



Revision: New wiring harness included, new fuse box included.

## Installation instructions

# Trailer coupling

# 31.1

Model 129.05/06

The trailer coupling approved by us has been tested and accepted according to German licensing regulations. For all the remaining countries the respective valid regulations must be observed.

See Service Information bulletin Group 31 (operation with trailer) for details on trailer loads.

The vertical pressure of the trailer drawbar against the ball of the trailer coupling must not exceed the specified value on the model rating plate of the trailer coupling.

The manufacturers installation instructions included with the installation kit and the MB booklet provided with the Operating Instructions must be handed to the customer.

A wiring diagram for the trailer coupling can be found in the volume "Electrical wiring diagrams, model 129".

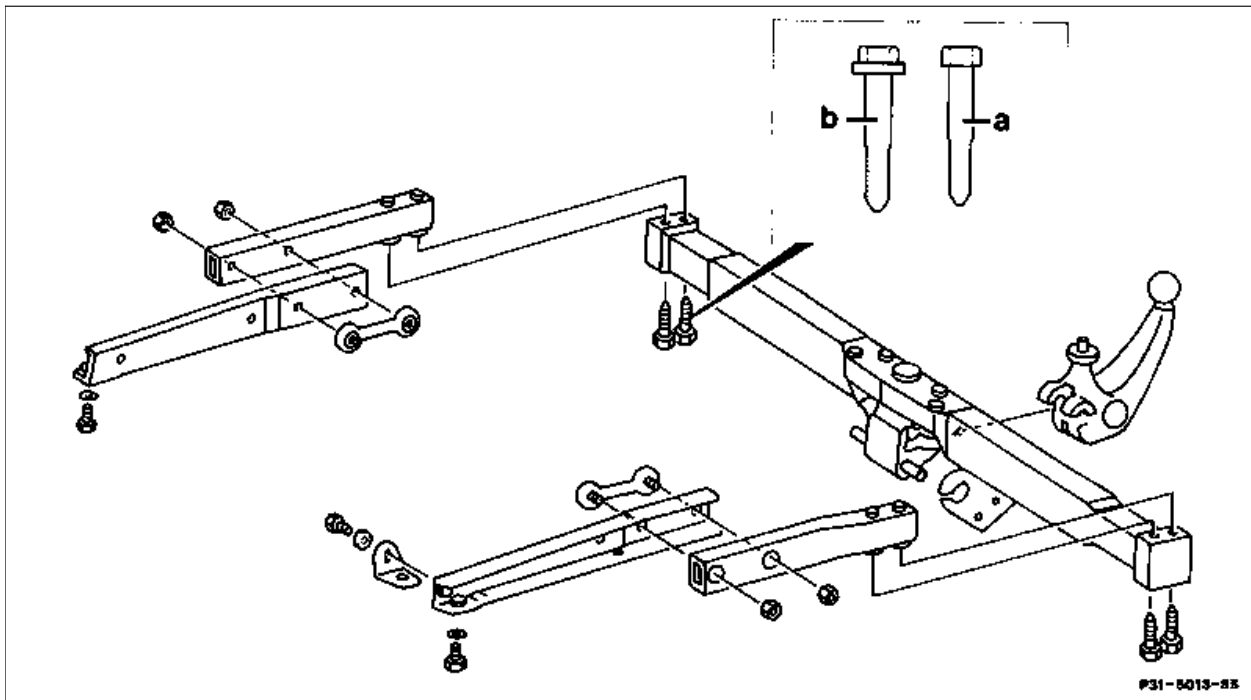


Remove body sealing compound and underfloor protection from all body mounting points of the trailer coupling and its fixing bolts.

Paint bare body parts e.g. on bores, with zinc dust paint.

The installation instructions are divided up into the following sections:

- A. Installing trailer coupling
- B. Installing electrical components
- C. Wiring harnesses
- D. Parts ordering note



P31-5013-55

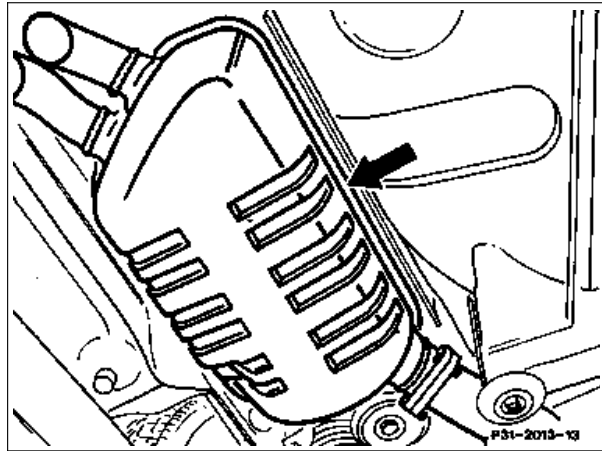
### Tightening torques in Nm

Screws without collar (a) M12 ×1.5×70 secured by micro-encapsulation	85
Screws with collar (b) M12 ×1.5×70 secured by micro-encapsulation	110
Screws M10×25 secured by micro-encapsulation	50
Nuts M10 self-locking	43

## A. Installing trailer coupling

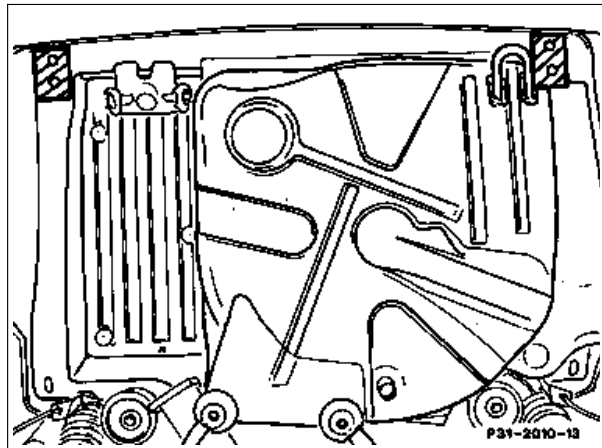
- 1 Detach hard-top or open soft-top.
- 2 Remove panelling at left and right in trunk.
- 3 Remove battery.
- 4 Remove cover of trunk floor.
- 5 Remove lamp carrier of taillamp units and panelling on rear center assembly.
- 6 Remove rear bumper.

- 7 Remove rear muffler (arrow).
- 8 Remove shield on rear muffler.



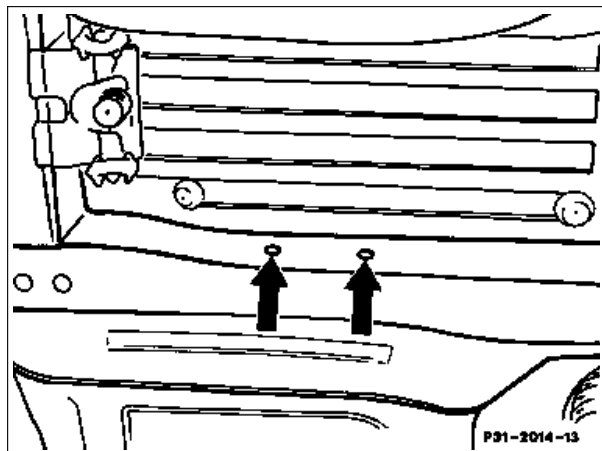
P31-2013-13

- 9 Remove underbody protection on the lower cross member of the rear center assembly in marked area.
- 10 Drill four holes (18 mm dia.) in cross member of rear center assembly, the locations are marked by 5 mm dia. holes in cover plate.



