**NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety
Washington, D.C. 20594

**Attachment 8 – Aircraft Flight Manual Section 5 Regulatory Performance Data**

# OPERATIONAL FACTORS / HUMAN PERFORMANCE

**ANC20MA010**

SECTION 5

REGULATORY PERFORMANCE DATA

CONTENTS


| | | Pages | |
|---|---|---|---|
| 1 | INTRODUCTION | 1 | |
| 2 | SUBSTANTIATED WIND ENVELOPE | 1 | |
| 3 | AIRSPEED CALIBRATION | 1 | |
| 4 | AIRSPEED HEIGHT ENVELOPE | 2 | R |
| 5 | HOVER PERFORMANCE | 2 | R |
| 6 | RATES OF CLIMB | 2 | R |
| 7 | NOISE LEVELS | 12 | R |

# SECTION 5

# REGULATORY PERFORMANCE DATA

## 1 INTRODUCTION

The following performance curves apply to the basic version of the aircraft. Refer to the supplements when optional equipment is fitted.

## 2 SUBSTANTIATED WIND ENVELOPE

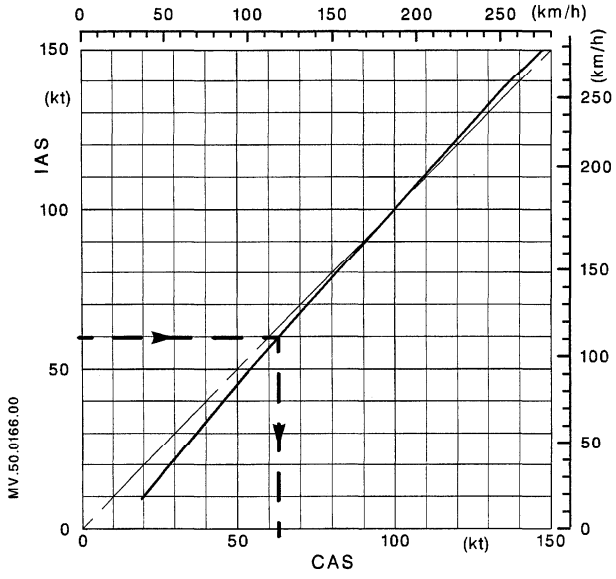
### 2.1 Wind envelope for spinning and stopping the rotors

Spinning or stopping of rotors has been substantiated for winds of 40 kt from any direction and for 50 kt headwinds.

### 2.2 Wind envelope in hover

Hovering with wind from any direction has been substantiated over the entire flight envelope up to winds of 17 kt, although this is not to be taken as a limit. For example hover at sea level at maximum weight, for all CG locations, has been substantiated at 30 kt.

## 3 AIRSPEED CALIBRATION



4 AIRSPEED-HEIGHT ENVELOPE (Figure 1)

The avoidance zone (Z) is defined by four points : A, B, C, D.

Determining fixed Points A and B

- Point A
  Point A is located at a height of 8 ft (2.5 m) at zero airspeed.

- Point B
  Point B is located at a height of 25 ft (8 m) for an airspeed of 40 kt (74 km/h).

Determining variable Points C and D

- Point C
  Point C is defined by :
  . a constant height of 100 ft (30,5 m)
  . a variable airspeed depending on the altitude and on the aircraft weight as determined by line (C).

