

Company Name: _____

Maintenance Forms & Logs

Date: _____

Log ID: _____

Version: 1.0

Centrifugal Pump Vibration Analysis Alignment Data Sheet

1.0 Form Objective & Asset Scope

This data sheet is used to document vibration analysis readings and alignment measurements for centrifugal pumps in process, HVAC, or water treatment applications. Accurate tracking of vibration trends and shaft alignment is critical to detect early signs of bearing wear, imbalance, misalignment, or resonance, enabling proactive maintenance before catastrophic failure occurs. This log supports compliance with OEM reliability standards and internal asset management programs.

2.0 Administrative & Asset Details

Date: _____

Technician Name: _____

Machine ID / Asset Tag: _____

Pump Model / Serial Number: _____

Motor Model / Serial Number: _____

Hour Meter Reading (Hours): _____

Operating Speed (RPM): _____

Coupling Type: _____

3.0 Inspection / Parameter Checklist

- ☐ Pass ☐ Fail - Verify pump and motor are isolated and locked out before taking measurements.
- ☐ Pass ☐ Fail - Record overall vibration velocity (mm/s RMS) at pump inboard bearing (horizontal, vertical, axial).
- ☐ Pass ☐ Fail - Record overall vibration velocity (mm/s RMS) at pump outboard bearing (horizontal, vertical, axial).
- ☐ Pass ☐ Fail - Record overall vibration velocity (mm/s RMS) at motor drive-end bearing (horizontal, vertical, axial).
- ☐ Pass ☐ Fail - Record overall vibration velocity (mm/s RMS) at motor non-drive-end bearing (horizontal, vertical, axial).
- ☐ Pass ☐ Fail - Measure and record shaft alignment offset (angular and parallel) using laser alignment tool.
- ☐ Pass ☐ Fail - Check and record soft foot condition at pump and motor mounting feet.
- ☐ Pass ☐ Fail - Inspect coupling condition for wear, cracks, or rubber deterioration.
- ☐ Pass ☐ Fail - Verify foundation bolts and baseplate are tight and free of corrosion.
- ☐ Pass ☐ Fail - Record bearing temperature (if applicable) using infrared thermometer.

☐ Pass ☐ Fail - Check for unusual noise or vibration during operation (audible/ tactile).

☐ Pass ☐ Fail - Compare readings against baseline or OEM alarm limits and note any exceedances.

4.0 Deficiencies & Work Order Generation

Issue Description (e.g., high vibration at pump inboard bearing, misalignment > 0.05 mm):

Recommended Corrective Action: _____

Parts Required (e.g., coupling insert, bearing, shims): _____

Priority Level (Low / Medium / High / Critical): _____

Work Order Number Generated: _____

5.0 Sign-off & Return to Operations

Maintenance Technician Signature: _____ Date: _____

Reliability Engineer Review: _____ Date: _____

Operations Supervisor Approval: _____ Date: _____

Regulatory Disclaimer: This maintenance log is a generic template. The end-user assumes all liability for validating all inspection parameters, PM frequencies, and tolerances against specific OEM machinery manuals before active shop floor deployment.