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LOAD DATA SHEET

D. MacArthur & Associates
(NAME OF ORGANISATION)

Aircraft Type Piper PA-28-181 S/N 2843062 Aircraft Reg VH-SFR

Approved Loading System Load Chart BC/PA181/1 OR PA-28-181 Flight Manual

AUTHORISED	DATE	DATE OF EXPIRY	ISSUE
D. J. MacArthur	27-Mar-15	INDEFINITE SUBJECT TO C.A.O. 100.7	THREE

APPROVED
DMA
D. J. MacArthur
WEIGHT CONTROL OFFICER AQ45
DATE 27-Mar-15

ITEM	WEIGHT Kg	ARM mm	MOMENT	INDEX * (IU)	CONFIGURATION (ALSO SEE EQUIPMENT LIST)
EMPTY WEIGHT	772.94	2247	1736741		FOUR SEATS TOTAL
IMPERIAL					
	WEIGHT Lbs	ARM inches	MOMENT		FOUR SEATS TOTAL
EMPTY WEIGHT	1704.0	88.5	150741		

THE ABOVE WEIGHTS INCLUDE:
EMPTY WEIGHT: UNUSABLE FUEL & FULL ENGINE OIL

LOAD SYSTEM

1) REFER TO FLIGHT MANUAL & SUPPLEMENTS FOR LOAD LIMITATIONS.

