

## THE 2015 SEAREY LSX AIRFRAME KIT AND OPTIONS

The Searey LSX Airframe Kit includes everything you need to build the basic airframe and includes aircraft-quality aluminum and steel parts, aircraft-quality hardware and components, and fabric. The cables and most of the tubing parts are pre-constructed. Parts are factory-welded as needed. Some drilling, riveting and cutting by the builder will be necessary during the Kit build, as well as fabric covering. The Basic Airframe Kit does not include engines or engine mounts, avionics, instruments or electrical wiring, or upholstered interior finishes. These are available as separate options. No plans or blueprints are available.

### **Hull**

The Hull is composed of strong, lightweight, reinforced fiberglass. It comes in three parts – main hull, nose deck, and turtle deck. The fiberglass work has been done for you, so you only have to rivet these pieces together. The fiberglass components are white gel coated, so they don't need to be painted. However, if you prefer you can custom paint. An integrated panel is molded into the nose deck. The nose deck also includes a top hatch opening for easy access inside. A carbon graphite hull is optionally available, providing a lighter weight hull. The carbon graphite hull should be painted.

**Optional Carbon Graphite Hull Upgrade (5330-016X):** Order as a Kit upgrade for a lower price  
**Carbon Graphite Hull (5330-016):** Use this part number if ordering separately as a single part.

### **Wing Floats**

The wing floats are constructed of durable, lightweight rotocast plastic. Color is white. Wing floats do not need to be painted, but can be using a specialized process for this type of plastic.

### **Flying Surfaces**

The wings are fabricated in the standard tube-and-ladder type construction with a C-cell leading edge. The pre-manufactured wing spars are made of strong aircraft-grade tubing and the pre-formed wing ribs are riveted to the spars. The slightly drooped fiberglass wing tips enhance overall performance, and have a raised section for installing optional navigation lights.

The ailerons, flaps, elevators, rudder and vertical fin are constructed with aluminum frames and are fabric-covered.

The wings and all flying surfaces are fabric-covered using conventional Stits Poly-Fiber aircraft fabric coverings and finishes. The covering materials include Stits fabric and tapes, Poly-Brush, Poly-Spray, Reducer and Poly-Tak. The Airframe Kit does not include finish color paint.

### **Flying Surface Controls**

The ailerons, flaps and elevators are controlled with push-pull and torsion tubes. The rudder is cable-controlled.

Both electric trim and electric flaps are standard. Trim and flap actuator motors are provided. The Airframe Kit does not include flap or trim position sensors or indicators, or flap controller unit, these are optionally available.

### **Landing Gear and Brakes**

The landing gear is a tail-dragger configuration. The electrically-operated main wheels and tail wheel all retract or extend in one motion. Two electric gear actuator motors are included. The Airframe Kit does not include any gear alert system or relay interface board, these are optionally available.

The hydraulic Matco Heavy Duty Brakes and Wheels are standard. The 6 inch main wheels and the 4 inch tail wheel have pneumatic tires. The steerable tail wheel has a breakaway feature which disengages the steering mechanism during a hard turn, allowing it to caster 360 degrees.

**Hydraulic Park Brake Kit (3240-083)**: Option available for separate purchase. The parking brake is activated by a knob on the control panel. For short term parking on land.

### **Sliding Canopies and Windshield**

The Windshield is made from optically clear polycarbonate material and is custom fitted to the frame by the builder. The Sliding canopies are also made with clear polycarbonate. They are mounted to tracks on each side of the cabin and easily slide open and closed.

### **Root Tube Selection**

The Root Tube is an integral part of the Airframe. It is located at the top of the cockpit frame, and the wings and the engine mount to it. The Root Tube is engine-specific, so the Rotax 912 or the Rotax 914 Root Tube configuration must be selected when ordering your Airframe Kit. If you change your desired engine type before you begin Kit construction, you may exchange the unused, not-previously-bolted Root Tube. However, if you decide to change part way through your Kit build, the Root Tube cannot be exchanged. Another Root Tube would then need to be purchased.

### **Fuel Tank**

The Airframe Kit includes a standard 23 (U.S.) gallon fuel tank made of durable, cross-link polyethylene plastic. It is mounted in the fuselage below the baggage compartment area.

### **Interior**

Seat pans and seat frames are included. However, seat cushions are not included with the Airframe Kit due to the wide variety of builder preferences. Seat cushions are optionally available

Seat belts with inertia reel shoulder restraints are provided with the Airframe Kit. A single, quick-release buckle disengages the entire seat belt and shoulder restraint in one motion.

The baggage compartment is now included with the Airframe Kit. Parts include precut wood decks, carpet and hardware to turn the open area behind the pilot into a baggage storage area, providing about 13 cubic feet of space. Enough carpet is included to cover not only the baggage compartment area, but also the cockpit floor beneath the pilot's and copilot's feet. Carpet color is black. Customer may request medium grey color instead of black carpet at time of Airframe Kit order, if desired.

## Interior Options

**Set of Deluxe Seat Cushions for One LSX Aircraft, Pearl Grey (5310-105):** Includes two seat back cushions embroidered with Searey Logo and two seat base cushions, upholstered in a light grey, soft, leather-like vinyl upholstery fabric. These fit into the LSX Airframe Kit's seat frames.

