The first airtanker

Back to Rohnerville, photo Jesse Jenks

The California Fire Pilots Association newsletter

News

The first airtanker

FIRE PICTURES

(The first airtanker, document Dan Dinneen)
Improvements for our OV-10

After two years of design, research and engineering work we have just completed the first installation of the new OV10 Air conditioning system. A440 was undergoing its Garmin 530 installation in addition to some conformity modifications. So, it was perfect timing to utilized it as the first installation (Columbia, please make the check payable to me).

Several years ago we started to experience the effects of age on our Air conditioning system. The failure rate of the components were increasing repair costs were going up and the parts were getting scarce. So, we went searching for an off the shelf, supportable, aviation approved System. This system would have to provide improved performance, reliability and ease of maintenance. We decided to go with the Enviro Systems Inc. Compressor/Condenser unit and two Evaporator Blowers (same manufacturer as the S2T system). The new compressor/condenser assembly is mounted in the same location as the original unit. The main difference is the power source. The new system utilizes a DC motor driven compressor, powered off of the main DC bus. This change allows for the removal of the large inverter behind the rear seat (yah, more storage). The Dual Evaporator/Blower design allows each crew member a dedicated blower/fan, and the ability to select high or low volume. Due to these higher more efficient blowers we needed to provide a better ducting system to deliver the conditioned air more efficiently. Two of our technicians took this task on and designed a ducting system that would utilize all of the new systems potential. These ducts are 70% larger, designed with smooth transitions and each have (two) 2 inch directional outlets.

We will evaluate the new systems performance this summer and make adjustments as necessary. If all goes well we will begin to modify additional aircraft during winter maintenance.

Thanks to the many technicians that helped in this project, you are the ones that make these aircraft fly!

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(photos Jerome Lavel)
Canadian scoopers back in LA

Quebec 1 and Quebec, two Bombardier 415 belonging to Service Gouvernemental du Quebec landed in Van Nuys airport, close to Los Angeles on 4th of September. They were dispatched here to help firemen from L.A. County Fire Department, as the fire season is coming to an end in Québec.

This is a part of an international agreement signed 21 years ago and renewed each 5 years. For $5,3 millions, LACoFD can use these two Super Scoopers for the upcoming three month and more if the situation on the fires front demands as it was for the last season in California.

Service Gouvernemental du Québec own 14 waterbombers, 8 Bombardier CL-415, 4 CL-215T (turbinised CL-215’s), and 2 CL-215 with piston engines. There are operated by SopFeu, Société de Protection des forêts contre le Feu, an non-profit organization.

Québec built Bombardier 415 can scoop about 1600 gallons in 12 seconds by skimming on a water surface. It can be done over a lake – must be about 1300 yards long - but also at sea. In this case, the aircraft must be thoroughly washed after each day to avoid corrosion by salt water.

A small tank inside can be used to add foaming agent to the water and the aircraft is also able to be refilled on ground with retardant if needed but this would switch the role of these amphibians to become land based retardant Tankers. It rarely happens.

Frédéric Marsaly, photo

▲ Canadair Scooping during Pines fire in march 2014 (photo LA county FD)
Paul Mantz, One of the founding fathers of aerial fire fighting.

As the years go by, the name of Paul Mantz (1903-1965) is little by little rubbed of our memories but he became famous by his implication since the 30ies in aerial film making and his skill was not only making stunts, but mainly knowing how to film them. Being a clever person, to the term «stunt pilot» he preferred «precision pilot». His aerial activities, ranged from cinema to transport and instruction. His firms; United Air Services and Mantz Air Services which became more specialized in Hollywood VIP discrete transport. He was also Amelia Earhart’s advisor on her long range raids.

After the war, many people laughed when he bought 475 surplus aircraft for around 55000 Dollars, making him virtually the chief of the 6th Air force in the world. They stopped laughing when they saw the profits he made selling the remaining fuel he collected from them. He kept around 20 aircraft for movies or races and sold or scrapped the rest.

As a racing pilot, he won three times the Bendix Trophy after the war, mainly due to his engineering’s skills. Bendix Trophy was a long range race and he transformed P-51B wings into tanks. Without external tanks, he was able to make the race without intermediate refueling.

Cloud seeding was a relatively new business after the war. To adjust the level of the artificial lakes made in the 30ies, it was necessary to make artificially rain and snow, dropping silver iodide, dry ice and charcoal over forming clouds. In June 1948 Paul Mantz created Weath-Air Inc with a B-25 and TBF-1C N9394H BuNo 46122, working on experimental devices with governmental agencies.

In 1954 US forest Service and
several governmental agencies began operation Firestop. During the 30ies and in 1947 water drop were tested, but in containers or droppable tanks. In 1947, P-47 proved to be reliable on small fire but military budget cuts stopped the program. Dropping water could be efficient, but very dangerous for ground crews at the mercy of a 65 US Gallons water tank coming from the skies.