WORK ORDER	DATUM
WB-5896	1991mm (78.4") Fwd of Wing Leading Edge

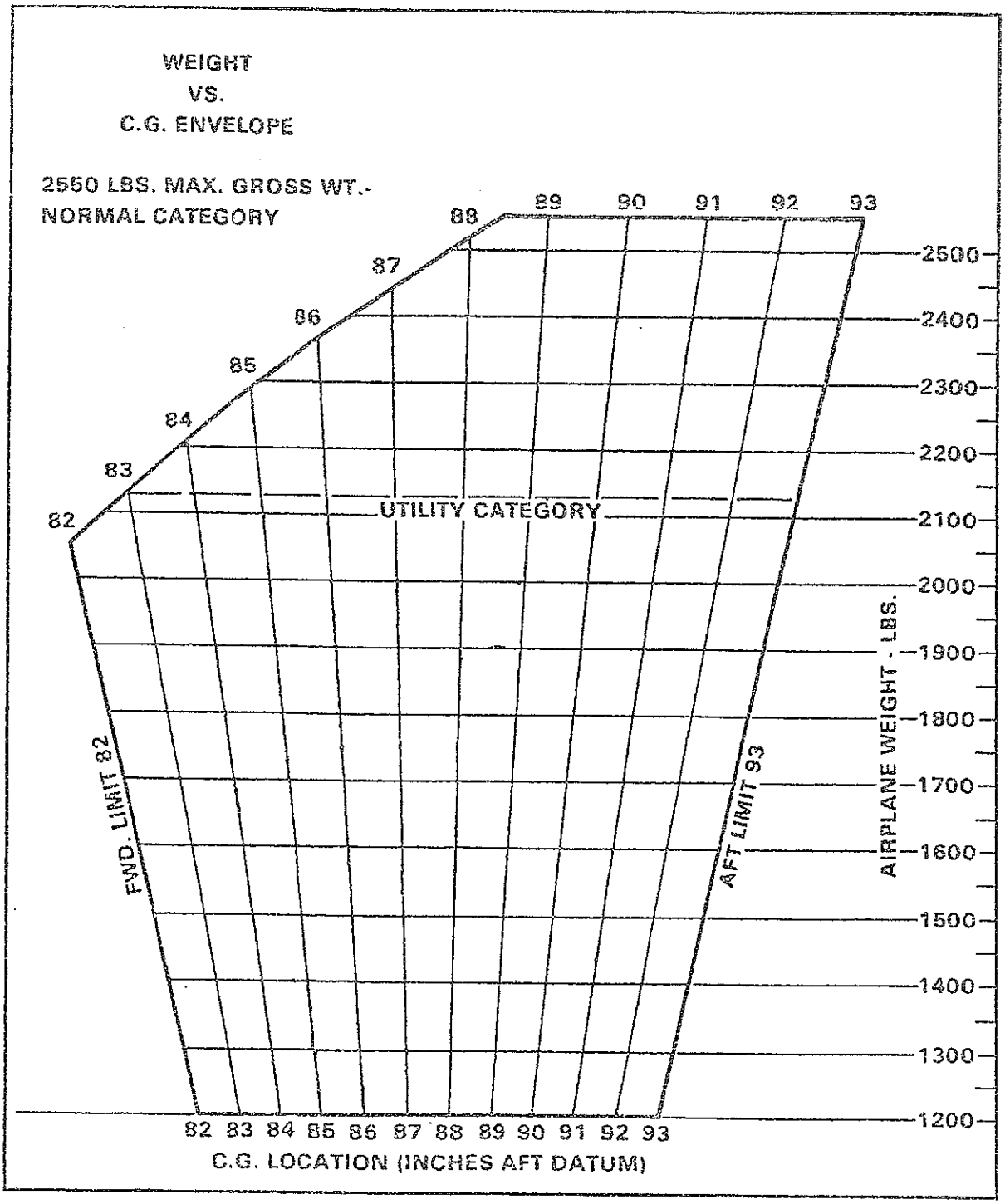
FORM DMA001LDS

	