

AIRWORTHINESS ALERT 2022-2

Corrosion

OVERVIEW

A recent defect report detailed widespread corrosion on metal components under the cockpit floor of a DG-1000. It was reported that an incident involving leaking water ballast bags had flooded the area under the cockpit. This water unfortunately remained trapped in situ for weeks due to no drains in the immediate area under the cockpit. A one-off loss of bladder control event also reportedly contributed. This scenario most likely exacerbated by an unprecedented wet season and resultant high humidity delaying the area drying out through evaporation.

INVESTIGATION

On inspection, it was identified there were no drain holes in the immediate area under the cockpit.



Figure 1: Corroded rear release pushrod resulting from water and urine exposure.

The report stated that water ballast leak in the wings was caused by bad connections at installation, these are now rectified. The lack of any drain holes played a significant part in allowing the water to remain trapped under the floor for a significant time.

All affected components were washed, cleaned, and treated as applicable with lanolin. Washing and drying the metal components and under floor area in the DG-1000 was difficult. All affected components will be reinspected at future maintenance and further treatment carried out as required.

RECOMMENDATION / ACTION

This AWA is issued to raise awareness to owners and operators for the need of vigilance regarding corrosion prevention and mitigation.

The under floor area should be inspected at the end of the day after known liquid spills or other mishaps in the cockpit.

Inspectors need to be vigilant when performing annual maintenance identifying and rectifying damage caused by urine, battery leakage and general water ingress. Drain holes must be clear and capable of performing their function.

The recent weather and prolonged rain events have caused local flooding and higher than average humidity. High humidity and hot, leaky 'wet' trailers create very corrosive conditions. Trailers and hangars should be well ventilated. Some sailplanes and powered sailplanes have suffered flood submersion. The RTOA for the region should be involved with any such restoration project.

Water also is the enemy of wooden structures, promoting wood rot and the breakdown of glue joints. Clear unobstructed drain holes and well-ventilated hangars and trailers are also essential for these sailplanes.

REPORTING

Notify the GFA if you have information relating to any similar or related occurrence.

A handwritten signature in black ink, appearing to be 'Dennis Stacey', with a long horizontal line extending to the right.

Dennis Stacey
GFA CTO
25/07/2022