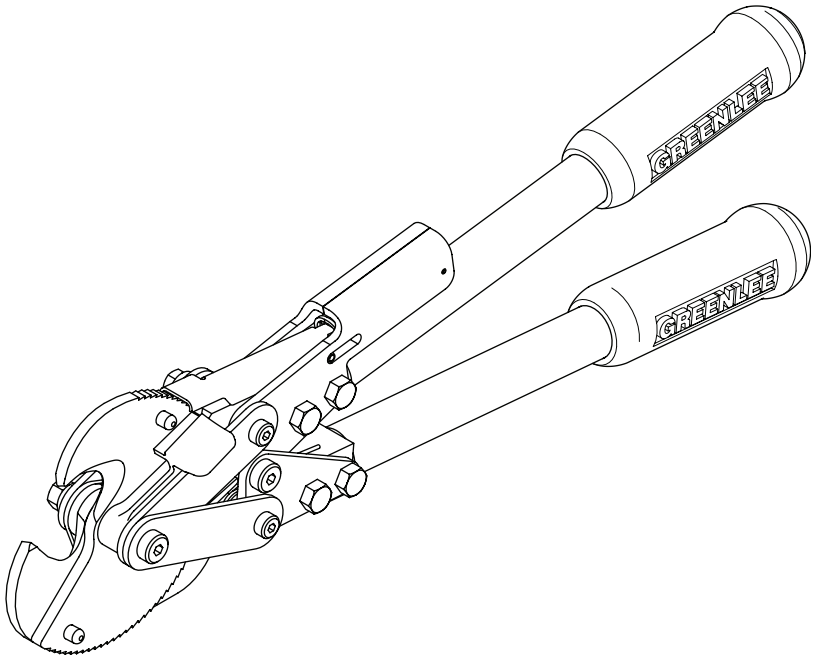
INSTRUCTION MANUAL

GREENLEE®
A Textron Company



773 and 774 Ratchet Cable Cutters

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

99947285 REV 5
© 2007 Greenlee Textron Inc.
2/07

Table of Contents

Description 2
Purpose of this Manual 2
Important Safety Instructions 3-4
Identification 5
Specifications 5
Operation 6
Maintenance
- General 7
- Cleaning the cutter 7
- Lubricating the cutter 7

Disassembly 8
Assembly 9-11
Illustration 12
Parts List 13-14

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 instruction manual is intended to familiarize personnel with the safe operation and maintenance procedures for the Greenlee 773 and 774 Cable Cutters.

Keep this manual available to all personnel.

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

Description

Greenlee 773 and 774 Ratchet Cable Cutters are non-insulated cutting tools intended for use on copper and standard aluminum electrical cable. The 773 will accommodate up to 500 Kcmil copper or 795 Kcmil aluminum cable. The 774 will cut up to 750 Kcmil copper or 795 Kcmil aluminum cable.

Both cable cutters ratchet and are equipped with fiber-glass handles and rubber grips to limit operator fatigue.

They are not intended for use on ACSR (aluminum cable, steel-reinforced) cable.

The Greenlee 773 and 774 Ratchet Cable Cutters are protected by U.S. Patent No. 6,766,581.

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.

Molykote is a registered trademark of Dow Corning Corporation.

Loctite is a registered trademark of Loctite Corporation.

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

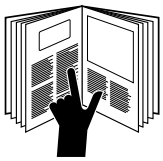
Immediate hazards which, if not avoided, WILL result in severe injury or death.

⚠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.

IMPORTANT SAFETY INFORMATION

⚠WARNING

Electric shock hazard:

This tool is not insulated. Do not use this tool near energized electrical lines.

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

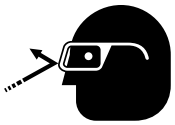
⚠WARNING

Keep hands away from closing blades.

⚠WARNING

Pinch points:

Keep hands away from moving parts.



