

LOAD DATA SHEET

ANJOG PTY. LTD.

AIRCRAFT TYPE : **PIPER PA28-161**

AIRCRAFT REG: **VH-LXP**

AIRCRAFT LOADING SYSTEM: **PIPER PA28-161 P.O.H.**

AUTHORISED	DATE	DATE of EXPIRY	ISSUE
H.J.GREAVES AV58	14/04/2014	INDEFINITE inw CAO 100.7	1



Approved
H J Greaves AV - 58

ITEM	WEIGHT	ARM	INDEX UNITS	CONFIGURATION
BASIC WT.	709.8 kg	2205 mm	1565109	4 SEAT PASS.
BASIC WT.	1564.9 lb	86.80 in	135871	4 SEAT PASS.

DATUM: 1991 mm FORWARD OF WING LEADING EDGE

ABOVE WEIGHTS INCLUDE UNUSABLE FUEL & FULL OIL

NOTE : It is the responsibility of the Pilot in command to ensure that the aircraft is loaded in accordance with Flight Manual limitations.

THIS IS A VALIDATION OF USA DATA

6.7 WEIGHT AND BALANCE DETERMINATION FOR FLIGHT

- (a) Add the weight of all items to be loaded to the basic empty weight.
- (b) Use the Loading Graph (Figure 6-13) to determine the moment of all items to be carried in the airplane.
- (c) Add the moment of all items to be loaded to the basic empty weight moment.
- (d) Divide the total moment by the total weight to determine the C.G. location.
- (e) By using the figures of item (a) and item (d) (above), locate a point on the C.G. range and weight graph (Figure 6-15). If the point falls within the C.G. envelope, the loading meets the weight and balance requirements.

	Weight (Lbs)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight	1500.0	85.9	128850
Pilot and Front Passenger	340.0	80.5	27370
Passengers (Rear Seats)*	340.0	118.1	40154
Fuel (48 Gallon Maximum)	267.0	95.0	25365
Baggage* (200 Lbs. Maximum)		142.8	
Ramp Weight (2447 Lbs. Normal, 2027 Lbs. Utility Maximum)	2447.0	90.6	221739
Fuel Allowance For Engine Start, Taxi and Run Up	-7.0	95.0	-665
Takeoff Weight (2440 Lbs. Normal, 2020 Lbs. Utility Maximum)	2440.0	90.6	221074

The center of gravity (C.G.) of this sample loading problem is at 90.6 inches aft of the datum line. Locate this point (90.6) on the C.G. range and weight graph. Since this point falls within the weight - C.G. envelope, this loading meets the weight and balance requirements.

IT IS THE RESPONSIBILITY OF THE PILOT AND AIRCRAFT OWNER TO INSURE THAT THE AIRPLANE IS LOADED PROPERLY.

*Utility Category Operation - No baggage or aft passengers allowed.

SAMPLE LOADING PROBLEM (NORMAL CATEGORY)

