

**TOW BAR O-220 FOR  
OPEL VECTRA B KOMBI**  
(1996 - 2003)  
**FITTING AND OPERATION MANUAL**

**Cat. No.O-220**

**DESTINATION**

Tow bar **O-220** for a **Opel Vectra B Kombi** is designed for towing a trailer. This ball hook has a current certification of approval authorizing the product with **e20** certification sign.

**FITTING CONDITIONS**

Tow bar **O-220** can be used and operated in a car with proper technical conditions of body elements. Those parts cannot be mechanically damaged. The ball hook has to be installed and operated in a car according to this instruction. All bolts and nuts in ball hook have to be screwed down with proper torque (Mo). Torque values are given below:

M8	-	25 (Nm)	M12	-	85 (Nm)
M10	-	50 (Nm)	M16	-	200 (Nm)

**OPERATION CONDITIONS**

The tow bar **O-220** has a rating plate describing correct and safe loads of the hook:

Typ: <b>O-220</b> <b>A50-X</b> <b>e20 0587-00</b> <b>D = 9,0 kN</b> <b>S = 75 kg</b> <b>R = 1700 kg</b>	The tow bar for <b>Opel Vectra B Kombi</b> Tow bar class ( compressing device ) Tow bar certification of approval number Teoretical related force working on a ball hook Max permissible vertical load of the hook ball Max permissible load of towing trailer
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**D - force is calculated using the following formula:**

$$D = g \times \frac{T \times R}{T + R} \text{ kN}$$

T-technically permissible maximum mass in tonnes of the towing vehicle (also towing tractors) including, if necessary, the vertical load of a centrale axle trailer.  
R-technically permissible maximum mass in tonnes of the full trailer with drawgal free to move in the vertical plane or of the semi-trailer.  
g-acceleration due to gravity(assumed as 9,81 m/s<sup>2</sup>)

During operating individual elements of ball hook should be kept in a proper technical condition and protected from corrosion. The trailer must be linked with an elastic joint with proper durability ( cord , chain ) while towing .It is necessary to check periodically bolt joints during operating the ball hook. If screws are eased , it is necessary to screw them down .

**FITTING**

The tow bar **O-220** for **Opel Vectra B Kombi** is made up of the following elements :

- |                                  |            |                                |            |
|----------------------------------|------------|--------------------------------|------------|
| 1. Towbar mainframe              | - 1 piece  | 8. Special washer 40/ 12,5x2,5 | - 3 pieces |
| 2. Tow ball with support         | - 1 piece  | 9. Special washer 60/ 12,5x2,5 | - 2 pieces |
| 3. Electrical plate              | - 1 piece  | 10.Bolt M12x100                | - 3 pieces |
| 4. Distance sleeve 17,3/ 12,5x65 | - 1 piece  | 11.Bolt M12x110                | - 2 pieces |
| 5. Distance sleeve 17,3/ 12,5x68 | - 2 pieces | 12.Bolt M12x30                 | - 4 pieces |
| 6. Distance sleeve 17,3/ 12,5x70 | - 1 piece  | 13.Spring washer 12,2          | - 9 pieces |
| 7. Distance sleeve 17,3/ 12,5x77 | - 1 piece  | 14.Nut M12                     | - 5 pieces |

Follow the general directions in order to fit **O-220** tow bar properly:

1. Rear bumper cutting is not required. There is also no need to remove it.
2. Unpack the towbar packing and separate components. Check all parts are present.
3. From inside of the trunk drill 3 holes 12,5 from the left side and 2 holes 12,5 from the right side in the factory marked places.
4. Drill previously drilled holes from size 12,5 to size 17,5 (from inside of trunk in one wall only) under (4), (5), (6) and (7).
5. Insert for two (5) and one (4) into previously drilled holes 17,5 from left side. From right side insert 1 pc. of (6) from the back strip side and one pc. of (7).
6. Next insert bolts (10) and (11) with (8) and (9) into above-mentioned distance sleeves.
7. Put (1) to (10) and (11) from the bottom and attach them using (14) with (13).
8. Attach (2) to (1) using (12) with (13), add (3) from left side of (2).
9. Check if all fixing bolts and nuts are correctly tightened.

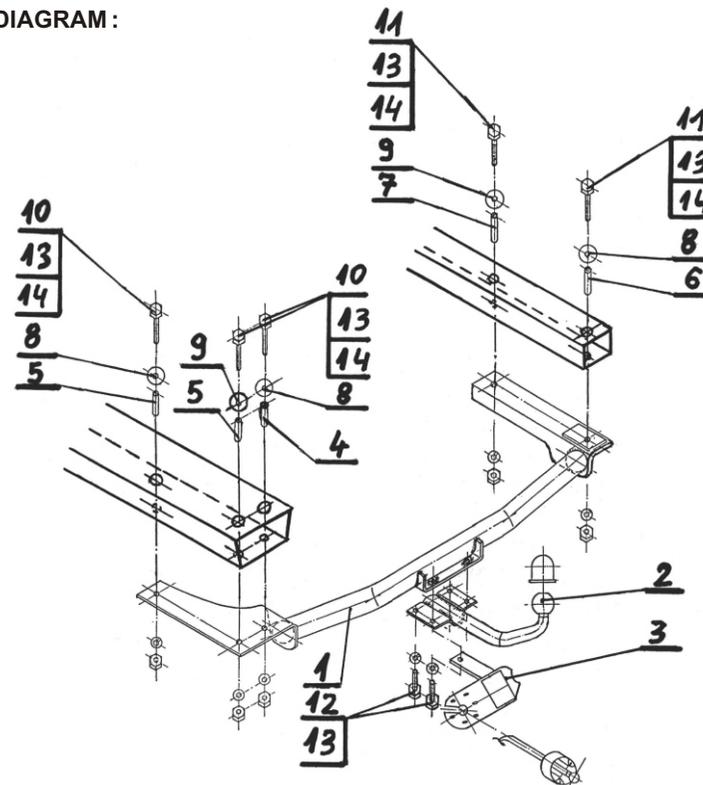
**Obeying this instruction assures correct montage and the tow bar operating in a Opel Vectra B Kombi.**

After assembling of the tow bar **O-220** you have to get entry in cars **registration book** in a quality control station .

**CAUTION :**

Check if all bolts and nuts are correctly tightened after 1000km. Keep tow ball clean, grease and cased. All mechanical damages of tow bar excludes its further exploitation . Damaged ball hook **cannot be repaired**. In case of braking the rules of montage or unproper usage manufacturer **do not take responsibility** for arised damages .

**MONTAGE DIAGRAM :**



**NOTE :**

Bunch of wires is not included (in total price).