1	018	012 Left side airbag sensor (A53) Wiring fault		Connect (22, Figure 6).	<1 Ω	Wiring.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒	 1)	Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
16.2		012 Left side airbag sensor (R53) Insulation fault 17-	 <p>N2/2</p> <p>6 — ◀ — ◯ — 20</p> <p>5 — ◀ — ◯ — 20</p>	Connect  (22, Figure 5). Disconnect connector at A53.	>20 kΩ >20 kΩ	Wiring shorted to circuit 31 Wiring shorted to circuit 30, 15, 15R.
17.0		010 Right side airbag squib (R12/10) > Ω < Ω (only with left/right side airbag equipped vehicles).		Ignition key in position "2".	✓ F ⇒ 17.1	
17.1		010 Right side airbag squib (R12/10) (except model 202 as of 06/97, Model 210 as of 03/97, Model 208) (Model 202 as of 07/97, Model 210 as of 03/97, Model 208)	 <p>X35/1</p> <p>1 — ◀ — ◯ — 2</p>  <p>X35/42</p> <p>1 — ◀ — ◯ — 2</p>	Remove ignition key. Disconnect left door separation point connector. Set resistance of 2 Ω. (22, Figure 3). Ignition key in position "2".	✓ F ⇒ 17.2	

1) A DTC is recognized within 4 seconds after the ignition key is turned to position "1", or if a fault is present.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
17.2		 Right side airbag squib (R12/I0)	R12/9  1 — () — 2	Remove ignition key. Remove door trim panel. Set resistance of 2 Ω. (22, Figure 5). Ignition key in position "2".	✓ F	Left side airbag, ⇒ 17.3
17.3		 Right side airbag squib (R12/I0) > Ω < Ω	N2/2  18 — () — 19	Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	2 – 5 Ω	Wiring, Contacts.
17.4		 Right side airbag squib (R12/I0) Γ1– Γ1+	N2/2  6 — () — 18  5 — () — 18	 connected. Remove ignition key. Disconnect N2/2 connector. Connect  (22, Figure 1).	>20 kΩ >20 kΩ	Wiring, Short in wiring circuit 31, Short in wiring circuit 30, 15, 15R
18.0		 Right side airbag sensor (A54) Voltage supply (only with left/right side airbag equipped vehicles).	A54  1 — () — 3	Disconnect A54 connector. Connect test cable, see (22, Figure 6).	11 – 14 V	Wiring.

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
18.1	 021	012 Right side airbag sensor (R54) Wiring fault	N2/2  21 —  — 3	A54 Connect  (22, Figure 1).	< 1 Ω	Wiring.
18.2	 021	012 Right side airbag sensor (R54) Insulation fault	N2/2  6 —  — 21 5 —  — 21	Connect  (22, Figure 1). Disconnect connector at A54	>20 kΩ >20 kΩ	Short in wiring circuit 31, Short in wiring circuit 30, 15, 15R
19.0	 020  024  025	04 Front passenger seat occupied recognition sensor (B41/1) or (B48)		Ignition key in position "2".	✓ F ⇒ 19.1	
19.1		04 Front passenger seat occupied recognition sensor (B41/1) or (B48)	X55/4  3 —  — 4  X55/4  3 —  — 4  X28/18  3 —  — 4 	 connected. Connect  (22, Figure 7). Set resistance of 30 k Ω (seat occupied), use diode 1N4007 as well as 300 Ω resistor, switched in parallel. Watch polarity!	✓ F ⇒ 19.2	Contact matt, ⇒ 19.2

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

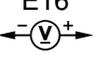
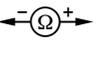
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/ display	Possible cause/Remedy
19.2		04 Front passenger seat occupied recognition sensor (B41/1) or (B4B)	<p>X55/3 X55/4</p> <p>3 — — 4</p>	<p>Front passenger seat not occupied:</p> <p>Front passenger seat occupied:</p>	<p>>70 k Ω</p> <p>30 k Ω</p>	Contact matt.
20.0	027 028	<p>Front passenger seat occupied recognition with automatic child seat recognition (B4B) (ACSR)</p> <p>Voltage supply</p> <p>Except for Model 129:</p> <p>Model 129:</p>	<p>X55/3 X55/4</p> <p>1 — — 4</p> <p>X28/18</p> <p>1 — — 4</p>	Ignition key in position "1".	11 – 14 V	Wiring.
20.1		<p>Data line</p> <p>Except for Model 129:</p> <p>Model 129:</p>	<p>N2/2</p> <p></p> <p>1 — — 3</p> <p>N2/2</p> <p></p> <p>15 — — 3</p>	<p>X55/3 X55/4</p> <p>Connect (22, Figure 1).</p> <p>X28/18</p>	< 1 Ω	Wiring.

16.3 Airbag (AB)

Models 129, 140, 170, 202, 208, 210

Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/  display	Possible cause/Remedy
21.0		Automatic child seat recognition (ACSR) indicator lamp (E 16) Voltage supply (Models 129, 140, 170 only)	4 —  — 1	Ignition key in position "1".	11 – 14 V	Wiring, If values are OK: E13
21.1		Automatic child seat recognition (ACSR) indicator lamp (E 16) Dimming	4 —  — 1	Ignition key in position "1". Switch on exterior lamps.	<1 V 11 – 14 V	Wiring.
21.2		Automatic child seat recognition (ACSR) indicator lamp (E 16) Activation	N2/2  33 —  — 2	Connect  (22, Figure 1).	<1 Ω	Wiring.

Control Module Programming - Vehicle Equipment

Upon replacement of the SRS control module (N2/2), the SRS MIL (A1e15) will blink or stay on, indicating the need to program and set parameters of the control module.

The SRS control module can only be programmed and the parameters set, using the Hand-Held Tester (HHT). During the programming the following conditions need to be met:

1. **Vehicles without side airbag:**

Version with passenger-side airbag, when replacing SRS control modules is to be set to YES when programming the control module.

Version with seat belt buckle switch is to be programmed NO.

Vehicles with side airbag;

Version is set to YES when replacing SRS control modules.

Version with seat belt buckle switch is set to YES.

Seat occupation recognition is set to YES.

2. **Parameters**

See 32/1

 **CAUTION!**

Entering wrong information (in regards to airbag installed during production) will render the SRS control module defective.

Control Module Programming - Parameters

After programming the vehicle equipment, the SRS MIL (A1e15) will continue to blink, indicating the need to set the parameters on the SRS control module (N2/2). Currently, the parameter set is identical for all models.

The setting of the parameters can only be accomplished with the Hand-Held Tester (HHT).

Setting Parameters:

Change versions as necessary (as with programming control module).

(example given):

Vehicle with Airbag

Programming:

Set passenger side airbag to NO,

Turn ignition OFF, then ON,

Read out DTC memory, then erase DTCs,

SRS MIL (A1e15) now blinks; set parameters via HHT.

Note:

After programming and setting SRS control module parameters, the SRS MIL (A1e15) will go out.

CAUTION!

To avoid damaging the SRS control module (N2/2), DO NOT interrupt the voltage supply to the control module while setting the parameters.

Setting of parameters can only be performed once.