Figure 6-9

SECTION 6
WEIGHT AND BALANCE

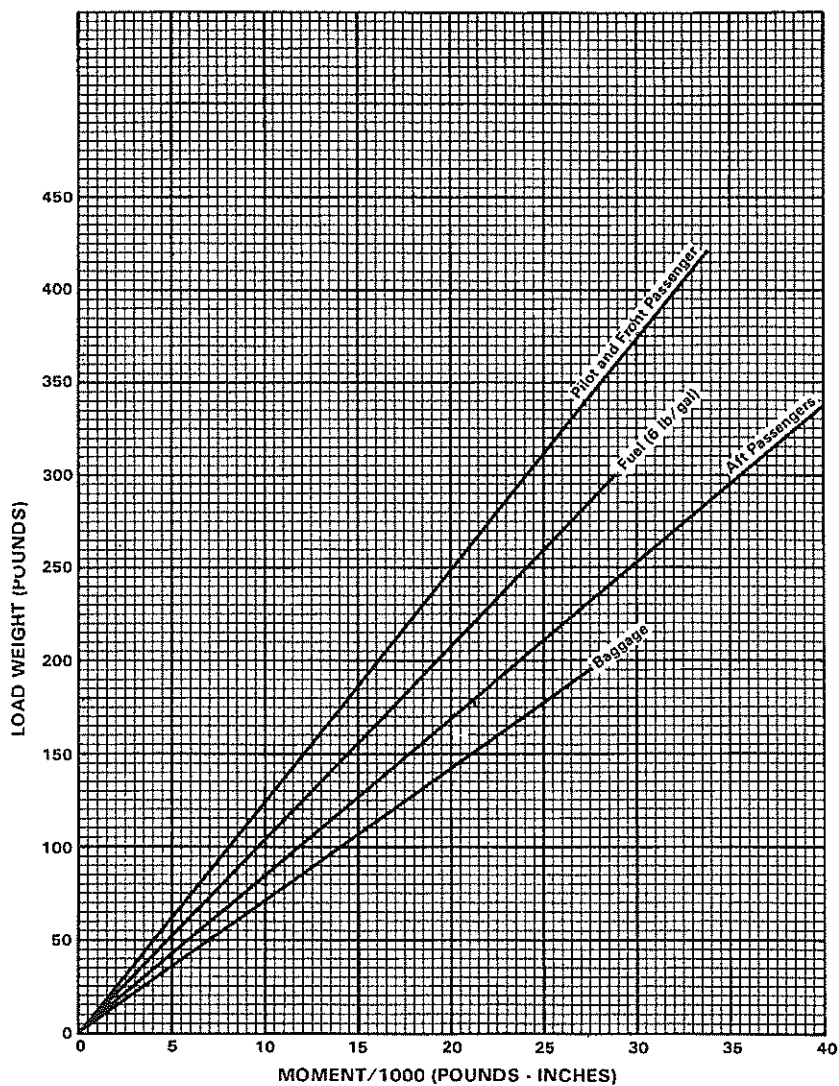
PA-28-161, WARRIOR III

	Weight (Lbs)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight			
Pilot and Front Passenger		80.5	
Passengers (Rear Seats)*		118.1	
Fuel (48 Gallon Maximum)		95.0	
Baggage* (200 Lbs. Maximum)		142.8	
Ramp Weight (2447 Lbs. Normal, 2027 Lbs. Utility Maximum)			
Fuel Allowance For Engine Start, Taxi and Run Up	-7	95.0	-665
Takeoff Weight (2440 Lbs. Normal, 2020 Lbs. Utility Maximum)			

Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Weight and Balance Data Form (Figure 6-5). If the airplane has been altered, refer to the Weight and Balance Record for this information.

*Utility Category Operation - No baggage or aft passengers allowed.

