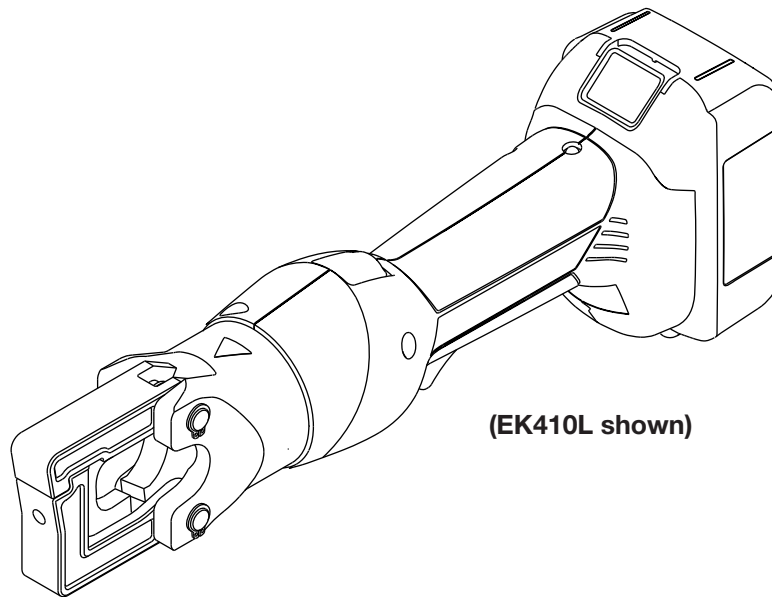


# SERVICE MANUAL



## **GATOR**<sup>®</sup> **Battery-powered In-line Tools**



**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](http://www.greenlee.com)

## Table of Contents

Safety .....	2
Purpose of this Manual .....	2
Other Publications .....	2
Important Safety Information .....	3
Main Illustrations—All Tools .....	4–5
Main Parts List—All Tools.....	6–7
Head and Ram Illustration and Parts List	
EK6IDL.....	8
EK210L .....	9
EK410L .....	10
EK622L .....	11
EK628L .....	12–14
ETS8L .....	15
ETS12L .....	16
ES32L, ES32FL, ES20L .....	17
ESG25L.....	18
LS50L.....	19
LS50L2.....	20
LS100L.....	21

## 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 authorized Greenlee service personnel with the service parts for the Greenlee Battery-powered In-line Tools listed on this page.

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge at [www.greenlee.com](http://www.greenlee.com).

## Other Publications

### Operation Manuals

- EK6IDL      52066203
- EK210L     52047664
- EK410L     52047663
- EK622L     52047665
- EK628L     52047662
- ETS8L      52047672
- ETS12L     52047671
- ES32L      52047668
- ES32FL     52056590
- ES20L      52056893
- ESG25L     52056894
- LS50L      52056896
- LS50L2     52083543
- LS100L     52068346



**Do not discard this product or throw away!**

For recycling information, go to [www.greenlee.com](http://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.

# 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

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.



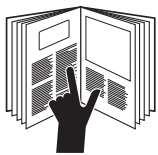
#### ⚠️ WARNING

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

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

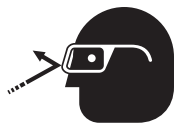
Read and understand all of the instructions and safety information in this manual before operating or servicing this tool. Refer also to the Operation Manual, which is listed under "Other Publications."

