Twin Oaks Aircraft Rental

Flight Operations Manual

This Flight Operations Manual establishes the core policies, procedures, and operational guidelines required to ensure the safe, efficient, and standardized operation of all NorthWest Wings, LLC DBA Twin Oaks Aircraft Rental aircraft. This Manual serves as an essential resource for pilots, ground crew, and management, aligning our day-to-day operations with safety best practices. Nothing contained within this Manual shall be construed to supersede, override, or circumvent any applicable federal, state, or local aviation regulations, laws, or directives, unless the Manual imposes a more stringent requirement. In the event of a conflict between this document and regulatory authority, the relevant governing regulation shall prevail. As a living document, this Manual is subject to regular reviews and updates to integrate evolving industry standards and operational insights.

AIRCRAFT OPERATING PROCEDURES

A. GENERAL FLIGHT SAFETY & PILOT RESPONSIBILITIES

1. **Pilot-in-Command (PIC) Authority**
   - **i.** The PIC is solely responsible for passenger safety and the safe outcome of the flight.
   - **ii.** Engine shutdown is mandatory before allowing any person to enter or exit the aircraft.
2. **Procedures**
   - **i.** Approved Twin Oaks Aircraft Rental checklists must be utilized for all phases of aircraft operation.

B. FLIGHT PHASES

1. **Preflight Inspection**
   - **i. Mechanical Safety**
     - **a.** The ignition key must be completely removed from the ignition switch during the preflight inspection.
     - **b.** If the aircraft is equipped with magneto switches, the pilot must double-check that they are toggled to the OFF position prior to commencing the exterior walkaround.
   - **ii. Cockpit Distraction Management**
     - **a.** The preflight inspection demands undivided attention. Pilots must avoid engaging in non-flight activities during preflight checks.
     - **b.** Prohibited cockpit distractions include cell phone usage, casual conversations with bystander personnel, listening to music, or any other activity not directly related to flight preparation.
   - **iii. Flight-Specific Inspections**
     - **a.** Pilots must tailor the preflight inspection to the specific nature of the planned flight profile.
     - **b.** If the flight involves operating under Instrument Flight Rules (IFR) or entering Instrument Meteorological Conditions (IMC), the preflight must include a

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thorough check of all instruments, avionics, and redundant systems required for IMC flight.

iv. Squawks

- **a.** If you discover a mechanical discrepancy or unairworthy condition during your preflight inspection or at any point during your flight, you must immediately log the "squawk" in the physical aircraft binder and report it to Twin Oaks Aircraft Rental management.
- **b.** If an airworthiness issue or mechanical failure occurs while away from Twin Oaks Airpark (7S3), you are strictly prohibited from authorizing any third-party mechanic, maintenance facility, or airport personnel to perform repairs, inspections, or alterations on the aircraft without the express verbal and written consent of Twin Oaks Aircraft Rental management.
- **c.** Unauthorized off-station maintenance or troubleshooting costs will not be reimbursed and may result in the immediate suspension of your rental privileges with Twin Oaks Aircraft Rental.

v. Pre-Existing Damage Reporting

- **a.** You are required to thoroughly inspect the aircraft's interior and exterior for cosmetic or structural damage (e.g., deep cowling scratches, tire wear, interior tears, torn plastic) during your preflight walkaround.
- **b.** Any damage not previously logged in the aircraft binder must be photographed and texted to Twin Oaks Aircraft Rental management at (503) 451-3480 PRIOR to engine start.
- **c.** If any undocumented physical or cosmetic damage is discovered during the post-flight inspection, it will be financially attributed to the most recent renter of record.

2. Fuel and Oil Policy

i. VFR Flights

- **a.** When preparing for a VFR flight, pilots must strictly adhere to the reserve requirements detailed in FAR Part 91.151.
- **b.** Twin Oaks Aircraft Rental imposes an additional safety buffer: pilots must verify that the aircraft fuel tanks are at least half full at the time of engine start.

ii. IFR Flights

- **a.** All IFR flights must strictly comply with the fuel reserve and alternate airport requirements detailed in FAR Part 91.167.

iii. Engine Oil Minimums and Fluid Handling

- **a.** Pilots are required to check the engine oil level prior to every flight by wiping the dipstick to ensure an accurate, verified fluid readout.
- **b.** Adding engine oil is prohibited unless the pilot has been formally trained and approved by Twin Oaks Aircraft Rental personnel.
- **c.** All flights departing Twin Oaks home base must carry at least one unopened quart of the appropriate engine oil grade and a clean funnel inside the aircraft baggage area.

