



May 28, 2019

Mr. Daniel K. Elwell, Acting Administrator  
Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, DC 50291

Dear Acting Administrator Elwell,

Earlier this month, General Aviation witnessed its third Diesel Exhaust Fluid (DEF) contamination event when DEF was inadvertently used to fuel aircraft. DEF is required to meet stringent EPA exhaust requirements and is mixed with diesel in trucks that carry avgas and or jet fuel. Fortunately, no injuries or fatalities have resulted from these incidents, but significant and costly repairs will be needed to return the affected aircraft to service.

We believed the first contamination event in November 2017 to be a unique situation and unlikely to reoccur. Unfortunately, a second occurred in August 2018. Shortly thereafter, AOPA, along with NATA, NBAA, and GAMA, stood up an industry working group to study factors surrounding these events, develop mitigation strategies, and recommend both short and long-term actions for industry and the FAA to implement.

Short of banning DEF until the working group's recommended actions are put in place, I have directed AOPA's Air Safety Institute (ASI) to issue the attached Safety Notice so that pilots are better informed about this issue.

It is my understanding the working group is finalizing its report and will publish recommendations within the next couple of weeks.

Any assistance the FAA can provide to work with industry and quickly implement the mitigation strategies identified in the report will be appreciated.

We strongly support the FAA's leadership and commitment to safety and look forward to working with you and your team on this particular matter.

Sincerely,

Mark Baker  
President and CEO

Enclosure

cc: Ali Bahrami, Associate Administrator for Aviation Safety, FAA

**Enclosure: ASI Safety Notice: 2019-2**  
Diesel Exhaust Fluid Contamination in Jet-A Fuel

# ASI SAFETY NOTICE



## **The Issue:**

Diesel Exhaust Fluid (DEF) is a colorless additive used with diesel engines to reduce emissions. It has mistakenly been added to jet fuel on three occasions over the past 18 months. Presumably, operators have mistaken DEF for fuel system icing inhibitors (FSII), which are also colorless. The latest DEF contamination incident caused engine flameouts at altitude in two Cessna 550 jets, one of which experienced dual-engine flameout resulting in a total engine failure landing at a Savannah, GA airport.

## **What You Should Do:**

Talk with your fuel providers and ask if they use DEF in ground equipment. If so, inquire about procedures to confirm correct additives are used for jet fuel. This should include separate storage, clear labeling, confirmation of correct additives at the time of insertion, and training for personnel. DEF crystallizes in jet fuel and clogs fuel filters, which can result in fuel starvation. If engine failure occurs due to turbine flameout, be cognizant of the potential for DEF contamination. Follow emergency checklist procedures for engine failure and realize if DEF contamination is the cause, successful restart is unlikely. If a turbine engine flameout occurs in a multi engine aircraft, follow emergency checklist procedures and expect loss of the remaining engine(s). Consider preserving altitude for as long as possible to maximize potential of a safe glide to a suitable runway.

If you encounter or suspect any DEF contamination, notify the Fixed Base Operator where fuel was obtained as soon as possible. Document the incident and report it to the local FAA FSDO office immediately.

## **What You Should Know:**

There are no known pre-flight procedures pilots can use to identify the presence of DEF in jet fuel.

An industry working group, which includes AOPA is working to understand causes of contamination and provide recommendations for prevention.

**Read AOPA's article** <https://www.aopa.org/news-and-media/all-news/2019/may/22/new-def-fuel-contamination-incidents-reported>

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*To increase safety awareness and help reduce accidents, the AOPA Air Safety Institute periodically issues Safety Notices to remind pilots of significant safety topics.*