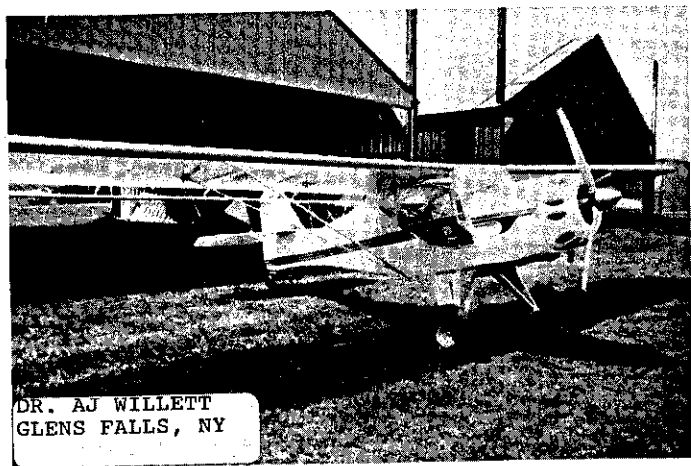


THE REFINING FIRES

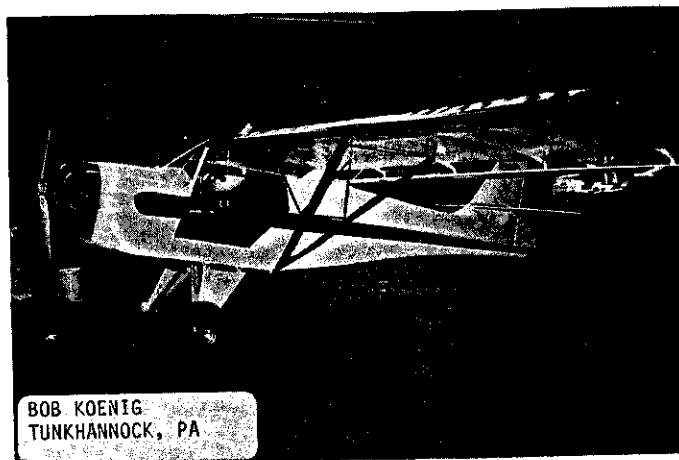
The refining fires continue to forge the ultimate light aircraft, from low and slow to an amazing *Speedster*. This American legend is helping to revitalize general aviation world wide. As a continuation of the last Kitfox Times article about the refining fires, we would like to give you a history of the Kitfox structural improvements.

Model I - The model 1 had a gross weight of 850 lbs. The standard engine was the 52hp, air cooled Rotax 503 "pull-start". An aluminum "Z" style spar insert was used as a stiffener centered over the lift strut. The diagonal drag anti-drag braces in the wing were 1/2" dia. x .035" wall aluminum tubing, crimped and bent at each end and riveted directly to the spar. The wing rib was made of aviation grade birch plywood. It was an extremely high lift airfoil for great STOL performance. The Kitfox control system utilized a system of push-pull tubes and bellcranks with a mixing system behind the seat, for an effective use of an aileron/flap combination called a flaperon. The flaperon was connected to the wing by an extension of the web material of the rib, which was 6 mil thick aviation grade birch plywood. The cabin was designed for two people with dual stick control and was 36" wide at the shoulders. The seat was made of sturdy fiberglass. Mechanical disc brakes were a standard item. The cowling design was a two-piece conventional looking unit made from fiberglass. Later, when the Dragon radial engine was brought to us for testing, we designed a round cowling around the engine. The engine did not prove out, but the radial looking cowl was a hit.