P31-2010-13

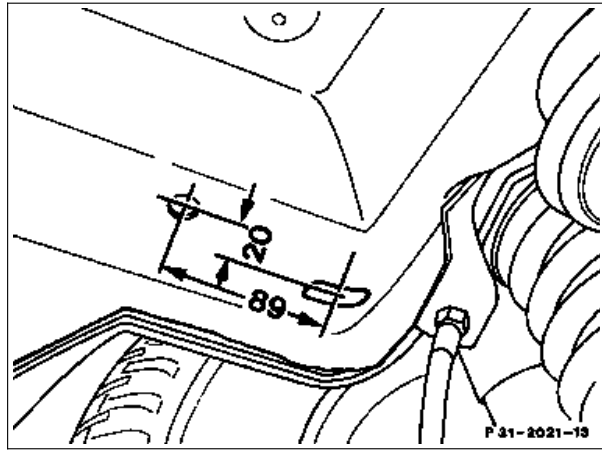
- 11 On left-hand vehicle underside, drill holes (15 mm dia.) indicated by a punch mark.
- 12 Remove under-floor protection in vicinity of holes.



P31-2014-13

- 13 Remove left and right rubber grommets from slot.
- 14 Trace hole on left longitudinal member and drill (15 mm dia.).

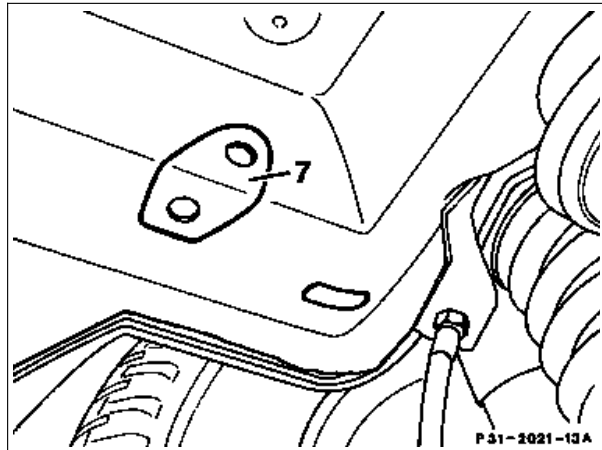
Arrangement, left



P31-2021-13

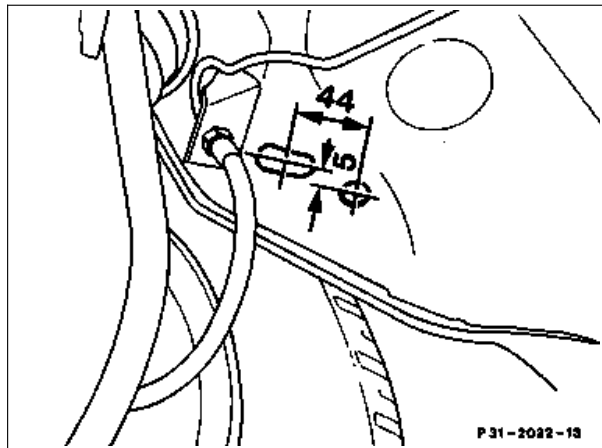
- 15 Using fastening angle as template, trace side hole in left longitudinal member and drill (15 mm dia.).
- 16 Remove under-floor protection in area where fastening angle is to be applied.

7 Fastening angle



P31-2021-13A

- 17 Trace hole on right longitudinal member and drill (15 mm dia.).
- 18 Remove under-floor protection in vicinity of hole.
- 19 Re-install left and right rubber grommet.
- 20 Remove foam parts from longitudinal members in trunk near wheel arches.

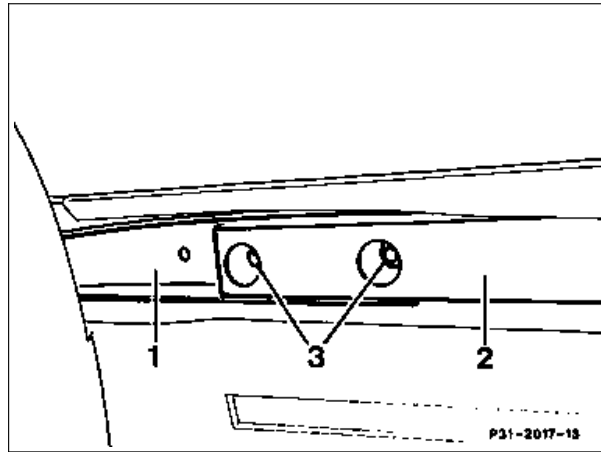


P31-2022-13

21 Place stiffening angle and then stiffening member, identified by "L" or "R", into left-hand or right-hand vehicle longitudinal member inside trunk.

Arrangement, left

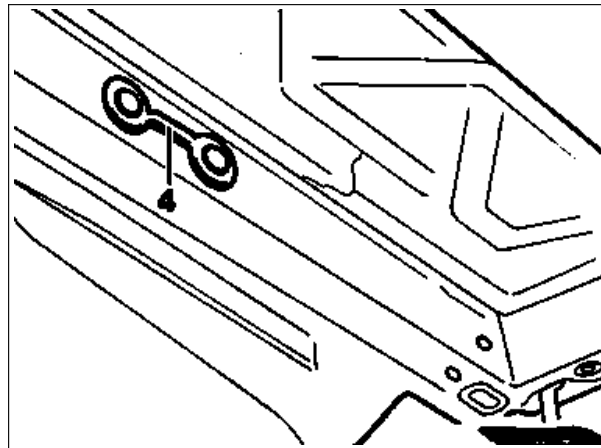
- 1 Stiffening angle
- 2 Stiffening member
- 3 Nuts M10 (self-locking)



P31-2017-13

22 Introduce counterlink on left-hand side from below. Then screw stiffening member and stiffening angle together with self-locking nuts in trunk so that the stiffening parts can still be moved.

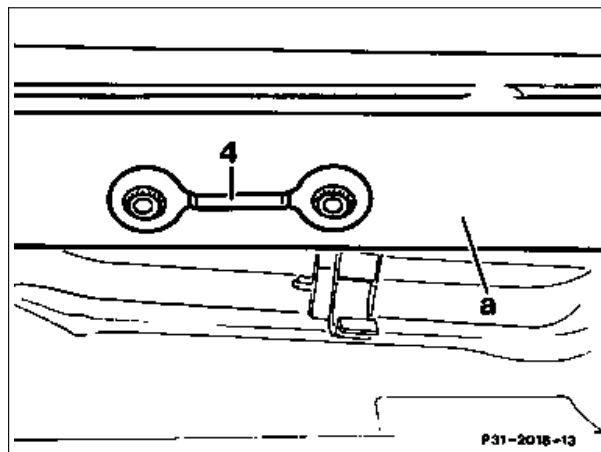
- 4 Counterlink



P31-2026-13

23 Insert counterlink in right-hand side of trunk. Then screw stiffening member and stiffening angle together with self-locking nuts so that the stiffening parts can still be moved.

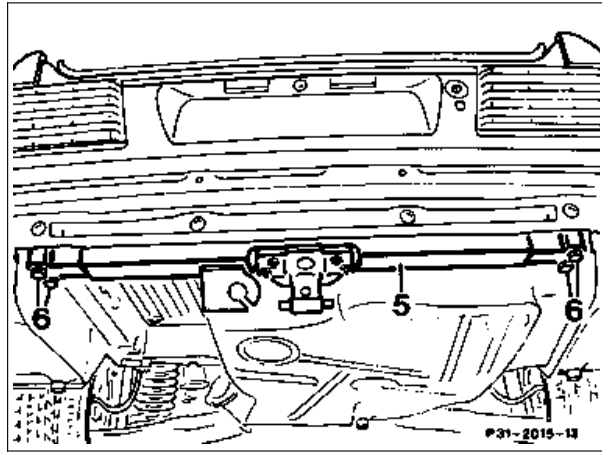
- 4 Counterlink
- a Longitudinal member in trunk



