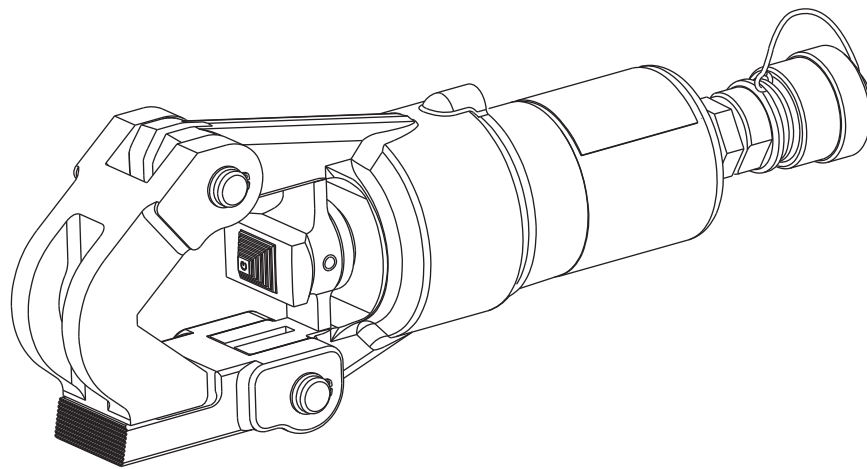


INSTRUCTION MANUAL



GREENLEE[®]
UTILITY
A Textron Company

Serial Number



RK12ID

Remote Dieless 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

Table of Contents

| | |
|--|------|
| Description | 2 |
| Safety | 2 |
| Purpose of this Manual | 2 |
| Important Safety Information | 3-4 |
| Identification | 5 |
| Specifications | 5 |
| Operation | 6-7 |
| cUL and UL Classified Crimps | 8 |
| Connector Table | 8 |
| Maintenance | 9-10 |
| Periodic Pressure Relief Valve Check | 9 |
| Verify Crimping Distance | 10 |
| Illustration and Parts List | 11 |

Description

The RK12ID Remote Dieless Crimping Tool is a dieless crimping tool intended to crimp aluminum and copper connectors onto electrical cable.

The RK12ID is to be coupled to any Greenlee or Greenlee Utility hydraulic pump capable of developing 10,000 psi (700 bar). Suggested pumps include:

| Pump Type | Model Number |
|---------------------------------------|---------------------|
| Battery | EHP700 |
| Hand Pump | 755 7475H |
| Electric Pump (120 Volt Models) | 975 980 990 |
| Electric Pump (220 Volt Models) | 976-22 980-22 |
| Greenlee Utility Intensifier | HB10* |

* Requires PVA0021 Control Valve

Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This instruction 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:

RK12ID Remote Dieless 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. 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

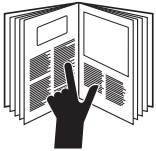
Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

⚠ 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

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.

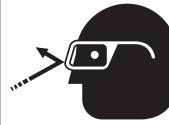


⚠ WARNING

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

Wear eye protection when operating this tool.

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



⚠ WARNING

Skin injection hazard:

- Hand-tighten all couplers completely before operating the pump. Do not use tools.
- Do not use hands to check for leaks.
- Do not hold the hose or couplers while the hydraulic system is pressurized.
- Depressurize the hydraulic system before servicing.

Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.

IMPORTANT SAFETY INFORMATION

⚠ WARNING

An incomplete crimp can cause a fire.

- Use proper connector and cable combinations. Improper combinations can result in an incomplete crimp.
- Crimp until the pump has reached relief pressure. If you do not achieve relief pressure you will have an incomplete crimp.

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

⚠ WARNING

Inspect tool 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.



⚠ WARNING

Keep hands away from the crimping tool head when crimping.

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

⚠ WARNING

Follow the instructions and safety information supplied with the pump.

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

⚠ WARNING

Use only Greenlee supplied hoses and couplers. Other manufacturers' components may fail.

