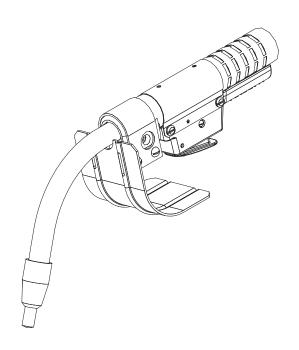


Operator's Manual

Magnum® Guns



For use with machines having Product Numbers:

K115-[], K116-[], K114, K264-8, K355-10, K126-1, K126-2, K126-3, K345-1, K345-10, K345-1



Register your machine: www.lincolnelectric.com/register

Authorized Service and Distributor Locator:

All K numbers shown above except K114 meet the following standards:

IEC 60974-7 GB 15579.7-2013

Save for future reference

Date Purchased
Code: (ex: 10859)
Serial: (ex: U1060512345)

THANK YOU FOR SELECTING A QUALITY PRODUCT BY LINCOLN ELECTRIC.

PLEASE EXAMINE CARTON AND EQUIPMENT FOR DAMAGE IMMEDIATELY

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

SAFETY DEPENDS ON YOU

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT. And, most importantly, think before you act and be careful.

• WARNING

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.

! CAUTION

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.

KEEP YOUR HEAD OUT OF THE FUMES.

DON'T get too close to the arc. Use corrective lenses if necessary to stay a reasonable distance away from the arc.

READ and obey the Safety Data Sheet (SDS) and the warning label that appears on all containers of welding materials.

USE ENOUGH VENTILATION or exhaust at the arc, or both, to

keep the fumes and gases from your breathing zone and the general area.

IN A LARCE ROOM OR OUTDOORS notwell ventile

IN A LARGE ROOM OR OUTDOORS, natural ventilation may be adequate if you keep your head out of the fumes (See below).

USE NATURAL DRAFTS or fans to keep the fumes away from your face.

If you develop unusual symptoms, see your supervisor. Perhaps the welding atmosphere and ventilation system should be checked.



WEAR CORRECT EYE, EAR & BODY PROTECTION

PROTECT your eyes and face with welding helmet properly fitted and with proper grade of filter plate (See ANSI Z49.1).

PROTECT your body from welding spatter and arc flash with protective clothing including woolen clothing, flame-proof apron and gloves, leather leggings, and high boots.

PROTECT others from splatter, flash, and glare with protective screens or barriers.

IN SOME AREAS, protection from noise may be appropriate.

BE SURE protective equipment is in good condition.

Also, wear safety glasses in work area **AT ALL TIMES.**



SPECIAL SITUATIONS

DO NOT WELD OR CUT containers or materials which previously had been in contact with hazardous substances unless they are properly cleaned. This is extremely dangerous.

DO NOT WELD OR CUT painted or plated parts unless special precautions with ventilation have been taken. They can release highly toxic fumes or gases.



Additional precautionary measures

PROTECT compressed gas cylinders from excessive heat, mechanical shocks, and arcs; fasten cylinders so they cannot fall.

BE SURE cylinders are never grounded or part of an electrical circuit.

REMOVE all potential fire hazards from welding area.

ALWAYS HAVE FIRE FIGHTING EQUIPMENT READY FOR IMMEDIATE USE AND KNOW HOW TO USE IT.



SECTION A: WARNINGS



CALIFORNIA PROPOSITION 65 WARNINGS



WARNING: Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects, reproductive harm.

or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an exposed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65 warnings.ca.gov/diesel

WARNING: This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code § 25249.5 et seg.)



WARNING: Cancer and Reproductive Harm www.P65warnings.ca.gov

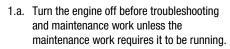
ARC WELDING CAN BE HAZARDOUS. PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACEMAKER WEARERS SHOULD CONSULT WITH THEIR DOCTOR BEFORE OPERATING.

Read and understand the following safety highlights. For additional safety information, it is strongly recommended that you purchase a copy of "Safety in Welding & Cutting - ANSI Standard Z49.1" from the American Welding Society, P.O. Box 351040, Miami, Florida 33135 or CSA Standard W117.2-1974. A Free copy of "Arc Welding Safety" booklet E205 is available from the Lincoln Electric Company, 22801 St. Clair Avenue, Cleveland, Ohio 44117-1199.

BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.



FOR ENGINE POWERED EQUIPMENT.





- Operate engines in open, well-ventilated areas or vent the engine exhaust fumes outdoors.
- 1.c. Do not add the fuel near an open flame welding arc or when the engine is running. Stop the engine and allow it to cool before refueling to prevent spilled fuel from vaporizing on contact



- with hot engine parts and igniting. Do not spill fuel when filling tank. If fuel is spilled, wipe it up and do not start engine until fumes have been eliminated.
- 1.d. Keep all equipment safety guards, covers and devices in position and in good repair. Keep hands, hair, clothing and tools away from V-belts, gears, fans and all other moving parts when starting, operating or repairing equipment.



- 1.e. In some cases it may be necessary to remove safety guards to perform required maintenance. Remove guards only when necessary and replace them when the maintenance requiring their removal is complete. Always use the greatest care when working near moving parts.
- 1.f. Do not put your hands near the engine fan. Do not attempt to override the governor or idler by pushing on the throttle control rods while the engine is running.
- 1.g. To prevent accidentally starting gasoline engines while turning the engine or welding generator during maintenance work, disconnect the spark plug wires, distributor cap or magneto wire as appropriate.
- 1.h. To avoid scalding, do not remove the radiator pressure cap when the engine is hot.



ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS



- 2.a. Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). Welding current creates EMF fields around welding cables and welding machines
- 2.b. EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before welding.
- Exposure to EMF fields in welding may have other health effects which are now not known.
- 2.d. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:
 - Route the electrode and work cables together Secure them with tape when possible.
 - 2.d.2. Never coil the electrode lead around your body.
 - 2.d.3. Do not place your body between the electrode and work cables. If the electrode cable is on your right side, the work cable should also be on your right side.
 - 2.d.4. Connect the work cable to the workpiece as close as possible to the area being welded.
 - 2.d.5. Do not work next to welding power source.



ELECTRIC SHOCK CAN KILL.

- 3.a. The electrode and work (or ground) circuits are electrically "hot" when the welder is on. Do not touch these "hot" parts with your bare skin or wet clothing. Wear dry, hole-free gloves to insulate hands.
- 3.b. Insulate yourself from work and ground using dry insulation. Make certain the insulation is large enough to cover your full area of physical contact with work and ground.

In addition to the normal safety precautions, if welding must be performed under electrically hazardous conditions (in damp locations or while wearing wet clothing; on metal structures such as floors, gratings or scaffolds; when in cramped positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with the workpiece or ground) use the following equipment:

- Semiautomatic DC Constant Voltage (Wire) Welder.
- DC Manual (Stick) Welder.
- AC Welder with Reduced Voltage Control.
- 3.c. In semiautomatic or automatic wire welding, the electrode, electrode reel, welding head, nozzle or semiautomatic welding gun are also electrically "hot".
- 3.d. Always be sure the work cable makes a good electrical connection with the metal being welded. The connection should be as close as possible to the area being welded.
- Ground the work or metal to be welded to a good electrical (earth) ground.
- Maintain the electrode holder, work clamp, welding cable and welding machine in good, safe operating condition. Replace damaged insulation.
- 3.g. Never dip the electrode in water for cooling.
- 3.h. Never simultaneously touch electrically "hot" parts of electrode holders connected to two welders because voltage between the two can be the total of the open circuit voltage of both welders.
- 3.i. When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.
- 3.j. Also see Items 6.c. and 8.



ARC RAYS CAN BURN.



- 4.a. Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing open arc welding. Headshield and filter lens should conform to ANSI Z87. I standards.
- 4.b. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.
- 4.c. Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.



FUMES AND GASES CAN BE DANGEROUS.



- 5.a. Welding may produce fumes and gases hazardous to health. Avoid breathing these
 - fumes and gases. When welding, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone. When welding hardfacing (see instructions on container or SDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable OSHA PEL and ACGIH TLV limits using local exhaust or mechanical ventilation unless exposure assessments indicate otherwise. In confined spaces or in some circumstances, outdoors, a respirator may also be required. Additional precautions are also required when welding
 - on galvanized steel.
- 5. b. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.
- 5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.
- 5.d. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to insure breathing air is safe.
- 5.e. Read and understand the manufacturer's instructions for this equipment and the consumables to be used, including the Safety Data Sheet (SDS) and follow your employer's safety practices. SDS forms are available from your welding distributor or from the manufacturer.
- 5.f. Also see item 1.b.



WELDING AND CUTTING SPARKS CAN CAUSE FIRE OR EXPLOSION.

- G
- 6.a. Remove fire hazards from the welding area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas. Avoid welding near hydraulic lines. Have a fire extinguisher readily available.
- 6.b. Where compressed gases are to be used at the job site, special precautions should be used to prevent hazardous situations. Refer to "Safety in Welding and Cutting" (ANSI Standard Z49.1) and the operating information for the equipment being used.
- 6.c. When not welding, make certain no part of the electrode circuit is touching the work or ground. Accidental contact can cause overheating and create a fire hazard.
- 6.d. Do not heat, cut or weld tanks, drums or containers until the proper steps have been taken to insure that such procedures will not cause flammable or toxic vapors from substances inside. They can cause an explosion even though they have been "cleaned". For information, purchase "Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping That Have Held Hazardous Substances", AWS F4.1 from the American Welding Society (see address above).
- Vent hollow castings or containers before heating, cutting or welding. They may explode.
- 6.f. Sparks and spatter are thrown from the welding arc. Wear oil free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes and a cap over your hair. Wear ear plugs when welding out of position or in confined places. Always wear safety glasses with side shields when in a welding area.
- 6.g. Connect the work cable to the work as close to the welding area as practical. Work cables connected to the building framework or other locations away from the welding area increase the possibility of the welding current passing through lifting chains, crane cables or other alternate circuits. This can create fire hazards or overheat lifting chains or cables until they fail.
- 6.h. Also see item 1.c.
- Read and follow NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work", available from NFPA, 1 Batterymarch Park, PO box 9101, Quincy, MA 022690-9101.
- 6.j. Do not use a welding power source for pipe thawing.



CYLINDER MAY EXPLODE IF DAMAGED.

7.a. Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. All hoses, fittings, etc. should be suitable for the application and maintained in good condition.



