

GB

Installation Instructions: Electrical System for Towing Hitch

General data

Part number		
Westfalia	Vehicle Manufacturer	Vehicle
321 451 300 147	--	VW T5 RHD Small van / Estate / Minibus

Important Notes

Read the installation manual prior to starting work.

The electrical kit should only be installed by qualified personnel.



Caution – Disconnect the battery!

Danger of damage to the vehicle's electronic system. Data which are stored electronically may get lost.

Read out the fault storage prior to starting work.

Make sure prior to drilling that no objects such as cables, for example, are located behind the covers.

Deburr any bare body parts, like bore holes, and seal them with the help of some rust inhibitor.

► **Note**

During installation special attention has to be paid to the following points:

- Cables must not be pinched or damaged.
- All sealing elements have to be installed properly.
- The socket gasket has to be positioned on the insulating sleeve, but not on the individual wires.
- Lay the cables such that they do not rub on the vehicle and are not bent.
- Do not lay any cables near the exhaust system.

The additional control lamp (C2) to check the trailer indicator lamps is already provided on the vehicle and ready-made accordingly.

Code the vehicle electrical system control unit to include extended functions for towing device.

When a trailer is used, the rear fog lamp of the traction vehicle is deactivated.

In the case of trailers without rear fog lamp, a rear fog lamp has to be retrofitted.

A socket adapter may only be used in conjunction with a trailer. When the trailer is no longer used, remove the socket adapter.

Correct trailer operation has to be checked using a trailer or a test instrument with load resistors.

Subject to technical alterations!

Installation overview

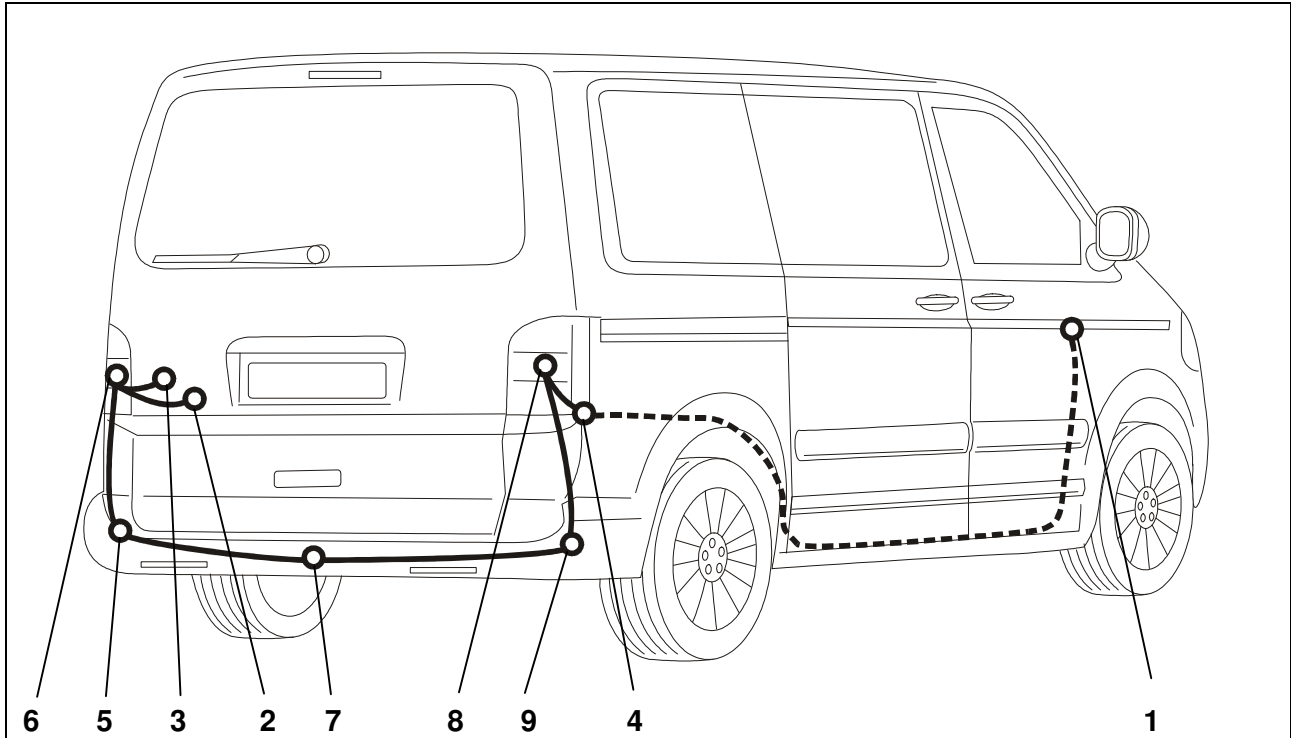


Fig. 1: Installation overview

- | | |
|---|---------------------|
| 1 PDC control unit (option) | 6 Left tail light |
| 2 Ground point | 7 Trailer socket |
| 3 Constant plus preparation (only 13-pin) | 8 Right tail light |
| 4 Plug for PDC cable | 9 Cable leadthrough |
| 5 Cable leadthrough | |

Installing the electric kit

1. Disconnect the ground terminal of the battery.
2. If necessary, remove the following coverings and panels:
 - Rear covering of the left rear trunk side
 - Right-hand and left-hand tail light
3. Push the oval grommet to the inside near the left-hand tail light (Fig. 1/6) using the cable harness.
4. Remove the blanking plug of the cable leadthrough (Fig. 1/5).
5. Push a solid wire through the bottom cable leadthrough (Fig. 1/5) to the top cable leadthrough for the tail light (Fig. 1/6) until it comes out of the top cable leadthrough.
6. Attach the socket end of the cable harness to the wire.
7. Pull the socket end of the cable harness through the cable leadthroughs to the bottom to the socket holder plate (Fig. 1/7).
8. Push the rubber grommet with the larger hole included in the scope of supply on the cable harness.
9. Repeat steps 3 to 8 with the rubber grommet having the smaller hole on the right-hand side.

