

Cessna 182S Skylane Preflight

Cabin

1. Pitot Tube – Remove Cover, Check for Blockages.
2. Documents – POH, W&B, Registration.
3. Parking Brake - SET.
4. Control Wheel Lock – Remove.
5. Ignition Switch – OFF.
6. Avionics Master Switch – OFF.
7. Master Switch – ON.
8. Fuel Quantity – Check Indicators and Annunciators.
9. Avionics Master Switch – ON.
 - Avionics Cooling Fan – Listen for Operation.
 - Avionics Master Switch – OFF.
10. Alternate Static Source Valve – OFF.
11. Annunciator Panel – Test (All lights should flash).
12. Fuel Selector Valve – BOTH.
13. Flaps – EXTEND.
14. Cowl Flaps – OPEN.
15. Pitot Heat – Check.
16. Master Switch – OFF.
17. Baggage Door – Locked with Key.

Empennage

1. Rudder Gust Lock – Remove if Attached.
2. Tail Tie-Down – Remove.
3. Control Surfaces – Check Freedom of Movement.
4. Trim Tab – Check Security.
5. Antennas – Check attachment and condition.

Right Wing

1. Aileron – Check Freedom of Movement and Security.
2. Flap – Check Security and Condition.
3. Wing Tie-Down – Remove.
4. Fuel Tank Vent – Check for Stoppage.
5. Main Wheel Tire – Check Inflation and Condition.
6. Fuel Tank Drain – *Check for Contamination, Fuel Grade.
 - Sample 5 Fuel Drains on each wing.
7. Fuel Quantity – Visually Check Quantity.
8. Fuel Filler Cap – Secure and Vent NOT Obstructed.

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Nose

1. Static Port (Right)– Check for Blockage.
2. Fuel Strainer Drain - *Check for Contamination, Fuel Grade.
3. Fuel Selector Drain - *Check for Contamination, Fuel Grade.
4. Engine Cooling Inlets – Check for obstructions.
5. Propeller and Spinner – Check for nicks and security.
6. Air Filter – Check for Obstructions.
7. Nose Strut – Check Inflation and Condition
8. Nose Wheel - Check Inflation and Condition.
9. Engine Oil – Keep filled to 8 quarts.
10. Static Port (Left)– Check for Blockage.

Left Wing

1. Fuel Quantity – Visually check quantity.
2. Fuel Filler Cap – Secure and Vent not obstructed.
3. Fuel Tank Drain – *Check for Contamination, Fuel Grade.
 - Sample 5 Fuel Drains on each wing.
4. Main Wheel Tire – Check Inflation and Condition.
5. Pitot Tube – Remove Cover and Check for Blockages.
6. Fuel Tank Vent – Check for Stoppage.
7. Stall Warning Vane – Check freedom of movement.
8. Wing Tie-Down – Remove.
9. Landing Light – Check Condition and Clean Cover.
10. Aileron – Check Freedom of Movement and Security.
11. Flap – Check Security and Condition.

* If Fuel contamination is found - Take additional samples from all sumps until clear. Rock wings and lower tail and sample again.

Cessna 182S Skylane Engine Start

Before Starting Engine

1. Preflight Complete.
2. Passengers Briefed.
3. Seats – Adjust and Lock position.
4. Seat Backs – Set to Most Upright position.
5. Seat Belts, Shoulder Harness – On, Adjust and Lock.
6. Brakes - Test and Set.
7. Circuit Breakers – Check In.
8. Avionics Circuit Breakers – Check In.
9. All Electrical Switches - OFF.
10. Avionics Master Switch - OFF.
11. Cowl Flaps – OPEN.
12. Fuel Selector - BOTH.

