



# TOW BAR S-401

## Suzuki Grand Vitara (3/5D) (1998 - 2005)

### FITTING AND OPERATION MANUAL.

Cat. No.S-401

#### DESTINATION

Tow bar **S-401** for a **Suzuki Grand Vitara (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 **S-401** 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 ( $M_o$ ) . Torque values are given below :

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

#### OPERATION CONDITIONS

The tow bar **S-401** has a rating plate describing correct and safe loads of the hook :

Typ: <b>S-401</b>	The tow bar for <b>Suzuki Grand Vitara (3/5D)</b>
<b>A50-X</b>	Tow bar class ( compressing device )
<b>e20 0259-00</b>	Tow bar certification of approval number
D = 9,8 kN	Theoretical related force working on a ball hook
S = 75 kg	Max permissible vertical load of the hook ball
R = 1900 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  $9,81 \text{ m/s}^2$ )

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 **S-401** for **Suzuki Grand Vitara (3/5D)** is made up of the following elements :

- |                            |            |                      |            |
|----------------------------|------------|----------------------|------------|
| 1. Towbar mainfame         | - 1 piece  | 5.Bolt M12x70        | - 2 pieces |
| 2. Electrical socket plate | - 1 piece  | 6.Spring washer 12,2 | - 6 pieces |
| 3. Tow ball                | - 1 piece  | 7.Flat washer 13,0   | - 6 pieces |
| 4. Bolt M12(1,25)x40       | - 4 pieces | 8.Nut M12            | - 2 pieces |

Follow the general directions in order to fit **S-401** tow bar properly:

- 1.Rear bumper cutting or dismantling is **not required**.
- 2.Dismantle the towing lug situated on the left side of chassis (will not be reuse).
- 3.Screw (1) from below of chassis rails using (4) along with (6) and (7).
- 4.Screw (3) and (2) to (1) using (5) along with (7), (6) and (8).

5.Check if all bolts and nuts are correctly tightened.

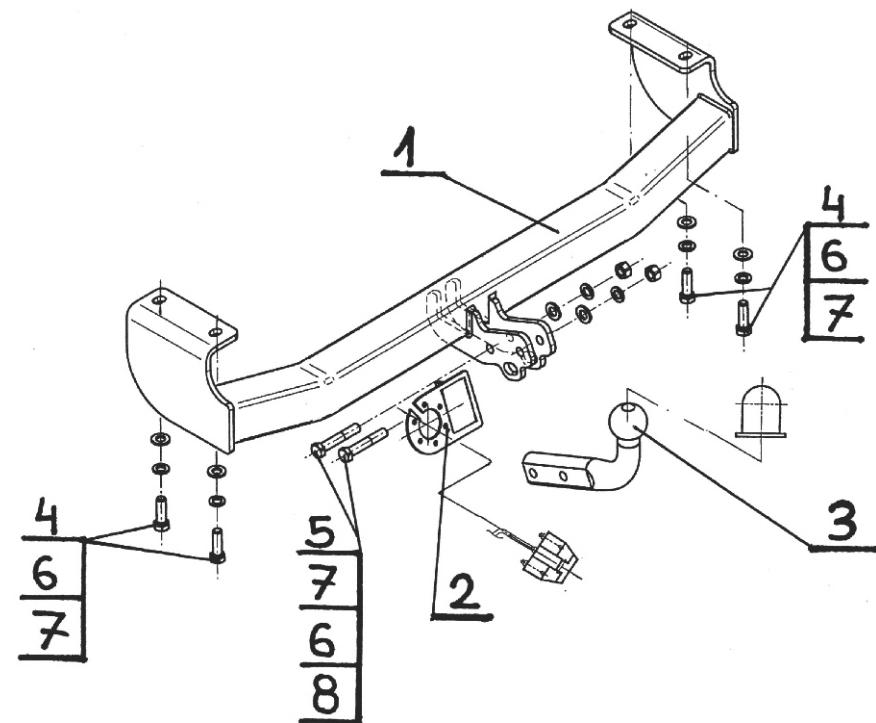
**Obeying this instruction assures correct montage and the tow bar operating in a Suzuki Grand Vitara (3/5D)**

After assembling of the tow bar **S-401** 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).

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