

LOAD DATA SHEET - PAGE 1 OF 3 - AEROPLANE WEIGHT

Aeroplane Type:..... PIPER PA28-161

Registration Marking:..... **VH-NRA** Serial No: 2842214

ISSUE:.... ONE

DATE:..... 9.Mar.10

EXPIRY:..... INDEFINITE

AEROPLANE WEIGHT AND CENTRE OF GRAVITY DATA:

ITEM	WEIGHT (Kg)	ARM (mm aft of datum)	MOMENT (Kg.mm)	CABIN CONFIGURATION
EMPTY	716.6	2186.3	1566655	FOUR SEATS TOTAL
STANDARD CABIN CONFIGURATION				
THE FOLLOWING IMPERIAL UNITS ARE FOR USE WITH THE PILOTS HANDBOOK SECTION SIX				
	(lb)	(in)	(in.lb)	
EMPTY	1579.8	86.07	135980	FOUR SEATS TOTAL

NOTE: The above empty weights include:-

BASIC EMPTY - unusable fuel and full oil

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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.

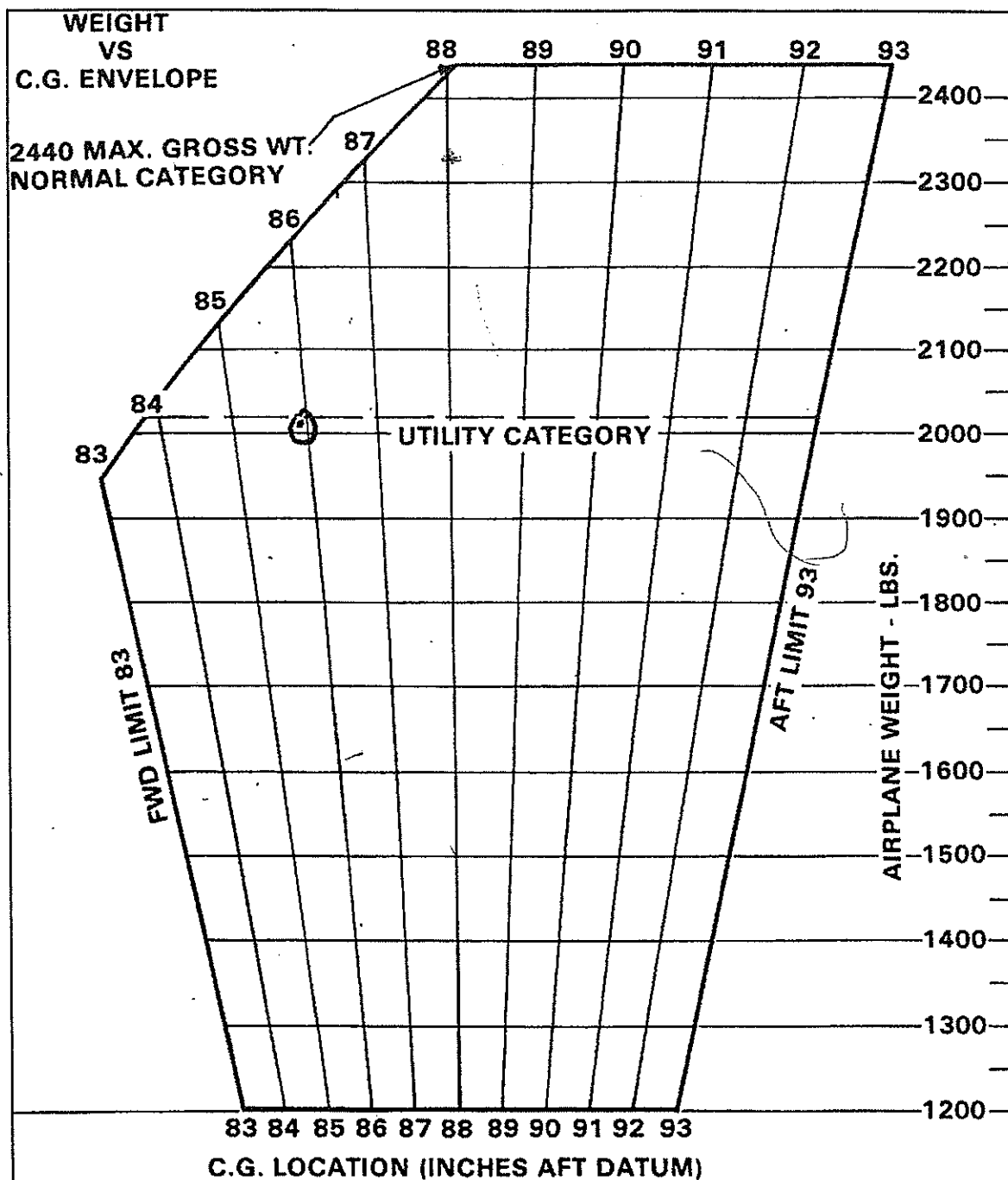
*Utility Category Operation - No baggage or aft passengers allowed.

