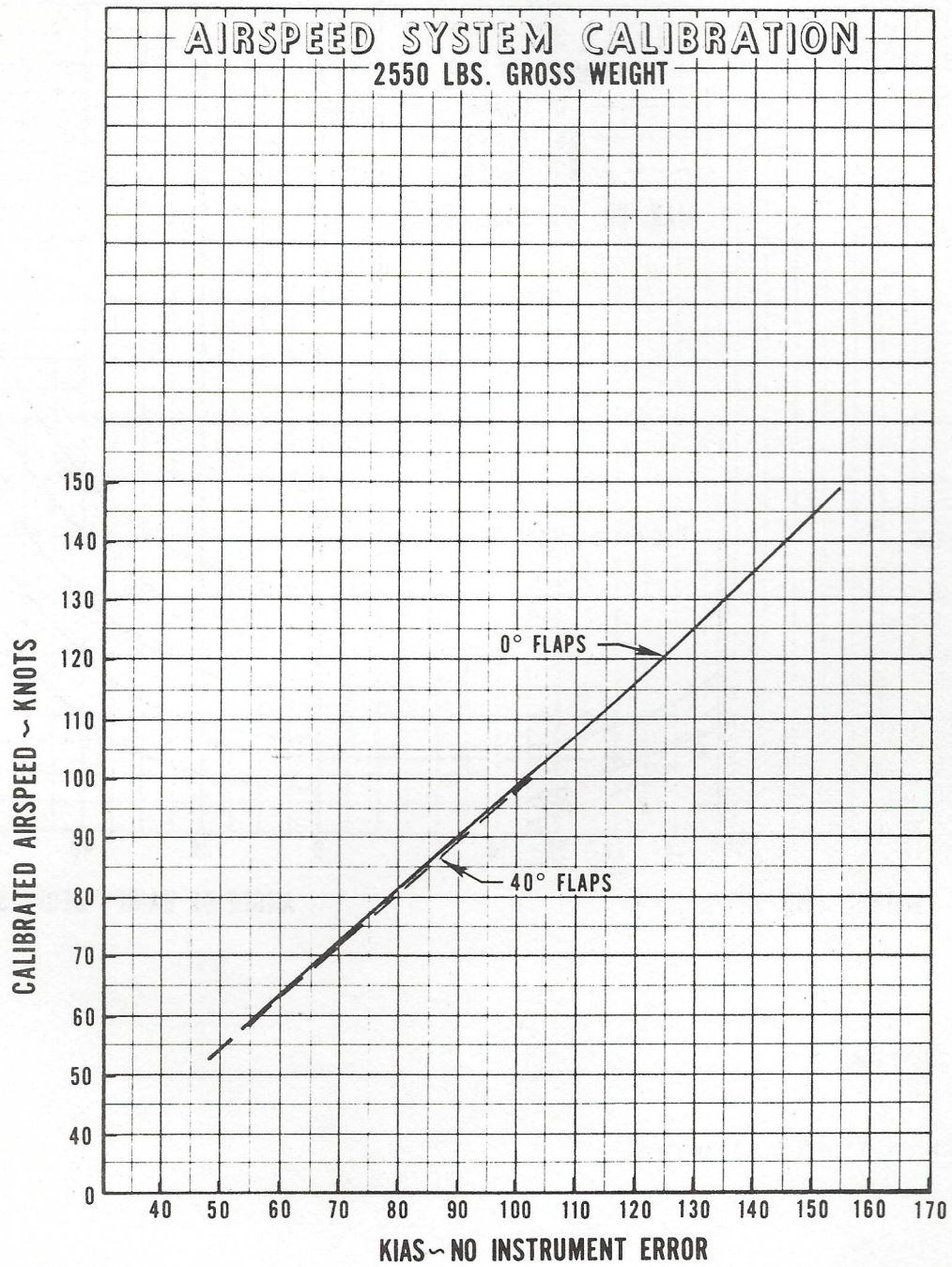


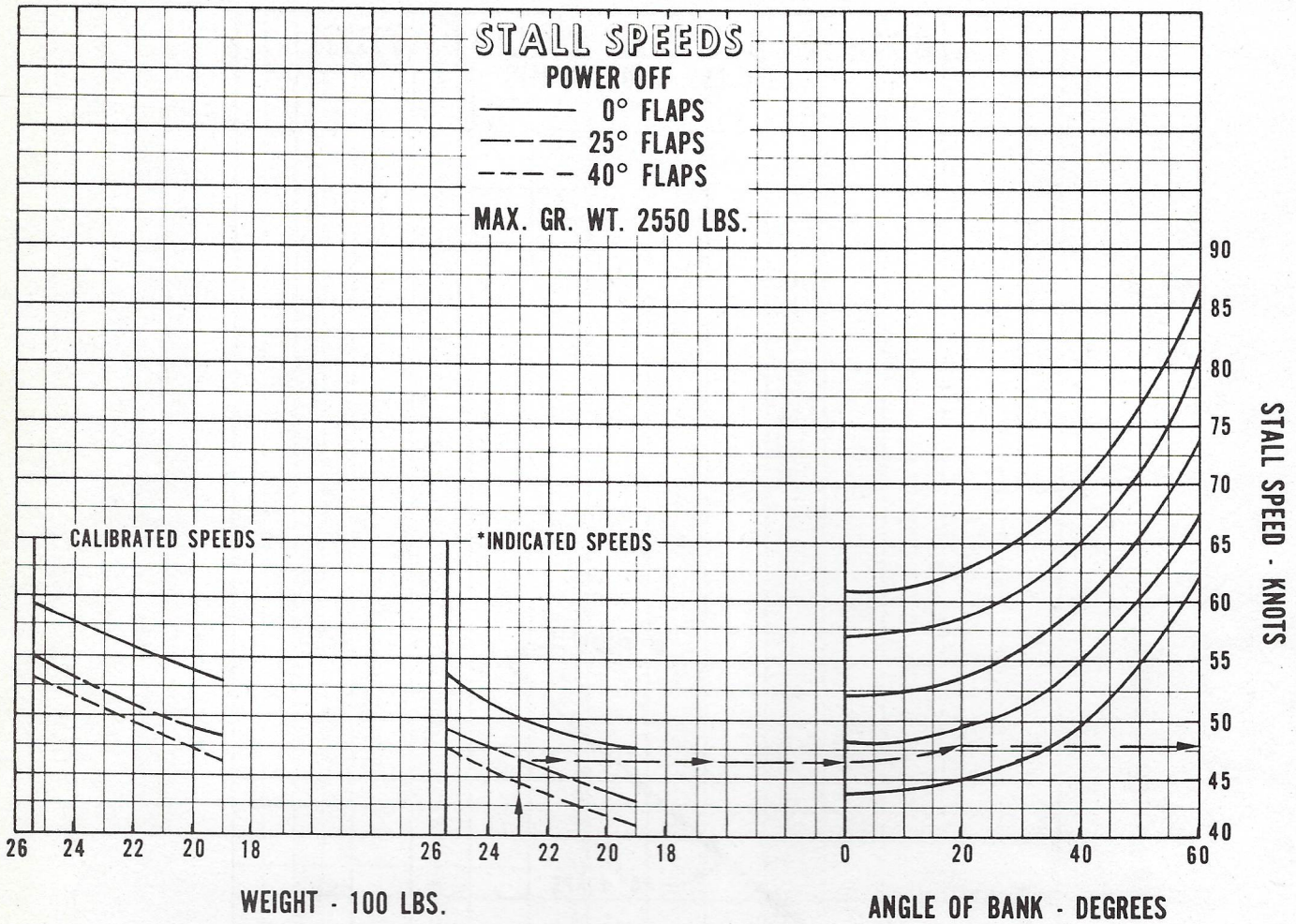
PA-28-181



AIRSPEED SYSTEM CALIBRATION

Figure 5-1

PA-28-181



Example:

Gross weight: 2300 lbs.

Angle of bank: 20°

Flap position: 25°

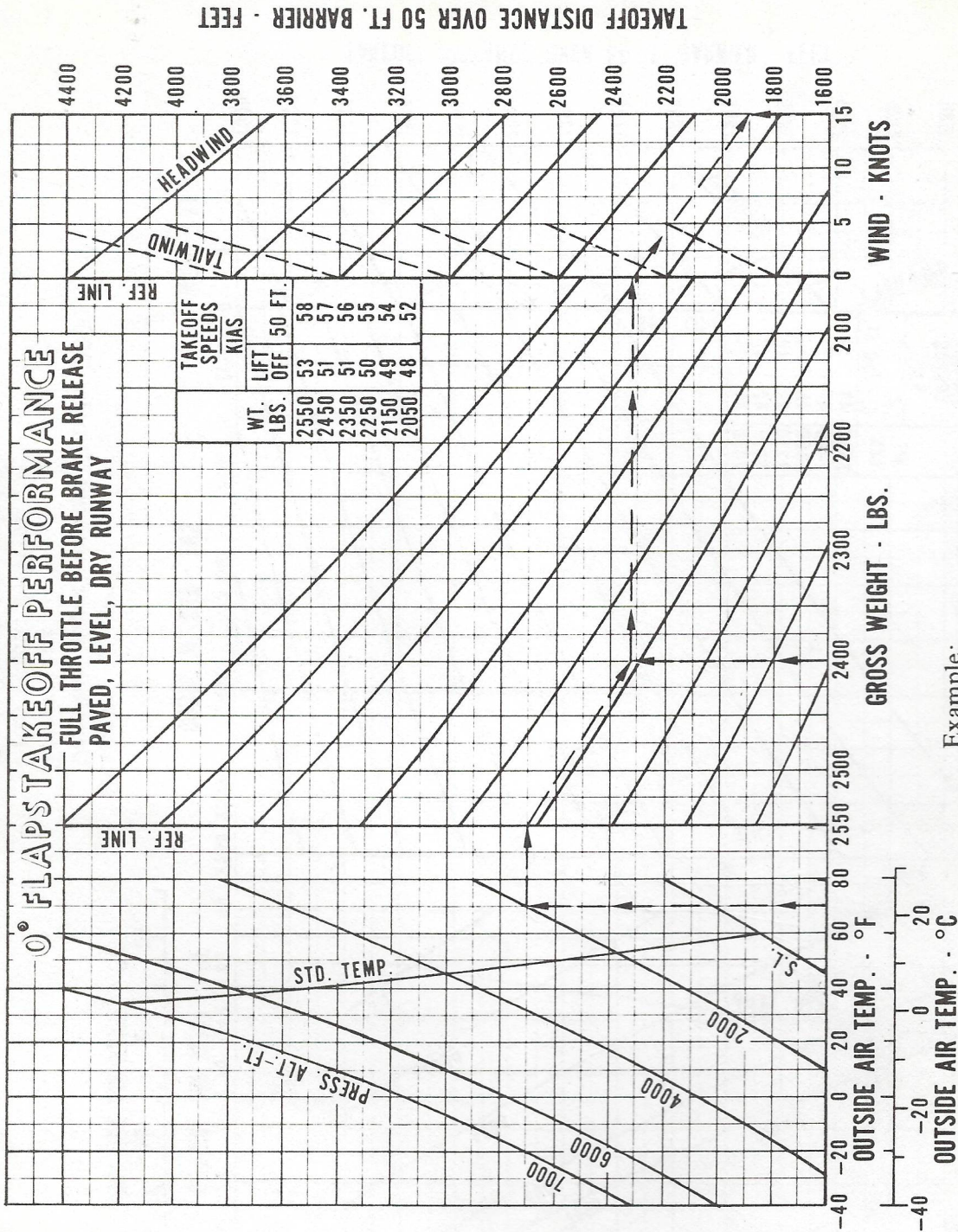
Stall speed: 46 knots (*indicated airspeed)

