



Ⓜ 2

Installation instructions:
Electrical system for towing hitch..... 2

**Installation instructions:
Electrical system for towing hitch****General data**

Part number		Vehicle
Westfalia	Vehicle Manufacturer	
321 554 300 143		VW Caddy GP RHD, 10/10 – 11/20 VW Caddy Maxi GP RHD, 10/10 – 11/20

Constant plus extension kit for the 13-pin socket**► Note**

The constant plus extension kit allows a “charging lead” and a “ground/earth for the charging lead” for a booster battery to be used.

Part number		Vehicle
Westfalia	Vehicle Manufacturer	
300 028 300 113		all vehicles

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.

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 and 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.

Failure of a trailer light (also direction indicator lamps, but not back-up light or rear fog lamp) is indicated by the light failure monitoring system on the combination instrument. There is no additional indicator light (C2) for monitoring the direction indicators on the trailer in the vehicle.

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

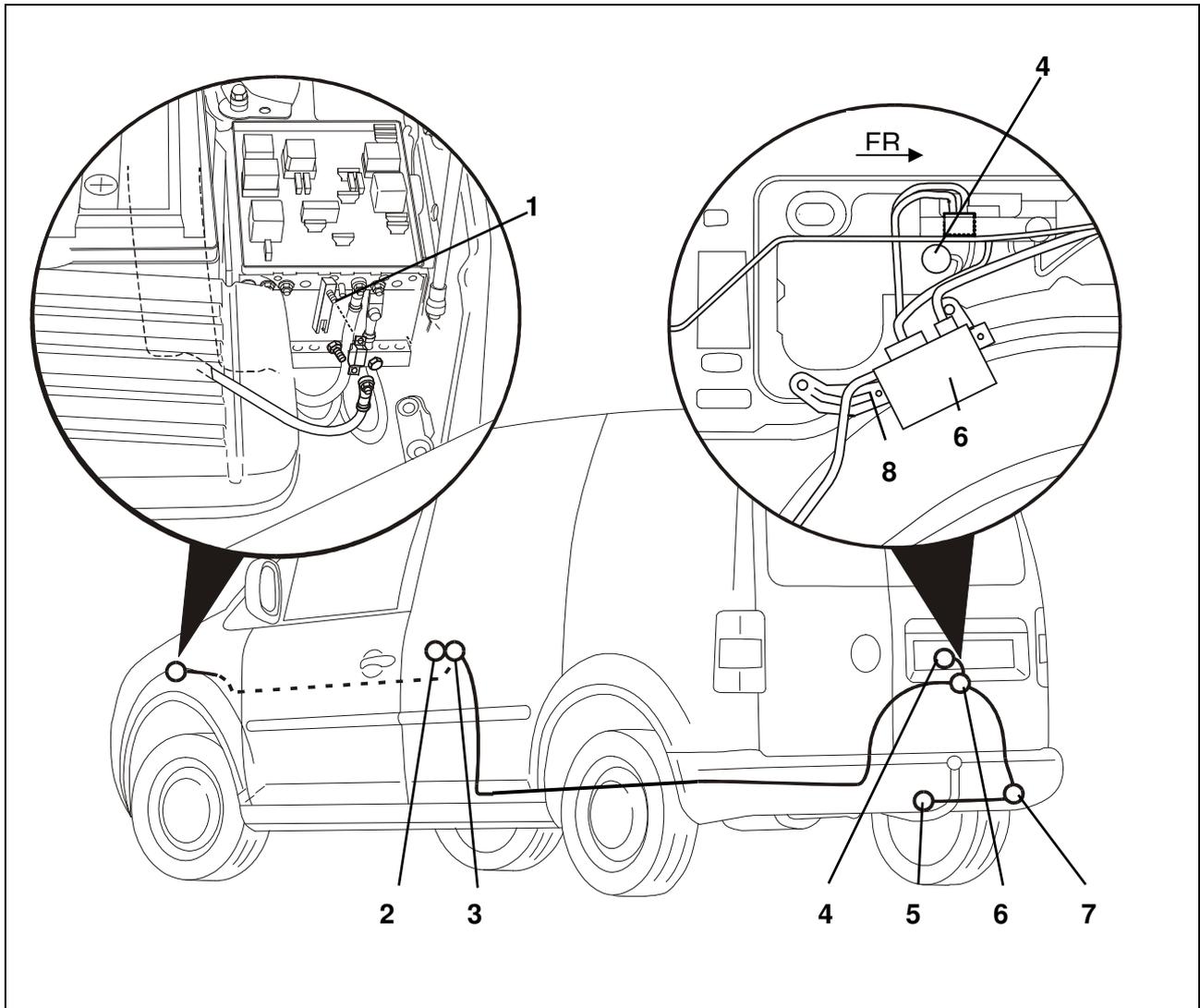


Fig. 1: Installation overview

- | | | | |
|---|---|---|--------------------------------|
| 1 | Constant plus connection (only if required) | 5 | Trailer socket |
| 2 | Network control unit | 6 | Trailer connection unit |
| 3 | Fuse carrier | 7 | Cable leadthrough |
| 4 | Ground point | 8 | Trailer connection unit holder |

Install electrical kit

1. Disconnect negative terminal of battery.
2. Remove the following covers and panelling, as necessary:
 - In the boot
 - Boot floor cover
 - Loading lip cover
 - Panelling on the right side of the boot
 - On the right side of the vehicle
 - Scuff plate driver's door
 - Right panelling by the steering column
 - fusebox
 - Depending on fittings, various interior trims must be removed to expose the cable route from the trailer control at the rear right up to the heel plate (between the B and C pillars, cross over here), then forwards to the fuse box.
 - In the engine compartment
 - Remove cover for the central electrics
 - Remove air filter housing
 - Completely remove battery, battery holder and air filter

► Note

In case the device support 2K0 959 503 A (Fig. 1/8) is not fitted in the vehicle for the trailer control unit, this must be ordered via VW Kassel.

3. Insert and lock the trailer connection unit into the device support (Fig. 1/8).
4. Or fasten the trailer control module to the right-hand side of the luggage trunk (Fig. 1/8) using velcro tape provided. Make sure it is securely fastened!
