

**SUPPLEMENT No. 7a**

**TOWING GEAR WITH TOST E-85 TOW RELEASE**

This Supplement must be attached to the Airplane Maintenance Manual, (Doc. No. 005.022.2), Section 95, when the Towing gear with TOST E-85 tow release is installed according to Drwg. No. L 143.8410.

The information contained herein supplements or supersedes the information in the Z 143 LSi Airplane Maintenance Manual (Doc. No. 005.022.2).

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EFFECTIVITY: ALL

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# **TOWING GEAR**

## **GENERAL**

The towing gear provided with the TOST E 85 tow release is aimed for towing the gliders or the banners. It is delivered as the optional equipment.

## **DESCRIPTION AND FUNCTION**

The assembly of towing gear with TOST E 85 tow release consists of:

- tow release (Fig. 1, item 1)
- release handle (7) and control cable (6)
- towline weak link (4)

### **NOTE**

The towing gear with TOST E 85 tow release is delivered together with two side rear-view mirrors (9), Drwg. No. L 143.8701, that are placed on sides of the sliding canopy, and the roof rear-view mirror (8), Drwg. No. Z 143.8265, placed on the sliding canopy top part.

The tow release (1) is located under the horizontal tail unit and is attached to the rear fuselage section:

- with the upper dual strut (2) to attachments on the stabilizer struts
- with the lower strut (3) to the tail skid spar on the rear fuselage section.

The eye on the towline (5) - when towing the gliders, fitted with the weak-link (4) - is engaged with the tow release (1) hook. The tow release hook is opened by pulling the release handle (7) placed on the panel L.H. side under the instrument board. The release handle is connected to the tow release (1) lever by means of the control cable (6) passing through the fuselage lower part.

The rear-view mirrors (8;9) enable to check visually the towed glider. The side rear-view mirrors (9) are adjustable. Inside of the mirror cover, there is the articulated joint that enables the mirror adjustment. The joint is fitted with the arresting screw that serves for regulation of the mirror adjustment "rigidity". The arresting screw is accessible after removal of the mirror from the mirror cover.

### **TOWLINE ENGAGEMENT (Fig. No.1)**

At engagement of the towline, open the tow release (1) hook by pulling the tow release lever upwards or by pulling the release handle (7).

Insert the eye of the towline (5) or (when towing the gliders) the eye of the weak-link (4) into the space under the tow release (1) hook and close the hook. Push the tow release lever with the hand - this ensures reliably snapping the tow release hook and spontaneous release at towing is thus precluded.

Check correct engagement of the towline by pulling the towline three times.

