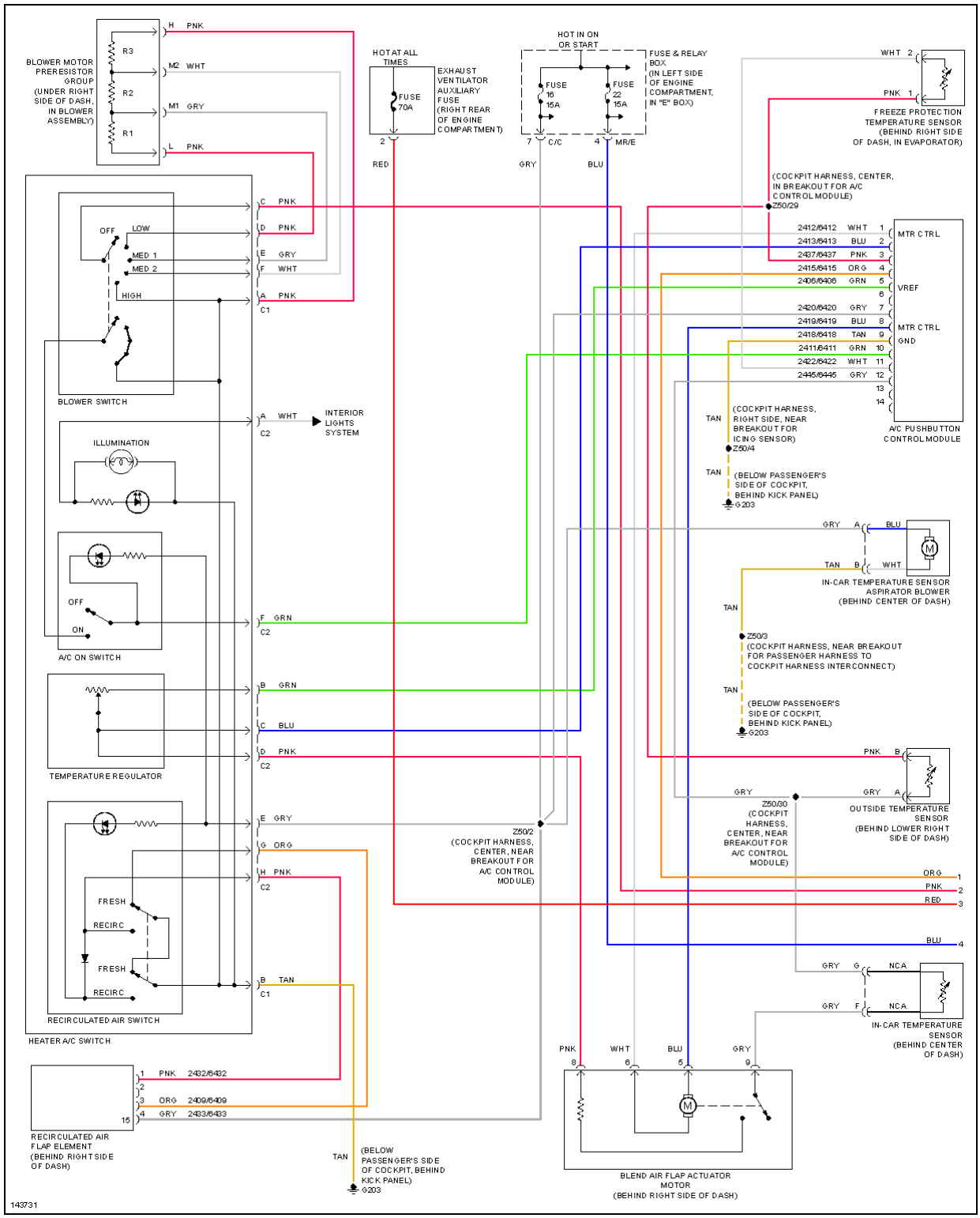
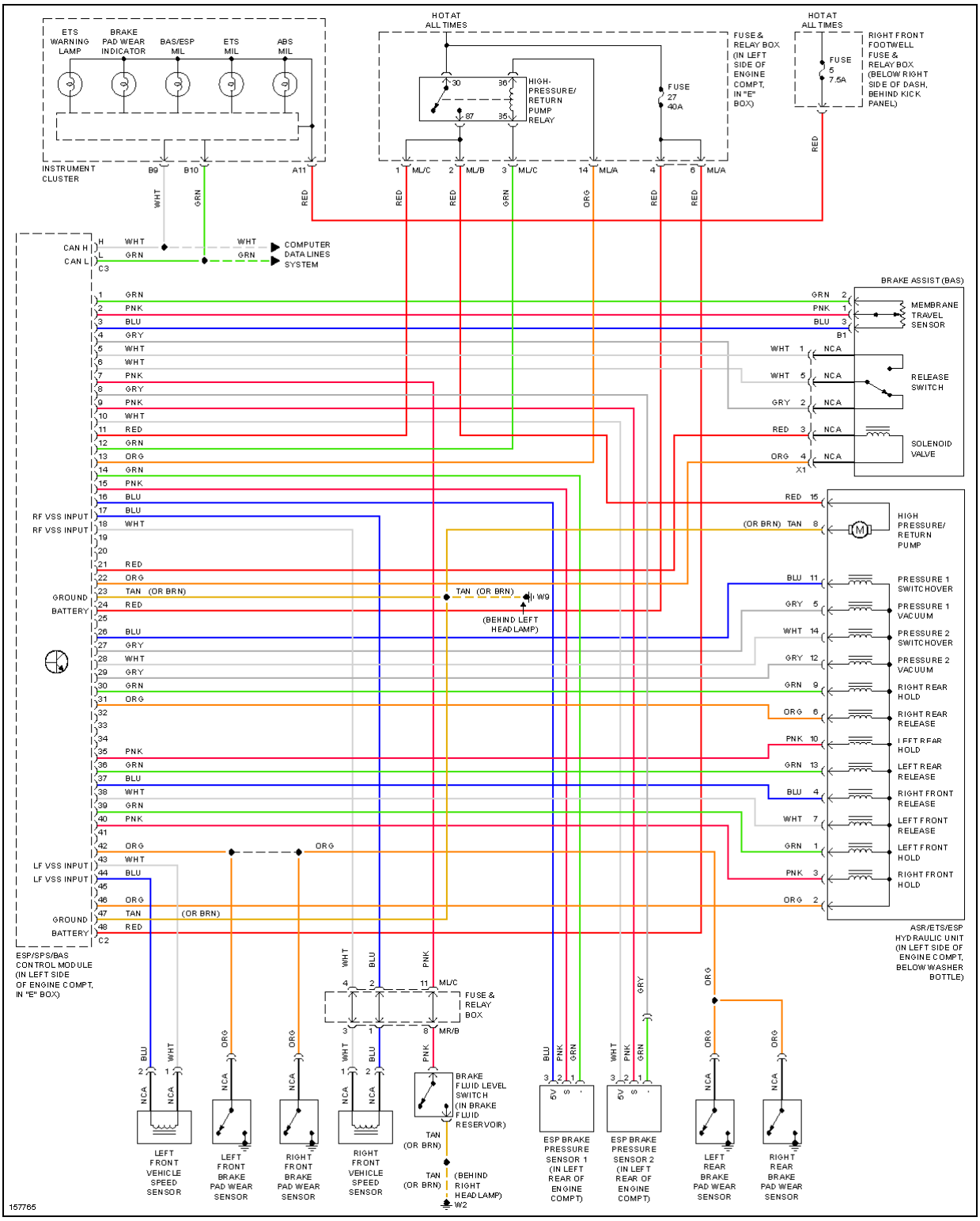
2001 Mercedes-Benz ML320

