

## TOW BAR R-077 RENAULT Laguna (5D)

(03/2001 - r.)

### FITTING AND OPERATION MANUAL.

Cat. No.R-077

#### DESTINATION

Tow bar **R-077** for a **Renault Laguna (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 **R-077** 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 **R-077** has a rating plate describing correct and safe loads of the hook:

Typ: <b>R-077</b> <b>A50-X</b> <b>e20</b> <b>0118-00</b> <b>D = 8,5 kN</b> <b>S = 75 kg</b> <b>R = 1500 kg</b>	The tow bar for <b>Renault Laguna (5D)</b> Tow bar class (compressing device) Tow bar certification of approval number Theoretical 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 **R-077** for **Renault Laguna (5D)** is made up of the following elements:

1. Towbar mainfame	- 1 piece	10.Bolt M10x90	- 2 pieces
2. Tow ball	- 1 piece	11.Bolt M12x35	- 4 pieces
3. Electrical socket plate	- 1 piece	12.Bolt M12x65	- 2 pieces
4. Right cantilever	- 1 piece	13.Flat washer 8,4	- 4 pieces
5. Left cantilever	- 1 piece	14.Flat washer 10,5	- 2 pieces
6. Special washer 40/ 10,5x2,5	- 2 pieces	15.Flat washer 13,0	- 8 pieces
7. Distance sleeve 17,3/ 12,5x63	- 2 pieces	16.Spring washer 8,2	- 4 pieces
8. Cage nut M8 (CH-005.01)	- 4 pieces	17.Spring washer 10,2	- 2 pieces
9. Bolt M8x25	- 4 pieces	18.Spring washer 12,2	- 6 pieces
		19.Nut M10	- 2 pieces
		20.Nut M12	- 4 pieces

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Follow the general directions in order to fit **R-077** towbar properly:

- 1.Rear bumper cutting is not required.
- 2.Find holes in the back strip and put (8) in them.
- 3.Remove the plastic shield.
- 4.After replacing plugs from chassis rails put (7) in the holes from the external side.
- 5.Screw (4) and (5) to chassis using (10) with (6), (14), (17) and (19). Then use (9) with (13), (16) as shown in the picture.
- 6.Put (1) between (4) and (5) and screw using (11) with (15), (18) and (20).
- 7.Attach the plastic shield.
- 8.Attach (2) together with (3) to (1) using (12) and (15), (18) and (20).
- 9.Check if all bolts and nuts are correctly tightened.

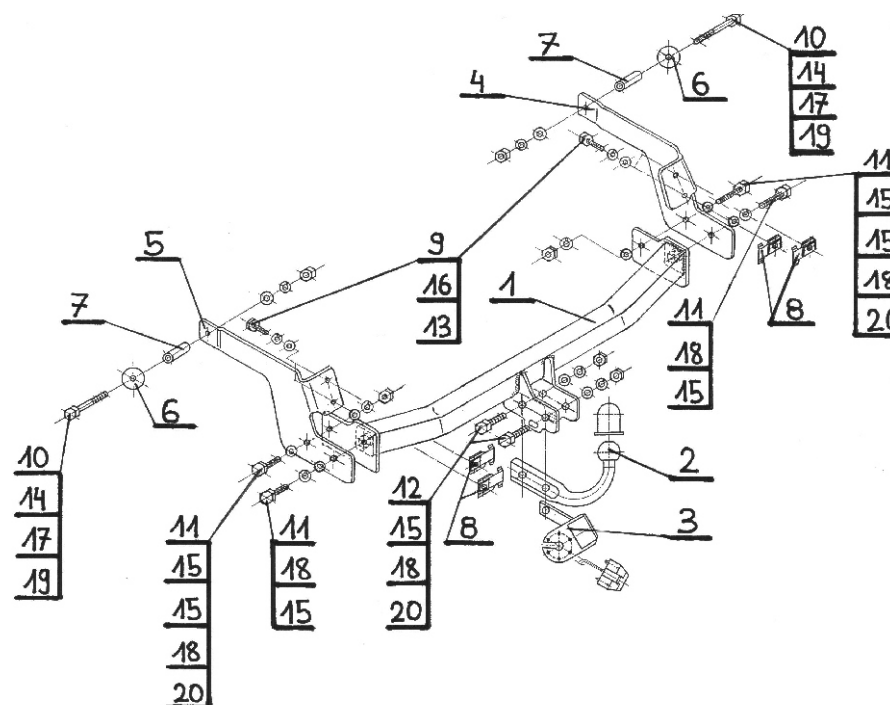
**Obeying this instruction assures correct montage and the tow bar operating in a Renault Laguna (5D).**

After assembling of the tow bar **R-077** 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 improper usage manufacturer **do not take responsibility** for arised damages.

#### MONTAGE DIAGRAM:



#### NOTE:

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

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