WEIGHT AND BALANCE LOADING FORM

Figure 6-11

SECTION 6
WEIGHT AND BALANCE

PA-28-161, WARRIOR III



C.G. RANGE AND WEIGHT

Figure 6-15

LOAD CHART BC/PA161/1 PIPER PA28-161 WARRIOR

*APPLICABLE TO ALL PA28-161
WARRIOR II AND III AIRCRAFT
S/N 28-7716001 AND ON.

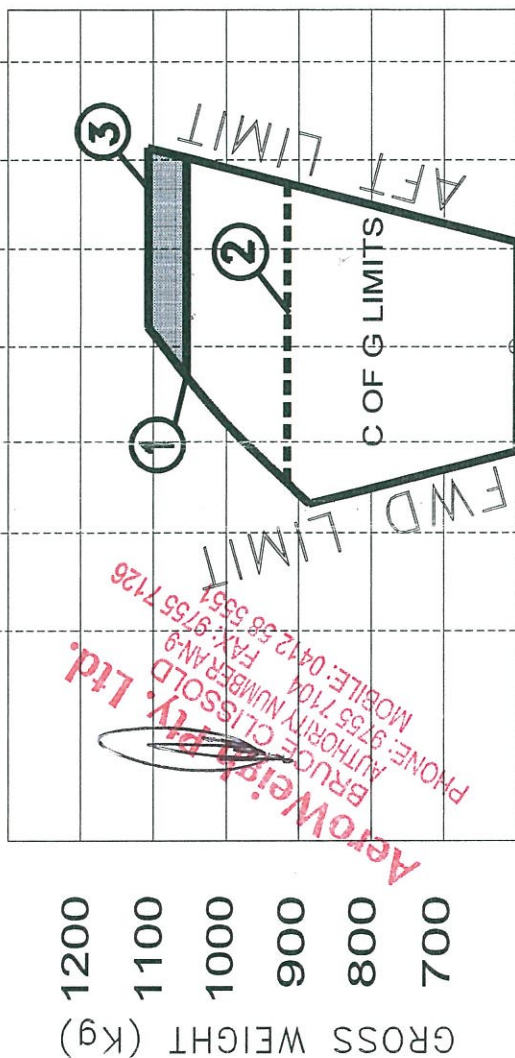
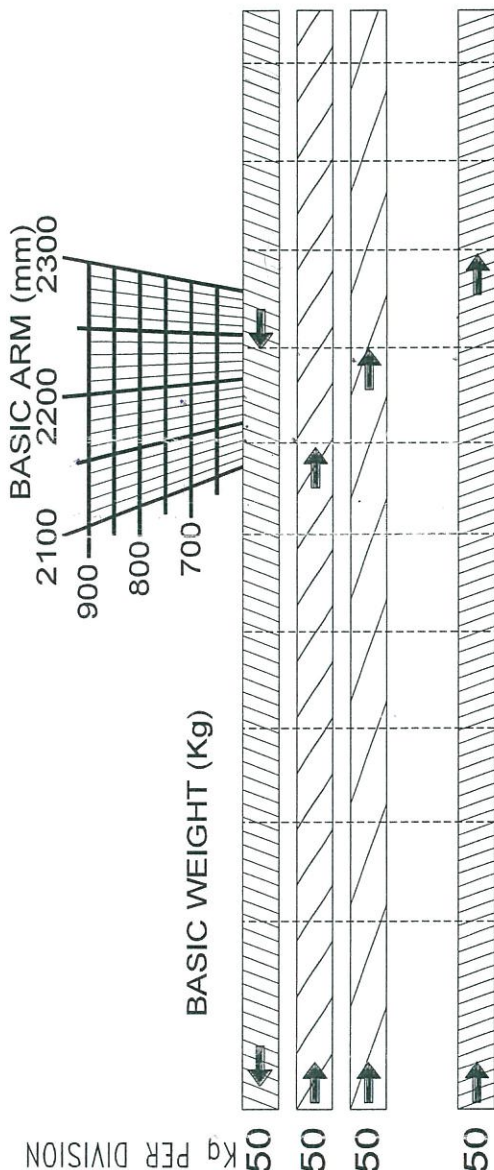
Kg PER DIVISION

