

**ENSTROM 480 AND 480B OPERATOR'S MANUAL
AND
FAA APPROVED
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
FOR
UKRAINE REGISTERED HELICOPTERS**

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REPORT NO. 28-AC-041

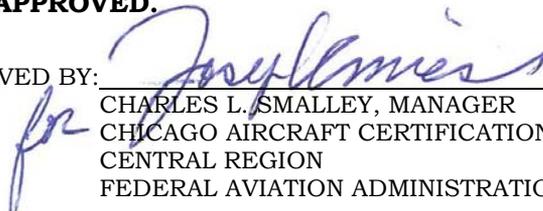
HELICOPTER SERIAL NO. _____

HELICOPTER REGISTRATION NO. _____

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THIS SUPPLEMENT MUST BE CARRIED IN THE HELICOPTER AT ALL TIMES. CHAPTERS 1, 2, 3, AND 4 ARE FAA APPROVED.

FAA APPROVED BY: _____



CHARLES L. SMALLEY, MANAGER
CHICAGO AIRCRAFT CERTIFICATION OFFICE
CENTRAL REGION
FEDERAL AVIATION ADMINISTRATION

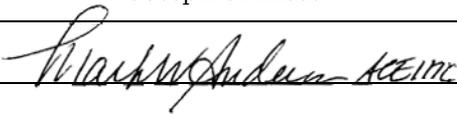
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APPROVED FOR THE MANAGER
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**ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
UKRAINE REGISTERED HELICOPTERS**

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INTRODUCTION

Intro-1. General

This supplement contains operating instructions, procedures, and limitations for Enstrom 480/480B helicopters registered in the Ukraine. Chapters 1, 2, 3, and 4 make up the FAA approved RFM Supplement. It is required by Federal Regulations that this supplement be carried in the helicopter at all times.

For additional information regarding the supplement format and text emphasis or definitions, refer to the Basic Flight Manual. Abbreviations noted in this supplement are listed in Table Intro-1.

Intro-1. List of Abbreviations

CAA	Civil Aviation Authority
COSPAS	Cosmicheskaya Sistema Poiska Avariynyh Sudov (Space System for the Search of Vessels in Distress)
dBA	Decibel (A-weighted)
ELT	Emergency Locator Transmitter
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
ICAO	International Civil Aviation Organization
KTAS	Knots True Airspeed
MHz	Mega Hertz
RFM	Rotorcraft Flight Manual
SAR	Search and Rescue
SARSAT	Search and Rescue Satellite-Aided Tracking
SEL	Sound Exposure Level
UIN	Unique Identification Number

INTRO-2 ENSTROM 480/480B RFM SUPPLEMENT

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CHAPTER 1. OPERATING LIMITATIONS

1-1. General

1. Refer to the basic RFM.
2. In addition to the operating limitations set forth in the basic RFM, the following limitations must be observed during ground and flight operations.

1-2. Altitude Limits

1. Maximum operating pressure altitude without supplement oxygen equipment is 2,400 m (8,000 ft) with passengers on board or 3,000 m (10,000 ft) without passengers on board.
2. Oxygen equipment must be approved by CAA of Ukraine.

1-3. Engine Limits

1. Fuel Operation Limits
 - a. Primary Fuel is defined as fuel conforming to MIL-T-5624 Grade JP-4 or JP-5, MIL-G-83133 Grade JP-8, ASTM D 1655 Jet A/A1 or Jet B, GOST 10227 Grade RT or TS-1, GSTU 320.00149943.007-97 Grade RT and GSTU 320.00149943.011-99 Grade TS-1.

NOTE

At temperatures below 4°C (40°F), fuels RT and TS-1 shall contain Anti-Icing Additive Fluid I or Fluid I-M with a concentration of 0.1 - 0.3% by volume.

1-4. Maneuvers

CAUTION

It is not recommended to exceed a turn (yaw) rate of 85 deg/sec.

1-5. Slope Landings

1. The maximum landing slope or helipad gradient is 15°.

CAUTION

Caution must be exercised when landing on slopes that available cyclic travel is not exceeded. Also, if any droop stop pounding is encountered as the collective is lowered the landing must be aborted and a slope with less angle selected.

1-6. Flight Over Water

1. Rotorcraft operating over water must fly within gliding distance of land.

1-7. Required Equipment

1. For operation in Ukraine airspace, the following equipment must be installed:
 - a. Grounding device, P/N 4230006-1;
 - b. Flight data recorders (for commercial operation);
 - c. VHF communication radio with 8.33 MHz channel spacing;
 - d. GPS (for flight in remote areas at geographical latitude from 60° and higher);
 - e. Transponder (with mode A or mode S);

- f. Attitude (pitch and roll) indicator;
- g. Clock displaying hours, minutes and seconds;
- h. Automatic fixed ELT 121.5/406 MHz;
- i. For flights over remote areas, sparsely populated regions and over large water surfaces, in addition to the automatic fixed ELT, the helicopter must be equipped with a portable ELT or emergency radio station P-855A1.