Model II - The Model II's gross weight was increased to 950 lbs. by increasing the size of the spar carry through tube and utilizing a unique new spar that had an extruded I-beam as an integral part that ran the entire length of each spar. The same high lift airfoil was used in this model. The diagonal, drag, anti-drag, stiffeners were 1/2" dia. x .035 wall aluminum tubing, same as the Model I. To accommodate the use of a heavier engine and to gain more stability, the fuselage was lengthened almost seven inches. The cabin area was made even

roomier by widening the cabin, at the shoulders to 39". Approximately 1" more leg room and head room was added. The 9 3/4 gal. nose tank was made from rotationally molded, cross-link polyethylene, that is impact resistant and leak proof. The 64hp Rotax 532 liquid cooled engine with electric start and three-bladed prop was made standard. The KFM 112 an Italian made 52 hp, 4 cylinder-4cycle air cooled engine was tested and marketed for a short period of time. Hydraulic disc brakes and several instruments were also made standard items.

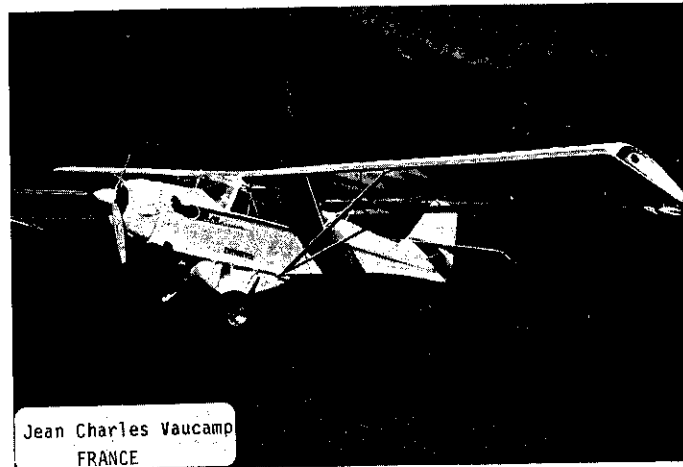
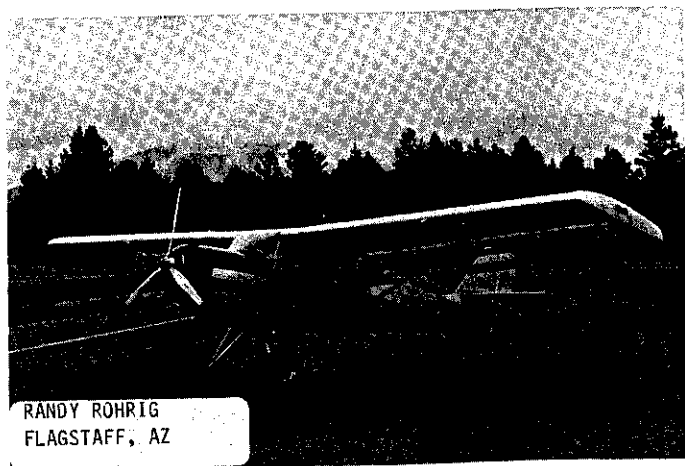


Model III - There were many structural changes to the Model III to strengthen and increase the gross weight to a very exciting 1050 lbs. The front and rear carry through spars were strengthened by going to 1" dia. x .035 tubing size. The lift struts were increased from 3/4" to 7/8" dia. x .035 wall and lengthened. An all new steel attach bracket was developed to attach the new 5/8" dia. x .035 wall aluminum drag, anti-drag tube in the wing. A 4.5 foot extruded I beam, aluminum spar insert, replaced the full extruded I-beam spar which increased strength and decreased weight. Rod ends were attached to all lift struts for easier adjusting and rigging. All lift strut components and brackets, from fuselage to wing spar, were statically load tested to in excess of 14 g's. Float and cargo container brackets were added as standard items. A stronger landing gear truss section was added. The vertical stabilizer and rudder were increased in height by 3" to give even more directional stability. Two inches more chord was added to the rudder and elevator. One additional hinge was added to the rudder and elevator attach points increasing the strength to accommodate the greater chord. A stronger horizontal stabilizer brace was added (3/8" to 1/2" dia. x .035 wall steel tubing). A revolutionary motor mount was developed and patented for Rotax's new 582 liquid cooled 65hp engine, that cradled the engine on side mounts and virtually eliminated all vibration from the fuselage. A new gear box for the 582 Rotax called the Type "C" became standard. With a 3:1 gear reduction ratio and resulting improvement in prop efficiency, the Kitfox gained 10 - 15 percent increase in performance.

