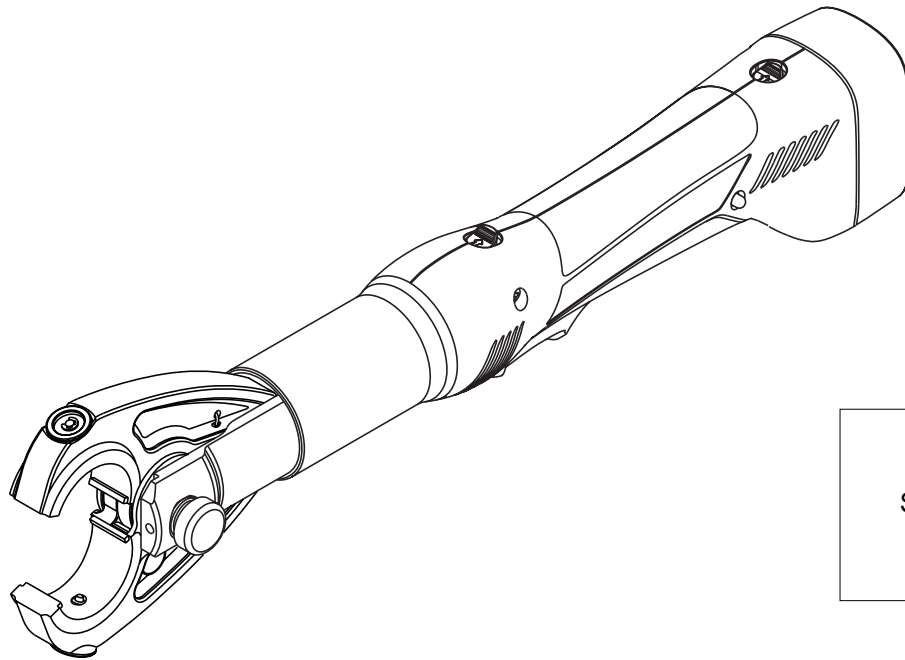


INSTRUCTION MANUAL



Serialnummer

GATOR® EK628 **Battery-powered** **Crimping Tool**



Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

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Description

The EK628 Battery-powered Crimping Tool is a hand-held, self-contained crimping tool with removable crimping jaws.

Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

Purpose of this Manual

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following Greenlee tool:

EK628 Battery-powered Crimping Tool

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge at www.greenlee.com.

All specifications are nominal and may change as design improvements occur. Greenlee Textron Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

GATOR is a registered trademark of Greenlee Textron Inc.

Blackburn is a registered trademark of Thomas & Betts.

Tellus is a registered trademark of Shell Oil Company.

KEEP THIS MANUAL

IMPORTANT SAFETY INFORMATION



SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

⚠ DANGER

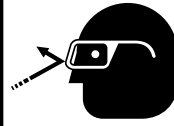
Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

⚠ WARNING

Hazards which, if not avoided, **COULD** result in severe injury or death.

⚠ CAUTION

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.



⚠ WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.



⚠ WARNING

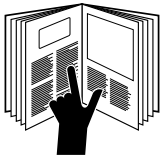
Skin injection hazard:

Do not use hands to check for oil leaks. High pressure oil easily punctures skin causing serious injury, gangrene, or death. If injured, seek medical help immediately to remove oil.



⚠ WARNING

Do not use solvents or flammable liquids to clean the crimping tool. Solvents or flammable liquids could ignite and cause serious injury or property damage.



⚠ WARNING

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning could result in severe injury or death.

⚠ WARNING

An incomplete crimp can cause a fire.

- Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.
- The relief valve will sound to indicate a completed crimp, and the ram will retract. If you do not hear the sound of the relief valve, the crimp is not complete.

Failure to observe these warnings could result in severe injury or death.



⚠ WARNING

Electric shock hazard:

This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment.

Failure to observe this warning could result in severe injury or death.



⚠ WARNING

Keep hands away from the crimping head when crimping.

Failure to observe this warning could result in severe injury or death.

IMPORTANT SAFETY INFORMATION**⚠ WARNING**

Do not dispose of batteries in a fire. They will vent fumes and may explode.

Failure to observe this warning could result in severe injury from harmful fumes or burns from flying debris.

⚠ WARNING

Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.

