

The **Flagship** Detroit DC-3

Grand Old Lady of American Airlines

SPARKY BARNES SARGENT



“Nine, ten, eleven, twelve—c’mon baby!” says Sheila Mabbitt in a firm but gentle tone, as she intently counts the blades rotating on the Wright Cyclone engine. She and George Dennis carefully listen and watch from the DC-3’s cockpit as the old reliable radial snorts, coughs and sputters to life. As soon as the engine settles into a throaty, rhythmic tone, its vibration spreading reassuringly through the airframe to the seat of their pants and their hands on the

controls, they turn their attention to coaxing the other engine to life, as hundreds of pilots have done before them. And if the Flagship Detroit Foundation has its way, more pilots will be able to learn the nuances of starting these Wright Cyclones and flying this grand old lady as she so gracefully ages.

Her polished aluminum gleaming in the sun, the American Airlines Flagship Detroit was fastidiously decked out in her original international orange-and-bonnet-blue flying colors—a nice way to celebrate her 70th year, after a very recent restoration. She made her third public appearance at Sun ‘n Fun 2006, where members of the Flagship Detroit Foundation were



The Flagship Detroit won the Transport Category Champion award at Sun 'n Fun 2006.

PHOTOS SPARKY BARNES SARGENT



Even the small details—like this ash-tray in a passenger seat armrest—received utmost attention.



Cockpit of the DC-3.



An individual light, stewardess call switch, and air vent for each window seat enhance passenger comfort.



The newly created interior of the 21-passenger Flagship Detroit adheres to the 1937 standards, including seat and curtain color, and overhead bins complete with pillows and blankets for passenger comfort. An interesting note is that there is no seat numbered "13."

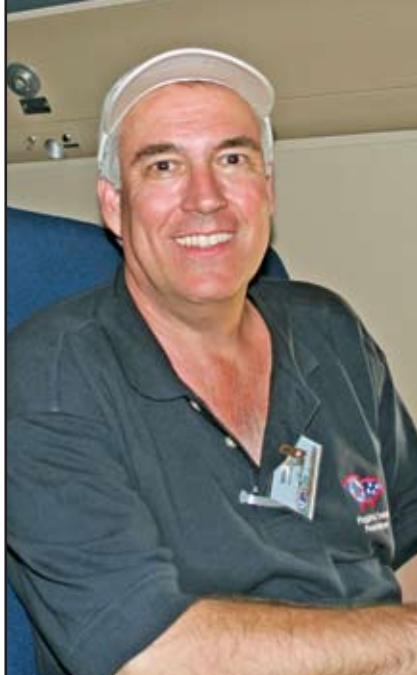
happily answering a myriad of questions from both young and old admirers who were drawn to the great ship's side.

George Dennis, president of the foundation, likes it that way. His passion for DC-3s awakened when he had the opportunity to fly one when he was younger. "They were exciting then, and I'm flying one again now, and I'm super excited. I had gotten to the point, and don't take it wrong," Dennis says, elaborating on his career as captain with American Airlines, "where it was just a little boring getting into 'Triple 7s' and flying 14 hours. This brings excitement back into my life. This is what flying is all about for me, and we are spreading



View of the engine from a passenger's seat on the left side of the DC-3.

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Foundation crewmember David Hendry enjoys his very first flight on the recently restored Flagship Detroit.



Foundation director of maintenance Terry Barker shows the articulating framework for a passenger seat, newly built from the original specifications.

the word to our younger generation, teaching them to never forget the heritage of these beautiful airplanes.”

The Early Days

C.R. Smith, president of American Airlines in the early days, is credited with being the catalyst behind the development of the DC-3. In 1934, he held a two-hour telephone conversation with Donald Douglas, during which he conveyed his proposal for building a new version of the DC-2 that would have sleeping berths for passengers. By the end of the conversation, Smith had accepted the idea, and the Douglas Skysleeper Transport was soon to become a reality. It featured larger wings and tail surfaces, a heavier gross weight, and more powerful engines to maintain its performance. Then Smith took it one step further. He realized that the airplane was capable of carrying 21 passengers—if the sleeping berths were replaced with seats—and thus the DC-3 evolved into the popular airliner that propelled the industry into the future.

The DC-3 was a solid performer with a top speed of 200 mph and a maximum range of 1,200 miles. It took only 15 hours for it to fly coast to coast. It quickly developed an excellent reputation as a safe, comfortable, and easy-to-fly airliner, and the other airlines were eager to follow American Airlines' lead. At last, the airlines could profit from carrying passengers, as opposed to relying upon government airmail contracts.

