

Part A - Weight & Balance Maintenance Data (to be completed by a Weigh- and Balance Control Officer (WBCO))						Revision and Re-issue Required	INDEFINITE
Weight and Balance Report Ref: BC/XGN/1							
Centre of Gravity Position (CG) Is LONGITUDINAL (delete as appropriate)		Configuration: FOUR SEATS					
AFT		measured.....of datum					
Aircraft Longitudinal/Lateral Datum							
1991.4 MM FWD OF W.L.E..							
Empty Weight and Empty Weight CG							
Weighing or Validation dated.....				15-Oct-21			
Weight (Kg)		Arm (mm)		Index			
804.31		2275.4		1830157			
Maximum and Minimum Empty Weight & Empty Weight CG.							
Revision and Re-issue by WBCO is required when calculated running totals are							
Weight (Kg)		Arm (mm)					
814.31		2281.03					
794.31		2269.85					
MORE THAN							
or LESS THAN							

[illegible]

WEIGHT AND BALANCE RECORD

LOAD DATA SHEET - PAGE 1 OF 3 - AEROPLANE WEIGHT

Aeroplane Type..... PIPER PA28-181
Registration Marking..... VH-XGN Serial No. 2881483

ISSUE: ... ONE	DATE:..... 15-Oct-21	EXPIRY:..... INDEFINITE
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AEROPLANE WEIGHT AND CENTRE OF GRAVITY DATA.

ITEM	WEIGHT (Kg)	ARM (mm aft of datum)	MOMENT (K.g.mm)	CABIN CONFIGURATION
EMPTY	804.3	2275.4	1830157	FOUR SEATS TOTAL
STANDARD CABIN CONFIGURATION				
THE FOLLOWING IMPERIAL UNITS ARE FOR USE WITH THE PILOTS HANDBOOK SECTION SIX				
	(lb)	(in)	(in.lb)	
EMPTY	1773.2	89.58	158851	FOUR SEATS TOTAL

NOTE: The above empty weights include:

EMPTY - unusable fuel and full oil

AeroWeigh Pty. Ltd.
BRUCE CLARKE
AUSCRAFT (AUST) PTY LTD
MOBILE 0412 58 5531

LOAD DATA SHEET - PAGE 2 OF 3 - EQUIPMENT LIST

This list details the items included in the empty weight shown in Page 1.

Aeroplane Type..... PIPER PA28-181
Registration Marking..... VH-XGN Serial No. 2881483

ISSUE: ... ONE	DATE:..... 15-Oct-21
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ENGINES PROPELLERS	
Lycoming O 360 A4M.....	1
Sensenich 76EM8S14.....	1
COMPASSES	
Magnetic.....	1
Remote Indicating	1
THERMOMETERS	
Cyl Head Temp	1
Oil Temp.....	1
Outside Air Temp.....	1
INDICATORS	
Airspeed.....	1
Standby Airspeed.....	G5
Direction Indicator.....	1
Exhaust Gas Temp.....	1
Hourmeters.....	2
Fuel Flow.....	1
Altitude Indicator.....	1
Standby Gyro Horizon.....	G5
Tacho Non recording.....	1
Trim Indicator.....	2
Vertical Speed.....	1
Altitude Alert.....	1
CO Detector.....	Guardian
RADIO EQUIPMENT (TYPE)	
ADF.....	0
Autopilot.....	GARMIN GFC700
Speakers.....	1
Gloves.....	PART NAVS
Headsets.....	1
GPS/Com.....	GARMIN GIA64W(x2)
Audio/Mkr.....	GARMIN GMA1360
Txponder	GARMIN GTX345R
PFD.....	GARMIN GDU1050
MFD.....	GARMIN GDU1054
ADAHRS.....	GARMIN GSU75
Magnetomit.....	GARMIN GMU44B
Analyzer.....	GARMIN GE471B
Traffic.....	GARMIN GTS800
TAWS B.....	GARMIN G1000
Standby.....	GARMIN G5
Magnetomit	GARMIN GMU11
INSTRUMENTS	
Altimeters.....	1
Standby Altimeters.....	G5
Volt/Ammeters.....	1
Clocks	1
GAUGES	
Engine Oil Pressure.....	1
Fuel Contents	2
Fuel Pressure.....	1
LIGHTS	
Tail Strobo.....	1
White Strobes (Tips).....	2
Inst. Full Panel.....	1
Inst. Overhead	2
Landing	2
Map.....	2
Navigation.....	4
Cockpit Courtesy.....	1
Passenger O/Head.....	2
RESTRAINT EQUIPMENT	
Lap-sash Inertia.....	4
Inflatable Restraints.....	2
Rear Baggage Straps.....	2
ELECTRICAL EQUIPMENT	
Alternator.....	1
Batteries	2
Starters.....	1
External Power.....	1
MISCELLANEOUS EQUIPMENT	
Dual Controls	1
Fire Ext.(Portable).....	1
Heated Pilot.....	1
Cabin Heat (Muff).....	1
Alternate Static.....	1
Piper Vent Fan.....	1
Airconditioner.....	1
Electric Trim.....	1
Wheel Fairings.....	0
DISPOSABLE LOAD LIST	
Torch.....	1
V.S.Beacon E.L.T.....	Artes 1000
Tow Bar.....	1

* ITEMS MARKED ARE PART OF ELECTRONIC DISPLAYS

LOAD DATA SHEET - PAGE 3 OF 3 - LOADING SYSTEM

Aeroplane Type..... PIPER PA28-181

Registration Marking:..... VH-XGN Serial No: 2881483

ISSUE:.... ONE DATE:.... 15-Oct-21

The following is valid only for the Empty Weight specified in Page 1 of 3 Aeroplane Weight dated.. 15-Oct-21 and is based on calculations using Occupant Weights of 60 to 90 Kg each.

