

OPERATION AND MAINTENANCE

- The value of the maximum permissible payload of the towing vehicle shall be decreased by the total mass of the coupling device (see technical data).
- The coupling device may be used only for towing of trailers with relevant coupling devices.
- Fastening of the coupling device to the vehicle as well as of the towing arm to the towing frame shall be checked after the first 300 km run with trailer. It is recommended to repeat such inspections regularly every 3000 km run with trailer.
- The towing arm with ball shall be kept clean and only appropriate grease shall be used to its protection.
- Inspections of ball diameter are necessary during the often use of the coupling device. Diameter shall not be smaller than 49 mm in any place.
- If a trailer isn't coupled, must be the detachable towing arm removed. Towing arm, which can be removed without using of tools, is allowed being detachable. Towing arm requiring tools for its removal isn't allowed to be detachable. If the towing arm is removed, it is necessary to protect the chuck of bayonet lock by the delivered cover.

WARRANTY CERTIFICATE

The manufacturer provides a 24 months warranty period from the date of sale for the fail-safe function of the supplied coupling device if all instructions given by him for mounting, operation and maintenance of that product have been kept.

The user shall apply the warranty claim at the sale organisation where the coupling device was bought. The shop dealer with the representative of manufacturer shall assess the claim in the legal time limit and in accordance with claim rule in force.

Condition of warranty is that coupling device has been used only for the purposes it has been designed and intended to and in accordance with the technical data put down in this instruction book. Next conditions of warranty are the observance of mounting procedure and the only use of original parts (especially of the towing arm).

Warranty does not cover damage of its surface protection made mechanically or by its use in extreme weather conditions.

Warranty expires if coupling device has been damaged in an accident of relevant towing or towed vehicle, with exception of an accident caused evidently by the own coupling device itself. Warranty is also cancelled in case of intervention into the mechanism of the coupling device leading to any change or improvement.

Warning: Warranty certificate is not valid without submission of the duly filled-up Type Sheet bearing protection elements.

Date of sale:

Sale organisation:

HOOK CZ s.r.o.

Košuličova 2

Brno 619 00

CZECH REPUBLIC

Tel., fax: +420 543 252 024



HOOK CZ s.r.o.

Košuličova 2

Brno 619 00

CZECH REPUBLIC

OPERATING INSTRUCTIONS WARRANTY CERTIFICATE

for
coupling device

Design: a) not detachable ball joint

TYPE:

BTZ 27-29A

EEC-approval number:

e8 00-0011

For vehicle:

Manufacturer:

Model:

Model year:

**Opel
Combo C
since 2002-**

TECHNICAL DATA:

D-value:

7,38 kN

Maximum static vertical mass S:

70 kg

Mass of the coupling device:

22,5 kg

The Coupling device was homologated pursuant to the Directive 94/20/EC. It is intended for towing of trailers and it was checked for D-value 7,38 kN. According to expression mentioned below, for example, it corresponds with trailer mass 1400 kg and vehicle mass 1627 kg. But technical data inscribed in the Vehicle Registration Document are valid. Value of vertical load S mustn't be exceeded.

$$\text{Calculation of D-value: } D \text{ [kN]} = \frac{\text{Max. trailer mass [kg]} \times \text{Max. vehicle mass [kg]} \times 9,81}{\text{Max. trailer mass [kg]} + \text{Max. vehicle mass [kg]} \times 1000}$$

CONDITIONS FOR ATTACHMENT OF THE COUPLING DEVICE TO THE VEHICLE

- Any change or reconstruction of the coupling device is not permitted!
- Presumption for the installation of the coupling device into the towing vehicle is that the vehicle meets perfectly the geometric parameters declared by manufacturer and that the fixing points on bottom of the rear part of bodywork are not deformed or injured by accident or attacked by corrosion at elder vehicles.