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.

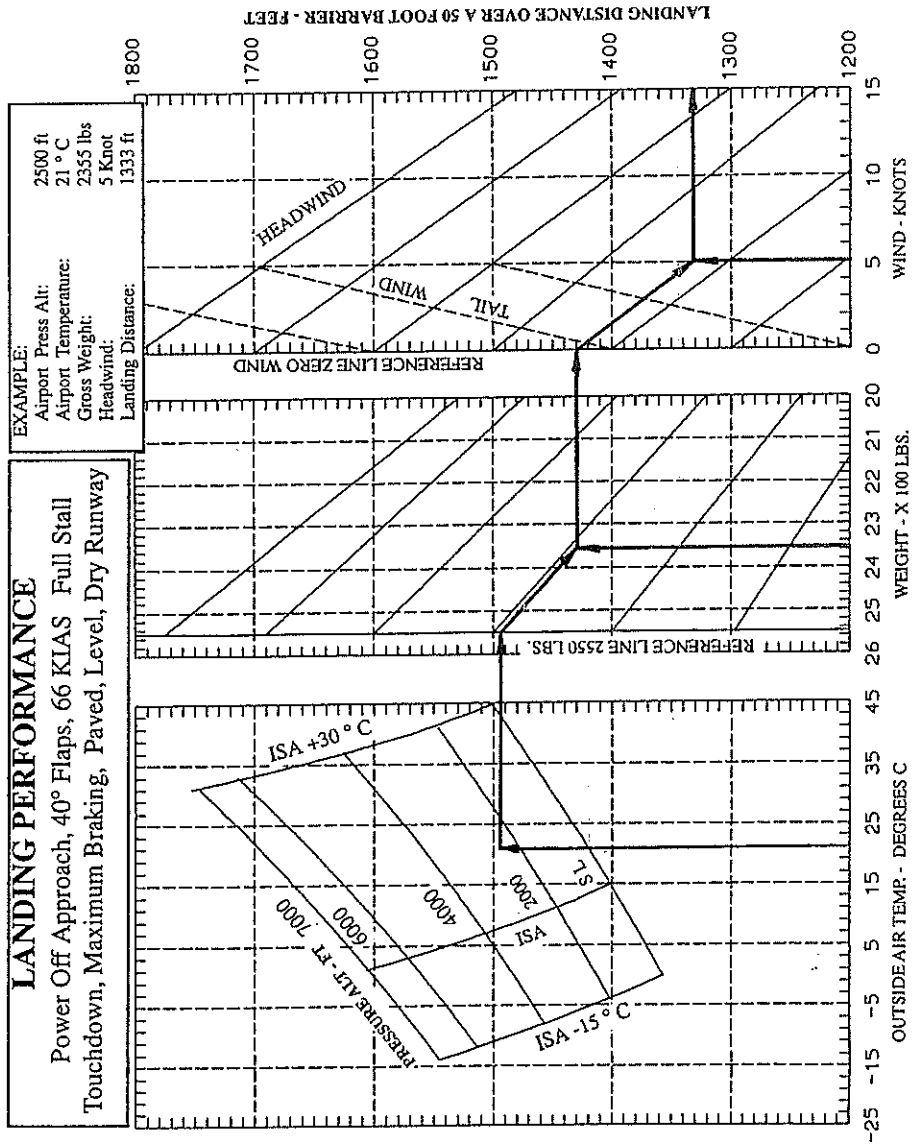
*Utility Category Operation - No baggage or rear passengers allowed.