A...NORMAL CATEGORY OPERATIONS:-

1. OCCUPANTS:-

Load Front to Rear (i.e. Front seats first)
Load Heaviest Passenger in front row

2. BAGGAGE COMPARTMENT LIMITATIONS:-

Number of	Maximum
Occupants	Baggage
One (pilot)	65.0 Kg
Two	90.7 Kg
Three	35.6 Kg
Four	9.0 Kg

3. FUEL:-

Fuel is limited only by All Up Weight

MAXIMUM TAKE-OFF WEIGHT1157 Kg

B...UTILITY CATEGORY OPERATIONS:-

No limitations except Utility Category all up weight limit

MAXIMUM TAKE-OFF WEIGHT966 Kg

NOTE: In utility category operations, the baggage compartment must be empty and the rear seat unoccupied.

NOTE: If a full Loading Check is required, refer to Instructions and Charts in the Pilots Handbook Section Six.

PIPER PA28-181 LOADING SYSTEM

Registration VH-XGN Aircraft Type PIPER PA28-181 Serial Number 2881483

INSTRUCTIONS FOR LOAD CHART BC/PA181/1 (14 SEP 1997)

PIPER PA28-181 ARCHER

1. Use standard trim sheet procedures. Enter top of chart using current Basic EMPTY Weight and Arm obtained from the Load Data Sheet.
2. Total load weights in left hand column obtaining Zero Fuel Weight and Take-off Weight.
Draw horizontal lines on the C.G. Limits Graph at the bottom of the chart.
3. From the Basic Weight Versus Arm point at the top of the chart draw a line VERTICALLY down until it intersects one of the oblique lines on the first load item scale.
4. Move HORIZONTALLY along the load item scale in the direction of the arrow and mark a point appropriate to the load indicated in the left hand column. (e.g. with 50 Kg Div a 100 Kg load = 2 Div.)
5. Draw a VERTICAL line down to the next load item scale and repeat the above process. (Exercise care in plotting values of segments noting that occupant scale segments are 50 Kg)
6. Proceed VERTICALLY down the load item scales, moving to left or right as indicated by the arrows and marking scale divisions as appropriate to each load.
7. From the last cabin load item scale draw a line VERTICALLY down to intersect the Zero Fuel line previously drawn on the limits graph
8. Continue down to the fuel scales and mark off the appropriate load noting that FUEL has 50 Kg Div scales. then draw a line VERTICALLY down from the last fuel point to intersect the Take off Weight line previously drawn on the limits graph.
9. The two intersection points above must not exceed the boundaries of the limits graph (heavily lined). If either point does, then the load must be rearranged and loading rechecked with steps 2 to 8.

DO NOT EXCEED MAXIMUM WEIGHTS SHOWN ON THE CHART

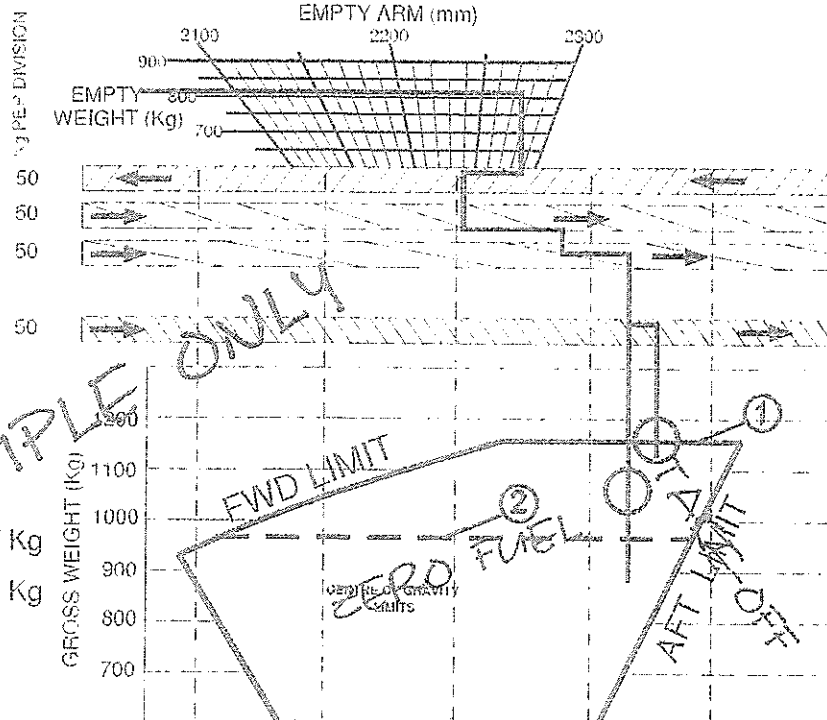
LOAD CHART BC/PA181/1 PIPER PA28-181 ARCHER

APPLICABLE TO ALL PA28-181
ARCHER II AND III AIRCRAFT
S/N 28-7690001 AND ON

EMPTY WEIGHT	804
PILOT/CO-PILOT	150
REAR SEATS	75
BAGS (MAX 90.7)	30
ZERO FUEL WEIGHT	1059
FUEL (MAX 130)	98
TAKE-OFF WEIGHT	1157
FUEL BURN-OFF	75
LANDING WEIGHT	1082

