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

⚠ 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 elctrical circuit (i.e. battery charger).
- When performing interior repairs or welding operations, disconnect the connector from the SRS control module.

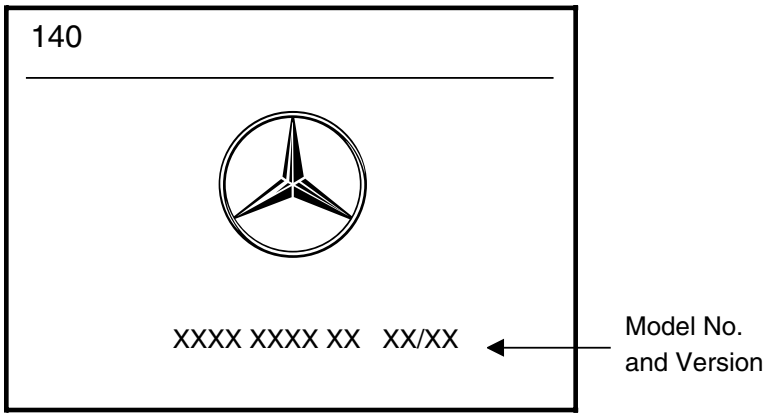
Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

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).

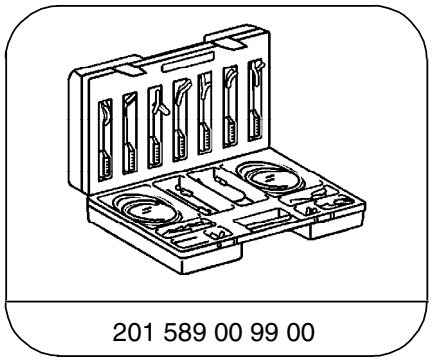


Pressing the return (↵) key will start the test program.

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

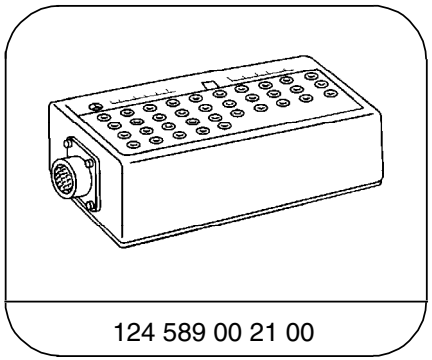
Electrical Test Program - Preparation for Test (driver/passenger-side airbag/side airbag)

