Aviation Maintenance Project Update

No Smoke!

The Toku Hana (a plane used in a goodwill mission between the US and Japan for relieving trade tension in 1964) has been around since the 1960's. It's been well taken care of over the last 60 years but there has been a growing need of some better wiring and avionics. A decision was made to upgrade the avionics (electronics) and wiring to more modern standards as the Toku Hana is used quite a bit for Angelwings Flights (non-medical-emergency, humanitarian flights) and other mission related work.

As I began to dig into the wiring while inspecting things, I realized the enormity of the task at hand and dreaded my next path of action on the plane. I found quite a bit of the original wiring in the plane in bad condition and in need of repair. Additionally, all the circuit breakers were quite old and probably original equipment from the 1960's. There was also no room in the original circuit breaker panel for all the new circuit breakers I'd need for installing new avionics. So along with a complete rewire of the circuit breaker panel, I would have to make a completely new avionics circuit breaker bus *and* panel.

This was going to be a big job, but I didn't understand just how big. Digging in, I quickly realized the depth of the issues I faced. The 60-year-old wiring and components needed repair, and some previously done repairs were not done well with unlabeled wiring, all during the years of the plane's service. This task would be a 6-month long project of repairing and replacing wiring and failed components like the stall warning system and flap position indicator, etc.

With some generous donations of wiring and components, I pulled it all together with a custom fabricated avionics bus, replaced every single circuit breaker in the system, completely rewired the entire main circuit breaker bus which powers everything on the plane, installed 4 new radios, a new GPS and antenna, a new/used transponder, a new audio panel/intercom, completely rewired all the headset jacks, and fixed and repaired a few gauges that

can no longer be purchased anymore let alone be easily repaired!

I was a little bit worried when I hooked everything up and turned the power on for the first time that it would all blow up in my face! With so many wires and so many repairs done and keeping track of everything over the length of time I had been working on it, on and off, waiting for parts and repairs being done, I was completely dumbfounded the moment I turned on the power the first time to test everything and *no smoke* came out of the wires.

Much to my amazement I only had a few very easy problems to fix. Almost everything worked… I replaced a bad (new) circuit breaker, *yes that happens,* and connected a few wires I'd forgotten to connect, and praise the Lord, it's all working!

I'm currently putting the finishing touches on everything and soon the Toku Hana will be back in the air. While it's been a long arduous battle, I'm proud to have been the one to do it. This is one of the battles I have engaged in as of late. There's another pressing battle for my family; finding just the right home in an inflated market.

With HQ having moved 50 minutes away from our house to Wilson, NC, *and gas uncomfortably high*, we are seeking somewhere closer. Please join us in prayer of our search for the right home and the successful sale of our current home. Thank you for all the support you give in prayer and monetarily that keeps us doing what we're able to do, serving and impacting lives.

Until Next Time,

Kyle, Rebecca, and Hadahsa Stevenson

Your AWA Mission Family stationed at AWA Headquarters in Smithfield, NC: Kyle, Rebecca, & Hadahsa Stevenson