Project Phoenix

Update 2 – May 31, 2015

We want to give you a progress report on HH-52A 1426 and ask for your generous support to help fund this amazing restoration. When we left you last, 1426 had arrived safely in Elizabeth City and, after a thorough washdown, was hangared in the FBO facility near Telefonics on the general aviation ramp. We held a strategy meeting with Mr. Roger Connor (Rotary Wing Curator at the National Air & Space Museum Udvar-Hazy Facility) and Chris Moore (Museum Specialist, NASM U-H).

Present were CDR Mike Frawley (CG-41); CAPT Jim Martin (CO, ALC); CDR (ret) Gary Polaski (ALC); RADM (ret) Bob Johanson (Phoenix Committee Chairman); CAPT (ret) Ray Miller (Phoenix Project Manager); CAPT (ret) Mont Smith (CGAA Executive Director's Representative); CDR (ret) Ben Stoppe (CGAA Executive Director); CAPT (ret) Stan Walz (CEO, VectorCSP); CAPT (ret) Tom King (Special Projects, VectorCSP); CWO4 (ret) Bill Kopp, (Director of Operations, VectorCSP); CAPT (ret) John Siemens (Technical Subject Matter Expert, VectorCSP); and CWO4 (ret) Craig Simmons (Technician, VectorCSP).
The meeting allowed all participants to raise concerns and ask questions regarding aircraft condition, authenticity, and requirements to meet Smithsonian standards. As you can see below, the aft cabin aluminum honeycomb floor required extensive repair.

The underlying fuel tank was purged and removed, revealing a fiberglass "bucket." There was no corrosion on adjacent frames. The tank plumbing (fuel quantity probe and jet pump) was cleaned and replaced. Extensive skin corrosion at numerous areas on the hull was identified. The decision was made to induct 1426 into a "media blast" procedure (formerly called "bead blast" but in modern times they use ground corn cob) to remove all exterior paint, in order to get a better look at the corrosion. Work began on obtaining a better floor panel from "the Aberdeen Girls" or 1398. Eventually the floor attachment flange needed to be reinforced and 60 new anchor nuts installed to make the floor secure.

Collapsed fuel bladder showing fiberglass

Clean bladder ready to be re-installed

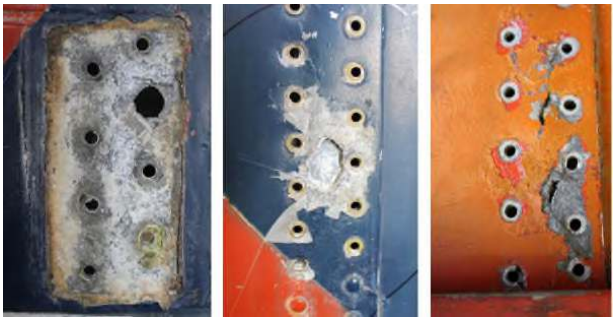
Inside fuel bladder – "plumbing" re-installed

Inside fuel bladder: clean, well preserved

VectorCSP's Craig Simmons installing bladder

Floorboard flange repair

Inspection of 1426 revealed a number of locations where corrosion was present. Rivets were drilled out and the surface was prepared for patching. Hexavalent chromium (zinc chromate) is no longer permitted as an underlayment to protect airframes from corrosion. Below are some pictures of various locations that will undergo repair in June.



VectorCSP's John Siemens fabricated and installed a "transmission truss" to hoist 1426 and the sponsons were re-attached. On May 19th, 1426 entered media blast at ALC, thanks in large part to CDR Frawley authorizing an addendum to the Project Phoenix Memorandum of Agreement (MOA) and the support of CAPT Martin at ALC. The following are views of 1426 following media blast.

MRS Product Line assistance with crane

1426 enters ALC media blast facility

1426 left front view

1426 right side view

1426 front view

1426 left side view

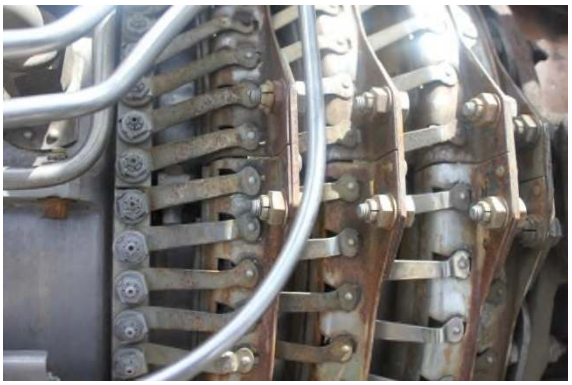
One senior officer commented, “She came out looking better than some of our fleet aircraft.” John Siemens welded up a structure to mount the General Electric T-58 engine on an Allison T-56 engine stand. This allowed the engine to be rotated 360 degrees for cleaning and polishing.

Right side view of engine (correct view)

Engine rotated approximately 135 degrees

Engine showing fuel control, oil lines, etc.

Pressure washing engine



As it turned out, there was considerable corrosion on the stator vane actuators. These were cleaned with solvent and wire brush.

