INSTALLING JUST ONE HYDRAULIC ISAF TURNED A SKEPTIC INTO A BELIEVER

Baldor's Dodge® Hydraulic ISAF pillow block bearing, with its patented, integral hydraulically assisted mounting system, is quick and easy to install and remove. And because it has full shaft contact, there is little or no fretting corrosion. That's the information the Binkelman Corporation rep and the Dodge field sales engineer shared with Ron Davenport, the facility maintenance foreman for the CSX Toledo Docks load-out facility. But while Davenport was intrigued, he was also skeptical.

He admitted that the bearing looked good on paper, but he was not totally convinced that a bearing could be installed in less than 15 minutes. So, even though he was frustrated with dealing with all of the issues involved with traditional split cap SAF-style bearings, he wasn't ready to try something new. But it wouldn't be long before he would change his mind, and this skeptic would turn into a believer.

CSX Corporation is one of the nation's leading transportation suppliers, providing rail-based transportation services, with about 21,000 route miles of track in 23 states, the District of Columbia, and the Canadian provinces of Ontario and Quebec. In 2012, the company's Toledo Docks operation off-loaded several million tons of iron ore shipped across Lake Erie from the iron range in Canada and Minnesota, sending railcars filled with taconite pellets directly to steel mills.

With CSX Toledo Docks in operation since 1985, Davenport says he and the maintenance crew are well acquainted with the challenges of installing split cap SAF-style bearings in the field.

"Keeping the bearing from being contaminated in the outdoors is nearly impossible," says Davenport. "A bearing change out never seems to happen on a nice day; it's usually raining or snowing, and that makes it tough on the team. Plus, you really have to know what you are doing, especially understanding how to set the tolerances just right."

A difficult installation is one issue Davenport might be willing to live with,

"Believe me, installing a bearing has never gone as smoothly as this..."

Ron Davenport, facility maintenance foreman, CSX Toledo Docks

but when a failed bearing shut down production for nearly two days, he decided he'd had enough.

"We spent a solid 48 hours changing out that bearing," says Davenport. "Not only is it a fight to get a failed bearing off, but the bearing also destroyed the shaft, so it had to be changed out as well. That's when I seriously began considering using the Dodge hydraulic ISAF bearing, because I knew there had to be a better way and, just maybe, this was it."

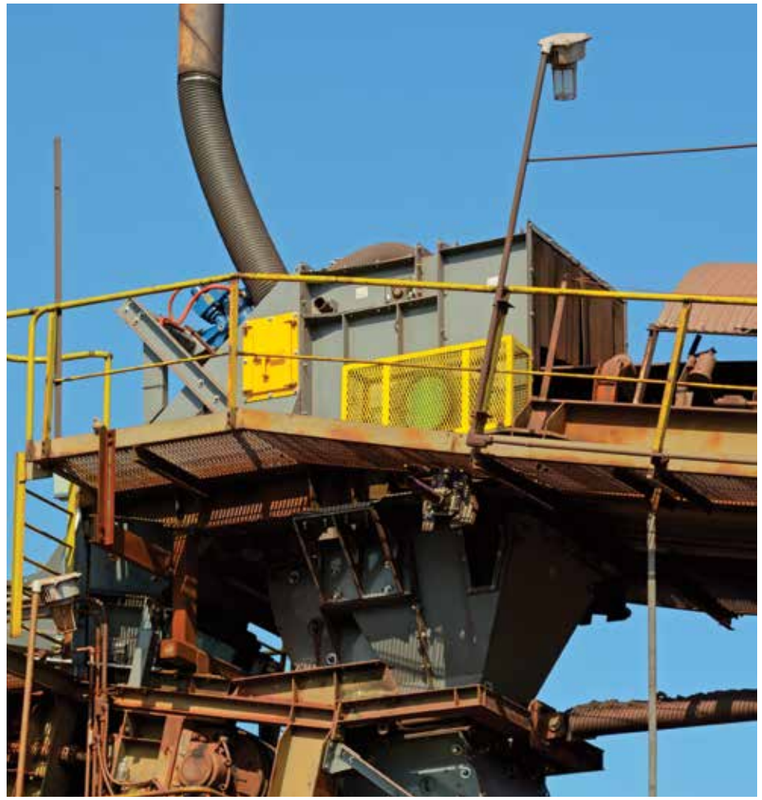
Bearing reliability was becoming an even more important consideration because the company wanted production increased, and it was installing a new high-flow chute that would improve flow. But the new design also meant the bearings on the head pulley would be much more difficult to reach, making a traditional bearing change out that much harder. Davenport decided this new project would be the perfect opportunity to try the hydraulic ISAF. But that didn't mean he was 100 percent convinced the bearing would live up to its claims.

