

EMERGENCY LANDING

Belts / Harnesses	SECURE
Backrests	UPRIGHT
Landing Area	SELECT
Wind	CONSIDER
Flaps	LDG
Fuel Selector	OFF
Ignition Switch	OFF
Master	OFF

The glide ratio is 8.8 (1.45nm per 1000ft) with a windmilling propeller, or 10.3 (1.7nm per 1000ft) with a stationary propeller. Flaps UP for best glide. With inoperative flaps in the UP position, land at best glide speed.

Emergency Airspeeds

Weight	Best Glide	Flaps T/O	Flaps LDG
2535 - 2646lbs	76 KIAS	74 KIAS	73 KIAS
2205 - 2535lbs	73 KIAS	72 KIAS	71 KIAS
1874 - 2205lbs	68 KIAS	66 KIAS	63 KIAS
Below 1874lbs	60 KIAS	59 KIAS	58 KIAS

ENGINE PROBLEMS

Weight	Best Glide
2535 - 2646lbs	76 KIAS
2205 - 2535lbs	73 KIAS
1874 - 2205lbs	68 KIAS
Below 1874lbs	60 KIAS

Airspeed	BEST GLIDE
Fuel Pump	ON
Fuel Selector	CHECK
Engine Instruments	CHECK
Throttle	CHECK
RPM Level	CHECK
Mixture	SET
Alternate Air	OPEN
Ignition Switch	CHECK BOTH

Fly 130KIAS to restart with a stationary propeller.

ENGINE FIRE

Cabin Heat	OFF
Fuel Selector	OFF
Throttle	MAX POWER
Fuel Pump	OFF
Emergency Window	OPEN
Front Canopy	UNLATCH

Carry out emergency landing with engine off.

ELECTRICAL FIRE

Master Switch	OFF
Cabin Heat	OFF
Emergency Window	OPEN
Front Canopy	UNLATCH
Emergency Switch	ON IN IMC ONLY

ALTERNATOR FAILURE

Circuit Breakers	CHECK
Essential Bus Switch	ON
Voltmeter	MONITOR

NO FLAP LANDING

Keep airspeed in white sector. With only UP or T/O available, land at a flat approach angle, use throttle to control airplane speed and rate of descent. Use modified airspeed below.

Weight	Airspeed
2535lbs - 2646lbs	76 KIAS
2205lbs - 2535lbs	73 KIAS
1874lbs - 2205lbs	68 KIAS
Below 1874lbs	60 KIAS

OVERWEIGHT LANDING

Perform a normal approach and landing, but maintain an increased airspeed during the landing approach. Damage of the landing gear can result from a hard landing with a flight mass above the maximum landing mass.

Weight	Airspeed
2535 - 2646lbs	73 KIAS
Below 2535lbs	71 KIAS

PREFLIGHT

CABIN

All Electrical	OFF
Ignition Key	OFF AND REMOVED
Main Canopy	CHECK LOCKING
Rear Door	CHECK LOCKING
Paperwork	CHECK
Flight Controls	RELEASE AND CHECK
Trim	CHECK
Circuit Breakers	CHECK
Engine Control Levers	CHECK TRAVEL
Mixture	FULL LEAN
Throttle	IDLE
Prop	FULL FORWARD
Master	ON
Fuel Quantity	CHECK
Oil Quantity	4QT VFR / 6QT IFR
Lights	CHECK
Master	OFF
Prop	1/8" PLAY, 2DEG ROT

The airplane may not be operated when its temperature prior to operation is less than -40F or higher than 129F.

RIGHT GEAR

Landing Gear Strut	INSPECT
Strut Fairing	INSPECT
Wheel Fairing	INSPECT
Tire Pressure	36 PSI
Tire Wear, Tread	INSPECT
Brake Line	INSPECT
Slip Mark	CHECK ALIGNED
Chocks	REMOVE

RIGHT WING

Entire Wing Surface	INSPECT
Foot Step	INSPECT
Openings on Lower Surface	INSPECT
Tank Filler	INSPECT
Tank Vent on Lower Surface	INSPECT
Two Stall Strips on Wing	INSPECT
Wing Tip	INSPECT
Light Cluster	INSPECT
Mooring	INSPECT, UNTIE
Aileron	INSPECT
Flaps	INSPECT

PASSENGER BRIEF

Controls, Belts, Egress, No Smoking

LEFT GEAR

Landing Gear Strut	INSPECT
Strut Fairing	INSPECT
Wheel Fairing	INSPECT
Tire Pressure	36 PSI
Tire Wear, Tread	INSPECT
Brake Line	INSPECT
Slip Mark	CHECK ALIGNED
Chocks	REMOVE

