

Beechcraft Skipper

Specifications

Model 77 (SEL)

Classification: Standard

Category: Utility

Engine: Lycoming O-235

FAA License: N _____

Serial number: WA- _____

Mfg date: _____

Dimensions

Span 30" Length 24' Height 6'11"

Prop 72" Turn Radius 20'8"

Engine O-235-L2C

Fuel 30 with 29 usable

Oil 6 quarts

Weight 1680 Takeoff 1675

Ground Handling

Tiedown lugs are weak. Tiedown rope must be nylon, not cotton; tie nose down in high wind.

Clean windows with water and soft cloth only prior to using approved cleaner.

Prior to washing, cover all air intakes.

Remove oil and dirt from nose strut with soft rag.

Never taxi with a flat shock strut.

Main tires 35 psi; nose 25 psi (4-ply tube type tires).

Cold weather rotate propeller backwards to loosen oil. Never move propeller with magneto on.

To sets parking brakes, holding the rudder brakes and pulling out the park brake control.

Do not leave aircraft with parking brake set for long periods of time.

Do not turn nose wheel in excess 15-degrees left or right when towing. See red marks.

Do not place weight on the empennage to raise the nose wheel.

Do not insert fuel nozzles in more than three inches.

Do not top-off tank at high pressure.

Pre-flight - Interior

Un-latch top door handle, open left side door

Note hour meter time

Control lock removed

Seat belts arranged

Key in switch, magnetos off

Radio master off

Master battery switch on

Fuel gauges out of yellow range

Warning lights (press to test lights, battery and alts)

Do not takeoff if either fuel gauge is in the yellow and/or below tab in tank by visual check.

Flaps down (optional)

Master battery switch off

Door shut (if windy)

Pre-flight - Wings

Remove Pitot Cover (left wing)

Stall Warning switch free (left wing)

Visual check of fuel levels (2-tanks, 1-each wing)

Fuel tank caps on properly

Tiedown removed and Chocks removed (if any)

Under wing for fuel leaks (blue dye traces)

Fuel sump drains (1-under each wing tank)

Main gear fairings, tires and wheels

Brakes and hydraulic fluid leaks

Flaps, aileron hinges, wing tip, nav and strobe lights

Pre-flight - Nose

Propeller for chips or cracks

Air intake and air filter clear

Landing light, engine cowl and belly for oil leaks

Minimum 4-inches of strut extension

Nose tire, shimmy damper

Lower fuel sump drain (quarter turn on, then off)

Pre-flight - Fuselage and Tail

General inspection for any damage

Static port (1-each side)

ELT switch on (RH side)

Aux power plug cover on - RH side

Stabilizer, rudder, elevator hinges and trim tabs

Tail tiedown removed (if any)

Pre-Start

Seats adjusted, belts and shoulder harness fastened

Doors shut and top latch locked

Mic and headsets (as required), x-ponder to standby

Circuit breakers in (or out as required)

Elevator & Rudder Trims set

Engine Start

Fuel selector on

Mixture full rich (or set for altitude)

Master (battery) switch on, Alternator switch on

Fuel boost pump on to start engine

Full throttle and back once and cracked for idle

Clear Prop area, Mag switch to start and hold

Push to prime (mag switch) briefly, more if cold

Max start cycle 3-10 seconds, max 3-attempts then cool for 2-minutes

Engine Operation

Throttle set to idle at about 800 - 1,000 rpm
Mixture leaned for altitude)
Oil Temp - normal range 120 to 245 F
Oil Pressure - Green Arc 60 to 90psi
Fuel Pressure - 3 to 8 psi and fuel pump off for taxi
Vacuum - 4.3 to 5.9 in. Hg
2nd check - Fuel tank gauges above yellow range

Pre-Taxi and Taxi

2nd check - Alternator switch on, indicator light out
2nd check - Circuit breakers in (or out as required)
Fuel pump off
Controls free
Flaps switch test, visual both same (up, if extended)
Radio master on, freqs set & x-ponder 1200 standby
Flight Instrument set (DG and Altimeter)
Rudder and elevator trims set
Parking brake off (if set)

Pre-Takeoff

Brakes held
Run up at 1800-rpm
Mags (L/R) 50 rpm drop normal (max 175 rpm)
Carb-heat on (note some rpm drop) then off
Engine Instruments - re-check oil pressure & Temp
Mixture (leaned for altitude, then richened slightly)

