



DISPATCH RELEASE FORM

FILL IN THE BLANKS AND CHECK THE BOXES THAT APPLY TO YOUR FLIGHT.
BOTH SIDES MUST BE COMPLETED PRIOR TO DISPATCH RELEASE.

DATE AND TIME:

TAIL #:

DEPARTURE TIME:

RETURN TIME:

STUDENT NAME:

INSTRUCTOR NAME:

PASSENGER NAME(S):

PATTERN ☐ APPROACHES ☐ CROSS COUNTRY ☐

DUAL ☐ SOLO ☐ LOCAL ☐ CROSS COUNTRY ☐

PRAC AREA OR ROUTE:

WEATHER BRIEFING VMC ☐ IMC ☐

91.103: CHECK BOXES OF COMPLETED ITEMS

INFO: TIME: WIND: /

☐ NOTAMS ☐ PILOT DOCS

VIS: CEILING: TEMP/DP: /

☐ WT & BAL ☐ TO/LDG DATA

ALT: RETURN WEATHER VERIFIED: YES ☐

☐ ARROW ☐ FUEL REQUIRED

FLT PLN REQUIRED: ALTERNATE REQUIRED:
YES ☐ NO ☐ YES ☐ NO ☐

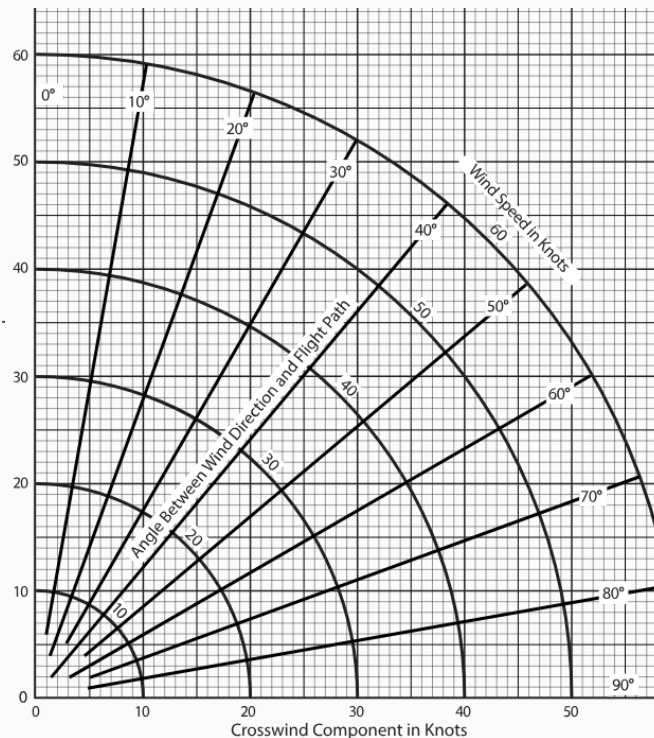
☐ A AVIATES 91.409 ☐ 50HR / 100HR
TIME LEFT ____ / ____

INSTRUCTOR SIGNATURE: _____

VERIFY ACCT: ☐

THIS SIDE MUST BE COMPLETED PRIOR INSTRUCTOR SIGNATURE AND DISPATCH RELEASE.

*RUNWAY #:	*LENGTH:	*SE SERV CEIL:
*PRESS ALT:	*DENS ALT:	
*HEAD/TAIL COMP:	*CROSSWIND COMP:	
*T.O. WEIGHT:	*LDG WEIGHT:	
*T.O. ROLL:	50FT OBST:	
*LDG ROLL:	50FT OBST:	
ACCEL STOP:	ACCEL GO:	



TAKEOFF AND LANDING DATA

* = REQUIRED.

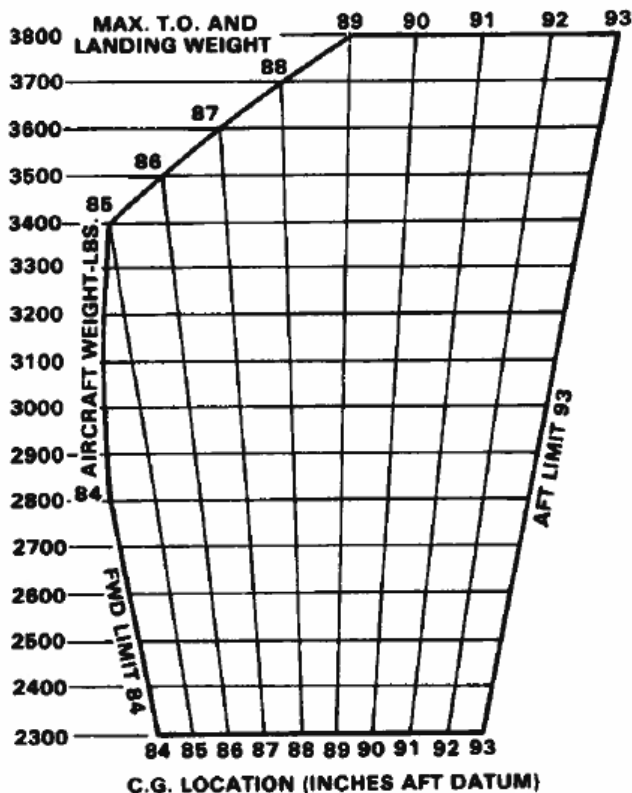
USE THE POH PERFORMANCE CHARTS TO COMPUTE
TAKEOFF AND LANDING DATA.

DRY ERASE PERFORMANCE CHARTS AND MARKERS
ARE LOCATED ON THE PREFLIGHT DOCUMENT
TABLE IN DISPATCH.

*MANEUVERING SPEED: _____ KTS

$VA = \sqrt{(\text{CURRENT TAKEOFF WEIGHT} / \text{MAX GROSS TAKEOFF WEIGHT}) \times \text{PUBLISHED } VA \text{ AT MAX GROSS}}$

	WEIGHT	ARM	MOMENT
BASIC EMPTY WEIGHT			
PILOT AND FRONT PASSENGER		80.5	
BACK SEAT PASSENGERS		118.1	
BAGGAGE AREA		142.8	
ZERO FUEL WEIGHT			
FUEL (6LBS)		95.0	
RAMP WEIGHT			
TAXI FUEL BURN	-16	95.0	
TAKEOFF WEIGHT			
FUEL BURN IN FLIGHT (LBS)			
LANDING WEIGHT			



WEIGHT & BALANCE

THE BASIC EMPTY WEIGHT AND ARMS ARE DIFFERENT FOR
EACH PLANE. ARMS AND WEIGHTS ARE LOCATED IN THE POH
OR FSP IN THE AIRCRAFT PROFILE PICTURE.