2001 SYSTEM WIRING DIAGRAMS Mercedes-Benz - ML320



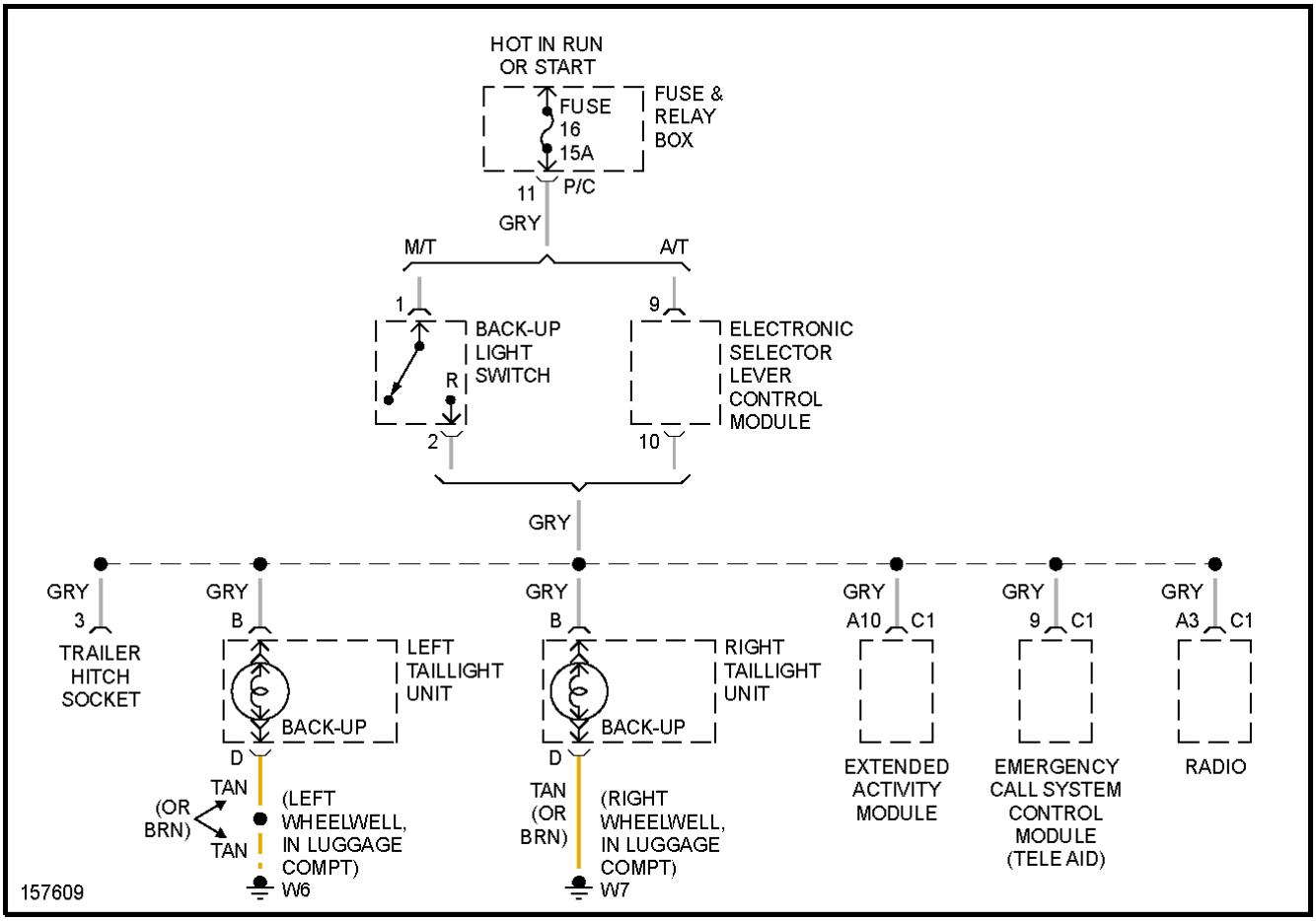
2001 Mercedes-Benz ML320

2001 SYSTEM WIRING DIAGRAMS Mercedes-Benz - ML320



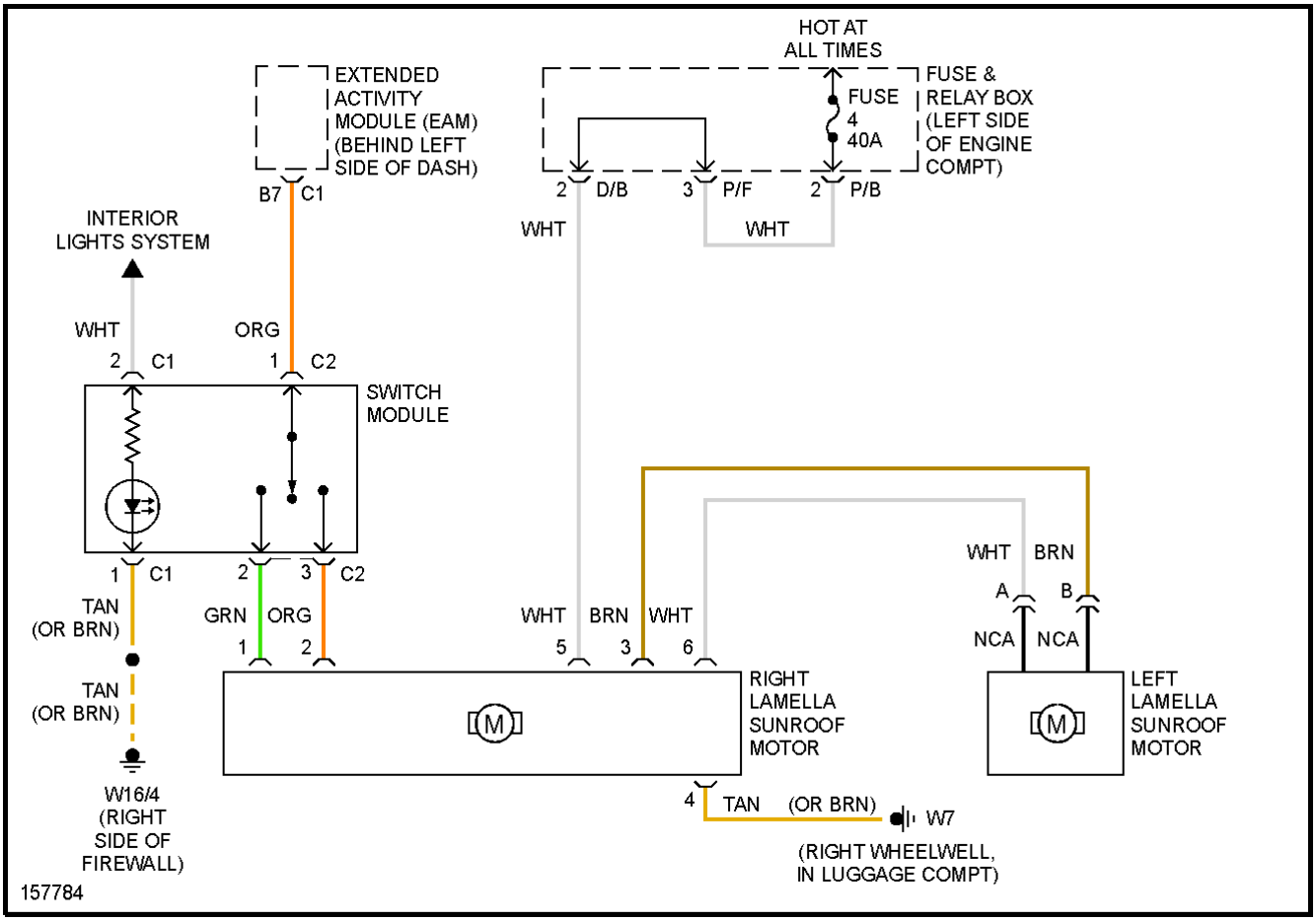
2001 Mercedes-Benz ML320

2001 SYSTEM WIRING DIAGRAMS Mercedes-Benz - ML320



2001 Mercedes-Benz ML320

2001 SYSTEM WIRING DIAGRAMS Mercedes-Benz - ML320



Fuse	Terminal	Color of unfused wire	Color of fused wire	Fused function	Bay	Rating in amperes (A)
12	58L	1,0 mm 2 blue	0,8 mm 2 blue 1,0 mm 2 blue	Interior connector sleeve, circuit 58L (Z53/6): • Trailer hitch connector (X52) • Left taillamp (E3): -Left taillamp and parking lamp (E3e2) Left front lamp unit (E1): • Left standing and parking lamp (E1e3) • Left side-marker lamp (E1e6)		7,5
13	30		2,0 mm 2 red 0.5 mm 2 rt 0.5 mm 2 rt 0.5 mm 2 rt	Roof connector sleeve, circuit 30 (Z54/2): • Front dome lamp (with shut-off delay and front reading lamp) (E15/2) • Rear interior lamp (E15/3) • Dome lamp in left rear (E15/8) • Dome lamp in right rear (E15/9) • Trip computer control unit (N41) Instrument cluster (A1): • Seat belt warning lamp (A1E9) Steering angle sensor (N49) Datalink connector (X11/4)		10
14	15			with diesel: Injection timing device Exhaust gas recirculation valve		10
15	54		1,0 mm 2 og	Interior connector sleeve, circuit 54 (Z52/6): Left left taillamp (E3): • Left stop lamp (E3e4) Right taillamp (E4): • Right stop lamp (E4e4) • Center-high mounted stop lamp (E21) • Center high-mounted stop lamp, spare wheel carrier (E35) • Trailer hitch connector (X52)		10