- 7.b. Always keep cylinders in an upright position securely chained to an undercarriage or fixed support.
- 7.c. Cylinders should be located:
 - Away from areas where they may be struck or subjected to physical damage.
 - A safe distance from arc welding or cutting operations and any other source of heat, sparks, or flame.
- 7.d. Never allow the electrode, electrode holder or any other electrically "hot" parts to touch a cylinder.
- Keep your head and face away from the cylinder valve outlet when opening the cylinder valve.
- 7.f. Valve protection caps should always be in place and hand tight except when the cylinder is in use or connected for use.
- 7.g. Read and follow the instructions on compressed gas cylinders, associated equipment, and CGA publication P-I, "Precautions for Safe Handling of Compressed Gases in Cylinders," available from the Compressed Gas Association, 14501 George Carter Way Chantilly, VA 20151.



FOR ELECTRICALLY POWERED EQUIPMENT.



- 8.a. Turn off input power using the disconnect switch at the fuse box before working on the equipment.
- 8.b. Install equipment in accordance with the U.S. National Electrical Code, all local codes and the manufacturer's recommendations.
- 8.c. Ground the equipment in accordance with the U.S. National Electrical Code and the manufacturer's recommendations.

Refer to http://www.lincolnelectric.com/safety for additional safety information.

MAGNUM GUN TABLE OF CONTENTS

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Installation	Section A
Specifications	A-1
Troubleshooting	Section E
Parts List	parts.lincolnelectric.com
Content/details may be changed or updated without no parts.lincolnelectric.com.	tice. For most current Instruction Manuals, go to

SPECIFICATIONS: MAGNUM GUN

K115-[] 450A INNERSHIELD SQUIRTGUN		
PROCESS	SELF-SHIELDED FLUX-CORED ARC WELDING, FCAW-S	
AMPERES	450A @ 60%	
WIRE DIAMETER RANGE:	3/32" – 0.120	
VOLTAGE RATING, PEAK:	113 V	
SHIELDING GAS:	NONE, THIS GUN IS DESIGNED FOR SELF-SHIELDED WIRES ONLY	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K115-1, K115-3, K115-5, K115-7, K115-9, K115-11 (10FT) K115-2, K115-4, K115-6, K115-8, K115-10, K115-12 (15FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

K116-[] 600A INNERSHIELD SQUIRTGUN		
PROCESS	SELF-SHIELDED FLUX-CORED ARC WELDING, FCAW-S	
AMPERES	600A @ 60%	
WIRE DIAMETER RANGE:	7/64" — 0.120	
VOLTAGE RATING, PEAK:	113 V	
SHIELDING GAS:	NONE, THIS GUN IS DESIGNED FOR SELF-SHIELDED WIRES ONLY	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K116-1, K116-3 (10FT)	
	K116-2, K116-4 (15FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

K114 SUB ARC GUN		
PROCESS	SUBMERGED ARC WELDING	
AMPERES	600A @ 60%	
WIRE DIAMETER RANGE:	5/64" — 3/32"	
VOLTAGE RATING, PEAK:	113 V	
SHIELDING GAS:	NONE	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K114 (15FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

K264-8 LN-22 GUN & CABLE ASBLY-8FT-250A		
PROCESS	SELF-SHIELDED FLUX-CORED ARC WELDING, FCAW-S	
AMPERES	250A @ 60%	
WIRE DIAMETER RANGE:	0.068-5/64"	
VOLTAGE RATING, PEAK:	113 V	
SHIELDING GAS:	NONE, THIS GUN IS DESIGNED FOR SELF-SHIELDED WIRES ONLY	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K264-8 (8FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

K355-10 LN-23P GUN & CABLE ASBLY-250 AMP		
PROCESS	SELF-SHIELDED FLUX-CORED ARC WELDING, FCAW-S	
AMPERES	250A @ 60%	
WIRE DIAMETER RANGE:	0.068-5/64"	
ARC STRIKING AND STABILIZING RANGE:	113 V	
SHIELDING GAS:	NONE, THIS GUN IS DESIGNED FOR SELF-SHIELDED WIRES ONLY	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K355-10 (10FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

K126-[] 350A INNERSHIELD SQUIRTGUN		
PROCESS	SELF-SHIELDED FLUX-CORED ARC WELDING, FCAW-S	
AMPERES	350A @ 60%	
WIRE DIAMETER RANGE:	0.068-5/64"	
VOLTAGE RATING, PEAK:	113 V	
SHIELDING GAS:	NONE, THIS GUN IS DESIGNED FOR SELF-SHIELDED WIRES ONLY	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K126, -2 (15FT), K126-1 (10FT), K126-3 (15FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

K345-[] INNNERSHIELD GUN & CABLE - FOR PIPE		
PROCESS	SELF-SHIELDED FLUX-CORED ARC WELDING, FCAW-S	
AMPERES	350A @ 60%	
WIRE DIAMETER RANGE:	0.068-5/64"	
VOLTAGE RATING, PEAK:	113 V	
SHIELDING GAS:	NONE, THIS GUN IS DESIGNED FOR SELF-SHIELDED WIRES ONLY	
OPERATING TEMPERATURE:	-4° F to 104° F (-20° C to 40° C)	
STORAGE TEMPERATURE:	-40° F to 185° F (-40° C to 85° C)	
COOLING:	AIR COOLED	
CABLE LENGTH:	K345-1 (10FT), K345-10 (10FT)	
CONNECTION OF GUN TO WIRE FEEDER:	THIS SERIES OF GUNS HAVE A PERMANENT POWER PIN, LINCOLN STYLE	

HOW TO USE TROUBLESHOOTING GUIDE

WARNING

Service and Repair should only be performed by Lincoln Electric Factory Trained Personnel. Unauthorized repairs performed on this equipment may result in danger to the technician and machine operator and will invalidate your factory warranty. For your safety and to avoid Electrical Shock, please observe all safety notes and precautions detailed throughout this manual.

