

Mustang Aviation Inc.

4029 Airport Road, Suite 300 Lexington, KY 40510 859-255-1902

WEIGHT AND BALANCE REPORT

AIRCRAFT MAKE Piper REGISTRATION N7677C
AIRCRAFT MODEL PA32R-300 SERIAL NO. 32R7680058
DATE October 6, 2009

Weight Point	Scale Reading	Tare	Net Weight	Arm	Moment
Right main	1033	0	1033	109.70	113320.10
Left main	1063	0	1063	109.70	116611.10
Nose	725	0	725	14.30	10367.50
Total	2821	0	2821	85.18	240298.70

Corrections	Weight	Arm	Moment
Fuel Removed 94 gals usable fuel	-564	93.60	-52790.40
Total	2257	83.08	187508.30

Aircraft Empty Weight **2257**
Aircraft Empty Moment **187508.30**
Aircraft Empty CG **83.08**

[Redacted Signature]

This weight and balance report supersedes any and all previous weight and balance reports.

6.7 WEIGHT AND BALANCE DETERMINATION FOR FLIGHT

- Add the weight of all items to be loaded to the basic empty weight.
- Use the Loading Graph (Figure 6-13) to determine the moment of all items to be carried in the airplane.
- Add the moment of all items to be loaded to the basic empty weight moment.
- Divide the total moment by the total weight to determine the C.G. location.
- 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	2193.46 2177.6	81.5	178434 177414
Pilot and Front Passenger	340.0	85.5	29070
Passengers (Center Seats)	340.0	118.1	40154
Passengers (Rear Seats)	340.0	155.7	52938
Passenger (Jump Seat) (Optional)		118.1	
Fuel (94 Gallon Maximum)	302.4	93.6	28305
Baggage (Forward)	100	42.0	4200
Baggage (Aft)		178.7	
Moment due to Retraction of Landing Gear			819
Total Loaded Airplane	3600	92.5	332900

The center of gravity (C.G.) of this sample loading problem is at 92.5 inches aft of the datum line. Locate this point (92.5) 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.

SAMPLE LOADING PROBLEM (NORMAL CATEGORY)