MAXIMUM TAKE-OFF WEIGHT

- ① NORMAL — 1157 Kg
② UTILITY — 966 Kg



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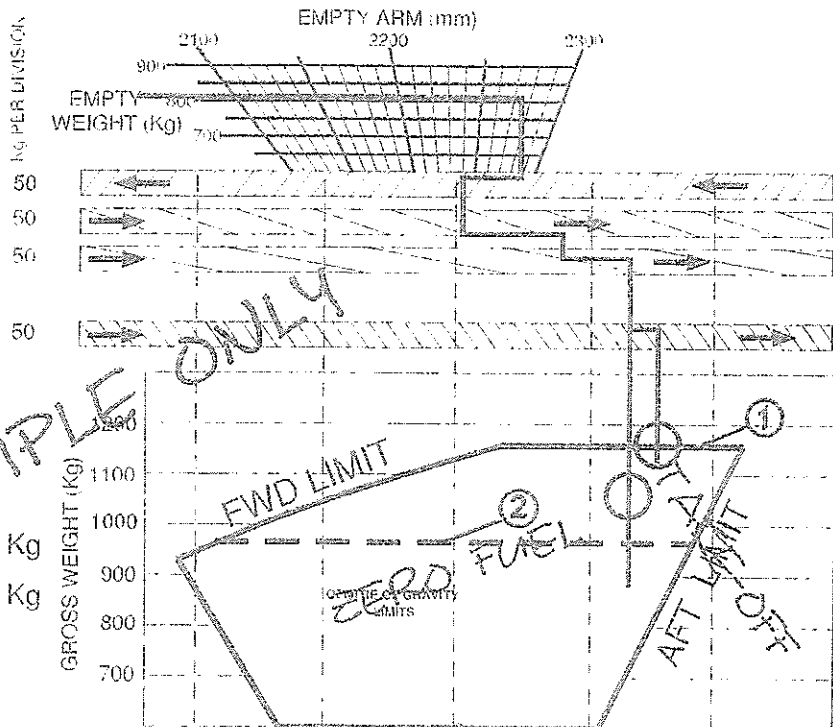
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MAXIMUM TAKE-OFF WEIGHT

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SECTION 6
WEIGHT AND BALANCE

PA-28-181, ARCHER 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 (2558 Lbs. Normal, 2138 Lbs. Utility Maximum)			
Fuel Allowance For Engine Start, Taxi and Run Up	-8	95.0	-760
Takeoff Weight (2550 Lbs. Normal, 2130 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 ensure 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.

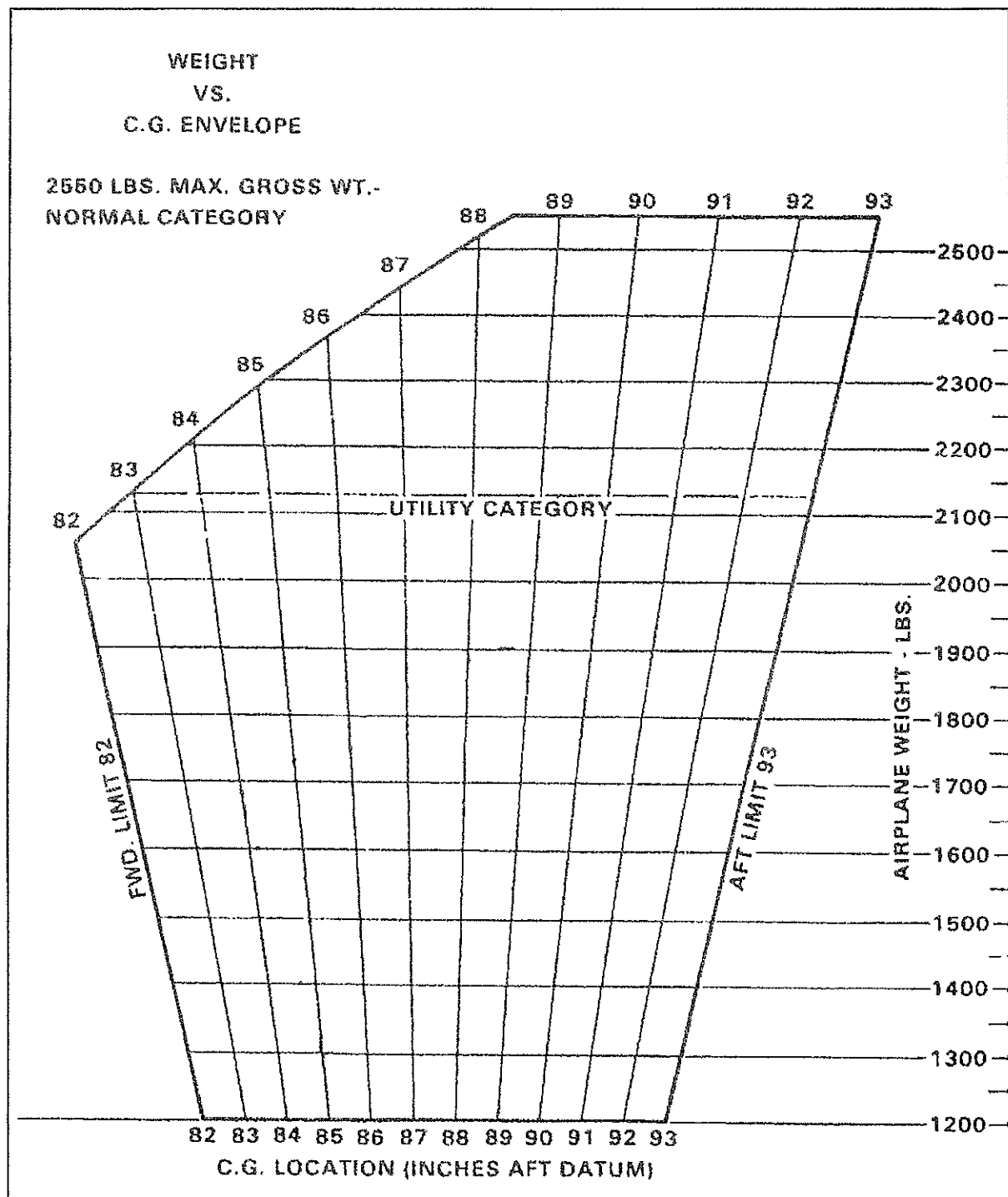
*Utility Category Operation - No baggage or rear passengers allowed.