**LSX Console & Cockpit Side Panel Kit, Pre-Upholstered, Charcoal Grey (7230-048):** Includes pre-upholstered cockpit side panels, side panel extensions, turtle deck arch upholstery bases, center console-side panel assembly and map compartment lid. Due to builder variances, the center console with raised throttle area is not pre-upholstered, but a length of upholstery is included for the builder to cover the center console after configuring it for the aircraft's particular application. The charcoal grey is a darker grey color of soft, leather-like fabric that complements the lighter grey seat color.

**Glove Box Kit (7230-046):** The Glove Box kit is installed into the dash panel. The door is upholstered in charcoal grey, soft, leather-like fabric, with the Searey logo embroidered in silver. The box is custom-fitted by the builder.

**Control Stick Upholstered Boots, Black, Set of 2 (2730-026):** Black, leather-like upholstery boots dress the control sticks, giving them a finished look.

**Dash Cover Upholstery, Black, Top-Stitched (3110-016):** Black, leather-like upholstery detailed with black top-stitching gives the dash a luxurious finished look.

**Complete Upholstered Interior Package (5310-106):** Includes all interior options as described above (Set of Deluxe Seats for One Aircraft, LSX Console & Cockpit Side Panel Kit, Glove Box Kit, Two Control Stick Boots, Dash Cover Upholstery.)

## Engine, Engine Mounting, Firewall Forward, and Propeller Options

Progressive Aerodyne offers the 100 hp Rotax 912S and the 115 hp turbo-charged Rotax 914 engines as options for the Searey. Factors affecting the choice of engine include its intended use as well as price. The Rotax 912S engine does not come with an exhaust system. The Rotax 914 does come with an exhaust system.

Progressive Aerodyne has thoroughly tested the Rotax engines along with the engine mounting systems we have designed for our Searey aircraft and we use them with great success.

Basic engine mounting kits and firewall forward kits are offered for each type of Rotax engine. Please note that the basic engine mounting kit and the firewall forward kit are two different sets of parts – the firewall forward kit does not include any components of the basic engine mounting kit. Neither of these kits includes a propeller or propeller shaft nuts. The Warp Drive and DUC propellers are offered as separate options.

**Rotax 912/912S LSX Basic Engine Mounting Kit (7200-912B):** provides the parts necessary to get the engine firmly mounted to the Root Tube, including engine mount bars and angles, rubber engine mounts, and hardware. Also includes engine-throttle mount brackets.

**Rotax 914 LSX Basic Engine Mounting Kit (7200-914B)**: provides the parts necessary to get the engine firmly mounted to the Root Tube, including engine mount frame for the 914, rubber engine mounts, and hardware. Also includes engine-throttle mount brackets.

**Rotax 912/912S LSX Firewall Forward Kit (7200-912FF)**: contains all the plumbing for fuel, oil and coolant, and associated hardware to make the engine work. It includes the CKT stainless steel exhaust system, radiator, radiator cowl and radiator pan, oil cooler kit, coolant recovery bottle kit, choke kit, throttle cables, fuel pump, fuel filter, preformed radiator hoses, fuel hose, air filters, associated mounting brackets, fittings and hardware.

**Rotax 914 LSX Firewall Forward Kit (7200-914FF)**: contains all the plumbing for fuel, oil and coolant, and associated hardware to make the engine work. It includes the radiator, radiator cowl and radiator pan, oil cooler kit, coolant recovery bottle kit, choke kit, throttle cables, fuel pump, fuel filter, preformed radiator hoses, fuel hose, air filter, associated mounting brackets, fittings and hardware.

The firewall forward kits are sold complete, and cannot be modified, so if for any reason not all parts in the kit are wanted, please individually order each part that is desired.

**Warp Drive Propeller**: The 3-blade, Warp Drive propeller has tapered-tip composite blades with nickel leading edges for extra protection. The hub is aluminum. A Spinner can be installed for a finished look. If a Spinner is not installed, the Faceplate should be ordered instead. Warp Drive mounting hardware and Rotax propeller shaft nuts are also necessary. Order as follows:

**Propeller, Warp Drive 3 Blade 68-L, CF/Nickel LE/Taper Tips/HPL-R Hub/912-914 Pat (7220-044)**

**Warp Drive 5" Spinner Polished Aluminum (7220-045)**

**Warp Drive Mounting Hardware 8x75 w/Drilled Heads (7220-046)**

**Warp Drive Faceplate (7220-047)**: order only if Spinner is not to be installed

**Propeller Shaft Nut, M8, Set of 6 (7220-042)**

**DUC Propeller**: The 3-blade DUC propeller has tapered-tip composite blades with metal leading edges for extra protection. The hub is composite material. A Spinner is installed for a finished look. A Spinner Mounting Plate and the Rotax propeller shaft nuts are also necessary for installation.

**DUC 3-Blade Hydro Inconel Flash-2 Propeller, LH, Pusher, 67" Dia. w/Mounting Bolts (7220-053)**

**DUC 3-Blade White Spinner 250mm w/Openings for Flash Blades (7220-054)**

**DUC 3-Blade Spinner Mounting Plate 250mm (7220-055)**

**Propeller Shaft Nut, M8, Set of 6 (7220-042)**