KCF technologies

# PAINT FANS

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MACHINE HEALTH SOLUTION FOR AUTOMOTIVE

## THE PROBLEM:

Within automotive paint shops, millions of dollars in downtime costs can be attributed to fan failures. Eyes-and-ears maintenance practices and dedicated routes are not enough to predict failures, even due to common issues like fan imbalance.

When issues are caught early enough, simple maintenance practices like cleaning fan blades and replacing discharge cones can save the entire asset from failing and causing unplanned


*Exhaust fan at Ohio Assembly Plant*

### COST OF ASSET FAILURES

**$900,000/hour**
Downtime Cost

**8 hours**
Downtime

**Other**
ex: elimination of route-based maintenance, decrease in power consumption, safety

### INDUSTRY SAVINGS POTENTIAL

**$7,200,000**
per asset
*With several fans per shop*

**Elimination of Route-Based Maintenance**

**Decrease in Power Consumption**

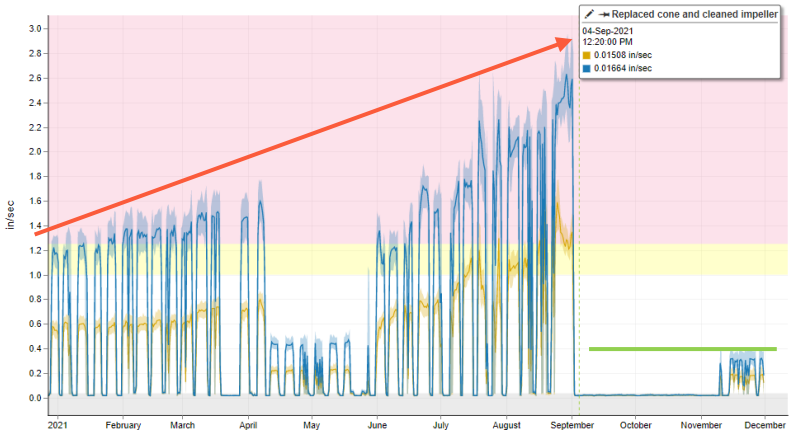
## ASSET BLIND SPOTS:

There are several inherent challenges related to monitoring paint exhaust and supply fans.

**Challenge #1:** When simple maintenance practices like impellor cleaning or cone replacement are not maintained over time, it can create common problems like fan imbalance.

**Challenge #2**: Even when these practices are maintained, improper maintenance can create asset damage through improper balancing on healthy equipment for the sake of maintaining a route.

# A NEW APPROACH TO PAINT FAN MONITORING




Above: Velocity vibration before and after impeller cleaning and cone replacement

Some automotive plants follow a preventative maintenance route where fans should be balanced and inspected. However, it is also possible that this maintenance causes more damage due to a lack of standardization across paint fans.

By implementing KCF continuous machine monitoring, it is possible to not only track asset health over time, but also ensure that preventive maintenance is done correctly. This allows for company-wide standardization across plants as well as documenting maintenance practices in SMARTdiagnostics.

## HARDWARE

### 8 V3 sensors per ASH Fan

For each air supply hose system

- Exhaust Fan
  - Motor Inboard
  - Motor Outboard
  - Inboard Bearing
  - Outboard Bearing
- Supply Fan
  - Motor Inboard
  - Motor Outboard
  - Inboard Bearing
  - Outboard Bearing

## SOFTWARE

- Threshold Settings
- Indicators
- Sensor Configurations
- Dashboards
- Reporting

## CUSTOMER INPUTS

- Run speed & asset information
- Work Orders for maintenance records
- Schematics of systems/equipment
- Downtime cost information

## TRAINING

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

**CONTACT US!**

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

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