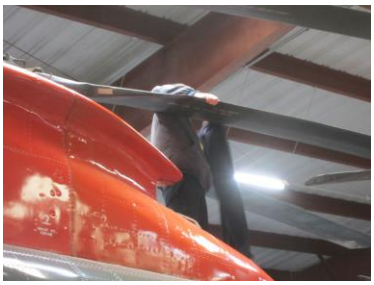
Hangar Happenings for March, April and May 2021

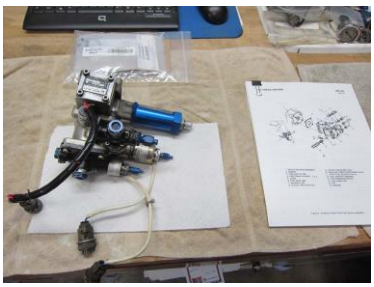
Rotorheads

Repairing DL-125 gear

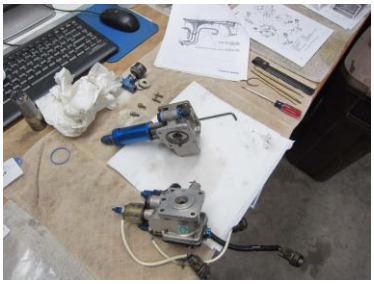
Polishing DL-125 eng cover



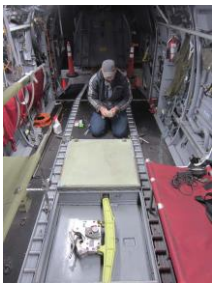
Cleaning H-46 rotor blades



H-46 APP fuel control



APP fuel control O-rings



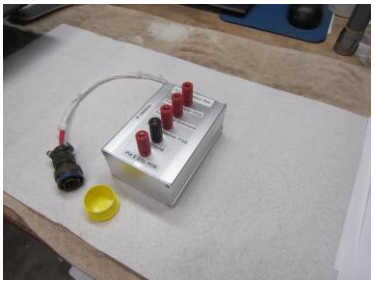
H-46 cargo hook

DL-125 landing gear fixed

DL-125 eng cover shined up

Making the H-46 radio harness

H-46 radio installed



H-46 ECCS test box

Hard to believe that summer is already half over; seems like it was February just yesterday. So I was just overcome by events in the spring. One thing leads to another and now I find myself outside of Pittsburgh, but finally enough time to get to the Happenings. Even though I was OBE things were still accomplished at the museum. Work was accomplished on the DL-125, H-46, H-37, H-1 and HRP as well as tours, infrastructure and some other interesting things.

I'm giving the diminutive **De Lackner DL-125 Cloud Buster** top billing this time. The DL-125 (known as Buster) has undergone major transformative work since this little 1940's vintage helicopter was dug out of the East Texas mud less than two years ago. Buster has been cleaned, de-corroded, painted and given new appendages. It is quite literally a Cinderella story. This period saw Buster's landing gear fixed. A restored wheel for the gear is ready for installation awaiting a part that needs to be machined. The cockpit windows which have been in place for a while will be fully installed in the next Happenings. Reconstruction work has been underway on both the nose and tail, part of which was polishing the engine cowling during this time. It really looks beautiful and the whole aircraft is taking shape nicely.

The majority of the work this time was on the **Boeing Vertol HH-46E Sea Knight** known as Pedro. After the rotor blades were cleaned, the radio wiring harness

Assembling the LCTA test box

LCTA test box ready to use

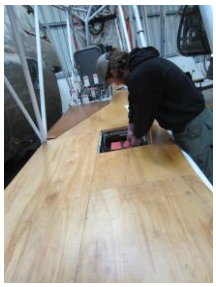
Removing the eng chip plugs

Engine fuel hoses removed

was completed and the radio installed. New rubber bumpers were installed on the “hell hole” (the hatch over the cargo hook) and an APU (Auxiliary Power Unit also called the APP) fuel control leak was fixed. Test boxes were built for the ECCS (Engine Condition Control System) and LCTA (Longitudinal Cyclic Trim Actuators), which will be used to check these parts. The construction of these test boxes was extremely involved, intricate and time consuming. I wish I had the space to show the process rather than just the final result. The engine fuel hoses were removed for overhaul and the engine chip detectors were inspected and cleaned.

