TROUBLE SHOOTING ARC WELDING EQUIPMENT

Problem: Welder will not start (Starter not operating)			
	Cause:	Power circuit dead.	
		Check voltage.	
	Cause:	Broken power lead.	
	Remedy:	Repair.	
	Cause: Remedy:	Wrong supply voltage. Check nameplate against supply.	
	Cause:	Open power switches	
	Remedy:	Close.	
	Cause:	Blown fuses.	
	Remedy:	·	
	Cause:	Overload relay tripped.	
	Remedy:	Let set cool. Remove cause of overloading.	
	Cause: Remedy:	Open circuit to starter button. Repair.	
	Cause:	Defective operating coil.	
	Remedy:	Replace.	
	Cause:	Mechanical obstruction in contactor.	
	Remedy:	Remove.	
Problem: Welder will not start (Starter operating)			
	Cause:	Wrong motor connections.	
	Remedy:	Check connection diagram.	
	Cause:	Wrong supply voltage.	
	Remedy:	Check nameplate against supply.	
	Cause:	Rotor stuck.	
	Remedy: Cause:	Try turning by hand. Power circuit single-phased.	
	Remedy:	Replace fuse; repair open line.	
	Cause:	Starter single-phased.	
	Remedy:	Check contact of starter tips.	
	Cause:	Poor motor connection.	
		Tighten.	
	Cause:	Open circuit in windings.	
	Remedy:	Repair.	
Problem: Starter operates and blows fuse			
	Cause:	Fuse too small.	
	Remedy:	Should be two to three times rated motor current.	
	Cause:	Short circuit in motor connections.	
	Remedy:	Check starter and motor leads for insulation	
		from around and from each other.	

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Problem: Welder runs but soon stops Cause: Wrong relay heaters Renewal part recommendations Remedy: Welder overloaded Cause: Remedy: Considerable overland can be carried only for a short time Duty cycle too high Cause: Remedy: Do not operate continually at overload currents Leads too long or too narrow in cross section Cause: Remedy: Should be large enough to carry welding current without excessive voltage drop Cause: Power circuit single-phased Check for one dead fuse or line Remedy: Cause: Ambient temperature too high Operate at reduced loads where temperature Remedy: exceeds 100° F Ventilation blocked Cause: Check air inlet and exhaust openings Remedy: Problem: Welding arc is loud and spatters excessively Current setting too high Cause: Remedy: Check setting and output with ammeter Cause: Polarity wrong Check polarity, try reversing, or an electrode of Remedy: opposite polarity Problem: Welding arc sluggish Cause: Current too low Remedy: Check output, and current recommended for electrode being used Poor connections Cause: Check all electrode-holder, cable and ground-Remedy: cable connections. Strap iron is poor ground return Cable long or too small Cause: Check cable voltage drop and change cable Remedy: Problem: Touching set gives shock Cause: Frame not grounded Ground solidly Remedy: Problem: Generator control fails to vary current Any part of field circuit may be short circuited Cause: or open circuited

Find faulty contact and repair

Remedy:

TROUBLE SHOOTING ARC WELDING EQUIPMENT ———

Problem:	Cause:	tarts but will not deliver welding current Wrong direction of rotation See INITIAL STARTING
	Cause: Remedy:	Brushes worn or missing Check that all brushes bear on commutator with sufficient tension
	Cause: Remedy:	Brush connections loose Tighten
	Cause: Remedy:	Open field circuit Check connection to rheostat, resistor, and auxiliary brush studs
	Cause: Remedy:	Series field and armature circuit open Check with test lamp or bell ringer
	Cause: Remedy:	Wrong driving speed Check name plate against speed of motor or belt drive
	Cause: Remedy:	Dirt, grounding field coils Clean and reinsulate
	Cause: Remedy:	Welding terminal shorted Electrode holder or cable grounded
Problem:	Cause:	enerating but current falls off when welding Electrode or ground connection loose Clean and tighten all connections
		Poor ground Check ground-return circuit
		Brushes worn worn off Replace with recommended grade. Sand to fit. Blow out carbon dust.
	Cause: Remedy:	Weak brush spring pressure. Replace or readjust brush springs
	Cause: Remedy:	Brush not properly fitted Sand brushes to fit
	Cause: Remedy:	Brushes in backwards Reverse
	Cause: Remedy:	Wrong brushes used Renewal part recommendations
	Cause: Remedy:	Brush pigtails damaged Replace brushes
	Cause: Remedy:	Rough or dirty commutator Turn down or clean commutator
	Cause: Remedy:	Motor connection single-phased Check all connections