

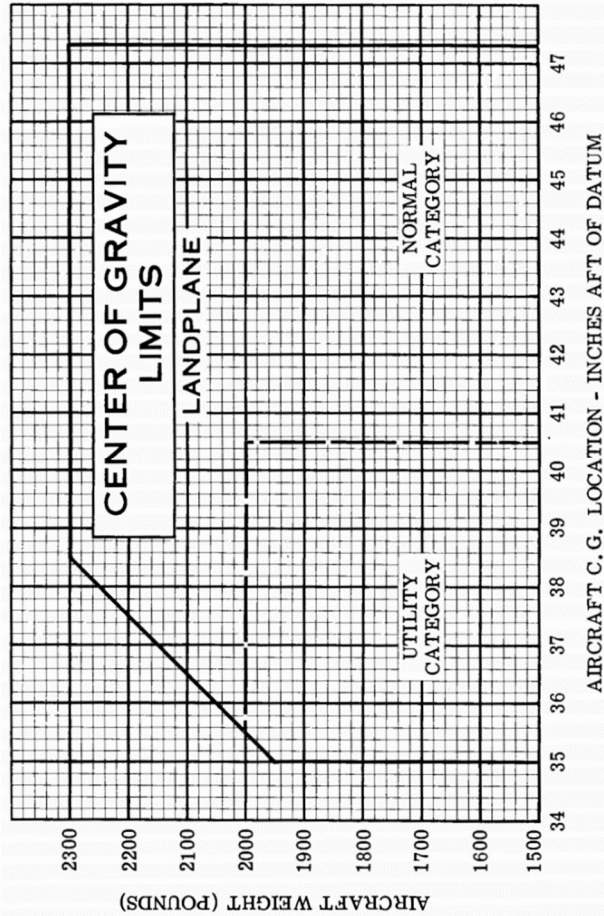


Figure 6-8. Center of Gravity Limits

Pressure Altitude	RPM	20° BELOW STANDARD TEMP			STANDARD TEMPERATURE			20° BELOW STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2000	2500	76	111	8.3	71	111	8.3	67	111	7.5
	2400	68	107	7.5	64	107	7.5	61	106	6.9
	2300	61	102	6.9	58	102	6.9	55	99	6.5
4000	2500	72	111	7.9	68	111	7.9	64	110	8.2
	2400	65	107	7.3	61	107	7.3	58	104	6.7
	2300	58	101	6.7	55	101	6.7	53	98	6.3
6000	2500	69	111	7.6	65	110	7.2	62	109	7
	2400	62	106	7	59	104	6.7	56	103	6.5
	2300	56	100	6.5	53	98	6.3	50	97	6.1
8000	2500	69	111	7.3	62	111	7.3	59	108	6.8
	2400	62	106	6.8	56	106	6.8	53	101	6.3
	2300	56	100	6.4	51	100	6.4	48	96	6.0
10000	2500	65	111	7.1	59	111	7.1	56	106	6.6
	2400	59	105	6.6	54	105	6.6	51	100	6.2
	2300	54	99	6.2	48	99	6.2	46	95	5.8

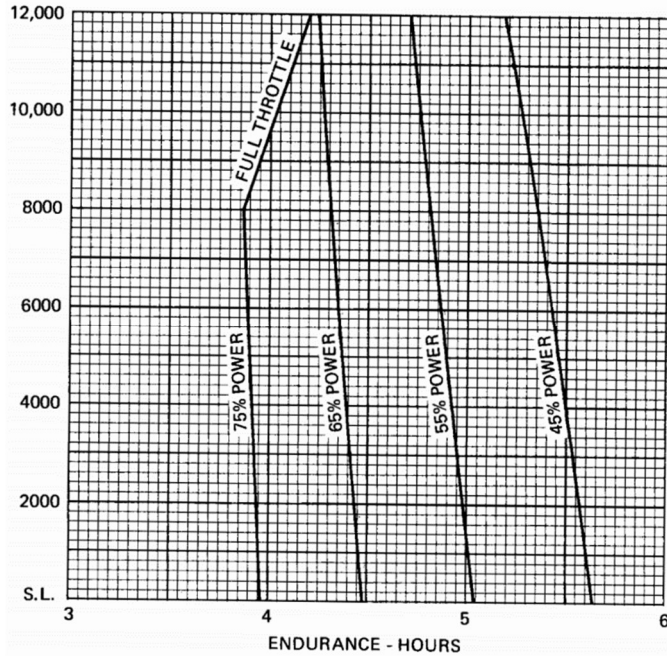


Figure 5-4. Takeoff Distance (Sheet 1 of 2)