Special Tools



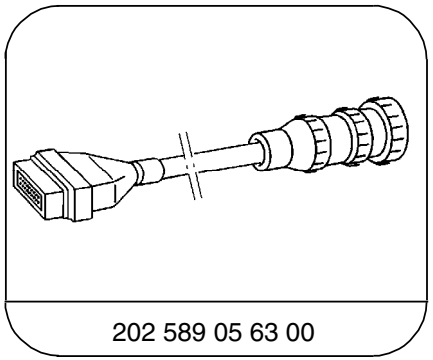
201 589 00 99 00

Electrical connecting set



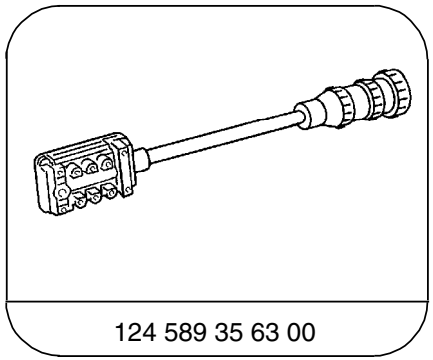
124 589 00 21 00

35-pin socket box



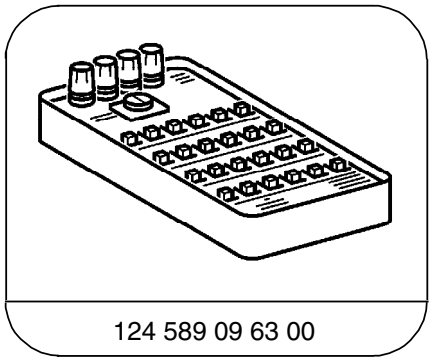
202 589 05 63 00

Test cable



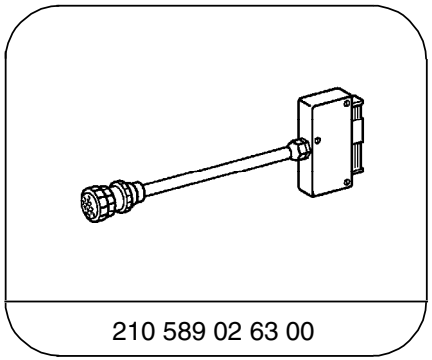
124 589 35 63 00

Test cable



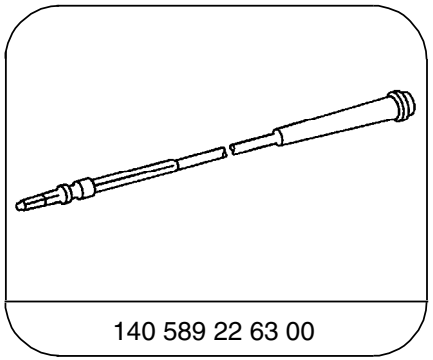
