

OPERATION AND PERFORMANCE DATA

OPERATIONAL DATA: PERFORMANCE INFORMATION

The following operational data are compiled from actual tests with airplane and engine in good condition and using average piloting technique. Data are based upon a gross weight of 1450 lbs. with standard Sensenich 74FK-49 propeller installed, and apply to both 120 and 140 models. Performance figures are for zero wind velocity and hard surface level runway. Speeds are true indicated airspeeds.

Airspeed	Indicated	40	60	80	100	120	140
Calibration	True Indicated	46	65	83	100	116	133

ITEM	ALTITUDE	OUTSIDE AIR TEMPERATURE					
		0°F	20°F	40°F	60°F	80°F	100°F
<i>Take Off Distance</i> (Ground Run in Feet) Airspeed 50 MPH Takeoff Full Throttle, Flaps Up	Sea Level	465	530	594	663	728	795
	2000 Ft.	600	689	761	842	923	1004
	4000 Ft.	760	857	956	1054	1152	1250
	6000 Ft.	980	1101	1222	1243	1464	1585

Take Off Correction: Reduce above distances 10% for each 5 MPH Wind Velocity.

<i>Landing Distance</i> (Ground Run in Feet) Approach at 70 MPH Flaps Up	Sea Level	233	266	299	332	365	398
	2000 Ft.	274	321	348	385	422	460
	4000 Ft.	329	372	414	457	500	542
	6000 Ft.	381	428	475	522	569	616

<i>Landing Distance</i> (Ground Run in Feet) Approach at 70 MPH Flaps Down	Sea Level	212	242	272	302	332	362
	2000 Ft.	252	286	320	354	388	422
	4000 Ft.	302	341	380	419	458	497
	6000 Ft.	352	396	439	483	527	570

Landing Correction: Reduce above distances 10% for each 5 MPH Wind Velocity.

<i>Normal Rate Climb</i> (Feet Per Minute) Flaps Up Full Throttle	AIRSPEED	81	Sea Level	740	710	675	640	605	570
		79	2000 Ft.	660	625	595	560	530	495
		76	4000 Ft.	555	520	490	460	425	395
		74	6000 Ft.	455	425	395	365	330	300

	Condition	Angle of Bank Degrees			
		0°	20°	40°	60°
<i>Stalling Speed</i> M.P.H. T.I.A.S.	Power Off; Flaps Up	49	50	56	69
	Power Off; Flaps Down	45	46	52	65
	Power On; Flaps Up	40	41	46	57
	Power On; Flaps Down	37	38	43	52

OPERATING DETAILS

CARBURETOR AIR HEAT:

The carburetor air heat control is located on the instrument panel. The push-pull control operates the butterfly valve in the carburetor air intake which proportions the hot and cold air entering the carburetor. To provide heated air for the carburetor, pull out the control; to provide only cold air for the carburetor, push the control in all the way. Carburetor ice can form on the ground with the engine idling, therefore, just before take-off when you run the engine and test the magnetos be sure and have the carburetor heat in the "on" position. Leave it in that position until you open the throttle for the take-off run. Then move carburetor heat to the cold air position. This gives maximum power for the take-off. Then watch engine for any indications of ice (roughness or loss of r.p.m.) during climb and apply full carburetor heat if engine begins to ice. The correct way to use carburetor heat is to first use full heat to remove any ice that is forming. By trial and error determine the minimum amount of heat required to prevent ice forming each time removing any ice that is formed by applying full heat. On each subsequent trial, increase the amount of heat applied until no ice forms. On approach glide just before reducing power apply full carburetor heat and leave in full hot air position.

CABIN AIR HEAT:

The cabin air heater (and cold air intake) control, if installed as optional equipment, is located on the instrument panel. The push-pull control operates to open the heater valve allowing fresh warm air (or cold air if the heater muff is not installed) to enter the cabin when the control is pulled out. Intermediate positions of the control may be used as desired.

MASTER SWITCH:

The master switch operates the solenoid switch located at the battery turning on all electrical power at the battery. In the event of a short or a malfunctioning of the airplane electrical system, the master switch may be turned off and the engine will continue to run on the magneto ignition system.

MAGNETO SWITCHES:

The two magneto switches are either toggle switches located on the panel or are operated with a key. The panel placards indicate the right and left magnetos. The switches operate to ground out the indicated magneto when the switch is turned off.