

**SECTION 5
PERFORMANCE
CONTENTS**

	Page
General	5-1
Demonstrated Operating Temperature	5-1
Airspeed Calibration	5-2
Density Altitude Chart	5-3
IGE Hover Ceiling Vs Gross Weight	
R22 Standard	5-4
R22 HP, Alpha, and Beta	5-5
R22 Beta II.	5-6
OGE Hover Ceiling Vs Gross Weight	
R22 Standard	5-7
R22 HP and Alpha	5-8
R22 Beta	5-9
R22 Beta II	5-10
Height-Velocity Diagram	5-11
Noise Characteristics	5-12

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**SECTION 5
PERFORMANCE**

GENERAL

IGE hover controllability has been substantiated in 17 knot wind from any direction up to 9800 feet (2990 meters) density altitude. Refer to hover performance charts for allowable gross weight.

CAUTION

Performance data presented in this section was obtained under ideal conditions. Performance under other conditions may be substantially less.

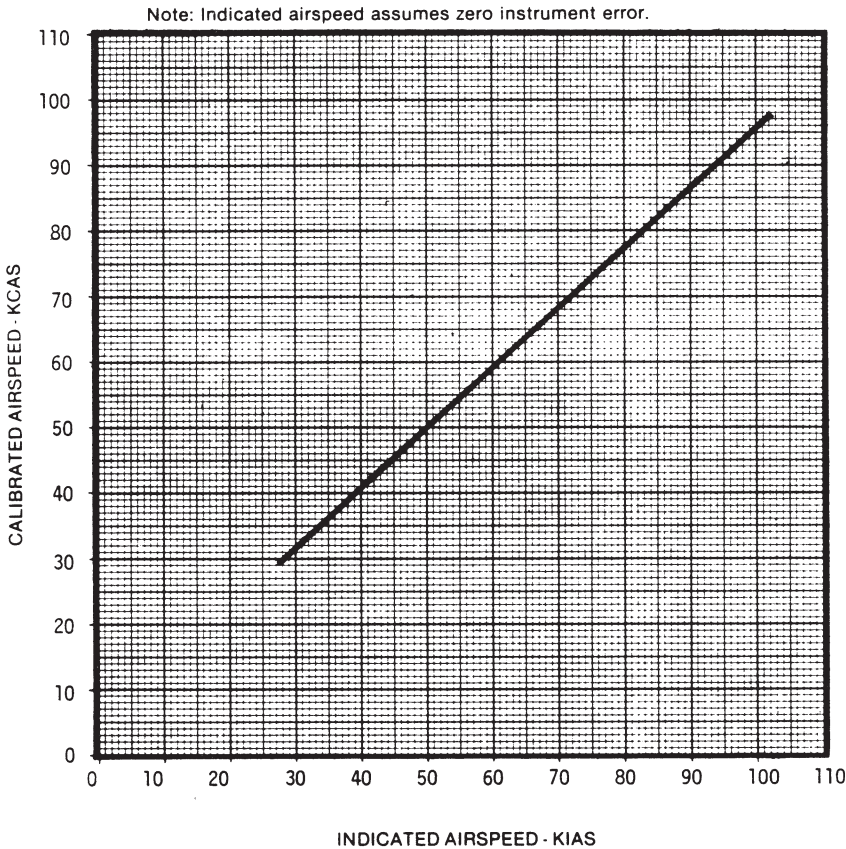
NOTE

Hover performance data given is with carburetor heat off. Full carburetor heat reduces hover ceilings by up to 2000 feet (610 meters).