*INDICATED AIRSPEED, NO INDICATOR ERROR

STALL SPEEDS

Figure 5-3

PA-28-181

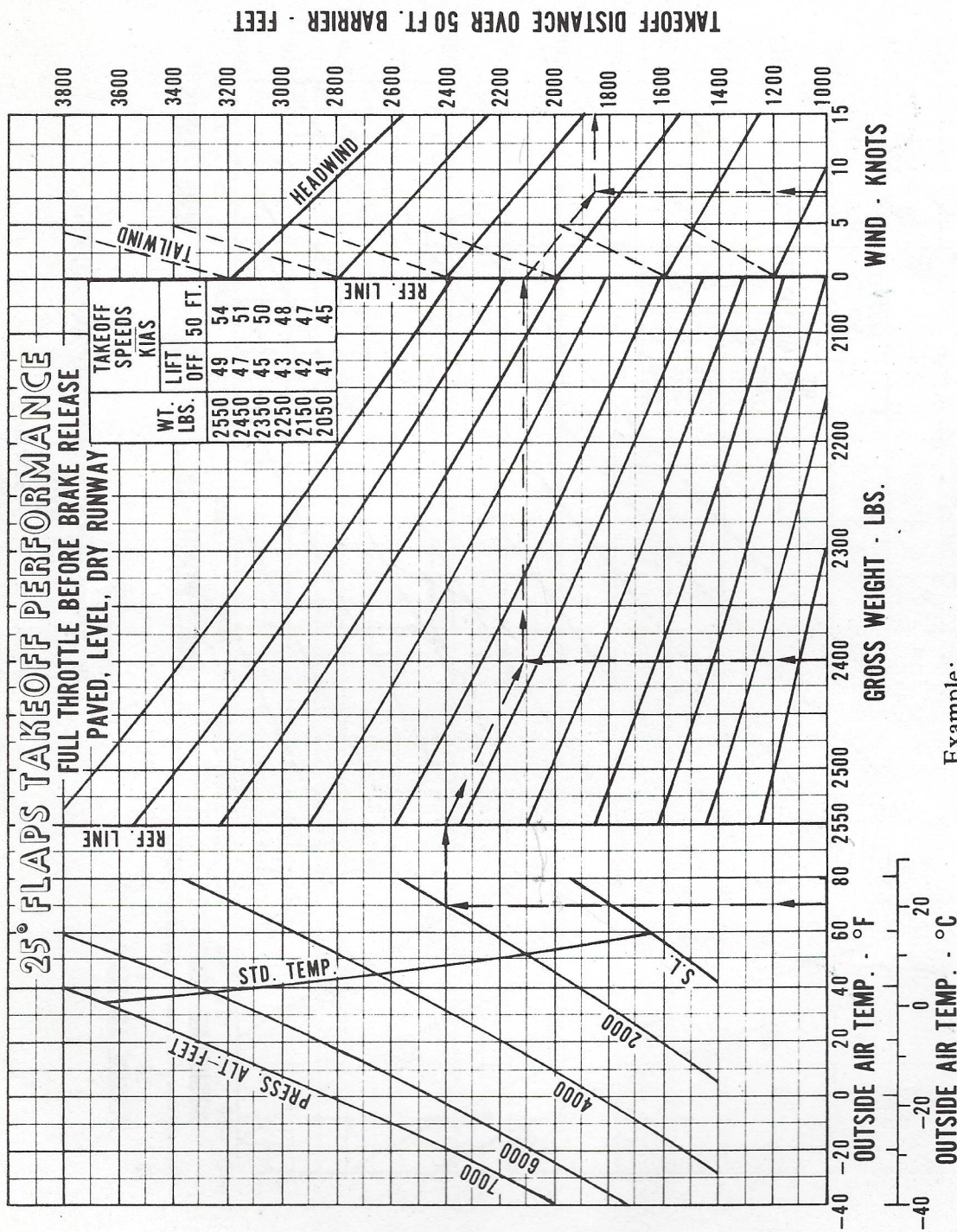


Example:
 Departure airport pressure altitude: 2000 ft.
 Temperature: 70°F
 Wind: 15 KT. (headwind)
 Gross weight: 2400 lbs.
 Takeoff distance: 1900 ft.

FLAPS UP TAKEOFF PERFORMANCE

Figure 5-5

PA-28-181

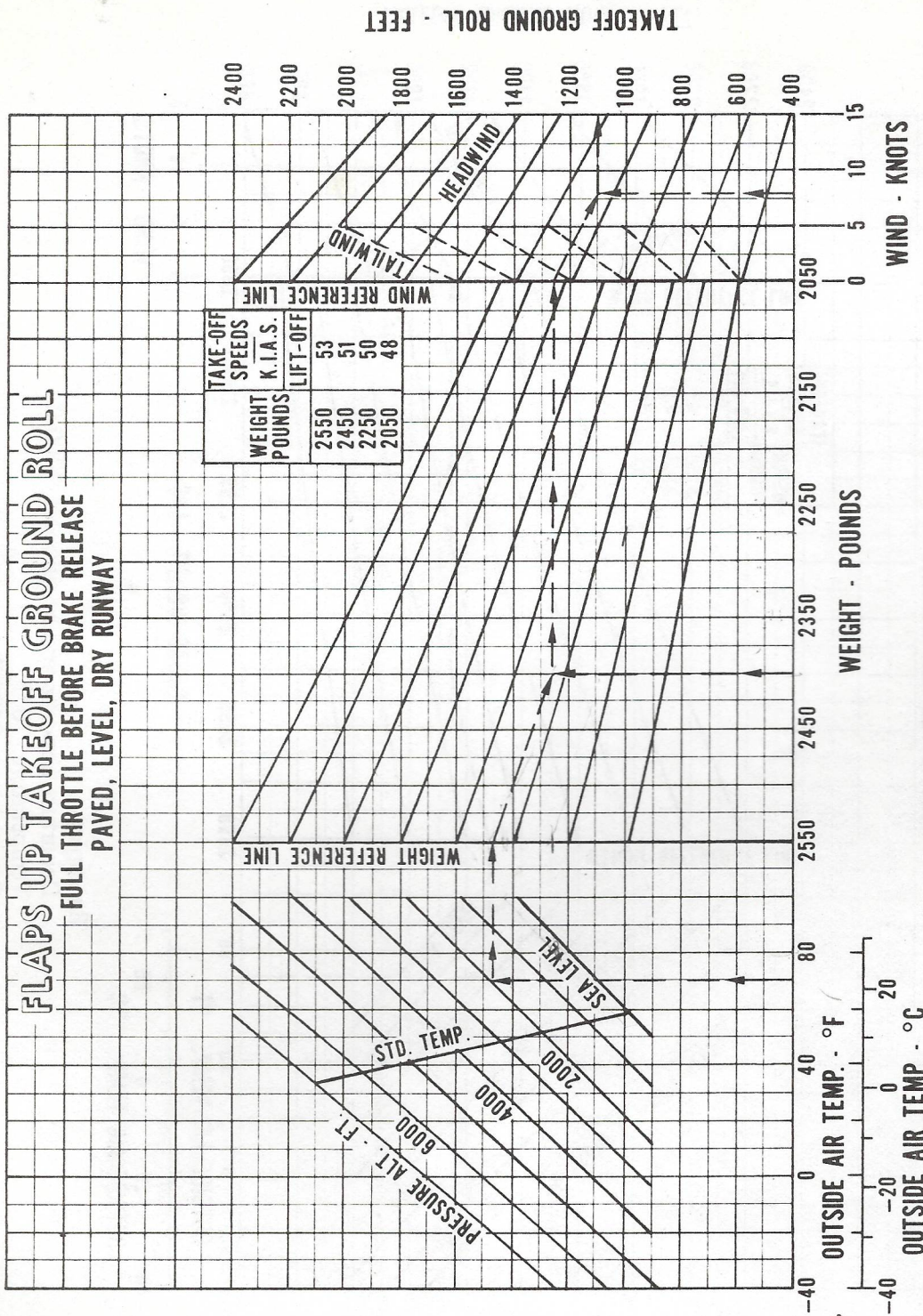


Example:
Departure airport pressure altitude: 2000 ft.
Temperature: 70°F
Gross weight: 2400 lbs.
Wind: 8 knots (headwind)
Takeoff distance: 1860 ft.

25° FLAPS TAKEOFF PERFORMANCE

Figure 5-7

PA-28-181

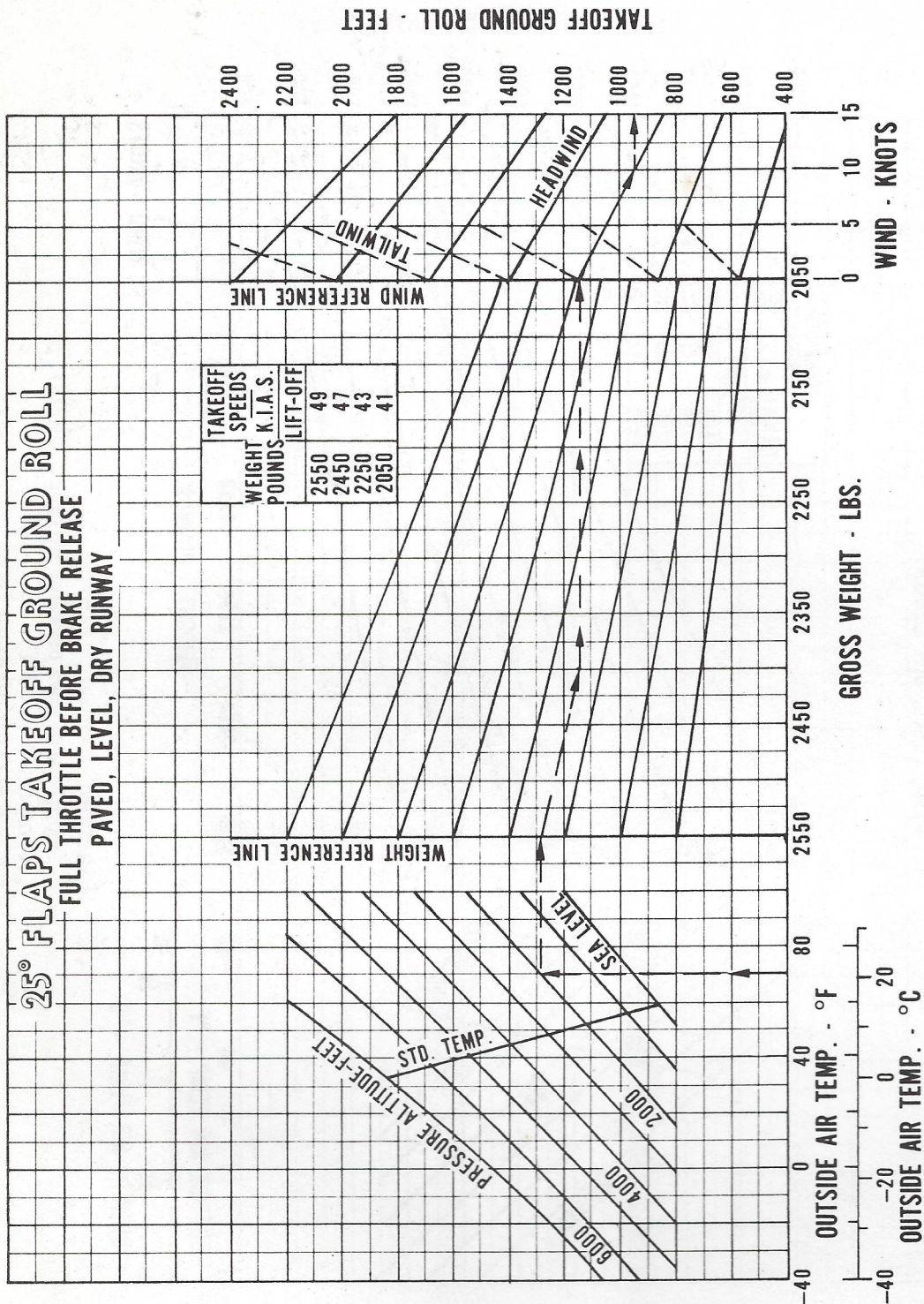


FLAPS UP TAKEOFF GROUND ROLL

Figure 5-9

Example:
 Departure airport pressure altitude: 2000 ft.
 Temperature: 70°F
 Gross weight: 2400 lbs.
 Wind: 8 knots (headwind)
 Takeoff ground roll: 1100 ft.

