

BHT-206B-FMS-23

**BELL MODEL 206B
JET RANGER II
FLIGHT MANUAL
SUPPLEMENT FOR
206-706-344
ENVIRONMENTAL
CONTROL SYSTEM
(Cabin Temperature
Control)**

**FAA APPROVED
February 20, 1975**

This supplement shall be attached to the Flight Manual, when the 206-706-344, Environmental Control System has been installed.

The information contained herein supplements the information of the basic Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, consult the basic Flight Manual.

Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

POST OFFICE BOX 482 • FORT WORTH, TEXAS 76101


20 FEBRUARY 1975
REVISION 1 — 24 OCTOBER 1985

BHT-206B-FMS-23

LOG OF PAGES

PAGES	REVISION NO.	PAGES	REVISION NO.
1 — 8	1		
9/10	1		

BHT-206B-FMS-23

LOG OF REVISIONS			
REVISION NO. DATE		REVISION NO. DATE	
Original20 Feb 75 Reissue14 May 82 124 Oct 85			
APPROVED			
			
MANAGER			
AIRCRAFT CERTIFICATION DIVISION FEDERAL AVIATION ADMINISTRATION DEPARTMENT OF TRANSPORTATION SOUTHWEST REGION, FORT WORTH, TEXAS			
NOTE: Revised text is indicated by a black vertical line. Insert latest revision pages; dispose of superseded pages.			

BHT-206B-FMS-23

INTRODUCTION

The Bell Environmental Control System (ECS), No. 206-706-344, when installed will lower or raise the cabin temperature and thereby provide additional comfort to the cabin occupants. The ECS unit is powered by engine bleed air and is manually temperature controlled for the ECS output level as desired.

Section 1

OPERATING LIMITATIONS

CENTER OF GRAVITY LIMITS

Actual weight change shall be determined after Environmental Control System is installed and ballast readjusted, if necessary, to return empty weight CG within allowable limits.

PLACARDS

**ECS OFF FOR
TAKEOFF
LANDING
HOVER**

(Located on left side of instrument panel)

**WHEN ENVIR CONT SYSTEM IS INSTALLED
REDUCE ALLOWABLE WT BY 75 POUNDS**

(Located on inner surface of baggage compartment door.)

TYPE OF OPERATION

Flight with the Environmental Control System (ECS) operating is prohibited during take-off, hover and landing.

External cargo loading LIMITED TO 3200 pounds gross weight with ECS unit in operation.

BHT-206B-FMS-23

Section 2

OPERATING PROCEDURES

NORMAL PROCEDURES

ENGINE PRE-START CHECK

ECS (Environmental Control System) switch — OFF.

BEFORE TAKEOFF

ECS circuit breaker — Check IN.

ECS switch — OFF.



Flight with the Environmental Control System (ECS) operating is prohibited during TAKEOFF, HOVER, and LANDING.

IN-FLIGHT OPERATIONS



Selection of MAX HEAT position on ECS switch turns off unit cooling fan. Do not use MAX HEAT position at ambient temperatures at or above -12°C to prevent damage to ECS.

BHT-206B-FMS-23

IN-FLIGHT OPERATIONS (Cont)

ECS switch — COOL/HEAT (as desired) for all maximum allowable gross weights after translational lift has been attained in forward flight. For operations below -12°C switch may be placed in MAX HEAT.

TEMPERATURE CONTROL — ROTATE to obtain desired comfort level if Environment Control System is being operated.

DESCENT AND LANDING

ECS switch — OFF

EMERGENCY PROCEDURES

OPERATING EMERGENCIES

ECS switch — OFF if any of the following emergencies occurs:
Fuel control and/or governor failure.
Engine fuel system failure.
Helicopter fuel system failure.
Engine air start is to be accomplished.

BHT-206B-FMS-23

Section 3

PERFORMANCE DATA

No change in performance with ECS OFF.

HOVERING CEILING — ECS OPERATING

Flight operations with the ECS unit being operated results in a hover ceiling decrement of 4500 feet.

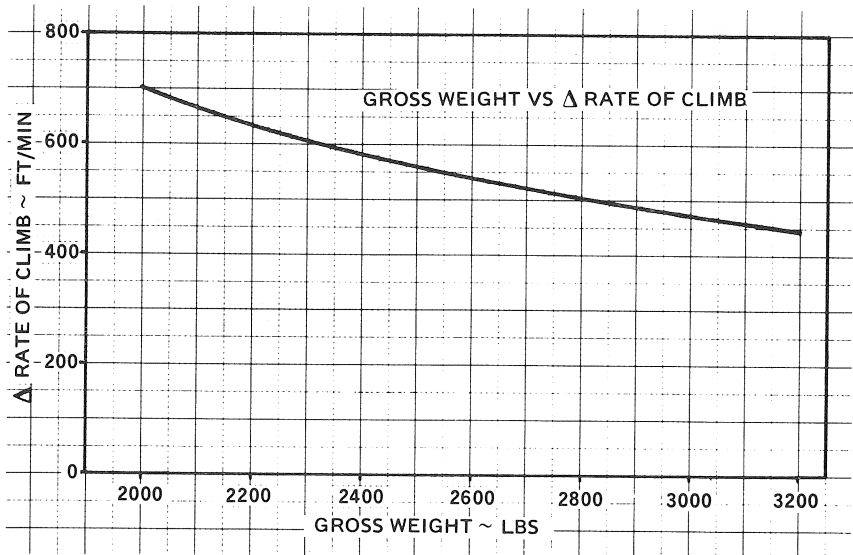
EXAMPLE:

If pressure altitude is 2000 feet plus the decrement of 4500 feet equals 6500 feet to be used as the chart entry pressure altitude. The chart is then used the same as previously, to determine Gross Weight and Hovering Ceiling for the current climatic condition.

RATE OF CLIMB — ECS OPERATING

RATE OF CLIMB
TAKE-OFF POWER & MAX CONT POWER
ALL TEMPERATURES
ALL CONFIGURATIONS
100% RPM

ECS R/C = FM OR SUPPLEMENT R/C — Δ R/C



EXAMPLE: Δ R/C CHART

Determine rate of climb for desired altitude, temperature and gross weight from Flight Manual or appropriate Supplement Chart.

Enter Chart at gross weight and proceed vertically to intersect curve, then move left to obtain Δ R/C decrement.

Subtract Δ R/C decrement from Flight Manual or Supplement R/C Chart to obtain R/C with ECS operating.

