



**TO :**

**FROM :** National Wildfire Coordinating Group

**REPLY TO :** NWCG@nifc.gov

**DATE :** 07/29/2003

**SUBJECT :** SAFETY WARNING : Primus and Other Fuel Bottles

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Please see the attached document which includes a description of a critical issue regarding fuel bottles .  
Bottom line?! DO NOT FILL THEM TO THE TOP... LEAVE PLENTY OF ROOM FOR EXPANSION!

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Please see the following dialogue regarding Primus and other fuel bottles...

**Issue:**

"Here is a interesting situation. Our 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 inspected the saw, everything was Ok. 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 I would assume. The fuel bottle showed no other damage.

"I am not sure if this was a quality control problem for that bottle. This could be a potentially serious event had this happened near open flames or in a aircraft. Has anyone else seen or had this problem. The brand of the bottle is "Primus Fuel Bottle1.0" with a max filling of 31fl. oz.

Just wanted to share this info. If you have any questions please contact me."

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**Response:**

07/29/2003 08:19 AM  
Subject: Primus Fuel Bottle

"At approximately the same time last year the Utah Flame'N'Go 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. What we found was that the 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 psia) requirement for fuel bottles. (See the attached report)

**"I cannot emphasize enough how important it is to not fill any of these bottles above the recommended fill line. During our testing we reached pressures of approximately 550 psi in an overfilled MSR bottle equipped with a specially made closure. A properly filled Primus bottle subjected to the same conditions reached an internal pressure of less than 1 psi."**

"If you have any questions feel free to call or email me."

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(Emphases added)