

## CTRL Systems, Inc. Best Practices

---

### Industry

Manufacturing

---

### Application

Condition Based Monitoring (CBM)

---

### System

3 Stage Powder Coat Wash System

---

### Component

Wash, Rinse and Pretreat Motor/Pump

---

### Current Procedures

The electric motors and pumps run constantly during two eight hour shifts at 1800 rpm five days a week. A maintenance technician performs preventive maintenance by greasing two points on each motor and three points on each pump once a week. During that time, the maintenance technician performs a visual and audible inspection to determine bearing health. When a bearing fails the wash plant is shut down for approximately eight hours for change out.



---

### CTRL's Sound Solution.

1. After a short training lesson of familiarization and application of CTRL's conditioned based monitoring (CBM) solution. The maintenance technician selects the UL101 Receiver, Headset, and solid probe from their case along with the SoundCTRL PDA.
  2. Verify operation of UL101 in accordance with the operator's manual.
  3. Attach solid probe, plug in headset and PDA to UL101 receiver.
  4. Ensure powder coat wash system is aligned and operating properly.
  5. Contact the UL101's solid probe to the motor / pump housing close to a bearing strut, usually at a zerk fitting.
  6. Adjust UL101's potentiometer to where its meter is bouncing just off the zero mark. Record for twenty seconds using SoundCTRL on PDA.
  7. Upload recording to InCTRL from PDA.
  8. Instantly view bearing health from PDA.
- 

### Benefit

The InCTRL Online Analysis and Reporting system is part of the complete InCTRL System for ultrasound maintenance and diagnostics. The online system allows for convenient organization and analysis of data captured using the UL101 ultrasonic device and the SoundCTRL system. Some of the main features include:

#### Organization

Convenient organization of test points and data collection.

#### Trending

Trend graphs based on the RMS (average amplitude) values from SoundCTRL samples.

#### Thresholds

Alerts can be established for individual test points that surpass pre-defined threshold levels.

#### Analysis and Reporting

The software features easy to use analysis in the form of health status updates, and comparison plots.

#### Data Export

Most report data and metrics can be exported for use with third party applications.