Troubleshooting with no control module connected

Note!

9588 Porsche System Tester II and 'Tiptronic control unit' are not connected.

Overview

Diagnostic conditions

- Ignition on
- The fuses of the 'Tiptronic control unit' are OK
- Battery voltage is OK
- Plug on 'Tiptronic control unit' fitted correctly
- Battery for 9588 Porsche System Tester II charged

Possible cause of fault

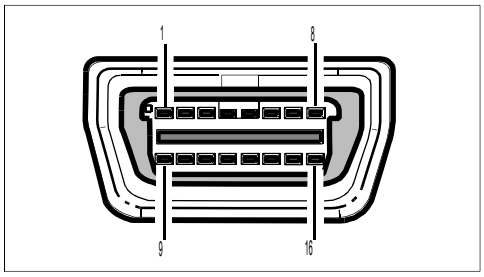
- Incorrect vehicle type selected in 9588 Porsche System Tester II
- 9588 Porsche System Tester II is not connected correctly or is faulty
- Power supply to the 'Tiptronic control unit' is not OK
- 'K-line' to 'Tiptronic control unit' faulty
- 'CAN drive' does not function
- 'Tiptronic control unit' does not function

Affected pins

Tiptronic control module plug:

- Pin 27 'terminal 15 power supply via fuse F51/fuse carrier at right of dashboard'
- Pin 28 'terminal 15 power supply via fuse F51/fuse carrier at right of dashboard'
- Pin 3 'terminal 30 power supply via fuse F29/fuse carrier at right of dashboard'
- Pin 1 'ground from body ground pin MB26'
- Pin 2 'ground from body ground pin MB26'
- Pin 46 'CAN drive (high)'
- Pin 34 'CAN drive (low)'

Diagnostic box in driver's footwell



Pin	Designation	Pin	Designation
1	Terminal 15 (fuse F52, fuse carrier at left of dashboard)	9	Not used
2	Not used	10	Not used
3	K' lead (communication with Tester)	11	Not used
4	Ground	12	Not used
5	Ground	13	Not used
6	CAN high diagnosis (instrument cluster)	14	CAN low diagnosis (instrument cluster)
7	K lead (OBD)	15	Not used
8	Not used	16	Terminal 30 (fuse F7, fuse carrier at left of dashboard)

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Work instruction			Display OK	If not OK
1	Check 9588 Porsche System Tester II connections:	♦ Check that the data link connector 9588 Porsche System Tester II is connected correctly to the diagnostic box in the vehicle. ♦ Check 9588 Porsche System Tester II connection cable for damage. ♦ Check function of 9588 Porsche System Tester II on another vehicle, if necessary.	⇒ Step 2	Repair 9588 Porsche System Tester II. ⇒ End
2	Check fuses and adjacent voltage in fuse carrier at right of dashboard:	♦ Terminal 30 power supply 'fuse F29' ♦ Terminal 15 voltage 'fuse F51'	11.4 to 14.5 V ⇒ Step 3	Replace any faulty fuse(s) (before doing so, check that the correct fuse was used). If the fuses are intact but there is no voltage, check the wires and repair them if necessary. If the wires are intact, check the fuse box and replace it if faulty. ⇒ End

Work instruction			Display OK	If not OK
3	Check terminal 30 power supply of 'Tiptronic control unit'	♦ Switch off ignition ♦ Pull plug off the 'Tiptronic control unit' ♦ Measure voltage between 'pin 3' and ground.	11.4 to 14.5 V ⇒ Step 4	Repair terminal 30 power supply of 'Tiptronic control unit'. ⇒ End
4	Check terminal 15 power supply of 'Tiptronic control unit'	♦ Switch on ignition ♦ Measure voltage between 'pin 27/28' and ground.	11.4 to 14.5 V ⇒ Step 5	Repair terminal 15 power supply of 'Tiptronic control unit'. ⇒ End
5	Check terminal 31 ground supply for open circuit:	♦ Switch off ignition ♦ Measure resistance between 'pin 1/2' and ground.	< 5 Ω ⇒ Step 6	Between Tiptronic control unit plug and 'body ground pin MB26': Open circuit, contact resistance/corroded or loose connection at 'body ground pin MB26'. Repair wire or fasten it to ground pin. ⇒ End
6	Check 'K-line' for short circuit to B+:	♦ Switch off ignition ♦ Disconnect DME control unit ♦ Switch on ignition ♦ Measure voltage between 'pin 7' of K-line on diagnostic box in the vehicle and ground.	< 0.3 V ⇒ Step 7	Repair K-line ⇒ End
7	Check 'K-line' for short circuit to ground:	♦ Switch off ignition ♦ Measure resistance between 'pin 7' of K-line on diagnostic box in the vehicle and ground.	∞ Ω ⇒ Step 8	Repair K-line ⇒ End
8	Check 'K-line' for open circuit:	♦ Measure resistance of K-line from diagnostic box in the vehicle 'pin 7' to plug on Tiptronic control unit'pin 9'.	< 0.5 Ω ⇒ Step 9	Repair K-line ⇒ End
9	CAN drive, check connection to 'Tiptronic control unit':	♦ Follow 'Checking instructions/CAN data bus (Rep. Gr. 9700)'.	If CAN check is OK: ⇒ Step 10	
10	Replace Tiptronic control module		Code new 'Tiptronic control unit' ⇒ End	