5. Remove the cover from the 40 mm hole in the rear, right side panel of the vehicle (Fig. 1/7).
6. Route the end of the cable set with the socket from inside through the hole to the socket mounting plate (Fig. 1/5).
7. Insert the rubber grommet in the hole (Fig. 1/7).

Fit socket

8. Push contact insert into the socket housing and slide the rubber seal up to the socket.
9. Secure the socket to the mounting plate with the screws provided (Fig. 1/5), torque setting: max. 2.0 Nm.

Connect trailer connection unit

10. Connect and lock the 12-way and 16-way plug housing in the sockets provided on the trailer connection unit (Fig. 1/6).
11. The functions "charge line" and "ground for charge line" can be retrofitted using the 3-pin plug for the uninterrupted positive pre-installation.

Install electrical kit

12. Connect the brown wires with eyelets to the ground point on the vehicle (Fig. 1/4).
 13. Route the remaining cable set along the vehicle cable looms / cable ducts up to the control unit for the vehicle electrical system, front right (Fig. 1/2).
 14. On the on-board electrical system control unit, unlatch the brown plug (slot C) and open the contact holder by sliding. Unlatch the following wires and insert into the 3-pin, bushing housing located on the wire set:
 - Wire orange/brown from chamber 16 in chamber 1 enclosed black housing.
 - Wire orange/green from chamber 15 in chamber 3 enclosed black housing.
 - Wire black/red from chamber 17 in chamber 2 enclosed white housing.
 15. From the wire set, insert the single wires orange/brown, orange/green and black/red into the proper coloured, vacated chambers 15, 16 and 17 of the brown plug.
 16. Reconnect the black contact holders with each other by sliding, snapping in the brown cover cap and plugging the plug back on the on-board electrical system control unit (slot C) and latching.
 17. In each case, plug the open 3-pin black and white housings together.

 18. Remove black cover from fuse box (Fig. 1/3) and slide open the purple catch, take the fuse-protected wire out of compartment 12 (terminal 15) and insert it into the 1-pin housing on the cable set. Re-insert the individual black/blue wire of the cable set into compartment 12 of the fuse carrier. Fit the now open 1-pin housings together.
 19. Insert the following wires into fuse-protected side of the fuse chambers as indicated.
 - Red wire into chamber 40
 - Red/black wire into chamber 41.
 - Red/blue wire into chamber 42.
 20. If fuse positions 40-42 on the vehicle have not been pre-equipped with terminal 30, the cable adapter supplied must be used.

