

THE PROBLEM:

Carrier Drives are a critical path asset that can cause a total line shutdown. If a carrier drive goes down, there is a total line shutdown causing extended lost production. With miles of carrier chain throughout a plant, it can be difficult to pinpoint the breakdown. These problems cannot always be caught right away through traditional monitoring.



COST OF ASSET FAILURES

\$905,000/hour
Downtime Cost

3 hours
Downtime

Safety Incidents

INDUSTRY SAVINGS POTENTIAL

\$2,715,000
per asset

\$97,740,000
per plant

ASSET BLIND SPOTS:

There are several inherent challenges related to monitoring Carrier Drives.



Challenge #1: Vibration frequencies are often undetectable by the human ear and eye.

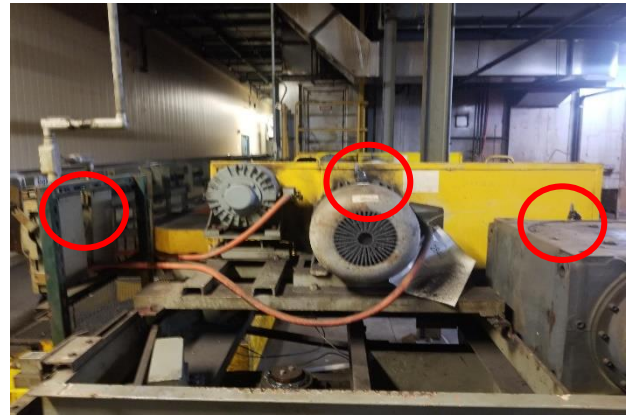


Challenge #2: The asset is critical path and cannot be easily maintained without total line shutdown.



Challenge #3: There are multiple components to a carrier drive. A problem can occur in the drive, gearbox, chain, bearings, or sprocket.

A NEW APPROACH TO CARRIER DRIVES



Ford's traditional way of catching failures is time-based PM's. These PM's are not always effective and issues can be missed. This practice is not only dangerous, but also inefficient.

Current and voltage input nodes can close the gap in monitoring carrier drives. CINs can directly monitor the current coming from the drive. This measurement aids in identifying breakdowns before they happen, and if they do, can help determine their location much faster.



HARDWARE

- A minimum of one CIN, 3 V3 sensors will be used.
- The V3 sensors will be placed on the motor, gearbox, and bearings.
- Current input nodes will be used to monitor the amperage drawn by the motors.



SOFTWARE

- Indicators
 - Current measurements will be used to determine faulty signals drives.
- Sensor Configurations
- Dashboards
 - Highlight data similarities between like assets
- Reporting



REAL-TIME DATA

- The voltage and current readings from CIN will be fed straight into SMARTdiagnostics to be viewed by the operator.
- The vibration data from the V3 sensors will be used to detect faults within the motor and gearbox.



TRAINING

- Sentry
 - Site visits quarterly
 - In-person training
- Academy
- Customer training/handbooks
- Asset playbook

CONTACT US!

Call **814-867-4097** or email sales@kcftech.com for information.

