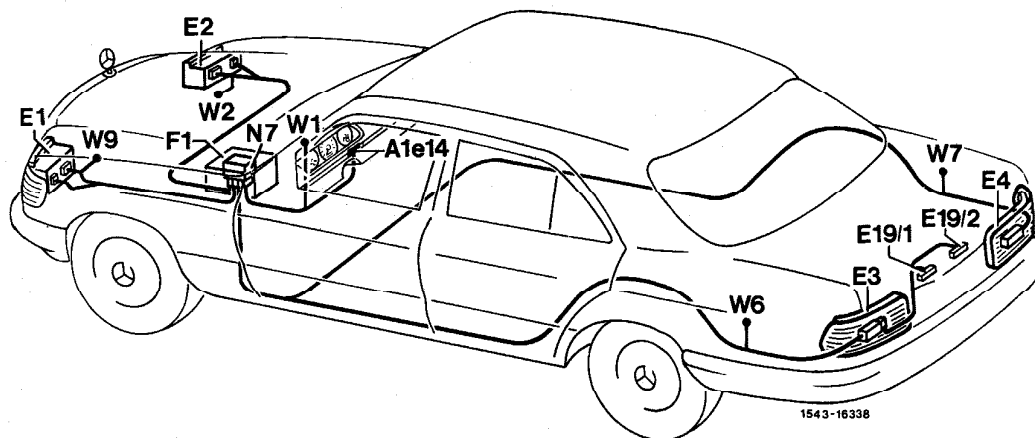


54-240 Bulb failure indicator



A1 Instrument cluster
 e14 Bulb failure indicator
 E1 Left headlamp unit
 E2 Right headlamp unit
 E3 Left tail lamp
 E4 Right tail lamp

E19/1 Left licence plate lamp
 E19/2 Right licence plate lamp
 F1 Fuse and relay box
 N7 Bulb failure monitoring unit
 W1 Main ground (behind instrument cluster)
 W2 Ground, front right (near headlamp unit)
 W6 Ground, trunk, left wheelhouse
 W7 Ground, trunk, right wheelhouse
 W9 Ground, front left (near headlamp unit)

— Electrical cables

A. Function bulb failure indication

The following bulb functions of the exterior lighting are monitored by the bulb failure monitoring unit N7 in the fuse and relay box and indicated by the indicator lamp in the instrument cluster which lights up upon failure:

Low beam, high beam, fog light, parking light, tail light, licence plate lamp, brake light, turn-signal light, fog tail light and backup light.

If a bulb fails in one of these circuits, the indicator lamp indicates the fault as long as this light remains switched on.

The brake light and the turn-signal light have a fault memory, i.e. if a bulb failure occurs in one of these electrical circuits, the bulb failure indicator remains on until the key in the steering lock has been returned to „1“ or „0“ position.

For fault identification, turn key from position „0“ to position „2“ (ignition on) and switch on turn-signal lamp and brake light.

If several lamps are activated simultaneously when switching on the lighting, a visual inspection is required to determine where the fault is.

Note: The indicator lamp for self-testing in key position „2“ lights up with reduced light intensity and goes out with running engine.

Upon subsequent installation of additional lighting such as additional headlamps, additional brake lamps, trailer coupling etc., the lamps must be connected to the fuse before the bulb failure monitoring unit.

The lamps must be connected before the monitoring unit otherwise the bulb failure indication will be disturbed or the bulb failure monitoring unit damaged.

B. Additional function and testing on vehicles with trailer hitch

As of 08/86, no additional turn-signal indicator lamp will be installed in the instrument cluster. A defective turn-signal bulb on the trailer will be indicated by a faster flashing frequency of the turn-signal indicator lamp, the bulb failure indicator lamp will light up at the same time.

