



Nearly lost to the ages,
an historic airplane
makes a comeback

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Dinndorf, Doolittle & Their Stinson

You can feel history in so many different ways in so many different places. Standing on “last stand hill” at the Custer battle-field, you can’t help but feel the connection; where your feet touch the soil, men fought their last desperate hours. Leaning against the glass office windows in Menlo Park, your hand resting lightly on the doorknob, it’s a little awe-inspiring to think how many times Thomas Edison’s hand rested exactly where yours is and turned that very knob. And when Tom Dinndorf sits in the leather seats of his Rod Roy-restored Stinson SR-10 while he and his wife, Mary, are thundering across the landscape, he has to feel a little bit of Jimmy Doolittle, the airplane’s original pilot, each time that big Lycoming fires.

Doolittle flew hundreds of airplanes during his career, but his connection with NC21104 wasn’t incidental. For nearly 100 flights from 1938 to 1940, the airplane was Doolittle’s preferred form of passenger transport as he scurried about the United States carrying out his duties as Shell Oil’s aviation manager. In that amount of



With its rakish, sloped windshield and tapered gull-wing planform, the 1938 Stinson SR-10 was just the ticket to turn heads toward the Shell Oil logo as Jimmy Doolittle, Shell's manager of the aviation department, flew the Stinson more than 100 times in the late 1930s.

MIKE STEINEKE

time, a pilot leaves something behind in the airplane's soul. Tom Dinndorf of Baudette, Minnesota, is acutely aware of that, and he doesn't take the responsibility lightly.

"I've owned this airplane for over 30 years and carted its remains around to various locations as I moved," he said. "Eventually, I realized I wasn't going to get the airplane done in my lifetime, and that just wasn't right. I owed it to the airplane and to history to get it finished. Thank goodness I found Rod and Dottie Roy. They are the only reason the airplane is finished, and they should get all of the credit."

As Dinndorf got into the project, researching its history became a near obsession, but just as it's difficult to prove "Washington Slept Here," it's often impossible to prove a given pilot has flown a given airplane. Unless, of course, you have his logbooks.

"Doolittle kept very careful records of his flights, and when I started researching the airplane, I found his logbooks were among his personal effects that had been donated to the University of Texas. I knew the airplane had been purchased by Shell Oil on 12 August of 1938, but I didn't know for sure if Doolittle had flown it at that time. If he did, it would probably be in the logs."

Tom called the university archives and asked the helpful curator if he

could take a look at the logbooks and get back to him. "I didn't expect him to drop what he was doing and search, but that was exactly what he did. He had me hold on while he got the logbook and thumbed back to August '38. He said, 'Yes, on August 13th it says 'acceptance flight, new Stinson, 15 minutes.' I can't tell you how that made me feel. Today, I have copies of all of Doolittle's Stinson log entries, and I periodically pull them out and look at them to convince myself the Doolittle connection is real. It's almost scary to own and fly an airplane with that much history to it."

Although the Stinson is a work of art today, it wasn't always that way. In fact, it has spent far more time in derelict and/or project condition than it did in flying condition.

"The last time the airplane flew, before we got it back in the air, was in 1952, even though it was only 14 years old at the time. Then, somehow it wound up in an aviation mechanics school, where it was stripped and the seats and a bunch of other stuff disappeared. Then it was pushed outdoors and pretty much abandoned. Since it had not been licensed since 1952, it lacked a permanent airworthiness certificate, (which became) another hill to climb."

It is at this point in an airplane's life that its continued existence hangs by



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The luxurious front office of the Stinson and its massive control wheels.

a thread: The dual vandals of weather and human nature can reduce an airplane in this situation to junk in nothing flat unless a savior rides over the horizon. NC21104 was lucky. Its savior was named Luke Youngren.

Dinndorf said, "In 1971 I heard about the airplane and thought I'd like to restore an antique. I went over to take a look at it, and it was a disassembled, sad-looking thing crammed into Youngren's hangar along with a bunch of spray planes. Youngren was a duster pilot and didn't really intend to restore it. He had bought it strictly to save it. If he had waited a few more years, there wouldn't have been much to save.

