16.4 Model 163

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.

Diagnosis - Function Test (driver/passenger-side airbag/side airbag)

Preparation for Test:

1. Review 12, 13, 21, 22, 31

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) (if so equipped) Model 163 as of 3/98, up to 12/99**	Position the approved and properly SRS control module version coded MB child seat **"Babysafe"** (facing fore or aft) onto front passenger seat. Ignition key in position “1”. and wait approx. 15 seconds.	AIRBAG OFF indicator lamp (A1e56) is illuminated continously.	23 ⇒ 22.0

[1] Observe Preparation for Test, see 22.

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.

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

Preliminary work:
Diagnosis - Function Test 11

Preparation for DTC readout

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

⚠ CAUTION!

Do not connect battery trickle charger.

⚠ CAUTION!

Risk of Injury when prforming 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.

(!)

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

Test equipment; See MBNA Standard Service Equipment Program

Hand-Held Tester (HHT) 1)	See S.I. in groups 58 and 99.

1) Available through the MBUSA Standard Equipment Program.

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

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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.
⌜⌝–	Short circuit to ground (GND)
⌜⌝+	Short circuit to positive (POS).
–//–	Open circuit.

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

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

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

Actual values:
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.
OFF:	Seat belt buckle **not** latched (USA), front passenger seat **not occupied**.

Contrary to the DTC memory, actual values are updated continuously, even during diagnosis, so that, e.g.: by moving components, or connections and wiring harnesses, intermittent failures may be indicated, recognized.

Additional Actual Values:
If so equipped, with Seat Occupied Recognition (SOR) with Automatic Child Seat Recognition (ACSR) the additional information is shown:
Function: F / SOR / ACSR
(SOR continues to be active regardless if MB Child seat "Babysafe" is not used or recognized).
Passenger seat: occupied / not occupied
Child seat: F / recognized / not used
Facing direction of child seat: F / forwards / backwards

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The actual values: SOR/ACSR are updated approx. every 15 seconds.

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

DTC 	Possible cause	Hints	Test step/Remedy [1]
No communication with HHT	Diagnostic line		23⇒ 2.0
No fault codes	No fault codes recognized.	In case of complaint; Perform electrical Test 23	23
B1000	SRS control module (N2/2)		N2/2
B1044	Front passenger AB squib 1 (R12/4) Faulty version coding		31
B1051	Driver AB squib 1 (R12/3) Faulty version coding		31
B1064	Circuit 15R Under or over voltage condition		23⇒ 1.0
B1065	Driver ETR squib (R12/1) Faulty version coding		31
B1066	Left side airbag squib (R12/9) Faulty version coding		31
B1068	Front passenger ETR squib (R12/2) Faulty version coding		31
B1069	Right side airbag squib (R12/10) Faulty version coding		31

[1] Observe Preparation for Test, see 22.

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

DTC	Possible cause	Hints	Test step/Remedy [1]
B1083	Left/right hand drive Faulty version coding	**Model 163 as of 3/98, up to 12/99**	23⇒ 20.0
B1150	Left front seat belt buckle/belt lock switch (S68/7), ⌜⌝+, ⌜⌝–, –//– Faulty version coding		23⇒ 18.0, 31
B1151	Right front seat belt buckle/belt lock switch (S68/8), ⌜⌝+, ⌜⌝–, –//– Faulty version coding		23⇒ 19.0, 31
B1476	SRS MIL (A1e15)		23⇒ 3.0
B1522	Driver airbag squib (R12/3) < Ω, > Ω		23⇒ 4.0
B1523	Driver airbag squib (R12/3) ⌜⌝+, ⌜⌝–		23⇒ 5.0
B1524	Front passenger AB squib (R12/4) < Ω, > Ω		23⇒ 7.0
B1525	Front passenger AB squib (R12/4) ⌜⌝+, ⌜⌝–		23⇒ 8.0
B1526	Driver ETR squib (R12/1) < Ω, > Ω		23⇒ 14.0

[1] Observe Preparation for Test, see 22.

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

DTC	Possible cause	Hints	Test step/Remedy [1]
B1527	Driver ETR squib (R12/1) ⌜1+, ⌜1–		23⇒ 15.0
B1528	Front passenger ETR squib (R12/2) < Ω, > Ω		23⇒ 16.0
B1529	Front passenger ETR squib (R12/2) ⌜1+, ⌜1–		23⇒ 17.0
B1530	Left side airbag squib (R12/9) < Ω, > Ω		23⇒ 10.0
B1531	Left side airbag squib (R12/9) ⌜1+, ⌜1–		23⇒ 11.0
B1532	Right side airbag squib (R12/10) < Ω, > Ω		23⇒ 12.0
B1533	Right side airbag squib (R12/10) ⌜1+, ⌜1–		23⇒ 13.0
B1152	Front passenger seat occupied recognition	Only valid with ACSR **Model 163 as of 3/98, up to 12/99**	23⇒ 21.0
B1153	Child seat: Communication fault, –//–, ⌜1+ Child seat: ⌜1–	Only valid with ACSR **Model 163 as of 3/98, up to 12/99**	23⇒ 24.0

[1] Observe Preparation for Test, see 22.

