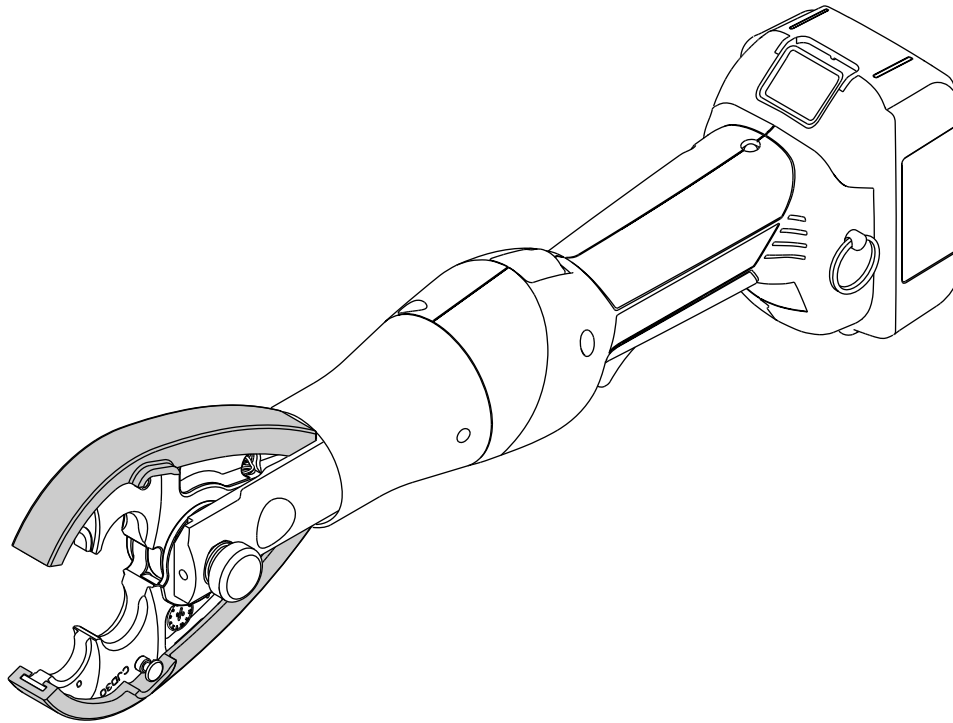


INSTRUCTION MANUAL



GREENLEE[®]
UTILITY
A Textron Company

Serial Number



GATOR[®] EK425L **Battery-powered** **Crimping Tool**



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

Register this product at www.greenlee.com

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Description

The EK425L Battery-powered Crimping Tool is a hand-held, self-contained crimping tool with removable crimping jaws.

This tool is protected by U.S. Patent No. 6,276,186, 6,401,515, 6,718,870, 7,086,979, 7,216,523, and 7,254,982.

Safety

Safety is essential in the use and maintenance of Greenlee Utility 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 Utility tool:

EK425L Battery-powered Crimping Tool

Keep this manual available to all personnel.

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



Do not discard this product or throw away!

For recycling information, go to 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 Textron Innovations Inc.

Blackburn is a registered trademark of Thomas & Betts.

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

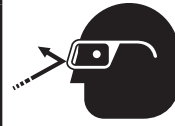
Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

⚠ 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. Oil under pressure easily punctures skin. If injured, seek medical attention immediately to remove oil.

Failure to observe this warning could result in serious injury, gangrene, or death.



⚠ WARNING

Do not use solvents or flammable liquids to clean the tool body. 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

Electric shock hazard:

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

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 sounds and the ram automatically retracts to indicate a completed crimp. If you do not hear the sound of the relieve valve or the ram does not automatically retract, the crimp is not complete.

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

IMPORTANT SAFETY INFORMATION

	⚠ WARNING
	<p>Pinch points:</p> <ul style="list-style-type: none"> • Remove battery before changing dies, adapters, or jaws. • Keep hands away from the crimping tool head when crimping. <p>Failure to observe these warnings could result in severe injury or death.</p>

⚠ WARNING
<p>Do not dispose of batteries in a fire. They will vent fumes and may explode.</p> <p>Failure to observe this warning could result in severe injury from harmful fumes or burns from flying debris.</p>

⚠ WARNING
<ul style="list-style-type: none"> • Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel. • Carrying strap is for carrying only, not to be used to hang or suspend tool. <p>Failure to observe these warnings could result in severe injury or death.</p>

⚠ CAUTION
<ul style="list-style-type: none"> • Do not use this tool for continuous use. After 30 to 40 cycles, allow the tool to cool for 15 minutes. • Do not secure this tool in a vise. This tool is designed for hand-held operation. • This tool may be used in damp or wet environments; however, air-drying is recommended before use if the tool becomes soaked. Damage may result when the tool is operated prior to thorough drying 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>

⚠ CAUTION
<p>Do not allow anything to contact the battery terminals.</p> <ul style="list-style-type: none"> • 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. <p>Failure to observe these precautions may result in injury or property damage.</p>

