



Radiant Reliant

The Stinson SR-9F legacy

ARTICLE AND PHOTOS BY MOOSE PETERSON

By 1925 when Eddie Stinson proposed his first aircraft, he had already lived a full aviator's life in an active family of aviators. His older sister Katherine was only the fourth woman in the United States to receive her Fédération Aéronautique Internationale pilot certificate at age 21. In April 1913, Katherine with her

mother incorporated the Stinson Aviation Company, announcing their intention to “manufacture, sell, rent and otherwise engage in the aircraft trade.” Katherine was wowing the audiences at this time with her exhibition flying in a Wright B Flyer, and by the summer of 1914, had done so well that her younger sister Marjorie wanted to get into the act. This whole time Eddie was learning the mechanics

of keeping a plane in the air. Eddie wanted to fly, so he finally went to Dayton, Ohio, to learn how to fly at the Wright School of Flying. And from there, he never looked back.

World War I had a dramatic effect on U.S. aviation with \$13 million being poured into the overlooked program. Many American pilots had joined the Lafayette Escadrille, so the Army found a shortage of qualified instructors.

Late in 1916, the commander of the 1 Aero Squadron decided to hire a civilian to fill the void and instruct new pilots — Eddie Stinson. Many graduates later remembered their instructor and some of the stunts he would fly during instruction. Up to this time, no course was taught for recovery of the “corkscrew twist” or spins, which ended mostly in tragedy. There is a story that Eddie was flying and got into a

spin. With no known recovery, it's believed he pushed the stick forward to expedite the inevitable, but by mistake or not, Eddie discovered how to get out of a spin. The Army was duly impressed and had him instruct the 1 Aero Squadron in this technique. Shortly thereafter, the United States entered WWI and Eddie became a buck private, instructing officers. His exploits in a plane doing loop-the-loop and

other stunts were legendary, doing 157 at Love Field. So were his exploits with a bottle, and after a long review, the Army made the change from buck private to chief civilian instructor.

Eddie Stinson moved to Detroit, Michigan, in 1922. In June, Eddie Rickenbacker, then automaker (and America's leading WWI ace), hired Stinson to fly him around the country to survey commercial



aviation possibilities. Flying in a Junkers, they had problem after problem plaguing their tour. Finally, Rickenbacker took the train, saying to Stinson, "I'm through with commercial aviation for the time being." The future head of Eastern Air Lines added, "There's not a plane in the U.S. fitted to make such a long trip." This started Stinson thinking about just such a plane. Then in September, he was a test pilot in the employ of Bill Stout, designer of the Ford Tri-Motor, which would later open up the skies to commercial passenger service. Stout had built a large, corrugated monoplane, the ST-1. The ST-1 was a twin-engine torpedo bomber. Stout thought Stinson was the only pilot of the day who could get it off the ground for the test flight. Stinson was successful flying it for the Navy demonstration and many times thereafter, making a number of improvement suggestions. Soon afterward, he acquired his own Junkers and started a somewhat successful charter passenger service.

Early in 1925, the Detroit Board of Commerce Aviation gathered to discuss promoting air transportation in the United States. A plan was devised based on the Glidden Tours, which helped to popularize automobile travel. Edsel Ford became interested in the idea, donating \$50,000 in cash and giving birth to the Ford Reliability Tour. Board



member Bill Mara was in charge of organizing the event and enlisted Stinson to survey the air route of the tour. Days after the successful tour ended, Stinson walked into the offices of the Detroit Board of Commerce with a large roll of brown paper under his arm.

When Stinson unrolled the paper, he laid out in front of Mara and others on the board his design for a four-passenger cabin biplane. In 1925 an enclosed airplane was a rare bird. Stinson added to this novelty a cabin heater, wheel brakes, and an electric starter. These by themselves were not new innovations in aviation. But collectively, having all three of these in-

novations in one aircraft, that was new. Stinson admitted he was no engineer, but he knew folks who were. So when asked why such an unorthodox airplane would be commercially successful, he had a simple answer. Firsthand experience convinced him that the advancement of commercial aviation depended on the principal features of his design. With a capitalization of \$25,000, Stinson Airplane Syndicate was formed. Stinson promised he'd have the first prototype within three months, a claim doubted by all.

