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Date: July 21, 2025

Subject: WPR23LA334, Weight / Balance and Performance Summary

A. Accident

Location: Prescott, Arizona
Date: September 02, 2023
Aircraft: Piper, PA-28-140, N6834W

B. Weight and Balance information

The airplane was reported to be about 38 lbs under the maximum gross weight of the airplane. The reported weight was used to base performance calculations.

C. Performance

The automated weather observation station located on the Prescott Regional/Ernest A Love Field Airport, Prescott, Arizona reported that, about the time of the accident, the temperature was 19° C, dew point was 16° C and the barometric pressure was 30.27.

The calculated density altitude at the accident location and time of the accident was about 6,357 ft and a pressure altitude of 4,695 ft.

Altimeter Setting to Pressure Altitude

Altimeter Setting ☒ in/hg ☐ hpa : 30.27

Field Elevation ☒ ft ☐ mt : 5045

Pressure Altitude (ft) 4695
What is the formula?

Pressure Altitude to Density Altitude

Pressure Altitude ☒ ft ☐ mt : 4695

True Altitude (ft) 5045

Standard (ISA) Temperature ☒ °C ☐ °F : 5.01

Air Temperature (OAT) ☒ °C ☐ °F : 19

Density Altitude (ft) 6357
What is the formula?

Figure 1: Density Altitude Calculation

A calculated takeoff distance ground run was 1,700 ft, and to clear a 50 ft obstacle 3,500 ft. Utilizing the performance instructions noted within the airplane flight manual, the assumed altitude and density altitude conditions, an airplane loaded at maximum gross weight, the calculated climb performance would have been about 400 ft per minute (fpm).

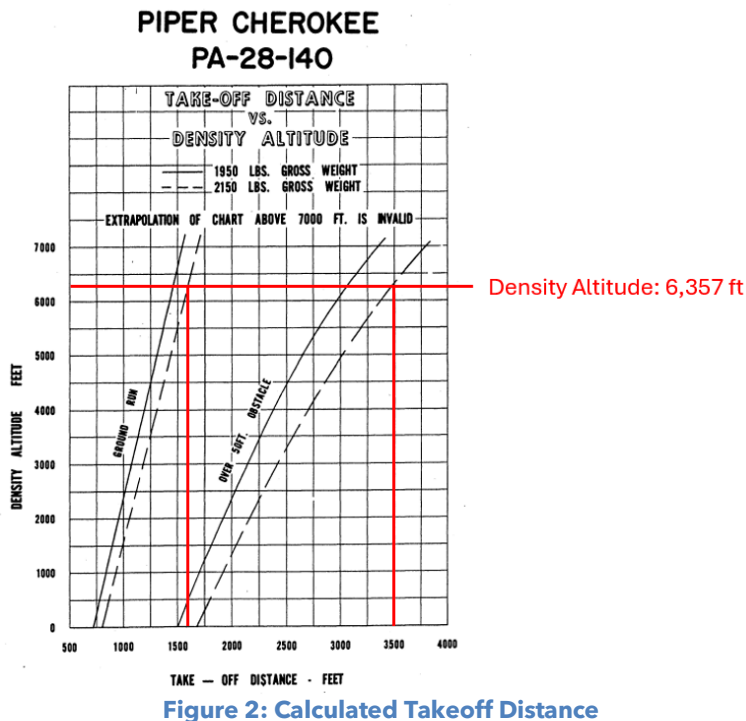


Figure 2: Calculated Takeoff Distance

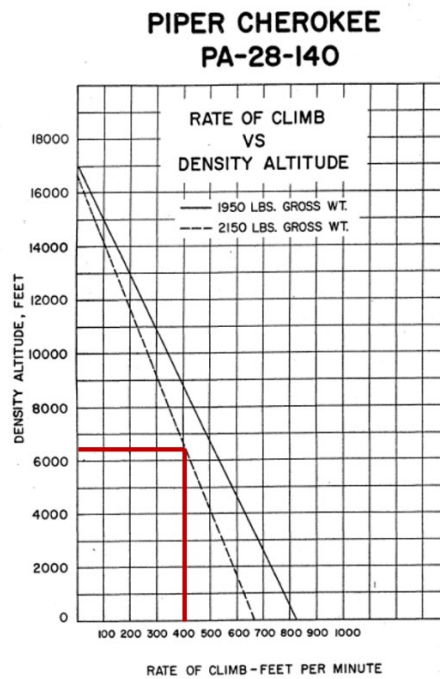


Figure 3: View of climb performance chart from airplane flight manual.

Submitted by:

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