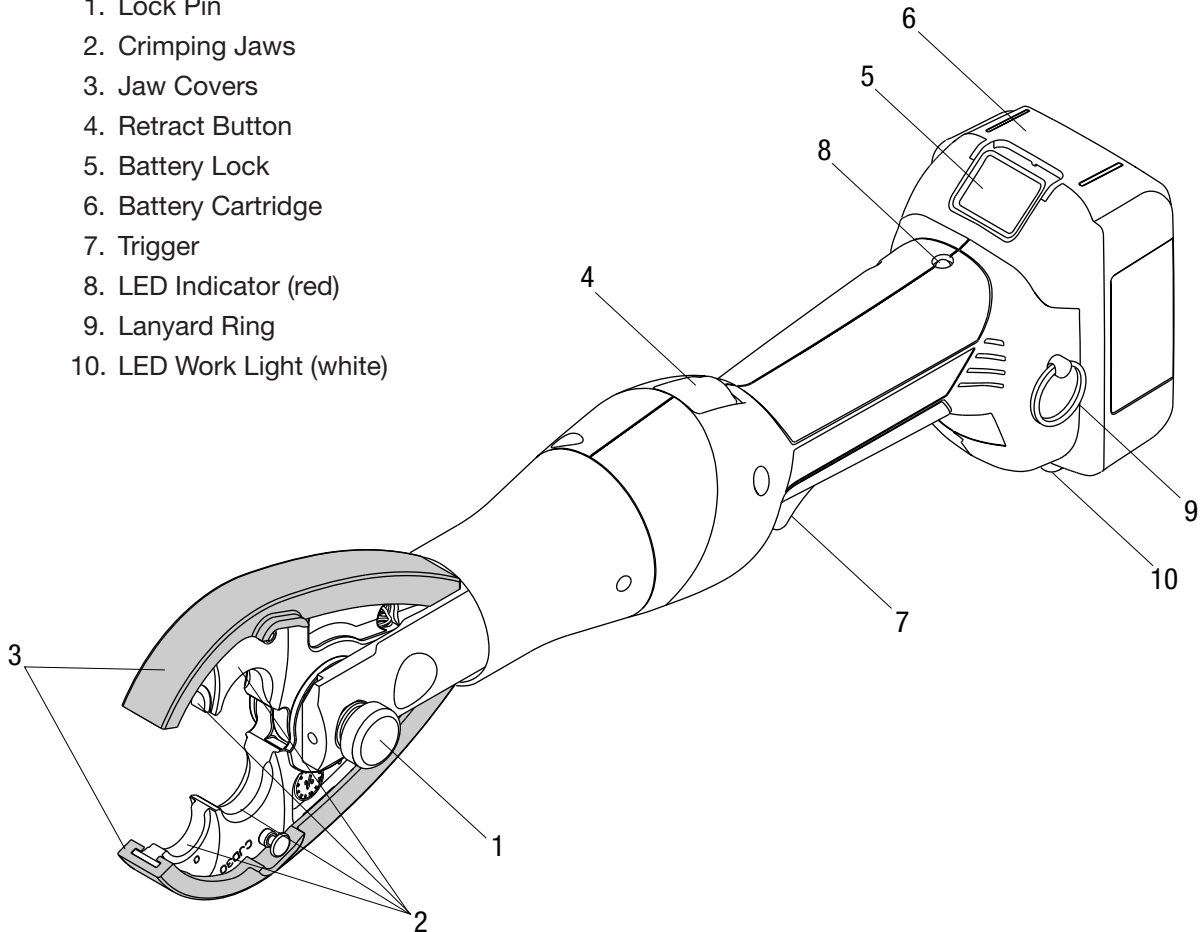
⚠ CAUTION
<ul style="list-style-type: none"> • Do not store the battery at more than 122 °F (50 °C) or less than -4 °F (-20 °C). Damage to the battery can result. • Do not use another manufacturer's charger. Other manufacturers' chargers may overcharge and damage the battery. • Do not attempt to open the battery. It contains no user-serviceable parts. <p>Failure to observe these precautions may result in injury or property damage.</p>

⚠ CAUTION
<p>Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.</p> <p>Failure to observe this precaution may result in injury and property damage.</p>

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

Identification

- 1. Lock Pin
- 2. Crimping Jaws
- 3. Jaw Covers
- 4. Retract Button
- 5. Battery Lock
- 6. Battery Cartridge
- 7. Trigger
- 8. LED Indicator (red)
- 9. Lanyard Ring
- 10. LED Work Light (white)



Specifications

Crimping Tool	
Length.....	18.50" (470 mm)
Width	2.87" (72.9 mm)
Depth.....	4.50" (114.3 mm)
Weight.....	6.5 lb (3 kg)
Crimping Force.....	6 tons (53 kN)
Hydraulic Oil	Biodegradable hydraulic fluid
Recommended Operating Temperature Range.....	5 °F to 122 °F (-15 °C to 50°C)
Battery Charger.....	Read the instructions supplied with the battery charger

Operation

⚠ 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.
- Carrying strap is for carrying only, not to be used to hang or suspend tool.

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

⚠ WARNING

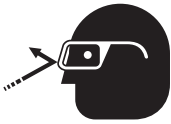


Electric shock hazard:

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

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

⚠ 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



Pinch points:

- Remove battery before changing dies, adapters, or jaws.
- Keep hands away from the crimping tool head when crimping.

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

⚠ CAUTION

- Do not use this tool for continuous use. After 30 to 40 cycles, allow the tool to cool for 15 minutes.
- Do not secure this tool in a vise. This tool is designed for hand-held operation.
- This tool may be used in damp or wet environments; however, air-drying is recommended before use if the tool becomes soaked. Damage may result when the tool is operated prior to thorough drying 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.

Charging the Battery

Read the instructions supplied with the battery charger.

LED Work Light (white)

This LED automatically turns on when the trigger is pulled. It remains on for 10 seconds after the trigger is released.