Failure to observe this warning could result in severe injury or death.

⚠ CAUTION

- This tool is not designed for continuous use. After 30 to 40 crimping cycles, allow the crimping tool to cool for 15 minutes.
- Do not place the tool in a vise. The crimping tool is designed for hand-held operation.
- This tool may be used in damp or wet environments, however, we recommend air drying the tool before use if it becomes soaked. Damage may result when the tool is operated prior to drying out when electrical components are soaked.
- Use this tool for the manufacturer's intended purpose only.

Failure to observe these precautions may result in injury or property damage.

⚠ CAUTION

Do not allow anything to contact the battery terminals.

- Do not immerse the batteries in liquid. Liquid may create a short circuit and damage the battery. If batteries are immersed, contact your service center for proper handling.
- Do not place the battery into a pocket, tool pouch, or tool box with conductive objects. Conductive objects may create a short circuit and damage the battery.
- Do not place a battery on moist ground or grass. Moisture may create a short circuit and damage the battery.

Failure to observe these precautions may result in injury or property damage.

⚠ CAUTION

- Do not store the battery at more than 60 °C (140 °F). Damage to the battery can result.
- Do not use another manufacturer's charger. Other manufacturers' chargers may overcharge and damage the battery.
- Do not attempt to open the battery. It contains no user-serviceable parts.

Failure to observe these precautions may result in injury or property damage.

⚠ CAUTION

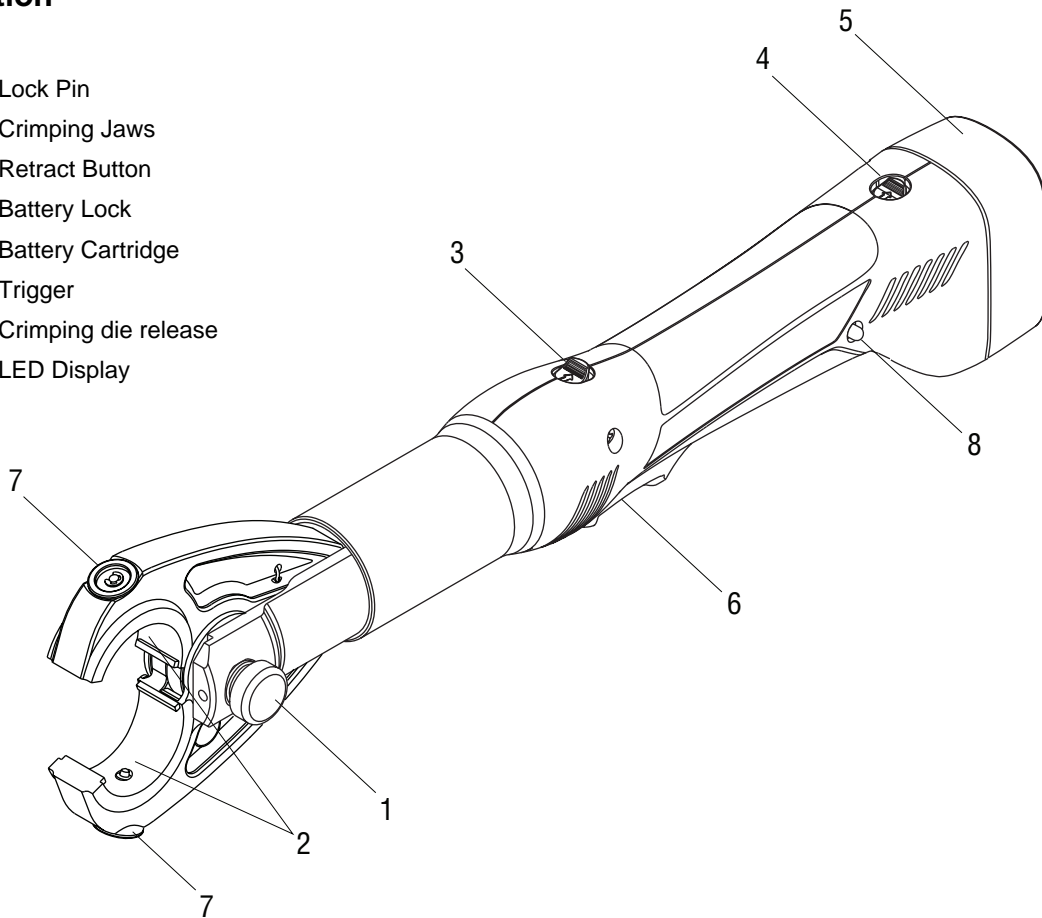
Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.