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

DTC 	Possible cause	Hints	Test step/Remedy [1]
B1153	Child seat: Positioned incorrectly Child seat: Only one transponder recognized Child seat: "Signal" transmission fault between front passenger seat and "Babysafe"	Only valid with ACSR **Model 163 as of 3/98, up to 12/99**	23⇒ 22.0
B1153	AIRBAG OFF indicator lamp (A1e56) –//–, ⌜⌝–	Only valid with ACSR **Model 163 as of 3/98, up to 12/99**	23⇒ 23.0
B1153	Child seat not recognized, unknown Child seat version code faulty Child seat not approved	Only valid with ACSR	Perform coding via HHT, Use only approved Child seats, 31

[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

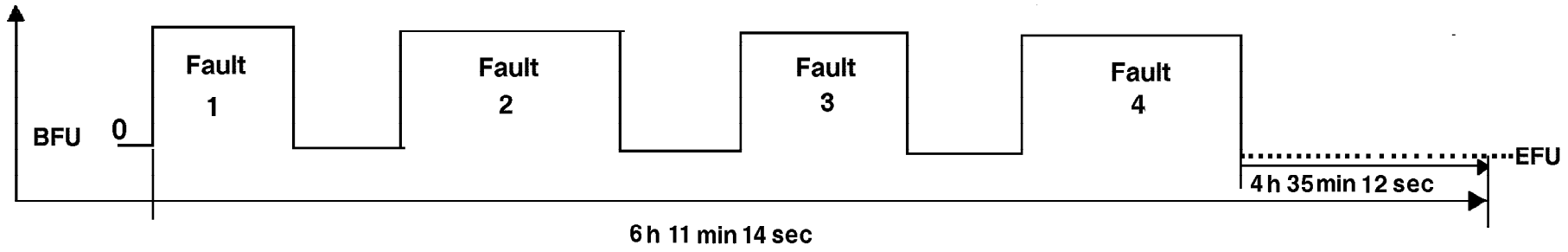
AB	DTC Memory
Fault Frequency 4 Time span since first fault is: 6 h. 15 min. Time span since last fault noted is: 4 h. 35 min.	
	≪

Example:

- Fault frequency: Fault noted 4 times.
- Time span since the first fault is: 6 h. 15 min.
- Time span since last fault noted is: 4 h. 35 min.

Periodic Faults:

Fault Frequency (count)



Time span (h, min, sec.)
BFU: Start of Fault Time Span.
EFU: End of Fault Time Span.

0	Fault not present.
1, 2, 3, 4	Fault present (occured 4 times, did not occur 4 times).

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

Actual values:
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.
OFF: Seat belt buckle **not** latched (USA), front passenger seat **not occupied**.

Contrary to the DTC memory, actual values are updated continuously, even during diagnosis, so that, e.g.: by moving components, or connections and wiring harnesses, intermittent failures may be indicated, recognized.

Additional Actual Values:
If so equipped, with Seat Occupied Recognition (SOR) with Automatic Child Seat Recognition (ACSR) the additional information is shown:
Function: F / SOR / ACSR
(SOR continues to be active regardless if MB Child seat "Babysafe" is not used or recognized).
Passenger seat: Occupied / Not occupied
Child seat: F / recognized / not used
Facing direction of child seat: F / Forwards / Backwards

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The actual values: SOR/ACSR are updated approx. every 15 seconds.

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

- 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.

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

Preparation for Test:

1. Review 13, 14, 21, 22, 31
2. Review SRS malfunction indicator lamp actuation, function. (see SMS, Function description of airbag, side airbag, seat belt tensioner (SRS), Z1 0879 02 01, Job No. GF91.60-P-2003GH).

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If **no fault is present**, the AIRBAG OFF indicator lamp (A1e56) is illuminated only when the front passenger seat occupied recognition with automatic child seat recognition (ASCR) (B48) has recognized the **installed** MB child seat "Babysafe".
The airbag, side airbag and ETR are **not activated** on the passenger side with **an unoccupied seat** (i.e. person or MB child seat "Babysafe"), thus the AIRBAG OFF indicator lamp (A1e56) **is not illuminated.**

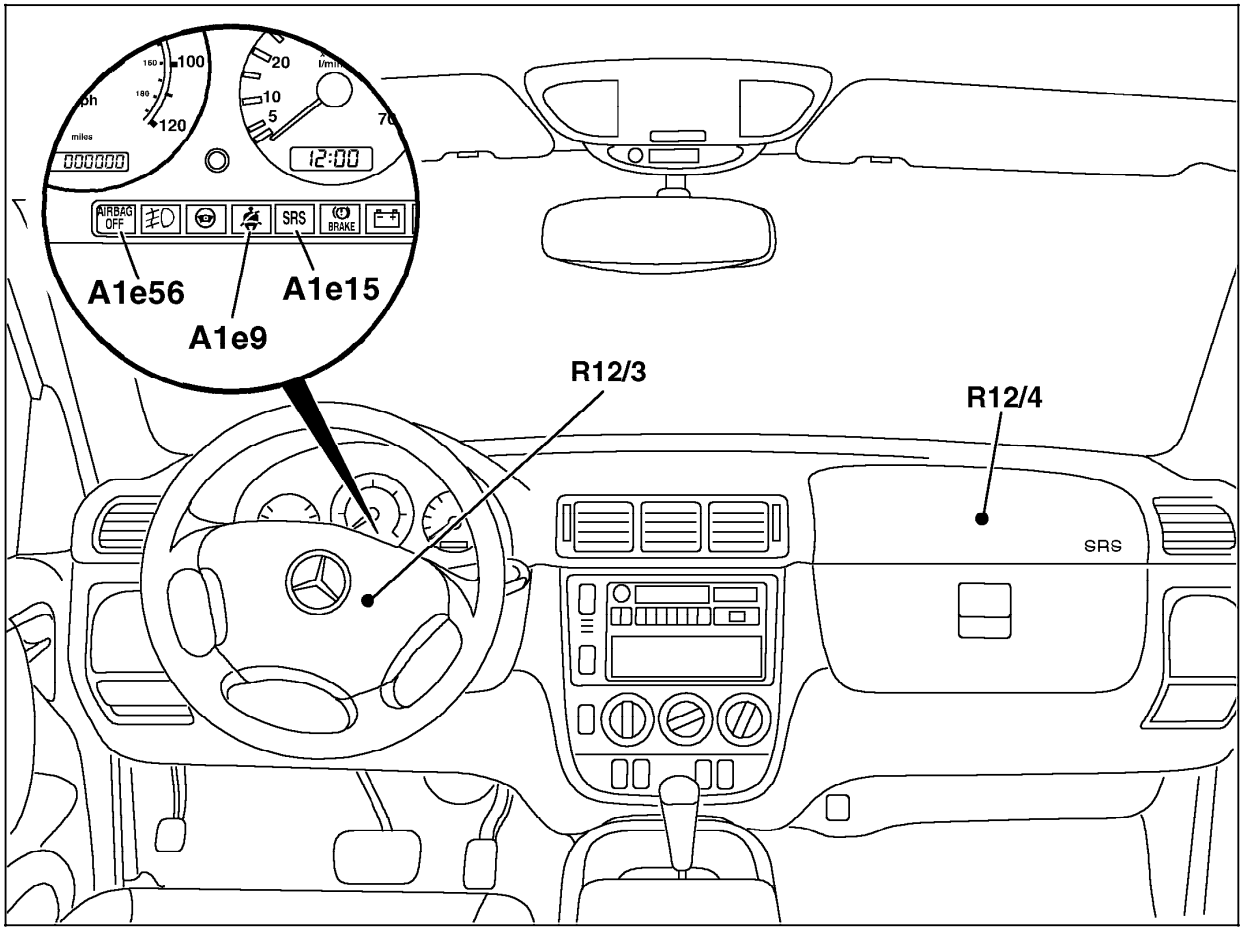
Complaint/Problem	Possible cause	Test step/Remedy
SRS MIL (A1e15) with ignition key in position “1”: • does not come on • does not go out after approximately 4 – 20 seconds • flickers • comes on for 2 minutes • remains illuminated continuously		23 ⇒ 3.0
SRS MIL (A1e15) blinks with ignition key in position “1”, after the control module has been replaced.	SRS control module not coded.	Programming Vehicle Equipment 31