LED Indicator (red)

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:

What happens	Signal	What it means
Flashing light for 2 seconds	●●	Battery is inserted in tool
Constant light for 20 seconds at end of cycle	▬	Battery charge is below 17 V at beginning of cycle
Tool will not start, and constant light for 20 seconds when trigger is released	▬	Battery charge is below 16 V at beginning of cycle
Tool will stop, and constant light for 20 seconds after trigger is released	▬	Battery voltage drops below 13 V during cycle
Tool will stop, and flashing light for 20 seconds when trigger is released	●●●●	Motor current exceeds 20 A during cycle Circuit has become too hot

Pressure Sensor

This tool is equipped with a pressure sensor that alerts the user of an incomplete crimp.

- If the tool is manually retracted before completion of a crimp, the red LED and an audible beep will be active for 2 seconds.
- If the tool is unable to reach the required crimp force, the red LED, work light, and an audible beep will pulse until after the trigger is released.

Operation (cont'd)

Die Selection

Interchangeable dies may be used in the standard die opening. Dies that may be used include:

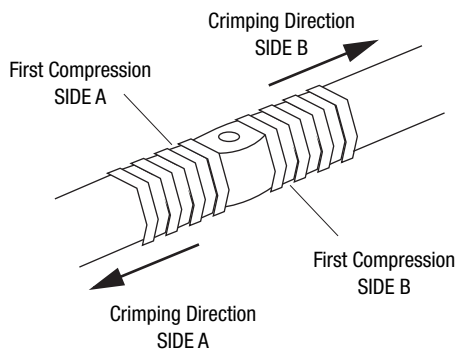
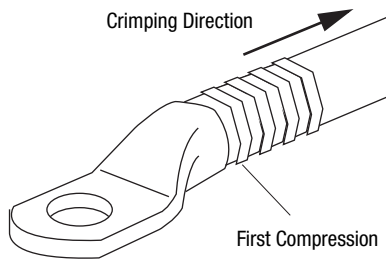
- Greenlee KD6 series
- Burndy W and X series
- ILSCO ND series
- Huskie HT58 series
- Panduit CD-2001 series
- Other industry W-type dies

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, positive lock, die buttons.

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 "H" frames; 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 and "H" frame connectors, 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 sounds and the ram automatically retracts to indicate a completed crimp. If you do not hear the sound of the relieve valve or the ram does not automatically retract, the crimp is not complete.

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

CJ22 Jaw and KA22/KC22-type Die Selection

Note: This tool will provide a cUL and UL classified crimp ONLY when used with the CJ22 jaws and KA22- or KC22-type dies.

Note: This tool will provide 53 kN (6 tons) of crimping force when used with the CJ22 jaws.

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” 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

CJ22 Crimping Jaw 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®	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	CSW CRA/CRB	LCAS/LCA LCD	54104-54118 54204-54218	BLU	
	Long	VHCL	CTL-L/LCN	YA-2N	CLN/CLW 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®	Burndy	ILSCO	Panduit**	T&B	Penn-Union	No. of Crimps*
Dual-rated Aluminum Splice	—	VACS	ASP	YS-A	AS ASN	SA	60501-60565	PIK	B
Dual-rated Aluminum Lugs	—	VACL	ATL	YA-A YA-ATN	ACL/ACN 2ACL/2ACN ALNS/ALNN/ALND	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

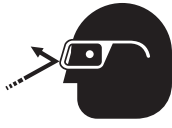
B — 8 to 2 AWG: 2 crimps
1 to 3/0 AWG: 3 crimps
4/0 AWG to 350 kcmil: 4 crimps


** 6 AWG to 350 kcmil


† 500 kcmil maximum with Penn-Union connectors


▲ 8 AWG to 350 kcmil with Burndy copper splices

Maintenance

	⚠ 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>Skin injection hazard:</p> <p>Do not use hands to check for oil leaks. Oil under pressure easily punctures skin. If injured, seek medical attention immediately to remove oil.</p> <p>Failure to observe this warning could result in serious injury, gangrene, or death.</p>

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

	⚠ WARNING
	<p>Pinch points:</p> <ul style="list-style-type: none"> • Remove battery before changing dies, adapters, or jaws. • Keep hands away from the crimping tool head when crimping. <p>Failure to observe these warnings could result in severe injury or death.</p>

IMPORTANT
Relief valve adjustments must be done by an authorized service center.

Daily

Before use:

1. Inspect the tool for wear or damage, such as cracks, gouges, or chips.
2. Inspect the tool for damage or leaks.
3. Inspect the rotation of the head assembly. Fully retract the ram. The head should rotate no more than 360°. If damage is detected, send the tool to a Greenlee Utility Authorized Service Center for inspection.

After use:

1. Use a damp cloth and mild detergent to clean the housing. Allow the housing to dry.
2. Fully retract the ram. Place the tool in the carrying case and store in a cool, dry place.
3. If necessary, recharge the batteries. Refer to the instructions supplied with the battery charger.

Monthly

1. Thoroughly clean all surfaces.
2. Check the oil level.

Annually or After 10,000 Crimps

1. Replace the hydraulic oil.
2. Send the tool to a Greenlee Utility Authorized Service Center for inspection.

Checking the Oil Level

1. Remove the screws holding the housing cover together.
2. Point the crimping head downward and remove the oil reservoir plug. Fill reservoir if necessary.
3. Replace the oil plug and housing cover.

Note: For Warranty Service or Repair, contact Greenlee customer service at 800-435-0786.

