

TIMKEN BELTS TOOLS CRUSH BELT MISALIGNMENT ISSUES IN AGGREGATE APPLICATION

CHALLENGE ▼

A sand and gravel supplier experienced recurring issues on their two crusher drives due to belt misalignment. Along with proper tensioning, alignment is critical to satisfactory belt life and performance. Without proper training or use of the correct diagnostic tools, these issues can be misdiagnosed and wrongly attributed to the belt itself rather than the condition of the drive.

The seven-foot crusher, driven by two Timken® R8V2500-4 banded belts, was found to be misaligned and under-tensioned. Additionally, the sand and gravel supplier's pit jaw crusher used four Timken R8V400-4 banded belts, which were not in the same groove on both sheaves. This was another source for misalignment and under-performance as the banded belts were being cut apart by the sharp grooves of the worn driver sheave.

TIMKEN BELTS SOLUTION ▼

A Timken Belts expert evaluated the crusher belt drives using the Laser-Align and the Frequency Finder tools. The Laser-Align was magnetically mounted against the side of one sheave with two magnetic targets placed on the side of the opposite sheave, positioned near the top and bottom of the sheave. The Frequency Finder ensured proper belt tension by measuring the natural frequency of vibration in the belt span. The Timken Belts expert documented recommendations in a service report and made a follow-up meeting to align and tension both crusher belt drives using the Drive Engineer® tool.

RESULTS THAT MATTER ▼

Considering total replacement and maintenance costs, the sand and gravel supplier is projected to save \$255,000 by addressing belt tensioning and misalignment.



Timken Belts is part of The Timken Company's growing portfolio of engineering bearings and industrial motion products. Timken Belts manufactures premium-performance power transmission belts that help keep industry in motion and the world more productive.

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