P31-2018-13

24 Mount cross member, align and tighten screws without collar to 85 Nm or screws with collar to 110 Nm.

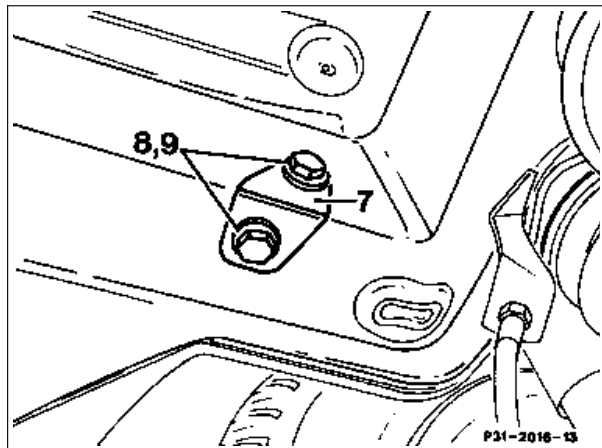
- 5 Cross member
- 6 Screw M12 X1.5X70 (micro-encapsulated)



P31-2015-13

25 Mount left-hand fastening angle and tighten screws to 50 Nm.

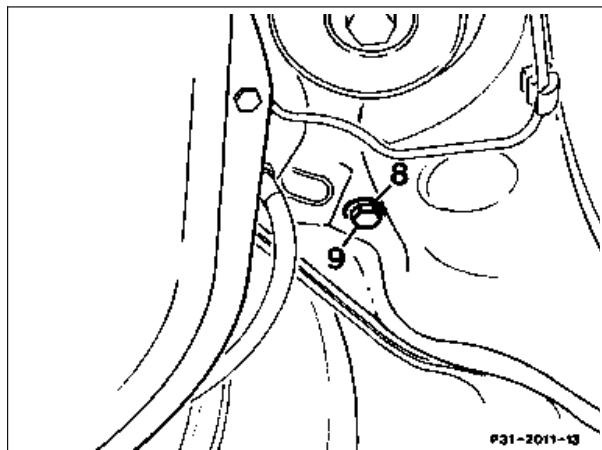
- 7 Fastening angle
- 8 Washer 10.5 (4 mm thick)
- 9 Screw M10 X25 (micro-encapsulated)



P31-2016-13

26 Mount right-hand screw with washer and tighten screw to 50 Nm.

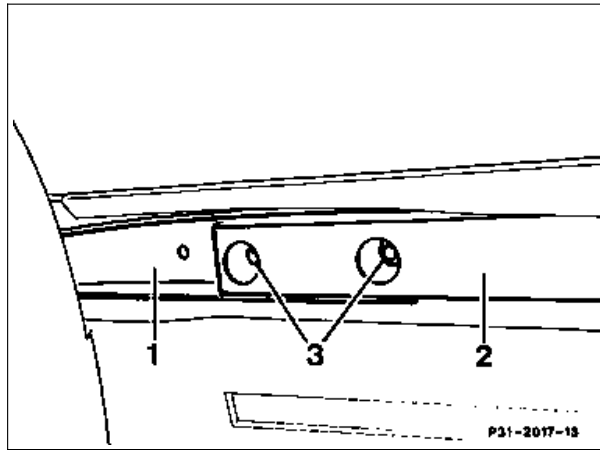
- 8 Washer 10.5 (4 mm thick)
- 9 Screw M10 X25 (micro-encapsulated)



P31-2011-13

27 On left and right inside of trunk, tighten self-locking nuts of stiffening member/stiffening angle screw connection to 43 Nm.

- 1 Stiffening angle
- 2 Stiffening member
- 3 Nut M10 (self-locking)



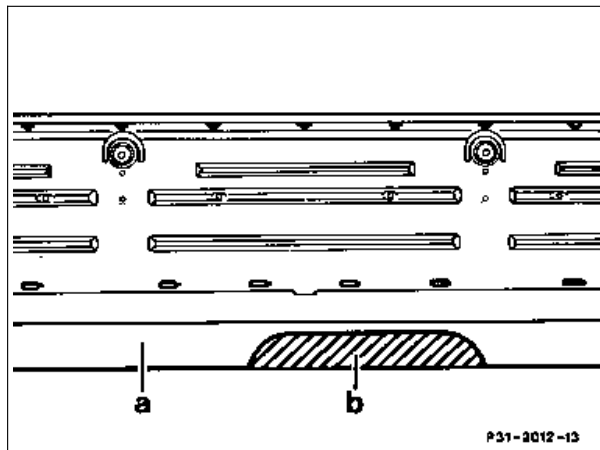
P31-2017-13

28 Cut out opening marked on inside of bumper (e.g. with a fret saw).

29 Install rear bumper.

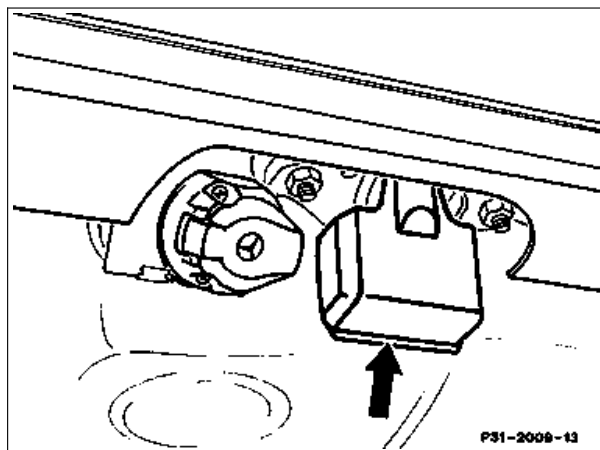
30 Install shield and rear muffler.

- a Bumper
- b Opening



P31-2012-13

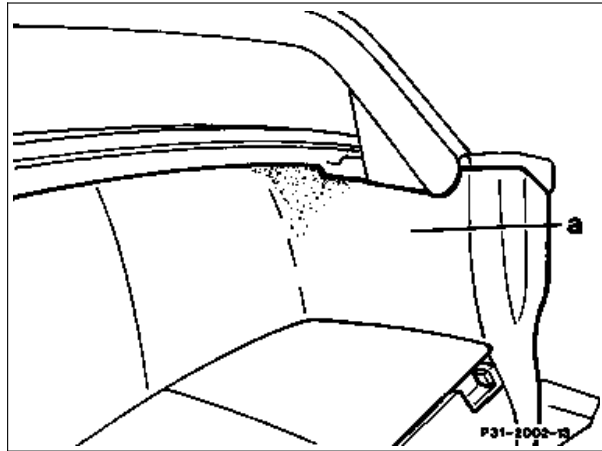
31 Attach ball neck and check that the marking on the hand wheel points towards "ZU" (closed). Then remove ball neck and push covering cap (arrow) onto ball neck mounting.



P31-2009-13

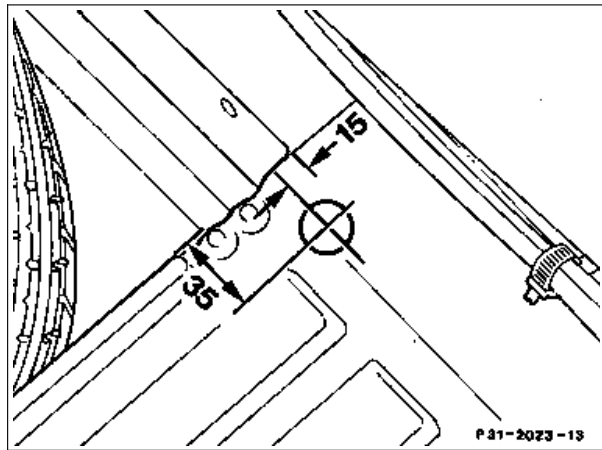
## B. Installing electrical components

- 1 Remove cover at left door entrance.
- 2 Remove left panelling (a) in rear passenger compartment (68-455).
- 3 Remove left covers below instrument panel.
- 4 Remove cover at left front wall pillar.