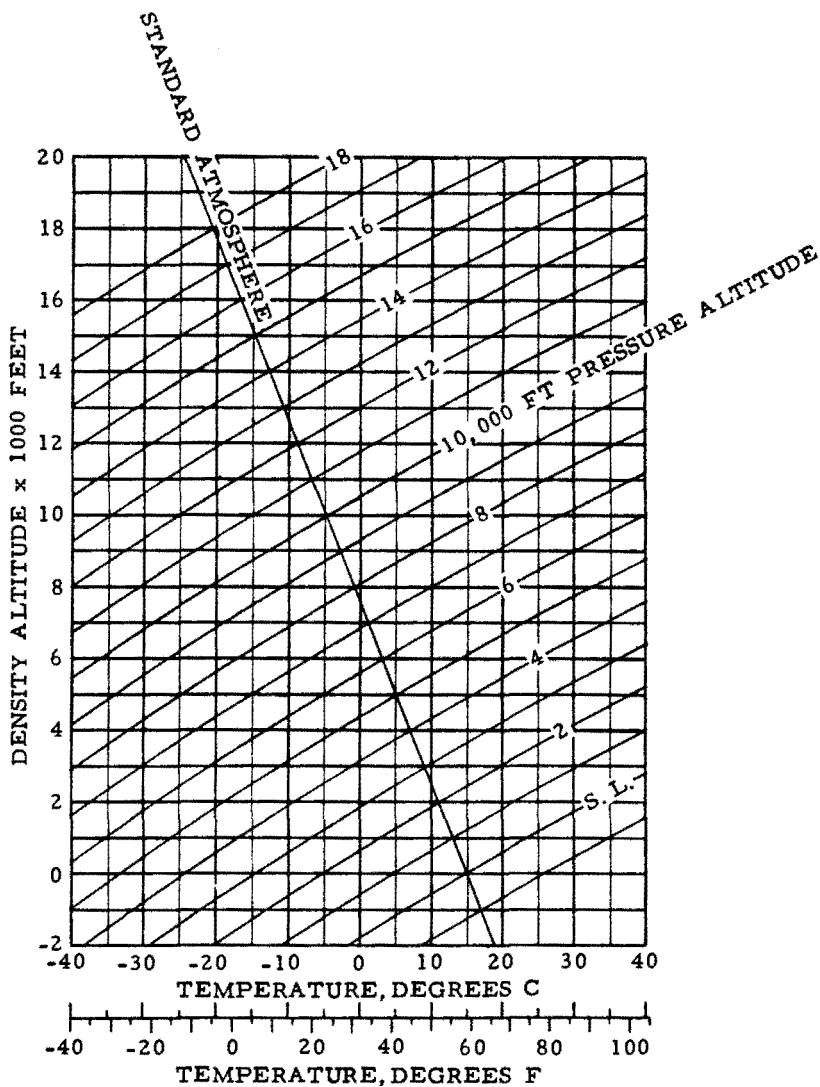
Indicated airspeed (KIAS) shown on charts assumes zero instrument error.

DEMONSTRATED OPERATING TEMPERATURE

Satisfactory engine cooling has been demonstrated to an outside air temperature of 38°C (100°F) at sea level or 23°C (41°F) above ISA at altitude.



