Electrical Test Program – Preparation for Test

Preliminary work:

- Battery voltage 11–14 V.
- Fuses OK.
- To avoid damage to the control modules, connectors should only be disconnected or connected with "Terminal 15R: **OFF**".
- Connect HHT as described in section 0 of the Diagnostic Manual.

The power window and roll bar systems are also activated when the soft top is operated. The complete diagnosis of these systems can be found in the following literature:
Power widows: DM, Body and Accessories, Volume 2; Section 5.4
Roll bar: DM, Body and Accessories, Volume 6; Section 19.5 (may not be released at time of print).

The soft top must never be unlocked or locked while driving and the soft top can only be operated when the vehicle is stationary.

To prevent a collision between the rear cover and the soft top compartment cover, the soft top can only be opened or closed automatically when the rear cover is closed.

To prevent damage to the soft top or items in the trunk:
- The soft top can only be opened or closed automatically when the trunk luggage cover is attached.
- Do not open or close the soft top when the soft top material is frozen or at temperatures below -15°C.
- Only open the soft top when it is clean.

Before opening the soft top with the power soft top switch (S84), the unlocking lever must be turned clockwise and the soft top raised slightly; then turn back and fold up the unlocking lever.
Once the soft top has closed automatically the unlocking lever must be turned clockwise and the soft top pulled onto the window frame; then turn the unlocking lever counterclockwise and fold up.

The following is to be observed after test and maintenance work:
If malfunctions occur when operating the soft top and the soft top remains in an intermediate position, the soft top is first to be moved manually to an end position (completely closed or completely opened). The roll bar (RB) control module (power soft top) (N52) then recognizes the exact position of the soft top. After this a function check is to be carried out.

Electrical wiring diagrams:
Electrical Troubleshooting Manual, Model 202/208.

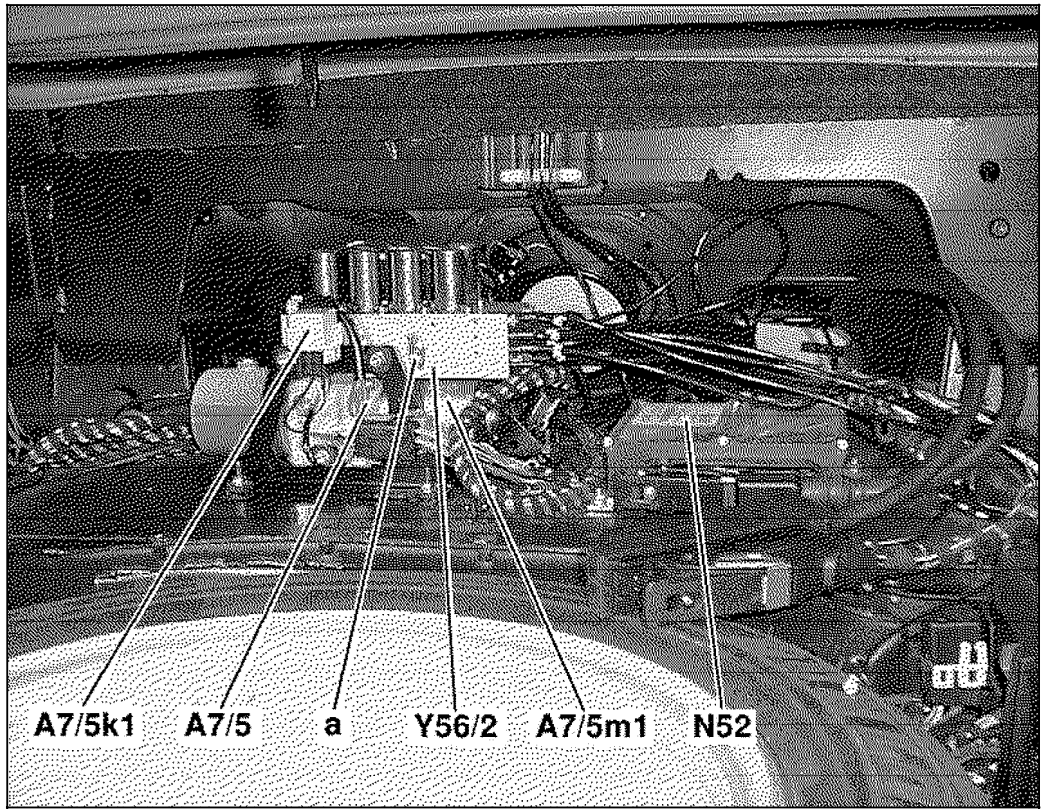
⚠ **WARNING!**
Danger of injury!
Prior to performing any testing, refer to 33/4 for important safety warnings and precautions.