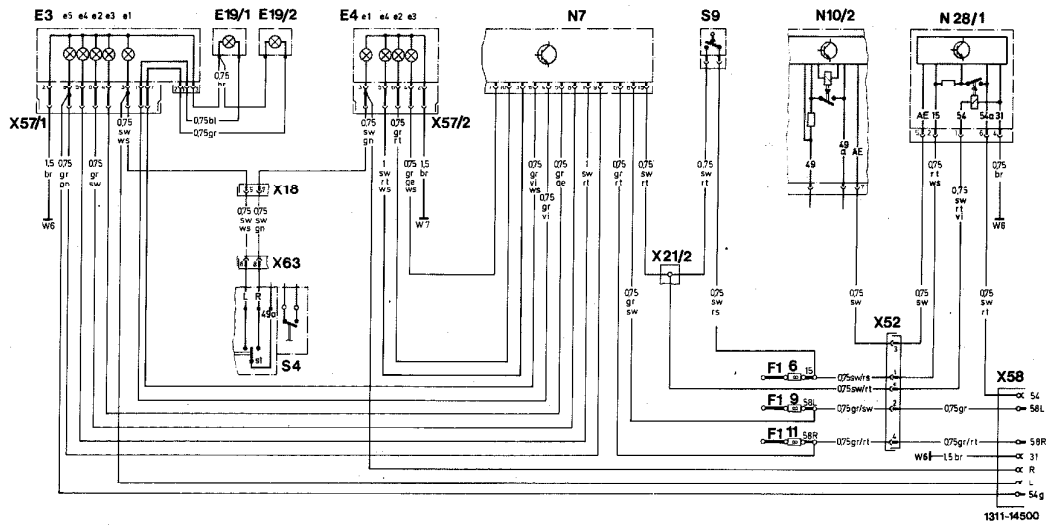
Function

Switching over the combination relay for turn-signal (N 10/2) to trailer operation takes place by a signal from the control unit „Trailer monitoring control unit (N 28/1)“. It identifies the trailer operation by electrical measurement via the brake lamps of the trailer.

Function test of bulb failure indication

1. Connect bulb 21 watt, 12 volt to terminal 54 (brake light) and terminal 31 (ground) of trailer socket (simulation of trailer with defective turn-signal lamp).
2. Switch on ignition.
3. Switch on turn-signal lamp; flashing frequency is faster than normal and the bulb failure indicator lamp lights up.

54-240 Bulb failure indicator



Wiring diagram trailer hitch, vehicles as of approx. 08/86 with bulb failure indication without permanent power line terminal 30

- | | | | |
|-------|--------------------------------------|-------|--|
| E3 | Left tail lamp | N10/2 | Combination relay (turn-signal lamp with trailer indication, heated back rear window, wiper motor) |
| e1 | Turn-signal lamp | N28/1 | Trailer monitoring control unit |
| e2 | Tail lamp/parking lamp | S4 | Combination switch |
| e3 | Backup lamp | S9 | Brake lamp switch |
| e4 | Brake lamp | W6 | Ground, trunk, left wheelhouse |
| e5 | Fog tail lamp | W7 | Ground, trunk, right wheelhouse |
| E4 | Right tail lamp | X18 | Connector, tail lamp wiring harness |
| e1 | Turn-signal lamp | X21/2 | Terminal block brake lamp switch/
electric speedometer |
| e2 | Tail lamp/parking lamp | X52 | Connector, trailer hitch |
| e3 | Backup lamp | X57/1 | Connector, tail lamp left/trailer hitch |
| e4 | Brake lamp | X57/2 | Connector, tail lamp right/trailer hitch |
| E19/1 | Left licence plate lamp | X58 | Socket trailer hitch
(connect terminal 54g only if trailer is equipped with fog tail lamp) |
| E19/2 | Right licence plate lamp | X63 | Connector, steering wiring harness |
| F1 | Fuse and relay box | | |
| | Fuse 6, terminal 15 | | |
| | Fuse 9, terminal 58L | | |
| | Fuse 11, terminal 58R | | |
| N7 | Bulb failure monitoring control unit | | |