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

⚠ CAUTION

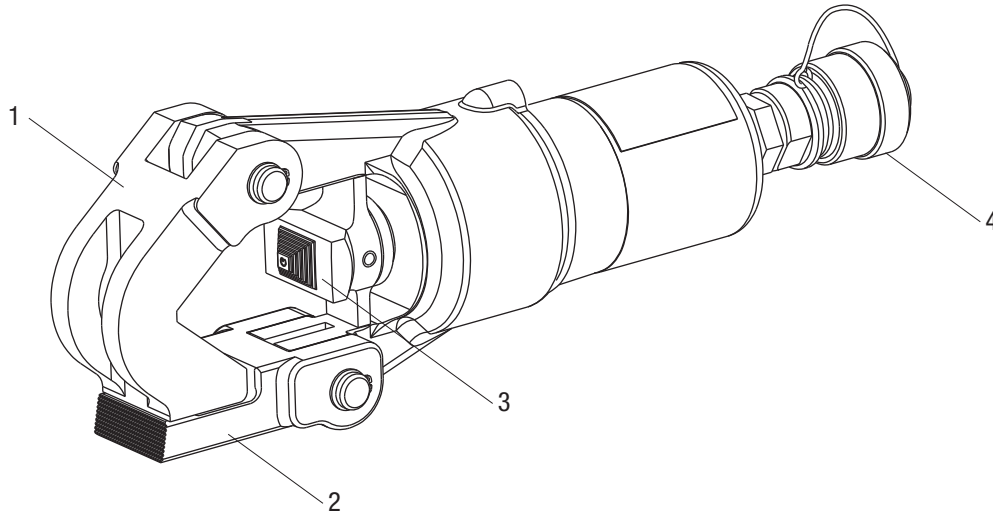
Do not operate the tool without a connector in place. Damage to the ram or crimping tool head can result.

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. Crimping head
2. Latch
3. Indenter
4. Coupler



Specifications

Crimping Tool

| | |
|-------------------|------------------|
| Length | 12.5" (317.5 mm) |
| Width | 2.87" (72.9 mm) |
| Height..... | 4.26" (108.2 mm) |
| Mass/Weight | 9.75 lb (4.4 kg) |


Crimping Capacities

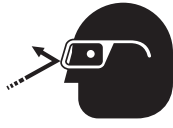
Crimping Range


| | |
|----------------|---------------------|
| Aluminum | 6 AWG to 1000 kcmil |
| Copper | 4 AWG to 1000 kcmil |

| | |
|---------------------|------------------|
| Crimping Force..... | 12 tons (106 kN) |
|---------------------|------------------|


Operation

| | |
|---|---|
|  | ⚠ WARNING |
| | <p>Electric shock hazard:</p> <p>This tool is not insulated. When using this unit on or 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 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> <ul style="list-style-type: none"> • Hand-tighten all couplers completely before operating the pump. Do not use tools. • Do not use hands to check for leaks. • Do not hold the hose or couplers while the hydraulic system is pressurized. • Depressurize the hydraulic system before servicing. <p>Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.</p> |

| |
|---|
| ⚠ WARNING |
| <p>An incomplete crimp can cause a fire.</p> <ul style="list-style-type: none"> • Use proper connector and cable combinations. Improper combinations can result in an incomplete crimp. • Crimp until the pump has reached relief pressure. If you do not achieve relief pressure you will have an incomplete crimp. <p>Failure to observe these warnings could result in severe injury or death.</p> |

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

| |
|--|
| ⚠ WARNING |
| <p>Follow the instructions and safety information supplied with the pump.</p> <p>Failure to observe this warning could result in severe injury or death.</p> |

Operation (cont'd)

Preparation

IMPORTANT

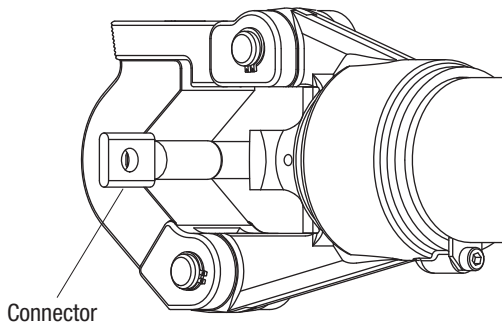
For a cUL or UL classified crimp, refer to the "Connector Table" in this instruction manual.

1. Select a proper size and type of connector to correspond with the wire or cable.
2. Strip the cable to an appropriate length. Follow the connector manufacturer's instructions.

Note: Apply an oxide inhibitor, if required. Refer to the connector manufacturer's instructions.