⚠WARNING

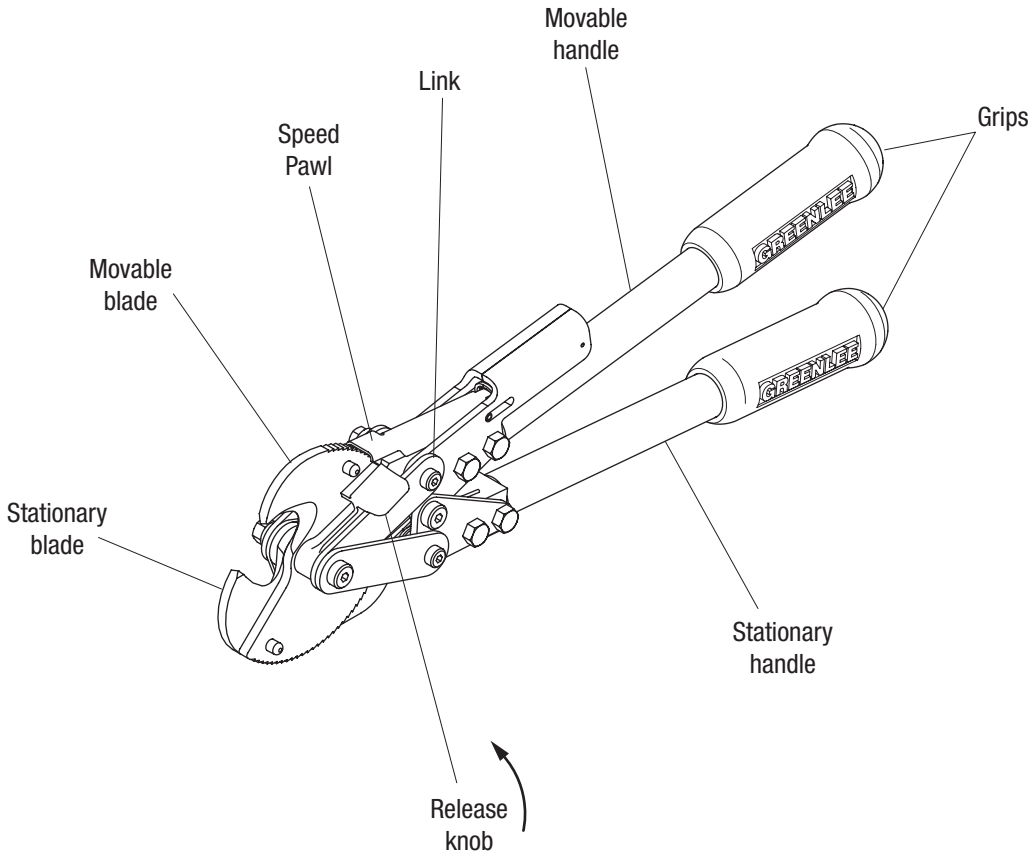
Wear eye protection when using this tool. Failure to wear eye protection could result in serious eye injury from flying debris.

⚠CAUTION

- This tool is intended for two-handed operation. Maintain a firm grip on both handles during operation.
- Do not cut ACSR or steel.
- Do not exceed the rated capacity of this tool.
- Inspect before use. Replace any worn or damaged parts.
- Do not perform any service or maintenance other than as described in this manual.

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

Identification



Specifications

	773	774
Mass/Weight	2.4 kg (5.3 lb)	2.6 kg (5.8 lb)
Length	394 mm (15.5")	486 mm (19.125")
Width		
at blades	127 mm (5.0")	127 mm (5.0")
at handles	132 mm (5.19")	152 mm (6")
Thickness	68.5 mm (2.7")	68.5 mm (2.7")
Jaw opening (minimum)	30 mm (1.188")	30 mm (1.188")
Handle force at Maximum Copper Capacity	289 N (65 lb)	267 N (60 lb)

Maximum-Rated Capacity

Copper (600-Volt Building Wire)	240 mm^2 (500 Kcmil)	400 mm^2 (750 Kcmil)
Aluminum (600-Volt Building Wire)	400 mm^2 (795 Kcmil)	400 mm^2 (795 Kcmil)
Communications Cable	30 mm (1.188") O.D.	30 mm (1.188") O.D.

Frequent Use

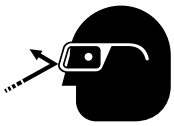
Copper (600-Volt Building Wire)	150 mm^2 (350 Kcmil)	240 mm^2 (500 Kcmil)
Aluminum (600-Volt Building Wire)	400 mm^2 (750 Kcmil)	400 mm^2 (750 Kcmil)
Communications Cable	30 mm (1.188") O.D.	30 mm (1.188") O.D.

Operation

⚠WARNING

Electric shock hazard:

This is not an insulated tool. Contact with live circuits could result in severe injury or death.



⚠WARNING

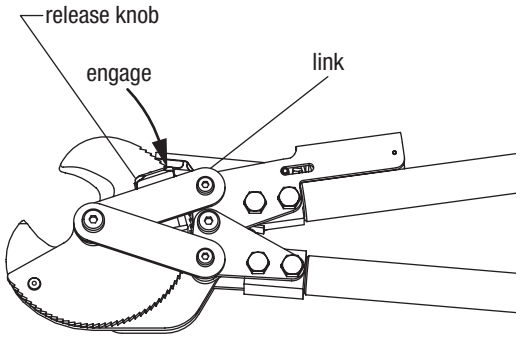
Wear eye protection when using this tool. Failure to wear eye protection could result in serious eye injury from flying debris.

⚠CAUTION

- This tool is intended for two-handed operation. Maintain a firm grip on both handles when using this tool.
- Inspect before use. Replace any worn or damaged parts.

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

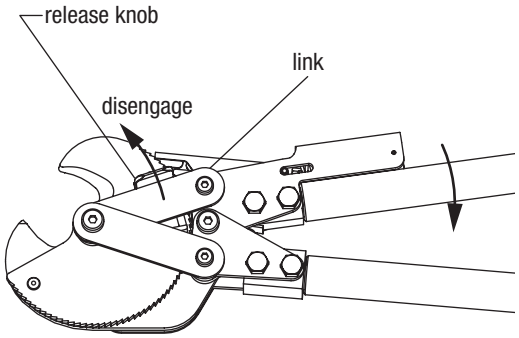
1. Check to see that the release knob is against the link.