Failure to observe this precaution may result in injury and property damage.

Note: Keep all decals clean and legible, and replace when necessary.

Identification

1. Lock Pin
2. Crimping Jaws
3. Retract Button
4. Battery Lock
5. Battery Cartridge
6. Trigger
7. Crimping die release
8. LED Display



Specifications

Crimping Tool

Length	465 mm (18-1/4")
Width	60 mm (2-3/8")
Depth	98 mm (3-7/8")
Mass/Weight (with battery)	2.5 kg (5.5 lb)
Sound Level	75 dB (A) at 1 meter
Vibration	< 2.5 m/s ²
Hydraulic Oil	Shell Tellus® T 15
Recommended Operating Temperature Range	-15 °C (5 °F) through 50 °C (120 °F)


Crimping Capacities

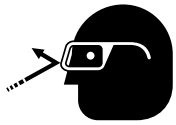
Maximum Crimping Force	53.4 kN (6 tons)
Average Crimping Time	4 seconds
Average Crimps per Charge	approximately 70


Battery

Charging Voltage	9.6 V
Charging Time	45 min

Operation

	⚠ WARNING
	<p>Electric shock hazard:</p> <p>This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment.</p> <p>Failure to observe this warning could result in severe injury or death.</p>

	⚠ WARNING
	<p>Wear eye protection when operating or servicing this tool.</p> <p>Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.</p>

	⚠ WARNING
	<p>Keep hands away from the crimping head when crimping.</p> <p>Failure to observe this warning could result in severe injury or death.</p>

⚠ CAUTION
<ul style="list-style-type: none"> • This tool is not designed for continuous use. After 30 to 40 crimping cycles, allow the crimping tool to cool for 15 minutes. • Do not place the tool in a vise. The crimping tool is designed for hand-held operation. • This tool may be used in damp or wet environments, however, we recommend air drying the tool before use if it becomes soaked. Damage may result when the tool is operated prior to drying out when electrical components are soaked. • Use this tool for the manufacturer's intended purpose only. <p>Failure to observe these precautions may result in injury or property damage.</p>

Charging the Battery

Read the instructions supplied with the battery charger.

LED Display

This tool is equipped with a special circuit board incorporating several important features to inform the user about the current status of the unit. The LED signals in the following cases:

Signal	Duration	When it occurs	What it means
● ●	a few seconds of flashing	battery insertion	self check – O.K.
■	glowing for 20 seconds	after crimp	battery discharged
● ● ●	flashing for 20 seconds (2 Hz)	after crimp	time for inspection and preventive maintenance
■ ●	20 sec. glowing and flashing intermittently	after crimp	battery discharged – time for inspection and preventive maintenance

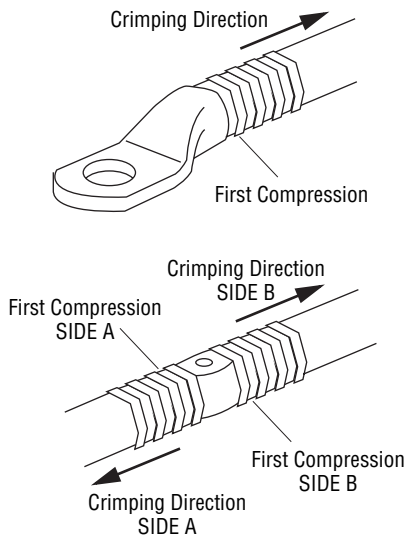
Operation (continued)

Installing Dies

1. Select the proper dies for the connector to be crimped.
2. Install dies in jaws making certain that they are properly secured by the spring-loaded detents.

Preparing Cable

Follow the lug manufacturer's instructions for appropriate cable strip length.



Crimping Procedure

1. Insert conductor into the connector and align the tool and die on the connector. Start in the center for splices and on the end, nearest the pad, for terminals.
2. Activate the tool by pulling the trigger. Continue to hold the trigger until the ram retracts. This is the signal that the crimp is complete.
3. Continue crimping the connector until the correct number of crimps has been completed. Work from the center to the outer edges for splices, alternating sides if possible, for the best compression connections.

