



## CATCH OF THE WEEK

# Rotor imbalance detected on water injection pump at an oil and gas facility



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Customer Success Story from  
GE's Industrial Performance & Reliability Center

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### What did GE's analytics software find?

In the beginning of April, the Proficy SmartSignal software detected a step change up in the drive end radial vibration on a water injection pump at an oil & gas facility. Given the speed and load on the machine, the drive end radial vibration was expected to remain at approximately 1.7 mils (43.2 micrometers), but the actual vibration stepped up to approximately 3.2 mils (81.3 micrometers). GE's [Industrial Performance & Reliability Center](#) (Industrial PRC) sent a high priority email notification to the customer and began tracking the issue on the weekly calls.

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### What was the underlying cause?

Upon investigation, the customer learned that the unit was out of alignment. The customer subsequently performed a realignment and trim balance on the unit, and the vibration readings returned to model predictions.

### What was the value to the customer?

Early notification from the Proficy SmartSignal solution and the Industrial PRC provided the customer an opportunity to proactively schedule an offline repair to prevent accelerated bearing wear due to the elevated vibration. This notification allowed a non-intrusive repair to be performed before an intrusive repair became necessary due to the bearing wear associated with the elevated vibration. The Industrial PRC was able to help the customer verify that its maintenance action was successful by showing that actual values returned to expected values.

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## MEET GE'S EXPERTS

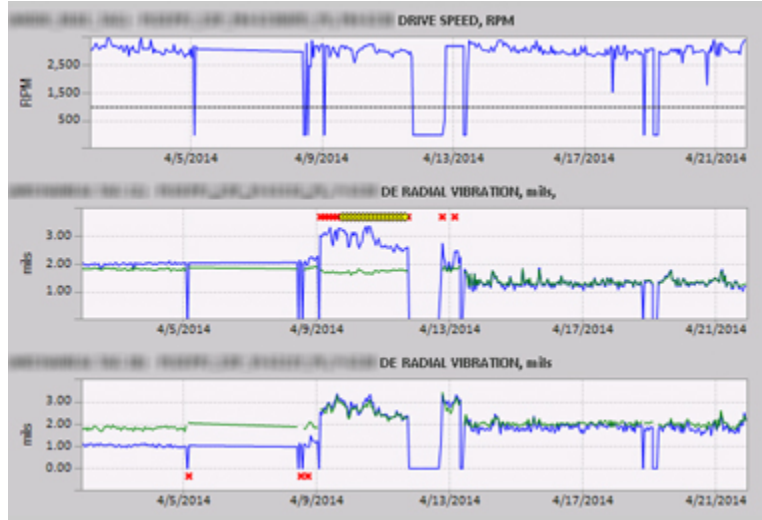
## WHAT THEY SAW



**Jenn Khong**  
Customer Reliability Engineer



**Mike Roe**  
Customer Reliability Engineer



*Drive end radial vibration stepped up to approximately 3.2 mils (81.3 micrometers), with the model prediction at approximately 1.7 mils (43.2 micrometers). The customer investigated the issue and learned that the unit was out of alignment. The customer performed realignment and trim balance on the unit, and the condition returned to model prediction.*

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GE's Industrial Performance & Reliability Center, using Proficy SmartSignal software, provides comprehensive predictive monitoring across all critical rotating and non-rotating equipment plus key balance-of-plant equipment. The Catch of the Week highlights some of the critical catches detected every day. Real customers, real stories.

What if you have small, undetected issues that might lead to big problems? We can help you find out.

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