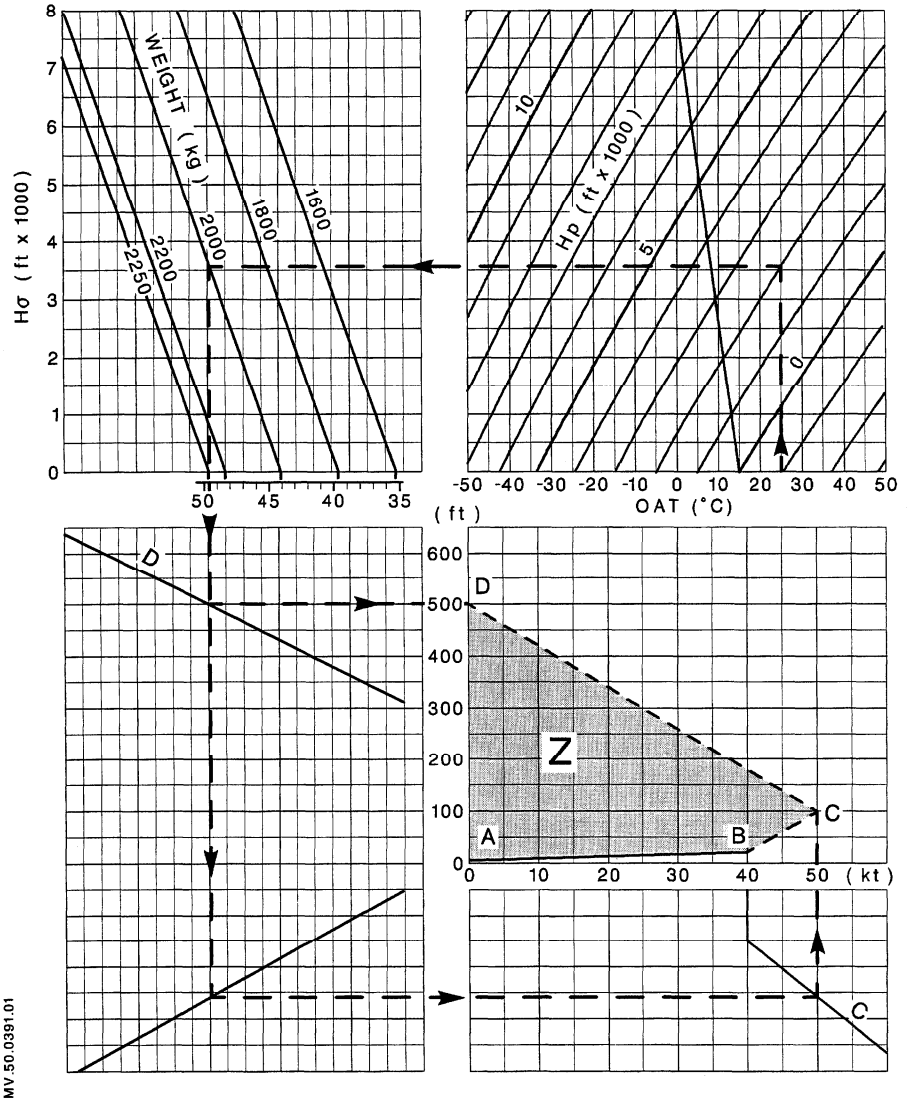
- Point D
  Point D is defined by :
  . a constant zero airspeed
  . a variable height depending on the altitude and on the aircraft weight as determined by line (D).

5 HOVER PEFORMANCE R

- Hover performance IGE (Figures 2 and 3). R
- Hover performance OGE (Figures 4 and 5). R