124 589 09 63 00

Ohm decade



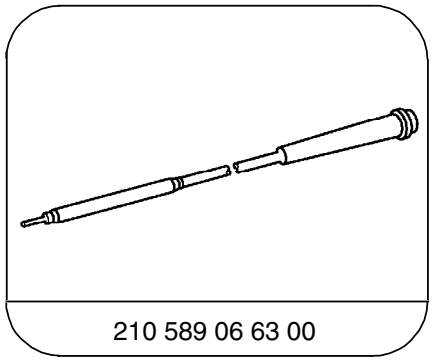
210 589 02 63 00

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

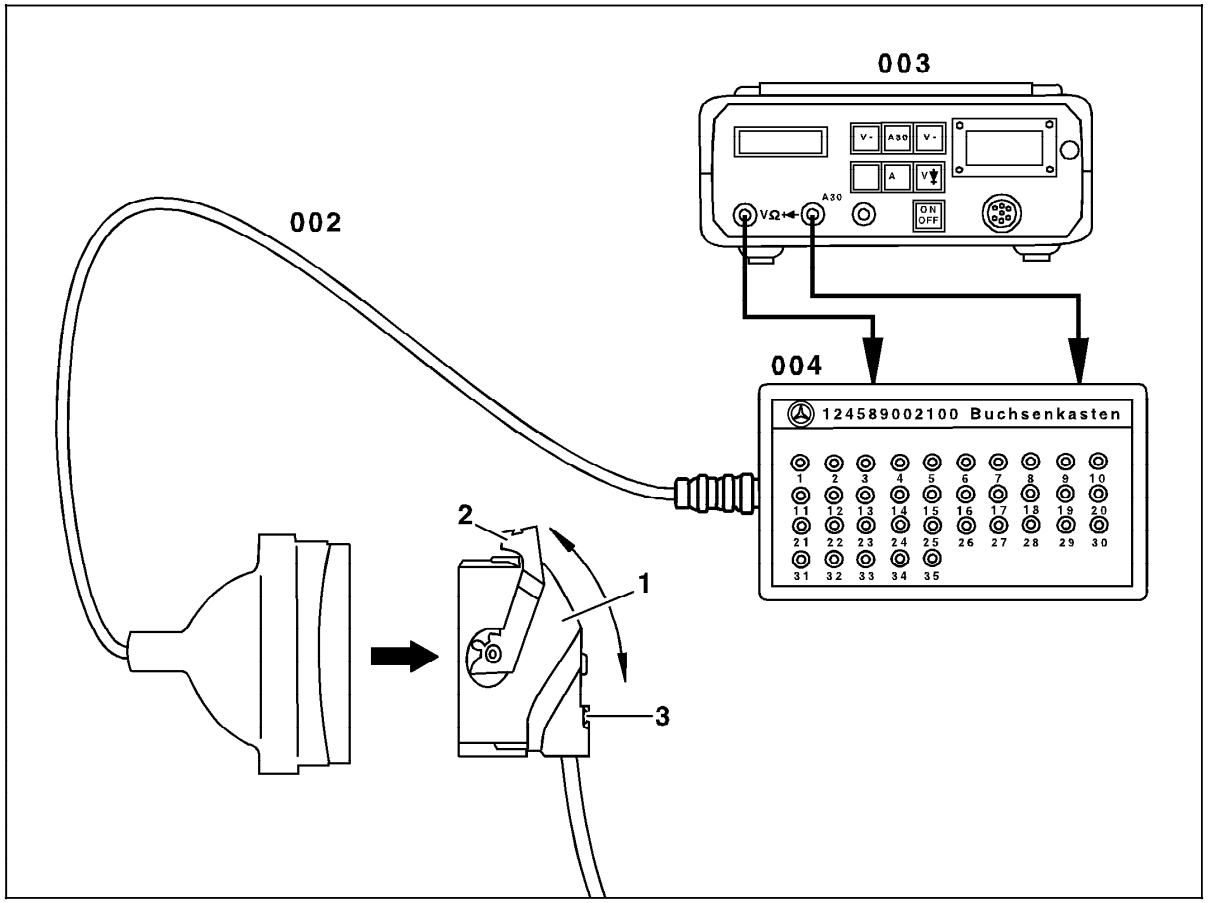


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Figure 1

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

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)

