CIVIL AIR PATROL
SAFETY

What can we learn?

Tail Tie Down Ring Damage

What happened?

An airplane is submitted to a local maintenance vendor to complete an annual inspection. The vendor discovers a missing tail tie-down ring and notifies the wing aircraft maintenance officer (AMO). The AMO provides a safety report in the CAP Safety Information System. A little research determines that the missing tail tie-down ring was not previously reported.

What are the concerns?

Pre-flight and post-flight inspections. In part, these inspections ensure that the aircraft is airworthy and in condition for safe flight. Tail strikes can result in invisible structural damage and should be reported immediately as a discrepancy and properly evaluated by a CAP-authorized mechanic. Without conducting pre-flight and post-flight inspections, you may be accepting an unnecessary safety risk.

Discrepancy reporting. Part of ensuring aircraft readiness and reliability, as well as protecting our members, is reporting and addressing per FAA and CAP regulations and guidance. Pilots do not always have all the necessary information or authority to make an airworthiness determination. Flying aircraft with damage, including tail strikes, that have not been evaluated or repaired by a properly certificated mechanic is beyond the scope of your authority within CAP.

Procedures/checklists not followed. What would lead a pilot to not conduct a pre-flight or post-flight inspection? What would lead them to not report a broken tail tiedown ring? Time pressure? Negative habit transfer? Procedures and checklists can seem inconvenient but, when followed correctly, are safeguards against negative safety outcomes. Even if "you've done this a thousand times before," it only takes once for safety to be compromised.

Positive aircraft control. Positive aircraft control means consistently maintaining appropriate control of the aircraft, regardless of the phase of flight or potential distraction of other required tasks. Tail strikes can occur because of excessive pitch inputs during takeoff or landing, unstabilized approach to landing, lack of proficiency in gust conditions, and more. These same factors can also result in significantly more serious outcomes if not addressed.

What can we do?

- Don't skip the pre-flight or post-flight!
- Report discrepancies – all discrepancies. You are an extension of CAP's responsibility as an owner/operator which includes resolving discrepancies that affect aircraft airworthiness and safety of flight.

From the NTSB: Stay Centered: Preventing Loss of Control During Landing (ntsb.gov)

- Know your limitations and those of the airplane you are flying. Stay current and practice [takeoffs and] landings on different runways and during various wind conditions. If possible, practice with a flight instructor on board who can provide useful feedback and techniques for maintaining and improving your landing procedures.
- Prepare early to perform a go-around if the approach is not stabilized and does not go as planned or if you do not feel comfortable with the landing. Once you are airborne and stable again, you can decide to attempt to land again, reassess your landing runway, or land at an alternate airport. Incorporate go-around procedures into your recurrent training.