BASIC WEIGHT	
PILOT/CO-PILOT	
REAR SEATS	
BAGGS (MAX 90.7)	
ZERO FUEL WEIGHT	
FUEL (MAX 130)	
TAKE-OFF WEIGHT	
FUEL BURN-OFF	
LANDING WEIGHT	

MAXIMUM TAKE-OFF WEIGHT

- ① NORMAL — 1055 kg
② UTILITY — 916 kg
③ NORMAL — 1107 kg

☐	☐	BAGGS
☐	☐	



③ OPERATION AT WEIGHTS IN EXCESS OF 1055 KG IS ONLY
APPLICABLE TO AIRCRAFT SERIAL 28-8316001 AND UP
OR ANY AIRCRAFT MODIFIED TO S.T.C. SA00397NY

LOAD CHART BC/PA161/1 PIPER PA28-161 WARRIOR

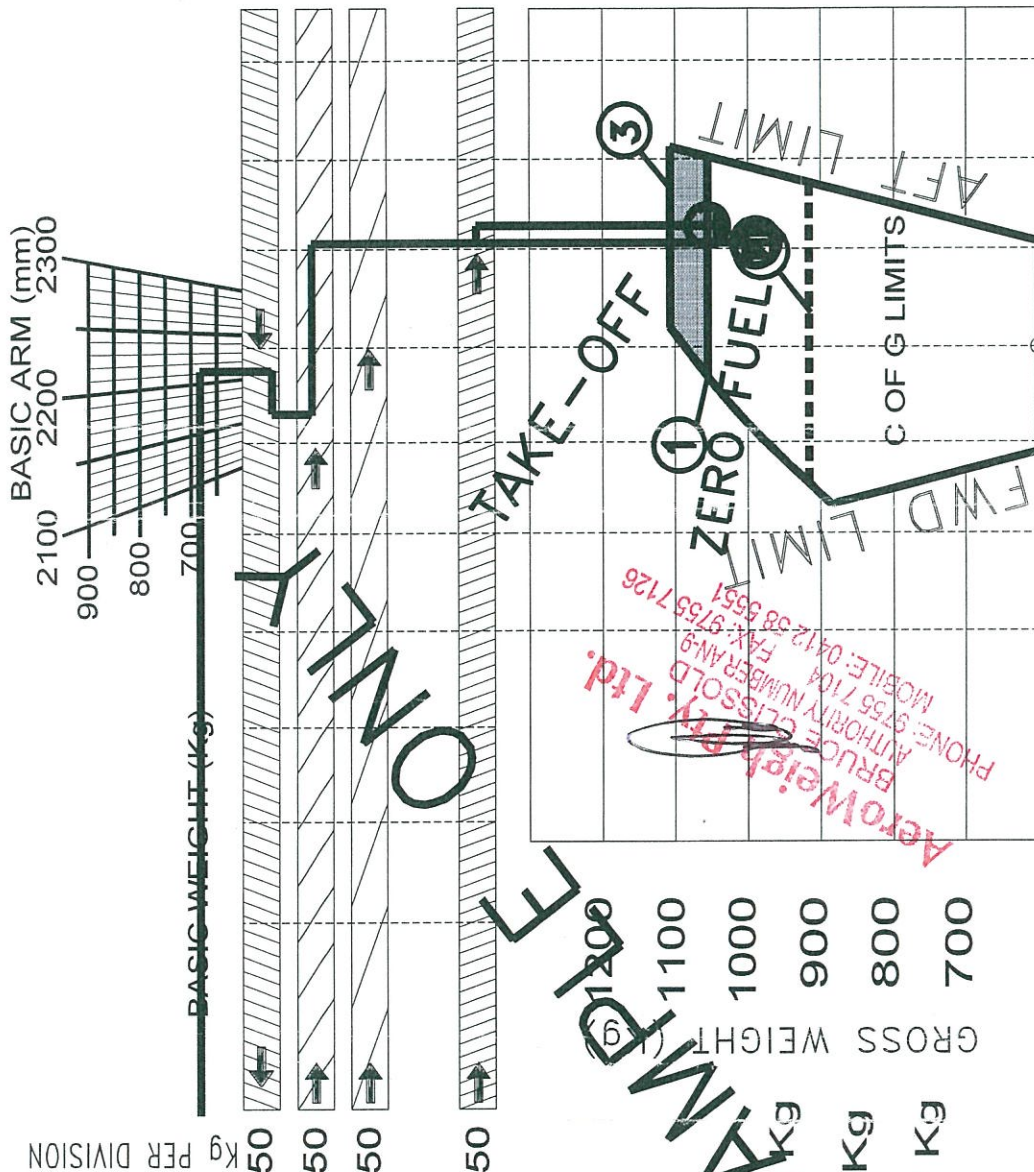
*APPLICABLE TO ALL PA28-161
WARRIOR II AND III AIRCRAFT
S/N 28-7716001 AND ON.

BASIC WEIGHT	682
PILOT/CO-PILOT	154
REAR SEATS	154
BAGGS (MAX 90.7)	—
ZERO FUEL WEIGHT	990
FUEL (MAX 130)	65
TAKE-OFF WEIGHT	1055
FUEL BURN-OFF	40
LANDING WEIGHT	1015

