LAX Community Noise Roundtable

Work Program Item A12

Noise Exposure From A320 Family of Aircraft

March 9, 2016

Work Program Item A12 - Noise Exposure From A320 Family of Aircraft

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

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BACKGROUND

- When requested by an airline, 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 and installing vortex generators on their new A320s
- Lufthansa has received a 40% reduction in landing fees at Frankfurt Airport for its A320 aircraft equipped with vortex generators

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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

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STATUS UPDATE

- **ESA has been tasked by LAWA with providing assistance in investigating the various aspects 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 airlines**
- **The following slides provide 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 regulations**
    - **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 administer 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 could 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 administrating 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**

ESA informally contacted A4A, Delta Air Lines, and United Airlines regarding voluntary A320 retrofit programs

- A4A did not respond to ESA's request for information regarding their members' plans to voluntarily retrofit their A320 aircraft
- Delta Air Lines said that it will install the vortex generators on all of its new A320 aircraft, but could provide no information on its plans to voluntarily retrofit its A320 aircraft
- United Airlines does not yet have a voluntary vortex generator retrofit policy

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?