

Checking turn signal and emergency flasher system

Required for troubleshooting:

- ◆ *Multimeter Fluke 83*
- ◆ *Connector Test Kit VW 1594*
- ◆ *Valid wiring diagram*

Before starting troubleshooting, battery negative terminal must be securely tightened.

Test conditions:

- ◆ S2 - Fuse 2 (10A) in fuse panel OK
- ◆ S239 - Fuse 39 (15A) in fuse panel OK
- ◆ All turn signal bulbs OK

CAUTION!

DO NOT damage, enlarge or bend connector terminals or cavities by forcing probes into them when performing electrical checks. Always use connector test kit VW 1594 to make the necessary electrical connections.

Preparation:

- Switch **OFF** ignition and all electric consumers.
- Remove Emergency Flasher Switch (E3) ⇒ Repair Group 96
- Remove turn signal switch trim, ⇒ Repair Group 96

Note:

If the emergency flasher system is inoperative and the turns signals function normally, check the power supply (30 circuit) to the emergency flasher system only. If the turn signal system is inoperative and the emergency flasher system functions normally, check the power supply (X circuit) to the turn signal switch only.

If malfunction has not been eliminated after all test steps, replace emergency flasher switch and integrated flasher relay.

After repairing malfunction, please perform functional test of turn signal and emergency flasher system.

Troubleshooting starts on next page

Check voltage supply (terminal 15) to emergency flasher switch (E3)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to 20 V - Remove emergency flasher switch, ⇒ Rep. Group 96 - Disconnect 7-pin connector from emergency flasher switch - Connect red test lead (+) to disconnected 7-pin connector, terminal 6 (terminal 15) - Connect black test lead (-) to disconnected 7-pin connector, terminal 5 (terminal 31) - Switch ignition ON 	
Voltage NOT OK	Reading approx. battery voltage

Check wiring to switch according to wiring diagram (positive and ground supply).

Check voltage supply (terminal 30) to emergency flasher switch (E3)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to 20 V - Connect red test lead (+) to disconnected 7-pin connector, terminal 7 (terminal 30) - Connect black test lead (-) to disconnected 7-pin connector, terminal 5 (terminal 31) 	
Voltage NOT OK	Reading approx. battery voltage

Check wiring to switch according to wiring diagram (positive and ground supply).

Check wiring for illumination of emergency flasher switch (E3)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to 20 V - Connect red test lead (+) to disconnected 7-pin connector, terminal 4 - Connect black test lead (-) to disconnected 7-pin connector, terminal 5 - Switch parking lights ON, set dimmer switch of instrument illumination to 'high' 	
Voltage NOT OK	Reading approx. battery voltage