P31-2002-13

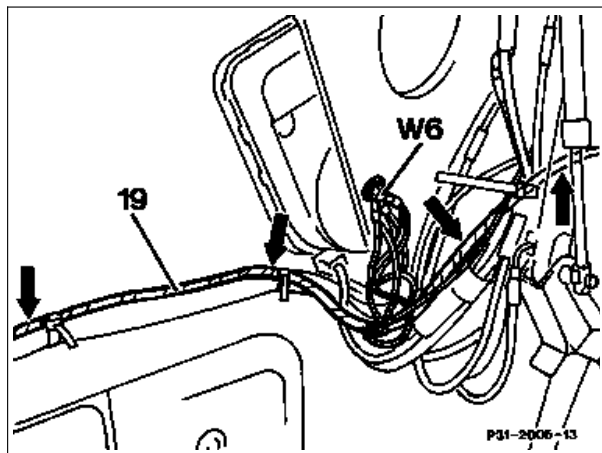
- 5 Mark holes for cables in rear floor on left near spare-wheel recess.
- 6 Drill marked hole (22 mm dia.).



P31-2023-13

- 7 Connect ground cable to ground point (W6).
- 8 Route trailer coupling wiring harness along present wiring harness to left tail lamp.

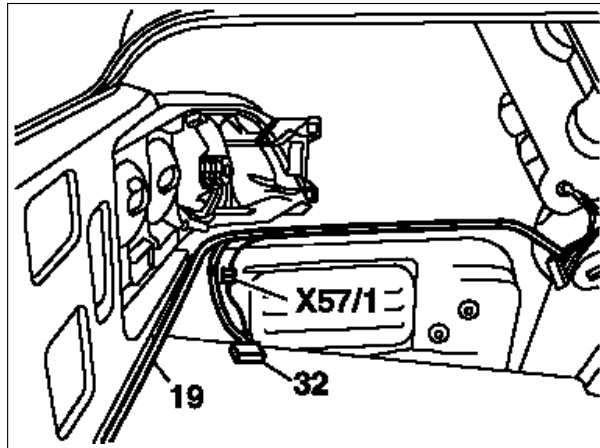
- 19 Trailer coupling wiring harness
- W6 Ground, left rear wheelhouse in trunk



P31-2005-13



- 9 Open connector (32) for left tail lamp.
- 10 Remove grey/green wire from pin 7. Insert grey wire from trailer coupling wiring harness (pin 7) and close connector (32).
- 11 Install grey/green wire removed from tail lamp in single-pin connector. Insert plug into connector (connector X57/1).
- 12 Route red/black wire from trailer coupling wiring harness along present wiring harness in area of central locking pump (CL).



P31-5115-13

- |       |   |
|-------|---|
| 19    | Trailer coupling wiring harness                               |
| 32    | Left tail lamp connector                                      |
| X57/1 | Intermediate plug connector, left tail lamp, trailer coupling |

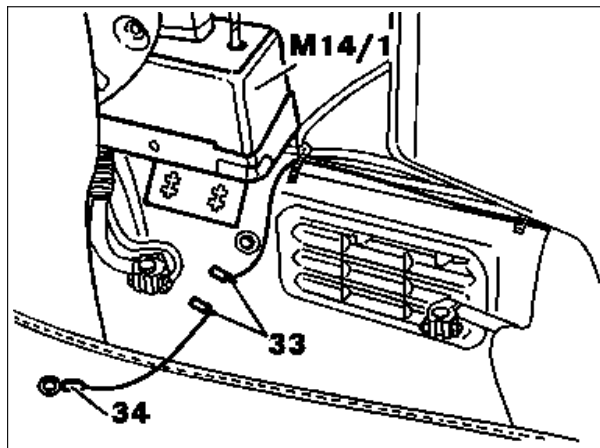
### Vehicles up to approx. 08/95

- 13 Cut red/black wire in area of central locking pump (CL). Solder 4 mm socket onto each end of wire cut.

- 14 Cut off red/black wire with flat terminal to approx. 40 cm and then solder on 6.5 mm ring terminal. Install contact protection on ring terminal.

**Note**

The remaining piece of red/black wire with the flat terminal is no longer required.



P31.19-0220-13

- |       |                                   |
|-------|-----------------------------------|
| 33    | 4 mm socket                       |
| 34    | 6.5 mm ring terminal              |
| M14/1 | Supply pump, central locking (CL) |

- 15 Insert sockets into 6-pin connector as follows:  
Wire from trailer coupling wiring harness into pin 3  
Wire with ring terminal into pin 5

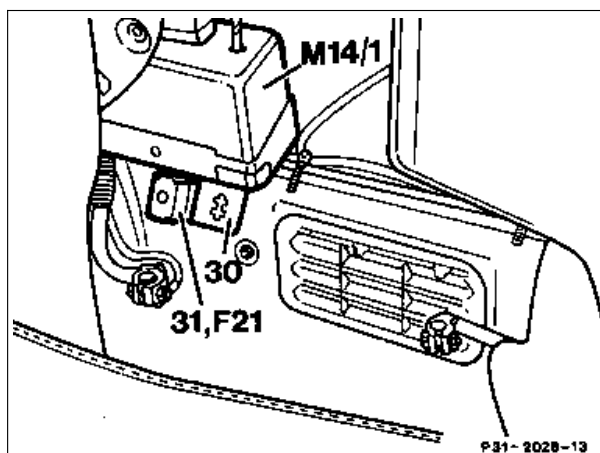
- 16 Close 6-pin connector and catch in mount (30).

- 17 Also connect red/black wire with ring terminal to positive pole clamp.

- 18 Press auxiliary fuse box onto 6-pin connector.

- 19 Insert fuse (16A).

- 20 Press cover onto fuse box.



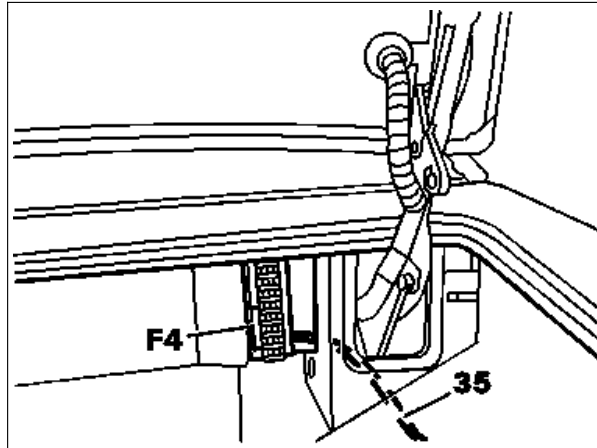
P31-2028-13

- |    |       |
|----|-------|
| 30 | Mount |
| 31 | Cover |

- F21 Auxiliary fuse box, trailer coupling (AHV), terminal 30
- M14/1 Supply pump, central locking (CL)

**Vehicles as of approx. 09/95**

- 21 Remove fuse box in trunk (F4).
- 22 Route red/black wire (35) to fuse box in trunk (F4) and connect to pin 7 B.
- 23 Install fuse (25A).
- 24 Install fuse box in trunk (F4).



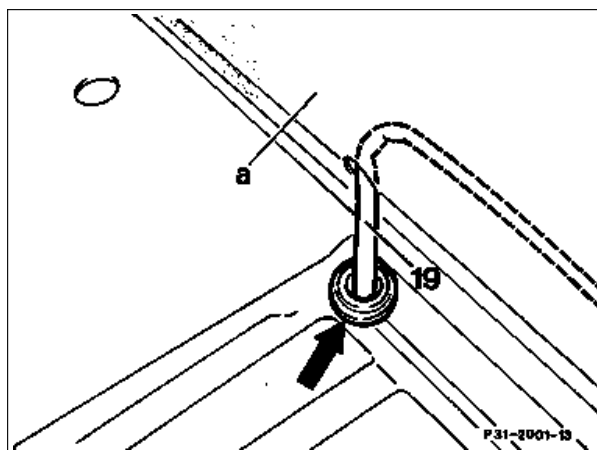
P31.19-0221-13

- 35 Red/black wire
- F4 Fuse box in trunk

**All vehicles**

- 25 Reinstall bottom panelling (a) on rear center piece while inserting trailer coupling wiring harness (19) through present hole.
- 26 Pull wiring harness through hole in trunk floor and insert rubber grommet (arrow).