Crimping

1. Insert the cable fully into the connector.
2. Place the connector into the V of the crimping head, as shown below.



3. If open, close the crimping head. Make sure the head and latch are fully engaged.
4. For a cUL or UL classified crimp, complete the number of crimps specified in the "Connector Table" in this manual.
5. For a single crimp, position the connector so the crimp will be located at the center of the barrel. For a double crimp, position the connector so two crimps will be evenly spaced between the connector marks.

6. Activate the hydraulic power source until the ram has advanced and the crimp is completed.

Note: To ensure a complete crimp, verify that the power source has reached 10,000 psi (700 bar). Refer to the "Periodic Relief Valve Check" in this manual.

7. Stop the power source and allow the ram to retract.
8. Lift the latch to open the crimping head and remove the connector.

Note: After completing the last crimp on an aluminum connector, wipe off the excess oxide inhibitor.

⚠ WARNING

An incomplete crimp can cause a fire.

Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.

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

cUL and UL Classified Crimps

Crimps made with the Greenlee Utility RK12ID Remote Dieless Crimping Tool are cUL and UL classified on standard concentric, compressed, or compact stranded copper and aluminum cable with the connectors listed

here. Refer to the “Connector Table” for the brand names and model numbers of appropriate connectors and the number of crimps required.

Connector Table

(NOT for use with flex, navy or welding wire)

| Copper Connector Type | | Anderson | Blackburn® | Burndy | ILSCO | Panduit | T & B | Penn-Union | Tyco (AMP) |
|-----------------------|--|--------------|---------------------|---|--|--|--|-------------|---|
| Copper Splices | | VHSS VHS | CSP CU | YS-L YS | CT CTL | SCSS SCS SCL, SCH | 54506 to 54528 54806 to 54828 | BCU BBCU | — |
| Copper Lugs | | VHCS VHCL | CTL CTL-L LCN | YA, YA-L, YA-2L YA-2LN, YA-2N YA-L-TC, YA-L-2TC YA-2TC, YAZ YAZ-2N, YAZ-2TC | CLN, CLW, CSW CRA, CRB, CRC CRA-L, CRB-L CRA-2L CRB-2L CRC-2L | LCAS LCA LCB LCD, LCC LCAN | 54106 to 54128 54206 to 54228 54906BE to 54928BE 54854BE to 54882BE | BLU BBLU | 1099898-2 to 1-1099898-5 1099899-2 to 1-1099899-9 1099939-1 to 1-1099939-5 |
| *Number of Crimps | Copper Cable Size: 4 AWG–1000 kcmil | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |


| Aluminum Connector Type | | Anderson | Blackburn® | Burndy | ILSCO | Panduit | T & B | Penn-Union |
|-----------------------------|---------------------------------|----------|------------|-----------------|--|------------|----------------------------------|-------------|
| Dual-Rated Aluminum Splices | | VACS | ASP | YS-A | AS, ASN | SA | 60507 to 60584 | PIK BCUA |
| Dual-Rated Aluminum Lugs | | VACL | ATL | YA-A YA-A-TN | ACL, ACN 2ACL, 2ACN ALNS, ALNN ALND | LAA LAB | 60106 to 60184 60230 to 60284 | BLUA |
| *Number of Crimps | Cable Size: 6 AWG–500 kcmil | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Cable Size: 600 kcmil–800 kcmil | 2 | 1 | 1 | 1 | 2 | 1 | 1 |
| | Cable Size: 1000 kcmil | 2 | 2 | 2 | 2 | 2 | 2 | 2 |


* When crimping with the RK12ID crimping tool, use the number of crimps listed in this table instead of the number provided with the connector.


Maintenance

- Keep the tool clean. Use the tool with care to keep dirt and grit out of the hydraulic system. Contamination is the most common cause of failure for hydraulic tools.
- Store the tool in its original case with the ram fully retracted.
- Inspect the hydraulic hoses periodically.
- Periodically verify that the power source reaches 10,000 psi (700 bar). Refer to the “Periodic Relief Valve Check” in this manual.

