





Dan's Dream



Ship

IT'S A DANDY!

BY SPARKY BARNES SARGENT

AS A CHILD, Dan Wilkins played with toy airplanes and drew them on his school papers. It was the genesis of his enduring dream of having his own biplane. But decades passed, as they are wont to do, and college, marriage, and a family intervened. And then, when he was still young at heart, Dan's dream came to fruition.

"I've always liked airplanes, particularly biplanes, as long as I can remember," said Dan with a radiant smile, beholding his "new" 1941 Waco UPF-7 for the first time during EAA AirVenture Oshkosh 2014. Virtually mesmerized and floating on a cloud of excitement, Dan felt the glorious mantle of being a "caretaker" for a gorgeous 74-year-old biplane settling softly upon his shoulders.



NC32141 in September 2014.



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an, a 63-year-old private pilot with single-engine land and glider ratings, started taking flying lessons in a Cessna 150 at 15, soloed at

16, and earned his private pilot certificate at 17. "When I saw a couple of Stearman sprayers operating from the local airport, I was in awe of them, and knew I wanted to own a biplane someday," he said.

Dan drifted away from aviation when he went to college, but the lessons he'd learned from flying proved invaluable. "My original instructor said, 'Here's some advice for you—when in doubt, don't,'" he said. "That's helped me with so many things all through my life, and of course in flying as well. A college professor asked me why I acted more mature than the other kids. I told him that I had learned to fly, and from that I learned that I had to be accountable because there were consequences to my actions."

Once his children had grown up, Dan began flying again after a 40-year hiatus. He took lessons in a Piper Cub and then became half-owner of an Aeronca Champ. During that time, he and his wife found themselves coping with somber news and a sobering challenge they would face together: Caryl had been diagnosed with Lou Gehrig's disease, also called amyotrophic lateral sclerosis or ALS. "I retired from my career as a guidance counselor to take care of her," Dan said. "And my wife of 37 years—my soul mate—passed away around Christmastime 2012."

In the spring of 2013, Dan took a flight in his Champ to lift his spirits a bit. While visiting another airport, he noticed a Waco UPF-7. Irresistibly drawn to it, he soon found himself climbing into the front seat and going up for a flight with the owner. "The owner said, 'If you can fly a Champ, you can fly this,' and he was right," Dan said. "I really liked that Waco, and he had it for sale, but I wasn't sure about buying it so the owner suggested I go see Roy Redman at RARE Aircraft to learn more about Wacos. I drove to Minnesota and talked to Roy...and as soon as you see one of his planes, if you've got the money in your pocket, you're sold."

Soon thereafter Dan sent a deposit to RARE Aircraft Ltd., and that award-winning family enterprise commenced breathing new life into an old original UPF-7.



Dan first beheld his freshly restored UPF-7 during AirVenture 2014, at Rare Aircraft's display area.

RARE AIRCRAFT—BORN OF ONE MAN'S PASSION

Roy Redman started Roy's Aircraft Service in 1988. At first, his business grew slowly, but as word spread about his high-quality aircraft restorations, the niche business began growing exponentially. Responding to that demand, he founded RARE Aircraft Ltd. in 1991. The acronym "RARE" stands for Redman Aviation Restoration Enterprises, and by now, it is virtually synonymous with award-winning aircraft. RARE has completed 40 airplanes since 1991 (and several more are in progress), and those that have been shown at a fly-in have won a major national award.

While Roy taught himself some of the skills necessary for restorations, he emphasizes that "there was *always* someone to first 'show me how' along the way." He said his great-uncle Fred Kegel first coached him in using a paint gun when Roy was 17. "I started painting my own control-line models and found that I loved it," he said. "When I tackled my first full restoration in 1975 (the 'Four Time Grand Champ' Gullwing Stinson), I realized quickly that I needed advice. I looked to experienced 'old pros,' including Jack Lysdale, who restored the 1929 Hamilton Metalplane, and Bob Strom, who assisted with welding, metalwork, and all-around craftsmanship. They were always glad to help."

RARE Aircraft keeps an inventory of restorable airplanes on hand and commences a restoration when a commission is obtained for a particular airplane. The Redmans are pilots and mechanics; altogether, they have 140 years of aviation experience. That, fueled by their passion, easily translates into meticulous craftsmanship and excellence in service to their customers.

