

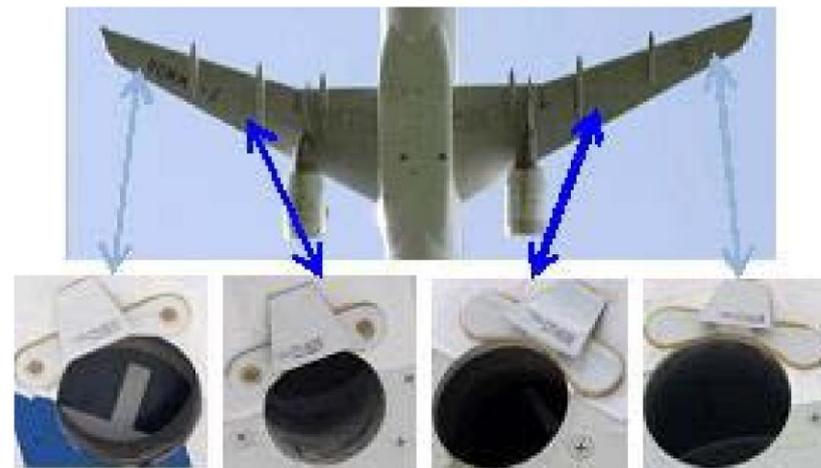
Airbus A320 “Whistle”

ONCC Technical Committee Meeting

April 14, 2020

A320 ARRIVAL “WHISTLE”

- High-pitched whistling noise identified in Airbus A320 Family
- Caused by Fuel Over Pressure Protector (FOPP) cavities
 - Four cavities total, two on each wing
- Noise occurs during aircraft descent and diminishes after landing gear deploys
- Aircraft Affected
 - A318, A319, A320, A321
 - Manufactured before 2014



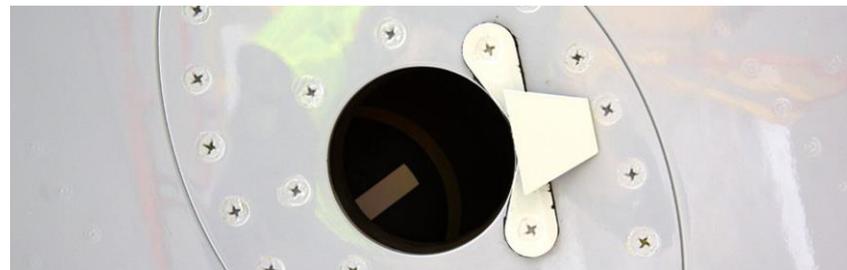
WHISTLE FIX

- Vortex Generator
 - Installation of a small device just in front of the vent opening
 - Device breaks the flow of air just enough to prevent the noise being created
 - Aircraft with vortex generators are up to 4 decibels quieter during the approach phase

FOPP



SOURCE: Supercraft; Vortex Generator, Engineered for a Quiet Approach, 2015.



SOURCE: Lufthansa Group; Active Noise Abatement, 2014.

AIRPORT AND COMMUNITY APPROACH

- ONCC letter to United Airlines in September, 2014
- Port of Seattle letter to Frontier Airlines in April, 2019
- Request all airlines with affected A320 family aircraft to utilize vortex generators in their existing fleet
 - Highlight noise issue and aircraft fix
 - Provide examples of airlines adopting this approach
 - Emphasis on community benefit for all



Seattle-Tacoma
International Airport
P.O. Box 30727
Seattle, WA 98168 USA
206.787.4833 (tollfree)
206.890.9039 (mobile)
206.787.4837 FAX

April 3, 2019

George Odwesso
Regional Properties Manager
Frontier Airlines
4545 Airport Way
Denver, CO 80239
george.odwesso@flyfrontier.com

VIA EMAIL

RE: A320 Arrival Noise and Vortex Generators

Dear Mr. Odwesso:

I am writing you today because Frontier Airlines is one of many airlines operating Airbus A320 series aircraft at Sea-Tac Airport.

As you may be aware, Airbus A320 series aircraft built before 2014, which includes the A319, A320 and A321, have a known design characteristic that creates a high-pitched whistling noise emanating from vent openings on the underside of the wings. This noise occurs upon descent and can generate noise for communities as far away as 30 miles who are under the approaches to Sea-Tac Airport. The Port of Seattle, in conjunction with the Sea-Tac Stakeholder Advisory Round Table (StART), are urging all airlines with A320 series aircraft to proceed with efforts to limit this noise impact.

StART was formed by the Port of Seattle in early 2016 as a way for neighboring communities to engage with Port staff, airline industry representatives and the FAA and begin to identify possible solutions to aviation-related impacts. This group, which includes three selected members from each neighboring community, meets on a bi-monthly basis and also has stood up working groups that focus on individual sets of issues including A320 descent noise.

In 2014, in response to growing concern over A320 descent noise, Airbus created a simple device known as a "vortex generator" that can be installed in front of the underwing vents. Subsequently, all A320 series aircraft manufactured since 2014 have this device installed at the factory. These small, triangular devices reroute the airflow and eliminate the whistling noise on descent. Several European airlines such as Lufthansa, Air France and British Airways have substantially retrofitted their fleets of pre-2014 aircraft in the years since.



JAMIE L. RHEE, COMMISSIONER

CONNECTING THE WORLD TO CHICAGO AND CHICAGO TO THE WORLD

www.flychicago.com