This Troubleshooting Guide is provided to help you locate and repair possible machine malfunctions. Simply follow the three-step procedure listed below.

Step 1. LOCATE PROBLEM (SYMPTOM).

Look under the column labeled "PROBLEM (SYMPTOMS)". This column describes possible symptoms that the machine may exhibit. Find the listing that best describes the symptom that the machine is exhibiting.

Step 2. POSSIBLE CAUSE.

The second column labeled "POSSIBLE CAUSE" lists the obvious external possibilities that may contribute to the machine symptom.

Step 3. RECOMMENDED COURSE OF ACTION

This column provides a course of action for the Possible Cause, generally it states to contact you local Lincoln Authorized Field Service Facility.

If you do not understand or are unable to perform the Recommended Course of Action safely, contact you local Lincoln Authorized Field Service Facility.

A CAUTION

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your **Local Lincoln Authorized Field Service Facility** for technical troubleshooting assistance before you proceed.



TROUBLESHOOTING

Observe all Safety Guidelines detailed throughout this manual

PROBLEMS (SYMPTOMS)	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
No wire feed occurs when trigger is pulled.	Machine is switched off or unplugged.	1. Switch on or plug in machine.
	2. Out of wire	2. Install full spool of specified wire.
	3. Contact tip burnback.	3. Replace contact tip.
	Fully or partially blocked gun liner.	4. Remove and clean or replace gun liner .
	5. Wire jam (bird nest) at wire feeder	5. Cut out wire jam, reload wire, and check for proper wire alignment.
	Defective trigger (contacts open or dirty).	6. Replace trigger assembly.
	7. Defective trigger circuit in gun.	7. Disconnect gun from machine and check trigger circuit for continuity.
	No motor voltage or current from machine.	See Troubleshooting section in welding machine's or wire feeder's instruction manual.
	Contact tip size too small for wire diameter used.	Replace contact tip with one that is the correct size.
Sluggish wire feed when trigger is pulled.	1. Drive roll is worn or galled.	Clean drive roll or replace drive roll.
	Machine's wire feed speed set- ting is too low.	2. Increase wire feed speed.
	Wire is obstructed somewhere along the wire feed path in the gun.	Check for obstructions: Remove any wire shavings; remove kinked wire; remove and clean or replace gun liner.
	4. Low motor voltage.	4. See Troubleshooting section in welding machine's instruction manual.
	5. Gun cable is coiled/kinked.	5. Remove all sharp curves from gun cable while welding.
	Mechanical resistance to wire feeding is too large	If using a reverse bend gun tube, try welding with a non reverse bend product.

A CAUTION

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your **Local Lincoln Authorized Field Service Facility** for technical troubleshooting assistance before you proceed.



Observe all Safety Guidelines detailed throughout this manual

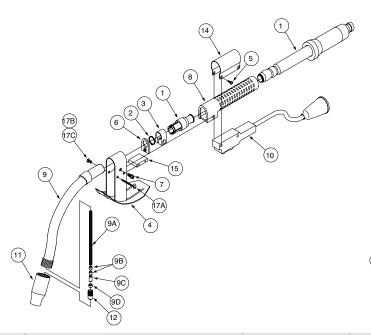
Observe all Safety Guidelines detailed throughout this manual PROBLEMS POSSIBLE RECOMMENDED			
	COURSE OF ACTION		
OAGGE .	GGGHGE GI AGHGH		
Drive roll has become galled.	Remove and then clean or replace drive roll.		
Wire has become kinked along its feed path.	Manually pull wire slowly thru gun until unkinked wire emerges.		
Wire shavings/lubricant is build- ing up in the cable.	Clean cable or replace cable liner.		
Cable liner is too large for wire size.	2. Install the smallest possible liner which is specified for the wire being used (i.e. use a .052-1/16 liner instead of a 1/16-5/64 liner when welding with 1/16" diameter wire.		
Mechanical resistance to wire feeding is too large.	If using a reverse bend gun tube, try welding with a non reverse bend product.		
Improper welding parameters or technique (example: ESO is too short).	See welding wire literature for proper settings.		
Wire may be feeding intermittently.	See symptoms on intermittent or sluggish wire feed.		
Improper electrode polarity.	Reconnect machine's welding output to proper electrode polarity.		
Improper welding parameters or technique.	See welding wire literature for proper settings.		
Defective trigger (contacts closed or dirty).	Replace trigger assembly.		
Defective (closed) trigger circuit in the welding machine.	See machine's instruction manual.		
Trigger lead(s) inside gun cable are shorted together or commonly shorted to either welding or accessory switch circuits.	Damaged control leads along cable; repair if possible. Otherwise, replace gun cable.		
	 Wire has become kinked along its feed path. Wire shavings/lubricant is building up in the cable. Cable liner is too large for wire size. Mechanical resistance to wire feeding is too large. Improper welding parameters or technique (example: ESO is too short). Wire may be feeding intermittently. Improper welding parameters or technique. Improper electrode polarity. Improper welding parameters or technique. Defective trigger (contacts closed or dirty). Defective (closed) trigger circuit in the welding machine. Trigger lead(s) inside gun cable are shorted together or commonly shorted to either welding or 		

