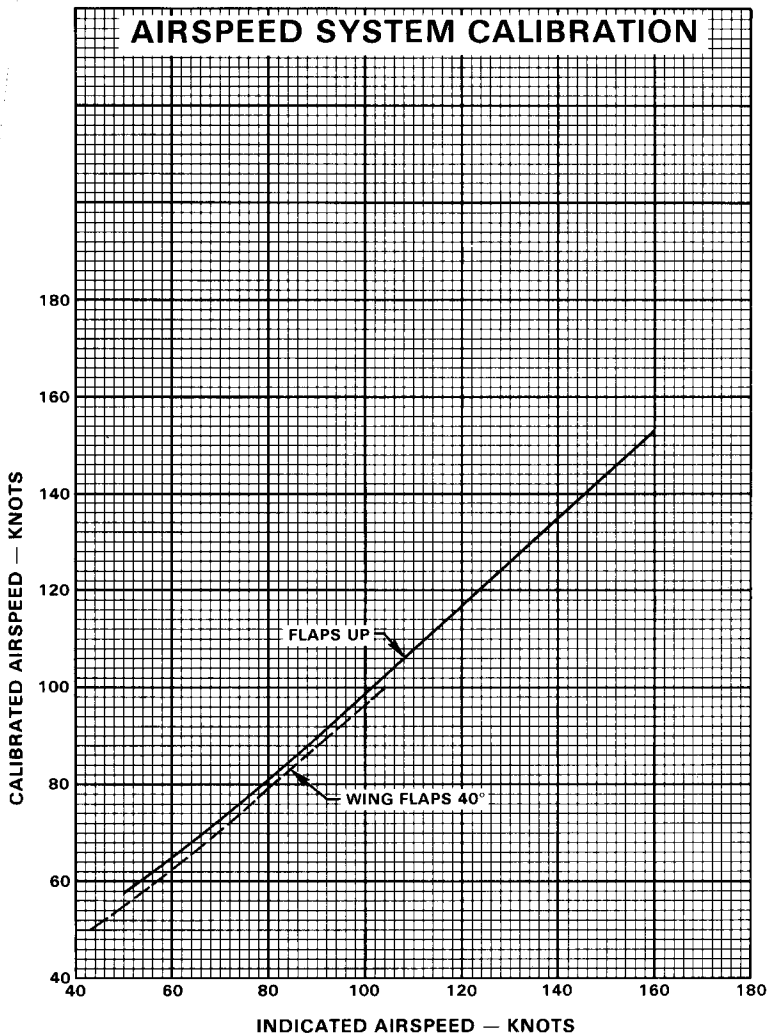


TEMPERATURE CONVERSION

Figure 5-1

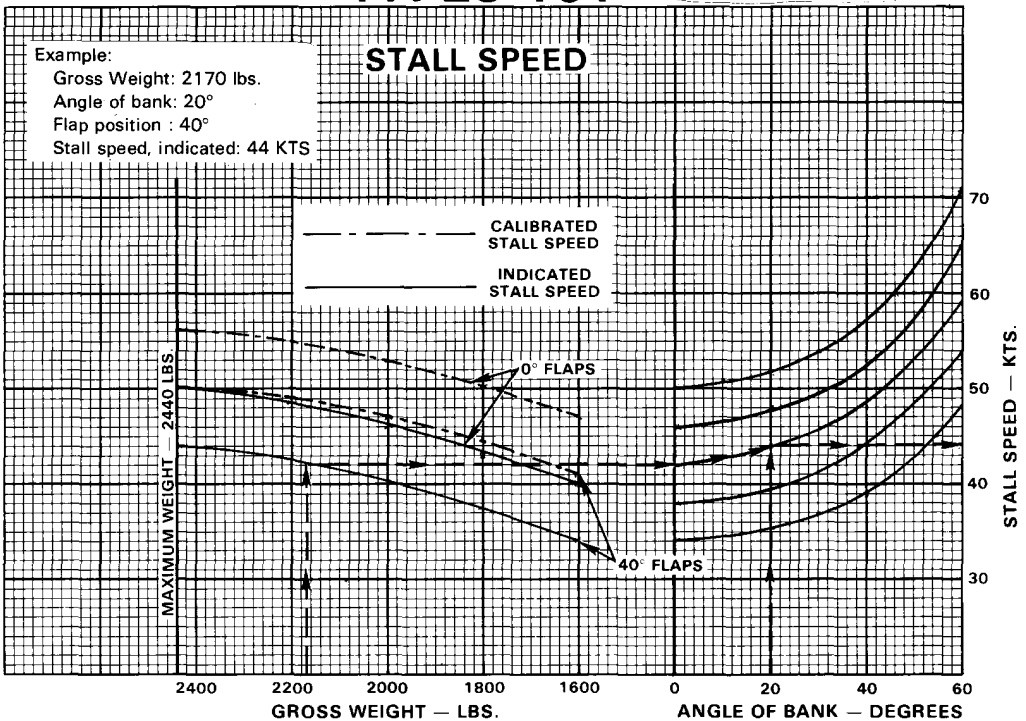
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AIRSPEED SYSTEM CALIBRATION

Figure 5-3

PA-28-161



STALL SPEED

Figure 5-5

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0° FLAPS TAKEOFF GROUND ROLL