16	15		0,5 mm 2 grey 1,0 mm 2 grey	Diagnostic connector (X11/4) Reversing lamp switch (S16/2) Cockpit connector sleeve, circuit 15 (Z50/2): • Air conditioning control unit (N19) • Heater/AC switch (S98): -Blower switch (S98s1) -Thermostat (S98p1) -Recirculated air switch indicator lamp (S98h1) -Illumination (S98e1) -Switch illumination (S98e2) -Recirculated air switch (S98s2) -Air conditioning On indicator lamp (S98h2) -Switch illumination (S98e2) -Air conditioning On switch (S98s3) • Recirculated air flap actuator motor (M39) • Air conditioning control unit (N19)		15
17	30		2,0 mm 2 red	Cargo area connector box (X58/4)		15
18	30		2,0 mm 2 red	Trailer hitch connector (X52)		25

G00315204

Since the transmitting and receiving diodes along with the digital data bus system's (D2B) chip are automatically shut off if they are not needed (sleep mode), a wake-up pulse, which activates the system, is required to start a new data transfer. This is accomplished via the separate wake-up line. For this purpose, the master unit actuates the wake-up signal (electrical signal), which allows the voltage in the wake-up line to decrease to a defined value. The chip of the digital data bus system (D2B) in the components recognizes on account of the duration of the signal that this is a wake-up signal, and the digital data bus (D2B) is then activated. Therefore the digital data bus (D2B) is then in an activated state. A "wake-up" can take place in a quiescent system (sleep mode) even without the wake-up pulse of the master unit by activation of a component located at the digital data bus (D2B).