DETERMINE MOMENT BY MULTIPLYING WEIGHT X ARM.
DETERMINE ARM BY DIVIDING MOMENT BY WEIGHT.

PLEASE MARK TAKEOFF WEIGHT AND LANDING FUEL WEIGHT
ON THE CG GRAPH BELOW TO ENSURE THAT YOU WILL BE
WITHIN CG LIMITS THE ENTIRE FLIGHT.

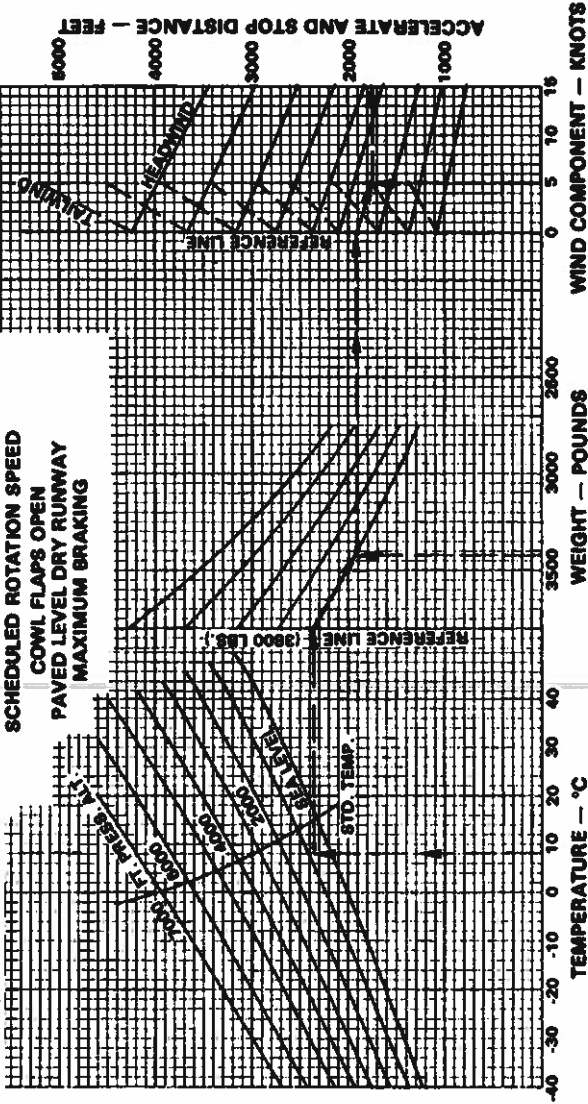
PA-44-180

SHORT FIELD ACCELERATE AND STOP DISTANCE

Example:

Airport press. alt.: 680 ft.
Outside air temp.: 8°C
Weight: 3430 lbs.
Wind component: 5 kts. headwind
Accelerate & stop distance: 1750 ft.

BOTH ENGINES 2700 RPM & FULL THROTTLE
MIXTURE FULL RICH
WING FLAPS 0° - ABORT SPEED AT
SCHEDULED ROTATION SPEED
COWL FLAPS OPEN
PAVED LEVEL DRY RUNWAY
MAXIMUM BRAKING



Accelerate And Stop Distance - Short Field Effort
Figure 5-11

TAKEOFF GROUND ROLL - SHORT FIELD EFFORT

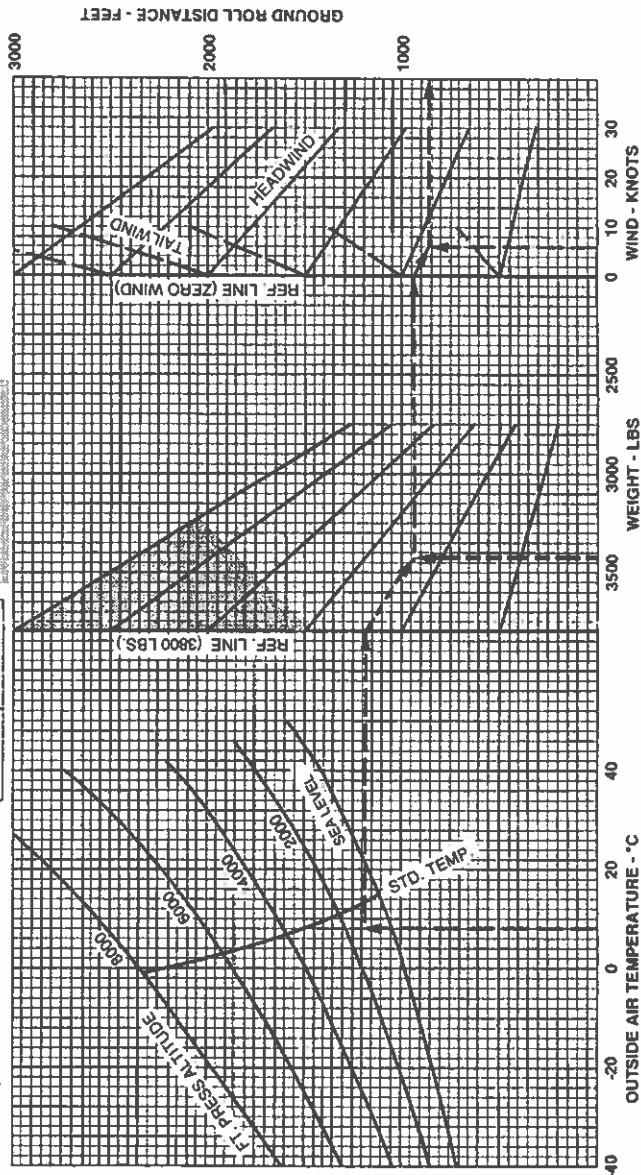
EXAMPLE:
 O.A.T.: 8°C
 Airport Pressure Altitude: 1250 FT
 Weight: 3430 LBS
 Wind Component: 6 KT HEADWIND
 Takeoff Ground Roll: 860 FT

CAUTION
 BEST ONE ENGINE INOPER-
 ATIVE RATE OF CLIMB IS
 LESS THAN 50 FPM IF T.O.
 WT. IS IN THE SHADED AREA.