Takeoff

Clearance or clear traffic pattern
Full Power (friction lock as required)
Rotate **56 k** (64 mph)
Liftoff **60 k** (69 mph)
Climb **68 k** (78 mph)
At 1000 feet AGL - fuel pump off

Speeds - Structural (1 knots = 1.15 mph)

Vne - never exceed **143 k** (164 mph)
Vno - structural cruise **119 k** (136 mph)
Va - maneuvering **109 k** (125 mph)
Vfe - max flaps extended **90 k** (104 mph)
Vso - min flaps extended **52 k** (60 mph)
Vx - best angle of climb **61 k** (70 mph)
Vy - best rate of climb **68 k** (78 mph)
Best glide and best approach **63 k** (72 mph)
Maximum crosswind **15 k** (17 mph)
Flaps extended - White Arc **52-90 k** (60-104 mph)
Operating - Green Arc **54-119 k** (62-136 mph)
Power-on emergency descent **143 k** (164 mph)
Power-off rapid descent - **63 k** and full flaps

Spin recovery

Simultaneous yoke full forward and opposite rudder
Power off, flaps up (if extended), ailerons neutral
Stall recovery, 300 feet is a normal altitude loss.

Flight Operations

Maxim slip time is 30 seconds.
Carburetor Heat is in (off) for go-around
Do not descend without some power.
Glide is 63 k - gives 1.3 nm per 1000 feet AGL
Do not spiral for more than two turns.
Pitot Heat should be on when in visible moisture.

Non-standard Operation

Stall warning is inoperative when master off.
Unlatched door, will trail open about 3" - some buffeting, hold during flare.
Low fuel light may be inoperative if gauges are operative.
Alternate Static Air Source is below instrument panel on lower left sidewall.
Flap indicator may be inoperative if flap travel is visually observed.
Avoid extended use of the landing light while on the ground.
The alternator bulb may be pressed to test.
An ammeter reading at zero is normal. Ammeter below 25% charge at 1100 rpm is normal.
Battery switch is on and alternator switch is off when using external power.
Battery must be installed when using external power.
Aircraft is negative ground. Power pin on external power receptacle is connected directly to the battery and will short out the battery if grounded.
Use only a negatively grounded power cart.

Descent

ATIS information or visual wind observation
Altimeter to local setting
Cruise descent power on (or power off w/carb-heat)
Mixture increased as required

Pre-Landing

Pattern speed 68 k minimum (78 mph) min
On final 63 k (72 mph)
Fuel Pump on before reducing power
Check fuel pressure
Carb-heat on (as required)
Full flaps on base or final

Go-Around

Throttle full
Carb-heat off
Level flight till 63 k (72 mph)
Establish positive rate of climb
Flaps up in increments above 68 k (78 mph) min

Post Landing

Flaps up
Fuel Pump off
Carb-heat off
Control held (as required) during taxi

Shut Down

All electrical off - lighting; radio master
Idle 1000-1200 rpm
Mixture to full cut off
Magnetos to off (after prop stops)
Master (battery) switch off and alternator switch off
Control Lock in place

Takeoff Emergency - On runway

Throttle full off
Master switch off
Magnetos all off
Fuel selector off
Maximum braking (after firmly on ground)

Takeoff Emergency - After lift off

Maintain **63 k** (72 mph) and level flight
Check mixture is at full rich (or lean slightly)
Check Carb-heat is off
Check Fuel Pump is on
Check Fuel selector is on
Check Magneto is on both
Throttle to 1/4th and select start (if engine has quit)
Magneto switch start - push to prime (as required)

Takeoff Emergency - No Restart

(same as on runway, plus)
Maintain **63 k** (72 mph)
Select landing area, avoid steep turns and land into the wind

Takeoff Emergency - Rough Engine

(same as After lift off, plus)
Mixture to rich and/or to lean for best operation
Magneto positions to Left, Right or Both for best operation

Engine Fire - Engine start

Throttle to full power
Mixture to lean
Fuel Pump off (if on)

Engine Fire - Engine fire continues

Mixture full off
Fuel Selector to off
Heat and Air Vents off
Expedite rapid decent and safe landing

Electrical Fire - In cockpit

Alternator switch to off
Master (battery) switch to off
Extinguisher (as required)
Determine source turn off or pull circuit breakers
Land at next available safe airport

Alternator Failure

Alternator switch to off
All non-essential electrical off - switches off or circuit breakers pulled
Radio Master switch to off
All non-essential radios off - Radio Master back on

Flooded Engine Start

Mixture off
Throttle full
Magnetos to crank
Mixture eased forward (when engine tries to start)
Throttle back to fast idle