

TOW BAR M-223 Mercedes Sprinter / VW LT

(Van, Minibus) *
(02/1995 - r.)

FITTING AND OPERATION MANUAL.

Cat. No.M-223

DESTINATION

Tow bar **M-223** for a **Mercedes Sprinter / VW LT** 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 **M-223** 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 (M₀). Torque values are given below:

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

OPERATION CONDITIONS

The tow bar **M-223** has a rating plate describing correct and safe loads of the hook:

Typ: M-223 A50-X e20 0082-00 D = 15,3 kN S = 120 kg R = 2800 kg	The tow bar for Mercedes Sprinter / VW LT 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 vehicale (also towing tractors) including, if neccessary, 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 **M-223** for **Mercedes Sprinter / VW LT** is made up of the following elements :

1. Tow bar mainfame	- 1 piece	11.Spring washer 16,3	- 2 pieces
2. Tow ball	- 1 piece	11.Spring washer 12,2	- 8 pieces
3. Special wascher 34/ 12,5x5	- 6 pieces	10.Flat washer 17,0	- 2 pieces
4. Bolt M16x50	- 2 pieces	10.Flat washer 13,0	- 8 pieces
5. Bolt M12x100	- 8 pieces	12.Nut M16	- 2 pieces
		12.Nut M12	- 8 pieces

Follow the general directions in order to fit **M-223** 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.

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- 3.Attach (1) through the side arms (steel plates) to the chassis frame members (right and left) using (5) with (9), (3) - inserted between the chassis frame members and side arms of (1) and attach using (11), (7).
- 4.Attach (2) to (1) using (4) with (8), (6), (10).
5. Check if all fixing bolts and nuts are correctly tightened.

Obeying this instruction assures correct montage and the tow bar operating in a Mercedes Sprinter / VW LT

After assembling of the tow bar **M-223** you have to get entry in cars **registration book** in a quality control station .

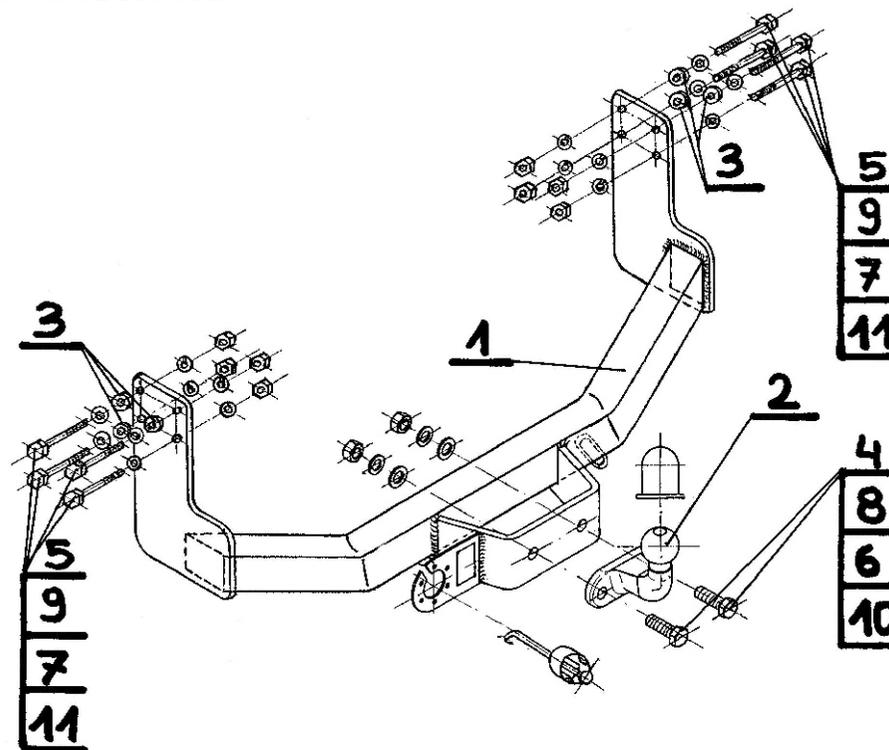
CAUTION :

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 .

* Tow Bar M-223 used to the following models:

- Mercedes Sprinter Van, Minibus (with step 3,55/4,025),
- Mercedes Sprinter Van, Minibus (double weels with step 3,55/4,025),
- Volkswagen LT 28-35 Van, Minibus (with step 3,55/4,025),
- Volkswagen LT 46 Van, Minibus (double weels with step 3,55/4,025).

MONTAGE DIAGRAM :



NOTE :

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

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