



Department of the Interior Accident Prevention Bulletin

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Subject: Aircraft Fuel Pump Cold Weather Kit

Area of Concern: Aircraft refueling

Distribution: All Aviation Activities

Discussion: This Accident Prevention Bulletin is based on a SAFECOM submitted by Voyageurs National Park in northern Minnesota. Voyageurs NP is located just outside of International Falls, the “Icebox of the Nation.”

While refueling an airplane from a truck mounted tank using an electric fuel pump manufactured by Great Plains Industries (GPI) with temperatures below zero, the pilot noticed a fuel leak from what appeared to be a bleeder hole on the bottom of fuel pump.



The leak progressed from a drip to a steady flow. Concerned about static electric spark hazards, the fuel truck was taken out of service until the fuel pump repair was complete. The pilot took pictures of the pump and the location of the leak and sent them to GPI for analysis where they identified the problem as a broken shaft seal. GPI stated that the fuel pump was equipped with a standard shaft seal kit, not a cold weather seal kit. The cold weather shaft seal kit (part number 133503-04) was installed and the fuel truck was returned to service.



According to a product support representative from GPI, the new part number is 133503-05. The standard seal is rated from -13°F to 104°F. The cold weather seal is rated from -40°F to 104°. The the two seals differ in materials and the cold weather seal has a slightly different design.

Winter is almost upon us. If you are going to be conducting aircraft refueling operations in very cold weather environments using a GPI fuel pump, check to see if the pump you are using has the cold weather shaft seal kit installed. Don't let Old Man Winter keep you from flying.

Thanks to the folks at Voyagers National Park for their follow-up and SAFECOM submission.



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