The starter housing re-painted gloss white…
and intake bellmouth re-painted flat black

Engine accessory section in good condition

Nose searchlight following stripping of layers

Re-painting emergency exits after strip/prime

Many areas of corrosion were detected after media blasting. These will be addressed in June. A solicitation message has been sent to the fleet requesting two active duty volunteers per week to assist in performing corrosion repairs. This will give the volunteers, particularly those with only composite repair experience, some expertise in metal work. In addition, there are numerous areas of fiberglass housings or fairings (sponson struts, Schrader valve fairings, fuel vents, tail pylon, etc.)

Windshield wiper mounting stud

Skin eroded between rivet pattern

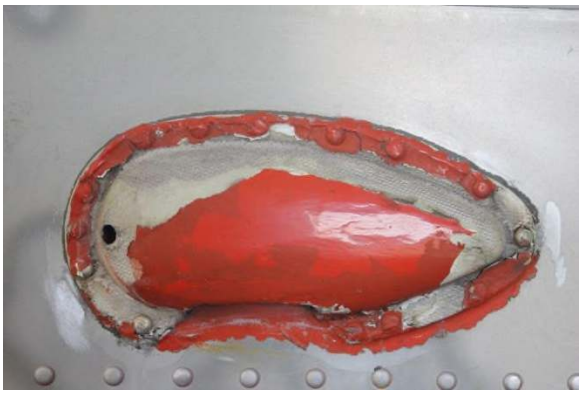
Corrosion on sponson float bag attachment point

Easily repairable corrosion (not foreseen)

Sponson nose requiring fiberglass repair

Sponson anti-collision light housing

Schrader valve housing



Fuel vent (5)

Next steps will involve re-installing cockpit instrument panel and seats, fabricating new anti-torque pedal and cyclic/collective boots, and re-installing avionics rack and sound-proof insulation blankets. We have two full sets of the latter. Old Velcro tape and glue has been removed. New Velcro for the blankets will be applied.

"Like new" avionics rack"

Cleaning cabin deck and bulkheads

Instrument panel to be sand-blasted and all instruments cleaned, re-installed

This is a description of work to be accomplished in the weeks ahead:

- Cockpit totally gutted – found and repaired minor corrosion on floor
- Instrument panel removed and sand-blasted; all instruments removed, cleaned
- Second trip to wash rack; scrubbed cockpit and cabin

- Ready to paint cabin/cockpit deck and bulkheads (up to 12” from deck); matched grey paint color with assistance of ALC paint/hazmat shop; ordered grey/flat black/white/orange/yellow paint in small quantities from commercial source (TPG Aerospace)
- Patch cabin heater ducting
- Remove troop seat and SAR board fittings
- Obtain rotor head tools to remove and magnaflux rotor shaft and transmission mounting bolts
- Replaced co-pilot greenhouse window; old window had become severely brittle; will replace pilot’s greenhouse window due to obvious crazing and embrittlement;
- Sand-blasted rescue platform
- Moving avionics black boxes from original 1426 radio rack to a far better one (depicted above); cleaned all “black boxes” and “fogged” with black paint – they look great!
- Strip all fiberglass components of many paint layers
- Replace Adel clamps on cabin fittings (SAR Board, Danforth anchor, etc.) and engine/transmission
- Repair new corrosion found after media blast – some areas right through the skin; June will see a lot of corrosion repair

- Inspected MLG wheels and tires (tail wheel and housing previously done); attempted to inflate tire to appropriate PSI – tire showed huge cracks; tires will likely need to be replaced – looking at cost/effective solution

As you can readily see, the aircraft restoration is proceeding on track to deliver a white HH-52A with red and blue diagonal stripes in an appearance befitting “any mission-ready H-52 sitting on an air station flight line in 1975.” Later this summer the cockpit, cabin, sponsons, MLG, and tail rotor drive components will be detailed out and re-installed. Final paint will be applied in late December. This aircraft will be immaculate when trucked to Udvar-Hazy for final assembly and suspension over the north hangar. Remember, CGAA has planned this project for ten years and we are excited it is coming

to fruition. You will be able to take your children, grandchildren and great grandchildren to see this "first of its kind" technological marvel that set the stage for our modern turbine-powered craft.

Artist's conception of HH-52A 126 suspended in military aircraft wing of Udvar-Hazy

Let's turn for a moment to what is needed from you. We need your generous contribution toward this exhibit that will be viewed by millions of people over the coming years. This is the centerpiece of our 2016 100th Anniversary of Coast Guard Aviation. We need to raise approximately $150,000 to augment monies that have, or will be, expended from our USAA account just to complete Phoenix. Moreover, our goal is to have a substantial amount of money to fund 2016 100th Anniversary events. CGAA will award a life membership for a donation of $250 or more and a one year membership including 3 25-page issues of the "PteroGram" newsletter for a donation of $30 or more. We urge you to recognize that this is, and will probably be, the first and only Coast Guard aircraft on display in this prestigious collection for many years. We will be grateful for a donation in any amount. Please send your donation by check to:

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