The Stinson Detroit, the SB-1, rolled out two months and 10 days later and was first flown on Jan-

uary 25, 1926. Stinson had done it! He pressed the starter button, the Curtiss propeller turned, and the SB-1 began to taxi, doing all of this without the usual ground support. In a flurry of snow kicked up by his takeoff, he was up in the air with ease. It was a cold winter day, but all were impressed with the starter and brakes as they stood in the chill. Stinson with passengers Dick Fitzgerald and Bill Mara in the warm, heated cabin in the upholstered seats flew overhead. The Stinson Detroit performed beautifully just as Stinson said it would. On its first public flight, 500 turned out to see the Stinson Detroit fly. Packard Field was covered in snow as Eddie Stinson flew in short sleeves. And the tires had chains, so he could stop in 100 feet as he stepped on the brakes. The SB-1 was a success. In May 1926 the Stinson Aircraft Corporation was born.

Stinson's SB-1 did very well commercially and led to many new innovations and designs. Stinson wasn't one to sit on his laurels! For the next seven years, both the company and the pilot grew in fame and experience. Adding parking brakes and interior design, monoplanes and additional usable loads, amphibians, tri-motors, and retractable landing gear, Stinson didn't sit still in design or in the air. In January 1932, the Model R received its certification and Stinson was off to sell it. The Model R was a revamp of the very popular Stinson SM-2 Junior. The Junior fuselage was shortened 3 feet in making the Model R along with aesthetics, courtesy of talented stylist Lloyd Skinner.

The Model R had to sell, so Eddie Stinson flew it up to Chicago, Illinois, on a sales flight. He'd been flying all day and was talking to the head of a large steel company exec on the

flightline when the gas truck came up to the Model R. He waved him on, as the tanks could wait till later. The steel company man wanted a ride. Eager for a sale, off they flew, heading out of Lake Michigan. They'd been flying only a few minutes when the engine quit. The steel man recognized the place and convinced Stinson to put down on the golf course rather than the beach. They struck a flagpole, and while all walked away, Stinson had broken ribs. He was taken to the hospital where sadly he died the next day.

On a rainy day, Eddie Stinson was laid to rest. Surrounded by the leading aviators of the day, Jimmy Doolittle flew overhead in a single flight as 2,000 mourners came to his home to pay tribute. It was said that Americans everywhere mourned Eddie Stinson's passing. It was a hard year for Stinson Aircraft with fewer than 50 aircraft being built. Through salary cuts, though, the company made it through the year without losing any of its labor force. But something was going to have to be done to stay open.

Then in early 1933, it embarked on the line of aircraft it is best known for: the Reliant. Robert L. Hall joined Stinson Aircraft as a designer and was tasked with designing a light utility aircraft to complete a Honduran air force (HAF) request. A tandem two-seater meeting the HAF requirements was in a prototype, and it was flying a few weeks later. In the spring of 1933, business began to pick up with the introduction of the Model SR, the first Reliant. The SR differed from the Model R mainly in having an all-new cantilever landing gear, improved styling, and tandem two-seater. In 1933 Stinson rolled out the SR-1, SR-2, SR-3, and SR-4; 100 were built under the design direction of Jack Irvine. In 1934

the SR-5 Reliant came out, the first plane in its class to have "speed arresters" or flaps.

In 1935 the SR-6 came out, and it was the last of the straight-wing Reliants. Just prior to this release, the Model L prototype was made and flown. It was considered too "hot" a plane for the average private pilot, and it was scrapped. Then Bob Ayer's classic gull wing seen on the Model A and on the scrapped Model L was adapted for the Reliant in the summer of 1935. On January 8, 1936, with the marked performance increase without adverse flight characteristics, the first production of the Gull Wing SR-7 Reliant began.

In 1937 the SR-9 came out and was considered the masterpiece of classic styling. What made the SR-9 so distinguished was its molded windshield. (All previous Reliants had flat-panel windshields.) Bob Ayer was hunting in Northern Canada; his hosts were associated with the Ontario Provincial Air Service and flew 80-mph de Havilland biplanes. Ayer did some quick thinking and told the Canadians a beefed-up Reliant would serve them better. They were skeptical. Ayer added the 450-hp Pratt & Whitney Wasp Junior, and the SR-9F was created. In 1937 more than 200 SR-9s were sold; 27 were 9Fs with the price range of \$9,500 to \$18,000.

