

# PRECISION MAINTENANCE SKILLS 1



## Reducing Common Assembly Errors in Equipment to Exponentially Extend MTBF

### COURSE DESCRIPTION

40 Hours/No Prerequisite

Learn How to Easily Double or Triple Rotating Equipment Life by making vibration much lower through the elimination of common assembly errors and adherence to rigid precision installation, rebuild, and maintenance standards which we will show you how to achieve with little or no extra down time.

Participants will disassemble, re-assemble, correct defects, perform precision alignment for both in-line coupled & v-belt driven machines. Improvements will be noticed and measured as common and shop assembly errors are eliminated from our running and static simulators.

**RECOMMENDED AUDIENCE:** Maintenance and construction craftsmen, apprentices, front-line supervisors, project & reliability engineers, maintenance managers, & superintendents, operations personnel and significant others implementing plant reliability improvement.

### **Course Objectives**

- Understand what Precision Maintenance is & how to achieve w/o extra down time
- How to identify and avoid common assembly errors
- Understand and correct common fit & tolerance problems
- Learn basic bearing installation problems and corrections
- Learn what is good, fair and bad vibration & how it affects equipment life
- How to lower vibration & exponentially improve bearing life
- How to significantly improve and retain balance
- How to improve upon “status-quo” alignment standards & achieve precision alignment
- How to create smooth running belt drives
- How to reduce energy consumption
- Learn common lubrication errors & how to avoid

### **TOPICS COVERED**

- Introduction to Precision and Expected Results
- Basic Vibration for Laymen
- Common Assembly Errors
- Precision Measuring Tools
- Rough Alignment
- Fits and Tolerances
- Bearing Overview (preparation for Skills 2)
- Lubrication Basics and Mistakes to Avoid
- Precision Alignment
- Thermal Growth
- Balance
- Couplings

A Hendrix Precision - Cornerstone Partnership