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

#### ⚠️ 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.



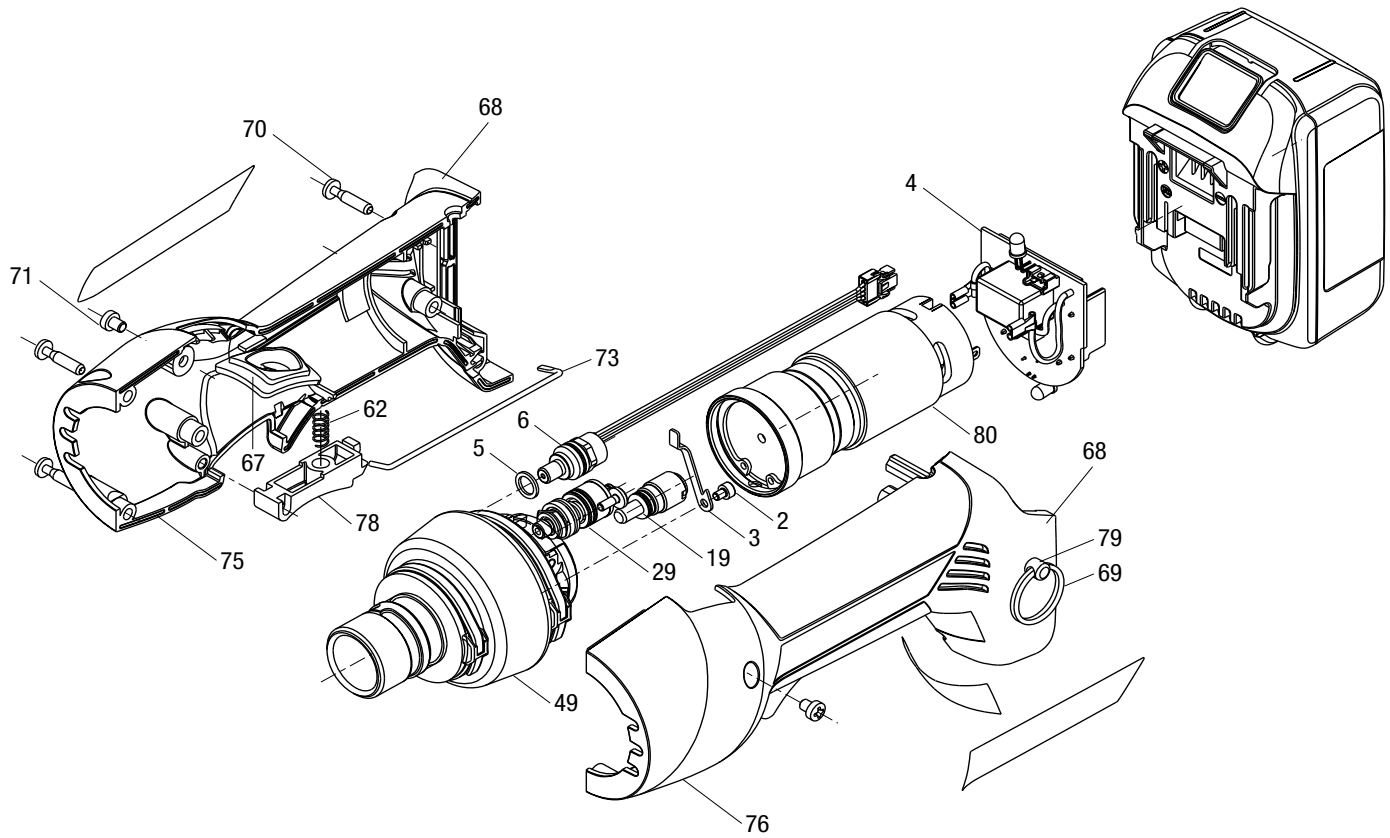
#### ⚠️ WARNING

Wear eye protection when operating or servicing this tool.

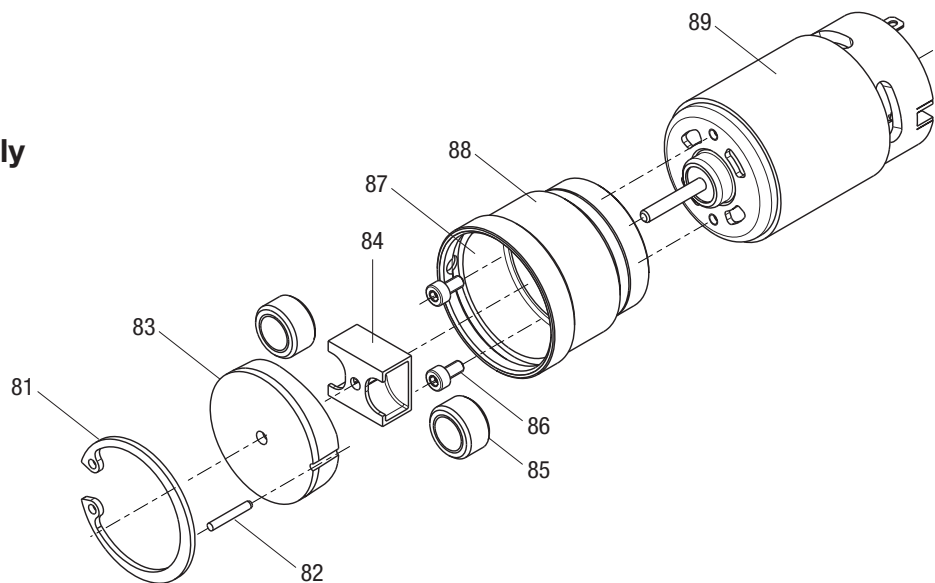
Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.

