SECTION 5

PERFORMANCE

5.1 GENERAL

All of the required (FAA regulations) and complementary performance information applicable to this aircraft is provided by this section.

Performance information associated with those optional systems and equipment which require handbook supplements is provided by Section 9 (Supplements).

5.3 INTRODUCTION TO PERFORMANCE AND FLIGHT PLANNING

The performance information presented in this section is based on measured Flight Test Data corrected to I.C.A.O. standard day conditions and analytically expanded for the various parameters of weight, altitude, temperature, etc.

The performance charts are unfactored and do not make any allowance for varying degrees of pilot proficiency or mechanical deterioration of the aircraft. This performance, however, can be duplicated by following the stated procedures in a properly maintained airplane.

Effects of conditions not considered on the charts must be evaluated by the pilot, such as the effect of soft or grass runway surface on takeoff and landing performance, or the effect of winds aloft on cruise and range performance. Endurance can be grossly affected by improper leaning procedures, and inflight fuel flow and quantity checks are recommended.

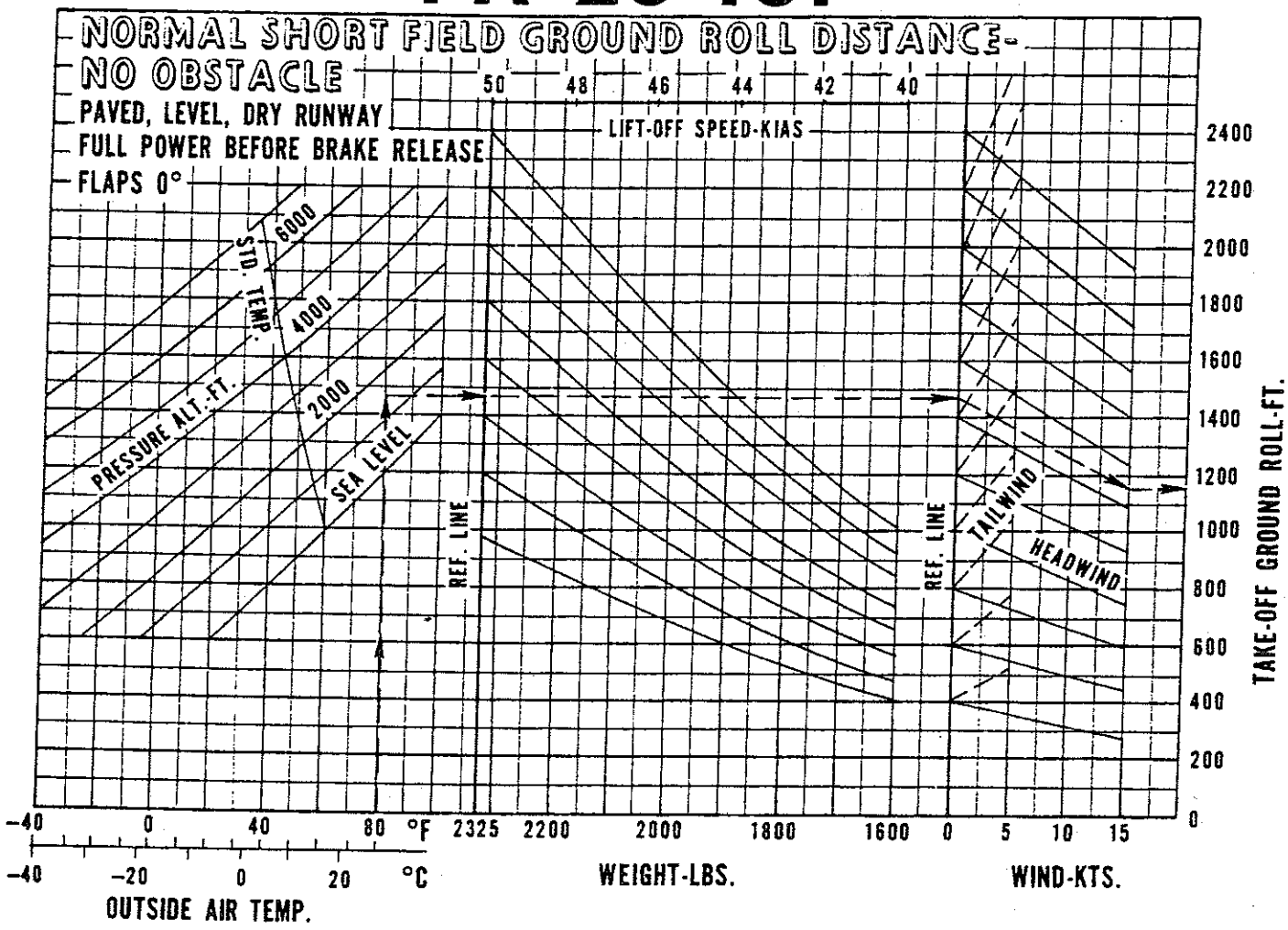
REMEMBER! To get chart performance, follow the chart procedures.