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

Complaint/Problem	Possible cause	Test step/Remedy
AIRBAG OFF indicator lamp (A1e56) does not illuminate with properly installed **"Babysafe"** child seat on the front passenger seat. **Model 163 as of 3/98, up to 12/99**	The front passenger seat occupied recognition with automatic child seat recognition (ASCR) (B48) has **not** recognized the **installed** MB child seat "Babysafe". A1e56 MB child seat "Babysafe" **has not been properly positioned** onto the front passenger seat.	23 ⇒ 22.0 23 ⇒ 23.0 23 ⇒ 22.0
SRS MIL (A1e15) and AIRBAG OFF indicator lamp (A1e56) remain **illuminated continously.** **Model 163 as of 3/98, up to 12/99**	Only one transponder of the MB child seat "Babysafe" is recognized. A **non-approved baby seat** has been recognized. The front passenger seat occupied recognition with automatic child seat recognition (ASCR) (B48) has been configured incorrectly. Data line problem from SRS control module (N2/2) to the front passenger seat occupied recognition with automatic child seat recognition (ASCR) (B48). B48	23 ⇒ 22.0 Perform coding of SRS control module: Programming Vehicle Equipment 31 23 ⇒ 24.0 Readout DTC memory of airbag: 12

Electrical Test Program – Component locations

Components locations
Model 163 (up to 12/99)