6 RATE OF CLIMB R

The rates of climb are specified in Figures 7 and 8. R

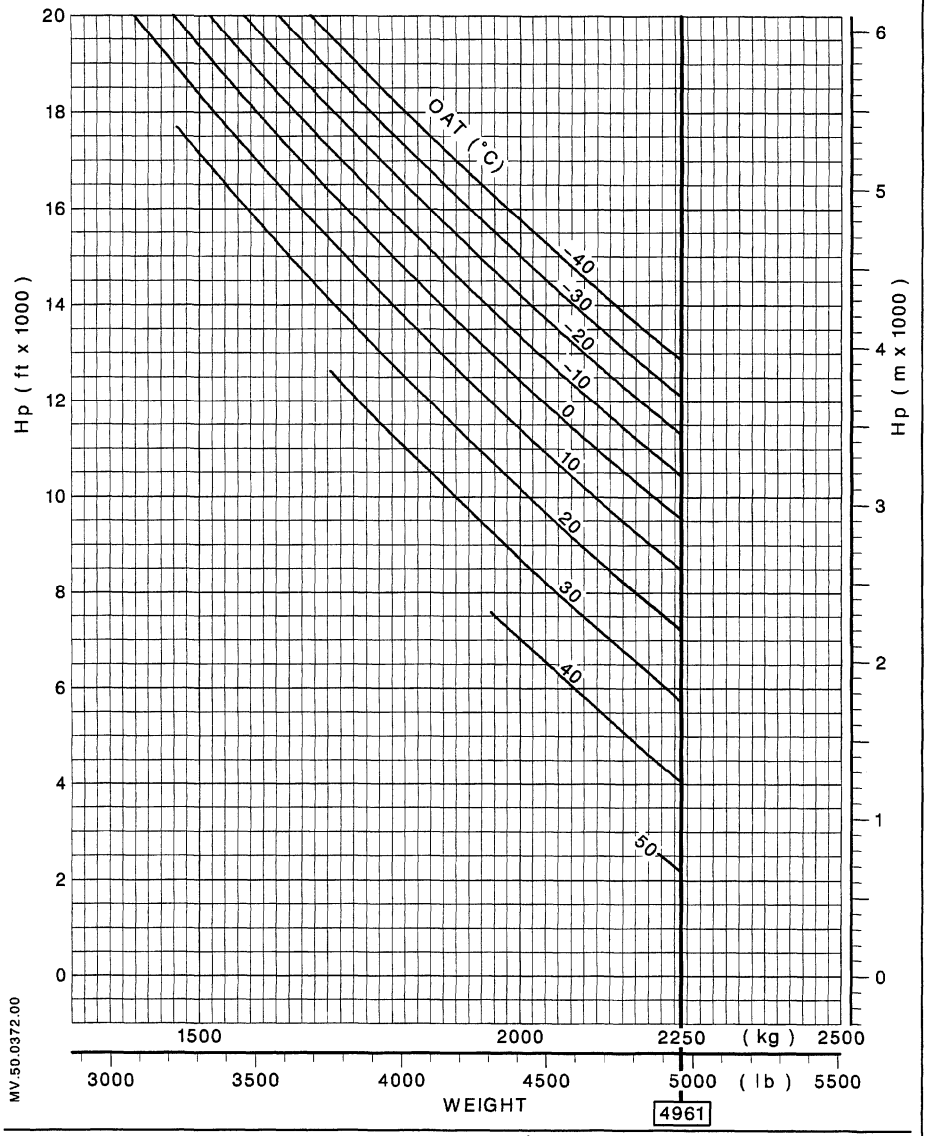



**CONDITIONS**

**HEIGHT / VELOCITY ENVELOPE**

R

Figure 1



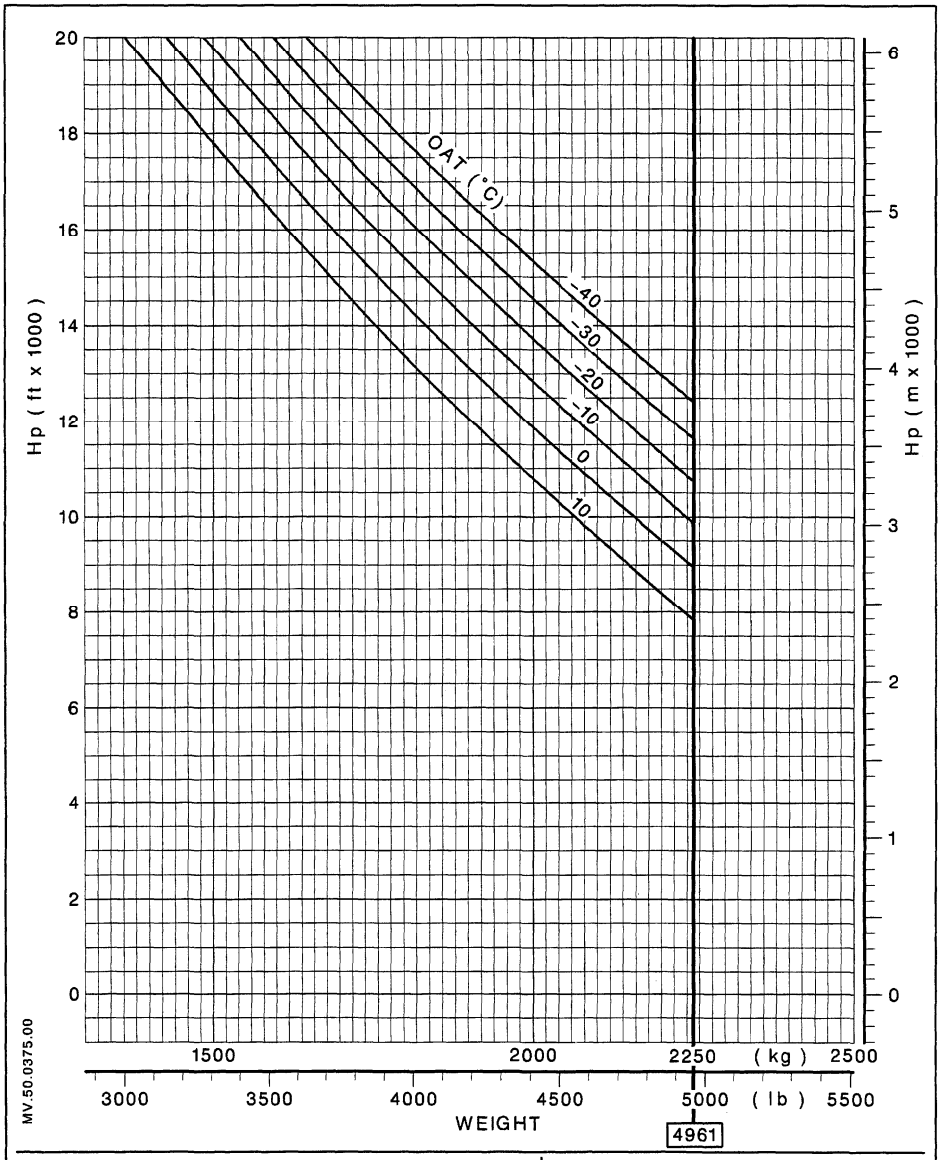

**CONDITIONS**

- HEIGHT 5 ft - 1.5 m
- NO P2 AIR BLEED
- MAXIMUM TAKEOFF POWER
-
-
-
-