Notes on emergency soft top operation
The soft top can be closed manually in the event of a defect in the soft top system or vehicle electrical system. If possible, this should be done carefully by two people.

Preparations:
The valve screw (a) on the hydraulic unit must first be opened before the emergency operation can be performed. As a result, the valve opens and the hydraulic cylinders (open/close soft top) are switched to return on the rod side. Only after this is it possible to move the soft top linkage manually.

The valve screw (a), is to be closed again after emergency operation. Otherwise, the soft top could be moved manually out of the soft top compartment by unauthorized persons. In addition, objects in the trunk would be fully accessible.

A7/5	Rollbar hydraulic unit (power soft top)
A7/5k1	Hydraulic unit relay
A7/5m1	Motor
N52	Power soft top control module
Y56/2	Soft top control valve block (7 connections)
a	Manually switchable check valve for emergency operation of soft top



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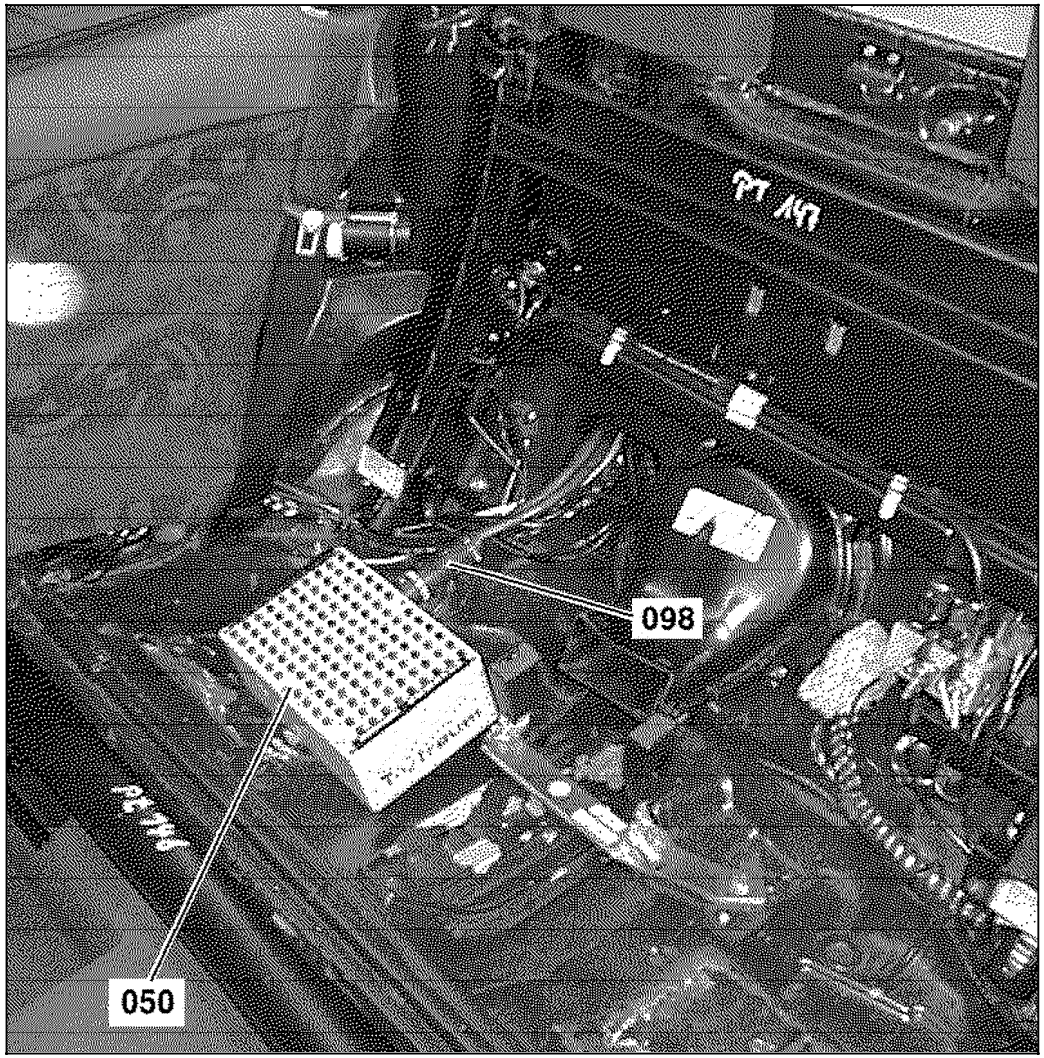
Note:
The exact procedure for emergency soft top operation can be found in the Owner's Manual.

