



NEWSLETTER – FOURTH QUARTER 2007  
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**EARLY AVIATORS – PART 3**  
**WHERE DID THE AIRPLANES GO AFTER THE BARNSTORMING?**

By  
Robert G. Lock

In this issue I conclude the EARLY AVIATORS with stories about the magnificent biplanes of the late 1920's and early 1930's. Most early ships were designed for flight training, barnstorming or just plain sport flying. So where did those aircraft go when barnstorming began drying up in the middle 1930's.

I would not hesitate to say that most remaining New Standard D-25 biplanes discarded by the barnstormers were either scrapped or became crop dusting ships. Because of the load carrying ability they became a target for installation of a dusting hopper in the large front cockpit. In fact let me tell a story about brand new New Standard biplanes coming from the factory as dusters. This is the way it goes.

When New Standard Aircraft Corporation went bankrupt in 1931, the Approved Type Certificate for the model D-25 was acquired by Ben Jones Aircraft Company in Schenecty, New York in March 1937. Five-airplanes, all model D-25's were manufactured in 1937, presumably utilizing parts and components from the original New Standard bankruptcy sale. The Jones manufactured aircraft could be identified by a "J" at the end of the serial number, such as 158J, NR17896, which was sold as a duster to Independent Crop Dusting, Inc., San Francisco, California. By the early 1930's crop duster operators had perfected a galvanized steel hopper capable of being sealed to carry liquid. Such was the case of the Independent Crop Dusters from San Francisco, California.

Independent Crop Dusters operated in California's fertile San Joaquin Valley and was a large operation in the early days of pest control from an airplane. A leading entomologist of the period, Frank B. Herbert wrote an extensive report in a booklet reprinted by the "Journal of Economic Entomology," volume 26, No. 6 in December 1933. Herbert writes, "Aircraft spraying is a new development which seems to offer considerable promise, especially on large acreage or where speed is of importance. Two companies, the Independent Crop Dusting Company of San Francisco and the Hawke Crop Dusting

Company of Modesto are now equipped to apply liquid materials. The Independence Company flies a New Standard biplane, powered by a 225 hp Wright Whirlwind motor.”



Independent Crop Dusters New Standard D-25 sprayer powered by a Wright J-5 225 hp air-cooled radial engine. Pilot Brown is standing on upper engine cowling, which is where the aircraft is fueled. Photo courtesy George Sanders from “Low & Slow,” by Mabry Anderson.



First liquid spraying of a peach orchard in Wheatland, California by Independent Crop Dusters. The unique platform of wings identifies the aircraft as a New Standard D-25. Photo courtesy George Sanders from "Low & Slow," by Mabry Anderson.

In late 1938, uncompleted D-25 airframes, parts inventory and manufacturing rights were acquired from Ben Jones by the White Corporation, Leroy, New York. In his documentary, "Charles Healy Day and his New Standards," David Stevenson writes, "In 1940 White moved to Palmer, Massachusetts, still holding the New Standard airframes and parts inventory. That year two of the D-25's outfitted as aerial applicators and designated D-25B's were delivered to the United States Department of Agriculture. The department purchased two more D-25B's in 1941 and a final aircraft in 1942." All were powered by the Wright J-6-7 285 hp engines and were suited for spraying or dusting at high altitude airfields.



The very last New Standard manufactured was serial number 167W (W for White), NR25313. Note large rudder and extended vertical fin. Power is a Wright J-6-7 producing 285 hp and engine is equipped with a two-position Hamilton Standard propeller. Aircraft is possibly flown by Kenneth Tiegs who sprayed in the high country of Colorado. Photo from David B. Stevenson

In the photo above note how high the pilot sits in the rear cockpit. This affords greater visibility in front of the aircraft while in flight. David Stevenson writes, "Although designated as a D-25B records show the aircraft is actually a D-25A airframe, probably built up from the beginning New Standard inventory and whatever had been left over from the Ben Jones venture."

As aircraft became licensed by the federal government, letters were used to designate what type airworthiness certificate was issued. The Roman capital letter "N" designated registration in the United States. A second letter was used to designate what type of

airworthiness certificate was issued. “C” was commercial, “R” was restricted, “X” was experimental and “L” was limited. Therefore, this New Standard was licensed as NR25313, meaning registered in the United States with airworthiness in the Restricted (crop pest control) category.

The following photos are interesting because they show a New Standard D-25 spraying a chemical designed specifically for pest control.



Above, a New Standard D-25 powered with a Wright J-5 engine at work. Caption on back of each photo states, “Spraying mosquitoes in Morris, New Jersey, 1930’s.” Photos obtained from Steve and Kathleen Maciag.