WEIGHT AND BALANCE LOADING FORM

Figure 6-11

SECTION 6
WEIGHT AND BALANCE

PA-28-181, ARCHER III



C.G. RANGE AND WEIGHT

Figure 6-15

FLAPS UP TAKEOFF PERFORMANCE

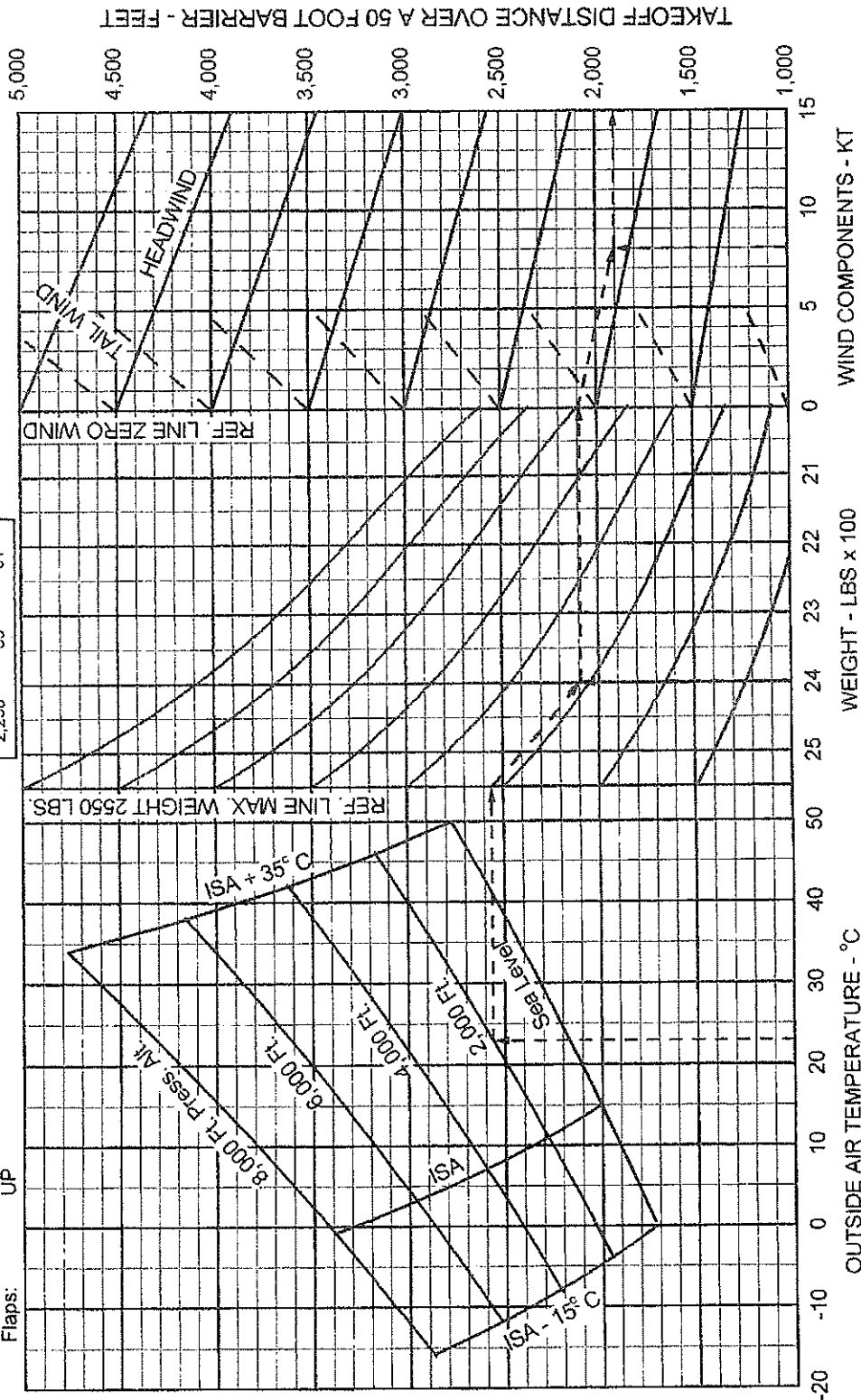
ASSOCIATED CONDITIONS:

Power: FULL THROTTLE BEFORE BRAKE RELEASE
Air Conditioner: OFF
Runway: PAVED, LEVEL, & DRY
Airspeed: REFER TO TABLE AT RIGHT
Propeller: SENSENICH 76EM8S14-0-62
Flaps: UP

EXAMPLE:

Depart Airport Pressure Alt: 2,000 Ft.
Temperature: 23° C
Gross Weight: 2,400 Lb.
Headwind: 8 Kt.
Takeoff Distance: 1907 Ft.