In five years' time, 32 airlines placed orders for more than 400 DC-3s.

When our country became embroiled in World War II, commercial production was stopped, and Douglas began producing the C-47 Skytrain—the military version of the DC-3, which was often nicknamed the “Gooney Bird.” They were also flown during the Berlin Airlift, and the Korean and Vietnam wars. After World War II, hundreds of the DC-3s were converted to carry 28 passengers, and many more were used in agricultural and firefighting applications.

Today, there are estimated to be around 400 DC-3s still flying. The American Airlines Flagship Detroit, NC17334, was manufactured in late 1936 and delivered to American on March 2, 1937. She was the 34th of 84 DC-3s that were purchased flown by American from 1936 to 1947. The DC-3s that were built for American had the passenger door installed on the right-hand side of the fuselage, instead of on the left side where the baggage and mail doors were located, because Smith didn't want his passengers to see the cargo being loaded as they boarded. He also adopted a nautical theme for his company and called the airplanes “flagships”—naming each one after the city or state that it served.

The Restoration

The Flagship Detroit Foundation purchased NC17334 in August 2004. In under two years' time, the devoted and relentless efforts extended by a multitude of individuals resulted in the DC-3's metamorphosis from a bare-bones cargo plane to its present award-winning restoration.

Terry Barker, an American Airlines 777 check airman and foundation maintenance director, says there were many modifications necessary to restore the DC-3 to her original 1937 stature. Perhaps ironically, modern technology facilitated the process. “The interior panels are made from MD-80 side panels, and the carpet is from a Boeing 727,” says Barker, adding “the bulkhead by the radio rack used to be plywood, and the floorboards were originally three-quarter-inch marine plywood; they have been replaced with honeycomb carbon fiber material, which is incredibly lightweight, but very strong.”

Additionally, the passenger seats have all been newly fabricated via original specifications, thanks in part to computerized design technology. “The guys at our Kansas City base built every one of these chair frames, complete with the ashtrays in the arm rests, and all of the mechanisms. The seats not only recline, they also articulate,” ex-



BONNIE KRATZ

plains Barker, who praises their workmanship by saying, “The metalwork and structural work done by the mechanics in both Kansas City and Alliance is great—it’s like artwork.”

Other distinguishing details include soft blue pillows and plastic-wrapped orange blankets in the overhead bins, blue window curtains that match the upholstery, and, above each window seat, an air vent, reading light, and flight attendant call button. Yet another detail, which the casual observer may fail to detect, is that the seat numbers go from 12 to 14—there is no seat numbered 13.

And then there are the power plants, which, according to Barker,



JIM KOEPNICK

are upgraded versions of the original Wright Cyclone SGR 1820 G2s. The R1820-56S has more cooling fins on the cylinders. “We installed pre-oilers on the engines—this airplane was actually the test bed for that application on Wrights, and they are STCd for these engines now,” explains Barker. Hamilton Standard constant-speed, full-feathering metal propellers were original equipment, and today it has Hamilton Standard 23E50 Hydro-matic propellers.

Flying the DC-3

Mabbitt, with 900 hours of DC-3 flight time, exudes a calm and quiet confidence in the cockpit, and makes



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—George Dennis

everything about operating the Flagship Detroit look easy—from starting the engines to taxiing through a crowded air show taxiway/exhibit area and taking off, to touching down softly on terra firma again.

And although Barker says he “tells the guys it’s not a hard aircraft to fly, and the engines aren’t hard to start,” there is a ritualistic procedure for

Sheila Mabbitt and George Dennis go over the starting procedures in the cockpit.

starting the engines, and important lessons to learn about ground-handling the DC-3—especially for those with little tailwheel time.

For example, here’s the basic starting procedure that Barker describes: “Turn the battery switch on, then select which engine you’re going to start, reach up and put three fingers on the ignition boost, starter and primer all at once, and look out the window at the engine. Typically, you start your right engine first, because you can hear it. If you start the left one first, when it’s running you can’t hear the right one. Back in the day, they would do that because they had very inexperienced copilots and they didn’t want them starting the right engine. Then press the starter button, count nine or 12 blades, hot or cold, press the fuel pump on, throw the magnetos on, and hit the boost. The boost is an induction-vibrator that makes the spark plugs fire all the time, because the engine needs a lot of high-energy ignition to get it to turn over. Leave the mixture in idle cutoff, and then start ‘tickling the primer’ as they say. This engine is supposed to be able to run on the primer as it’s starting. Then once you’re sure it’s started, you can throw the mixture up, but you stay on the starter and the ignition until you’re



positive it's done that. Then come off the starter and the boost and if it runs, great. If it doesn't, you may have to give it a shot of prime, but leave the throttle alone—just let it sit there and run. Otherwise it can backfire, and that comes up through the carburetor. The old hands would tell you that backfiring would blow a carburetor right off the top of the engine. Then you repeat the procedure for the other engine."

