

## **REPORT ON EXAMINATION OF N26DC LANDING GEAR FIRE**

On 06/02/2021 at approximately 0800 hours at the Heritage Aviation hangar at the Burlington International Airport (KBTV) in South Burlington, Vermont this Inspector observed the removal of the aftermarket strut/wheel fairing, wheel, rotor, and tire, and brake assembly from the right landing gear of N26DC. This aircraft is a 1965 Piper Cherokee 6 PA-32-260 Serial Number: 32-64. The removal of these parts was accomplished by Airman Justin HOUGHTON, holder of Airframe & Powerplant Mechanic's Certificate [REDACTED]. A Chain of Custody receipt for the parts was provided to Airman HOUGHTON and they remain in the secured possession of this Inspector.

Prior to the fire, N26DC had recently undergone a major rehabilitation which included brake work and attachment of after-market wheel/strut shrouds/fairings manufactured by Knots 2U Ltd. The STC is attached to this document. The fairing is of a tightly fitted full assembly design over the brake assembly, wheel, and strut.

### **History:**

On 03/24/2021 at KBTV this aircraft had flown 2 consecutive biannual flight reviews and conducted a relatively long taxi from Heritage Aviation to the threshold of Runway 15. See accompanying KBTV diagram – Heritage is south of C Taxiway. While holding short the occupants notice a burning odor and the Tower reported that a fire had broken out on the right main land gear assembly. Airport CFR was able to put out the fire.

Due to the extremely fast arrival of the CFR crew the fire was rapidly contained. Initial inspection revealed that there was significant fire and heat damage to the lower portion of the wing skin including melting and penetration. It appears that the trailing edge of the main spar had heat damage/melting. The upper and lower wing skin was physically penetrated by the CFR crew to get water onto the landing gear assembly. The tire had burned and deflated and much of the fairing was melted and burned.

### **Inspection and parts removal:**

During removal of the right brake caliper assembly, wheel, tire, and rotor, and fairing the following was noted:

- The outer portion of the fairing had suffered significantly less damage than the inner. The lower inner portion of the fairing had experienced high heat exposure and all the resin was burned out of the fiber fabric. The upper inner portion of the

fairing was significantly burned but not to the extent of the lower inner. The wheel brake assembly is adjacent to the lower inner portion of the fairing. It appears that the fire started at the location of the brake assembly.

- The tire adjacent to the brake assembly had burned and the tire had deflated and the bead was no longer on the edge of the rim.
- The wheel and rotor appeared to be normal except for expected heat and smoke exposure.
- The brake pads were easily removed and appeared to be undamaged except for that expected by the fire.
- No shims were installed
- The brake pistons were not exercised and the casing was not opened.
- Compared to stock “wheel pants” there appears to be limited airflow over/around the brake assembly and, essentially, there would be none at taxi speeds. The shroud may reduce radiant heat dispersal.

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Frederick H  
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