PA-28-181

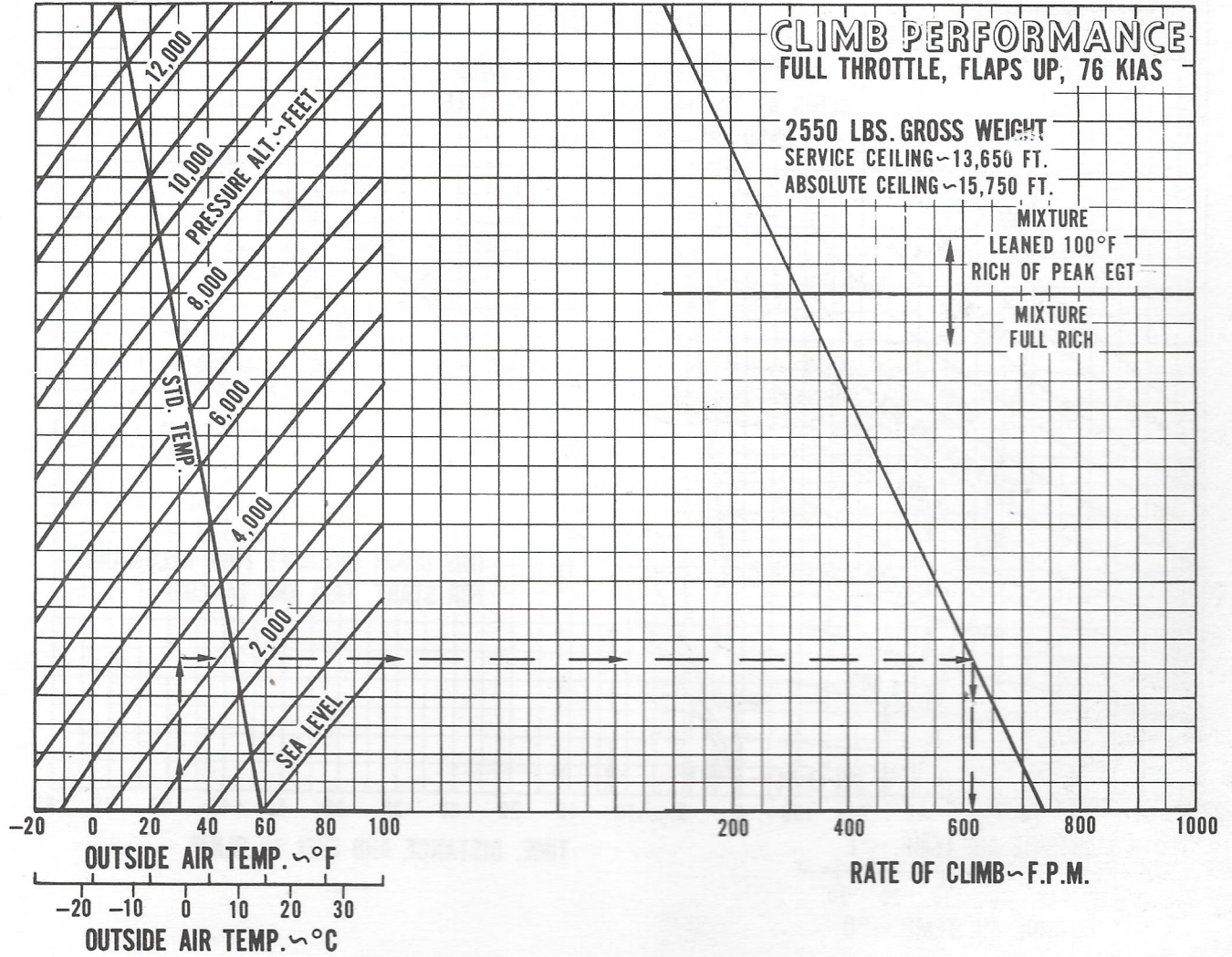


Example:
Departure airport pressure altitude: 2000 ft.
Temperature: 70°F
Gross weight: 2400 lbs.
Wind: 10 knots (headwind)
Takeoff ground roll: 950 ft.

25° FLAPS TAKEOFF GROUND ROLL

Figure 5-11

PA-28-181



Example:

Climb pressure altitude: 3600 ft.

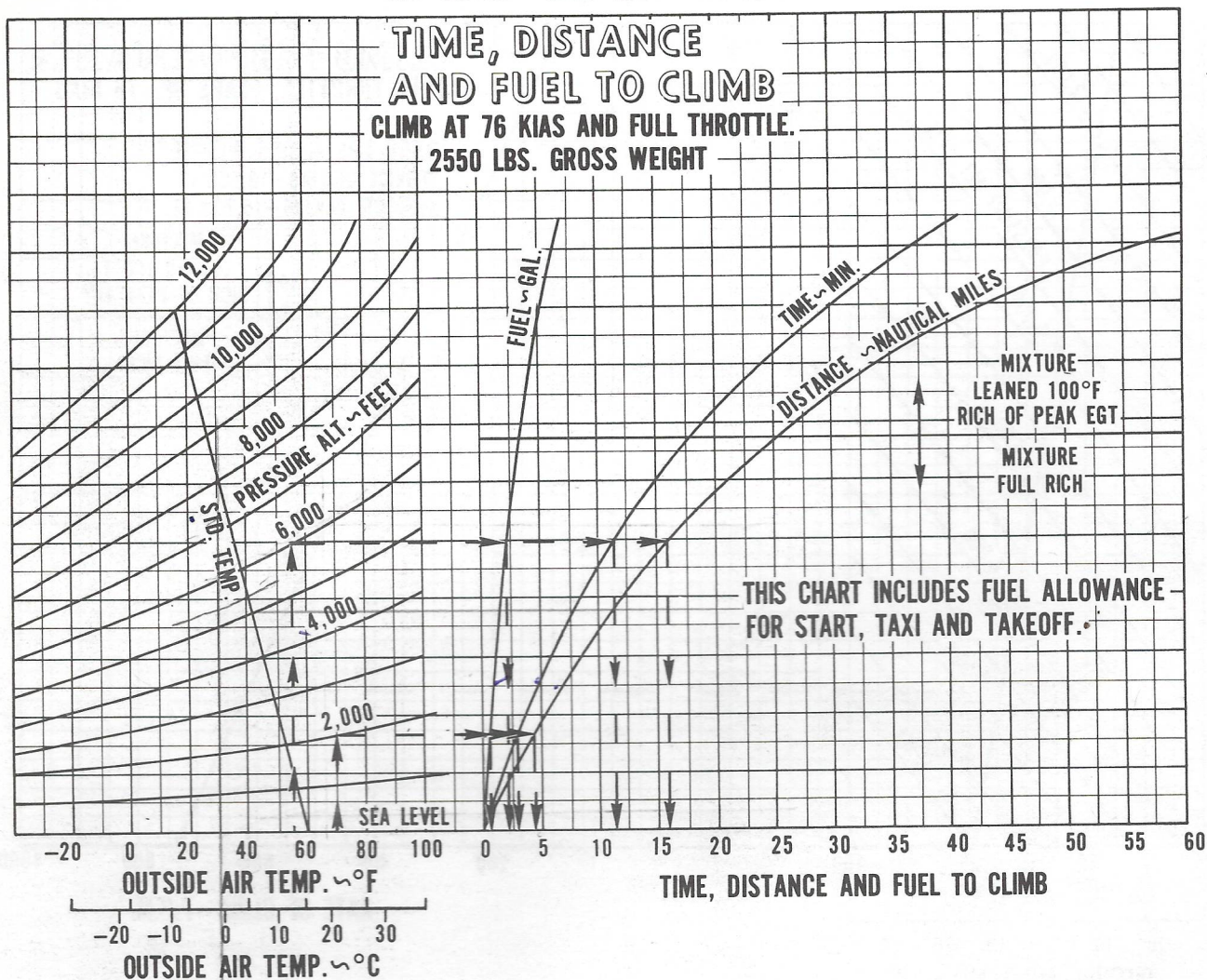
OAT: 30°F

Rate of climb: 620 F.P.M.

CLIMB PERFORMANCE

Figure 5-13

PA-28-181



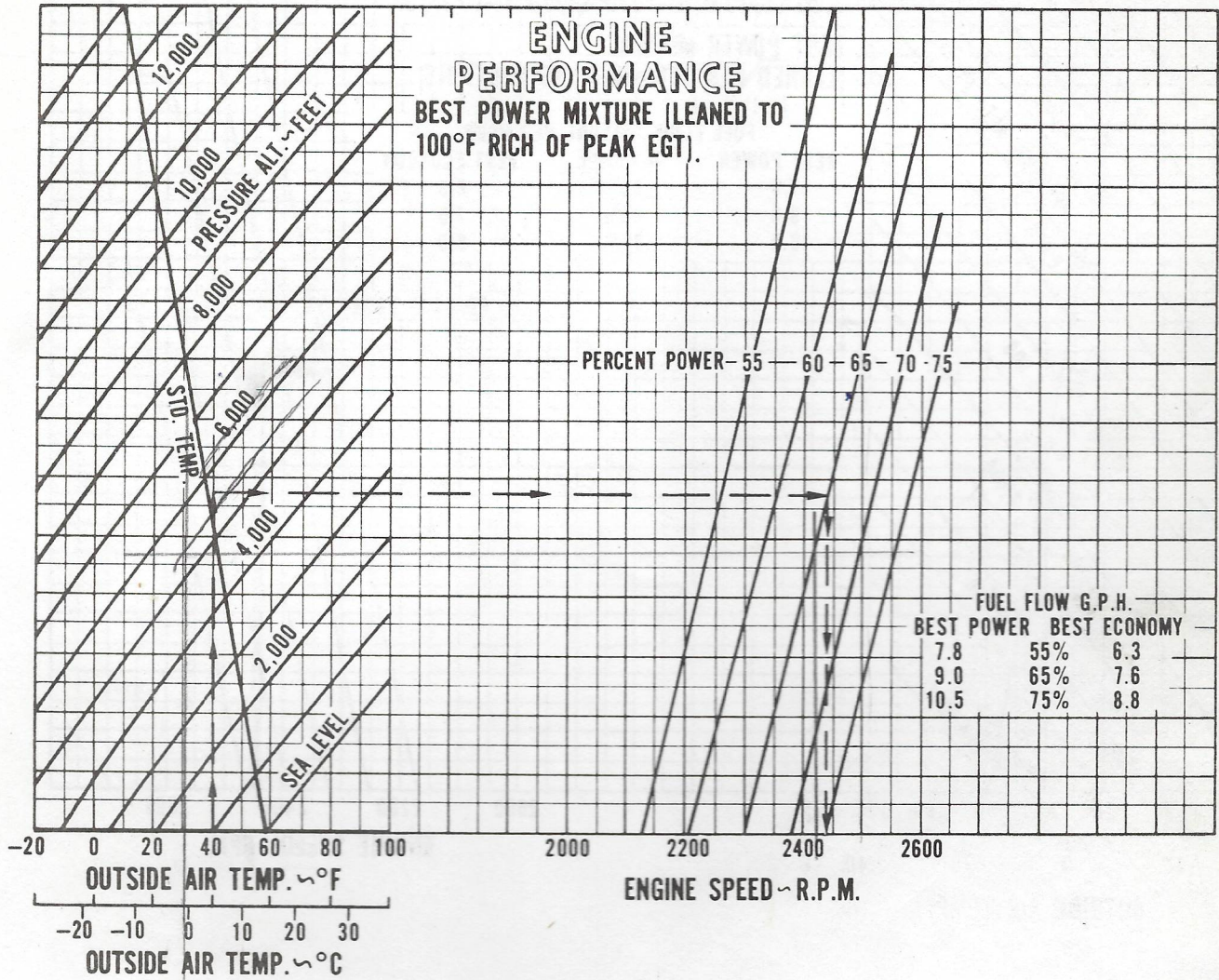
Example:

- Departure airport pressure altitude: 2000 ft.
- Departure airport temperature: 70°F
- Cruise pressure altitude: 6000 ft.
- Cruise OAT: 55°F
- Time to climb: 11.5 min. minus 3 min. = 8.5 min.
- Distance to climb: 16 miles minus 4.5 miles = 11.5 nautical miles
- Fuel to climb: 2 gal. minus 1 gal. = 1 gal.