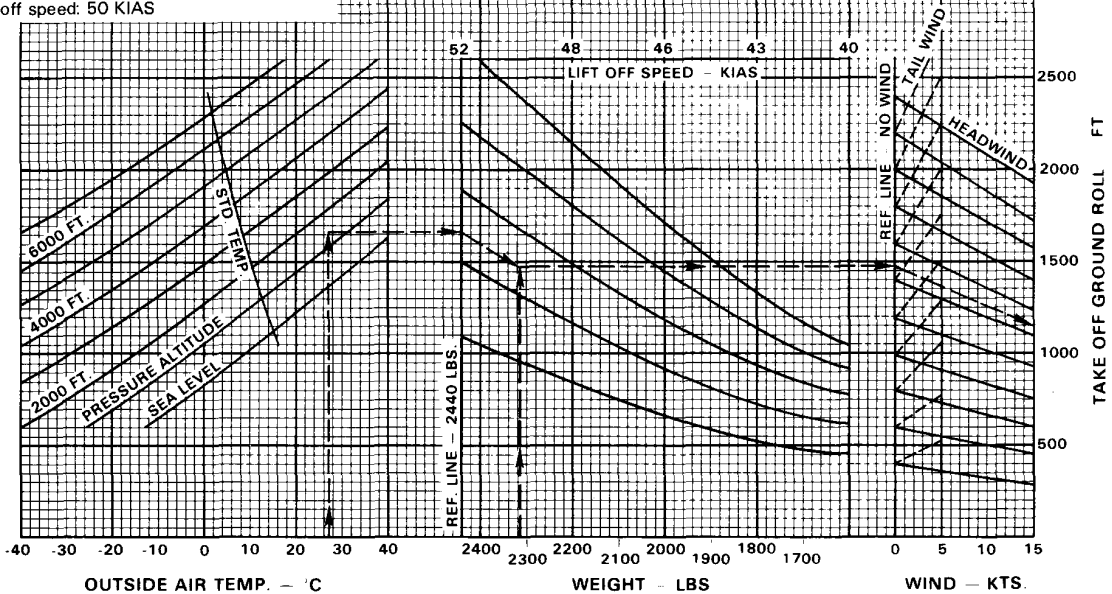
ASSOCIATED CONDITIONS:
PAVED, LEVEL, DRY RUNWAY
FULL POWER BEFORE BRAKE RELEASE
FLAPS 0°

Example:

Departure airport pressure altitude: 1500 ft.
Departure airport temperature: 27°C
Weight: 2316 lbs.
Wind: 15 KTS headwind
Ground roll: 1150 ft.
Lift-off speed: 50 KIAS

0° FLAPS TAKEOFF GROUND ROLL

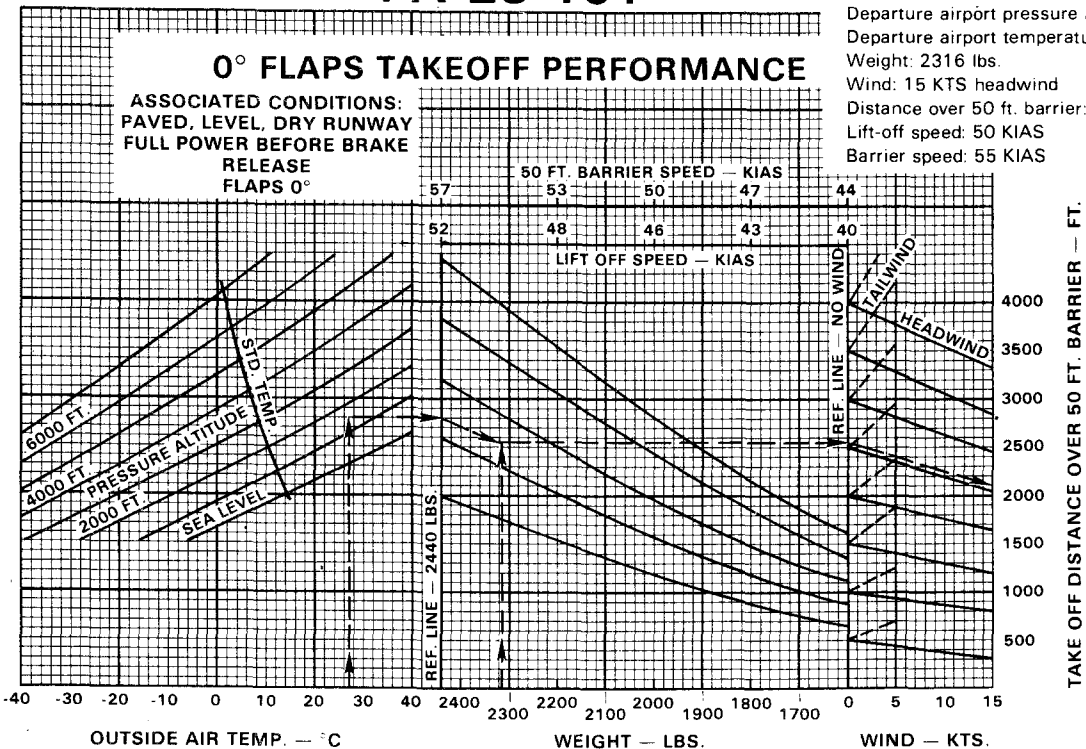
Figure 5-7



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Example:

Departure airport pressure altitude: 1500 ft.
 Departure airport temperature: 27°C
 Weight: 2316 lbs.
 Wind: 15 KTS headwind
 Distance over 50 ft. barrier: 2100 ft.
 Lift-off speed: 50 KIAS
 Barrier speed: 55 KIAS