WEIGHT POUNDS	ROTATE SPEED KIAS
3800	70
3400	66
3000	62
2800	57

ASSOCIATED CONDITIONS:

Wing Flaps: 0°
 Cowl Flaps: 2700 RPM & FULL THROTTLE
 Power: BEFORE BRAKE RELEASE
 Runway: PAVED, LEVEL & DRY



Takeoff Ground Roll - Short Field Effort

Figure 5-13

TAKEOFF DISTANCE OVER 50 FT OBSTACLE - SHORT FIELD EFFORT

ASSOCIATED CONDITIONS:

Wing Flaps: 0°
 Cowl Flaps: OPEN
 Power: 2700 RPM & FULL THROTTLE
 BEFORE BRAKE RELEASE
 Runway: PAVED, LEVEL & DRY

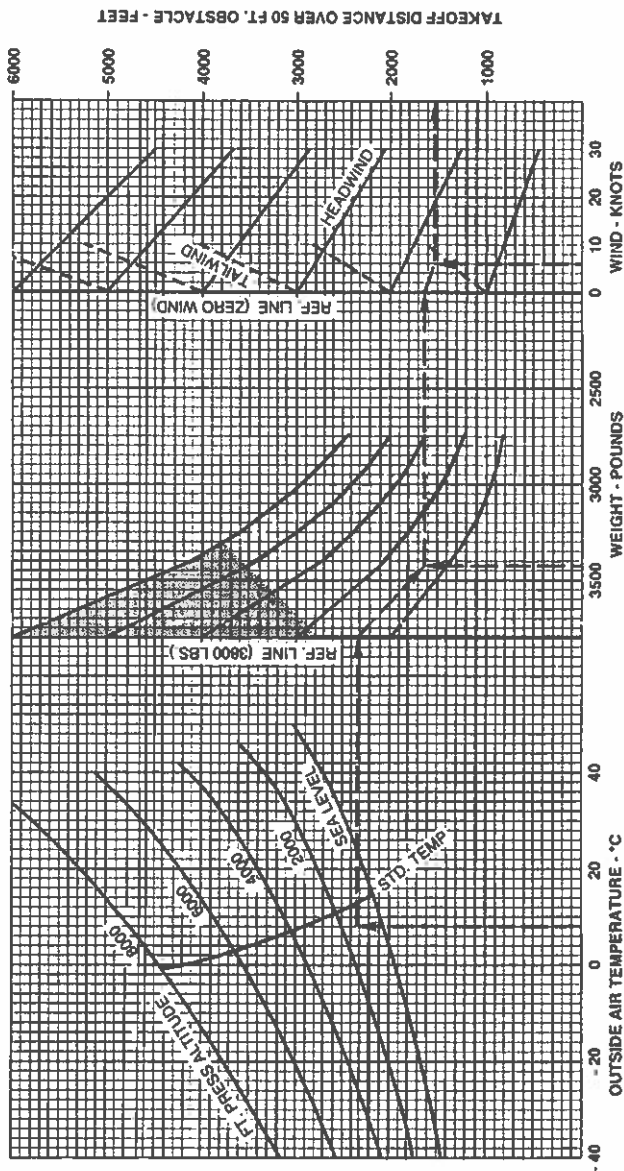
WEIGHT POUNDS	ROTATE SPEED KIAS	OBSTACLE SPEED KIAS
3800	70	82
3400	66	77
3000	62	72
2600	57	67

CAUTION

BEST ONE ENGINE INOPER-
 ATIVE RATE OF CLIMB IS
 LESS THAN 50 FPM IF TO
 WT. IS IN THE SHADED AREA

EXAMPLE:

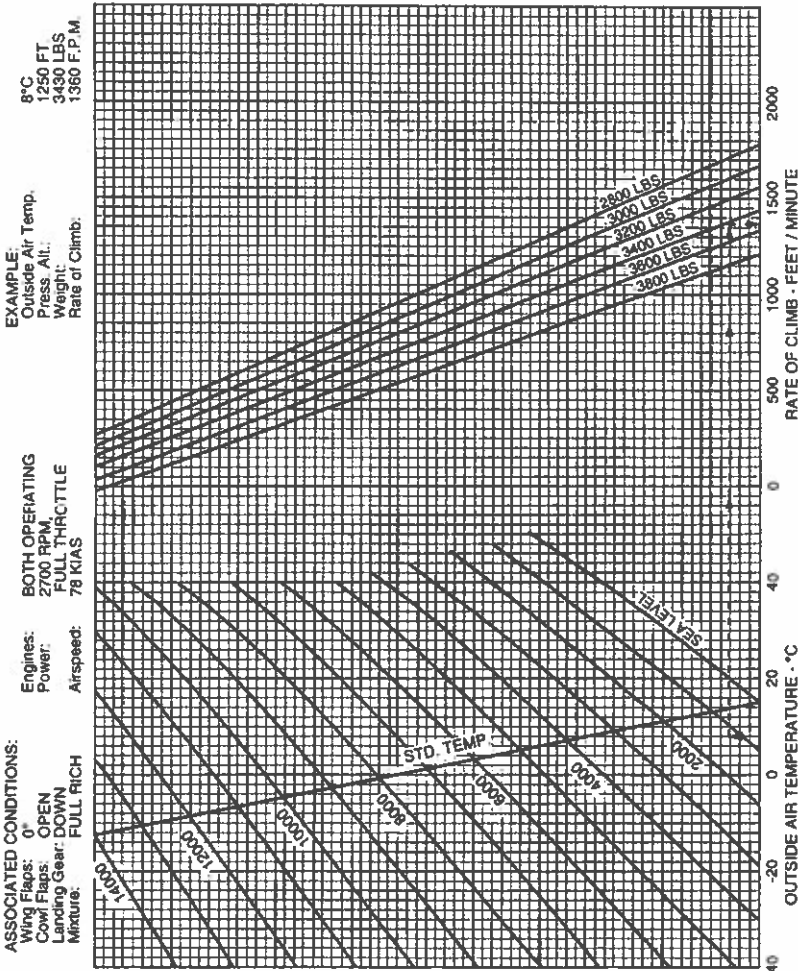
O.A.T. 8°C
 Airport Pressure Altitude: 1250 FT
 Weight: 3430 LBS
 Wind Component: 6 KT HEADWIND
 Takeoff Distance
 Over 50 FT Obstacle: 1520 FT