Periodic Relief Valve Check

| | |
|---|--|
|  | ⚠ WARNING |
| | <p>Skin injection hazard:</p> <ul style="list-style-type: none"> • Do not use fingers or hands to check for leaks. • Depressurize hydraulic system before servicing. <p>High pressure oil easily punctures skin causing serious injury, gangrene or death. If injured seek medical help immediately to remove oil.</p> |

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

| | |
|---|---|
|  | ⚠ WARNING |
| | <p>Pinch points:</p> <p>Keep hands away from closing dies.</p> <p>Failure to observe this warning could result in severe injury or death.</p> |

| |
|---|
| ⚠ WARNING |
| <p>Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool could break and strike nearby personnel with sufficient force to cause severe injury or death.</p> |

| |
|---|
| ⚠ CAUTION |
| <ul style="list-style-type: none"> • Do not operate crimping tool without dies in place. Damage to the ram or crimping tool head may result. • Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result. |

Periodically verify that your hydraulic power source is supplying between 9600 and 10,400 psi (662 and 717 bar).

Use a test-quality pressure gauge on the supply line from the hydraulic power source.

1. Refer to the instructions supplied with the pressure gauge.
2. Stop the flow of hydraulic oil from the power source.
3. Connect the pressure gauge to the supply line of the power source.
4. Install the set of test dies into the crimping tool.
5. Activate the power source until the ram has advanced and the power source reaches relief pressure. The pressure gauge should read between 9600 psi and 10,400 psi (662 bar and 717 bar).
6. Release the pressure by stopping flow from your power source. The ram will retract.

If crimp pressures are low, the hydraulic power source relief valve may need adjustment.

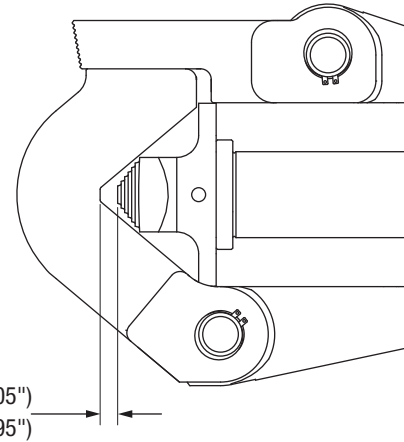
| |
|---|
| IMPORTANT |
| <p>Relief valve adjustments must be performed according to the instructions provided with the hydraulic power source.</p> |

Maintenance (cont'd)

Verify Crimping Distance

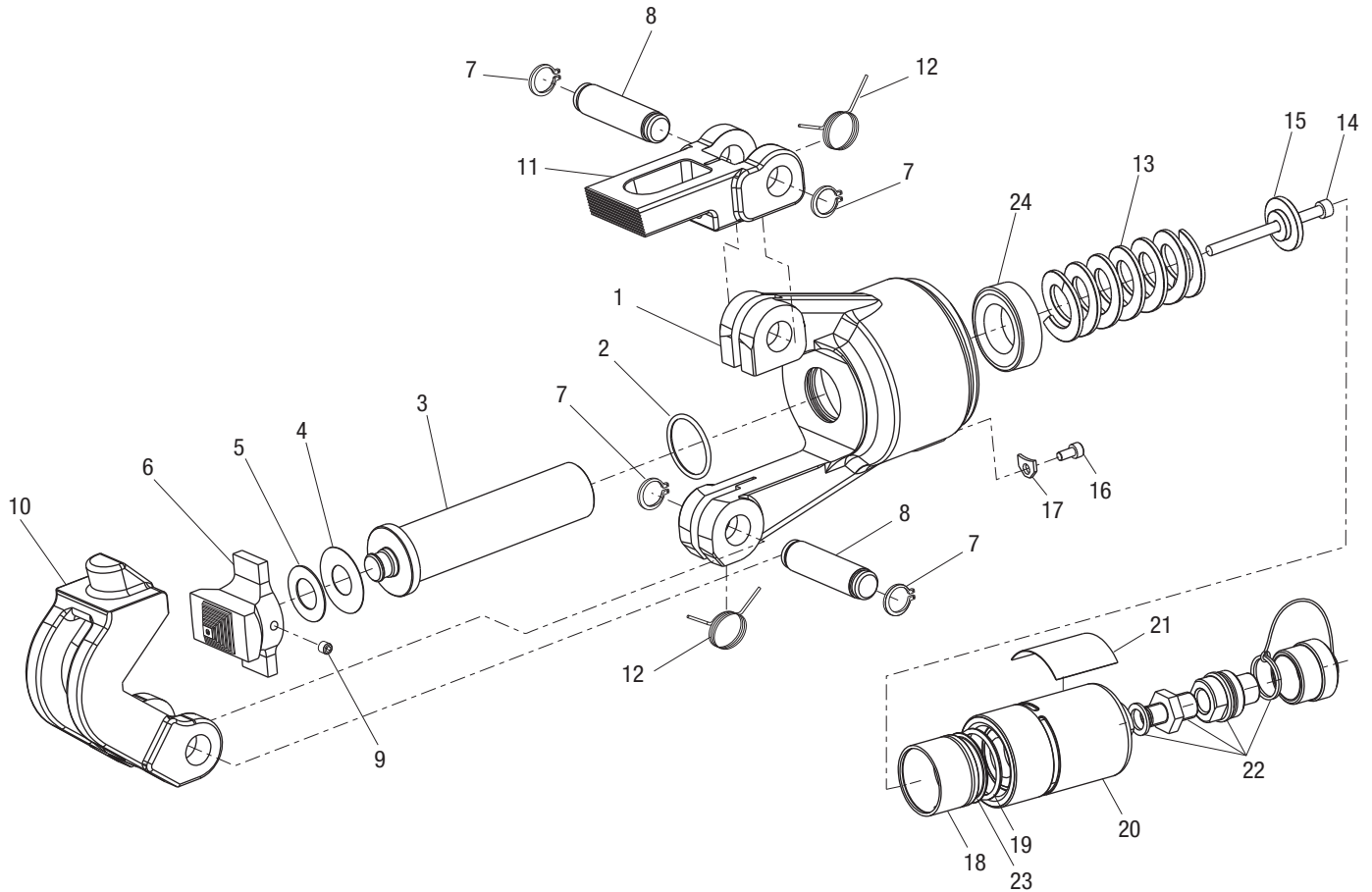
The crimping distance on this tool is set at the factory to a precise dimension to insure a certified crimp. The crimping distance may require resetting if the indenter, crimping head, or other components are replaced on the tool. Follow the procedure below to verify and reset the crimping distance.