Troubleshooting

Before You Begin

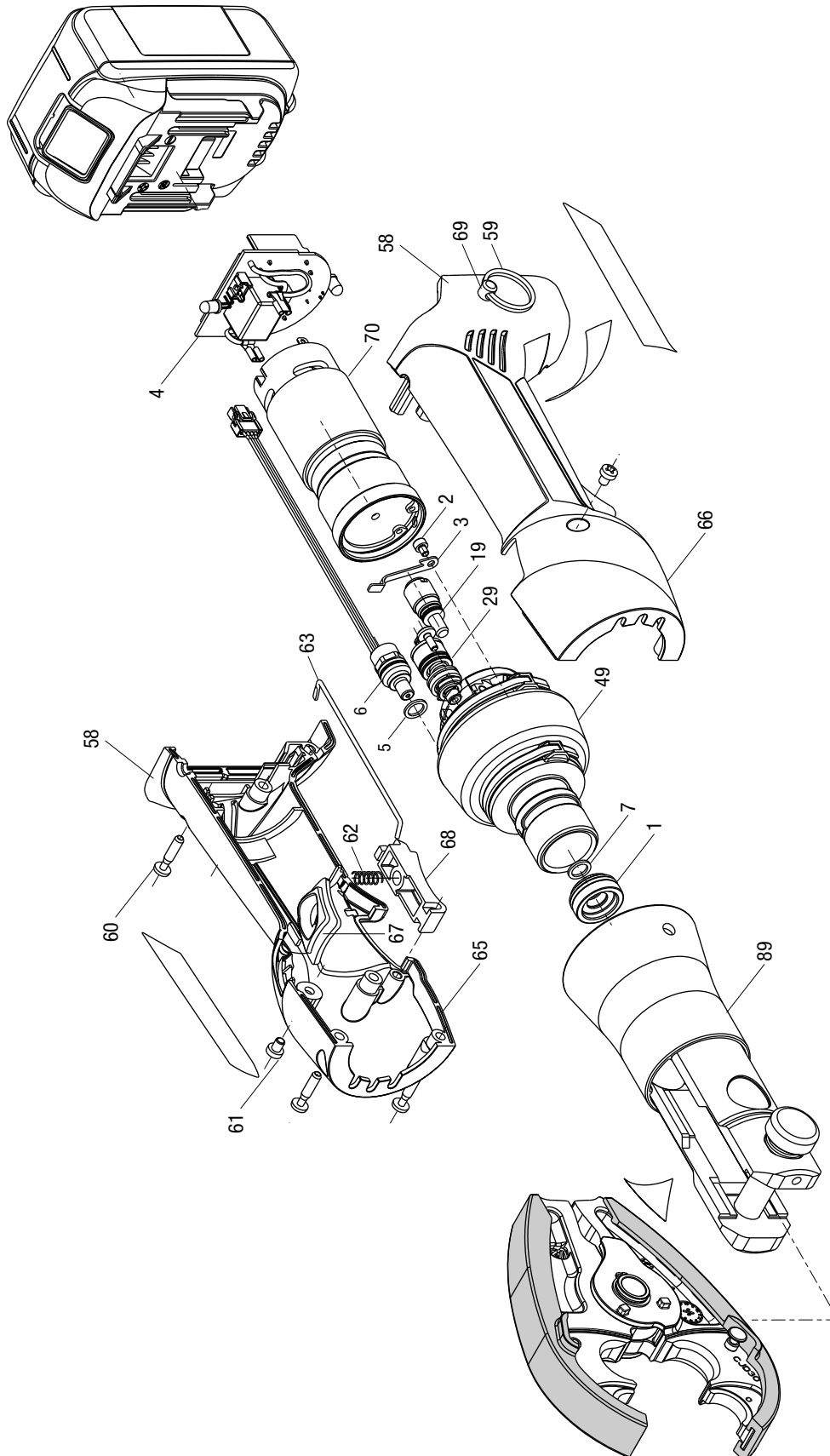
1. Make sure that the battery is charged. Recheck the battery after several minutes to make sure the battery is holding its charge.
2. Use a **nonflammable** contact cleaner or pencil eraser to clean the electrical contacts on the battery and tool.
3. Reinstall the battery and check the tool again.

Problem	Possible Cause	Probable Remedy
Tool is inoperative.	Dirt, contaminants, etc., in ram area of tool.	Clean tool.
	Tool battery contacts damaged.	Reform contacts.
	Tool components worn or damaged.	Return tool to a Greenlee Utility Authorized Service Center.
Motor is inoperative.	Low or uncharged battery.	Try known charged battery. Inoperative battery may be discharged or may have reached life expectancy.
	Broken switch components.	Return tool to a Greenlee Utility Authorized Service Center.
Motor runs but tool will not complete a cycle.	Oil level low.	Return tool to a Greenlee Utility Authorized Service Center.
	Air in hydraulic system.	Pull trigger and hold retract button simultaneously. Run for approximately 10 seconds, and then attempt to crimp. If unsuccessful, return tool to a Greenlee Utility Authorized Service Center.
	Cold oil.	Pull trigger and hold retract button simultaneously to warm oil. Store tool in warm area.
Dies stop during operation.	Oil level low.	Return tool to a Greenlee Utility Authorized Service Center.
	Air in hydraulic system.	Pull trigger and hold retract button simultaneously. Hold for approximately 10 seconds.
LED glows for 20 seconds.	Battery charge low.	Charge or replace battery.
Tool loses oil.	Damaged internal seal.	Return tool to a Greenlee Utility Authorized Service Center.