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iv. Fleet Engine Oil Specifications

- **a.** Cessna 150: Minimum hot oil level is 4 quarts; normal operating range is 4.5 to 5 quarts.
- **b.** Cessna 172: Minimum hot oil level is 5 quarts; normal operating range is 5.5 to 6.5 quarts.
- **c.** Piper PA-23 Apache: Minimum hot oil level is 6 quarts; normal operating range is 6 to 7 quarts.

3. Engine Start-Up, Taxi, and Run-Up

i. Ramp Safety and Propeller Blast Avoidance

- **a.** Pilots must maintain continuous situational awareness of ground personnel and bystanders to prevent injury from propeller rotation or high-velocity prop blast.
- **b.** Starting an aircraft with the propeller blast directed toward an open hangar, another parked aircraft, or any residential or commercial structure is strictly prohibited.
- **c.** Once the engine is started and safety parameters are verified, the pilot should immediately begin taxiing toward the run-up area. Prolonged engine idling on the aircraft ramp should be avoided to prevent engine fouling.

ii. Cockpit Equipment Restrictions

- **a.** The use of yoke clips or aftermarket clipboard mounts is strictly prohibited on all Twin Oaks Aircraft Rental aircraft.
- **b.** Placing any items on the glare shield—including headsets, kneeboards, iPads, sunglasses, or view-limiting devices—is strictly prohibited at all times. These items damage anti-glare coatings and disrupt magnetic compass accuracy.

iii. Hangar Limitations

- **a.** Starting an aircraft engine or dry-motoring a starter inside any hangar facility is strictly prohibited.

iv. Ground Movement and Taxi Standards

- **a.** All engine start, taxi, and run-up procedures must be executed using the appropriate written aircraft checklist, regardless of the pilot's familiarity with the specific tail number.
- **b.** To reduce brake pad wear and prevent dangerous brake rotor overheating, pilots must minimize braking action during taxi operations. An engine setting of 800 RPM is typically sufficient for ground movement down to Runway 02.
- **c.** Ground taxi speed must be maintained no faster than a brisk human walk.
- **d.** When wind conditions allow, the elevator control wheel/yoke must be held in the full aft position while taxiing to reduce nose-wheel load and propeller stone-chip wear.
- **e.** Maneuvering an aircraft through a confined ramp area or close to solid structures is prohibited unless an outside observer is actively marshaling the wings. Pilots must keep the nose wheel centered on painted taxi line markings.
- **f.** Engine run-up checks must only be conducted on paved surfaces or clean grass surfaces completely free of loose gravel.

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4. **Cruise Flight Profiles**
   - i. **Power Plant Limitations**
     - **a.** During the cruise flight phase, pilots must not exceed the maximum cruise power settings specified in the applicable Pilot's Operating Handbook (POH) or Airplane Flight Manual (AFM).
5. **In-Flight Practice and Maneuver Limitations**
   - i. **Simulated Power Plant Failures**
     - **a.** When operating single-engine aircraft, simulating an engine failure by pulling the mixture control to idle-cutoff or closing the fuel shut-off valve is strictly prohibited. Simulated failures must be performed exclusively via throttle reduction.
     - **b.** During simulated engine failure maneuvers, the pilot must periodically clear the engine by adding brief bursts of throttle power to ensure the cylinders stay clear and the engine remains operational.
     - **c.** All simulated forced landings over unpaved terrain must be terminated at or above 500 feet AGL, unless the aircraft is properly stabilized and aligned for a landing on an active airport runway.
6. **Arrival and Landing at Twin Oaks Airpark (7S3)**
   - i. **Local Orientation Requirements**
     - **a.** Pilots must completely familiarize themselves with Twin Oaks Airpark traffic patterns and runway layouts prior to their first flight. Twin Oaks Airpark utilizes a standard left-hand traffic pattern, subject to specific safety constraints.
   - ii. **Runway 20 Specific Constraints**
     - **a.** Runway 20 features a distinct downhill gradient if an aircraft lands long.
     - **b.** Trees on the final approach path create a displaced visual profile and require a steeper glide path angle. Pilots uncertain of their short-field landing skills must practice the approach with an approved Twin Oaks Aircraft Rental flight instructor on Runway 20.
   - iii. **Touch-and-Go Restrictions**
     - **a.** Conducting intentional touch-and-go landings at Twin Oaks Airpark in either direction is highly discouraged in Twin Oaks Aircraft Rental aircraft.
   - iv. **Go-Around Decision Mandate**
     - **a.** Regardless of the chosen runway, if the aircraft wheels are not securely on the ground within the FIRST THIRD of the available runway surface, the pilot must immediately execute a go-around.
   - v. **Meteorological Tracking**
     - **a.** Ground wind conditions at Twin Oaks Airpark can vary significantly from nearby Hillsboro Airport (KHIO). Pilots should monitor the KHIO ATIS broadcast for regional trends, using it as a general guide only.

