SERVICE INFORMATION

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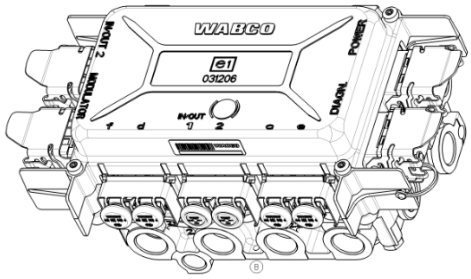
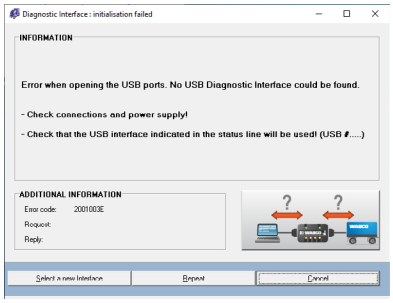
TEBS-D MODULATOR: PARAMETERIZATION PROCESS – TIPS

Taking care about Customer satisfaction and to ensure highest quality of TEBS-D product key parameterization tips have been identified and highlighted in below table.

Mentioned tips should ensure successful parameterization process of TEBS-D Modulator.





APPLICABLE TEBS-D PART NUMBERS:

- 480102014R
- 4801020140
- 4801020150
- 4801020200

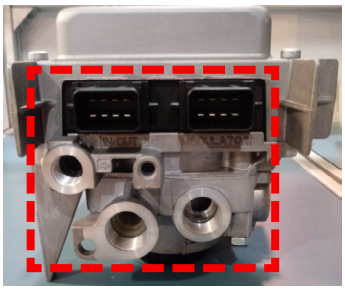
PARAMETERISATION TIPS:

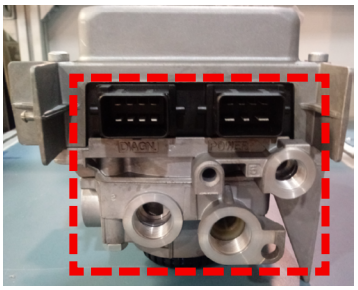
A: Unpacking of TEBS-D Product before installation on trailer

– Check of product for mechanical damages.

– Keep main focus on Customer Interfaces (ports, connectors, pins, electronic)

Claims for mechanical damages of product after mounting at Trailer will not be accepted.





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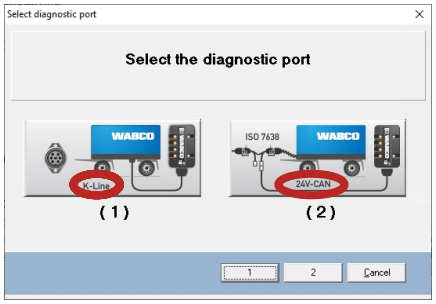
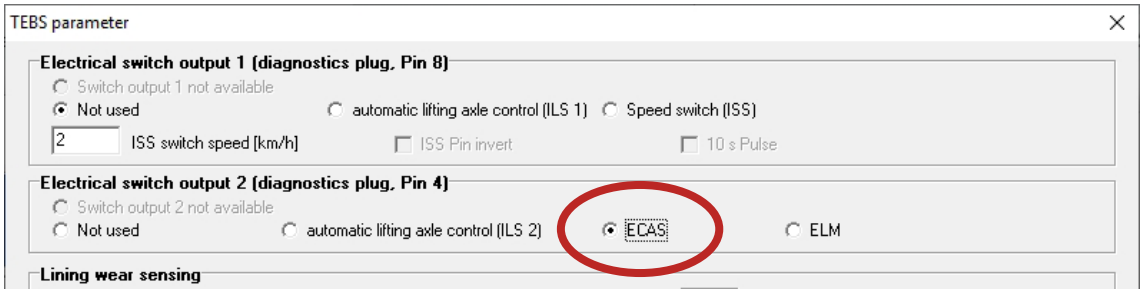
B: Parameterization of TEBS-D Modulator