WEIGHT AND BALANCE LOADING FORM
Figure 6-11

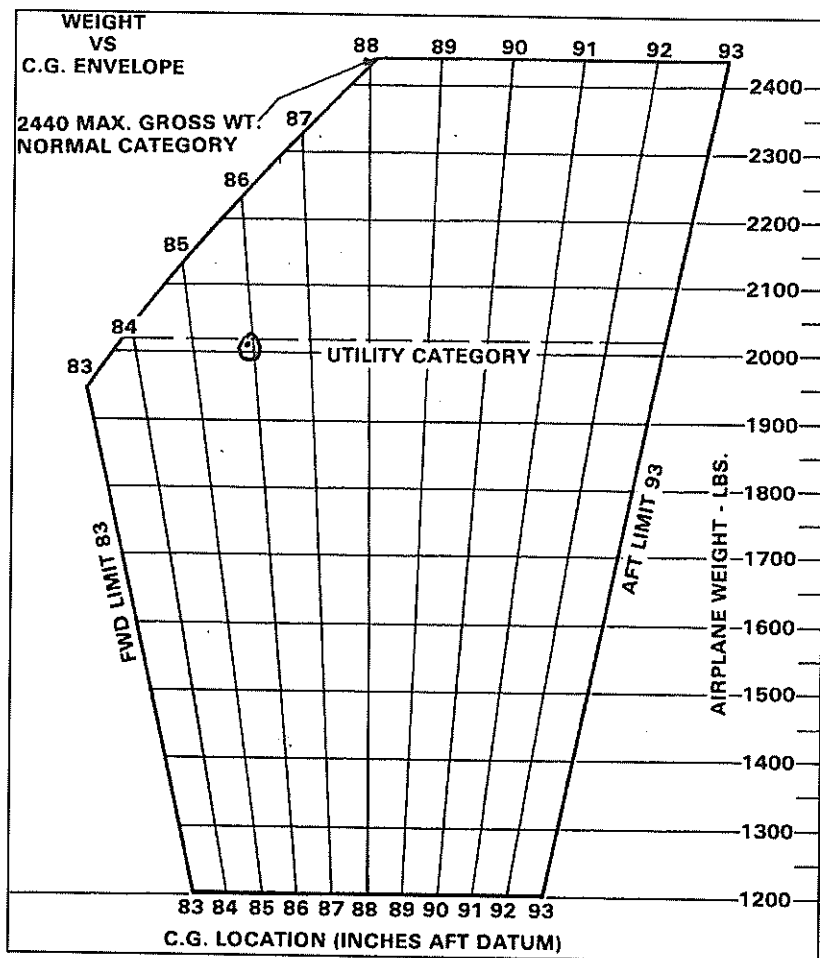


LOADING GRAPH

Figure 6-13

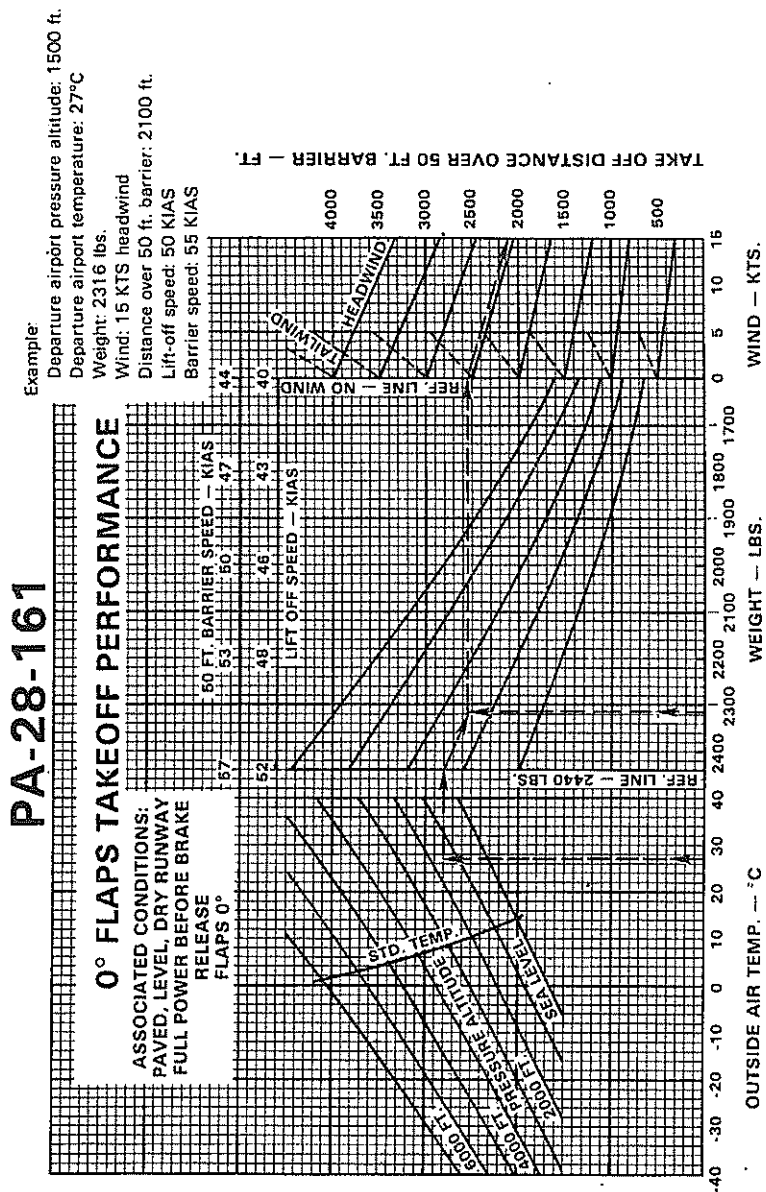
SECTION 6
WEIGHT AND BALANCE

PA-28-161, WARRIOR III



C.G. RANGE AND WEIGHT
Figure 6-15

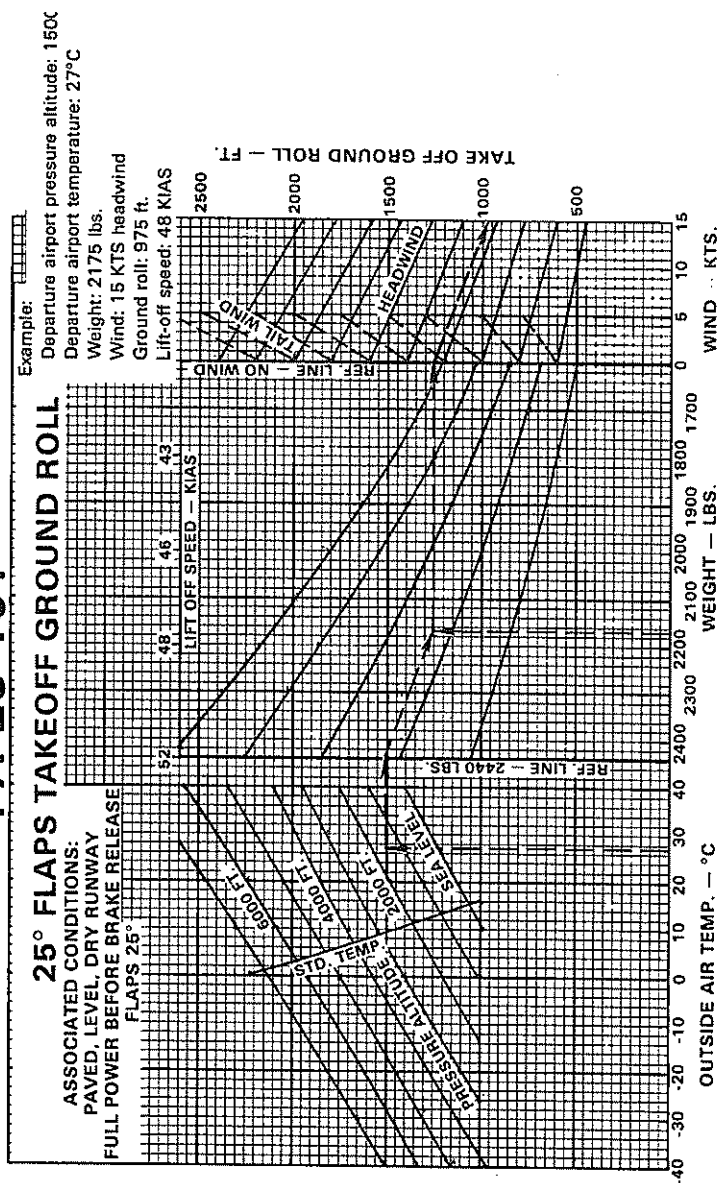
SECTION 5 PERFORMANCE



0° FLAPS TAKEOFF PERFORMANCE

Figure 5-9

PA-28-161



