

## TOWBAR H-270 FOR HYUNDAI Santa Fe ( 09/2000 - 2006 r. ) FITTING AND OPERATION MANUAL.

Nr kat. H-270

### DESTINATION

Towbar **H-270** for a **Hyundai Santa Fe** is designed for towing a trailer. This ball hook has a current certification of approval authorizing the product with **e20** certification sign.

### FITTING CONDITIONS

Towbar **H-270** 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 towbar **H-270** has a rating plate describing correct and safe loads of the hook:

Typ: <b>H-270</b>	The tow bar for <b>Hyundai Santa Fe</b>
<b>A50-X</b>	Tow bar class ( compressing device )
<b>e20 0035-00</b>	Tow bar certification of approval number
<b>D = 11,5 kN</b>	Theoretical related force working on a ball hook
<b>S = 92 kg</b>	Max permissible vertical load of the hook ball
<b>R = 2300 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 towbar **H-270** for **Hyundai Santa Fe** is made up of the following elements :

1. Tow bar mainframe	- 1 piece	9. Bolt M12x65	- 2 pieces
2. Tow ball	- 1 piece	10. Bolt M12x120	- 2 pieces
3. Electrical plate	- 1 piece	11. Bolt M10x(1,25)x40	- 4 pieces
4. Support	- 2 pieces	12. Flat washer 13,0	- 4 pieces
5. Right angle bar	- 1 piece	13. Flat washer 10,5	- 4 pieces
6. Left angle gar	- 1 piece	14. Spring washer 12,2	- 12pieces
7. Bolt M12x40	- 4 pieces	15. Spring washer 10,2	- 4 pieces
8. Bolt M12x(1,25)x40	- 4 pieces	16. Nut M12	- 8 pieces

In order to mount the ball hook **Hyundai Santa Fe** you have to obey the instruction below.

1. Rear bumper cutting is required.
2. Unscrew the tow holders from the right and left side of chassis side members.
3. Lower the silencer from the hanger and spare wheel.
4. Attach (4) to the chassis side members using (8), (14) through the chassis side members using (10), (12), (14), (16)-the bolts must be put from inside of the chassis side members.
5. Put (1) to (4) and the chassis side members, mark and make the cut-out of the bumper.
6. Insert (1) and attach to (4) using (7), (14), (16) and attach to the bottom of the chassis side members using (11), (15) and (13). To the last hole the support of (1) screw tight (5) and (6), next attach to the chassis side members using (8), (14).
7. Attach (2) to (1) using (9), (12), (14), (16), attach (3) from the left side of (2).
8. Hang up the silencer and the spare wheel.
9. Check if all fixing bolts and nuts are screwed hard enough.

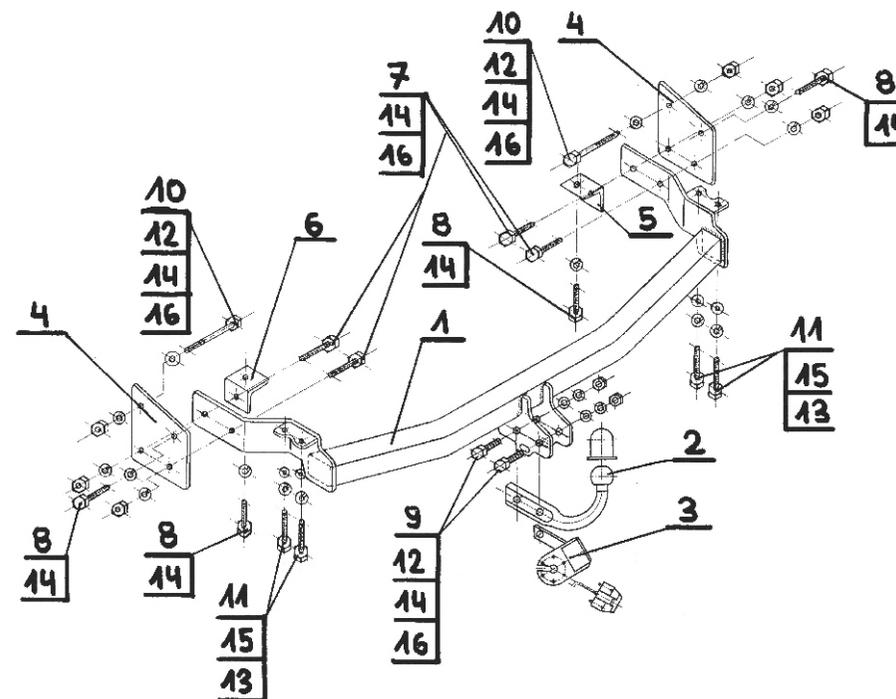
**Obeying this instruction assures correct montage and the tow bar operating in a Hyundai Santa Fe.**

After assembling of the tow bar **H-270** 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).