

4.5 Model 170 (with Bumper Antenna System)

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Diagnosis – Function Test

Function Test Explanation

Function Test:

- Tune-in a weak radio station (music).
- Set fader, bass, treble and balance to center range (RESET reading in display window).
- Verify reception quality of AM and FM band by driving a 360° circle (in a large parking lot) while performing road test.
- Compare function test results against identical vehicle (with integrated antenna) from dealer stock. Tune-in **same radio station**, ensure that the settings are set to position 0 and perform same road test as above and over **same course**.
- If components are replaced, repeat entire function test.

Electrical Test Program – Component Locations

Model 170

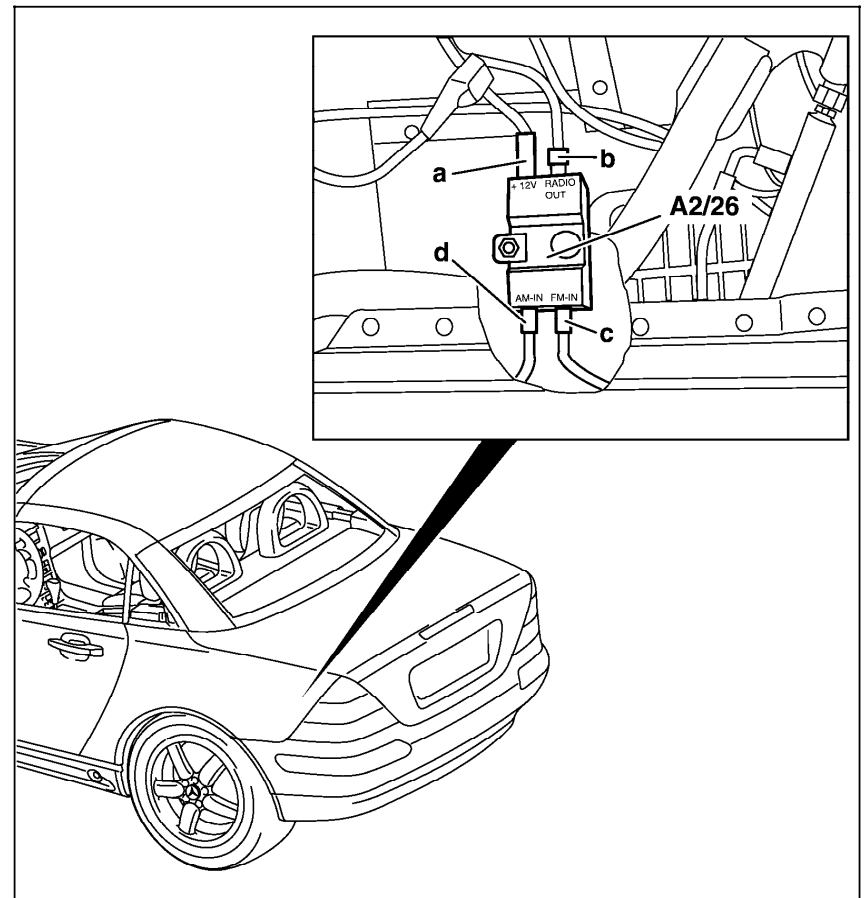


Figure 1

- a Voltage supply control wire from radio for bumper antenna amplifier
 - b High frequency cable from antenna amplifier to radio (A2)
 - c FM signal wire from bumper antenna
 - d AM signal wire from bumper antenna
- A2/26 Left rear antenna amplifier

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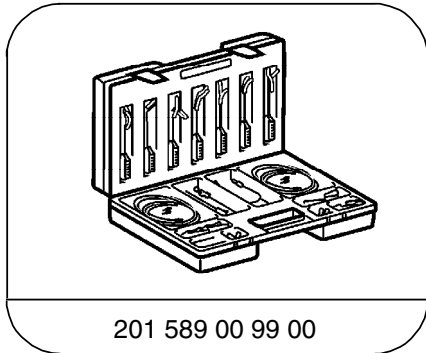
Electrical Test Program – Preparation for Test

1. Battery voltage 11–14 V.
2. Check fuses.
3. Radio OK.
4. No physical damage to the rear bumper.

Electrical wiring diagrams:

Electrical Troubleshooting Manual, Model 170, Group 82

Special Tools



201 589 00 99 00
Electrical connecting set

Conventional tools, test equipment



Description	Brand, model, etc.
Digital multimeter ¹⁾	Fluke Models 23, 77 III, 83, 85, 87, 88

¹⁾ Available through the MBUSA Standard Equipment Program.