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

**Main Illustrations—All Tools**

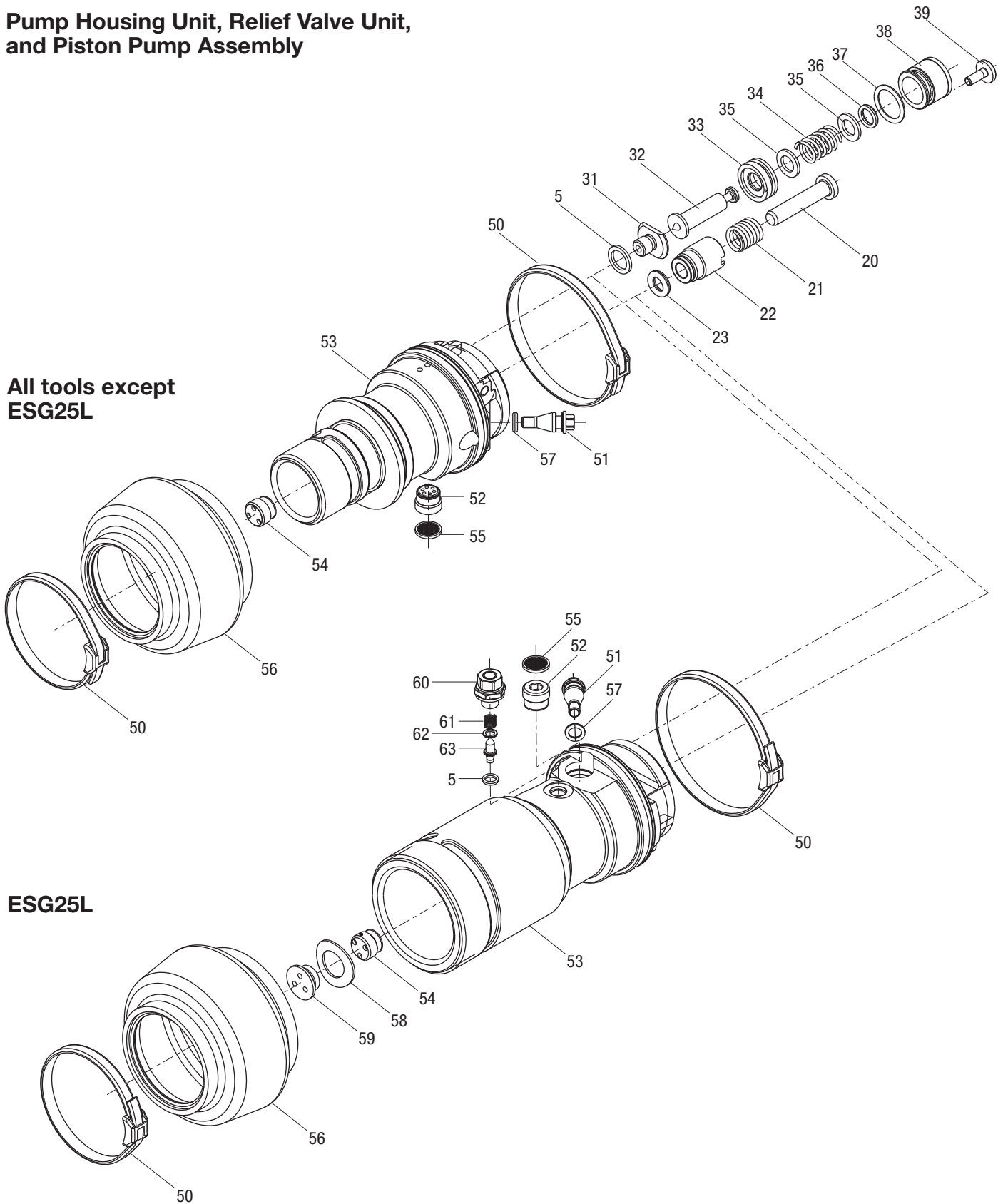


**Motor Assembly**



**Main Illustrations—All Tools (cont'd)**

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



**All tools except  
ESG25L**

**ESG25L**

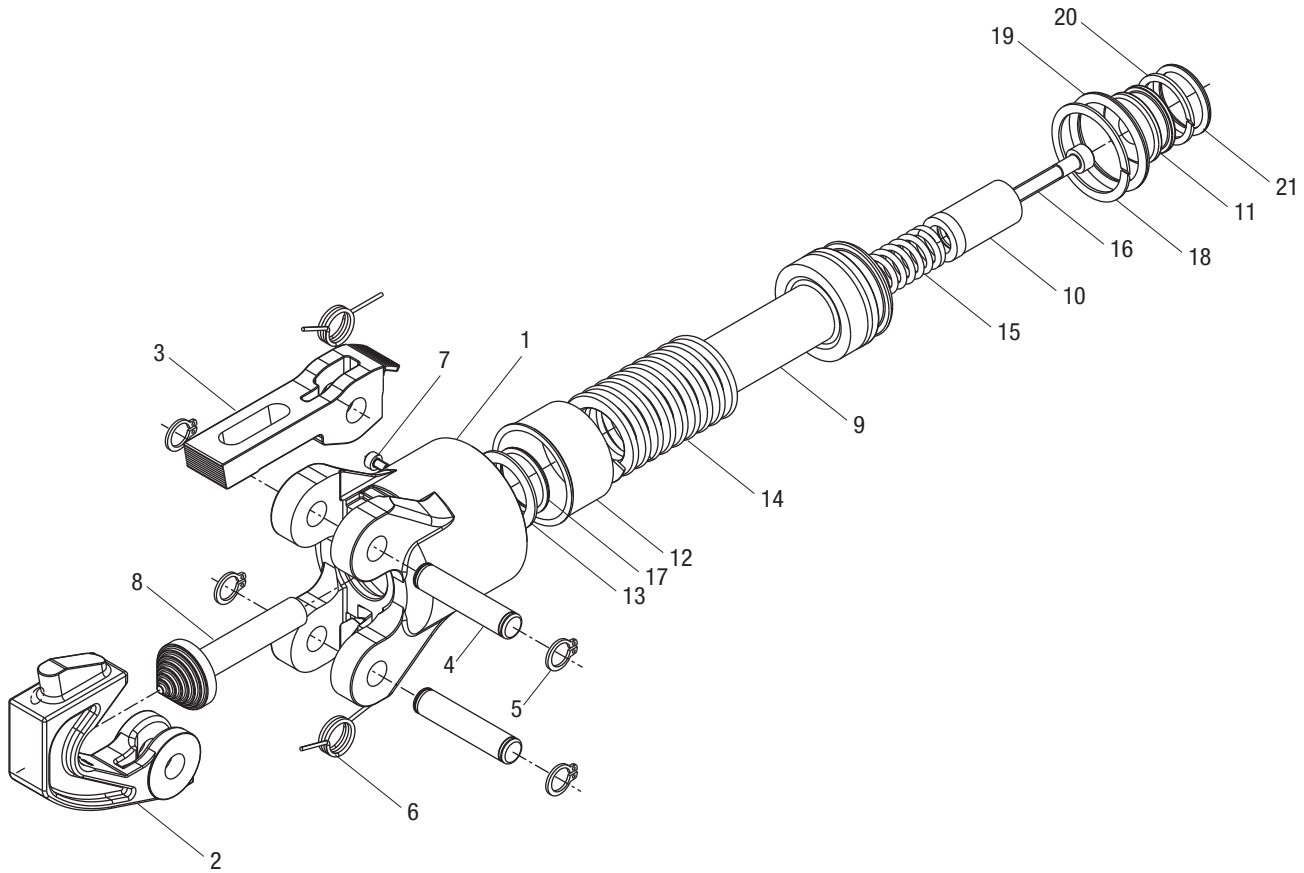
## Main Parts List—All Tools

Key	Part No.	Description	Qty	Key	Part No.	Description	Qty
	52055860	Relief lever kit (includes 2, 3)		49	52048120	Pump housing unit (includes 50–57) (EK210L, EK628L, ETS8L, ES32L, ES32FL, ES20L).....	1
2		Screw .....	1		52054796	Pump housing unit (includes 50–57) (EK410L, ETS12L) .....	1
3		Relief valve lever .....	1		52054795	Pump housing unit (includes 50–57) (EK622L).....	1
4	52067906	Control board (EK6IDL) .....	1		52057116	Pump housing unit (includes 50–63) (EK6IDL, ESG25L) .....	1
	52055033	Control board (EK210L).....	1		52056935	Pump housing unit (includes 50–57) (LS50L)	
	52055032	Control board (EK410L).....	1		52068302	Pump housing unit (includes 50–57) (LS100L)	
	52056014	Control board (EK622L).....	1	50	52055861	Clamp, 10 pack.....	1
	52056510	Control board (EK628L).....	1	50*		Clamp.....	2
	52055031	Control board (ETS8L, ETS12L, ES32L, ES32FL, ES20L, ESG25L).....	1	51		Screw .....	1
	52056949	Control board (LS50L, LS100L).....	1	52	50109162	Threaded bushing .....	1
5*		Seal .....	2	53		Pump block .....	1
6	52049205	Sensor (EK6IDL, EK210L, EK410L, EK622L, EK628L) .....	1	54	50109308	Threaded bushing .....	1
	50121839	Screw (ETS8L, ETS12L, ES32L, ES32FL, ES20L, ESG25L, LS50L).....	1	55	50109316	Screen .....	1
19	50018990	Piston pump assembly (includes 20–23) .....	1	56	52049296	Reservoir .....	1
20		Piston pump .....	1		52069041	Reservoir kit (LS100L) .....	1
21		Spring.....	1	57*		O-ring .....	1
22	50019309	Piston pump housing .....	1	58		Washer .....	1
23*		Piston seal.....	1	59		Threaded bushing .....	1
29	50018922	Relief valve unit (includes 31–39) (all except EK6IDL, EK622L, ESG25L) ETS12L, LS50L).....	1	60		Valve seat .....	1
	52054799	Relief valve unit (includes 31–39) (EK6IDL, EK622L, ESG25L, ETS12L, LS50L, LS100L) .....	1	61		Spring.....	1
31	50019554	Valve seat .....	1	62		Washer .....	1
32		Needle valve.....	1	63		Needle valve.....	1
33		Plunger .....	1	68	52054797	Housing unit (includes 69–79) (all except ETS8L) .....	1
