



a clear direction for the future



case study

Seattle-Tacoma International Airport Seattle,WA

Overview

As a major international travel hub, the Seattle-Tacoma International Airport requires continuous and consistent power, running some of its systems 24-hours, seven days a week. This consistent uptime is critical to the airport's workings with backup power generators playing a significant role in the success of all operations. Installed near the crowded facilities of the airport's terminals, the generators called for an effective sound attenuation solution—a solution to dampen the sound enough that when running, noise from the generator room did not leak into the airport's terminals.



Challenge

Compounding these strict noise requirements, the area housing the generators proved extremely cramped. Little overhead room meant putting a silencer on top of the power generator would be impossible. Adding still to the sophistication of a final solution, the engine had an unusually wide distance between the two exhaust outlets and the existing downstream exhaust run needed to be connected to the silencer. The exhaust run was positioned at a 30-degree angle to the central line of the engine, so the silencer would need to be finessed into position to line up with the existing exhaust run. The unique setup demanded a great deal of customization.



Solution

GT Exhaust, Inc. (GT) put its engineering talent to the test to design a solution effectively meeting each of the sophisticated requirements in this challenge. Working with its channel partner, Seattle-based Dehn Engineering, GT found the answer. The teams customized GT's 501 model silencer. The unit was designed to fit within the limited space while meeting the strict noise reduction requirements. The silencer's outlets were repositioned to align correctly with the unusual connection and its body was rotated to line up with the downstream exhaust run.

With creative, precision engineering GT engineered a solution that not only fit within the required space, but met the demanded sound attenuation requirements. The silencer was successfully installed eight to ten years ago, with the end customer pleased with all final results and the process of finding this solution.

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