

# TOW BAR FOR Toyota Avensis Estate (T25) (04/2003 - 2009) FITTING AND OPERATION MANUAL

Cat. No.T-103

## DESTINATION

Before the towbar assembly please refer to the manual and vehicle registration document whether car is adjusted for towing a trailer.

Towbar **T-103** is designed for towing a trailer. This towbar has a current certification of approval authorizing the product with **E20** certification sign.

## FITTING CONDITIONS

Towbar **T-103** can be used and operated in a car with proper technical conditions of body elements. Those parts cannot be mechanically damaged. Remove the insulating mass of the sealing from surface mounting. The towbar has to be installed and operated in a car according to this instruction. All bolts and nuts in towbar have to be screwed down with proper torque (Mo). Torque values are given below :

M6	-	10	(Nm)	M10	-	50	(Nm)
M8	-	25	(Nm)	M12	-	85	(Nm)

## OPERATION CONDITIONS

The towbar **T-103** has a rating plate describing correct and safe loads of the hook :

Typ: **T-103**  
**A50-X**  
**E20 55R-01 4474**  
**D** = 8,6 kN  
**S** = 75 kg  
**R** = 1550 kg

Towbar catalogue number  
Towbar class (compressing device)  
Towbar certification of approval number  
Teoretical related force working on a towbar  
Max permissible vertical load of the tow ball  
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/s<sup>2</sup>)

During operating individual elements of towbar 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 towbar. If screws are eased, it is necessary to screw them down.

## FITTING

- |                            |           |                        |            |
|----------------------------|-----------|------------------------|------------|
| 1. Towbar mainframe        | - 1 piece | 5. Bolt M12x25         | - 4 pieces |
| 2. Tow ball (ACS-2030)     | - 1 piece | 6. Bolt M12x1,25x40    | - 4 pieces |
| 3. Tow ball socket (ACS)   | - 1 piece | 7. Spring washer Ø12,2 | - 8 pieces |
| 4. Electrical socket plate | - 1 piece | 8. Round washer Ø13,0  | - 8 pieces |

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

1. Rear bumper cutting **is not required**.
2. Remove the plastic shield.
3. Remove the factory-made holders from the chassis side members.
4. Put the towbar mainframe (1) to the chassis side members from the bottom of the car on previously screwed tow holders place and attach to the chassis side members using bolts M12x1,25x40 (6) with spring washers Ø12,2 (7) and round washers Ø13,0 (8).

5. Make incision in the plastic shield for blockader sidearm of towbar mainframe (1).
6. Refit the plastic shield.
7. Tighten the tow ball socket (3) and electrical socket plate (4) to the towbar mainframe (1) using bolts M12x25 (5) with spring washers Ø12,2 (7) and round washers Ø13,0 (8).
8. Plug the tow ball (2) into the socket (3) following the attached instructions.

## 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.

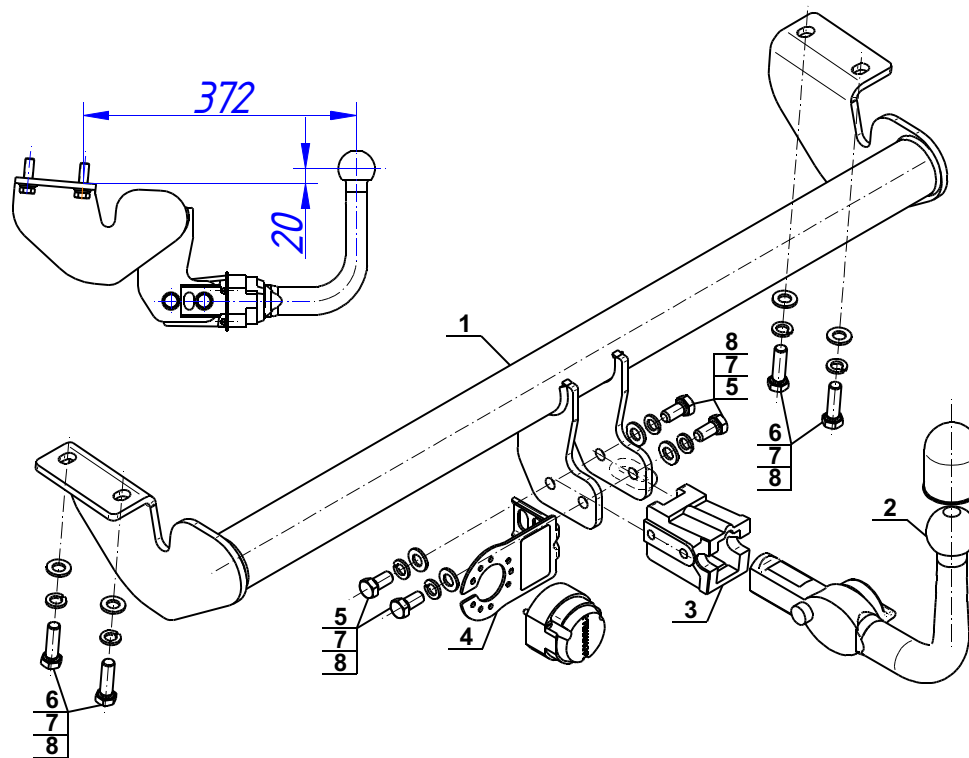
**Obeying this instruction assures correct montage and the T-103 tow bar operating.**

After assembling of the towbar **T-103** 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 towbar excludes its further exploitation. Damaged towbar **cannot be repaired**. In case of braking the rules of montage or improper usage manufacturer **do not take responsibility** for arised damages.

## MONTAGE DIAGRAM:



## NOTE :

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