Figure 6-9

6.7 WEIGHT AND BALANCE DETERMINATION FOR FLIGHT

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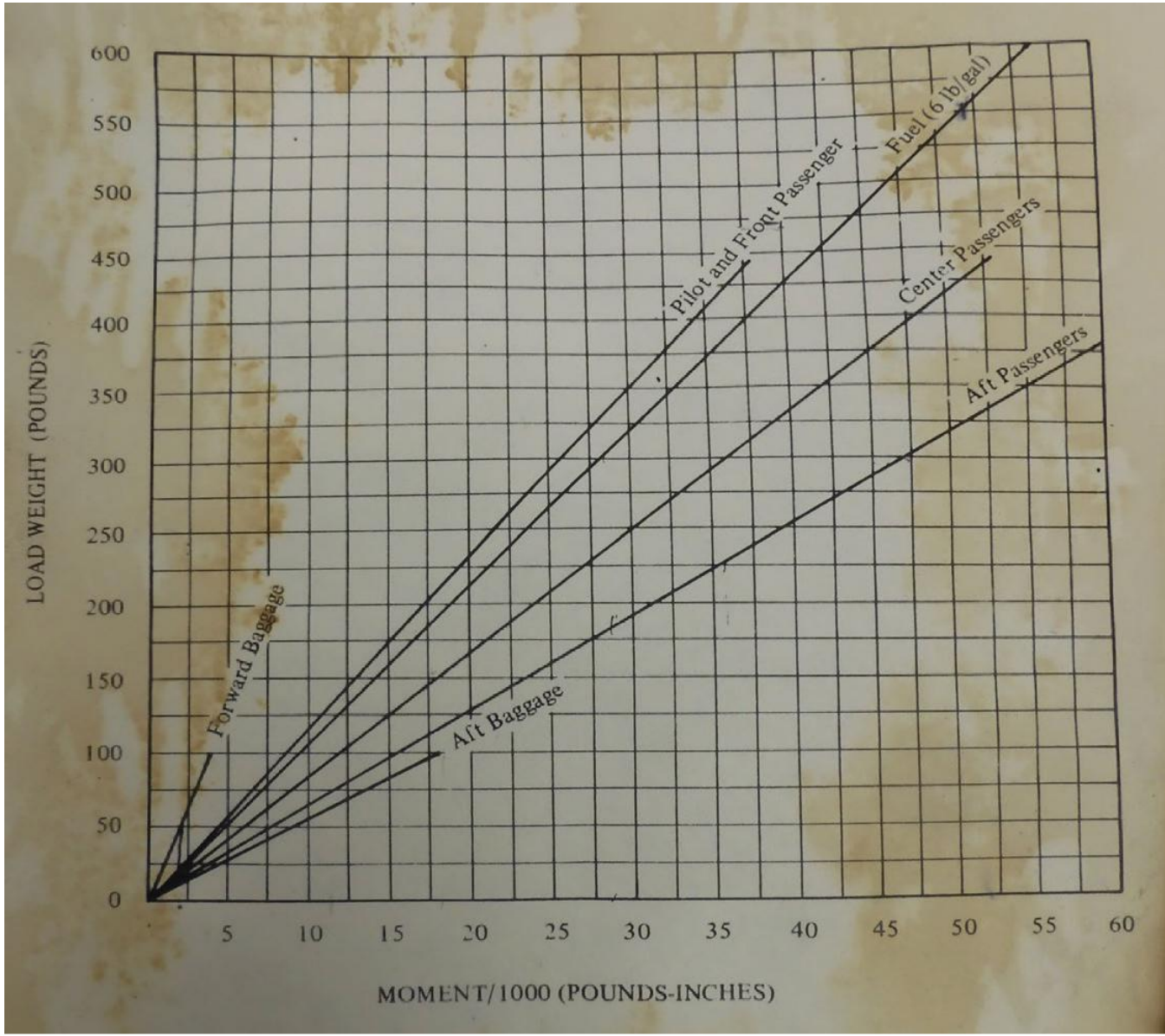
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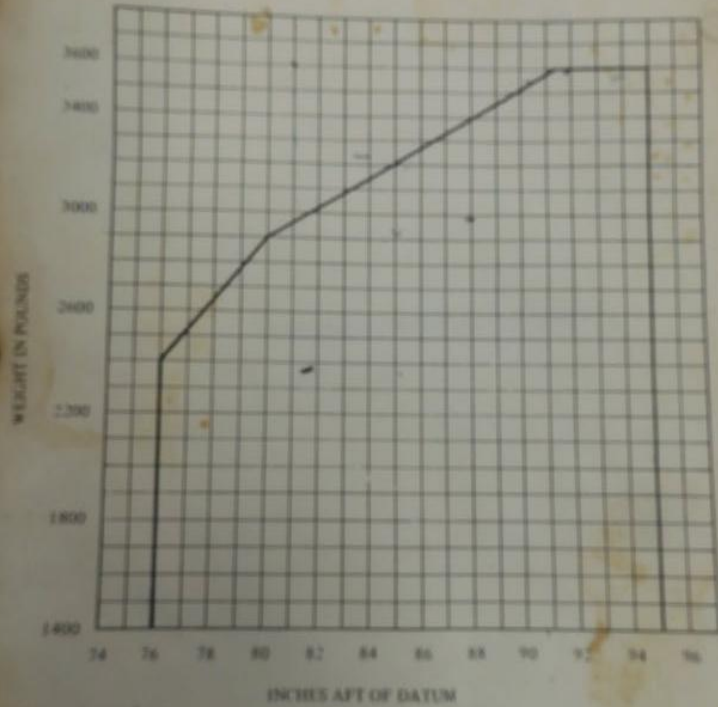
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Figure 6-9





• Moment due to retracting landing gear = +819 in. lbs.