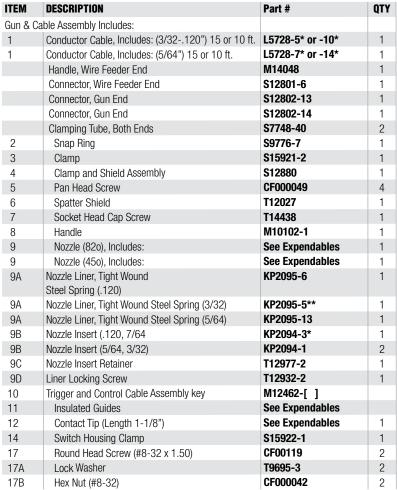
A CAUTION

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your **Local Lincoln Authorized Field Service Facility** for technical troubleshooting assistance before you proceed.



Innershield® K115 Squirt Gun & Cable





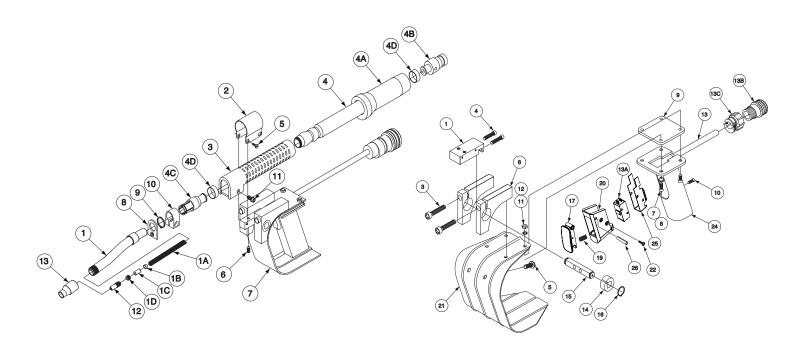
ITEM	DESCRIPTION	Part #	OTY
	& Control Cable Asbly,	Includes:	ų
1	Micro Switch	T12485	1
2	Housing	L10706	1
3	Trigger Assembly	S23982*	1
4	Cord Clamp	T11669-2	1
5	Coil Spring	T12025	2
6	Roll Pin	T9967-52	2
7	#3-48 x .75 RHS	CF000312	2
8	Insulating Sleeving	S14878	1
9	Set Screw	S11604-22	1
12	Polarized Plug, Wire Feeder	S12020-6	1
	End, (Not Shown) (Old Style)		
12	Polarized Plug, Wire Feeder End	S12020-16	1
12A	Clamp at Polarized Plug (Old	S12024-1	1
	Style) (Not Shown)		
12A	Clamp at Polarized Plug	S12024-4	1
	Molded Plug Kit Includes:	S19757	1
13A	Connector Body	NSS	1
13B	Connector Cover	NSS	1
13C	Connector Pin	NSS	2
13D	Insulating Washer	NSS	1
13E	Strain Relief	NSS	1

^{*}For earlier design "straight pull" trigger, contact Service Department for replacement parts.

^{*} Discontinued. Availale until stock is depleted.

^{**} Discontinued. Use KP2095-2.

Innershield® K116 Squirt Gun, Cable & Gun Handle



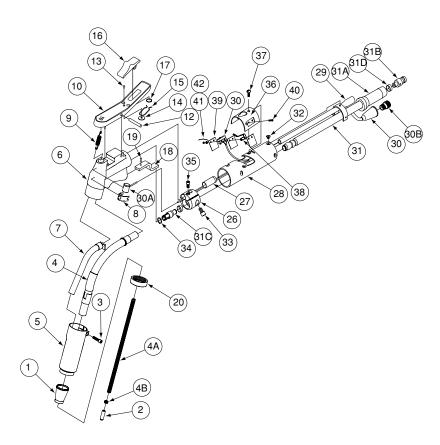
ITEM	DESCRIPTION	Part #	QTY
Gun & C	Cable Assembly Includes:		
1	Nozzle, Includes:	See Expendables	
1A	Nozzle Liner	KP2095-7*	1
1B	Nozzle Insert (.120 & 7/64")	KP2094-3	1
1B	Nozzle Insert (3/32)"	KP2094-1	1
1C	Nozzle Insert Retainer	T12977-2	1
1D	Liner Locking Screw	T12932-2	1
2	Switch Housing Clamp	S12339-1	1
3	Handle	M10102-1	1
4	Conductor Cable, Includes: (15 ft)	L5728-5*	
4A	Handle, Wire Feeder End	M14048	1
4B	Connector, Wire Feeder End	S12801-4	1
4C	Connector, Gun End	S12802-13	1
4D	Clamping Tube, Both Ends	S7748-40	2
5	Pan Head Screw	CF000049	4
6	Socket Head Screw	S11604-9	2
7	Handle & Control Cable Assembly - 10' Length	L5734-10*	
8	Spatter Shield	T12027	1
9	Snap Ring	S9776-7	1
10	Clamp	S15921-2	1
11	Socket Head Cap Screw	T14438	1
12	Contact Tip	See Expendables	1
13	Insulated Guide	See Expendables	1

^{*} Discontinued. No longer available.

