



Interagency Aviation SAFETY ALERT



No. IASA 19-04

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Subject: Parrot Anafi Small Unmanned Aircraft System (sUAS) Propeller Blades

Area of Concern: Flight Safety

Distribution: All sUAS Aviation Operations



Discussion: During a UAS training flight, a Parrot Anafi sUAS suddenly began flying erratically and struggled to maintain its position while the GCS operator was in the process of landing. The GCS operator was able to descend the sUAS and brought it to the ground. The crew found the sUAS on its back, still turned on, and missing one of its front left blades. The blade appeared to have broken off at the rotor shaft. The blade was recovered approximately 30 feet away from the area where the aircraft initially experienced the problem. The blade was free of nicks or scratches but the sUAS received damage to the left back leg and the other front left blade.

An examination by the OAS UAS Safety Specialist showed that the propeller had a failure where the seam weld was. A seam weld is common on other propellers. The screw that holds the propeller on is a shoulder screw and limits the ability of the user to overtighten the propeller. The OAS Safety Specialist installed a new propeller and test flew the sUAS with no issues. The aircraft was then placed back in service ([SAFECOM 19-0471](#)).

Motor bell housing where break occurred.



Location of propeller break.



A civil online forum addressed the issues associated with the Anafi Parrot propellers. They noted that markings (dings) and cracks can develop when the propeller contacts the mounting for the other propeller upon startup. According to the forum members, a “best practice” would be to change the propellers between every 100 and 120 flights in order to mitigate the risk associated with the loss of propeller blades.

Propeller inspections are specified in the Anafi User Guide v2.4:

Pre-Flight Checklist

Equipment

-Make sure its propellers are clean, intact and unobstructed (page 21).

The DOI Multi-rotor Flight Checklist also includes:

Aircraft specific information and troubleshooting

Parrot Anafi item #6. *Check prop seam for fatigue or cracks.*

Sweat the small stuff – especially in sUAS operations as every component is critical to flight.

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