Above a very interesting spray boom installation at the aft end of fuselage under horizontal stabilizer and elevators. Normal installation favored area below the lower wing. Photo from Steve and Kathleen Maciag.

The final blow for an old workhorse appears below. A New Standard D-25 sits forlorn at an airfield near Phoenix, Arizona. Mr. Carl Small writes, “Dick Comfort operated Fram Field west of Phoenix. The hangar had adobe walls and there were some New Standard D-27’s (*they were probably D-25’s, L.*) sprayers that went to Old Rhinebeck in New York State to be rebuilt. We ‘nick-named’ them ‘Bull Stearman’s’ when we were flying them. I believe it was Max Shear who sold them to Old Rhinebeck. I still have a BT-15 firewall that came from there. They used the Wright R-975’s as spares for the New Standards.” The R-975 put out 440 hp that added to the load carrying ability of the old ships.



Above, an old New Standard D-25, registration and serial number unknown at Fram Field, Phoenix, Arizona. Could be NR31K, serial number 150 manufactured 1930. Note wire spoked wheels and condition of cotton fabric – completely rotted. Owner has obviously abandoned this aircraft because of its age and condition. Photo from Carl Small

As crop dusting or spraying aircraft, New Standards were scattered across the country and two were even exported to Central America, where they met their demise. For some reason a large number of New Standard D-25’s were assembled in the Phoenix, Arizona area. I can remember seeing a New Standard D-25 fully assembled but structure tattered by the elements sitting at the edge of a small airport in Central California as late as 1965. Max Shear sold five New Standard D-25 sprayers to Cole Palen at Old Rhinebeck Aerodrome in New York.



Carl Small visiting with Dick Comfort next to New Standard D-25 at Fram Field near Phoenix, Arizona. Note condition of structure and fabric covering also conversion to BT-13 hydraulic wheels and brakes. This aircraft also went to Old Rhinebeck Aerodrome in New York. Max Shear sold 5-ships in deteriorated condition to Cole Palen at Old Rhinebeck. Two of those aircraft have been restored and are now flying. Photo from Carl Small

Locating these old relics of the past can be both fun and challenging. But to eventually find two-New Standard D-25 was pure luck. Both the aircraft pictured next were modified for crop dusting and spraying. The aircraft on right has cardboard seats installed in front cockpit area where hopper was once installed. I just wanted to see what it would look like with the seats in place! The frame on the left has a large opening in front cockpit where a hopper was once installed.



Left, your humble editor with both New Standards in 1994. At this time we were planning on how to restore at least one ship. Lockfoto



Above, New Standard D-25, NR9756 as assembled for first time after purchase. There was an engine, although it was totally disassembled and in boxes, a set of 30 x 5 wheels and a propeller. Think about deciding how to begin restoration! Photo from Budd Brockett, Reedley Exponent newspaper, Reedley, California



Left, corrosion has eaten away much of the aft fuselage of NR9756, necessitating replacement of much of the fuselage structure. Note that the diagonal aluminum angles are completely disintegrated by the effects of corrosion. Lockfoto

Pictured above is a mechanics nightmare – severe corrosion of the extruded aluminum in aft fuselage. This caused by chemicals over the years as the airplane served as a crop duster and sprayer. NR9756 was owned at one time by the Yakima Seed Company, Yakima, Washington and was used until it was no longer airworthy. Then the old girl passed through a few hands before Rob Lock rescued her.

Fuselage repairs required replacement of much of the structure due to the effects of corrosion. Below the frame is being riveted together. Note how structure is designed – using mostly aluminum angle with gussets at stations (joints) much like a bridge was made. Original material was an alloy called “dural,” but replacement material was called “double dural,” currently identified as 2024-T4.

Right, master craftsman Frank Cote is shown riveting the fuselage frame of New Standard D-25, NC9756 together at Craig Sinclair’s shop in Hampton, New Hampshire in 1997. Note aluminum angle and aluminum gussets at joints.



So, what does the newly restored fuselage frame look like? Well, it’s better than new!



The fuselage frame with much of interior installed. Note all aluminum structure has been primed and painted to resist the effects of corrosion, a constant enemy of aluminum, particularly if the aircraft operates around a saltwater environment. The red lines are engine controls from rear throttle. Lockfoto

Charles Healy Day's fuselage closely resembled that of his previous wooden J-1 design rather he used aluminum instead of wood. Retained however were the steel brace wires that added rigidity to the structure without adding much additional weight, which contributed to a very strong but light frame. With this type structure repairs could be made much easier than wood frames. The factory designed longeron splice repairs that could be duplicated in the field if an aircraft was damaged. And many suffered landing gear and lower fuselage frame damage when hauling contraband liquor into the United States during prohibition due to landings in rough unimproved fields in order to stay ahead of law enforcement.

