



MOTION METRICS™

TrucksMetrics™

One solution to help
divert boulders away
from your crusher
and assess truck load
characteristics

By accurately identifying oversized material on its way to the crusher, TrucksMetrics™ AI boulder detection system empowers mines with actionable alerts, helping to divert large rocks, **cutting down on obstructions and rock-breaker usage** while protecting your equipment.

- ✓ **Boulder Detection**
- ✓ **Fragmentation Analysis**
- ✓ **Load Profiling**
- ✓ **Volume Sensing**

WEHR

Mining technology for a sustainable future

The True Costs of Lost Crusher Production

The costs that mines suffer from crushing obstructions are severe, but preventable.

Crushing represents a critical juncture in mining operations. A single undetected boulder entering the crusher can bring the system to a halt, compromising equipment health and creating costly delays to a process where production uptime and efficiency are key to driving profitability. Weir Motion Metrics examined three major mines to discover the cost of boulder-related incidents at the crusher.

Case 1:

A Copper Mine in Kazakhstan

Even delays that are short in duration lead to large amounts of value lost when accumulated over time. Although this mine's average crusher delay averaged only seven minutes per incident, the total estimated cost of the lost production due to those delays was ≈\$650,000 USD over the course of a year.

	Total Delay Duration	Cases	Average Delay Duration	Average Crusher Capacity	Crusher Production Loss	Copper Production Loss	Copper Value Loss
Average Per Month	26 mins	4	7 mins	4,000 tones per hour	1,738 tones	8.3175 tones	\$54,061 USD
Annual Loss	313 mins	48			20,858 tones	99.81 tones	\$648,736 USD

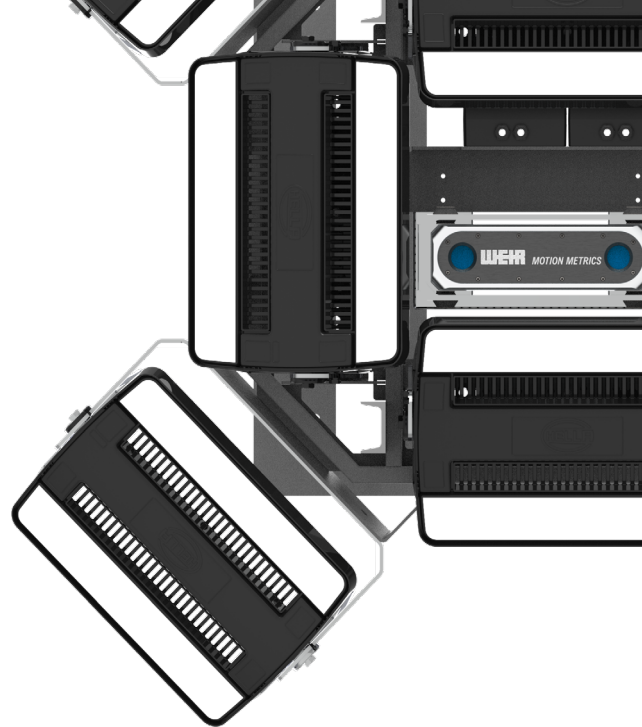
The solution is clear.

Day and night, a high-performance mine needs a reliable boulder detection system that scans each truck on its way to the crusher and provides fast boulder alerts to dispatch and operations staff allow contaminated loads to be diverted to a stockpile so that downtime due to crusher obstructions can be avoided whenever possible. The **TruckMetrics™** load scanning system is equipped with powerful LED lighting to provide ample light in all conditions and is positioned some distance from the primary crusher to allow time for dispatch to take action to reroute any problematic truck loads.

TruckMetrics™

Automatically detect boulders and assess material volume on the way to the crusher

A high-performance mine requires a dependable **boulder detection system** that operates around the clock, scanning each truck en route to the crusher and delivering rapid boulder alerts to dispatch and operations teams. This allows contaminated loads to be diverted to a stockpile, minimizing downtime caused by crusher obstructions. The **TruckMetrics™** haul truck monitoring solution features powerful LED lighting to ensure optimal visibility in all conditions. It is strategically positioned at a distance from the primary crusher, giving dispatch ample time to reroute any problematic truck loads.

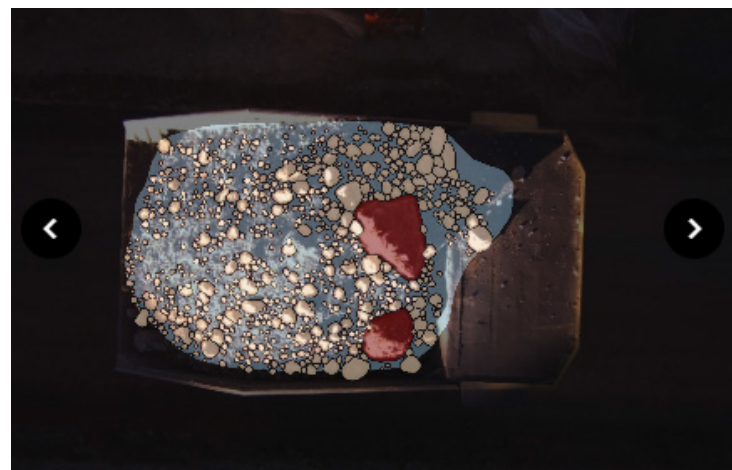


MINIMIZE COSTLY DAMAGE TO HAUL TRUCKS AND REDUCE CRUSHER DOWNTIME

TruckMetrics™ AI powered haul truck monitoring solution provides **boulder detection, particle size analysis, load profiling, and volume sensing without interrupting production.** Equipped with an automated lens cleaning system, the **TruckMetrics™** load scanning system uses AI and a 3D (stereo) camera mounted on a gantry above the haul road to provide real-time video analysis.

Features

- ✓ **Boulder Detection**
- ✓ **Fragmentation Analysis**
- ✓ **Load Profiling**
- ✓ **Volume Sensing**



▲ **BOULDER DETECTED**

Value To The Customer

*"The annual cost of the **TruckMetrics** monitoring system is typically 10% of the cost of production loss."*

Averages from Case Studies on **TruckMetrics**, Motion Metrics, 2020-2021

Design and Construction

Equipped with an automated lens cleaning system, **TruckMetrics™** uses a specially engineered 3D (stereo) camera, which has been rigorously testing for shock and vibration, heat and cold, and dust and moisture protection, mounted on a custom gantry above the haul road to provide automatic load analysis for every truck that passes beneath.

Secure Cloud Reporting

Like all **Motion Metrics™** products, **TruckMetrics™** interfaces with our centralized data analysis platform, **MetricsManager™ Pro**. Users with authorized credentials can receive SMS and email **boulder notifications**, monitor truck volume for insight into shovel operator performance, and access particle size data from anywhere.

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MOTION METRICS™

Our helpful representatives
are present everywhere
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A world map with a teal color scheme. Numerous small white circles are placed across the map to indicate the locations of Weir's representatives. These circles are concentrated in North America, Europe, Africa, and Australia, with a few scattered in South America and Asia.

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