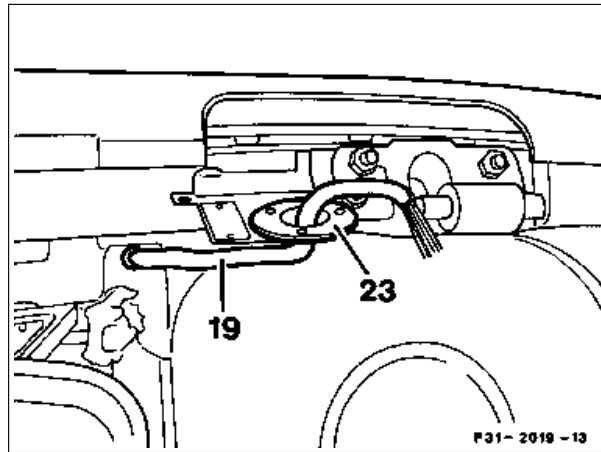
- 19 Trailer coupling wiring harness
- a Bottom panelling on rear center piece



P31-2001-13

27 Pull rubber grommet (23) onto trailer coupling wiring harness (19).

- 19 Trailer coupling wiring harness
- 23 Rubber grommet



P31-2019-13

28 Attach 3-pin connector for trailer coupling wiring harness to socket (X58).

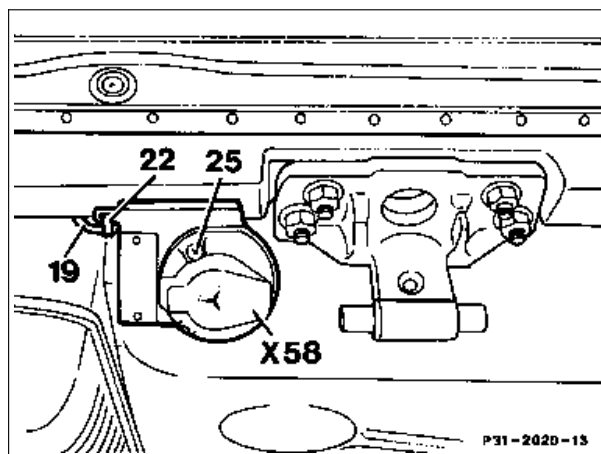
29 Connect trailer coupling wiring harness in socket as follows:

Pin	Wire	mm <sup>2</sup>
1	black/white	0.75
2	green	1.5
3	brown	1.5
4	black/green	0.75
5	grey/red	0.75
6	black/red	0.75
7	grey/black	0.75
8	grey/yellow	0.75
9	red/black	2.5
13	brown	2.5

30 Screw socket (X58) onto retaining plate.

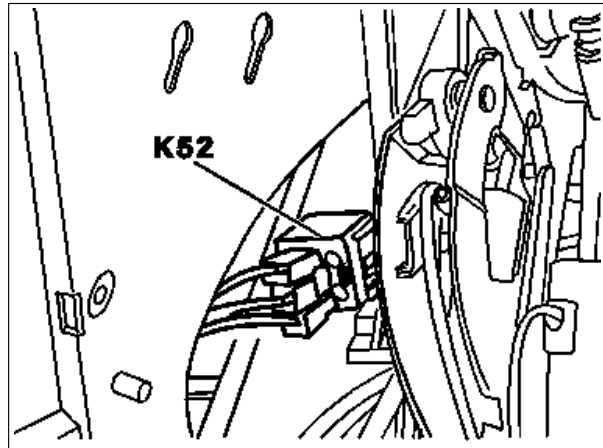
31 Fasten trailer coupling wiring harness (19) to cross member.

- 19 Trailer coupling wiring harness
- 22 Cable strap
- 25 Screw B 4.8 X32
- X58 Trailer coupling socket



P31-2020-13

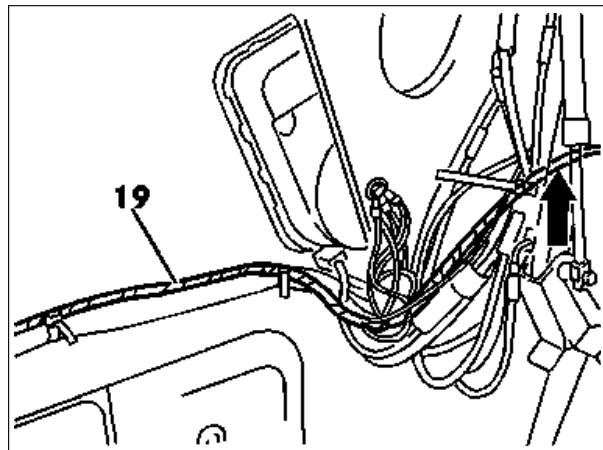
- 32 Clip tie-out with rear fog lamp shutoff relay (K52) in vicinity of left trunk lid hinge.  
K52 Rear fog lamp shutoff relay



P31.19-0222-13

- 33 Route tie-out from trailer coupling wiring harness (19) to left through rear wall (arrow) into passenger compartment.

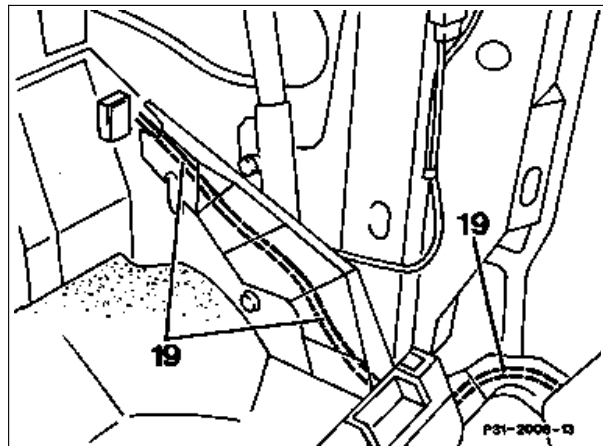
19 Trailer coupling wiring harness



P31.19-0223-13

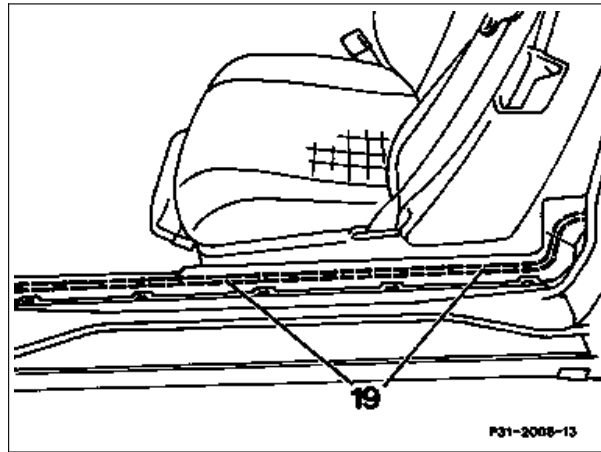
- 34 Route trailer coupling wiring harness (19) along main wiring harness into front footwell while lifting floor covering and laying auxiliary wiring harness in wiring duct.

