

# DOCUMENT GSM-G-CPL.022

# GENERAL OPERATIONS, FLIGHT PLANNING AND PERFORMANCE

# CHAPTER 20 LANDING CHARTS

Version 1.0 January 2013

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# CHAPTER 20 LANDING CHARTS



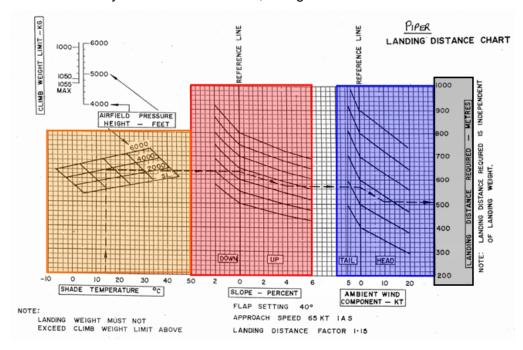
# GENERAL OPERATIONS, FLIGHT PLANNING AND PERFORMANCE

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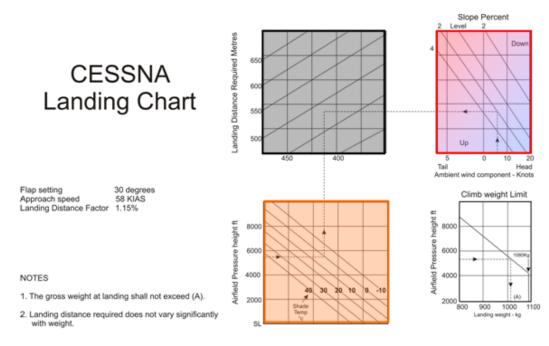
# LANDING CHARTS

Landing charts are typically provided in several forms. They allow a pilot to compute the landing distance of the aircraft with a specified flap configuration. A pilot can also compute landing weight for a given distance. The landing distance chart provides for various pressures altitudes, temperatures, slope, winds, and weight or distance.

Most P-charts are normally divided in to sections, though often not the same order



**NOTE:** you can see on this Cessna type chart, wind component and weight are in the same section



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# **CESSNA LANDING CHART**

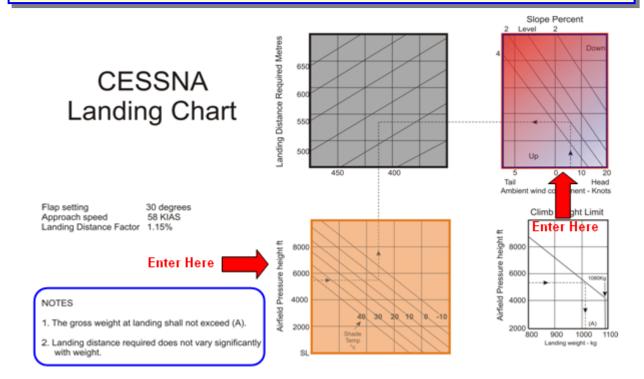
All Take-off's are voluntary, but all landing do become compulsory. Landing performance charts again follow the same basic principles as found in the take-off charts.

Pressures altitudes, temperatures, surface, slope, winds, and weight or distance.

It is important to read the note on charts and extract the relevant information

### Note:

- 1. Talks about climb weight limit. (This will be discussed later)
- 2. States, landing distance will not vary significantly with weight, hence weight is only show in the climb weight limit



This type of landing chart has duel entry points

- One at pressure height
- One at wind component

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#### **CHART EXAMPLE**

Given the following destination information for the Landing chart below:

340<sup>ft</sup> **Elevation** 

OAT 25°C Pressure Alt = 3000ft OAT =+25

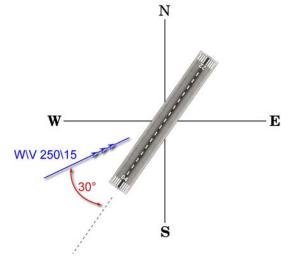
QNH 1021 **TODA** 700m

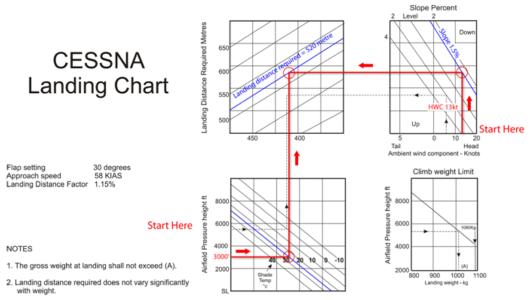
**Surface** long wet grass - There is NO surface representation

