



Mercedes-Benz

W203 Facelift



Model Line Up

W203 launch date – 05/15/04

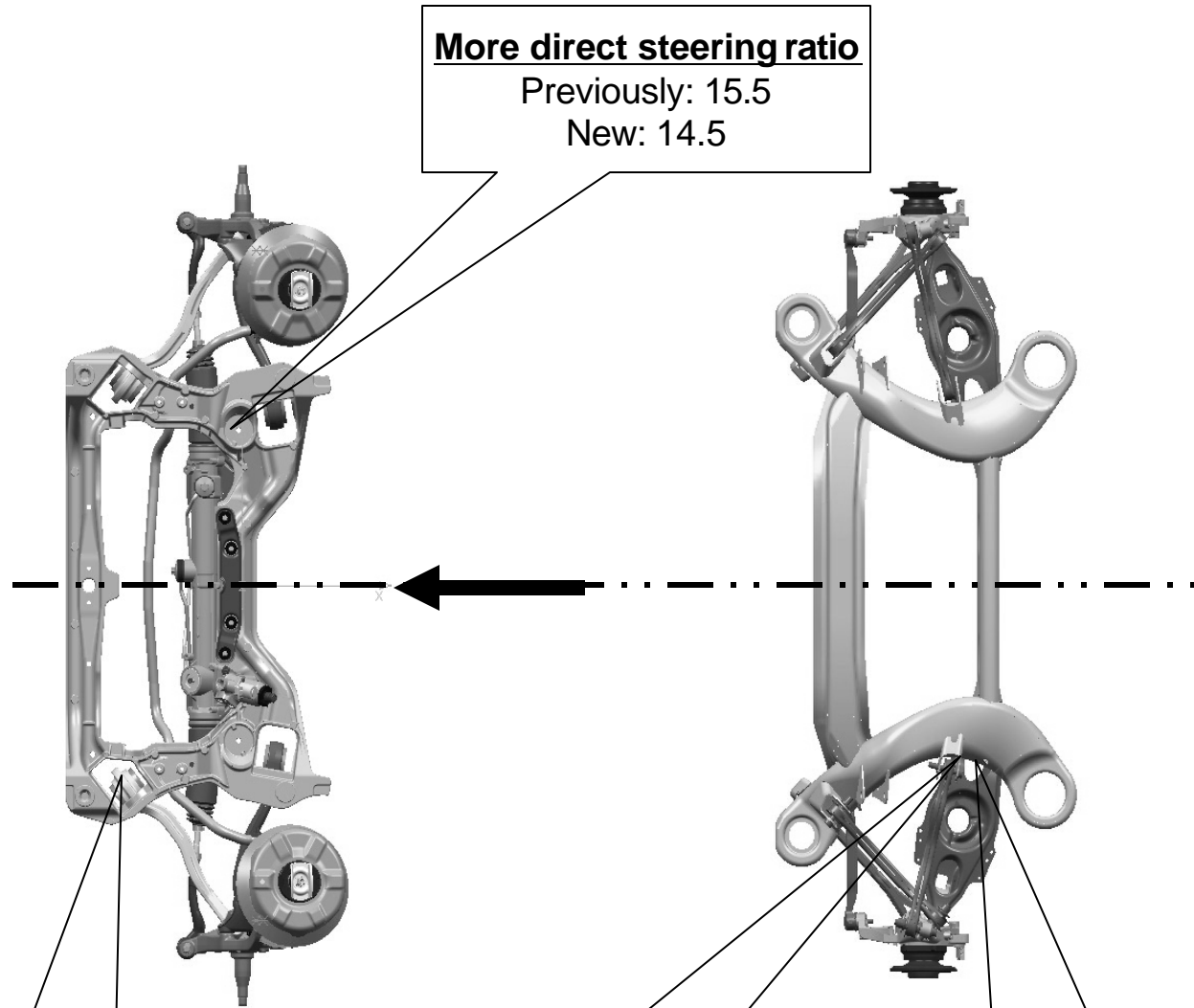
- New Luxury and Sport line differentiation
- W 203
 - C230 1.8K, C240, C240-4, C320, C320-4, C320 Sport
 - C55 AMG (normally aspirated) introduction (06/04)
- CL 203
 - C230 1.8K, C320
- S 203
 - C240, C240-4
 - C320 Station Wagon no longer available

Features

- Modified headlights, turn signals and tail lights
- Redesigned bumpers and side sills
- Modified radiator grill
 - 3 rib design for W/S
 - Drilled ribs for CL
- Lower window trim with chrome strip for sport models
- Redesigned instrument cluster
- Redesigned steering wheel (sport models only)
- Revised center console
 - Redesigned upper control panel switches (W211)
 - Revised HVAC control unit
 - Chrome accents
- Standard driver's lumbar support adjuster
- New Audio head units and modified Telematics

Chassis

- Non AMG
 - 16"-18" Wheels for all models
 - Softer torque strut bushing on front axle (-22%)
 - Softer spring link bushing on rear axle (-60%)
 - 1mm thicker torsion bar rear axle (14 mm)
 - More direct steering gear (14.5 instead of 15.5) (also for AMG vehicles)
 - Improved, more direct manual gearbox shifter
- ➔ Features
 - Improved agility and handling dynamics
 - More precise steering (2.8 vs. 3.3 turns lock to lock)
 - Higher level of ride comfort
 - Wider stance and sportier look



More direct steering ratio
Previously: 15.5
New: 14.5

Modified torque strut mount
470 N/mm (-22%)
Previously: 600N/mm

Rear spring/damping
Rear torsion bar 1 mm thicker
Previously W203: 13mm
New W203: 14mm

Spring link mount
11 kN/mm (- 56%)
Previously: 25kN/mm

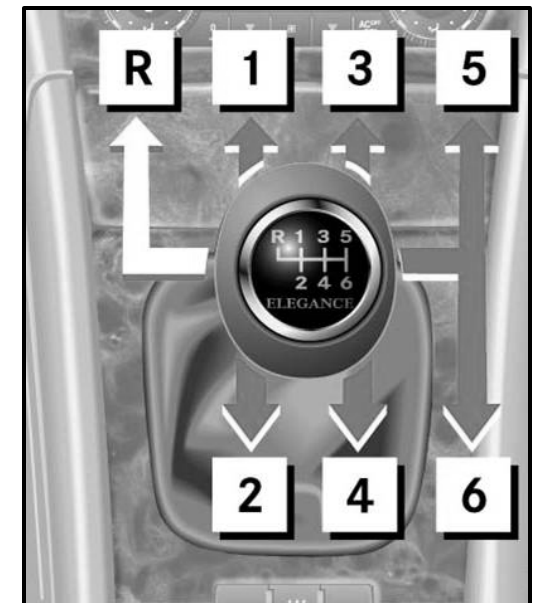
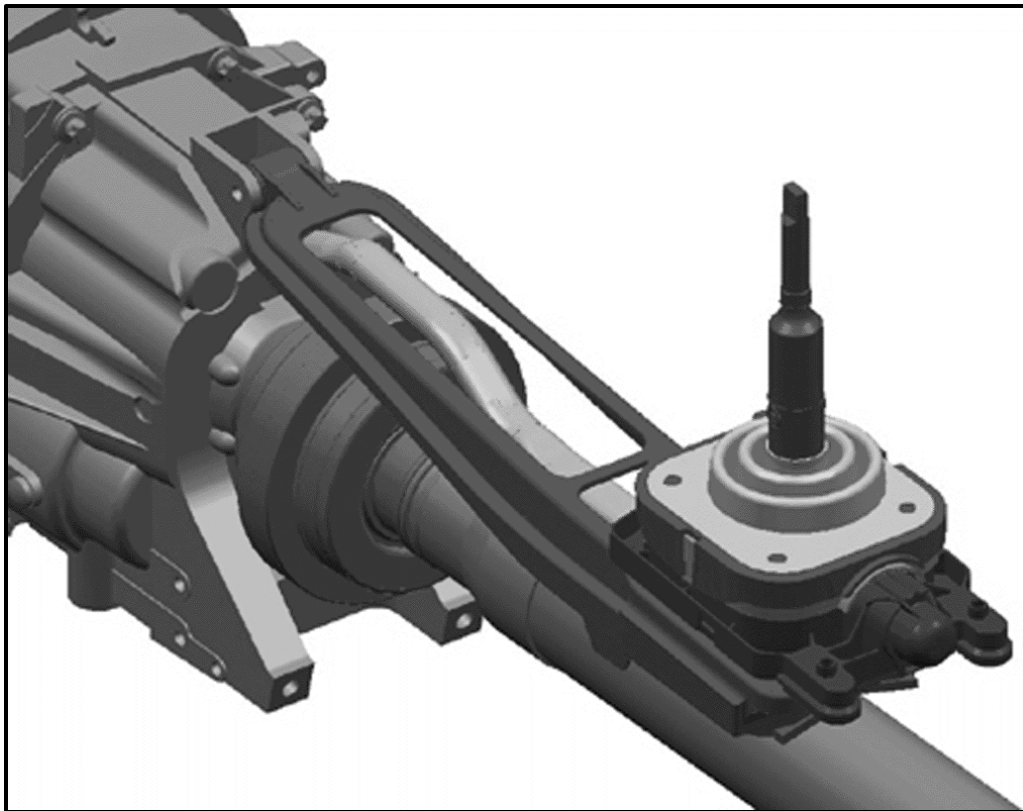
Chassis

- 6 Speed Manual gearshift actuation system
 - Shift operation performed exclusively by means of a single rod (previously rod and cable)
 - Reverse gear located at front left (previously rear left)
 - Reverse gear lockout now performed by pressure point (previously lift on lever)
 - Shift housing decoupled from the bodywork with a large volume elastomer element
 - No shift mechanism adjustments necessary
- 6-Speed manual Gearbox (716.6)
 - Gear selection mechanism adapted
 - First Gear Synchronization modified
 - Reverse gear assembly adapted to new shifter position

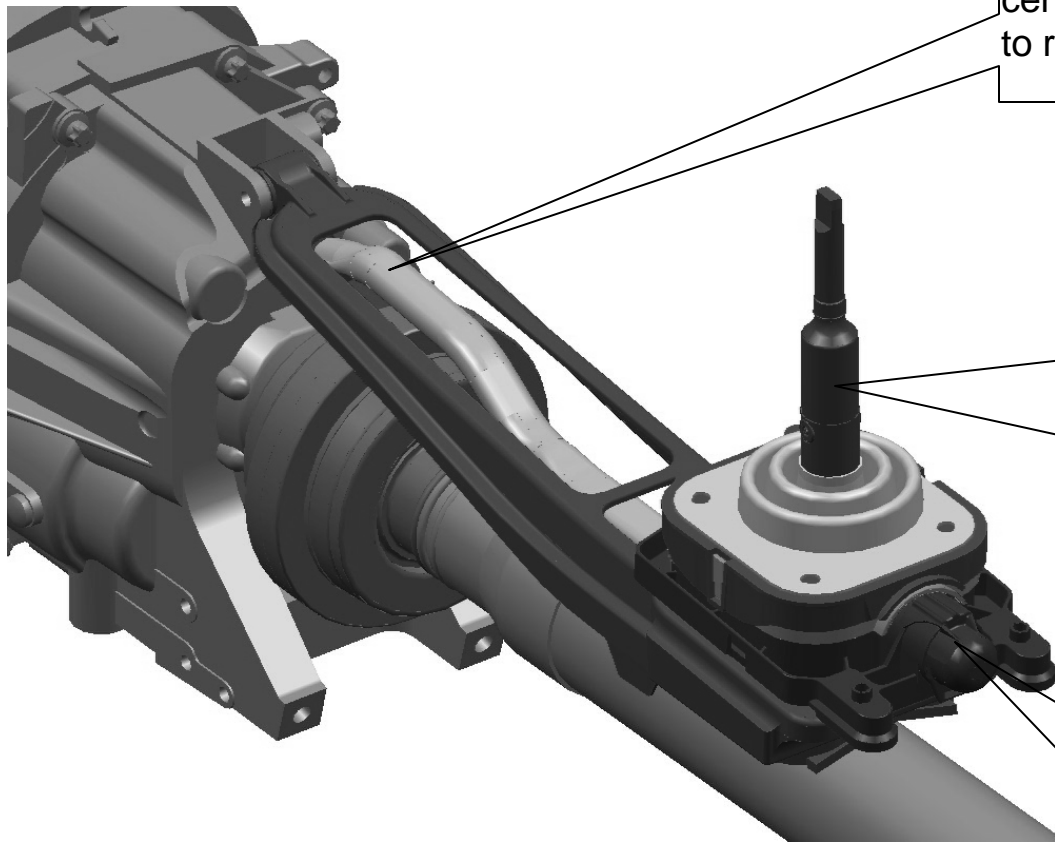
Manual Transmission

Only available on Sport coupes and sedans

- Sport → 20 mm shorter lever
- 20% shorter shifter travel



Technical Description



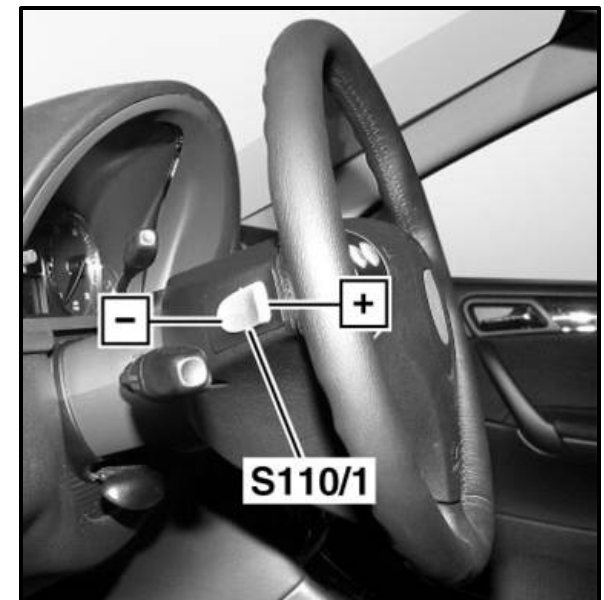
Gears are shifted and selected via a central shift rod without any losses due to redirecting motion

Comfort element directly below the shift lever handle to facilitate harmonious shifting, at the same time neutralizing engine and transmission excitations

Decoupling to the chassis by a large-displacement elastomer element integrated in the casing