19 Trailer coupling wiring harness



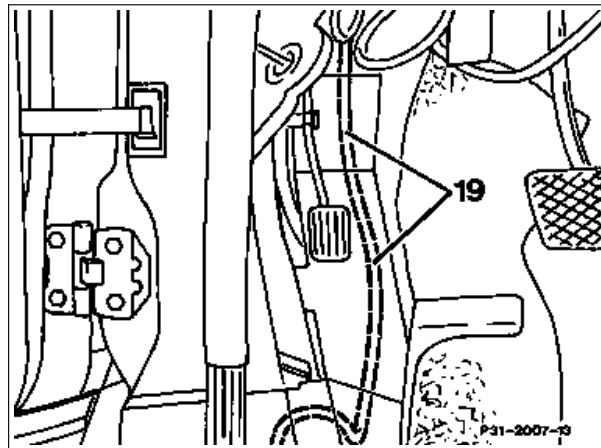
P31-2006-13

19 Trailer coupling wiring harness



P31-2008-13

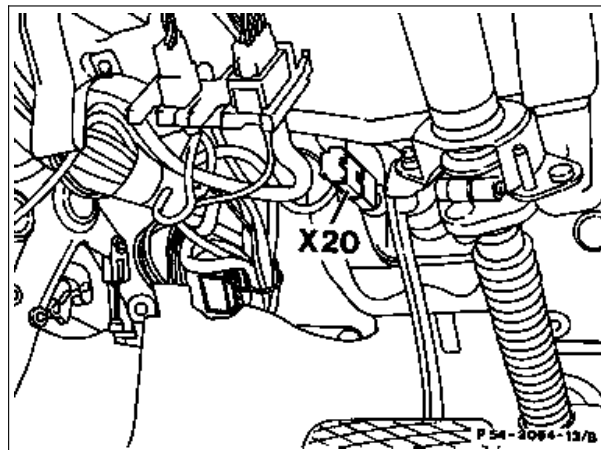
19 Trailer coupling wiring harness



P31-2007-13

35 Install intermediate plug on trailer coupling wiring harness between vehicle wiring harness and stop lamp switch.

X20 Connector, stop lamp switch

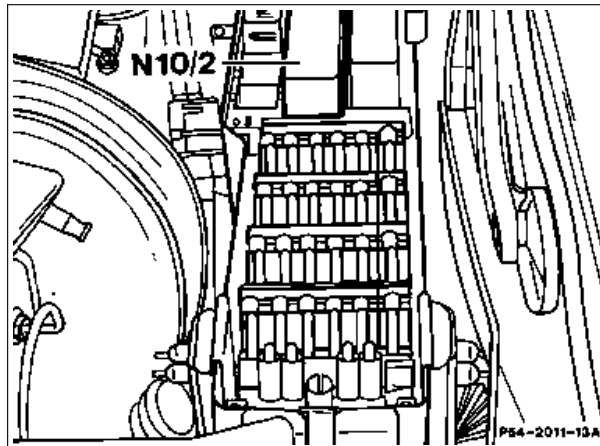


P54-2064-13B

36 Remove cover on fuse and relay box.  
37 Loosen fuse carrier.

**Vehicles up to approx. 08/95**

- 38 Pull out combination relay (N10/2) and unclip relay holder.
- 39 Pull trailer coupling wiring harness from footwell into fuse and relay box.

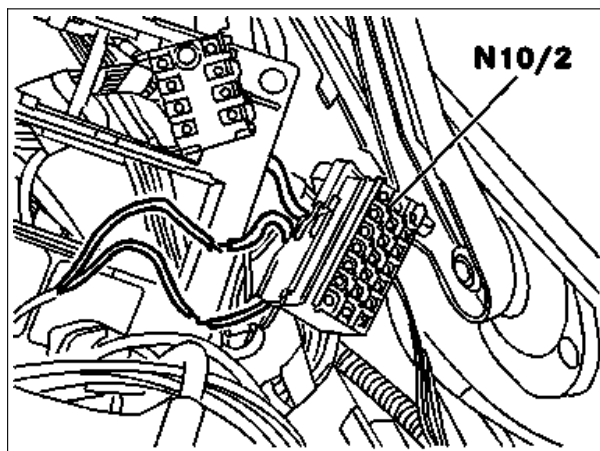


P54-2011-13A

- 40 Open 3-pin connector for trailer coupling wiring harness and remove wires (coupling housing is no longer required).
- 41 Mount socket with yellow wire in pin 4 of 21-pin connector for combination relay (N10/2).
- 42 Cut sockets off of black/white and black/green wires on trailer coupling wiring harness and strip insulation back approx. 10 mm.
- 43 Cut black/white and black/green wires in 21-pin connector for combination relay (N10/2) approx. 40 mm away from connector and strip insulation back approx. 10 mm.

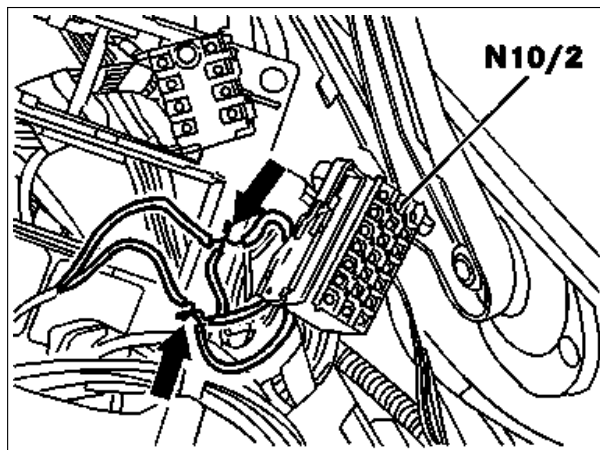
**Note**

The black/white wire is connected to pin 15, black/green wire to pin 19 in 21-pin connector!



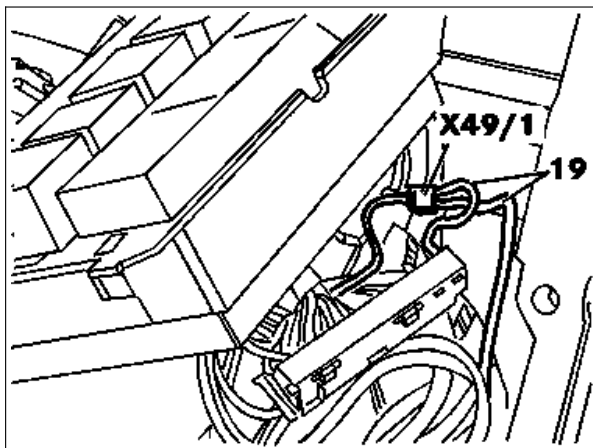
P31.19-0224-13

- 44 Solder black/white and black/green wires together (arrow) and insulate.
- 45 Reinstall 21-pin connector and combination relay (N10/2).



P31.19-0225-13

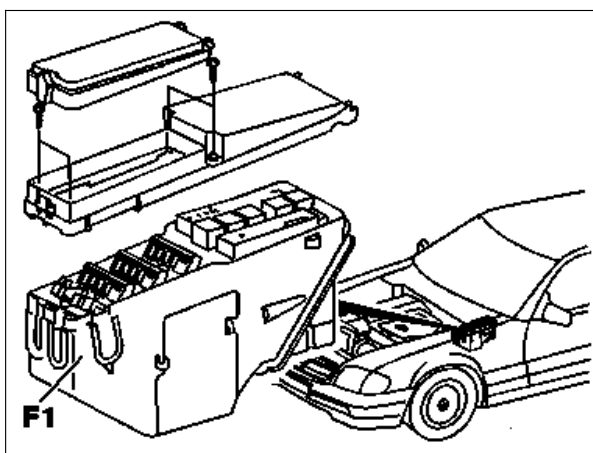
- 46 Disconnect exterior lamp failure monitoring module (N7).
- 47 Open connector on exterior lamp failure monitoring module (N7) and remove grey/yellow wire (pin 13). Insert grey/yellow wire from trailer coupling wiring harness (19) and close connector.
- 48 Insert grey/yellow wire removed into 2-pin connector for trailer coupling wiring harness (pin 1), close housing (connector X49/1).
- 49 Reinstall exterior lamp failure monitoring module (N7).