Working with test cable and socket box

For test work on the soft top or rear side windows when using the 55-pin test cable, it is absolutely essential to observe the following:
Before connecting the test cable, if possible open the rear side windows with the power soft top switch (S84).
Only activate the rear power windows **briefly** when the test cable is connected so that the test cable is never overloaded due to the high current draw of the power window motors.



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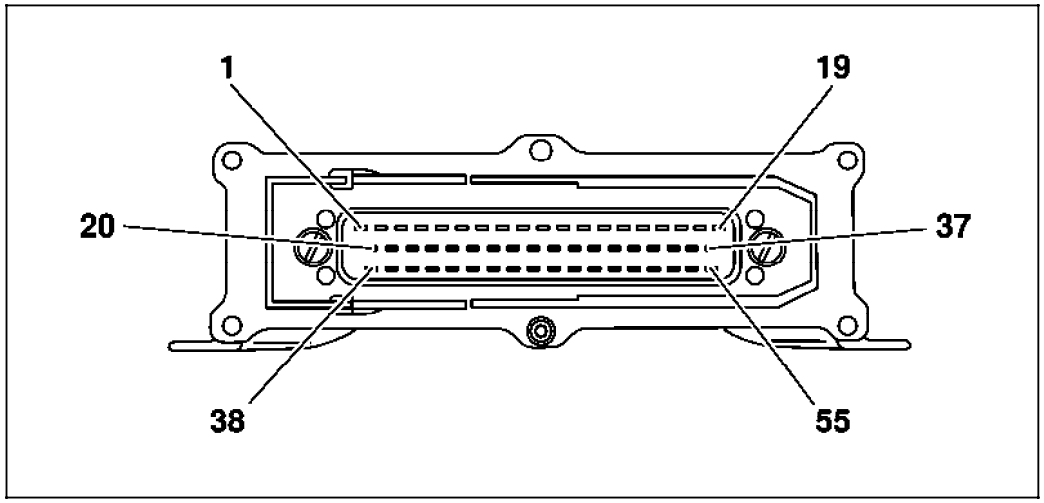
050 126-pin socket box
098 55-pin test cable

Connections on RB control module (power soft top) (N52)

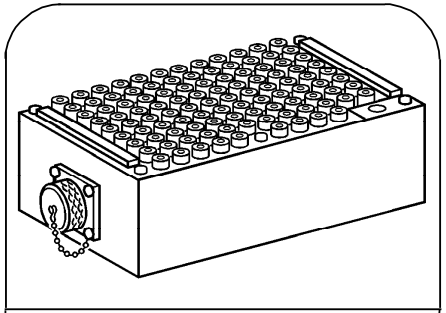


P77.39-2001-10

1	Connector, right rear power window motor (M10/6), +/-
2	Connector, left rear power window motor (M10/5), +/-
3	Terminal 31: Left rear power window motor (M10/5)
4	Terminal 30: Soft top, electronics
5	In-car temperature sensor (B10/4), switchover
6	Input, in-car temperature sensor (B10/4), switchover
7	Indicator lamp in roll bar switch (manual operation) (S83)
8	Actuation of soft top bow "closed" valve (Y56/2y4)
9	Actuation of power soft top compartment cover lock "open" valve (Y56/2y7)
10	Right soft top compartment cover locked switch (A25s2)
11	Soft top fabric bow up/down limit switch (S84/15), fabric tensioning bow in "down" position
2	–
13	Soft top fabric bow up/down limit switch (S84/15), fabric tensioning bow in "up" position
14	Terminal 15: Soft top, electronics
15	Soft top locked (left) limit switch (S84/11)
16	RB "retracted" switch (S83/5)
17	Right front power window switch (front center console) (S21/2)
18	Temperature signal of RB hydraulic unit (power soft top) (A7/5)
19	CAN data bus, low
20	Connector, right rear power window motor (M10/6), -/+
21	Terminal 31, right rear power window motor (M10/6)
22	Terminal 30, RB deployment solenoid (RB, Y57/1)
23	Actuation of piston side valve (Y57y11)
24	–
25	Malfunction indicator lamp in power soft top switch (S84)
26	Actuation of power soft top bow lock "open" valve (Y56/2y6)
27	Actuation of power soft top "closed" valve (Y56/2y2)
28	Retractable luggage cover engaged limit switch (S69/10)
29	Soft top fabric bow "locked" limit switch (S84/16)
30	Left front power window switch (front center console) (S21/1), ground
31	Soft top closed limit switch (S84/13s1)
32	Temperature signal of RB hydraulic unit (power soft top) (A7/5)
33	Soft top opened limit switch (S84/13s2)
34	RB "extended" limit switch (S83/6)
35	–
36	Left front power window switch (S21/1)
37	CAN data bus, high
38	Terminal 30: Right rear power window motor (M10/6)
39	Connection, left rear power window motor (M10/5), -/+
40	Terminal 30: Left rear power window motor (M10/5)
41	Terminal 30: Soft top, electronics
42	Actuation of hydraulic unit relay (A7/5k1) and RB rod side valve (Y57y10)
43	Actuation of power top fabric bow "open" (Y56/2y3)
44	Actuation of soft top "open" valve (Y56/2y1)
45	Actuation of power top compartment cover "open" (Y56/2y5)
46	Ground signal for actuations with the Hand-Held Tester (HHT)
47	Soft top compartment limit switch (closed) (A25s1)
48	–
49	Right front power window switch (front center console) (S21/2), ground
50	Soft top compartment "open" switch (S84/5)
51	Terminal 31: Soft top, electronics
52	Terminal 31: Soft top, electronics
53	Actuation of RB deployment solenoid (Y57/1)
54	RB switch (manual operation) (S83)
55	Power soft top switch (S84)

