



Engine Maintenance Run-ups at Sea-Tac Airport

There are many sources of ground noise at an airport such as Sea-Tac. Sources of aircraft ground noise can include takeoff roll, taxiing and idle aircraft, thrust reversal to slow an aircraft after landing, and auxiliary ground power units used to service aircraft. Meteorological conditions also have an effect on the propagation of noise over distances. For example, you may notice that ground noise in general is louder on days when the skies are overcast or when certain wind conditions exist.

Engine maintenance run-ups and reverse thrust maneuvers are the two noise sources that are perceived as being the most annoying to surrounding communities and are therefore the focus of ground noise control programs. These programs are designed to reduce the noise impact on surrounding communities by addressing the peak sound levels and the duration of noise events. More specifically, minimizing jet engine maintenance run-up noise and the use of the reverse thrust maneuver during the nighttime hours (10 p.m. to 7:00 a.m.).

Engine Maintenance Run-ups

One of the major concerns of citizens living near Sea-Tac is noise caused by engine maintenance run-ups. These run-ups result in significant noise levels, and consequently inquiries from citizens in the communities near the Airport.

When certain types of maintenance activities are performed on an engine, the operator of an aircraft must test the engine prior to the next flight. This testing of the engine is known as an engine maintenance run-up and consists of power being applied to the engine while the aircraft remains stationary.

The Federal Aviation Administration (FAA) has recognized a time period during the night from 10:00 p.m. to 7:00 a.m. when people are more sensitive to airport noise. This time period also coincides with the hours established by the Port of Seattle for restrictions on engine run-ups. Aircraft operators conducting engine run-ups during these hours must have permission from the Airport's Aeronautical Duty Manager. If the run-up is absolutely necessary and permission is granted, it is not to exceed a two-minute duration. The only exception to the two-minute rule is when an aircraft is scheduled to depart between the hours of 7:00 a.m. and 8:30 a.m. In these instances, engine run-ups may be conducted as necessary between the hours of 6:00 a.m. and 7:00 a.m. with the permission of the Airport Duty Manager.

In an effort to further minimize engine run-up noise impacts to surrounding communities, the Port of Seattle established areas on the airfield designated to perform these operations. Two sites were chosen at both the north and south ends of the airfield to accommodate operations in both directions. When air traffic is departing to the south, an aircraft conducting a run-up will be directed to an area located at the south end of the airfield and is turned onto the wind (e.g., facing south) directing the jet blast back across the airfield rather than towards an immediately adjacent community.

Because of the operating nature of the airlines, we do not anticipate the elimination of engine maintenance run-ups at night. However, the Airport Noise Program Office will continue to monitor developing technologies, as well as work with the aircraft operators to further reduce the ground noise created by engine maintenance run-ups. As a recent endeavor to reduce run-ups at night that exceed our two-minute duration, the tariffs for violations were substantially increased to the following:

- First offense - Letter of Admonishment
- Second offense in a calendar year = \$1,000
- Third offense within a calendar year from first offense = \$2,000
- Maximum fine within a calendar year from first offense = \$8,000

Ground Noise Assessment

In an effort to develop more noise mitigation programs, The Port of Seattle is investigating ways to most effectively monitor and measure all ground noise sources. For example, in 1991, the Port of Seattle prohibited the use of power-backs by aircraft operating at Sea-Tac Airport and now use ground vehicles to push aircraft back from the assigned parking position or gate.

One of our best sources for documenting ground noise results from the calls we receive from you and your neighbors. We would like to encourage you to continue to call our information line to let us know when you feel ground noise is excessive. Your call helps us keep in touch with public opinion, as well as enforce our programs, gauge our performance, and plan for future noise reduction programs.

Sea-Tac Airport Noise Information Line

206-433-5393
1-800-826-1147