

## Checking Windshield Wiper/Washer System, only for cars with blue illuminated instrument cluster

Required for troubleshooting :

- ◆ Multimeter Fluke 83
- ◆ Connector Test Kit VW1594
- ◆ Valid wiring diagram

Test Conditions:

- ◆ S240 Fuse 40 (25A) OK
- ◆ Wiper in off position
- ◆ Speedometer 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:

- Remove lower instrument panel cover ⇒ Repair Group 70
- Remove Wiper/Washer Intermittent Relay J31 ( production control number 377) from auxiliary relay-panel

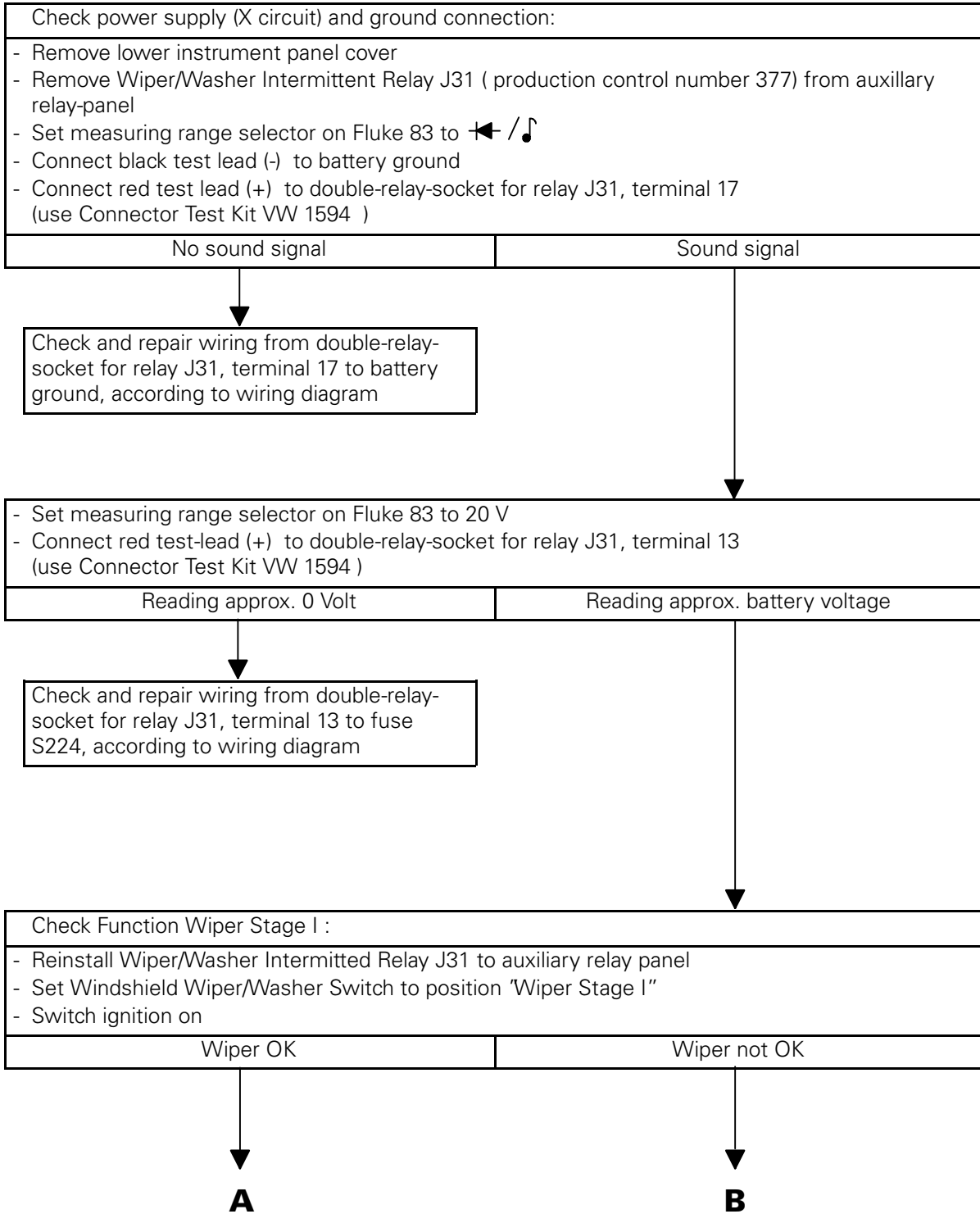
Troubleshooting procedure:

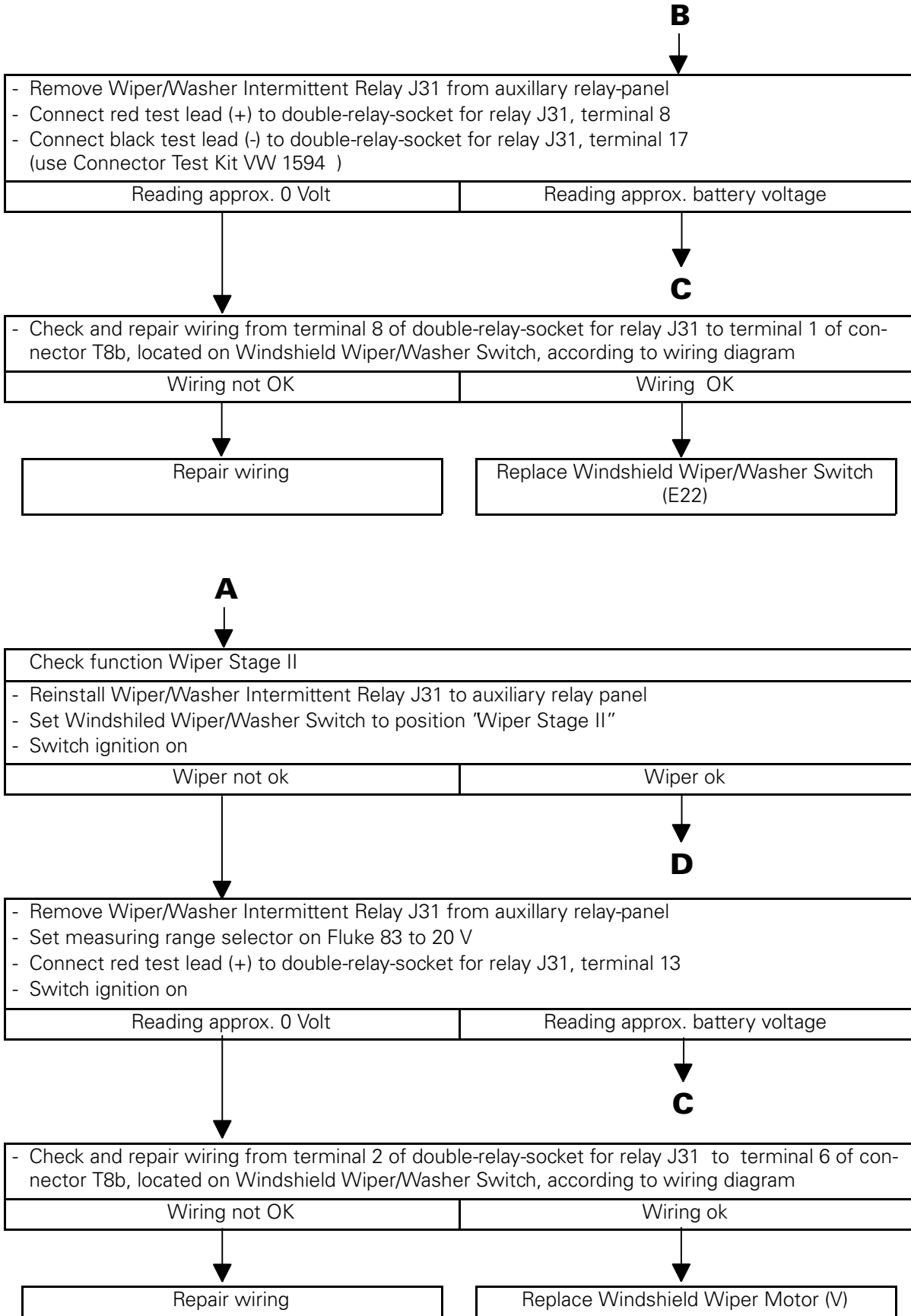
- Perform test steps according to table on page 10/2
- If specified value/test result is obtained, proceed to next step (test result OK !)
- If specified value/test result is not obtained, use table for troubleshooting and repair
- Use valid wiring diagram for wire testing
- Disconnect test leads after each step

**If malfunction has not been eliminated after performing all steps,  
replace Wiper/Washer Intermittent Relay J31 (production control number 377) !**

After repairing malfunction, perform test of Wiper/Washer System.

Troubleshooting starts on next page !





