

October Banquet Speaker Summary - Addison Pemberton

A short story of a Model 40C Tail # 5339



This is the story of a Boeing Model 40C, affectionately known as 5339 by some and told at the Boeing Employees Coin Club Annual Banquet on October 24th 2012 by Addison Pemberton. I need to let you, the reader, know just so you are aware that Addison has what some diagnose as “OAD”, or “Old Airplane Disease” or you could say the love for old airplanes. When he was done telling his story of the Model 40 tail number 5339 he had all present pulled into the dream, the fun, and a greater appreciation for the plane we used as the model for this year’s club medal.

Addison had been searching for a Model 40 to restore but there were only 82 built. He wasn’t interested in restoring a belly button Stearman as some called them (as everybody has one). If my notes serve me right, he got the idea in 1982 when he toured the Henry Ford museum in Detroit. There was at that time a model 40 sitting in one of the back corners. Soon Addison started chasing down all the serial numbers of the 82 planes to see what had happened to them. He thought he located a possible plane to use, it had crashed in Oregon and he went to see if the plane was still there. He could not find a trace of it. So on to look for another one. A few years later in an article for an aviation magazine, the closing question was about your dream project. His answer was to restore a Model 40. A short time later he was contacted about the recovered wreckage of a Model 40 in Oregon. Immediately he knew it had to be 5339.

Arrangements were made and he became the owner of a semi truck trailer of wreckage parts. The plane had burned up in the crash, but there were enough parts there for the project to be classified as a restoration verse a replica. So the project, the dream, was alive and well.



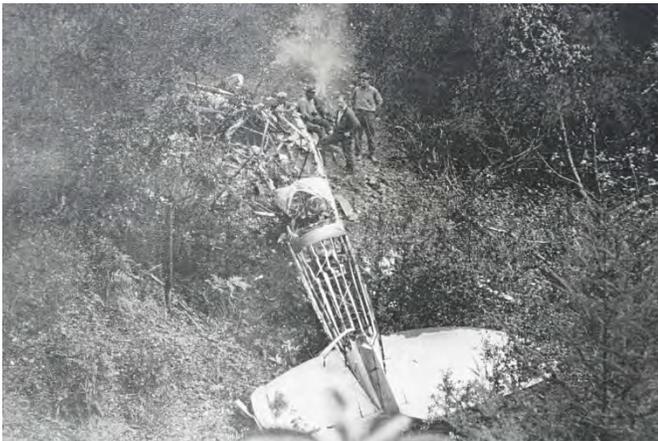
Here’s what was ‘salvaged’ and arrived on the truck.

So how does a Boeing Model 40 end up on the side of a mountain in Oregon? Addison gave the history of the US Air Mail and that a letter mailed in New York for San Francisco had a 98% chance of making it there in about two days' time. Around 1926 the government decided to get out of the flying business and employing pilots. They wanted to contract the route out. This saw some innovations in radial engines and plane design. Bill Boeing went with the newer engine and designed the Model 40 to be used to carry both mail, and a couple of passenger. One of the big benefits of using the radial engine was that it wasn't water cooled, it was air cooled. So instead of carrying the water weight, the Model 40 carried passengers. The model 40 flew the US Air Mail routes up and down the west coast. The Pacific Air Transport flow the routes and the company showed a profit after 6 months.

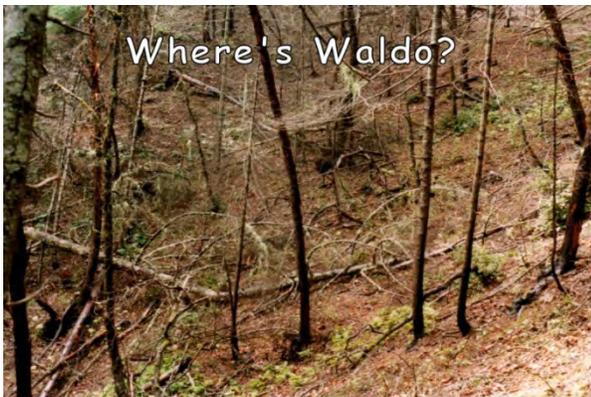
It has been said that the model 40 was a proving point for Bill Boeing that the company could make it in the passenger plane business.

Now back to 5339, carrying mail and one passenger, it left Medford and had some weather to deal with on it flight through the mountain passes. Low clouds and fog caused the pilot to fly just above the tree line. About an hour north of Medford in the Canyonville Pass area the pilot, Grant Donaldson, hit a large enough branch or tree top that spun the plane into the hillside and the plane burst into flames.

