

NORMAL TAKEOFF

Beacon, Transponder, Heading	
Wing Flaps	0 -10°
Carburetor Heat	COLD
Throttle	FULL OPEN
Elevator	LIFT NOSE WHEEL at 50 KIAS
Climb Speed	65-75 KIAS

SHORT FIELD TAKEOFF

Wing Flaps	10°
Carburetor Heat	COLD
Brakes	APPLY
Throttle	FULL OPEN
Mixture	RICH (> 3,000' LEAN to obtain max RPM)
Brakes	RELEASE
Elevator	MAINTAIN SLIGHTLY TAIL-LOW ATTITUDE
Climb Speed	54 KIAS until all obstacles are cleared
Wing Flaps	RETRACT SLOWLY AFTER 60 KIAS

ENROUTE CLIMB

Airspeed	70-80 KIAS
Throttle	FULL OPEN
Mixture	RICH (> 3,000' LEAN to obtain max RPM)

CRUISE

WARNING: Improper leaning procedures will greatly reduce endurance.

Power	1800-2550 RPM
Elevator and Rudder Trim	ADJUST
Mixture	LEAN
Landing Light	OFF

V _{NE}	149 KIAS	V _Y	67 KIAS
V _{NO}	111 KIAS	V _X	55 KIAS
V _A AT 1640 lbs	104 KIAS	V _{S1}	40 KIAS
V _A AT 1505 lbs	98 KIAS	V _{S0}	35 KIAS
V _A AT 1350 lbs	93 KIAS	BEST GLIDE	60 KIAS
V _{FE}	85 KIAS	CROSSWIND	12 kt
Window Open	140 KIAS		

DESCENT

Carburetor Heat	FULL HEAT AS REQUIRED
Power	AS DESIRED
Mixture	ADJUST for smooth operation (FULL RICH FOR IDLE POWER)
Landing Light	ON

BEFORE LANDING

Seats, Seat Belts, Shoulder Harnesses	ADJUST and LOCK
Mixture	RICH
Carburetor Heat	ON (apply full heat before closing throttle)

NORMAL LANDING

Airspeed	60-70 KIAS (flaps UP)
Wing Flaps	AS DESIRED (below 60KIAS)
Airspeed	55-65 KIAS (flaps DOWN)
Touchdown	MAIN WHEELS FIRST
Landing Roll	LOWER NOSE WHEEL GENTLY
Braking	MINIMUM REQUIRED

SHORT FIELD LANDING

Airspeed	60-70 KIAS (flaps UP)
Wing Flaps	30° (below 85 lbs)
Airspeed	MAINTAIN 54 KIAS
Power	REDUCE to idle after clearing obstacle
Touchdown	MAIN WHEELS FIRST
Brakes	APPLY HEAVILY
Wing Flaps	RETRACT

BALKED LANDING

Throttle	FULL OPEN
Carburetor Heat	COLD
Wing Flaps	RETRACT TO 20°
Climb Speed	55 KIAS
Wing Flaps	10° (until obstacles are cleared)
	RETRACT (at safe altitude and 60 KIAS)

AFTER LANDING

Carburetor Heat	COLD
Wing Flaps	UP
Transponder	RESET TO 1200, OFF
Landing Light	AS REQUIRED

SECURING AIRPLANE

Parking Brake	SET
Radios and Electrical Equipment	OFF
Mixture	IDLE CUT-OFF (pulled full out)
Ignition Switch	OFF
Beacon, Landing & Nav Lights	OFF
Master Switch	OFF
Control Lock	INSTALL

PREFLIGHT INSPECTION

CABIN	
Pilot's Operating Handbook	AVAILABLE IN AIRPLANE
Parking Brake	SET
Control Wheel Lock	REMOVE
Ignition Switch	OFF
Electrical Switches	OFF
Master Switch	ON

WARNING

When turning on the master switch, using an external power source, or pulling the propeller through by hand, treat the propeller as if the ignition switch were on. Do not stand, nor allow anyone else to stand, within the arc of the propeller, since a loose or broken wire, or a component malfunction, could cause the propeller to rotate.

Fuel Quantity Indicators	CHECK QTY
Airvacs Cooling Fan	CHECK AUDIBLY for operation
Interior, Beacon, Nav and Landing Lights	CHECK
Wing Flaps	DOWN
Master Switch	OFF
Fuel Shutoff Valve	ON

EMPENNAGE	
Rudder Gust Lock	REMOVE
Tail Tie-Down	REMOVE
Control Surfaces	CHECK freedom of movement and security

RIGHT WING	
Wing Flap	CHECK
Wing Tie-Down	DISCONNECT
Main Wheel and Tire	CHECK for proper inflation
Wheel Chock	REMOVE
Fuel Quantity	CHECK
Fuel Filter Cap	SECURE
Fuel Sample (Wing/Belly)	CHECK

NOSE	
Engine Oil Level	CHECK 4 qt Minimum
Fuel Strainer	DRAIN
Propeller and Spinner	CHECK
Carburetor air filter	CHECK
Landing Lights	CHECK
Nose Wheel Strut and Tire	CHECK
Nose Tie-Down	DISCONNECT
Strobe Port	CHECK

LEFT WING	
Main Wheel and Tire	CHECK for proper inflation
Wheel Chock	REMOVE
Fuel Sample	CHECK
Fuel Quantity	CHECK VISUALLY
Fuel Filter Cap	SECURE
Pilot Cover/Pitot Tube	REMOVE
Stall Warning Operating	CHECK
Fuel Tank Vent	CHECK
Wing Tie-Down	REMOVE
Wing Flap	CHECK

BEFORE STARTING ENGINE

Preflight Inspection	COMPLETE
Passenger Briefing	COMPLETE
Seats, Seat Belts, Shoulder Harnesses	ADJUST and LOCK
Brakes	TEST & SET
Circuit Breakers	CHECK IN and SET
Electrical Equipment and Radios	CHECK OFF
Fuel Shutoff Valve	ON

STARTING ENGINE

Prime	AS ROD
Carburetor Heat	COLD
Throttle	OPEN 1/2 INCH
Mixture	RICH
Propeller Area	CLEAR
Master Switch	ON
Beacon	ON
Ignition Switch	START (release when engine starts)
Throttle	1,000 RPM OR LESS
Oil Pressure	CHECK

TAXIING

Flaps	UP
Radios & Transponder	SET/STANDBY
Directional Gyro	SET
Nav & Landing Lights	AS DESIRED
Parking Brake	RELEASE
Taxi Area	CLEAR
Throttle	APPLY SLOWLY
Brakes	CHECK
Steering	CHECK
Instruments	CHECK

BEFORE TAKEOFF

Parking Brake	SET
Seats, Seat Belts, Shoulder Harnesses	ADJUST and LOCK
Cabin Doors and Windows	CLOSED and LOCKED
Flight Controls	FREE and CORRECT
Flight Instruments	SET
Fuel Quantity	CHECK
Fuel Shutoff Valve	ON
Mixture	RICH (below 3000 feet)
Elevator Trim	TAKEOFF
Throttle	1700 RPM
Magneto	CHECK
(RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnetos)	
Carburetor Heat	CHECK (for RPM drop)
Suction Gauge	CHECK
Engine Instruments and Annular	CHECK
Throttle	1000 RPM or less
Throttle Friction Lock	ADJUST
Strobe Lights / Landing Light	ON
Radios	SET
Wing Flaps	SET FOR TAKEOFF
Transponder	ALT
Brakes	RELEASE