TIME, DISTANCE AND FUEL TO CLIMB

Figure 5-15

PA-28-181



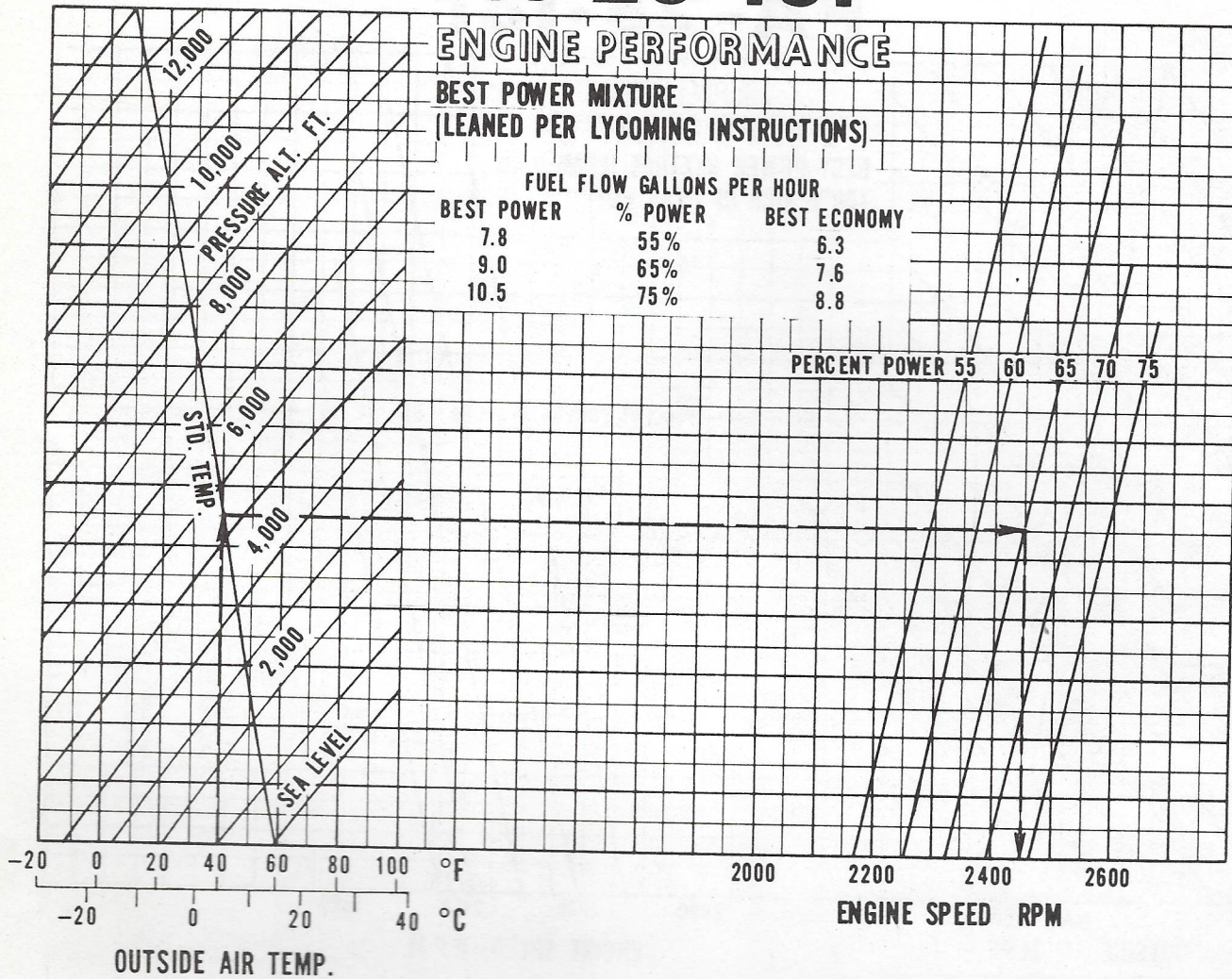
Example:

- Cruise pressure altitude: 5500 ft.
- Cruise OAT: 40°F
- Percent power: 65%
- Engine RPM: 2440 RPM

ENGINE PERFORMANCE (SERIAL NOS. 28-7790001 THROUGH 7790607)

Figure 5-17

PA-28-181



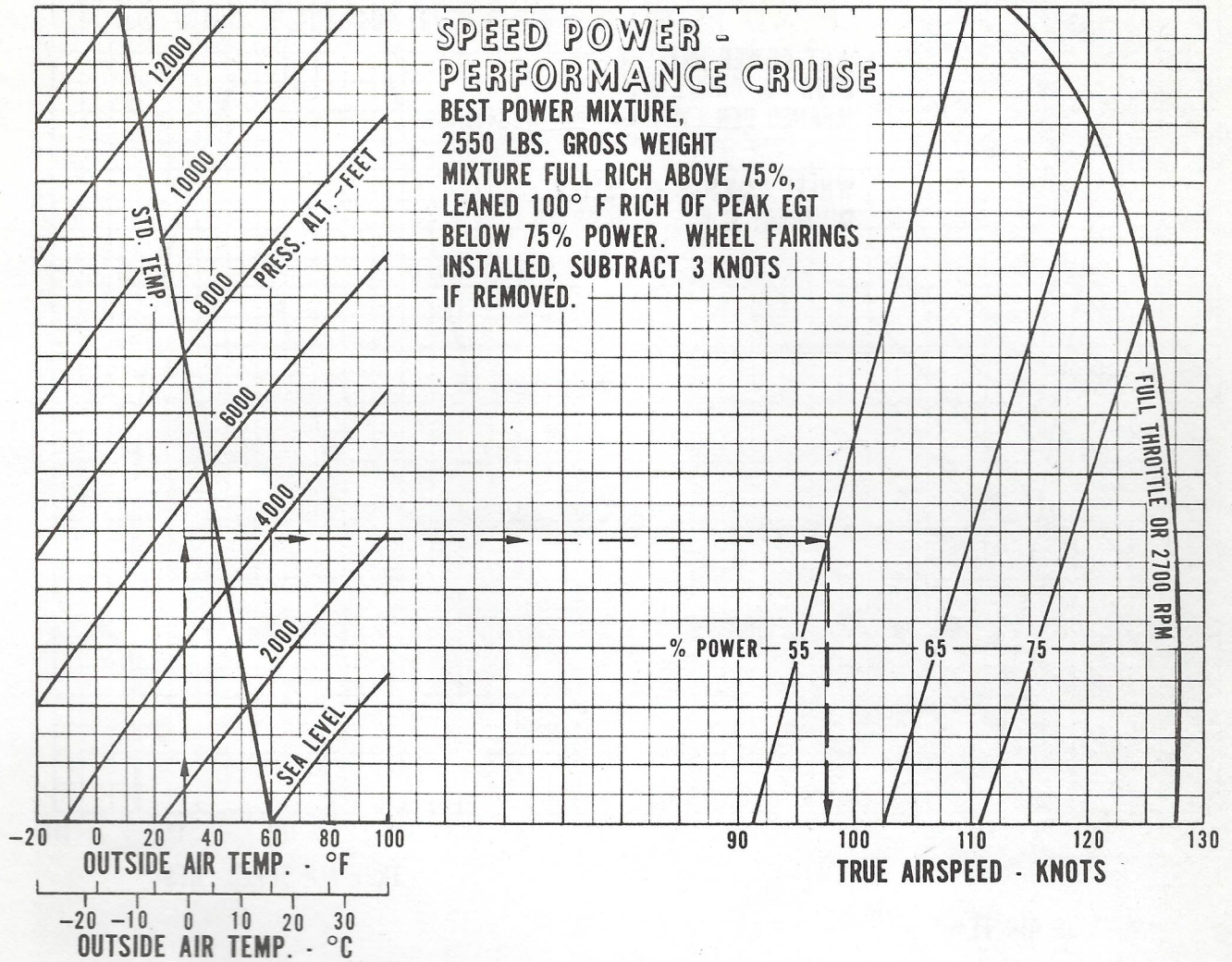
Example:

- Cruise pressure altitude: 5500 ft.
- Cruise OAT: 40°F
- Percent power: 65%
- Engine RPM: 2450 RPM

ENGINE PERFORMANCE (SERIAL NOS. 28-7890001 AND UP)

Figure 5-18

PA-28-181

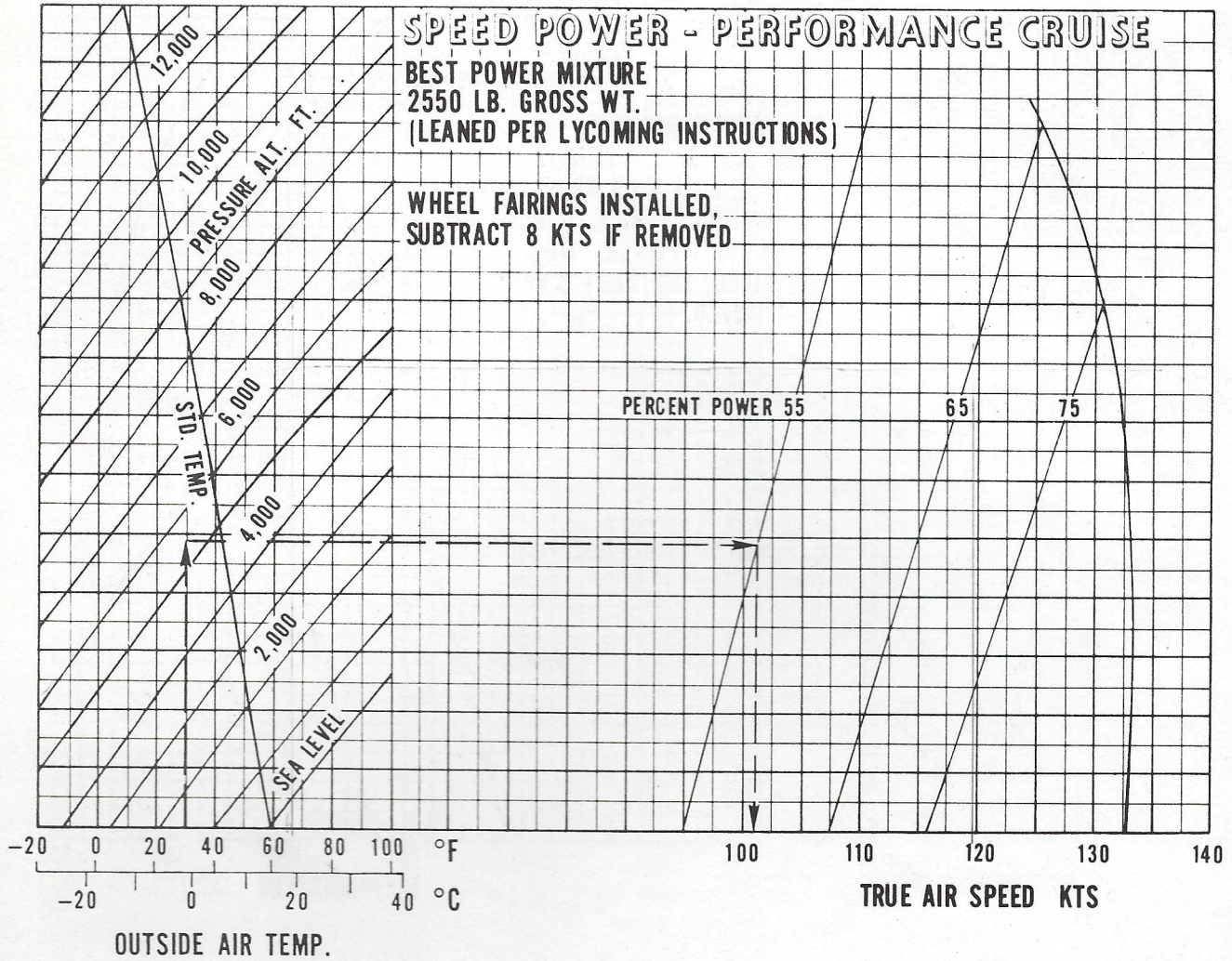


Example:
 Cruise pressure altitude: 5500 ft.
 Cruise OAT: 30°F
 Power: 55%
 True airspeed: 97.5 knots