0° FLAPS TAKEOFF PERFORMANCE
Figure 5-9

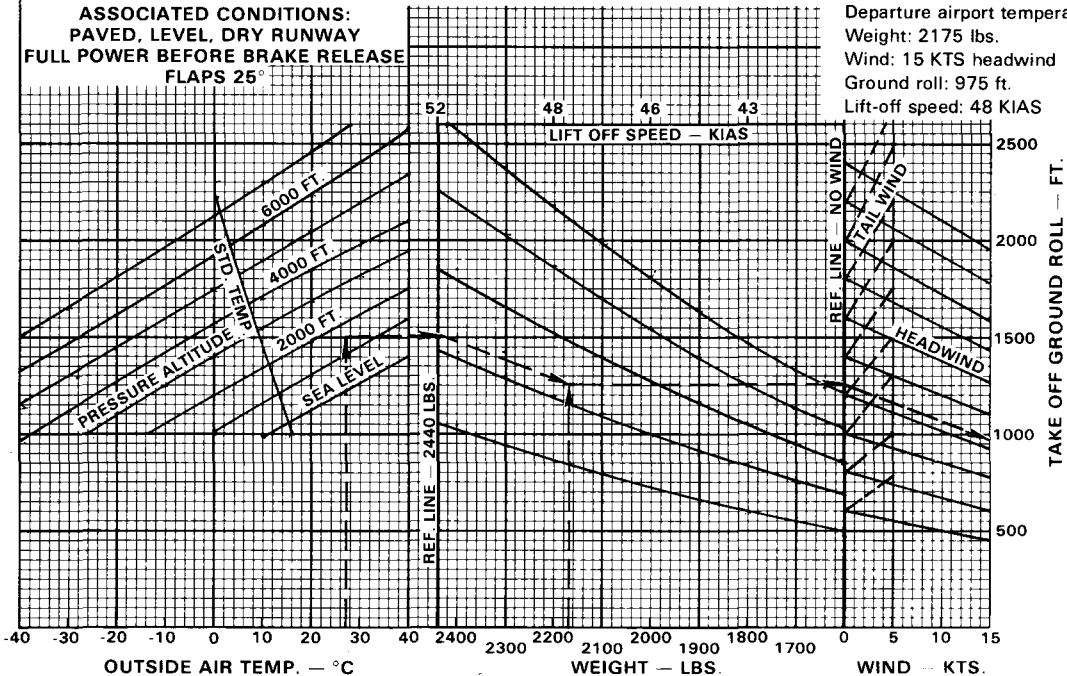
PA-28-161

25° FLAPS TAKEOFF GROUND ROLL

ASSOCIATED CONDITIONS:
PAVED, LEVEL, DRY RUNWAY
FULL POWER BEFORE BRAKE RELEASE
FLAPS 25°

Example:

Departure airport pressure altitude: 1500
Departure airport temperature: 27°C
Weight: 2175 lbs.
Wind: 15 KTS headwind
Ground roll: 975 ft.
Lift-off speed: 48 KIAS



25° FLAPS TAKEOFF GROUND ROLL

Figure 5-11

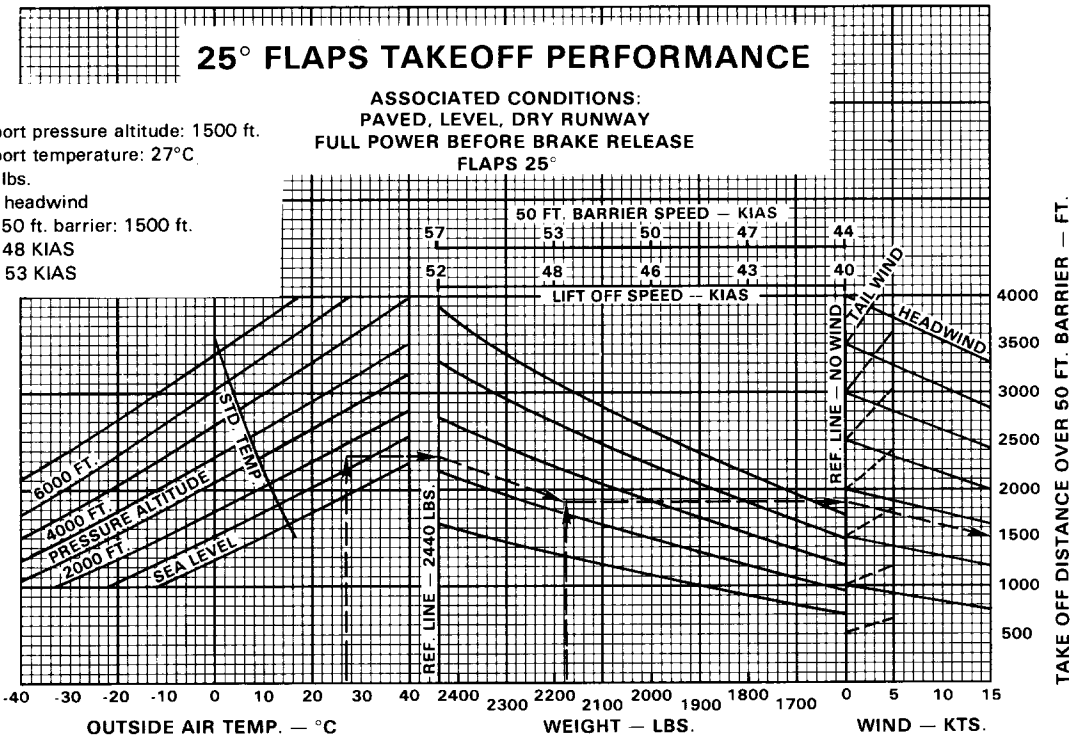
PA-28-161

25° FLAPS TAKEOFF PERFORMANCE

ASSOCIATED CONDITIONS:
PAVED, LEVEL, DRY RUNWAY
FULL POWER BEFORE BRAKE RELEASE
FLAPS 25°

Example:

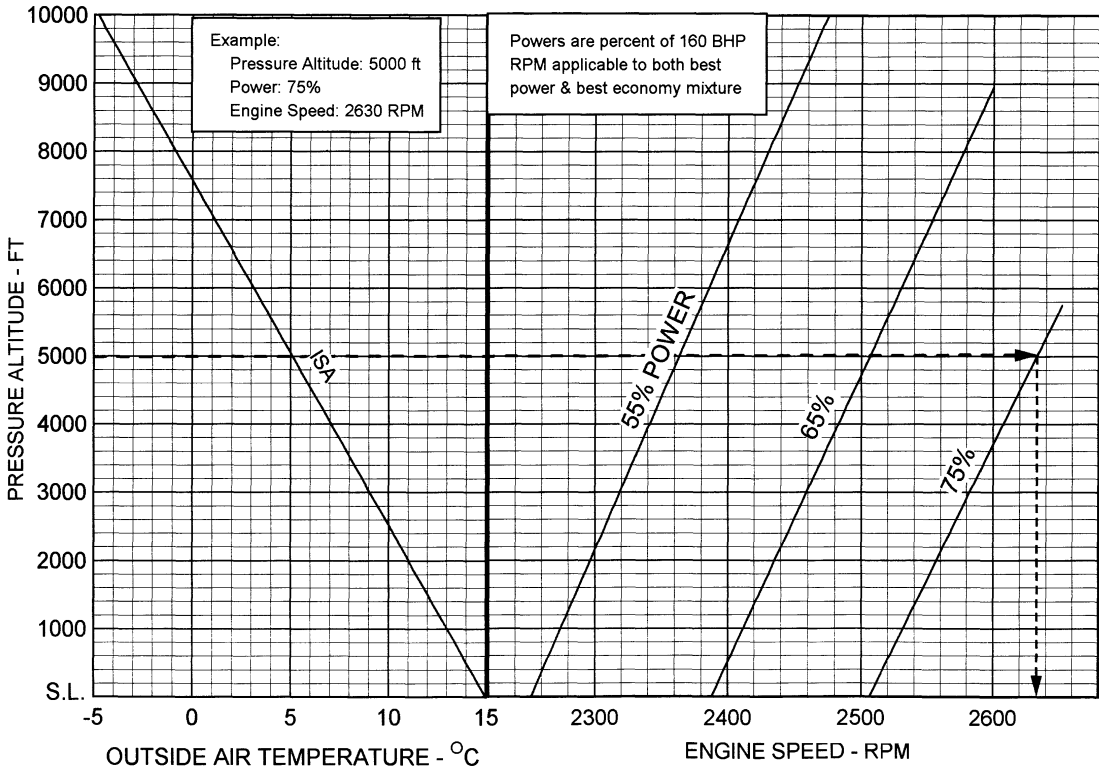
- Departure airport pressure altitude: 1500 ft.
- Departure airport temperature: 27°C
- Weight: 2175 lbs.
- Wind: 15 KTS headwind
- Distance over 50 ft. barrier: 1500 ft.
- Lift-off speed: 48 KIAS
- Barrier speed: 53 KIAS



25° FLAPS TAKEOFF PERFORMANCE

Figure 5-13

ENGINE PERFORMANCE POWER vs RPM
OAT = ISA PROPELLER: Sensenich 74DM6-0-60



ENGINE PERFORMANCE
Figure 5-15

MAXIMUM RATE OF CLIMB

EXAMPLE

PRESSURE ALTITUDE: 5000FT
OAT: 16° C (ISA + 11° C)
MAX RATE OF CLIMB: 374 FPM

ASSOCIATED CONDITIONS:

GROSS WEIGHT: 2440 lb.
POWER: FULL THROTTLE
MIXTURE: FULL RICH
FLAPS: UP
AIRSPEED: 79 KIAS

PRESSURE ALTITUDE FEET	OUTSIDE AIR TEMPERATURE				
	ISA - 15° C	ISA	ISA + 10° C	ISA + 20° C	ISA + 30° C
S.L.	677	644	624	604	585
1000	628	595	574	554	534
2000	578	545	524	504	485
3000	528	495	475	455	436
4000	478	446	425	405	386
5000	429	396	376	356	337
6000	379	346	326	306	287
7000	330	298	277	257	238
8000	280	248	227	207	188
9000	231	198	177	157	138
10000	181	149	128	108	89
11000	132	99	79	59	40
12000	83	49	29	9	-10
13000	33	0	-21	-41	-60