**IGE HOVERING FLIGHT PERFORMANCE**

Figure 2

R



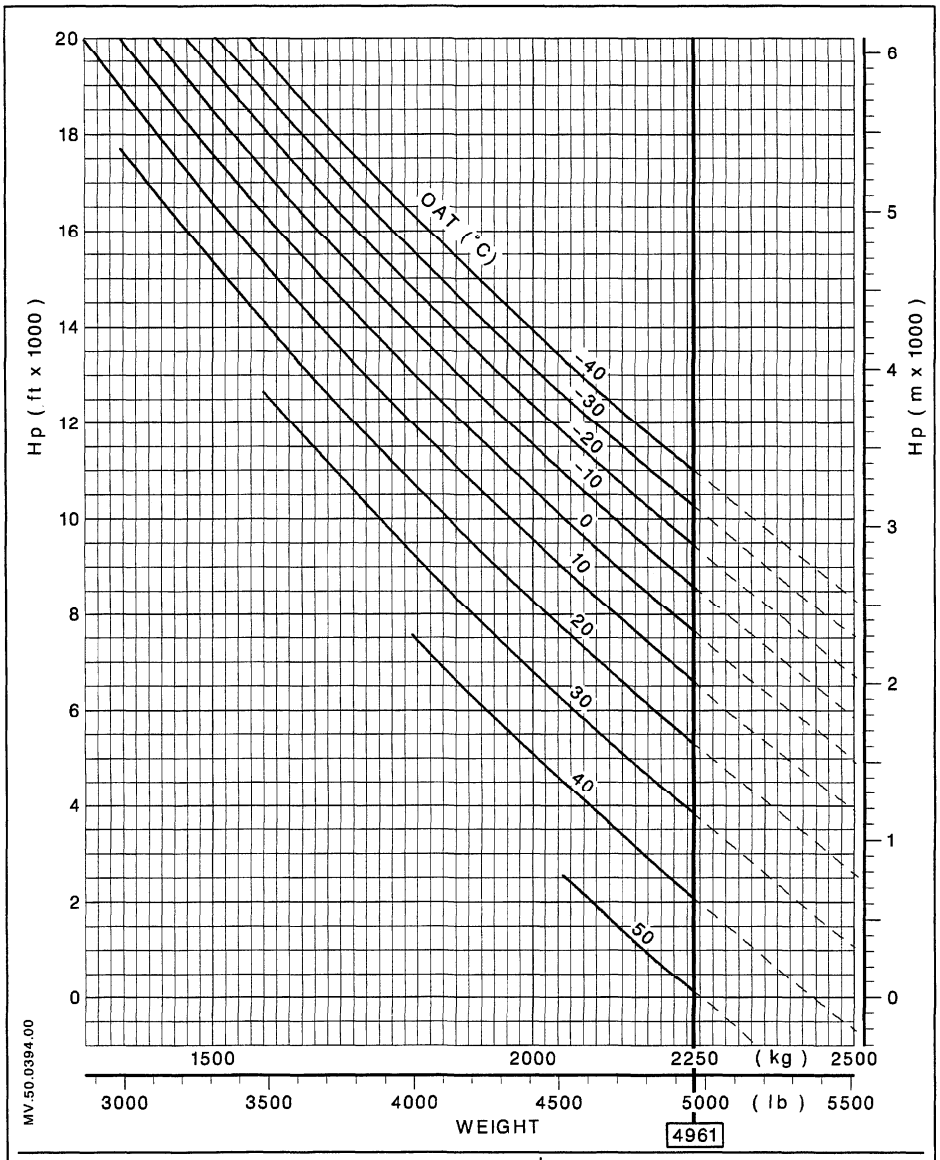

**CONDITIONS**

- HEIGHT 5 ft - 1.5 m
- HEATING AND DEMISTING SYSTEMS ON
- MAXIMUM TAKEOFF POWER

**IGE HOVERING FLIGHT PERFORMANCE**

R

Figure 3



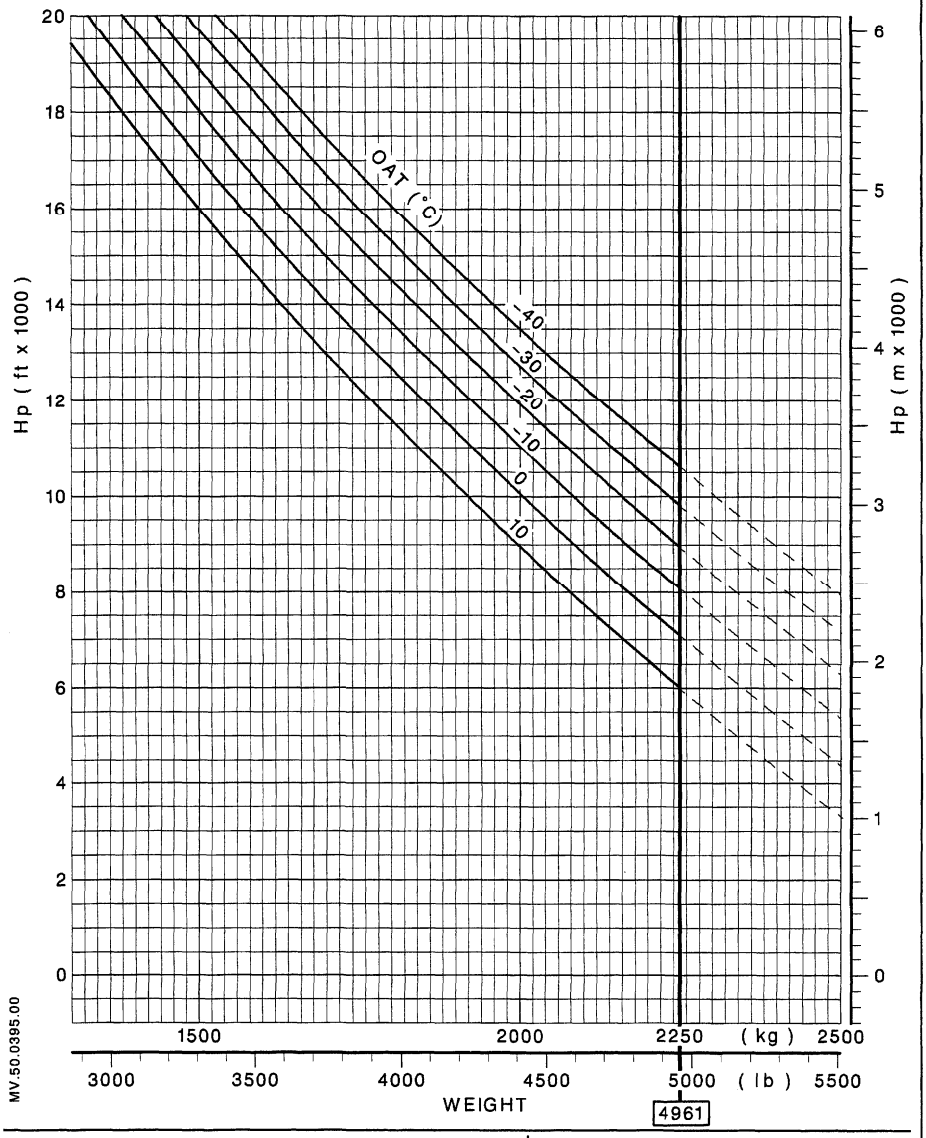

**CONDITIONS**

- NO WIND
- NO P2 AIR BLEED