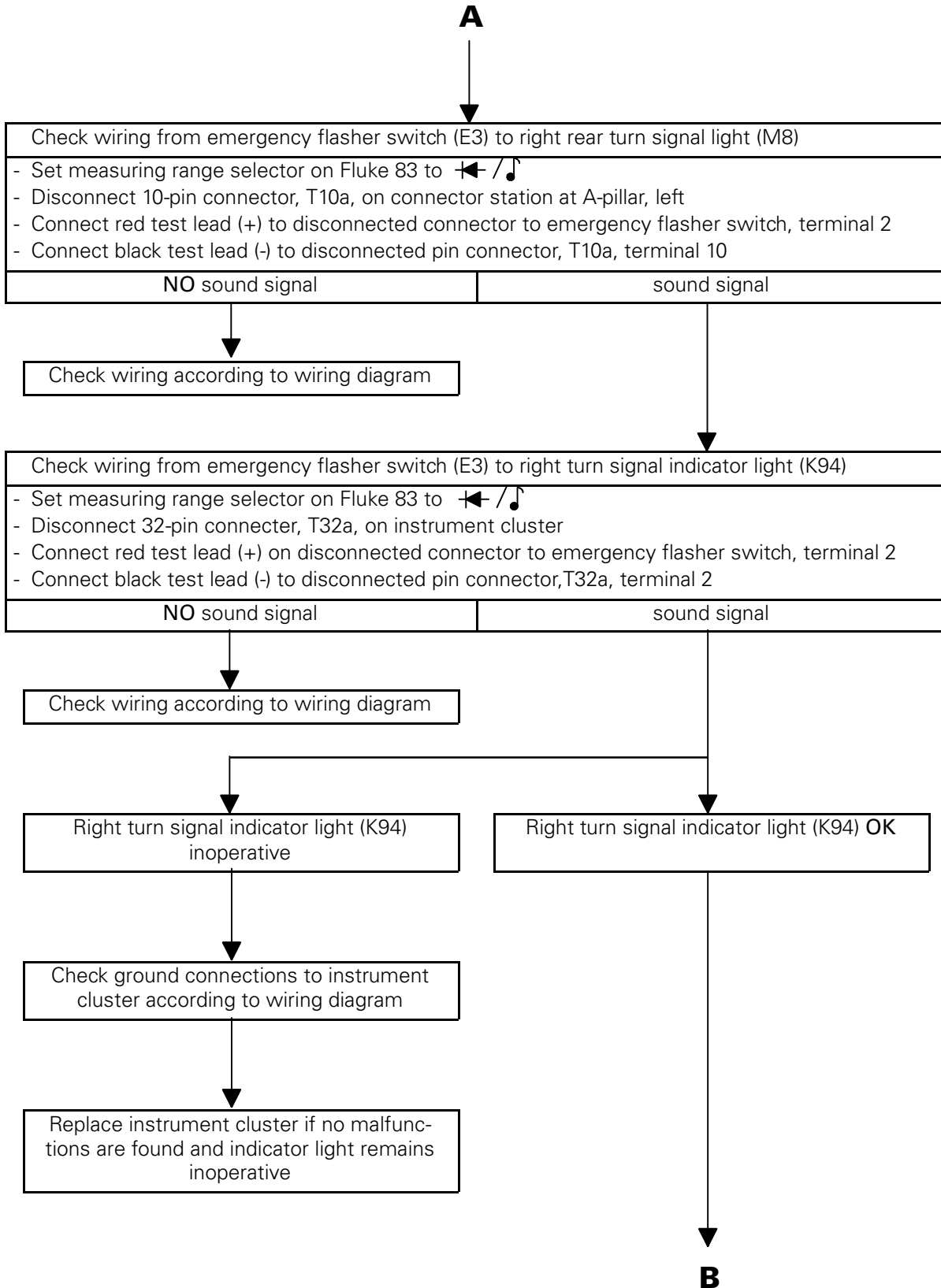
Check wiring from instrument panel light dimmer switch to emergency flasher switch according to wiring diagram

Replace emergency flasher switch

Check wiring from emergency flasher switch (E3) to right front turn signal lights (M36 and M19)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to $\leftarrow / \updownarrow$ - Disconnect 6-pin connector, T6d, on connector station at A-pillar, right - Connect red test lead (+) to disconnected connector for emergency flasher switch, terminal 2 - Connect black test lead (-) to disconnected pin connector, T6d, terminal 2 	
NO sound signal	sound signal

Check wiring according to wiring diagram

A



B

Check wiring to right front turn signal lights (M36 and M19)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to $\blacktriangleleft / \text{musical note}$ - Connect red test lead (+) to disconnected 6-pin connector, T6d, terminal 2 - Connect black test lead (-) to body ground - Conduct test step twice, once with bulb for side mounted turn signal light removed 	
NO sound signal	sound signal

Check wiring according to wiring diagram

Check wiring to right rear turn signal lights (M8)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to $\blacktriangleleft / \text{musical note}$ - Connect red test lead (+) to disconnected 10-pin connector, T10a, terminal 10 - Connect black test lead (-) to body ground 	
NO sound signal	sound signal

Check wiring according to wiring diagram

Check wiring from emergency flasher switch (E3) to left front turn signal lights (M35 and M18)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to $\blacktriangleleft / \text{musical note}$ - Disconnect 10-pin connector, T10s, on connector station at A-pillar, left - Connect red test lead (+) to disconnected connector on emergency flasher switch, terminal 3 - Connect black test lead (-) to disconnected pin connector, T10s, terminal 1 	
NO sound signal	sound signal