2. Place the cable to be cut between the cutting blades.
3. Open and close the handles until the cable is cut.

   Note: The automatic rapid advance mechanism will advance the movable blade by 3 teeth each time the handle is opened. The blade advances 1 tooth for each closing of the handle. The rapid advance mechanism is spring loaded to disengage when maximum leverage is needed to cut the cable.
4. When the cut is complete, the automatic blade mechanism automatically returns the blade to the open position and resets the reverse lever to cut cable.

   Note: To open the blade before the cut is complete, move the release knob away from the link and press the handles together. The blade spring will return the



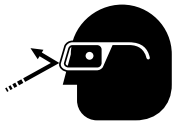
Maintenance

General

Maintain the tool with care. Keep the blades sharp and the tool clean for better and safer performance. Follow instructions for lubricating the cutter; lubrication prolongs the tool life and enables the tool to cut with less force. Keep grips dry, clean and free from oil and grease.

Note: The blade pivot lock nut (23) may require tightening after making several initial cuts on a new or repaired unit. Always maintain proper adjustment on all pivot screws. For adjustment procedures, see Assembly—Tighten pivot screws.

Cleaning the cutter



⚠WARNING

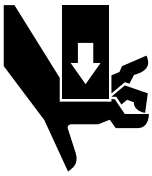
Wear eye protection when using this tool. Failure to wear eye protection could result in serious eye injury from flying debris.

Blow dirt and/or cable particles out of the ratchet mechanism with compressed air.

Lubricating the cutter

⚠WARNING

Keep hands away from closing blades.



⚠WARNING

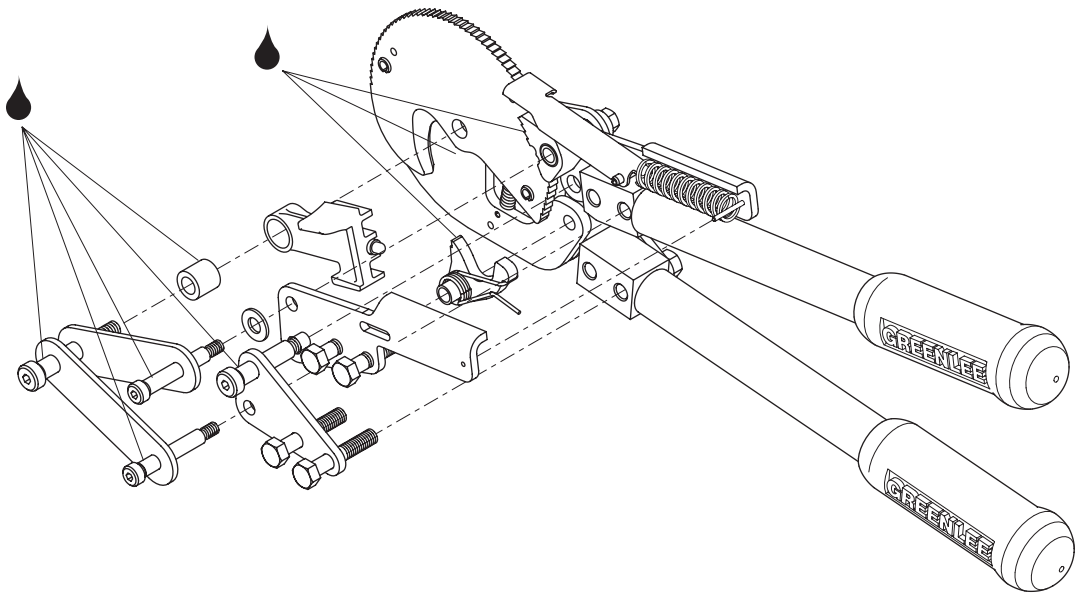
Pinch points:

Keep hands away from moving parts.

Close the blades and apply Molykote lubricant or equivalent between the blades. Lubricate the teeth on holding pawl (6) and drive pawl (7). Lubricate the four pivot shoulder screws (13, 16 and 17) and area between pivoting surfaces. Operate the cutter to spread the lubricant.

Disassemble, clean, and lubricate the tool if it does not operate smoothly.

Lubrication points —use Molykote®



Disassembly

This tool consists of three subassemblies: the cutter head, stationary handle, and movable handle sub-assemblies (see figure).

1. Cutter head assembly: movable blade (1), stationary blade (2), release lever (3), links (4), spring cover (10), reverse lever pin (12), spring (37), bushing (29), return spring (36), shoulder screw (17) and related hardware.
2. Stationary handle assembly: handle unit (39), handle plates (5), holding pawl (6), torsion spring (40), shoulder screw (16) and related hardware.
3. Movable handle assembly: handle unit (38), handle plates (8 and 9), speed pawl (11), spring (35), drive pawl (7), shoulder screws (13 and 16) and related hardware.

The disassembly procedure is divided into sections of the tool. Disassemble only the section(s) necessary to complete the repair.

Disassemble the tool on a flat, clean surface. Take care not to lose or damage any parts that may fall free during disassembly.

Cutter head

1. Open the movable blade to release tension on the blade return spring (36).
2. Remove two shoulder screws (16) and remove the cutter head assembly from the handle assemblies.