AIRSPEED CALIBRATION CURVE

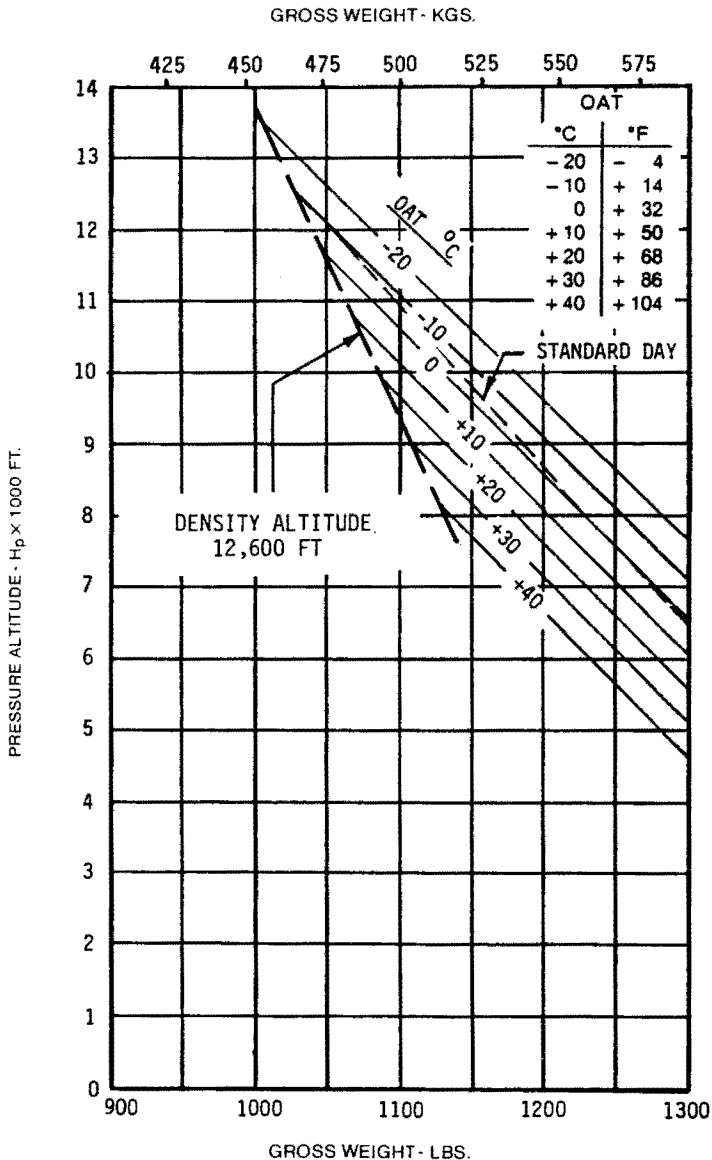


DENSITY ALTITUDE CHART

**ROBINSON
MODEL R22**

**SECTION 5
PERFORMANCE**

IN GROUND EFFECT AT 2 FOOT SKID CLEARANCE
FULL THROTTLE AND 104% RPM



R22 STANDARD
0-320-A2B OR A2C ENGINE

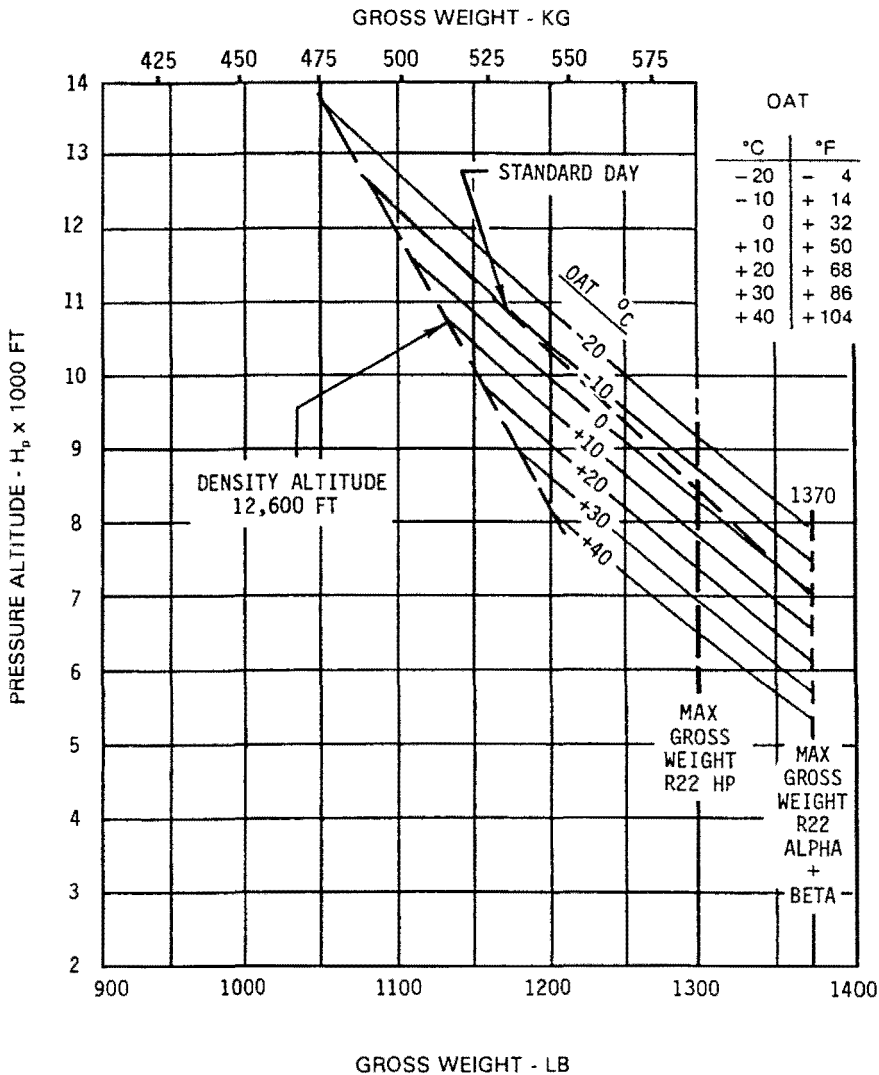