Judie Redman is Roy's wife and an officer and director of the company. She takes part in weekly management meetings, and her flair for color combinations has been passed along to their son Jeremy. He has a background in art, as well as his pilot certificate and A&P/IA. As restoration director, Jeremy is adept at coordinating consistent and precise standards among multiple team members working on the same airplane.

Judie and Roy's other son Ben is general manager and holds a commercial pilot certificate with an instrument rating, as well as his A&P/IA. Most of the time he's in the shop working on engines or aircraft fabrication, but he loves having the opportunity to

test fly the airplanes and has been checked out in 65 different types.

Jeremy and Ben are likely the ones you'll see on the flightline or in a vendor display area at fly-ins debuting the latest Redman restoration. They are friendly and courteous, and while proud of their work, they are humble professionals.

"The challenge lies in marrying vintage aircraft to modern technology to provide an end product that appeals to all interest levels, and is safe and valuable for years to come," Ben said. "If focus was applied to only 'how it was,' I'm afraid we wouldn't be enjoying these great airplanes in the future, to connect us to our past. In the end, installing new gascolators, brakes, or electrical systems will never steal the soul of a great airplane or the way it flies—as long as care is taken to keep the aircraft light. So, there is the challenge: making a safe, modern, and serviceable aircraft in today's environment that is light and true to its own soul."

Roy, the patriarch, president, and CEO, is proud of his entire RARE Aircraft family team, which is composed of 15 employees in addition to himself and his sons. "Jeremy and Ben learned their skills by working with me in my shop from near infancy," Roy said. "As we started adding people in the early '90s, each new addition worked alongside one of us to learn the skills. This formula continues today. We have leaders in our present team with the experience to guide newer hands; at this point, however, I can say that our team has a pretty deep experience level."

Just think, it all started when Roy followed his early passion for flying—and that feeling is one reason he can relate so well to his customers. "Seeing the great craftsmanship our team produces every day is rewarding, of course, but the supreme reward is to see a new completion roll out and take to the air," he said.

Though RARE Aircraft restores numerous aircraft makes and models, it seems appropriate to employ the Waco Aircraft Company's old advertising logo, "Ask any pilot," and apply it to those handsome aircraft that fly away from RARE Aircraft's shop in Faribault. "Ask any pilot" flying those planes—whether a Waco or another type—and those pilots invariably smile when they say just how much they love their new, old, rare airplane.



DID YOU KNOW?

The Civil Aeronautics Authority ordered around 30 UPF-7s, which were finished in black with orange wings, and outfitted with engine cowls.

The tandem, Continental-powered Waco UPF-7 was specifically designed as a student pilot trainer prior to World War II.

"I've been able to realize a dream of owning a biplane, and this is a dandy one!"

—Dan Wilkins, owner and pilot

THE UPF-7

RARE Aircraft is a unique entity for many reasons, not the least of which is offering "all Waco models remanufactured to new specifications." Roy has done considerable research on UPF-7s and shares highlights he has gleaned about them. "The UPF-7s we know and love today are virtually all from Waco's production run from July 1940 to November 1942," he said.

"Previously, there were nine 'civilian' F-7s built (the VPF or ZPF versions, which were powered by the 240-hp Continental or Jacobs). All except two were exported, and both are still on the registry today. Only one 'civilian' UPF-7 was built, S/N 4659, which was sold to the Army Air Corps for evaluation. This is still on the registry, but appears to be a title only. I use the term 'civilian' because there were changes made, ostensibly to satisfy government requirements," he said. "The primary changes were flat rigging of the upper wings to allow more room for front cockpit entry and egress, center section with a straight trailing edge and hand holds, a wide type landing gear similar to the Custom Cabin series, and advancements in the control system and trim system. A new type certificate (642) was issued, and the 1940 to 1942 production run of 577 UPF-7s followed." As of January, 204 UPF-7s are listed on the FAA Registry.

PROVENANCE

Dan likes the fact that his Waco has a long-standing history, and especially that it played a

role in the World War II era, since his father was a veteran of that war.

A 1941 Waco Aircraft Company ad touted the rugged construction and reliable performance of UPF-7s for training operations: "Waco trainers are built to 'take a beating'...built to do a lot of hard work with a minimum of maintenance...built to assure the operator a profit on his operation...that's why so many operators choose Wacos for the CPTP secondary training."

