

## SECTION 1

### **1.     GENERAL**

#### **1.1.   INTRODUCTION**

##### Validity:

This FLIGHT MANUAL applies only to the aircraft, whose production number is introduced on the page 0-1.

##### Caution:

The aircraft pilot must be acquainted with the contents of this FLIGHT MANUAL before the flight.

#### **1.2.   CHANGES**

##### **1.2.1.** All changes or supplements of this Flight Manual are performed as follows:

- 1) The aircraft manufacturer will send the binding bulletin with changes or new corrected pages of the Flight Manual to the holder of the Flight Manual.
- 2) The holder of the Flight Manual is under an obligation
  - a) of recording the obtained change into the LIST OF CHANGES - item 1.2.2.
  - b) of carrying out of the change in accordance with the bulletin or of replacing the original pages by new corrected ones marked with date of issue and with abbreviation „REV“.

##### Note:

The changes or supplemented parts of the text will be marked with vertical line.

### 1.2.2. List of changes

**Note:**

1 - 4

## SECTION 2

### HANDLING INSTRUCTIONS

#### VENTILATION:

By pulling the fresh air supply is increased first on the front part of windshield, in the position PULL OUT the fresh air flows to the pilot's head space.

#### HEATING:

Function according to arrow position on the control device.

No.	Arrow position	Sign on placard	Heating function
1.	left	0	closed
2.	up	▲	front part of windshield
3.	right	◆	front part of windshield and space for legs
4.	down		space for legs

(12)

AIRSCREW REVOLUTION  
PUSH TO MAX.

#### Note:

Placard No. (12) is located at airscrew control.

By PUSHING the angle of propeller setting is decreased (higher revolution).

By PULLING the angle of propeller setting is increased (lower revolution).

(13)

SUPERCHARGER  
PUSH-ON

#### Note:

Placard No. (13) is located at supercharger control.

#### Positions:

ON - (push)

OFF - (pull)

## SECTION 2

(14)

PARKING BRAKE PULL ON
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**Note:**

Placard No. (14) is located at parking brake control.

**Positions:**

ON - (pull)

OFF - (push)

(15)

LANDING REFLECTOR	TAXIING REFLECTOR	BEACON	LIGHTING		TRANS FORMER
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BATTERY	GENERATOR	STARTER	RADIO	FLIGHT INSTRUMENTS	RADIO- COMPASS	PITOT HEATING
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**Note:**

Placards No. (15) are located on panel between pilot seats at sectionalizing switches and show separate electrical circuits.

The actual location of switches depends on the particular aircraft equipment.

## SECTION 4

- (3) Trim tab - as required
- (4) Levelling:
  - (a) start at 7 m altitude above runway
  - (b) finish at 1 m altitude above runway.
- (5) Float - pull the control stick gradually to decrease the airspeed
- (6) Landing - pull the control stick smoothly to make a main wheel landing. Nose wheel touch-down at max. speed 80 - 90 km/h IAS.
- (7) Landing run:
  - (a) control stick - neutral
  - (b) brakes can be applied below speed of 100 km/h IAS to shorten the landing run
  - (c) at finishing the landing run wing flaps must be retracted.

### Note:

On paved runway pull the control stick as required at finishing the landing run.

In accordance with FAR Part 23, the maximum rate descent for landing is  $v_d = 2,7$  m/s.

### **4.14. AFTER LANDING**

- (1) Compressor - off
- (2) Trim tab - elevator: neutral  
- rudder: neutral
- (3) Sectionalizing switches - off as required (horizon, etc.)

### **4.15. STOPPING THE ENGINE**

- (1) Temperature - cool the heads of cylinders on temperature below 140°C
- (2) Throttle - idling
- (3) Radiostation - off
- (4) Magnetos - off („O")
- (5) Master switch - off
- (6) Sectionalizing switches - off

### **4.16. SECURING THE AIRCRAFT**

- (1) Check that magnetos, master switch and sectionalizing switches are in OFF position
- (2) Fuel shutoff valve - off
- (3) Control - lock
- (4) Parking brake - brake to a stop
- (5) Cockpit - close



## SECTION 4

### Note:

- (1) Locking the control:  
Hand control - apply forward pressure on control stick and lock it.
- (2) Parking brake:  
Use at a short-time parking only. For a long-lasting parking, tie down your aircraft without use of the parking brake.

### **4.17. RECOVERY FROM SPINS AND STALLS**

**4.17.1.** Spins performing is permitted in accordance to Section 2, item 2.15. Recovery from spins is performed in the following way:

- (1) Normal spin
  - 1) Throttle - idling
  - 2) Rudder - full deflection opposite to the direction of rotation
  - 3) Elevator - immediately after finishing the counteraction of rudder push smoothly the control stick at least to the half of deflection between neutral and full pushed positions, within 1 - 2 sec., without use of ailerons.
  - 4) After rotation has stopped:
    - (a) Rudder - neutral
    - (b) Elevator - pull steadily the control stick to perform the aircraft recovery from the dive.