ITEM	DESCRIPTION	Part #	QTY
Handle & Control Cable Assembly - 10'		L5734-10	
Length			
1	Handle Mounting Bracket	S12905	1
3	Socket Head Cap Screw	T9447-36	2
4	Socket Head Cap Screw	T9447-22	2
5	#8-32 x.5 RHS	CF000033	12
6	Handle Pivot Block	S12690	1
7	#8-32 x.625 FHS	CF000147	2
8	Lock Washer	T10441-1	2
9	Insulating Pad	T12241	1
10	#8-32 x.5 FHS	CF000146	3
11	Lock Washer	T4291-A	2
12	#8-32 HN	CF000042	2
13	Control Cable, Includes:	M10427-15	1
	15' Length Cable		
13A	Micro Switch	T12485	1
13B	Polarized Plug, Wire Feeder End	S12020-6	1
13C	Clamp at Plug	S12024-1	1
14	Friction Bushing	T12233	2
15	Handle Pivot Shaft	T12239	1
16	Snap Ring	S9776-25	2
17	Trigger Assembly	S23982[*]	1
19	Spring	T12025	2
20	Trigger Mounting Block	M18910	1
21	Gun Shield	L4188	1
22	#3-48 x .75 RHS	CF000312	2
23	Roll Pin	T9967-27	2
24	Handle	S12687-1	1
25	Switch Insulation	S14878	1
		0.1.0.0	
26	Roll Pin	T9967-52	1

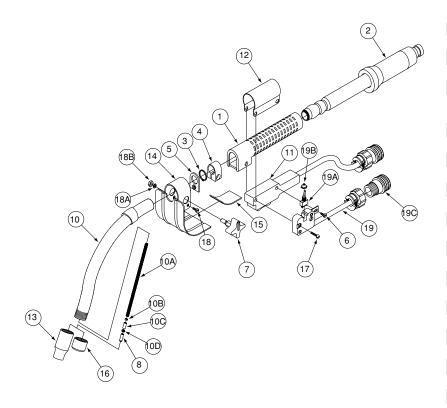
 $[\]hbox{``For earlier design ``straight pull'' trigger, contact Service Department for replacement parts.}$

K114 Squirtgun & Cable



ITEM	DESCRIPTION	Part #	QTY
	& Cable Includes:	l uit "	٠
1	Nozzle Flux Cone 13/16" Opening	KP1968-2	1
	(Optional)		
1	5/8" Opening (Standard)	KP1968-5	1
1	3/4" Opening (Optional)	KP1968-4	1
1	15/16" Opening (Optional)	KP1968-3	1
2	Contact Tip (3/32")	KP2088-2B1	1
2	Contact Tip (5/64" Optional)	KP2088-3B1	1
	Gun Assembly, Includes:	L5757-A	1
3	Socket Head Cap Screw	T9447-22	1
4	Nozzle, Includes:	S13816	1
4A	Tight Wound Steel Spring	T12931-2	1
4B	Liner Locking Screw	T12932-2	1
5	Gun Tube	S13042	1
6	Right & Left Gun Mount	L3828	1
7	Flux Shut Off Assembly	S11686	1
8	Receptacle Clamp	T11521	1
9	Spring	T11514	1
10	Lever	S11567-1	1
11	Left Gun Mount	See Note 1	1
12	Pivot Pin	T11546	
13	Rivet	T10167-1	1
14	Plain Washer	S9262-39 S11685	1
15 16	Spring Clip	S11569	1
	Trigger Span Ding	S9776-16	1
17 18	Snap Ring	T11523	1
19	Gun Hanger Roll Pin	T9967-23	1
20	Collar	S12964-1	1
	Conductor Cable Assembly, Includes:	L5757-B	1
26	Clamping Ring	S12903	1
27	Tube Insulator	T11584	1
28	Handle	S11629	1
29	Flux Tube	S11822	1
30	Control Cable	M9473	1
00	Micro Switch	S12182-1	1
30A	3 Contact Receptacle, Gun End	T11155-1	1
30B	5 Contact Receptacle, Wire End	S12020-6	1
31	Conductor Cable, Includes:	L5728-6	1
31A	Handle & Stiffener, Wire Feeder End	M14048	1
31B	Connector, Wire Feeder End	S12801-6	1
31C	Connector, Gun End	S12802-14	1
31D	Clamping Tube, Both Ends	S7748-40	2
32	#8-32 x .1875 FHS	CF000133	2
33	Socket Head Screw	T9447-8	1
34	Snap Ring	S9776-28	1
35	Socket Head Screw	T9447-21	1
36	Switch Mounting Plate	S11588	1
37	#8-32 x .50 RHS	CF000033	3
38	Actuator	T11527	1
39	Insulation	T11522	3
40	#2-56 x .4375 RHS	CF000135	2
41	Lock Washer	T9695-10	2
42	#2-56 HN	CF000136	2
	Nozzle Extension,		
	2-1/4" Stickout, (Not Shown)	S12891-1	1
	Housing	S13028-1	1
	Insert	T12329-1	1
	Tip (3/32")	KP2091-1*	1