Starting Engine When Cold

1. Throttle – ¼ inch Open.
2. Prop - Full Increase.
3. Mixture – IDLE CUT OFF.
4. Master Switch - ON.
5. Prime Engine
 - Electric Fuel Pump - ON
 - Advance Mixture until Fuel Flow rises then OFF.
 - Electric Fuel Pump - OFF.
6. Propeller Area Clear.
7. Engage Starter, Advance Mixture when Engine Fires.
8. Throttle - Adjust to 1200 RPM
9. Oil Pressure - Check.
10. Mixture - Lean to Maximum RPM.
11. Throttle – 600 to 800 RPM (If Cold – 800 to 1000 RPM.)

Starting Engine When Hot

1. Same as Cold Except:
 - Do NOT Prime Engine.

Starting Engine When Flooded

1. Same as Cold Except:
 - Do NOT Prime Engine.
 - Throttle 1/2 Open.
 - When engine fires advance mixture and retard throttle.

Cessna 182S Skylane Taxi / Run Up

Before Taxi

1. Anti-Collision Lights - ON.
2. Flaps – Retract.
3. Avionics Master Switch – ON.
4. Autopilot – Self-Test Complete.
5. Test and Set Shadin Fuel Flow Meter.
 - Press Enter/Test for Self-Test – Verify “Good”
 - Verify Fuel Reaming – Set if Needed
 - Set Display as Desired – Fuel Remaining or Other.
6. Radios - On and Set.
7. Nav/GPS – On and Set (GPS Flight Plan, VOR Check)
8. Clearances - ATIS, Clearance Delivery, Ground.
9. Transponder – Standby.
10. Landing Light/Taxi Light as Necessary.
11. Navigation Lights and Interior Lights as Desired.
12. Brakes - Test on Initial Roll.

Run Up

1. Brakes - Set.
2. Flight Controls - Free and Correct.
3. Flight Instruments - Set.
4. Fuel Quantity – Check.
5. Fuel Selector - BOTH.
6. Oil Temperature - In Green (Beginning to come up).
7. Mixture – RICH.
8. Throttle - 1800 RPM.
 - Engine Instruments - Check.
 - Magnetos - Check Right - Both - Left - Both.
(Max. Drop 150 RPM, Max. Delta 50 RPM)
 - Prop - Cycle Once.
(Keep RPM drop to less than 100 RPM)
 - Annunciator Panel – Check No Lights Illuminated.
 - Vacuum - 4.5" to 5.5"
 - Alternator Output - Check.
 - Throttle Retard.
9. Throttle Friction Lock – Adjust.

Cessna 182S Skylane Run Up / Before Takeoff

Run Up (Continued)

10. Auto Pilot / Manual Electric Trim – Test
 - MET – Press both halves up/down and verify trim wheel and indicator are moving.
 - DISC/TRIM INT – Press and hold while MET is pressed to verify that trim wheel and indicator are not moving. Release and verify trim wheel and indicator are moving.
 - Engage Autopilot – Press AP Button.
 - Flight Controls – Move fore, aft, left, and right to verify that autopilot can be overpowered.
 - DISC/TRIM INT – Press and verify that the autopilot disconnects. (Tone and Voice warning.)
11. Elevator and Rudder Trim - Set for Takeoff.
12. Radios Set Up.
13. NAV/GPS – SET.
14. Pitot Heat - As Desired.
15. Cabin Doors and Windows - Closed and Locked.
16. Note Time Off.

Before Takeoff

1. Transponder - On Altitude.
2. Mixture – Rich.
 - High Altitude – Adjust for Placarded fuel flow.
3. Prop - Full Forward.
4. Flaps – Set as desired for Take-Off (0° to 20°)
5. Cowl Flaps – OPEN.
6. Anti-Collision Lights - ON.
7. Landing Light/Taxi Light as Desired.

Cessna 182S Skylane Takeoff

Normal Takeoff

1. Brakes – Release.
2. Full Throttle – 2400 RPM.
3. Mixture – Rich.
 - High Altitude – Adjust for Placarded fuel flow.
4. Rotate at - 55 to 60 kts.
5. Climb Speed - 80 kts No Flaps.