Note: For Warranty Service or Repair, contact Greenlee customer service at 800-435-0786.

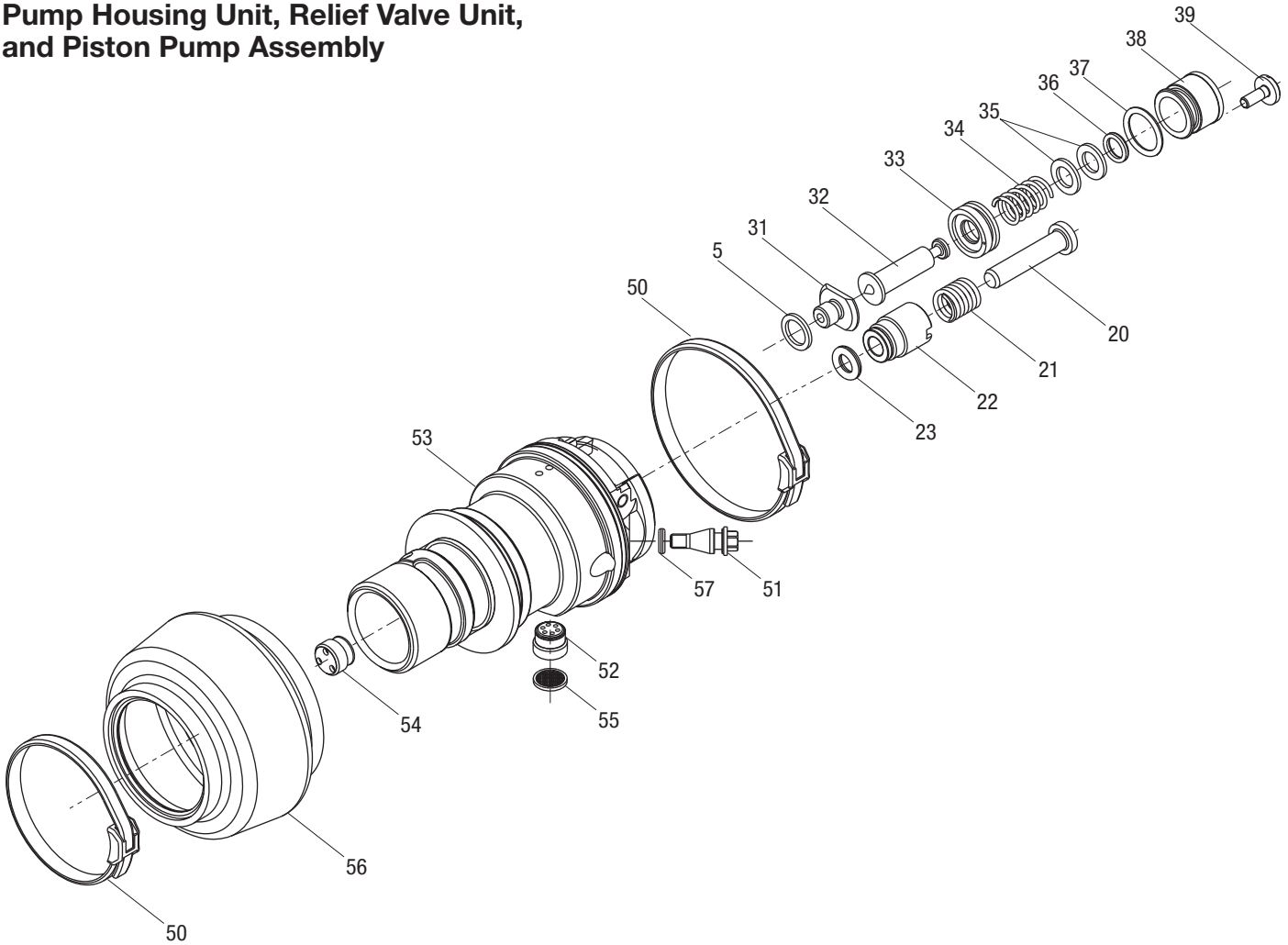
Illustrations

Main

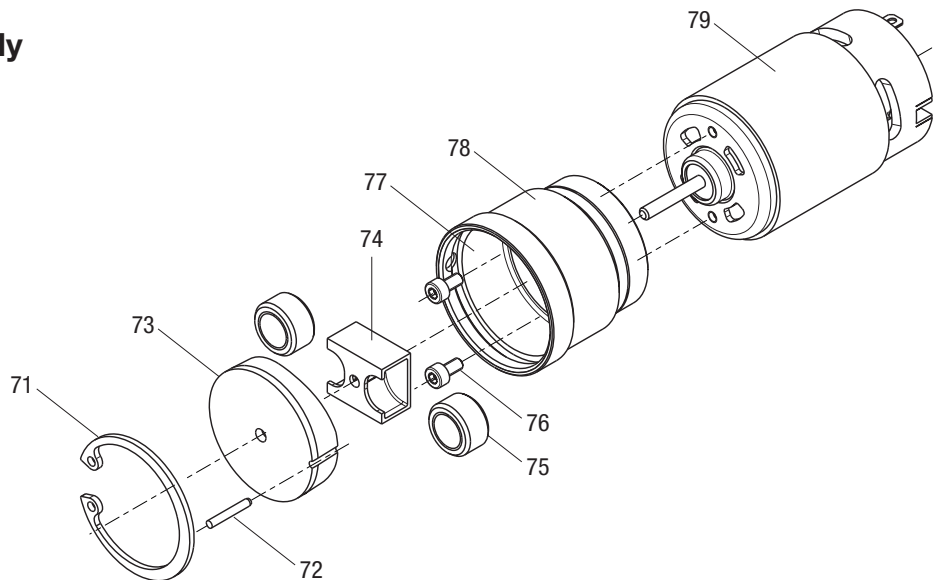


Illustrations (cont'd)