"We struck a deal and I trailered the carcass home. Looking back, I was incredibly naive. I had been close to some Cub restorations, and that's what I must have had in my mind when I started



BONNIE BARTEL

this. I put the fuselage in my basement shop and the wings in the garage, thinking I'd start restoring it. I bought a compressor and sandblaster and started cleaning the fuselage and I think that's when the lights started coming on that this was going to be a much bigger project than I thought it was."

Dinndorf had worked in his father's pharmacy as a youngster and, when he went to college, continued in that direction. Eventually he was in the manufacturing end of the pharmaceutical business and found himself leaving Minnesota for Atlanta.

"I trailered the fuselage down behind a little 2-liter Oldsmobile. We were so marginal on power that we couldn't run the air conditioner and climb even the slightest hill, so we just rolled the windows down and sweated all the way.

"When I got to Atlanta, life took over and I barely touched the airplane. It was sad. And I was getting really frustrated. Here I had this amazing historical artifact and I couldn't do anything with it!"

Life eventually seems to work things out, and after he moved back to Minnesota, he met Rod Roy and Roy's wife, Dottie. "I was at Oshkosh and saw Paul Sensor's Stinson that he had done, and it was nice. It was past being nice. It was beautiful, and I started talking to Rod about doing my airplane."

Rod and Dottie could easily be the poster children for aviation couples. They were high school sweethearts who went their own ways but eventually found each other again in their early 20s when Rod was already well into his career as airport manager. He has been the manager and primary FBO at several Midwestern airports and said, "We've always been a full-

service FBO in that we do every type of maintenance except avionics. The restoration projects are part of that."

His first rebuild project was the "ratty" C-140 he and Dottie had bought. "We took it to Oshkosh as part of that 150 or so C-140 gaggle, and ours was the airplane the EAA singled out for photos when they were covering the event."

Rod's first big project was a pair of Christen Eagles, one of which won a grand champion Lindy at Oshkosh. Along the way, Dottie, who is a trained and experienced nurse, became part of the restoration team.

"Almost from the beginning," Rod remembered, "she'd do all of the rib stitching and got really good at it. At the time, I didn't do upholstery and usually bought a kit and installed it. We were in the process of installing one of those when Dottie said, 'Hey, I can do that.' She took a trade school course in upholstery at night for a year and has been doing all of our interiors since."

Almost since the beginning, Rod had been doing the motors for his rebuilds, so adding upholstery rounded out his in-house capabilities.

"We usually spend a little more time with a restoration than other shops, but that's deceiving because we aren't farming anything out. We're a one-stop restoration operation, and the airplane never leaves our building. Plus, I have to give credit to my shop crew. They're a group of really motivated and talented guys.

"Our first restoration that gained any notoriety was the red-and-black SR-8 Gullwing that became Hallmark's Christmas ornament for that year. That's the airplane Tom saw at Oshkosh and started him talking to us."

Tom loaded his airplane (even he uses the term "airplane" loosely), and all the parts onto a trailer behind a Ryder truck and headed for Grand Marais, Minnesota, where Rod has been the FBO for the last six years. Grand Marais, incidentally is on the north shore of Lake Superior, 30 miles south of the Canadian border, eh?

Rod said, "When we unloaded it, I knew it was bad, but later I real-

ized that as negative as I had been, I had underestimated it badly. It was far from being a hopeless basket case, but it was far worse than I initially thought it was. It took us about a week to figure out what we had, but then it took over three years before we figured out what we didn't have."

While Rod was banging on the airplane, Tom continued scrounging, splitting his time between digging up historical information and missing parts.

Tom said, "We had a lot of people really help us on this, including George Alleman, president of the National Stinson Club, but finding and visiting Jerry Arnold, another Gullwing restorer up in Winnipeg, got us some of the hardest-to-find parts, including the front seats. The back seats are just slings, so Rod could fabricate those, but the front seats are very unique. Jerry has a trucking company and a nose for wrecked Stinsons. Since the airplane was sort of a 'poor man's Beaver,' lots of them were used in Canadian bush flying and many were torn up in the process. Many were just abandoned or pushed against hangars. Jerry scouted them out and backhauled them to his hangar.

