

Plasma Cutter Safety Checklist

The potential hazards you may encounter while plasma cutting consist of:

- Electrical shock
- Burns from hot metal and/or molten materials
- Exposure to noxious gas and/or toxic chemicals
- Radiation damage to eyes and/or exposed skin
- Airborne particles and dust
- Elevated noise levels from heavy machinery

To avoid these potential safety hazards and to ensure safe operations, follow this checklist:

Personal Protective Equipment (PPE)

- Hearing protection
- Welding mask/eye protection
- Half-face/air-purifying respirator
- Gloves
- Long-sleeve shirts and long pants
- Safety footwear

Pre-operational safety checks

- Is the operator familiar with all plasma cutter operations and controls?
- Have all emergency stops been located and tested to ensure they're in good, working order?
- Have all electrical connections to the plasma cutter been inspected and are secured and tight?
- Is the material safe to cut and poses no health risks? Review your Safety Data Sheets (SDS) for specific technical data and precautionary measures for any materials or coatings on metals cut with this equipment.
- Are workspaces and walkways free of any trip and fall hazards?
- Are workspaces clean and free of oil, grease, and/or any other flammable materials?
- Are your PPE, equipment, and workspace dry to avoid electrical shock?
- Are your PPE, handpiece, and work leads in good, working condition?
- Is the immediate area closed off to protect other workers from flashes?
- Is ventilation to the plasma cutter in good working condition?
- Are work leads and hoses secured to prevent the trip and fall hazard?
- Is all required PPE available and equipped?

Operational safety checks

- Ensure the fume extraction unit is on and operational before beginning.
- Is the machine correctly set up for current, voltage, and gas flow rate?
- Are return cables making firm contact in order to provide a good electrical connection?
- Is the workpiece free of any paint, oxides, or other surface finishes to ensure a good electrical contact?

Pre-operational safety checks

- Is the operator familiar with all plasma cutter operations and controls?
- Have all emergency stops been located and tested to ensure they're in good, working order?
- Have all electrical connections to the plasma cutter been inspected and are secured and tight?

Never leave the plasma cutter running unattended.

Post-operational procedures checks

- Are the cut materials cooled off?
- Is the fume extraction unit turned off?
- Is the plasma cutter turned off at the isolating switch?
- Are the electrode holder and welding cables secured?
- Is the work area cleaned up and the tools put away?
- Has defective equipment been reported to maintenance department?

If you have questions about the safe operating procedures of plasma cutters, please contact your local West Bend Mutual Insurance loss control consultant.