CLIMB PERFORMANCE

Figure 5-17

TIME, FUEL, & DISTANCE TO CLIMB

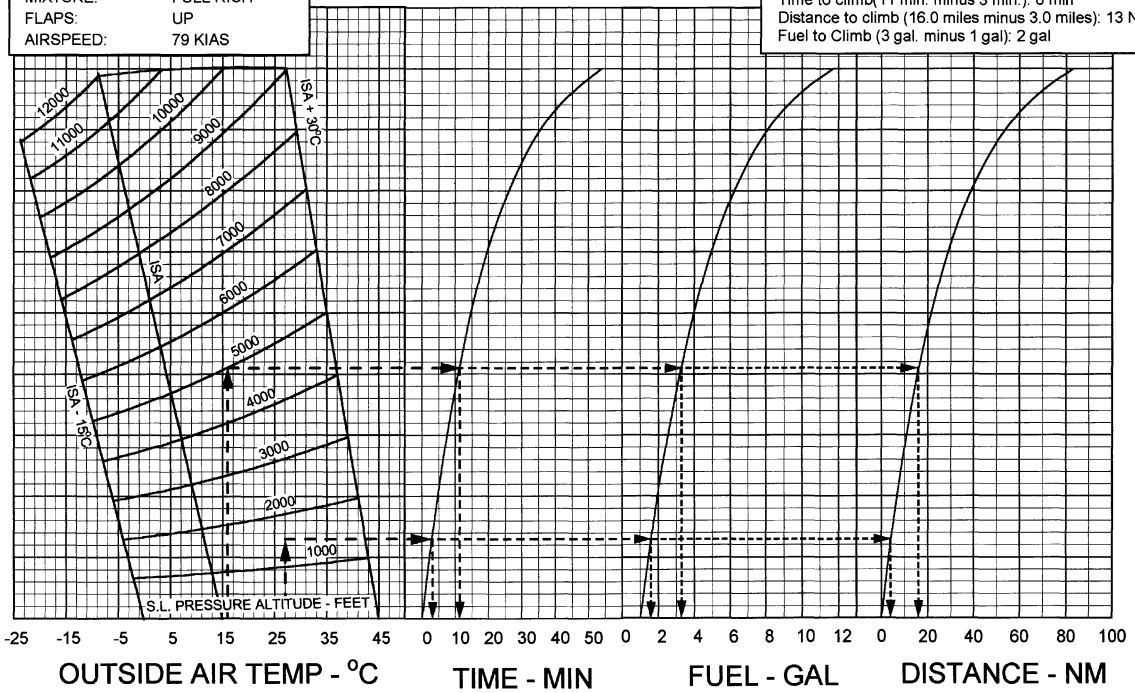
ASSOCIATED CONDITIONS	
WEIGHT:	2440LBS
POWER:	FULL THROTTLE
MIXTURE:	FULL RICH
FLAPS:	UP
AIRSPEED:	79 KIAS

Distance shown based on zero wind
Propeller Sensenich 74DM6-0-60

Example:
 Departure Altitude Pressure Altitude: 1500 ft.
 Departure Airport Temperature: 27° C
 Cruise Pressure Altitude: 5000 ft.
 Cruise OAT: 16° C
 Time to climb(11 min. minus 3 min.): 8 min
 Distance to climb (16.0 miles minus 3.0 miles): 13 NM
 Fuel to Climb (3 gal. minus 1 gal): 2 gal

