LOAD DATA SHEET

AIRWEIGH AVIATION SERVICES
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Aircraft Type: **Piper PA 28-181** Aircraft Registration **VH - NRD**
Sn. 28-43111.

Approved Loading System: **Piper PA28-181 Pilots Operating Handbook**

AUTHORISED	DATE	DATE OF EXPIRY	ISSUE
A.K. SEARLE AV 70	23-1-2008.	Indefinite Subj. CAO 100.7	One.

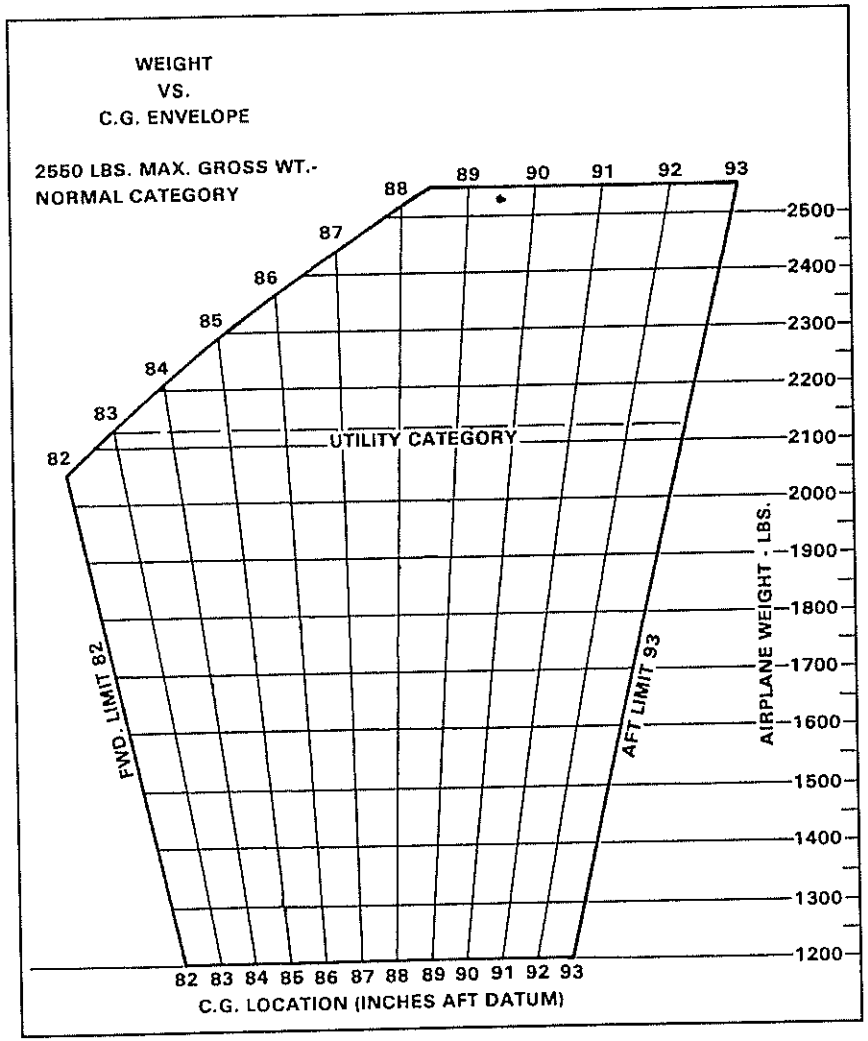
APPROVAL STAMP

ALAN K. SEARLE
APPROVED
DATE 23-1-08
WEIGHT CONTROL AUTHORITY No. AV70

AIRCRAFT WEIGHT AND CENTRE OF GRAVITY DATA

ITEM	WEIGHT.	ARM.	INDEX UNITS	CONFIGURATION
EMPTY	814.5 kg.	2215.0 mm.	1,804,145 kg.mm.	4 Seats.
EMPTY	1795.7 lb.	87.205 inches	156,594 lb.in.	4 Seats
DATUM : 1991mm Fwd of the WLE at the intersection of straight and taper sections.				

