

BLR COMPANY FLIGHT TEST DATA

CHAPTER 7 – PERFORMANCE (Continued)

BLR HOVER CEILING – CALM WINDS*
MAXIMUM TORQUE POWER AVAILABLE (30 MINUTE OPERATION)
324 ROTOR/6600 ENGINE RPM

EXAMPLE

WANTED

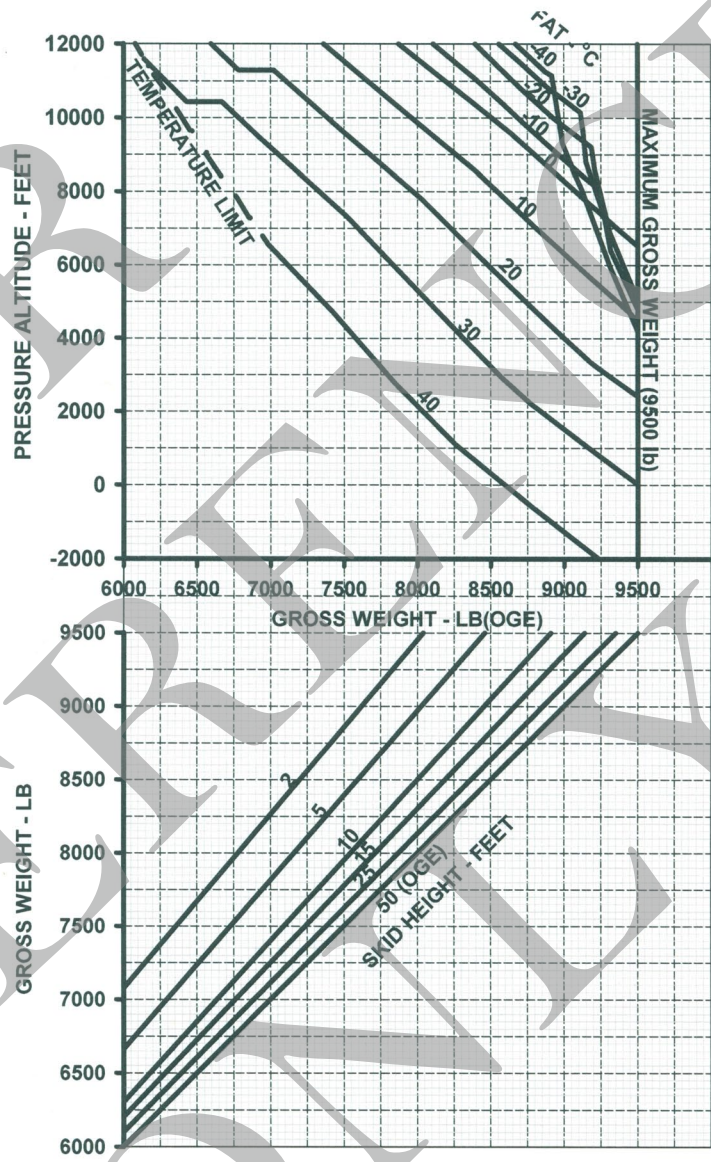
GROSS WEIGHT TO HOVER

KNOWN

PRESSURE ALTITUDE = 10600 FEET
FAT = 10°C
SKID HEIGHT = 2 FEET

METHOD

ENTER PRESSURE ALTITUDE
MOVE RIGHT TO FAT
MOVE DOWN TO SKID HEIGHT
MOVE LEFT, READ GROSS WEIGHT
TO HOVER = 9200 POUNDS



DATA BASIS: DERIVED FROM
BLR FLIGHT TEST, JUNE 2002
& BLR ENGINE TEST CELL DATA

FIGURE 7.3 BLR Hover (Ceiling) Chart (Sheet 1 of 2)
U. S. Army UH-1H with Lycoming T53-L-13B Engine and Metal Main Rotor Blades

* Calm winds are defined as low winds less than 5 knots. Additionally, this hover performance is still acceptable with higher winds (as high as 20 knots) as long as the wind direction is less than 10 degrees off the nose of rotorcraft.