Short Field

1. Flaps - 20°.
2. Brakes - Apply & Hold.
3. Full Throttle – 2400 RPM.
4. Mixture – Adjust for Placarded fuel flow.
5. Brakes - Release.
6. Pull Back @ 47 kts.
7. Lift-Off @ 49 kts.
8. Climb Speed - 58 kts.
9. Flaps – Retract after reaching 70 kts.
10. Climb Speed
 - 70 kts with 20° Flaps.
 - 80 kts No Flaps.

Soft Field

1. Flaps - 20°.
2. Full back elevator pressure.
3. Slowly Increase to Full Throttle -2400 RPM.
4. Lift Nose as Soon as Possible
5. Accelerate in Ground Effect.
6. Flaps – Retract after reaching 70 kts.
7. Climb Speed
 - 70 kts with 20° Flaps.
 - 80 kts No Flaps.

Cessna 182S Skylane Climb, Cruise, and Descent

Climb

1. Cowl Flaps – OPEN.
2. Fuel Selector – BOTH.
3. Enroute Climb.
 - 90 kts.
 - Power - 23”MP, 15 GPH, 2400 RPM.
4. Maximum Performance Climb.
 - Best Rate - 80 kts. (72 kts @ 10,00 Feet)
 - Best Angle - 63 kts. (66kts @ 10,000 Feet)
 - Full Throttle.
 - Lean to Placarded Fuel Flow.

Cruise

1. Power - Set to power table and Lean Mixture.
 - 4000 ft & 75% Pwr – 25” MP, 2200 RPM, 12.7 GPH.
2. Cowl Flaps – CLOSED.
3. Landing Light/Taxi Light - OFF.

Descent

1. Power – As Desired.
2. Mixture – Enrichen as necessary.
3. Cowl Flaps – CLOSED.
4. Fuel Selector – BOTH.

Cessna 182S Skylane Approach and Landing

Before Landing (Down Wind)

1. 16” to 17” MP, 2400 RPM, 90 kts.
2. Seat Belts, Shoulder Harness - On.
3. Seat Backs - Up.
4. Fuel Selector – BOTH.
5. Mixture – RICH.
6. Cowl Flaps – CLOSED.
7. Landing Light/Taxi Light - As Desired.
8. Autopilot – OFF.
9. Abeam Touch Down Point - 12” to 14” MP.
10. 10° Flaps.

Normal Landing

1. Base: 80 kts., GUMP Check, Flaps 20°.
2. Final: 70 kts., Full Flaps. (65 kts. Over the Runway.)

Short Field Landing

1. Extend Downwind by 4-5 Seconds. Add 2” MP.
2. Reduce Approach Speeds to 60 kts.

Balked Landing

1. Full Throttle – 2400 RPM
2. Flaps – Retract to 20°.
3. Climb Speed – 55 kts.
4. Flaps – Retract after reaching 70 kts.
5. Cowl Flaps – OPEN.
6. Climb Speed
 - 70 kts with 20° Flaps.
 - 80 kts No Flaps.

After Landing

1. Flaps Retract.
2. Cowl Flaps – OPEN.
3. Transponder - Standby.
4. Landing Light/Taxi Light – As Desired.
5. Anti-Collision Lights – As Desired.

Cessna 182S Skylane Engine Shutdown

Engine Shutdown

1. Brakes - Apply and Hold.
2. Electrical Equipment – OFF.
3. Avionics Master Switch - OFF.
4. Lights - OFF.
5. Throttle - 1200 RPM.
6. Mixture - Idle Cut Off.
7. Magnetos - OFF.
8. Master Switch - OFF.
9. Cowl Flaps – CLOSED.
10. Fuel Selector Valve – Set to Left or Right.
11. Brakes - OFF.
12. Cabin Air – Closed.
13. Secure Control Wheel.
14. Tie Down Plane.