Socket installation

10. Pull both cable harnesses through the socket gasket included in the scope of supply.

► Note

In case of larger cable diameters cut off the conical feed domes correspondingly.

11. Insert the wires into the 3-pin microswitch housing according to the *Microswitch housing assignment* table and push the housing on the trailer socket microswitch.
12. Connect the remaining cables to the socket housing in accordance with the *Socket pin assignment plan* (Fig. 1/7) and push the rubber grommet towards the socket.
13. Screw the socket onto the holding plate (Fig. 1/7) using the supplied screws.
14. Secure the cable harness in place along the towing device using cable ties.
15. Insert the grommet properly into the cable leadthroughs (Fig. 1/5+9).

Connecting the tail lights

16. Push the pre-cut foamed material piece included in the scope of supply on the left-hand tail light plug (Fig. 1/6).
17. Connect the plug of the left-hand tail light (Fig. 1/6) with its counterpart on the cable harness. Make sure that the plug locks firmly into place. Push the pre-cut foamed material piece over both plugs.
18. Push plugs back into the inside of the car body.
19. Connect the brown wire with the eyelet to the ground point (Fig. 1/2) above the vehicle's coupling spot.

On vehicles with PDC it is possible to deactivate the PDC control unit for trailer operation. The PDC control unit (Fig. 1) is located next to the steering column.

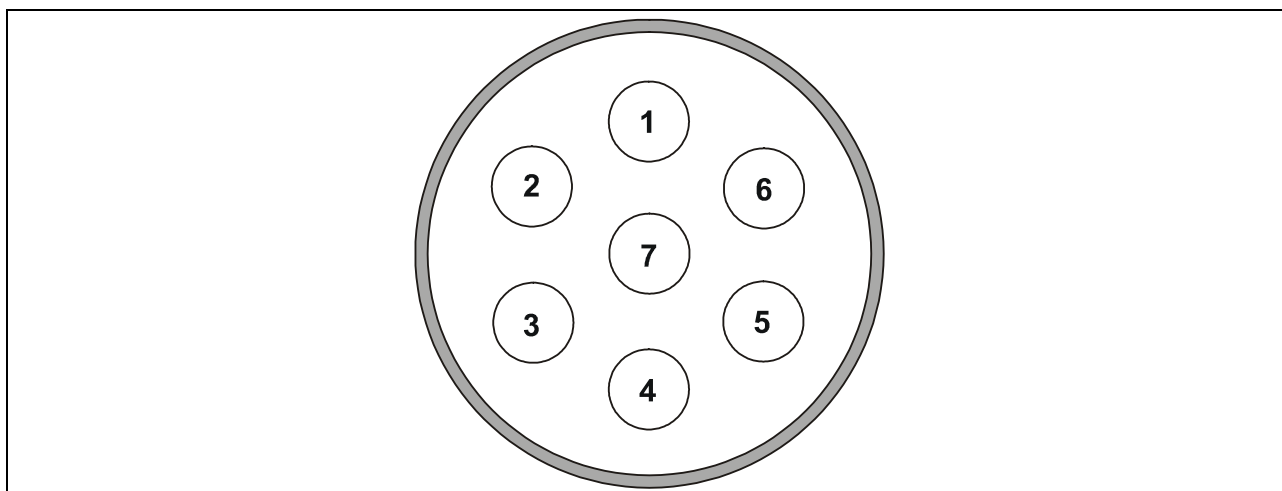
20. Connect the separate brown/white wire to the free brown/white single wire (Fig. 1/4) of the cable harness and lay it to the PDC control unit (Fig. 1/1) along the vehicle's cable harness.
21. Unlock the 16-pin plug from the PDC control unit (Fig. 1/1) and disconnect it.
22. Insert the brown/white wire into chamber 5 of the contact carrier.
23. Re-insert the 16-pin plug into the PDC control unit.

24. Insert the large oval grommet where the cable comes out at the top into the left-hand top cable leadthrough (Fig. 1/6).
25. Insert the 6-pin housing into the left-hand tail light.
26. Repeat the following steps on the right-hand side (Fig. 1/8): 15, 16, 17, 18, 25, 26

Checking correct operation

27. Reconnect the ground of the vehicle's battery.
28. Code the vehicle electrical system control unit to include extended functions for towing device.
29. Check the trailer function with the help of a suitable test instrument (with load resistors) or with the help of a trailer.
30. Secure all cables using cable ties.
31. Refit any parts removed for installation.

Socket pin assignment



Pin	Circuit	Wire Colour
1	Indicator lamp, left-hand side	black/white
2	Rear fog lamp	blue
3	Ground (circuit 1-7)	brown
4	Indicator lamp, right-hand side	black/green
5	Tail light, right-hand side	gray/red
6	Stop lamp	black/red
7	Tail light, left-hand side	gray/black

Microswitch housing assignment

Pin	Wire Colour
1	blue
2	brown/white
3	gray