

# TOW BAR FOR Kia Carens

(2013- )

## FITTING AND OPERATION MANUAL

Cat. No.K-058

#### **DESTINATION**

Tow bar **K-058** 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 K-058 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  $(M_0)$ . Torque values are given below:

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

#### **OPERATION CONDITIONS**

The tow bar K-058 has a rating plate describing correct and safe loads of the hook:

<b>D</b> = 9,1 kN <b>S</b> = 75 kg	Teoretical related force working on a ball hook Max permissible vertical load of the hook ball
<b>R</b> = 1500 kg	Max permissible load of towing trailer

### D - force is calculated using the following formula:



T-technically permissible maximum mass in tonnes of the towing vehicale (also towning tractors) including, if neccessary, 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-058** is made up of the following elements:

1. Towbar mainframe 2. Tow ball (ACS-2030) 3. Tow ball socket (ACS) 4. Electrical socket plate 5. Right support 6. Left support 7. Flat bar 8. Washer Ø30/Ø10,5x3	- 1 piece - 2 pieces - 6 pieces	9. Bolt M10x1,25x35 10. Bolt M10x1,25x40 11. Bolt M12x25 12. Bolt M12x40 13. Spring washer Ø10,2 14. Spring washer Ø12,2 15. Round washer Ø13,0 16. Nut M12	- 2 pieces - 4 pieces - 4 pieces - 4 pieces - 6 pieces - 8 pieces - 8 pieces - 2 pieces
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Please follow the installation fitting instruction below in order to ensure correct installation of the towbar:

- 1. Rear bumper removing and cutting is not required.
- 2. Lower the spare wheel.

30.10.2015. Cat. No. K-058

- Remove the plastic cover from left and right side. Make an undercut in the right side according to the drawing 1.
- 4. Remove central plastic supports of the bumper (it will not be reused).
- 5. Attach the right (5) and left (6) brackets to the towbar mainfrane (1) with flats (7) and screw using bolts M10x1,25x40 (10) and M10x1,25x35 (9) with spring washers Ø10,2 (13) and washers Ø30/Ø10,5x3 (8).
- 6. Between supports slide the towbar mainfrane (1) and screw using bolts M12x40 (12) with spring washers Ø12,2 (14), round washers Ø13 (15), and nuts M12 (16).
- 7. Reinstall the plastic cover on the left and right side.
- 8. Attach the tow ball socket (3) and electrical plate (4) to the towbar mainframe (1) using bolts M12x25 (11), with spring washers Ø12,2 (14) and round washers Ø13,0 (15).
- 9. Plug the ball (2) of tow bar (3) into the socket following the attached instructions.
- 10.Reinstall the spare wheel.

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

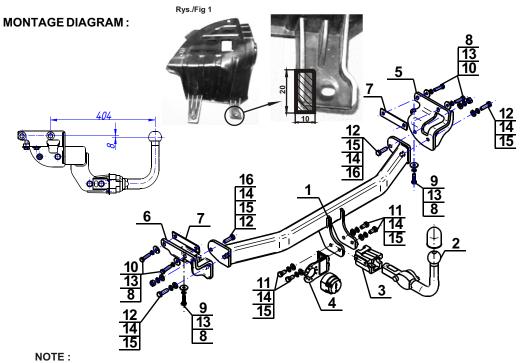
- 1. The adapted tow has its own information label with homologation number
- 2.D and S values are equal or higher than (1) values.
- 3. Tow ball centre-point is in aaccordance with the drawing.

Obeying this instruction assures correct montage and the K-058 tow bar operating.

After assembling of the tow bar K-058 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 .



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

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