Check wiring according to wiring diagram

Check wiring from emergency flasher switch (E3) to left rear turn signal lights (M6)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to $\blacktriangleleft / \text{musical note}$ - Disconnect 10-pin connector, T10a, on connector station at A-pillar, left - Connect red test lead (+) to disconnected connector for emergency flasher switch, terminal 3 - Connect black test lead (-) on disconnected pin connector, T10a, terminal 9 	
NO sound signal	sound signal

Check wiring according to wiring diagram

C

C

Check wiring from emergency flasher switch (E3) to left turn signal indicator light (K65)

- Set measuring range selector on Fluke 83 to \leftarrow / \bullet
- Disconnect 32-pin connector, T32a, from instrument cluster
- Connect red test lead (+) to disconnected connector for emergency flasher switch, terminal 3
- Connect black test lead (-) to disconnected pin connector, T32a, terminal 18

NO sound signal	sound signal
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Check wiring according to wiring diagram

Left turn signal indicator light (K65) inoperative

Left turn signal indicator light (K65) OK

Check ground connections to instrument cluster according to wiring diagram

Replace instrument cluster if no malfunctions are found and indicator light remains inoperative

Check wiring to left front turn signal lights (M35 and M18)

- Set measuring range selector on Fluke 83 to \leftarrow / \bullet
- Connect red test lead (+) to disconnected 10-pin connector, T10s, terminal 1
- Connect black test lead (-) to body ground
- Conduct test step twice, once with bulb for side mounted turn signal light removed

NO sound signal	sound signal
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Check wiring according to wiring diagram

D

D

Check wiring to left rear turn signal lights (M6)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to \leftarrow / \bullet - Connect red test lead (+) to disconnected 10-pin connector, T10a, terminal 9 - Connect black test lead (-) to body ground 	
NO sound signal	sound signal

Check wiring according to wiring diagram

Check turn signal switch (E2)	
<ul style="list-style-type: none"> - Remove turn signal switch trim - Disconnect 12-pin connector, T12, on turn signal switch - Set measuring range selector on Fluke 83 to \leftarrow / \bullet - Connect red test lead (+) to turn signal switch, contact 49a - Connect black test lead (-) to turn signal switch, contact 'L' - Set turn signal switch to left side 	
NO sound signal	sound signal

Replace turn signal switch

Check turn signal switch (E2)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to \leftarrow / \bullet - Connect red test lead (+) to turn signal switch, contact 49a - Connect black test lead (-) to turn signal switch, contact 'L' - Set turn signal switch to right side 	
NO sound signal	sound signal

Replace turn signal switch

Check wiring from turn signal switch (E2) to emergency flasher switch (E3)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to \leftarrow / \bullet - Connect red test lead (+) to disconnected 12-pin connector, T12, on turn signal switch, terminal 5 - Connect black test lead (-) to disconnected 7-pin connector, T7a, on emergency flasher switch, terminal 1 	
NO sound signal	sound signal

Check wiring according to wiring diagram

E

E



Check wiring from turn signal switch (E2) to emergency flasher switch (E3)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to / - Connect red test lead (+) to disconnected 12-pin connector, T12, on turn signal switch, terminal 3 - Connect black test lead (-) to disconnected 7-pin connector, T7a, on emergency flasher switch, terminal 3 	
NO sound signal	sound signal



Check wiring according to wiring diagram



Check wiring from turn signal switch (E2) to emergency flasher switch (E3)	
<ul style="list-style-type: none"> - Set measuring range selector on Fluke 83 to / - Connect red test lead (+) to disconnected 12-pin connector, T12, on turn signal switch, terminal 11 - Connect black test lead (-) to disconnected 7-pin connector, T7a, on emergency flasher switch, terminal 2 	
NO sound signal	sound signal



Check wiring according to wiring diagram



End of troubleshooting. If no malfunctions are found, replace emergency flasher switch with integrated turn signal relay.