34		Spring.....	1		52055081	Housing unit (includes 70–78) (ETS8L).....	1
35		Lock washer (all except EK622L, ESG25L, ETS12L, LS50L) .....	2	69		Ring (ETS8L).....	1
		Lock washer (EK622L, ESG25L, ETS12L, LS50L).....	6	70		Screw .....	4
36*		O-ring .....	1	71	50019767	Screw .....	2
37*		O-ring .....	1	72		Compression spring, DA5.5 x L14.0 .....	1
38		Pressure relief.....	1	73		Trigger link .....	1
39		Screw .....	1	75		Housing half .....	1
				76		Housing half .....	1
				77		Relief valve button.....	1
				78		Trigger cover .....	1
				79		Stud (ETS8L) .....	1

## Main Parts List—All Tools (cont'd)

Key	Part No.	Description	Qty	Key	Part No.	Description	Qty
80	52048132	Motor assembly (includes 81–89) .....	1		50122746	Carrying strap	
81		Retaining ring .....	1		52055055	Carrying case	
82	50019589	Pin .....	1		52057023	Carrying case (LS50L)	
83		Motor cap.....	1		52067905	Connector compatibility decal (EK6IDL)	
84		Disc housing.....	1		52047649	Connector compatibility decal (EK410L)	
85		Disc .....	2		52047648	Connector compatibility decal (EK622L)	
86		Screw .....	2		52047647	Connector compatibility decal (EK628L)	
87		Gear lube, 1.5 g.....	1	*	50047957	Seal kit (includes items marked with an asterisk, bushings not included)	
88		Motor adapter .....	1		52049190	18 V battery 1.5 Ah	
89		Electric motor.....	1		52049189	18 V battery 3.0 Ah	
	52054837	Decal kit, crimper .....	1		52049201	18 V charger 120 VAC	
	52054838	Decal kit, cutter .....	1		52049202	18 V charger 230 VAC	
	52066079	Identification decal (EK6IDL).....	1		52049204	18 V charger 12 VDC	
	52047632	Identification decal (EK210L).....	1		52047087	18 V corded adapter 120 VAC	
	52047631	Identification decal (EK410L).....	1		52047088	18 V corded adapter 230 VAC	
	52047633	Identification decal (EK622L).....	1		52054992	Li (18 V) to NiCd, NiMH (12 V) charger adapter	
	52047630	Identification decal (EK628L).....	1		52057878	Biodegradable hydraulic fluid	
	52047642	Identification decal (ETS8L).....	1				
	52047641	Identification decal (ETS12L).....	1				
	52047637	Identification decal (ES32L).....	1				
	52056588	Identification decal (ES32FL).....	1				
	52056913	Identification decal (ES20L).....	1				
	52056914	Identification decal (ESG25L).....	1				
	52056916	Identification decal (LS50L).....	1				
	52068313	Identification decal (LS100L).....	1				