Model IV-1200 - This model is an upgrade of the Model IV to include an even higher gross weight; 1200 lbs. Structure changes include 1" dia. lift strut tubing with a wall thickness of .049. The lift strut carry-through tube has also been given a thicker wall. The upper horizontal tube of the landing gear that engages the bungees, has been beefed up by increasing the diameter of the tube size and the wall thickness. The vertical stabilizer and rudder were once again increased in height, this time 7" were added. The chord of the rudder was increased approximately two more inches and is now attached to the tail post by four hemispherical rod end bearings. The fuselage's tail section was widened slightly and more bracing was added to the vertical fin.

Model IV-SPEEDSTER - The *Speedster* is a specially modified Model IV-1200 that encompasses everything to date and adds a new dimension to the Kitfox to make it a real cross country aircraft. Many options have been made standard on the *Speedster* package that make it more streamlined. It has been sufficiently cleaned up with various fairings that coax another 15 to 20 mph out of this model. Smaller tires with wheel pants, speed fairings, juncture fairings at the lift strut to spar and horizontal to vertical stabilizer junctures, a faired radiator scoop, and special wingtips. Actual structure changes include an even thicker windshield, a shorter wing span (from 32 feet to approximately 29 feet), bottom false ribs on the wing to help maintain the airfoil, and airfoil shaped vertical fin. Electric trim has been added, along with a double-pin door latch system (quarter turn style handle), and gas struts on the doors. At 950 lbs. maximum, the *Speedster* is capable of positive G aerobatics, ultimate load limits of 9.g + and 4.5g -.

Denney Aircraft Company is continually striving to develop and produce the best personal light aircraft in the world. As you can see, the Kitfox has under gone technological refining that has brought back the hopes and dreams of the private pilot. Integrity of design, the use of aviation grade materials and hardware, and a commitment to "first class or not at all" make the Kitfox your best choice.

