

TIMKEN CONTROLS CONTAMINANT SEEPAGE IN HYDRAULIC FRACTURING OPERATIONS

CHALLENGE ▼

Blender truck augers combine sand and chemicals using spherical roller bearing housed units in the hydraulic fracturing process. Insufficient seals allow contaminants to seep inside the bearing housings. This seriously damages the bearings and disrupts drilling operations.

TIMKEN SOLUTION ▼

A combination of Timken® four-bolt flange bearing with triple lip urethane seals, as well as secondary seals came to the rescue. Added to the sealed unit is a steel backing plate with a labyrinth Dupont™ Teflon® seal that sits on the shaft and turns with it. A bolt-on steel cover was added to the front of the bearing. The steel covers are accepted by all standard flanged bearing units. The combination of the steel cover and added seals helped to greatly decrease ingress of contamination into the bearing.

RESULTS THAT MATTER ▼

After installation of the new backing plate seal, bearing life was extended three times. This solution also saves one fracking fleet operator \$2.6 million annually. Urethane seals are resistant to chemicals, corrosion and abrasion. They are designed for moist and dirty application such as the hydraulic fracturing process. The seals keep contaminants out to extend bearing life and drilling operations experience less interruptions.



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