

Preventive Maintenance & Precision Service Programs

Machine tool performance does not stop at installation. Routine maintenance, accurate calibration, and timely service help protect machine accuracy, reduce unplanned downtime, and extend the productive life of your equipment.

Absolute Machine Tools provides comprehensive preventive maintenance and precision service programs designed to identify potential issues before they become costly problems. Our experienced service technicians evaluate the mechanical condition and performance of your equipment and provide the information you need to keep production on track.

01 BRONZE TIER

A thorough inspection and essential maintenance package for routinely serviced CNC equipment. This includes:

- Pull back way covers and clean chips
- Inspect pneumatic system for leaks and wear
- Check proper way lubrication distribution
- Change way oil and clean tank, up to 2 gallons
- Change gearbox cooling oil
- Check and adjust air pressure
- Inspect way oil lines for leaks; tighten or replace as necessary
- Check and adjust backlash
- Check machine level with .0005"/12" levels
- Report general machine condition

02 SILVER TIER

Adds mechanical inspection and diagnostic testing for a more complete evaluation of machine condition. Includes everything in the **Bronze Tier PLUS:**

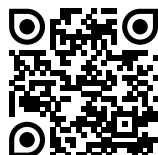
- Adjust gibs on X, Y, and Z axes
- Check spindle runout and bearing temperature
- Evaluate machine condition and backlash using ballbar testing

03 GOLD TIER

Our most comprehensive preventive maintenance program for manufacturers requiring a deeper evaluation of machine geometry and positioning accuracy. Includes everything in the **Silver Tier PLUS:**

- Level, tram, and square the machine*
- Laser calibrate the machine*
- Pitch compensate three axes

*Certain services may be billed at current hourly rates and are also available individually.



Precision Services for CNC Machine Tools

When machine accuracy, geometry, or performance begins to change, Absolute can go beyond routine maintenance to diagnose and correct the underlying issue.

Pitch Error Compensation

Absolute provides linear and rotary axis measurement, calibration, and compensation services using Renishaw laser technology.

Pitch error compensation can help restore positioning accuracy by identifying deviations within a machine's motion system and applying the appropriate compensation values. Services include:

- Linear axis measurement and compensation
- Rotary axis measurement and compensation
- Positioning accuracy verification
- Calibration reporting



Level, Square, & Alignment

Using advanced FARO and Hamar laser measurement systems, Absolute technicians can evaluate machine geometry, including:

- Level and squareness
- Straightness
- Surface flatness
- Positional accuracy
- Machine alignment

These systems allow our technicians to evaluate multiple geometric relationships efficiently and identify alignment errors that can affect part accuracy and machine performance.

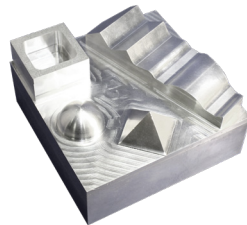


Servo Tuning for CNC Controls

Proper servo tuning can improve the way a machine responds during demanding machining operations. Absolute technicians evaluate machine mechanics, CNC parameters, and servo response using precision diagnostic equipment to optimize the machine for the customer's application.

Servo tuning can help:

- Improve surface finish
- Reduce cycle times
- Improve machine response
- Support tighter tolerances
- Optimize performance for specific applications



Ballbar Circularity Inspection & Tram Testing

Renishaw ballbar testing provides a fast, data-driven method for evaluating machine motion and geometry. Testing can help identify:

- Backlash
- Servo-related errors
- Squareness issues
- Machine geometry problems
- Mechanical wear
- Circular interpolation errors

Detailed diagnostic data helps our technicians pinpoint potential mechanical or electrical issues and recommend corrective action.



From preventive maintenance and troubleshooting to machine calibration and precision alignment, Absolute Machine Tools provides the technical resources manufacturers need to keep CNC equipment performing at its best. Schedule your Preventive Maintenance & Precision Services today!