Innershield® K264, K345, K355 & K361 Squirt Gun & Cable Assemblies

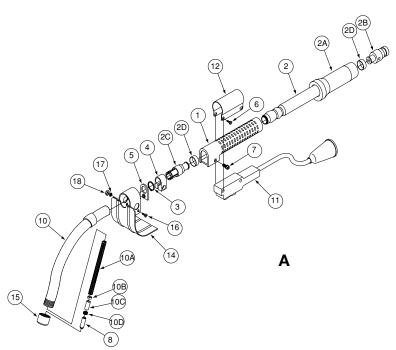


ITEM	DESCRIPTION	Part #	QTY
Gun & C	Cable Assembly, Includes:		
1	Handle	M10102	1
2	Conductor Cable (K264-8)	L5993-2	1
2	Conductor Cable (for K355-10)	L5993-3	1
2	Conductor Cable (for K345-10 & K361-	L5993-4	
	10)		
3	Retaining Ring	S9776-7	1
4	Clamp	S11598-1	1
5	Spatter Shield	T12027	1
6	Pan Head Screw	CF000049	3 or 4
7	Hand Screw Assembly	T13858	1
8	Contact Tip	See Expendabls	1
10	62° Nozzle Assembly	KP1909-1 (Std.)	1
10	90° Nozzle Assembly	KP1920-1	1
10	30° Nozzle Assembly - 6" long	KP1914-2	1
10	30° Nozzle Assembly - 12" long	KP1914-1	1
10A	62° and 30° Nozzle Liner 6" long	KP2095-4	1
10A	90° Nozzle Liner	KP2095-14*	1
10A	30° Nozzle Liner - 12" Long	KP2095-9*	1
10B	Nozzle Insert	T12576-2	1
10C	Nozzle Insert Retainer	T12977-1	1
10D	Liner Locking Screw	T12932-1	1
11	Trigger & Control Cable Assembly (8 ft.)	M12956-8	1
11	Trigger & Control Cable Assembly (10 ft.)	M12956-10	1
12	Clamp	S15922-1	1
13	Nozzle Assembly Insulated Guide	See Expendables	1
14	Heat Shield Assembly	S13037	1
15	Gun Caution Decal	T13297	1
16	Thread Protector	KP2089-1	1
17	Round Head Screw (K345 & K355)	CF000096	1
18	Round Head Screw	CF000119	2
18A	Lock Washer	T9695-3	2
18B	Hex Nut	CF000042	2
19	Switch & Cable Assembly, (K345 & K355) Includes:	S16383-1	1
19A	Switch	T13381-6	1
19B	Switch Boot	T13938-6	1
19C	Polarized Plug	S12020-17	1

Note: When tip life is limited by tip being fused over, KP2105-[] tips may give a lower overall cost.

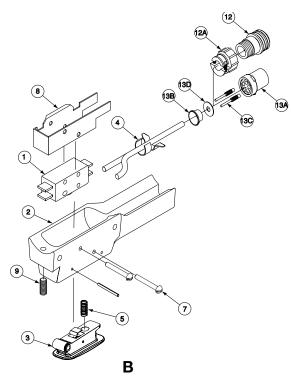
^{*} Discontinued. Use KP2095-15.

Innershield® Classic K126 Squirt Gun, Cable



ITEM	DESCRIPTION	Part #	QTY
Gun & 0	Cable Assembly, Includes:		
1	Handle	M10102-1	1
2	Conductor Cable, Includes: (15')	L6250-1*	1
2	Conductor Cable, Includes: (10')	L6250-2*	1
2A	Handle & Stiffener, Wire Feeder End	M14050-1	
2B	Connector, Wire Feeder End	S12801-3	1
2C	Connector, Gun End	S12802-12	1
2D	Clamping Tube, Both Ends	S16997	2
3	Snap Ring	S9776-7	1
4	Clamp	S15921-2	1
5	Spatter Shield	T12027	1
6	#8-32 x .25 PNHS	CF000148	4
7	Socket Head Cap Screw	T14438	
8	Contact Tip	See Expendables	
10	Nozzle, Includes (Gun Tube):	KP1909-1	1
10A	Nozzle Liner, Tight Wound Steel Spring	KP2095-4	1
10B	Nozzle Insert	KP2094-2	1
10C	Nozzle Insert Retainer	T12977-1	1
10D	Liner Locking Screw	T12932-1	1
11	Trigger & Control Cable	For Details See B	
	10 ft.	M12462-10	1
	15 ft.	M12462-15	1
12	Clamp	S15922-1	1
14	Heat Shield Assembly	S13037	1
15	Thread Protector, 3/4 to 1-1/2" Stickout	KP2089-1	1
16	#8-32 x 1.50 RHS	CF000119	4
17	Lock Washer	T9695-3	2
18	#8-32 HN	CF000042	2

K126, K112 & K113 Trigger & Control Cable Parts



ITEM	DESCRIPTION	Part #	QTY
Trigger &	Control Cable Assembly, Includes:		
1	Micro Switch	T12485	1
2	Housing	L10706	1
3	Trigger Assembly	S23982*	1
4	Cord Clamp	T11669-2	1
5	Coil Spring	T12025	2
6	Roll Pin	T9967-52	1
7	#3-48x.75 RHS	CF000312	1
8	Switch Insulation	S14878	1
9	Set Screw	S11604-22	1
12	Polarized Plug, Wire Feeder End, (Not Shown) (Old Style)	S12020-6	1
12	Polarized Plug, Wire Feeder End	S12020-16	1
12A	Clamp at Polarized Plug (Old Style) (Not Shown)	S12024-1	1
12A	Clamp at Polarized Plug	S12024-4	1
	Molded Plug Kit, Includes:	S19757	1
13A	Connector Body	NSS	1
13B	Connector Cover	NSS	1
13C	Connector Pin	NSS	2
13D	Insulating Washer	NSS	1
13E	Strain Relief	NSS	1