This Waco has been owned by some locally notable aviators. NC32141's statement of conformity was signed December 4, 1941, by A. Francis Arcier of the Waco Aircraft Company. The application for the first airworthiness certificate stated that this Waco UPF-7 (S/N 5773) "will be used for CAA Secondary Training Program." From Waco Aircraft it was sold to Dickerhoof Flying Service owned by aviation pioneer and former barnstormer Orville E. Dickerhoof. Orville purchased one UPF-7 for the secondary training course; his school grew until he had 24 Waco UPF-7s (in addition to other airplanes), more than 30 instructors, and 20 mechanics.

Dickerhoof Flying Service sold the Waco to the Defense Plant Corporation of Washington, D.C., on April 5, 1943, for the sum of \$7,886.88, though Roy said it's likely the aircraft was still operated by Dickerhoof Flying Services. "The Defense Plant Corporation was an entity formed under the Reconstruction Finance Corporation," he said. "RFC had been established by the government in the 1930s to finance

THE RESTORATION PROCESS



Above: Pulling the fabric over the fuselage.



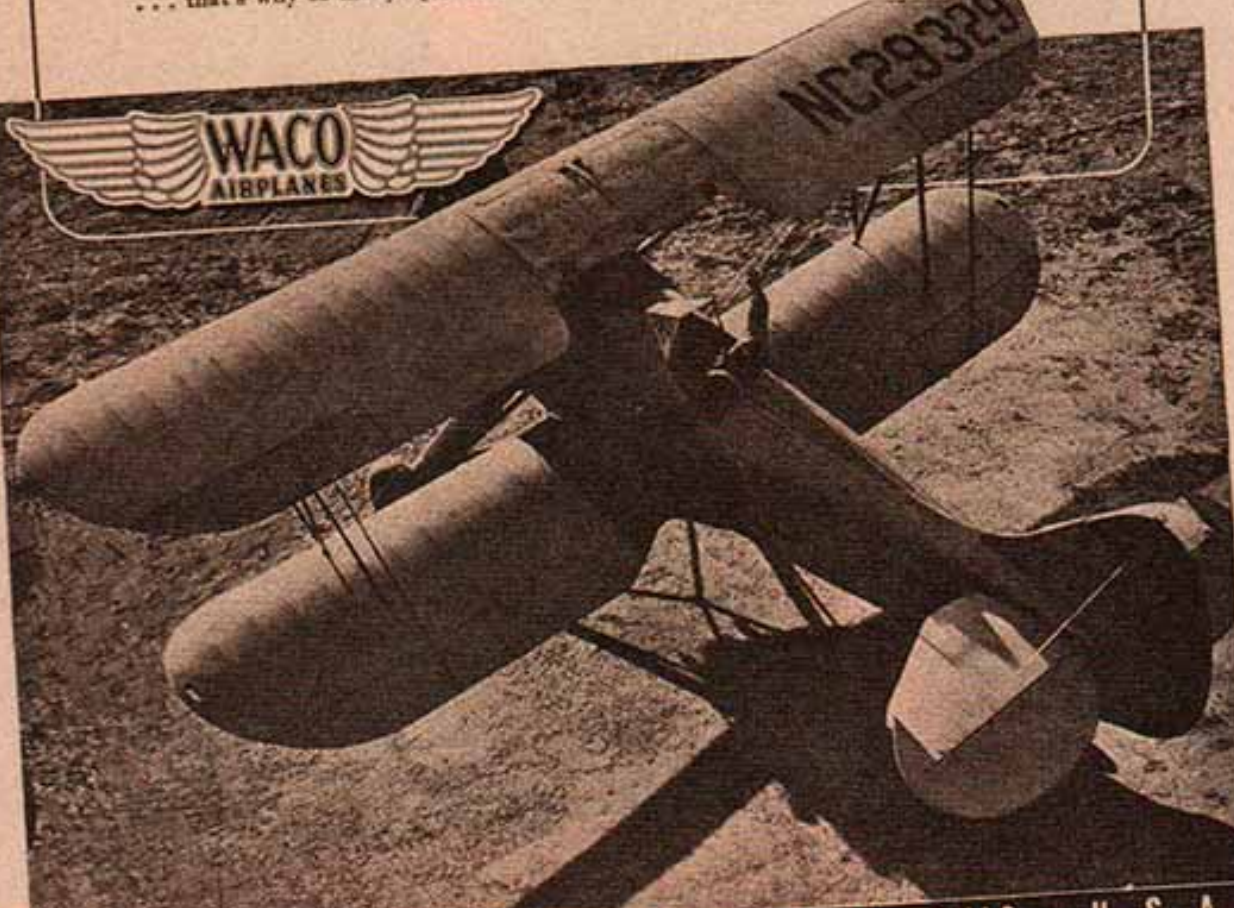
Right: Fitting the lower wings.