- **Parameterization** of TEBS-D Modulator **shall be performed after mounting of Modulator on the trailer**. Parameterization of Modulator on external Test Bench do not verify proper function of the valves mounted on the trailer (e.g. sensors and cables, others). Parameters selected by service man shall be reflecting the reality at trailer.
- To ensure proper parameterization of the Modulator there **shall be at least 7 Bars supplied to supply port (red colour) of TEBS-D Modulator**.
- **Original WABCO Interface (Software/ Hardware) shall be used** to ensure proper communication with TEBS-D Modulator during parameterization
- K-Line protocol [2] shall be use to perform proper prameterisation of Modulator in case **when ECAS valve is assembled on trailer**.

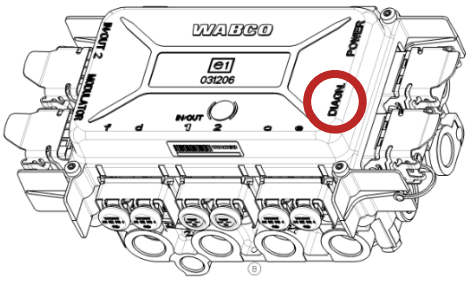
[2] Selction of K-Line & CAN protocol





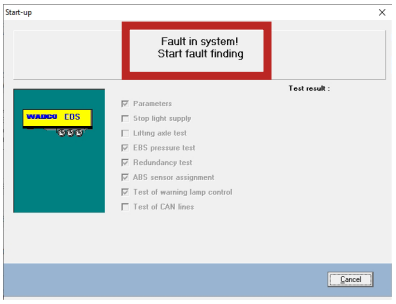
Connection with DIAGN port at Modulator shall be ensured [3].

[3] DIAGN port at modulator

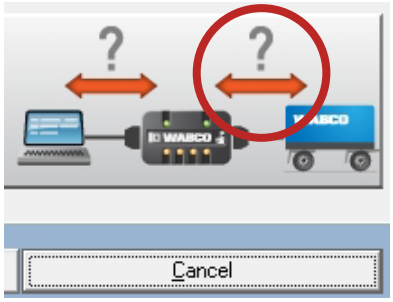


Using of CAN protocol (instead of K-Line) will lead to message „ Faults in system. Start fault finding” [4]. Try of re-connecting with EBS-D Modulator will lead to message “communication between WABCO interface and Modulator is impossible” [5].

[4] Faults in system

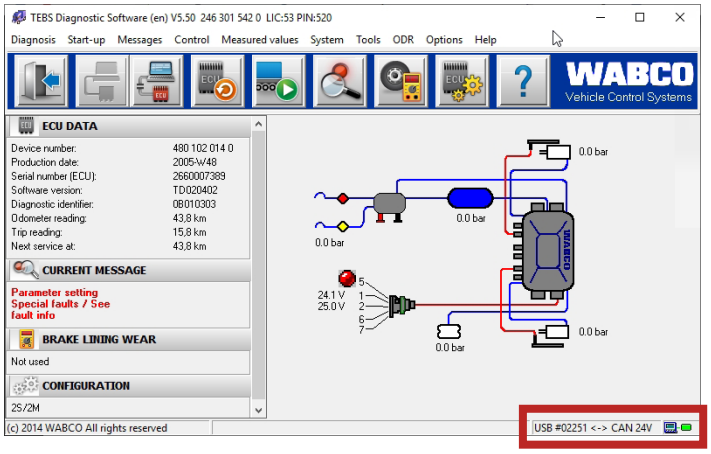


[5] Communication failure



Information about used protocol is available in the right down corner of program interface [6].

[6] Information about used protocol

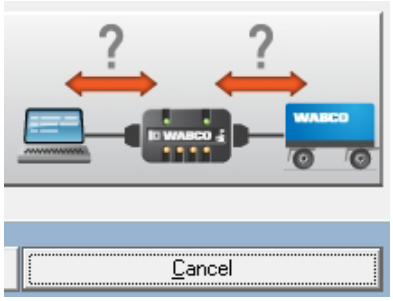


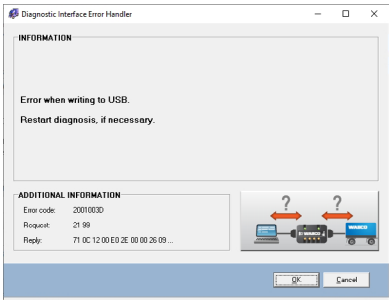
To solve observed failure, CAN protocol shall be changed to K-Line and re-connection with Modulator shall be performed. Data shall be re-uploaded to ECU and EOL test shall be re-started.

