

# MOBILE MACHINERY

## NOISE TESTING & ATTENUATION



**hushpak**  
engineering

...the quiet achievers

Hushpak follows International Standards for dynamic and stationary test conditions and achieves repeatable results, representative of normal mobile machinery operation. Accurate modelling and assessment of noise provides a crucial understanding of how individual components contribute to overall noise. Hushpak use this precise acoustic data to design, manufacture and install the most effective attenuation products for mobile equipment, including dozers, excavators, graders, drilling rigs and haul trucks.

Superior noise testing, engineering analysis, design and installation results in the following:

- ✔ Substantial noise attenuation
- ✔ Assured operational performance and ease of maintenance
- ✔ Uncompromised vision and comfort of operator
- ✔ Improved health and safety of workers
- ✔ Engineered designs for maximum service life
- ✔ Compliance with WHS requirements
- ✔ More cost effective noise attenuation

### MUFFLERS

Custom designed mufflers provide optimum noise suppression without compromising engine efficiency. Mufflers can be modified or reconditioned to achieve further sound suppression, using materials that withstand harsh conditions.

### ACOUSTIC LOUVRES

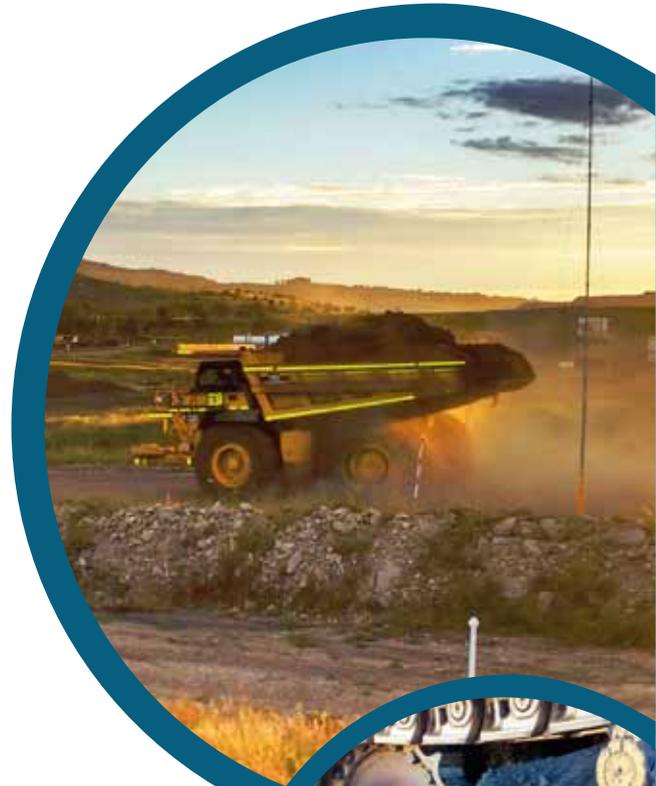
Designed and installed to incorporate low air resistance with aerodynamics, to minimise sound emissions whilst ensuring appropriate air flow and ventilation. Hushpak louvres are usually custom built for specific applications.

### DOZER ATTENUATION

Dozer attenuation packages address the numerous operating scenarios that generate track noise. Noise attenuation packages are also available to treat exhaust, engine bay and cabin noise.

### ACOUSTIC ENCLOSURES

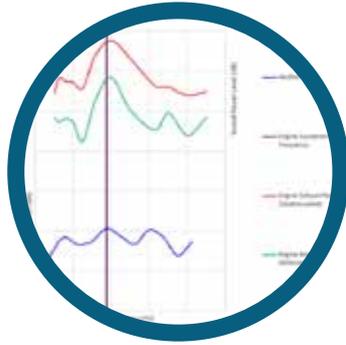
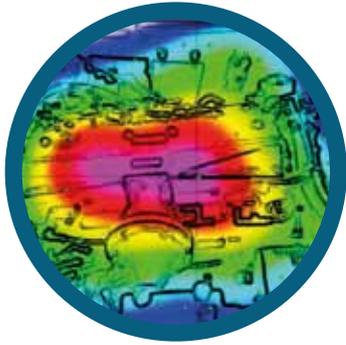
Hushpak acoustic panels and enclosures attenuate and absorb sound and vibration. Enclosures are possible in many shapes and sizes for engine bays, walls or roof panels. Existing enclosures can also be upgraded to further improve noise attenuation.



**As leaders in supplying turnkey acoustic solutions, Hushpak specialise in suppressing or absorbing noise at the source. Knowledge of the mechanical aspects of mobile machinery and engineering, together with acoustic monitoring and engineering analysis, ensures your noise problem is resolved completely.**

We have a strong reputation and proven track record for measuring, monitoring and solving excessive noise. This is achieved through the following:

- ✔ Adhere to Standards for dynamic and stationary test conditions
- ✔ Advanced acoustic testing and integrated noise management services
- ✔ Custom design and purpose built solutions, manufactured under strict quality control and tested to prove effectiveness
- ✔ Applied knowledge of workplace regulations and standards
- ✔ Proven R&D strategy that identifies the most effective software, acoustic procedures, sound proofing products and acoustic materials



## **Hushpak**

PROVEN RESULTS

### **DOZERS**

Hushpak has over 15 years of dozer research and experience, resulting in optimised solutions for dozer noise problems that withstands severe service workload and harsh conditions.

Multiple sound reduction solutions have been engineered for track plates and idlers with proven durability over time. Installation of insulated engine panels are part of the dozer attenuation package.

R&D into sprocket noise is progressing, with a system that reduces drive socket noise.

### **DRILLING RIGS**

Hushpak was given a brief to design, manufacture and fit an enclosure for the engine and hydraulics of a Drilltech Rig.

The acoustic treatments were successful in suppressing sound whilst allowing airflow for normal engine aspiration and cooling. Hushpak's enclosure design also allowed for easy access to components for regular service and maintenance.

Hushpak has also carried out noise reductions on an Exploratory Drill Rig. Tests carried out before and after the acoustic treatment showed reductions of approximately 5dB(A).

### **HAUL TRUCKS**

Hushpak assessed the vehicle noise on a CAT 793B, which produced 120dB(A) SWL.

After comprehensive analysis and acoustic monitoring, Hushpak manufactured and installed a package of side panels, louvres and mufflers. Modifications were also made to the fan and fan cowling. On completion, the noise levels was reduced to 114dB(A) (120dB), static and 115dB(A) (122dB), dynamic.

We have also installed successful noise suppression systems on 773, 777, 785 and 789 type Caterpillar trucks.