WEIGHT LBS	TAKEOFF SPEED KIAS	PRESS ALT FT	0°C			10°C			20°C			30°C			40°C		
			GRND TO CLEAR 50 FT OBS ROLL	TOTAL TO CLEAR 50 FT OBS ROLL	S.L. ALT	GRND TO CLEAR 50 FT OBS ROLL	TOTAL TO CLEAR 50 FT OBS ROLL	S.L. ALT	GRND TO CLEAR 50 FT OBS ROLL	TOTAL TO CLEAR 50 FT OBS ROLL	S.L. ALT	GRND TO CLEAR 50 FT OBS ROLL	TOTAL TO CLEAR 50 FT OBS ROLL	S.L. ALT	GRND TO CLEAR 50 FT OBS ROLL	TOTAL TO CLEAR 50 FT OBS ROLL	S.L. ALT
2300	52	59	775	1380	835	835	1475	895	1575	1725	1725	960	1685	1845	1030	1795	1970
			850	1510	1000	1000	1770	1075	1895	2030	2030	1155	2030	2235	1235	2170	2395
			930	1650	1100	1100	1945	1180	2085	2235	2235	1270	2235	2475	1360	2395	2655
			1020	1815	1210	1210	2145	1300	2305	2475	2475	1395	2475	2750	1495	2960	3265
			1125	2000	1330	1330	2375	1430	2555	2750	2750	1540	2750	3070	1650	3265	3565
			1235	2210	1470	1470	2640	1580	2850	3190	3190	1700	3070	3400	1760	3565	3865
			1365	2450	1625	1625	2955	1750	3190	3530	3530	1860	3300	3630	1860	3865	4165
			1505	2730	1800	1800	3320	1950	3530	3870	3870	2020	3630	3960	2020	4165	4465
			1665	3065	2000	2000	3700	2150	3870	4210	4210	2180	3960	4250	2180	4465	4765

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2300	60	S.L.	495	1205	510	1235	530	1265	550	1300	565	1330
		1000	510	1235	530	1265	550	1300	570	1335	590	1370
		2000	530	1265	550	1300	570	1335	590	1370	610	1405
		3000	550	1300	570	1335	590	1370	615	1410	635	1445
		4000	570	1335	590	1370	615	1410	635	1445	655	1480
		5000	590	1370	615	1415	635	1450	655	1485	680	1525
		6000	615	1415	640	1455	660	1490	685	1535	705	1570
		7000	640	1455	660	1485	685	1535	710	1575	730	1615
		8000	665	1500	690	1540	710	1580	735	1625	760	1665

Cessna 172N N5174E

Preflight Checklist

INTERIOR

FLIGHT CIRCLE.....DISPATCHED
AROW DOCUMENTS.....CHECKED
FUEL DRAINED/QUANTITY.....CHECKED
CONTROL LOCK.....OFF
IGNITION SWITCH.....OFF
ALTERNATE STATIC.....CHECKED
AVIONICS.....OFF
MASTER.....ON
FUEL GAUGES.....CHECKED
FLAPS.....FULL
LIGHTS & PITOT HEAT.....ON/CHECKED
LIGHTS & PITOT HEAT.....OFF EXCEPT BEACON
MASTER.....OFF

EMPENNAGE

BAGGAGE DOOR.....CLOSED/LOCKED
ANTENNAS.....CHECKED
HORIZONTAL STABILIZER/ELEVATOR.....CHECKED
VERTICAL STABILIZER/RUDDER.....CHECKED
ELEVATOR TRIM TAB.....CHECKED

RIGHT WING

MAIN GEAR.....CHECKED(29PSI)
FLAP HINGES/PUSHROD.....CHECKED
AILERON WEIGHTS/HINGES.....CHECKED
WING TIP/LIGHTS.....CHECKED
LEADING EDGE.....CHECKED
CABIN AIR VENT INLETS.....CHECKED
FUEL CAP.....SECURED

FORWARD FUSELAGE

OIL QUANTITY.....6-8 QTS
FUEL STRAINER.....CHECKED
ENGINE COWLING.....SECURE
EXHAUST STACK.....CHECKED
NOSE GEAR.....CHECKED(31PSI)
PROPELLER/SPINNER.....CHECKED
ALTERNATOR BELT.....CHECKED
AIR INTAKE/FILTER.....CHECKED
STATIC PORT.....CLEAR

