HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/HB 569 Diesel Exhaust Fluid
SPONSOR(S): Transportation & Infrastructure Subcommittee, Overdorf and others
TIED BILLS: **IDEN./SIM. BILLS:** SB 1036

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	15 Y, 0 N, As CS	Johnson	Vickers
2) Agriculture & Natural Resources Appropriations Subcommittee			
3) State Affairs Committee			

SUMMARY ANALYSIS

The United States Environmental Protection Agency requires diesel exhaust fluid (DEF) to be used in newer diesel engines, including diesel-powered vehicles used for aircraft and airport support. DEF is an exhaust additive that reduces diesel emissions by neutralizing nitrogen oxide into harmless nitrogen gas and water.

In recent years, a number of aircraft have experienced engine shutdowns and other engine operability issues resulting from the contamination of jet fuel due to the inadvertent filling of fuel truck anti-icing injection system reservoirs with DEF instead of fuel system icing inhibitor. The Federal Aviation Administration has made a number of preliminary safety recommendations regarding the use of DEF at airports including additional training and the adoption of best management practices.

The bill requires public airports which utilize DEF to create a DEF safety mitigation and exclusion plan and provides minimum requirements for such plan. The plans must be approved by the governing bodies of the airports and submitted to the Department of Transportation. The airport must regularly review its plan and annually certify compliance to the Department of Transportation.

The bill may have an indeterminate negative fiscal impact on the state and local governments. Tenants of public airports may incur expenditures associated with complying with DEF safety mitigation and exclusion plans. *See* Fiscal Analysis for details.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

Diesel Exhaust Fluid

As part of the Clean Air Act of 1990, the United States Environmental Protection Agency (EPA) has, in order to curb air pollution, mandated stronger emission control standards for vehicle engines. Nitrogen Oxide (NOx) emissions can be a major polluter from diesel engines and the EPA has targeted them for significant reductions. In 2007, the EPA mandated that all new on-road heavy duty vehicles manufactured after 2010 meet certain requirements, with light duty vehicles to meet these requirements in 2014. In order to meet these standards, technologies such as selective catalytic reduction have been developed.[1]

In diesel vehicles, selective catalytic reduction reduces NOx emissions by injecting diesel exhaust fluid (DEF) into ammonia, which in the presence of the catalyst, reacts with the exhaust NOx to neutralize it into harmless nitrogen gas and water.[2]

DEF is a nontoxic, nonhazardous and colorless aqueous solution of automotive grade Urea in deionized water.[3]

Airport Use of Diesel Exhaust Fluid

At public airports, the airport and its tenants use DEF in various diesel-powered vehicles including aircraft refueling equipment, diesel aircraft fire-fighting equipment, life-saving equipment, and emergency generators.[4]

In recent years, a number of aircraft have experienced engine shutdowns and other engine operability issues due to the contamination of jet fuel as a result of the inadvertent filling of aircraft fuel trucks anti-icing injection system with DEF instead of fuel system icing inhibitor.[5]

Due to fuel system designs, some aircraft require fuel system icing inhibitor to prevent engine operability issues in cold weather. Due to this requirement, for many years, airport refueling trucks have been equipped with fuel system icing inhibitor injections systems, which require a fuel system icing inhibitor fluid reservoir mounted on the truck to supply the injection system during refueling. However, new refueling trucks contain a DEF reservoir in addition to the fuel system icing inhibitor reservoir. Since the EPA's mandate for selective catalytic reduction on non-road diesel trucks began in 2014, airport refueling trucks with two reservoirs have begun appearing at airports.[6]

Between November 2017 and May 2019, there were three instances, two in Florida, in which multiple aircraft had jet fuel contaminated with DEF or were refueled using equipment exposed to DEF. Because of these instances, numerous aircraft had to perform emergency landings. The Federal Aviation Administration (FAA) conducted a hazard analysis, and issued preliminary recommendations to address the problem, including additional training for ground support crews, adoption of best management practices, and dying either DEF or fuel system icing inhibitor so they can be distinguished from each other.[7] One recommendation called for the aviation industry to request that EPA issue