CHAPTER 7 – PERFORMANCE

NOTE ALL ITEMS REMAIN AS IN BASIC OPERATOR'S MANUAL EXCEPT THE FOLLOWING:

HOVER CEILING MAXIMUM TORQUE POWER AVAILABLE (30 MINUTE OPERATION) 324 ROTOR/6600 ENGINE RPM

EXAMPLE

WANTED

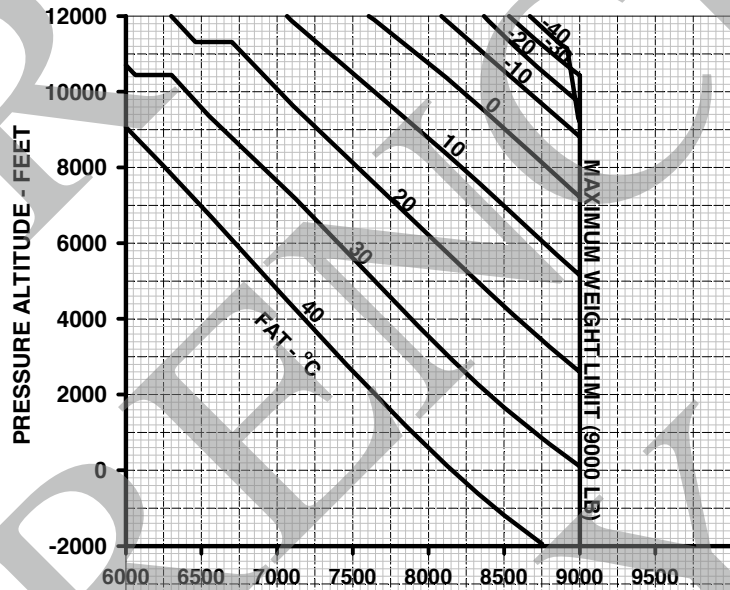
GROSS WEIGHT TO HOVER

KNOWN

PRESSURE ALTITUDE = 10600 FEET
 FAT = 10°C
 SKID HEIGHT = 2 FEET

METHOD

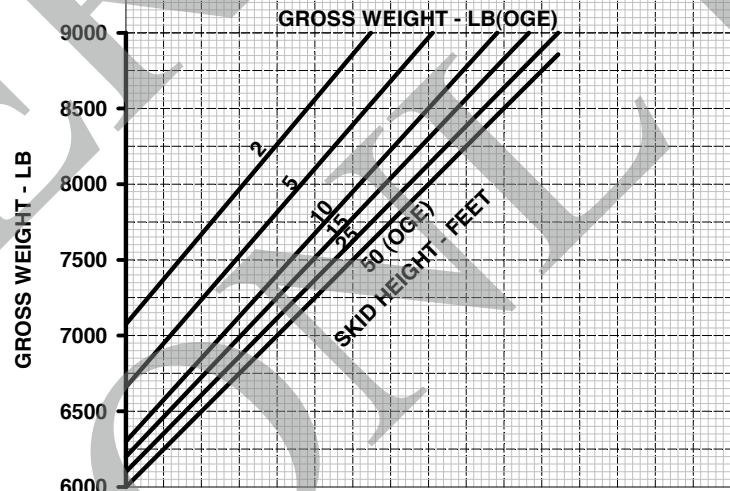
ENTER PRESSURE ALTITUDE
 MOVE RIGHT TO FAT
 MOVE DOWN TO SKID HEIGHT
 MOVE LEFT, READ GROSS WEIGHT
 TO HOVER = 8810 POUNDS



CORRECTION TABLE:

TORQUE CORRECTION PSI*				
FAT	CALIBRATED TORQUE-PSI			
	20	30	40	50
0°C	.2	.3	.4	.5
-20°C	.4	.6	.8	1.0
-40°C	1.4	2.1	2.8	3.5
-50°C	2.4	3.6	4.8	6.0
-60°C	4.0	6.0	8.0	10.0

*When operating at or below 0°C increase the calibrated torque determined from sheet 2 by the amount shown in the table to determine torque required. See example on sheet 2.