P31.19-0226-13

- 19 Trailer coupling wiring harness  
 X49/1 Connector, reverse lamp switch

- 50 Cut flat terminals off of remaining 3 wires (no longer required).
- 51 Solder ring terminals onto wires and install contact protection.
- 52 Connect wires as follows to fuse and relay box (F1):  
 Grey/red wire fuse 1 (output)  
 Grey/black wire fuse 3 (output)  
 Black/yellow wire fuse 12 (output)

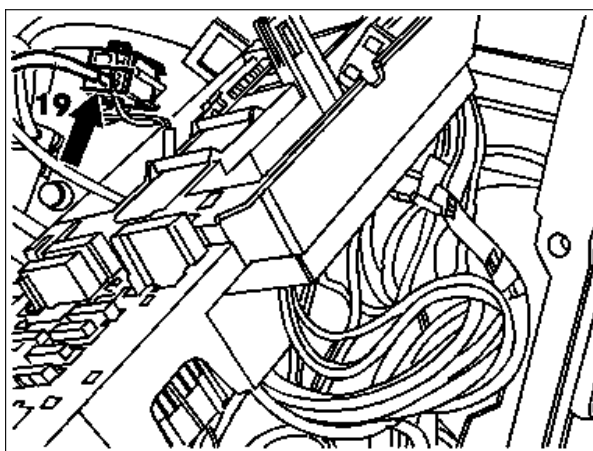


P31.19-0227-13

- F1 Fuse and relay box

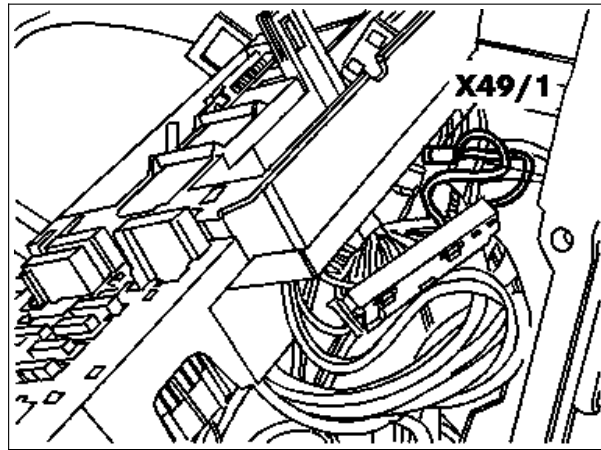
**Vehicles as of approx. 09/95**

- 53 Remove combination relay (N10/2) and unclip relay holder.
- 54 Pull trailer coupling wiring harness (19) from footwell into fuse and relay box.
- 55 Connect 3-pin connector to support element (arrow) for combination relay (N10/2).
- 56 Reinstall combination relay (N10/2).



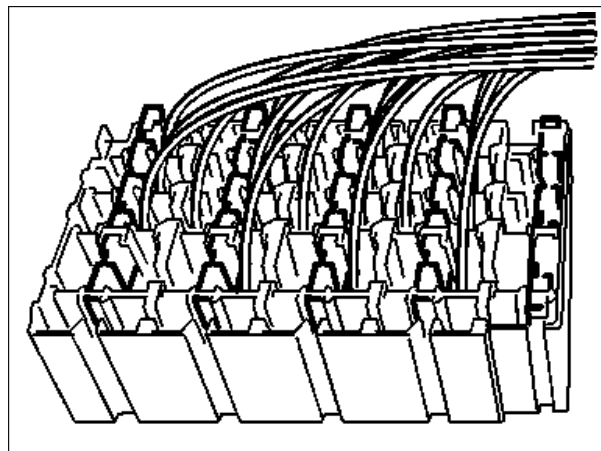
P31.19-0228-13

- 57 Disconnect exterior lamp failure monitoring module (N7).
- 58 Open connector on exterior lamp failure monitoring module (N7) and remove grey/yellow wire (pin 13). Insert grey/yellow wire from trailer coupling wiring harness and close connector.
- 59 Insert grey/yellow wire removed into 2-pin plug for trailer coupling wiring harness (pin 1) and close plug housing (connector X49/1).
- 60 Reinstall exterior lamp failure monitoring module (N7).



P31.19-0229-13

- 61 Unlock retaining blocks on fuses 2, 3 and 13.
- 62 Connect wires as follows:  
 Grey/red wire fuse 2 pin A  
 Grey/black wire fuse 3 pin A  
 Black/yellow wire fuse 13 pin A
- 63 Lock fuse blocks.



P31.19-0230-13

### All vehicles

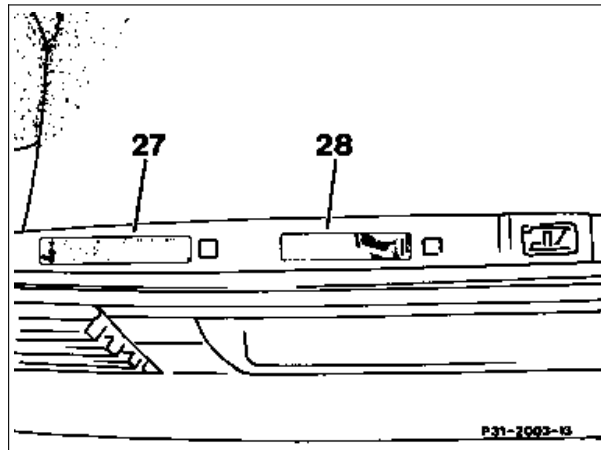
- 64 Fasten fuse carrier and close cover on fuse and relay box.
- 65 Install cover below instrument panel, on front pillar and door sill.
- 66 Install panelling in rear (68-455).

- 67 Install left trunk panelling.
- 68 Install upper panelling for rear center piece.
- 69 Insert cover for trunk floor.
- 70 Install lamp carrier for tail lamps.



71 Affix plates to loading edge.

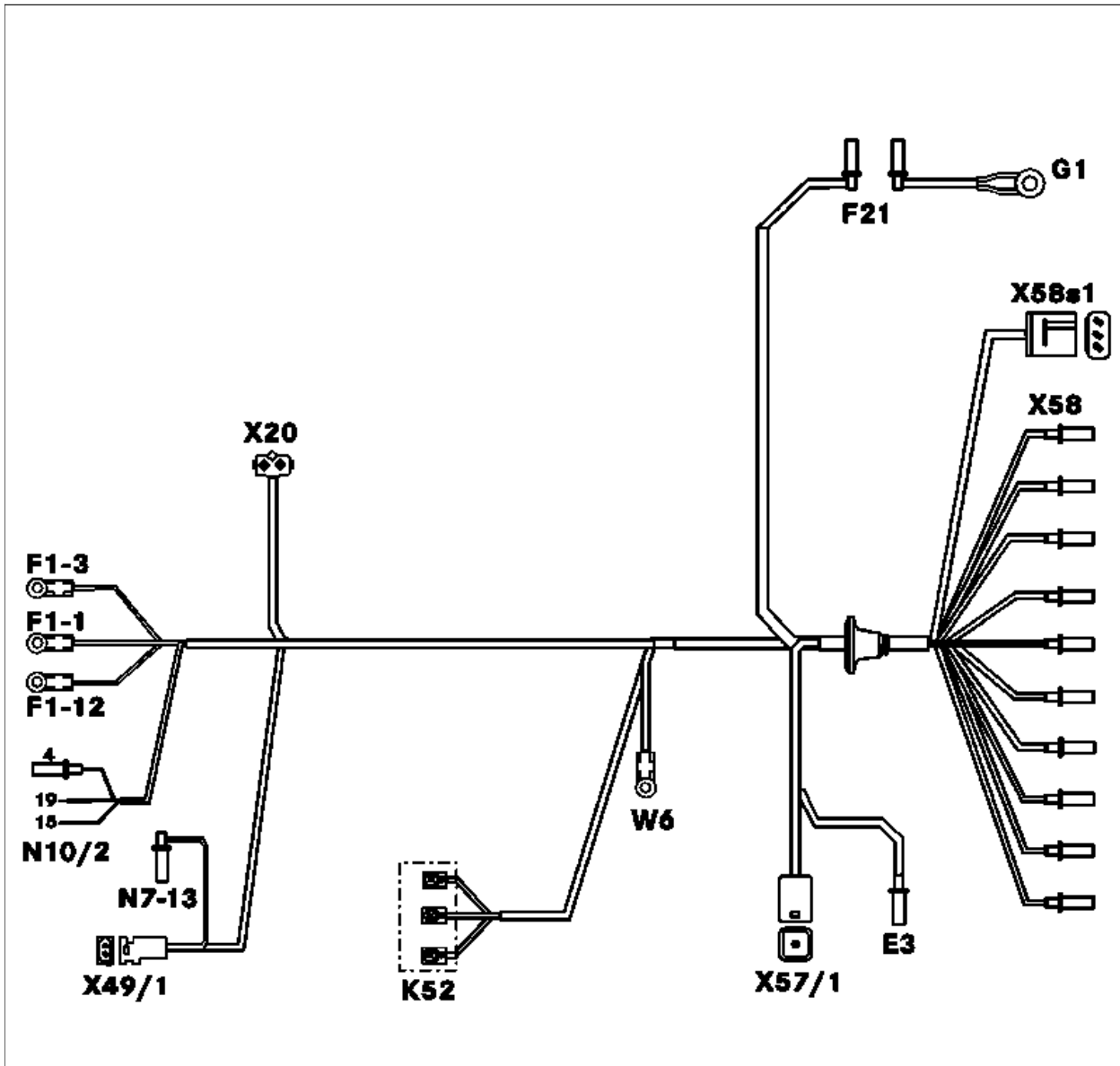
- 27 Drawbar load/trailer load sticker
- 28 Operating note sticker



