

Case Study:

IAC Acoustics Engine Dyno Test Cells

» Lube-Tech
Golden Valley, Minnesota



IAC Acoustics Engine Dyno Test Cells Allow for Extensive Research for Lube-Tech Corporation

Lube-Tech Corporation is a leader in the development of high-performance lubricants. Servicing the custom power sports and outdoor power equipment industry over 50 years, Lube-Tech puts its products to the test in its engine testing facility aptly named **Test-Tech**.

In 2018, **Test-Tech** was ready for a state-of-the-art upgrade, and IAC Acoustics was there to help. IAC partnered with O'Neill Engineered Systems and Lube-Tech's Engineering Manager, Denny Swanson, to meet the complex requirements of this multi-room dyno test facility. Each test cell required a combination of preeminent noise reduction, accessibility, visibility and ventilation.

Ultimately, IAC was able to provide a multi-suite test chamber that allowed for each suite to have precision

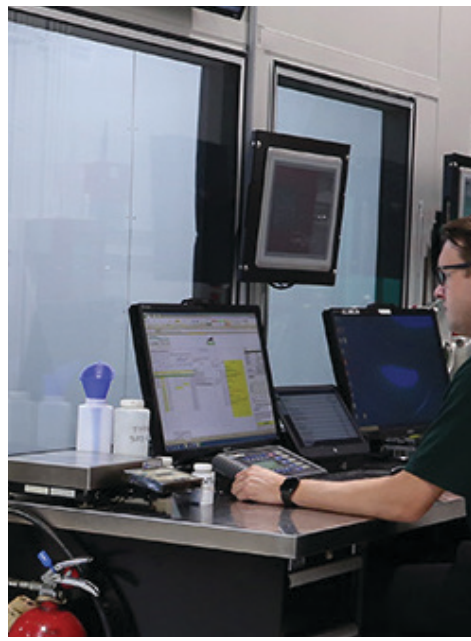
sound control, private access, clear visibility and independent airflow.

IAC's Noishield® Hard panels consist of a solid face and backside. They were used to flank the test cell exterior walls, providing an STC-56 value. All roof and interior walls used IAC's Noise-Lock®-I Panels (constructed of a perforated face and solid backside.) IAC's Noise-Lock I panels provide an STC-44 value and NRC - 1.1 value.

IAC provided a total of four single leaf STC-51 Noise-Lock doors and three STC-51 double-leaf doors. Each test cell required double pane STC-53 acoustical windows, allowing for visibility from each control station.

IAC's required scope for ventilation included engineering and materials for two intakes and one exhaust plenum. All were constructed of IAC's Noishield Regular STC-40 panels. All were rooftop-mounted. Various IAC silencers also assisted in meeting the customers' acoustical requirements.

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The unique combination of panels provided an excellent balance of sound transmission loss and absorption throughout the system.

The dyno room was retrofit into an older, dated building. The logistics made harnessing large mechanical equipment challenging. Per Chris Depies of O'Neill Engineered Systems, "The quality and accuracy of the IAC products made the installation virtually trouble-free."

IAC provided all engineering and materials. O'Neill Engineered Systems provided the installation.

IAC Acoustics has over 70 years of experience in designing and constructing dyno test cells.