You can't beat this baby for night work

• "Pat" Patzold, Manager-Treasurer of the Chicago School of Aeronautics, is strong in his praise of the Waco trainer now in service at Pal Wauke Airport, Wheeling, Illinois. He says, "We've got to think of the safety of these boys and our Waco really takes a beating... at least 125 different men have used our Model UPF7 and the engine has never stopped running... our boys have to take the ship up and do funny things with it. Maintenance is wonderful. The gear is very good. It's soft and takes a good bouncing. It has stood up under as much beating as three of our older type ships could stand."

Waco trainers are built to "take a beating"... built to do a lot of hard work with a minimum of maintenance... built to assure the operator a profit on his operation... that's why so many operators choose Wacos for the CPTP secondary training.



WACO AIRPLANES

THE WACO AIRCRAFT COMPANY • TROY, OHIO • U. S. A.

APRIL 1941

27



Waco UPF-7

Manufactured under ATC No. 642

Length: 23 feet 6 inches	Fuel capacity: 50 gallons
Height: 8 feet 6 inches	Maximum speed: 130 mph
Wingspan upper: 30 feet	Cruise: 115 mph
Wingspan lower: 26 feet 10 inches	Landing speed: 50 mph
Total wing area: 243.6 square feet	Rate of climb: 900 feet per minute
Weight empty: 1,870 pounds	Ceiling: 14,800 feet
Useful load: 780 pounds	Cruising range: 400 miles
Gross weight: 2,650 pounds	

(Derived from manufacturer's specifications and Juptner's U.S. Civil Aircraft Series, Vol. 7.)

struggling Depression-era companies. Operators...could sell existing aircraft and lease them back for \$1 per year. All the UPF-7s in service at the time, as well as new deliveries to operators, were sold to DPC and leased back."

In October 1944, 39-year-old student pilot Arthur Imhof of Colby, Kansas, purchased NC32141. He owned it for nearly 17 years and sold it to Robert N. Fraker of Oberlin, Kansas, in January 1961. During the 36 years that Robert owned NC32141, some fuselage and wing repair work was done, and the biplane was re-covered and finished in Lakeland Blue with Newport Blue trim.

"We have researched more than 50 Waco UPF-7s to date, and NC32141 has probably the most unique and, I might say, desirable history that we have seen," Roy said. "It stayed in Kansas for 56 years! It is not unusual to see 15 or 20 transfers and as many locations all around the country in UPF-7 records. Further, this airplane had no record of major damage history."

NC32141 still had its light blue paint scheme when it flew away from its home state of Kansas in June 1997 to its new owner, Raymond Dominici in South Carolina, who later sold it to Derrick Young in June 1999.

RARE Aircraft purchased the Waco from Derrick in March 2013. "Derrick flew and enjoyed the airplane for several years when he lived in Florida," Roy said. "Rene St. Julien, well-known Florida biplane pilot and antique aficionado, was also very active in its operation. Rene and Derrick flew NC32141 several hundred hours in the Port St. Lucie area, hopping rides with friends and sharing the joys of open-cockpit flight." Roy found that in 1995 the engine suffered a hydraulic lock. Derrick moved to his hometown in Alabama around the same time and was unable to repair the engine. "When he sold the airplane to us, it had been carefully stored awaiting restoration, so our preparations for transport to Minnesota were relatively easy," Roy said.

REMANUFACTURE

The tired-but-venerable old blue Waco underwent a meticulous transformation after it arrived at RARE Aircraft in Faribault, Minnesota. More than 4,000 hours were devoted to "remanufacturing" the biplane. "Remanufacture" is the way RARE Aircraft describes the extensively detailed work it performs to maintain an aircraft's value and safety, which goes well beyond the scope of typical restorations that were done decades ago.