- MAXIMUM TAKE-OFF WEIGHT
- ① NORMAL — 1655 Kg
- ② UTILITY — 916 Kg
- ③ NORMAL — 1107 Kg



BAGGS

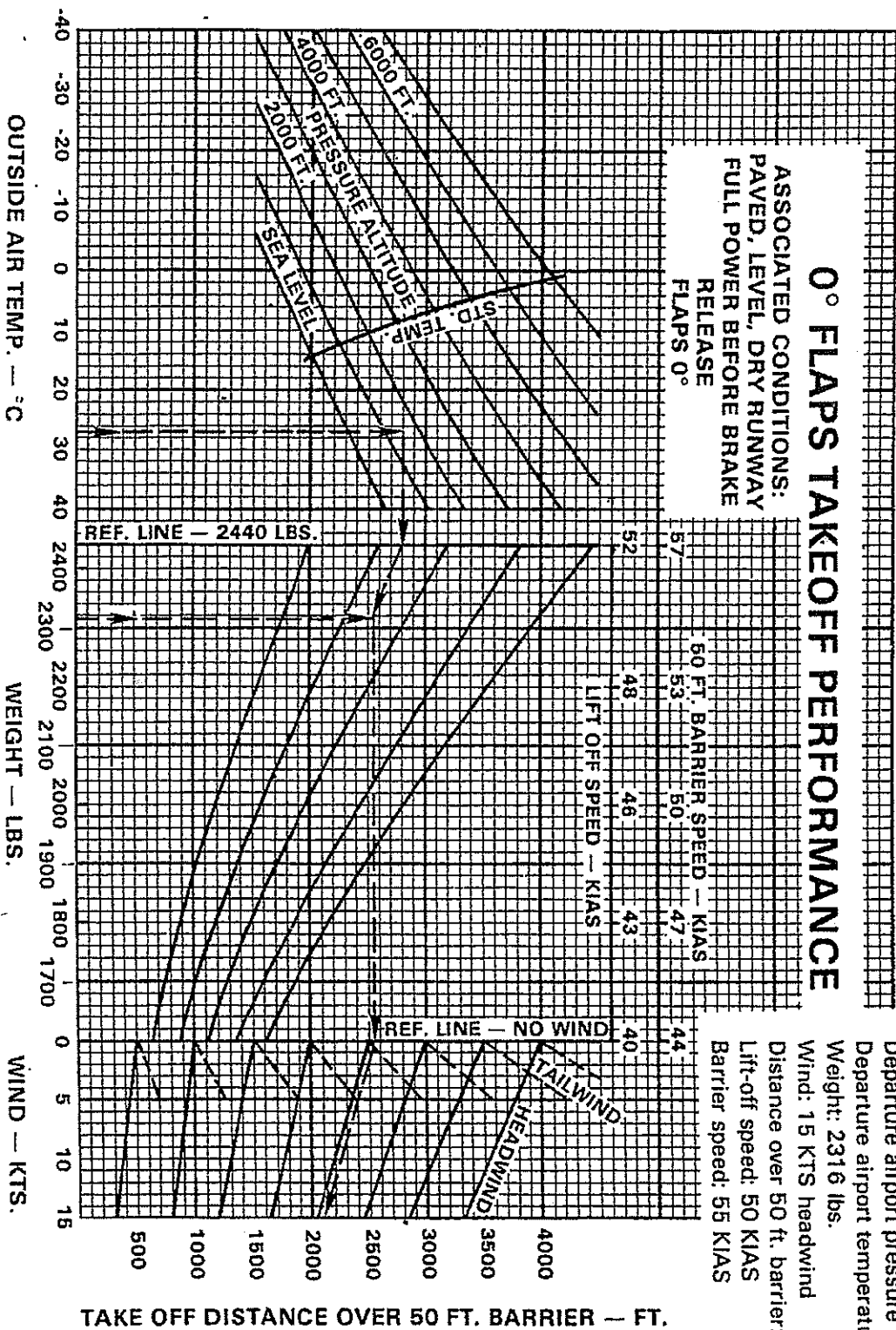


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0° FLAPS TAKEOFF PERFORMANCE

RELEASE
FLAPS 0°

Departure airport pressure altitude:
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



PA-28-161

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.