The Vast History of Stinson SR-9F N18445

Stinson SR-9F N18445, S/N 5720, has led a full life, serving many pilots in many different roles. Originally purchased by George B. Barham of Midland, Texas, he got N18446 (the original number) from the Stinson factory in Wayne, Michigan, on October 18, 1937. The Defense Supplies Corporation in Washington, D.C., acquired it on May 8, 1942, for the price of



\$15,000. It was transferred over to the U.S. War Department, Washington, D.C., on October 8, 1942, for \$15,206.56. There it was used as part of the War Training Service program. Its registration changed to WTS145. The U.S. Civil Aeronautics Administration (CAA), Washington, D.C., acquired it July 13, 1945. The CAA used it for giving CAA inspectors instrument training. Registration changed to N129E. There the Stinson was rebuilt.

It was then returned to the civilian registration when Agair Incorporated, located in Eagle Field, Dos Palos and Fresno, California, acquired it October 28, 1946, for the reported price of \$2,500. Then over the next 10 years, it had a number of owners: Rex Williams, Tolleson, Arizona, September 19, 1951; Miller Body Works Inc., Las Vegas, Nevada, May 14, 1952; PMP Aviation Co. Inc., Turner, Oregon, April 4, 1954; Roy Bradley, Fort Worth, Texas, August 26, 1954; William E. Quick of Expressos Aereos Quick, Tegucigalpa, Honduras, September 10, 1954; Joe Marrs, Marrs Aircraft, Hollywood, Florida, July 13, 1955; O.K. Williams, Floresville, Texas, December 5, 1956; U.S. Worm and Minnow

Hatchery, Cordele, Georgia, October 9, 1957; and Mercy Flights Inc., Medford, Oregon, May 18, 1960, when it was modified with the gurney door and registered N139MF. Then Jack Mulkey, Klamath Falls, Oregon, purchased it January 29, 1964; Stuart Petersen and Roy Gerhard, Boise, Idaho, January 16, 1979; and Abel Hera, Miami, Florida, September 8, 1984. Its current proud owners, Woodson K. Woods III and Scott Woods, in February 2008 changed it to N18445, as N18446 was unavailable.

The Start of the Stinson SR-9F N18445 Project

It's not until you're up close to a Reliant or have the opportunity to sit in its luxurious cabin can you gain a sense of why this is such a popular aircraft! The Woods family has a long history with aviation from Spitfires to Wacos, but when it came time for a new project, the definitive project, it was a Stinson Reliant that was at the pinnacle. I asked, "So your dad had a thing for Stinsons for a long time?" Scott Woods didn't hesitate for a heartbeat in answering the question. "He owned an SR-9F project back in the '80s, which he sold when

he got out of the restoration business," Scott said. I went on to ask, "But why the SR-9F of all the possible Reliants?"

"The gentleman that we paid tribute to in the restoration of this airplane, Jack Nees, was my father's aviation mentor," Scott said. "When my father got into collecting antiques, he asked Jack, who happened to be a walking encyclopedia of aviation. He asked Jack, 'What do I need to have? What are the best airplanes?' He said, 'Waco UBF-2 and a Stinson SR-9F.' It was the pinnacle of the Stinson line because of the design aesthetics of the SR-9 with the curved windshield but also the power and performance of the 985 Pratt & Whitney, which made the F model the most desirable. Many 9Fs were either wrecked in the bush or somehow went off the registry and were lost with time. There only remain, still to this day, five on the U.S. registry. And there's one in Canada that was the multiuse version with the Pratt & Whitney.

"The Waco project was done, so it was time to go after that SR-9F." I asked, "How did you find a SR-9F project?" He said, "I looked on the registry, and I found there were five on the registry and I started

making calls. Yeah. Cold calls. I got in touch with Abel Hera who was the previous owner. When I called him, I just said, 'Hey, would you consider selling?' And he said, 'You know, not right now, but keep calling me.' I think about a year later I called him, and he said, 'Yeah, come on down and have a look.' So I went down in 2007, I think it was April 2007, and checked out the airplane for the first time.