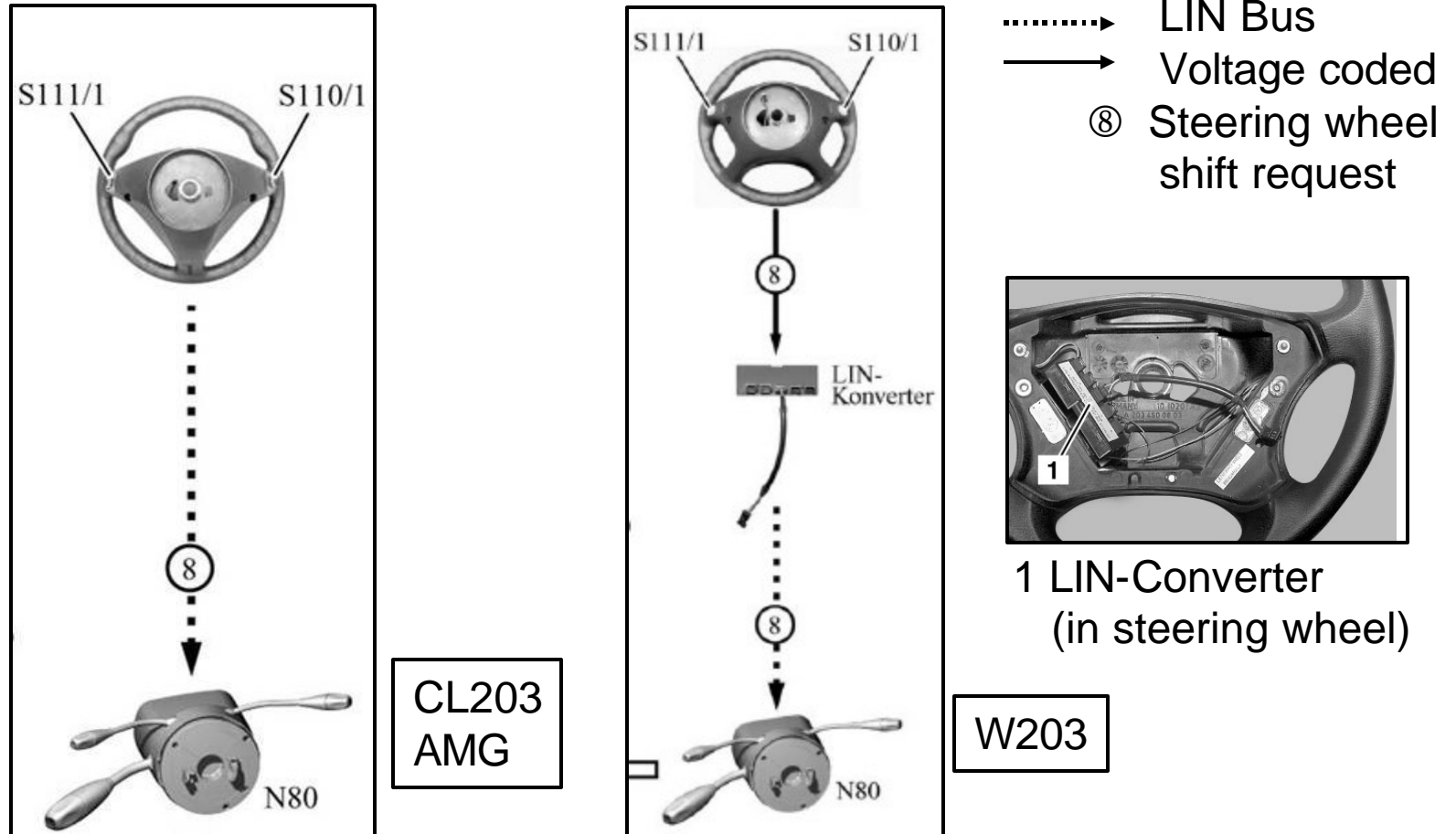
Steering Wheel Gearshift Buttons

- Steering wheel gearshift buttons (option code 428)
 - Gearshift buttons placed on back of steering wheel (like AMG)
 - Both gearshift buttons have '+' & '-' functions (double throw button)
 - Gearshift buttons connected to Steering Control Module (SCM) via LIN-bus
 - Gearshift buttons are active in all transmission modes (S,C,M)
 - Manual mode features
 - Up shift at rpm limit
 - Downshift when rpm critical
 - 1st gear selected at standstill
 - S mode selected after ignition cycle



Steering Wheel Gearshift

- Steering wheel gearshift button data flow



Legend

- N80 Steering control module (CAN-B connection)
- S110/1 Steering wheel shifter left (Minus-AMG)
- S111/1 Steering wheel shifter right (Plus-AMG)

C 55 AMG

- AMG 5.5 liter naturally aspirated V8
- 362 hp @ 5750 rpm
- 376 lb-ft (510 Nm) torque @ 4000rpm
- 0-60 mph ~ 5.1 seconds
- Unique front end module (CLK design)
- 80 mm longer (roomier engine bay)
 - Wider track
 - 3 slat grill and MB Star on hood



C 32 AMG vs. C 55 AMG

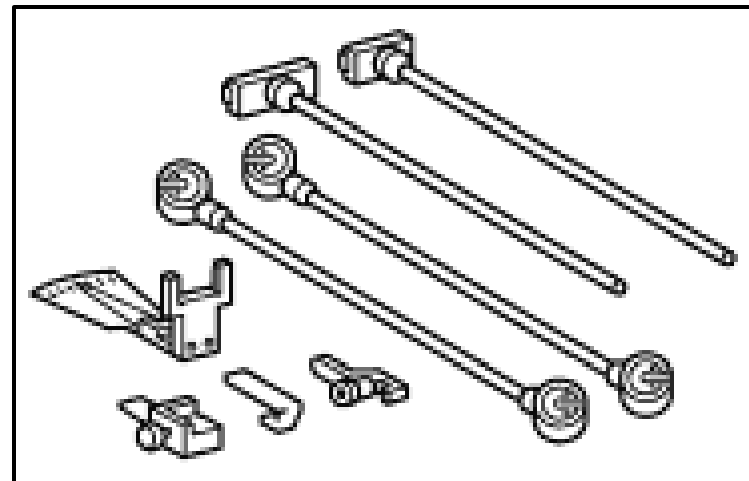
C 55 AMG

- AMG body styling with spoiler lip on trunk
- AMG brake system (as C32 AMG)
- AMG sport suspension
- AMG SPEEDSHIFT 5 speed automatic with steering wheel shift buttons
 - No up shift at rpm limit

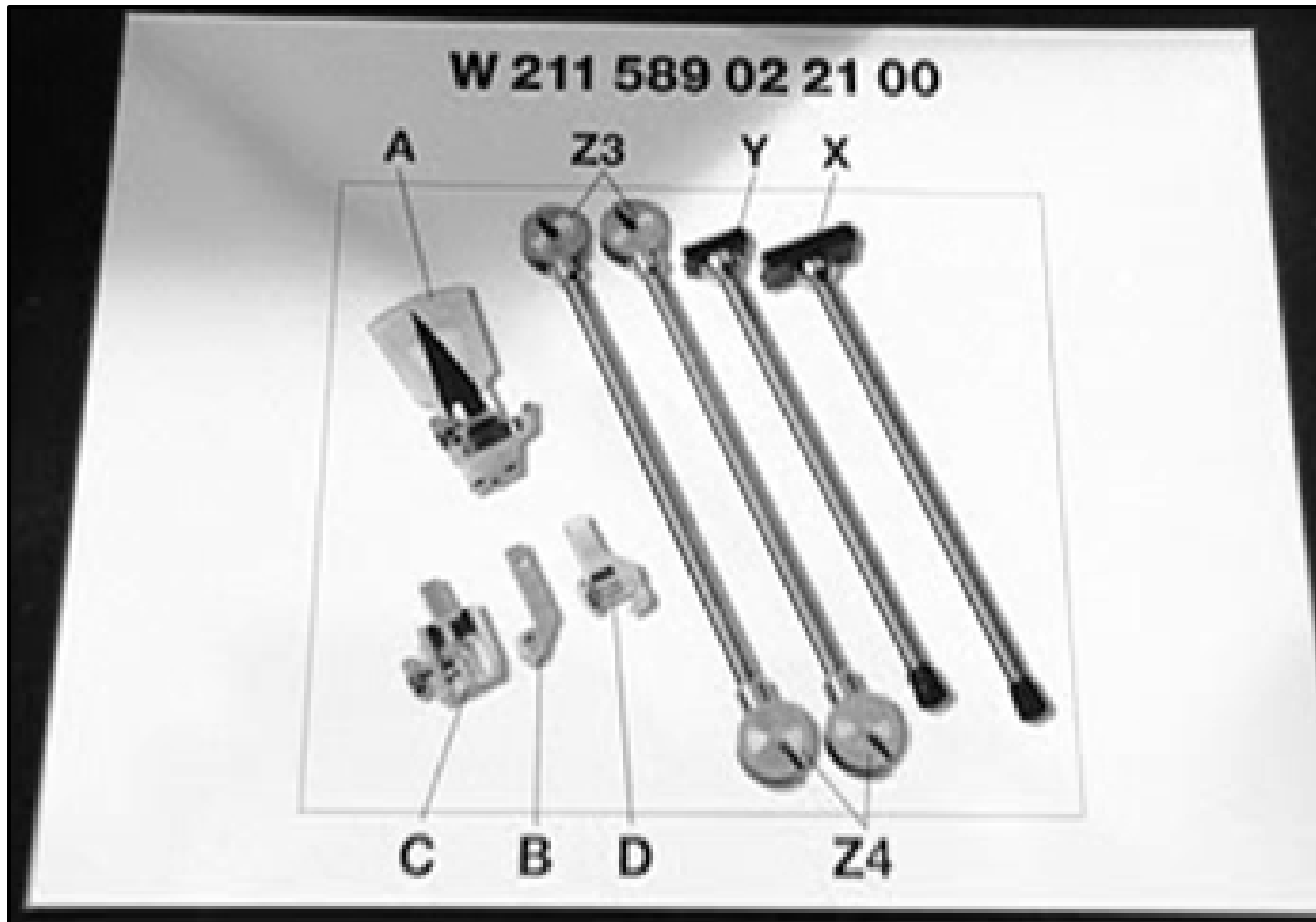


Windshield Wiper Arm Adjustment

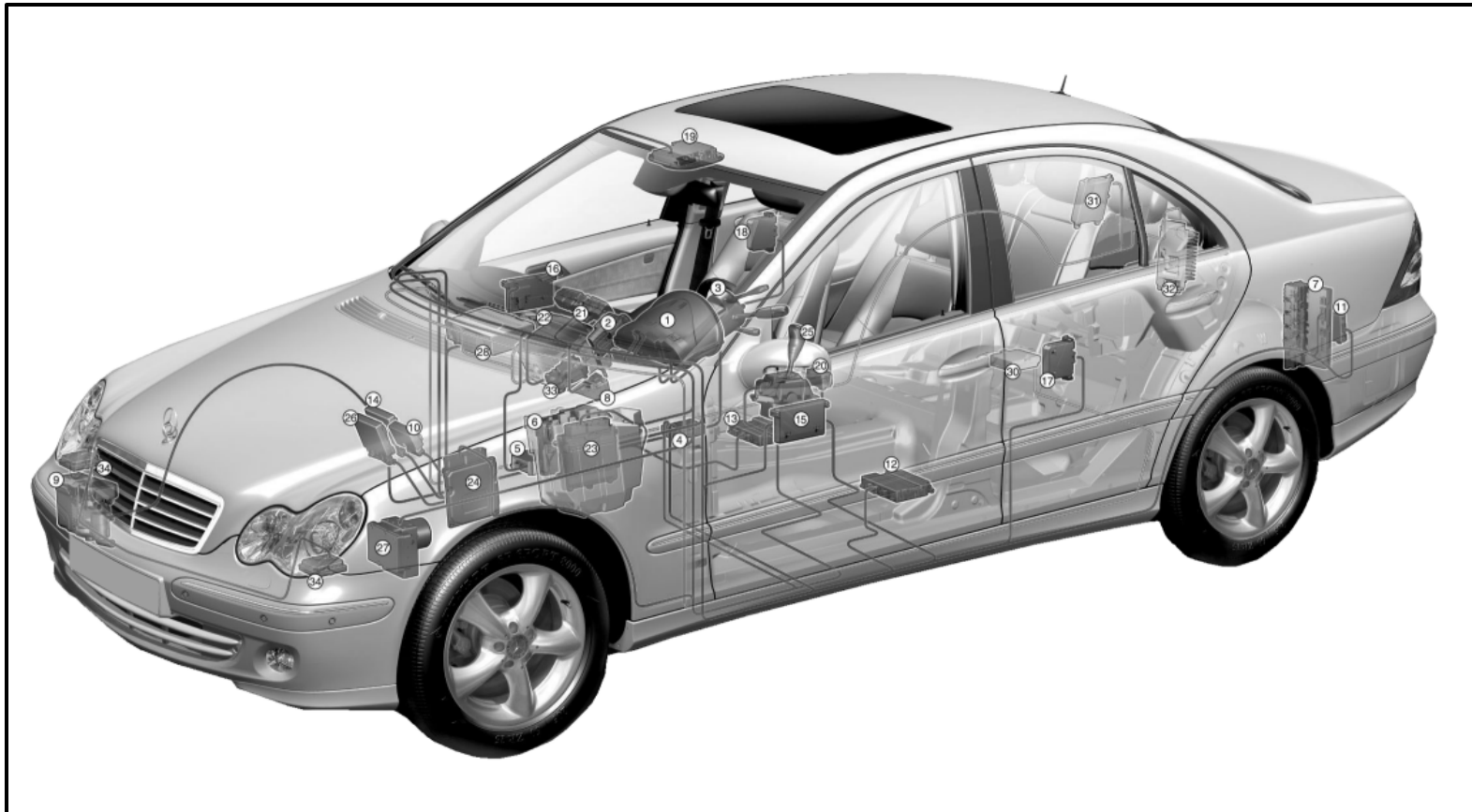
- Aero wiper blades equipped on all lines
- Windshield Wiper Arm Adjustment Kit
 - Countermeasure for wiper noises (shudder/squeak)
 - Measure and adjust wiper blade angle to windshield
 - Angle of attack at park position
 - Angle of attack at direction change
 - Applicable for 203, 209, 211, 215, 220, 230
 - Service Tool Kit number 211 589 02 21 00 (B-Tool)
 - Order put in to Germany, no ETA to USA
 - Content
 - Angle Measure
 - Wiper arm adapter fittings
 - Wiper arm adjustment levers