Cessna 182S Skylane Airspeeds / Capacities

Best Glide - 75 kts. Flaps up

Best Glide – 70 kts. Flaps Down

V_{S0}	=	36	kts.
V_{S1}	=	43	kts.
V_X	=	63	kts. (Sea Level, Flaps Up)
V_X	=	66	kts. (10,000 feet, Flaps Up)
V_Y	=	80	kts. (Sea Level, Flaps Up)
V_Y	=	72	kts. (10,000 Feet, Flaps Up)
V_A	=	88	kts. @ Empty 2000 lbs
V_A	=	110	kts. @ Gross 3100 lbs
V_{FE}	=	140	kts. Flaps 0° to 10°
V_{FE}	=	120	kts. Flaps 10° to 20°
V_{FE}	=	100	kts. Flaps 20° to Full
V_{NE}	=	175	kts.
V_{NO}	=	140	kts.

Capacities and Limitations

1. Tire Pressure
 - Main Wheels 42 PSI
 - Nose Wheel 49 PSI
2. Maximum Takeoff Weight 3100 lbs
3. Maximum Landing Weight 2950 lbs
4. Useable Fuel
 - Full 88 gallons
 - Filler 65 gallons
 - Operation on Left or Right tank is limited to level flight
5. Oil – Fill to 8 quarts
 - Maximum Capacity 9 quarts
 - Minimum Capacity 4 quarts

Shadin Miniflo Digital Fuel Management System

Self-Test

1. Press ENTER/TEST for Self-Test – Verify “Good” is Displayed.

Verify Fuel Remaining / Fuel Used

1. Move REM/USED to REM – Fuel Remaining is Displayed.
2. Move REM/USED to USED – Fuel used since Last Entry is Displayed.

Setting Full Fuel

1. Move FULL/ADD to FULL – the Press ENTER/TEST.
2. Release FULL/ADD.
3. Move REM/USED to REM – Verify Fuel Remaining 88 gal.

Setting Fuel Remaining

1. Move REM/USED to REM - Press ENTER/TEST to increment fuel remaining. You may hold ENTER/TEST to increase speed of incrementing.
2. Verify Fuel Remaining before releasing REM/USED.
3. Release REM/USED.

Adding Fuel

1. Move FULL/ADD to ADD - Move REM/USED to REM to increment fuel added.
2. Press ENTER/TEST to Enter Added Fuel.
3. Release FULL/ADD.
4. Move REM/USED to REM – Verify Fuel Remaining.

Correcting Errors (If to Much Fuel was Added)

1. Decrement Fuel Remaining
 - Move REM/USED to USED - Press and Hold ENTER/TEST, after 4 seconds the fuel remaining will begin to decrement.
 - Release ENTER/TST.
 - Release REM/USED.
2. Move REM/USED to REM – Verify Fuel Remaining.

Cessna 182S Skylane Emergencies

Engine Failure

1. Pitch / Trim for Best Glide - 75 kts Flaps Up.
 - 70 kts Flaps Down.
2. Fuel Selector – BOTH.
3. Electric Fuel Pump - ON.
4. Mixture Rich.
5. Mags - Check Both or Start.
6. **Power Off Landing** - If Engine will not Restart.
 - Select Landing Location.
 - Prop - Full Back to extend glide.
 - Radios - Squawk 7700, Mayday on 121.5.
 - Fuel Pump OFF.
 - Mixture – OFF.
 - Fuel Selector OFF.
 - Mags – OFF.
 - Flaps – Full.
 - Before Landing (Seat belts tight, Door Open, Master switch OFF).

Engine Fire

1. Mixture - Idle Cutoff.
2. Fuel Selector – OFF.
3. Electric Fuel Pump – OFF.
4. Master Switch – OFF.
5. Cabin Heat and Air Vents – Closed.
6. Throttle – Idle.
7. Descend rapidly (do not exceed VNE).
8. Prepare for power off landing.

Electrical Fire

1. Master Switch – OFF.
2. Cabin Vents – Closed.
3. Avionics Master – OFF.
4. All Electrical – OFF.
5. Verify source of smoke is out.
6. Cabin Vents – OPEN.
7. Leave any tripped breakers off.
8. Restore Electrical items one at a time
9. Land as soon as possible.