SPEED POWER - PERFORMANCE CRUISE (SERIAL NOS. 28-7790001 THROUGH 7790607)

Figure 5-19

PA-28-181



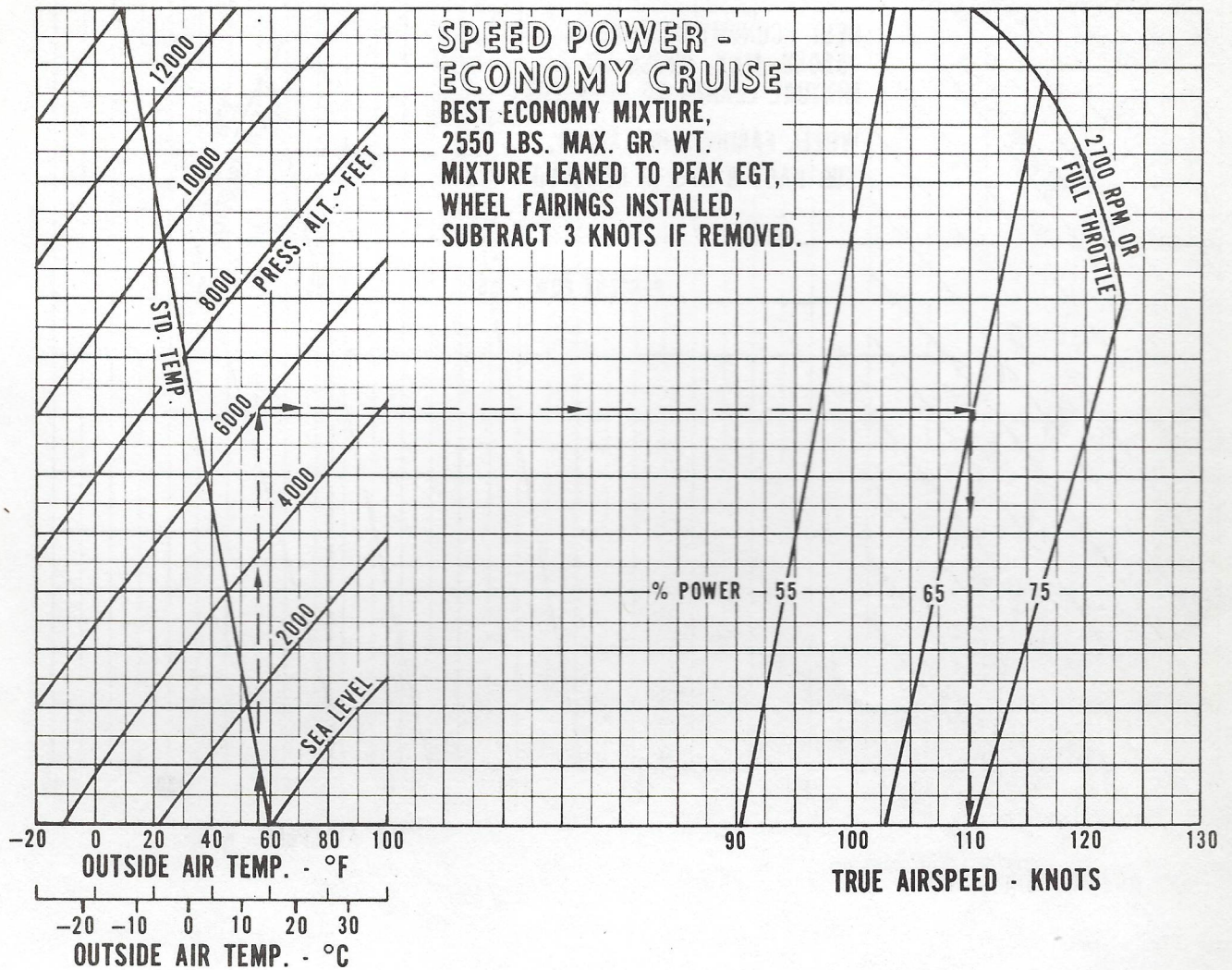
Example:

- Cruise pressure altitude: 5500 ft.
- Cruise OAT: 30°F
- Power setting: 55%
- True airspeed: 101 knots

SPEED POWER - PERFORMANCE CRUISE (SERIAL NOS. 28-7890001 AND UP)

Figure 5-20

PA-28-181



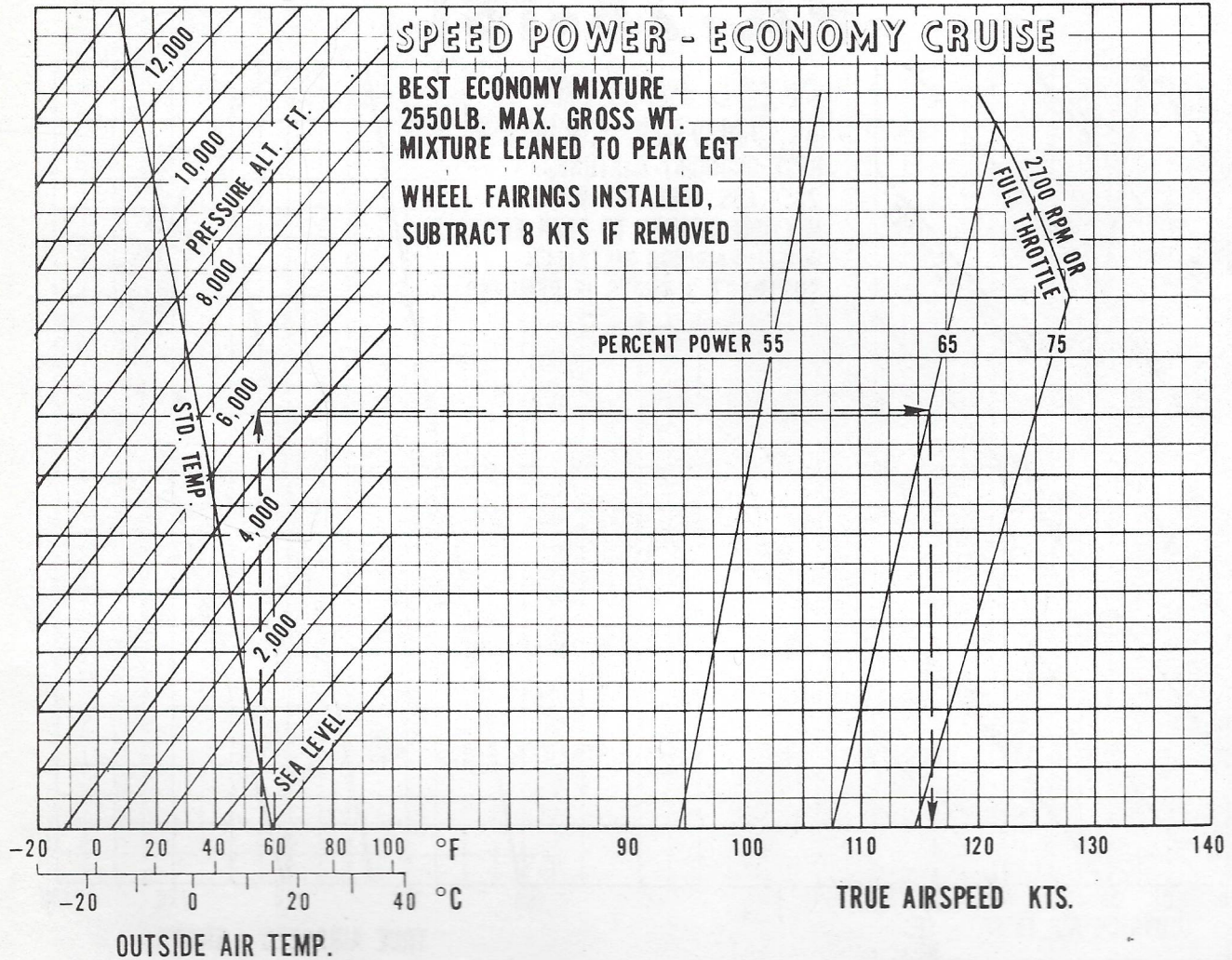
Example:

- Cruise pressure altitude: 6000 ft.
- Cruise OAT: 55°F
- Power: 65%
- True airspeed: 110 knots

SPEED POWER - ECONOMY CRUISE (SERIAL NOS. 28-7790001 THROUGH 7790607)

Figure 5-21

PA-28-181



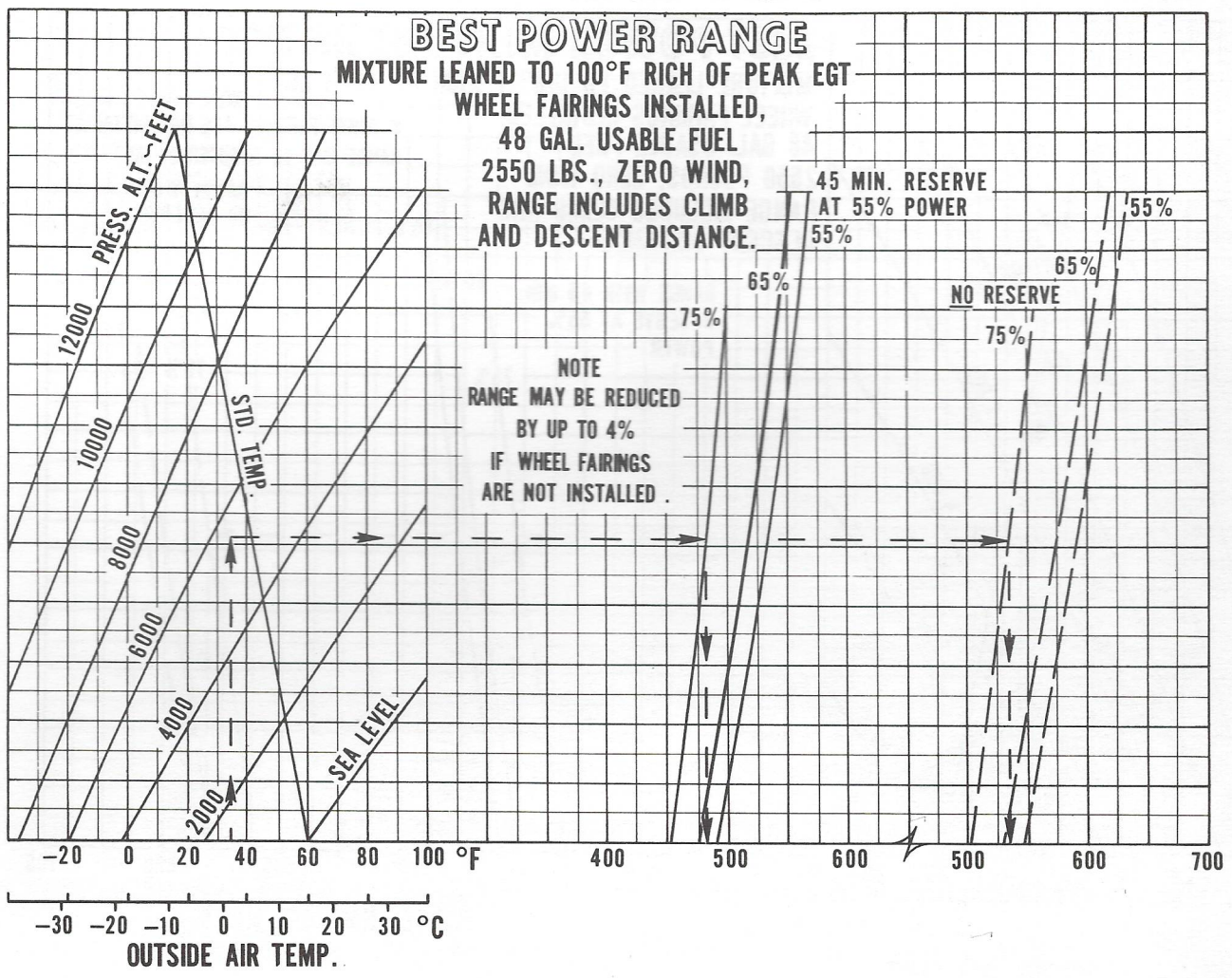
Example:

- Cruise pressure altitude: 6000 ft.
- Cruise OAT: 55° F
- Power setting: 65%
- True airspeed: 116 knots

SPEED POWER - ECONOMY CRUISE (SERIAL NOS. 28-7890001 AND UP)

Figure 5-22

PA-28-181

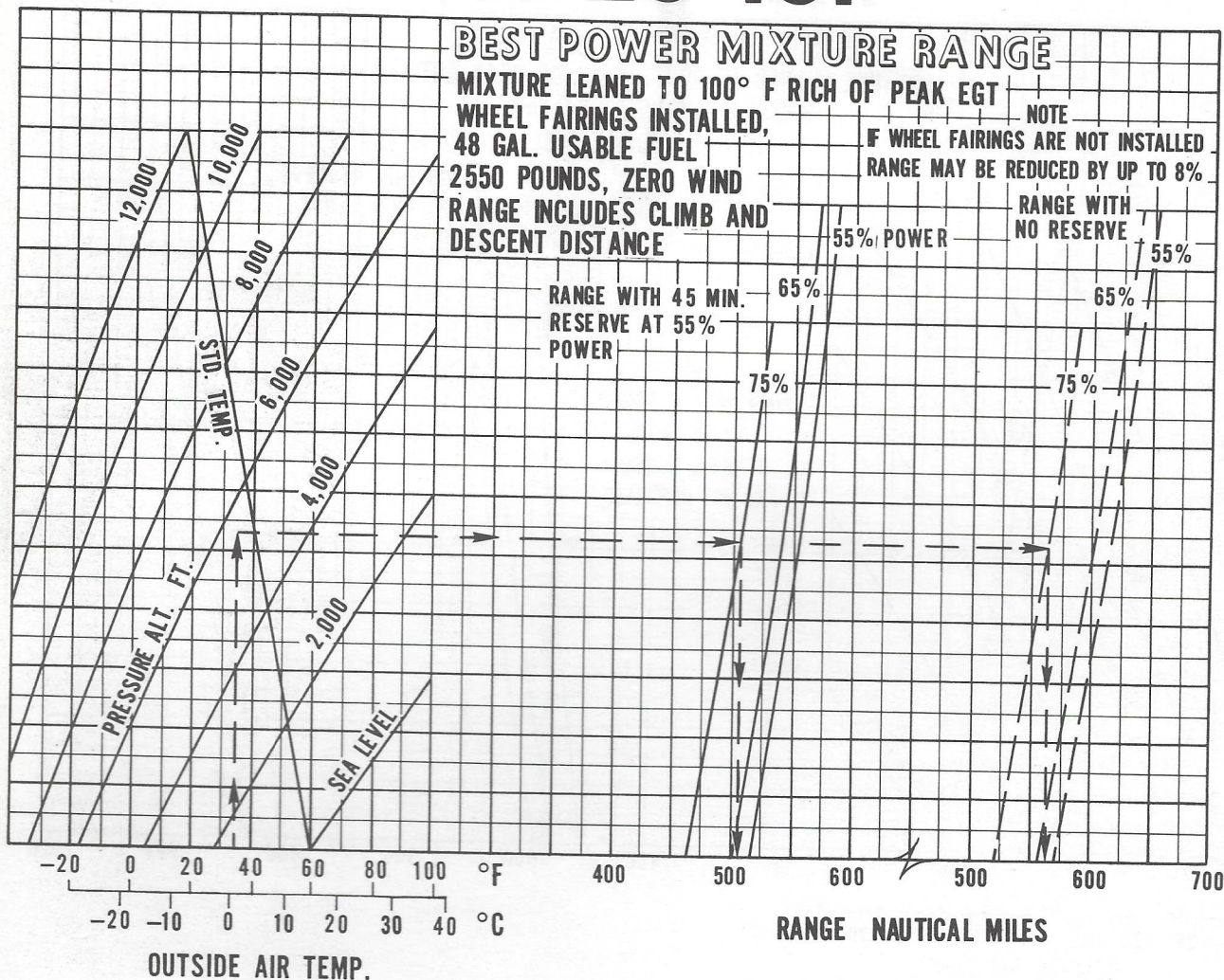


Example:
 Cruise pressure altitude: 5500 ft.
 Cruise OAT: 35°F
 Power setting: 75%
 Range (with reserve): 480 nautical miles
 Range (no reserve): 535 nautical miles

BEST POWER MIXTURE RANGE (SERIAL NOS. 28-7790001 THROUGH 7790607)

Figure 5-23

PA-28-181



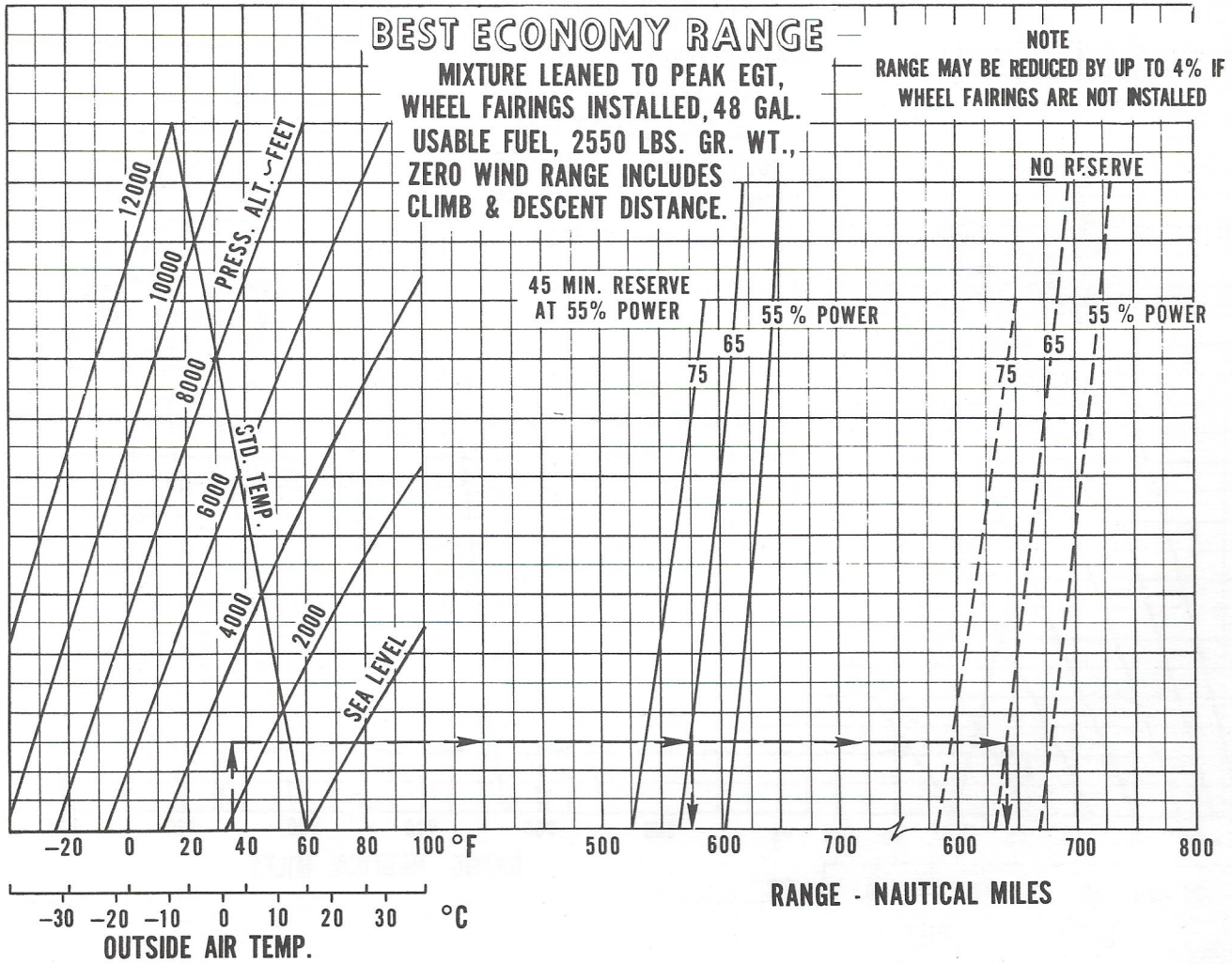
Example:

- Cruise pressure altitude: 5500 ft.
- Cruise OAT: 35°F
- Power setting: 75%
- Range (with reserve): 505 nautical miles
- Range (no reserve): 560 nautical miles

BEST POWER MIXTURE RANGE (SERIAL NOS. 28-7890001 AND UP)