C. G. RANGE AND WEIGHT

Figure 6-15

PIPER AIRCRAFT CORPORATION
PA-32R-300, CHEROKEE LANCE
2.25 PLAC

SECTION 2
LIMITATIONS

2.13 CENTER OF GRAVITY LIMITS

PIPE
PA-3

2.21

Weight Pounds	Forward Limit Inches Aft of Datum	Rearward Limit Inches Aft of Datum
3600	91.4	95.0
2900	80.0	95.0
2400	76.0	95.0

NOTES

Straight line variation between points given.
The datum used is 78.4 inches ahead of the wing leading edge at the intersection of the straight and tapered section.
It is the responsibility of the airplane owner and the pilot to insure that the airplane is properly loaded. See Section 6 (Weight and Balance) for proper loading instructions.

2.15 MANEUVER LIMITS

No acrobatic maneuvers including spins approved.

2.17 FLIGHT LOAD FACTORS

- (a) Positive Load Factor (Maximum)
- (b) Negative Load Factor (Maximum)

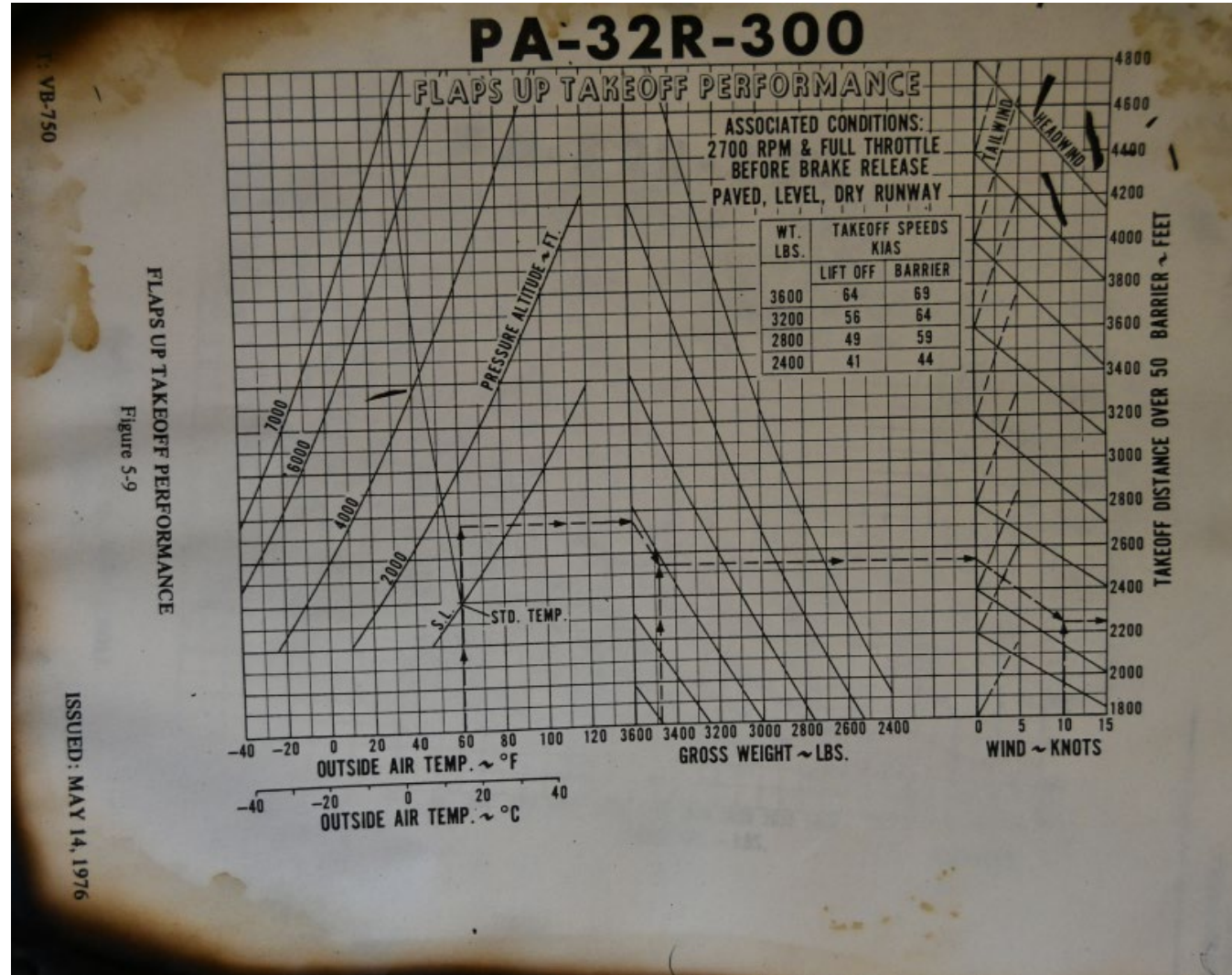
No inverted maneuvers approved 3.8 G

2.19 TYPES OF OPERATIONS

The airplane is approved for the following operations when equipped in accordance with FAR 91 or 135.

