

TOW BAR FOR Honda FR-V (2005- 2010) FITTING AND OPERATION MANUAL

Cat. No.H-049

DESTINATION

Tow bar **H-049** 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 **H-049** 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 **H-049** has a rating plate describing correct and safe loads of the hook:

Typ: H-049	Tow bar catalogue number.
A50-X	Tow bar class (compressing device)
E20 55R-01 3217	Tow bar certification of approval number
D = 8,8 kN	Theoretical related force working on a ball hook
S = 90 kg	Max permissible vertical load of the hook ball
R = 1600 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 **H-049** is made up of the following elements:

1. Towbar mainframe	- 1 piece	10. Screw M8x35	- 2 pieces
2. Tow ball (ACS-3003)	- 1 piece	11. Screw M12x25	- 3 pieces
3. Tow ball socket (ACS)	- 1 piece	12. Screw M12x30	- 1 piece
4. Right support	- 1 piece	13. Screw M12x35	-12 pieces
5. Left support	- 1 piece	14. Screw M12x80	- 1 piece
6. Washer	-4 pieces	15. Spring washer Ø8,2	- 2 pieces
7. Electrical socket plate	- 1 piece	16. Spring washer Ø12,2	-17 pieces
8. Special washer Ø24/Ø8,5x2,5	- 2 pieces	17. Flat washer Ø13,0	-17 pieces
9. Special washer Ø40/Ø12,5x3	- 6 pieces	18. Nut M12	- 7 pieces

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

1. Rear bumper **cutting and removing is required.**

2. Remove the rear bumper together with the reinforcement (reinforcement will not be re-used).
3. Remove the two screws inside the bumper.
4. Insert the support (4, 5) into stringers and screw in using bolts M12x35 (13) with spring washers Ø12,2 (16), washers Ø40/Ø12,5x3 (9) and screw in with bolts M8x35 (10) with spring washers Ø8,2 (15) and washers Ø24/Ø8,5x2,5 (8).
5. Slide the towbar mainframe (1) between mounted supports (4, 5) and screw using bolts M12x35 (13) with round washers Ø13,0 (17), spring washers Ø12,2 (16) and nuts M12 (18).
6. Screw the owbar mainframe (1) with towing eye using bolt M12x80 (14) with washers (6), round washer Ø13,0 (17), spring washer Ø12,2 (16) and nut M12 (18).
- 7 Attach the tow ball socket (3) and electrical plate (7) to the towbar mainframe (1) using bolts M12x30 (12)-1 piece and M12x25 (11)- 3 pieces with spring washers Ø12,2 (16) and round washers Ø13,0 (17) (according the scheme)
8. Make an undercut in the bumper according to the fig. 1.
9. Install the bumper to the car.
10. Plug the tow ball (2) to the socket (3) in accordance with attached instruction.

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

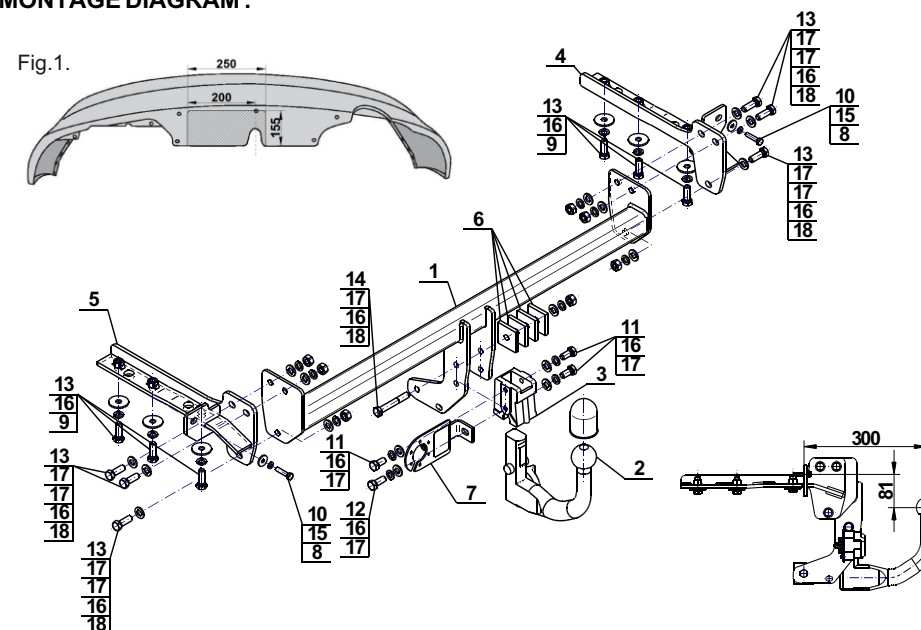
Obeying this instruction assures correct montage and the H-049 tow bar operating.

After assembling of the tow bar **H-049** 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).