WEIGHT AND BALANCE LOADING FORM
Figure 6-11

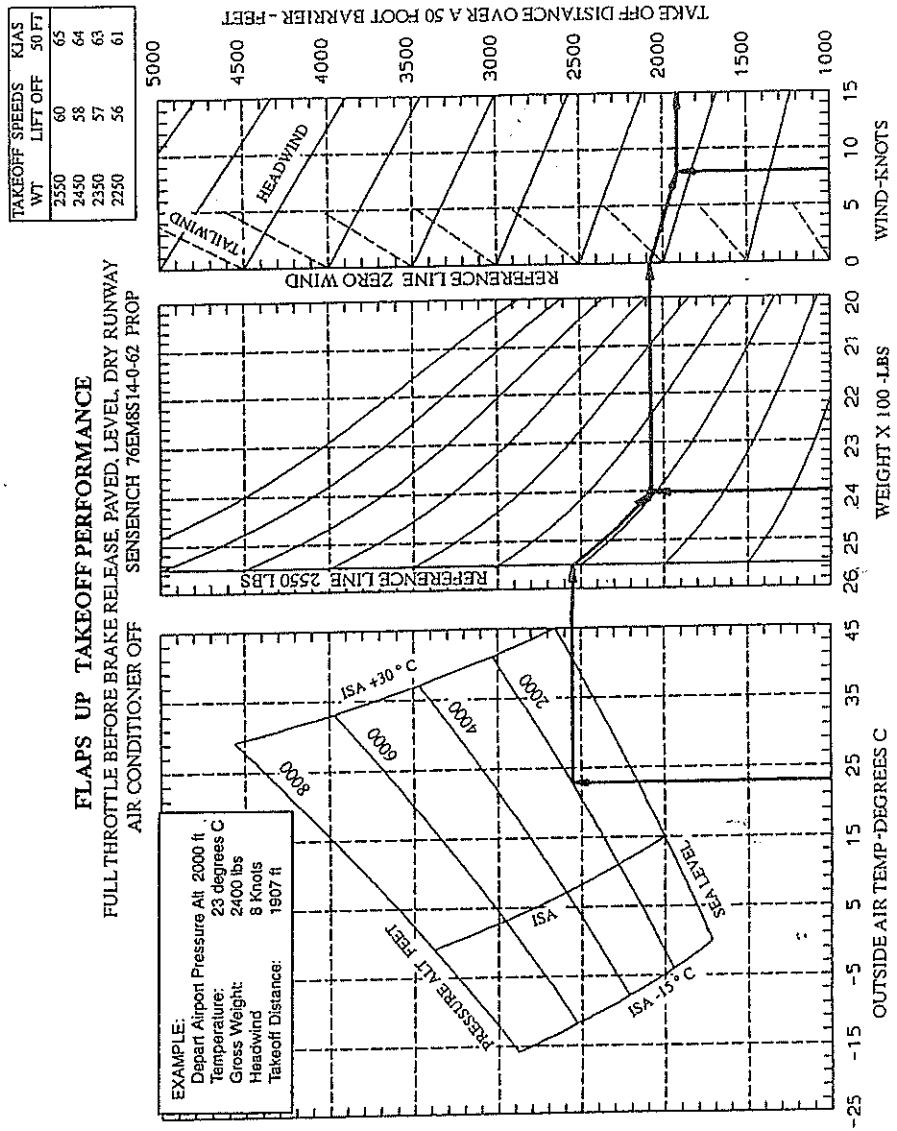


C.G. RANGE AND WEIGHT
Figure 6-15

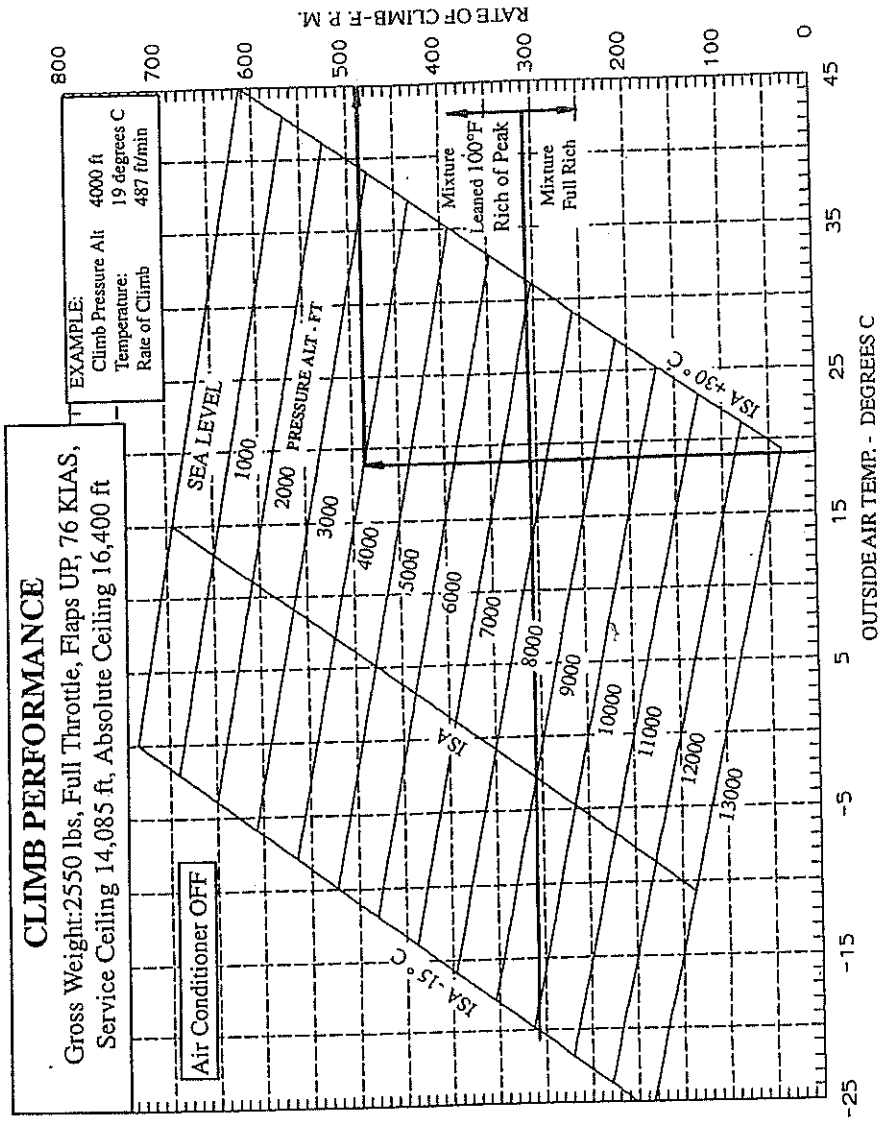
VH-SFR



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

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