

## TOWBAR V-135 FOR VW Sharan / Seat Alhambra / Ford Galaxy FITTING AND OPERATION MANUAL. ( 1995 - 05/2000 r. )

**Cat. No.V-135**

### DESTINATION

Tow bar **V-135** for a **VW Sharan / Seat Alhambra / Ford Galaxy** 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-135** 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 (M<sub>o</sub>). Torque values are given below:

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

### OPERATION CONDITIONS

The tow bar **V-135** has a rating plate describing correct and safe loads of the hook:

Typ: <b>V-135</b>  <b>e20</b> <b>A50-X</b> <b>0012-00</b> D = 11,2 kN S = 85 kg R = 2100 kg	The tow bar for <b>VW Sharan / Seat Alhambra / Ford Galaxy</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 **V-135** for **VW Sharan / Seat Alhambra / Ford Galaxy** is made up of the following elements:

- |                                |            |                       |            |
|--------------------------------|------------|-----------------------|------------|
| 1. Towbar mainframe            | - 1 piece  | 7. Bolt M12x65        | - 2 pieces |
| 2. Tow ball                    | - 1 piece  | 8. Flat washer 6,4    | - 4 pieces |
| 3. Electrical plate            | - 1 piece  | 9. Flat washer 13,0   | - 2 pieces |
| 4. Special washer 40/ 10,5x2,5 | - 6 pieces | 10.Spring washer 10,2 | - 6 pieces |
| 5. Bolt M6x20                  | - 4 pieces | 11.Spring washer 12,2 | - 2 pieces |
| 6. Bolt M10x40                 | - 6 pieces | 12.Nut M6             | - 4 pieces |
|                                |            | 13.Nut M12            | - 2 pieces |

In order to mount the ball hook **V-135** you have to obey the instruction below:

- 1.Rear bumper cutting is required.

- 2.Remove the rear bumper and dismantle the rear bumper strenghtening (it will not be mounted again)
- 3.Dismantle the towbar into kit-form elements.
- 4.Put the rear bumper to (1) and mark the place and size of cut-out in the bottom strip of the bumper. Make the cut-out.
- 5.Attach the rear bumper to the holders placed on (1) using (5), (8) and (12).
- 6.Insert (1) together with the bumper into the chassis side members and screw using (6), (4), (10).
- 7.Attach the rear bumper to the car.
- 8.Attach (2) to (1) using (7),(9), (11) and (13), attach (3) from the left side of (2) at the same time.
- 9.Check if all fixing bolts and nuts are screwed hard enough.

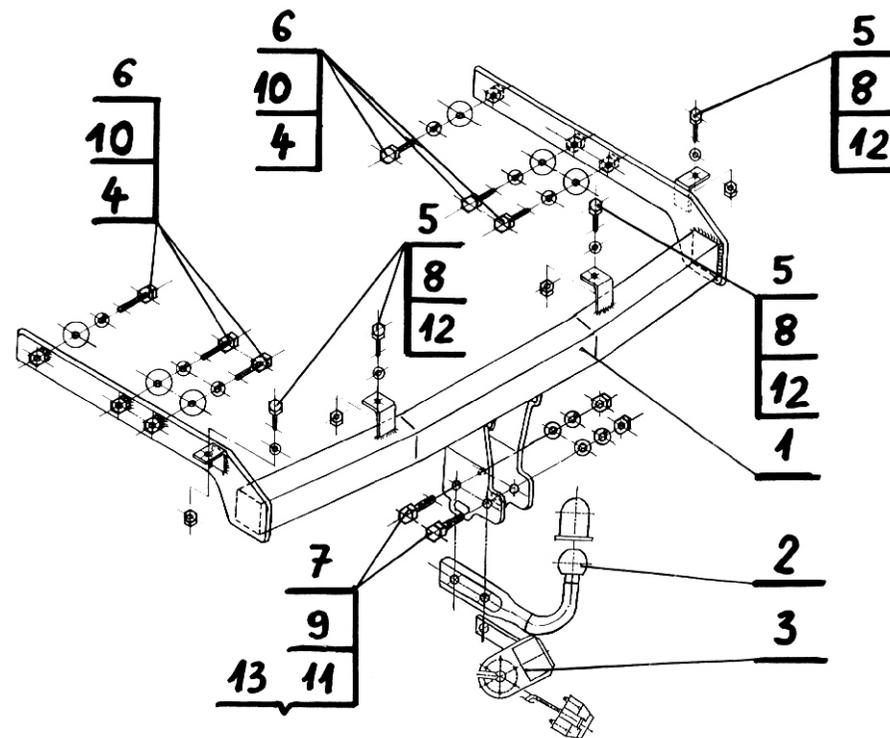
**Obeying this instruction assures correct montage and the tow bar operating in a VW Sharan / Seat Alhambra / Ford Galaxy**

After assembling of the tow bar **V-135** 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).