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

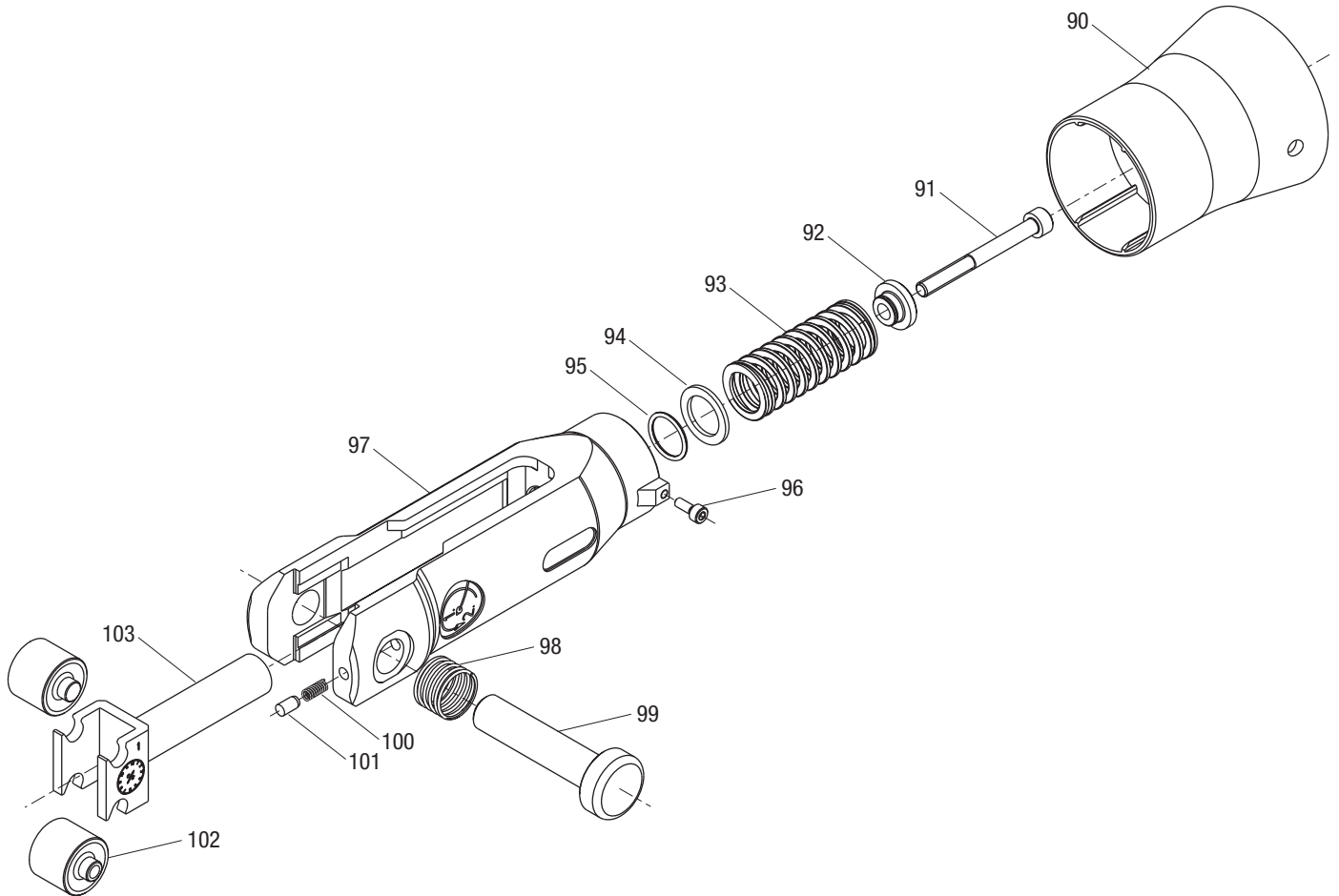


Motor Assembly



Illustrations (cont'd)

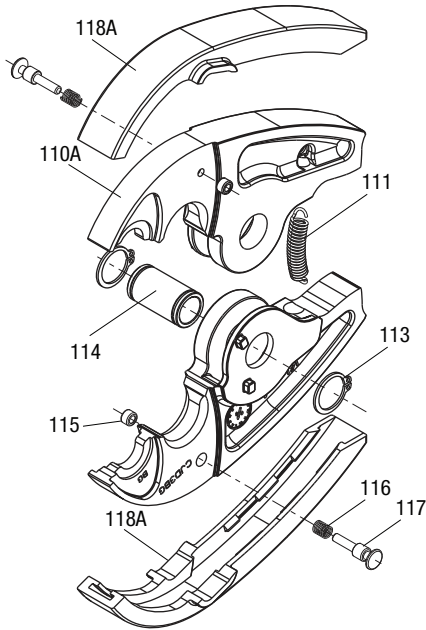
Ram Unit



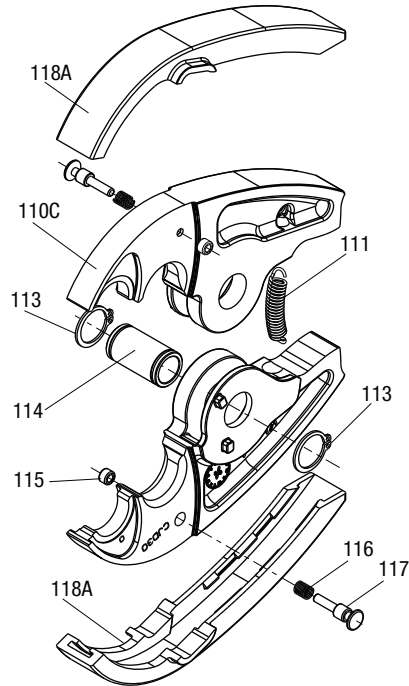
Illustrations (cont'd)