⚠ WARNING

An incomplete crimp can cause a fire.

- Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.
- The relief valve will sound to indicate a completed crimp, and the ram will retract. If you do not hear the sound of the relief valve, the crimp is not complete.

Failure to observe these warnings could result in severe injury or death.

Die Selection

Crimps made on copper cable with Greenlee KC22-type dies and the copper connectors listed here are cUL and UL classified.

Crimps made on copper or aluminum cable with Greenlee KA22-type dies and the dual-rated aluminum connectors listed here are cUL and UL classified.

Refer to "Connector Selection" on page 12 for brand names and model numbers of appropriate lugs as well as crimping instructions.

Dies for Copper Connectors

Catalog Number	UPC Number	Cable Size	Color Code
KC22-8	03079	8 AWG	Red
KC22-6	03080	6 AWG	Blue
KC22-4	03081	4 AWG	Gray
KC22-2	03082	2 AWG	Brown
KC22-1	03083	1 AWG	Green
KC22-1/0	03084	1/0 AWG	Pink
KC22-2/0	03085	2/0 AWG	Black
KC22-3/0	03086	3/0 AWG	Orange
KC22-4/0	03087	4/0 AWG	Purple
KC22-250	03088	250 kcmil	Yellow
KC22-300	03089	300 kcmil	White
KC22-350	03090	350 kcmil	Red
KC22-400	03091	400 kcmil	Blue
KC22-500	03092	500 kcmil	Brown
KC22-600B	03094	600 kcmil	Green

Dies for Dual-rated Aluminum Connectors

Catalog Number	UPC Number	Cable Size
KA22-8	06744	8 AWG
KA22-6	06745	6 AWG
KA22-4	06746	4 AWG
KA22-2	06747	2 AWG
KA22-1	06749	1 AWG
KA22-1/0	06750	1/0 AWG
KA22-2/0	06751	2/0 AWG
KA22-3/0	06752	3/0 AWG
KA22-4/0	06753	4/0 AWG
KA22-250	06754	250 kcmil
KA22-300	06755	300 kcmil
KA22-350	06756	350 kcmil

Connector Selection

Tool Range: Copper — 8 AWG to 600 kcmil†; Dual-rated Aluminum — 8 AWG to 350 kcmil

When used with KC22-type dies, this tool is cUL and UL classified for use with the following connector brands:

Connector Type	Barrel Type	Anderson	Blackburn®	FCI Burndy	IlSCO	Panduit	T&B	Penn-Union†	No. of Crimps*
Copper Splice	Short	VHSS	CSP	YS-L	CT	SCSS/SCS	54504-54518	BCU	A
	Long	VHS	CU	YS	CTL	SCL/SCH	54804-54818	BBCU	
Copper Lugs	Short	VHCS	CTL-2/CTL	YA-2LN/YA-L/YA-2L YA/YA-L-TC/YA-L-2TC	CRA/CRB	LCAS/LCA LCD	54104-54118 54204-54218	BLU	
	Long	VHCL	CTL-L/LCN	YA-2N	CRA-L/CRB-L CRA-2L/CRB-2L	LCB/LCC	54930BE-54918BE 54850BE-54876BE	BBLU	

When used with KA22-type dies, this tool is cUL and UL classified for use with the following connector brands:

Connector Type	Barrel Type	Anderson	Blackburn®	FCI Burndy	IlSCO	Panduit	T&B	Penn-Union	No. of Crimps*
Dual-rated Aluminum Splice	—	VACS	ASP	YS-A	AS	SA **	60501-60565	PIK	B
Dual-rated Aluminum Lugs	—	VACL	ATL	YA-A YA-ATN	ACL/ACN 2ACL/2ACN	LAA/LAB **	60101-60166 60230-60267	BLUA	



* Use the number of crimps listed in the last column instead of the number provided with the connector:

A — 8 to 1/0 AWG: 1 crimp
2/0 AWG to 600 kcmil: 2 crimps

B — 8 to 2 AWG: 2 crimps
1 to 3/0 AWG: 3 crimps
4/0 AWG to 350 kcmil: 4 crimps

** 6 AWG to 350 kcmil


†500 kcmil maximum with Penn-Union connectors

Maintenance

Each Operating Day


Before use:

1. Inspect dies for wear or damage such as cracks, gouges, or chips.
2. Inspect the tool for damage or leaks. If damage is detected, return the tool to an authorized Greenlee service center for inspection.