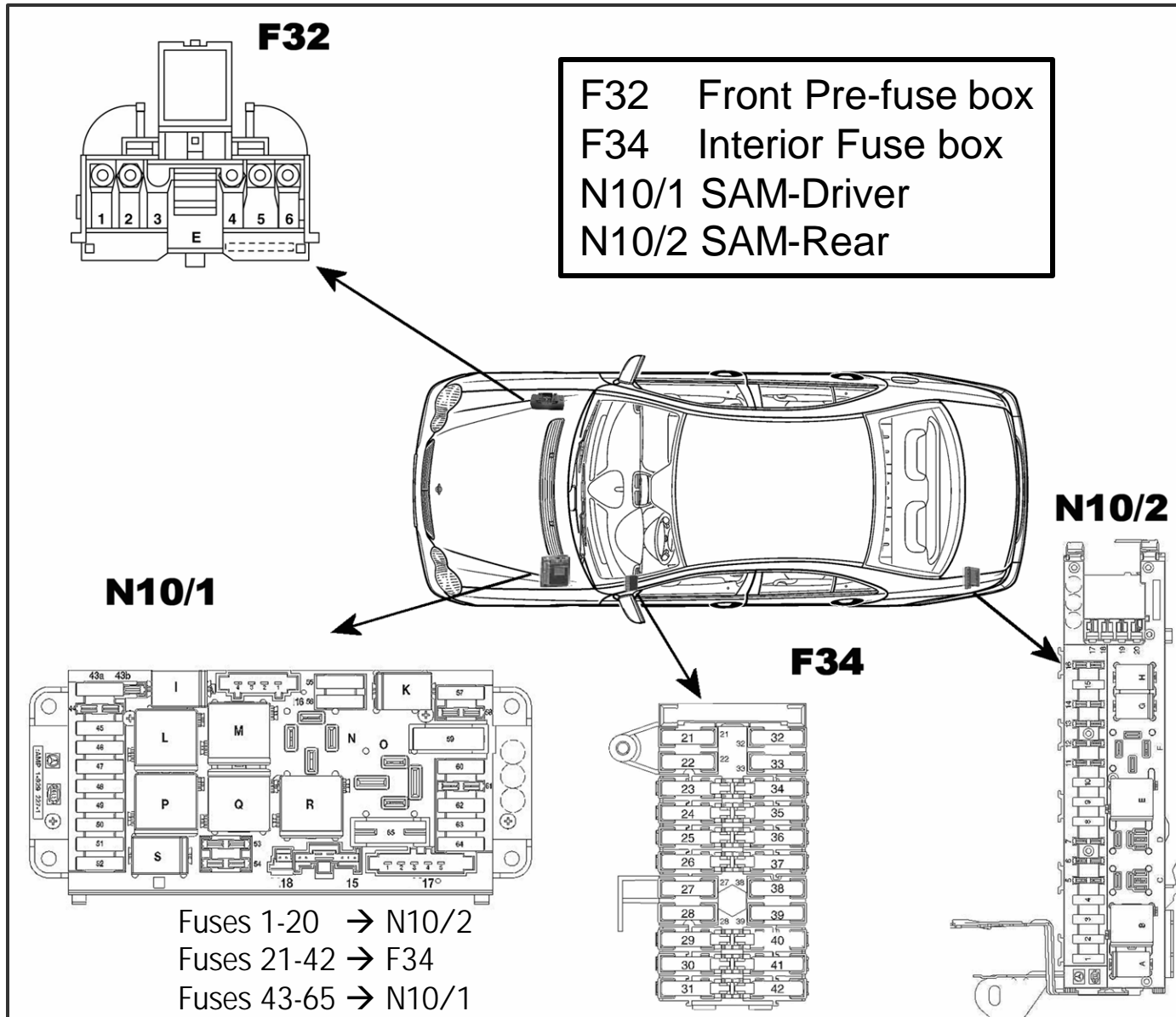
Windshield Wiper Arm Adjustment



Electrical System



Fuse Concept

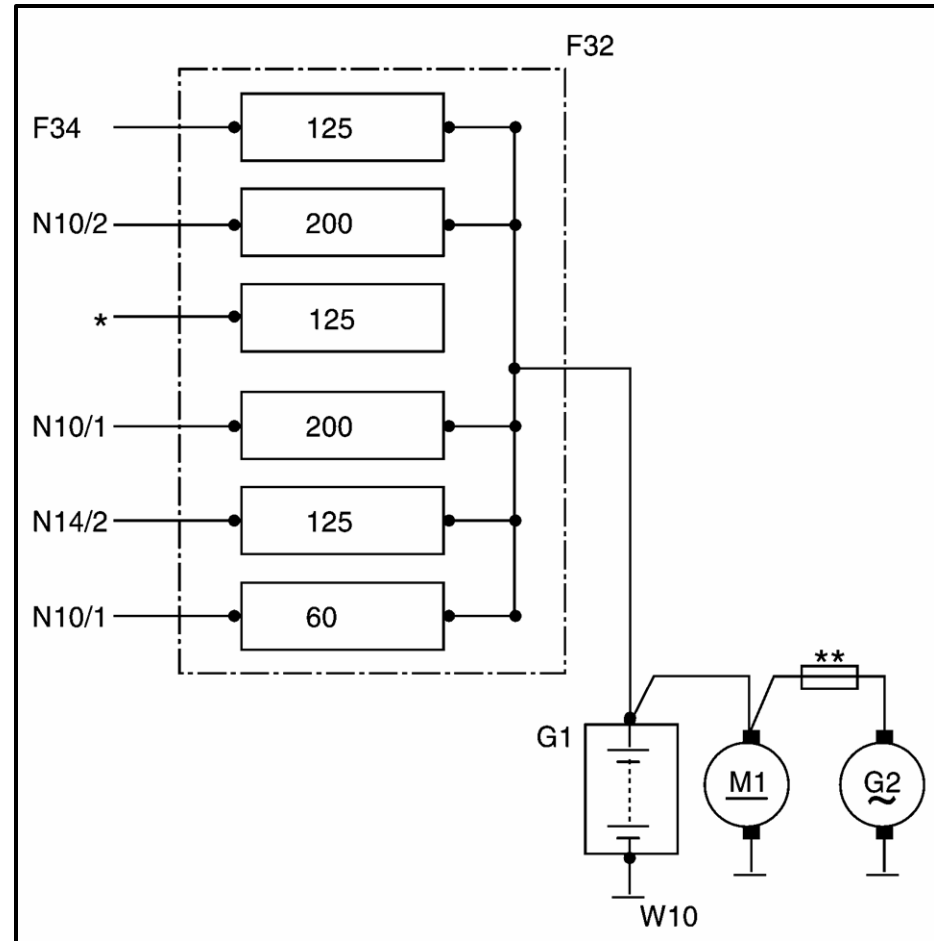


Fuse Concept

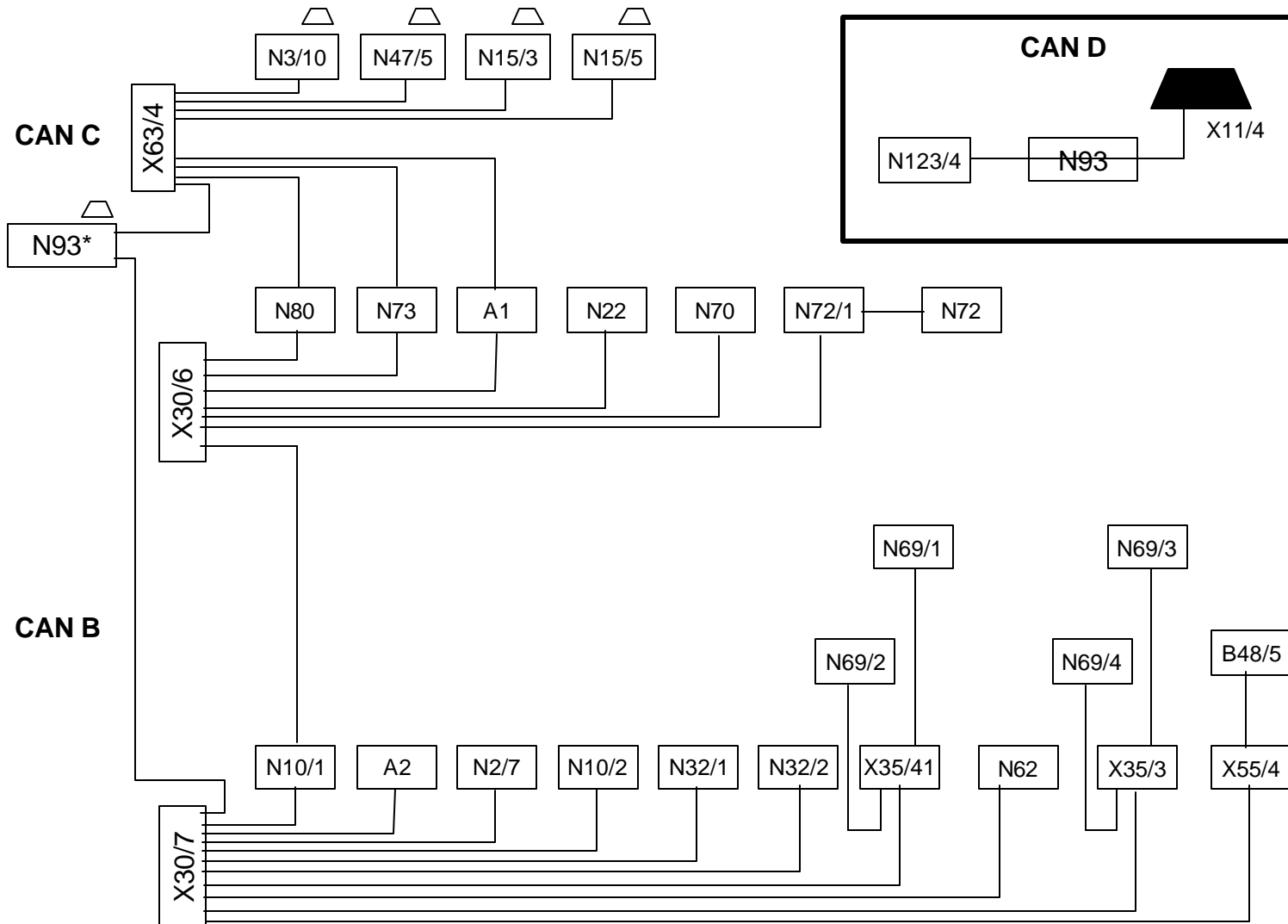
F32 Front Pre-fuse box
F34 Interior Fuse box
G1 Alternator
M1 Starter
N10/1 SAM-Driver
N10/2 SAM-Rear
N14/2 Not used (CDI)
W10 Ground
(engine compartment)

* Not Used (CDI)

** Alternator cable fuse
M271 only → 175A



Networking Map - Vehicle



* N93 only installed until ~12/04, EIS takes over functionality

Networking Map - Legend

CAN B

- A1 - Instrument cluster (IC)
- A2 - Radio
- B48/5 - Passive Occupant Detection System
- N2/7 - Supplemental restraint system (SRS)
- N10/1 - Driver SAM
- N10/2 - Rear SAM 1
- N22 - Automatic air conditioning (AAC)
- N32/1 - LF Electric seat adjustment (ESA)
- N32/2 - RF Electric seat adjustment (ESA)
- N62 - Parktronic (PTS)
- N69/1 - LF Door control module (DCM)
- N69/2 - RF Door control module (DCM)
- N69/3 - LR Door control module (DCM)
- N69/4 - RR Door control module (DCM)
- N70 - Front overhead control module (OCP)
- N72 - Lower control panel (LCP)
- N72/1 - Upper control panel (UCP)
- N73 - Electronic ignition switch (EIS)
- N80 - Steering column module (SCM)
- N93 - Central gateway (CGW)
- X30/6 - CAN B network connector
- X30/7 - CAN B network connector

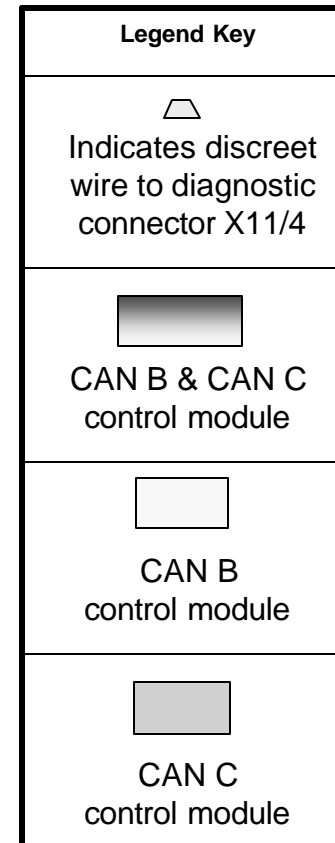
CAN C

- A1 - Instrument cluster (IC)
- N3/10 - Motor electronics (ME)
- N15/3 - Electronic transmission control (ETC)
- N15/5 - Electronic shifter module (ESM)
- N47/5 - Electronic stability program (ESP)
- N73 - Electronic ignition switch (EIS)

