

Plasma Cutter - Hand Cutting Certification

Student:

Trainer:

Date:

Version: 0.1.0 - 2020-11-03

Certification required for: Plasma Torch (Metal Shop)

Training Check-Off List:

Tool Anatomy

- Parts of the CMS's Hypertherm Powermax85 plasma cutter are properly identified
 - Torch lead and connector - can take torch lead on and off
 - Work lead, clamp and connector - can install and remove work lead
 - Gas supply line
 - On/Off Switch
 - Operating Mode Switch - can impart different modes
 - Expanded metal
 - Standard cutting and piercing
 - Gouging
 - Lock
 - Status Screen
 - Current setting
 - Fault Icon
 - Fault code
 - Pressure setting
 - Gas Pressure Bar

Machine Capabilities & Limitations

- Student can convey recommended cutting capacities as respective speeds (ipm) for Powermax85.
- Student can convey duty cycle limitations with Powermax85:
 - At 85 A, the arc can remain on for 6 minutes out of 10 minutes without causing the unit to overheat (60% duty cycle).
 - At 74 A, the arc can remain on for 8 minutes out of 10 (80%)
 - At 66 A, the arc can remain on for 10 minutes out of 10 (100%).

Pre-Operation

- Student utilizes proper Personal Protection Gear - safety glasses, welding helmet or glasses, welding gloves, welding jacket (or long sleeves!) No unrestrained long hair and no flowing clothes. Closed-toed shoes are required.
- Student checks to ensure that work area is safe - No puddles on floor in welding/ plasma cutting (handheld) area. Plasma cutting area is free of flammable materials.
- Student adjusts welding screens to make sure no bystanders can be caught by arc-flash

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Operation

- Student turn on air compressor AND cooling fan
- Student turns on the Powermax85, checks the indicators and verifies the following
 - The green power ON LED on the front of the power supply is illuminated.
 - The Fault LED is not illuminated.
 - No error icons appear in the status screen.
- Student adjusts the current (amperage) for the specific cutting application.
- Student turns on the fume extractor and position extraction arm correctly.
- Student attaches work clamp correctly
- Student demonstrates proper drag-cutting technique

Post-Operation

- Student turns off the fume extractor.
- Student turns off the plasma cutter.
- Student turns off air compressor and cooling fan.
- Student disconnects the work clamp, coil cords and stores neatly.
- Student return all tools.
- Student cleans the cutting table and the area around the cutting table.

Lockout/Tagout Procedure

- Student imparts the following Lockout/Tagout procedure: Tool unplugged and plug wrapped in safe/visible location, tag filled out and posted, front desk and/or Metal Shop Lead notified ( [/cdn-cgi/l/email-protection#204d4554414c53484f5060434c4152454d4f4e544d414b455253504143450e4f5247])

Pass/Fail:

Comments:

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Student Signature: Date

Certifier Signature: Date



Certifier: Please scan this QR Code to email info@claremontmakerspace.org, and include a list of students who have passed this test.

Then, return this form to the front desk (even if the student failed!).