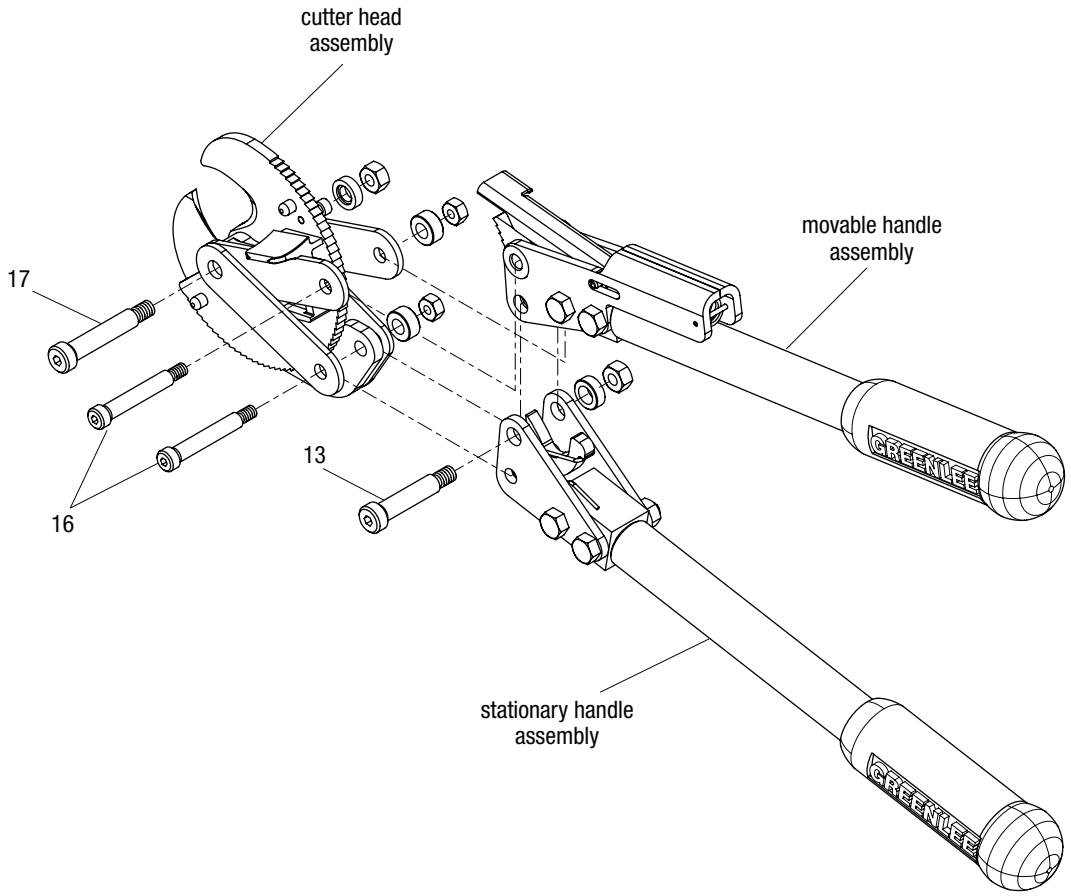
   Note: Holding pawl (6), torsion spring (40), drive pawl unit (7), washer (22) and spacer (19) may fall free during disassembly.
3. Remove shoulder screw (17), spacers (27 and 20), links (4), release lever (3) and bushing (29).
4. Remove screw (15) and separate cover (10) from stationary blade (2).
5. Remove screw (41) and spring (36).

Stationary handle

6. Remove shoulder screw (13) and movable handle assembly.
7. Remove two screws (30) and stationary handle plates (5).

Movable handle

8. Remove two screws (31), left handle plate (8), right handle plate (9), speed pawl (11) and spring (35).

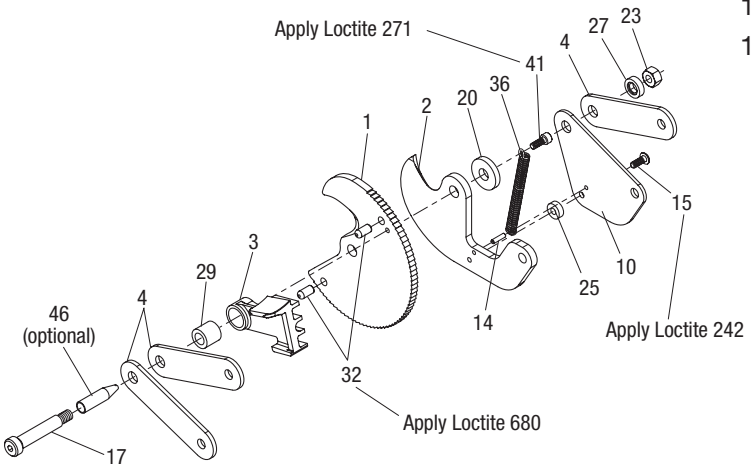


Assembly

Refer to the Exploded View and Parts List for correct orientation and placement of parts. Inspect and replace any worn or damaged parts. Wherever the assembly results in metal-to-metal contact, coat the surfaces with Molykote or equivalent lubricant.