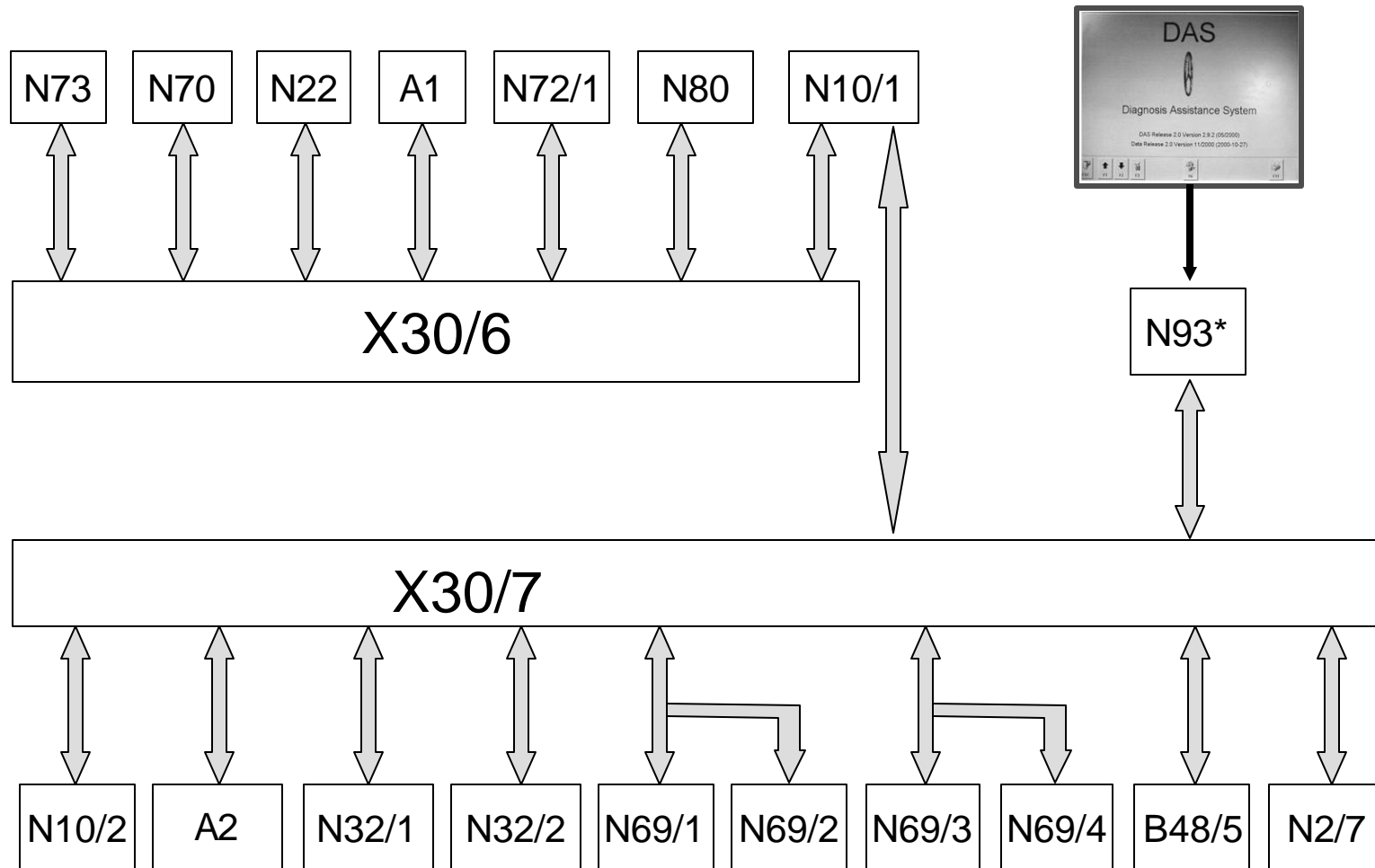
- N80 - Steering column module (SCM)
- N93 - Central gateway (CGW)
- X63/4 - CAN C network connector

CAN D

- N93 - Central gateway (CGW)
- N123/4 - TELEAID
- X11/4 - Diagnostic connector



Networking Map – CAN B



CAN H (BN/RD) except N10/2 (BN/GY) / CAN L (BN)

* N93 only installed until ~12/04, EIS takes over functionality

Networking

List of new ECU's or those that have been modified:

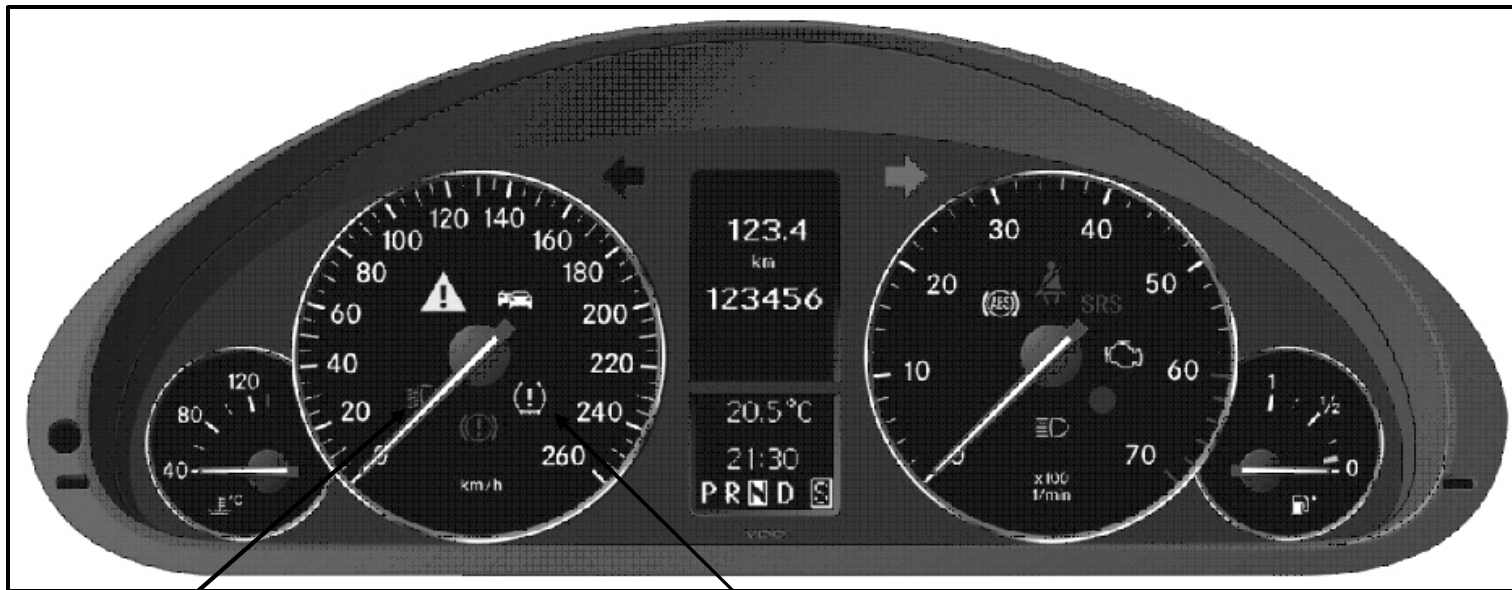
- Central Gateway
- Electronic Ignition Switch
- Instrument Cluster
- Electronic Stability System
- Climate Control
- Electronic Selector Module
- Steering Control Module
- Upper control panel
- Supplemental Restraint System
- Weight Sensing System
- Audio 20
- MCS II
- Satellite Radio Receiver
- CD Changer
- Voice Control
- CTEL Handy Interface
- Sound Amplifier
- Dual System TELE AID

Networking

- Central Gateway (CGW) Tasks
 - Primary gateway between CAN B and CAN C
 - Gateway between CAN B and CAN D
 - Only if version coding set to TELE AID present
 - Diagnostics gateway between CAN D and CAN B/C
 - NO System Diagnosis
 - Installed until approximately 12/04
 - Removed in connection with modification year AJ04/2
- Electronic Ignition Switch (EIS) Tasks
 - Limited gateway between CAN B and CAN C
 - Master Version Coding
 - DAS III functionality
 - Functionality of Central Gateway as of approximately 12/04

Instrument Cluster (IC)

- 4 Tube design (with chrome rings)
 - Engine Temperature gauge is back
- Vertical Multifunction display
 - Central display (operated via MF-steering wheel buttons)
 - Lower display (Basic information)



Headlights On Indicator

Tire Pressure Monitor Indicator

Instrument Cluster (IC)

- 3 Versions of cluster used depending on model
 - Luxury
 - Sport (Deeper, angled chrome rings)
 - AMG (Aluminum detailing and 200mph speedometer)
- Maintenance calculator
 - MB Maintenance System replaces FSS
 - Maintenance Booklet
 - Fixed maintenance intervals with automatic reminder
 - 10000 miles or one year for AMG and V12 models
 - 13000 miles or one year for all other models
 - MB Service Welcome replaces Maintenance Commitment
 - First Shop Visit (1 hour)
 - First Tire Rotation
 - Synthetic oil according to sheet 229.5 is required
 - Mobil 1 0W-40 is recommended by MBUSA

Electronic Stability System (ESP)

- Private-Bus (CAN)
 - CAN between ESP and micromechanical turn rate sensor (B25/15)
 - 2-wire CAN used to transmit rotational speed and lateral acceleration data to ESP
- Brake light control
 - Brake switch eliminated
 - Release contact of BAS system used to determine brake application
(brake pressure & membrane travel used as back up)
 - Redundant signals
 - Discrete wired from ESP→SAM-D (looped)→SAM-R
 - CAN signal ESP→EIS→SAM-R
 - SAM-R confirmation reply via CAN
 - Brake light suppression via CAN message from ESP

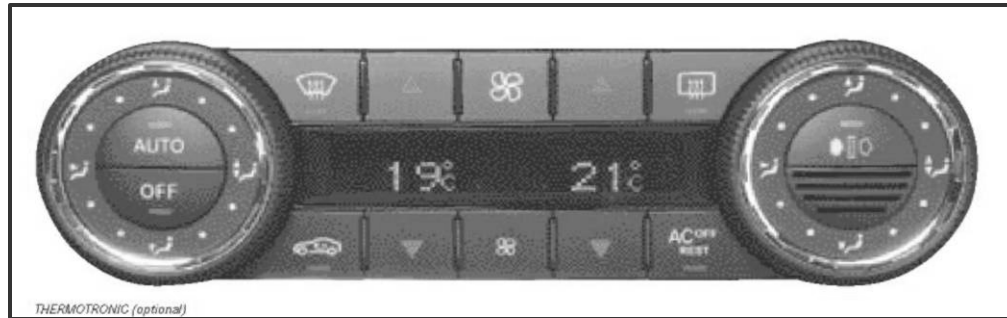
Climate Control - Thermatic



Dual-zone climate control

- Automatic control of temperature, air flaps & blower speed
- Independent left / right temperature selection
- Joint left / right air distribution
- Blower speed '0' to turn system off
- Interior temperature measured at control panel only!
- Dew point sensor

Climate Control - Thermotronic



- Automatic control of temperature, air flaps & blower speed
- Independent left / right temperature selection & air distribution
- Active Charcoal Filter
- Residual Engine Heat Utilization (REST)
- Key dependant memory settings
- 'Off' button to turn system off
- Interior temperature measured at control panel only!
- Solar sensor and Multifunction sensor

Steering Control Module (SCM)

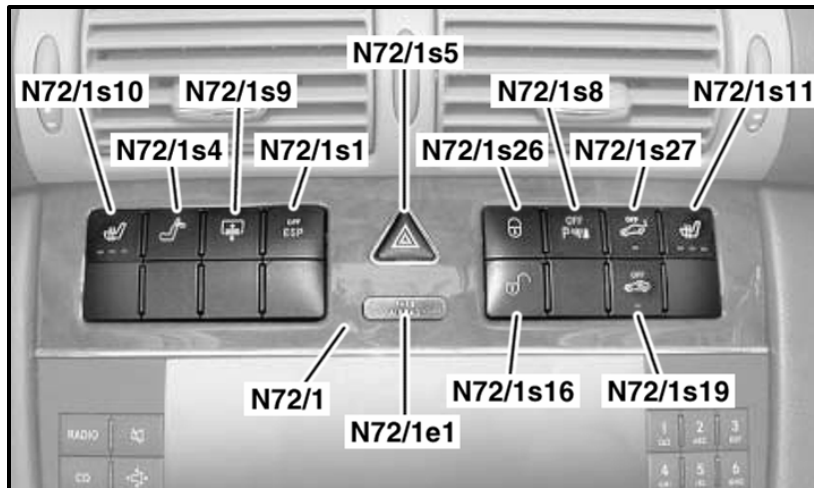
- 2 basic versions
 - W/S 203 (standard) → Multifunction steering wheel buttons via voltage coding
 - CL203 or Steering wheel shift buttons (option) → Multifunction steering wheel buttons via LIN-Bus
- Rear wiper functions (S203)
 - Multifunction switch with controls for rear wiper



Note: The front windshield wiper motor is now controlled via serial data bus (LIN-BUS) from SAM-Driver

Upper Control Panel (UCP)

- New design with Push/Push-buttons
- Seat Heating control modifications
 - 3 Stages (5, 10, 20 minutes)
 - No heating if interior temperature $>40^{\circ}\text{C}$ (104°F)
 - 5 minute memory after ignition off



Note: Optional equipment shown

Legend

- N72/1 Upper Control Panel
- N72/1e1 Airbag OFF light
- N72/1s1 ESP OFF switch
- N72/1s4 Rear head restraints switch
- N72/1s5 Hazard warning system switch
- N72/1s26 Interior central locking (Lock)
- N72/1s16 Interior central locking (Unlock)
- N72/1s27 TS switch with ATA
- N72/1s19 IR switch with ATA (not USA)
- N72/1s8 PTS OFF switch
- N72/1s9 Rear blind switch
- N72/1s10 Left front HS switch
- N72/1s11 Right front HS switch

Outside Lighting

- Reflection technology with clear lens and H7 main beam
- Projection technology with clear lens and Bi-xenon (SA)
- Bi-xenon package includes cornering fog lamp function (not for sport models or AMG)
- Mirror turn signals with clear lens
- Tail lights / 3rd brake light in high brilliant optic

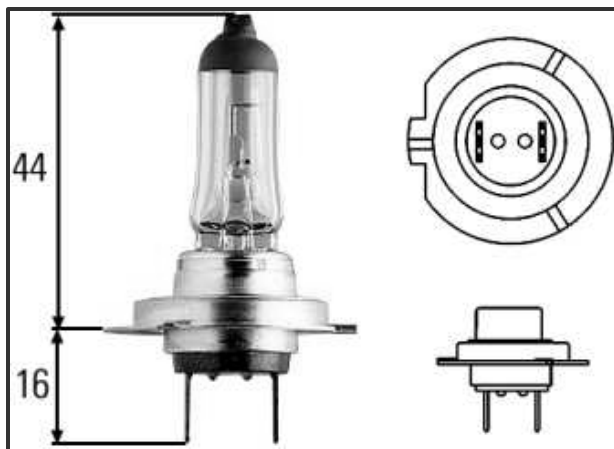


Outside Lighting – Cornering Fog Lamp

- Cornering Fog Lamp is an additional light function realized with special fog lights (61° versus 21° reflector, H7 55 Watt bulb)
- Fog light on the inside of the turn is activated under specific steering angle or turn signal requests
- Inverse activation if reverse gear is engaged
- Fog light is activated dependant on
 - Turn signal activation
 - Steering wheel angle
 - Vehicle Speed
 - Reverse gear
- Soft dim activation and deactivation
- All functions related to this feature are controlled by SAM-Driver
 - Not a version coding, unique SAM-Driver

