

## TOW BAR FOR Nissan Pathfinder (01/2005 - ) FITTING AND OPERATION MANUAL

**Cat. No.N-080**

### DESTINATION

Tow bar **N-080** 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 **N-080** 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 **N-080** has a rating plate describing correct and safe loads of the hook:

Typ: <b>N-080</b>	Tow bar catalogue number.
<b>A-50X</b>	Tow bar class ( compressing device )
<b>e20 00-0440</b>	Tow bar certification of approval number
<b>D = 14,5 kN</b>	Teoretical related force working on a ball hook
<b>S = 120 kg</b>	Max permissible vertical load of the hook ball
<b>R = 3000 kg</b>	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/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 **N-080** is made up of the following elements :

1. Right support	- 1 piece	6. Bolt M12x70	- 2 pieces
2. Left support	- 1 piece	7. Bolt M12x90	- 6 pieces
3. Connector	- 1 piece	8. Spring washer Ø12,2	- 8 pieces
4. Tow ball	- 1 piece	9. Flat washer Ø13,0	- 8 pieces
5. Electrical socket plate	- 1 piece	10. Nut M12	- 8 pieces

Follow the general directions in order to fit **N-080** towbar properly:

1. Rear bumper cutting and removing is required.
2. Remove the rear bumper and the Styrofoam fill.
3. Attach the right (1), left (2) support to the underside of the crossbeam and from the top of beam attach connector (3) then turn at factory points using bolts M12x90 (7) with flat washers Ø13,0 (9), spring washers Ø12,2 (8) and nuts M12 (10).
4. Make the undercut in the styrofoam fill at the connector site (3).
5. Make the undercut in the bottom part of the bumper according to the figure 1.
6. Install the bumper with it styrofoam fill.
7. Attach the tow ball (4) and electrical plate (5) to the supports (1 i 2) using bolts M12x70 (6) with flat washers Ø13,0 (9), spring washers Ø 12,2 (8) and nuts M12 (10).

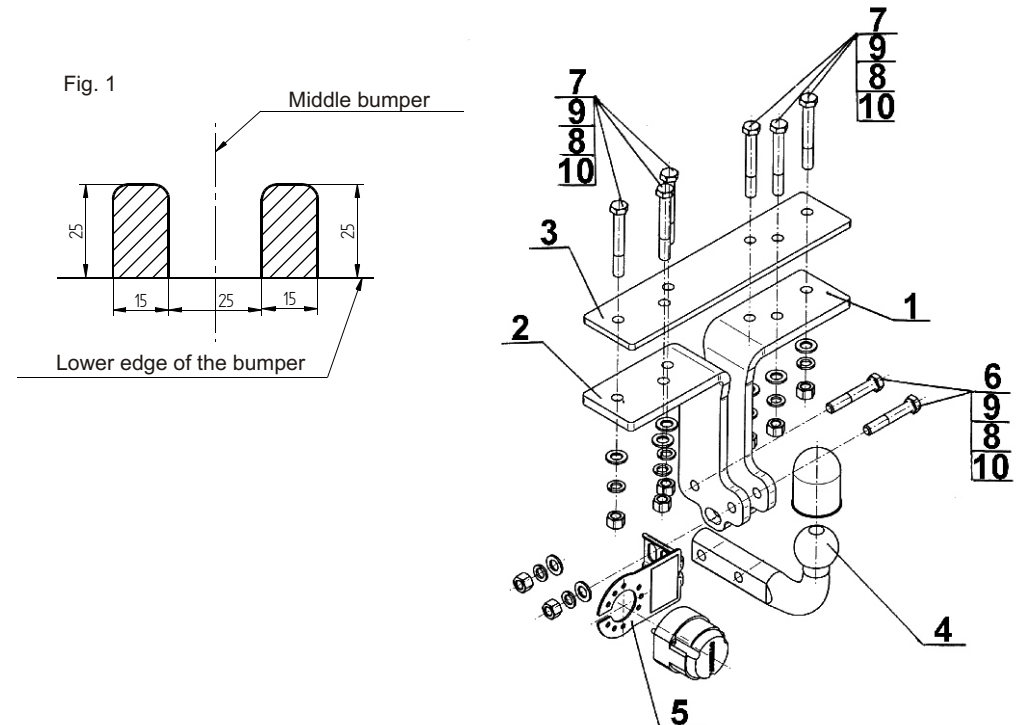
**Obeying this instruction assures correct montage and the N-080 tow bar operating.**

After assembling of the tow bar **N-080** 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).