

**Servicing Cartridge Filters is in a Confined Space and must only be carried out by personnel with confined spaces training**

	Activities	Procedures	Hazards/Risks	Controls
1	Transferring work piece to plasma machine	Use crane or move rail trolley holding the work pieces to plasma machine	Manual handling injuries	<p>If using rail trolley, use more than one person to push trolley</p> <p>If necessary to manually handle the work at all, assess the weight and where it has to go and only handle it alone if safe to do so. Use someone to assist you and use mechanical equipment where necessary.</p> <p>In the event of a fault, do not proceed until Supervisor instructs you to however Supervisor must document fault in Works Diary. Repair to be arranged and alternate safe-to-use equipment to be provided.</p>
2	Operation of compressor	Visual inspections of compressor	<p>Malfunctioning compressor resulting in oil and/or electrical fires.</p> <p>Collection of oil, papers, rags or other combustible materials being ignited by adjacent hot works</p>	<p>Preoperational safety check undertaken by operator to ensure</p> <ul style="list-style-type: none"> <li>- Operator familiar with operation including use of the emergency stop</li> <li>- Fire extinguishers are readily available (ABE or CO2)</li> <li>- Air hoses are attached and in good condition</li> <li>- Electrical leads are tested and tagged for the current period and in good condition</li> <li>- Compressor service tag shows current maintenance</li> <li>- Regulator set to appropriate pressure</li> <li>- Sufficient oil level</li> <li>- the inner compartments are</li> </ul>

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				<p>clear of oil or any other combustible or flammable materials</p> <p>During operation, operators to ensure:</p> <ul style="list-style-type: none"> <li>- Operation of compressor is monitored for any air leaks, sudden pressure changes</li> <li>- The compressor is never left unattended</li> </ul> <p>Before breaks or end of working day, operators are to ensure:</p> <ul style="list-style-type: none"> <li>- Work areas are left clean and tidy</li> <li>- Operator or fire-watch checks for any fires</li> </ul>
3	Check condition of equipment	Check torch tip and check oxygen and argon. Change torch parts if necessary	Electrocution, burns, electric shock	Disconnect power before checking, cleaning or changing torch tip. Isolate coolant pump prior to changing cutting head. Ensure that the torch is a Hypertherm torch. Wear eye protection.
4	Check electrical safety	Conduct check of electrical gear and ensure electrical safety	Electrocution, burns, electric shock	<p>Ensure clothes are dry and wear insulated gloves and protective footwear with soles that are in good condition and can guard against slip. Check that RCD protection and cord/leads are in proper condition and area is not wet.</p> <p>In the event of a fault, do not proceed until Supervisor instructs you to however Supervisor must document fault in Works Diary. Repair to be arranged and alternate safe-to-use equipment to be provided.</p>
5	Check safety of	Ensure general area is	trip or slip injuries and	Ensure that supply covers are

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	work area	safe	risk of fire	in place.  Ensure that the work area is free of any trip or slip hazards and any flammable chemicals.
6	Operate plasma machine	Use plasma machine to cut metal	Flash or glare and infra-red or ultra-violet rays, hot slag and sparks, fumes. Noise	<p>Keep other personnel away from the machine operating area and clear of flash or glare and ensure screens are in place.</p> <p>Do not cut any metal that is coated without consulting the Supervisor.</p> <p>Keep clear of all hot surfaces and the torch area.</p> <p>Wear eye protection with side shields and proper lens shading or else a proper welding helmet, to protect against ultra violet and infra-red radiation.</p> <p>Ensure that there is adequate ventilation and if using a fan that it is not exhausting fumes to other personnel.</p> <p>Wear hearing protection</p>
7	Remove work pieces from chamber	Use crane or move rail trolley holding work pieces away from the machine	<p>Manual handling injuries.</p> <p>Hot material causing burns</p>	<p>If using rail trolley, use more than one person to push trolley</p> <p>Ensure enough time has elapsed to allow material to cool and wear gloves</p>
8	Clean up debris	Ensure any waste or debris is freed from plasma machine areas using compressed air if required	Hand injuries from sharp metal fragments and eye contamination	Wear protective gloves and eye protection with side shields
9	Emptying dust	Ensure dust is not	Collector is approx. 15	Two person lift

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	collector	excessive and empty dust collector using two persons	kg and difficult to handle	
10	Servicing Cartridge Filters	Filters are in a confined space environment	Confined spaces have particular risk features	To be carried out only by confined spaces trained personnel



## Safe Operating Procedure #11 – Plasma Machine

- Supervisor:
- **Personal Protective Equipment that must be used: Insulated gloves, eye protection with side shields and proper lens shading or else a proper welding helmet, insulated footwear, hearing protection**

This SOP has been developed in consultation with me and I agree to follow it and carry out tasks in a safe manner, reporting any problems to my immediate Supervisor.

	Name	Signature	Date
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