The information provided by paragraph 5.5 (Flight Planning Example) outlines a detailed flight plan using the performance charts in this section. Each chart includes its own example to show how it is used.

WARNING

Performance information derived by extrapolation beyond the limits shown on the charts should not be used for flight planning purposes.

PA-28-161

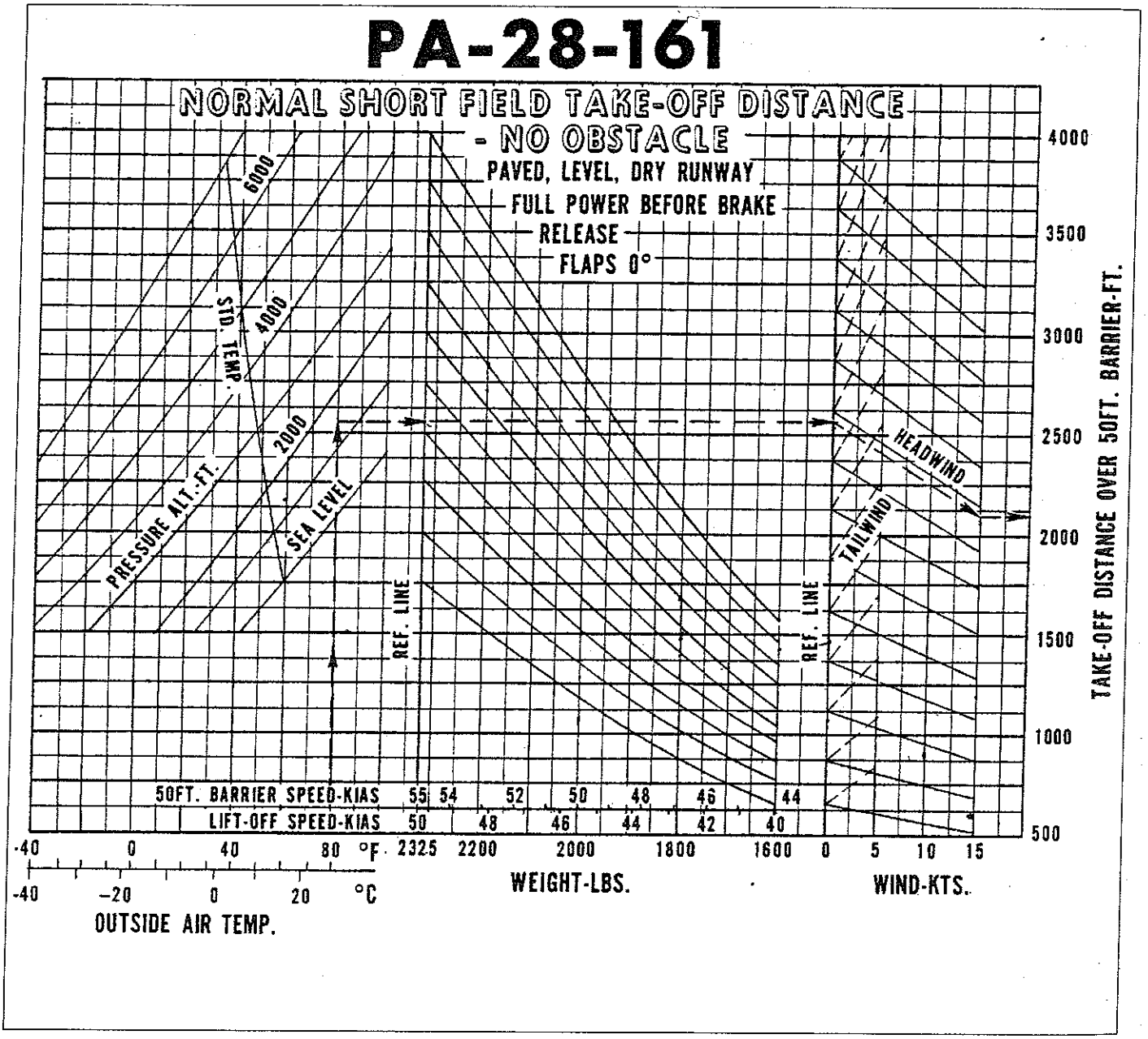


Example:

- Departure airport pressure altitude: 1500 ft.
- Departure airport temperature: 80°F
- Weight: 2325 lbs.
- Wind: 15 KTS headwind
- Ground roll: 1150 ft.
- Lift-off speed: 50 KIAS

NORMAL SHORT FIELD GROUND ROLL DISTANCE - NO OBSTACLE

Figure 5-5



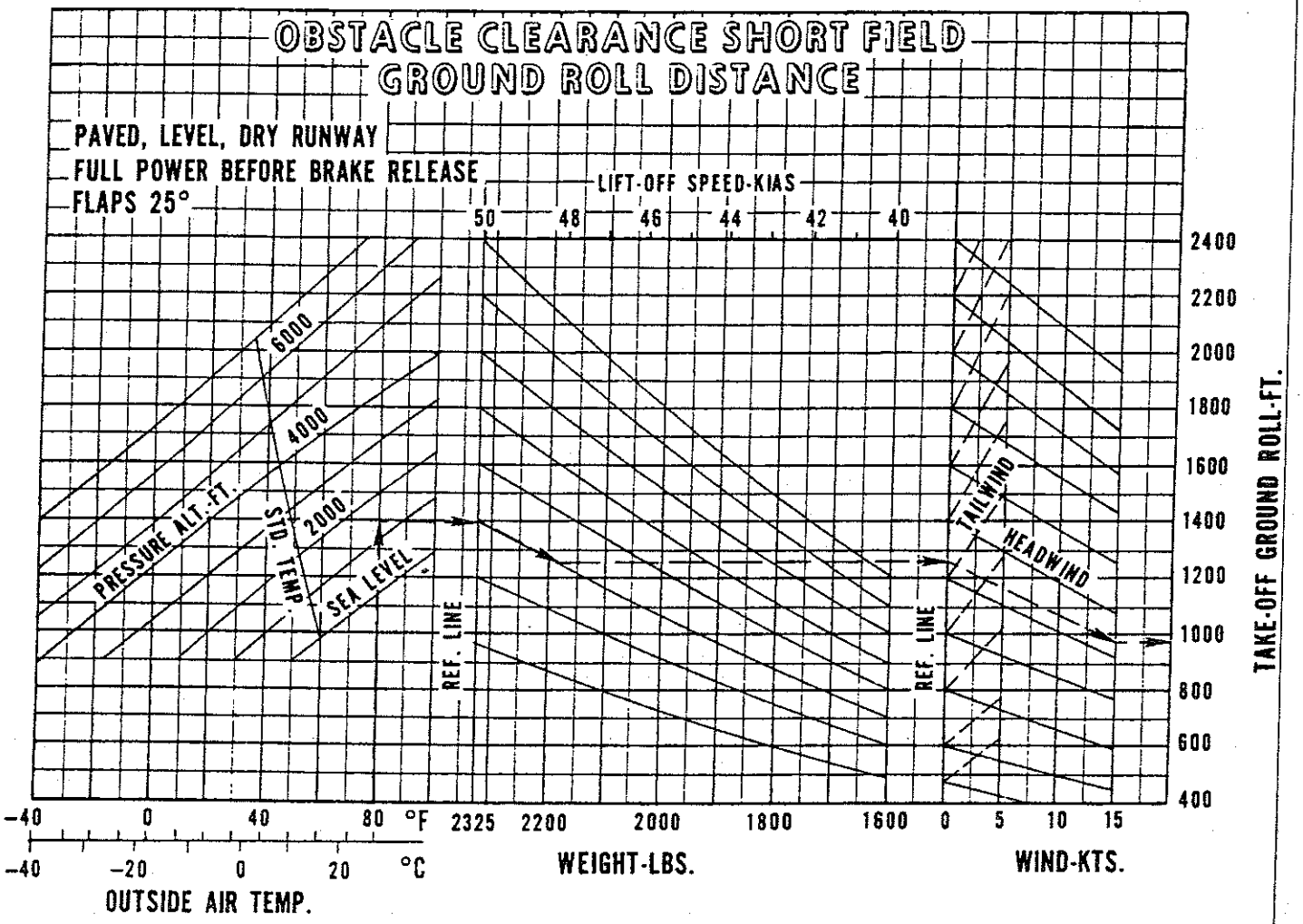
Example:

Departure airport pressure altitude: 1500 ft.
Departure airport temperature: 80°F
Weight: 2325 lbs.
Wind: 15 KTS headwind
Distance over 50 ft. barrier: 2100 ft.
Lift-off speed: 50 KIAS
Barrier speed: 55 KIAS