## Head and Ram Illustration and Parts List—EK6IDL

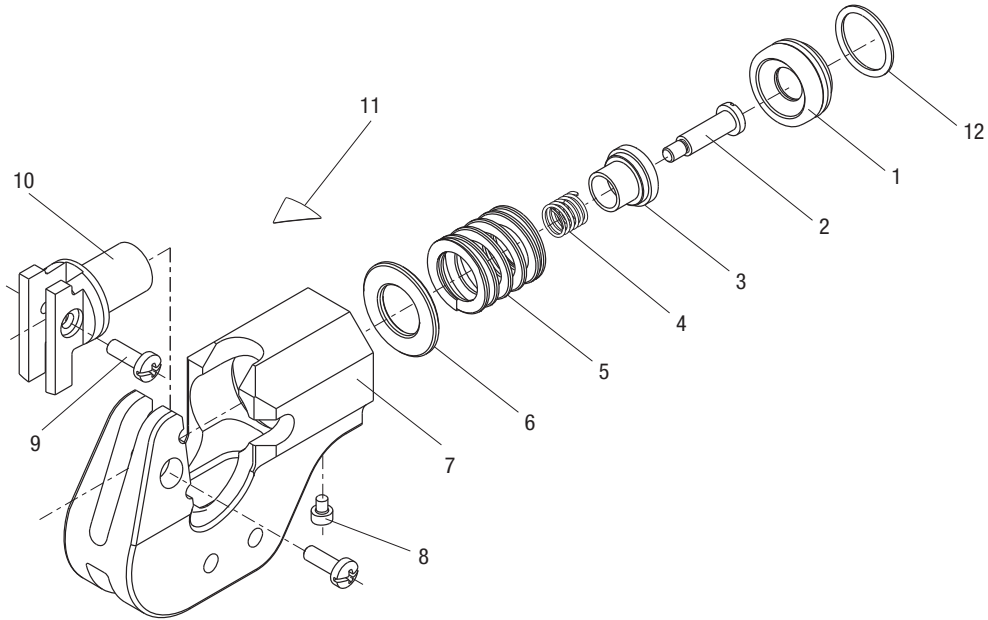


Key	Part No.	Description	Qty
1	52067891	Fixed head.....	1
	52068198	Head and latch kit (includes 2, 3)	
2		Movable head.....	1
3		Latch head .....	1
	52068196	Fastener kit (includes 4-7)	
4		Pin .....	2
5		Retaining ring .....	4
6		Spring.....	2
7		Screw .....	1
8	52067893	Cone die.....	1
	52068197	Ram kit (includes 9-13)	
9		Ram.....	1
10		Sleeve.....	1
11		Piston cup, small.....	1
12		Bushing .....	1
13		Adapter disk.....	1

Key	Part No.	Description	Qty
	52068199	Spring kit (includes 14, 15)	
14		Compression spring.....	1
15		Spring.....	1
16	52068200	Hex screw, M5 x 3.....	1
17*		O-ring (included in 50047957).....	1
18*		Piston backup ring (included in 50047957).....	1
19*		O-ring, 28.17 x 3.53 N870 (included in 50047957).....	1
20*		Backup ring (included in 50047957).....	1
21*		O-ring (included in 50047957).....	1



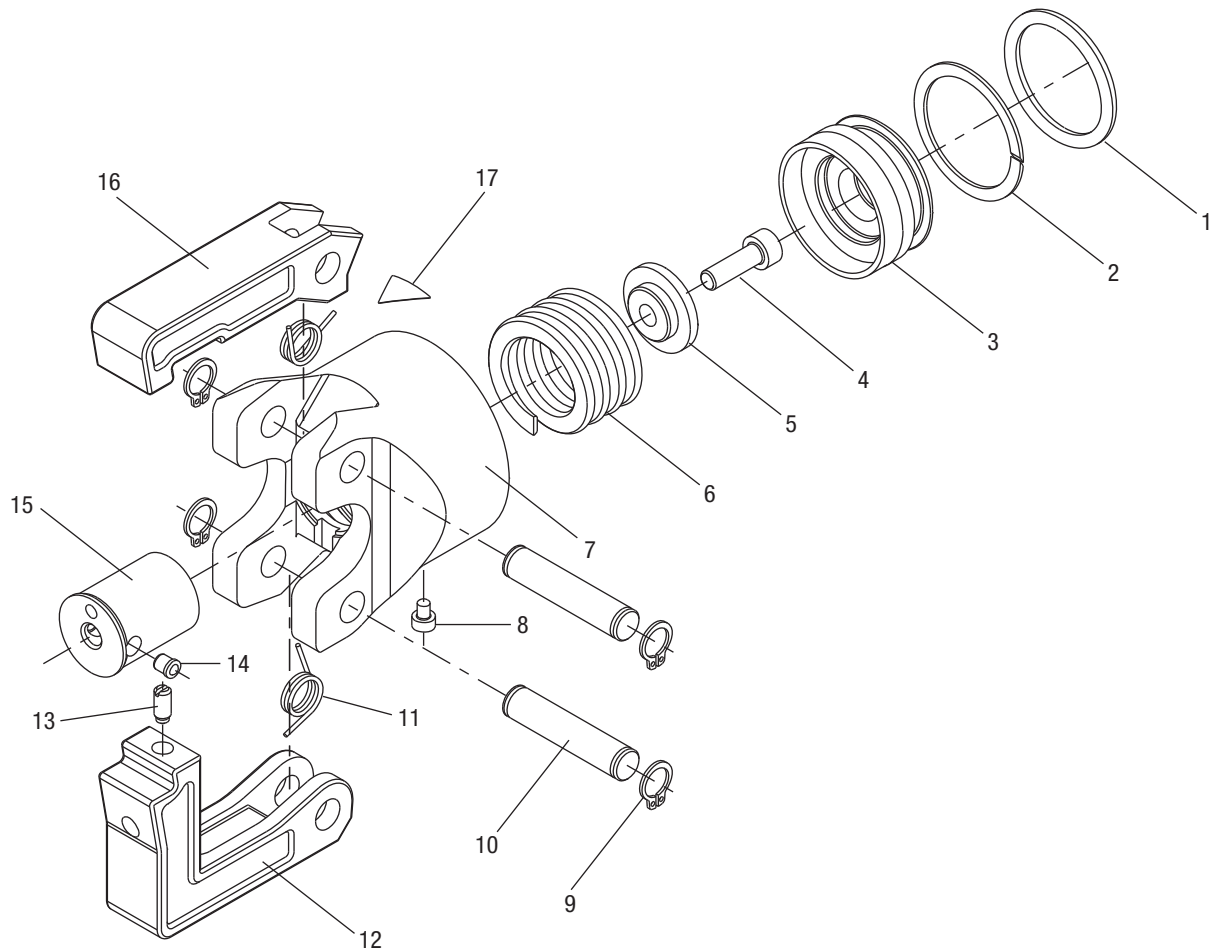
## Head and Ram Illustration and Parts List—EK210L



Key	Part No.	Description	Qty
1	50120050	Bushing with seal .....	1
	52055862	Die holder kit (includes 2–6, 9, 10)	
2		Shoulder bolt.....	1
3		Cap.....	1
4		Compression spring.....	1
5		Compression spring.....	1
6		Washer .....	1

Key	Part No.	Description	Qty
7	52055011	Crimping head.....	1
8	50019295	Screw .....	1
9	50019716	Screw .....	2
10		Die holder .....	1
11	50019708	Pinch hazard decal.....	1
12*		Seal bushing (included in 50047957) .....	1