Wake-up diagnosis

For diagnosis of the wake-up circuit in the components, the master unit can trigger a wake-up diagnosis signal using STAR DIAGNOSIS and the data link connector (X11/4). This signal differs from the wake-up signal by the fact that it has a significantly longer duration. The components react to this long wake-up pulse with a signal on the wake-up line (message to master unit). This allows the master unit to recognize which components have received the long wake-up pulse. The wake-up diagnosis signal can only be actuated when the digital data bus (D2B) cannot be activated due to an error. If all components reply to the master unit, then their voltage supply is correct.

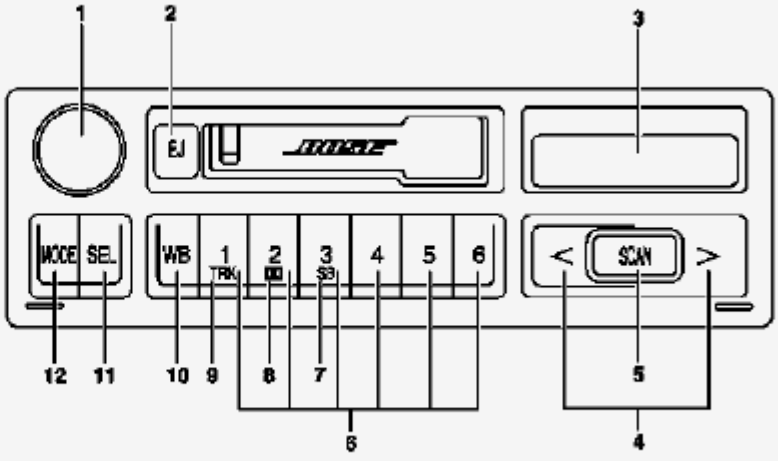
	Fiber optical cable, location/task/function	Except model 208.4	**GF82.00-P-4000A**

FIBER OPTIC CABLE, LOCATION - GF82.00-P-4000-01GH

Model 163

Components for ECE version

1 On/off, loudness, fader, bass, treble, balance
2 Cassette ejection
3 Display
4 Forward/rewind search (radio broadcast, CC, CD)
5 Scan search (radio broadcast, CC, CD)
6 Select station memory/CD music title
7 Skip blank, CC
8 Dolby
9 Track switchover, CC
10 Weather station
11 Sound selector
12 Select FM 1/2 (AM 1/2), AM (MW), CC, CD