Takeoff Distance Over 50 Ft. Obstacle - Short Field Effort

Figure 5-15

CLIMB PERFORMANCE - BOTH ENGINES OPERATING - GEAR DOWN



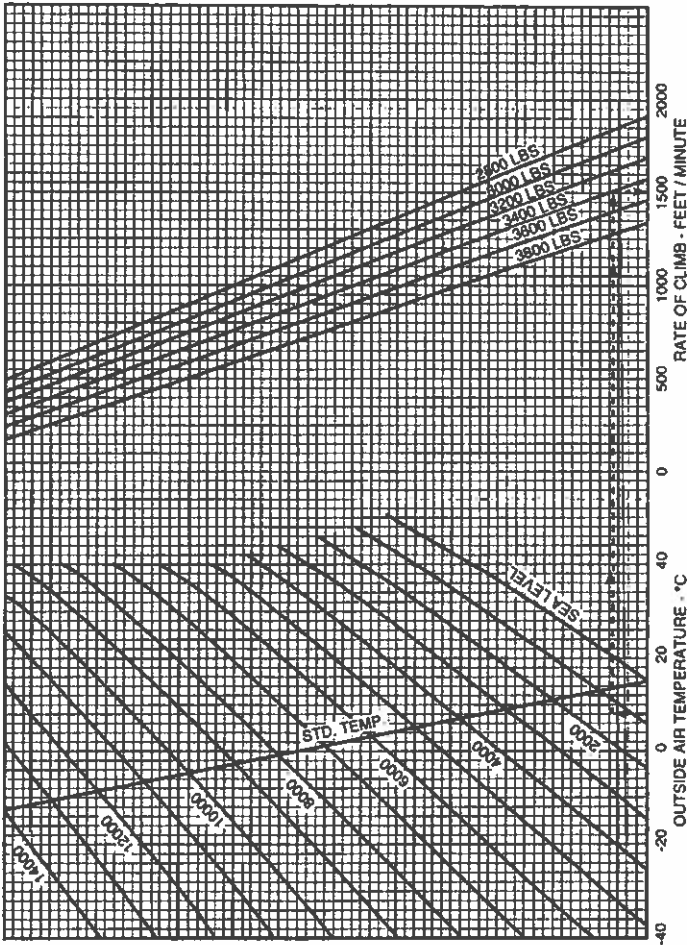
Climb Performance - Both Engines Operating - Gear Down
Figure 5-17

CLIMB PERFORMANCE - BOTH ENGINES OPERATING - GEAR UP

ASSOCIATED CONDITIONS:
Power: FULL THROTTLE, 2700 RPM
Cowl Flaps: OPEN
Mixture: FULL RICH
Airspeed: 88 KIAS
Wing Flaps: 0°

Engines: BOTH OPERATING
Landing Gear: UP

EXAMPLE:
Press. Alt.: 1250 FT.
Outside Air Temp.: 8°C
Weight: 3430 LBS
Rate of Climb: 1505 FT/MIN



Climb Performance - Both Engines Operating - Gear Up
Figure 5-19

CLIMB PERFORMANCE - ONE ENGINE OPERATING - GEAR UP

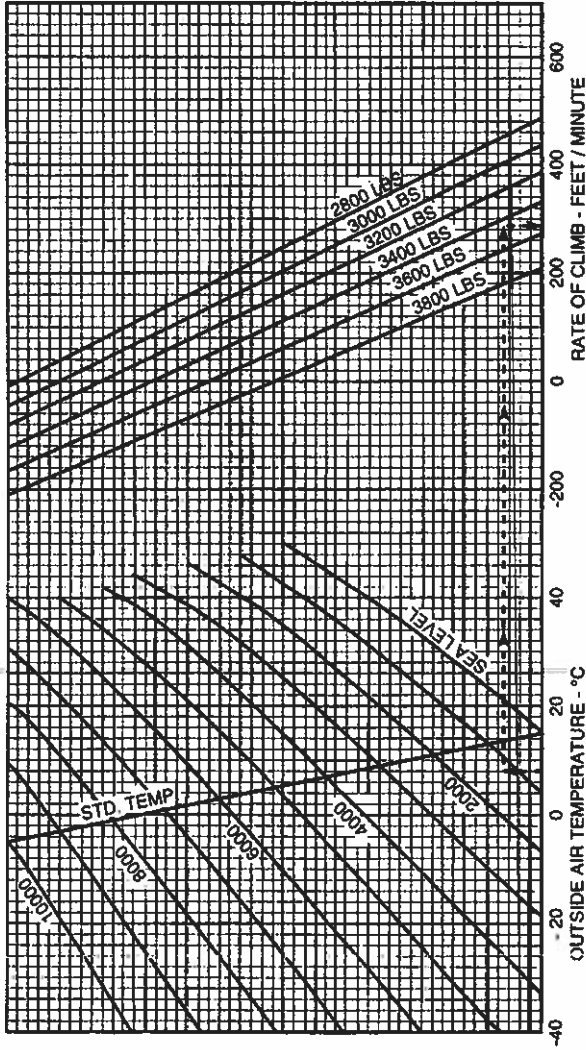
ASSOCIATED CONDITIONS:
Wing Flaps: $\uparrow$
Cowl Flaps: OPEN
(Operating Engine); CLOSED
(Inoperative Engine); UP
Landing Gear: UP

Mixture:
Prop
(Inoperative Engine); FEATHERED
Power: 2700 RPM
FULL THROTTLE
88 KIAS

FULL RICH

NOTE
2° TO 3° BANK TOWARD
OPERATING ENGINE

EXAMPLE:
Outside Air Temp.: 8°C
Press Alt.: 1250 FT.
Weight: 3430
One Engine
Inoperative Climb: 285 F.P.M.