Note : Empty weight includes unusable fuel and <u>full</u> engine oil.



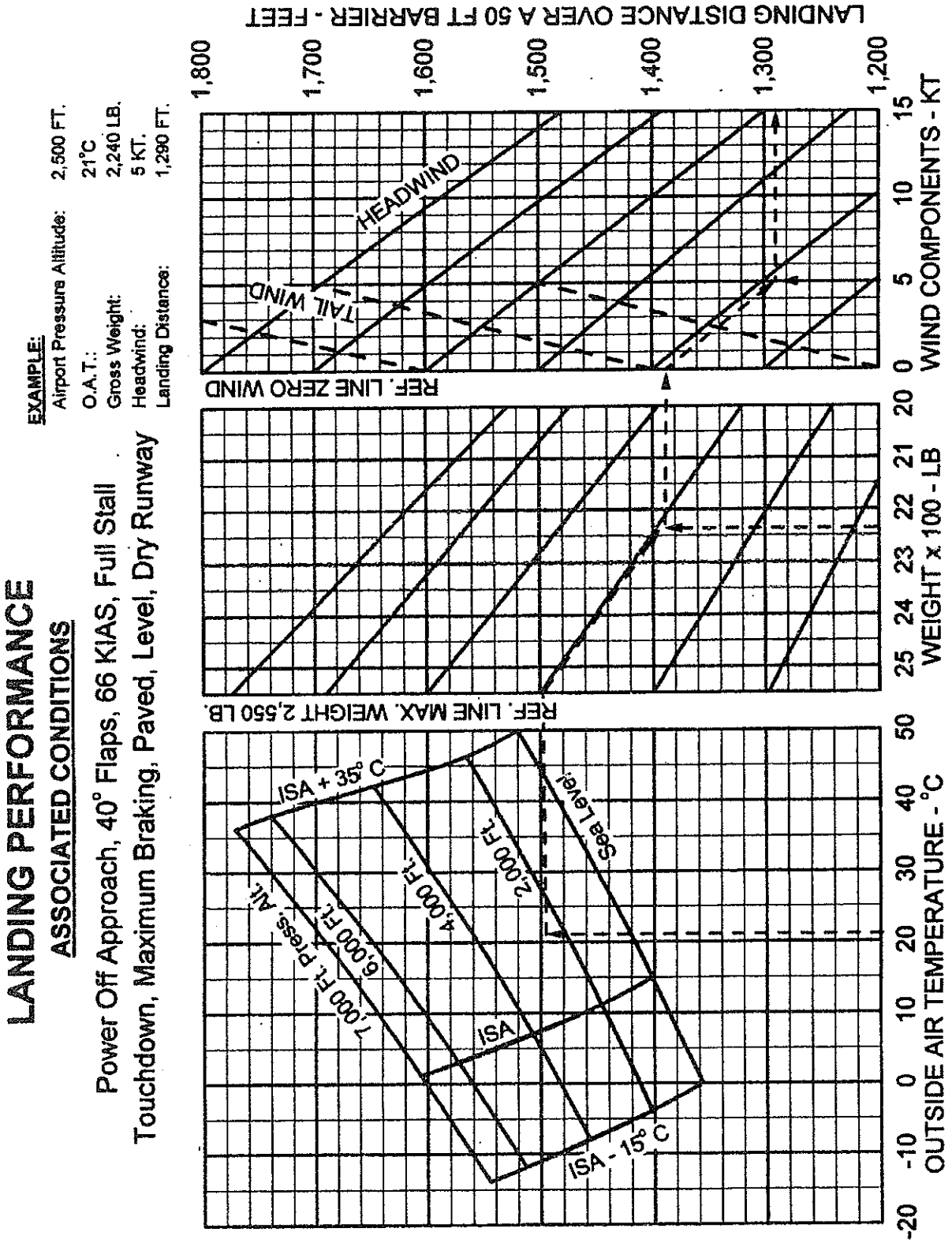
C.G. RANGE AND WEIGHT
Figure 6-15

	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)			

