

CONDITION INSPECTION CHECKLIST

Condition Inspection Progressive Aerodyne Inc. SeaRey – Elite/Adventure Rotax – 912iS/912ULS/914UL

IAW FAA Part 91.327 (b/2): "performed once every 12 calendar months by a certified repairman (light-sport aircraft) with a maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station in accordance with inspection procedures developed by the manufacturer or a person acceptable to the FAA". A copy of the completed Checklist should be retained as proof of an acceptable inspection.

Ref.: Progressive Aerodyne Inc. SeaRey Maintenance Manuals, BRP (Rotax) Powertrain Manuals, Warp Drive Propeller Manuals, MATCO mfg. Wheel/Brake Manuals, FAA CFR Part 43 appx. D, FAA AC 43.13-1B.

Aircraft Model: _____	Engine Model: _____
Aircraft S/N: _____	Engine S/N: _____
Airframe Time (Tach): _____	Engine Time (TCU/Hobbs): _____
"N" Number: _____	Manufacture Date: _____
Inspection Date: _____	A&P/LSRM: _____

Note: Throughout this inspection, be evident of a dark substance surrounding a bolt or rivet (working/wear grease) as it is an indication of wear/looseness and must be given special attention.

Documents Review:

_____ Completed	Review Airframe, Engine, and Propeller Logbooks.
_____ Completed	Review Maintenance Manuals.
_____ Completed	Research required Service Bulletins.

Disassembly and Prep:

_____ Completed	Remove: Nose Hatch, Seat Cushions, Baggage Trays, Engine Cowling, Center & Lower Gap Seals, Wing Inspection Plates, and Splash Guard.
_____ Completed	Attach battery charger. (Proper operational inspection of actuators and other electrical components require a fully charged battery)

Nose Compartment:

_____ Pass	_____ Fail	Check battery date, condition, and terminal security. (Replace every 3-5 years or upon load test failure)
_____ Pass	_____ Fail	Check battery mount/bracket/insert for damage, cracks, and security.
_____ Pass	_____ Fail	Check the parking brake valve for security, leaks, and adjustment.
_____ Pass	_____ Fail	Check electronics shelf components for security and corrosion.
_____ Pass	_____ Fail	Check cabin heater for leaks and fan blade movement.
_____ Pass	_____ Fail	Check rudder pedals for condition, security, and interference. (See SB-20001)
_____ Pass	_____ Fail	Check the rudder pedal springs for security, wear, stretching, and mounting.

Nose Compartment:		
_____ Pass	_____ Fail	Check condition and security of rudder pedal blocks. (See SB-18001)
_____ Pass	_____ Fail	Check security of all electronics on the backside of the instrument panel.

Cockpit/Cabin:		
_____ Pass	_____ Fail	Check windscreen for clarity, security, scratches, and cracks.
_____ Pass	_____ Fail	Check instrument panel components for condition, security, and operation.
_____ Pass	_____ Fail	Check windshield support components for damage, security, and operation.
_____ Pass	_____ Fail	Check canopies for ease of movement, wear, and cracks.
_____ Pass	_____ Fail	Check canopy tracks and latches for condition and operation.
_____ Pass	_____ Fail	Check flap controller operation and adjustment.
_____ Pass	_____ Fail	Check seat base and backs for security and worn rivets.
_____ Pass	_____ Fail	Check seat belts for condition, secure attachment, and proper operation.
_____ Pass	_____ Fail	Check rudder cables/pulleys/brackets for condition and security. (See SB-18003)
_____ Pass	_____ Fail	Check control sticks for wear, binding and lubrication. (Control stick bearings must have play because they expand and tighten with heat/sunlight)
_____ Pass	_____ Fail	Check tie rod controls for freedom of movement, condition, and security.
_____ Pass	_____ Fail	Check aileron torque tube for binding, clearance, and security.
_____ Pass	_____ Fail	Check throttle lever for binding and proper movement.
_____ Pass	_____ Fail	Check brake lever for brake pressure and parking brake operation.
_____ Pass	_____ Fail	Check turtle deck bulkhead assembly for wear, deformation, and security.
_____ Pass	_____ Fail	Check brake reservoir for security, leaks, and proper servicing.
_____ Pass	_____ Fail	Check emergency fuel shutoff valve for operation, security, and leaks.
_____ Pass	_____ Fail	Check fuel pump assembly for proper mounting, operation, security, and leaks. Check Replacement interval – no greater than 5 yrs. for 912ULS and 914UL.
_____ Pass	_____ Fail	Remove, inspect, and clean airframe fuel filter.
_____ Pass	_____ Fail	Check bulkhead components for wear and damage.
_____ Pass	_____ Fail	Check elevator control tube guide for binding and lubrication.
_____ Pass	_____ Fail	Check flap actuator and hardware for wear, security, and corrosion.
_____ Pass	_____ Fail	Check elevator actuator for operation, wear, security, and corrosion.
_____ Pass	_____ Fail	Check elevator actuator springs for stretching, proper centering, and tension.
_____ Pass	_____ Fail	Check bilge pump assembly for cleanliness, security, and operation.
_____ Pass	_____ Fail	Check bilge area for debris, water, coolant and fuel.
_____ Pass	_____ Fail	Check heater hoses for kinks, abrasions, and leaks.
_____ Pass	_____ Fail	Check fuel tank for security, leaks, cracks, and contamination.
_____ Pass	_____ Fail	Check fuel tank vent hose for proper material, leaks, kinks, and blockage.
_____ Pass	_____ Fail	Check fuel tank hoses for leaks, condition, and security.