- MAXIMUM TAKEOFF POWER
-
-
-
-

**OGE HOVERING FLIGHT PERFORMANCE**

R

Figure 4



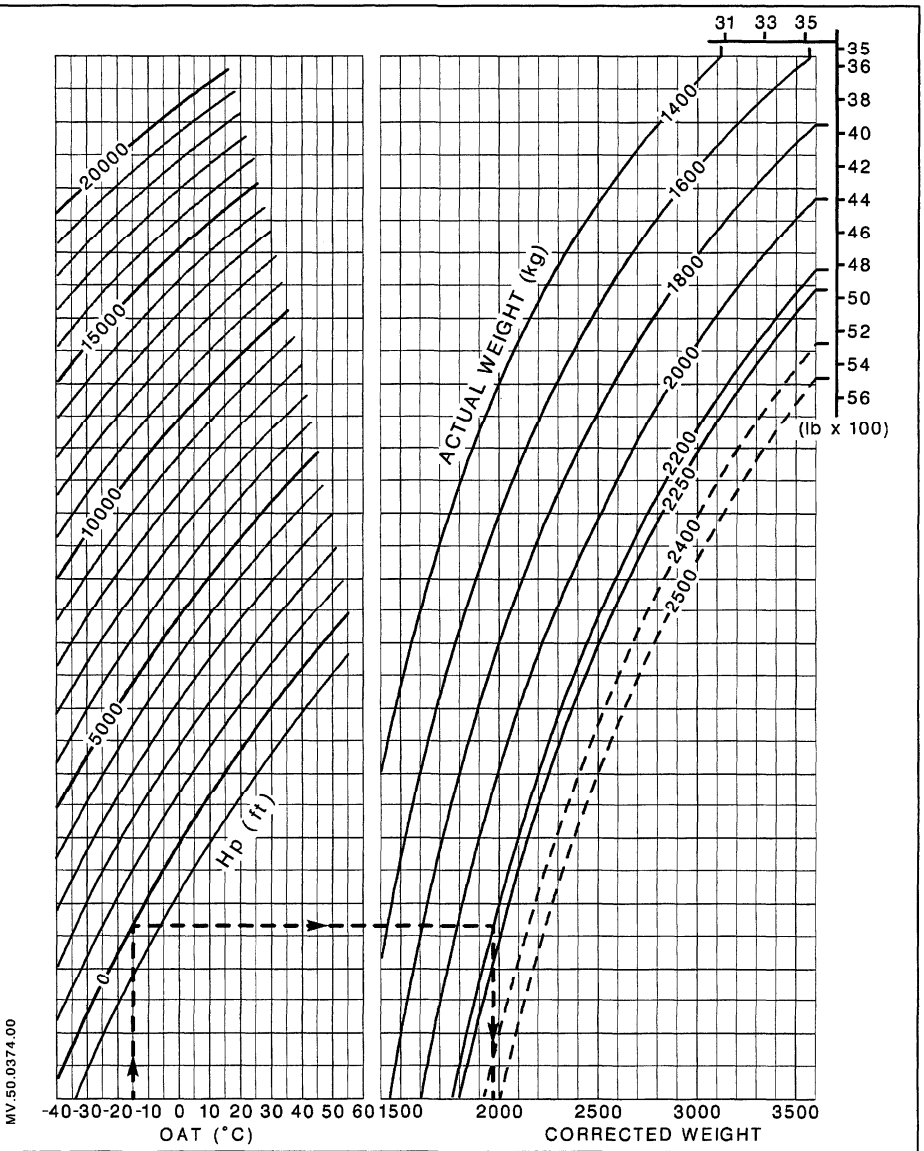

**CONDITIONS**

- NO WIND
- HEATING AND DEMISTING SYSTEMS ON
- MAXIMUM TAKEOFF POWER

**OGE HOVERING FLIGHT PERFORMANCE**

R

Figure 5



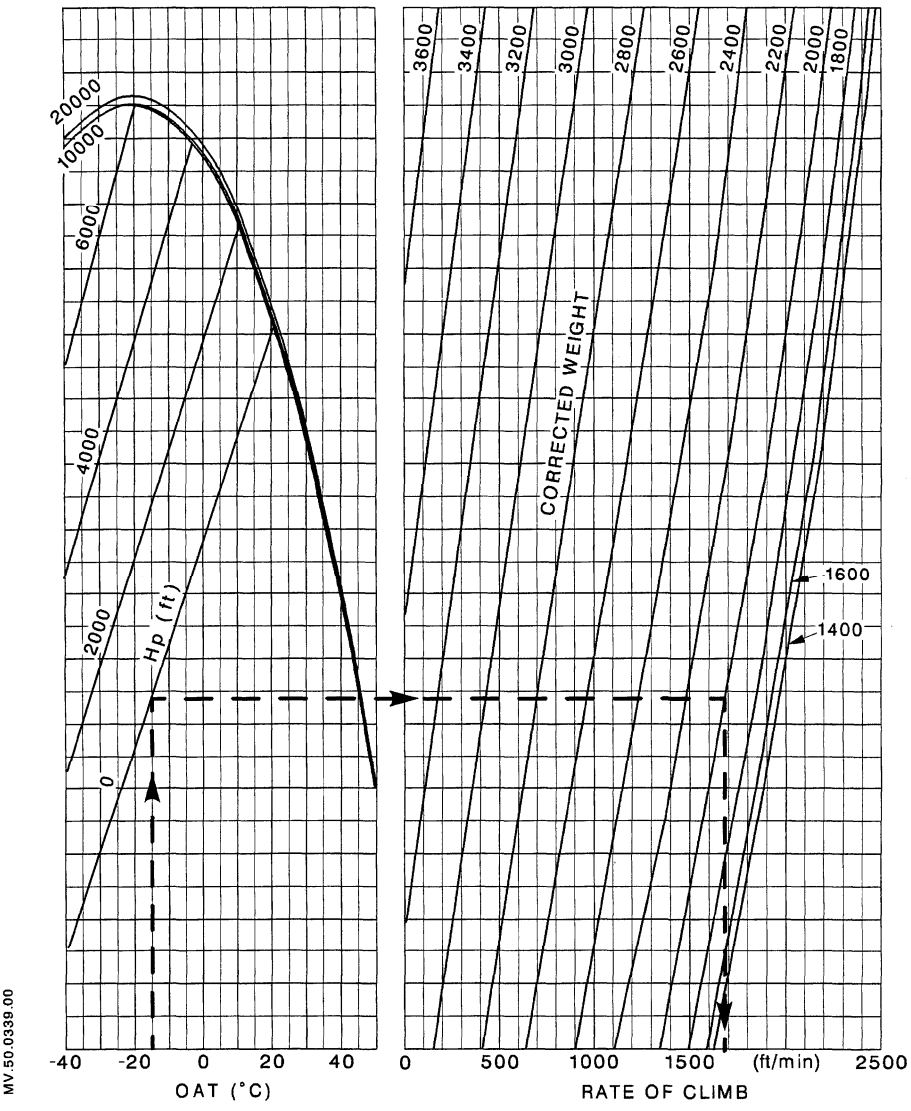

