

TOW BAR FOR Kia Picanto (5D) (05/2011 -) FITTING AND OPERATION MANUAL

Cat. No.K-038

DESTINATION

Tow bar **K-038** is designed for towing a trailer. This ball hook has a current certification of approval authorizing the product with **e4** certification sign.

FITTING CONDITIONS

Tow bar **K-038** 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 **K-038** has a rating plate describing correct and safe loads of the hook:

Typ: K-038	Tow bar catalogue number.
F	Tow bar class (compressing device)
e4 00-4472	Tow bar certification of approval number
D = 5,5 kN	Theoretical related force working on a ball hook
S = 36 kg	Max permissible vertical load of the hook ball
R = 900 kg	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/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 K-038 is made up of the following elements:

1. Towbar mainframe	- 1 piece	7. Screw M10x1,25x40	- 6 pieces
2. Tow ball (ACS-2030)	- 1 piece	8. Screw M12x25	- 4 pieces
3. Tow ball socket (ACS)	- 1 piece	9. Spring washer Ø10,2	- 6 pieces
4. Electrical socket plate	- 1 piece	10. Spring washer Ø12,2	- 4 pieces
5. Special washer Ø30/Ø10,5x3	- 6 pieces	11. Flat washer Ø13,0	- 4 pieces
6. Strengthening	- 1 piece		

Please follow the installation fitting instruction below in order to ensure correct installation of the towbar:

1. Rear bumper **cutting and removing is not required.**

2. Disassembly the towing eye from the stringer (will not be reused).
3. Attach the towbar mainframe (1) to the stringers then attach the strengthening (6) to the right stringer and join in factory points using bolts M10x1,25x40 (7) with spring washers Ø10,2 (9) and washers Ø30/Ø10,5x3 (5).
4. Add the tow ball socket (3) and electrical socket plate (4) using bolts M12x25 (8) with spring washers Ø12,2 (10) and flat washers Ø13,0 (11) (according to the drawing).
5. Pin in the tow ball (2) to the socket (3) according to the manual.

Caution:

Different types of (2) may be attached to the (1) only if:

1. The adapted tow has its own information label with homologation number
2. D and S values are equal or higher than (1) values.
3. Tow ball centre-point is in accordance with the drawing

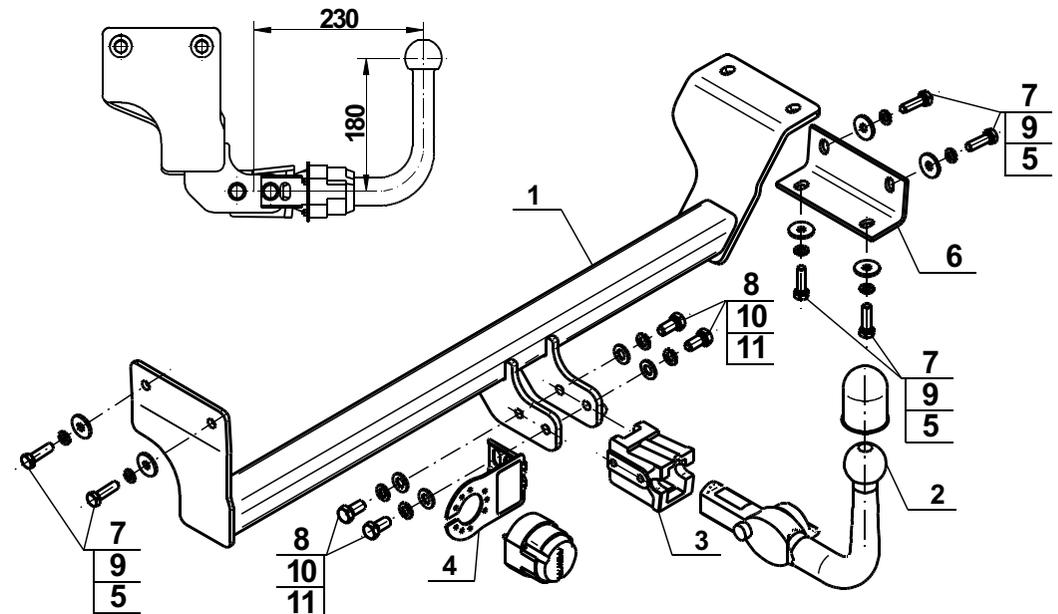
Obeying this instruction assures correct montage and the K-038 tow bar operating.

After assembling of the tow bar **K-038** you have to get entry in cars **registration book.**

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).