25° FLAPS TAKEOFF GROUND ROLL

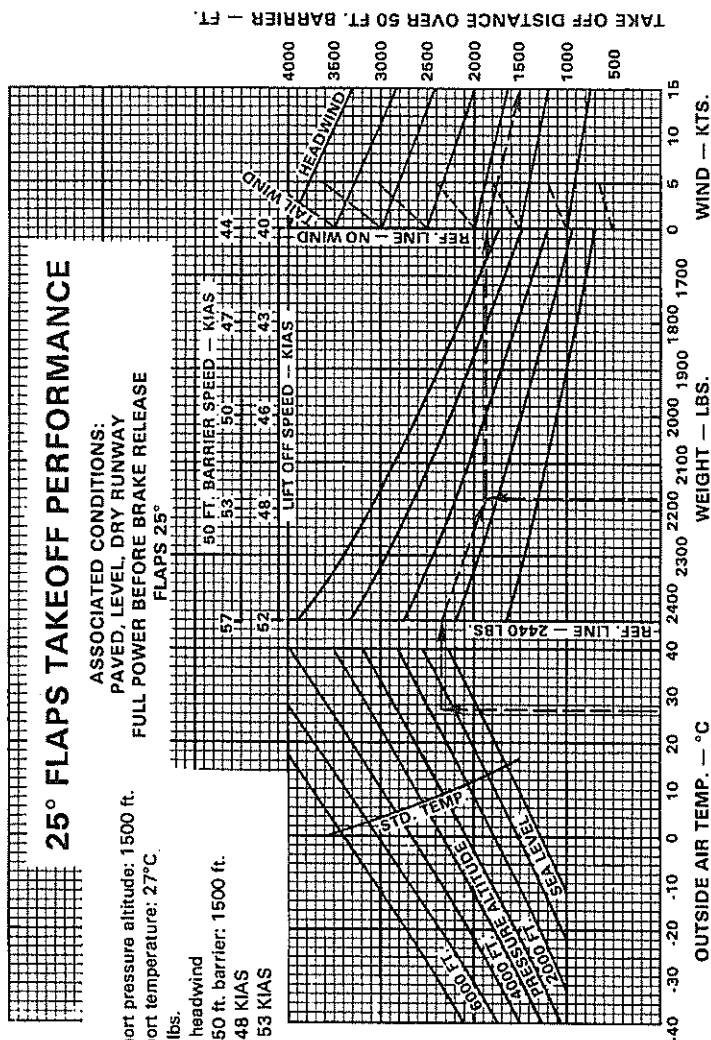
Figure 5-11

PA-28-161-1

25° FLAPS TAKEOFF PERFORMANCE

**ASSOCIATED CONDITIONS:
PAVED, LEVEL, DRY RUNWAY
FULL POWER BEFORE BRAKE RELEASE**

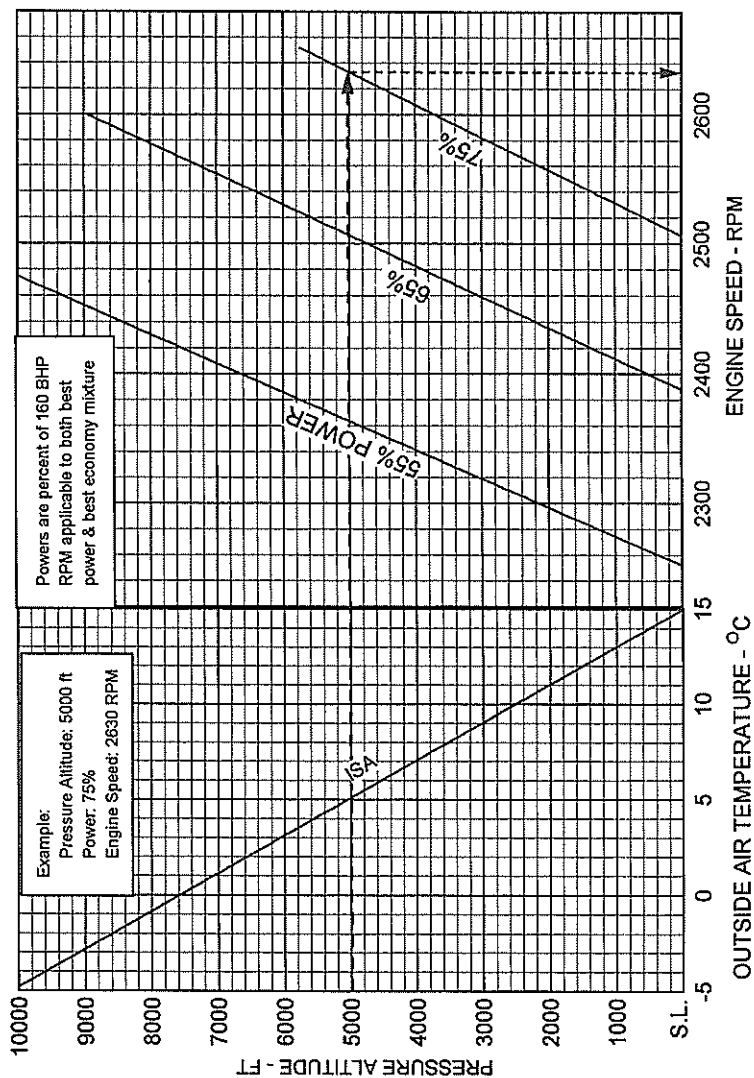
Example:
Departure airport pressure altitude: 1500 ft.
Departure airport temperature: 27°C
Weight: 2175 lbs.
Wind: 15 KTS headwind
Distance over 50 ft. barrier: 1500 ft.
Lift-off speed: 48 KIAS
Barrier speed: 53 KIAS



25° FLAPS TAKEOFF PERFORMANCE

Figure 5-13

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



ENGINE PERFORMANCE

Figure 5-15

ASSOCIATED CONDITIONS:

POWER: FULL THROTTLE

FULL RICH

UP

79 KIAS

PRESSURE ALTITUDE: 5000FT

OAT: 16° C (ISA + 11° C)

