

Hangar Happenings for June, July and August 2021

Rotorheads

The fall fell with two cement feet. The school where I teach opened under strict COVID precautions, back in the classroom for the first time in three semesters. So, in helicopter terms, I'm immediately behind the power curve, about to flame out and enter autorotation at any moment. If that's enough drama for you, we can get on with it and catch you up starting with summer. Work was done on the H-25, H-46, H-37, DL-125 and HRP as well as some other projects, infrastructure work and tours

On the **H-25/HUP Retriever** we worked on the blade dampers. The H-25/HUP and HRP use the same dampers and we have quite a number of them. Each aircraft uses six dampers. The dampers were sorted, and inspected, picking the best ones, which were then disassembled, cleaned and tested. The testing involved building an apparatus to test the dampers then researching and developing a test procedure. We also had to build a special tool to work on the dampers.

The **HH-46 Pedro Sea Knight** saw work on the fuel system. An assembly jig was built for the engine compartment fuel lines. A repaired fuel control ECA (Engine Condition Actuator) arrived and was installed and rigged for proper operation. Electrical power is required to get the ECA to operate, so an adapter was made to attach our Power Bunny electrical power cart to Pedro's electrical system. The #1 engine (left one) is a little difficult to rig, requiring a mirror to be able to see the setting marks. A blade fold and fuel control rigging test box assisted in properly setting up the ECA correctly.

The **H-37 Mojave** tail rotor gearbox and head were positioned for work. The 37's



H-25/HUP dampers sorted



Disassemble the dampers



Damper testing device



H-46 fuel lines assembly jig



External Power Bunny



Cleaning the dampers



Research & check the dampers



Special damper tool



Repaired ECA installed



Mirror reading ECA rig marks



H-46 rigging test box

left seat collective was removed for cleaning and repair. The flight control bellcranks in the fuselage overhead were cleaned and worked on. The Mojave's tail rotor blades were sorted, setting the best ones aside for later installation on the bird. Incidentally, you can purchase complete tail rotor blades for \$150 each. They're a bit difficult to mail due to their size and weight, so you would have to pick it up at the museum.



H-37 TR gearbox



Mojave left seat collective



Cleaning a control bellcrank

A lot of work was done on the **DL-125 Cloud Buster** in the summer.



Working on the flight controls



Sorting H-37 TR blades

The aft fuselage engine frames were installed. The complete cockpit windows on the front, side and back were installed and riveted in. The nose and tail cones were installed after all of the dents were finally hammered out. More work was done on the cockpit and fuel tank areas and the fuel control valve was cleaned up and reworked. The aft transmission area was also worked on.



Engine frames



DL-125 canopy windows



DL-125 Fuel control valve



De Lackner cockpit



125 nose cone



HRP transmission U-joint

Work on the **HRP Rescuer** included the damper work which was mentioned previously for the H-25/HUP. A hole had to be drilled in the main transmission U-joint and the aft head blade fold placement worked on.

The major other project of the summer was finishing the **Outside Parking Structure**. Recall that it was mentioned previously as a Boy Scout Eagle project and we're now



HRP blade fold

happy to finally have the roof finished. Planning for the project had started in January, the plans finalized in February and signed off in March for the start of construction. Other projects included a lot of aircraft



Outside parking structure



CR Memorial Plaque



Cleaning the north ramp



Mi-24 Hind model



C-130J Super Herc fire bomber

cleaning of the H-37 and H-46 cabins and the little **McCulloch J-2** autogyro. Our deceased member Rick's picture was added to the **Memorial Plaque**. A new camera base station was checked out as well as working on the Hangar Happenings.

Infrastructure work included cleaning the north ramp and relocating scrap lumber that was stashed there as the parking structure was built. The Boy Scouts also helped out with cleaning the ramp. A palm stump had to be trimmed down which involved some serious cutting. Cal Fire put in a new fence along the south ramp as well as new slats in the east side chain link fence. Excess dirt from the fence work was spread outside of the north ramp area. The final bit of infrastructure work this time was repairing the leaf blower.

As always, many tours took place throughout the summer. The Ninety-Nines (an international organization of women pilots) Southern California Chapter held a fly-in and barbeque. Several members of the group toured the museum as well as the Boy Scouts and even visitors from Russia. Another happening included the offer of a large model of an Mi-24 Hind helicopter from the Western Museum of Flight at Torrance Airport. We will pick up the model



Tour in the 46



Boy Scout Troop 170 crew



Cleaning the J-2 autogyro



Leaf blower repair



Tour for the Ninety-Nines



Aero Comp turboprop

once the COVID restrictions have subsided and I will talk more about it then. In addition to interesting people visitors, interesting aircraft are often flying in and out of the airport, this time including a C-130 firebomber and Aerocomp turboprop as well as a Hughes 500C and Bell 407 helicopter. The Lockheed C-130 is the infamous 4-engine turboprop Hercules which first flew in 1954 and is still in service as the Lockheed-Martin C-130J



Vertol H-21C Shawnee



Vertol YHC-1A prototype



USMC HH-46E Pedro

Super Hercules. The Aero Comp 7SLX turboprop is a unique fixed-wing kit aircraft from Comp Air Corporation in Florida and looks like it's designed for STOL operations.

Summer-history-wise, in August of 1956 an Army H-21C Shawnee flew coast to coast. On August 24 of that year, the H-21 "Amblin Annie" completed the first non-stop transcontinental helicopter flight with aerial refueling. The 2610 mile flight from San Diego, CA to Washington, DC took 37 hours. It was accomplished using a single engine fixed-wing Army U-1A de Havilland Otter as a refueling aircraft. There is a short YouTube video clip of the operation below. For some comparison our flight in the HH-46 in 2016 from Cherry Point, NC to Ramona, CA was 2100 miles long, taking 18.8 hours with 9 refueling stops. The other historical happening that I wanted to mention was in 1960. On June 28, 1960, the Army test flew the Vertol YHC-1A twin-turbine helicopter. This prototype would later be designated the

Boeing-Vertol model BV-107, entering service with the Navy and Marine Corps as the H-46 Sea Knight in 1964. There's more to say in this regard which will be saved for a future Happenings.

Additional videos below are a 9 minute look at the 2012-2015/16 restoration of a Canadian Vertol V-44. It's all stills but very interesting. The third video is a 21 minute Vertol film called Skyways without Runways from the late 1950's (side note: Piasecki became Vertol in 1956, Vertol became Boeing-Vertol in 1960). I may have sent you this one before but it's still fun and informative. So, get your shots, then man or woman up your vehicle of choice and get to the museum. There you can check out our 1957 H-21 Shawnee and 1974 H-46 Sea Knight as well as a host of other amazing rotary-wing aircraft. Until then, stay safe and we'll see you soon.

Chip out

Amblin Annie Coast-to-Coast (36 sec)

[US Army Piasecki H-21C Shawnee air refueling by a U-1A Otter - YouTube](#)

Canadian Vertol Restoration (9 min)

<https://www.youtube.com/watch?v=ZAgStW2rcl0>

Skyways without Runways (21 min)

<https://www.youtube.com/watch?v=SRcrGhhowdo>



de Havilland U-1A Otter



U-1 to H-21 Aerial refueling



Canadian Vertol V-44