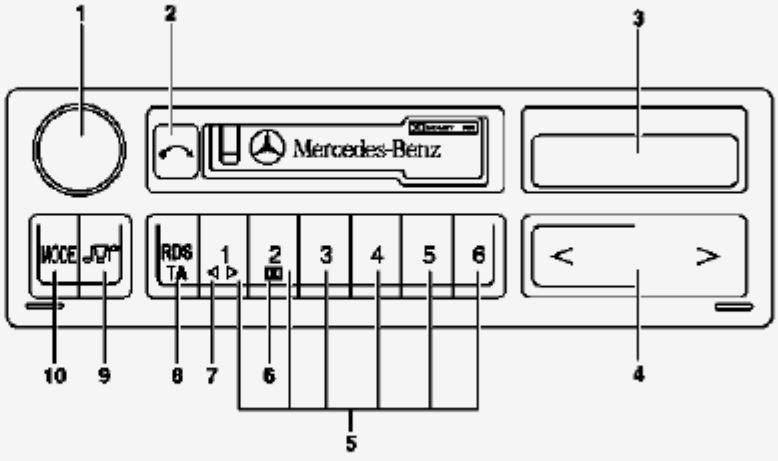
P82.60-0241-05

Fig. 34: Identifying Radio (RD) Controls Location

RADIO (RD) ARRANGEMENT OF OPERATING ELEMENTS - GF82.60-P-0001-02K

MB radio ML 5

1 On/off, loudness, fader, bass, treble, balance
2 Cassette ejection
3 Display
4 Forward/rewind search (radio broadcast, CC, CD)
5 Select station memory/CD music title
6 Dolby
7 Track switchover, CC
8 RDS/TA
9 Sound selector
10 Select FM (VHF), AM (MW), CC, CD



P82.60-0261-05

Fig. 35: Identifying Radio (RD) Arrangement Of Operating Elements

RADIO (RD) ARRANGEMENT OF OPERATING ELEMENTS - GF82.60-P-0001-02L

MB ML 10 radio

RADIO AND NAVIGATION MODULE, DESIGN - GF82.61-P-4109-03GI

The following is integrated into the radio and navigation module (A2/56) (maximum scope):

- Graphic compatible 5" LCD color display
- Navigation processor with GPS receiver and gyrosensor
- Single CD drive for playing audio CD's (option)
- Navigation CD drive for loading navigation data or for playing audio CD's (optional)
- Telephone unit (optional)
- Radio tuner
- Audio amplifier
- CC player

The **radio and navigation module (A2/56) has the following digital interfaces:**

- Digital data bus (D2B)
- K-cable (diagnosis interface)

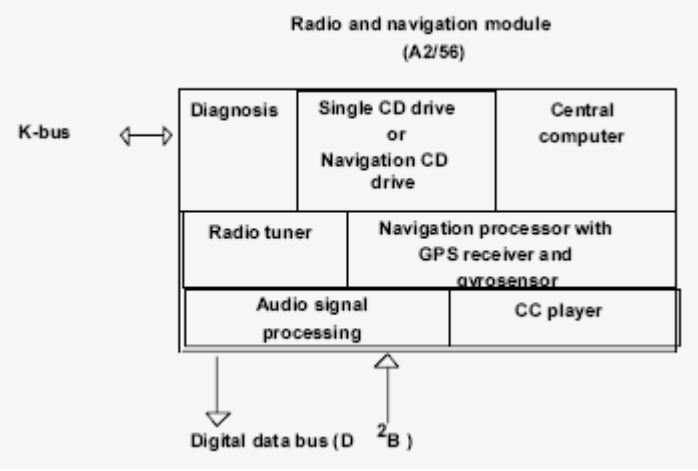


Fig. 58: Identifying Radio And Navigation Module (A2/56) Design

RADIO AND NAVIGATION MODULE, FUNCTION - GF82.61-P-4109-04A

Models 163, 168, 170, 208, 209, 210 with code 353

Processing key signals

The controls on the radio (A2) are read in via I/O ports of the microcontroller and made available to the central computer. Depending on the system function the button operations are processed further in the central computer or conveyed via the Digital Data Bus (D2B) or interior CAN (CAN B) in the form of a data telegram to the system components involved (e.g. CD changer).

Display

i The date or the version of the currently stored software and the software on the CD appears in the display.

i By pressing the right knob the download is started. After some seconds the system changes to screen "CD ROM software download".

- On the download control module the main processor software is loaded first, then the graphic processor software. Entire duration: approx. 40 minutes
- The download progress is indicated by a bar graph.

i In the event of errors an error message is indicated on the display.

When the download is completed, the display switches off for a short time. When it is switched back on again the result of the download is displayed.

6. Remove download CD and reinsert navigation CD.

FAULT IN COMAND OPERATING AND DISPLAY SYSTEM - AF82.85-P-6000N

MODEL 163, 203, 208, 210, 215, 220, 463 with CODE (352a) COMAND operating and display system with CODE (801) Model year 2001

MODEL 414 with CODE (EN4) Auto pilot system with TMC interface, large display with CODE (EN3) Auto pilot system with GSM interface, large display

Modification notes

26.11.01	Supersedes **AF82.85-P-6000N** dated 09.01.2002	Part numbers added and changed	**AF82.85-P-6000-01B**

Operation no. of operation texts or standard texts and flat rates

Category	Op. no.	Operation text	Time	Acc. no.	Code
P	829905	PERFORMING SW UPDATE FOR RADIO/COMAND	003 WU/0.3 h	-	-

Damage code	Cause	Remedy	
	Software error	i Error patterns for COMAND update CD 10/2001. 1 Perform COMAND update Update only COMAND with the following part numbers. A 163 820 14 89	**AF82.85-P-6000-01B** **AF82.85-P-6000-04A**

Fig. 124: Identifying Adapter Cable (140 589 22 63 00)

Commercially available tools

Number	Designation
WH58.30-Z-1001-09A	Multimeter

	Designation		
	MB radio removal tool (000 833 03 61)		