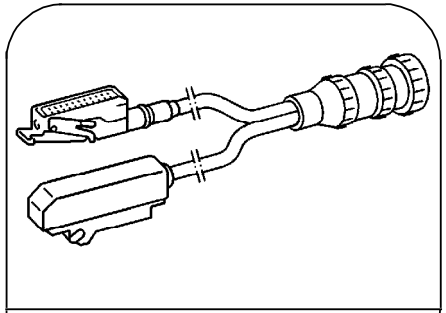
Electrical Test Program – Preparation for Test

Special Tools



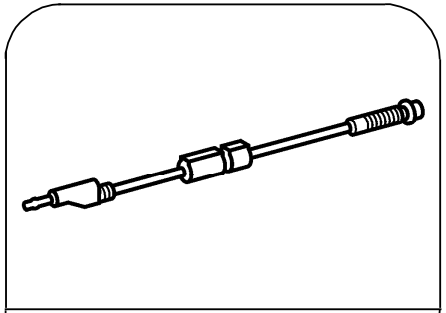
129 589 00 21 00

126-pin socket box



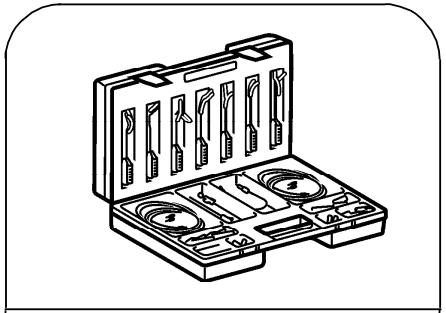
104 589 00 63 00

Test cable



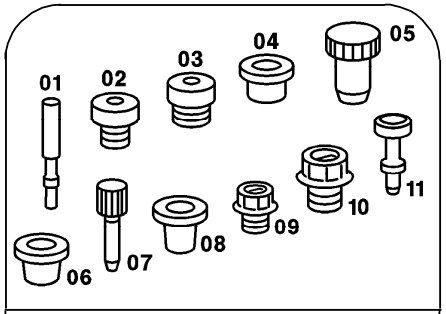
124 589 37 63 00

Fused cable



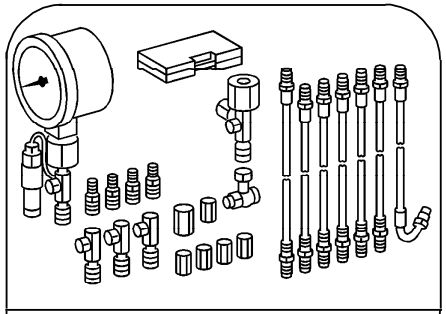
201 589 00 99 00

Electrical connecting set



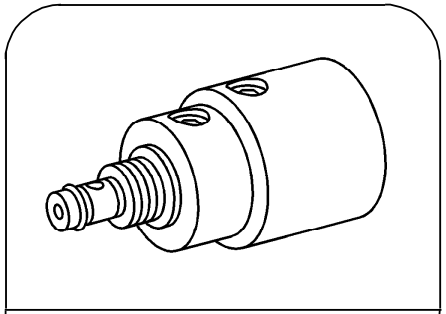
129 589 00 91 00

Set of plugs



126 589 14 21 00

Tester



129 589 08 63 00

Check valve

Conventional tools, test equipment

Description	Brand, model, etc.
Multimeter [1]	Fluke models 23, 83, 85, 87
Battery charger [1]	Local supply

[1] Available through the MBUSA Standard Equipment Program.