



## **Service Bulletin TTC-SB-DHC3-02**

**Date:** August 25, 2005

**Title:** Primary Exhaust Nozzle Cracking

**Effectivity:** All DHC-3 Otter aircraft modified with Texas Turbine Conversions, Inc. STC SA09866SC or Canadian STC SA02-15, turbine engine conversion.

**Reason:** Several operators, during periodic 100 hr inspections, discovered cracking on the primary exhaust nozzle P/N 34264 mounting flange weld. The cracks have all been located on the edge of the weld between the exhaust mounting flange and the pipe. The cracks typically run parallel to the weld bead.

**Description:** This service bulletin provides the requirements and instructions for the inspection of the primary exhaust nozzle for cracks.

**Compliance:** Mandatory

### **Accomplishment Instructions:**

1. Before the next flight, conduct a basic visual inspection of the primary exhaust nozzle and mounting flange for cracks. This inspection can be accomplished through the inspection access door on the left side of the engine nacelle. Pay close attention to the weld between the mounting flange and the exhaust pipe itself. (See figure 1)
  - If no cracks are discovered, proceed to paragraph 2.
  - If cracks are discovered, the exhaust nozzle must be removed and repaired before further flight. All weld repairs must be accomplished per Mil Std 2219. Proceed to paragraph 3.
2. Within the next 10 hours of operation or the next 100-hour inspection, whichever comes first, inspect the entire primary exhaust nozzle and mounting flange for cracks using a dye penetrate technique or flash light and magnifying glass.
  - If no cracks are found, the exhaust nozzle should be re-inspected every 100 hours using similar techniques.
  - If cracks are discovered, the exhaust nozzle must be removed and repaired before further flight. All weld repairs must be accomplished per Mil Std 2219. Proceed to paragraph 3.
3. 50 hours after repair, the exhaust should be re-inspected for cracks using the techniques of paragraph 2.
  - If no cracks are found, the exhaust nozzle should be re-inspected every 100 hours using similar techniques.

-If cracks are discovered and are not in the location of a previous repair, the exhaust nozzle must be removed and repaired before further flight. All weld repairs must be accomplished per Mil Std 2219. Continue with paragraph 3 inspection at next 50 hours.

-If cracks are discovered at the location of a previous weld repair, the exhaust nozzle must be removed from service.

**Approval:** Not applicable.

**Man-hours:** The inspection should take no more than one man-hours.

**Material:** Not applicable.

**Tooling:** Not applicable.

**Weight and Balance:** No Change.