RADIO AND NAVIGATION UNIT CONNECTOR ASSIGNMENTS - AD82.61-P-2001-02A

Connectors on radio and navigation unit (A2/56)

MODELS 163.154 /172 /113 with CODE (612b) Xenon headlamp unit

MODELS 163.174/175/128/157

N71 *Headlamp range adjustment control module*

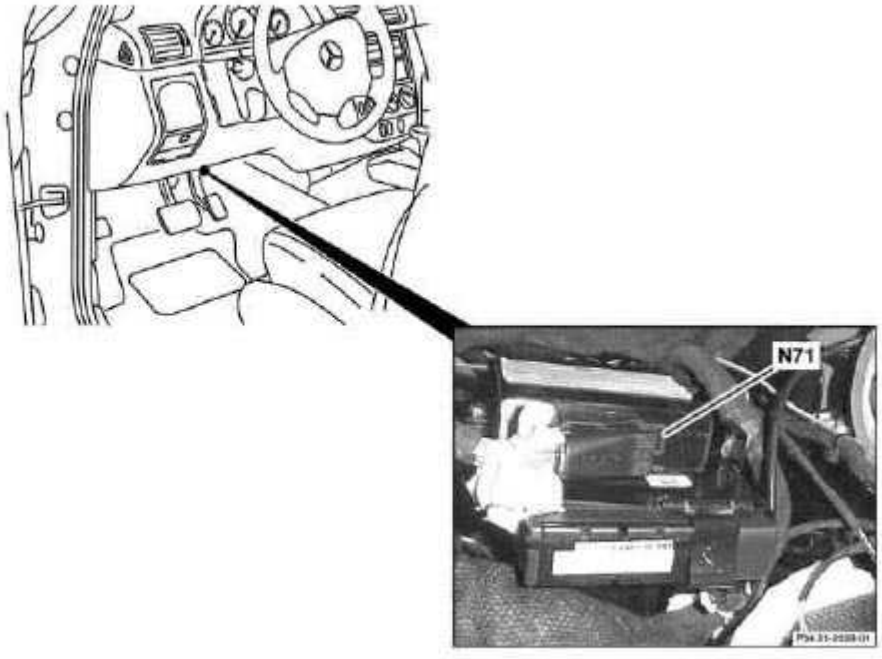


Fig. 157: Identifying Headlight Beam Adjustment Control Module

☒☒	**Remove/Install**		
1	Remove cover below instrument panel (left)		**AR68.10-P-1500GH**
2	Disconnect connector from headlamp range adjustment control module (N71)		
3	Unscrew headlamp range adjustment control module from mount of extended activity module (EAM)	i 2 nuts.	
4	Remove headlamp range adjustment control module (N71)		
5	Install in the reverse order		
6	Adjust headlamp into zero position using STAR DIAGNOSIS		

	adapter (5)		
3	Unscrew screws (2 each) from CAN bus adapter (5)		
4	Remove CAN bus adapter (5)		
5	Install in opposite order		
6	Check for proper function		

REMOVE/INSTALL ANTENNA FOR GLOBAL POSITIONING SYSTEM (GPS) ON VEHICLES WITH APS - AR82.61-P-7474GI

MODEL 163.113 /154 /172 /174 #A as of 145273 up to 289564, 163.113 /154 /172 #X as of 708319 up to 754619, 163.136/157 with CODE (353) Audio 30 APS with CODE (357) Navigation system - additional unit with CODE (349) E-call emergency call system

