

Safety Matters

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In recent years, there have been several incidents of fuel contaminated with diesel exhaust fluid (DEF) being uplifted to business aircraft, causing damage to airplanes and a safety risk to passengers and crews.

On 9th May 2019 two jets experienced engine failure but landed safely after receiving fuel contaminated with DEF.

There were no injuries in these incidents that resembled occurrences in 2017 and 2018 which triggered FAA warnings and prompted intensive industry review of aircraft fuelling practices and personnel training, with recommendations to be published soon.

According to the FAA, both Cessna Citation 550 twinjets received fuel at Punta Gorda Airport that had been contaminated with DEF which was added erroneously to the fuel supply carried by a fuel truck. DEF is a urea-based chemical that is used to reduce diesel-engine emissions under a US federal environmental mandate.

DEF is not intended for use in aircraft, and when added to jet fuel, can trigger reactions including the formation of crystals that can plug fuel filters and damage other engine components.

The first Cessna 550 departed for Niagara Falls, New York, but experienced an engine flameout north of Savannah, Georgia. It then lost its second engine but landed safely in Savannah. The other 550 departed for Chicago, experienced an engine failure, and landed safely in Louisville, Kentucky.

DEF is used in the US and may be used in other countries.



WHAT CAN OPERATORS DO TO MITIGATE THE RISK?

The Registry recognises that this places aircraft operators in a potentially difficult situation, however these simple steps *may* assist in reducing the risk: -

- Ask whether the airport uses DEF, and if they do, are there procedures to ensure aviation fuel is segregated appropriately;
- Consider tanking fuel, if possible;
- Do you have confidence in the airports Quality Management System/Safety Management System?
- Consider using an FBO who conform to industry recognised standards, e.g. IS-BAH.
- Review the [NTSB Safety Alert](#), and AOPA [ASI Safety Notice:2019-2](#)

Jet-Fuel Contamination