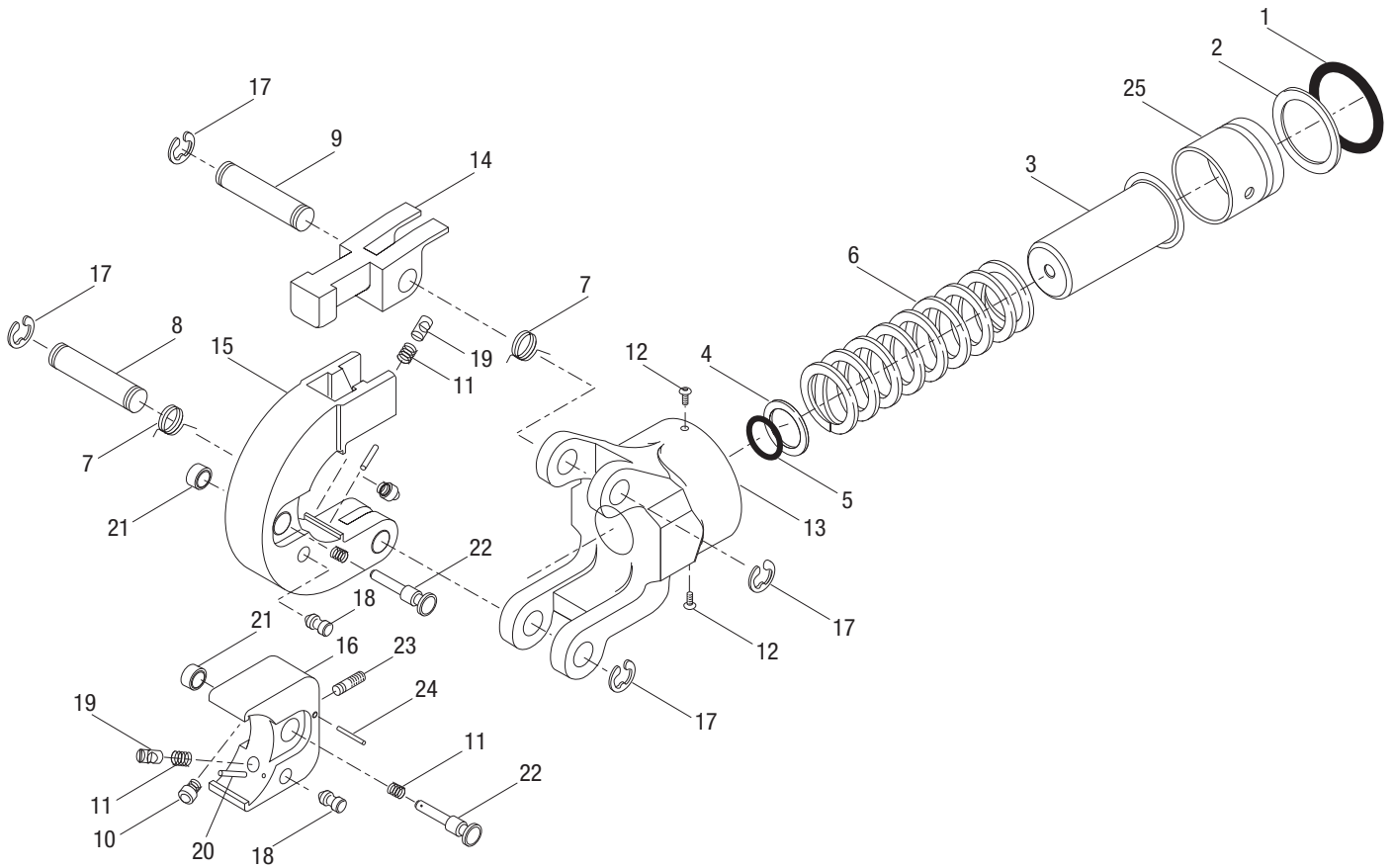
## Head and Ram Illustration and Parts List—EK410L



Key	Part No.	Description	Qty
1*		O-ring (included in 50047957).....	1
2*		Piston backup ring (included in 50047957).....	1
3	50019082	Bushing .....	1
	50018981	<b>Head unit</b> (includes 4–16)	
	52055863	Ram kit (includes 4–6, 14, 15)	
4		Shoulder bolt.....	1
5		Disc .....	1
6		Spring.....	1
7	50019180	Fixed head.....	1

Key	Part No.	Description	Qty
	52055864	Hardware kit (includes 8–11, 13, 14)	
8		Screw .....	1
9		Retaining ring .....	4
10		Pin .....	2
11		Spring.....	2
	52040994	Head and latch kit (includes 12, 16)	
12		Movable head.....	1
13		Screw .....	1
14		Pin .....	1
15		Ram adapter.....	1
16		Latch head .....	1
17	50019708	Pinch hazard decal.....	1