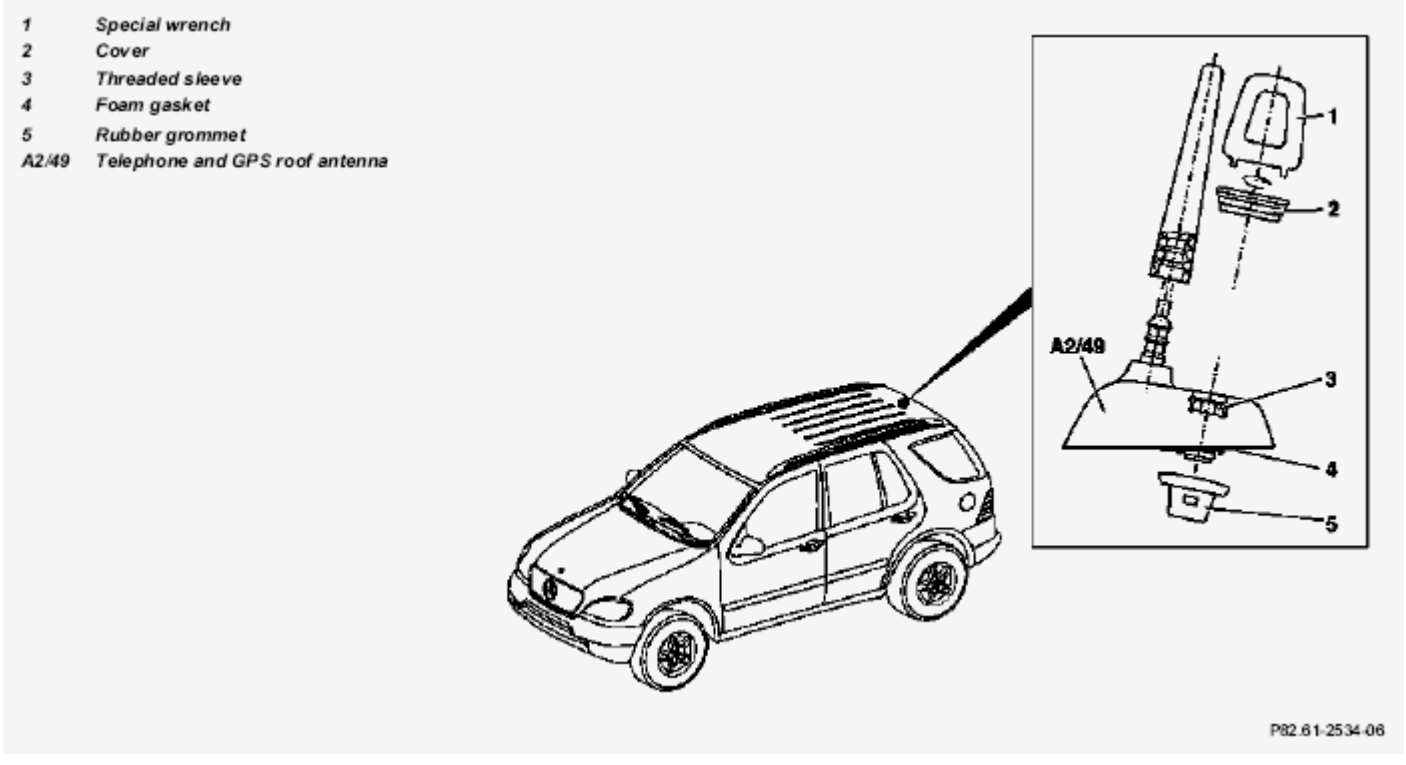


Fig. 193: Identifying Antenna For Global Positioning System On Vehicles With APS Components

	Remove/install		
	Information on preventing damage to electronic components due to electrostatic discharge		**AH54.00-P-0001-01A**
1	Unscrew cover (2) using special wrench (1)	i **Installation:** Screw in cover (2) until it is flush	

1 Bolt
2 Bolt
3 Electrical connections
A2/5 Radio antenna splitter

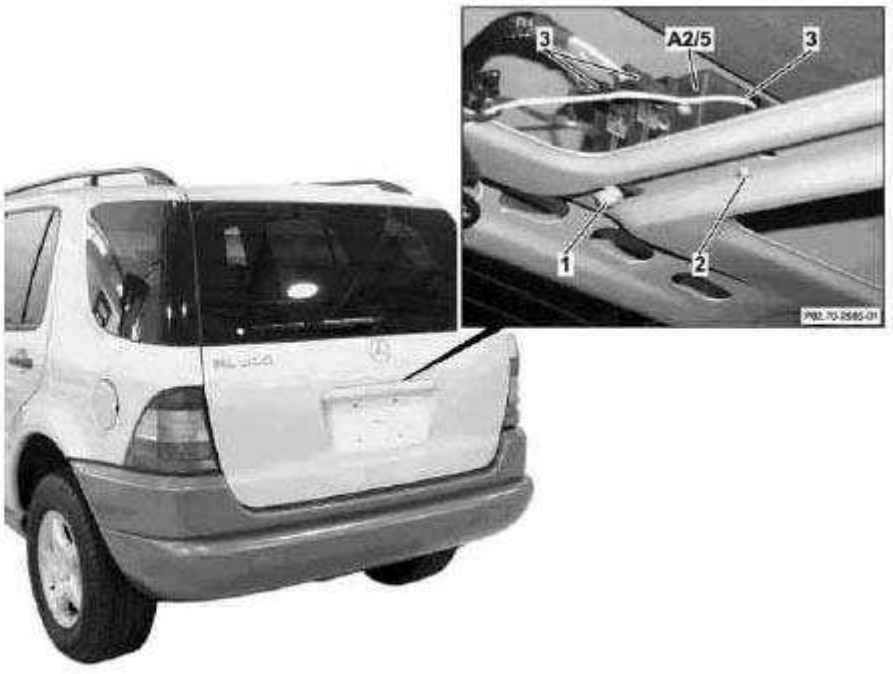


Fig. 216: Identifying Antenna Splitter Components

	Remove/install		
	Information on preventing damage to electronic components due to electrostatic discharge		**AH54.00-P-0001-01A**
1	Open rear-end door		
2	Remove liner on tailgate		**AR72.20-P-3520GH**
3	Remove bolts (1, 2)		
4	Disconnect electrical connectors (3)		
5	Remove radio antenna splitter (A2/5)		
6	Install in the reverse order		

REMOVE/INSTALL ELECTRONIC COMPASS - AR82.85-P-7371GH

MODELS 163.113 /154 /172 /174 #A as of 221506, 163.113 #X as of 734088, 163.128 /157 /175 with CODE (245) Trip computer