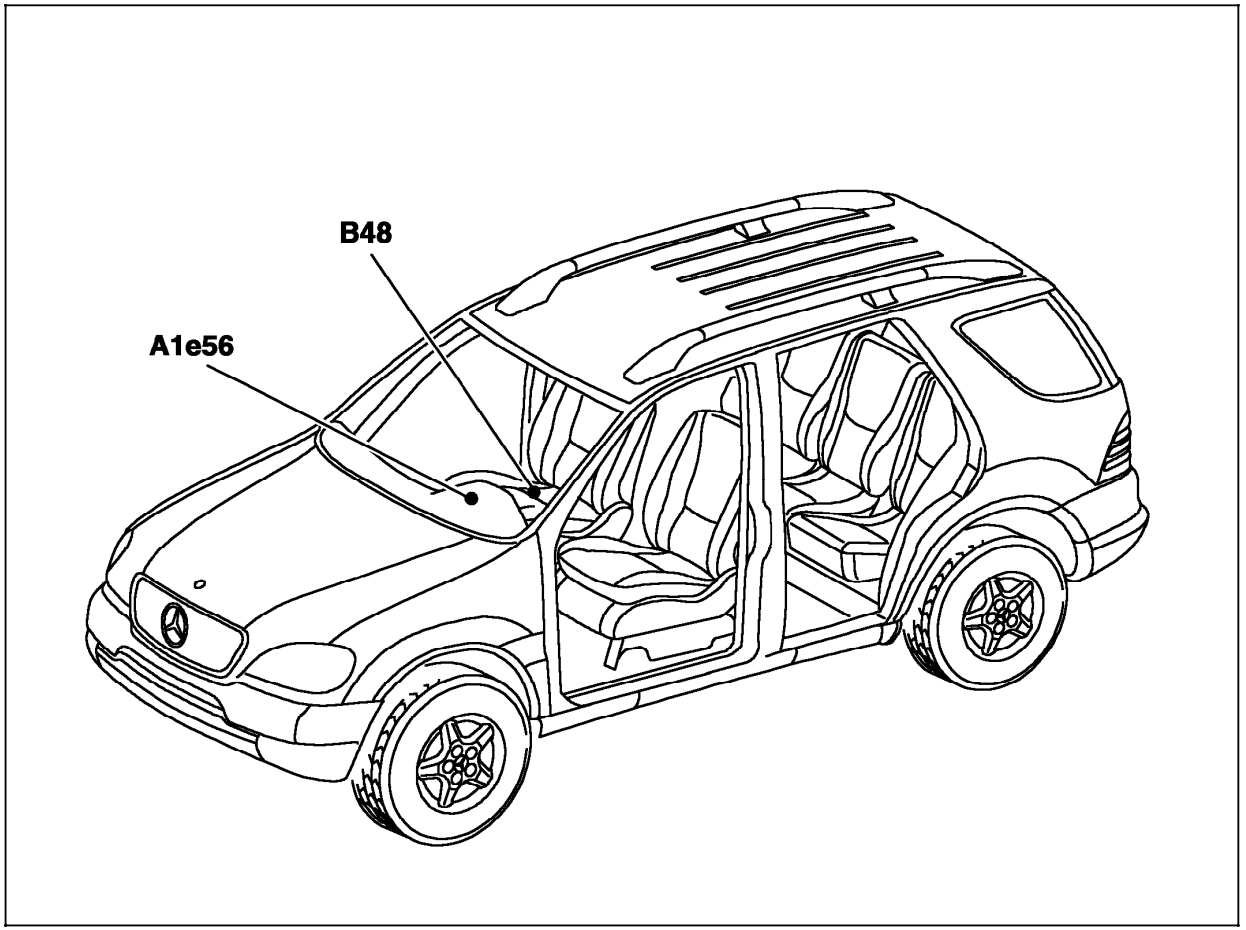
P91.60-0556-06

Figure 1

A1e9	Seat belt reminder lamp
A1e15	SRS MIL
A1e56	AIRBAG OFF indicator lamp
R12/3	Driver AB squib
R12/4	Front passenger AB squib 1

Electrical Test Program – Component locations

Components locations
Model 163 (up to 12/99)



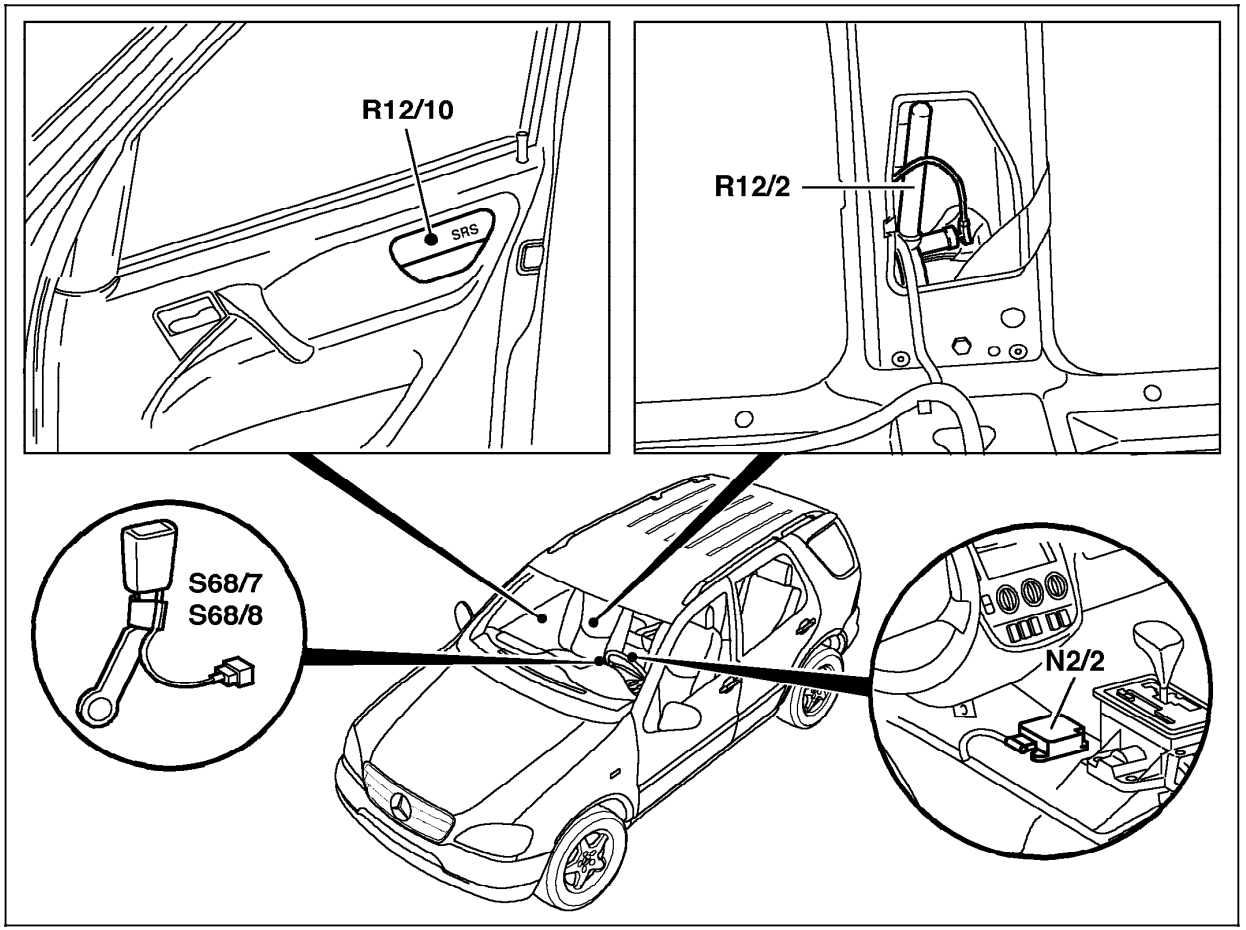
P91.60-0686-06

Figure 2

A1e56	AIRBAG OFF indicator lamp
B48	Front passenger seat occupied recognition with automatic child seat recognition (ACSR)

Electrical Test Program – Component locations

Components locations
Model 163 (up to 12/99)



P91.60-0554-06

Figure 3

N2/2	SRS control module
R12/2	Front passenger ETR squib
R12/10	Right side airbag squib
S68/7	Left front seat belt buckle/belt lock switch
S68/8	Right front seat belt buckle/belt lock switch

Electrical Test Program - Preparation for 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.