Cockpit/Cabin:

_____ Pass	_____ Fail	Check fuel quantity sender security, loose terminals, leaks, and corrosion.
_____ Pass	_____ Fail	Check fuel bulb and shutoff valve operation, and verify fuel sample is clean.
_____ Pass	_____ Fail	Check attachment points of inner frame to hull for wear, play and corrosion.
_____ Pass	_____ Fail	Check the tail wheel retraction spring for tension, corrosion, and wear.
_____ Pass	_____ Fail	Check boom tube for condition, distortion, corrosion, and damage.
_____ Pass	_____ Fail	Check boom tube mounted components for security, damage, and corrosion.
_____ Pass	_____ Fail	Compare actual fuel quantity (via tank decals) to indicated quantity. Perform Fuel Calibration, as necessary. (See SB-16001)

Main Landing Gear (MLG):

_____ Pass	_____ Fail	Raise the airplane with jacks until the landing gear is off the ground (the tail wheel should be high enough that it will not contact the ground when swung forward). Perform Landing Gear Swing check. Ensure the retraction/extension mechanism operates freely and without contacting or binding on any surface or structural member. Ensure the over center locking mechanism is working properly and locking securely in the down position of the landing gear. Verify switches are adjusted properly. Ensure all moving/rotating components are properly lubricated. (Ensure battery is fully charged for proper actuator operation)
_____ Pass	_____ Fail	Check tail wheel extension pulley and 1 ¾" channel bracket on lower bulkhead for deformation. (Ensure to inspect bottom of 1 ¾" channel bracket)
_____ Pass	_____ Fail	Check entire MLG structure, components, and attach points for wear, play, and deformation.
_____ Pass	_____ Fail	Check MLG legs for bending, wear, and excessive corrosion. (See 4yr Insp)
_____ Pass	_____ Fail	Check MLG rubber seals (boots) for cracks, tears, dry rotting, and holes.
_____ Pass	_____ Fail	Check MLG leg spindle and spindle housing retaining bolts for security.
_____ Pass	_____ Fail	Check spindle housing for drain hole and ensure it is clean and clear.
_____ Pass	_____ Fail	Check brakes for cleanliness, wear, leaks, and operation. (Replace linings when the wear notch is no longer visible)
_____ Pass	_____ Fail	Check MLG tires for proper air pressure (26psi), flat spots, cracks, and wear.
_____ Pass	_____ Fail	Check wheel hubs for cracks, distortion, or visible damage.
_____ Pass	_____ Fail	Clean, inspect, re-grease, and properly preload Main Wheel Bearing assemblies.

Tail Landing Gear:

_____ Pass	_____ Fail	Raise the airplane with jacks until the landing gear is off the ground (the tail wheel should be high enough that it will not contact the ground when swung forward). Perform Landing Gear Swing check. Ensure the retraction/extension mechanism operates freely and without touching or grinding on any surface or structural member. Ensure all moving/rotating components are properly lubricated.
_____ Pass	_____ Fail	Check entire tail landing gear structure, components, and attach points for wear, play, and deformation.
_____ Pass	_____ Fail	Check tail wheel strut for bending and wear (max 10° bend)
_____ Pass	_____ Fail	Check tail wheel tire for proper air pressure (20 psi), flat spots, cracks, and wear.
_____ Pass	_____ Fail	Check tail wheel hub for cracks, melting, or visible damage.
_____ Pass	_____ Fail	Check tail wheel bearings for wear, corrosion, and damage.

Tail Landing Gear:

_____ Pass	_____ Fail	Check tail fork assembly for deformation, cracks, corrosion and damage.
_____ Pass	_____ Fail	Check steering arms for binding, corrosion, and proper operation.
_____ Pass	_____ Fail	Check steering cables for proper outboard bowing during tail wheel retraction.
_____ Pass	_____ Fail	Check extension cable pulleys for rotation, corrosion, and wear.
_____ Pass	_____ Fail	Check tail wheel assembly movement when retracted for binding and drag.
_____ Pass	_____ Fail	Check tail wheel retraction tension (verify +10 lbs. of tail wheel pressure against the boom tube in a retracted position).