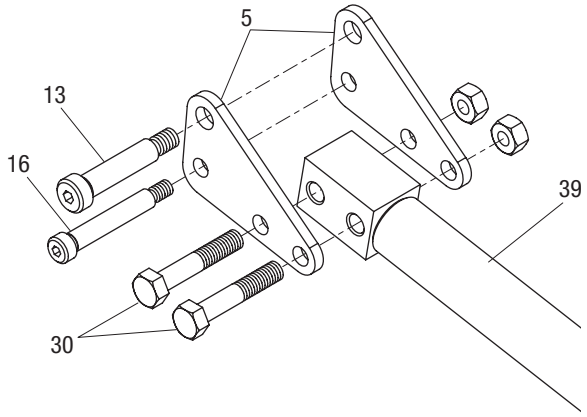
Cutter head

1. Apply Loctite 680 retaining compound to two dowel pins (32) and install into movable blade, if necessary. The dowel pins should be flush with the flat side of the blade. Remove excess Loctite.
2. Apply Loctite 271 thread adhesive to screw (41) and install screw through end of spring (36) and into movable blade. Adjust until end of screw is flush with the angled side of the blade. Allow Loctite to cure for 10 minutes and remove excess adhesive.
3. Install roll pin (14) into stationary blade (2), if necessary.
4. Install end of spring (36) over roll pin (14) and assemble spacer (25), and cover (10). Apply Loctite 242 thread adhesive to screw (15) and assemble to stationary blade (2). Roll pin (14) should be flush with top of cover (10).
5. Install optional screw guide (46) onto shoulder screw (17) to help guide the screw through components.
6. Lubricate components and assemble shoulder screw (17), two links (4), bushing (29), reverse lever (3), movable blade (1), stationary blade (2), spacer (20), cover (10), link (4), spacer (27)—with counter-bore toward link. Remove optional guide (46) if used and install lock nut (23). Tighten lock nut so gap between blades does not exceed .004 inches.



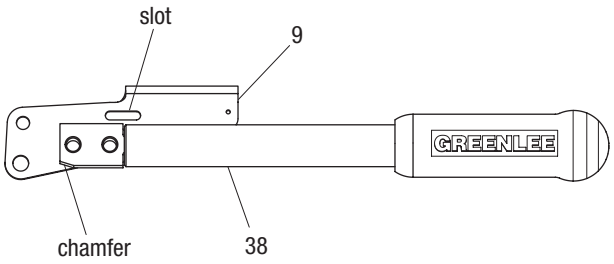
Stationary handle

7. Assemble handle plates (5) to handle unit (39), but do not tighten hex screws (30).
8. Insert shoulder screws (13 and 16) to align handle plates (5) and tighten hex screws (30) to 170-190 in-lb. Remove shoulder screws.

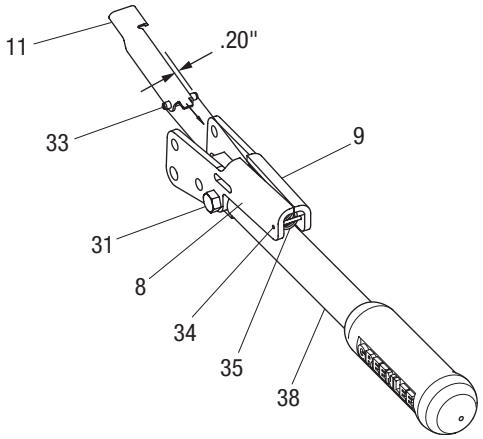


Movable handle

9. Assemble right and left handle plates (8 and 9) to handle unit (38), but do not tighten hex screws (31). Orient handle plates so slotted hole is opposite the chamfer in the handle adapter.



10. Install roll pin (34) into right and left handle plates.
11. Install roll pin (33) into speed pawl (11), if necessary. The roll pin should protrude .20 inches from each side of the speed pawl.
12. Install spring (35) between handle plates.
13. Spread the right and left handle plates and install speed pawl so the roll pin fits into the slot in the handle plates. Use the speed pawl to compress spring (35).

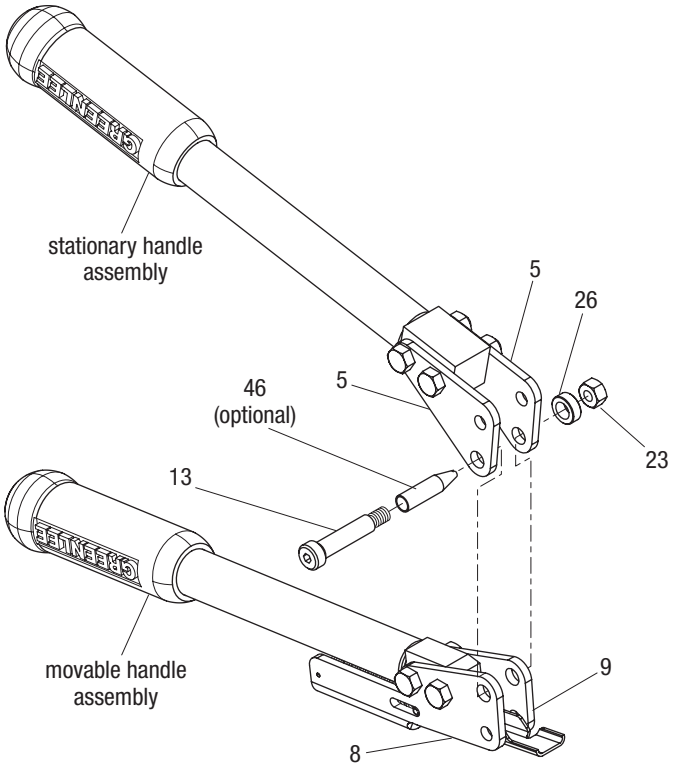


14. Insert shoulder screws (13 and 16) to align handle plates and tighten hex screws (31) to 170-190 in-lb. Remove shoulder screws.