Outside Lighting – Cornering Fog Lamp

Burned Bulb	Substitution light	Pulse modulated	Remarks
Parking light rear left (outside)	Rear fog light left	Yes	Only with parking light
Parking light rear right (outside)	Rear fog light right	Yes	Only with parking light
Brake light left	Rear fog light left	No	Brake light right is also shut off & Rear fog light right activated
Brake light right	Rear fog light right	No	Brake light left is also shut off & Rear fog light left activated
Parking light front left	Fog light front	100Hz/25%	Only with parking light
Parking light front right	NS right	100Hz/25%	Only with parking light

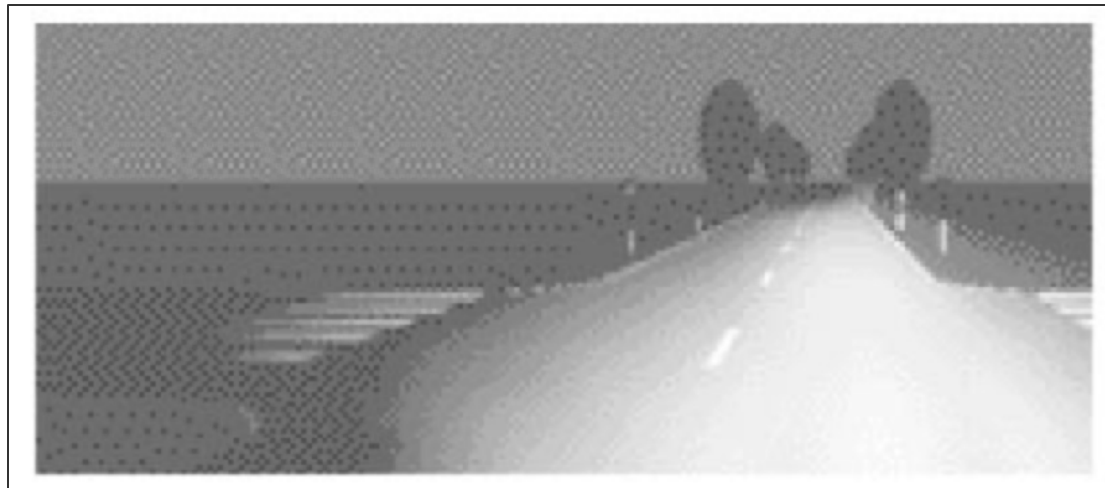


Hella H7 bulb

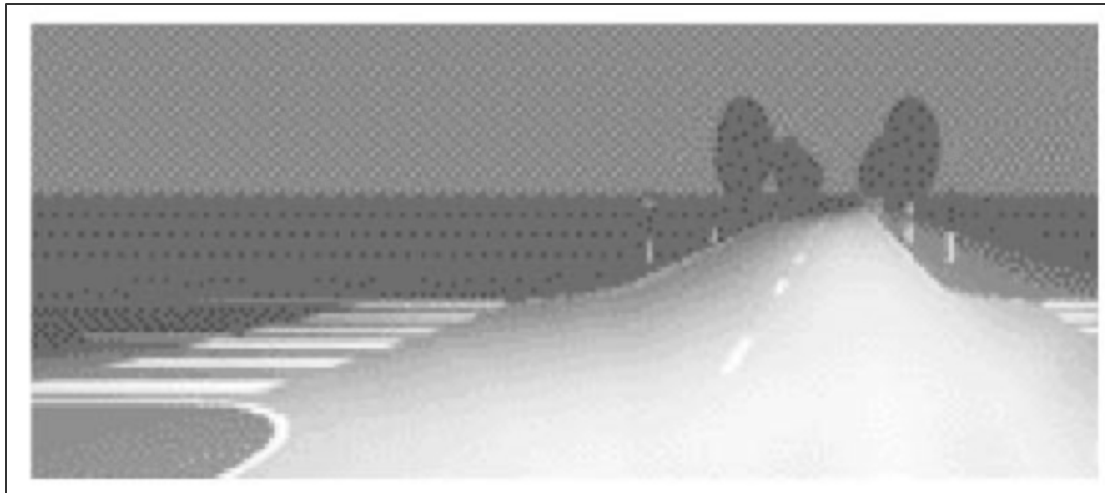
Outside Lighting - Cornering Fog Lamp



Outside Lighting - Cornering Fog Lamp



Road illumination without cornering fog lamp function



Road illumination with cornering fog lamp function

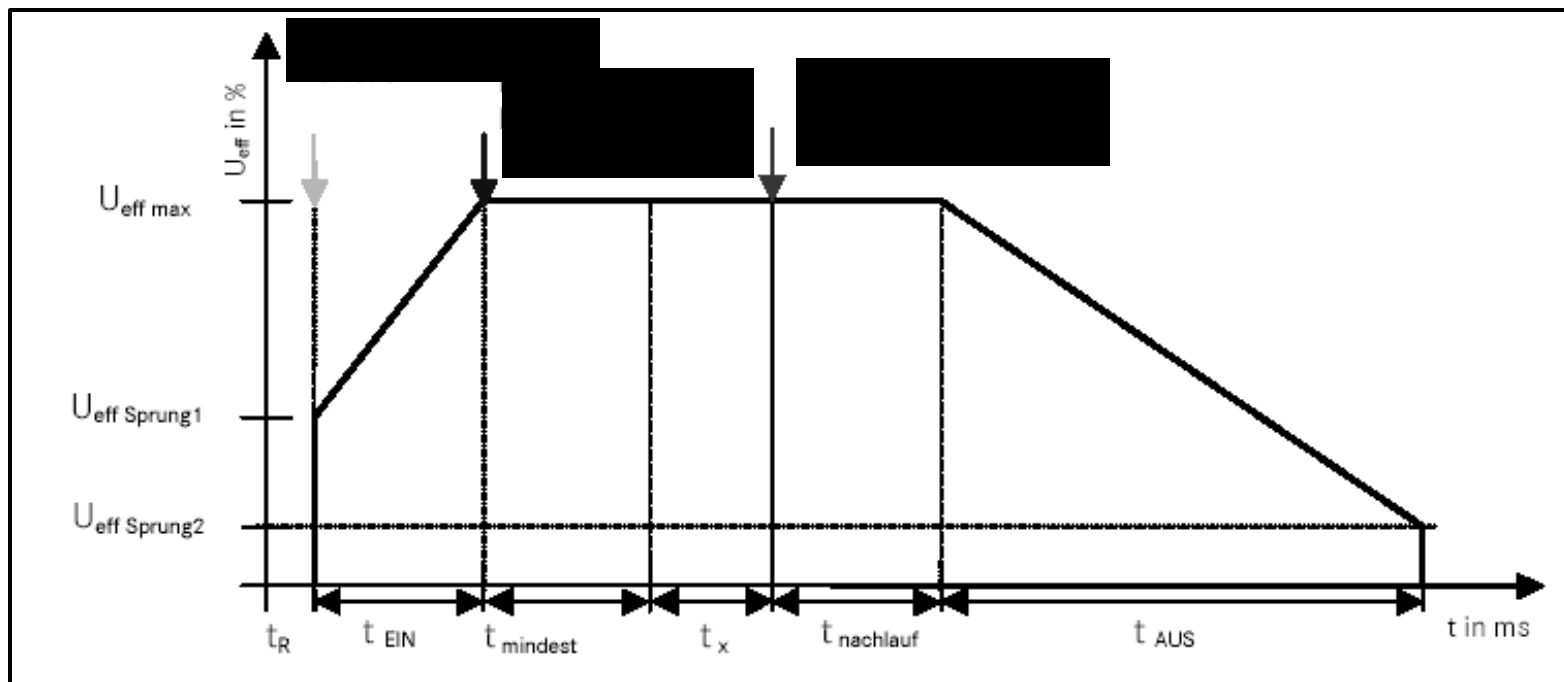
Note: Do not confuse with dynamic headlamps from W211

Outside Lighting - Cornering Fog Lamp

- Cornering fog lamp function pre-requisites
 - Engine running (circuit 61 on, or engine >300rpm)
 - Light switch in position “Auto” / “On” or Daytime Running Lights active
 - “Light On” from Rain/Light sensor (darkness for “Auto”)
 - Vehicle speed < 25mph
 - Cornering light request over turn signal (priority) and/or steering angle
 - Activation of fog light in turn signal / steering direction
- Cornering fog lamp function with Reverse (same as above except)
 - Reverse gear engaged (>0,5 sec.)
 - Cornering light activated by steering angle only
 - Inverse activation of fog light to steering direction

Outside Lighting - Cornering Fog Lamp

- Only one cornering fog lamp is activated at a time
 - Both may be on at the same time due to activation curve
 - Dim on and dim off times vary (off is longer)



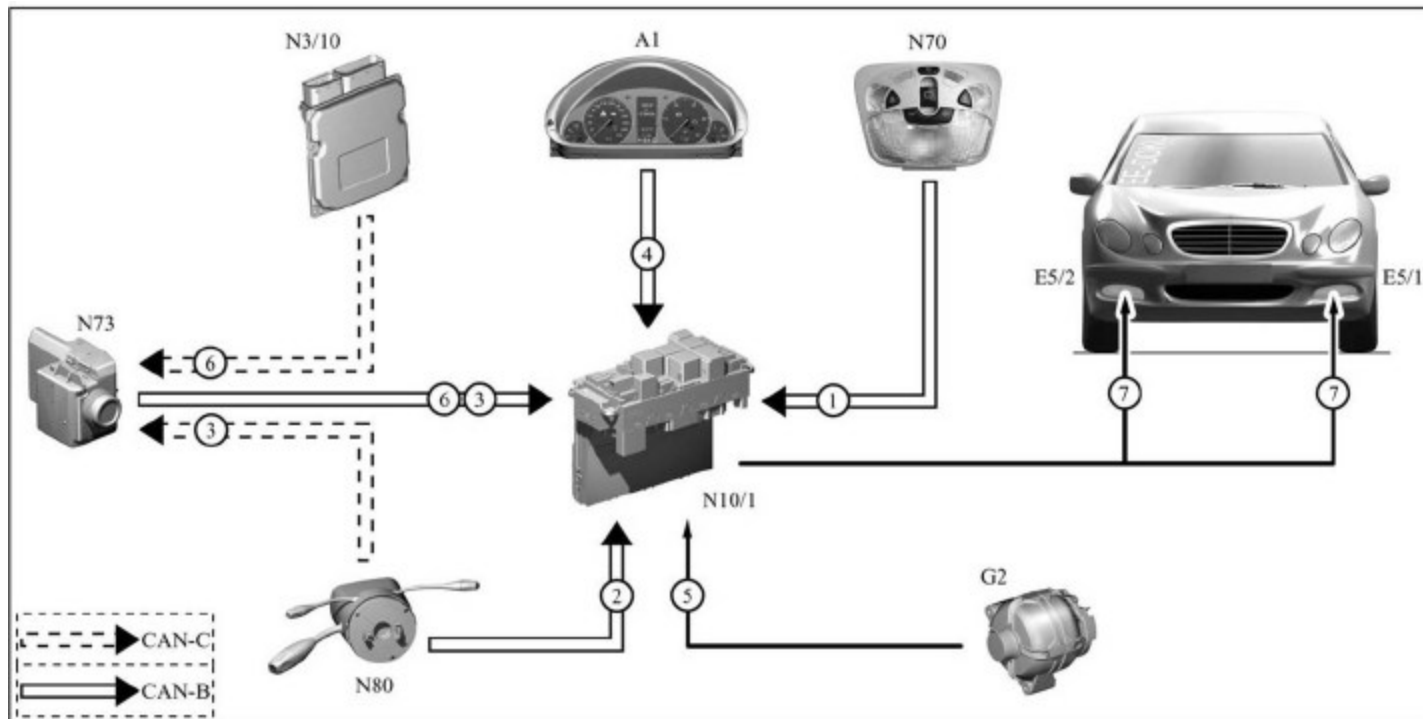
Legend

t	Time in ms	t_x	Activation time (based on activation criteria)	U_{eff}	Effective Voltage
t_R	Reaction time (<100ms)	t_{nachlauf}	Run-on time (0-5s)	$U_{\text{eff max}}$	Maximum U_{eff}
t_{EIN}	On time (dim-on)	t_{mindest}	Minimum activation time (0-5s)	$U_{\text{eff Sprung1}}$	30% U_{eff} (dim-on)
t_{AUS}	Off time (dim-off)			$U_{\text{eff Sprung2}}$	Shut down U_{eff} (dim-off)

Outside Lighting - Cornering Fog Lamp

- Immediate deactivation of cornering fog lamp without dimming if;
 - High Beam activated
 - Fog lights activated
 - Diagnostics
 - Hazard Flasher activated
 - Light switch turned to position 0
- Fault handling
 - Fault affecting only cornering fog lamp
 - IC message regarding unavailability of cornering light
 - Fault affecting fog light
 - IC message regarding corresponding fog light failure
(Cornering light also unavailable but no message)

Outside Lighting - Cornering Fog Lamp



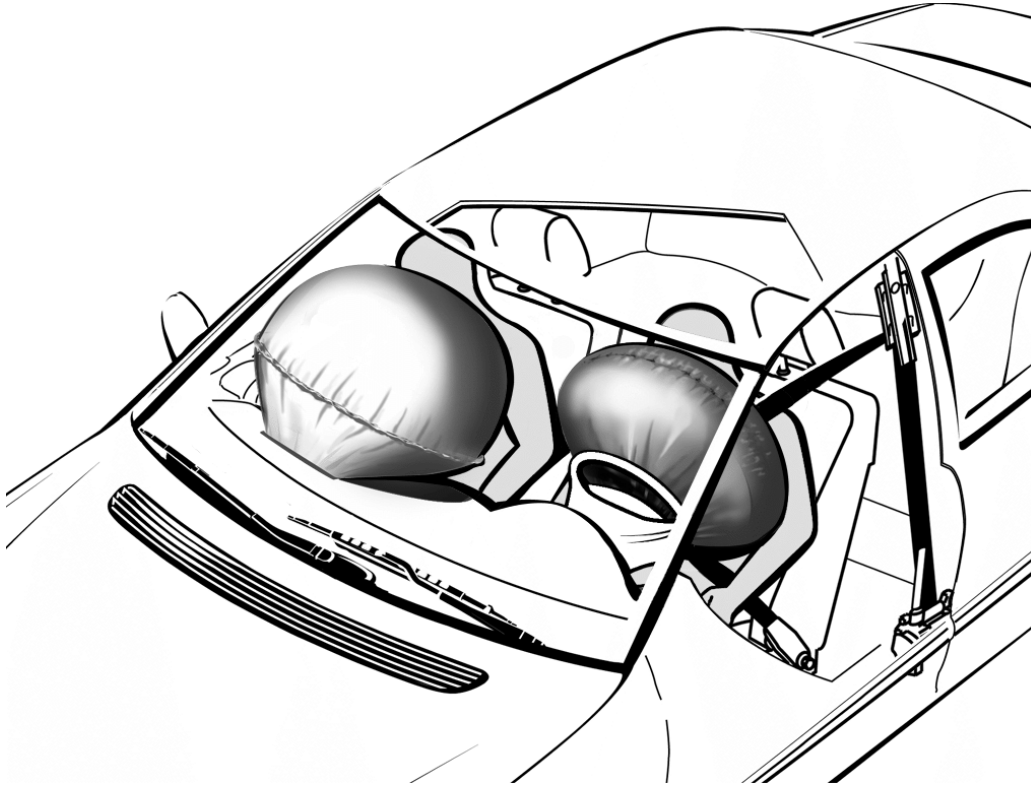
Light switch in Auto
- input to SAM-D

- | | | |
|--|------------------------------|-------------|
| ① Light On from Rain/Light sensor light On | ④ Speed signal | ⑦ Cornering |
| ② Turn signal active | ⑤ Circuit 61, engine running | |
| ③ Steering angle signal | ⑥ Engine RPM | |