"The front seats I got still had the original leather on them, which was good because we could then do a better job of duplicating the material and the pattern. He also had a vacuum tank that I had just about given up on finding."

The original concept Eddie Stinson had, when it came to building his airplanes, was that they should be limousines of the air, and since he was based in Detroit, it was natural that they would have a lot of automotive flavor to them.

Tom said, "The SR series of airplanes had a lot of car stuff in them. They had an artificial wood-grain panel, roll-down windows, cranks, hang straps, all the stuff you associate with a car and not an airplane. That was part of his marketing program—make it look luxurious and then charge top dollar for it, and that's exactly what he did."

The target markets for the Gull-

The Great Doolittle/Porta Potti Ambush

Tom Dinndorf admits to being a Doolittle nut. Which is actually a huge understatement.

"I'm a little frustrated that so many people only remember him for the Tokyo raid when there are so many other things he should be remembered for. Besides his achievements in air racing, he pioneered instrument flight, did the first outside loop, and, if he hadn't read Hitler's mind and talked Shell into setting up production of 100-octane fuel in the 1930s, we would have been in real trouble in the early days of WW II.

"During the four years we worked on this airplane, Doolittle was never more than a millimeter from my mind or from the heart of this project. I had read everything I could on him and searched the archives in every museum you could think of looking for things that would tie him to our airplane.

"During one search at the Smithsonian, I stumbled on a really nice 8-by-10 of our airplane in the original Shell paint job, and I wanted desperately to not only meet Doolittle, but to show him the picture. My opportunity came some years ago at Oshkosh when he chaired a panel on air racing.

"I won't say that I was actually 'stalking' him. Well maybe I was. Anyway, I spotted him in the crowd just as he stepped into a Porta Potti. I waited until he came out, and introduced myself. I should also say that I was a little nervous, but he could not have been more congenial or gracious. We talked about my airplane and him having flown it. Then I showed him the picture, and without asking, he took it away for a few minutes and came back having signed it for me. I'm too old to do double back flips, but if I could have, I would have. He was just so nice about it.

"Later, I saw a Discovery Channel program on him that featured his second son, John P. I Googled the name for a phone number and hit him on the first call. I explained the airplane thing to him, and he was just as gracious as his father had been. Plus, he led me to Jonna Doolittle Hoppes, the granddaughter, who was doing an insider book on Jimmy, *Calculated Risk*. He also introduced me to Jimmy Doolittle III, grandson and namesake.

"We spent some time together with them at Oshkosh, when we had the airplane there, and we tried to get up for a flight, but weather and schedules kept us from getting together. I'm still talking with Jimmy III and Jonna, and both really want to get up in their grandfather's Stinson.

"Everything about this airplane just keeps getting better and better."



Tom Dinndorf, proud caretaker of the Doolittle/Shell Stinson.

wings were split between feeder airlines, corporations, and very rich sportsmen. Although Eddie Stinson had died in 1932, the result of a crash at the end of a forced landing in Chicago's Jackson Park, the company policy was well entrenched and no corners were cut in building his airplanes. The outline of his airplanes was very distinctive not only because of the "gull" at the wing root where it went into the fuselage, but also the finely shaped, bumped cowls all the civilian Gullwings sported (military Reliants had smooth cowls). Unfortunately, the bumped cowl loomed large on Dinndorf's "missing" list.

"It's difficult to describe how much effort we put into trying, and I emphasize 'trying,' to find the right cowl for the airplane. I had a cowl, but it was a smooth one, and I had decided very early on that the airplane was going to be exactly, and I mean exactly, the way it was on August 13, 1938, when Doolittle first flew the airplane. Going with a smooth cowl simply wasn't an option."

The airplane had already become as much a fabrication project as a restoration because, as Rod put it, "... there was practically nothing on the airplane, either wood or metal, that was rebuildable." So the logical solution for the missing cowl was to build a new one—no small project. The bumps, rather than being formed separately and riveted to a base cowl, were part of the primary surface. To make matters worse, the cowl tapered slightly toward the rear.