**Slope** 1.5% dwn to SSW - This would be an Up slope for landing on runway 22

The angle between Rwy and wind Wind 250/15

direction is 30° giving HWC 13kt 22/04 Rwy





# PIPER TYPE LANDING CHART

# **Example**

Below is a Piper type landing chart

Again the principle is the same

Given the following as an example to work through the graph

Elevation 2300ft

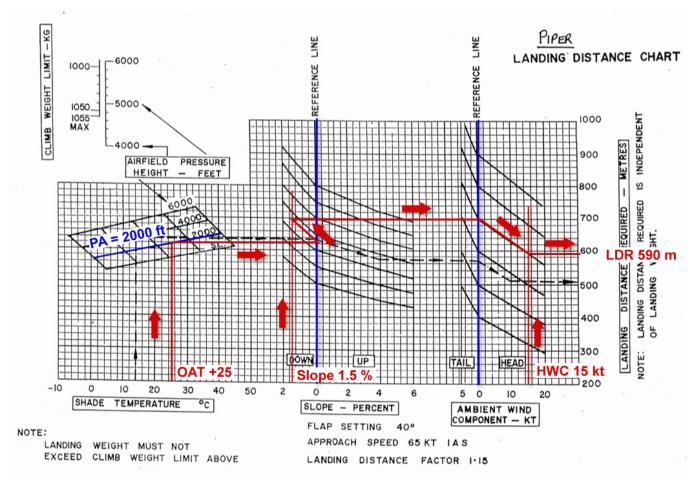
QNH 1023Hpa

PA =  $2000^{ft}$ OAT 25°C

Slope 1.5% dwn

HWC 15kt

Take note of the Reference line's, remember from previous P Chart you must go to the reference line first before plotting your line



**Answer :** Landing distance required 590meter

# CLIMB WEIGHT LIMIT FOR LANDING CHARTS

Civil Aviation Orders, section 20.7.4 subsection 9.1

Climb weight limit for a Cessna type landing chart is in its own box (lower right corner)

Enter the airfield pressure altitude on the left hand side of the box, from here move horizontally to the right until you hit the climb weight limit line highlighted in blue, from that point move vertically down and read the climb weight limit for landing.

# **CESSNA Landing Chart**

Flap setting Approach speed 58 KIAS Landing Distance Factor

#### NOTES

- 1. The gross weight at landing shall not exceed (A).
- 2. Landing distance required does not vary significantly

# Slope Percent Landing Distance Required Metres Climb weight Limit Airfield Pressure height ft 8000 6000 6000 4000 4000 10 2000 900 1000 1100

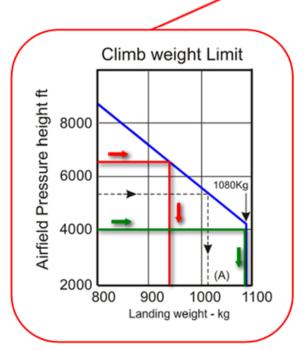
## Enter with your Pressure Altitude.

#### Example 1

PA = 6500 ftClimb weight limit = 940kg

#### Example 2

PA = 4000ftClimb weight limit = 1080kg, max landing weight as shown by the Pchart



Version: 1.0 7 of 8 GSM-G-CPL.022 Date: Jan 13 © 2005 FTA As we have seen all P charts have slight variations for use. This landing chart is yet another example showing a different method for Climb weight limit.

Climb weight Limit on the chart is quite easy: Locate you pressure altitude on the airfield pressure height side, draw a line horizontally to the left and read off.

