

PREFLIGHT INSPECTION

CABIN

Certificates/Documents	IN AIRCRAFT
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- A**irworthiness Certificate

- R**egistration

- R**adio Operators/Station License (**I**nternational Flts)

- O**perating Limitations/Airplane Flight Manual

- W**eight & Balance (current)

- Pre-Flight Checklists (2)

FUEL AND POWER CHART LYCOMING O-360-A1A 180HP ENGINE

Aircraft Use Log	CHECK
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Parking Brake	AS REQUIRED
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Control Wheel Lock	REMOVE
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Ignition Switch	OFF
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Fuel Selector	BOTH/ON
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Master Switch	ON
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Fuel Quantity Indicators	CHECK QUANTITY
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Anti-collision/Strobe Lights	CHECK OPERATION
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Fuel Pump (check for ops including gauge: 4-6 psi)	ON then OFF
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Lights (Night Operations)	CHECK
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Stall Warning Horn	CHECK
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Master Switch	OFF
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Flaps	DOWN FOR INSPECTION
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Baggage Door	CHECK SECURE
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TAIL SECTION

Tail Tie-Down/Rudder Gust Lock	REMOVE
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Elevator & Rudder	CHECK FREEDOM & SECURE
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Nav. Light	UNBROKEN (WHITE)
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RIGHT WING

Flap Tracks & Actuator Rod	CHECK
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Aileron	CHECK FREEDOM & SECURE
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Nav. Light	UNBROKEN (GREEN)
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Fuel Quantity	CHECK VISUALLY
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Fuel Filler Cap	SECURE
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Wing Tie Down	REMOVE
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Fuel Tank Sump Quick-Drain Valve	DRAIN
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Main Wheel	CHECK WEAR & INFLATION (23 psi)
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NOSE

Windshield	CHECK CLEAN
Wheel Chocks	REMOVE
Engine Oil Dipstick	CHECK (6-8 qt.)
Engine Fuel Strainer	DRAIN 4 SECONDS
Nose Wheel	CHECK WEAR & INFLATION (26 psi)
Shock Strut	CHECK PROPER INFLATION (45 psi) <i>Approx. 3.25 inches showing</i>
Air Inlets	CHECK FREE OF FOREIGN MATTER
Air Filter	CHECK
Propeller & Spinner (cracks, nicks, etc)	CHECK
Tow Bar	REMOVE
Alternator belt	CHECK TENSION
Inside battery door	INSPECT
Static Port	CHECK

LEFT WING

Main Wheel	CHECK WEAR & INFLATION (23 psi)
Fuel Tank Sump Quick-Drain Valve	DRAIN
Wing Tie-down	REMOVE
Fuel Quantity	CHECK VISUALLY
Fuel Filler Cap	SECURE
Pitot Tube/Cover	CHECK/REMOVE
Fuel Tank Vent Opening	CHECK
Landing Light	CHECK
Nav. Light	UNBROKEN (RED)
Aileron	CHECK FREEDOM & SECURE
Flap Tracks & Actuator Rod	CHECK

BEFORE STARTING ENGINE

Chocks	REMOVE
Preflight Inspection	COMPLETE
Passenger Briefing	COMPLETE
Seats, Seat Belts, Harness	ADJUST & LOCK
Brakes	TEST & SET
Circuit Breakers	CHECK IN
Avionics Master (and other electrical equipment)	OFF
Fuel Selector	BOTH/ON

STARTING ENGINE

Mixture	RICH
Carburetor Heat	COLD
Propeller	FULL RPM
Master Switch	ON
Prime	(2-6 strokes) AS REQUIRED
Primer	IN & LOCKED
Throttle	OPEN 1/4 inch
Anti-collision/Strobe Lights	ON
Propeller Area	CLEAR
Ignition Switch	START
Oil Pressure	Low Pressure Light OFF
<i>Verify oil pressure with gauge w/in 30 seconds</i>	
Engine Warm-up	THROTTLE 1000-1100 RPM
Mixture (Lean to the point of almost not running)	LEAN

BEFORE TAXI

Lights & Strobes	AS REQUIRED
Avionics Master	ON
<i>Set Radio (ATIS, GC, etc.) and NAV Frequencies</i>	
Transponder	ALTITUDE
Flaps	UP
Brakes	TEST