**CONDITIONS**

- WEIGHT LIMITATION WITH INTERNAL LOAD : 2250 kg (4961 lb)
-
-
-
-
-

**CORRECTED WEIGHT FOR DETERMINING RATE-OF-CLIMB (on facing page)**

Figure 6

R



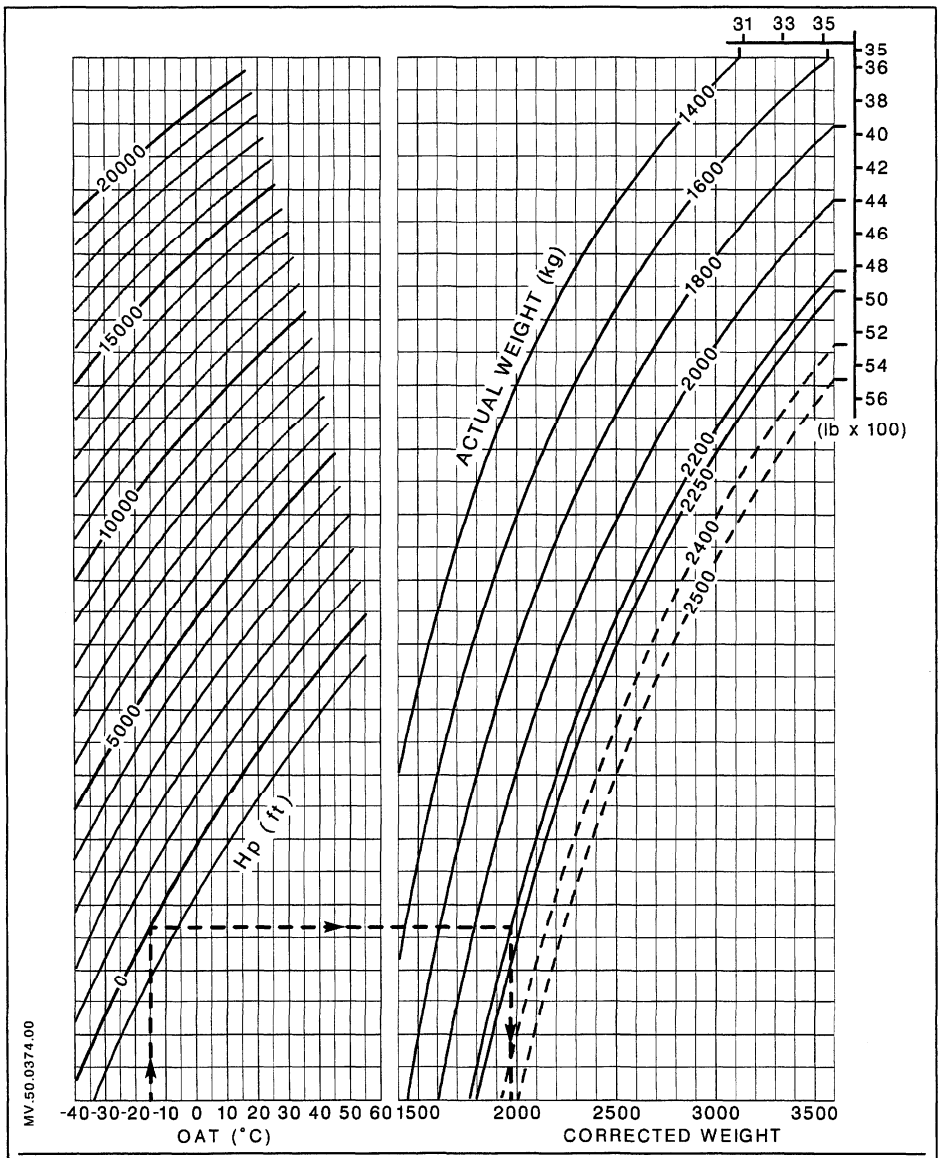

**CONDITIONS**

- CAS = 55 kt (102 km/h)
- MCP
- NO P2 AIR BLEED
-
-
-
-

**RATE OF CLIMB**

Figure 7

R