[1] Aircraft Diesel Exhaust Fluid Contamination Working Group, *A collaborative Industry Report on the Hazard of Diesel Exhaust Fluid Contamination of Aircraft Fuel*, June 11, 2019. P. 3-4 (Copy on file with Transportation & Infrastructure Subcommittee).
[2] *Id.*
[3] *Id.*
[4] Email from Lisa Waters, President/CEO Florida Airports Council, Diesel Exhaust Fluid, Nov. 4, 2019. (Copy on file with Transportation & Infrastructure Subcommittee).
[5] Federal Aviation Administration, *Safety Assessment for Jet Fuel Contamination with Diesel Exhaust Fluid.* August 30, 2019. P.4. (Copy on file with Transportation & Infrastructure Subcommittee).
[6] *Id.*
[7] *Id.*

permanent relief from emission control/system performance inducements (which require the use of DEF) for any non-road diesel engine powered vehicles at or on airports.[8]

Effect of the Bill

The bill requires the governing body of each public airport[9] at which aviation fuels receive onsite treatment with FSII by means of injection or mixing systems, and any aircraft fuel delivery vehicle or ground service equipment the exhaust of which is being treated with DEF within 150 feet of any aircraft must create a DEF safety mitigation and exclusion plan.

At a minimum, the plan must include:

- A full inventory of all DEF on the airport's premises.
- Designation of specific areas where DEF may be stored on the airport's premises. To the extent practicable, such areas may not be located within or on a vehicle operated for the fueling or servicing of aircraft or at any aviation fuel transfer facility or bulk aviation storage facility.
- Designation of specific areas where DEF may be added to vehicles. Such areas may not be located in aircraft operating areas.
- Incorporation of best practices for ensuring the proper labeling and storage of DEF.
- Incorporation of training in the proper use and storage of DEF for all persons on the airport's premises who may come into contact with DEF in the ordinary course of his or her duties.

The DEF fuel safety mitigation and exclusion plan must be approved by the airport's governing body by September 1, 2020. The governing body must, by October 1, 2020, submit the plan to the Department of Transportation (DOT) and certify that all DEF has been secured within the premises of the airport.

Each airport's DEF fuel safety mitigation and exclusion plan must be fully implemented by January 1, 2021.

By January 1 of each year, beginning in 2022, each public airport must certify to DOT compliance with the airport's DEF safety mitigation and exclusion plan.

B. SECTION DIRECTORY:

Section 1 creates s. 330.401, F.S., providing for diesel exhaust fluid safety mitigation and exclusion plans; certification.

Section 2 provides an effective date of July 1, 2020.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

   The bill does not appear to impact state government revenues.

2. Expenditures:

   There is an indeterminate, but likely insignificant fiscal impact to DOT associated with reviewing airport DEF safety mitigation and exclusion plans.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

[8] *Id.* at 2

[9] Section 330.27(6), F.S., defines the term "public airport" as an airport, publicly or privately owned, which is open for use by the public.

1. Revenues:

   The bill does not appear to impact local government revenues.

2. Expenditures:

   There is an indeterminate, but likely negative fiscal impact to local governments operating public airports associated with reporting requirements.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

Tenants of public airports, including fuel providers, will likely incur expenditures associated with complying with the DEF safety mitigation and exclusion plans; however, the impact is indeterminate.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

   The county/municipality mandates provision of Art. VII, section 19 of the Florida Constitution may apply because the bill requires public airports to develop DEF safety mitigation and exclusion plans; however, an exemption may apply since there is likely an insignificant fiscal impact.

2. Other:

   None.

B. RULE-MAKING AUTHORITY:

This bill does not grant rulemaking authority, nor does it require rulemaking authority.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

On January 21, 2020, the Transportation & Infrastructure Subcommittee adopted a strike-all amendment and reported the bill favorably as a committee substitute. The strike-all amendment removed the requirement that all DEF be removed from the premises of public airports by October 1, 2030. The amendment also revised provisions regarding the DEF safety plans to incorporate best practices and training requirements regarding the use of DEF. The amendment also changed from the Department of Environmental Protection, to DOT, the agency to which the airports must certify compliance.