ATE Troubleshooting Chart Wheel Speed Sensors

Legend:
✔ = Yes
✘ = No

A1
ABS/ESP fault indicator lights up

A2
Visual check: brake wear, brake fluid, wheel bearing play, sensor connecting wires, possibly sensor wheels, brake dynamometer readings okay?

B2
Repair brakes, adjust brake fluid level, adjust wheel bearing play/renew wheel bearings, continue with **A3**

A3
Fault reader available?

B3
Check all control unit input signals with multimeter based on wiring diagram, continue with **A5**

A4
If possible, read out fault memory. Does any entry point to a wheel speed sensor?

B4
Eliminate indicated fault as directed by the manufacturer, continue with **A9**

A5
ATE AST 2 available?

C5
Active sensor? (internal resistance infinite)

E5
Passive sensor? (internal resistance 800 to 3500 Ohm)

A6
Connect ATE AST 2 to wheel speed sensor. Perform test sequence according to instruction. Wheel speed sensor okay?

B6
Renew sensor; if passive sensor, continue with A7; if active sensor, continue with **A8**

C6
Check actual values of wheel speed sensors for plausibility with diagnostic tester. Any irregularities?

D6
Continue with **A7**

E6
Check resistance of sensor. Are the values specified by the manufacturer attained or are the values at all sensors identical?

F6
Continue with **B6**

A7
Test sensor wheel visually or with ATE sensor card; check gap to sensor. Sensor wheel/gap okay?

B7
Renew sensor wheel/wheel bearing as directed by the manufacturer, continue with **A8**

C7
Test voltage supply to wheel sensor with multimeter (5 V). Voltage okay?

D7
Continue with **A8**

E7
Turn wheel, measure ac voltage at sensor. Are the values specified by the manufacturer attained or are the signals at all wheels identical?

F7
Continue with **A7**, if this does not give results, continue with C9

A8
Check wires from wheel sensor to control unit for break, short circuit to positive pole and ground; check plug connections. Plugs/wires okay?

B8
Repair wires/plug connections as directed by the manufacturer, continue with **A9**

C8
Test sensor wheel visually or with ATE sensor card. Sensor wheel okay?

D8
Renew sensor wheel/wheel bearing as directed by the manufacturer, continue with **A9**

E8
Continue with **A8**

A9
Erase fault memory, carry out test drive, read out fault memory

C9
Renew wheel speed sensor, continue with **A9**

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