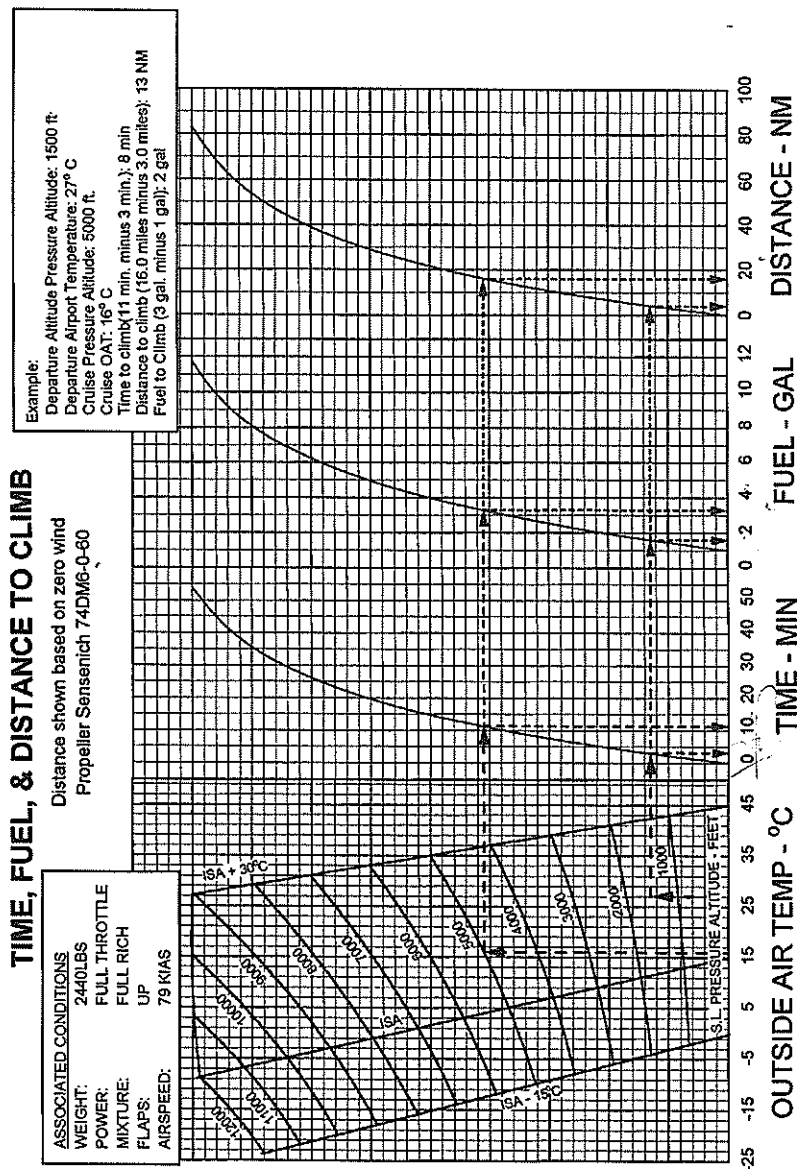
MAX RATE OF CLIMB: 374 FPM

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

Figure 5-17

SECTION 5 PERFORMANCE

PA-28-161, WARRIOR III



