4.3 Model 210 (with Rear Window Antenna System)

Diagnosis – Function Test

Function Test:

- Tune radio as follows: Select a weak radio station (music). Set fader, bass, treble and balance to the center position 0 (RESET or CENTR in display window).
- Tune radio to verify reception of AM and FM bands, then in an open area test drive vehicle in a 360° circle to verify reception quality.
- If necessary, repeat above test steps with an identical vehicle to perform a comparison test.
- Perform the comparison test at the **same location** and with the **same radio stations** tuned in.
- After replacing one of the components, repeat the above tests again to **verify** the repair.

Electrical Test Program – Component Locations

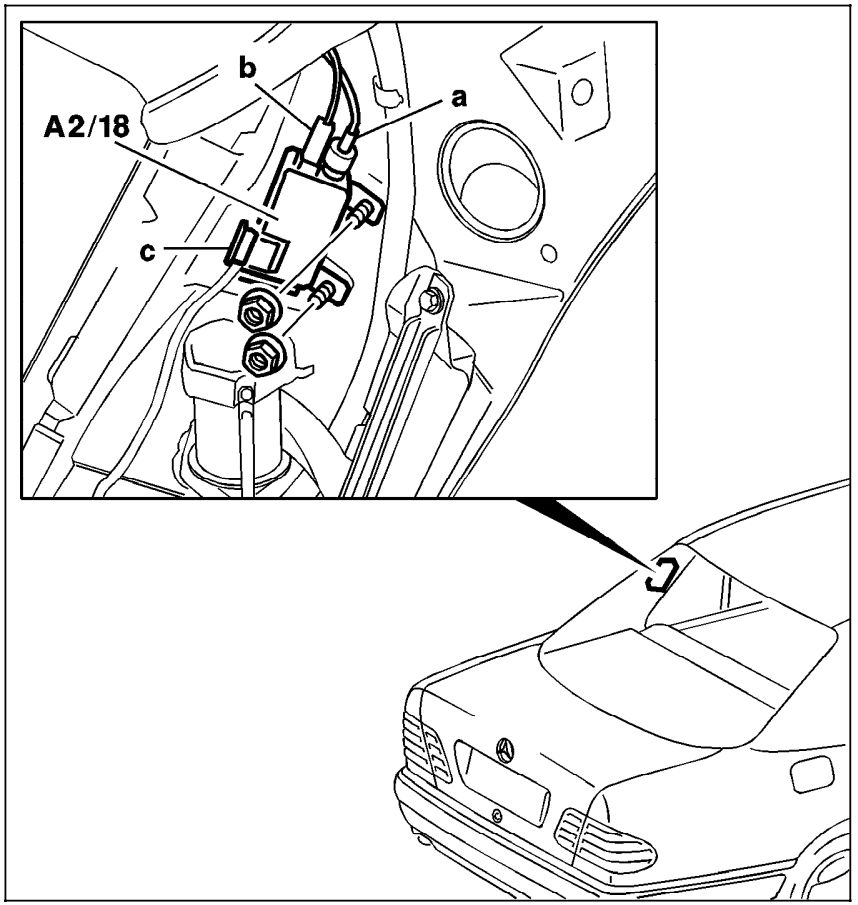

Figure 1

A2/18 FM/AM rear window antenna amplifier
a High frequency connection wire to radio
b Automatic antenna control wire from radio
c Signal wire from rear window antenna