**C**

Check Windshield Wiper Motor (V)	
<ul style="list-style-type: none"> <li>- Set measuring range selector on Fluke 83 to <math>\blacktriangleleft / \bullet</math></li> <li>- Remove Wiper/Washer Intermittent Relay J31 from auxillary relay-panel</li> <li>- Connect black test lead (-) to double-relay-socket for relay J31, terminal 17</li> </ul> Continuity on the following connections ( sound signal ) :	
<ul style="list-style-type: none"> <li>- Connect red test lead (+) to double-relay-socket for relay J31, terminal 4</li> <li>- Connect red test lead (+) to double-relay-socket for relay J31, terminal 5</li> <li>- Connect red test lead (+) to double-relay-socket for relay J31, terminal 11</li> </ul>	
No sound signal	Sound signal

**C**

- Check wiring according to wiring diagram	
Wiring not OK	Wiring OK
Repair wiring	Replace Windshield Wiper Motor (V)

**D**

Check Windshield and Rear Window Washer Pump (V59) <span style="float: right;">(not valid for wagon)</span>	
<ul style="list-style-type: none"> <li>- Reinstall Wiper/Washer Intermittent Relay J31 to auxiliary relay panel</li> <li>- Switch ignition on</li> <li>- Set Windshield Wiper/Washer Switch to position "wash"</li> </ul>	
Pump not OK	Pump OK

**E**

<ul style="list-style-type: none"> <li>- Check wiring from terminal 7 of connector T10t to battery ground, according to wiring diagram</li> <li>- Check wiring from terminal 3 of connector T10s to terminal 5 of connector T8b, located on Windshield Wiper/Washer Switch (E22) according to wiring diagram</li> </ul>	
Wiring not OK	Wiring OK.
<b>F</b>	Replace Windshield and Rear Window Washer Pump (V59)

**F**



<ul style="list-style-type: none"><li>- Set measuring range selector on Fluke 83 to <math>\overleftarrow{\leftarrow} / \bullet</math></li><li>- Connect red test lead (+) to connection of Windshield and Rear Window Washer Pump, terminal 2</li><li>- Connect black testlead (-) to battery ground, using Connector Test Kit VW 1594</li></ul>	
Sound signal	No sound signal



Check wiring from terminal 1 of the Windshield and Rear Window Washer Pump to Windshield Wiper/Washer Switch (E22) according to wiring diagram



Check wiring from terminal 2 of the Windshield and Rear Window Washer Pump to battery-ground according to wiring diagram

**E**



Check intermittent wiper function: <ul style="list-style-type: none"><li>- Reinstall Wiper/Washer Intermittent Relay J31 to auxiliary relay panel</li><li>- Connect red test lead (+) to double-relay-socket for relay J31, terminal 12</li><li>- Connect black test lead (-) to double-relay-socket for relay J31, terminal 17</li><li>- Set Windshield Wiper/Washer Switch to position "Intermittent"</li></ul>	
Reading approx. 0 Volt	Reading approx. battery voltage



<ul style="list-style-type: none"><li>- Check and repair wiring from terminal 12 of double-relay-socket for relay J31 to terminal 7 of connector T8b, located on Windshield Wiper/Washer Switch, according to wiring diagram</li></ul>	
Wiring OK	Wiring not OK



**G**

**G**



Repair wiring

**G**



Check function of Intermittent Windshield Wiper	
<ul style="list-style-type: none"><li>- Set measuring range selector on Fluke 83 to Resistance 20 kOhm</li><li>- Connect red test lead (+) to to double-relay-socket for relay J31, terminal 3</li><li>- Connect black test lead (-) to double-relay-socket for relay J31, terminal 17</li><li>- Intermittent Regulator in position : 1 - Reading : approx. 2 kOhm</li><li>- Intermittent Regulator in position : 2 - Reading : approx. 4 kOhm</li><li>- Intermittent Regulator in position : 3 - Reading : approx. 8 kOhm</li><li>- Intermittent Regulator in position : 4 - Reading : approx. 16 kOhm</li></ul>	
Readings OK	Readings not OK



Replace Wiper/Washer Intermittent Relay (J31)



<ul style="list-style-type: none"><li>- Check and repair wiring from terminal 3 of double-relay-socket for relay J31 to terminal 6 of connector T6e, located on the Windshield Wiper Intermittent Regulator (E38), according to wiring diagram</li><li>- Check and repair wiring from battery-ground to terminal 5 of the connector T6e, located on the Windshield Wiper Intermittent Regulator (E38), according to wiring diagram</li></ul>	
Wiring OK.	Wiring not OK



Replace Windshield Wiper Intermittent Regulator (E38)



Repair wiring

**END**