Climb Performance - One Engine Operating - Gear Up
Figure 5-21

FUEL, TIME AND DISTANCE TO CLIMB**ASSOCIATED CONDITIONS:**

Wing Flaps: 0°
 Cowl Flaps: OPEN
 Landing Gear: UP
 Power: 2700 RPM &
 FULL THROTTLE

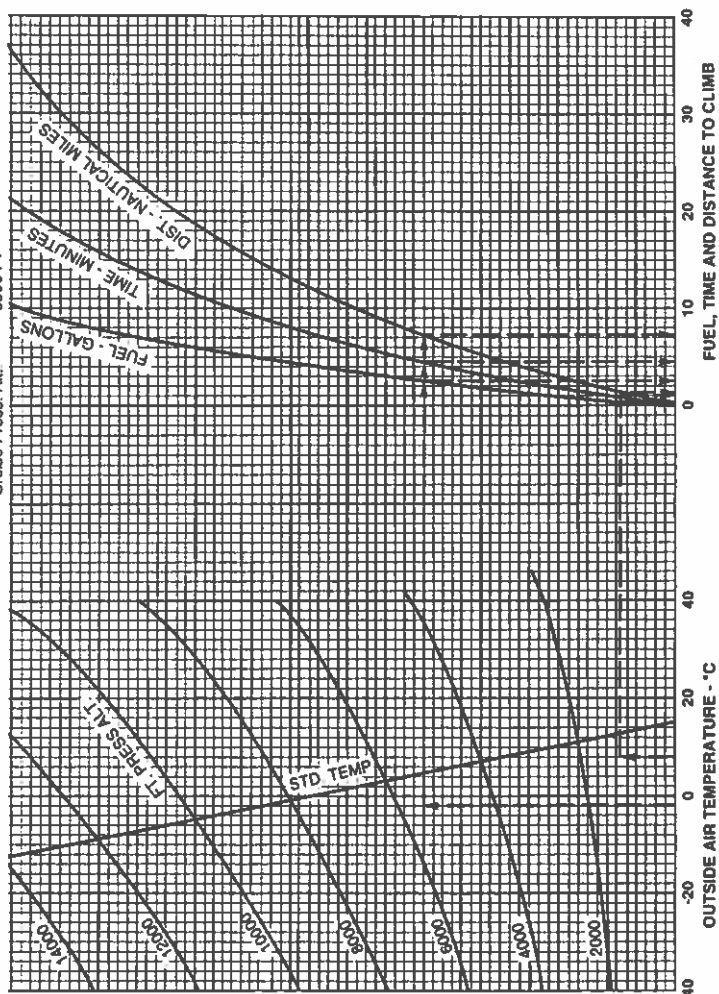
Climb Speed: 88 KIAS
 Wind: NONE

EXAMPLE:

Departure Airport O.A.T.: 8°C
 Dep. Airport Press. Alt.: 250 FT
 Cruise O.A.T.: 25°C
 Cruise Press. Alt.: 5500 FT

Fuel to Climb:
 Time to Climb:
 Distance to Climb:

26.0-42.2 GAL
 45.0-92.6 MIN
 73.3-145.9 N.M.



Fuel, Time And Distance To Climb

Figure 5-23

FUEL AND POWER SETTING TABLE

Press. Alt. Feet	Std. Alt. Temp. °C	99 BHP- 55% Rated Power Approx. Fuel Flow 8.7 G.P.H.* RPM AND MAN. PRESS.				117 BHP- 65% Rated Power Approx. Fuel Flow 10.2 G.P.H.* RPM AND MAN. PRESS.				135 BHP- 75% Rated Power Approx. Fuel Flow 11.7 G.P.H.* RPM AND MAN. PRESS.				Press. Alt. Feet
		2100	2200	2300	2400	2100	2200	2300	2400	2200	2300	2400	2500	
SL	15	22.3	21.7	21.1	20.6	24.9	24.2	23.5	22.9	26.7	26.0	25.2	24.6	SL
1000	13	22.9	21.3	20.8	20.3	24.6	23.8	23.2	22.6	26.3	25.6	24.9	24.3	1000
2000	11	21.7	21.0	20.5	20.0	24.2	23.5	22.9	22.3	25.9	25.3	24.6	24.0	2000
3000	9	21.3	20.7	20.2	19.8	23.9	23.2	22.6	22.0	25.6	25.0	24.4	23.7	3000
4000	7	21.1	20.5	20.0	19.5	23.5	22.8	22.3	21.8	FT	24.7	24.1	23.5	4000
5000	5	20.8	20.2	19.7	19.2	23.2	22.5	22.0	21.5	—	FT	23.8	23.2	5000
6000	3	20.5	19.9	19.4	19.0	22.9	22.2	21.7	21.3	—	—	—	22.9	6000
7000	1	20.2	19.7	19.2	18.7	FT	21.9	21.5	21.0	—	—	—	FT	7000
8000	-1	20.0	19.4	18.9	18.5	—	FT	21.2	20.8	—	—	—	—	8000
9000	-3	19.7	19.1	18.7	18.2	—	—	FT	20.6	—	—	—	—	9000
10,000	-5	19.5	18.9	18.4	18.0	—	—	—	FT	—	—	—	—	10,000
11,000	-7	19.2	18.7	18.2	17.8	—	—	—	—	—	—	—	—	11,000
12,000	-9	FT	18.4	18.0	17.6	—	—	—	—	—	—	—	—	12,000
13,000	-11	—	FT	FT	17.4	—	—	—	—	—	—	—	—	13,000
14,000	-13	—	—	—	FT	—	—	—	—	—	—	—	—	14,000

NOTE: To maintain constant power, add approximately 1% Manifold Pressure for each 8°C above standard. Subtract approximately 1% for each 8°C below standard