"I went down to Florida to look at the project and came into the hangar, your classic pack rat hangar full of stuff. Parts and bits and then stuffed in the back of this hangar was this sad, old 9F fuselage up on its gear with the gurney door on the side; the wings were in another hangar. And I just started inspecting everything, and to me, it looked like a viable project, albeit a lot of work. But being so rare and the excitement of finding the prize, you kind of overlook a lot of the hurdles. We clearly wanted the 9F, but unfortunately, he wouldn't sell it separate of an SR-10 that he was also selling. We didn't want the 10 but had to have the 9F, so we put a deal together for both the airplanes as he wanted us to cart both of them out as a package deal. And that's what we did.

"The 10 was donated to the Cincinnati Aviation Heritage Society and Museum that they set up at the terminus of the old All American Aviation (AAA) airmail route. This Reliant SR-10 was used by AAA as an in-flight mail pickup and drop-off ship. So we found a home for that.

"In the summer of 2012, the SR-9F arrived at Rare Aircraft, Faribault, Minnesota, and the two-year restoration project began."

Restoring to Flight Stinson SR-9F N18445

The airframe of N18445 is all original, and the wings are as well. A

few of the SR-9s have interchangeable wings, all but the 9F. If the wings of the project weren't viable, they wouldn't have had a project. Since they are heat-treated steel truss construction, they had come through the decades intact. The ribs, which were extruded aluminum, had to be replaced, and there was only one guy that had the correct rib material for the gull wings.

I asked, "What makes the ribs so difficult?" Scott explained, "All Reliants have square tube ribs. There's a machine that will take a circular tube and turn it into a square tube. To tool up and to do that is very expensive, so there just aren't many that exist. And to have to go and have it made would have been extremely expensive. I think we pretty much got the last batch of this one gentleman's stuff and had all the ribs made. There are four fuel tanks, two in each wing, and they were in pretty

rough shape. They were stripped down, cut open and inspected, and portions refabricated, so the tanks are original but restored. One modification on the wing is where originally there was fabric covering the fuel tanks; now it's metal to facilitate their inspection.

"The wingtip bows had to be refabricated. They're steel. And all the gas caps, all of the control surfaces were serviceable; they just needed to be cleaned up. And Abel, the gentleman we bought the Reliant from, had done some work on restoring. Like the rudder had been cleaned up and primed, and it was kinda ready to go. He had been slowly pecking away at certain little groups of the parts. We were able to get the original wing lights, which are rare; it's hard to come by a lot of this stuff," Scott said with a smile, taking pride in bringing this beautiful aircraft back to life.

Another Poly-Fiber Moment in History



Pilot Joe Bob Lamont (goggles and gloves) and navigator "Thataway" Hattaway (pointing east) were fully confident their ship would be first. Poly-Fiber being unavailable, they used Archie Bancroft's (taller one on wing) mother's best sheets stuck on with whitewash. Despite their indubitable prowess, no European landing was ever documented.

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While the fuselage is all original, it had to be brought back from modifications made to carry stretchers. What Rare Aircraft had to contend with: "They had cut out some tube metal to make room for the gurney to work," Scott explained. "So they had to weld in another piece of the fuselage, and a few other little things had to be done on the fuselage for the stringers, the wooden stringers that form the fabric. So all that was done. They sandblasted, media-blasted the whole frame, inspected it, and then powder-coated the whole fuselage. All the airframe parts were there, as far as the finished parts; we had to refabricate 40 percent of the stuff. The bump cowling, the wheelpants were original, but had to be reworked. A lot of the sheet metal, the whole boot cowl around and behind the bump cowl, that all had to be refabricated from the original pattern, which we had. So we had to reverse-engineer the oil-cooler housing and the structure that mounts to the engine mount with the help of our friend Rick Rezabek, using his SR-9F parts as patterns."

Now for the engine itself. "The

engine came with the project and may have been the original engine on that airplane," Scott said. "I'm not sure from the factory, but it came with the airplane; it was from that era. There are some original reworked parts that are in that engine, essentially a brand-new overhaul. Prop came out of an H&S Prop Shop. It was a numbers-matching-blades A-quality, so it'd never been cut down or messed with. Basically, a new, old stock, overhauled and cleaned up. But it's recertified, but very high-quality prop."