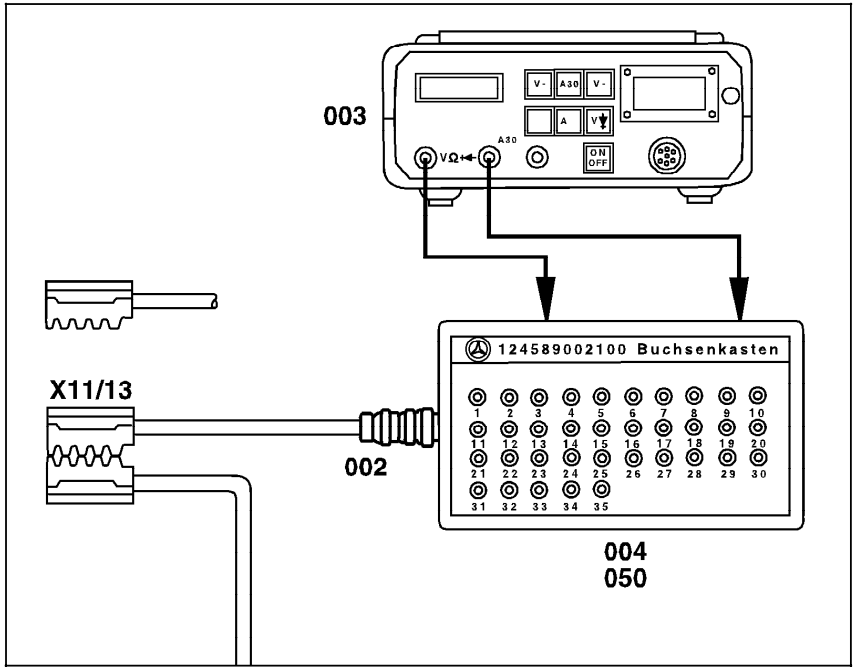

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Figure 2

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

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