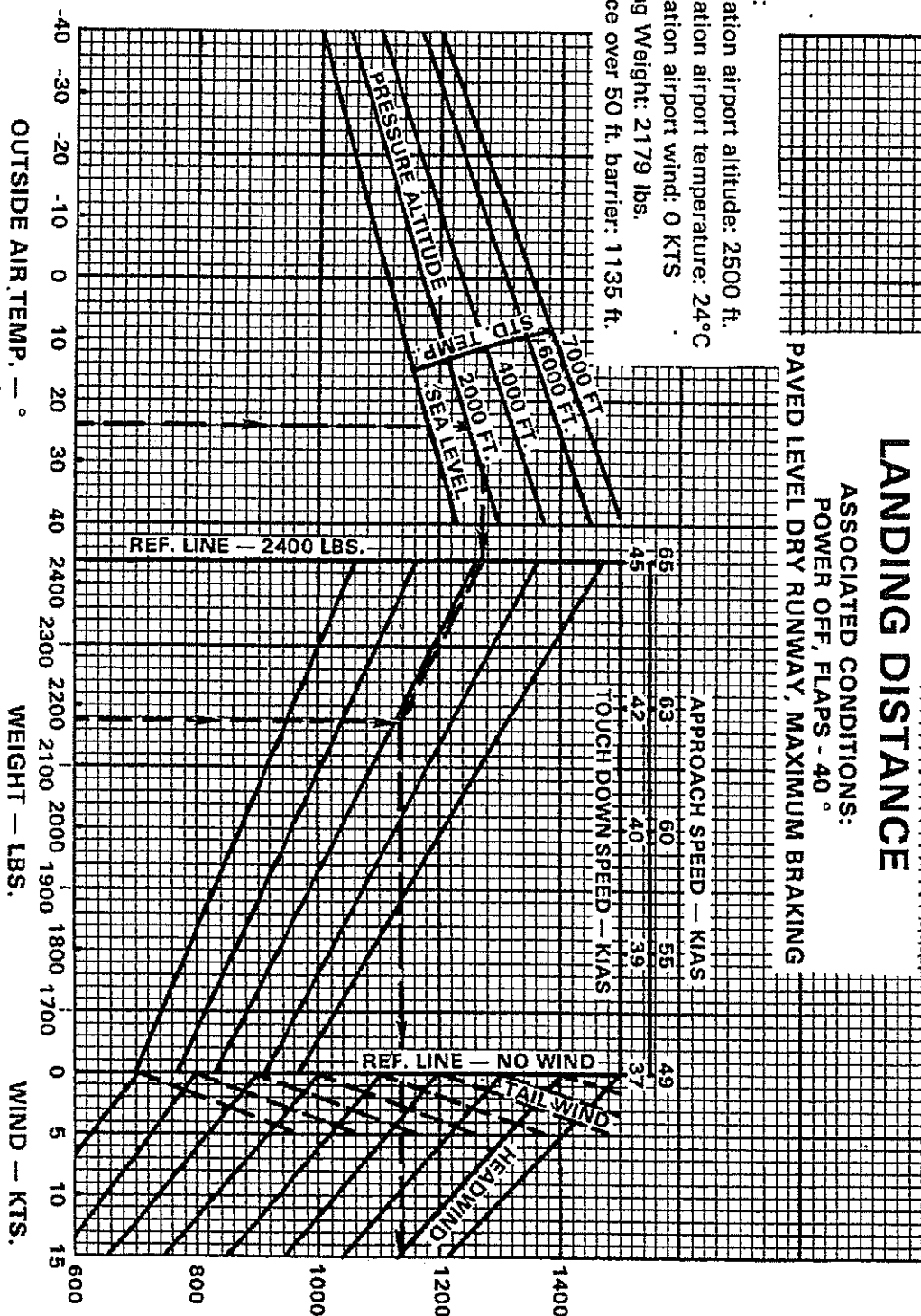


Figure 5-35

LANDING DISTANCE

Climb Gradients

1 Take off climb performance (20.7.4 / 7.1)

In the take-off configuration with landing gear extended, an aeroplane must have the ability to achieve a climb gradient of 6% at takeoff safety speed (TOSS), without ground effect, and with all engines operating at take-off power.

2 En-route climb performance (20.7.4 / 8.3)

Single-engined aeroplanes must have the ability to climb at a gradient of 4.5% at an airspeed not less than 1.2Vs at all heights up to 5000ft in standard atmospheric conditions with the engine operating at maximum continuous power, undercarriage (if retractable) and flaps retracted.

3 Landing Climb performance (20.7.4 / 9.1)

In the landing configuration with all engines operating at take-off power an aeroplane must have the ability to climb at a gradient of 3.2% in standard atmospheric conditions at a speed not exceeding 1.3Vs

Formula

$$\text{RoC} = ((\text{GS} \times 6080) / 60) \times (\text{CG} / 100)$$

Or

$$\text{CG} = \frac{\text{ROC}}{(\text{G.S X 6080}) / 60}$$

ASSOCIATED CONDITIONS:**GROSS WEIGHT:** 2440 lb.**POWER:**

FULL THROTTLE

MIXTURE:

FULL RICH

FLAPS:

UP

AIRSPEED:

79 KIAS

MAXIMUM RATE OF CLIMB**EXAMPLE****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

CLIMB PERFORMANCE

Figure 5-17