- Day V.F.R.
- Night V.F.R.
- Day I.F.R.
- Night I.F.R.
- Ice

From Operator's Manual

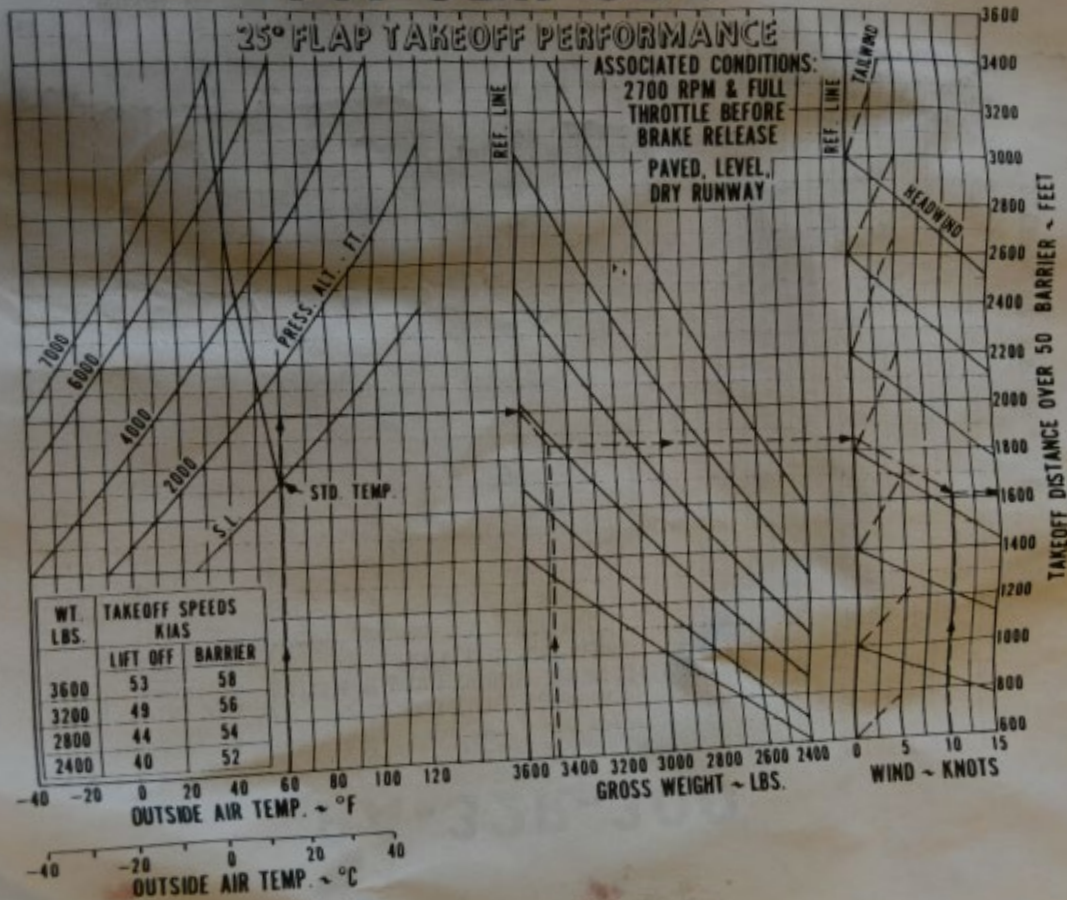


REPORT: VB-750
5-14

PA-32R-300

25° FLAP TAKEOFF PERFORMANCE

ASSOCIATED CONDITIONS:
2700 RPM & FULL THROTTLE BEFORE BRAKE RELEASE
PAVED, LEVEL, DRY RUNWAY