Legend

- | | | |
|-----------------------|-------------------------|--------------------------------|
| A1 Instrument Cluster | G2 Alternator | N73 Electronic Ignition Switch |
| E5/1 Fog Light; left | N10/1 SAM-Driver | N80 Steering Control Module |
| E5/2 Fog light; right | N3/10 Engine Management | |

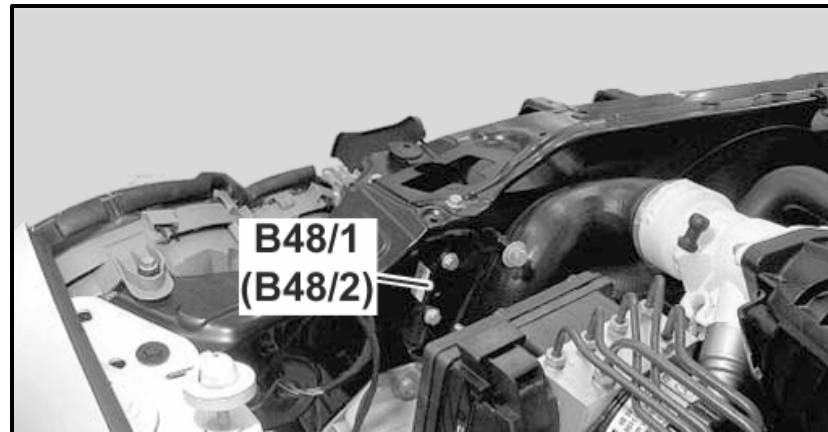
Supplemental Restraint System (SRS)



P91.60-2482-26

Supplemental Restraint System (SRS)

- SRS system with maximum of 14 ignition squibs
- New features
 - Upfront sensors (B48/1 & B48/2)
 - USA only



- Passenger Airbag with dual inflation system
- Occupant classification system
- Deletion of passenger seat occupancy mat (B48)

Occupant Classification System

- FMVSS 208 requires the progressive implementation of advanced airbags on all production vehicles by MY 2007
- Advanced air bags systems determine the proper airbag deployment and power levels based on any of the following:
 - Occupant size / weight
 - Seat belt use
 - Crash Severity
- To fulfill this requirement a new occupant classification system was developed
 - Passive-Occupant-Detection-System-B (B48/5)
 - SRS system adaptation (AB)

Occupant Classification System

- Implementation schedule
 - CL 203 → Start of production (04/04)
 - W/S203 → Delayed introduction approx. 07/04, but C55 AMG will never get this system
- System design
 - A silicone oil filled mat placed underneath the foam cushion measures pressure (weight) put on the seat
 - System activates to determine whether to deploy airbag and tailors the inflation of the front passenger's front air bag to the occupant classification of the seated occupant
- System components (on top of SRS module)
 - Bladder mat & Pressure sensor
 - Belt tension sensor
 - OCS control module

OCS Vehicle Identification

- Vehicles equipped with Advanced Air Bags need to display this accordingly



Labels affixed to back of sun visors



Additional label affixed to ash tray cover (Temporary label, removed after delivery)

OCS – Customer Indication

- Primary Airbag state indicator is Passenger Airbag Off light (new icon for all OCS systems as of MY05)

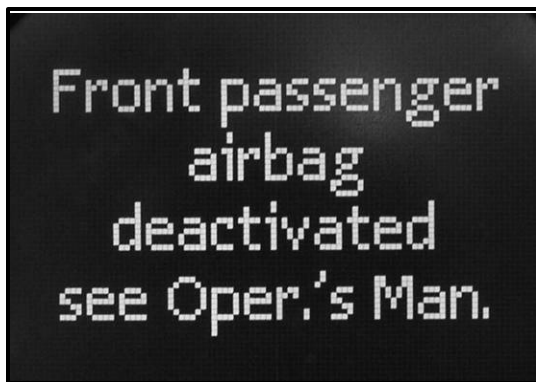


Location: Upper control panel (center console)

- Lit upon Ignition On (6 seconds)
 - Lit until system recognizes an occupant needing Airbag enabled
 - Not lit if adult person recognized
 - Airbag may still not deploy in an accident if not required
-
- Proper seating position (backrest) is critical for proper classification
 - Passenger Airbag Off light indicates all deactivated conditions, not just BabySmart child seats
 - Light is always illuminated if no passenger seated

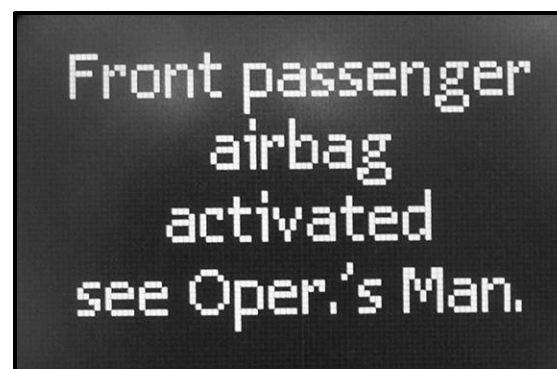
OCS – Customer Indication

- Additional reference messages displayed in instrument cluster
 - Displayed only if implausible weight class change occurred that results in an Airbag state change
 - Passenger door not open
 - Weight classification change without running through class 0
 - Not all Airbag state changes will trigger an instrument cluster display message



Front passenger
airbag
deactivated
see Oper.'s Man.

Airbag On → Off



Front passenger
airbag
activated
see Oper.'s Man.

Airbag Off → On

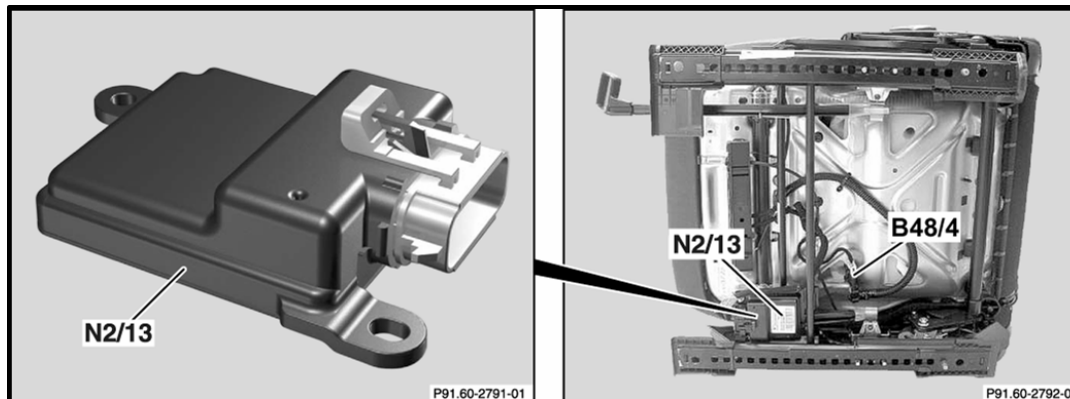
Malfunction Indication



No specific message related to OCS, only SRS malfunction Indicator for a OCS problem is additional Airbag Off light ON despite an adult sitting in the passenger seat

OCS – Control Module (N2/13)

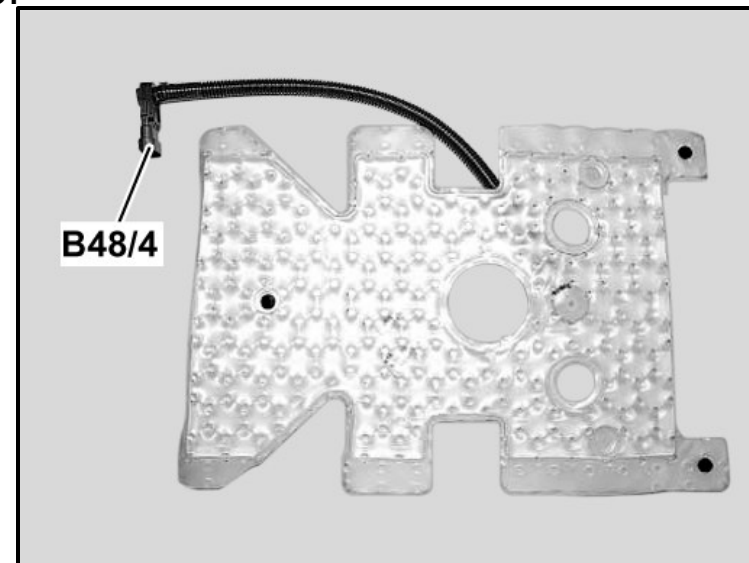
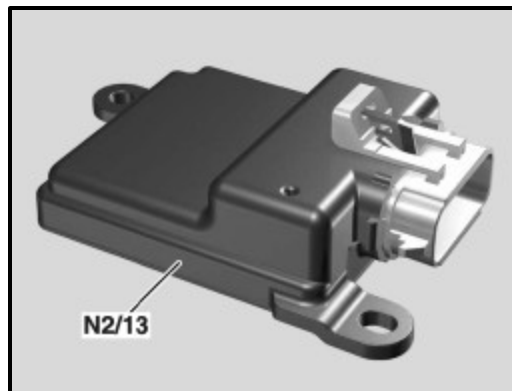
- Tasks
 - Supply power (5V) to belt tension sensor (B48/3) and pressure sensor (B48/4)
 - Interpret data from pressure sensor (B48/4) attached to silicon bladder and belt tension sensor (B48/3) attached to end of seat belt
 - Calculate weight classification of occupant on seat
 - Provide weight classification and seat occupancy data on CAN B
 - Self-test of ECU and sensors (upon power up) and log fault codes



Location:
Under passenger
seat
(attached to frame)

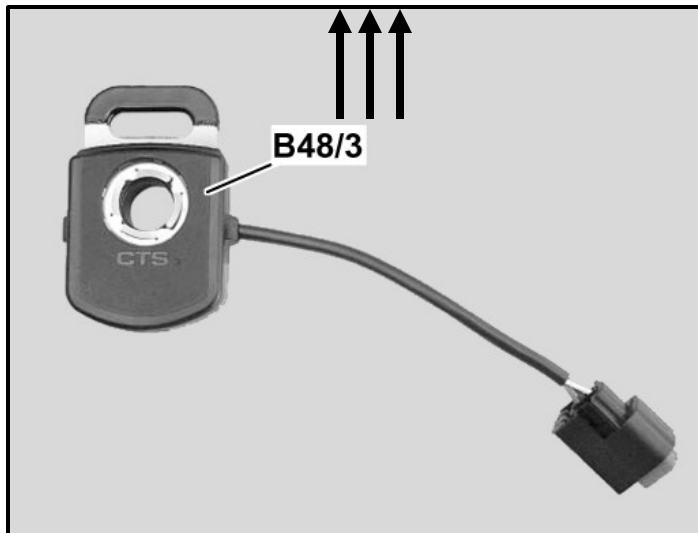
OCS – Pressure Sensors (B48/4)

- Pressure sensor (B48/4)
 - Measures pressure inside silicon filled bladder mat
→ permanently attached to bladder mat
 - Bladder mat geometry is adapted to each seat / vehicle → same pressure measurement independent of the pressure point area
 - Permanently assigned to OCS controller due to adaptation process at manufacturer
→ tamper indicator connector
(seal discolors from pink to purple if unplugged)



OCS – Belt Tension Sensor (B48/3)

- Belt tension sensor (B48/3)
 - Measures tension (pull) on the seat belt at the anchor point
 - permanently attached to seat belt
 - Value used to determine correction factor of bladder pressure sensor
 - Seat belt anchor point is below weight measuring area and can therefore influence reading



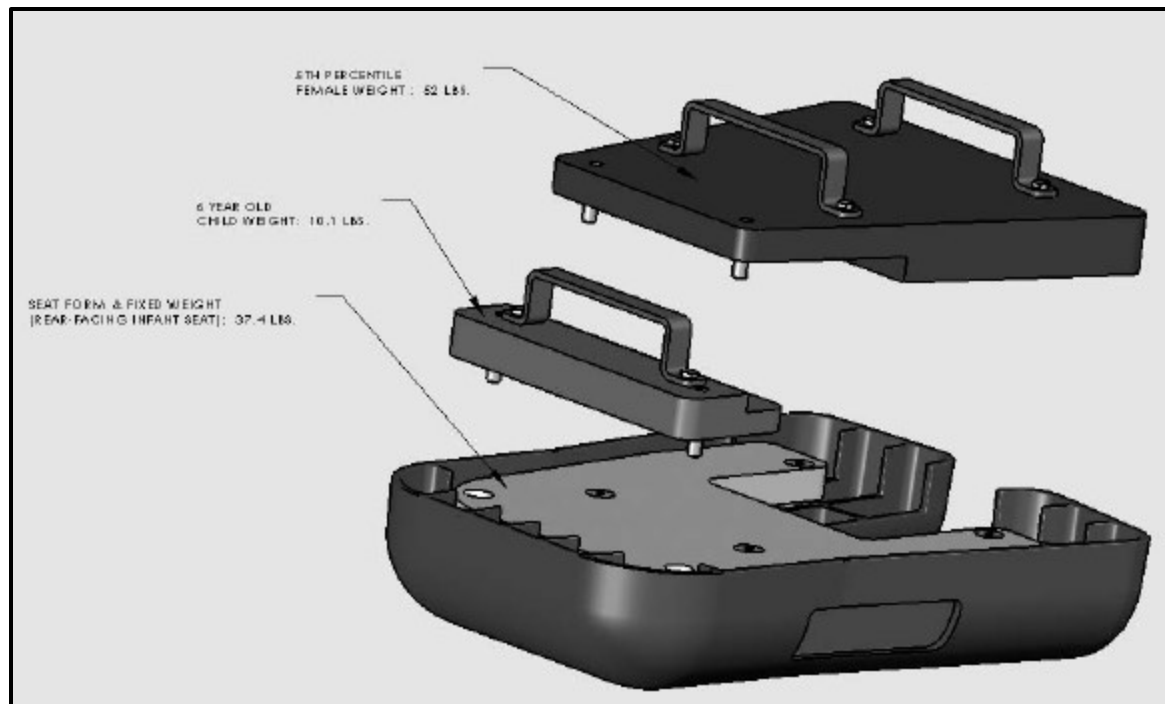
Location (CL shown):
W/S203 Belt anchor point at seat frame
CL203 Belt anchor point at B-pillar