Wing, Aileron, and Flaps:

_____ Pass	_____ Fail	Check wing struts for distortion, cracks, damage, and security.
_____ Pass	_____ Fail	Check wing strut attach points for condition and security.
_____ Pass	_____ Fail	Check wing landing lights for operation, security, and damage.
_____ Pass	_____ Fail	Check wing float struts/eyes/mirrors for distortion, cracks, damage, and security.
_____ Pass	_____ Fail	Check wing floats for damage, cracks, and water intrusion.
_____ Pass	_____ Fail	Check aileron inner and outer tie rods for binding, clearance, wear, corrosion, security, and thread engagement (minimum thread engagement is 1.5 times the major thread diameter).
_____ Pass	_____ Fail	Check wing spar attach points for condition and security.
_____ Pass	_____ Fail	Check forward wing strut plates for security and missing/worn rivets.
_____ Pass	_____ Fail	Check wing tips for splits, cracks, security, and condition.
_____ Pass	_____ Fail	Check navigation/strobe light clarity, security, and operation.
_____ Pass	_____ Fail	Check all fabric covering for tears, punctures, tautness, and missing paint.
_____ Pass	_____ Fail	Check wing fabric for wrinkles and irregularities that could indicate possible rib or spar damage.
_____ Pass	_____ Fail	Check vortex generators for security, damage, and breakage. (max. 3 missing)
_____ Pass	_____ Fail	Check wing inspection plates for damage, security, and corrosion.
_____ Pass	_____ Fail	Check Mid-wing wires, hoses and connectors for damage and security.
_____ Pass	_____ Fail	Check interior of wing structure for condition, corrosion, and security.
_____ Pass	_____ Fail	Check interior wing cables for tension. (Address if slackened)
_____ Pass	_____ Fail	Check wing/tail cables for fraying, corrosion, and tension (50-90 lbs.).
_____ Pass	_____ Fail	Check drain grommet presence and proper drainage.
_____ Pass	_____ Fail	Check aileron and flap hinges and hardware for excessive play or wear.
_____ Pass	_____ Fail	Check aileron and flap control horns, for wear, corrosion, and security.
_____ Pass	_____ Fail	Check aileron control system for operation, and proper adjustment (match approx. in line with wing chord @16° from a level deck).
_____ Pass	_____ Fail	Check flap control system for operation, and proper adjustment (match to ailerons, approx. in line with wing chord @16° from a level deck).
_____ Pass	_____ Fail	Check flap controller for proper adjustment (0, 10, 20, and 30°).

Wing, Aileron, and Flaps:

_____ Pass	_____ Fail	Check ELT, VHF, XPDR, and OAT antennas for security and damage.
_____ Pass	_____ Fail	Lubricate all rod ends and hinge bolts.

Pylon, Turtledeck, and Hull:

_____ Pass	_____ Fail	Check pylon skins for corrosion and worn rivets.
_____ Pass	_____ Fail	Check flap slave arm for excessive play, security and damage.
_____ Pass	_____ Fail	Check pylon heater hose access grommets for presence, and security.
_____ Pass	_____ Fail	Check for proper seal between pylon and turtle deck.
_____ Pass	_____ Fail	Check turtle deck for cracks and damage.
_____ Pass	_____ Fail	Check fuel cap for security, operation, damage, and internal corrosion.
_____ Pass	_____ Fail	Check the cabin windows for cracks, security, and clarity.
_____ Pass	_____ Fail	Check bow eye for damage and corrosion.
_____ Pass	_____ Fail	Check bow landing lights for operation, security, and leaks.
_____ Pass	_____ Fail	Check static ports for blockage.
_____ Pass	_____ Fail	Check keel guard for excessive damage and separation.
_____ Pass	_____ Fail	Check drain plugs for security and seal condition.
_____ Pass	_____ Fail	Check hull for wear, cracks, delamination, holes, and deformation.
_____ Pass	_____ Fail	Check tail skins for damage and corrosion.