Procedure of the attachment to the vehicle:

- Demount bumper and cut it- see fig.2.
- Demount 3+3 nuts M8 of bumper reinforcement holder. Remove the reinforcement from rear wall.
- Uncover the boot floor and demount plastic lath under the rear door.
- There are depressions on the rear wall prepared by vehicle manufacturer. Use these depressions as a centre and drill 2+2 holes $\varnothing 11$ through hollow beam of rear wall.
- There are depressions on boot floor prepared by vehicle manufacturer. Use these depressions as a centre and drill 2+2 holes $\varnothing 11$ - bottom holes have been prepared by vehicle manufacturer. Consequently, enlarge these floor holes only for $\varnothing 22$ - for distance tubes insertion.
- Enlarge for $\varnothing 22$ the holes at rear wall- the first holes only (not through the beam!).
- Put right (6) and left (5) counter plates- together with bolts (10), (11) and distance tubes (7), (8)- by holes in floor into the beams- see fig. 1.
- Put right (4) and left (3) side plates onto the bolts (10), (11) that protrude from the bottom side of the beams and tighten them slightly by nuts with washers.
- From the spare wheel space insert 2+2 bolts (12) with washers through the side plates (3) and (4) into the rear wall cavern. From the outer side of rear wall insert distance tubes (9) and fit bumper reinforcement onto original M8 bolts and 2+2 towbar bolts (12). Firmly tighten the bumper reinforcement by original nuts M8.
- Put the crossbeam (1) onto the bolts (12) and fix it by nuts with washers.
- Firmly tighten all bolts: M8= 25 Nm, M10= 45 Nm, M12= 75 Nm.
- Make a cutting for rear left counter-plate bolt in plastic lath by a rear door.
- Install the wiring.
- Fit back the plastic lath and bumper.

List of delivered parts:

crossbeam (1)	1
towing arm(2) + plastic cover	1+1
side plate right (4) + left (3)	1+1
counter plate right (6) + left(5)	1+1
socket holder	1
bolt M 12 x 65 (13) + spring washer + nut M12	1+1+1
bolt M 12 x 70 (14) + spring washer + nut M12 + washer 13.....	1+1+1+1
bolt M 10 x 100 (12) + washer $\varnothing 26$ + spring washer + nut M10	4+8+4+4
distance tube $\frac{1}{2}$ " length 53mm (9)	4
bolt M 10 x 120 (10) + washer $\varnothing 26$ + spring washer + nut M10	2+2+2+2
distance tube $\frac{1}{2}$ " length 85mm (7)	2
bolt M 10 x 230 (11) + washer $\varnothing 26$ + spring washer + nut M10	2+2+2+2
distance tube $\frac{1}{2}$ " length 196mm (8)	2
wiring	by the order

FIGURE – coupling device Opel Combo C

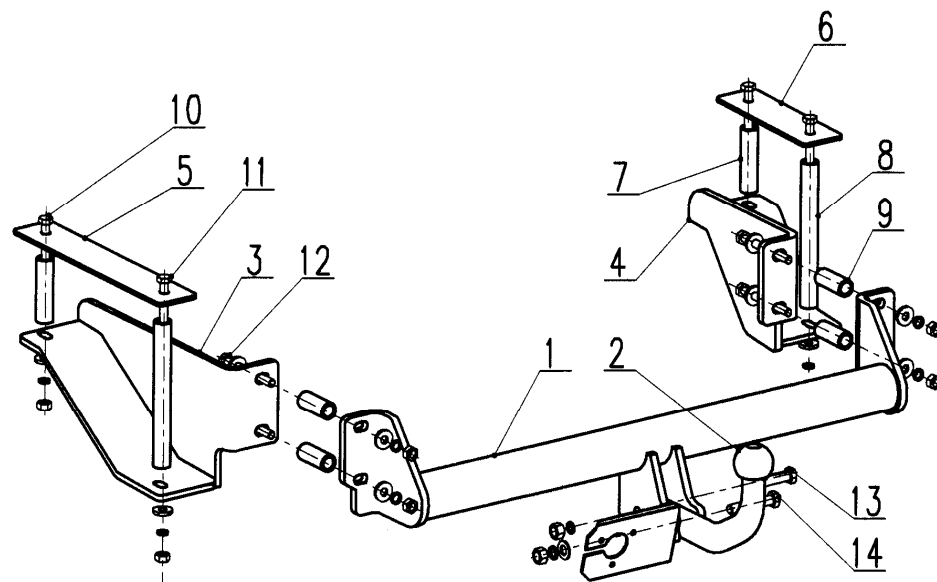


FIGURE 2- bumper cutting Opel Combo C