FUEL, TIME AND DISTANCE TO CLIMB

Figure 5-19

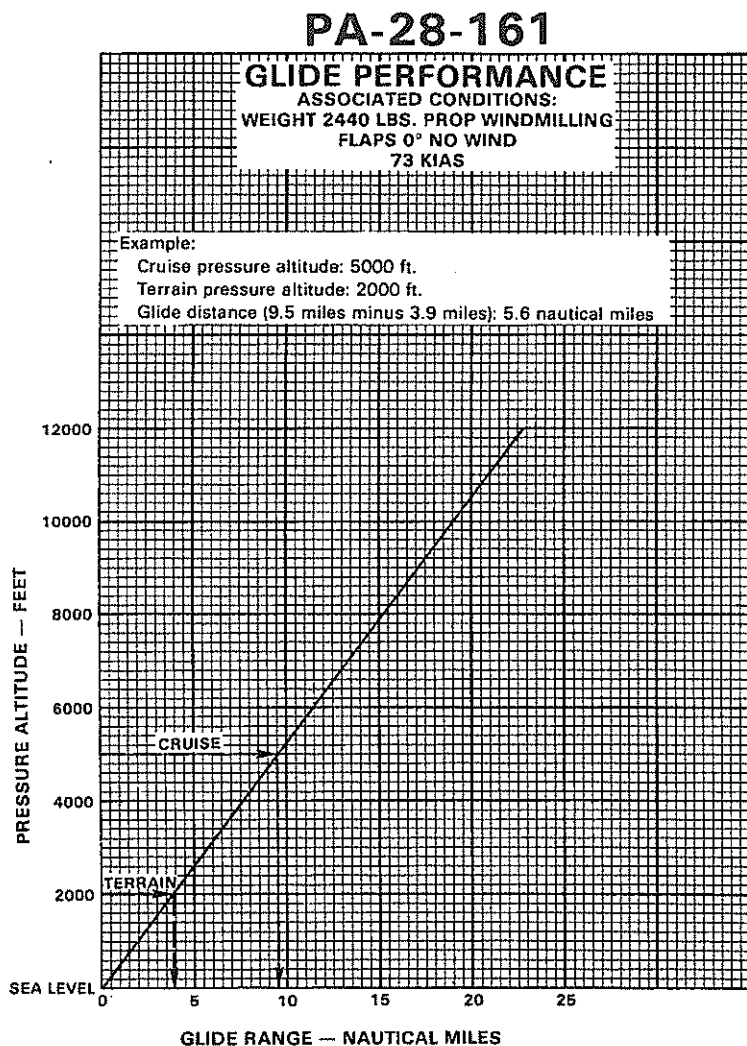
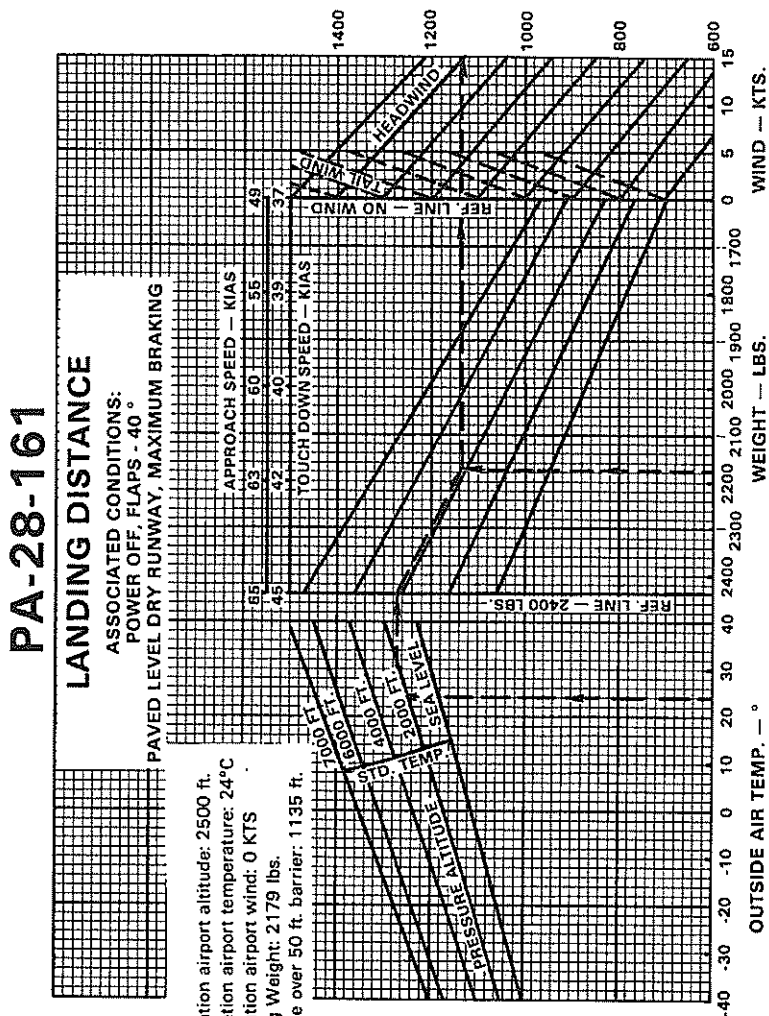


Figure 5-33



LANDING DISTANCE

Figure 5-35