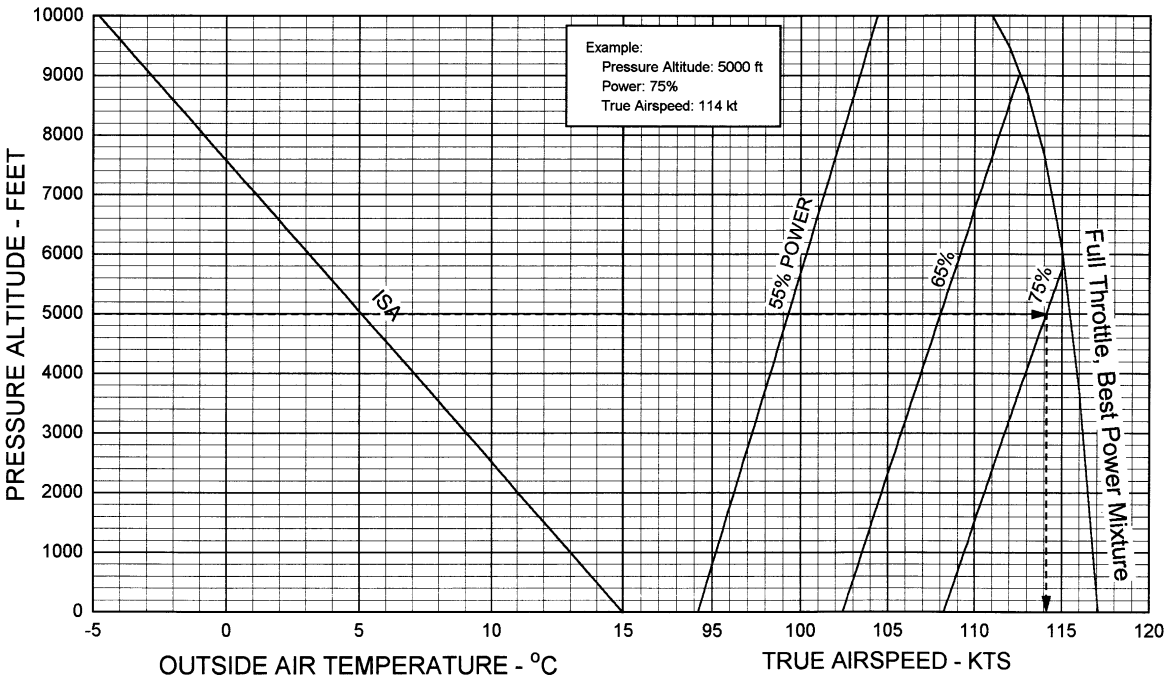
FUEL, TIME AND DISTANCE TO CLIMB

Figure 5-19



CRUISE PERFORMANCE SPEED POWER

OAT = ISA Mid Cruise Weight 2300 Lbs Propeller: Sensenich 74DM6-0-60



CRUISE PERFORMANCE - SPEED POWER

Figure 5-21

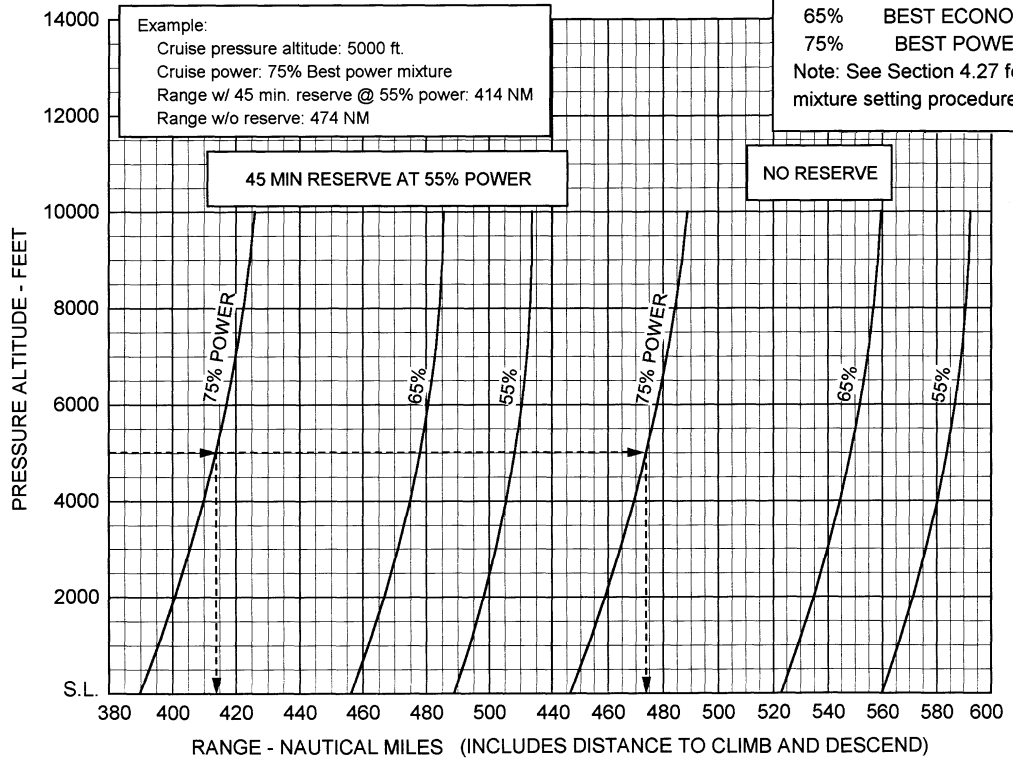
RANGE

ASSOCIATED CONDITIONS:

48 GAL USABLE FUEL 2440 LBS GROSS WT.
PROPELLER SENSENICH 74DM6-0-60

POWER	MIXTURE
55%	BEST ECONOMY
65%	BEST ECONOMY
75%	BEST POWER

Note: See Section 4.27 for mixture setting procedure



RANGE
Figure 5-25

ENDURANCE

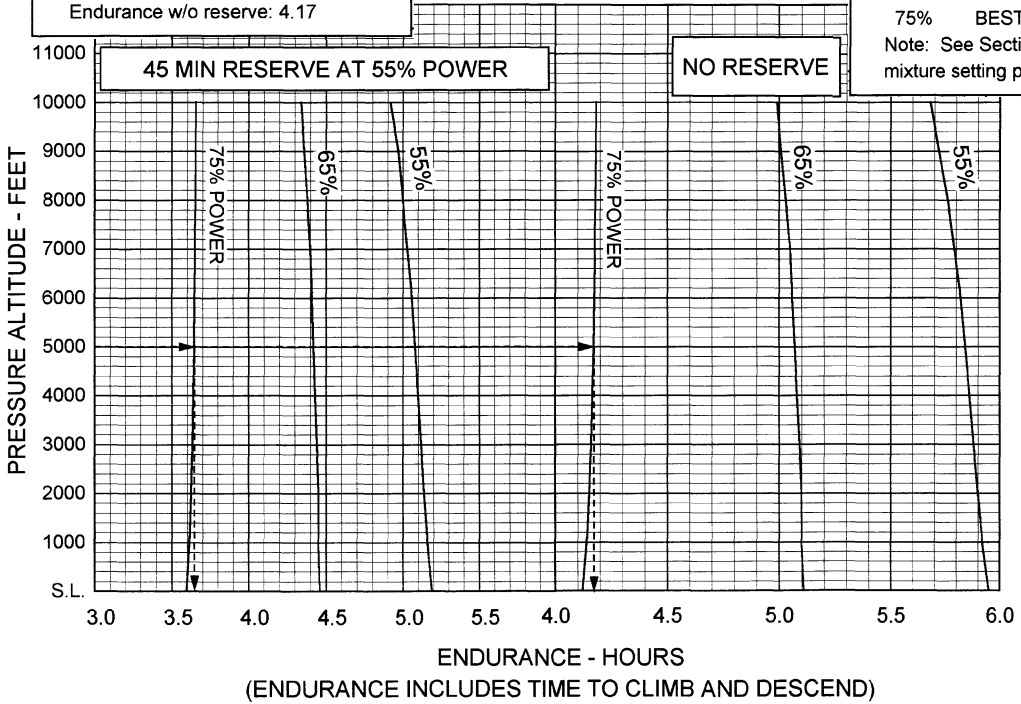
ASSOCIATED CONDITIONS

48 GAL USABLE FUEL 2440 LBS GROSS WT.
PROPELLER SENSENICH 74DM6-0-60

POWER	MIXTURE
55%	BEST ECONOMY
65%	BEST ECONOMY
75%	BEST POWER

Note: See Section 4.27 for mixture setting procedure

Example:
Cruise pressure altitude: 5000 ft.
Cruise power: 75% best power mixture
Endurance w/ 45 min. reserve @ 55% power: 3.65 hrs.
Endurance w/o reserve: 4.17