Assembly (cont'd)

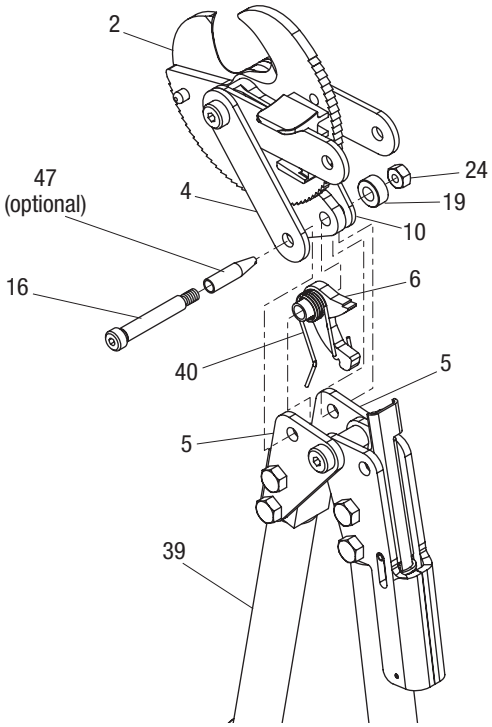
Movable handle to stationary handle

15. Install movable handle assembly between the stationary handle plates and align the 3/8" pivot holes.
16. Install optional screw guide (46) onto shoulder screw (13) to help guide the screw through components.
17. Lubricate shoulder screw (13) and install it through the handle plates (5 and 8), handle plates (9 and 5) and spacer (26). Remove guide (46) if used and install lock nut (23).

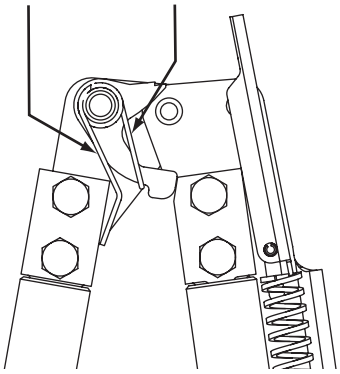


Cutter head to stationary handle

18. Install torsion spring (40) onto holding pawl (6) and locate them between the handle plates on the stationary handle (39) as shown.



Note:
Ends of torsion spring should be against handle and pawl as shown.

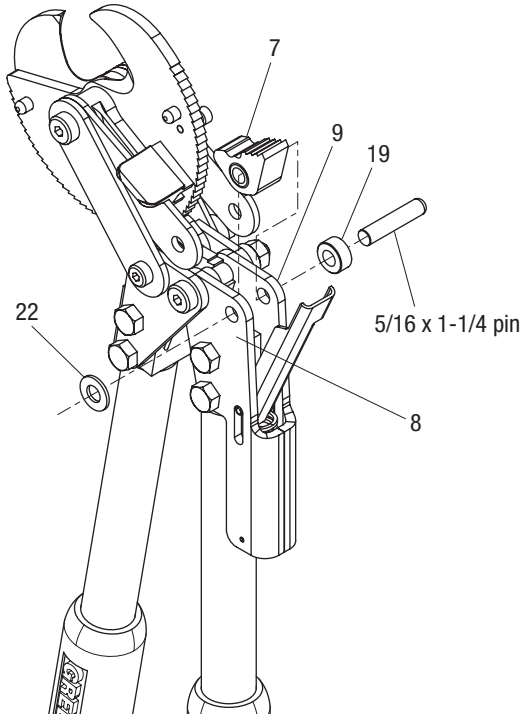


19. Install head assembly between handle plates on the stationary handle and around the holding pawl (6).
20. Install optional screw guide (47) onto shoulder screw (16) to help guide the screw through components.
21. Lubricate shoulder screw (16) and install it through link (4), handle plate (5), torsion spring (40), holding pawl (6), stationary blade (2), second handle plate (5), cover (10) and spacer (19). Remove guide (47) if used and thread on lock nut (24), but do not tighten.

Assembly (cont'd)

