

TOW BAR T-220 Toyota Yaris (3/5D) (1999 - 2005) FITTING AND OPERATION MANUAL.

Cat. No.T-220

DESTINATION

Tow bar **T-220** for a **Toyota Yaris (3/5D)** 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 **T-220** 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-220** has a rating plate describing correct and safe loads of the hook :

| | |
|--------------------|---|
| Typ: T-220 | The tow bar for Toyota Yaris (3/5D) |
| A50-X | Tow bar class (compressing device) |
| e20 0533-00 | Tow bar certification of approval number |
| D = 6,0 kN | Teoretical related force working on a ball hook |
| S = 50 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 **T-220** for **Toyota Yaris (3/5D)** is made up of the following elements :

| | | | |
|-------------------------------|------------|------------------------|------------|
| 1. Towbar mainframe | - 1 piece | 5. Bolt M10x(1,25)x50 | - 4 pieces |
| 2. Tow ball with support | - 1 piece | 6. Bolt M12x30 | - 4 pieces |
| 3. Electrical plate | - 1 piece | 7. Spring washer Ø10,2 | - 4 pieces |
| 4. Special washer Ø30/Ø10,5x3 | - 4 pieces | 8. Spring washer Ø12,2 | - 4 pieces |

Follow the general directions in order to fit **T-220** towbar properly:

- 1.Rear bumper removing and cutting is not required.
- 2.Unpack the towbar packing and separate components. Check all parts are present.
- 3.Remove existing factory made tow- handles from left and right chassis side members.

- 4.Attach (1) so its side cantilevers are placed exactly on the same possision as earlier removed tow- handles were.
- 5.Tight side cantilevers to the chassis side members using (5), (4), (7).
- 6.To the (1) attach (2) with (3) on the left side using (6),(8).
- 7.Check if all bolts and nuts are correctly tightened.

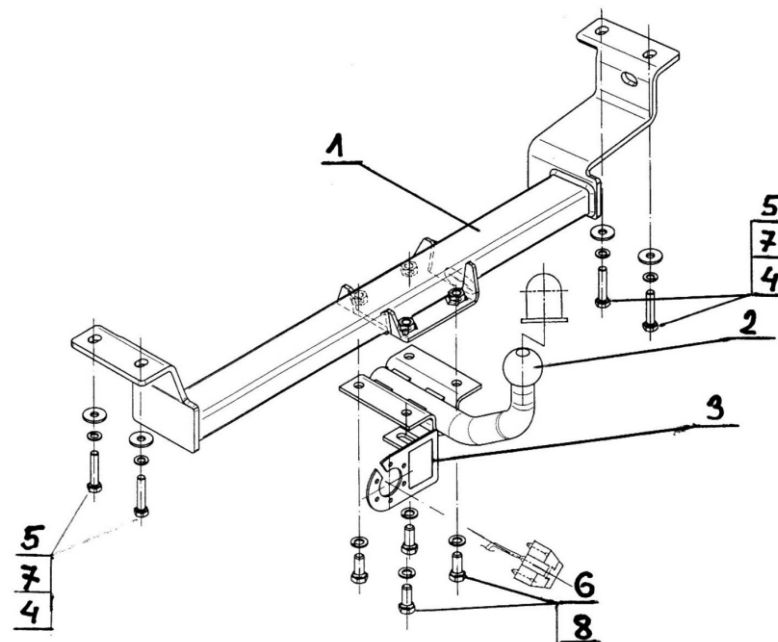
Obeying this instruction assures correct montage and the tow bar operating in a Toyota Yaris (3/5D).

After assembling of the tow bar **T-220** 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).