25° FLAPS TAKEOFF PERFORMANCE
Figure 5-7

ISSUED: AUGUST 1, 1975
REVISED: MAY 14, 1978

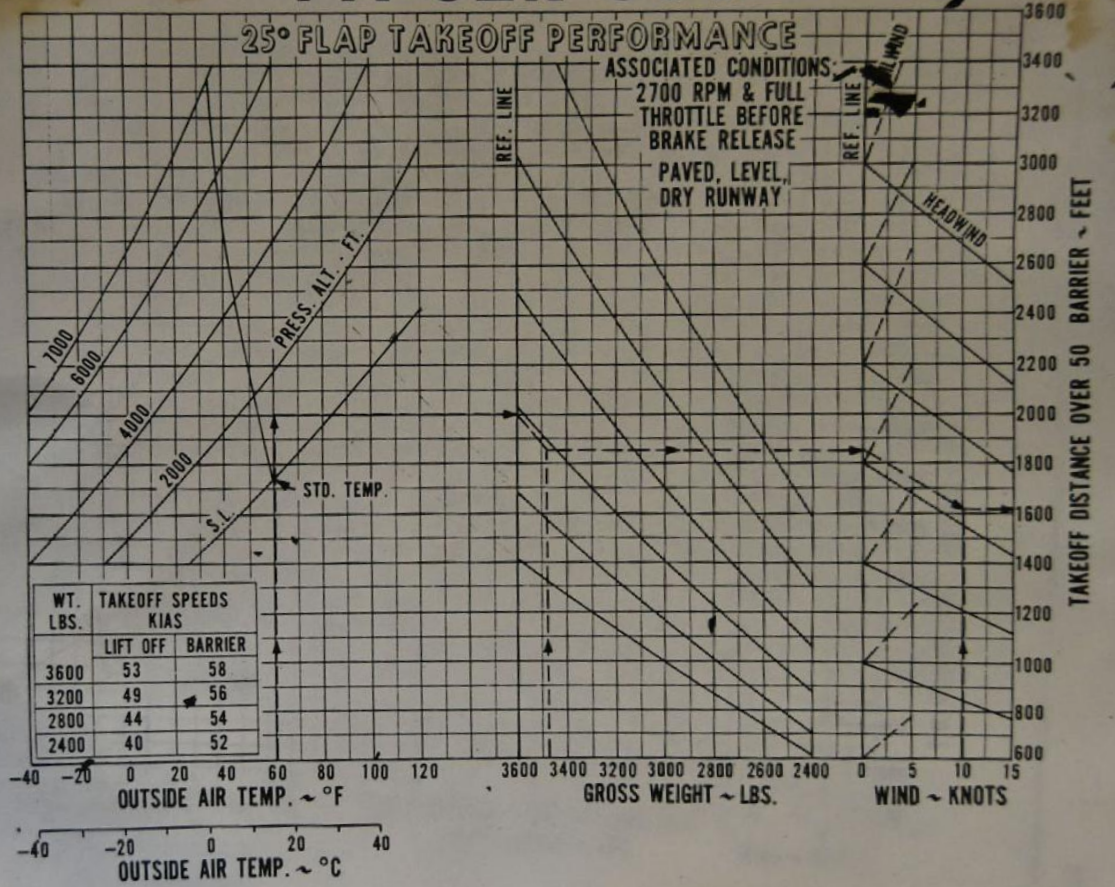
SECTION 5
PERFORMANCE

PIPER AIRCRAFT CORPORATION
PA-32R-300, CHEROKEE LANCE

PA-32R-300

25° FLAP TAKEOFF PERFORMANCE

ASSOCIATED CONDITIONS:
 2700 RPM & FULL
 THROTTLE BEFORE
 BRAKE RELEASE
 PAVED, LEVEL,
 DRY RUNWAY



25° FLAPS TAKEOFF PERFORMANCE
 Figure 5-7

ISSUED: AUGUST 1, 1975
 REVISED: MAY 14, 1976

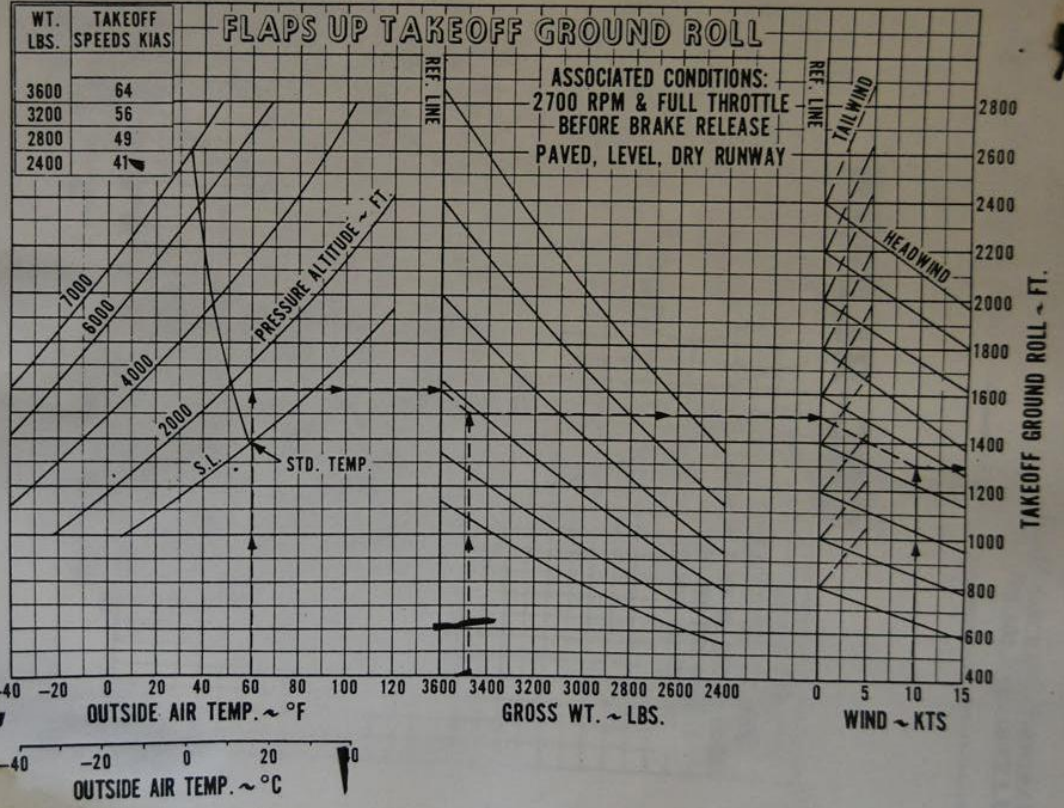
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PA-32R-300, CHEROKEE LANCE

