

SOP Template: Calibration and Adjustment Guidelines for Specific Machinery

This SOP provides detailed **calibration and adjustment guidelines for specific machinery**, ensuring optimal performance and accuracy. It covers step-by-step procedures for calibrating various types of equipment, criteria for adjustment, maintenance schedules, safety precautions during calibration, and documentation of calibration results. The purpose is to maintain machinery reliability, enhance operational efficiency, and minimize downtime by following standardized calibration practices.

1. Purpose

To establish standardized methods for calibration and adjustment of specified machinery, ensuring consistent performance, compliance, and safety.

2. Scope

This SOP applies to all personnel and equipment involved in the calibration and adjustment of machinery identified by the organization.

3. Responsibilities

- Operators: Carry out routine calibration following this SOP and report deviations.
- Maintenance Technicians: Perform adjustments and scheduled calibrations.
- Supervisors: Ensure SOP compliance and review calibration records.

4. Definitions

Term	Definition
Calibration	Process of configuring equipment to provide a result within an acceptable range.
Adjustment	Modifying equipment settings to correct or optimize its performance.
Reference Standard	Verified measurement standard used to check the accuracy of equipment.

5. Safety Precautions

- Ensure all machinery is powered down and properly locked out before calibration.
- Wear appropriate personal protective equipment (PPE).
- Follow manufacturer safety instructions at all times.
- Handle calibration tools with care and check for current calibration certificates.

IMPORTANT: Only trained and authorized personnel may perform calibration and adjustment procedures.

6. Calibration Procedure

- Verify the latest revision of this SOP is available and understood.
- Review machine-specific operator manual for any special instructions.
- Collect and inspect necessary calibration tools and reference standards.
- Isolate equipment power and apply lockout/tagout procedures.
- Connect reference standard to the equipment as per manufacturer's guidelines.
- Initiate calibration sequence and record all measurement deviations.
- If results fall outside acceptable limits, proceed to adjustment procedure.
- Document all calibration readings and corrective actions taken.
- Restore the machine to operational condition and verify functionality.

7. Adjustment Criteria & Procedure

- If calibration results exceed tolerances, perform the following:
- Identify adjustment points according to manufacturer's diagram.
- Modify settings/components as specified.

- Repeat calibration test; continue adjustment until results are within standard limits.
- Document the specific adjustments made and any parts replaced (if applicable).

8. Maintenance & Calibration Schedule

Machine	Calibration Interval	Responsible Party
Machine A	Monthly	Maintenance Technician
Machine B	Quarterly	Operator

*Refer to the machinery inventory for a complete schedule.

9. Documentation & Record Keeping

- All calibration and adjustment activities must be recorded on the **Calibration Log Sheet**.
- Record must include: date, time, machine ID, calibration results, adjustments performed, personnel signature.
- Keep records for at least 3 years or as per regulatory requirements.

10. References

- Manufacturer equipment manuals
- ISO 9001:2015 Quality Management Systems
- Internal work instructions and prior calibration records

11. Revision History

Version	Date	Description	Approved by
1.0	2024-06-01	Initial release	QMS Manager