

Enidine by Design

Wire Mesh Isolator for the Auxiliary Power Unit (APU)

Enidine Vibration Isolation Application

By Mark Ott

Application Overview

A major manufacturer of aircraft engines and Auxiliary Power Units (APUs) asked Enidine to help them properly isolate their product on a US ARMY Tank. The application called for an isolator that would not only meet severe off road shock and vibration requirements, but would also withstand the harsh conditions and temperature extremes of the tank's operating environment. In pre-qualification high random vibration testing, a competitors elastomeric isolation failed, severely damaging the APU. Facing potential production delays and few options, the client called on enidine fir a solution.



Product Solution

Enidine immediately assessed the problem, determining that the solution would need to be more rugged than a simple elastomer. We recommended the use of wire mesh technology, an approach that would provide reliable vibration isolation and optimal shock protection under the following extreme conditions.

- Vibration of less than 5g maximum amplification at resonance
- Basic shock oh 30g, 11 msec.
- Gun firing shock of 55g, 2.5 msec.
- Ballistic shock of 65g, 2.0 msec.

The Enidine Wire Mesh Isolator offered excellent heat and corrosion resistance properties for withstanding a wide range of environmental conditions including operating temperatures of -25°F to 200°F, making it a durable alternative to a standard elastomeric isolator. Armed with a solution, the customer installed the APU Wire Mesh Isolator and successfully completed testing, allowing the program to move forward.

Application Opportunity

Auxiliary Power Units are just one example of products for which wire mesh technology can be beneficial. If your power generation application calls for tough performance requirements in harsh environmental conditions, Enidine Wire Mesh Isolators can prevent the premature deterioration of equipment, improve performance levels and extend service life, particularly when conditions would normally inhibit the capabilities of a standard elastomer.