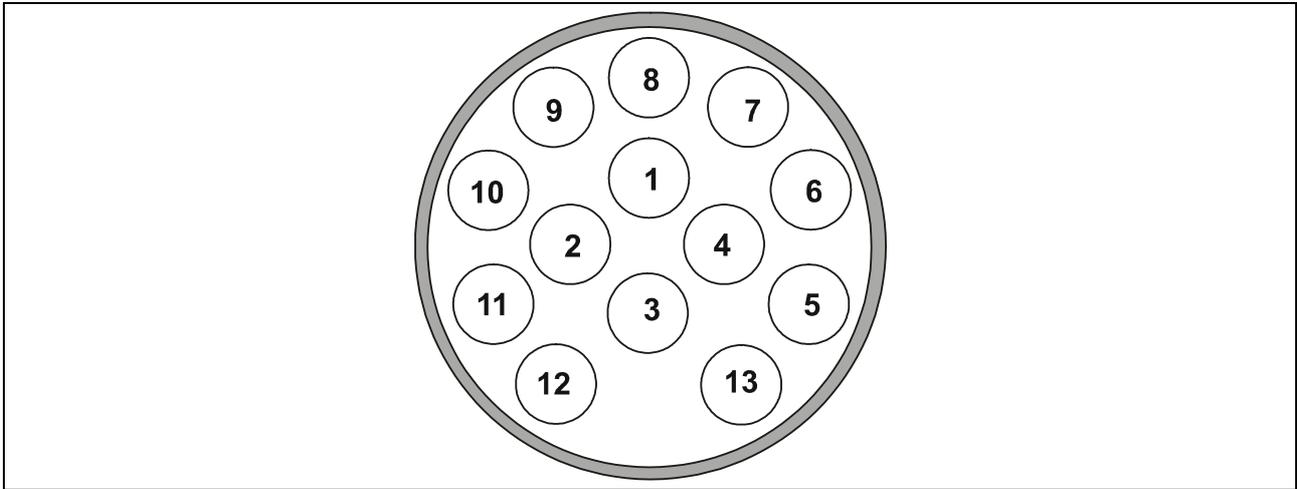
Insert the 3-way contact into input side of sockets 40-42 of the fuse box.

Route the wire end with cable lug through a suitable hole in the mounting plate grommet up to the uninterrupted positive distribution (Fig. 1/1) of the central electrics (EM box) in the engine compartment.
- **Note**
- Seal any new hole in the mounting plate grommet to prevent moisture seeping into the interior!
21. Slide the M5 x 13 hex head screw provided into the slot beneath the uninterrupted positive distribution and lock.
 22. Screw the 50A fuse link onto the cable lug of the red cable with the lock washer and nut provided (recommended torque: 4.5 Nm).
 23. Insert the fuses (supplied) as follows:
 - 15 A fuse into socket 40
 - 20 A fuses into socket 41 and 42

Check operation

24. Re-connect ground of vehicle battery.
25. A VAS tester must be used to code the vehicle's Gateway with the additional function for the towing hitch, as follows:
 - Vehicle self-diagnosis
 - 19 diagnostics interface for data bus
 - Select function 008 coding
 - Master
 - Select function 008 03 coding
 - 69 trailer function (code)
26. For vehicles fitted with Park Distance Control or Park Assist, code the control unit in the self-diagnosis using the VAS tester:
 - Address 10 (Park Distance Control or Park Assist)
 - Code the control unit
 - Select control unit
 - > Continue
 - Change the code value: Byte 0 Bit sample xxxxxxx1 (x: enter the available values in the entry field). To do this, switch to entry mode [BIN].
27. The automatic activation of trailer stabilisation can be checked as follows when a trailer is connected:
 - Vehicle self-diagnostics
 - 03 Brake electronics
 - 011 Measurement values
 - enter "10" and "Q"
 - Trailer yes
28. Check the operation of the trailer using suitable test equipment (with load resistances) or with a trailer.
29. Secure all cables with cable ties.
30. Re-fit all disassembled parts.

Socket pin assignment



Pin	Circuit	Wire Colour
1	Indicator lamp, left-hand side	black/white
2	Rear fog lamp	gray/blue
3	Ground (circuit 1-8)	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
8	Back-up light	black/blue
9	Constant plus	red
10	Charging lead	yellow
11	Ground (circuit 10)	brown/white
12	Trailer identification	--
13	Ground (circuit 9)	brown