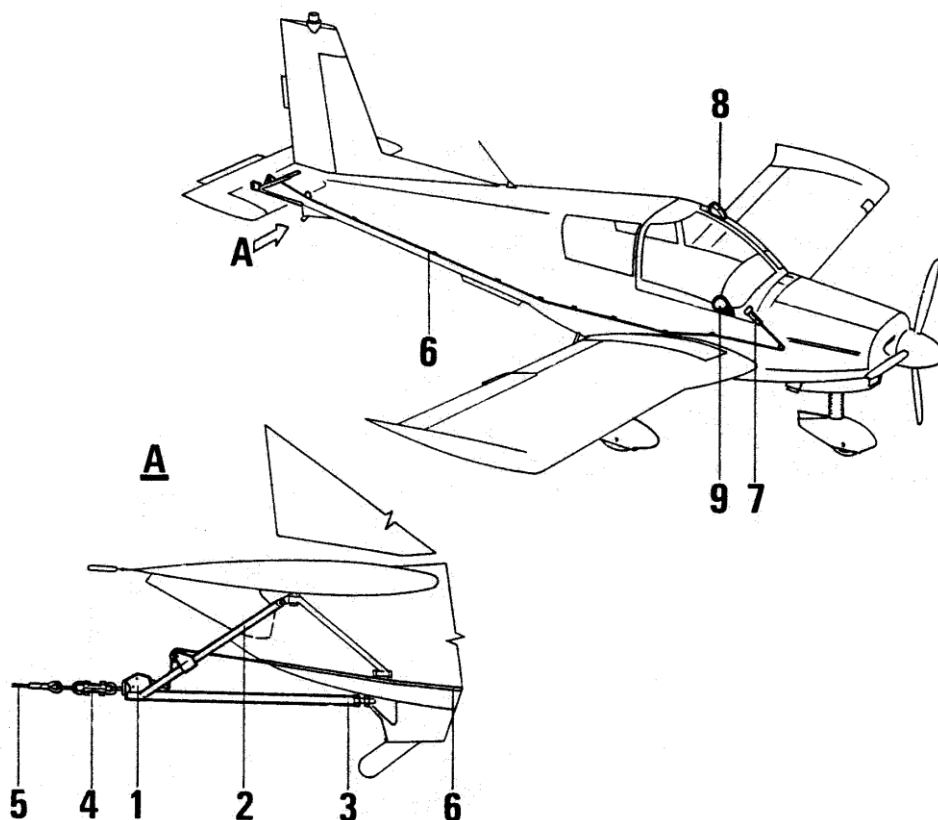
## PLACARDS

- (1) This placard is located on the lower strut of the towing gear behind the fuselage rear part.

**TOWLINE MUST BE PROVIDED WITH 4.9 kN (1100 lbf) WEAK-LINK,  
IF MAXIMUM TOWLINE STRENGTH EXCEEDS 4.9 kN (1100 lbf).**

- (1) This placard is located on the middle instrument panel at the towing release handle.

**TOWING CABLE RELEASE**



**Fig. No. 1 Towing gear with TOST E 85 tow release**

A ... attachment of tow release (1) to rear fuselage section

1 ... tow release (TOST E 85)

2 ... upper strut

3 ... lower strut

4 ... towline weak-link

5 ... towline

6 ... control cable

7 ... release handle

8 ... roof rear-view mirror

9 ... side rear-view mirrors

**EFFECTIVITY: ALL**

# **MAINTENANCE**

## **DISASSEMBLY / ASSEMBLY**

### **TOWING GEAR DISASSEMBLY**

- a) Disconnect the towline (Fig. No. 1, item 5) from tow release (1).
- b) Disassembly the TOST (1) tow release from aircraft.
- c) Disassembly the upper (2) and lower (3) struts.

### **TOWING GEAR ASSEMBLY**

- a) Assembly the upper (Fig. No. 1, item (2) and lower (3) struts.
- b) Assembly the tow release (Fig. No. 1, item 1) on the aircraft.
- c) Insert the weak-link (4) designed to the towline tenacity between the tow release (1) and towline (5).
- d) Connect the towline (Fig. No. 1, item 5) to the tow release (1).

# INSPECTION / CHECK

## PRE-FLIGHT CHECK

PRIOR TO TOWING THE GLIDERS OR THE BANNERS:

- |                                     |  |
|-------------------------------------|--|
| (1) Towing gear struts              | - CONDITION, ATTACHMENT,<br>LOCKING THE JOINTS |
| (2) Towline, weak-link, tow release | - CONDITION                                    |
| (3) Mirrors                         | - CONDITION, ADJUSTMENT                        |

## SCHEDULED INSPECTION

- |                                  |   |
|----------------------------------|---|
| (1) TOW RELEASE GENERAL OVERHAUL | 4 CALENDAR YEARS OR 2000 TAKE-OFF (WITH TOWING) – APPLICABLE WHICHEVER COMES FIRST. |
|----------------------------------|---|

The instructions for accomplishment of the overhaul are included in the accompanying documentation for the TOST E 85 tow release operation.

Struts: condition, locking the nuts.

TOST tow release

- (a) tow release fixing, locking the nuts
- (b) check the proper function, greasing
- (c) crack detection check of struts (weld near)

Controls: control cable conditions, pulleys condition

Towline weak-link: condition (corrosion, damage).

| 100<br>(1Y) | Spec. | Note |
|-------------|-------|------|
| o           |       |      |
| o           |       |      |
| o           |       | (1)  |
| o           | o     | (2)  |
| o           |       |      |
| o           |       | (3)  |

### NOTES:

- (1) Unsuitable locking of the tow release (Fig. 1, Item 1) can be caused by insufficient greasing or by the defective spring. If the tow release is not improved in spite of proper greasing, replace the mentioned spring.
- (2) Crack detection performed after 4 years or after 2000 take-off (with towing) – whichever comes first.
- (3) Replace the towline weak-link if damaged or considerably corroded (Fig.No. 1, item 4).