ENSTROM 480B OPERATOR'S MANUAL

AND

FAA APPROVED

ROTORCRAFT FLIGHT MANUAL

SUPPLEMENT

2+2 SEATING CONFIGURATION

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REPORT NO. 28-AC-036

HELICOPTER SERIAL NO._____

HELICOPTER REGISTRATION NO._____

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THIS SUPPLEMENT MUST BE CARRIED IN THE HELICOPTER AT ALL TIMES IF EQUIPPED FOR THE 2+2 SEATING CONFIGURATION. CHAPTERS 1, 2, 3, AND 4 ARE FAA APPROVED.

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FAA APPROVAL DATE: OCT 26 2009

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LOG OF REVISIONS

Rev. No.	Date	FAA Approved
Original	Oct 26/09	Joseph C. Miess

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ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

2+2 SEATING CONFIGURATION

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INTRODUCTION

Intro-1. General

This RFM Supplement contains the operating instructions, procedures, and limitations for the equipment typical of the 2+2 Seating Configuration, P/N 4230042-1. The supplement is divided into two basic parts, the FAA approved RFM and the Supplemental Data provided by the Enstrom Helicopter Corporation (Enstrom). 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 if the 2+2 seating configuration is installed.

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CHAPTER 1. OPERATING LIMITATIONS

1-1. Purpose

1. This chapter includes operating limitations and restrictions that must be observed during ground and flight operations.

1-2. General

1. The operating limitations set forth in this chapter are the direct results of design analysis and flight tests. Compliance with these limits will allow the pilot to derive maximum utility from the helicopter.

1-3. Operational Limits

1. This installation does not affect the limitations of the basic aircraft. Refer to the basic RFM.

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CHAPTER 2. NORMAL PROCEDURES

2-1. Preflight Check

1. Add the following to paragraph 2-8, "Before Exterior Check" of the basic RFM:

7. Right Side Flight Controls

a. Check security of controls if installed.

b. Check properly stowed if controls are removed and check all covers for security.

WARNING

The leg guard must be installed in the 2+2 Seating Configuration if the right side flight controls are installed to ensure the rear passengers do not interfere with the flight or operation of the aircraft.

c. Check condition and security of leg guard. Ensure leg guard does not interfere with collective motion.

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CHAPTER 3. EMERGENCY PROCEDURES

3-1. General

1. Refer to the basic RFM.

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CHAPTER 4. PERFORMANCE DATA

4-1. General

1. Refer to the basic RFM.

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CHAPTER 6. WEIGHT/BALANCE AND LOADING

6-1. General

1. In accordance with Chapter 6 of the basic RFM, the specific seating configuration must be determined and adjustments to the aircraft basic weight and balance computed when determining the weight and balance for the intended operation.

2. A new weight and balance should be recalculated per the instructions in Chapter 6 of the Basic Flight manual using the information provided in Table 6-1 and 6-2 to follow. Table 6-1 and 6-2 specific to this supplement replace Table 6-1 and 6-2 of the basic RFM when the 2+2 seating configuration is installed.

3. Figure 6-1 provides sample loading calculations of the 2+2 seating configuration.

Table 6-1. Seating Configuration*

Item	Weight	Arm (F.S.)	Moment	Lateral Arm (B.L.)	Lateral Moment
Copilot/Passenger Seat	**	†	†	†	†
Removable Flight Controls	6.7	86.8	581.7	16.8	112.5
Flight Control Covers	0.3	76.3	22.9	21.3	6.4
Leg Guard‡	**	101.9	**	11.2	**
Rear Passenger Seat Cushion	**	113.1	**	0.3	**
Foot Rest Assembly, Middle Rear Position	**	105.4	**	2.4	**

* Weights are in pounds (lbs) and Arms are in inches (in.).

** Will vary depending on the type of upholstery. Weigh the component to determine its exact weight.

† Use the information in Table 6-2 to follow to determine the correct arms and moments for the seat.

‡ Installation of the leg guard is required.

Table 6-2. Center of Gravity Locations*

Item	Arm (F.S.)	Lateral Arm (B.L.)
Pilot Seat	97, 98, 99, 100, 101	-20.3
Copilot/Passenger Seat	97, 98, 99, 100, 101	21.3
Rear Seat with 2 Passengers:		
Left Rear Passenger	113.1	-7.8
Right Rear Passenger	113.1	7.6
Baggage Compartment	192.0	
Fuel	145.0	

* Arms are in inches (in.).

Component	Weight	Arm	Moment	Lateral Arm	Lateral Moment
Basic Empty Weight & C.G.	1,770	146.8	259,889		
Pilot	170	101.0	17,170	-20.3	-3,451
Copilot	170	101.0	17,170	21.3	3,621
Left Rear Passenger	170	113.1	19,227	-7.8	-1,326
Right Rear Passenger	170	113.1	19,227	7.6	1,292
Battery Relocated Aft (Lead Acid)	No Change		2,795		-1,677
Zero Fuel Weight & C.G.	2,450	136.9	335,478		-1,541
Fuel	550	145.0	79,750		
Takeoff Weight & C.G.	3,000	138.4	415,228		-1,541

Figure 6-1. Sample Loadings

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CHAPTER 7. SYSTEM DESCRIPTION AND OPERATION

7-1. System Description

1. The 2+2 seating configuration accommodates a pilot (left front seat), copilot/instructor/crew member (right front seat), and two passengers seated in the middle rear position.

2. The pilot and copilot seats remained unchanged from those described in Chapter 7 of the basic RFM.

3. The 2+2 seating configuration is comprised of a rear bench seat, a foot rest, and a guard for the copilot's collective control.

4. The rear bench seat is comprised of a single honeycomb panel with aluminum attachment fittings. It is located between the pilot and copilot seats. The rear seat is mounted to the cabin backwall and fixed to the floor by two seat legs. It is configured with a cushion arrangement for two back seat passengers with individual combination diagonal shoulder harness and lap belt restraints. Arm rests are located in the left rear and right rear positions. Each arm rest is attached to the backwall.

5. The foot rest is positioned in the middle rear position and attached to the floor to provide lower lumbar and leg support to the back seat passengers.

WARNING

The leg guard must be installed in the 2+2 Seating Configuration if the right side flight controls are installed to ensure the rear passengers do not interfere with the flight or operation of the aircraft.

6. A leg guard (i.e. collective guard) is installed over the right side collective control to ensure the rear passengers do not interfere with collective motion. The composite constructed guard is fixed to the cabin floor in four locations. The collective can be removed and installed without removing the leg guard.

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