OCS – Weight Classification

- OCS Process
 - Ignition 15R initiates self-test
 - Pressure present in bladder mat is measured
 - Weight adjustment factor is calculated from seat belt tension
 - Weight classification is determined
 - OCS sends CAN B messages
 - Passenger seat occupancy state
 - Passenger weight classification (0-4)
 - AB sets airbag deployment state
 - Enabled / Not enabled
 - Deployment level (1st / 2nd stage) based on weight class and accident severity
 - AB sends CAN message to Upper Control Panel to activate / deactivate Airbag Off light

OCS - Diagnosis and Repair

- All diagnostic procedures are in SDS/DAS 04/04
- Proper seat backrest position is vital for accurate classification
- Special Tool required for calibrating system
 - Set of weights to verify accurate weight classification
- System requires calibration after OCS component replacement



OCS - Diagnosis and Repair

- Belt tension sensor replaced together with seat belt
→ “Zero” sensor in OCS controller after installation
- Bladder mat and OCS controller only replaceable as a unit together with:
 - Cushion frame
 - Cushion
 - Cushion cover
- Service Kit contains all of the above
- Pressure sensor should never be unplugged from control unit
→ swapping for test purposes has no use since bladder and controller are matched for tolerances
→ discolored connector seal indicates tampering

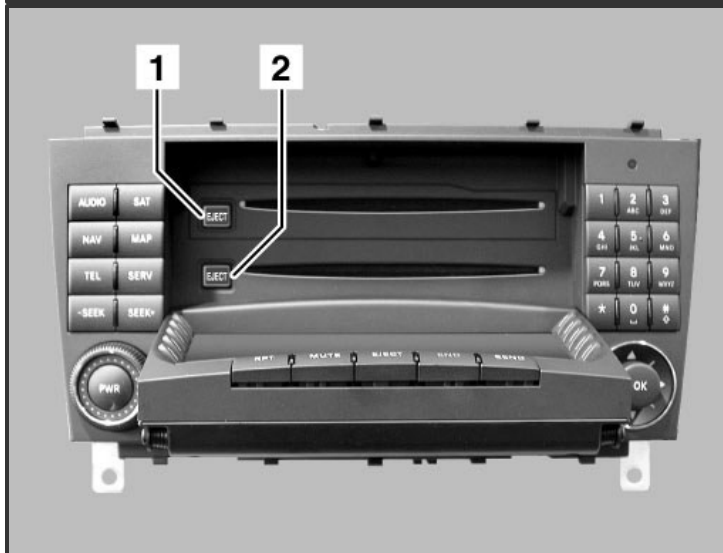
Audio COMAND (MCS2)

Overview:

- One block device
- FM /AM tuner inclusive weatherband
- Extra CD drive for audio
- Gateway CAN-B --> MOST
- AUX input
- 4 channel amplifier
- Services: roadside assistance, MB info, E call

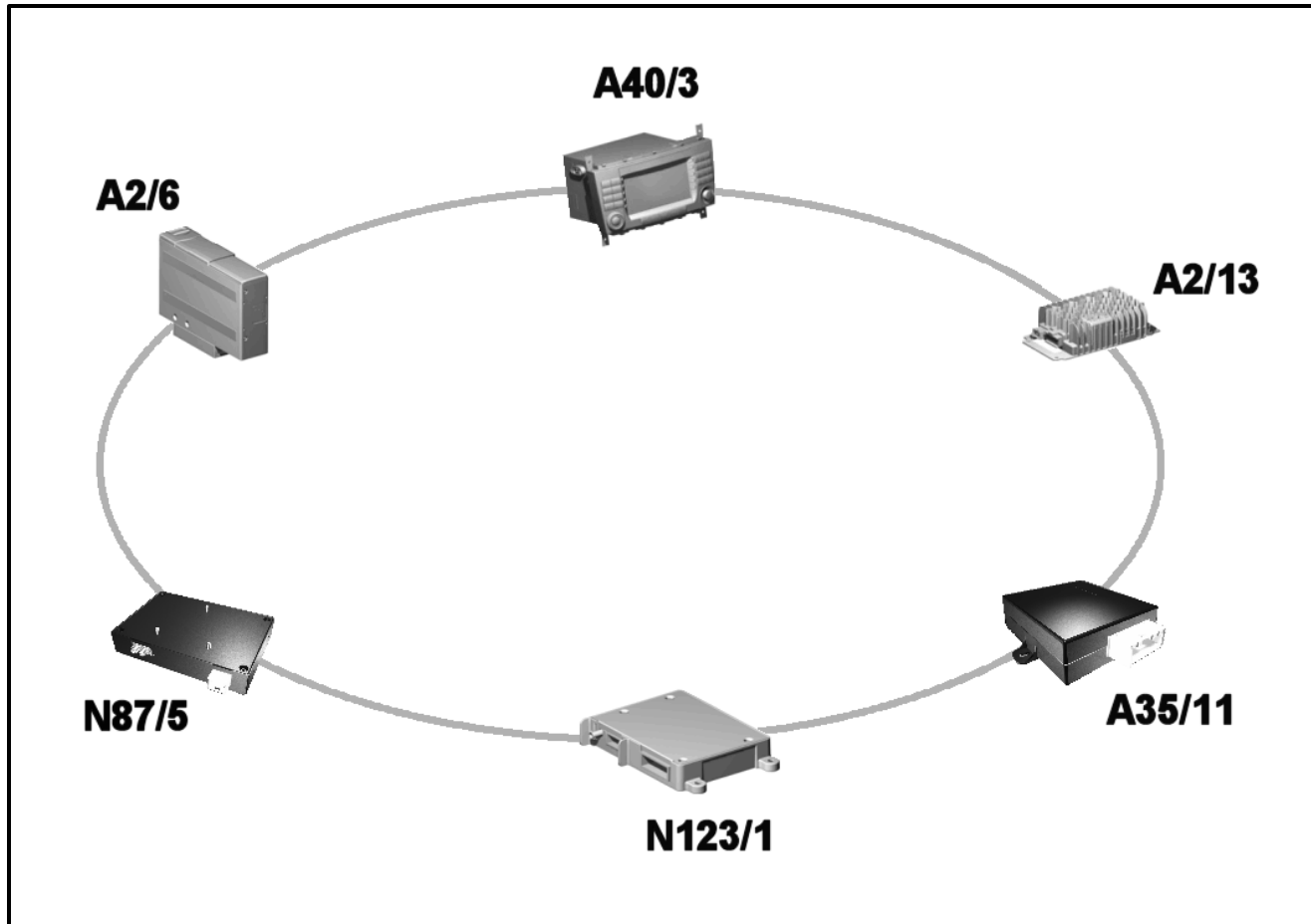
Supported MOST components :

- CD changer
- Universal portable C Tel interface (UPCI)
- Voice control system module
- Audio amplifier
- SDARS



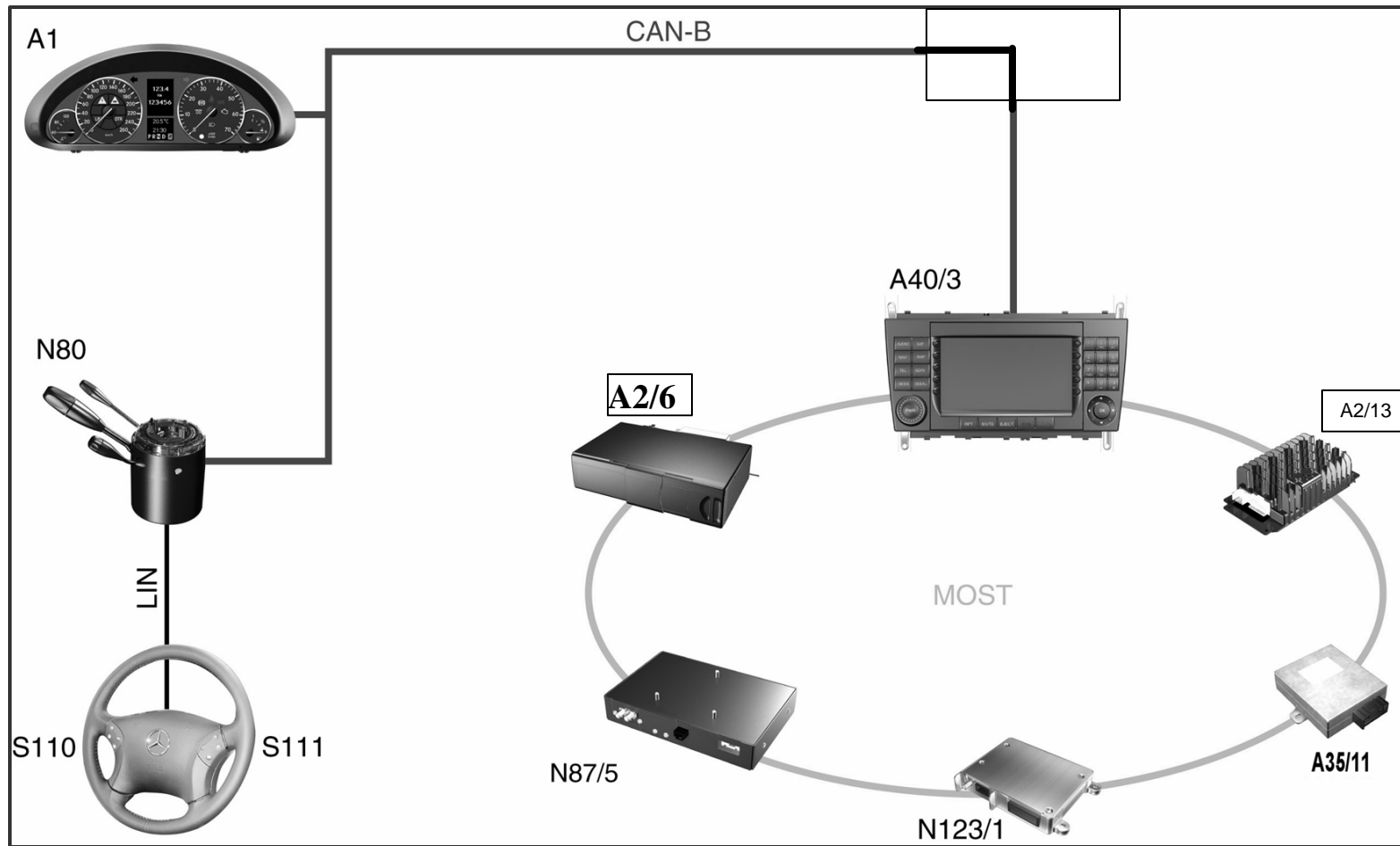
- ❶ slot in for navigation
- ❷ slot in for audio CD

Most Ring Illustration



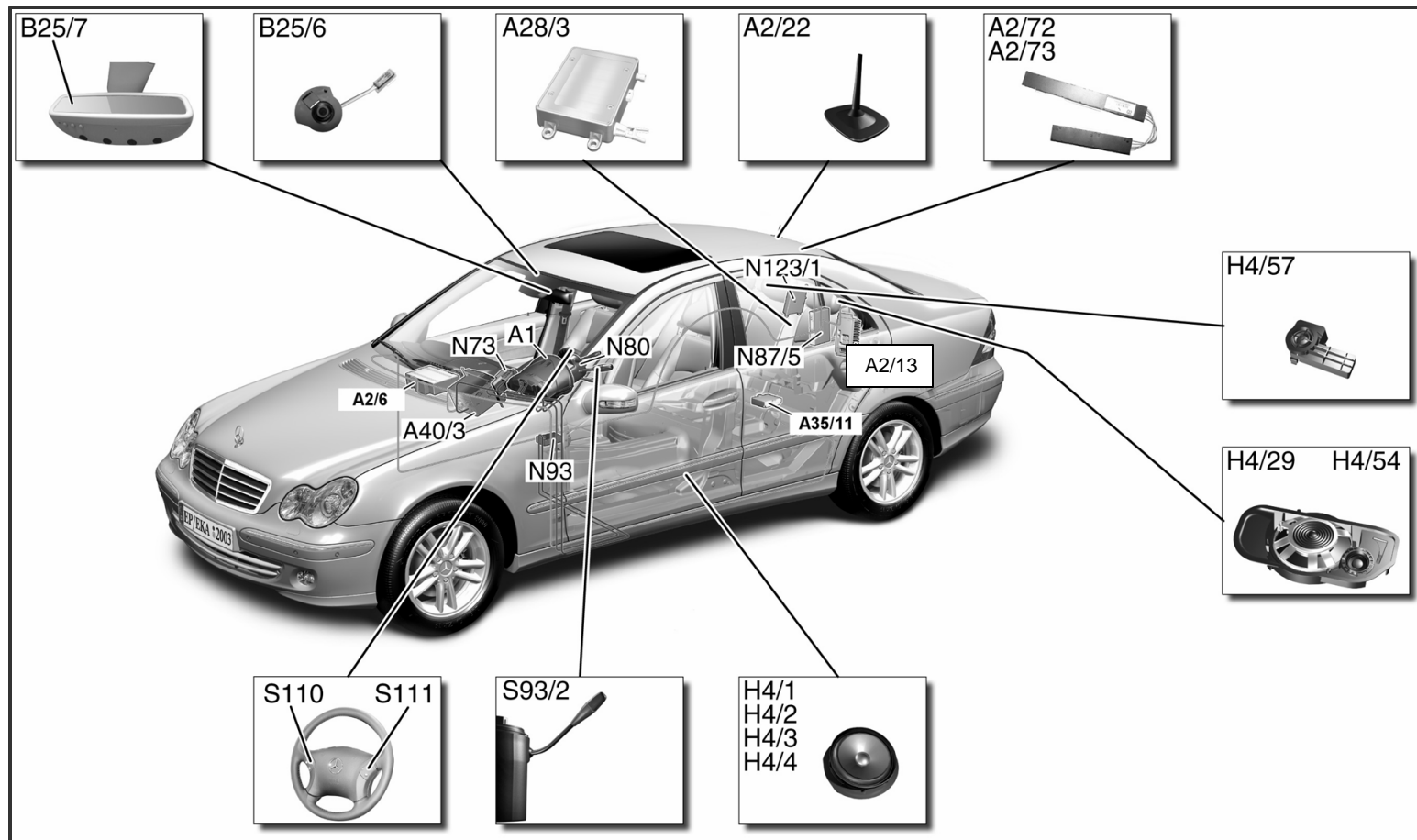
- A40/3 – COMAND
- A2/13 – Sound amplifier
- A35/11 – Voice control
- N123/1 – Universal portable CTCL interface
- N87/5 – Satellite module
- A2/6 – CD changer