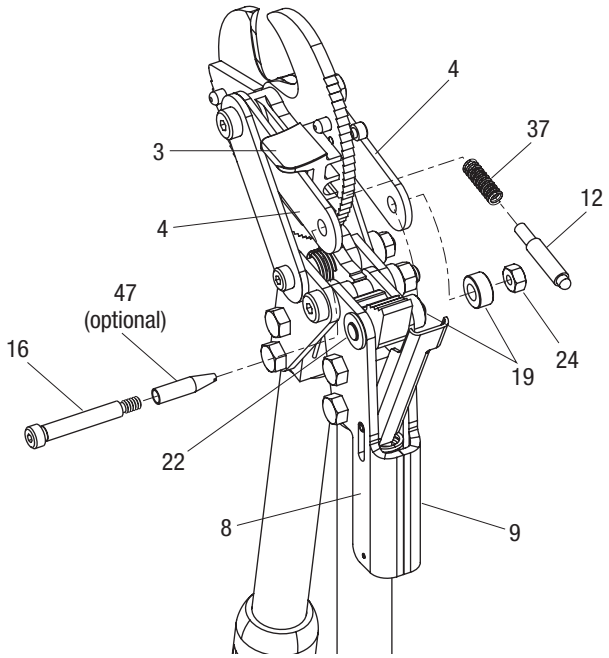
Cutter head to movable handle

22. Lubricate the ID and teeth on drive pawl unit (7). Install drive pawl unit between right and left handle plate (8 and 9) with teeth toward speed pawl. Install a 5/16 x 1-1/4" pin through the handle plates, pawl unit, washer (22) and spacer (19) to keep it in place.



23. Lubricate release lever pin (12) OD and spherical end. Install spring (37) and release lever pin (12) into release lever (3).
24. Rotate cutter head to align 5/16" diameter holes in links (4) with handle plates (8 and 9).

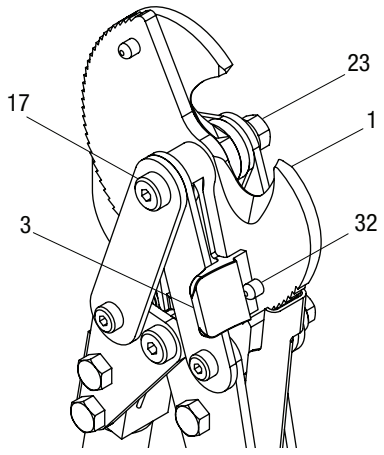
    Note: Spherical end of release lever pin should nest into one of the two pockets in drive pawl unit.
25. Install optional screw guide (47) onto shoulder screw (16) to help guide the screw through components.
26. Lubricate components and install shoulder screw (16) through link (4), washer (22), right handle plate (8), drive pawl unit (7), left handle plate (9), spacer (19), link (4) and spacer (19). Remove guide (47) if used and thread on lock nut (24), but do not tighten.