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

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

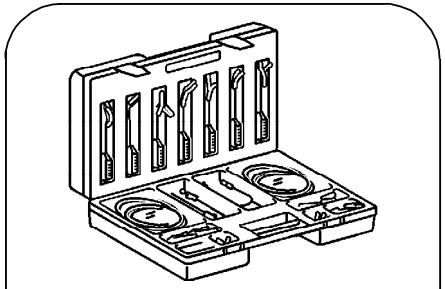
Preparation for Test

1. Review section 0, 13, 14, 20, 21, 22
2. .Check fuses.
3. Battery voltage 11 – 14 V

⚠ **CAUTION!**
Do not connect battery trickle charger.

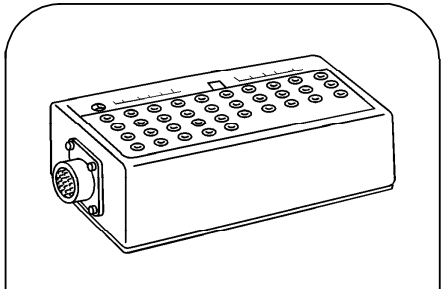
Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Special Tools



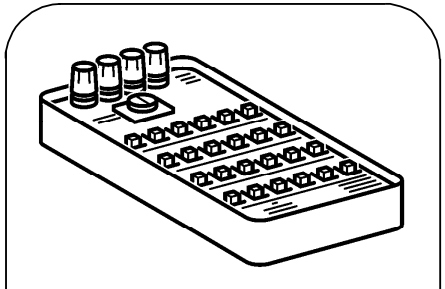
201 589 00 99 00

Electrical connecting set



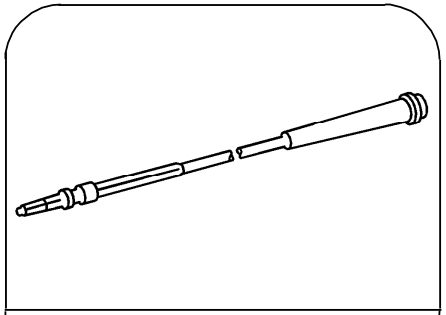
124 589 00 21 00

35-pin socket box



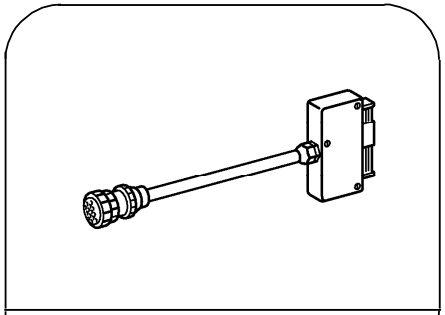
124 589 09 63 00

Ohm decade



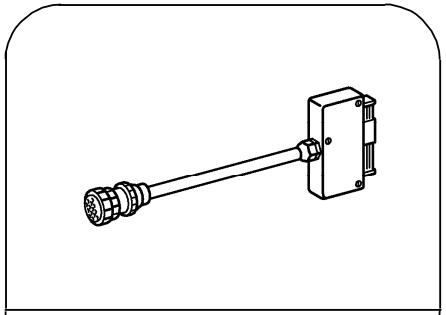
140 589 22 63 00

Adapter cable



210 589 02 63 00

36-pin test cable



163 589 02 63 00

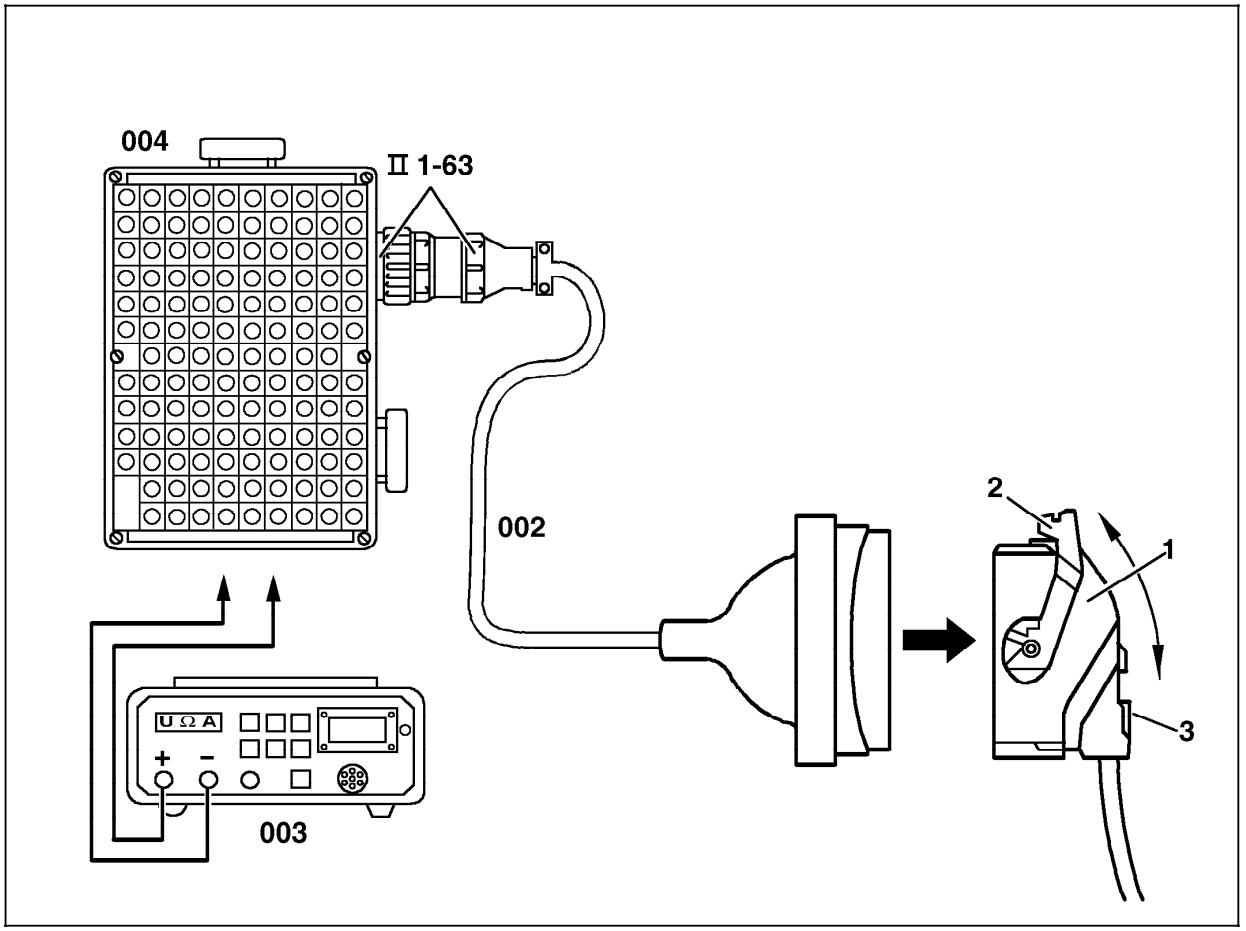
Test cable 50-pin

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)

Connection Diagram - Socket Box Tester/SRS Control Module Connector



P91.60-0560-06

Figure 1

002	Test cable
003	Multimeter
004	Socket box (126-pole socket box)
1	SRS control module connector
2	Connect and disconnect aid
3	Connect and disconnect lock

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

Connection Diagram - Test Cables/Squib Plug Connections