**FIGURE A-5 Hover Ceiling Max Torque Available (30 min)
 USAF UH-1F, UH-1P & TH-1F with Lycoming T53-L-13B Engine and Metal Main Rotor Blades**

CHAPTER 7 – PERFORMANCE

NOTE ALL ITEMS REMAIN AS IN BASIC OPERATOR'S MANUAL EXCEPT THE FOLLOWING:

EXAMPLE

WANTED

GROSS WEIGHT TO HOVER

KNOWN

PRESSURE ALTITUDE = 12000 FEET

FAT = 10°C

SKID HEIGHT = 2 FEET

METHOD

ENTER PRESSURE ALTITUDE

MOVE RIGHT TO FAT

MOVE DOWN TO SKID HEIGHT

MOVE LEFT, READ GROSS WEIGHT

TO HOVER = 9200 POUNDS

HOVER CEILING MAXIMUM TORQUE POWER AVAILABLE (30 MINUTE OPERATION) 324 ROTOR/6600 ENGINE RPM

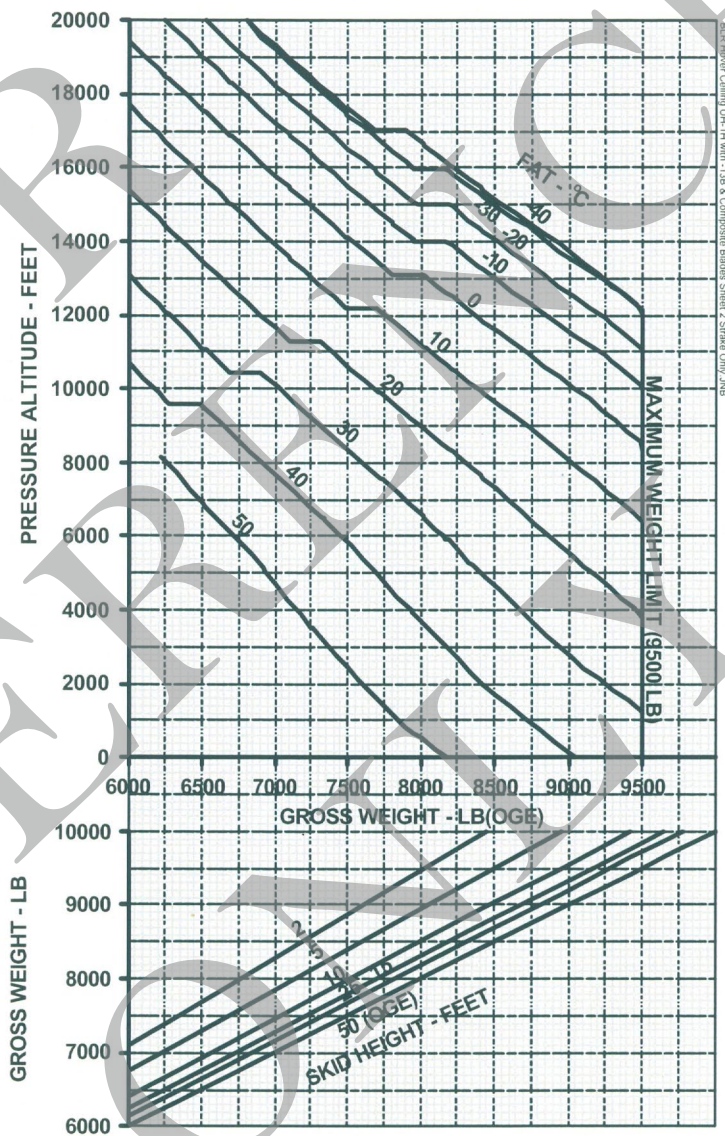


FIGURE 7.1-3 Hover Chart (Sheet 2 of 2)