Scott didn't bring a lot of modern aviation into the restoration. "We have a Garmin Aera 560 GPS, and then we have the Trig radios and Trig transponders, which are the smaller," he said. "We wanted to keep as much acreage on the panel original, so we didn't wanna have any big radios in there. So we went with a smaller style. But the panel, other than that, is very original. All of the instruments were restored to have the original look to them. No, it's not an IFR airplane. There's nothing modern, no modern instrumentation other than the GPS."

But what everyone notices first thing is the distinctive and gorgeous paint the SR-9F wears. "So, we knew from the beginning that we wanted to do the classic Stinson lightning bolt, which we'd seen so many pictures of. But we'd also seen a lot of restorations that had been done over the years where people had really got it wrong, I mean, just awful. Many have lightning bolts at weird angles, and it just points down or too far up. And we're very visual people, and we really wanted to get it right. And luckily we were working with Rare Aircraft 'cause Roy Redman is also very visual. Roy took an original picture of that scheme, and he scaled the lightning bolt exactly, the one that's on the wheelpants and the one that's on the fuselage, and we wanted to make sure it was perfect. So that and also the way that the paint drops back to the point of the lightning bolt, the little diamond, all of that had to be right, and he nailed it!

"As for the interior colors, we had always planned on doing something in the tan and brown family. Rare Aircraft had just completed a

V-77 restoration, the military version of the Stinson Reliant, and they had finished that interior in a similar tan, just a little lighter. As soon as we saw that and the black, red, and gold on the exterior, we could see that it was going to look great! We picked a little bit darker, kind of more of a milk chocolate color. They had all the swatches there, and it really turned out nice. To add to the originality, the entire interior was fabricated using photos from an original SR-9 interior that Rezabek had in his files."

Scott, who lives outside of San Francisco, California, was quite a distance from Rare Aircraft in Minnesota where the restoration went on for two years. During that time, the Woods visited their baby. "I think it's about right, about six times in the two years, yeah," he said. "A couple times with dad and a few more times by myself." I asked, "And how many phone calls?"

"Boy, probably more than they would have liked," Scott said with a gigantic smile! He went on to relate about working with Rare Aircraft. "They were great; they gave us full pictorial updates every two

weeks on what was going on with the airplane. And yeah, they had a full-service, full-time shop producing Waco UPF-7s and Stearmans, and so there was a couple months where things slowed down a little bit. But that's kinda the nature of the shop environment. But I'd call them every couple of weeks just to check on it and kinda had to leave them alone to do the work, but was definitely always chomping at the bit to see progress."

"And when it was first rolled out, what was that experience like?" I asked. Scott said, "I remember getting a video because I wasn't there. But the first engine run, which I think was in October of 2014, and just chills, of course, seeing it come to life. And really it had no hesitation, started up without a hitch and ran great; everything went really well, and then within a couple of days, they had done the weight and balance and had the cowling put on and painted. And then before we knew it, there was a test flight. I got a video of a flyby of our Stinson in the air on its first flight. It was November 12, I think, 2014. After taking care of some final fin-

ishing, it was time for the N18445 to be ferried to its new home."

With the biggest smile yet, Scott said, "Jimmy Rollison, who is a friend of ours and kind of the one guy — he's flown everything, he's got the experience, and we wanted it flown out of there in the middle of winter. And he's the kind of guy who just shows up and gets the job done. He picked it up in February 2015 and flew it back here. I met him in Chino, after, I think it was on his third day, I met him in Chino, and we did the last leg to Petaluma together."

"And what was that flight like?" I asked. Scott seemed a little choked up when he said, "Getting into that airplane with him, I sat right seat, and taking off from Chino was the most surreal thing just because I'd been carting around this pile of parts for so many years. And to actually fly away in that airplane for the first time, I was kind of ... what's the word? In shock, I guess."