BEFORE TAKEOFF

Parking Brake	AS REQUIRED
Seats, Belts, Harnesses	RE-CHECK
Cabin Doors & Windows	CLOSED & LOCKED
Flight Controls	FREE & CORRECT
Fuel Selector	BOTH/ON
Elevator Trim	SET for takeoff

Mixture	RICH
Throttle	1800 RPM
Oil Pressure	CHECK (In Range)
Suction Gage	CHECK (4.6 to 5.4)
Engine Instruments & Ammeter	CHECK
Propeller	CYCLE 3 TIMES (500 RPM Max drop)
Magnetos	CHECK
	<i>125 max drop/50 max difference</i>
Carburetor Heat	HOT (Check for RPM drop)
Throttle	CHECK IDLE LIMITS (650 RPM)
Carburetor Heat	COLD (IDLE at 1000 RPM)
Throttle Friction Lock	ADJUST
Flight Instruments	CHECK & SET
Radios	SET
Fuel Pump	ON
Wing Flaps	SET for takeoff
Lights	LANDING/TAXI ON

Note time of departure for fuel purposes.

NORMAL TAKEOFF

Wing Flaps	0 Degrees
Carburetor Heat	COLD
Throttle	FULL OPEN
Elevator Control	LIFT NOSE WHEEL (60 MPH)
Climb Speed	65 MPH until obstacle clearance assured then 85-90 MPH
At 500' AGL	Throttle: 25" MP Prop: 2500 RPM
Fuel Pump	OFF at 1000' AGL

DO NOT Operate prop continuously between 2000 and 2250 RPM

CRUISE

Power Refer to FUEL AND POWER CHART O-360-A1A
(A good power setting is 21" MP and 2300 RPM)

Mixture LEAN (as required)

BEFORE LANDING

Seats, Belts, Harnesses	SECURE
Fuel Selector	BOTH/ON
Fuel Pump	ON
Mixture	RICH
Propeller	FULL RPM
Carburetor Heat	HOT
Wing Flaps	AS DESIRED
Airspeed	70-80 MPH (flaps up), 65-75 MPH (flaps down)

BALKED LANDING (Go-Around)

Power	FULL THROTTLE
Carburetor Heat	COLD
Wing Flaps	RETRACT to 20°
<i>Upon reaching airspeed of approximately 65 MPH, retract flaps slowly</i>	

NORMAL LANDING

Airspeed	70-80 MPH (flaps up)
Wing Flaps	AS DESIRED (below 100 MPH)
Airspeed	65-75 MPH (flaps down)
Touchdown	MAINS FIRST
Landing Roll	LOWER NOSE WHEEL GENTLY
Braking	MINIMUM REQUIRED

AFTER LANDING

Wing Flaps	UP
Carburetor Heat	COLD
Fuel Pump	OFF
Mixture (Lean to the point of almost not running)	LEAN
Lights	AS REQUIRED

SHUTDOWN

Parking Brake	AS REQUIRED
Avionics Master (and other electrical equipment)	OFF
Throttle	1000 RPM
Mixture	IDLE CUT-OFF
Ignition Switch	OFF
Master	OFF
Control Lock	INSTALL
Tach Time	RECORD
Pitot Tube Cover	INSTALL
Aircraft	SECURE

USEFUL INFORMATION**V-Speeds Note:** All Speeds are for Gross Weight (2,300 lbs)

Vr: (Rotation)	60 MPH
Vx: (Best Angle)	65 MPH
Vy: (Best Rate)	80 MPH
Va: (Maneuvering)	122 MPH
Vfe: (Max Flaps extend)	100 MPH
Vno: (Max Structural Cruising)	140 MPH
Vne: (Never Exceed)	174 MPH
Vs1: (Stall Clean)	57 MPH
Vso: (Stall Dirty)	49 MPH
VGlide: (Clean)	80 MPH

Standard Fuel Loading

42 Gallon Capacity 252 lbs

36 Gallons Usable 216 lbs

6 Gallons Unusable Fuel 36 lbs

55% ~99HP Approx. 7.4 gph	65% ~117HP Approx 8.8 gph	75% ~135HP Approx 10 gph
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