NORMAL SHORT FIELD TAKEOFF DISTANCE - NO OBSTACLE

Figure 5-6

PA-28-161

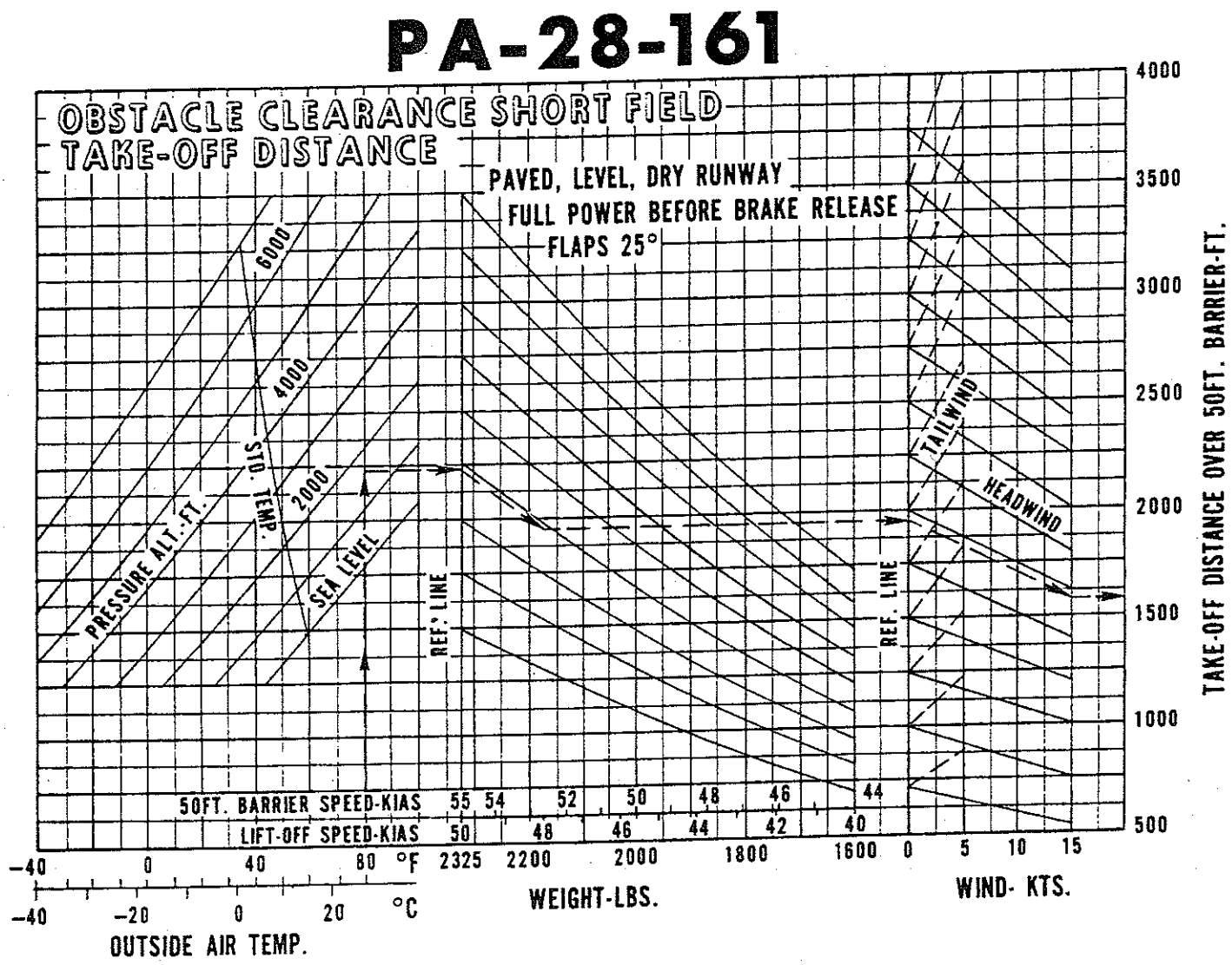


Example:

Departure airport pressure altitude: 1500 ft.
Departure airport temperature: 80°F
Weight: 2175 lbs.
Wind: 15 KTS headwind
Ground roll: 975 ft.
Lift-off speed: 48 KIAS

OBSTACLE CLEARANCE SHORT FIELD GROUND ROLL DISTANCE

Figure 5-7



Example:
Departure airport pressure altitude: 1500 ft.
Departure airport temperature: 80°F
Weight: 2175 lbs.
Wind: 15 KTS headwind
Distance over 50 ft. barrier: 1600 ft.
Lift-off speed: 48 KIAS
Barrier speed: 53 KIAS

OBSTACLE CLEARANCE SHORT FIELD TAKEOFF DISTANCE

Figure 5-8