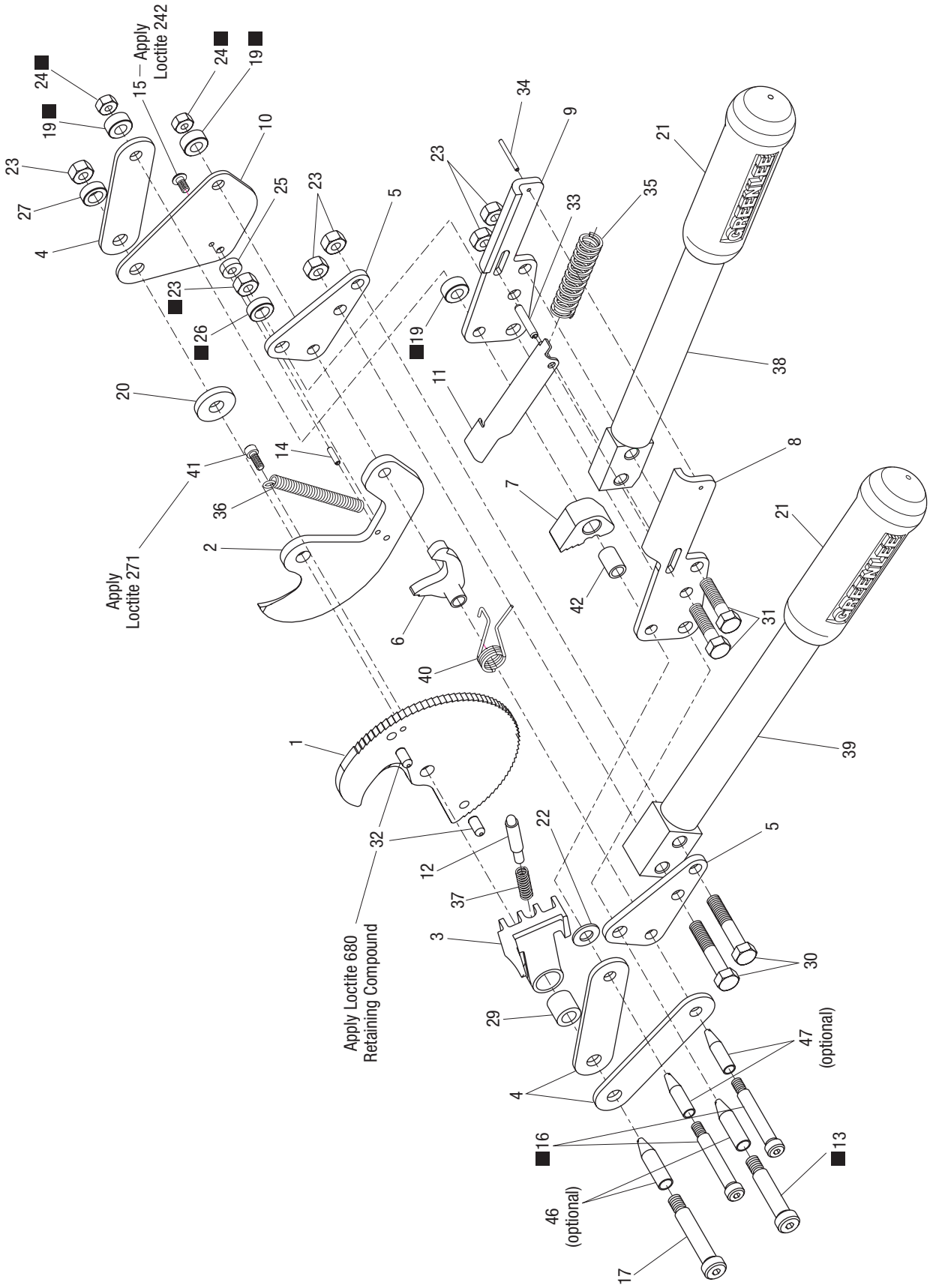
Tighten pivot screws

27. Tighten lock nut (23) on shoulder screw (17) so gap between blades does not exceed .004 inches. Spring (36) must open movable blade freely.
28. Tighten lock nuts on three shoulder screws (13 and 16) and adjust until components pivot freely.
29. Operate the cutter without cutting cable (see Operation) and check for proper function. At the end of the cutting cycle, the spring (36) should automatically return the movable blade (1) to the fully open position. Pin (32) should hit and reset reverse lever (3) into the cutting position. Pin (32) should remain against the reverse lever as shown.

    Note: Tighten the lock nut (23) on screw (17) if there is a gap between the pin and reverse lever. Loosen the lock nut (23) if the movable blade returns slowly or the reverse lever does not reset to the cutting position.



Illustration



Parts List

Key	773 Part No.	774 Part No.	Description	Qty
1			Blade assembly, movable (includes key 32)	1
2			Blade, stationary	1
3	50105213	50105213	Lever, release	1
4	50105248	50105248	Link	3
5	50105264	50105264	Plate, stationary handle	2
6	50105280	50105280	Pawl, holding	1
7	50106317	50106317	Pawl unit, drive (includes key 42)	1
8	50105310	50105310	Plate, right handle	1
9	50105337	50105337	Plate, left handle	1
10	50106775	50106350	Cover, spring	1
11	50105370	50105370	Pawl, speed	1
12	50106252	50106252	Pin, reverse lever	1
13	90553764	90553764	Screw, shoulder, 3/8" x 1.50" x 5/16-18	1
14	90513479	90513479	Rollpin, .125" x .50"	1
15	90501110	90501110	Screw, cap, #10-24 x .50" button head	1
16	F023194	F023194	Screw, shoulder, 5/16" x 1.75 x 1/4-20	2
17	90552229	90552229	Screw, shoulder, 3/8" x 1.75 x 5/16-18	1
19	50106279	50106279	Spacer, .315" x .62" x .286"	3
20	50106287	50106287	Spacer, main pivot	1
21	50223003	50223003	Grip, rubber 0.995" x 1.50" x 5.09"	2
22	90516567	90516567	Washer, 5/16 flat	1
23	F009550	F009550	Nut, locking, 5/16-18	6
24	90541200	90541200	Nut, locking, 1/4-20	2
25	50018671	50018671	Spacer, .203" x .50" x .179"	1
26	50018663	50018663	Spacer, .377" x .62" x .230"	1
27	50109901	50109901	Spacer, .377" x .62" x .187"	1
29	50106295	50106295	Bushing	1
30	90553853	90553853	Screw, cap, 5/16-18 x 1.75" hex head	2
31	90552652	90552652	Screw, cap, 5/16-18 x 1.25" hex head	2
32			Pin, dowel, .2503" x .50"	2
33	90506995	90506995	Rollpin, .187" x 1"	1
34	90517822	90517822	Rollpin, .094" x 1"	1
35	90553780	90553780	Spring, compression	1
36	90539850	90539850	Spring, extension	1
37	90553802	90553802	Spring, compression	1
38	50106651	50106716	Handle kit—one handle and hardware (includes keys 21, 31, 23)	1
39	50106660	50106724	Handle kit—one handle and hardware (includes keys 21, 30, 23)	1
40	50106309	50106309	Spring, torsion	1
41	F017344	F017344	Screw, cap, #10-24 x 1/2, socket head	1
42	90553799	90553799	Bearing, bronze, .312" x .437" x .625"	1

Repair Parts (next page)

Repair Parts List

Key	773 Part No.	774 Part No.	Description	Qty
	50108093	50108093	Blade assembly (includes keys 1, 2, 32)	1
■	50106260	50106260	Bolt kit (includes keys 13, 16, 19, 23, 24, 26)	1

Optional Repair Parts

	50114603	50114603	Service kit, screw guides (includes items 46 & 47)	1
46			Guide, 3/8 screw	1
47			Guide, 5/16 screw	1

GREENLEE®
A Textron Company

USA	800-435-0786	Fax:	800-451-2632
	815-397-7070	Fax:	815-397-1865
Canada	800-435-0786	Fax:	800-524-2853
International	+1-815-397-7070	Fax:	+1-815-397-9247

4455 Boeing Drive • Rockford, IL 61109-2988 • USA • 815-397-7070
An ISO 9001 Company • Greenlee Textron Inc. is a subsidiary of Textron Inc.

www.greenlee.com

Printed in USA