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

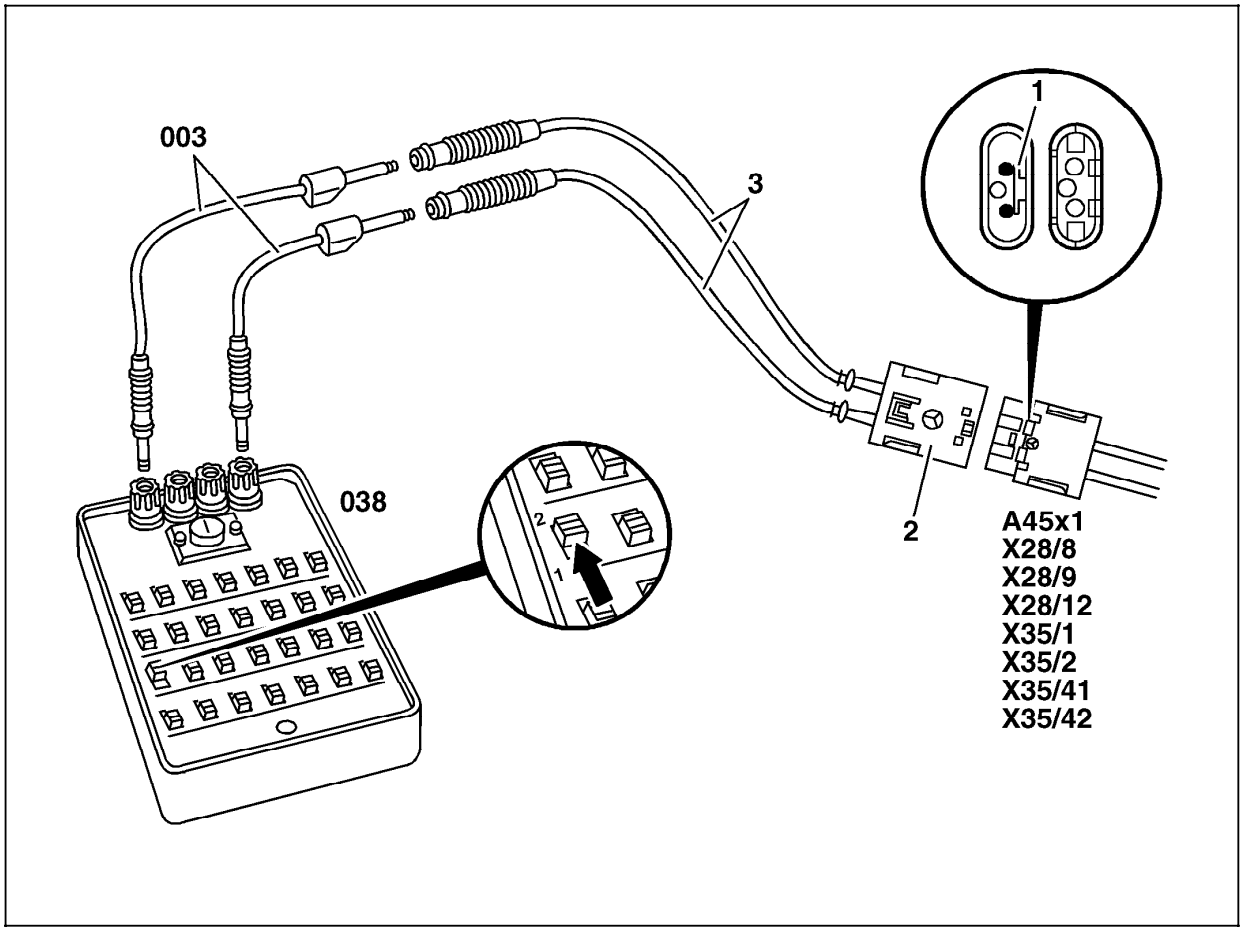


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Figure 2

002	Test cable, part no. 140 589 22 63 00
003	Test cables with banana plugs
038	Resisitance substitution unit
R12/1	Driver ETR squib
R12/2	Front passenger 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

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

⇒		Test scope	Test connection	Test condition	Nominal value/ display	Possible cause/Remedy
1.0	B1064	Circuit 15R voltage supply Low /over voltage **HHT actual value**		Ignition key in position “2“.	√ F	⇒ 1.1
1.1		SRS control module (N2/2) **Voltage supply**	N2/2 6 — V — 5	Remove ignition key. Disconnect connector on N2/2. Connect (22, Figure 1). Ignition key in position “1“.	11 – 14 V	Wiring. If values are OK: N2/2
2.0		SRS control module (N2/2) **Diagnostic output**	N2/2 6 — Ω — 13 (x11/4)	Remove ignition key. Disconnect connector on N2/2. Connect (22, Figure 1).	<1 Ω	Wiring
3.0	B1476	SRS MIL (A1e15) **HHT actual value**		Ignition key in position “2“. SRS MIL illuminates.	A1e15 goes out after approx. 4 – 20 seconds. √ F	Wiring, SRS MIL short circuit to positive, SRS MIL short circuit to grnd.

