

# Inspection Checklist for CNC Laser Cutting

Inspecting CNC Laser Cutting Machines regularly is essential for maintaining precision and ensuring safe operation. Here's a checklist for inspecting CNC Laser Cutting Machines:

## 01. OVERALL MACHINE CONDITION:

- ☐ Check for any signs of wear, rust, or damage on the machine's exterior.
- ☐ Ensure the machine frame and structure are stable and in good condition.

## 02. LASER SOURCE:

- ☐ Inspect the laser source for proper alignment and cleanliness.
- ☐ Check for any signs of wear or damage on mirrors and lenses

## 03. GAS SUPPLY SYSTEM:

- ☐ Verify the availability and proper pressure of assist gases (e.g., nitrogen, oxygen).
- ☐ Check for leaks or blockages in the gas lines.

## 04. CUTTING HEAD:

- ☐ Inspect the abrasive delivery system for proper operation and alignment.
- ☐ Check for any blockages or irregularities in the abrasive flow.

## 05. AXIS MOVEMENT:

- ☐ Jog each axis through its full range of motion to check for smooth movement.
- ☐ Verify there is no backlash or excessive play in any of the axes.

## 06. WAY COVERS AND SEALS:

- ☐ Check way covers for damage or obstruction and ensure they move freely.
- ☐ Inspect seals to prevent contamination of critical components.

## 07. COOLING SYSTEM:

- ☐ Check the coolant level and ensure it is at the appropriate concentration.
- ☐ Inspect hoses, pump, and heat exchanger for leaks or damage.

## 08. ELECTRICAL COMPONENTS:

- ☐ Verify that all electrical components, including switches, buttons, and lights, are functioning properly.
- ☐ Check the wiring for any signs of wear or damage.

## 09. SAFETY FEATURES:

- ☐ Test emergency stop buttons to ensure they function correctly.
- ☐ Check interlocks and safety guards for proper operation.

## 10. EXHAUST AND FILTRATION SYSTEM:

- ☐ Verify the proper functioning of the exhaust and filtration system.
- ☐ Inspect filters and replace them as needed to maintain air quality.

Regularly performing these inspections helps identify issues early, ensuring the CNC Laser Cutting Machine operates safely and efficiently. Always refer to the machine's manual for specific inspection procedures and maintenance recommendations.