*PERFORMANCE CRUISE POWER

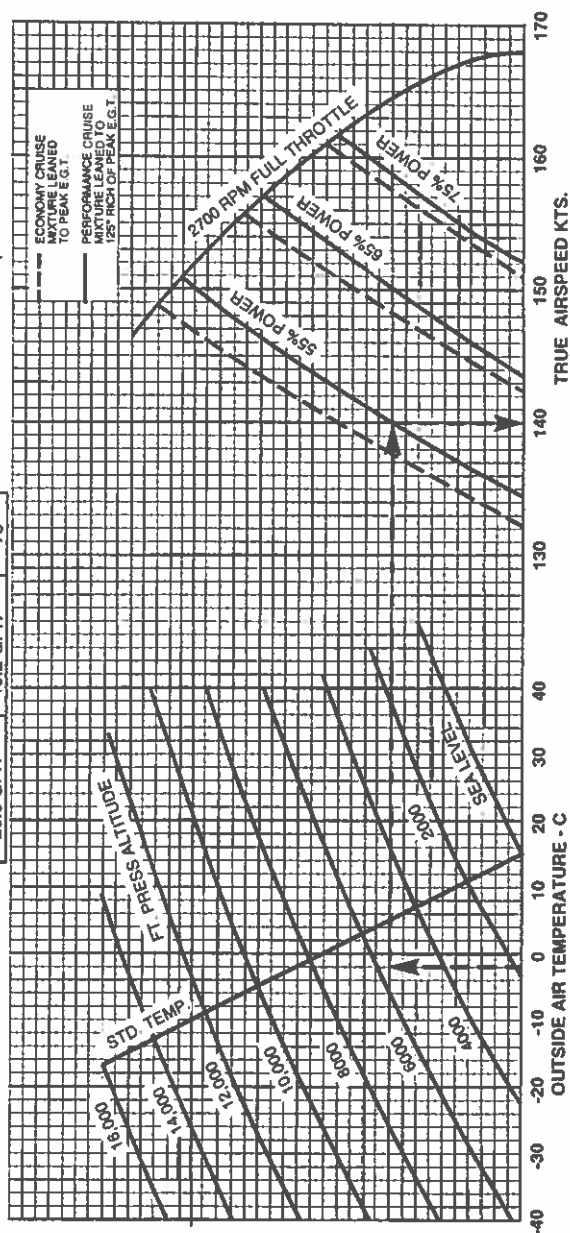
Fuel & Power Setting Table
Figure 5-25

SPEED POWER

ASSOCIATED CONDITIONS:
 Cowl Flaps: CLOSED
 Landing Gear: UP
 Wing Flaps: 0°
 Mid Cruise Weight: 3480 LBS

PERF. CRUISE	APPROX. FUEL FLOW	% POWER
17.4 GPH	ECON CRUISE	55
20.4 GPH	14.0 GPH	65
23.3 GPH	16.6 GPH	75
	19.2 GPH	

EXAMPLE:
 -2°C
 Cruise altitude: 5500 FT
 Cruise power: 55 %
 Cruise speed: 140 KTAS



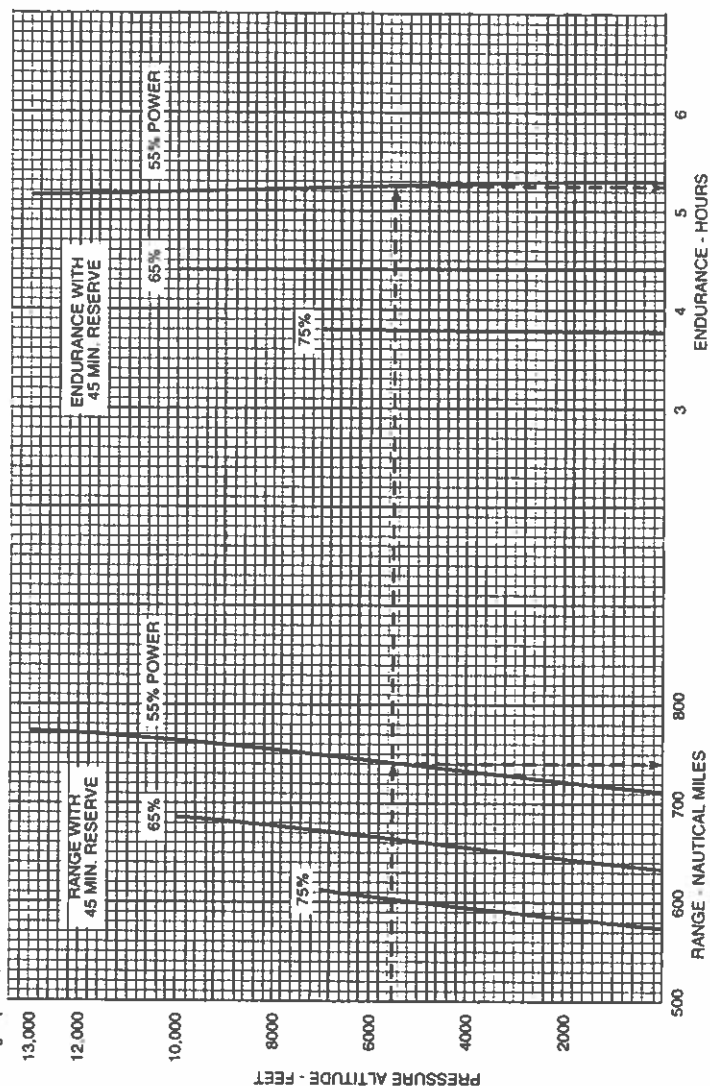
Speed Power
 Figure 5-27

STANDARD TEMPERATURE RANGE AND ENDURANCE - PERFORMANCE CRUISE

ASSOCIATED CONDITIONS:
 Usable Fuel: 108 GAL
 Weight: 3800 LBS
 Landing Gear: UP
 Cowfl Flaps: CLOSED
 Wing Flaps: 0°