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	B1522	Driver airbag squib (R12/3) **HHT actual value**		Ignition key in position “2“.	√ F	⇒ 4.1
4.1		Driver airbag squib (R12/3) **HHT actual value**	R12/3 1 — ❮ ❯ — 2	Remove ignition key. Remove airbag unit. Disconnect connector on R12/3. Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Squib, ⇒ 4.2
4.2		Driver airbag squib (R12/3) **HHT actual value**	A45x1 3 — ❮ ❯ — 4	Remove ignition key. Disconnect connector on horn/airbag clock spring contact (A45). Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Check A45 for continuity, ⇒ 4.3
4.3		Driver airbag squib (R12/3) **Resistance**	N2/2 11 — ❮ Ω ❯ — 10	Remove ignition key. Disconnect connector on N2/2 Connect (22, Figure 1).	2 – 5 Ω	Wiring.

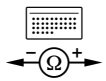
Electrical Test Program - Test (driver/passenger-side airbag/side airbag)

⇒		Test scope/ Actual value no. and text	Test connection	Test condition	Nominal value/ display	Possible cause/Remedy
5.0	B1523	Driver airbag squib (R12/3) **Short circuit test** ⌐1– ⌐1+	N2/2 6 — Ω — 10 5 — Ω — 10	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	 >20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
6.0	B1525	***Not applicable to U.S.A. version vehicles***				
7.0	B1524	Front passenger AB squib 1 (R12/4) **HHT actual value**		Ignition key in position “2“.	√ F	 ⇒ 7.1
7.1		Front passenger AB squib 1 (R12/4) **HHT actual value**	R12/4 1 — 2	Remove ignition key. Remove glovebox insert. Disconnect right front passenger AB squib 1 (R12/4) connector. Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Squib. ⇒ 7.2

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
7.2		Front passenger AB squib 1 (R12/4) **Resistance**	N2/2 14 — Ω — 13	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	2 – 5 Ω	Wiring.
8.0	B1525	Driver airbag squib (R12/3) **Short circuit test** ⌐1– ⌐1+	N2/2 6 — Ω — 13 5 — Ω — 13	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	 >20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
9.0	B1523	***Not applicable to U.S.A. version vehicles***				
10.0	B1530	Left side airbag squib 1 (R12/9) **HHT actual value**		Ignition key in position “2“.	√ F	 ⇒ 10.1

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
10.1		Left side airbag squib 1 (R12/9) **HHT actual value**	X35/1 E —()— D	Remove ignition key. Disconnect left front door separation point (X35/1). Disconnect right front passenger AB squib 1 (R12/4) connector. Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Wiring, Squib, ⇒ 10.2
10.2		Left side airbag squib 1 (R12/9) **HHT actual value**	R12/9 1 —()— 2	Remove ignition key. Remove interior door trim panel. Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Squib, ⇒ 10.3
10.3		Left side airbag squib 1 (R12/9) **Resistance**	N2/2 17 —()— 16	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	2 – 5 Ω	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
11.0	B1531	Left side airbag squib 1 (R12/9) **Short circuit test** Γ1– Γ1+	N2/2 6 — Ω — 16 5 — Ω — 16	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	 >20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
12.0	B1532	Right side airbag squib 1 (R12/10) **HHT actual value**		Ignition key in position “2“.	√ F	 ⇒ 12.1
12.1		Right side airbag squib 1 (R12/10) **HHT actual value**	X35/2 E — D	Remove ignition key. Disconnect right front door separation point (X35/2). Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Wiring, Squib, ⇒ 12.2
12.2		Right side airbag squib 1 (R12/10) **HHT actual value**	R12/10 1 — 2	Remove ignition key. Remove interior door trim panel. Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Squib, ⇒ 12.3

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
12.3		Right side airbag squib 1 (R12/10) **Resistance**	N2/2 19 — Ω — 18	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	2 – 5 Ω	Wiring.
13.0	B1533	Right side airbag squib 1 (R12/10) **Short circuit test** Γ1– Γ1+	N2/2 6 — Ω — 18 5 — Ω — 18	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	 >20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
14.0	B1526	Driver ETR squib (R12/1) **HHT actual value**		Ignition key in position “2“.	√ F	 ⇒ 14.1
14.1		Driver ETR squib (R12/1) **HHT actual value**	R12/1 1 — 2	Remove ignition key. Disconnect connector on R12/1 Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Squib, ⇒ 14.2

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
14.2		Driver ETR squib (R12/1) **Resistance**	N2/2 2 — Ω — 1	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	2 – 5 Ω	Wiring.
15.0	B1527	Driver ETR squib (R12/1) **Short circuit test** ⌜1– ⌜1+	N2/2 6 — Ω — 1 5 — Ω — 1	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	B1528	Front passenger ETR squib (R12/2) **HHT actual value**		Ignition key in position “2“.	√ F	⇒ 16.1
16.1		Front passenger ETR squib (R12/2) **HHT actual value**	R12/2 1 — 2	Remove ignition key. Disconnect connector on R12/2 Connect (22, Figure 2). Set resistance of 2 Ω. Ignition key in position “2“.	√ F	Squib, ⇒ 16.2