IGE HOVER CEILING VS. GROSS WEIGHT

IN GROUND EFFECT AT 2 FOOT SKID CLEARANCE

FULL THROTTLE

104% RPM

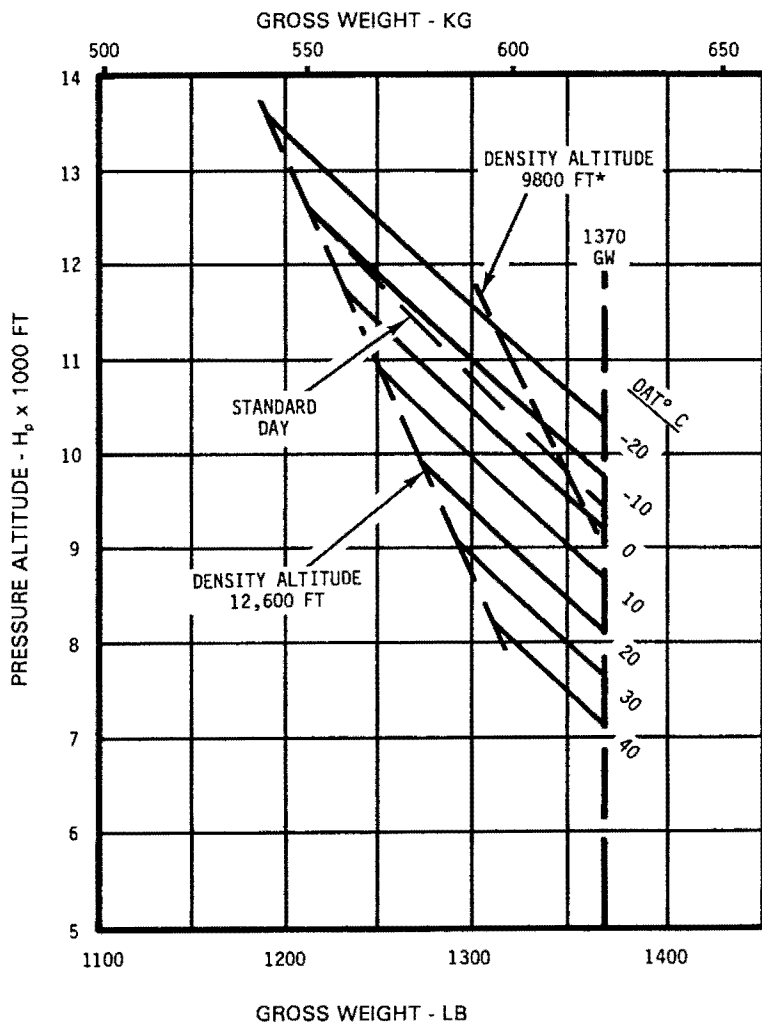
ZERO WIND



**R22 HP, ALPHA, & BETA
O-320-B2C ENGINE**

IGE HOVER CEILING VS. GROSS WEIGHT

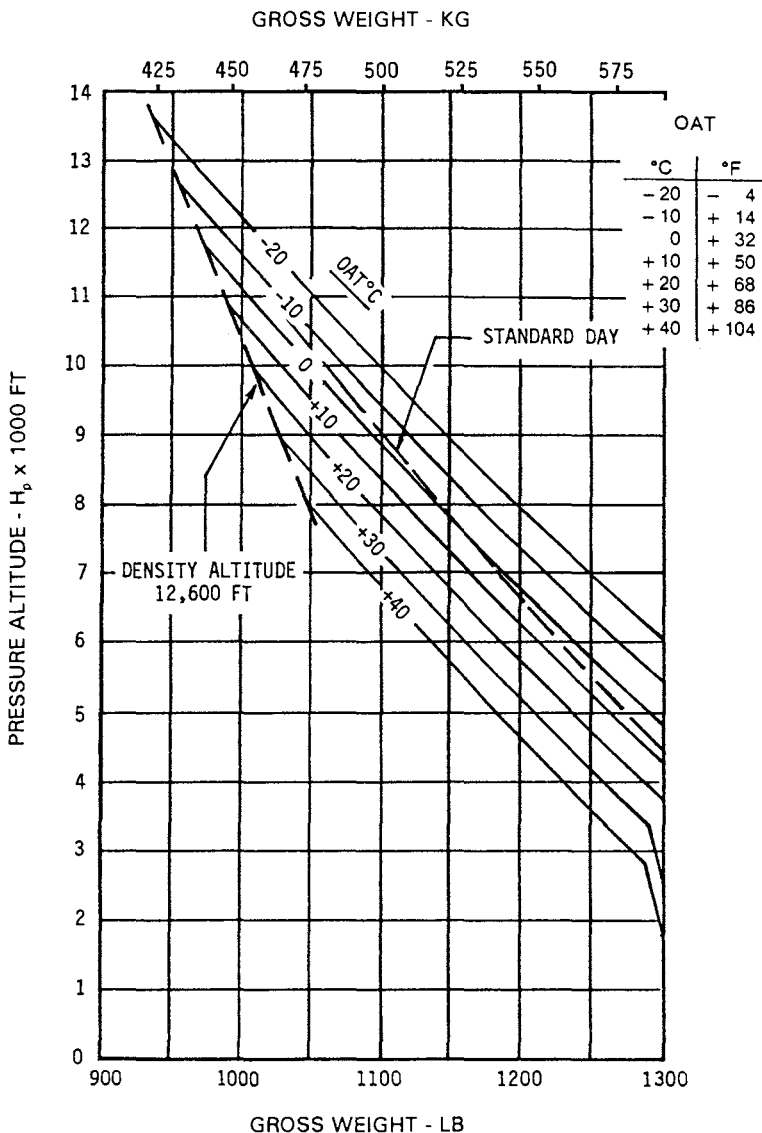