CHAPTER 7 – PERFORMANCE

NOTE ALL ITEMS REMAIN AS IN BASIC OPERATOR'S MANUAL EXCEPT THE FOLLOWING:

HOVER CEILING
MAXIMUM TORQUE POWER AVAILABLE (30 MINUTE OPERATION)
UH-1H with T53-L-703 Engine and Metal Main Rotor Blades
OUT OF GROUND EFFECT - 324 ROTOR/6600 ENGINE RPM

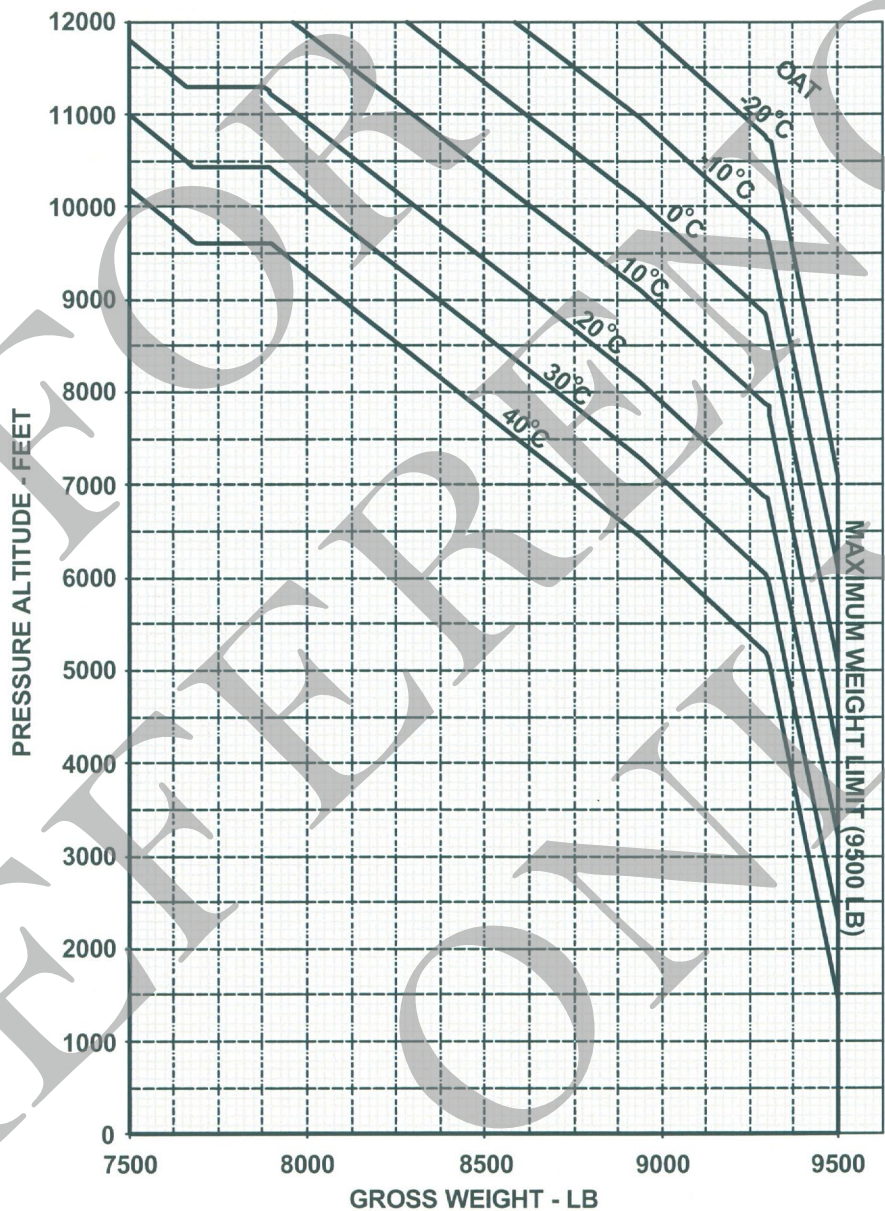


FIGURE 7.2 Hover Ceiling Chart – Metal Blades

CHAPTER 7 – PERFORMANCE (CONT.)