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
16.2		Front passenger ETR squib (R12/2) **Resistance**	N2/2 4 — Ω — 3	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	2 – 5 Ω	Wiring.
17.0	B1529	Front passenger ETR squib (R12/2) **Short circuit test** Γ1– Γ1+	N2/2 6 — Ω — 3 5 — Ω — 3	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1).	 >20 kΩ >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
18.0	B1150	Left front seat belt buckle/belt lock switch (S68/7) **HHT actual value**		Ignition key in position “2“. Seat belt buckle **not** latched: Seat belt buckle **latched**:	√ F OFF ON	 ⇒ 18.1
18.1		Left front seat belt buckle/belt lock switch (S68/7) **Resistance**	S68/7x1 2 — Ω — A	Disconnect connector. Seat belt buckle **not** latched: Seat belt buckle **latched**:	 80 – 210 Ω 320 – 480 Ω	S68/7 ⇒ 18.2

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
18.2		Left front seat belt buckle/belt lock switch (S68/7) **Short circuit test** Γ1– Γ1+	N2/2 6 — Ω — 12 5 — Ω — 12	**not** connected. Remove ignition key. Left front seat belt buckle/belt lock switch **not latched.** Disconnect N2/2 connector. Connect (22, Figure 1).	 80 – 210 Ω >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
19.0	B1151	Right front seat belt buckle/belt lock switch (S68/8) **HHT actual value**		Ignition key in position “2“. Seat belt buckle **not** latched: Seat belt buckle **latched**:	√ F OFF ON	 ⇒ 19.1
19.1		Right front seat belt buckle/belt lock switch (S68/8) **Resistance**	S68/8x1 B — Ω — A	Disconnect connector. Seat belt buckle **not** latched: Seat belt buckle **latched**:	 80 – 210 Ω 320 – 480 Ω	S68/8 ⇒ 19.2

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
19.2		Right front seat belt buckle/belt lock switch (S68/8) **Short circuit test** Γ1– Γ1+	N2/2 6 — Ω — 8 5 — Ω — 8	**not** connected. Remove ignition key. Right front seat belt buckle/belt lock switch **not latched.** Disconnect N2/2 connector. Connect (22, Figure 1).	 80 – 210 Ω >20 kΩ	Wiring, Short to circuit 31, 30, 15, 15R.
20.0	B1083	SRS control module (N2/2) **Left/right hand steering coding** **Model 163 as of 3/98, up to 12/99**	N2/2 6 — Ω — 37 (⊥)	Remove ignition key. Disconnect N2/2 connector. Connect (22, Figure 1). Left hand steering:	 >20 kΩ	Wiring.
21.0	B1152	Seat occupied recognition (SOR) **HHT actual value** **Model 163 as of 3/98, up to 12/99**		Ignition key in position “2“. Person seated in front passenger seat. Front passenger seat **not** occupied.	 Frt. Pass. seat occupied. Frt. Pass. seat not occupied.	Front passenger seat occupied recognition with automatic child seat recognition (ASCR) (B48)

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
22.0	B1153	Automatic child seat recognition (ACSR) **HHT actual value** **Model 163 as of 3/98, up to 12/99**		Ignition key in position “2“. Position MB child seat "Babysafe" in forward facing position, then wait approx. 15 seconds. Position MB child seat "Babysafe" in backward facing position, then wait approx. 15 seconds. i SOR continues to be active regardless if MB Child seat "Babysafe" is not used or recognized.	"Babysafe“ seat recognd. Position facing forward. "Babysafe“ seat recognd. Position facing backward.	MB child seat "Babysafe" not positioned in front passenger seat correctly. Child seat not approved or not coded in SRS control module: 31 Fault in data line from front passenger seat occupied recognition with automatic child seat recognition (ASCR) (B48) to SRS control module (N2/2). 23 ⇒ 24.0, B48

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
23.0	B1153	AIRBAG OFF indicator lamp (A1e56) **HHT actual value** **Model 163 as of 3/98, up to 12/99**		Position **approved** and **version coded** MB child seat "Babysafe" in forward (or rearward) facing position, Ignition key in position “2“. Then wait approx. 15 seconds.	AIRBAG OFF indicator lamp (A1e56) illuminates. √ F	Wiring, Indicator lamp: Short to positve, Short to ground.
24.0		Front passenger seat occupied recognition with automatic child seat recogntion (ACSR) (B48) **Voltage supply** **Model 163 as of 3/98, up to 12/99**	B48x1 4 — (— V —) — 1	Disconnect connector. Ignition key in position "1".	11 – 14 V	Wiring. If values are OK: 23 ⇒ 24.1

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
24.1	B11/53	Front passenger seat occupied recognition with automatic child seat recogntion (ACSR) (B48) **Short circuit test** Γ1+ Γ1–	B48x1 — N2/2 3 — 5 3 — 6	Remove igntion key. Disconnect B48x1 connector. Disconnect N2/2 connector. Connect (22, Figure 1).	 >20 kΩ >20 kΩ	Short circuit to positive, Short circuit to ground. If values are OK: 23 ⇒ 24.2
24.2	B11/53	Front passenger seat occupied recognition with automatic child seat recogntion (ACSR) (B48) **Data line** –//–	B48x1 — N2/2 3 — 15	Remove igntion key. Disconnect B48x1 connector. Disconnect N2/2 connector. Connect (22, Figure 1).	 < 1 Ω	Wiring, B48

Control Module Coding - Vehicle Equipment

Model 163 up to 12/99

Via coding, the stored vehicle equipment as noted in the SRS control module is matched to the actual vehicle equipment installed.

By using the Hand-Held Tester (HHT), the coding of the SRS control module (N2/2) is undertaken.

The coding of the vehicle equipment (into the SRS control module) can be repeated numerous times depending on changes in the vehicles' installed equipment.

After replacing the SRS control module, the SRS MIL (A1e15) **blinks** indicating the need to code the control module.

On the initial coding, the vehicle VIN must be entered via the HHT.

Subsequently, the entered VIN will be transfered (noted) in the SRS control module.