



Aviation Maintenance Project Update



Maintenance and Flight School Update

By Kris Giggey, Head of Maintenance

Service is the foundation of our work at AWA. Through aviation, we can reach remote communities with medical transport, humanitarian aid, and support for missionary efforts in areas with limited or nonexistent access. Each aircraft in our fleet becomes a vital link to people who might otherwise be beyond reach. This work is sustained through the generosity of donors, the dedication of volunteers, and the partnership of friends who share the vision of aviation in ministry. From aircraft maintenance and pilot training to the behind-the-scenes coordination that keeps operations running, every role plays an important part in advancing the mission.

Maintenance and Flight School Update

Our flight school aircraft continue to stay busy. The flight school has been very successful thus far this year and is expected to continue growing. Our primary training aircraft receives heavy use and requires constant attention. Flight training places significant demands on aircraft, making regular 50-hour, 100-hour, and annual inspections essential to keeping them safe and reliable.

Our IFR trainer recently completed a 100-hour inspection. Just before the inspection was due, the aircraft began backfiring, so we knew something wasn't

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quite right. After completing the required inspection items, we began an extensive troubleshooting process to determine the cause. Cylinder compression checks were excellent, and the valves and exhaust system showed no problems. After eliminating several possible causes, we removed one of the engine's magnetos. We discovered that the distributor block and rotor were badly worn, with noticeable scarring and burn marks. The magneto was repaired and returned to service, resolving the problem.

Our VFR trainer is approaching its next 50-hour inspection, during which we will investigate an electrical issue. Recently, the aircraft failed to start because power was not reaching the starter or the instrument panel. We traced the problem to a faulty battery/master relay, which was replaced. The aircraft now starts normally, and the panel powers up as expected. However, we are now seeing fluctuations in voltage and ammeter readings. During the upcoming 50-hour inspection, the aircraft will remain in the hangar longer than usual. At the same time, we will troubleshoot and correct this issue. It may be an alternator problem.

The Cherokee 180 project is still patiently waiting for its new parts to be installed and to complete its first engine test. After extensive searching, we located several hard-to-find fuel system components. As aircraft age, finding the correct replacement parts becomes increasingly difficult because many are no longer manufactured. We hope to return to this project soon.

Progress is also being made on another aircraft. One of our volunteers is upgrading and repairing the instrument panel in a Cherokee 140. At this point, we have not yet decided whether it will remain in the flight school or eventually be deployed to the mission field. The aircraft has received two new AV-30 electronic flight instruments. An overhauled Garmin 430 GPS will be installed soon. Although the Garmin 430 is now considered older technology, it remains a dependable and highly capable GPS/navigation system. The cost to overhaul the 430 is expected to be \$2,500 to \$3,000 if the repairs are simple.

Recently, we completed the annual inspection on one of our Cessna 182s. This aircraft has accumulated many hours of service in the mission field. It was scheduled to be deployed to Uganda or Colombia after the inspection. During the annual, however, we discovered that the engine mount was separating from the firewall. This serious structural problem could have led to catastrophic failure if left undetected. The engine will need to be removed so

the firewall can be repaired, and indications suggest the engine mount will also need to be replaced. We expect the cost of an overhauled engine mount to be between \$1,500 and \$5,000. As a result, the aircraft will remain grounded for several months while these repairs are completed and we address other ongoing maintenance projects. In the meantime, it may provide the parts needed to return one of our Cessna 182s in Guyana to service.

AWA is planning to return to Guyana this fall with the tools, parts, and materials needed to continue restoring one of the two Cessna 182s based there. The aircraft requires significant work due to corrosion and extended periods of inactivity, with parts and materials alone estimated at around \$35,000. Import duties and taxes will substantially increase the total cost. Your support is essential as we work to return this aircraft to active ministry service. We are grateful for your continued prayers and faithful partnership. Aviation missions require significant resources, and it is your generosity that keeps the fleet airworthy.



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