P31-2003-13

- 72 Place case with ball neck in vehicle.
- 73 Install battery.
- 74 Install trunk panelling on right.
- 75 Check electrical system for proper function.
- 76 Check headlamp adjustment, correct as required.

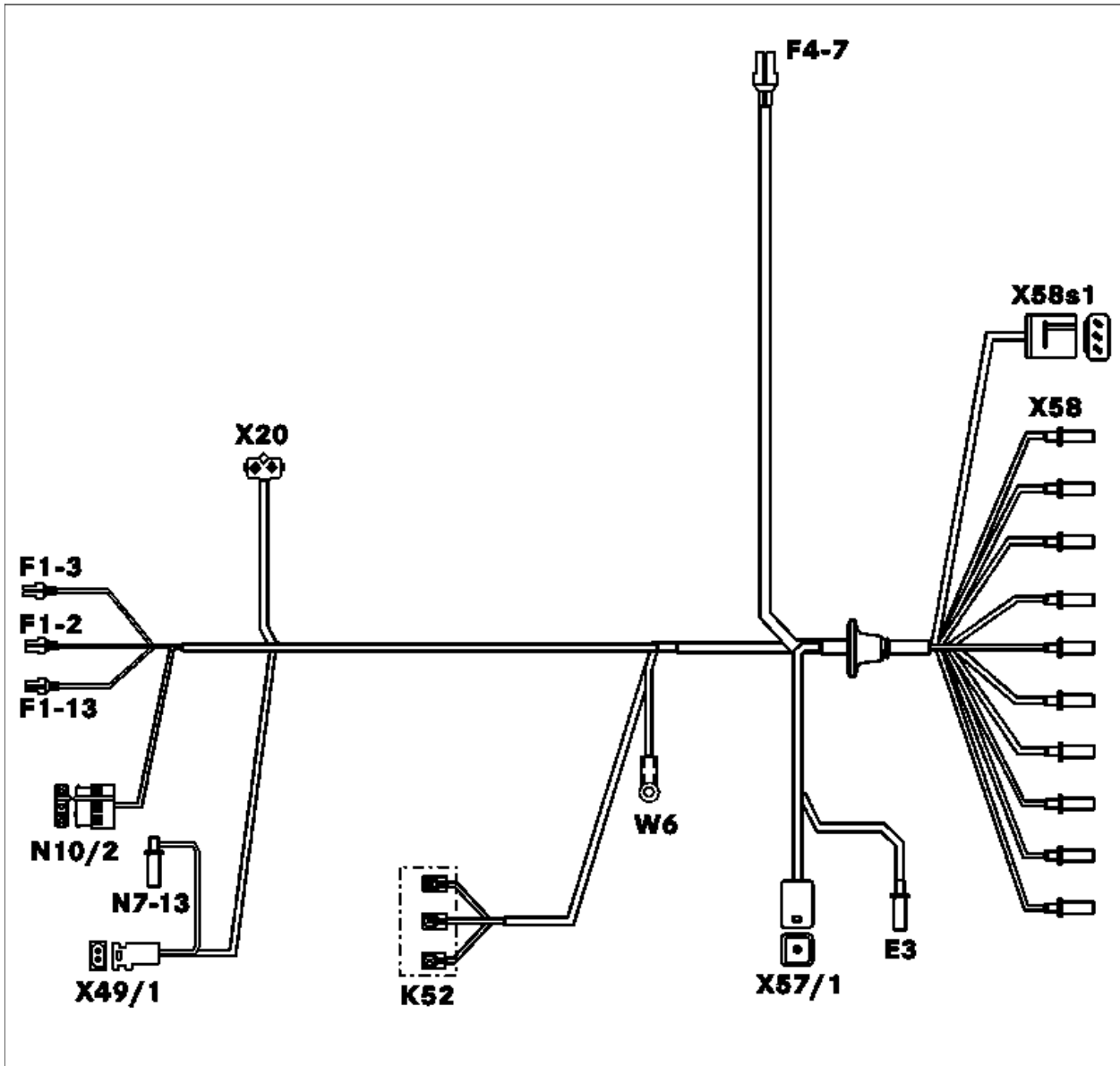
## C. Wiring harnesses



P31.19-0231-59

### Trailer coupling wiring harness, vehicles up to approx. 08/95

E3	Left tail lamp	N10/2	Combination relay (turn signal with trailer coupling, rear window defroster, wiper motor, ATA)
F1	Fuse and relay box	N10/2 (4)	Trailer recognition
F1-1	Fuse 1, terminal 58R	N10/2 (15)	Right turn signal lamp
F1-3	Fuse 3, terminal 58I	N10/2 (19)	Left turn signal lamp
F1-12	Fuse 12, terminal 15R	W6	Ground, left rear wheelhouse in trunk
F21	Auxiliary fuse box, trailer coupling (AHV), terminal 30	X20	Intermediate connector, stop lamp switch, 2-pin
G1	Battery	X49/1	Connector, reverse lamp switch
K52	Rear fog lamp shutoff relay	X57/1	Intermediate connector, left tail lamp, trailer coupling
N7	Exterior lamp failure monitoring module	X58	Socket, trailer coupling, 13-pin
N7-13	Reverse lamp	X58s1	Trailer recognition microswitch



P31.19-0232-59

#### Trailer coupling wiring harness, vehicles as of approx. 09/95

E3	Left tail lamp	N10/2	Combination relay (turn signal with trailer coupling, rear window defroster, wiper motor, ATA)
F1	Fuse and relay box	W6	Ground, left rear wheelhouse in trunk
F1-2	Fuse 2, terminal 58R	X20	Intermediate connector, stop lamp switch, 2-pin
F1-3	Fuse 3, terminal 58L	X49/1	Connector, reverse lamp switch
F1-13	Fuse 13, terminal 15R	X57/1	Intermediate connector, left tail lamp, trailer coupling
F4	Fuse box in trunk	X58	Socket, trailer coupling, 13-pin
F4-7	Fuse 7, terminal 30	X58s1	Trailer recognition microswitch
K52	Rear fog lamp shutoff relay		
N7	Exterior lamp failure monitoring module		
N7-13	Reverse lamp		

#### D. Parts ordering note

The parts required for installation are listed in the parts documents:

Designation

Group

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Mechanical parts set for trailer coupling	99
Ball head parts set	99
Electrical parts set for trailer coupling	99
Adapter for connecting 13-pin trailer socket to 7-pin trailer plug <sup>1)</sup>	31

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<sup>1)</sup> Only on customer request.