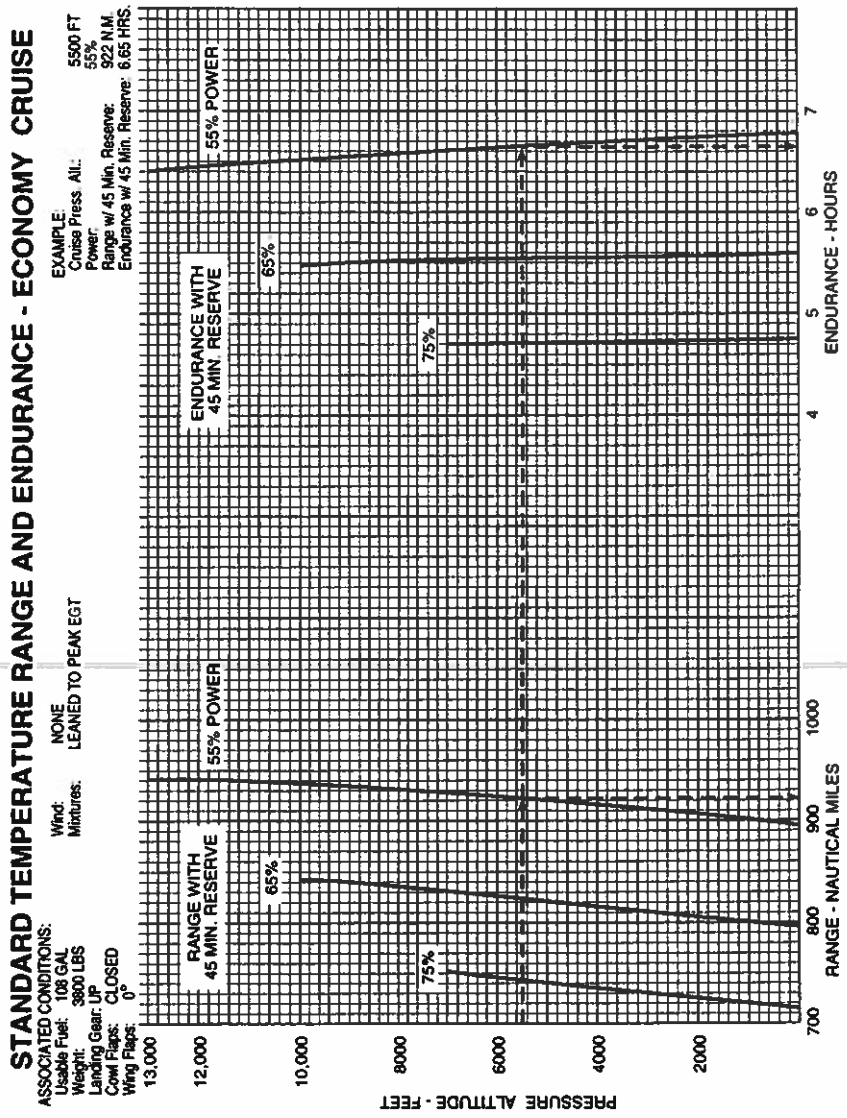
Wind: NONE
 Mixtures: LEANED TO 125°F RICH
 OF PEAK EGT

EXAMPLE:
 Cruise Altitude: 5500 FT
 Power: 55%
 Range w/45 Min. Reserve: 741 N.M.
 Endurance w/45 Min. Reserve: 5.25 HRS.



Standard Temperature Range and Endurance - Performance Cruise

Figure 5-29



Standard Temperature Range And Endurance - Economy Cruise
Figure 5-31

FUEL, TIME AND DISTANCE TO DESCEND

ASSOCIATED CONDITIONS:
 Airspeed: 165 KIAS
 Descent: 500 FPM
 Both Engines: 2600 RPM &
 THROTTLE AS REQUIRED
 TO MAINTAIN AIRSPEED
 AND DESCENT RATE

Wing Flaps: 0°
 Cool Flaps: CLOSED
 Landing Gear: UP
 Wind: NONE

EXAMPLE:

Cruise O.A.T.: -2°C
 Cruise Altitude: 5500 FT
 Destination Airport O.A.T.: 8°C
 Destination Airport Altitude: 690 FT

Fuel to Descend: 3 - 1 = 2 GAL
 Time to Descend: 9 - 2 = 7 MIN
 Distance to Descend: 30 - 4 = 26 N.M.



Fuel, Time And Distance To Descend

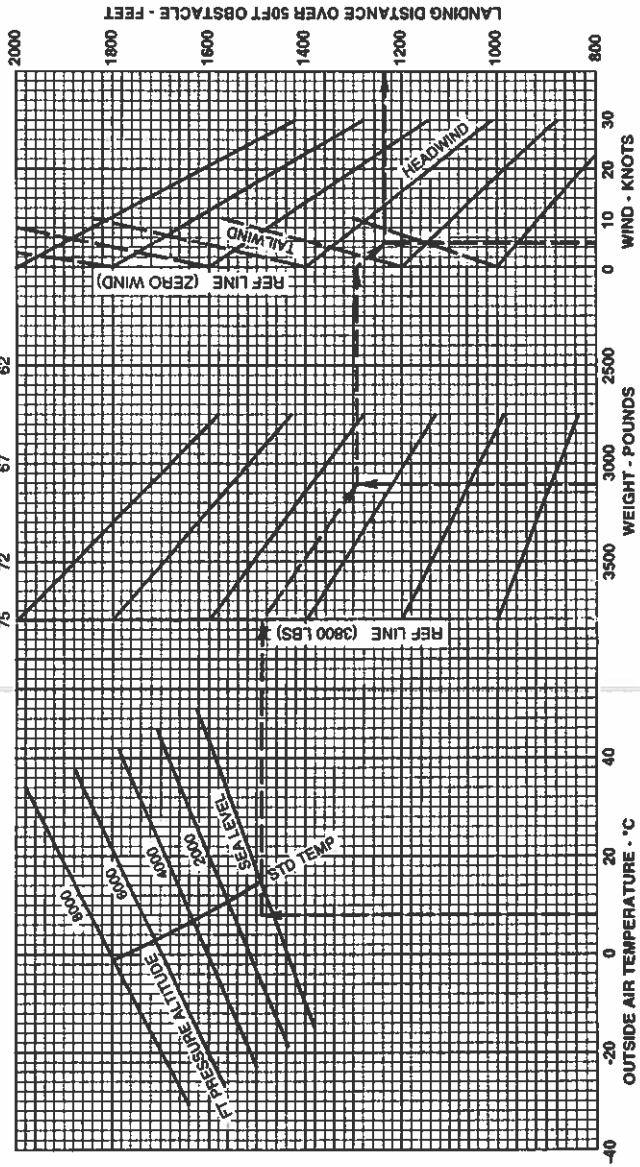
Figure 5-33

LANDING DISTANCE OVER 50 FT OBSTACLE — SHORT FIELD EFFORT

ASSOCIATED CONDITIONS:
Wing Flaps: 40°
Power: OFF
Cowl Flaps: AS REQUIRED
Runway: PAVED LEVEL & DRY
Touchdown: FULL STALL
Approach Speed: AS SCHEDULED