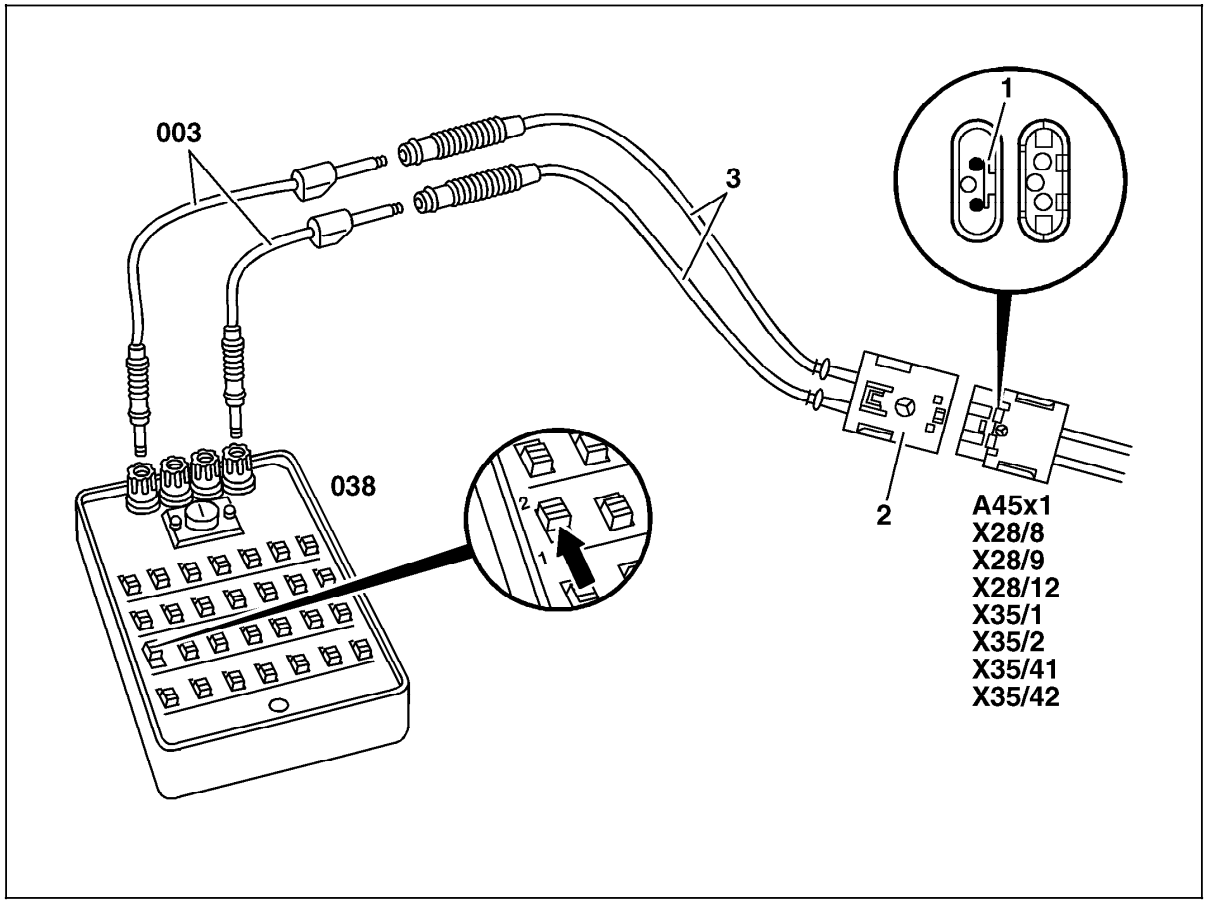

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Figure 3

003	Test cables with banana plugs
038	Resisitance 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