CLIMB

FLAPS.....UP
MIXTURE.....AS APPROPRIATE
TRANSPONDER.....CODE/ALT
LIGHTS.....SET

CRUISE

POWER.....SET
TRIM.....SET
MIXTURE.....AS APPROPRIATE

DESCENT

WEATHER.....REVIEWED
ARRIVAL/APPROACH.....BRIEFED
COMS/NAVS.....SET
FUEL SELECTOR.....BOTH
MIXTURE.....AS APPROPRIATE
CARB HEAT.....AS NEEDED
ALTIMETER.....SET
SEATS/SEATBELTS.....SECURE

AFTER LANDING

TRIM.....SET
FLAPS.....UP
MIXTURE.....LEANED
CARB HEAT.....OFF
LIGHTS.....SET
TRANSPONDER.....VFR/ALT

SHUTDOWN

RPM.....1000
AVIONICS.....OFF
MIXTURE.....IDLE CUT OFF
MAGNETOS.....OFF
MASTER.....OFF
KEY.....OFF/OUT

Cessna 172N N5174E

Normal Checklist

BEFORE START

PASSENGER / CREW BRIEF.....COMPLETE
SEATS / SEATBELTS.....ON
FUEL SELECTOR.....BOTH
TRIM.....SET
FLAP SWITCH.....NEUTRAL
MIXTURE.....RICH (AS APPROPRIATE)
THROTTLE.....CRACKED (AS APPROPRIATE)
LIGHTS.....SET
CIRCUIT BREAKERS.....ALL IN
AVIONICS SWITCH.....OFF
PRIMER.....PRIMED/LOCKED
MASTER SWITCH.....ON
PROP AREA.....CLEAR

BEFORE TAXI

OIL PRESSURE.....CHECK
MIXTURE.....LEANED
FLAPS.....UP
AVIONICS.....ON
BRAKES.....CHECK
INSTRUMENT COCKPIT CHECK.....COMPLETE

BEFORE TAKEOFF/RUNUP

DOORS/WINDOWS.....CLOSED & LATCHED
SEATBELTS.....SECURED
CONTROLS.....FREE & CORRECT
INSTRUMENTS.....CHECKED
AVIONICS/RADIOS/TRANSPONDER.....SET
FUEL SELECTOR.....BOTH
FLAPS.....SET
TRIM.....SET
RUNUP

RPM.....1700
ENGINE GAUGES.....CHECKED
MIXTURE.....AS APPROPRIATE
CARB HEAT.....CHECKED
MAGNETOS.....CHECKED
RPM.....IDLE CHECK, 1000
DEPARTURE BRIEFING.....COMPLETED

Airspeeds:

Vr.....55 KIAS
Vx.....64 KIAS
Vy.....75 KIAS
Best Glide.....65 KIAS
Short Field Takeoff Flaps: 0°

LEFT WING

FUEL CAP.....SECURED
CABIN AIR VENT INLETS.....CHECKED
PITOT TUBE.....CHECKED
FUEL VENT.....CHECKED
STALL HORN INLET.....CHECKED
LEADING EDGE.....CHECKED
WING TIP/LIGHTS.....CHECKED
AILERON WEIGHTS/HINGES.....CHECKED
FLAP HINGES/PUSHROD.....CHECKED
MAIN GEAR.....CHECKED(29PSI)

SECURE

POST FLIGHT INSPECTION.....COMPLETED
TIE DOWNS.....AS NEEDED
CONTROL LOCK.....AS NEEDED
MASTER.....OFF

PHONE NUMBERS

Isaac Mosgrove.....503.930.3405
Joan Johnson503.559.4593
Salem Tower.....503.581.3571
Salem Air Fuel.....503.364.4158
Flight Service.....800.992.7433
Portland FSDO.....503.615.3200

Loading Data	Weight (lbs)	ARM (in)	Moment (lbs-in)
Empty Weight	1477.92	40.12	59,296.37
Front Seats		*37* Range (34-46)	
Rear Seat		73	
Fuel 38gal/228lbs usable		48	
Cargo Area # 1 120 lbs max		*95* Range (95-108)	
Cargo Area # 2 40 lbs max		*123* Range (123-142)	
Total 2300 LBS MGTOW			

Cessna 172N N5174E

Abnormal Checklist

ENGINE TROUBLESHOOT

FUEL SELECTOR.....BOTH
MIXTURE.....AS APPROPRIATE
THROTTLE.....1/2 OPEN
CARB HEAT.....ON
PRIMER.....IN/LOCKED
MAGNETOS.....CYCLE (START)