TAKEOFF SPEEDS		KIAS
WT	LIFTOFF	50 FT
2,350	60	65
2,450	58	64
2,350	57	63
2,250	56	61



FLAPS UP TAKEOFF PERFORMANCE

Figure 5-7

SECTION 5 PERFORMANCE

PA-28-181, ARCHER III

FLAPS UP TAKEOFF GROUND ROLL

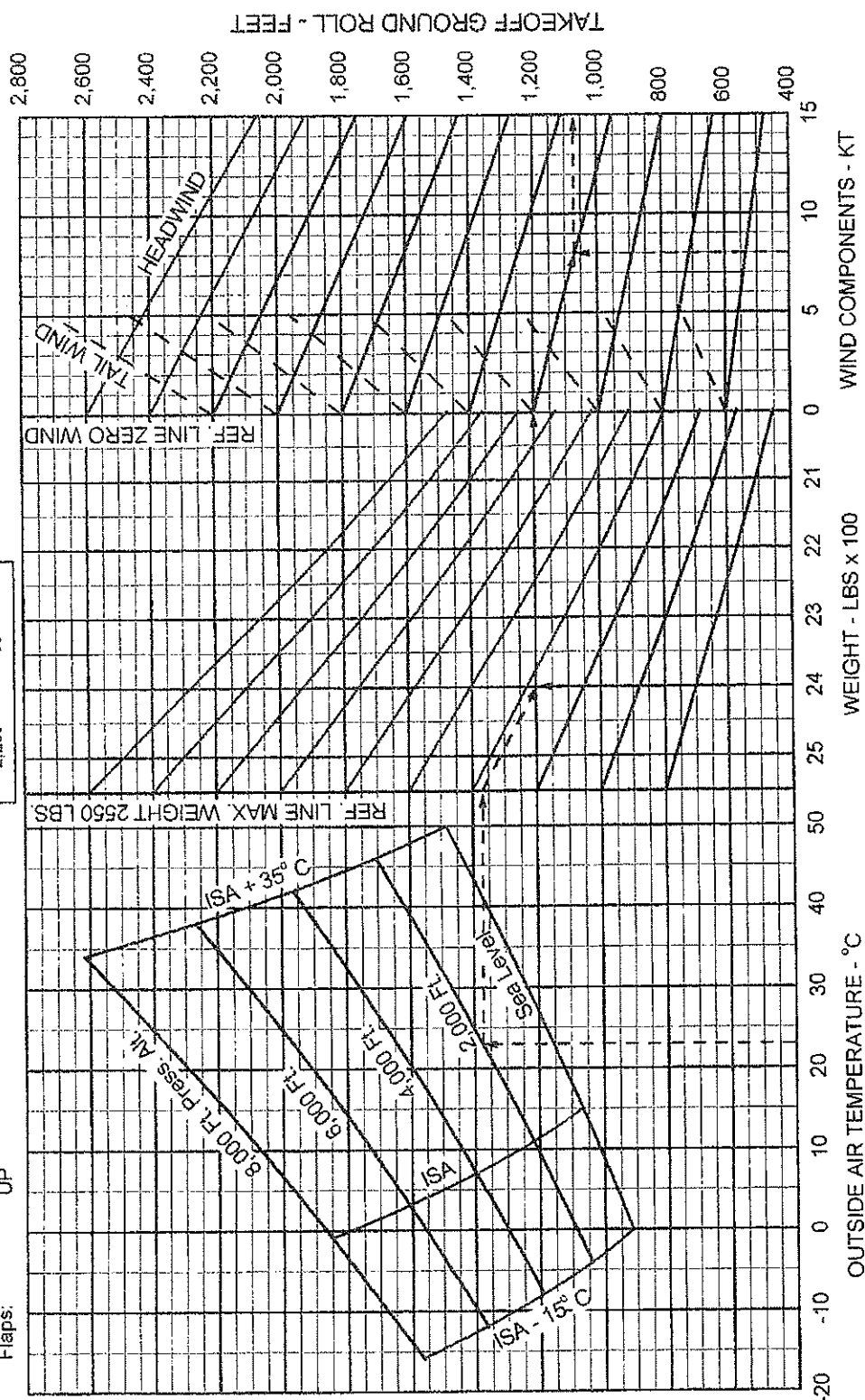
ASSOCIATED CONDITIONS:

Power: FULL THROTTLE BEFORE BRAKE RELEASE
Air Conditioner: OFF