LEFT WING

Entire Wing Surface	INSPECT
Foot Step	INSPECT
Air Intake on Lower Surface	INSPECT
Openings on Lower Surface	INSPECT
Stall Warning	CHECK
Tank Filler	INSPECT
Tank Vent on Lower Surface	INSPECT
Two Stall Strips on Wing	INSPECT
Pitot Probe	INSPECT
Landing / Taxi Lights	INSPECT
Wing Tip	INSPECT
Light Cluster	INSPECT
Mooring	INSPECT, UNTIE
Aileron	INSPECT
Flaps	INSPECT

FUSELAGE

Canopy	INSPECT
Rear Door and Window	INSPECT
Fuselage Skin	INSPECT
Antennas	INSPECT

EMPENNAGE

Stabilizers / Surfaces	INSPECT
Hinges	INSPECT
Elevator Trim Tab	INSPECT
Rudder Trim Tab	INSPECT
Fin Tie Down	INSPECT
Tail Skid	INSPECT

Depending on the type of fuel probes installed, the indicator can read a maximum of 15 or 17 US gallons. Long range tanks read a maximum of 16 gallons.

With long range tanks, when reading 16, the quantity of auxiliary fuel can be determined by switching the AUX FUEL QTY switch to the LH or RH position. The auxiliary quantity is added to the 16gal. An auxiliary fuel quantity of less than 3 gallons cannot be indicated by the system.

BEFORE STARTING

Fuel Sumps	ALL DRAINED
Fuel Quantity	VERIFY
Baggage	STOWED / SECURE
Rudder Pedals	ADJUSTED
Seat Backrests	UPRIGHT
Ties / Chains	CHECK REMOVED
Chocks	CHECK REMOVED
Prop	CHECK CLEAR
Fuel Caps	CHECK SECURE
Cowl Access	CHECK SECURE
WX / NOTAMs / TFRs	CHECK
Weight and Balance	CHECK
Headset	MONO / STEREO
Sunglasses	AS REQUIRED
ATIS / AWOS	LISTEN
Altimeter	SET
Rear Door	LATCHED / UNLOCKED
Front Canopy	LATCHED IN (1) OR (2)
Departure Clearance	AS REQUIRED
Flight Controls	CHECK FREE
Trim Wheel	TAKEOFF
Prop	FULL FORWARD
Alternate Air	CLOSED
Alternate Static	CLOSED
Avionics Switch	OFF
Essential Bus	OFF

START

Avionics Switch	OFF
Essential Bus Switch	OFF
Master	ON
Strobes	ON
G1000	PWR / ACK
MFD	ENG SYS PAGE
Fuel Selector	FULLEST TANK
Throttle	1 1/4" Open
Mixture	RICH
Fuel Pump	PRIME ENGINE
<i>3-5 seconds cold, 1-3 seconds warm</i>	
Mixture	FULL LEAN
Throttle	1/2" OPEN IF COLD
Brakes	HOLD
Starter	ENGAGE
Mixture	RICH ON START
Oil Pressure	GREEN IN 15 SECONDS
Alternator	ON
Ammeter	CHECK
Fuel Pressure	CHECK
G1000	CLEAR ANNS

FLOODED ENGINE

Crank with throttle half open and no prime. When engine fires, pull throttle before pushing mixture.

TAXI

Avionics Switch	ON
Electrical Equipment	ON AS REQUIRED
Flaps	TEST
Flaps	SET T/O
Instruments	AS REQUIRED
Flood Light	AS REQUIRED
Ammeter	NOT DISCHARGING
Idle RPM	TEST 600 - 800 RPM
Fuel Selector	CHANGE TANKS
Pitot Heat	TEST
Transponder	ALT
Lights	AS REQUIRED
Taxi Clearance	AS REQUIRED
Parking Brake	RELEASE
Brakes	TEST

Do not overheat the starter motor. Do not operate the starter for more than 10 seconds. After operating the starter motor, let it cool off for 20 seconds. After 6 attempts to start the engine, let the starter cool off for half an hour.