IN GROUND EFFECT AT 2 FOOT SKID CLEARANCE
FULL THROTTLE
103-104% RPM
ZERO WIND



IGE HOVER CEILING VS. GROSS WEIGHT

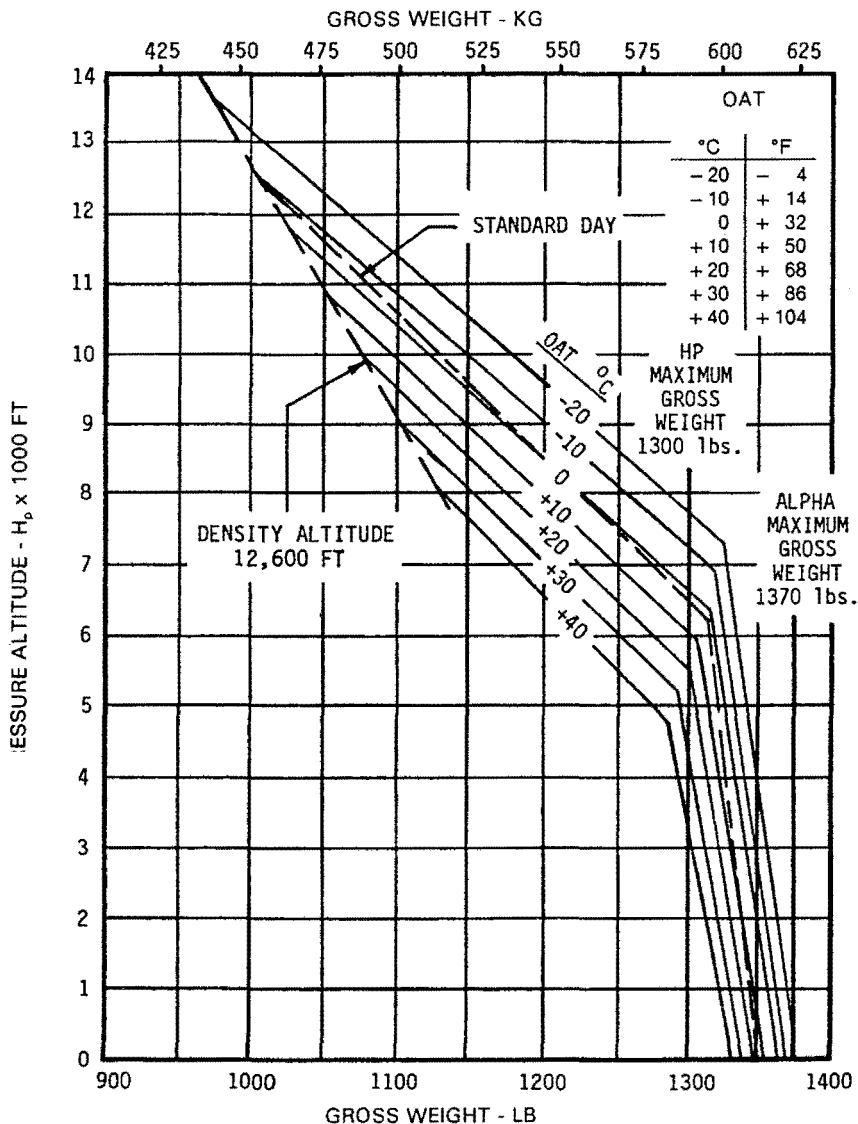
*Hover controllability with 17 knot wind substantiated up to 9800 feet density altitude.

OUT OF GROUND EFFECT, ZERO WIND
LIMIT MANIFOLD PRESSURE TO CRITICAL ALTITUDE