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7. **Securing Aircraft (Home Base and Outstations)**
   - **i. Ground Parking Compliance**
     - **a.** Upon returning to Twin Oaks home base, the aircraft must be parked cleanly within designated tie-down spots so that it does not infringe upon or block active taxiways.
   - **ii. Outstation Standardization**
     - **a.** At all airports, pilots must ensure the aircraft is fully secured. Standard security requires: fastening all cabin seatbelts, installing the control yoke lock, placing the pitot tube cover on, chocking the wheels, and tying down the wings/tail.
     - **b.** All trash, personal property, and flight materials must be completely removed from seatback pockets and baggage compartments.
     - **c.** Pilots must enter final hobbs/tach statistics into the physical aircraft binder and complete the digital return process on Flight Schedule Pro.
   - **iii. Ramp Equipment Restrictions**
     - **a.** Only explicitly authorized personnel are permitted to operate powered tow tugs on Twin Oaks Aircraft Rental aircraft. If a tug is required, the pilot must request assistance from an approved operator.
     - **b.** Pilots must utilize a manual towbar to move aircraft to the fueling area. Starting an aircraft engine simply to taxi a short distance is strictly prohibited due to excessive starter and battery wear.
     - **c.** Pushing an aircraft backward into any hangar facility requires an outside spotter/wing-walker. This safety requirement is MANDATORY.

C. WEATHER & OPERATIONAL LIMITATIONS

1. **Weather Minimums and Night Flight Restrictions**
   - **i. Student Pilot Solo Operations:**
     - **a.** Student pilots must strictly adhere to all conditions and limitations detailed on their solo logbook endorsements.
     - **b.** Local flight operations within the Twin Oaks traffic pattern require a minimum cloud ceiling of 1,500 feet AGL and a minimum visibility of 7 statute miles.
     - **c.** Local flight operations outside the Twin Oaks traffic pattern require a minimum cloud ceiling of 2,000 feet AGL and a minimum visibility of 7 statute miles.
     - **d.** Cross-country flight operations require a minimum cloud ceiling of 3,000 feet AGL and a minimum visibility of 10 statute miles.
     - **e.** Solo takeoffs and landings are prohibited if wind conditions exceed a 20-knot gust factor or a 10-knot crosswind component, unless explicitly authorized by the student's flight instructor.
   - **ii. Student Pilot Weather Diversion Protocol:**
     - **a.** If weather or wind conditions at Twin Oaks Airpark (7S3) deteriorate while airborne below Student's endorsement limits, personal minimums, or what is permitted by CFI, do not attempt to force a landing.
     - **b.** Divert immediately to Hillsboro Airport (KHIO) or another suitable nearby airport with acceptable weather.

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c. Once you land, complete the standard shutdown checklist, tie down and lock the aircraft securely, and then call your CFI or Twin Oaks Aircraft Rental management to report the diversion before leaving the airport.

iii. Certified Pilot Flight Minimums

a. Certified pilots are expected to exercise sound aeronautical decision-making and avoid conducting flight operations in weather conditions that fall below their personal comfort or proficiency levels.

b. Under no circumstances shall a certified pilot operate a Twin Oaks Aircraft Rental aircraft in weather conditions that violate the FARs governing their specific pilot certificate or ratings.

iv. Night Flight Restrictions

a. Night flight operations over the Cascade Mountains, Rocky Mountains, or Sierra Nevada range are strictly prohibited for all pilots unless prior written authorization is granted by Twin Oaks Aircraft Rental management.

b. Student pilots are strictly prohibited from conducting solo flight operations at night. All student pilot night operations must be flown under the direct supervision of an authorized CFI.

2. Prohibited Airports and Runways

i. Local Airport Restrictions: Specific prohibited local airports, including the following:

a. Flying M Airport (ORO5)

b. Vernonia (05S)

c. Skyport (4S4)

d. Country Squire (S48)

e. Mollala (Skydive Oregon)

f. Any airport that has a density altitude above 6,500 ft.

ii. Runway Surface/Type Restrictions: Off-limits runway profiles and conditions:

a. Any grass runway other than Lenhardt (7S9)

b. Any closed or unimproved runway

c. Any private airport unless approved by that airport's manager and NW.

