

DESTINATION

Tow bar V-114/1 for a Volkswagen Polo (3/5D) 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 V-114/1 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 V-114/1 has a rating plate describing correct and safe loads of the hook:

Typ: V-114/1	The tow bar for Volkswagen Polo (3/5D)
A50-X	Tow bar class (compressing device)
e20 0110-00	Tow bar certification of approval number
D = 6,9 kN	Theoretical related force working on a ball hook
S = 50 kg	Max permissible vertical load of the hook ball
R = 1200 kg	Max permissible load of towing trailer

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/s²)

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 V-114/1 for Volkswagen Polo (3/5D) is made up of the following elements:

1. Tow bar mainframe	- 1 piece	6. Bolt M12x65	- 2 pieces
2. Tow ball	- 1 piece	7. Spring washer 10,2	- 4 pieces
3. Electrical plate	- 1 piece	8. Spring washer 12,2	- 2 pieces
4. Special washer 40/ 10,5x2,5	- 4 pieces	9. Flat washer 13,0	- 2 pieces
5. Bolt M10x35	- 4 pieces	10. Nut M12	- 2 pieces

Follow the general directions in order to fit V-114/1 tow bar properly:

1. Rear bumper cutting is **required**.
2. Unpack the towbar packing and separate components. Remove the rear bumper of the car. Check all parts are present.

3. Unscrew the rear bumper of the car and remove the strenghtening of the bumper. Once the tow bar is fitted the strenghtening will not be mounted.
4. Insert (1) into the chassis side member and attach using (5), (4), (7).
5. Make the undercut of the rear bumper (cut-out between two factory-made marked lines relative to the axis of the bumper sized ~ 50x70 mm). Attach the rear bumper to the car.
6. Attach (2) to (1) using (6), (9), (8), (10), attach (3) on the left side of (2) at the same time.
7. Check if all fixing bolts and nuts are screwed hard enough.

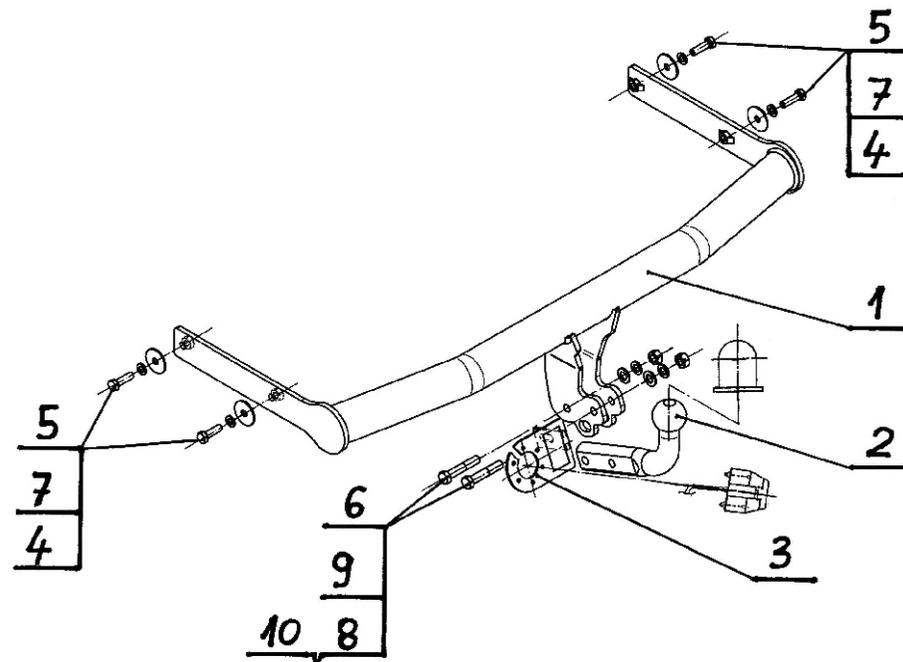
Obeying this instruction assures correct montage and the tow bar operating in a Volkswagen Polo (3/5D).

After assembling of the tow bar V-114/1 you have to get entry in cars registration book in a quality control station.

CAUTION:

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).