Electrical Test Program – Component Locations

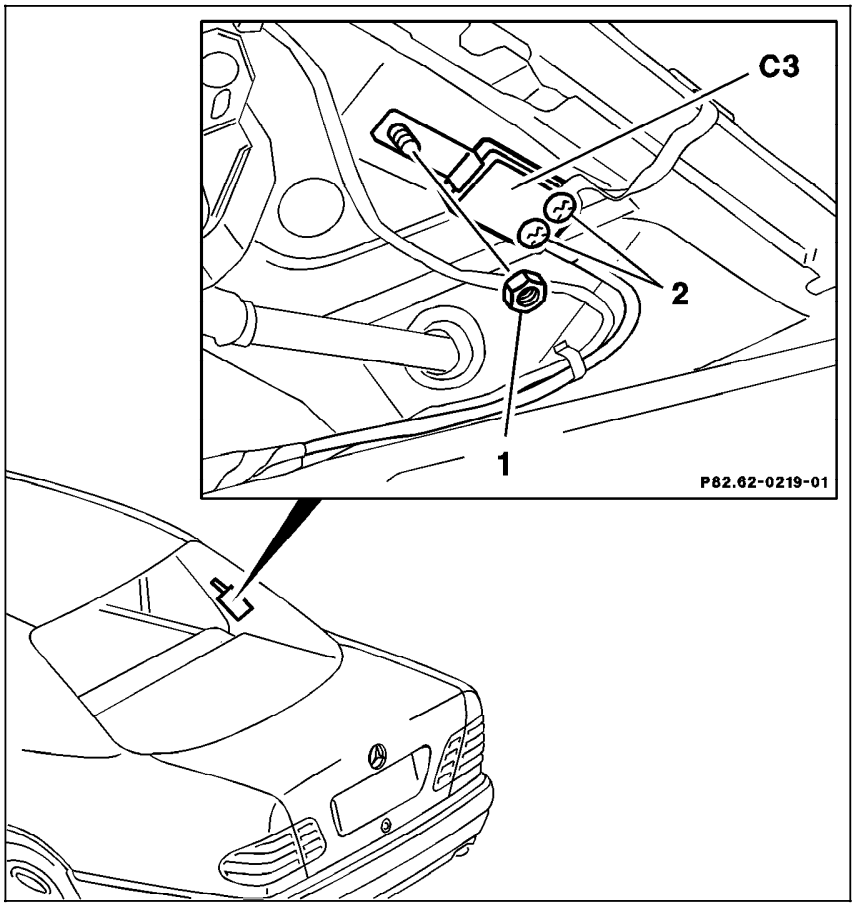

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Figure 2

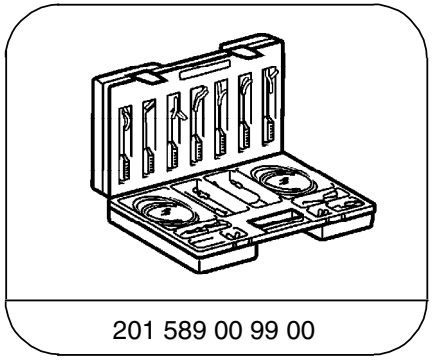
C3 Electrolytic capacitor (rear glass noise suppressor) (right C-pillar)

Electric Test Program – Preparation for Test

1. Battery voltage 11 – 14 V.
2. Check fuses.
3. Radio in order.
4. No damage to the rear glass.

Electrical wiring diagrams:
See Electric Troubleshooting Manual, Model 210, group 82

Special Tools



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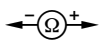
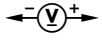
Electrical connecting set

Conventional tools, test equipment

Description	Brand, model, etc.
Multimeter [1)]	Fluke models 23, 83, 85, 87

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	**Electrolytic capacitor (C3)** Function		Ignition: **OFF** Radio (A2): **ON** Tune radio to weak station in AM band. Engine: **at idle**	No change in the reception quality.	Electrolytic capacitor (C3) in right C-pillar.
2.0	**High frequency wire to radio (A2)** Short circuit (shielding/signal wire)	—()—	Radio (A2): **OFF** Disconnect connector from radio (A2) and FM/AM rear window antenna amplifier (A2/18) (Figure 1).	< 10 Ω ∝ Ω	Wiring.
3.0	**Radio (A2)** Control voltage	WO ⊥  A2/18)— b	Disconnect connector from (A2/18) (Figure 1). Radio (A2): **ON**	11 – 14 V	Wiring, D.M., Information/Communication, Vol. 1, Radio (RD) – 3.1 23

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	**FM/AM rear window antenna amplifier (A2/18)**	A2/18 — (-)A(+) — A2	Connect ammeter between A2/18 and automatic antenna control wire from radio (A2) (Figure 1). Radio (A2): **ON**	52 – 72 mA	A2/18, ⇒ 5.0, Values are OK: however, there is a poor reception quality: Replace A2/18 and retest using Function Test 11, If reception problem continues, replace rear window antenna.
5.0	**Ground connection** A2/18	⊥ — (-)Ω(+) — A2/18	Radio (A2): **OFF** **Note:** Do not loosen mount nuts for A2/18, since mount also functions as ground for A2/18.	< 1 Ω	Connection (mount) resistance at ground point.