Approach, N12345, over the XYZ VOR, request flight following to XXX, type DA40, altitude YYYY

RUN-UP

Seat Backrests	UPRIGHT
Belts / Harnesses	CHECK FASTENED
Rear Door	CLOSED AND LOCKED
Front Canopy	CLOSED AND LOCKED
Door Warning Light	CHECK OFF
Fuel Selector	FULLEST TANK
Engine Instruments	GREEN RANGES
Circuit Breakers	CHECK
Flaps	CHECK T/O
Trim	CHECK T/O
Flight Controls	FREE AND CORRECT
Fuel Pressure	14 - 35 PSI
Mixture	BEST POWER
Alternate Air	CHECK CLOSED
Fuel Pump	ON
Throttle	2000 RPM
Prop Control	CYCLE THREE TIMES
Magnetos	175 RPM / 50 RPM
Voltmeter	CHECK GREEN
Throttle	IDLE

TAKEOFF

Landing Light	ON
Flaps	CHECK T/O
Prop Control	CHECK FULL FORWARD
Mixture	RICH
Fuel Pump	ON

Rotate at 59 KIAS

Weight	Initial Airspeed
2535lbs - 2646lbs	67 KIAS
2205lbs - 2535lbs	66 KIAS
Below 2205lbs	60 KIAS

CLIMB

Fuel Pump	OFF
Prop Control	2400 RPM
Throttle	MAX POWER
Mixture	RICH

Weight	Best Climb	Cruise Climb
2535lbs - 2646lbs	67 KIAS	76 KIAS
2205lbs - 2535lbs	66 KIAS	73 KIAS
1874lbs - 2205lbs	60 KIAS	68 KIAS
Below 1874lbs	54 KIAS	60 KIAS

Flaps T/O for best climb, UP for cruise climb

CRUISE

Flaps	UP
Throttle	SET
Prop Control	1800 - 2400 RPM
Mixture	SET
Trim	SET
Fuel Selector	AS REQUIRED
<i>Max imbalance 10gal STD, 8gal LR</i>	
Fuel Pump	OFF

DESCENT

Mixture	ADJUST
Prop Control	1800 - 2400 RPM
Throttle	SET
Fuel Pump	OFF

APPROACH

Seat Backrests	UPRIGHT
Belts / Harnesses	FASTENED
Fuel Selector	FULLEST TANK
Airspeed (for flaps)	BELOW 108 KIAS
Flaps	T/O
Trim	SET
Landing Light	ON

LANDING

Mixture	RICH
Prop Control	FULL FORWARD
Airspeed (for flaps)	BELOW 91 KIAS
Flaps	LDG
Fuel Pump	ON

Weight	Airspeed
2535lbs - 2646lbs	73 KIAS
2407lbs - 2535lbs	71 KIAS
2205lbs - 2407lbs	67 KIAS
1874lbs - 2205lbs	63 KIAS
Below 1874lbs	58 KIAS

GO AROUND

Throttle	MAX POWER
Flaps	T/O

Weight	Airspeed
2535lbs - 2646lbs	67 KIAS
2205lbs - 2535lbs	66 KIAS
1874lbs - 2205lbs	60 KIAS
Below 1874lbs	54 KIAS

(CLIMB)

Fuel Pump	OFF
Prop Control	2400 RPM
Throttle	MAX POWER
Mixture	RICH

Weight	Best Climb	Cruise Climb
2535lbs - 2646lbs	67 KIAS	76 KIAS
2205lbs - 2535lbs	66 KIAS	73 KIAS
1874lbs - 2205lbs	60 KIAS	68 KIAS
Below 1874lbs	54 KIAS	60 KIAS

Flaps T/O for best climb, UP for cruise climb

(This is a duplicate copy of CLIMB for a go around)

AFTER LANDING

Fuel Pump	OFF
Pitot Heat	CHECK OFF
Strobes	AS REQUIRED
Lights	AS REQUIRED
Transponder	ALT
Flaps	UP

When taxiing at close range to other aircraft, the strobe lights should be switched OFF. The position lights must always be switched ON during night flight.

WHAT ARE YOU FORGETTING?

Stratux, Cameras, iPad, Phone, Headset, Jacket, Sunglasses, Checklists, Foggles, Kneeboard, Timer, Charts, Passenger(s), Litter, Tach Book, Radios, Bags, Luggage.

SHUTDOWN

Brakes	HOLD
Avionics	OFF
Throttle	1000 RPM
Mixture	LEAN
Ignition	OFF
Master	OFF
Timer / Tracker	STOP

FINAL

Ignition	OFF
All Electrical	OFF
Parking Brake	RELEASED
Rear Canopy	LOCKED
Ties / Chocks	IN PLACE
Hobbs Time	RECORD
Pitot / Cowl Covers	ON
Front Canopy	LOCKED