Grant tried to rescue the passenger getting severe burns in the process, but was unable to get the passenger out. Grant was able to walk out for help. The burnt remains of the plane stayed there until the Oregon Civil Aviation hauled it out. So when Addison looked, the plane had already been removed.



Now, jumping back to Addison getting the wreckage, he needed to chase down the drawings for the airplane to rebuild the missing parts. He again placed an ad in the back section of an aviation magazine asking if anyone knew the where about of a gentlemen Addison knew would have a set of plans. The wife of the gentleman responded and said she'd her husband was on a trip but she'd let him know on his return. So Addison was able to get the plans and put it all into AutoCAD.



Do you see the plane, or the airframe?



How about now?



With the drawings converted into AutoCAD it made it possible to manufacture some of the needed parts using a water jet to cut the material.

Throughout all of this Addison would reach out to the aviation community in the trade magazines when he needed to find something. It is an incredible community of people that rally around each other to assist a person working on their dream project. To assist a fellow enthusiast in fulfilling that dream project, the lifetime goal to some, and to know that you had a hand in it. Knowing that someday there could be a chance that you might get to see the completed project at an airshow somewhere.

Addison weaved an incredible story for the club of a restoration project that took over 8 years, all after hours, after a normal work day had been completed. The number of people who showed up to assist, it really demonstrated the great teamwork involved to pull off the project.



Starting to come together. In this picture you can see that the chassis has a tubular metal core frame with wood attachment cords for the sheet metal sides to fasten to.



Nice view of the tail section before the coverings/skins are added.



Looking inside the tail section. Here you get to see the beauty that is hidden inside; the black metal tubal frame, the wooden cords, support rods and the flight control wires running back to the rudder and horizontal stabilizers.

Wings – unlike the airplanes and jets of today the wings were made of wood. Here is a picture before the wing skins are added.



Addison standing with the engine

The beauty of the engine installed



Wing fit check before covering. At this point, so much time, energy, and effort has been put in by so many people on the project so far that I had to sneak in another picture of the plane from a different angle.



Wing Skins, no they aren't metal, the covering for the wings are cloth. That's a lot of fabric and stitching that needs to be done. But fabric in the outdoors by itself doesn't hold up so it gets coated or painted in this case. For this one very skilled seamstress and painter is appreciated.



A finished wing, just like every component, when it's ready to be placed on the frame, is a fine work of art, skill, and expertise. Great care is taken to ensure proper installation.



The open air cockpit

The 2 passenger compartment

The plane, finally restored and back together, but all was not done. There was the engine start, would it actually start on the first or second blade, or would there be issues. Then how well would it fly? Would adjustments to the rigging need to be made? Some many questions and steps to go through. It is easiest to say the plane outperformed all of their expectations. The engine started on the second blade with a large crowd watching. It flew smoothly, and well balanced, the wing tie rods and rigging was spot on and no adjustments were needed. Addison check with a friend and got a rigorous flight test program outlined for the plane. He learned how the plane handled in a variety of situations, some of which he never planes to put the plane into again. But it handled them all.

What the drawings didn't show or give any hints of are what some might consider drawbacks. I call them that as they were improved upon in later model planes. One of the drawbacks had to do with landing the plane, the pilot couldn't actually see the wheels touchdown on the airstrip, the landing gear compensated for this and floated a little like shock absorbers. Addison mentioned that the first time he landed the plane, it went so smooth that he wasn't sure the plane was actually down for a moment. Another drawback is that the flight controls are about three times stiffer than a Stearman, so it requires a little more strength to fly and maneuver the plane. But for the pilots that flew it day in and day out, that would not be a problem as you would have developed the necessary muscles.

When Addison had reached the end of his presentation, and all the pictures and slides had been shown, the little boy in me wanted to be a pilot, wanted to be able to take on the dream project and fly such a magnificent plane with all its glory and drawbacks. Yes the plane had some drawbacks in its design but it seemed to the kid within, that those could be overlooked and flying in the beautiful skies above the fields was all that mattered.

These two highlight pictures of 5339 says it all.

Grant Donaldson (Pilot) standing on 5339 shaking Bill Boeing's hand. (1928)



Addison Pemberton (Pilot) standing on 5339 shaking Bill Boeing Jr.'s hand, with Boeing CEO Scott Carson. (2008)

