

Handheld Plasma Cutting of Steel Plate - JSA - B

en-US · Technical failure review · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time	Location / area		Assessor		Supervisor	
Team signatures						

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Inspect supply and gas							
HP-2 Verify separation support							
HP-3 Hold and restore controls							
HP-4 Inspect and hand over							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Set support and shielding	1. Fire from sparks 2. Cable insulation damage 3. Nearby arc-eye injury	1. Combustibles below table 2. Lead touches hot edge 3. Screens incomplete	1. Remove or protect combustibles 2. Protect lead and hose routes 3. Control radiation and access	1. Spark-reach inspection 2. Cable and hose routing 3. Screens and required PPE				
2. Inspect supply and gas	1. Stored-charge injury 2. Hose release 3. Wrong gas operation	1. Servicing scope confused 2. Connection defective 3. Gas specification ignored	1. Define isolation and authority 2. Check hoses and connections 3. Use specified gas conditions	1. Work-return connection 2. Service and energy boundary 3. Gas hose and filter condition				
3. Verify separation support	1. Retained plate tips 2. Molten-metal impact 3. Return path interrupted	1. Sequence not reviewed 2. Person below cut 3. Clamp on falling piece	1. Confirm final cutting sequence 2. Exclude below and drop area 3. Keep approved return path	1. Retained-plate stability 2. Drop zone and removal method 3. Return clamp placement				
4. Cut and monitor	1. Arc-radiation injury 2. Fire development 3. Hot-torch contact	1. Protection unsuitable 2. Sparks reach combustibles 3. Nozzle adjusted while active	1. Use correct radiation protection 2. Watch exposed areas 3. Stop before torch adjustment	1. Screens and filter selection 2. Sparks and combustibles 3. Settings and cut condition				
5. Service and clear pieces	1. Gas-pressure release 2. Hot-consumable burn 3. Sharp-edge cut	1. Residual gas ignored 2. Cooling skipped 3. Piece stored unstably	1. Control supply and residual energy 2. Confirm safe handling condition 3. Remove pieces by planned method	1. Gas and cooling condition 2. Compatible consumables 3. Stable removed-piece storage				
6. Hold and restore controls	1. Damaged torch reused 2. Continued fume exposure 3. Shock during rework	1. Unstable arc forced 2. Extraction not restored 3. Stop confused with isolation	1. Inspect isolated equipment 2. Restore fume and fire controls 3. Review support and return again	1. Torch consumables and return 2. Control restoration evidence 3. Safe restart authorization				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ Spark-reach inspection	☐ Work-return connection	☐ Retained-plate stability
☐ Screens and filter selection	☐ Gas and cooling condition	☐ Torch consumables and return
☐ Screens and required PPE	☐ Settings and cut condition	☐ Safe restart authorization