ENDURANCE
Figure 5-29

TIME, FUEL, AND DISTANCE TO DESCEND

Distance show based on zero wind
Propeller Sensenich 74DM6-0-60

ASSOCIATED CONDITIONS

POWER: 2500 RPM
AIRSPEED: 126 KIAS

PRESSURE ALTITUDE FEET	ISA - 15° C			ISA ° C			ISA + 10° C			ISA + 20° C			ISA + 30° C		
	TIME MIN	FUEL GAL	DIST NM	TIME MIN	FUEL GAL	DIST NM	TIME MIN	FUEL GAL	DIST NM	TIME MIN	FUEL GAL	DIST NM	TIME MIN	FUEL GAL	DIST NM
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	8	2	16	5	1	10	3	1	6	2	1	4	1	1	3
2000	21	4	43	8	2	17	5	1	10	3	1	8	3	1	6
3000	26	4	53	10	2	22	6	1	14	5	1	11	4	1	9
4000	29	5	59	12	2	26	8	2	17	6	1	13	5	1	11
5000	31	5	64	14	2	29	9	2	20	7	1	16	6	1	13
6000	33	5	67	15	3	32	10	2	22	8	2	18	7	1	15
7000	34	6	70	16	3	34	11	2	24	9	2	20	7	1	17
8000	35	6	73	17	3	36	12	2	26	9	2	21	8	2	18
9000	36	6	76	18	3	38	13	2	28	10	2	23	9	2	20
10000	37	6	78	19	3	40	13	2	30	11	2	25	9	2	21
11000	38	6	80	19	3	42	14	2	31	11	2	26	10	2	23
12000	39	6	81	20	3	43	15	2	33	12	2	28	10	2	24

Example:

Cruise Pressure Altitude: 5000 ft
Cruise Temperature: 16° C (ISA + 11° C)
Time To Descend: 8.8 min (By Interpolation)
Fuel To Descend: 1.9 gal (By Interpolation)
Distance To Descend: 19.6 miles (By Interpolation)
Destination Airport Pressure Altitude: 2500 ft
Destination Airport Temperature: 24° C (ISA + 14° C)

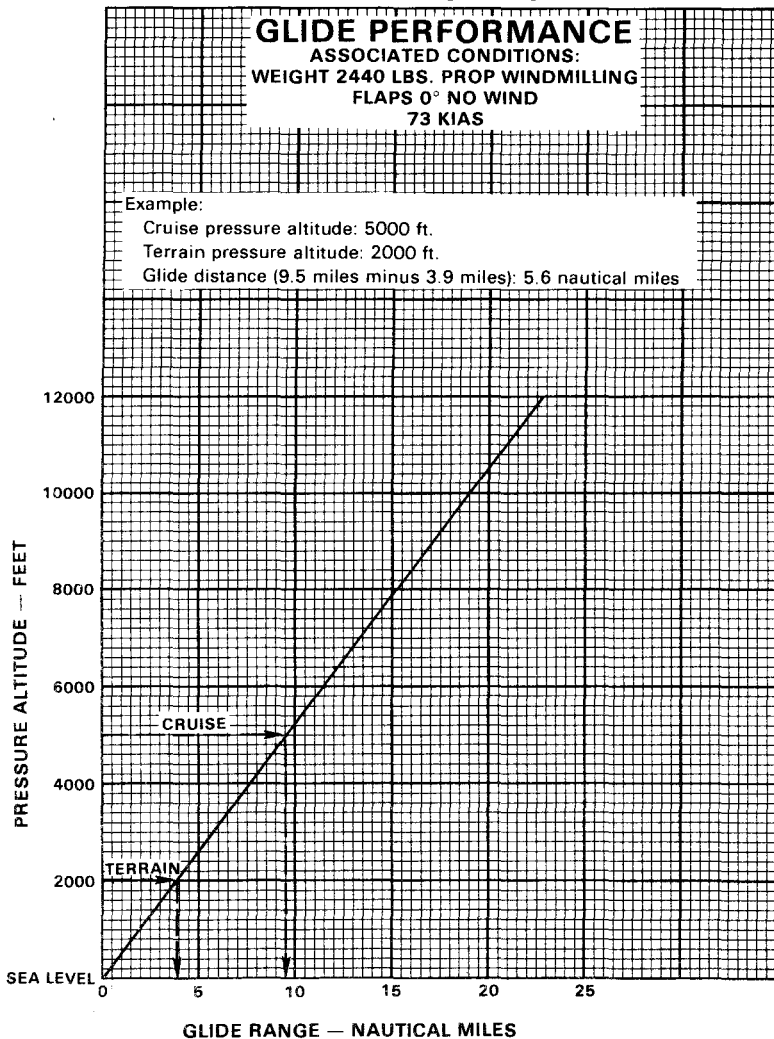
Time To Descend: 4.9 min (By Interpolation)
Fuel To Descend: 1.0 gal
Distance To Descend: 11 miles

Actual Time To Descend From Cruise To Destination Airport (8.8 - 4.9): 3.9 min
Actual Fuel To Descend From Cruise To Destination Airport (1.9 - 1): 0.9 gal
Actual Distance To Descend From Cruise To Destination Airport (19.6 - 11): 8.6 NM

