

Safe Work Practice (SWP)

Name of Task Plasma Cutter	
Department/Unit: Trades Programs	
Personal Protective Equipment or other required equipment and safety considerations: Eye protection, CSA approved footwear, hearing protection, leather welding gloves, NIOSH approved respirator, protective apron and face shield. Long hair must be tied back or contained. No loose fitting clothing, or jewelry (watches, rings or necklaces). Fume hood required.	
Hazards: Dust/debris irritation, noise, burns, sparks, fumes, flashbacks, radiation burns to eyes and body, electric shock, and hot or molten material injuries.	
Required Training:	<ul style="list-style-type: none"> • Read and understand General Safe Work Practices. • Hands on training with instructor for proper safety procedures.
Steps to be taken to complete task safely:	
1	Pre-Operational Safety Checks:- <ul style="list-style-type: none"> • Inspect required personal protective equipment and replace if required. • Ensure no slip/trip hazards are present in workspaces and walkways. • Make sure guards, if present, are installed and working properly. • Locate and ensure you are familiar with the operation of the ON/OFF starter. • Ensure work area is clean and clear of grease, oil, and any flammable materials. • Keep plasma cutter and work area dry to avoid electric shock. • Ensure the gloves are dry and free from holes to avoid electric shock. • Ensure torch, ground leads and cable are in good condition. • Ensure fume extraction unit is on before beginning welding operation. • Ensure other people are protected from flashes by closing curtain to welding bay or by erecting screens.
2	Prohibited Activities: <ul style="list-style-type: none"> • Do not leave this equipment unattended while running. • Do not use bare hands and never wrap electrode leads around yourself. • Never plasma cut or watch plasma cutting without using a protective shield. • Do not use around flammable materials. • Do not cut containers until you can determine whether it once contained flammable liquids. • Do not use while wearing trousers with cuffs.
3	Inspect required personal protective equipment and replace if required.
4	Put on all required personal protective equipment.
5	Make all adjustments with Power Off.
6	Open fume hood and turn on fume extractor.
7	Position metal and clamp if necessary.
8	Securely attach ground cable to work. Ensure the ground lead makes firm contact and does not create a tripping hazard.
9	Set-up plasma cutter current.
10	For drag cutting, keep the torch in contact with the workpiece.
11	For standoff cutting, hold the torch 3-9 mm from the workpiece.

12	With the torch in starting position, press and hold the Torch Trigger.
13	Once on, the cutting arc remains on as long as the Torch Trigger is held down, unless the torch is withdrawn from the work or torch motion is too slow.
14	Release Torch Trigger to shut Off torch.
15	Allow workpiece to cool to room temperature before handling.
16	Post-Operational Safety Checks:- <ul style="list-style-type: none"> • Ensure equipment is off. • Place all materials in the their proper storage areas. • Switch off the machine and fume extraction. • Close air supply valve. • Hang up torch and ground cable. • Ensure the equipment is safe, clean and tidy before you leave it.
<i>If an emergency situation occurs while conducting this task, or there is an equipment malfunction, shut the equipment off immediately and follow the lock out procedure. Report any hazardous situation to your instructor/supervisor immediately.</i>	
Responsibilities, Completion and Review	
<i>Management and workers to ensure all duties performed in accordance to training, established health and safety regulations/guidelines, policies and procedures (e.g. utilizing personal, protective equipment as per SAFE Work Procedures). Notify Manager or designates (i.e. supervisors) of all occurrences, injuries illnesses or safety and health concerns which are likely to harm themselves, co-workers, or any others who enter the premises.</i>	
Completed by and Date:	Approved by:
Last Reviewed/Revised by and Date:	Note: This task will be monitored periodically to ensure compliance and effectiveness.