Runway: PAVED, LEVEL, & DRY
Airspeed: REFER TO TABLE AT RIGHT
Propeller: SENSENICH 76EM8S14-0-62
Flaps: UP

EXAMPLE:

Depart Airport Pressure Alt: 2,000 Ft.
Temperature: 23° C
Gross Weight: 2,400 Lb.
Headwind: 8 Kt.
Takeoff Ground Roll: 1073 Ft.

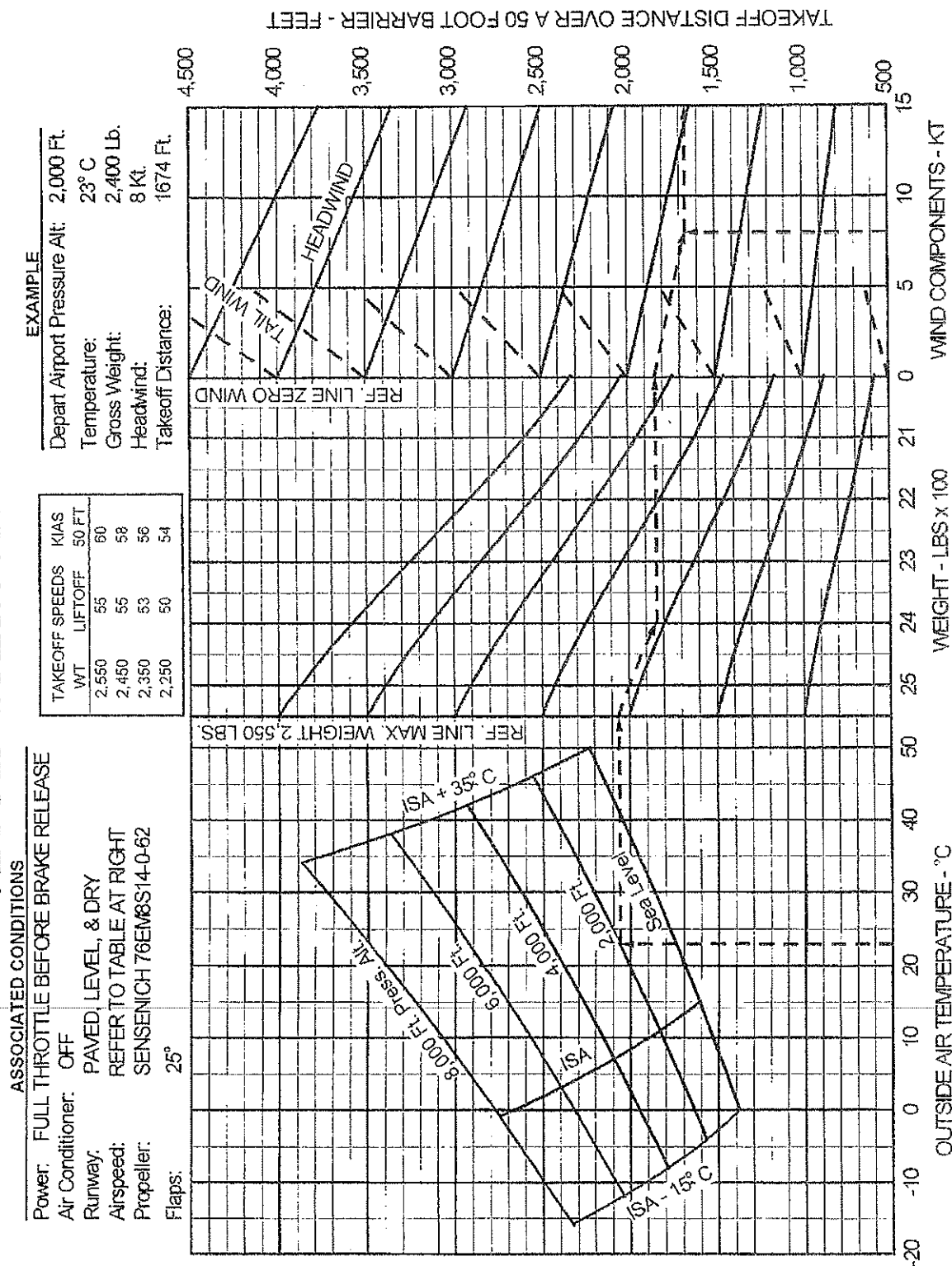
TAKEOFF SPEEDS KIAS	
WT	LIFTOFF
2,550	60
2,450	58
2,350	57
2,250	56