Barker emphasizes the need to learn how to operate engines like they did in the 1930s and 40s, and to "do it properly, because we want to take care of the aircraft and be flying it forever. As maintenance director, I tell our enthusiastic foundation crew members, 'I'm going to make the airplane flyable as best I can for you, and I want you to follow procedures like you've never followed them before. Check your ego at that door, make sure you ask the question if you don't know.' I want them to understand that it's one thing to be technically legal in the airplane; it's quite another to be proficient in it."

The Foundation

Dennis, reflecting upon the genesis of the Flagship Detroit Foundation, shares that he "first had the idea about 10 years ago, when we found



Logo of the Flagship Detroit Foundation.

the original Flagship El Paso. We ran it by American Airlines at that time, and the management didn't want us to do it. When the new management came in, I went right to our president, and he has encouraged me the whole way. He's been very supportive by giving us access to a lot of history from the C.R. Smith Museum—it's been a good partnership between us and American."

David Hendry, a foundation crew member and American Airlines 737 captain, clarifies a common misunderstanding that American Airlines now owns the Flagship Detroit, by elaborating that "the foundation members own this airplane, not American Airlines. With that said, American has

helped us—not financially—but in many other ways, such as donating hangar space at Dallas-Fort Worth."

The foundation is open to anyone and currently has about 200 members. Of those, seven are DC-3 pilots and 33 have signed up to earn their type ratings. Hendry describes the nonprofit organization's membership options this way: "You can become a member by donating \$100. If you have adequate flying time, and want to donate \$3,500, we will make you a copilot and you will fly the airplane. If you have adequate experience and/or tailwheel time, and you want to donate \$7,000, you can get a type rating in the airplane."

Individual Expertise

It takes a lot of devoted people working together to keep a foundation thriving, and ultimately lead it to successful fruition of its restoration, flying, and educational public relations goals. To that end, numerous members of the Flagship Detroit Foundation have volunteered their time and individual expertise in a variety of ways. These individuals include: David Hendry



PHOTOS BONNIE KRATZ

tions and promotion; Ron Tallent and Sheila Mabbitt, who have contributed their DC-3 flying skills and knowledge, along with David Liscomb and George Dennis; Preston Jones, who has been instrumental in the accuracy of the interior restoration. And the list doesn't stop there. It continues with all of the American Airlines mechanics—many of whom had never before worked on a DC-3—who were authorized by American Airlines to volunteer their time and talents.

"I don't have all their names, but we had more than 25 mechanics in Kansas City who worked on the engines and mechanical airframe components, as well as more than 65 in Alliance who worked on the interior," says Dennis, adding with a smile, "and what's really neat is that so many of the young mechanics, especially, just love working on the DC-3. And talk about quality work—I have nothing but praises for the mechanics who have volunteered their time on this project."

younger generation about the airline industry's early days, and also about making dreams come true.

Mabbitt, who has been a flight attendant for American Airlines for 14 years now, says that, "as a child I always wanted to be a flight attendant, and after a year of that, I decided the real adventure was going to be as a pilot. It was kind of a secret dream of mine. I've been flying DC-3s for two and a half years now, for a freight operator, Ron Tallent, in Morristown, Tennessee. I love having the opportunity to fly the Flagship. It's lots of fun."

And now, there are new opportunities for others to fulfill their own dreams—whether they dream of earning their DC-3 type rating, experiencing a flight in one, or simply being able to stroll up the aisle toward the cockpit and allow their imaginations to transport them back in time to 1937. What began as George Dennis' personal dream of restoring and flying an Ameri-



and David Gorrell, who have written and compiled an operations manual for the DC-3; Terry Barker, who has been an integral part of the airplane's restoration in his role as maintenance director; Dave Buffington, who has done a lot of administrative and organizational work; Zane Lemon, who has been in charge of public rela-

Awards . . . and Dreams

The judges at Sun 'n Fun joined in the chorus of praises for the detailed restoration of this 1937 Douglas DC-3, by awarding it Transport Category Champion this year. Yet there is more to the Flagship Detroit Foundation's mission than winning awards—it involves educating our

can Airlines Flagship, has now flourished through passion and perseverance into an actualized dream shared by many who love the legendary DC-3. For more information about the Flagship Detroit Foundation, or where their DC-3 is scheduled to appear, visit them online at www.flagshipdetroit.org.