

EVALUATING ANTI-VIBRATION SEAT PADS TO IMPROVE THE HEALTH AND SAFETY OF DOD OPERATORS

PROJECT OVERVIEW

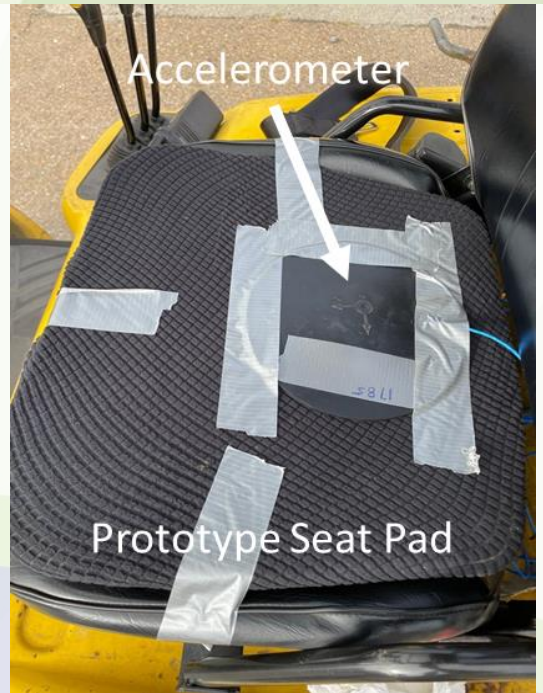
The purpose is to field test two low-cost, anti-vibration seat pads that incorporate energy-absorbing materials intended to damp vibration at frequencies harmful to humans. The field test will occur at multiple DoD installations with commonly used military vehicles and material handling equipment. Collection of vibration exposure data will determine seat pads effectiveness in reducing operator's exposure to whole-body vibration (WBV).

BENEFITS

The National Safety Council website states the average cost of a lower back injury claim in 2018 was \$37,309, including medical expenses of \$17,563. Over 10% of the \$30 million the Army spent on lower back injuries in 2019 was attributable to employees with job classifications of Transportation/Mobile Equipment Operator. The expense of this NDCEE project will be justified if just two back injuries are avoided.

PATH FORWARD

If the proposed seat pads minimize WBV, they will be recommended to the transition partners. The materials can also be engineered into replacement seats or act as upgrades to existing and future military vehicles. Results of the analysis will be shared with Program Managers of existing systems through the Health Hazard Assessment process.



Vehicle Outfitted with Seat Pad and Accelerometer



Fiber Energy Absorbing Material

DoD Executive Agent

Office of the Assistant Secretary of the Army for Installations, Energy, and Environment

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FOR FURTHER INFORMATION

National Defense Center for Energy and Environment

<http://www.denix.osd.mil/ndcee/>

Defense Centers for Public Health - Aberdeen

<https://ph.health.mil/Pages/Contact.aspx>

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