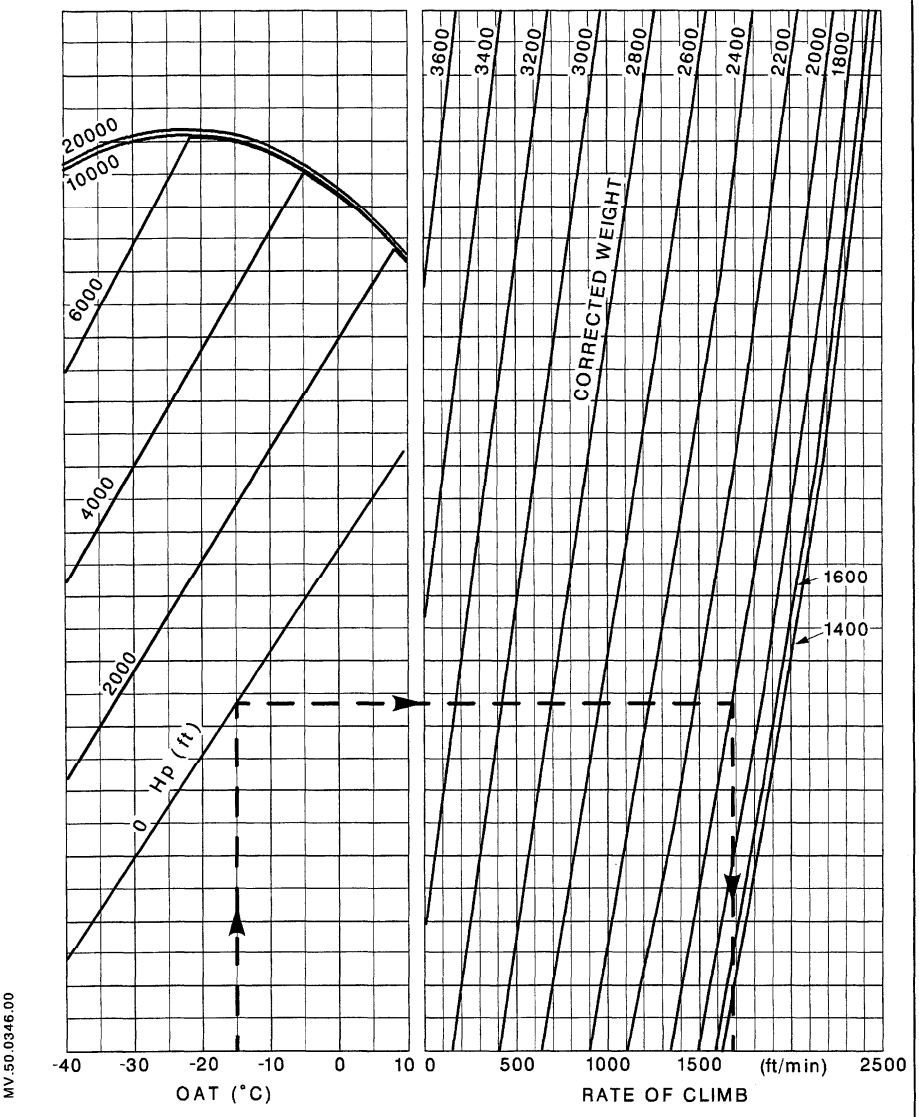

**CONDITIONS**

- WEIGHT LIMITATION WITH INTERNAL LOAD : 2250 kg (4961 lb)
-
-
-
-
-

**CORRECTED WEIGHT FOR DETERMINING RATE-OF-CLIMB (on facing page)**

R

Figure 6




**CONDITIONS**

- CAS = 55 kt (102 km/h)
- MCP
- HEATING AND DEMISTING SYSTEMS ON.

**RATE OF CLIMB**

Figure 8

R

## 7 NOISE LEVELS R

The noise levels determined under the conditions prescribed by FAR PART 36 are as follows :

| Reference measurement configurations | Noise levels EPNdB | FAR 36 noise limits at 2250 kg EPNdB |
|---|---|---|
| Take off | 89,8 | 93,5 |
| Approach (56 Kts) | 91,4 | 94,5 |
| Overflight | 87,1 | 92,5 |