### Caution:

- (1) If the procedure specified for recovering from the spin is not complied with, the spin may be recovered with over turning. Normal over turning is:
  - to one turn since counteraction have started after one spin turn,
  - to 1,5 turn since counteraction have started at spins with more turns.
- (2) During pushing the control stick, the force on this stick is increased from initial value of cca 200 N to value of cca 250 N. When pushing in time, that is shorter than 1 sec., the force swell is more increased, time prolongation of elevator action over 2 sec. may lead to over turning during spin recovering.

### Note:

- (1) After beginning of spin, autorotation motion is characterized by progressive increase of angular speed till

## SECTION 7

### 7. S U P P L E M E N T S

#### 7.1. G E N E R A L

This section contains necessary information, operating limitations and procedures which apply to the Z 142 aircraft delivered by the manufacturer with corresponding optional equipment.

#### 7.2. V A L I D I T Y

Operating limitations and procedures, given in Section 7, apply to Z 142 aircraft with corresponding optional equipment only.

## SECTION 7

### **7.3. SUPPLEMENT No. 1 - TOW OF SAILPLANES**

This Supplement contains data for the tow of sailplanes and completes following sections of the Flight Manual.

#### **Section 1 - GENERAL**

The Z 142 aircraft is approved for the tow of sailplanes. Release lever of the towing gear is located on the central panel between the seats.

#### **Section 2 - OPERATING LIMITATIONS**

When accomplishing following conditions, tows of sailplanes are approved:

- (1) Maximum permissible take-off weight of sailplane 500 kg
- (2) Maximum permissible take-off weight of aircraft 1020 kg
- (3) The Z 142 is equipped with:
  - (a) towing gear of the approved type
  - (b) rear-view mirror
- (4) Maximum permissible load of tow rope is 4900 N (500 kp)

#### **Caution:**

- (1) When performing the tow of sailplanes, the limitations must be observed in accordance with Section 2 in range for category NORMAL (N).
- (2) If tow rope tensile strength exceeds 4900 N (500 kp), breaking piece dimensioned to the tensile strength of 49800 N (500 kp) must be located on the tow rope.

TOWING CABLE RELEASE

#### **Note:**

This placard is located on the towing gear lever.

#### **Section 4 - NORMAL PROCEDURES**

- (1) Take-off - according to item 4.8.
- (2) Climbing - according to item 4.9.
- (3) Climbing speed - 110 - 130 km/h
- (4) Cruising speed - in accordance with limitations of sailplane
- (5) Descent - after sailplane releasing, according to item 4.11.
- (6) Before landing - in safe altitude, throw down the tow rope on the marked place
- (7) Approach and landing - according to item 4.12., 4.13.

#### **Recommendation:**

- (1) Select speed of climbing and descent in accordance with the sailplane type.
- (2) Climbing can be executed with wing flaps position „START“ of „RETRACTED“.



## SECTION 7

### **7.4. SUPPLEMENT No. 2 - LUN 3524.21 RADIOSTATION**

#### **(1) General**

The radiostation is installed to permit the air-to-ground communication and also serves as board telephone between the pilots.

The radiostation box is located on the central panel of instrument panel. The VHF push button and IC board telephone push button are placed on the control stick.

Sockets for earphones are on side covers at seats.

#### **(2) Basic specifications**

Frequency range: 118,000 - 135,975 MHz

Channel separation: 25 kHz

Total number of channels: 720

Transmitter power: 16 W

Range of operating temperatures: + 60° to - 50°C

#### **(3) Radiostation actuators**

The radiostation control panel contains:

- noise squelch (SQ) in upper portion
- lighted frequency scale
- two frequency selectors: L.H. for the range in MHz  
R.H. for the range in kHz
- loudness setting knob acting also as a radiostation main switch in lower portion.

#### **(4) Radiostation actuation**

- (1) Just before turning the radiostation ON, the MASTER SWITCH and the BATTERY switch should be turned ON; during engine run, the GENERATOR switch should be turned ON, too.
- (2) Insert the earphone pin plug into the earphone socket.
- (3) Turn the RADIO switch ON (also for using the board telephone).
- (4) Set required frequency by aid of frequency selectors.
- (5) Turn on the radiostation by turning the main switch knob to the right. Reception loudness is adjusted by turning the same knob.
- (6) During transmission, push the VHF button, during board telephone using, push the IC button.
- (7) In the event of weak signal reception, it is possible to place the noise squelch switch in the position labeled „0" and put the noise squelch out of operation.
- (8) In the event of strong signal, it is possible to limit interference in earphones by placing the noise squelch switch in the position labeled „SQ".
- (9) Turn off the radiostation by turning the main switch knob to the left.

## SECTION 7

RADIO DOES NOT FULFILL  
REQUIREMENTS ON RESISTANCE  
AGAINST FM INTERFERENCE

**Note:**

The placard (if installed) is located in near of radiostation.

**Caution:**

- (1) When starting the engine, disconnect the radiostation from board network with use of a switch located on the control panel.
- (2) When not certified external source is connected do not turn on the radiostation.
- (3) Before engine stop, disconnect the radiostation from board network.