

PREDICTING TAKEOFF PERFORMANCE

According to the *Pilot's Handbook of Aeronautical Knowledge* (PHAK), FAA-H-8083-25A, "Proper accounting of pressure altitude and temperature is mandatory for accurate prediction of takeoff roll distance. The most critical conditions of takeoff performance are the result of some combination of high gross weight, altitude, temperature, and unfavorable wind. In all cases, the pilot must make an accurate prediction of takeoff distance from the performance data of the AFM/POH, regardless of the runway available...."

The *PHAK* notes primary consideration in predicting takeoff performance include pressure altitude and temperature—density altitude—gross weight, wind and runway slope and condition. The *PHAK* goes on to state, "... performance data may be presented on the basis of standard atmospheric conditions, pressure altitude, or density altitude. The performance information in the AFM/POH has little or no value unless the user recognizes those variations and makes the necessary adjustments."