1. Close the crimping head and check that latch and head are fully engaged.
2. Advance the indenter until the indenter is at full stroke.
3. Measure the distance between the bottom of the indenter and the head as shown below. The distance should measure 0.195" to 0.205" (4.953 mm to 5.207 mm). If the distance is outside this range, remove the set screw (9) and indenter (6).
 - To increase distance, remove a spacer (4, 5).
 - To decrease distance, add a spacer (4, 5).



4. Install the indenter (6) and secure set screw (9).

Illustration and Parts List



| Key | Part No. | Description | Qty |
|-----|-----------------|---|-----|
| | 52024011 | Head and ram unit (includes 1–5, 7–17) | |
| 1 | 52020271 | Yoke | 1 |
| 2 | | O-ring (included in 52054906) | 1 |
| 3 | 52020510 | Ram..... | 1 |
| 4 | 52020512 | Spacer, .010 x 1.181 x .531(as needed) | |
| 5 | 50337300 | Spacer, .025 x .997 x .549(as needed) | |
| 6 | 52025013 | Indenter..... | 1 |
| 7 | 90513533 | Retaining ring..... | 4 |
| 8 | 52020513 | Pivot pin..... | 2 |
| 9 | | Screw, #10-32 x .25 skt set cone pt | 1 |
| 10 | 52064268 | Crimp head | 1 |
| 11 | 52020273 | Latch..... | 1 |
| 12 | 50111230 | Torsion spring | 2 |

| Key | Part No. | Description | Qty |
|-----|----------|--|-----|
| 13 | 52066861 | Spring | 1 |
| 14 | 50066897 | Screw, M6-1.0 x 80 mm skt head cap.... | 1 |
| 15 | 50066900 | End cap..... | 1 |
| 16 | 50043676 | Screw, M5-0.8 x 10 mm skt head cap.... | 1 |
| 17 | 50066943 | Stop | 1 |
| 18 | 52066863 | Piston cup..... | 1 |
| 19 | 52066864 | O-ring..... | 1 |
| 20 | 52066862 | Cylinder..... | 1 |
| 21 | 52065528 | Decal, ID | 1 |
| 22 | 52065823 | Coupler kit, 3/8" male | 1 |
| 23 | 52066865 | Backup ring..... | 1 |
| 24 | 52068682 | Spacer..... | 1 |
| | 52067055 | Tag, connector chart..... | 1 |



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