FUEL, TIME AND DISTANCE TO DESCEND

Figure 5-31

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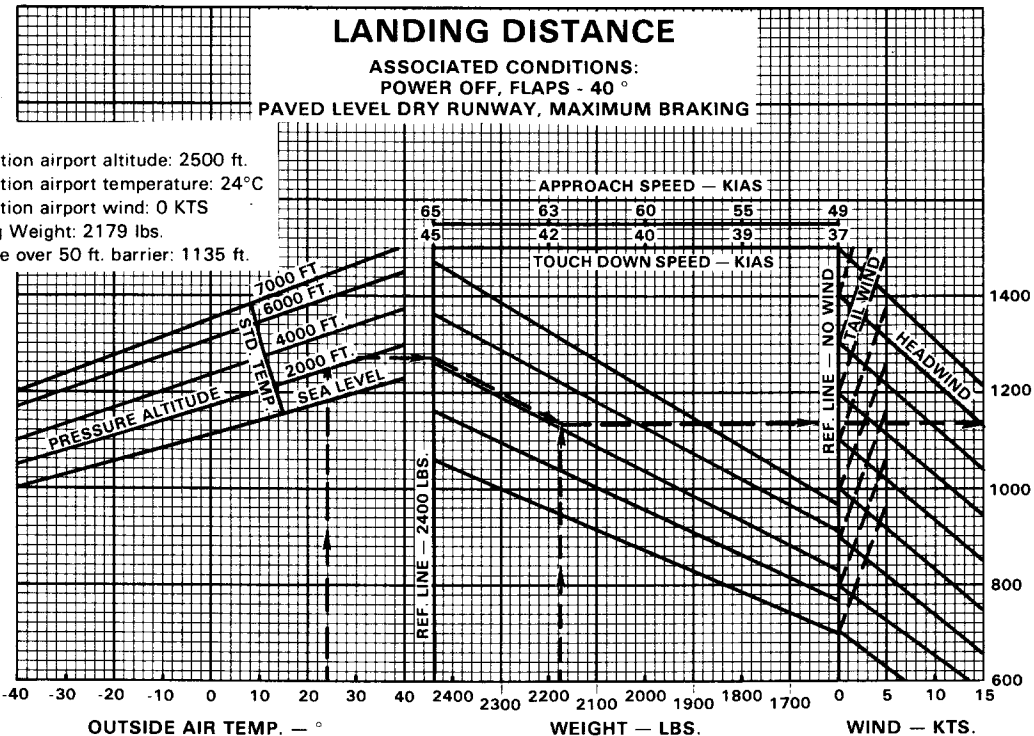
GLIDE PERFORMANCE

Figure 5-33

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LANDING DISTANCE

ASSOCIATED CONDITIONS:
POWER OFF, FLAPS - 40°
PAVED LEVEL DRY RUNWAY, MAXIMUM BRAKING



Example:

- Destination airport altitude: 2500 ft.
- Destination airport temperature: 24°C
- Destination airport wind: 0 KTS
- Landing Weight: 2179 lbs.
- Distance over 50 ft. barrier: 1135 ft.

LANDING DISTANCE
Figure 5-35

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LANDING GROUND ROLL DISTANCE

ASSOCIATED CONDITIONS:
POWER OFF, FLAPS - 40°

PAVED LEVEL DRY RUNWAY, MAXIMUM BRAKING

Example:

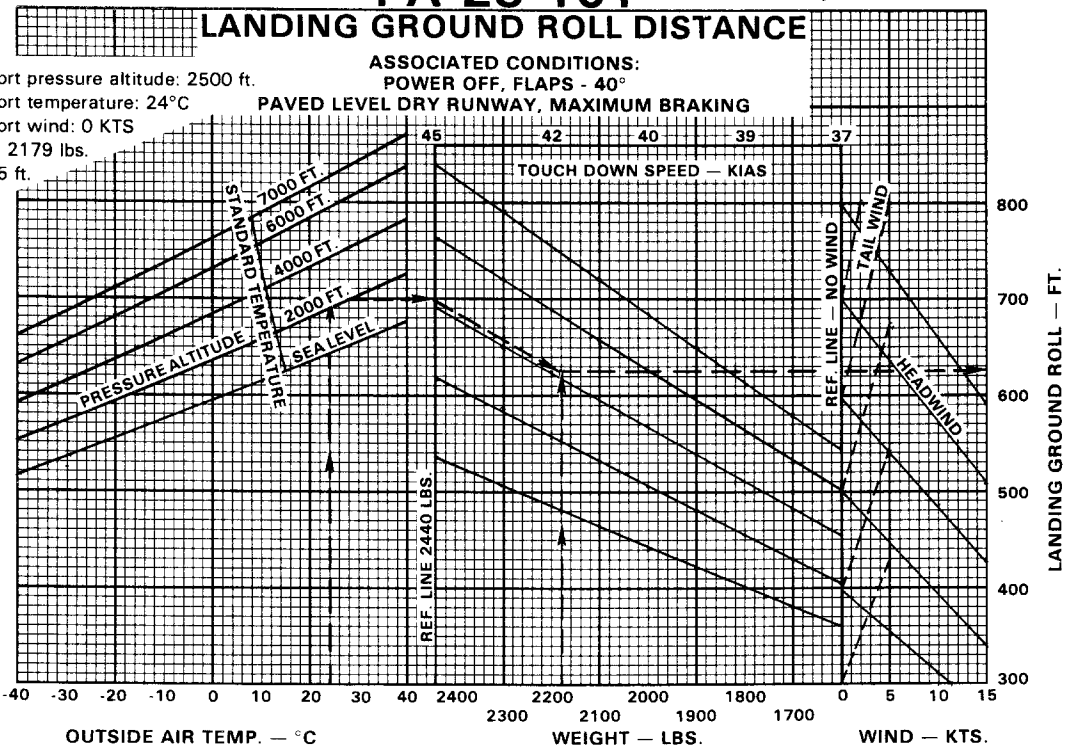
Destination airport pressure altitude: 2500 ft.

Destination airport temperature: 24°C

Destination airport wind: 0 KTS

Landing Weight: 2179 lbs.

Ground Roll: 625 ft.



LANDING GROUND ROLL DISTANCE

Figure 5-37