The RARE Aircraft team methodically disassembled, cleaned, and carefully inspected NC32141's fuselage. They welded a landing gear center brace, gussets for rear shoulder harness attach points, and a new right rudder stop. Then they sandblasted and powder-coated the fuselage. Many of the original wood fairings and aluminum components were used as patterns, and new aluminum fuselage cowlings and forward fairing panels, as well as new aluminum bulkheads for instrument panels, were fabricated. A new stainless firewall and dishpan assembly were fabricated as well as new oil and fuel tanks.

The wings and center section were reconstructed, and new wood replaced the old in the tail group. Other items were rebuilt or fabricated new per the Waco Aircraft Company's drawings. This work included new skins for the ailerons, rebuilding the main landing gear struts, and a new tail wheel support assembly and shock strut assembly. New front and rear control stick assemblies, aileron slave struts, and new aileron push-tube assemblies were also fabricated. The aircraft was covered and finished with Superflite System 7.

MODS

Several modifications were included to enhance safe and reliable operations. To that end, the following equipment was installed: a Jasco alternator, navigation lights, a Garmin GTR 225 comm and Garmin 327 transponder, an Ameri-King altitude encoder, a PM1000 intercom system, and a JPI FS-450 fuel-flow monitor. A tail wheel adapter ring was used so that current

More than 4,000
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production tires and tubes could be used. The Waco also has a Steve's Aircraft gascolator, Cleveland wheels and brakes, and an Airwolf oil filter.

For those flights when Dan feels the need to see the Earth above his head, a sturdy five-point harness was installed. Dan elected to keep a 220-hp Continental on the Waco, sans cowling, with a Hamilton Standard 5B1 propeller. The Continental W670-6N engine came from Peter Jones' Air Repair Inc. of Cleveland, Mississippi.

A FLYING DREAM

The UPF-7's original front bucket seat was removed and a two-place seat was installed, to allow Dan the opportunity to double the joy of sharing open-cockpit style flying in his eye-catching orange and black biplane.

"Somebody at an EAA meeting suggested black and orange, just like the CAA planes had," Dan said. "And when I was a kid, my dad built a 10-foot sailboat for me for Christmas, and it had a black hull with two orange stripes. So right then and there, I knew I had the colors!"

Roy's son, Ben, had the pleasure of introducing Dan to the Waco at EAA AirVenture 2014. "It's an awesome experience to have Dan see the airplane for the first time here, and to watch him for the first 20 minutes just hanging out with his biplane. That's rewarding," Ben said. "I'm really pleased with this airplane, because it came in pretty light, and it's a joy to fly a really light UPF-7."



The instrument panel is ready.



Close-up view of the 220-hp Continental.

"I feel blessed to have been led to the Redmans to make this possible," Dan said. "It's just a glorious airplane, and I feel fulfilled. I've been able to realize a dream of owning a biplane, and this is a dandy one! I'll just fly it for fun; that's what it's all about."

NC32141 was awarded the World War II Era Bronze Lindy and was delivered to Dan at Pegasus Air Park (50PA) in Queen Creek, Arizona, after EAA AirVenture 2014. At that time, Dan had logged around 300 hours' total, including 200 hours in his Champ. So the delivery pilot, Monty Throop, stayed with Dan to familiarize him with flying his new biplane. "The transition was very manageable, and Monty was part of the magic of my first week with 32141," Dan said. "This Waco flies like a dream! She is happy three-pointing on a grass or hard runway, dancing with the clouds, getting over on her back at 4,000 feet, or just plain old showing her gorgeous smile and lines while parked in front of the airport restaurant."

When the RARE Aircraft team began breathing new life into the Waco, Dan himself was acquiring a fresh and buoyant perspective on life. The biplane was, in a sense, a gift from his late wife because after sharing her retirement funds with his children, Dan combined the remainder with life insurance funds and realized that he had the means to attain his lifelong dream. With his role of caregiver completed, Dan welcomes the liberating and joyful role of being caretaker for a new old biplane—and on every flight, he feels Caryl's presence as copilot. *EAA*

Sparky Barnes Sargent, EAA 499838, holds a commercial glider certificate with private single-engine land and sea ratings, and she personally restored her 1948 Piper Vagabond.



WANT MORE VINTAGE?

THE VINTAGE AIRCRAFT ASSOCIATION is the EAA division that brings together people who share a love for the aircraft of yesterday. Whether you fly, restore, or simply enjoy vintage aircraft and aviation, we invite you to consider adding the Vintage Aircraft Association to your EAA membership. For more information, visit www.EAA.org/vintage.