Flying Stinson SR-9F

Scott's first left-seat flight was not too long afterward. He said, "It was, probably about two weeks

after the airplane was delivered here, we went up. I did four hours with Jimmy Rollison as my flight instructor, and so in that two weeks, I had done a bunch of taxi tests just to get used to the controls and the rudder pedal system, which is different than anything I've ever flown. It's a different system but works extremely well. They're heel brakes, full footpad, heel brakes. I went out and did some fast taxis down the runway, got used to the feel of it. And then he came over, and we did our flights. We did four hours of flying together over two days before I soloed the airplane, and I was surprised, pleasantly surprised at how great the characteristics of the airplane were and how straightforward she is to land — that wide 9-foot gear spread. It's just such an honest-behaving airplane. And just tracks straight and true, and [I] couldn't have been happier with what I was flying."

Scott has not kept this beautiful aircraft in the hangar. He is out sharing it with the public. "Our first fly-in was Columbia up in the foothills of California on June 20," he said. "We met our friend Rick Rezabek, who has the other flying 9F here in the States, and so we got those two birds together for the first time, which was so great. The next event we took it to was the Monterey McCall's car week event, which kicks off car week for Monterey. This includes the Concours d'Elegance. We were invited to bring the Stinson down and put it on display there with all the other cars, warbirds, and other great airplanes. It was very interesting to see classic car aficionados' reaction to the airplane. People loved it! It was like a magnet! It really has a lot of cues from old Packards. The interior, when you look in there, it just feels like an old car from that

era. So there was a lot of attention, a lot of interest. And there were even a couple people, fellow pilots there, that were thinking about having one done for themselves, if they could find one."

"So, what's it like to fly the SR-9F?" I asked. Scott replied, "Well, the biggest thing ... I mean, as far as handling on the runway, if you start straight, the thing tracks straight and true. You have your normal P-factor and torque to deal with but not pronounced. That big rudder provides excellent directional. You don't have to put a ton of right rudder in. The most crucial thing on takeoff is watching your manifold pressure, and you don't want to go over 36 inches. If it happens here and there, it's fine, but there's propensity for the engine to have damage because of overboost, so that's the most critical thing on takeoff. As far as climb-out, I mean, it's just like any other airplane. You just watch your speed as it climbs like a bat; you could pull up to 70 mph, and you're climbing out well over 1,500 feet per minute. It's remarkable; it's a climber; it's a performer. Then you level off, get it up on the step, and it's just like cruising in a big Packard in the sky. It's just super comfortable; it has very responsive roll rate. Yeah, it's just a sweet bird."

Keep in mind the Stinson has really cool yokes. "We had the original control wheels with the project. But they needed restoration, and that was something we had to farm out. We actually found a guy who restores Ferrari and other classic car steering wheels, and he really did an amazing job."

"Is landing a Stinson Reliant as easy as they say?" I asked. "As far as landing the airplane, you want to set up a nice manageable approach as with all airplanes," he

said. "I like to hold 80 to 85 mph in the pattern from abeam mid-field onto base to final [and] then cross the numbers around 75 to 80 mph. Pull the power and just do a nice, even flare, and it just settles right down on that big gear. Just a touch of forward pressure on the yoke and you roll up onto the mains, and it just tracks amazingly straight; you don't have to do a lot of work to keep it straight, unless of course there's gusty wind, but it's just a sweetheart."

In September 2015, Scott Woods flew the Stinson SR-9F to the Reno National Championship Air Races, and it was entered in the National Aviation Heritage Invitational where it won the Paul E. Garber Trophy for Best Classic. But when you ask Scott about the whole project, he'll say, "The greatest part was doing the project with my dad; it was a real coming together for us. Unfortunately, he was unable to share in the last part of the project due to health reasons, but it just really brought us together. It was a very special thing to share, and so that's what it really has been all about. That and, of course, Jack Nees' words." Scott's dad was able to get to Reno to see the Stinson SR-9F for the first time and the presentation of the trophy.

Scott finished by saying, "But we've always been airplane fanatics, antique airplane people, and we've put a lot of time and resources into them over the years. And others that do so also understand the strong calling to preserve the last of aviation's wildlife. When we get our sights set on a special one, we'll put everything into it. Especially rare ones like the SR-9F!"

Note: I want to thank Scott Woods for flying the SR-9F and Steve Bowman, the photo platform pilot. 