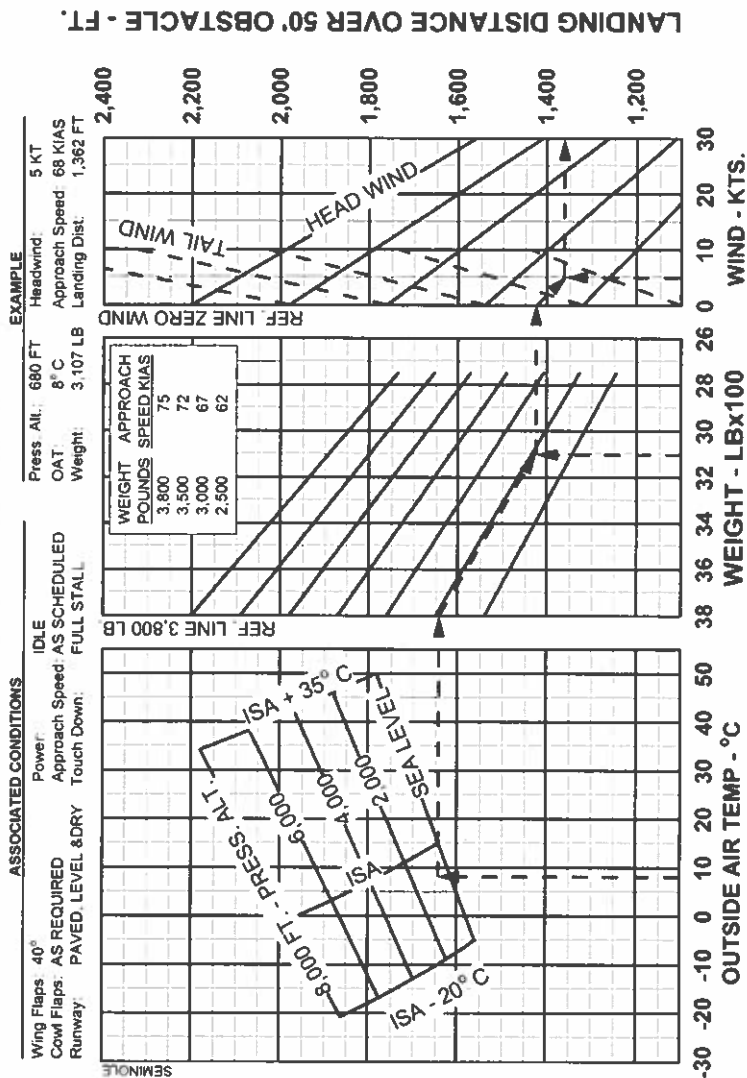
EXAMPLE:
O.A.T.: 8°
Press. Alt.: 680 FT
Weight: 3107 LBS
Wind Component: 5 KT HEADWIND
Approach Speed: 68 KIAS
Total Landing Distance: 1238 FT

Straight Blade Propellers (see Section 1.7)



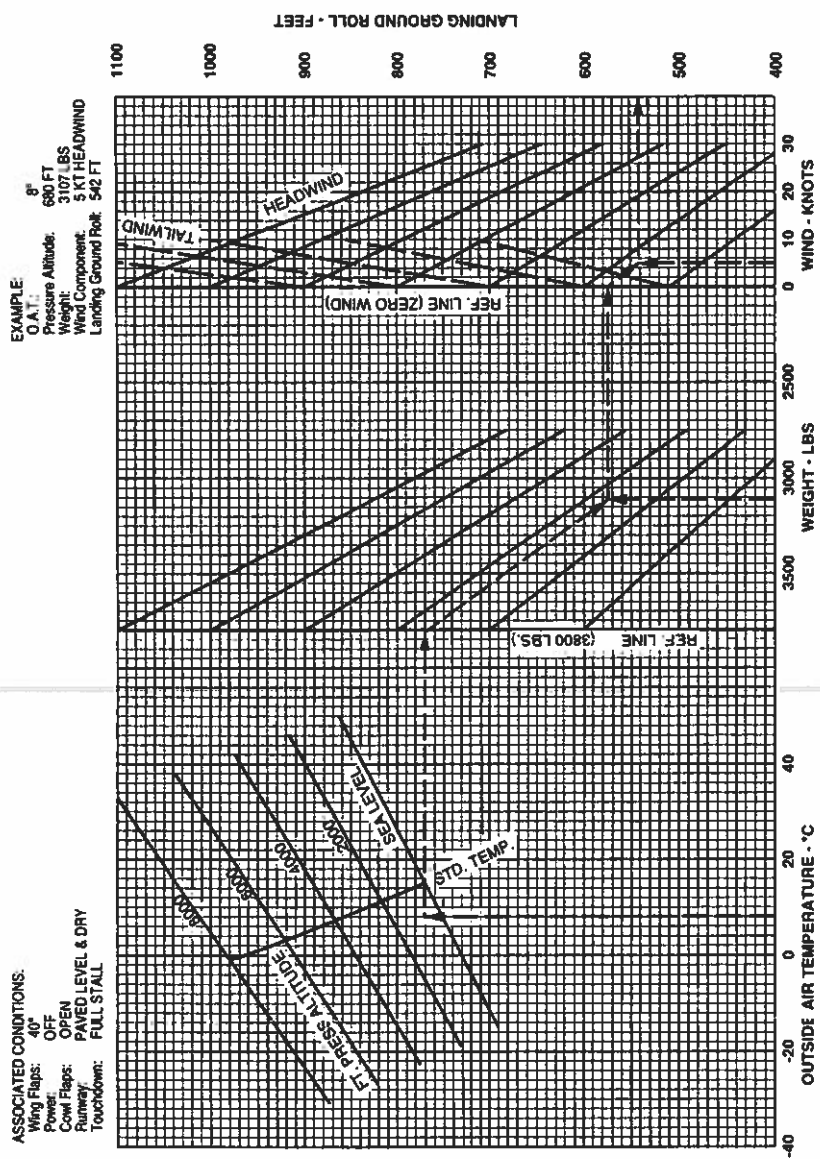
Landing Distance Over 50 Ft. Obstacle - Short Field Effort
Figure 5-35

LANDING DISTANCE OVER 50 FT. OBSTACLE - SHORT FIELD EFFORT **Scimitar Blade Propellers (see Section 1.7)**



Landing Distance Over 50 Ft. Obstacle - Short Field Effort
 Figure 5-35a

LANDING GROUND ROLL — SHORT FIELD EFFORT



Landing Ground Roll - Short Field Effort
Figure 5-37