

[Announcer] You rely on modern technology to keep the ball rolling in distribution, fulfillment and materials handling facilities across the industry. With higher demand comes the need for reliable and resilient solutions. You need to keep everything running in top condition, stay ahead of issues, and always be prepared for peak season. Condition monitoring systems in conjunction with predictive maintenance strategies are the best way to ensure your machinery and equipment run without issue. MHI's solutions community, and the condition monitoring and reliability committee pool their collective resources and experience to develop best practices and strategies to extend the life of your equipment. In a world of robotics and automation, maintenance is necessary to keep everything running smoothly. Condition monitoring is the process of actively observing and assessing a process or system in real time. It then detects any changes, issues, or anomalies allowing for immediate action if needed. Condition monitoring methods are used on a wide range of equipment using sensors and control and operational data, creating a fully integrated system. Using condition monitoring along with a well-defined predictive maintenance strategy can effectively reduce or replace more traditional, preventative and reactive maintenance programs. These traditional methods have a reputation for slowing down production as they rely on static data and a set schedule to anticipate and perform maintenance. So how do condition monitoring methods help? Instead of solely relying on regularly planned maintenance schedules and risking extended unplanned downtime, especially during peak reduction, condition monitoring allows you to anticipate maintenance and troubleshoot with minimal production interruption. Picture this. You have a fully automated distribution center when suddenly a critical component starts to overheat. This can cause trouble for your operation if not corrected immediately. The issue is that without a condition monitoring program in place, you would not even be aware that a problem is going to happen. Instead of waiting for an issue that hinders machine performance or a component to fail, condition monitoring sensors provide real-time data that can be compared to historical data to identify changes in functional parameters such as vibration or temperature but it doesn't stop there. Along with vibration analysis, condition monitoring techniques include oil analysis which measures the health of a machine's fluid properties, potential contamination and general wear. It can also include electrical current analysis, which identifies when there's an anomaly in a machine's flow of electricity. All of this and more means you can monitor speed, sounds, vibration and visual indicators of the machine metadata to alert you of potential issues. Advanced maintenance strategies rely on condition monitoring tools to provide a continuous stream of data, which help technicians identify and accurately predict the moment a piece of machinery requires attention. As smart technology, including artificial intelligence and machine learning, compiles the stream of information, it can analyze the overall health of your machine and its many components. AI can then provide data to determine any predictive or condition monitoring faults. Giving the right people the right information at the right time can bring visibility to stakeholders across the enterprise so they can make safe and cost-effective decisions protecting employees and avoiding unplanned shutdowns. Historically, condition monitoring was only viable for critical processes or industries, but now the cost, availability and enhancement of technology has allowed for expansion into material handling. This means

businesses can now rely on these tools to indicate problems throughout their facilities. Bottom line, with state-of-the-art condition monitoring techniques and tools you can expect to identify and resolve numerous machine-related issues, avoid unplanned downtime, prevent idle labor, eliminate quality issues and create monumental savings across multiple facilities. Keep your machinery running at peak performance and protect your investment. The solutions community improves the marketplace for all by striving to engage and collaborate with industry leaders in automation, software, hardware and services that support supply chain needs. Find more information on mhi.org/solutions-community.