

DESTINATION

Tow bar **T-224** for a **Toyota Yaris (3/5D) (P90)** 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 **T-224** 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 **T-224** has a rating plate describing correct and safe loads of the hook:

Typ: T-224 A50-X e4 00 - 3720 D = 6,9 kN S = 55 kg R = 1300 kg	The tow bar for Toyota Yaris (3/5D) (P90) Tow bar class (compressing device) Tow bar certification of approval number Teoretical related force working on a ball hook Max permissible vertical load of the hook ball Max permissible load of towing trailer
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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 **T-224** for **Toyota Yaris (3/5D) (P90)** is made up of elements as follows :

1. Towbar mainframe	- 1 piece	10.Bolt M10x(1,25)x40	- 5 pieces
2. Electrical plate	- 1 piece	11.Bolt M10x(1,25)x70	- 1 piece
3. Tow ball	- 1 piece	12.Bolt M12x35	- 4 pieces
4. Right sidearm	- 1 piece	13.Bolt M12x100	- 2 pieces
5. Left sidearm	- 1 piece	14.Spring washer 10,2	- 6 pieces
6. Flat bar	- 2 pieces	15.Spring washer 12,2	- 6 pieces
7. Distance insert	- 2 pieces	16.Flat washer 10,5	- 6 pieces
8. Special washer 25/ 10,5x8	- 2 pieces	17.Flat washer 13,0	- 6 pieces
9. Distance sleeve 25/ 10,5x35	- 1 piece	18.Nut M12	- 4 pieces

Follow the general directions in order to fit **T-224** tow bar properly:

- 1.Rear bumper dismantling and cutting are not required.
- 2.Unpack the towbar packing and separate components. Check all parts are present.
- 3.Remove the lower part of bumper cover plate.
- 4.Lower the bumper.
- 5.Remove the heat shield.
- 6.Put (4) with (6) to the factory-made holes located in the inner side of chassis side members. Attach with (10), (11), (9), (8), (14), (16) torque 53 Nm.
- 7.Put (5) with (6) to the factory-made holes located in the inner side of chassis side members. Attach with (10), (11), (9), (8), (14), (16) torque 53 Nm.
- 8.Attach (1) to (4) and (5) using (12), (15), (17), (18).
- 9.Attach (3) to (1) together with (7), (2), using (13), (17), (15), (18).
- 10.Refit the bumper and the heat shield.
- 11.Cut a slot in the cover plate (see the drawing). Refit it to the car.
- 12.Check if all fixing bolts and nuts correctly tightened.

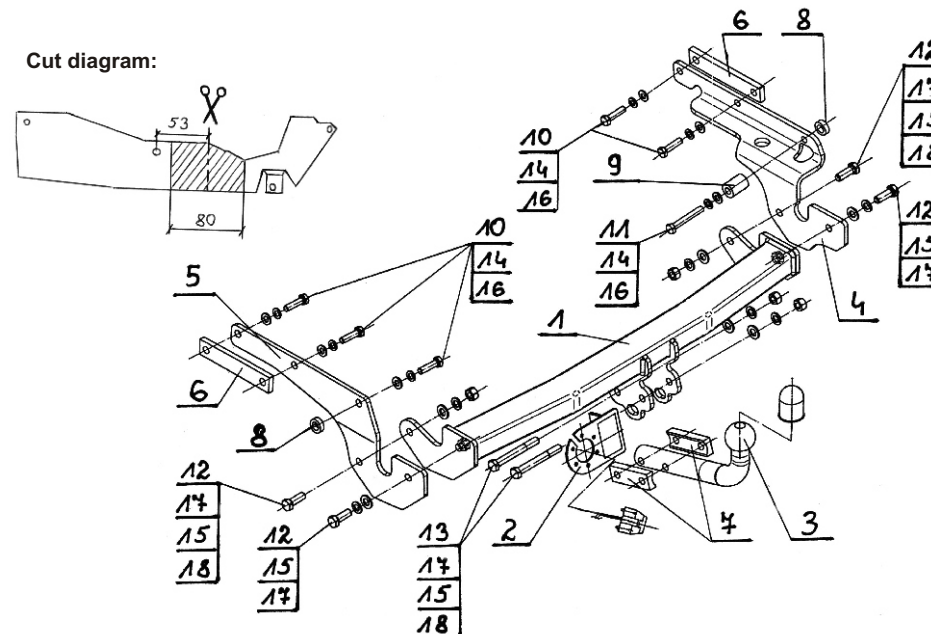
Obeying this instruction assures correct montage and the tow bar operating in a Toyota Yaris (3/5D) (P90).

After assembling of the tow bar **T-224** 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).