Stabilizers, Elevators, and Rudder:

_____ Pass	_____ Fail	Check fabric for holes, tears, tautness, and missing paint.
_____ Pass	_____ Fail	Check for presence and security of drain grommets and rudder drain hole.
_____ Pass	_____ Fail	Check elevator and rudder hinges for wear, condition and security.
_____ Pass	_____ Fail	Check horizontal stabilizer brackets for condition and security.
_____ Pass	_____ Fail	Check tail cables for security, fraying, corrosion, turnbuckle clip installation, and tension (fwd. upper 45-55 lbs., aft upper 60-70 lbs.).
_____ Pass	_____ Fail	Check elevator actuator tubes for wear, corrosion, and security.
_____ Pass	_____ Fail	Check rudder and elevator control horns for security and damage.
_____ Pass	_____ Fail	Check rudder/steering control cables for fraying, damage, and corrosion.
_____ Pass	_____ Fail	Check elevator control tube and reversing bell cranks for wear and play.
_____ Pass	_____ Fail	Check elevator control tube rubber seal (boot) for cracks, tears, and holes.
_____ Pass	_____ Fail	Check elevator control system for operation and proper adjustment (+18°, -20° from horizontal stabilizer chord).
_____ Pass	_____ Fail	Check rudder control system for operation, and proper adjustment (+/- 32° offset from vertical stabilizer).
_____ Pass	_____ Fail	Check rudder trim tab for security, damage, and authority.

Stabilizers, Elevators, and Rudder:

_____ Pass	_____ Fail	Lubricate all pivot points, rotating hardware, and hinge bolts.
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Radiator:

_____ Pass	_____ Fail	Check radiator for leaks, cracks, security, and overall condition.
_____ Pass	_____ Fail	Check and tighten all coolant hose clamps.
_____ Pass	_____ Fail	Check radiator hose to heater hose Tee's for leaks, cracks, and corrosion.

Engine Mounting:

_____ Pass	_____ Fail	Inspect engine mount for condition (wear, distortion, cracks, etc.) and security.
_____ Pass	_____ Fail	Check engine mounting bolts and nuts for security.
_____ Pass	_____ Fail	Inspect rubber engine mounts for cracking, deterioration, and distortion.
_____ Pass	_____ Fail	Check the engine cowling standoff for cracks, security, and damage.

Propeller:

_____ Pass	_____ Fail	Check propeller blades and hub for nicks, splits, cracks, excessive wear or other damage. (Refer to and follow the Warp Drive Inc. manual for maintenance procedures, inspector qualifications and details of inspections for the propeller)
_____ Pass	_____ Fail	Check the condition of the blade erosion tape.
_____ Pass	_____ Fail	Check for excessive blade tip path tracking (if greater than 0.25 in, swap blade positions while horizontal and re-inspect).
_____ Pass	_____ Fail	Check propeller bolt condition. If propeller bolts are replaced or removed and re-installed, their torque should be rechecked after 5 hrs. of operation.
_____ Pass	_____ Fail	Check proper propeller bolt torque (Outboard 7/16" hex bolt/nut torque value: 10 ft-lbs./120 in-lbs., Inboard 1/2" hex bolt torque value: 15 ft-lbs./175 in-lbs.).
_____ Pass	_____ Fail	Safety wire the heads of the 7/16" (AN4) bolts.

ELT:

_____ Pass	_____ Fail	Check ELT security and mounting location/angle.
_____ Pass	_____ Fail	Check ELT battery expiration date.
_____ Pass	_____ Fail	Check ELT operation IAW manufacturer's directions. (FAR 91.207)

Transponder/Altimeter:

_____ Pass	_____ Fail	Perform Transponder 24-month test, VFR (91.413a, 43, F)
_____ Pass	_____ Fail	Perform Altimeter/Altitude Reporting 24-month test, IFR (91.411a1, 43, E, a-c)

Engine Inspection and Service:

_____ Completed	Assure that all inspections and servicing of the engine are current and compliant per the BRP (Rotax) Powertrain Manuals. If not current or compliant per the BRP (Rotax) Powertrain Manuals, all non-compliances must be remedied prior to the release of the aircraft.
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Final Run-up and Servicing:

_____ Completed	Run up the engine and verify all systems are operational and within limits (pressures, temperatures, RPM, Ignition check) (see Op Man and SL-914-014).
_____ Completed	Check for leaks.
_____ Completed	Perform final service check of all fluids.
_____ Completed	Ensure ALL bearings, cable straws, pivot points, hinges, etc., are lubricated.

Re-assembly:

_____ Completed	Re-install Nose Hatch, Seat Cushions, Baggage Trays, Lower and Center Gap Seals, Engine Cowling, Wing Inspection Plates, and Splash Guard.
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Final Quality Check:

_____ Completed	Perform final walk around and quality assurance inspection.
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Documentation and Markings:

_____ Pass	_____ Fail	Update weight and balance as necessary, if required.
_____ Pass	_____ Fail	Check POH for accuracy and proper LOA entries.
_____ Pass	_____ Fail	Check for proper display of registration markings, "Light Sport" marking, passenger warning labels, instrument/gauge markings and placards.
_____ Pass	_____ Fail	Verify Service Bulletins/Instructions/Letters are completed.
_____ Completed		Make proper entries in Airframe, Engine, and Propeller Logbooks.