John Miller made a living in Poughkeepsie, New York by repairing damaged New Standard aircraft. In a story titled "The WCTU Bootlegger Incident," John Miller writes, "The bootleggers mostly hired unlicensed pilots with limited experience to fly the D-25's. They made from one to three flights a day over the border with loads of good Scotch whiskey that was purchased legally in Canada.

The planes were landed in various hayfields just south of the border, the cargo unloaded into cars by appointment and they returned to Canada for another load. As they arrived over the designated field, the pilots would look for a whitewashed signal-of-the-day on top of a car before landing, and if any other car was seen in the vicinity they would go back to Canada without landing and make another appointment. Those landings, and some of the pilots who made them, were not always successful, and the airplanes would occasionally get bent out of shape – sometimes a little; sometimes a lot.

It so happened that I had a small business in an 80' by 100' hangar where I serviced and rebuilt airplanes. My chief mechanic had been a foreman in the New Standard factory in charge of building these very same D-25's that were being used by the bootleggers and being bent into odd shapes. So it was quite convenient and natural for the airplanes to be brought in trucks to my shop for reshaping. My chief was a real expert, so we had a good business going."

John Miller's story continues but it is too long to put in the newsletter without permission. But John Miller concludes, "The prohibition law was repealed, putting the bootleggers out of business – and my shop too. Broke, I quit the business in 1933, soon after the law was repealed."

This is a story by THE John Miller, who purchased New Standard, serial number 2 (actually 102), NC193E. John's ship was painted black and used for barnstorming. Miller remembers, "People always wanted to take a ride in the black plane because it appeared heavier and safer."



Above, John Miller's hangar at Poughkeepsie, New York with three New Standard D-25's parked in front. The center ship is Miller's D-25, NC193E, the second ship constructed by the New Standard Aircraft Company of Paterson, New Jersey. Note shorter wingspan because aircraft was assembled less the center section.

Photo from David B. Stevenson.

Today a few New Standards are carrying on the spirit of early aviators such as John Miller, Ivan Gates, Clyde Pangborn and many others who we will profile in future editions.



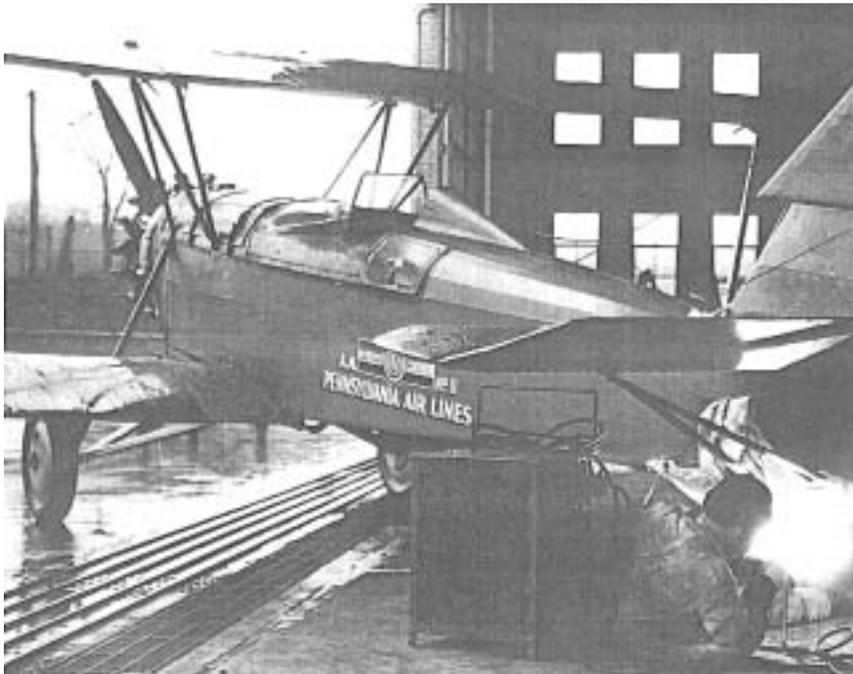
And what does Waldo Wright's airplane look like now you ask? Well here it is in a photo taken by Jim Baker when NC9756 first took to the air in 2000. Here it sits in all its glory at Plum Island Airfield, the first public appearance. I recall the parking lot filling with cars as spectators stopped to take a look at this beautiful and rare airplane.