HOVER CEILING MAXIMUM TORQUE POWER AVAILABLE (30 MINUTE OPERATION) UH-1H with T53-L-703 Engine and Composite Main Rotor Blades OUT OF GROUND EFFECT - 324 ROTOR/6600 ENGINE RPM

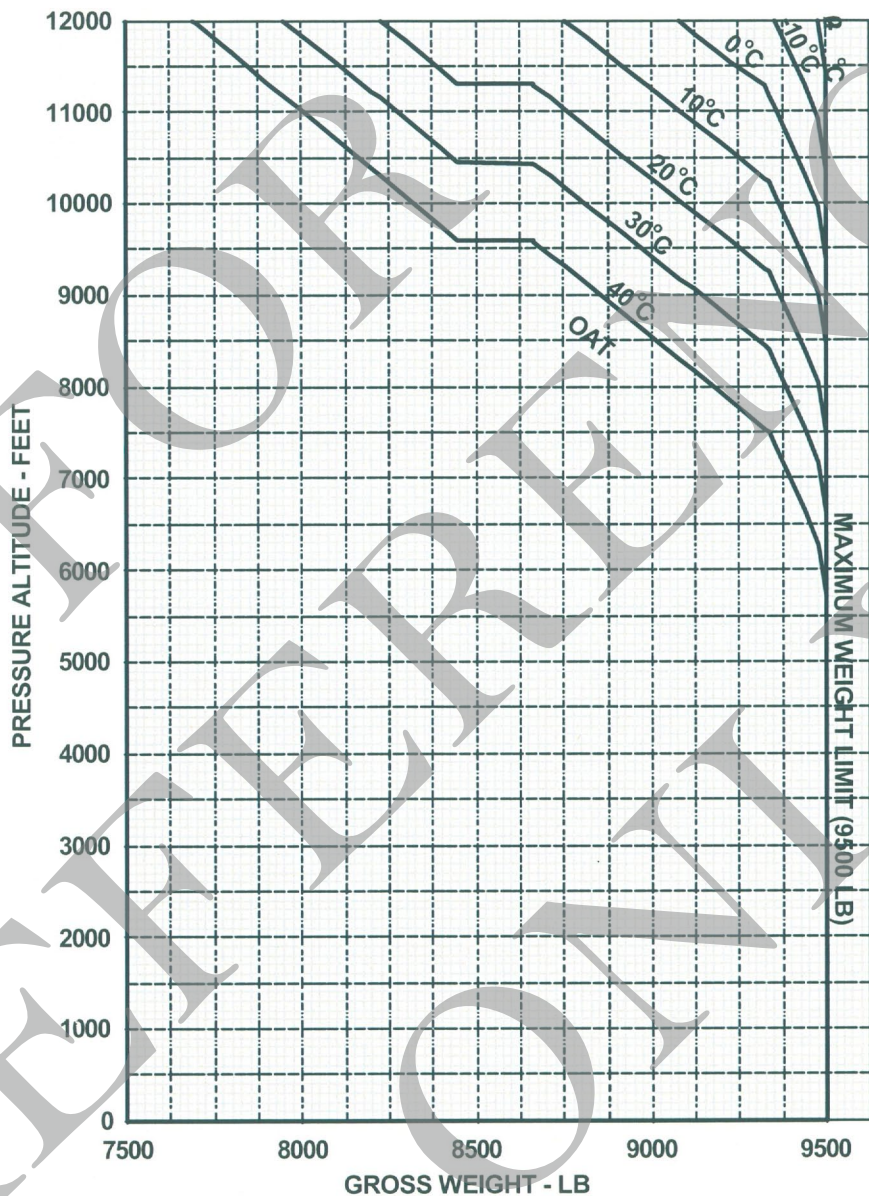


FIGURE 7.3 Hover Ceiling Chart – Composite Blades