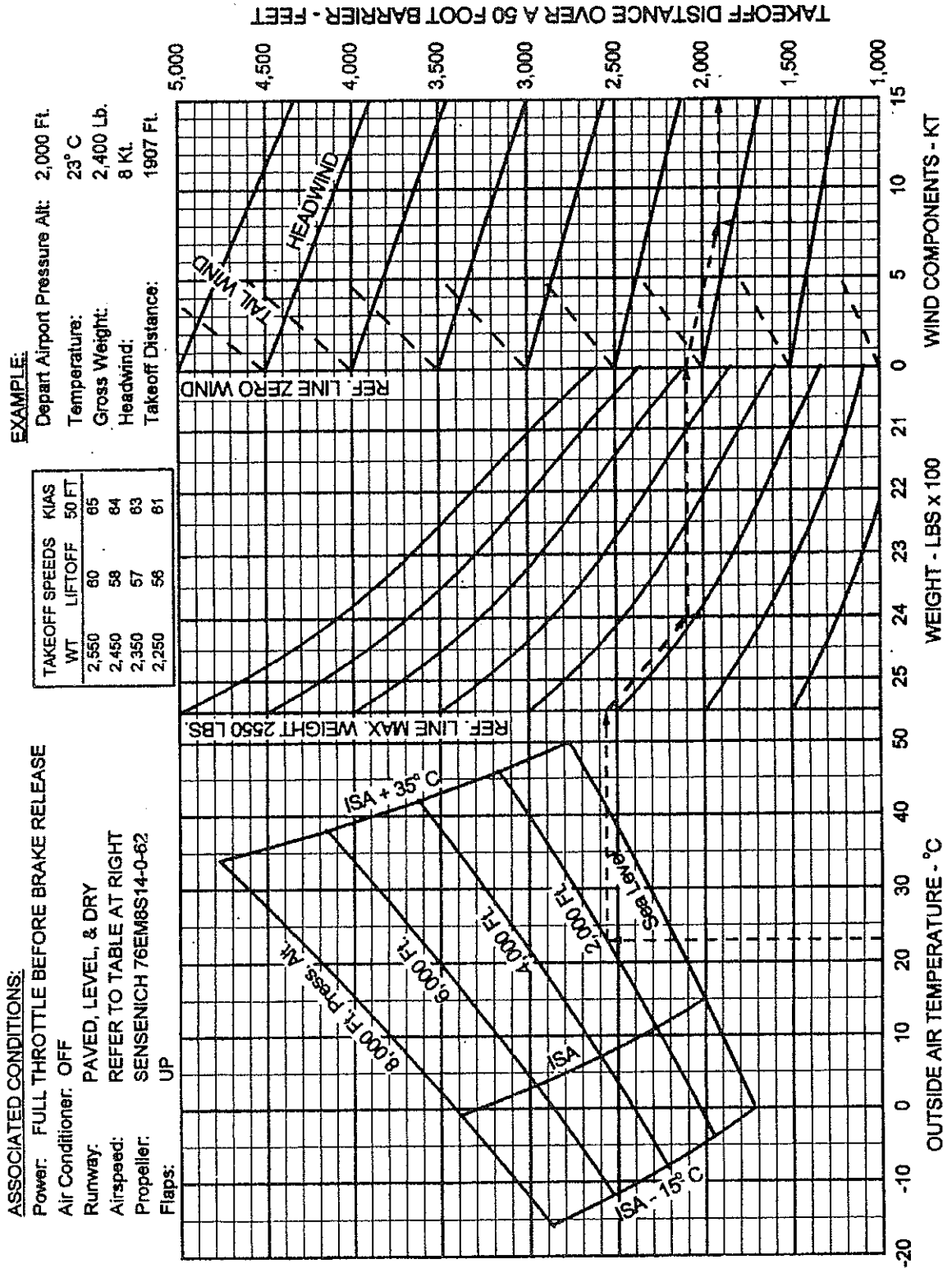
Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Weight and Balance Data Form (Figure 6-5). If the airplane has been altered, refer to the Weight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