Figure 5-24

PA-28-181



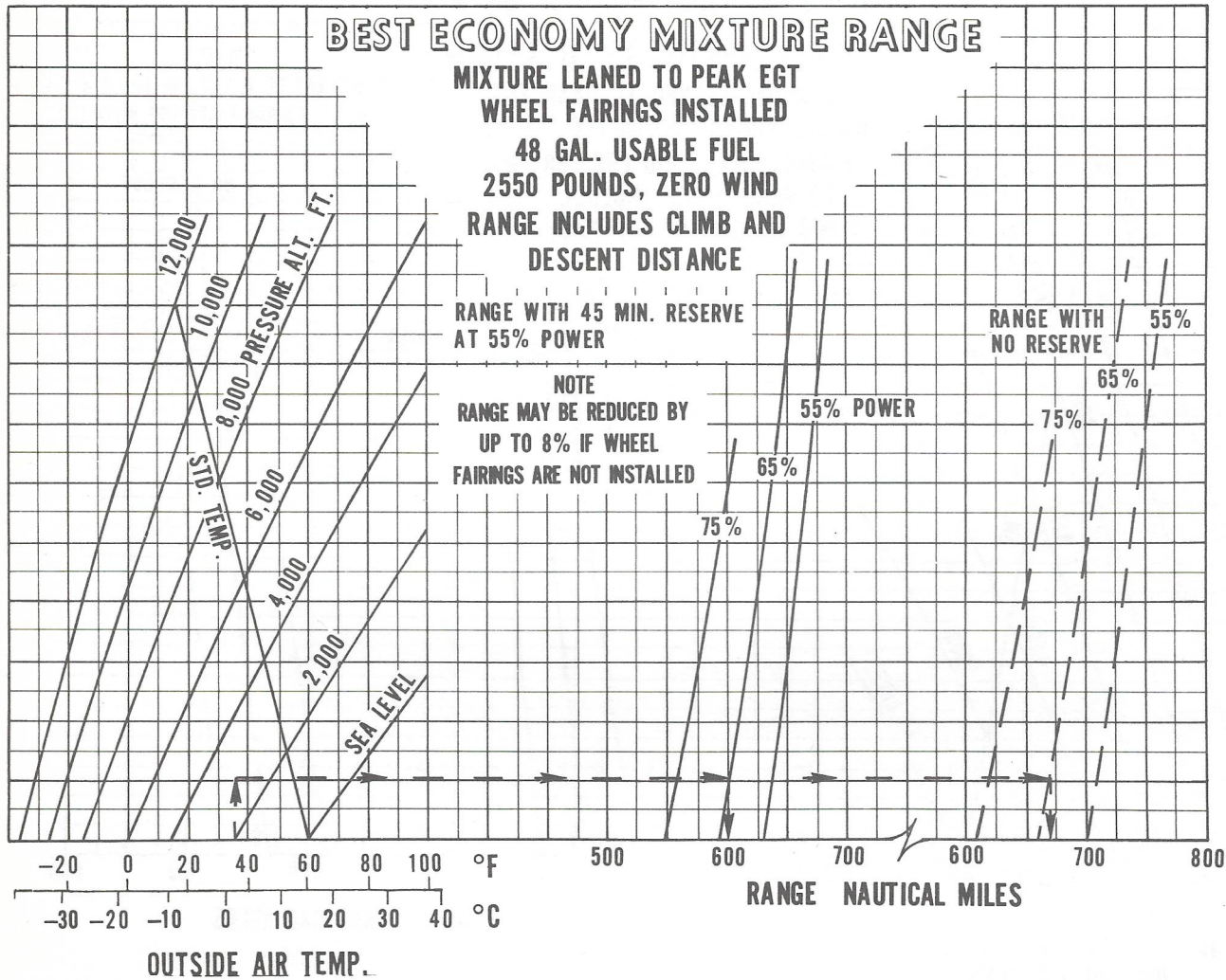
Example:

- Cruise pressure altitude: 3000 ft.
- Cruise OAT: 35°F
- Power setting: 65%
- Range (with reserve): 570 nautical miles
- Range (no reserve): 650 nautical miles.

BEST ECONOMY MIXTURE RANGE (SERIAL NOS. 28-7790001 THROUGH 7790607)

Figure 5-25

PA-28-181



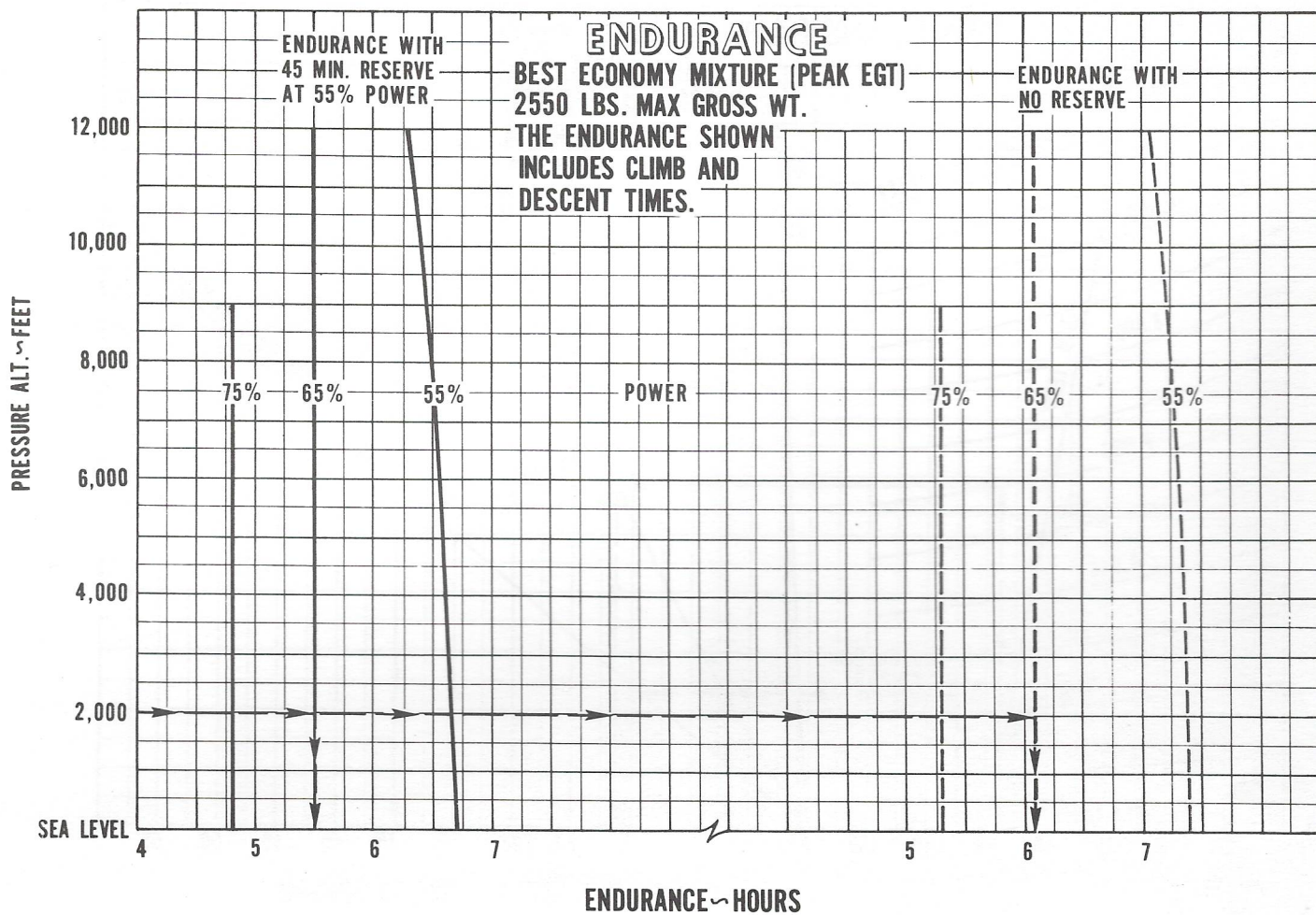
Example:

- Cruise pressure altitude: 3000 ft.
- Cruise OAT: 35° F.
- Power setting: 65%
- Range (with reserve): 600 nautical miles
- Range (no reserve): 670 nautical miles

BEST ECONOMY MIXTURE RANGE (SERIAL NOS. 28-7890001 AND UP)

Figure 5-26

PA-28-181



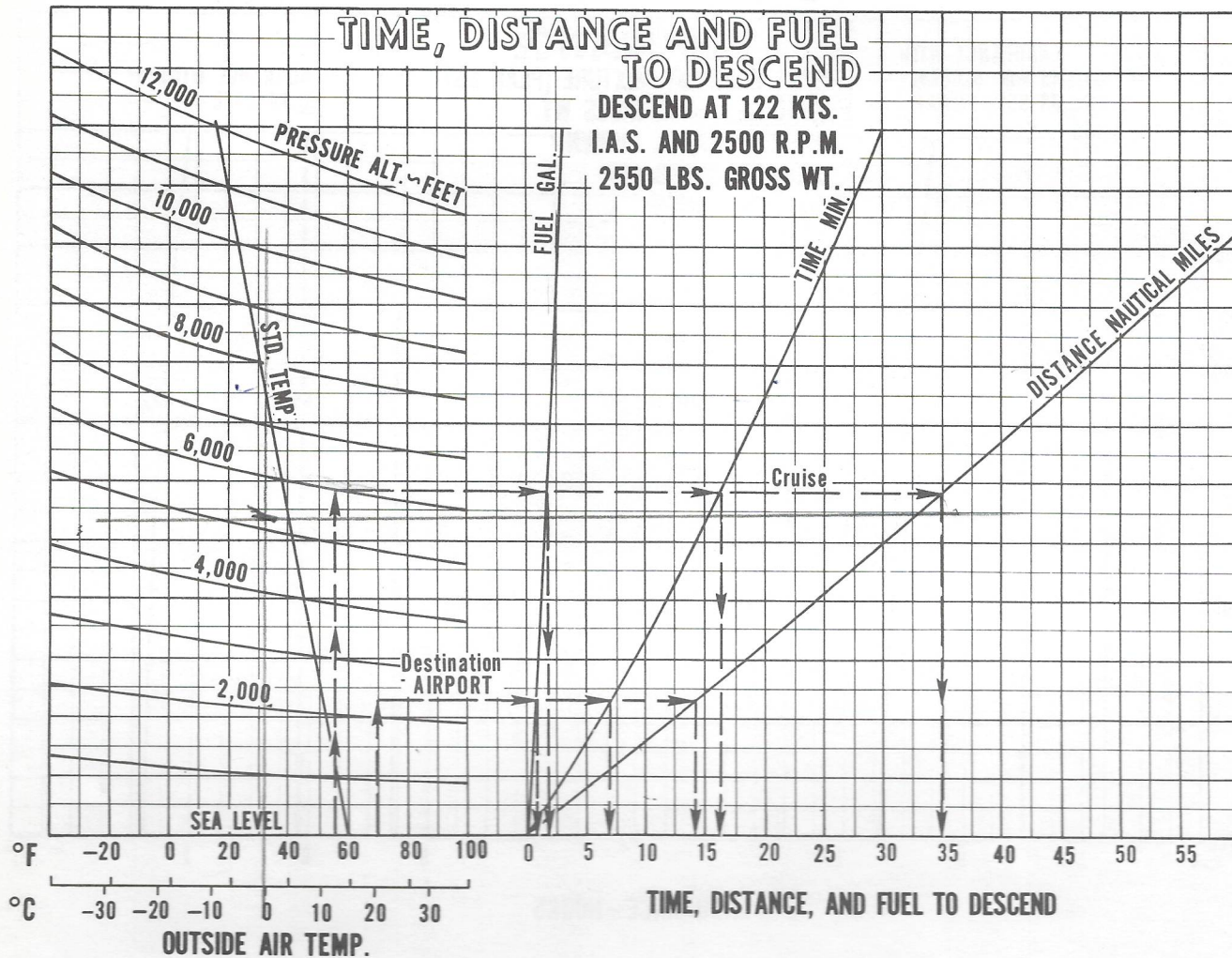
Example:

Cruise pressure altitude: 2000 ft.
Power setting: 65%
Endurance (with reserve): 5.5 hrs.
Endurance (no reserve): 6.1 hrs.