1-8. Placards

1. Placard that is to be located on interior side of the cabin doors near the door latch:

EMERGENCY EXIT
RAISE DOOR HANDLE TO OPEN DOOR

2. Beneath the fuel filler port on the left side of the aircraft:

CAP. 340.65 L
JP-4/JET-A
FOR OTHER FUELS SEE RFM SUPPLEMENT
FOR UKRAINE REGISTERED HELICOPTERS
AT TEMPERATURES BELOW 4°C (40°F) FUEL MUST
CONTAIN APPROVED ANTI-ICING ADDITIVES

3. Placard that is to be located in view of the pilot and passengers:

FIRST AID KIT
ATTACHED TO THE BACKWALL BEHIND THE
PILOT SEAT

CHAPTER 2. NORMAL PROCEDURES

2-1. General

1. Refer to the basic RFM.
2. In addition to the normal procedures set forth in the basic RFM, the following procedures should be included during relevant operations.

2-2. Cold Weather Operations

1. The following procedures apply to operations in temperatures -5°C (23°F) and below.

NOTE

Cold weather engine starts should only be attempted with a fully charged battery.

NOTE

Avoid engine starts below -15°C (5°F) without preheat.

2. Preheat the battery, engine, oil tank, and main rotor gearbox with an appropriate heater system for at least 30 minutes; or overnight in extreme cold, -25°C (-13°F) and below. Engine starting at -15°C ($\pm 5^{\circ}\text{F}$) or below without preheat should be avoided.

3. For temperatures to -25°C (-13°F) with a crew of two or more, allow 10 minutes ground running time before loading the crew. Loading the crew before the cabin components have warmed will cause fogging and frost formation on the windows.

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CHAPTER 3. EMERGENCY PROCEDURES

3-1. Electrical System Failure

1. Refer to the basic RFM.

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CHAPTER 4. PERFORMANCE DATA

4-1. General

1. Refer to the basic RFM.
2. In addition to the performance data set forth in the basic RFM, the following performance data should be considered during ground and flight operations.

4-2. Noise

1. In accordance with Appendix J of FAR36, the fly-over noise level (SEL) at a reference airspeed of 93.5 KTAS is 83.7 dBA. This satisfies the ICAO limit of 84.31 dBA.

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CHAPTER 5. OPTIONAL EQUIPMENT SUPPLEMENTS

5-1. General

1. Refer to the basic RFM.
2. In addition to the applicable equipment installations set forth in the basic RFM, the instructions for the following installed equipment must be observed.

5-2. Emergency Locator Transmitter

1. The 480/480B is equipped with a fixed ELT, model AK-451.
2. The ELT should be registered with the local National Authority. The 406 MHz ELT transmits a programmed UIN when activated. Registration provides SAR organizations with contact information to verify an actual emergency, assist identification, and speed the launch of a rescue operation.

WARNING

The AK-451 ELT should be registered with the National Authority prior to use. Lack of registration could delay rescue operation in an actual emergency.

3. The AK-451 ELT transmits on the following frequencies: 121.5 MHz, 243.0 MHz, and 406 MHz.
4. Main switch selection **“ARM”**:
 - a. For normal operation, set the main switch at **“ARM”** position. A self-test is confirmed after 24 seconds. The two green ON lights and the buzzer sound will extinguish after a successful self-test.
 - b. The AK-451 ELT will automatically activate upon impact.

5. Main switch selection **“ON”**:

- a. Set the main switch to **“ON”** to transmit immediately. Both green ON lights will flash and the buzzer will sound.

6. In the event of a crash, the AK-451 ELT activates automatically, and transmits the standard swept tone on 243/121.5 MHz lasting until battery power is gone.

- a. For the first 24 hours of operation, a 406 MHz signal is transmitted at 50 second intervals. This transmission contains identification data programmed into the ELT to be received by COSPAS-SARSAT satellites.
- b. If it is necessary to leave the scene of the accident, the AK-451 may be removed from the aircraft and used as a personal locating device.

7. Main switch selection **“OFF”**:

- a. Set the main switch to **“OFF”** when handling or shipping the beacon to avoid nuisance activation.

8. In case of an inadvertent activation, contact the local National Authority to report false alarms. Any activation of a 406 MHz for a few seconds will usually be detected, and if no actual emergency exists, will generate a false alarm.

CHAPTER 6. WEIGHT/BALANCE AND LOADING

6-1. General

1. Refer to the basic RFM.

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CHAPTER 7. HELICOPTER AND SYSTEMS DESCRIPTION AND OPERATION

7-1. General

1. Refer to the basic RFM.

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CHAPTER 8. HANDLING, SERVICING, AND MAINTENANCE**8-1. General**

1. Refer to the basic RFM.
2. In addition to the information set forth in the basic RFM, the following handling, servicing, and maintenance requirements are as noted below.

8-2. Grounding

1. After landing, ground the helicopter using Enstrom grounding device, P/N 4230006-1.
2. Insert the grounding device plug into the grounding receptacle below the fuel filler port on the left side of the aircraft.
3. Stake the grounding rod into the ground.

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CHAPTER 9. SUPPLEMENTAL INFORMATION

9-1. General

1. Refer to the basic RFM.

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CHAPTER 10. ABBREVIATED CHECKLIST

10-1. General

1. Refer to the basic RFM.

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