Bearing Failure Costs Up to $3 Million in Downtime

Component Bearing Damage

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CHALLENGE

What started as a routine motor change out on an Australian mining site ended in unplanned shutdown, an urgent repair and estimated up to $3 million in downtime.

MOTOR FAILURE DUE TO BEARING DAMAGE

A 12.8 tonne underground ventilation fan was transported and stored on a standard frame for 5 years before installation.

The expected service life of the fan was 100,000 hours.

However, at just 40,000 hours — just 40% of its projected lifespan — **the motor failed due to bearing damage.**

REAL COST OF BEARING DAMAGE IN CRITICAL COMPONENTS:

Some of the fallouts due to a motor failing included:

1. Urgent shutdown with only 6 weeks' notice
2. Part of the underground mine area closed for 7 dayS
3. Production losses alone at $350,000 per day

The costs also included the extra time to plan and execute shutdown, as well as repair costs for the damaged motor.

Total downtime estimated at $3 million.

UNDERSTANDING BEARING DAMAGE

Bearing damage can occur in transport or storage. Vibrations can cause damage to the bearings in heavy equipment components. This is from poor manual handling practices, impact in storage, or road irregularities when in transit.

This damage is known as brinelling: a permanent indentation or deformation of a hard surface, such as a metal bearing. Brinelling can only be prevented if shock, impact and vibrations during transport or storage are avoided.

When working with large, heavy, high-value components, the control of vibrations during transport or storage can be a challenge.

Keep Moving

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Failing frames & poor preservation for the heavy component were not suitable.

The age and deteriorated state of the previous frame was visible, showing the impact of the harsh environment.

DAYWALK provided a standard solution in the Transporta, which offers full storage & transport with vibration damping for bearing protection.

VIBRATION DAMPING SOLUTION

To mitigate these risks to high-value motors and equipment, DAYWALK has developed vibration damping transport frames to control the risk of downtime and damage.

The solution to this particular challenge was a vibration damping frame that also provided storage protection from the harsh outback environment.

As a vibration damping frame and an enclosed storage unit with PVC cover, the Transporta® Frame offers transport, storage and preservation in the one product.

This solution delivers optimal protection for high-value spares, with logistics certified frames for equipment ranging from 4 to 30 tonnes.

Keep Moving

CONTACT US

If brinelling and high-value component storage or transport is a risk in your organisation, get in touch with our Technical Consultants at DAYWALK. We offer a range of vibration damping frames, including the Transporta®, so you can keep large components moving. View our vibration damping innovations today.

LEARN MORE

Scan to explore the DAYWALK Resource Hub.