FULL THROTTLE ABOVE CRITICAL ALTITUDE
104% RPM



R22 STANDARD
O-320-A2B OR A2C ENGINE
OGE HOVER CEILING VS. GROSS WEIGHT

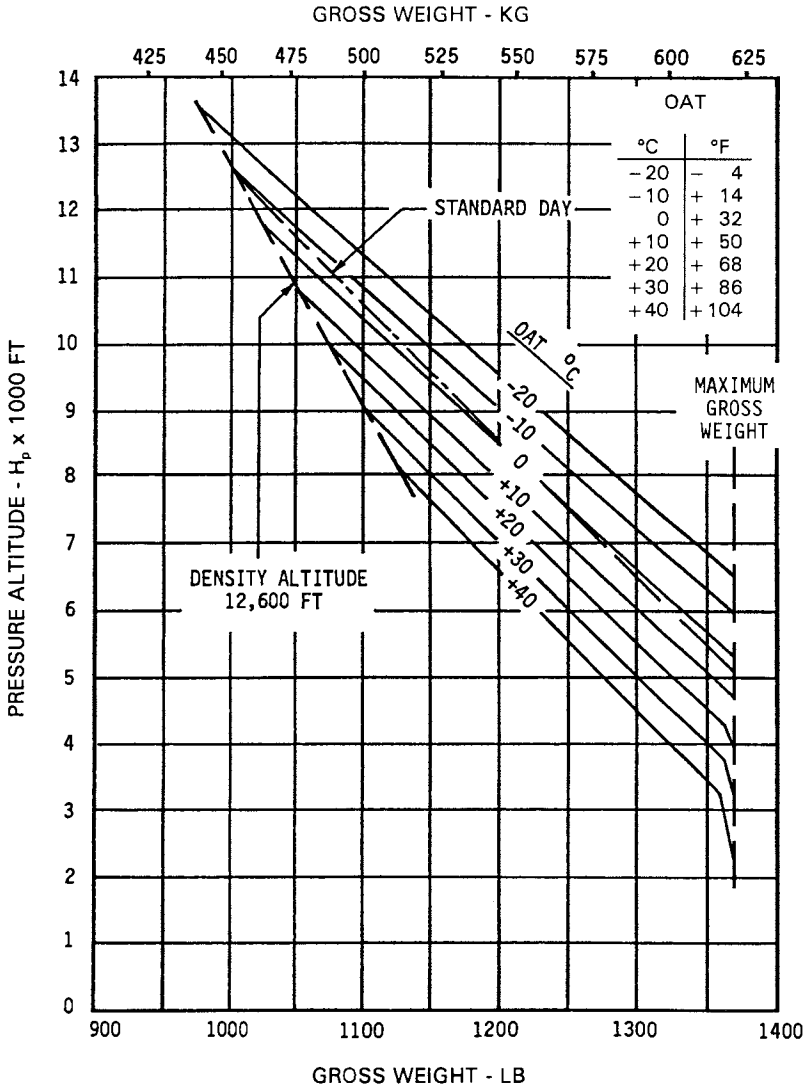
OUT OF GROUND EFFECT, ZERO WIND
LIMIT MANIFOLD PRESSURE TO CRITICAL ALTITUDE
FULL THROTTLE ABOVE CRITICAL ALTITUDE
104% RPM