D. PILOT QUALIFICATIONS & SCHEDULE COMPLIANCE

1. Pilot Currency and Minimum Experience Requirements

i. General Currency Policy:

a. Twin Oaks Aircraft Rental experience requirements are more stringent than FAA minimums.

b. You are not eligible to act as PIC of a Twin Oaks Aircraft Rental aircraft unless you have logged flight time in that specific make and model in the preceding 90 days.

c. If you fail to meet any currency window, you must complete a recurrency flight review with a Twin Oaks Aircraft Rental-approved CFI before renting.

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ii. Instrument Rating Currency

- **a.** To operate in IMC, you must be fully instrument current under FARs.
- **b.** Additionally, you must have logged at least 1.0 hour of flight time within the preceding 60 days in the specific, instrument-capable tail number you intend to rent.

iii. Complex/Multi-Engine Aircraft Minimums

- **a.** Regardless of your pilot certificates or endorsements, renting the Piper PA-23 Apache requires a minimum of 250 total PIC hours and 25 hours of retractable gear time.
- **b.** All Apache rentals are evaluated on a case-by-case basis and require explicit, final approval from Twin Oaks Aircraft Rental management.

iv. Operator Discretion and Checkout Authority

- **a.** Currency alone does not guarantee rental privileges.
- **b.** Twin Oaks Aircraft Rental reserves the absolute right to require additional ground instruction, flight training, or a formal aircraft checkout for any pilot prior to dispatching an aircraft.

v. Right of Refusal and Discretionary Grounding

- **a.** Twin Oaks Aircraft Rental reserves the absolute and unconditional right to refuse, suspend, or permanently revoke aircraft rental or flight instruction privileges for any user at any time.
- **b.** Grounding or suspension of rental privileges may be enacted for safety violations, poor aeronautical decision-making, behavioral issues, scheduling non-compliance, or delinquency on account balances, or any other such reason Twin Oaks Aircraft Rental management deems reasonable, without prior notice or right of appeal.

2. Flight Scheduling and Reservations

i. Flight Schedule Pro Profile Requirements

- **a.** All renters and students must maintain an active, fully completed profile on Flight Schedule Pro (FSP).
- **b.** The following documents must be uploaded, completely filled out, and kept current within your FSP profile:
  1. User Profile data and current Emergency Contact information
  2. Clear Profile Photo and a government-issued Photo ID
  3. Pilot Certificate (clear copies of both front and back)
  4. Valid FAA Medical Certificate or BasicMed documentation
  5. TSA Citizenship Verification (required for all student pilots)
  6. Non-Owned Aircraft Insurance (Renter's Insurance), required for all solo operations
  7. Signed Twin Oaks Aircraft Rental Agreement and Flight Operations Manual acknowledgment
  8. Signed Liability Release Form (a separate form is required for each passenger)

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ii. Aircraft Dispatch and Check-In Procedures

a. Renters must complete the official electronic dispatch (check-out) and return (check-in) process directly within FSP for every flight.

b. Additionally, pilots are required to manually and accurately fill out all fields in the physical aircraft log binders before engine start and immediately after engine shutdown.

3. Aircraft Return, Delays, and Abandonment Policies

i. Weather and Maintenance Delays

a. If unforecast weather or sudden mechanical issues force a delay in your scheduled return, you must immediately secure the aircraft according to company procedures and contact Twin Oaks Aircraft Rental management as soon as possible for operational instructions.

b. If Twin Oaks Aircraft Rental determines, at its reasonable discretion, that your delay was avoidable, Twin Oaks Aircraft Rental reserves the right to charge you for all lost revenue resulting from the aircraft missing its subsequent scheduled flights.

ii. Delays Due to Other Circumstances

a. Delaying the return of an aircraft for any reason other than unforecast weather or safety-related maintenance issues is a violation of scheduling policy.

b. Twin Oaks Aircraft Rental reserves the right, at its sole discretion, to charge you for any and all lost company revenue caused by unexcused late returns.

iii. Aircraft Abandonment

a. Abandoning a Twin Oaks Aircraft Rental aircraft at any airport other than its designated Twin Oaks home base—regardless of whether the cause is weather, maintenance, or personal schedule conflicts—is strictly prohibited.

b. In the event of an abandonment, Twin Oaks Aircraft Rental reserves the right to bill your account for all direct expenses incurred to retrieve the aircraft, in addition to charging you for any lost rental revenue.

c. If you choose to leave the aircraft and transfer to an alternate mode of transportation, you do so entirely at your own personal expense.