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

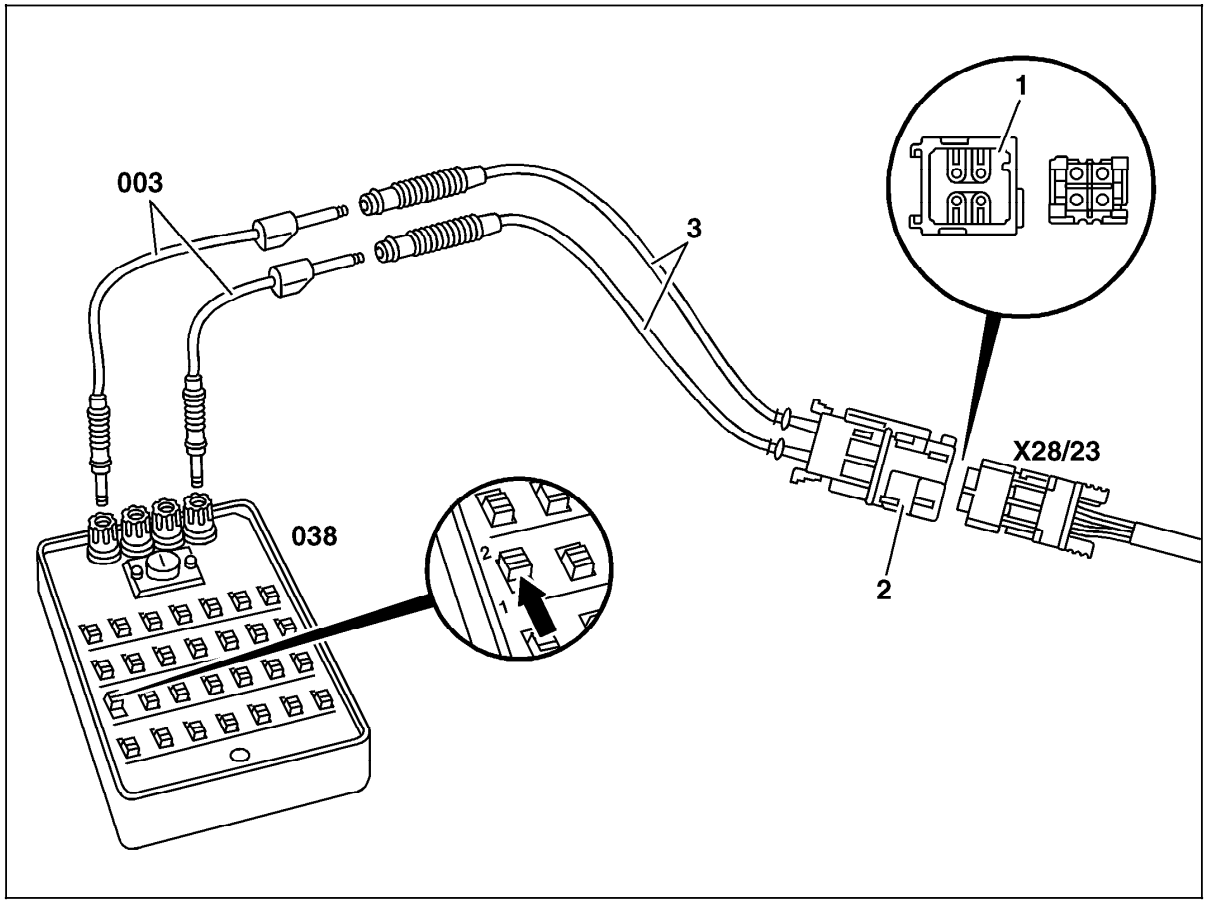

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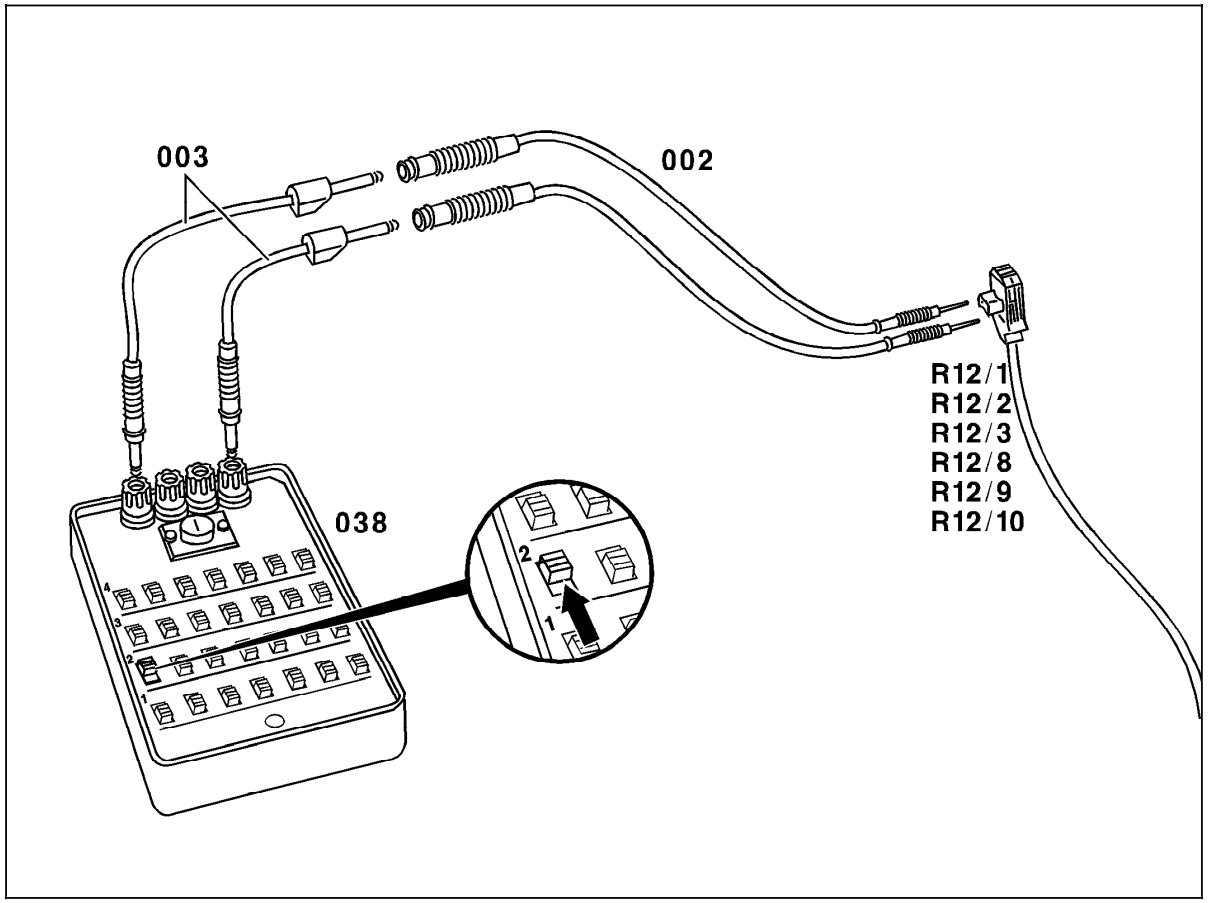
Figure 4