Wiring the HRP external power

On the **Piasecki HRP Rescuer**, the external power wiring was completed. The battery was checked and then turned on with the voltage indicating on the cockpit instrument gauge, probably the first time in 60 or 70 years. The engine manifold pressure transmitter was installed and wired up. The **Bell HH-1N Twin Huey** ground handling wheel cylinder pitting was repaired and honed out and a hydraulic leak was repaired. The Pratt & Whitney T-400 twinpac engine for the Huey arrived and is positioned under the tailboom as part of the display. The plan is to put the engine into the Huey engine compartment with the compartment cowling off so you can see how it’s installed. There is an additional cut-away single T-400 that will be placed on a stand at floor level.



HRP battery

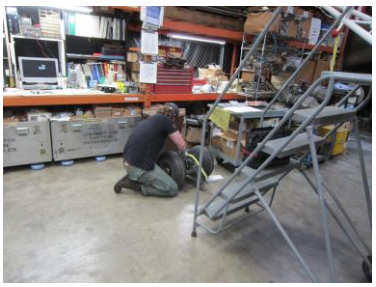
HRP voltage gauge and light

Manifold pressure transmitter

Wiring the manifold press trans

Pitting in Huey ground wheels

Cylinder honing



Repairing Huey hyd leak

P&W T-400 twin-pac engine

Scouts working on roof

New CR T- shirt back

Fixing the golf cart

Workshop cleaning

The major outside project was to complete the **Garage/Storage Shed Roof** on the north side of the hangar. The shed goes from the street fence all the way to the front of the hangar. The structure supports were finished and the roof about 2/3 finished with the help of San Diego Boy Scout Troop 170. It was done as an Eagle Scout project and will be completed in the next Happenings. In another project, a new **Classic Rotors T-Shirt** was designed and produced. The new shirts arrived in April and are available in sizes small, medium, large and extra-large. The shirt is a pocket T-shirt with the Classic Rotors logo and six helicopters on the back and the CR logo on the pocket. The plan is to include a store feature in the new website where the shirts and hats can be purchased for $20 each.

In the infrastructure area, the **Golf Cart** was fixed up and sold and one of the **Trailers** was fixed and painted. The trailer was the same one we had transported the Air & Space 18A reported in the last Happenings. Trailers are an important part of museum functionality. **Shop Cleaning** and **Parts Inventory** are always an ongoing job. We are often acquiring **New Stuff** in the form of tools, equipment and display items which are often very used. During this period we received a belt sander, parts blaster and a sewing machine. The sewing machine is especially unique as it was made in Japan and used during World War II to make parachutes in San Diego. In May, Ramona Airport hosted a **Ninety-Nines Beechcraft Airplane Fly-In**. Dozens of Beechcraft owners and enthusiasts and their families attended in more than 50 Bonanzas and Barons as well as the occasional Cessna and Piper and including a T-34 Mentor flight demonstration team. The Ninety-Nines is an international organization of women pilots founded

Garage/shed roof in March

Garage/shed roof in May

New CR T- shirt front

Trailer fixed and painted

Spare instrument inventory

Belt Sander

Parts blaster

by Amelia Earhart in 1929. The event featured a burger & hotdog lunch and several of the members were able to tour the museum. **Tours** continued during this period, increasing during April and May. In addition to the Ninety-Nines, some other interesting rotary and fixed-wing **Aircraft Visitors** to the airport included an MBB BK 117, a Bell 407 doing long-line work, a Sukhoi Su-29 and Piper Cub with Alaska bushwheels. You want a treat; check out the YouTube videos of the little Cubs with the oversize tires doing off-field operations.

