

**NIMS Certified Machine Tool Maintenance, Service, and Repair Specialist:
Complete Core Competencies**

Task	Date Completed	Supervisor Signature
Prepare Machine Maintenance Schedule		
Confirm Frequency of Checks		
Perform Broad Scan Visual Inspection		
Confirm Proper Operation & Operating Performance		
Be Sensitive to Changes in Operating Conditions		
Perform Fluids Change		
Locate Check Points & Grease Points		
Check Particulate Matter		
Clean up Spills		
Select Proper Fluid Types		
Filters		
Verify Controller Functions-Level II		
Verify Machine Diagnostic Capabilities-Level II		
Confirm Accuracy of All Instrumentations		
Create a Project Plan		
Troubleshoot Project		
Use a Computer as Diagnostic Tool		
Maintain Records		
Be Sensitive to Heat Build-Up, Odors, and Variations in Part Consistency		
Seal Fluid Leaks		
Identify Contamination Sources		
Verify Controller Functions-Level III		
Verify Machine Diagnostic Capabilities-Level III		
Confirm Operation of All Gauges		
Inspect & Confirm Condition of Bearing		
Repair Shafts & Bores for Mountings		
Install Bearings		
Verify Bearings Installation		
Select and Replace Gearing		
Check Heat of Operation		
Verify Operation of Sensors		
Verify Volt & Amperage Capacity		
Replace Damaged Electrical Components		
Replace Electronic Components		
Confirm Structural Integrity		
Verify Balance, Leveling, Squareness, Parallelism & Perpendicularity, Pitch, Yaw, & Roll		
Use Solder		
Diagnose Welding Needs		
Use Alternative Technologies		
Machine Operations & Material Handling, Hazardous Materials Handling & Storage		
Lock-out, Tag-out Procedures		

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Required NIMS Credentials

In order to demonstrate proficiency in all of the competencies listed in this appendix, the apprentice will have completed all of the following NIMS Credentials.

Name of Credential	Date Completed	Supervisor Signature
Measurement, Materials and Safety		
Job Planning, Benchwork and Layout		
Drill Press Skills		
Grinding Skills I (optional)		
Machine Maintenance Level II		
Machine Service and Repair - Level III		
One of the Following Two		
Manual Milling Skills I CNC Milling: Programming Set-up and Operations I		
One of the Following Three		
Turning Operations: Turning Between Centers I Turning Operations: Turning Chucking Skills CNC Turning: Programming Set-up and Operations		
One of the Following Two		
Manual Milling Skills II CNC Milling Skills II		
One of the Following Three		
Turning II-Chucking Turning II-Between Centers CNC Turning Skills II		