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

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.



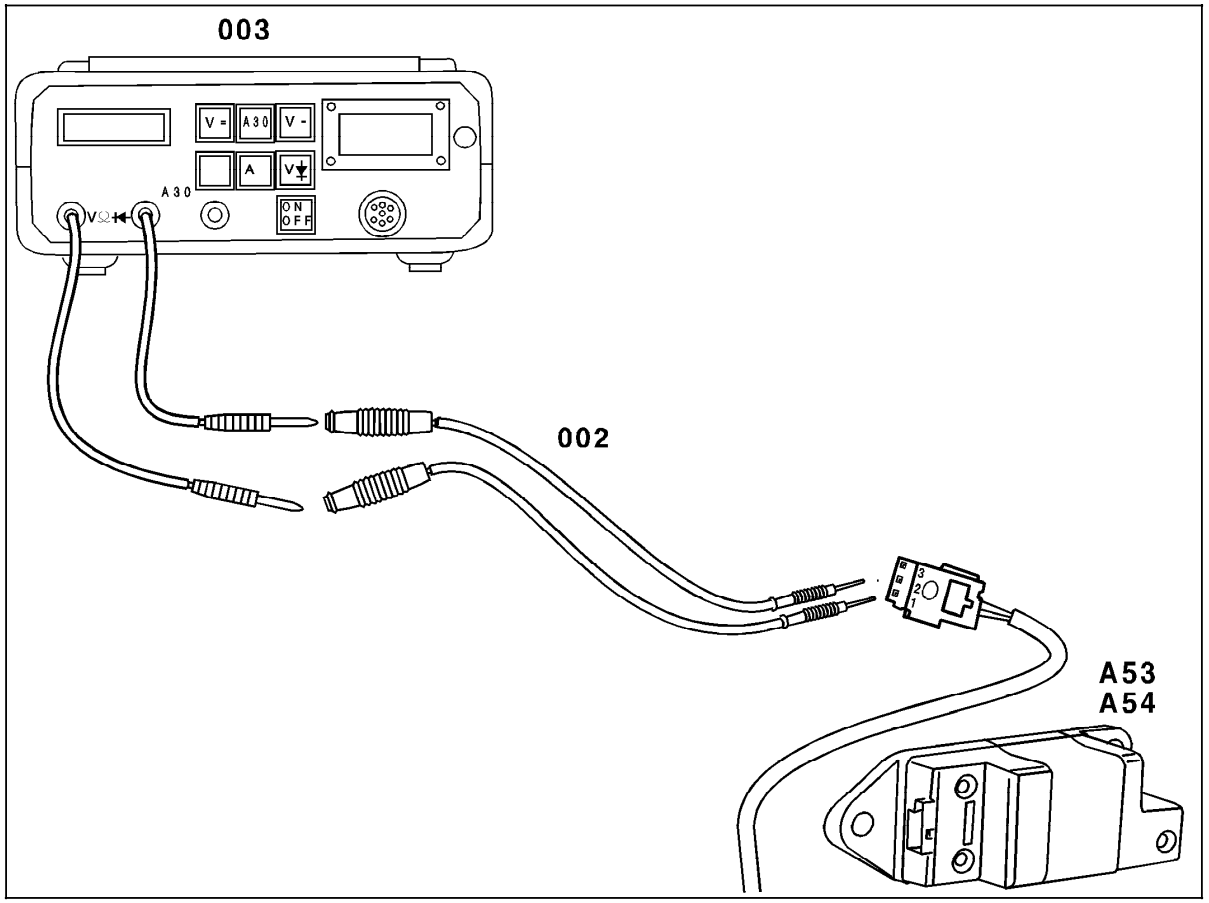
P91.60-0251-06

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

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