	⚠ WARNING
	<p>Skin injection hazard:</p> <p>Do not use hands to check for oil leaks. High pressure oil easily punctures skin causing serious injury, gangrene, or death. If injured, seek medical help immediately to remove oil.</p>

After use:

1. Wipe all tool surfaces clean with a damp cloth and mild detergent.

	⚠ WARNING
	<p>Do not use solvents or flammable liquids to clean the crimping tool. Solvents or flammable liquids could ignite and cause serious injury or property damage.</p>

2. Fully retract the ram. Place the tool in the carrying case. Store in a cool, dry place.
3. Charge the battery.

Monthly

1. Thoroughly clean all surfaces.
2. Oil the pin joints.

Annually or After 10,000 Crimps

Return the tool to an authorized Greenlee service center for inspection.

Troubleshooting

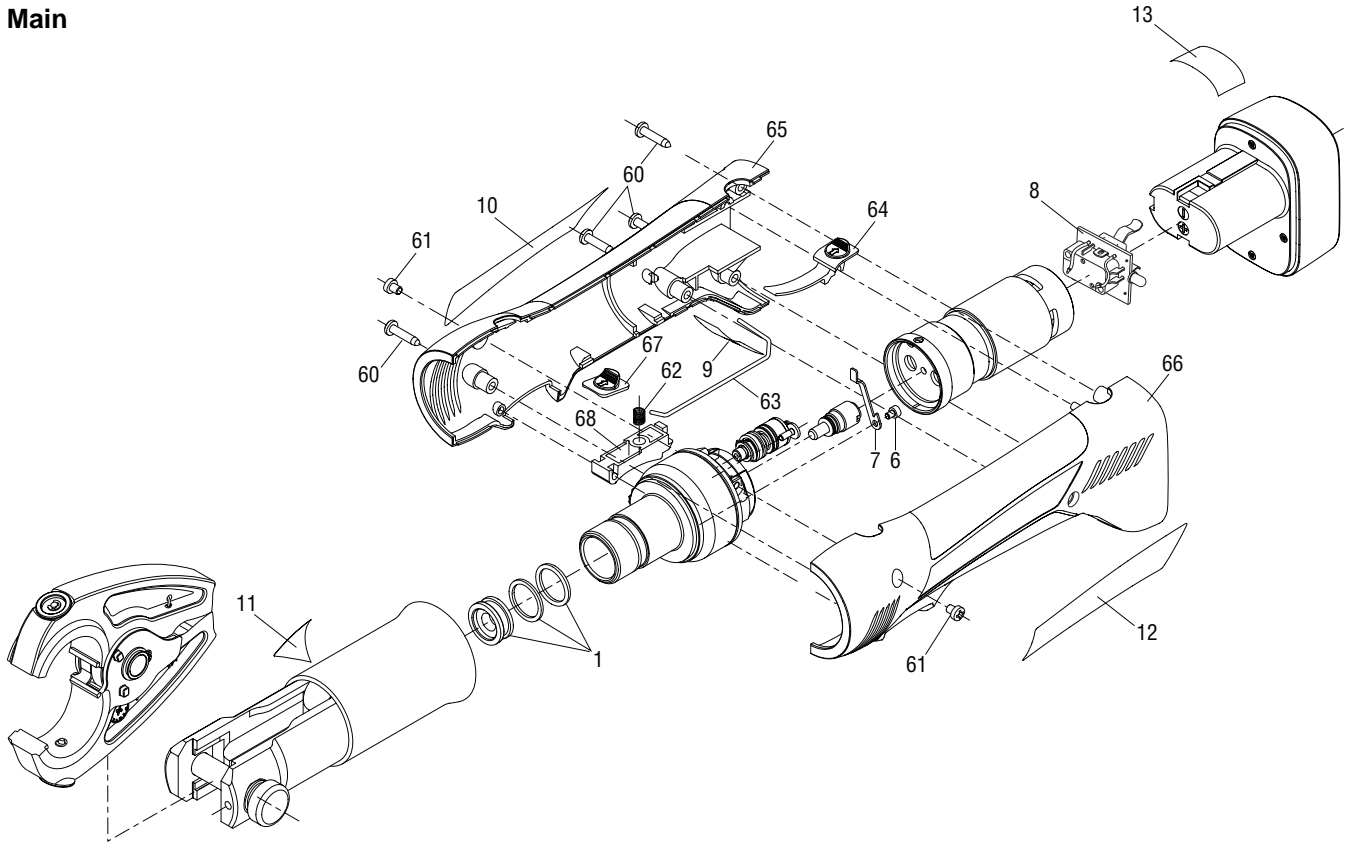
Before You Begin

1. Make sure that the battery is charged. Recheck the battery after several minutes to make sure the battery is holding its charge.