FLAPS UP TAKEOFF GROUND ROLL

Figure 5-11

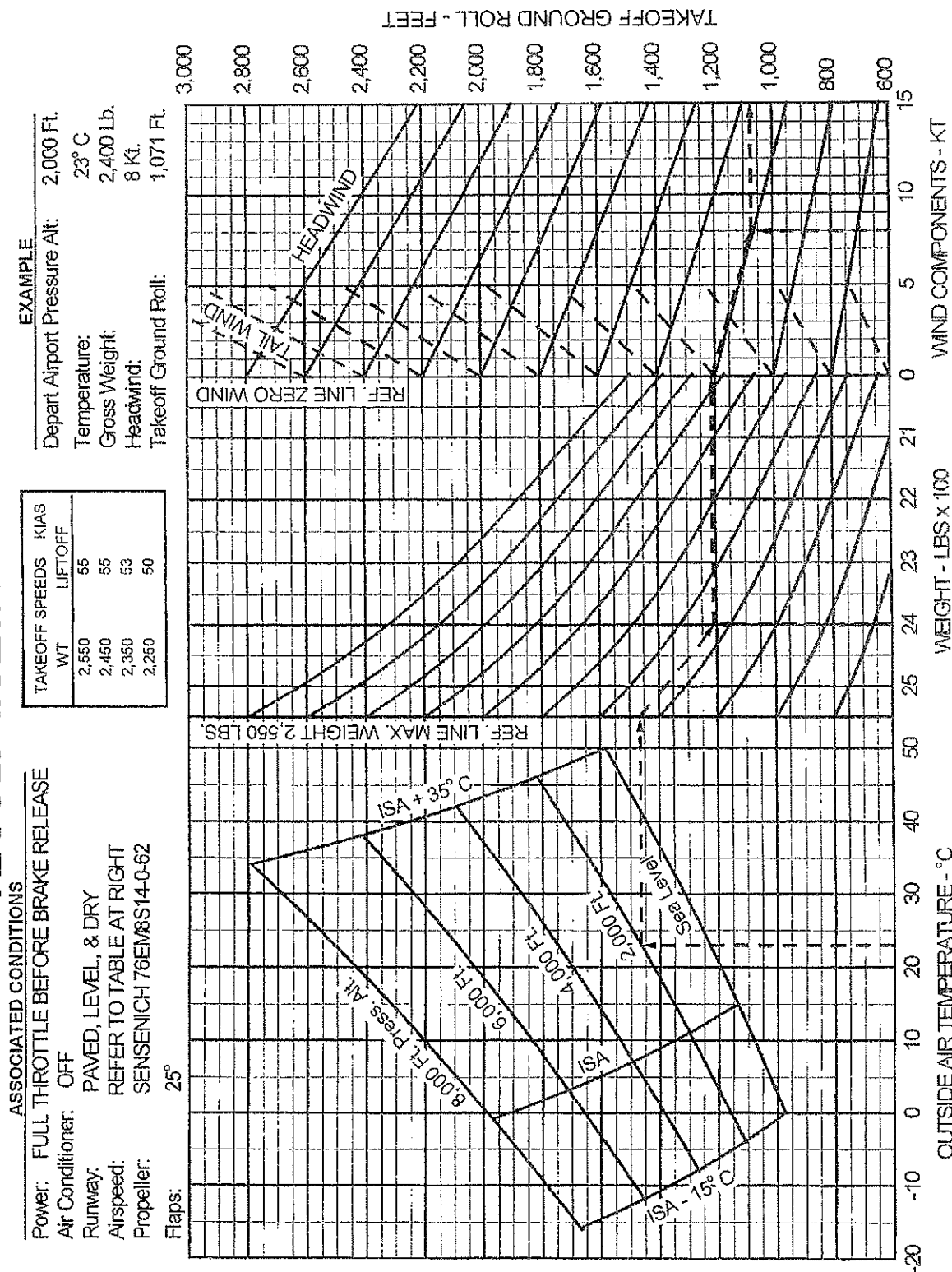
FLAPS 25° TAKEOFF PERFORMANCE



25° FLAPS TAKEOFF PERFORMANCE

Figure 5-9

FLAPS 25° TAKEOFF GROUND ROLL



25° FLAPS TAKEOFF GROUND ROLL

Figure 5-13

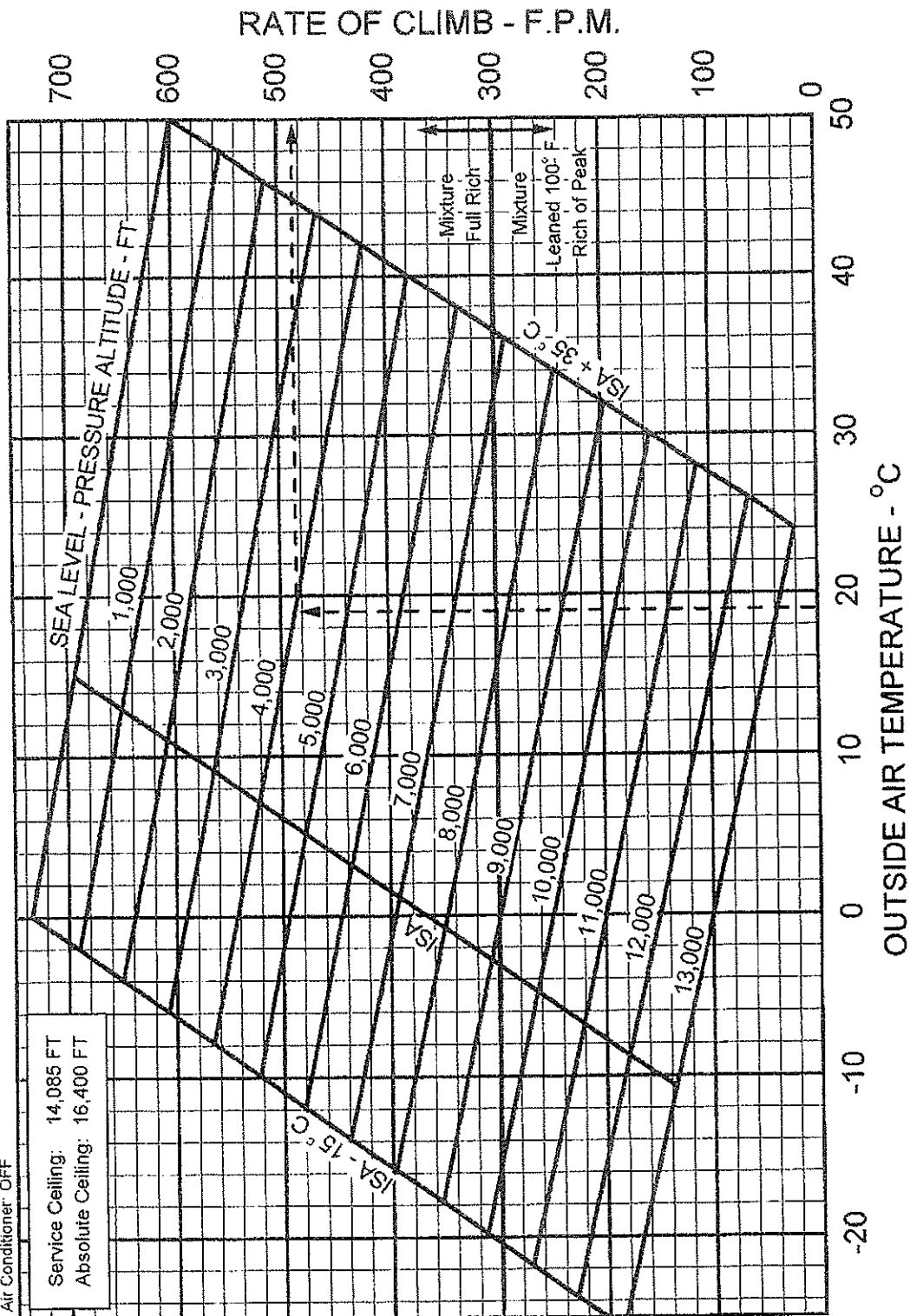
SECTION 5 PERFORMANCE

PA-28-181, ARCHER III

CLIMB PERFORMANCE

EXAMPLE:
Climb Pressure Alt. 4000 Ft
Temperature: 19° C
Rate of Climb: 487 Ft/Min.

ASSOCIATED CONDITIONS:
Gross Weight: 2550 LBS.
Power: FULL THROTTLE
Airspeed: 76 KIAS
Flaps: UP
Air Conditioner: OFF