WARNING	Do not touch electrically live parts or electrode with skin or wet clothing. Insulate yourself from work and ground.	Keep flammable materials away.	Wear eye, ear and body protection.
AVISO DE PRECAUCION	 No toque las partes o los electrodos bajo carga con la piel o ropa moja- da. Aislese del trabajo y de la tierra. 	 Mantenga el material combustible fuera del área de trabajo. 	 Protéjase los ojos, los oídos y el cuerpo.
ATTENTION	 Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension. Isolez-vous du travail et de la terre. 	 Gardez à l'écart de tout matériel inflammable. 	Protégez vos yeux, vos oreilles et votre corps.
WARNUNG	 Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung! Isolieren Sie sich von den Elektroden und dem Erdboden! 	Entfernen Sie brennbarres Material!	 Tragen Sie Augen-, Ohren- und Kör- perschutz!
ATENÇÃO	 Não toque partes elétricas e electrodos com a pele ou roupa molhada. Isole-se da peça e terra. 	 Mantenha inflamáveis bem guardados. 	 Use proteção para a vista, ouvido e corpo.
注意事項	● 通電中の電気部品、又は溶材にヒ フやぬれた布で触れないこと。● 施工物やアースから身体が絶縁されている様にして下さい。	● 燃えやすいものの側での溶接作業は絶対にしてはなりません。	● 目、耳及び身体に保護具をして下 さい。
Chinese 警告	● 皮肤或濕衣物切勿接觸帶電部件及 銲條。 ● 使你自己與地面和工件絶縁。	●把一切易燃物品移離工作場所。	● 係 戴 眼、耳及身體勞動保護用具。
Rorean 위험	● 전도체나 용접봉을 젖은 형겁 또는 피부로 절대 접촉치 마십시요. ● 모재와 접지를 접촉치 마십시요.	●인화성 물질을 접근 시키지 마시요.	● 눈, 귀와 몸에 보호장구를 착용하십시요.
Arabic	 ♦ لا تلمس الإجزاء التي يسري فيها التيار الكهرباني أو الالكترود بجلد الجسم أو بالملابس المبللة بالماء. ♦ ضع عاز لا على جسمك خلال العمل. 	 ضع المواد القابلة للاشتعال في مكان بعيد. 	 ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.

	*		
Keep your head out of fumes. Use ventilation or exhaust to remove fumes from breathing zone.	Turn power off before servicing.	Do not operate with panel open or guards off.	WARNING
 Los humos fuera de la zona de respiración. Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases. 	Desconectar el cable de ali- mentación de poder de la máquina antes de iniciar cualquier servicio.	No operar con panel abierto o guardas quitadas.	AVISO DE PRECAUCION
 Gardez la tête à l'écart des fumées. Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail. 	Débranchez le courant avant l'entre- tien.	N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés.	ATTENTION
 Vermeiden Sie das Einatmen von Schweibrauch! Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes! 	Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öff- nen; Maschine anhalten!)	 Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen! 	WARNUNG
 Mantenha seu rosto da fumaça. Use ventilação e exhaustão para remover fumo da zona respiratória. 	 Não opere com as tampas removidas. Desligue a corrente antes de fazer serviço. Não toque as partes elétricas nuas. 	 Mantenha-se afastado das partes moventes. Não opere com os paineis abertos ou guardas removidas. 	ATENÇÃO
ヒュームから頭を離すようにして下さい。換気や排煙に十分留意して下さい。	■ メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切って下さい。	● パネルやカバーを取り外したまま で機械操作をしないで下さい。	注意事項
●頭部遠離煙霧。 ●在呼吸區使用通風或排風器除煙。	●維修前切斷電源。	●儀表板打開或沒有安全罩時不準作 業。	Chinese
● 얼굴로부터 용접가스를 멀리하십시요. ● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시요.	● 보수전에 전원을 차단하십시요.	● 판넬이 열린 상태로 작동치 마십시요.	Rorean 위 험
 • ابعد رأسك بعيداً عن الدخان. • استعمل التهوية أو جهاز ضغط الدخان للخارج لكي تبعد الدخان عن المنطقة التي تتنفس فيها. 	 ● اقطع التيار الكهربائي قبل القيام بأية صياتة. 	 ♦ لا تشغل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه. 	تحذیر

LEIA E COMPREENDA AS INSTRUÇÕES DO FABRICANTE PARA ESTE EQUIPAMENTO E AS PARTES DE USO, E SIGA AS PRÁTICAS DE SEGURANÇA DO EMPREGADOR.

使う機械や溶材のメーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

請詳細閱讀並理解製造廠提供的説明以及應該使用的銀捍材料,並請遵守貴方的有関勞動保護規定。

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اقرأ بتمعن وافهم تعليمات المصنع المنتج لهذه المعدات والمواد قبل استعمالها واتبع تعليمات الوقاية لصاحب العمل.

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