Today, 8-years later NC9756 graces the skies at Fantasy of Flight in Polk City, Florida. And, like the early aviators and ships of the past, this New Standard has introduced thousands to the thrill of flying in an open cockpit biplane.



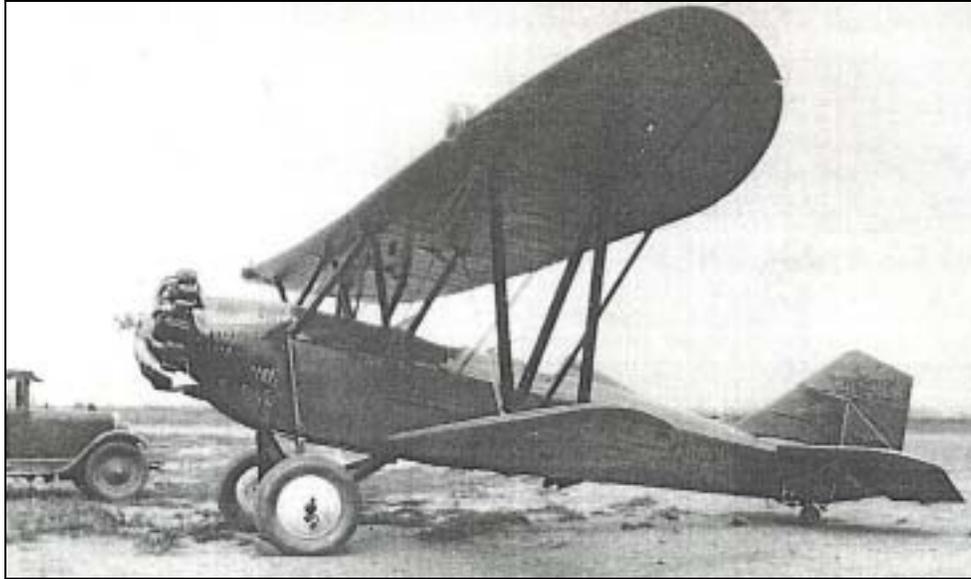
#### VARIANTS OF THE MODEL D-25

By the end of 1929, approximately 49 of the basic D-25 series ships had been constructed. The figure included 4-midel D-27's built to carry mail in the entire front cockpit with only the pilot sitting in the open rear seat. The model D-27 was built in



small numbers, possibly only four, all for Clifford Ball and the Pennsylvania Airlines specifically for carrying mail. The ship carried no passengers in the front cockpit. It was designed as a single seat airplane and came from the factory in that configuration.

Above, New Standard D-27 built for Pennsylvania Air Lines. Although NC number is not visible the ship is either NC9121, NC9192, NC9123 or NC9124. Photo from Bill Rhode scrapbook.



Above, New Standard D-26A, serial number 202, NR35K pictured at Teterboro. This was the only model D-26 manufactured by the company. Photo from Bill Rhode scrapbook.

The only New Standard D-26A constructed, NR35K, serial number 202. Note forward front cockpit is enclosed where two forward seats would be located, most likely for mailbags, while rear seat is open with a windscreen installed. Designed to carry both mail and passengers on short hops. Engine is Wright J-6 producing 240 hp. Photo from has researched all New Standard registration numbers beginning with the prototype NX7286. Mr. Stevenson records the following regarding model D-26A, NR35K: "Later designated as D-26B with Wright J-6-9 as factory modification. During flight-testing for certification with J-6-9, plane crashed due to unrecoverable flat spin. Ben Jones was the pilot. Registration to Electric Sky Ads of New York." Jones survived although ship was destroyed. Wright J-6-9 was a nine-cylinder radial engine developing 400 hp. The Sky Ads company developed an electric sign that was attached on the underside of the lower wings of the ship. All current operating New Standards are required by the FAA to carry a placard stating, "Intentional Spins Prohibited" and this statement is written on the aircraft's Airworthiness Certificate. Thou shalt not spin a New Standard D-25!!



A rather different New Standard D-25, NC174H with factory-made canopy installed over the front cockpit. This created a cabin for the four passengers in the front, protecting them from weather and wind. Specially created for Alaskan Airways, Fairbanks, Alaska.  
Photo courtesy Cecil Higgins

References: “Charles Healy Day and his New Standards,” David B. Stevenson  
“Low & Slow – An Insiders history of Ag Aviation,” Mabry I. Anderson  
“Barnstorming,” Martin Caidin  
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