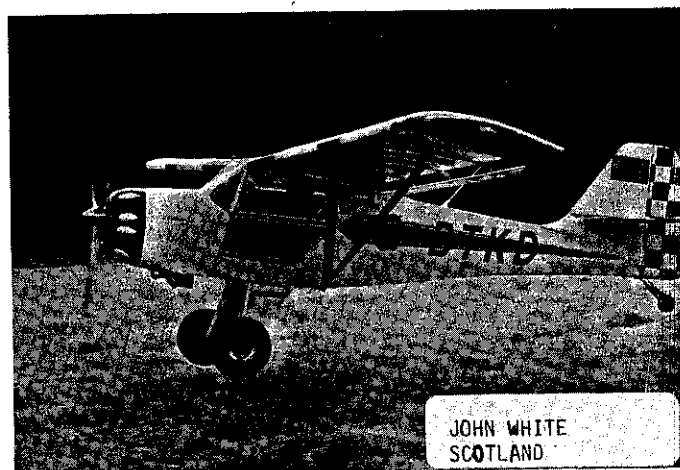


THE COST OF REFINING

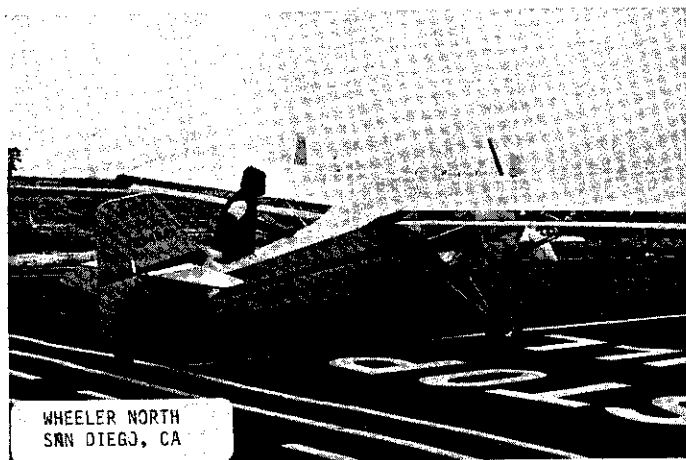
Keeping the Kitfox, aviation's industry leader, always on the cutting edge of technology, is not without costs. Our new Model IV-1200 and the *Speedster* are revolutionizing the personal light aircraft world, from a recreational workhorse to the newest cross-country delight. The flight envelope has been widened even further for STOL capabilities and high top-end performance, with an unprecedented 5 to 1 ratio between stall speed and cruise speed.

Denney Aircraft's desire to fulfill your dream of flying a low cost, highest quality aircraft, has kept the company from passing on the cost of this engineering and technology for the past two years. Because of the vast advancements and developments of the Kitfox, it was necessary to increase the cost of a Kitfox by approximately 6-7 percent. A small price to pay for improvements that are more significant than any in our history.

It is still the best time ever to buy the best.

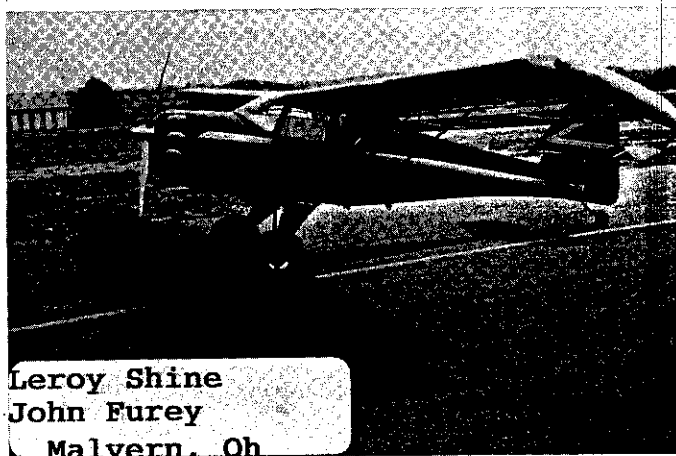


A ground adjustable three-bladed prop also became standard with the 582 engine. Denney Aircraft pioneered installation of one of the first Rotax 912's, a four-cylinder four cycle, 80 hp engine. Denney Aircraft was the first to develop a dynafocal style engine mount for the 912, making it feel smoother than any four-cylinder aircraft engine you've ever flown behind. The engine is equipped with carb heat and an exclusive, light weight stainless steel exhaust system developed by Denney Aircraft. There were also other changes to make the entire building process easier and simpler.



Model IV - Perhaps the most dramatic change in the Model IV was a new airfoil designed by Harry Riblett that enlarged both ends of the flight envelope. We were able to increase the top end speed of the Kitfox by at least 10%. With the assistance of a newly designed flaperon we actually decreased the stall speed by 3-4

miles per hour. The Kitfox has never lost any of its STOL capabilities while improving upon the speed. The new wing has a true, non-critical, laminar flow airfoil. It Utilizes all metal attach brackets to mount the flaperon to the wings. The new flaperon design has 2" more chord and a thicker, symmetrical, low-pitching-moment section (the only flaperon in use today that has a laminar airfoil). A leading edge cuff was designed to maintain the proper airfoil configuration. The wing is enhanced by a new control system that has 2:1 differential aileron control. This control system has no swivel joints and uses aircraft rod ends at all bellcranks and joints (this is much stronger than the older system). The new controls allow for 5 cubic feet of storage behind the seat. The cabin width has been increased by bowing the doors out, allowing for almost 3 more inches of shoulder and elbow room. The windshield material is made of a thicker Lexan and the bottom edge has been moved approximately 4" forward to make it more streamlined. The window area in the turtledeck has been almost doubled. Again, there were more minor changes that would help the builder shorten his building process.



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