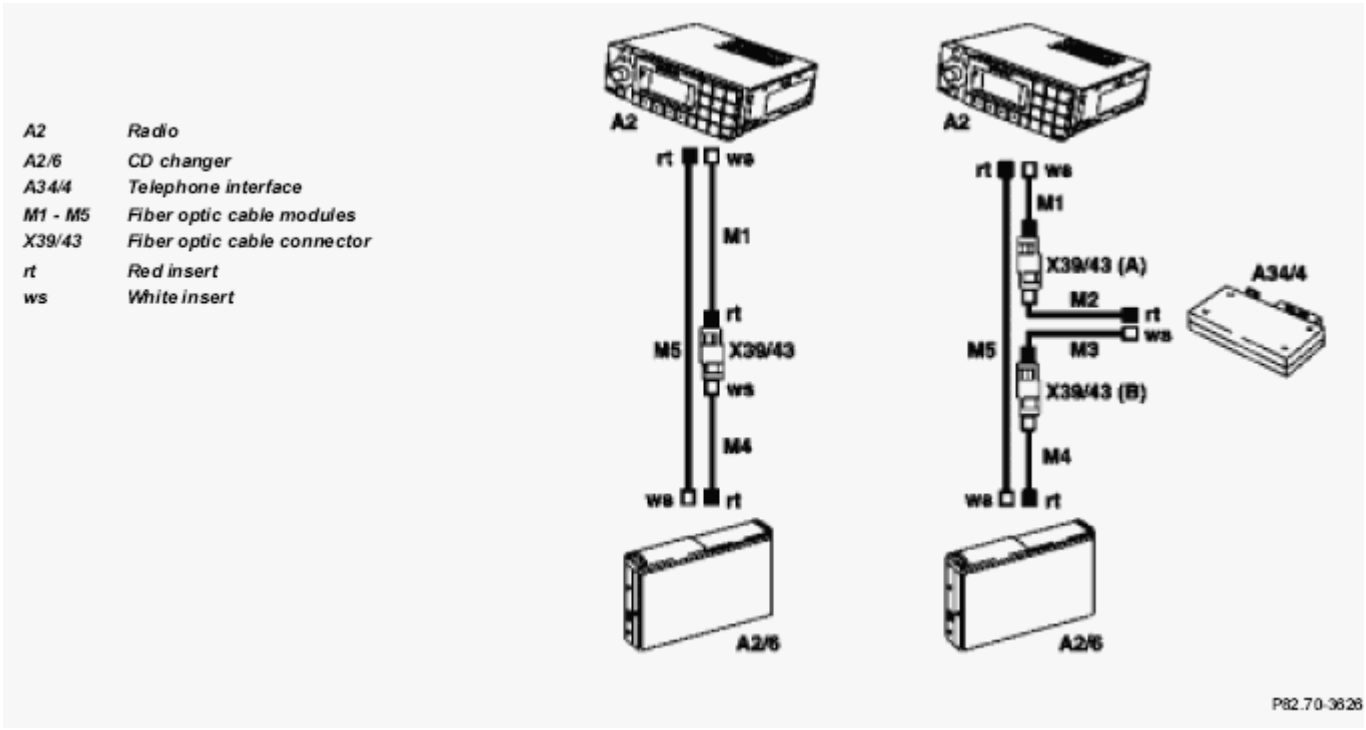


Fig. 243: Identifying Radio, CD Changer And CTEL Interface

3. After installing the interface in the radio slot, expose fiber optic cable connector (X39/43) (A), offnen and take out the white insert (ws).

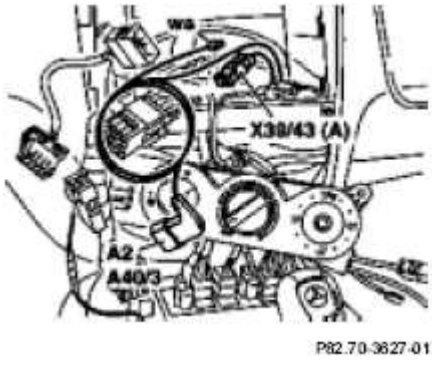


Fig. 244: Identifying White Insert And Fiber Optic Cable Connector

4. Place the white insert (ws) of the fiber optic cable wiring harness (31) into the fiber optic cable connector (X39/43) (A) and close again.
5. Open the fiber optic cable connector (X39/43) (B) of the fiber optic cable wiring harness (31), place in the white insert (ws) of the standard wiring harness and close again.

Shown on vehicle with radio A2 Radio

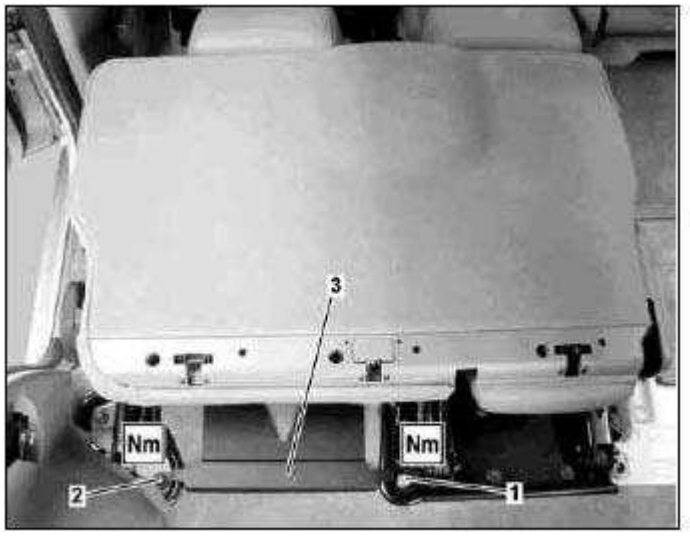


Fig. 300: Identifying Rear Seat Bracket

4. Apply transparent protective foil in area of locking arm (5) of video/DVD player to crossmember of seat frame (4).
5. Slide video/DVD player (6) into bracket under the 60% rear seat.

   i Ensure that the guide on the underside of the playback unit is moved into the V-shaped cutout in the bracket.

6. Fold locking arm (5) above seat frame crossmember (4).
7. Install striker (7) for seat adjustment.

   i Before installation ensure that the seat is completely to the rear because after installation adjustment is no longer possible. Striker should be installed approximately 5 mm to the left of the video player, with the flat side facing the video player.

8. Insert corresponding plug, video or DVD, into the playback unit.