Tom found a metal smith, Larry Rampic, through another SR-10 owner and had him make the 18 bump cowl sections on an English wheel. Then Rod and his crew tackled the daunting task of making a cowl out of the sections. This required building a frame and then painstakingly fitting the sections, welding them together and then working the surface down to perfection. Then they had to add the hinges, door, and louvers.

Rod said, "The steel part of the airplane was fairly straightforward, except there's a lot of it. There was some





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Rod Roy, ace restorer from the shore of Lake Superior in Grand Marais, Minnesota.

rust, but nothing catastrophic, and luckily, the steel truss wing spars weren't bad at all. We had to do a little welding on it, but since this was a 300-hp airplane, not a 450, the spars weren't heat-treated. If they had been heat-treated it would have made repairs much more difficult.

"The very first time I saw the fuselage," Tom remembered, "my first thought was, 'This isn't made to fly; all the tubing is too stout.' It's absolutely massive in some areas."

The steel tube spars of the Gullwing are streamlined with ribs built up from small, square aluminum tubing that is gusseted and riveted together. What makes the process of restoring them so "interesting" is that they use square aluminum tubing that was manufactured specifically for Stinson. Luckily, according to Tom, getting a supply of it turned out to be no problem.

"Charlie Near, yet another Stinson restorer, this one from Nebraska, handled irrigation pipe, and he apparently found the original dies for the rib tubing and had some made for his Stinson. The problem was, he had to buy the entire mill run, so he had thousands of feet of the stuff. For someone like me, who thought we'd have to go through the same process as Charlie, that was a good problem to have."

The double tapered wings hide a couple of complexities that Rod could only iron out by going back to the English Wheel again.

Rod said, "Part of the leading edge, where it forms the 'gull,' is compound curved. The wingtips too. Being able to do that in-house, right on the airplane, really made

the process much easier."

When it came to doing the interior, they were in trouble because nothing of the original remained and they were unsuccessful in finding sufficient photos to use as a guide. They did, however, luck out when discovering a series of detailed drawings.

"We used the drawings done by William Wylam, which were incredible in their detail and were drawn from Stinsons back when they were still in their heyday. We judged them as being accurate because we looked at his drawings of other airplanes for which there were photographs to use as comparisons, and he was dead on. So we felt safe in using his work."

Dottie laid in a supply of whole hides and started cutting and stitching, using both the original, rotting seat upholstery and the Wylam drawings as guides.

One thing we'd like to ask Dottie is about rib stitching the wings: At the root, they are at least 16 inches deep. Running a stitching needle that far and being that accurate must be a real art. Or does she have some tricks she can share?

When the airplane was up through silver (using the Super Flight system) it was time for the paint, but this was something Tom had been doing a lot of work on.

"We wanted the paint to be so accurate Jimmy Doolittle wouldn't know it had been repainted, so we went right to the source. First, I found Jimmy Haislip, who had raced with Doolittle in the '30s and was still his good friend. He gave me Doolittle's phone number. I called the man himself and told him I had his airplane

and was looking for a way to exactly duplicate the colors and the logo. He in turn plugged me into someone in Shell, who not only gave us permission to paint the logo on the airplane, but also got us a color chip for us to match. It's kind of funny because when we gave the chip to PPG, they found it was identified as Shell Yellow. I guess we could have asked them first, but we probably wouldn't have trusted them anyway."

Rod is justifiably proud that every single bit of trim, except the Stinson logo, is masked paint.

Although Rod usually does his own engines, he was up to his hips in Stinson parts and both he and Tom wanted to get the airplane done in time for Oshkosh. So the R-680, 300-hp Lycoming was sent out to Radials Inc., in Guthrie, Oklahoma.

So how did Tom feel the first time he felt the wheels leave the ground?

"First, I was nervous as a cat. This airplane isn't really mine. It belongs to history and I'd hate to damage it somehow. Once I got over that and we were cruising around, I simply couldn't get Jimmy Doolittle off my mind. I met him only briefly, but he impressed me, and of course, what he contributed to aviation is legendary. I guess maybe I feel as if this airplane is my tribute to him, and the longer this airplane is flying, the longer more people will remember him and what he contributed."