

TESTING EQUIPMENT AND TOOLS

Below is a list of test equipment and tools for servicing and repairing welding and EnPak equipment. These tools are available online or at electronic supply stores, with alternative manufacturers or models acceptable if they meet or exceed the required specifications.

Other tools may be required for specific repairs as outlined in the Technical Manual or Field Instruction.

Description	Specification	Model	Used For
Required			
Welding Power Load Bank	Capacity 750A at 50 volts AC/DC	Eagle Eye LB-50-750	Testing load and functions of power sources
	Capacity 350A at 35 volts AC/DC	Eagle Eye LB-50-350	Enpak requires 350A load bank.
True RMS Multimeter	CAT III 1000V, CAT IV 600V	Fluke 179	Measuring frequency, capacitance, and testing diode
IGBT/Mosfet Tester	OEM Design	Miller #043553	Simulating or testing power module and power transistor
Flashlight with Continuity Tester	Leads with alligator clamps	Fulton 905-IB	Testing SCR components
True RMS AC/DC Clamp-on Ammeter	0 to 600 amp CAT III 1000V, CAT IV 600V	Fluke 375 FC	Non-contact current measurement
Windows-based Computer	With USB drive or SD card		Updating software
ESD Wrist Strap	1 Megohm, Ansi/ESD S1.1	SCS ECWS61M-1	Protecting circuit boards and other sensitive electronic components from static discharge
Non-Contact Voltage Tester	CAT IV 1000V AC	Klein NCVT3P	Detecting presence and absence of voltage
Pin Extraction Tool Kit	305183 Amp Extraction Pin 11-03-0044 Mini-Fit Extraction 2063388-1 Amp Extraction Pin HT2038 Circular .093" Extraction	Miller #298069	Removing pins from connectors and wiring harnesses
Torque Wrenches	Lowest 4 inch-pound Highest 160 foot-pound	Proto	Tightening components to torque specification
Pneumatic Flowmeter with Pressure Gauge	½" NPTF, 5-50 SCFM	Hedland H671A-050	Testing and monitoring pressurized air line (Enpak ONLY)
Hydraulic Tester	0-5000 psi (16+ GPM)	Hydracheck HC-TK760S-050	Measuring the flow rate and pressure in hydraulic systems (Enpak ONLY)
Recommended			
Oscilloscope	100 MHz bandwidth 300V Cat II	Hantek DSO2C10	Displaying and analyzing waveform and bandwidth of electronic signals
Insulation Tester	50-1000V	Fluke 1507	Testing stationary and rotating magnetics and insulation resistance
Contact Tachometer	10-9999 RPM 0.2-6560 Feet/Minute	Ex-Tech 461891	Measuring motor speed of wire feeder and rotating objects
Multimeter Test Leads Kit	Wire Piercing	Pomona 5899A	Testing connection points; use with multimeter
Thermal Imaging Camera	w/ Smart Phone Option	FLIR One Gen 3	Identifying temperature differential in electrical and mechanical system