CLIMB PERFORMANCE

Figure 5-15

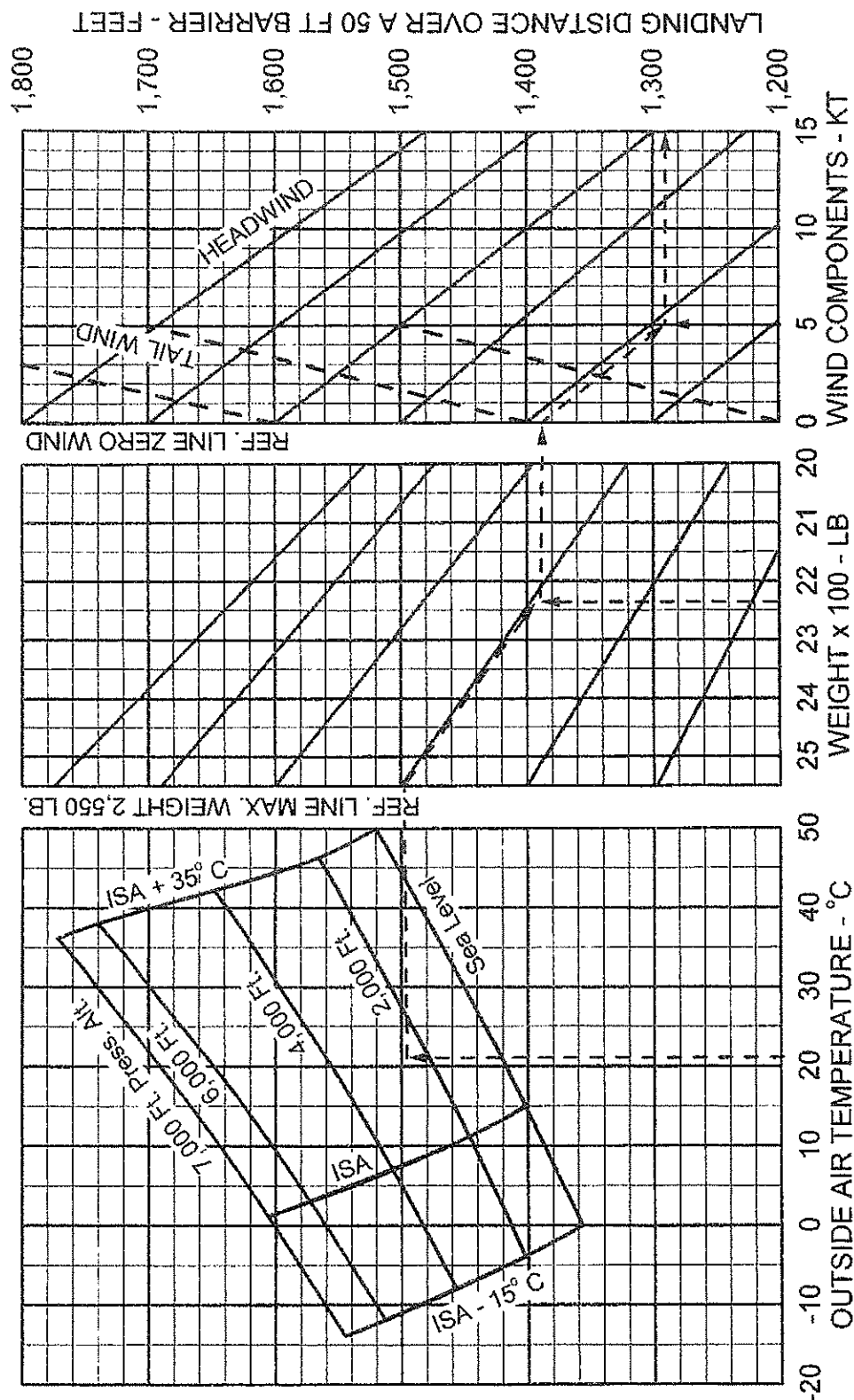
LANDING PERFORMANCE

ASSOCIATED CONDITIONS

Power Off Approach, 40° Flaps, 66 KIAS, Full Stall
Touchdown, Maximum Braking, Paved, Level, Dry Runway

EXAMPLE:

Airport Pressure Altitude: 2,500 FT.
O.A.T.: 21°C
Gross Weight: 2,240 LB.
Headwind: 5 KT.
Landing Distance: 1,290 FT.



LANDING PERFORMANCE

Figure 5-41

LANDING GROUND ROLL**ASSOCIATED CONDITIONS**

Power Off Approach, 40° Flaps, Full Stall Touchdown
Maximum Braking, Paved level, Dry Runway

EXAMPLE:

Airport Pressure Altitude: 2500 Ft.
O.A.T.: 21°C
Gross Weight: 2240 LB.
Headwind: 5 Kt.
Landing Ground Roll: 820 Ft.

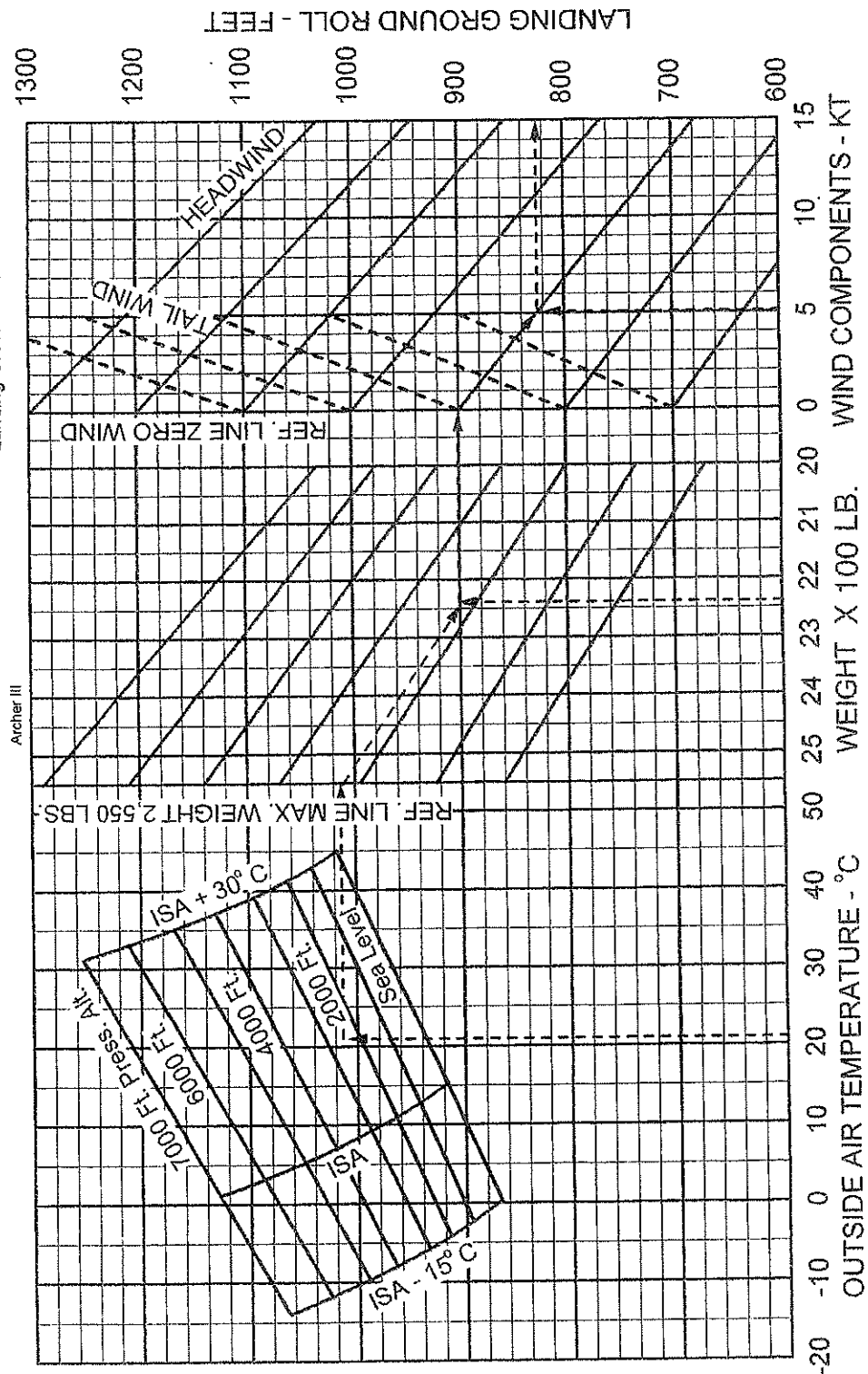
**LANDING GROUND ROLL**

Figure 5-43