"The first thing I did when the bearings arrived was take one of them apart to satisfy my curiosity," says Davenport. "I wanted to look at this bearing, touch it and figure out how it works. And when I did all that, I thought, 'Darn, I wish I had thought of this.'"

Davenport considered asking for help with the installation. But he says after watching the installation video and reviewing the instruction manual, he decided that the bearing actually looked fairly easy to install.

"We got the hydraulic pump out, lifted the bearing up and put it on the shaft, hooked up the hydraulic port

When the maintenance team spent 48 hours to remove and replace a failed split cap SAF-style bearing, maintenance foreman Ron Davenport knew there had to be a better bearing solution. While Davenport was skeptical that a bearing could be installed or removed quickly and easily, he became a believer in Baldor's Dodge Hydraulic ISAF bearing after he and his team installed the bearing in less than 15 minutes.



The Toledo Docks facility has run more than 3 million tons of ore since the installation of the Baldor•Dodge® Hydraulic ISAF (located behind the yellow guard) on its new high-flow shoot. Because of the bearing's reliability, ease of installation and expected ease of removal, company officials expect more Hydraulic ISAF units will be installed in the future.

and followed the directions to loosen up the spanner nuts on both sides," explains Davenport. "We had one guy pumping and one guy watching the dial indicator. We watched it go from the starting point to the finish in a matter of seconds. I hollered out, 'We're there,' and they said, 'Are you sure?' Yeah, I said 'We are there.' And then they asked me if I thought this was going to work, and I said 'I don't know.' It was too easy. But that was it. It was done."

The entire installation, from taking the bearing out of the box, taking it apart to satisfy Davenport's curiosity, putting the bearing back together and then installing it on the shaft, took about two hours. But, Davenport says, it really only took about 10 minutes to actually install the bearing once it was lifted and ready to slide onto the shaft. Which is why, he says, the guys kept asking him if this was all they had to do.

"And I told them, yes, that's it," says Davenport. "But I understood why they were asking, because this was just too easy, and that made us all a little nervous. Believe me, installing a bearing has never gone as smoothly as this – it was just too easy, that's the only way I can explain it."

Since the installation, the facility has run more than 3 million tons of ore. Davenport says he and his team continue to check the Dodge bearings, but nothing's moved; everything is exactly right where it belongs. No longer a skeptic, Davenport says he's ready to install these Dodge bearings in other locations in the facility when opportunities become available, calling it a smart investment.

"We can load a train in approximately six hours, so when we lose a minimum of 36 hours to change out a bearing, that's lost production that can't be made up," says Davenport. "So, if I can change out a bearing quickly and salvage a train, the bearings pay for themselves. It's a good feeling to know that when this bearing does have to be removed, it will come off as easily as it went on. The design of this bearing is just fantastic."

Baldor's Dodge Hydraulic ISAF pillow block bearing, with its patented, integral hydraulically assisted mount and dismount system, is quick and easy to install and remove. A built-in hydraulic piston is used on both the mount and dismount nut to facilitate tightening the bearing on the shaft during installation, and then aid in removal when it is time to dismount and replace the bearing. A harsh-duty, two-part sealing system protects the bearing from contamination and extends service life.