HQ-650

Federal Aviation Agency

ADVISORY CIRCULAR

AC NO: AC 61-37
CERTIFICATION: PILOT AND FLIGHT INSTRUCTORS
EFFECTIVE: 2/14/67

Cancelled 00-2Q

SUBJECT: CORRECTION TO KOCH CHART IN AC 61-11 AND AC 61-28

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1. PURPOSE. This circular informs all holders of AC 61-11, Airplane Flight Instructor Examination Guide, (1965) and AC 61-28, Commercial Pilot Written Examination Guide, (1966) of inaccuracies in the Koch Chart for Altitude and Temperature Effects which appears in these publications.

2. INFORMATION.

   a. The Koch chart, dated 5-5-64, shown in AC 61-11, pages 37 and 62, and in AC 61-28, page 68, has been rescinded. A corrected Koch chart, shown on the reverse side of this advisory circular, should be used in place of the one dated 5-5-64, which was used in AC 61-11 and AC 61-28.

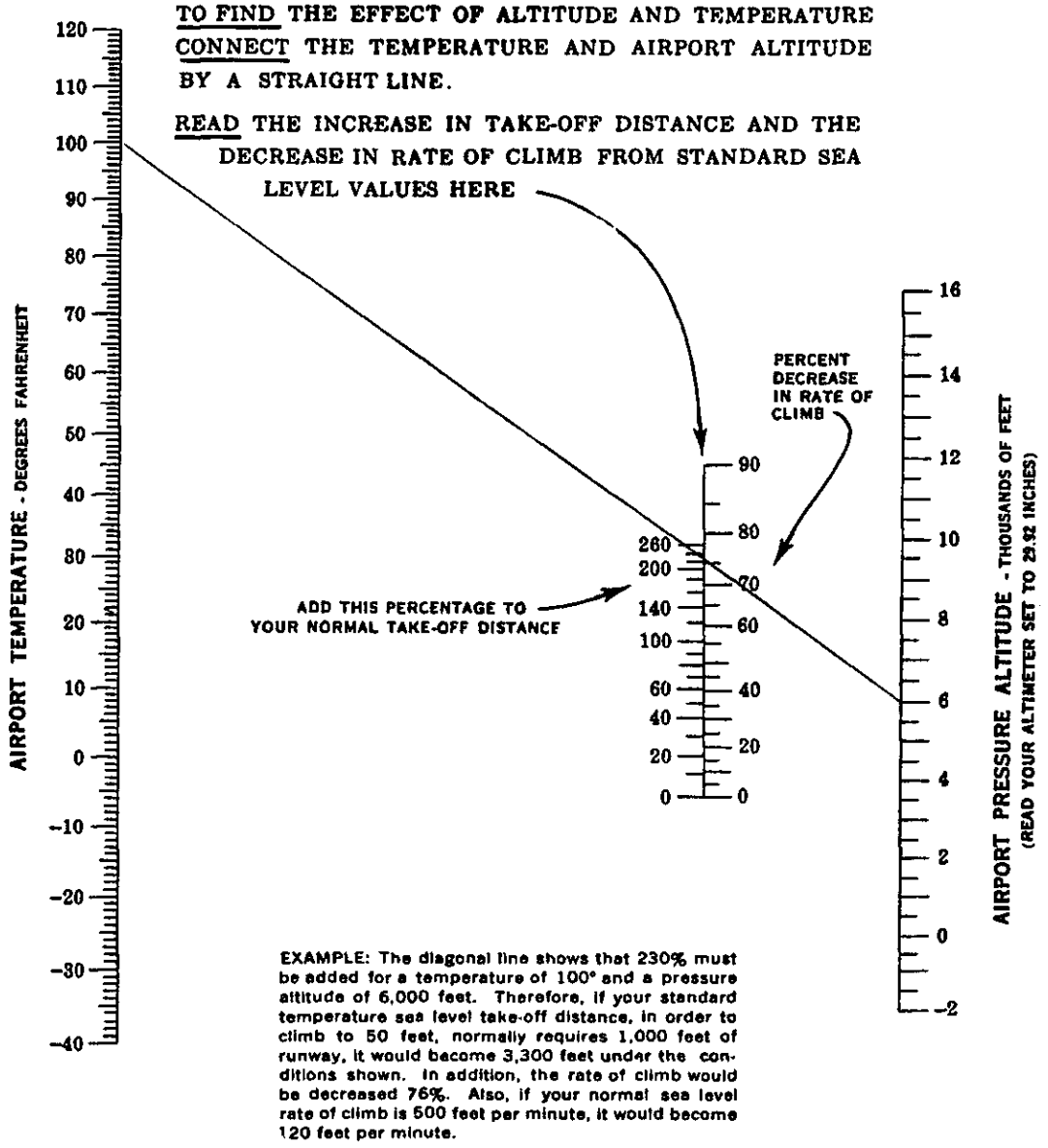
   b. The Denalt Performance Computer has recently been designed by the FAA and is a considerable improvement over the Koch chart. It is available for aircraft with either fixed pitch or variable pitch propellers and will provide the approximate expected take-off distance and rate of climb based on temperature, pressure and altitude. The Denalt Performance Computer is intended to supplement, NOT replace manufacturer published performance information. Denalt computers may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, price .50 cents each. State type of computer desired, fixed or variable pitch propeller.

   c. AC 61-11, Airplane Flight Instructor Examination Guide, will contain an errata page with the correct chart which will be inserted in the present stock. The next reprint of AC 61-28 will contain the corrected Koch chart on page 68.

E W Walker

Director
Flight Standards Service

THE KOCH CHART FOR ALTITUDE AND TEMPERATURE EFFECTS



EXAMPLE: The diagonal line shows that 230% must be added for a temperature of 100° and a pressure altitude of 6,000 feet. Therefore, if your standard temperature sea level take-off distance, in order to climb to 50 feet, normally requires 1,000 feet of runway, it would become 3,300 feet under the conditions shown. In addition, the rate of climb would be decreased 76%. Also, if your normal sea level rate of climb is 500 feet per minute, it would become 120 feet per minute.

This chart indicates typical representative values for "personal" airplanes.
For exact values consult your airplane flight manual.
The chart may be conservative for airplanes with supercharged engines.
Also remember that long grass, sand, mud or deep snow can easily double your take-off distance.

Koch chart for computing takeoff distance and rate of climb.