- All data / parameters shall be set by service man manually. “Copy – Paste” of parameters from old/ defective to new Modulator is not allowed.
- Messages “Communication between WABCO interface and PC” and “Communication between WABCO interface and Modulator” [5], and “Communication between WABCO interface and Modulator and PC” [7] do not indicate only for failure of TEBS-D Modulator.
  Message “Communication between WABCO interface and Modulator and PC” [7] is useally caused by connection problems between PC and WABC Inetrface.

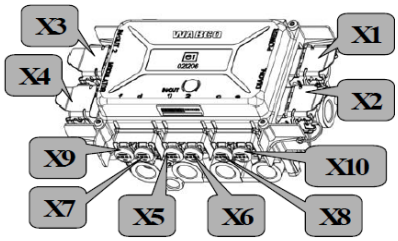
> Problems with PC, Interface, selected protocols, cables (not broken and without oxides or contaminations on connectors surfaces), sensors and Customer system (proper connection of Modulator and other equipment at trailer) shall be examined and excluded by service man before decision about claim of Modulator will be taken.

[7] Communication failure

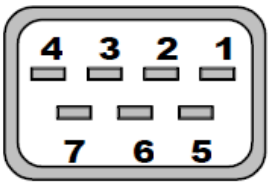




[8] TEBS D connectors reference

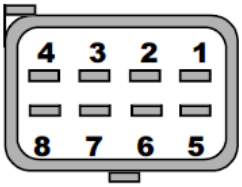


Plug X1 "POWER"



Pin no.	Pin assignment
1	CAN "LOW" line (standard 24 V, TCE 5 V)
2	CAN "HIGH" line (standard 24 V, TCE 5 V)
3	Warning light (not occupied in TCE version 015)
4	GND ECU (not occupied in TCE version 015)
5	GND valves (GND in TCE version 015)
6	+24 V ECU = TI.15 (not in TCE version 015)
7	+24 V valves = TI.30 (+24V in TCE version 015)

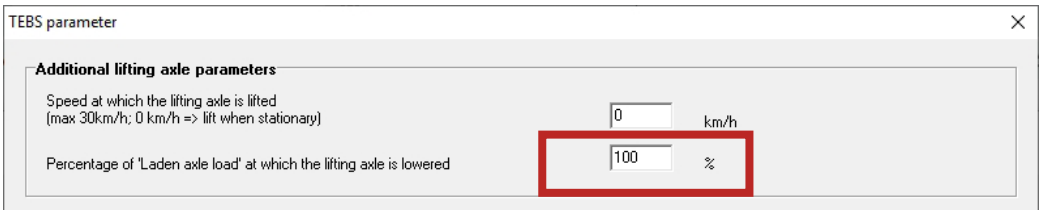
Plug X2 "DIAGNOSE"



Pin no.	Pin assignment
1	ISO 9141 K-line
2	Switching output 4 (diagnostic supply)
3	GND ECU
4	Switching output 2 (ECAS/ELM/ILS2)
5	Input 24N (brake lamp)
6	Battery charge output
7	GND ECU
8	Switching output 1 (ISS/ILS1)

- In case of **using of lift axle at trailer**, service man **shall** select proper **value of axle load (different than “0”)** [9]. Selecting “0” will lead to parameterization failure.

[9] Value of axle load



- In case of additional **lift axle valves used on trailer, proper parameters** in the settings **shall be selected** [10] by service man. In the next step **information about ILS1 or ILS2** [10] **shall be selected as well**. Without above, parameterization failures will apprear.

[10] Lift axle valve selectoion