SECTION 5
PERFORMANCE

PA-32R-300



FLAPS UP TAKEOFF GROUND ROLL

Figure 5-10

ISSUED: AUGUST 1, 1975
REVISED: MAY 14, 1976

REPORT

VB-750

ISSUED: AUGUST 1, 1975

ISSUED: AUGUST 1, 1975

ISSUED: AUGUST 1, 1975

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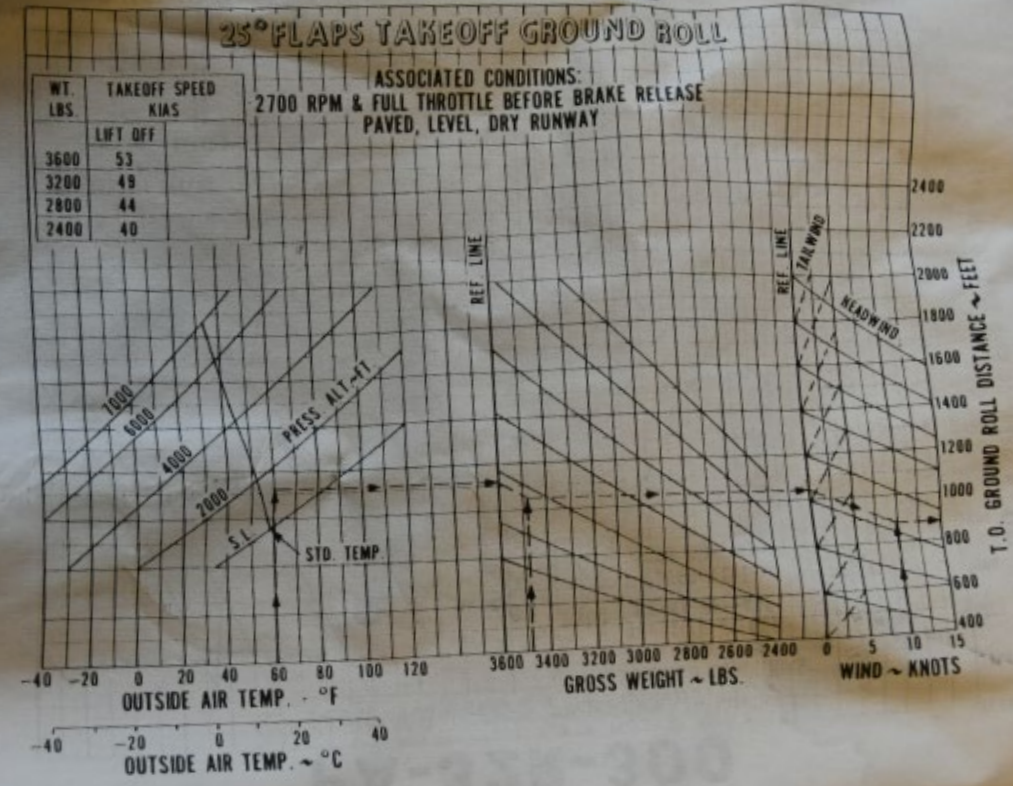
PA-32R-300