During its tests, the Douglas DC-7 prototype dropped its water ballast making very interesting traces on the ground. CDF and USFS authorities were invited to be shown the discovery. It gave idea that it could be possible to have a mass impact with free fall water. Mantz Air Services whose abilities to make improbable air projects come true was contacted to create an the prototype of a free fall water air tanker.

As it was just to see if it worked, light materials were privileged. A four doors 600US Gallons plywood tank was designed, divided in two compartments. Water sealing was made by a weather balloon (probably obtained due to previous work with weather agencies). The envelope was filled with water and when the door opened, it busted.

By the end of 1955 five drop tests were conducted by the US Forest service, looking for the best altitudes, from 10ft to 100ft. Mantz Air Services pilot Ed Ball was flying the aircraft during the trials. A live drop on a simulated fire was half a success, the water missed the fire but the impact blazed the flames. At this moment, the USFS concluded that the trials were encouraging. The agency bought several TBM-3U from Navy surplus and converted some in airtankers, testing various types of tanks. Joe Ely, State forester, head of

\[\text{The new tool in the firefighters' box and makes the covers.~coll Dan Dinneen}\]
\[\text{The Mantz' TBM-1C can be easily identified, being the only tanked Avenger keeping its turret.~coll Dan Dinneen}\]
Mendocino National Forest assisted to the demonstration and, back home, he discussed with Nolta brothers, cropduster pilots. They modified a Stearman to convert it as a tanker and tested it during 1955 season. Have a look at the concept, improve it step by step; this is how it worked during this pioneering years.

Mantz’s TBM-1 received later two types of tanks, in 1955-56 and for 58 season. She lost her bear aluminium livery for a white one in 1956 and received some day glow orange paint job for 1958 season.

Unfortunately in 1958 the TBM-1C hit a tree during fire operations, killing its pilot. Mantz continued a little in tanker business with two B-25s, finally selling one of them in Venezuela, preparing his retirement.

Paul Mantz was slowly stopping his stunt pilot’s activities. Unfortunately he accepted to be part of «the flight of the Phoenix» in 1965. The plane engineered with parts of various aircrafts wasn’t ready for flying and Mantz made modifications quickly to honor the contract, finishing flight test at the movie scene. The aircraft crashed during filming, killing him. Hollywood had lost an aviation legend.

Special thanks to Dan Dinneen, Steve Whitby and Tom Janney for the illustration of this article.

For more informations on Paul Mantz, have a look at Scott Thompson’s website:
http://www.aerovintage.com/tallmantz.htm
DC-10 over Bridge fire
by Tammy Richards
Redding approach

by John C. Lords
Fires over Paso

by Anouck le Bris
Fires over Columbia

by Bryan Combs
783 in action

Jennifer Limburg

Tracy Cook Webster
National Guard Training

California Army National Guard and CalFire conducted joint training for summer fire activity at Ione’ CalFire academy in April 2014.

by Wes Schultz
BOEING (STEARMAN) PT-17 “KAYDET”

TANKER # 1

DIMENSIONS: WINGSSPAN 32' 2” LENGTH 25’

POWERPLANT: ONE-PRATT & WHITNEY R-985-SB3 NINE CYLINDER ENGINE RATED AT 450 H.P.

PERFORMANCE: MAX SPEED, 160 M.P.H. AT 3,500’

CAPACITY: 100 GAL. OF WATER / SODIUM CALCIUM BORATE

MFG. DATE: 1940, DATE OF OPS. 1956

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BEECHCRAFT 18/C-45S “EXPEDITOR”

TANKER # 37

DIMENSIONS: WINGSSPAN 47' 8” LENGTH 34' 3”

POWERPLANT: TWO-PRATT & WHITNEY R-985-AN-14B NINE CYLINDER ENGINES RATED AT 450 H.P. EACH

PERFORMANCE: MAX SPEED, 250 M.P.H. AT 12,000’

CAPACITY: 300 GAL. OF SODIUM CALCIUM BORATE

MFG. DATE: 1941, DATE OF OPS. 1958
before you forget,,,please send the pic!
cheers!
Jerome

Subject: Re: CFPA July 2014 Newsletter
From: flysmokey@yahoo.com
Date: Tue, 5 Aug 2014 19:34:17 -0700
To: jeromelaval@hotmail.com

Crap. I forgot to send you that photo. It was good to see you.

Sunsets

Photo Jimmy Ferreira

Photo Bryan Baker

Photo Jimmy Ferreira
FOR THE FIRST TIME, THE COMPLETE STORY OF THE CL-215s AND CL-415s WATER BOMBERS WORLDWIDE, IN ENGLISH AND FRENCH. 64 COLOR PAGES FEATURING 24 SPECIALLY-COMMISSIONED PROFILES AND 130 PHOTOS, COVERS ALL VARIANTS, MISSIONS AND USERS WITH CLOSE-UP DETAILS.

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