2. Use a **nonflammable** contact cleaner or pencil eraser to clean the electrical contacts on the battery and crimping tool.
3. Reinstall the battery and check the tool again.

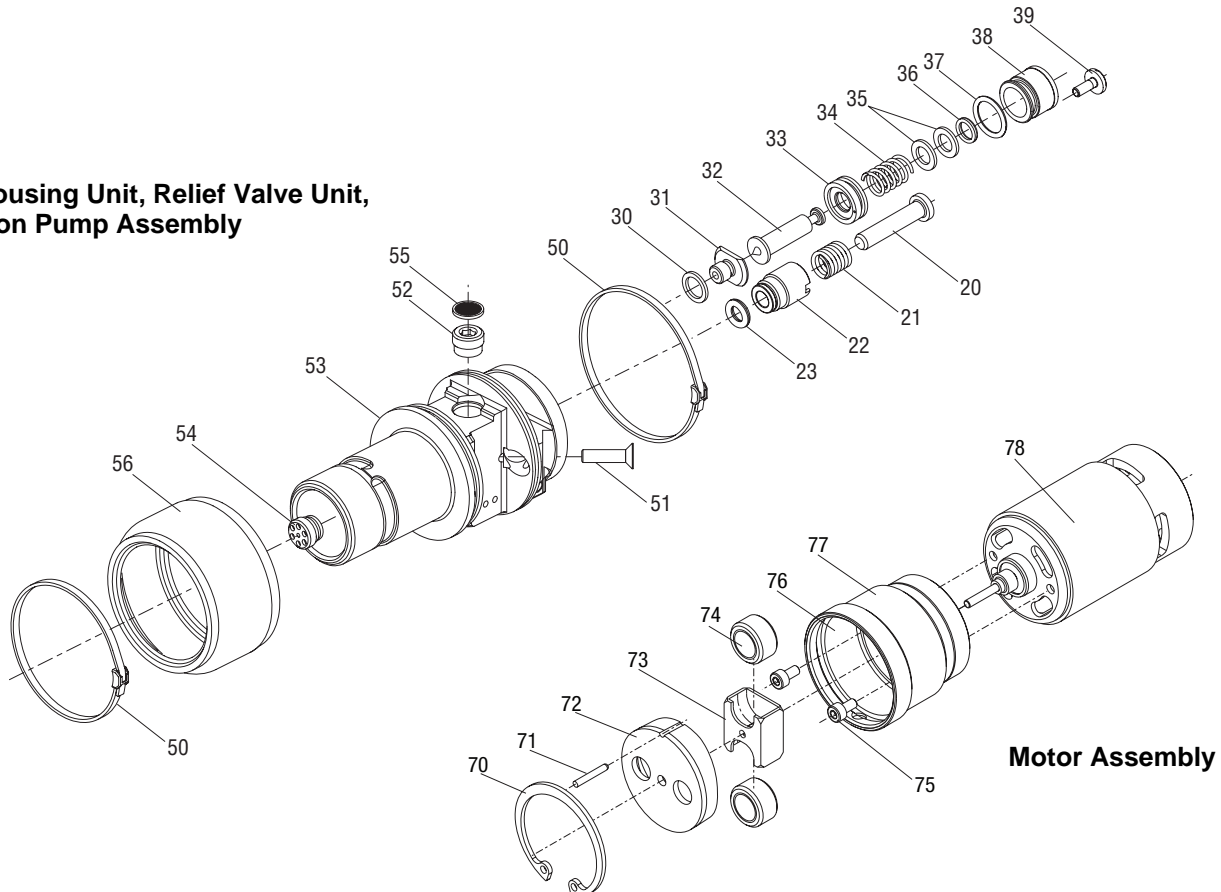
Problem	Probable Cause	Probable Remedy
Tool is inoperative.	<p>Dirt, contaminants, etc., in ram area of tool.</p> <p>Crimping tool battery contacts damaged.</p> <p>Tool components worn or damaged.</p>	<p>Clean tool.</p> <p>Reform contacts.</p> <p>Return tool to an authorized Greenlee service center.</p>
Dies stop during operation.	<p>Oil level is low.</p> <p>Air in hydraulic system.</p>	<p>Return tool to an authorized Greenlee service center.</p> <p>Pull trigger and hold retract button simultaneously. Hold for approximately 10 seconds.</p>
LED display glows for 20 seconds.	Battery charge low.	Charge or replace battery.
Tool loses oil.	Damaged internal seal.	Return tool to an authorized Greenlee service center.