WWII sewing machine

Ninety – Nines Fly-in

Beechcraft T- 34 Mentor

Tour at the Helipod

HRP/H-21 tour

Tour at the Hiller H-12

Piper Cub bush plane

MBB BK 117

Fw/Fa 61

Fw/Fa 61 in flight

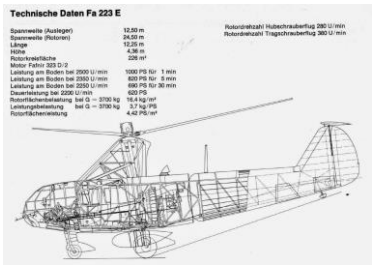
I have two exciting events history-wise this time. The first happened 85 years ago. June of 1936 saw the first flight of the world's first truly functional helicopter, the Focke-Wulf Fw 61. Dr. Henrich Focke developed the dual side-by-side rotor configuration by rigging the two rotors outboard from the fuselage of an Fw 44 biplane fixed-wing trainer. The aircraft retained the 160 hp Bramo radial engine and propeller. The arrangement gave complete six-degree of freedom directional control to the pilot. Note that previous designs up to this time may have been able to get airborne but lacked sufficient controllability to make them functional. In 1937 Dr. Focke teamed up with engineer Gerd Achgelis to form the Focke-Achgelis Company and the helicopter became the Focke-Achgelis Fa 61. This design lead directly to the development and production of the Fa 223 Drache (Dragon), the world's first functional transport and heavy-lift helicopter. The 223 Drache was about twice the size of the 61 with a 1000 hp Bramo radial driving two 39 ft diameter rotors. The

Fa 223 Drache

Drache with people

first flight of this amazing aircraft was 81 years ago in August of 1940. The Drache's performance was truly exceptional with a top speed over 100 mph and service ceiling in excess of 15,000 feet and capable of carrying a crew of two and four passengers or up to 2000 lbs of cargo with an endurance of 2.3 hours. It was also the first helicopter to have a full production line capable of producing 400 aircraft a month. The factory was destroyed by allied bombing so that only about 20 airframes were built. They were used extensively for troop and cargo transport including mountain and external load operations. Only a few airframes survived the war; one was shipped to the United States and one flown to England. The flight to England was the first helicopter flight across the English Channel and I have so far found no mention of what happened to the one shipped to the U.S. Three were built in France in 1948 by the Sud-Est Company with the designation SE.3000 and two were built in Czechoslovakia in 1945/46 with the designation VR-1. As far as I can find, there are no original airframes anywhere in the world, with the only full scale replica hanging in the Hubschraubermuseum (Helicopter Museum) in Buckeburg, Germany.

Fa 223 Drache in flight



Drache cut-away drawing

After my signoff is a special treat of five YouTube videos. The first is a 41 sec newsreel of Hanna Reitsch flying the Fa 61 inside of an enclosed sports arena. The second is a 5 min 15 sec Mark Felton narration of the Fa 223 Drache. The third is a 3 min 30 sec video showing Hanna Reitsch in the 61, the 223 doing mountain external loads with some inside cockpit and rotor hub shots, and some other German WWII helos including ship operations. The fourth is a 5 min 56 sec huge RC 223 which is very cool. And the last is for true history buffs, a 9 min 24 sec silent archive film with English titles of Hanna Reitsch flying the 61 both outside at an airport and inside the enclosed arena including world record achievements of the 61. Come see us.

Chip out

https://www.youtube.com/watch?v=hSkeYK46dx4

https://www.youtube.com/watch?v=Fl_E_nREWgI&ab_channel=MarkFeltonProductions

https://www.youtube.com/watch?v=6SrUyNG4fYA&ab_channel=Grommo

https://www.youtube.com/watch?v=ThiPkiDdds4&ab_channel=RCMEDIAWORLD

https://www.youtube.com/watch?v=59mxYc-xufk