Crimping Jaw Units

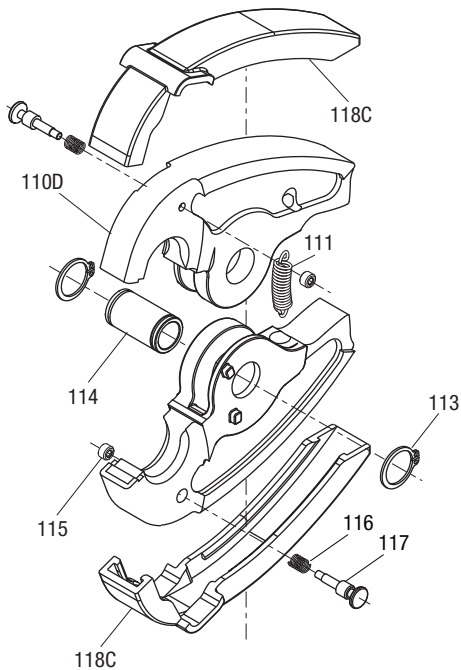
CJD3BG



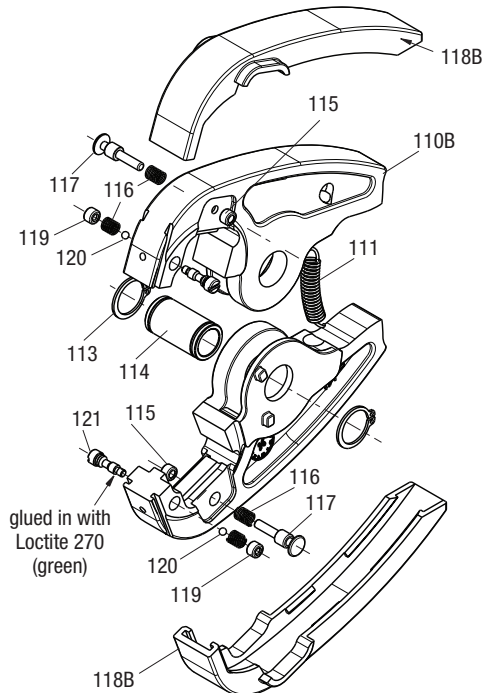
CJD30



CJD3



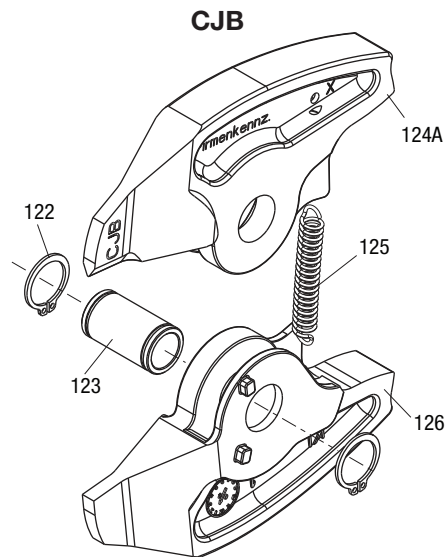
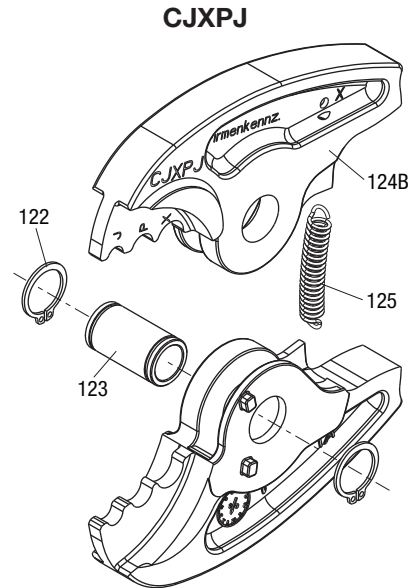
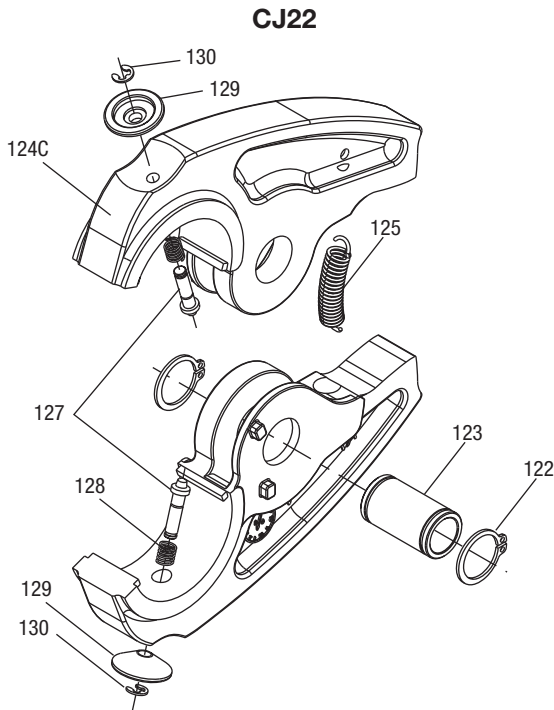
CJK Kearney