Illustrations

Main

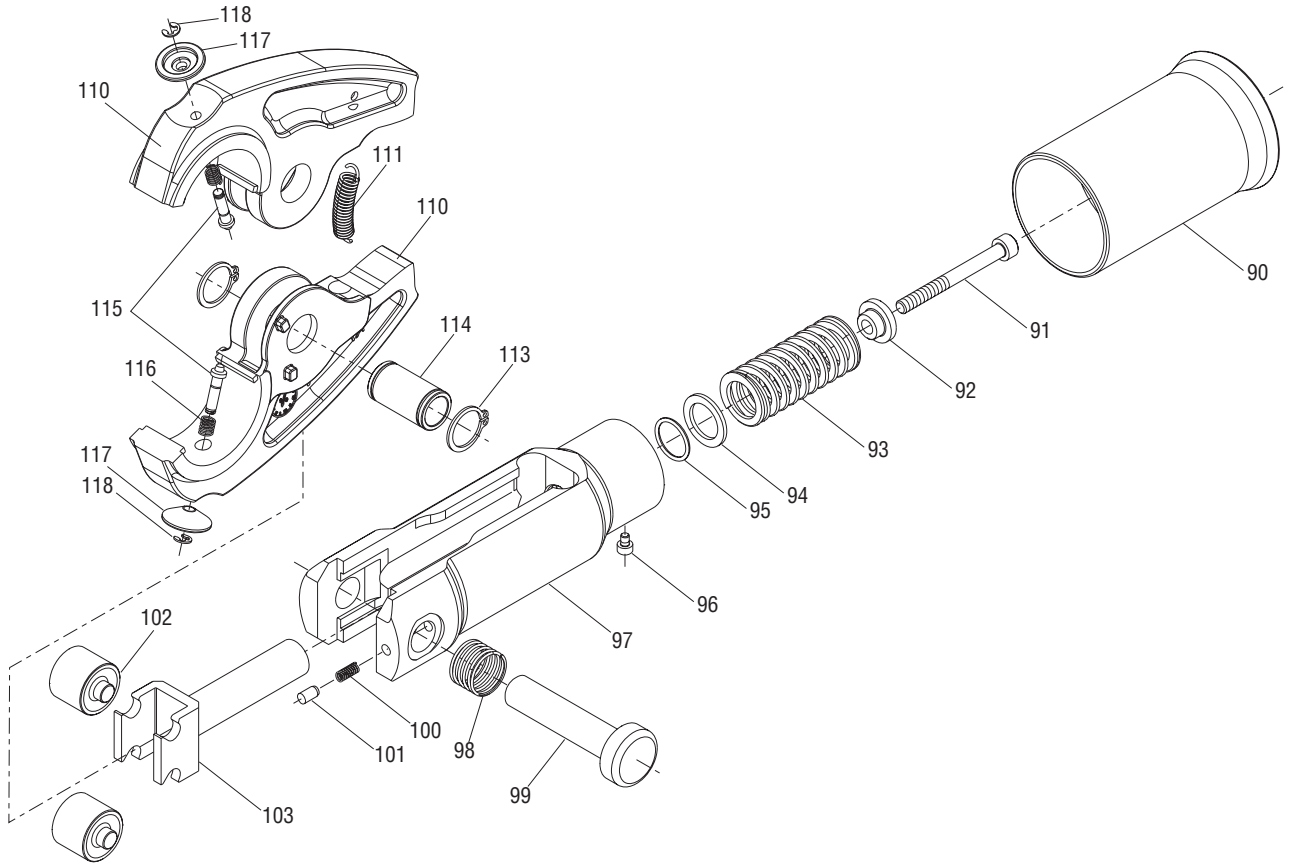


Pump Housing Unit, Relief Valve Unit, and Piston Pump Assembly



Illustrations (continued)

Ram Unit and Crimping Jaw Unit—D₃



Parts List

Key	Part No.	Description	Qty	Key	Part No.	Description	Qty
1*	50120050	Bushing with seal	1	50032410	Ram unit (includes 90–103)		
6	50019295	Screw	1	90	50032542	Sheath	1
7	50019287	Relief valve lever	1	91	50032550	Shoulder bolt	1
8	52026640	Switch	1	92	50032569	Disc	1
9	52023617	Decal, specification	1	93	50032585	Compression spring	1
10	50019414	Decal, Greenlee GATOR	1	94	50032623	Washer	1
11	50019708	Decal, pinch hazard	1	95*		O-ring	1
12	50019422	Decal, Greenlee GATOR	1	96	50019295	Screw	1
13	50019430	Decal, warning	1	97	50032631	Ram housing	1
	50018990	Piston pump assembly (includes 20–23)		98	50032640	Compression spring	1
20	50019317	Piston pump	1	99	50032658	Locking pin	1
21	50019015	Spring	1	100	50032666	Compression spring	1
22	50019309	Piston pump housing	1	101	50032674	Pin	1
23*		Piston seal	1	102	50032682	Roller	2
	50018922	Relief valve unit (includes 30–39)		103	50032690	Ram	1
30*		Seal	1	52024683	Crimping jaw unit, CJ22 (includes 110–118)		
31	50019554	Valve seat	1	110		Jaw, CJ22	2
32	50019465	Needle valve	1	111	52022544	Spring	1
33	50019546	Plunger	1	113	50032275	Retaining ring	2
34	50103776	Spring	1	114	50032500	Pin pivot	1
35	50070150	Lock washer	2	52023623	Die retaining pin kit (includes 115–118)		
36*		O-ring	1	115		Die retaining pin	2