25° FLAPS TAKEOFF GROUND ROLL

WT. LBS.	TAKEOFF SPEED KIAS	
	LIFT OFF	
3600	53	
3200	49	
2800	44	
2400	40	

ASSOCIATED CONDITIONS:
 2700 RPM & FULL THROTTLE BEFORE BRAKE RELEASE
 PAVED, LEVEL, DRY RUNWAY

25° FLAPS TAKEOFF GROUND ROLL
Figure 5-8



PIPER AIRCRAFT CORPORATION
 PA-32R-300, CHEROKEE LANCE

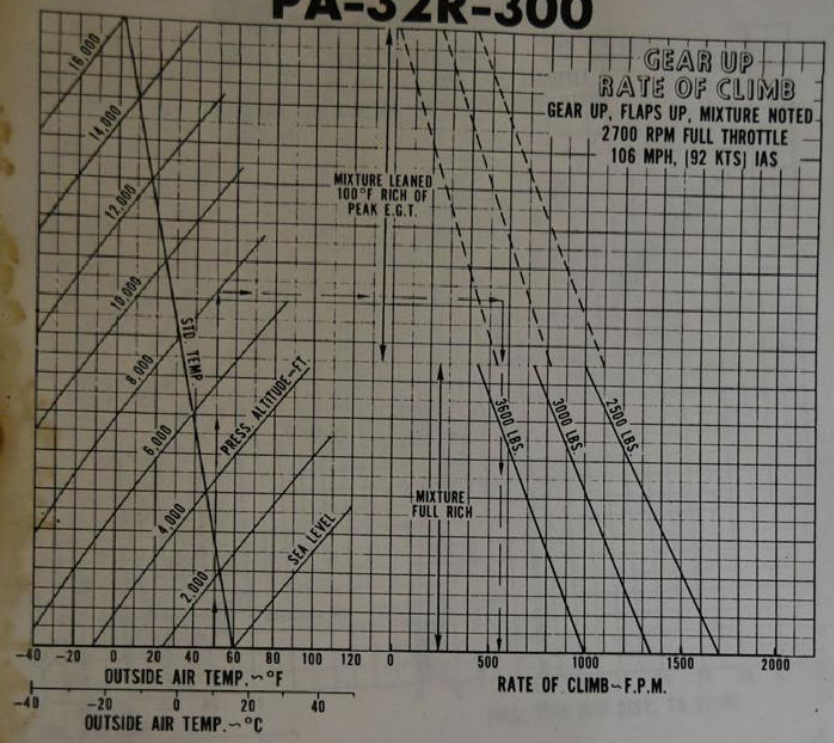
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SECTION 5
 PERFORMANCE

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PA-32R-300

PA-32R-300

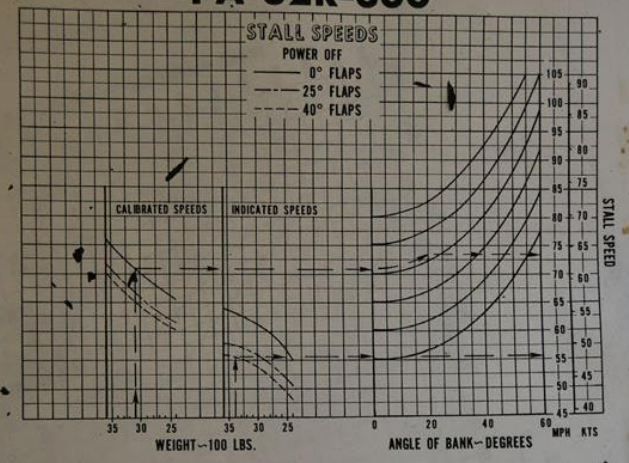


1
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49

GEAR UP RATE OF CLIMB
Figure 5-11

REPORT

PA-32R-300



STALL SPEEDS
Figure 5-5

ISSUED: AUGUST 1, 1975

REPORT

ISSUED

VB-750

1975

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Figure 6-9

ISSUED: AUGUST 1, 1975

REPORT: VB

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REVISED: JULY 13, 1984

Density Altitude Calculator

Elevation	<input checked="" type="radio"/> feet	<input type="radio"/> m	4606
Air Temperature	<input type="radio"/> deg F	<input checked="" type="radio"/> deg C	30
Altimeter Setting	<input checked="" type="radio"/> in Hg	<input type="radio"/> hPa	30.07
Dew Point	<input type="radio"/> deg F	<input checked="" type="radio"/> deg C	6

Calculate Reset

Density Altitude	7292	feet	2223	m
Absolute Pressure	25.4	in Hg	860	hPa
Air Density	0.0614	lb/ft ³	0.984	kg/m ³
Relative Density	80.34	%	80.34	%
Estimated AWOS	7200	feet	2195	m