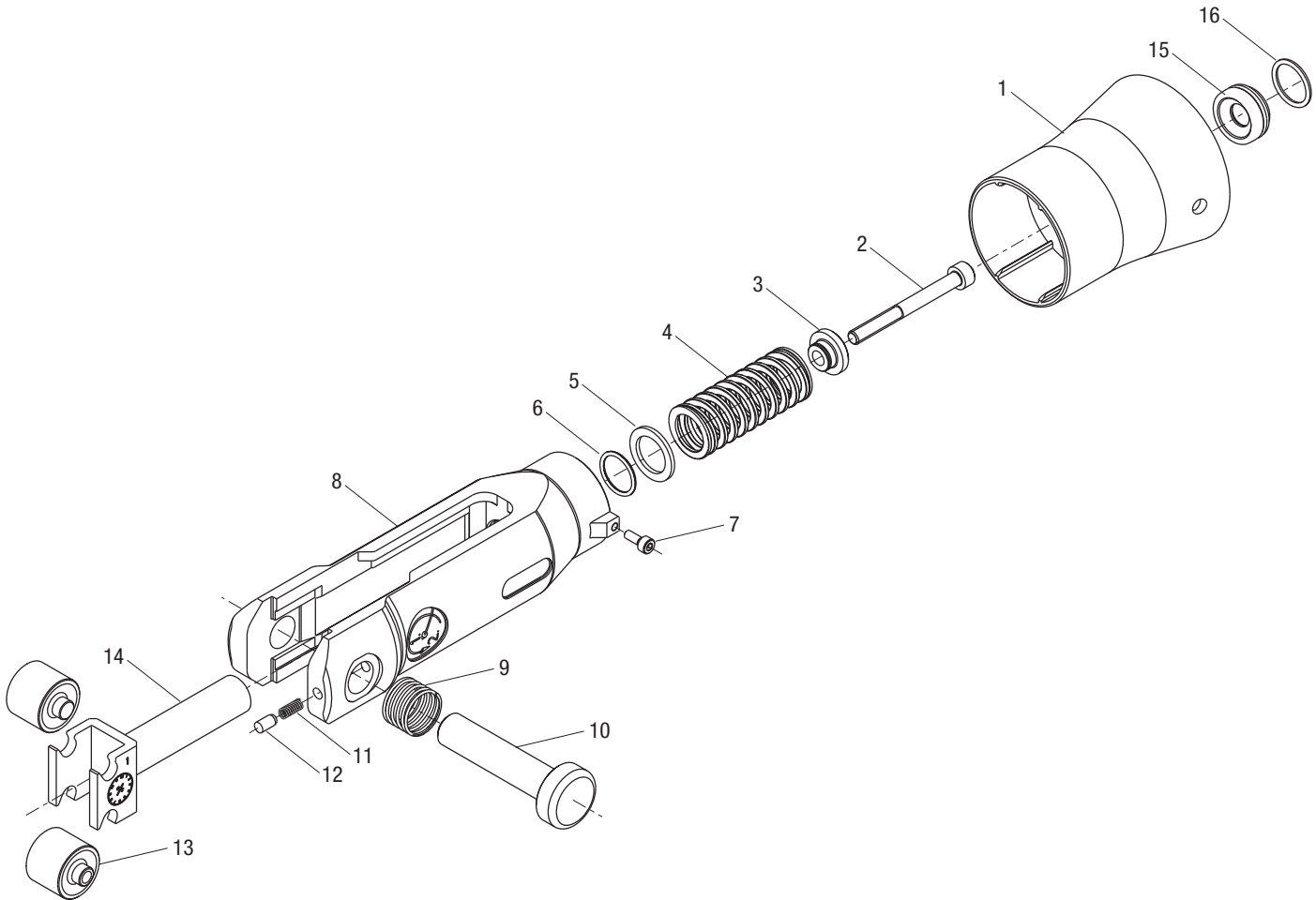
## Head and Ram Illustration and Parts List—EK622L



Key	Part No.	Description	Qty
1*		O-ring (included in 50047957).....	1
2*		Backup ring (included in 50047957).....	1
3	52055797	Ram.....	1
4	50058371	Adapter disk.....	1
5*		O-ring (included in 50047957).....	1
6	50058398	Compression spring.....	1
	52055866	Pin kit (includes 7-9, 17)	
7		Spring.....	2
8		Pin.....	1
9		Pin.....	1
	52055867	Die retainer kit (includes 10, 11, 18-22)	
10		Die retainer.....	2
11		Compression spring.....	4
12	50041681	Screw.....	2

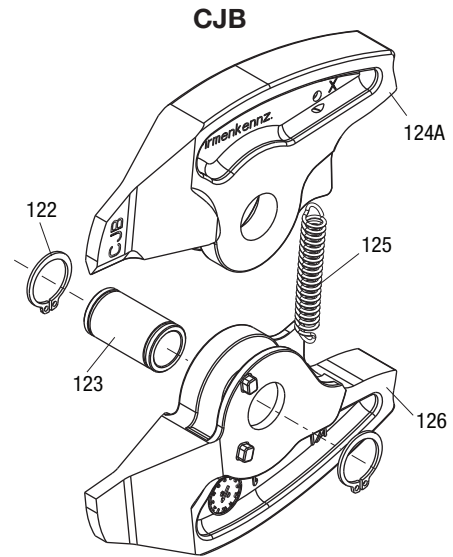
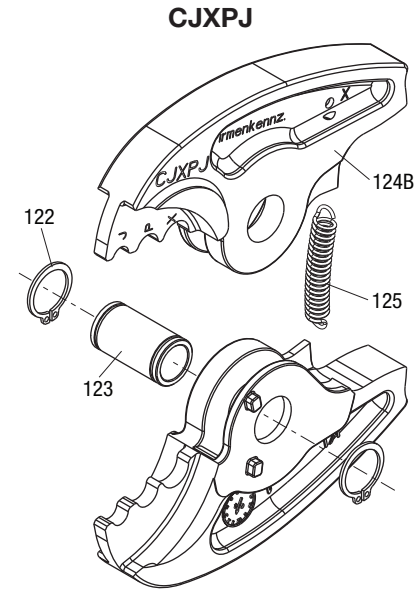
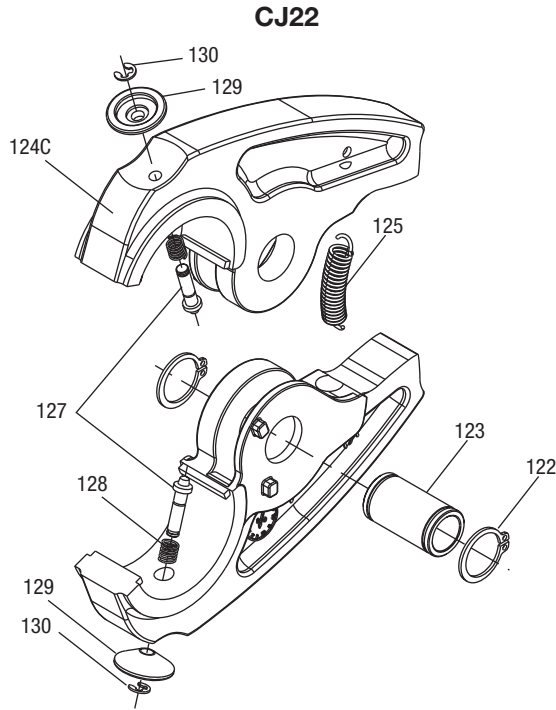
Key	Part No.	Description	Qty
13	50058304	Bottom crimp head.....	1
14	50121693	Latch.....	1
15	50121731	Top die holder.....	1
16	50121715	Bottom die holder.....	1
17		Retaining ring.....	4
18		Die release button.....	2
19		Die retainer.....	2
20		Roll Pin.....	2
21		Die release button.....	2
22		Locking pin.....	2
	52055865	Die holder kit (includes 23, 24)	
23		Threaded stud.....	1
24		Pin.....	1
25	52020648	Piston cup.....	1