37*		O-ring	1	116		Compression spring	2
38	50019520	Pressure relief	1	117		Release button	2
39	50109146	Screw	1	118		Retaining ring	2
	50032399	Pump housing unit (includes 50–56)					
50*	50019724	Clamp	2	* 50047957	Seal kit (includes items marked with an asterisk)		
51*	50019023	Screw	1	52027056	Carrying case		
52	50109162	Threaded bushing	1	50035444	Decal, case		
53	50032445	Pump block	1	52026638	9.6 V battery		
54	50109308	Threaded bushing	1	50021788	12 V charger 110 VAC		
55	50109316	Screen	1	52023076	12 V charger 12 VDC		
56	50019449	Reservoir	1	50021800	12 V charger 220 VAC		
	50109430	Housing unit, green (includes 60–68)					
60	50042076	Screw	4				
61	50019767	Screw	2				
62	50043960	Compression spring, DA5.5 x L14.0)	1				
63	50019341	Trigger link	1				
64		Battery release lever	1				
65		Housing half	1				
66		Housing half	1				
67		Button, relief valve	1				
68		Cover, trigger	1				
	50018957	Motor assembly (includes 70–78)					
70	50019651	Retaining ring	1				
71	50019589	Pin	1				
72	50019619	Motor cap	1				
73	50019538	Disc housing	1				
74	50019627	Disc	2				
75		Screw	2				
76		Gear lube, 1.5 g	1				
77		Motor adapter	1				
78		Motor, electric	1				

Accessory Crimping Jaw Units

52025123	CJD3BG for use with W- and X-type crimping dies
52025126	CJD3O for use with W- and X-type crimping dies
52024068	CJD3 for use with W- and X-type crimping dies
04829	CJK for use with Thomas & Betts "6TON" crimping dies



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