COMAND Networking



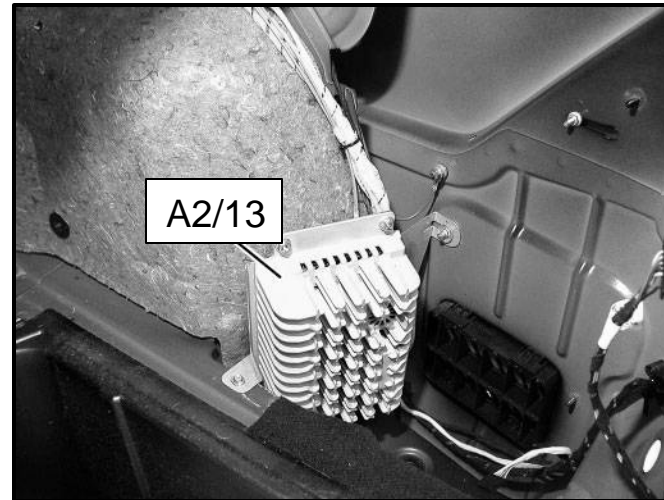
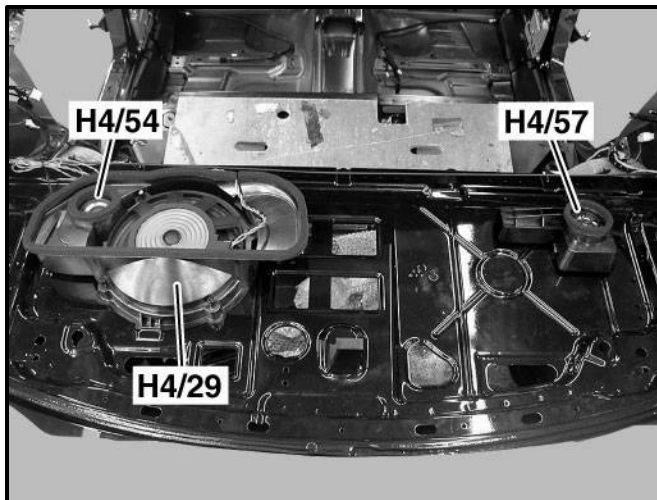
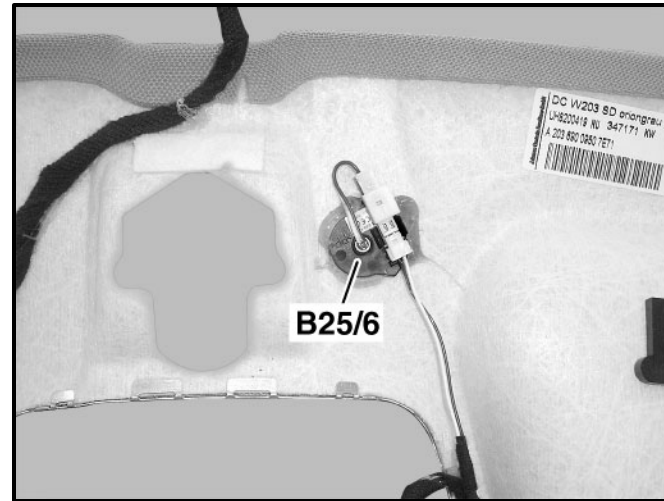
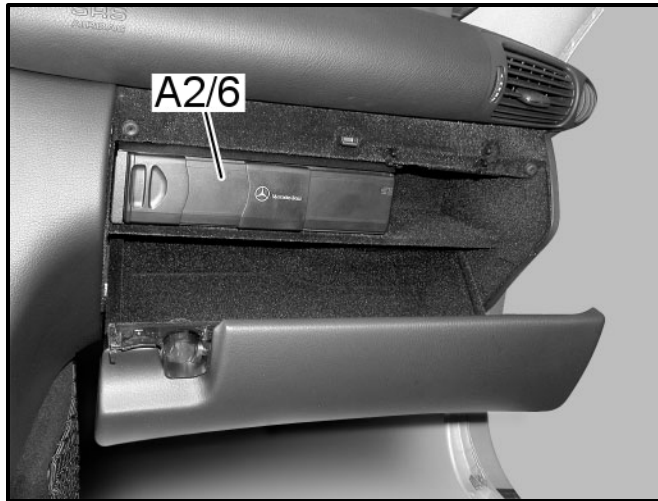
- A1 – Instrument cluster
- A40/3 – COMAND
- A2/13 - Amplifier
- A35/11 – Voice control
- N123/1 – Universal portable CTTEL interface
- N87/5 – Satellite Module
- A2/6 – CD changer
- N80 – Steering column module
- S110,112 – Left, right multifunction steering wheel button group

Location of Components

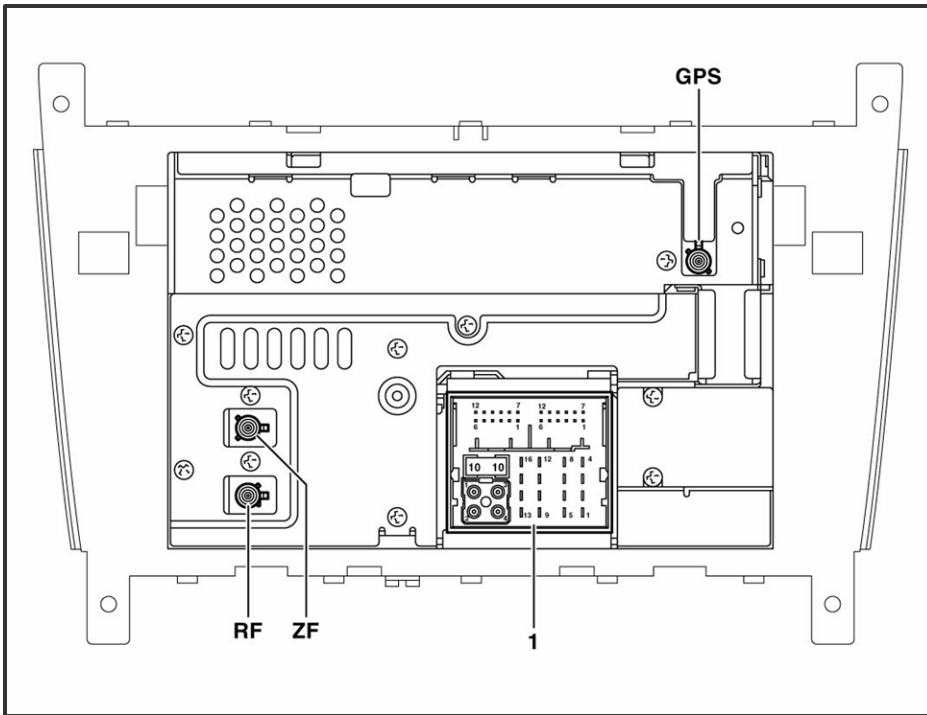


- B25/6 – Sound amplifier microphone
- A28/3 – E Network compensator
- A2/22 – Telephone antenna
- A2/72,73 – Window antenna amplifier 1 and 3

- H4/57 – Rear speaker
- H4/29 – Rear speaker
- H4/54 - Rear speaker
- H4/1-4 – Door speakers
- S93/2 – VCS switch
- S110,111 – Left, Right multifunction steering wheel button group



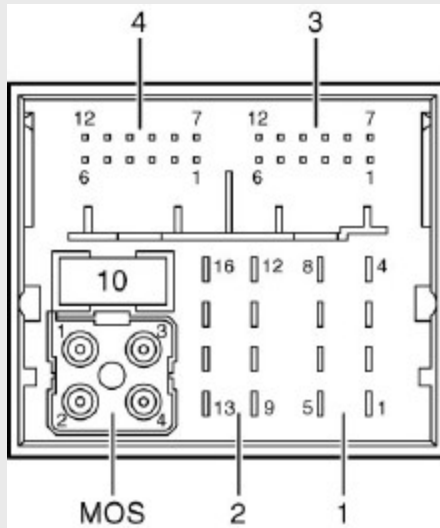
COMAND 203



The plug assignment is as follows

- 1 loudspeaker and power supply and MOST
- RF Radio antenna plug
- ZF Intermediate frequency plug
- GPS GPS antenna plug

COMAND 203



Camber 1 & 2 16-Pin codeage A

PIN	Signal/Signalinfo
• Stecker 1	
1	HR + (loudspeaker)
2	VR + (loudspeaker)
3	VL + (loudspeaker)
4	HL + (loudspeaker)
5	HR - (loudspeaker)
6	VR - (loudspeaker)
7	VL - (loudspeaker)
8	HL - (loudspeaker)
• Stecker 2	
9	CAN-Low
10	phone Mute
11	CAN-High
12	tm. 31

13	antenna
14	free
15	tm. 30
16	Wake-Up

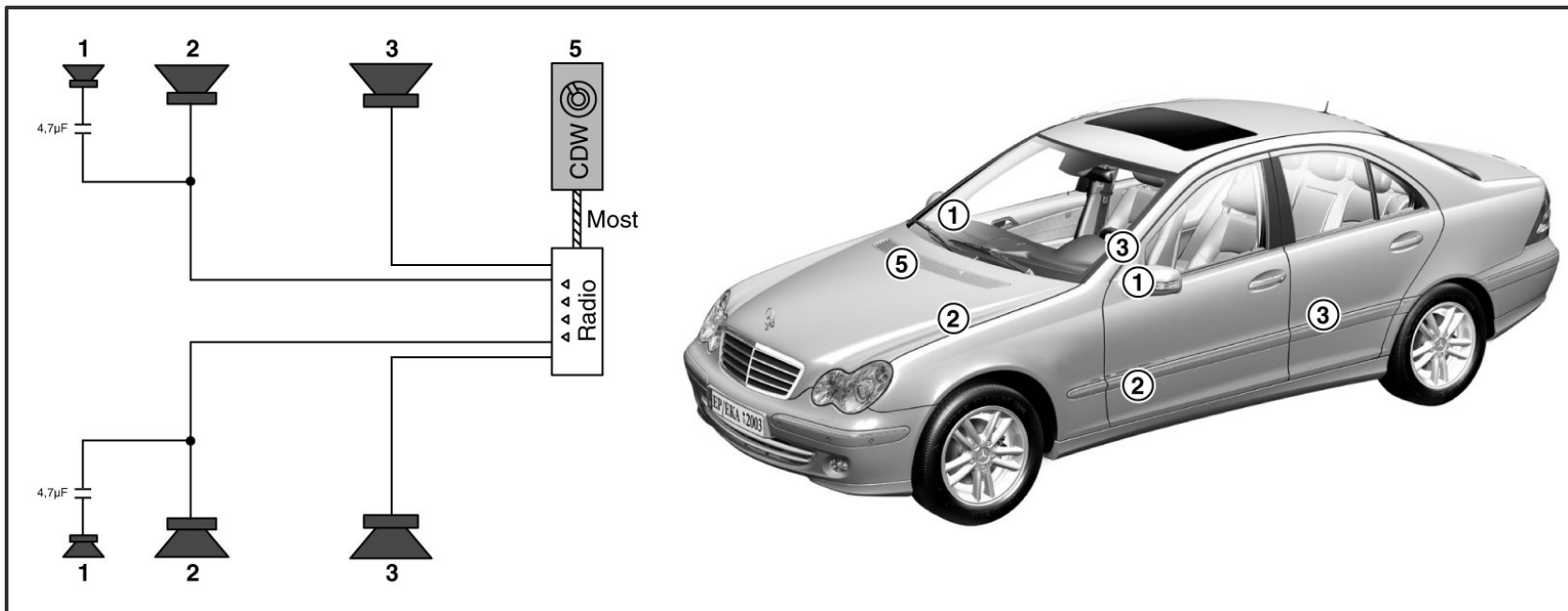
Camber 3, connector 3 (12-PIN, codeage B)

PIN	Signal/Signalinfo
1	FAN - (external fan)
2	Free
3	Free
4	Free
5	AUX-Shield
6	AUX Left Channel (glove ox)
7	FAN + (external fan)
8	DIAG fan (diagnose external fan)
9	Free
10	Free
11	AUX-GND (glove box)
12	AUX Right Channel (glove box)

Camber 4, connector 4 (12-PIN, codeage A)

PIN	Signal/Signalinfo
1	Free
2	Free
3	Reserved
4	Free
5	Shield (rear audio entertainment)
6	Left channel (rear audio entertainment)
7	Free
8	Free
9	Reserved
10	Reserved
11	Ground (rear audio entertainment)
12	Right channel (rear audio entertainment)

Loudspeakers Without Option SOUND



part-Nr.:	A 203 820 01 02	A 203 820 11 02	A 203 820 15 02	A 203 820 08 02	A 203 820 90 89
designation:	loudspeaker hightone	loudspeaker middletone	loudspeaker widetone	loudspeaker deeptone	CD-changer
producer:	Harman	Harman	Harman	Harman	Alpine
measures: [mm/l]	Ø 36	Ø 168	Ø 155	Ø 230	181, 250, 71
Magnet/weight: [kg]	0,06	0,5	0,410	0,9	1,8
Output Sinus: [Watt]	18	18	18	18/18	-
Transfer frequency: [Hz]	5k – 20k	55k – 7k	120k – 10k	40k – 130k	-
Impedance: [Ohm]	4	4	4	4/4	-

Mercedes-Benz USA W203



Questions ?