Electrical Test Program – Test

Connection – Schematic

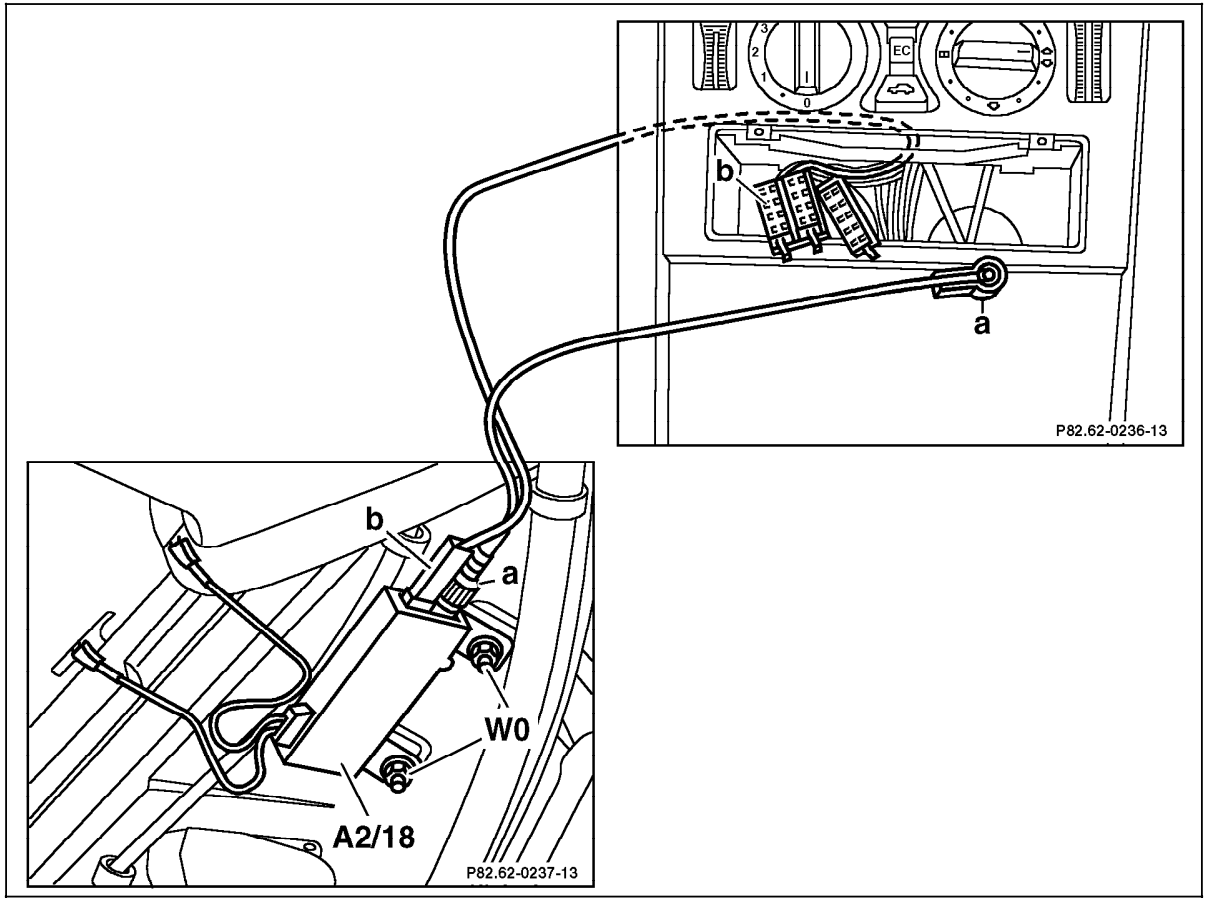


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Figure 1

A2/18	FM/AM rear window antenna amplifier
WO	Ground and mount point
a	High frequency connection wire to radio
b	Automatic antenna control wire from radio