**R22 HP & ALPHA
O-320-B2C ENGINE**

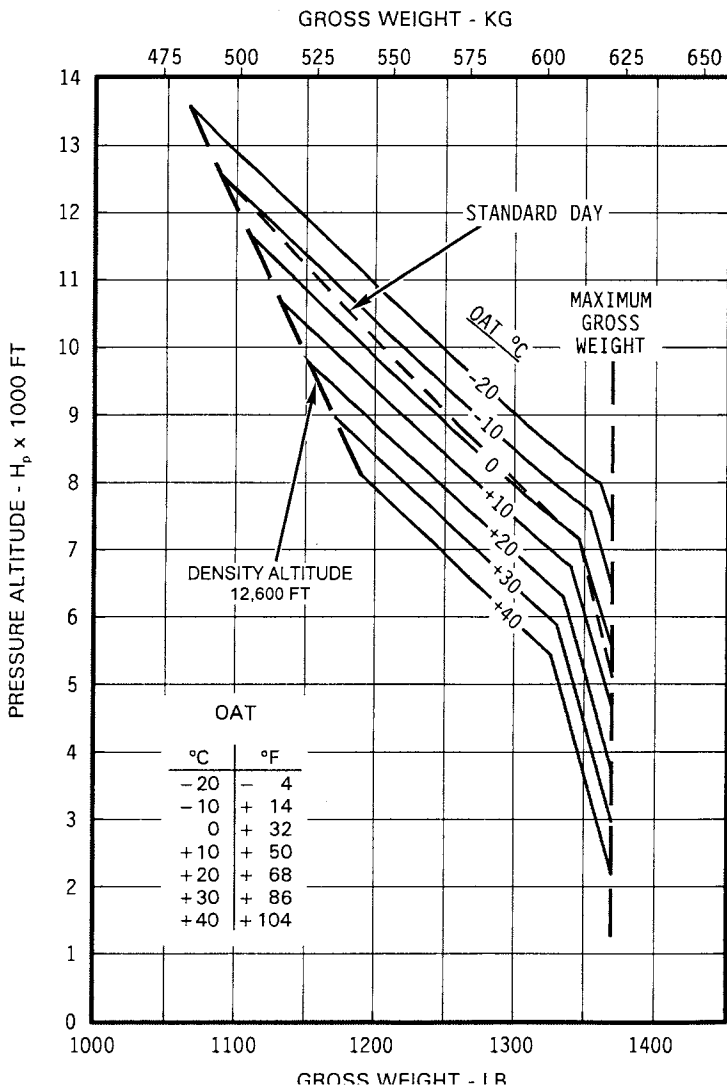
OGE HOVER CEILING VS. GROSS WEIGHT

OUT OF GROUND EFFECT, ZERO WIND
TAKEOFF POWER OR FULL THROTTLE
104% RPM



R22 BETA
O-320-B2C ENGINE
OGE HOVER CEILING VS. GROSS WEIGHT

OUT OF GROUND EFFECT, ZERO WIND
TAKEOFF POWER OR FULL THROTTLE
104% RPM

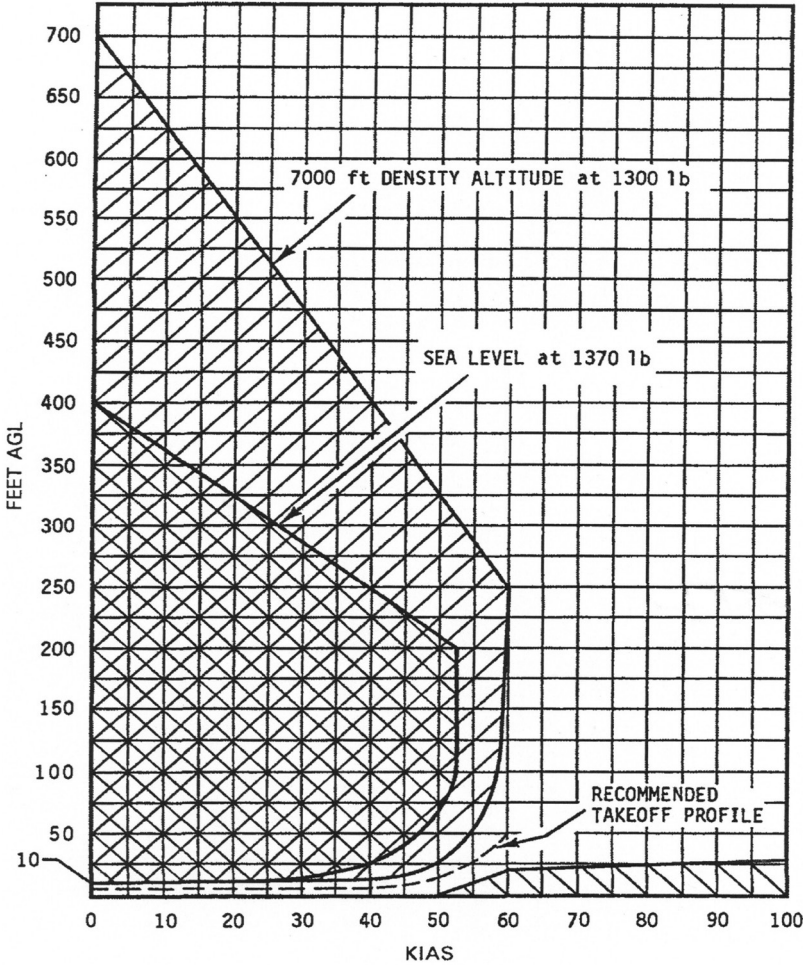


R22 BETA II
O-360-J2A ENGINE

OGE HOVER CEILING VS. GROSS WEIGHT

DEMONSTRATED CONDITIONS:
SMOOTH HARD SURFACE
WIND CALM
103-104% RPM

AVOID OPERATION IN SHADED AREAS



HEIGHT - VELOCITY DIAGRAM

NOISE CHARACTERISTICS

The following noise level complies with 14 CFR Part 36, Appendix J and ICAO Annex 16, Chapter 11 noise requirements for later versions with the horizontal stabilizer mounted under the tailcone forward of the tail rotor. The noise level was obtained from FAA-approved noise test data.

Models:	R22	R22 Alpha & Beta
Engine:	Lycoming O-320-A2B, O-320-A2C, & O-320-B2C	Lycoming O-320-B2C & O-360-J2A
Gross Weight:	1300 lbs (590 kg)	1370 lbs (622 kg)
V _h :	95 KTAS	

The flyover sound exposure level (SEL) is 77.4 dB(A). This noise level meets the requirements for a Stage 3 helicopter as defined in 14 CFR Part 36.

NOTE

No determination has been made by the Federal Aviation Administration that the noise level of this aircraft is or should be acceptable or unacceptable for operation at, into, or out of any airport.