ENGINE SECURE

MIXTURE.....IDLE CUT-OFF
THROTTLE.....CLOSED
CARB HEAT.....OFF
MAGNETOES.....OFF
TRANSPONDER.....7700

EMERGENCY LANDING W/O POWER

AIRPSEED.....BEST GLIDE
RADIO CALLS/XPDR.....AS APPROPRIATE
SEATS/SEATBELTS.....SECURE
FLAPS.....AS NEEDED
DOORS.....UNLATCH

-PRIOR TO TOUCHDOWN-

MASTER.....OFF

ENGINE FIRE IN FLIGHT

MIXTURE.....IDEL CUT-OFF
THROTTLE.....CLOSED
MAGNETOES.....OFF
EMERGENCY DESCENT.....EXECUTE

WING FIRE

EXTERIOR LIGHTS.....OFF
PITOT HEAT.....OFF
SIDESLIP.....ESTABLISH

ELECTRICAL TROUBLESHOOT

CIRCUIT BREAKER.....CHECK
-IF POPPED, RESET. IF IT POPS AGAIN, DO NOT RESET-

ELECTRICAL/CABIN FIRE

MASTER.....OFF
CABIN WINDOWS.....OPEN
FIRE EXTINGUISHER.....AS NEEDED
EMERGENCY DESCENT.....AS NEEDED

ALT INOP ANNUNCIATOR

ALTERNATOR SWITCH/BREAKER.....CHECK
-IF ALTERNATOR FAILED-

ELECTRICAL LOAD.....REDUCE
LAND AIRPLANE.....AS NEEDED

WEIGHT LBS	TAKEOFF SPEED KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS
2300	52	59	775	1380	835	1475	895	1575	960	1685	1030	1795
			1000	1510	915	1615	980	1725	1050	1845	1125	1970
			2000	1650	1000	1770	1075	1895	1155	2030	1235	2170
			3000	1815	1100	1945	1180	2085	1270	2235	1360	2395
			4000	2000	1210	2145	1300	2305	1395	2475	1495	2655
			5000	2210	1330	2375	1430	2555	1540	2750	1650	2960
			6000	2450	1470	2640	1580	2850	1700	3070	1760	3190
			7000	2730	1625	2965	1750	3190	1800	3320	1800	3320
			8000	3065	1800	3320	1800	3320	1800	3320	1800	3320

Figure 5-4. Takeoff Distance (Sheet 1 of 2)

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS	GRND ROLL 50 FT OBS	TOTAL TO CLEAR 50 FT OBS
2300	60	60	495	1205	510	1235	530	1265	545	1295	565	1330
			1000	1510	550	1540	570	1570	590	1600	610	1630
			2000	1650	600	1680	620	1710	640	1740	660	1770
			3000	1815	650	1845	670	1875	690	1905	710	1935
			4000	2000	710	2030	730	2060	750	2090	770	2120
			5000	2210	770	2240	790	2270	810	2300	830	2330
			6000	2450	830	2480	850	2510	870	2540	890	2570
			7000	2730	890	2760	910	2790	930	2820	950	2850
			8000	3065	950	3095	970	3125	990	3155	1010	3185

Figure 5-10. Landing Distance

Pressure Altitude	RPM	20° BELOW STANDARD TEMP			STANDARD TEMPERATURE			20° BELOW STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2000	2500	76	111	8.3	71	111	8.3	67	111	7.5
	2400	68	107	7.5	64	107	7.5	61	106	6.9
	2300	61	102	6.9	58	102	6.9	55	99	6.5
4000	2500	72	111	7.9	68	111	7.9	64	110	8.2
	2400	65	107	7.3	61	107	7.3	58	104	6.7
	2300	58	101	6.7	55	101	6.7	53	98	6.3
6000	2500	69	111	7.6	65	110	7.2	62	109	7
	2400	62	106	7	59	104	6.7	56	103	6.5
	2300	56	100	6.5	53	98	6.3	50	97	6.1
8000	2500	69	111	7.3	62	111	7.3	59	108	6.8
	2400	62	106	6.8	56	106	6.8	53	101	6.3
	2300	56	100	6.4	51	100	6.4	48	96	6.0
10000	2500	65	111	7.1	59	111	7.1	56	106	6.6
	2400	59	105	6.6	54	105	6.6	51	100	6.2
	2300	54	99	6.2	48	99	6.2	46	95	5.8