

United States Department of Agriculture Forest Service

Aviation Technical Alert

Number 2003-02

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Date: July 30, 2003

Subject: Primus Fuel Bottle 1.0

Distribution: USFS Aviation Operations

Issue: The "Primus Fuel Bottle 1.0" with a max filling of 31fl has a design flaw requiring that it be handled with caution. This could be potentially serious in the event of a failure near open flames or in an aircraft.

An Engine Module was hiking into a fire on the Rock Springs BLM District and one of the crewmembers was carrying a few fuel bottles and chain saw into the fire. He heard a pop and wondered what it was. He checked his fuel bottles and the entire top and thread insert was missing. The crew looked around and found the cap and thread insert nearly 10 feet away. There were three bottles taped together with one of the bottles carabinered to his line gear pack by the eyelet of the bottle. The fuel bottle was filled to the max fill line as recommended on the bottle. The bottom of bottle was slightly rounded out from pressure. The fuel bottle showed no other damage.

At this same time last year a Utah crew experienced similar failures of their Primus fuel bottles. A Safety Warning on the failure of these bottles was issued 08/22/2002. MTDC tested the Primus bottles along with several other brands. They found that Primus bottles were prone to failure, especially if overfilled. The MSR fuel bottle proved to be the best bottle tested. In fact it was the only fuel bottle that met the GSA burst pressure (400 psi) requirement for fuel bottles.

MTDC emphasizes the importance of filling any of these bottles only to the recommended fill line. Questions may be forwarded to:

Wesley Throop

Missoula Technology and Development Center

E-mail: wthroop@fs.fed.us

Phone: (406) 329-3957

Fax: (406) 829-6746

Recommendation:

1. When transporting fuel bottles in aircraft we recommend that they be purged of fuel if at all possible.
2. If fuel is being transported internally in fuel bottles they must be double-checked for compliance with the manufacturer's directions for filling and security of the cap assembly.
3. Firefighters must comply with the Interagency Aviation Transport of Hazardous Materials Guide.
4. Avoid securing Primus bottles by tying through the cap handle.
5. Recommend that over the long term Primus bottles be removed from use and replaced with a more acceptable model.

/s/ Ron Hanks - National Aviation Safety and Training Manager

/s/ Pat Norbury – Acting National Aviation Operations Officer