E. FINANCIAL POLICIES & FEES

1. Rental Fees and Payment Structure

i. Renter Fee Responsibility

a. You are fully responsible for all auxiliary fees incurred during the operation of the aircraft.

b. Auxiliary fees include, but are not limited to, third-party tie-down fees, hangar storage, and airport landing fees.

ii. Payment Mandate and Penalties

a. All rental fees must be paid immediately upon return from your flight.

b. Acceptable payment methods include cash, credit card, linked bank account, or personal check.

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c. Any payment dishonored or returned by your financial institution will incur a processing penalty up to the legal maximum, not to exceed $50.00.

iii. Cabin Cleanliness and Sickness Fee

a. Twin Oaks Aircraft Rental maintains complimentary air sickness bags in all aircraft seatback pockets.

b. You are required to familiarize yourself and your passengers with the location of these bags prior to engine start.

c. A $200.00 cleaning fee will be billed to your account if a passenger vomits inside the aircraft without using the provided airsickness bags.

iv. Excessive Braking and Tire Damage

a. Twin Oaks Aircraft Rental reserves the right to assess a $200.00 fee per tire for excessive braking that results in structural flat-spotting or tire destruction.

b. To protect fleet landing gear and tires, you must execute a go-around immediately if approaching a runway with excessive airspeed.

v. Insurance Deductible Liability

a. In the event of an aircraft accident, incident, or ground-handling mishap during your rental period, you are financially responsible for paying the full insurance deductible associated with Twin Oaks Aircraft Rental's commercial hull policy.

b. This deductible liability applies regardless of fault, weather conditions, or air traffic control instructions.

c. If the damage caused is less than the insurance deductible, or if the insurance claim is denied due to a violation of this Manual or the FARs, you are fully liable for the total cost of all parts, labor, and structural repairs required to restore the aircraft to an airworthy condition.

2. Off-Station Fuel and Oil Reimbursement

i. Reimbursement Caps and Verification

a. Fuel or oil purchased away from Twin Oaks Airpark (7S3) will be credited to your rental account at the current Twin Oaks Aircraft Rental retail price or the actual price paid, whichever is lower.

b. To secure a reimbursement credit, you must provide a clear copy or photograph of the fuel pump readout and the itemized receipt.

c. All copies and verification photos must be texted to Twin Oaks Aircraft Rental management at (503) 451-3480 immediately following purchase.

F. PROHIBITED OPERATIONS & CONDUCT

1. Unauthorized Aircraft Use

i. Operating a Twin Oaks Aircraft Rental aircraft for illegal purposes, carrying passengers or property for hire, or engaging in any unauthorized commercial enterprise is strictly prohibited.

ii. Providing flight instruction in Twin Oaks Aircraft Rental aircraft without explicit management approval is strictly prohibited, regardless of whether you hold a Commercial Pilot or CFI certificate.

iii. Using the aircraft for personal transportation to and from your place of business is fully permitted.

iv. Unless a Twin Oaks Aircraft Rental-approved CFI is actively on board acting as a required crewmember, the following flight profiles are strictly prohibited in all Twin Oaks Aircraft Rental aircraft:

a. Formation flying with any other aircraft.

b. Aerobatic flight maneuvers, dynamic spins, or intentional stalls outside of certified CFI spin-endorsement training profiles.

c. Off-airport landings, including operations on beaches, riverbeds, roads, or unregistered fields.

d. Simulated engine failure maneuvers conducted at night or while operating in IMC.

2. Tobacco and Vaping Restrictions

i. Smoking, vaping, or using tobacco products of any kind is strictly prohibited inside all Twin Oaks Aircraft Rental aircraft.

ii. Tobacco use and vaping are strictly prohibited across all physical Twin Oaks Aircraft Rental facility grounds and airport property.

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Twin Oaks Aircraft Rental

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RENTER ACKNOWLEDGMENT AND AGREEMENT

By signing below, you certify that you have read, fully understand, and agree to abide by all the policies, procedures, currency requirements, and financial responsibilities detailed in this Twin Oaks Aircraft Rental Flight Operations Manual.

Your signature constitutes a legally binding agreement between you and Twin Oaks Aircraft Rental. You understand that any violation of these operational guidelines, safety minimums, or financial policies may result in the immediate revocation of your rental privileges, financial liabilities for damages or lost revenue, and legal enforcement.

You acknowledge that you are responsible for checking the currency of this document and that this agreement applies to all subsequent aircraft rentals dispatched under your Flight Schedule Pro account.

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