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	<p>High frequency (HF) antenna cable from amplifier (A2/26) to radio (A2) Continuity</p> <p>Short circuit (inner shielding/signal wire)</p>		<p>Radio (A2): OFF Disconnect antenna cable from radio (A2) and left rear antenna amplifier (A2/26), see Figure 1</p>	<p>< 10 Ω</p> <p>∞ Ω</p>	Wiring.
2.0	<p>Radio (A2) Control voltage</p>	<p>W0</p>	<p>Disconnect connector at left rear antenna amplifier (A2/26), see Figure 1 Radio (A2): ON</p>	11 – 14 V	Wiring, Radio (RD), 3.1 23 or AD82.60 in WIS
3.0	<p>Left rear antenna amplifier (A2/26) Current draw</p>	<p>A2/26</p>	<p>Connect ampmeter between (A2/26) and control voltage wire from radio (A2), see Figure 1 Radio (A2): ON</p>	45 – 55 mA	Ground connection for left rear antenna amplifier A2/26, ⇒ 4.0, If nominal value is ok, but poor reception quality continues: Swap A2/26 with known good unit and perform 11 Function Test. If no improvement, replace rear bumper antenna.

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	Ground connection Left rear antenna amplifier (A2/26)		Radio (A2): OFF  Hint: Do not loosen mounting connection on A2/18. Mounting connection also serves as ground.	< 1 Ω	Contact resistance at ground.

Electrical Test Program – Test

Connection diagram
Model 170

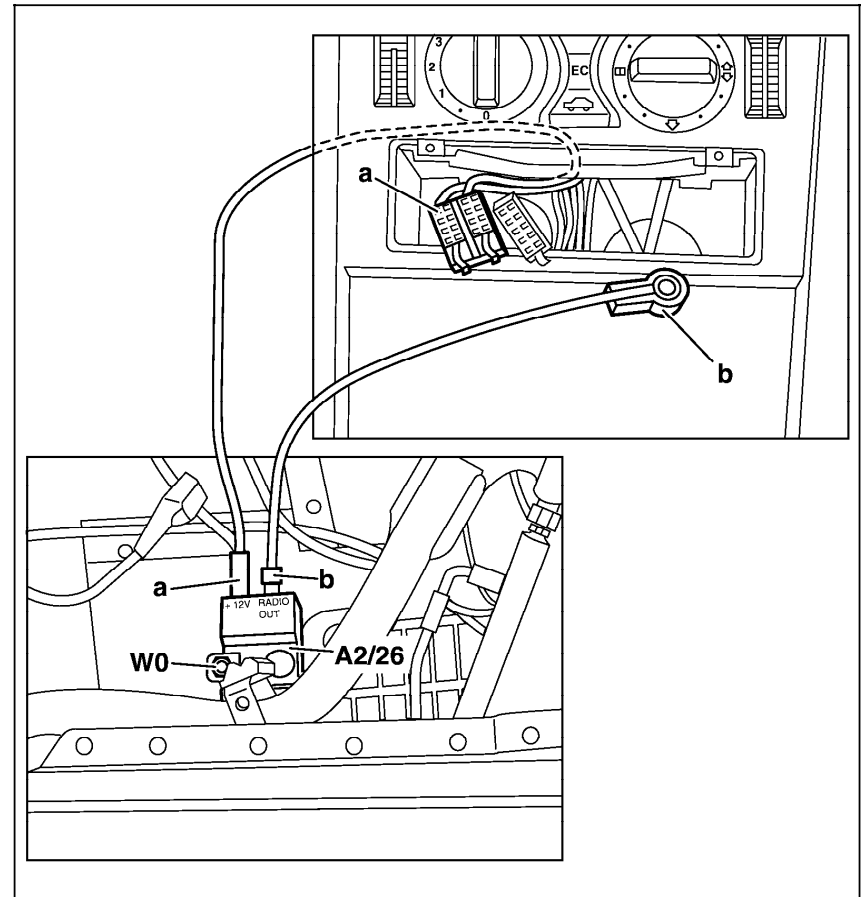


Figure 1

- a Control wire for automatic antenna from radio
- b High frequency cable to radio (A2)
- A2/26 Left rear antenna amplifier
- W0 Ground and mounting point

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