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

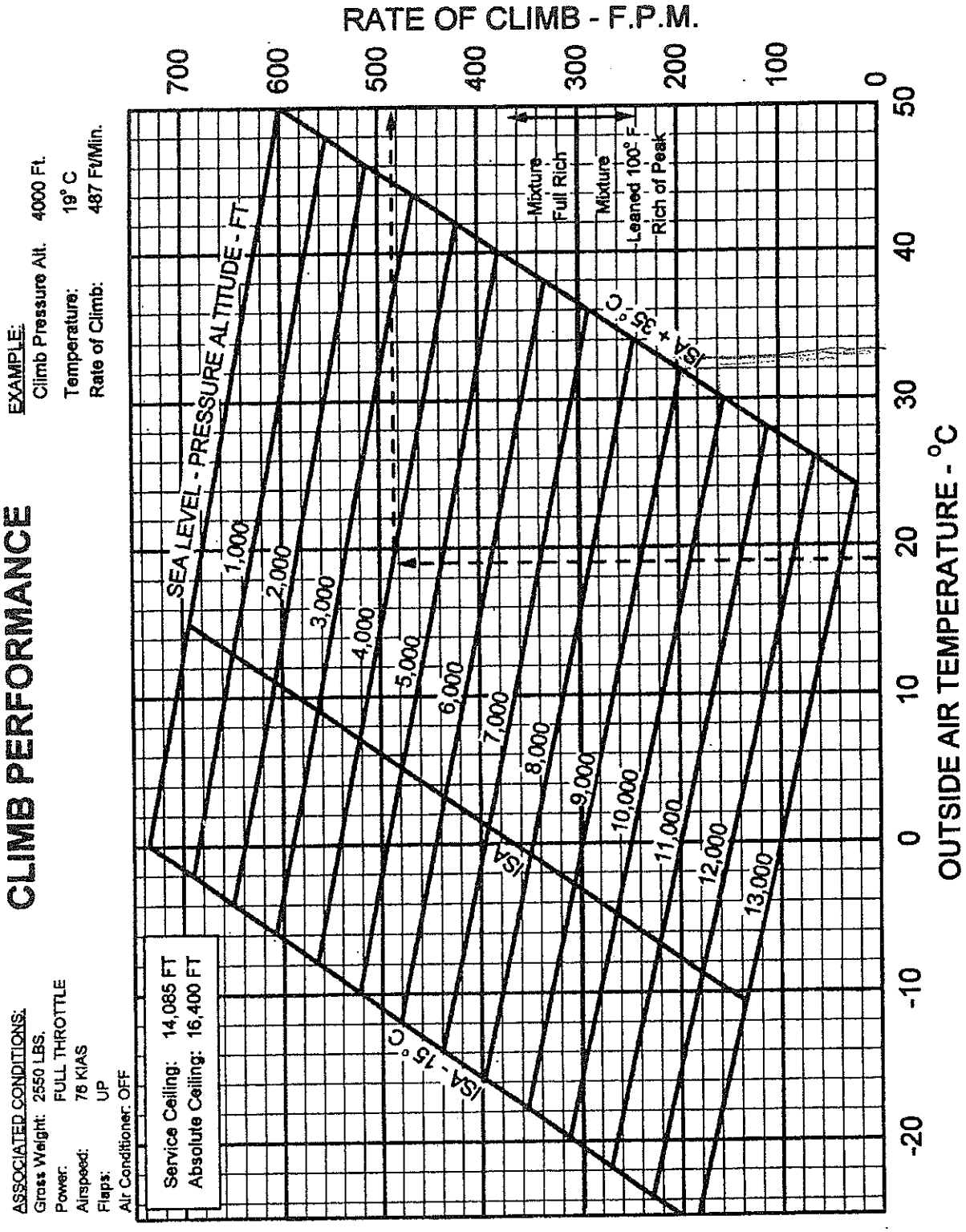
WEIGHT AND BALANCE LOADING FORM
Figure 6-11



LANDING PERFORMANCE
Figure 5-35



FLAPS UP TAKEOFF PERFORMANCE
Figure 5-7



CLIMB PERFORMANCE
Figure 5-15

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

RoC = ((GS x 6080) / 60) x (CG / 100)

Or

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