ENDURANCE

Figure 5-27

PA-28-181



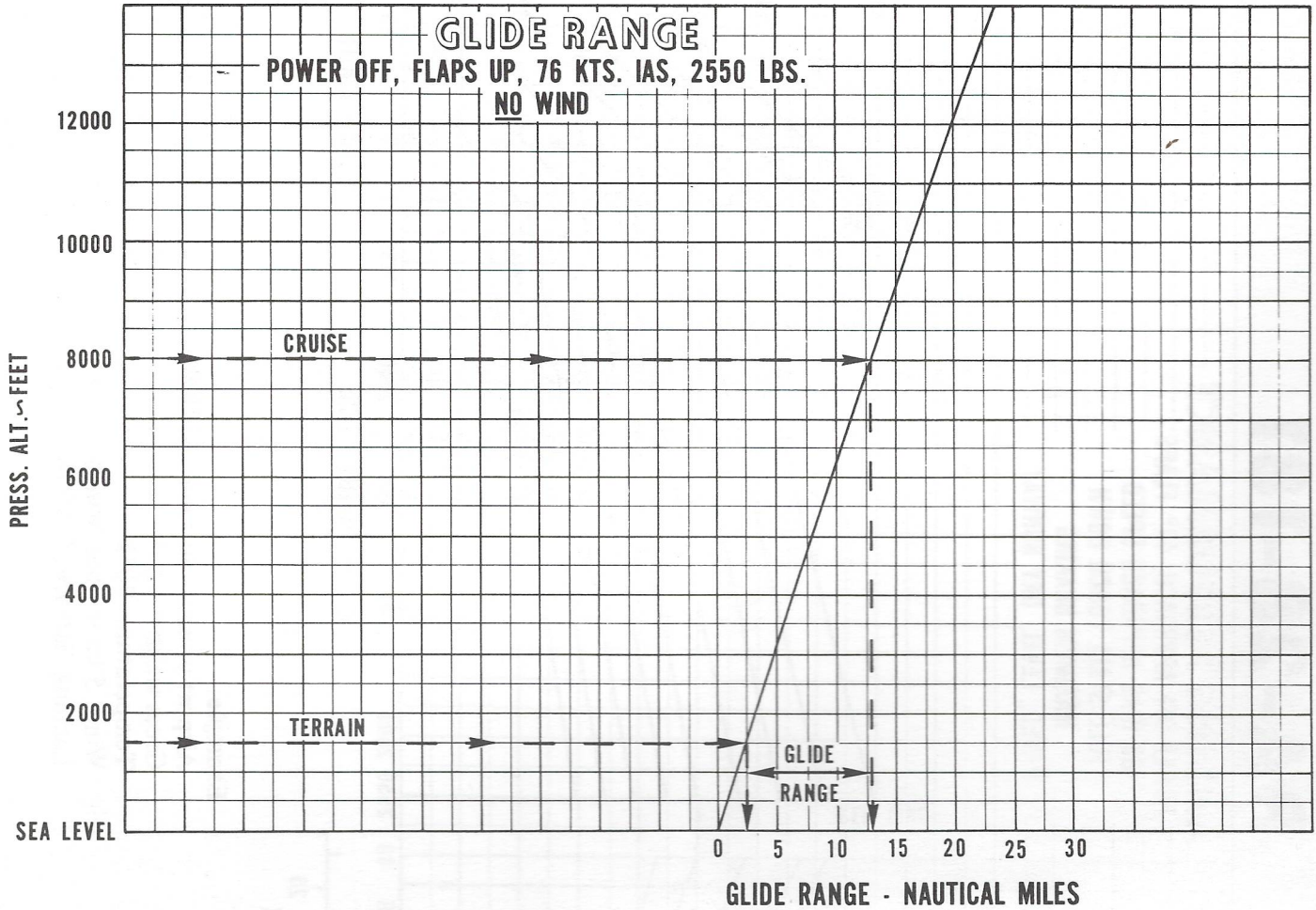
Example:

- Cruise pressure altitude: 6000 ft.
- Cruise OAT: 55° F
- Destination airport pressure altitude: 2300 ft.
- Destination airport temperature: 70° F
- Fuel to descend: (2.0 gal. minus 1 gal.) = 1.0 gal.
- Time to descend: (16 min. minus 7.5 min.) = 8.5 min.
- Distance to descend (35 miles minus 14.5 miles) = 20.5 nautical miles

TIME, DISTANCE AND FUEL TO DESCEND

Figure 5-29

PA-28-181



Example:

Cruise pressure altitude: 8000 ft.

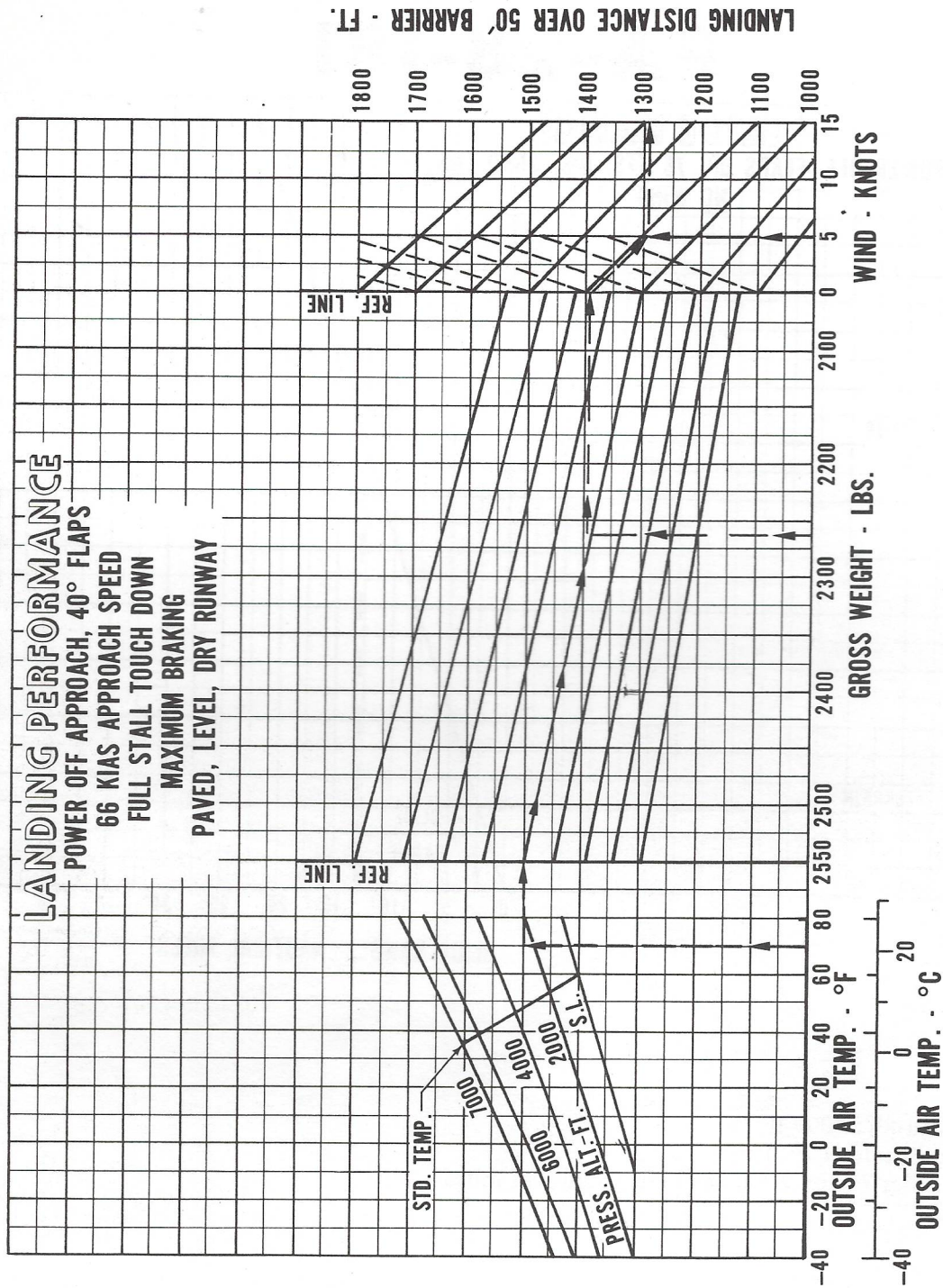
Terrain pressure altitude: 1500 ft.

Glide Range: 13 miles minus 2.5 miles = 10.5 nautical miles

GLIDE RANGE

Figure 5-31

PA-28-181

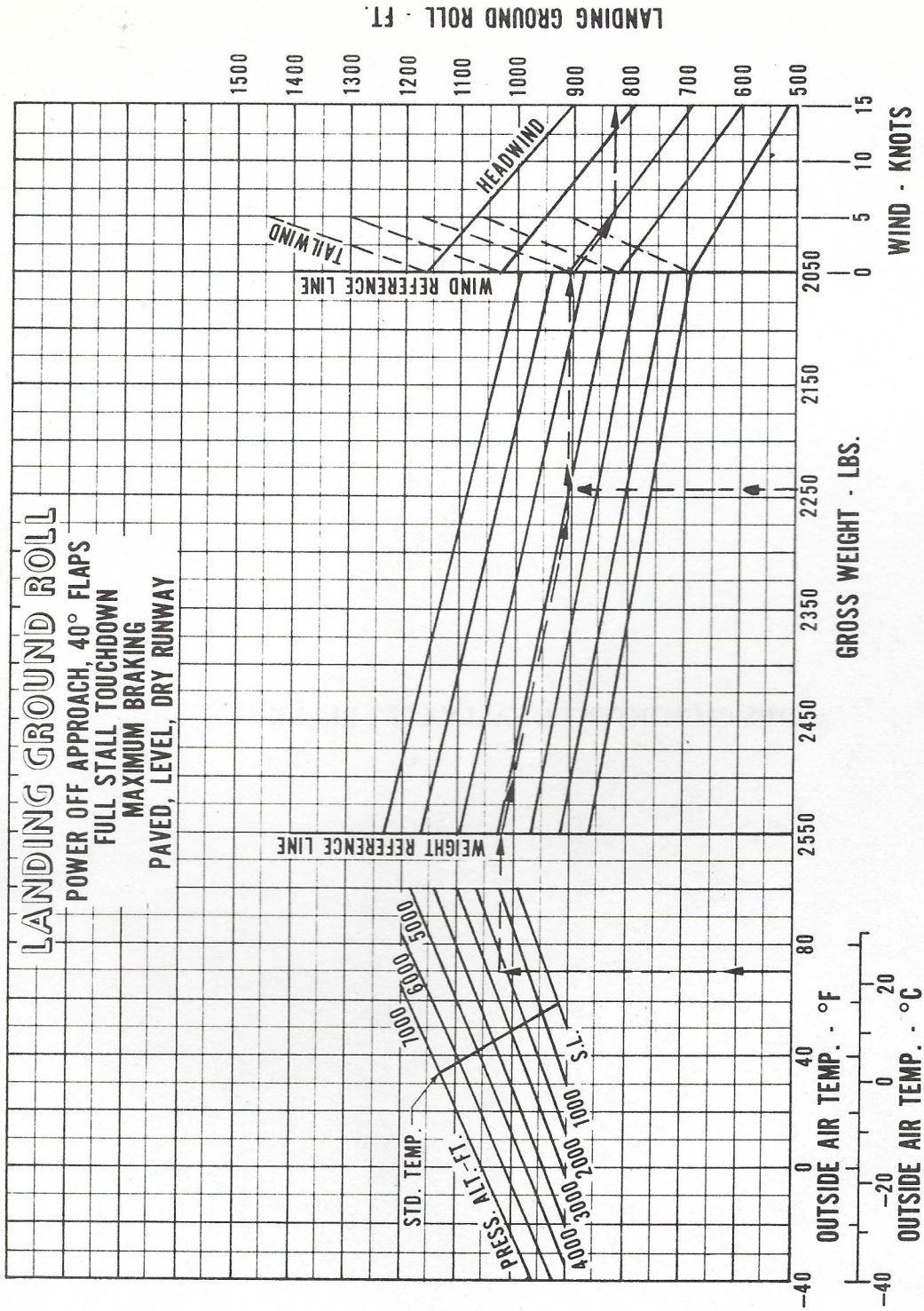


Example:
 Airport pressure altitude: 2300 ft.
 Gross weight: 2264
 Temperature: 70°F
 Wind: 5 knots (headwind)
 Landing distance: 1290 ft.

LANDING PERFORMANCE

Figure 5-33

PA-28-181



Example:
 Airport pressure altitude: 2300 ft.
 Airport temperature: 70°F
 Gross weight: 2264 lbs.
 Wind: 5 knots (headwind)
 Ground roll: 825 ft.

LANDING GROUND ROLL

Figure 5-35