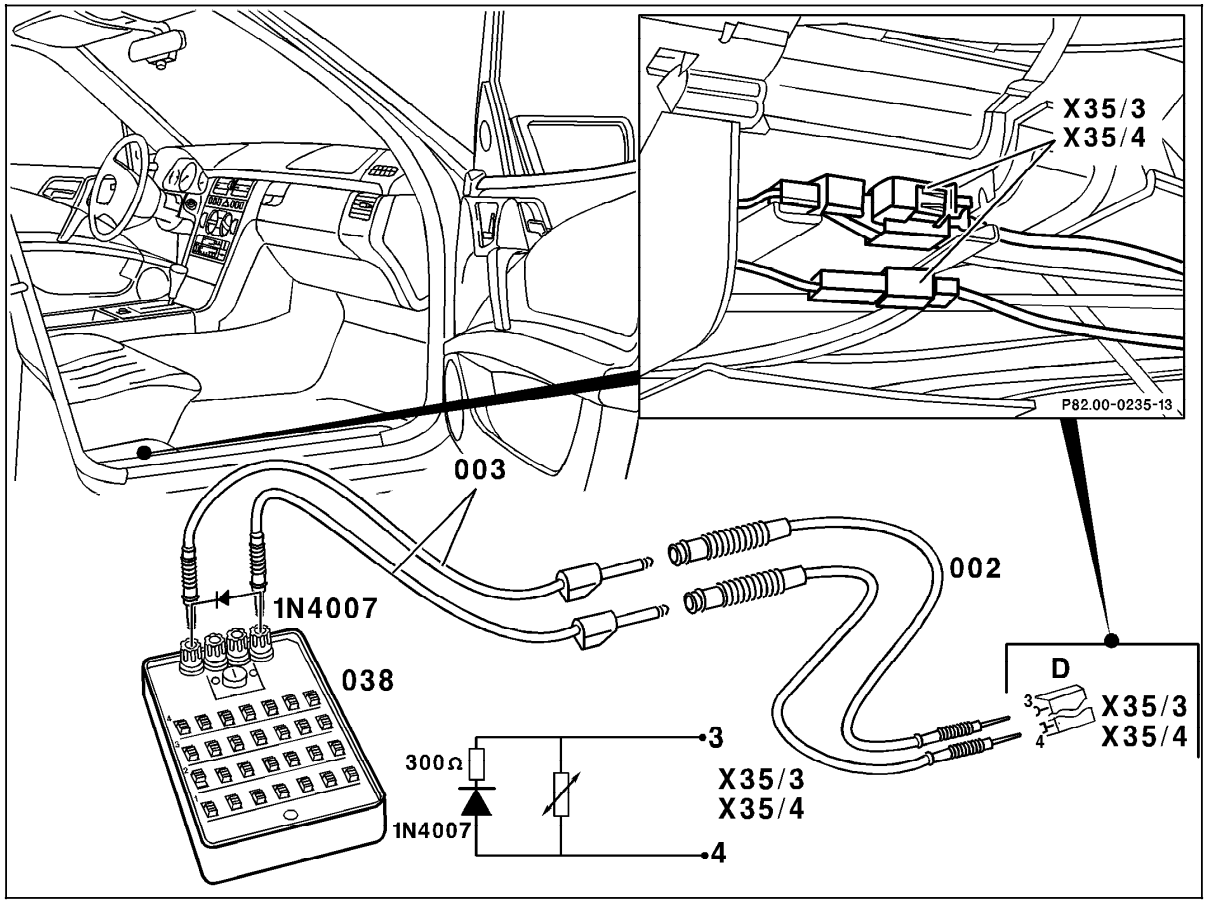


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Figure 7

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

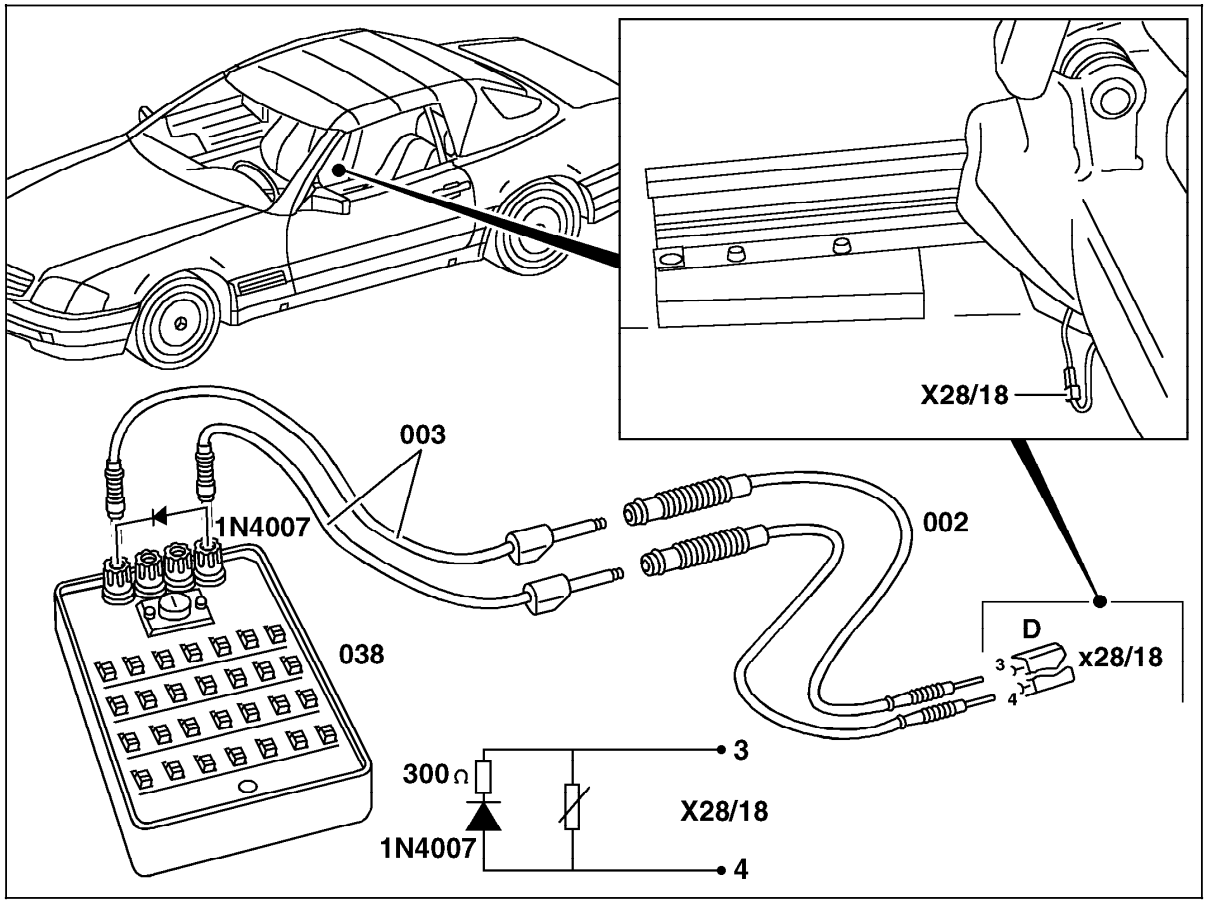

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Figure 8

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