Parts List

Key	Part No.	Description	Qty	Key	Part No.	Description	Qty
1	50120050	Bushing with seal	1	91		Bolt, shoulder	1
2	50019295	Screw.....	1	92		Disc.....	1
3	50019287	Lever, relief valve	1	93		Compression spring	1
4	52056510	Control board	1	94		Washer.....	1
5*		Seal.....	2	95*		O-ring	1
6	52049205	Sensor	1		52057497	Jaw holder kit (includes 90, 96, 97).....	1
7*		Bushing seal	1	96	52057496	Screw.....	1
19	50018990	Piston pump assembly (includes 20–23).....	1	97		Jaw holder.....	1
20		Piston pump	1		52049400	Latch kit (includes 98–101)	
21		Spring	1	98		Compression spring	1
22	50019309	Piston pump housing	1	99		Locking pin	1
23*		Piston seal	1	100		Compression spring	1
29	50018922	Relief valve unit (includes 31–39)	1	101		Pin	1
31	50019554	Valve seat	1		52049401	Roller kit (includes 102 and 103)	
32		Needle valve	1	102		Roller	2
33		Plunger	1	103		Ram	1
34		Spring	1		52027121	CJD3BG crimping jaw unit (includes 110–118)	
35		Lock washer	2		52027122	CJD3O crimping jaw unit (includes 110–118)	
36*		O-ring	1		52024068	CJD3 crimping jaw unit (includes 110–118)	
37*		O-ring	1		52020114	CJK Kearney crimping jaw unit (includes 110–118, 119–121)	
38		Pressure relief	1	110A		Jaw, CJD3BG	2
39		Screw.....	1	110B		Jaw, CJK	2
49	52048120	Pump housing unit (includes 50–56)	1	110C		Jaw, CJD3O	2
50	52055861	Clamp, 10 pack	1	110D		Jaw, CJD3	2
50*		Clamp	2	111	52022544	Extension spring.....	1
51		Screw.....	1		52049402	Jaw pivot kit (includes 113 and 114)	
52		Threaded bushing.....	1	113		Retaining ring	2
53		Pump block	1	114		Pin pivot.....	1
54		Threaded bushing.....	1	115		Bushing	2
55		Screen	1	116		Compression spring	2
56	52049296	Reservoir	1	117		Lock adapter	2
57*		O-ring	1	118A	52025125	Jaw covers, CJD3O/CJD3BG (set of 2)	1
58	52048131	Housing unit (includes 59–69).....	1	118B	52022386	Jaw covers, CJK (set of 2).....	1
59		Ring	1	118C	52021086	Jaw covers, CJD3 (set of 2)	1
60		Screw.....	4	119		Bushing	2
61		Screw.....	2	120		Ball, 3 mm	2
62		Compression spring, DA5.5 x L14.0).....	1	121		Locking pin	1
63		Link, trigger.....	1		50103750	Die pin kit, “W”-style dies (includes 115–117)	
65		Housing half	1		50105108	Die pin kit, Kearney-style dies (includes 116, 119–121)	
66		Housing half	1	*	50047957	Seal kit (includes items marked with an asterisk)	
67		Button, relief valve.....	1		52049206	Decal kit	
68		Cover, trigger	1		52025047	Carrying pouch	
69		Stud.....	1		50122746	Carrying strap	
70	52048132	Motor assembly (includes 71–79).....	1		52049189	18 V, 3 Ah battery	
71		Retaining ring	1		52049201	18 V charger 120 VAC	
72	50019589	Pin	1		52049202	18 V charger 230 VAC	
73		Motor cap	1		52049204	18 V charger 12 VDC	
74		Disc housing.....	1		52047087	18 V corded adapter 120 VAC	
75		Disc.....	2		52047088	18 V corded adapter 230 VAC	
76		Screw.....	2		52054992	Li (18 V) to NiCd, NiMH (12 V) charger adapter	
77		Gear lube, 1.5 g	1		52057878	Biodegradable hydraulic fluid (1 qt)	
78		Motor adapter.....	1		52067054	Tag, connector chart	1
79		Motor, electric.....	1				
89	52048133	Ram unit (includes 90–103).....	1				
90	52049292	Sheath	1				
	52049399	Spring kit (includes 91–95)					

Illustration and Parts List—Optional Accessories



Key	Part No.	Description	Qty
	52024683	CJ22 crimping jaw unit for cUL and UL classified crimps—refer to “Connector Selection” for details	
	52025649	CJXPJ crimping jaw unit (includes 122-125)	
	52025648	CJB single-use lock cutter (includes 122-126)	
	52049402	Jaw pivot kit (includes 122 and 123)	
122		Retaining ring	2
123		Pivot pin.....	1
124A		Jaw, sharp—CJB.....	1
124B		Jaw, CJXPJ	2
124C		Jaw, CJ22.....	2
125	52022544	Extension spring.....	1
126		Jaw, flat—CJB.....	1
	52023623	Die retaining pin kit (includes 127–130)	
127		Die retaining pin.....	2
128		Compression spring	2
129		Release button	2
130		Retaining ring	2