



LAX Community Noise Roundtable

Work Program Item A12

Noise Exposure From A320 Family of Aircraft

January 13, 2016



BACKGROUND

- **Researchers in Europe have identified a high-pitched noise from the older A320 family of aircraft as the aircraft descends for landing, caused by air flowing across open cavities under the wing**
- **The noise can be heard several miles from the runway before the deployment of landing gear**
- **Researchers have developed a simple solution called the Vortex Generator that solves this particular problem**
- **The Vortex Generator is a small metal device placed in front of the open cavities that changes the air flow and reduces approach noise by 2 to 6 dB**





BACKGROUND

- **Airbus is installing vortex generators on A320 aircraft manufactured after March 2014**
- **Lufthansa and Air France are retrofitting their existing A320 aircraft that operate in Europe**
- **Lufthansa has received a 40% reduction in landing fees at Frankfurt Airport for its A320 aircraft with vortex generators**



BACKGROUND

- According to the USDOT's Bureau of Transportation Statistics Air Carrier Financial: Schedule B-43 Inventory there were 937 A320 family aircraft in the U.S. fleet in 2014
- August 2014 statistics indicate that approximately 17% of the total arrivals at LAX are comprised of A320 family aircraft
- There are other busy air carrier airports with similar or greater portions of their fleet mix comprised of A320 aircraft



STATUS UPDATE

- **ESA has been tasked by LAWA with providing assistance in investigating the various aspect of moving forward on this Work Program Item**
- **ESA is researching several A320 Vortex Generator Retrofit Strategies to determine feasibility and effectiveness including:**
 - **Obtaining Congressional funding support**
 - **Offering reduced landing fees**
 - **Partnering with an airline willing to serve in a champion role**
 - **Partnering with another airport and focusing on one or two carriers**
- **The following provides an update on each of these strategies**

Obtaining Congressional Funding Support



- **There are several issues related to this possible strategy including, but not limited to:**
 - **What is the critical mandate that requires an act of Congress?**
 - **What, if any, is the appropriate funding mechanism?**
 - **Who within the federal government would administer the program?**
 - **Would the program be considered discriminatory?**

Obtaining Congressional Funding Support



- **Based on informal conversations with federal regulators, ESA learned that:**
 - **The A320 family of aircraft complies with current federal noise regulation**
 - **Therefore, there is no critical mandate that would be met by invoking an act of Congress**
 - **The Airport Improvement Program would not be the appropriate funding mechanism**
 - **If such a program could be created, the FAA's Flight Standards division would be the most likely group within FAA to handle it**
 - **At a minimum, Flight Standards would determine if the retrofit is airworthy**
 - **However, since this is not a safety-related issue, it is unlikely that Flight Standards would administer such a program**
 - **It's likely that the program would be considered discriminatory**
 - **The program could be costly to administer**

Offering Reduced Landing Fees



- **The informal conversations with federal regulators also revealed that:**
 - **Reduced landing fees would likely be perceived as discriminatory by both the FAA and other non-participating airlines**
 - **The mechanism for administering the program by an airport operator could be complex:**
 - **What determines the length of time the reduced landing fee is in place?**
 - **Is the money held in an escrow account?**
 - **How is the money distributed?**
 - **Who verifies the vortex generators are installed on each aircraft?**
 - **Would put the airport in a position of acting like a federal regulator, which could be challenged by the FAA and/or airlines**
 - **Could add unreasonable administrative costs to staff/manage the program**

Partnering with an Airline Willing to Serve in a Champion Role



- **Many airlines have sustainability programs designed to reduce impacts on the environment including noise**
- **Seek to identify an airline or airlines that would be willing to add the vortex generator retrofit to their sustainability program**
- **A voluntary vortex generator retrofit program eliminates:**
 - **Possible discrimination claims**
 - **Complex and costly administrative programs**
- **ESA will reach out to several airlines to determine their level of interest in participating in a voluntary retrofit program**
- **This effort could be pursued in concert with other airports and/or noise forums**

Partnering with Another Airport/Focus on One or Two Carriers



- **The A-320 Family of aircraft represent a significant portion of the fleet at several other busy air carrier airports**
- **Working in cooperation with one or more of these airports could be more compelling than working on the issue on an airport-by-airport basis**
- **ESA will be engaging with staff at other airports to determine if broader support for this initiative exists**
- **As previously reported to the Roundtable, LAWA has reached out to SFO and those discussions will continue**



SUMMARY

- **Obtaining Congressional funding support and offering reduced landing fees do not appear to be viable strategies**
 - These strategies appear to represent the most complex and costly approach to carrying out the retrofit process
 - A voluntary program carried out by each airline offers the least complex and lowest cost to carrying out the retrofit process
- **Partnering with one or two airlines to champion this effort is worth exploring**
- **Partnering with another airport and focusing on one or two carriers also appears to be a viable strategy to pursue**
- **This work will continue with more information to come at future Roundtable briefings**



Questions?