

THE ZLIN 242 L AIRPLANE FLIGHT MANUAL**SUPPLEMENT No. 1b****GLIDER/BANNER TOWING EQUIPMENT**

Airplane S/N:

Registration Mark:

This supplement must be attached to the Airplane Flight Manual Doc. No. 003.012, Section 7, when the towing equipment is installed according to Drwg. No. L 242.8400.

The information contained herein supplements or supersedes the basic AFM information only in sections listed herein. Limitations, procedures and information not contained in this Supplement are included in the basic CAA approved AFM.

CORRECTED ISSUE OF SUPPLEMENT No. 1b OF THE Z 242 L AIRCRAFT FLIGHT MANUAL IS
APPROVED ON THE BASIS OF THE DOA APPROVAL No. EASA.21J.110

DATE OF APPROVAL - 8. 04. 2005

Supplement No. 1b

LIST OF EFFECTIVE PAGES

Page No.	Date of issue
1	Apr 5, 2006
2	Apr 5, 2006
3	Apr 5, 2006
4	Apr 5, 2006
5	Apr 5, 2006
6	Apr 5, 2006

SECTION 1 - GENERAL

The towing equipment L 242.8400 may be optionally installed on Z 242 L aircraft for glider or banner towing. It consists of the tow-hook, cable control system and the rear view mirror.

The towline release handle is installed on the left side of middle instrument panel.

SECTION 2 - OPERATING LIMITATIONS**2.1. GLIDER TOWING**

- (1) The limitations stated for category N (Normal) must be complied with during glider towing.
- (2) Max. take-off weight of the glider must not exceed 500 kg (1100 lbs)
- (3) Max. take-off weight of the Z 242 L aircraft must not exceed 1090 kg (2400 lbs)
- (4) Max. load on the towline must not exceed 4.9 kN (1100 lbf)

2.2. BANNER TOWING

- (1) The limitations stated for category N (Normal) must be complied with during banner towing.
- (2) Static moment of towed banner calculated according to Section 6.1.1 of the basic AFM must not exceed values shown in following table:

Static moment		Crew + fuel
kg.m	lb.ft	
210	1520	1 pilot + fuel in the main tanks
121	875	1 pilot + fuel in the main and auxiliary tanks
114	825	2 pilots + fuel in the main tanks

$$S_B = M_B \times L_B$$

S_B - static moment of banner

M_B - weight of banner

L_B - distance between Datum and towing-hook

- (3) Maximum load on the towline must not exceed 4.9 kN (1100 lbf)

CAUTION:

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

Supplement No. 1b**2.3 PLACARDS**

Placard is located on the towing equipment.

TOWLINE MUST BE PROVIDED WITH 4.9 kN (1100 lbf) WEAK-LINK.

Placard is located at the towing release handle

TOWING CABLE RELEASE

SECTION 3 - EMERGENCY PROCEDURES**3.1 ENGINE FAILURE**

- (1) Tow-hook release handle - PULL, RELEASE THE EXTERNAL LOAD
- (2) Continue Emergency procedures according to the basic AFM Section 3.1 or 3.2, 3.3 respectively.

3.2 OTHER KINDS OF EMERGENCY

- (1) Tow-hook release handle - PULL, RELEASE THE EXTERNAL LOAD
ACCORDING TO PILOT'S DECISION AND
EVALUATION OF THE PARTICULAR
CONDITIONS
- (2) Continue Emergency procedures according to the basic AFM.

SECTION 4 - NORMAL PROCEDURES

- | | |
|----------------|--|
| (1) Take-off | - ACCORDING TO Section 4.8 OF THE BASIC AFM |
| (2) Climb | - ACCORDING TO Section 4.9 OF THE BASIC AFM |
| Climbing speed | - 70 knots (130 km/h) ACCORDING TO THE TYPE OF EXTERNAL LOAD |

NOTE:

Climbing speed reduce by 3 knots (5 km/h) for each 3280 ft (1000 m) altitude or according to the type of external load.

- | | |
|--------------------------|--|
| (3) Cruising speed | - ACCORDING TO THE TYPE OF EXTERNAL LOAD |
| (4) Descent | - AFTER THE EXTERNAL LOAD RELEASES CONTINUE ACCORDING TO Section 4.11 OF THE BASIC AFM |
| (5) Towline release | - IF SAFE LANDING WITH TOWLINE IS NOT POSSIBLE (OBSTACLES ON APPROACH, SHORT STRIP etc.) RELEASE THE TOWLINE OVER THE PROPER SITE, OVERSHOOTING AT SAFE ALTITUDE |
| (6) Approach and landing | - ACCORDING TO Section 4.12 AND Section 4.13 OF THE BASIC AFM |

CAUTION:

WHEN LANDING WITH TOWLINE BE AWARE OF THE TOWLINE NOT TO HIT OBSTACLES OVERFLOWN.

Supplement No. 1b**SECTION 5 - PERFORMANCE (COMPLEMENTARY PERFORMANCE INFORMATION)**

Although this airplane is not designed as a special tow-plane, the performance is sufficient for towing gliders/banners when observing the operational limitations. The real performance depends on the external load, airplane and glider take-off weight, pilot's technique, etc..

The following tables shows the principal performance at the take-off weights of airplane 1020 kg (2250 lbs) and 1090 kg (2400 lbs) when towing glider take-off weight is 500 kg (1100 lbs).

5.1. MAX. TAKE-OFF WEIGHT OF THE Z 242 L AIRCRAFT: 1020 kg (2250 lbs)

Take-off run: 1870 ft (570 m)

Level	(ft)	0	1640	3280
	(m)		500	1000
(ISA)				
Time to climb	(min)	0	3.2	7.5
Average vertical speed	(ft/min)	-	510	435
	(m/s)		2.6	2.2

5.2. MAX. TAKE-OFF WEIGHT OF THE Z 242 L AIRCRAFT: 1090 kg (2400 lbs)

Take-off run: 1970 ft (600 m)

Level	(ft)	0	1640	3280
	(m)		500	1000
(ISA)				
Time to climb	(min)	0	4.8	9.7
Average vertical speed	(ft/min)	-	415	315
	(m/s)		2.1	1.6

SECTION 6 - WEIGHTS AND CENTRES OF GRAVITY

No change.