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ELIMINATING EXCAVATOR PIN & BUSH FAILURES

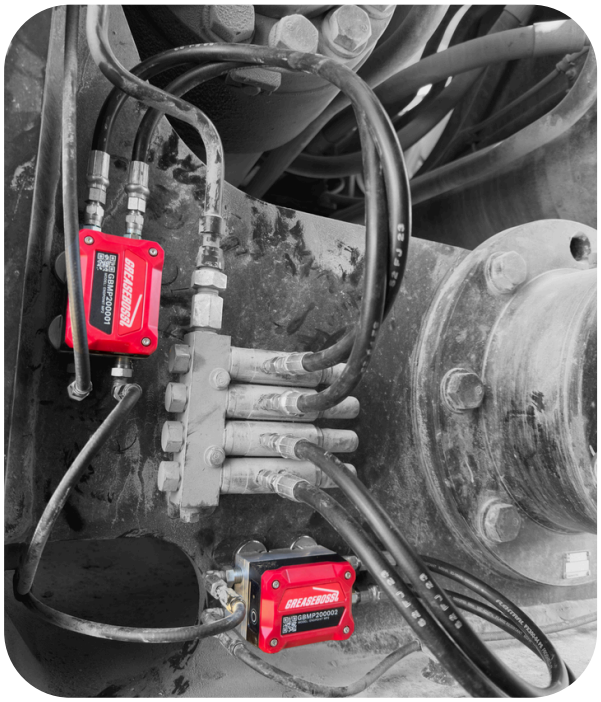
GreaseBoss's **Critical Point Monitoring** system significantly **eliminated downtime and repair costs** for an Australian Tier 1 coal mine by identifying and addressing lubrication issues on mining excavators.

CHALLENGES FACED

Our customer experienced regular pin and bush failures on their mining excavators, with no information on the volumes of grease being applied. OEMs provided vague answers and limited support.

Catastrophic pin & bush failures resulted in approximately **$10 million AUD in downtime and two weeks for line boring.** Line boring and **new pin and bush replacement cost around $500,000 AUD**. Early failures required a few days of downtime and cost **$250,000 AUD to repair.**

GREASE-RELATED COSTS = $17,500,000 AUD



SOLUTIONS PROVIDED

GreaseBoss installed Endpoint LF and Endpoint MP2 units on two new mining excavators to monitor critical points.

Developed over the past 12 months,

this device is designed to be installed downstream of injectors and distributors, that monitors:

- **Grease flow volume**
- **Line pressure**
- **Temperature**

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MEASURABLE OUTCOMES

PROVIDE VISIBILITY TO MAINTENANCE TEAMS

After installing the Endpoint LF and Endpoint MP2 units on two new mining excavators, the **data quickly highlighted greasing anomalies on all 8 injectors on an injector bank.** This was flagged and found to correlate with a low pump pressure fault in the system, caused by a bypassing injector (not being directly monitored by GreaseBoss).

Figure 1 - Healthy lube system - consistent trends across injectors.

A **“healthy”** lube system will give a **consistent trend** in the injector volumes can be observed across a lube system, as shown in Figure 1. In contrast, a bypassing injector would show a sporadic trend, as shown in Figure 2.

Figure 2 - Bypassing injector causing inconsistent trends across the system.

The GreaseBoss system demonstrated immediately that it has the **capability to alert the maintenance team of lubrication issues much earlier than any lube pump monitoring** on the excavator as well as quantify the effect that one bypassing injector can have on the entire lube system.

The grease data also indicated **grease volumes on the boom foot pins were significantly lower on one excavator than the other** and initiated an investigation into the injector settings.