## Ram Illustration and Parts List—EK628L



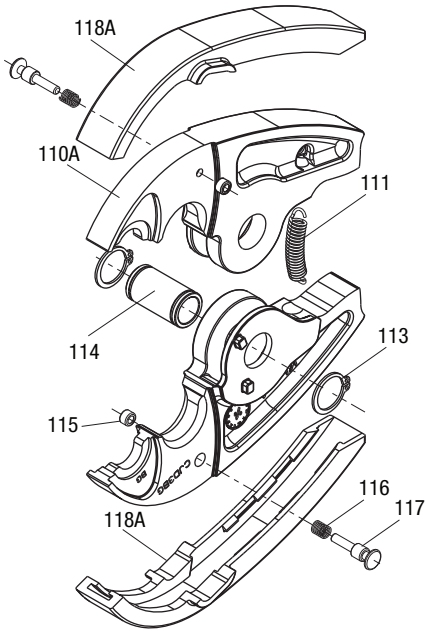
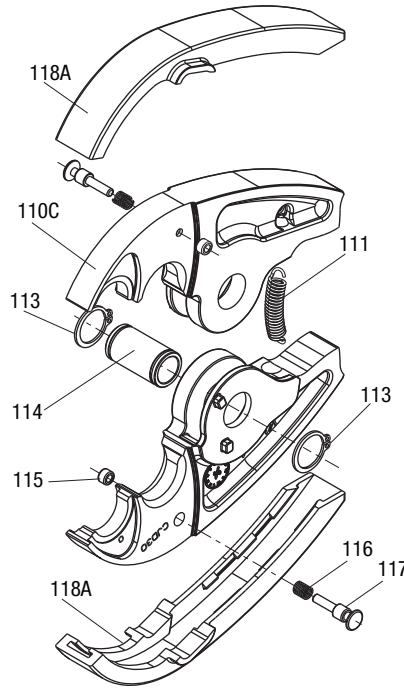
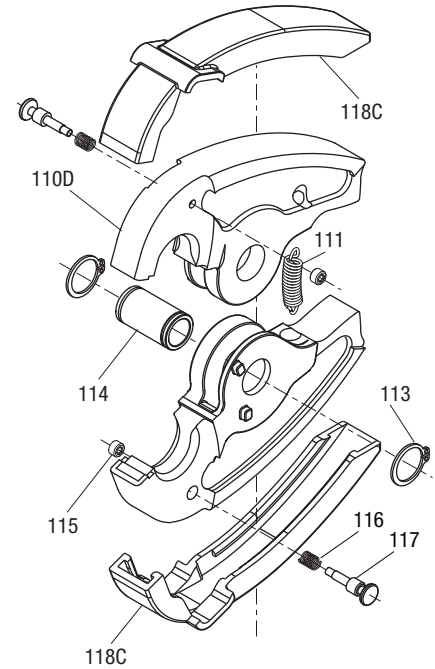
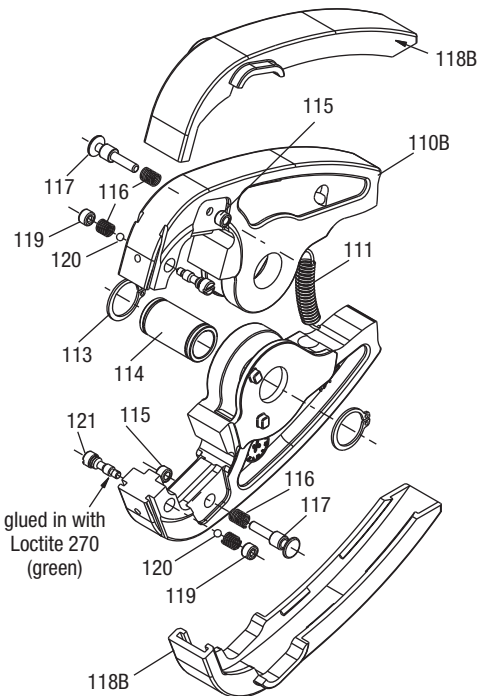
Key	Part No.	Description	Qty
	52048133	<b>Ram unit</b> (includes 1–14).....	1
	52057497	Jaw holder kit (includes 1, 7, 8)	
1	52049292	Sheath .....	1
	52049399	Spring kit (includes 2–6)	
2		Shoulder bolt.....	1
3		Disc .....	1
4		Compression spring .....	1
5		Washer .....	1
6*		O-ring (included in 50047957).....	1
7	52057496	Screw .....	1
8		Jaw holder.....	1

Key	Part No.	Description	Qty
	52049400	Latch kit (includes 9–12)	
9		Compression spring .....	1
10		Locking pin.....	1
11		Compression spring .....	1
12		Pin .....	1
	52049401	Roller kit (includes 13, 14)	
13		Roller .....	2
14		Ram.....	1
15	50120050	Bushing with seal .....	1
16*		Seal bushing (included in 50047957) .....	1

**Crimping Jaw Units Illustration and Parts List—EK628L**


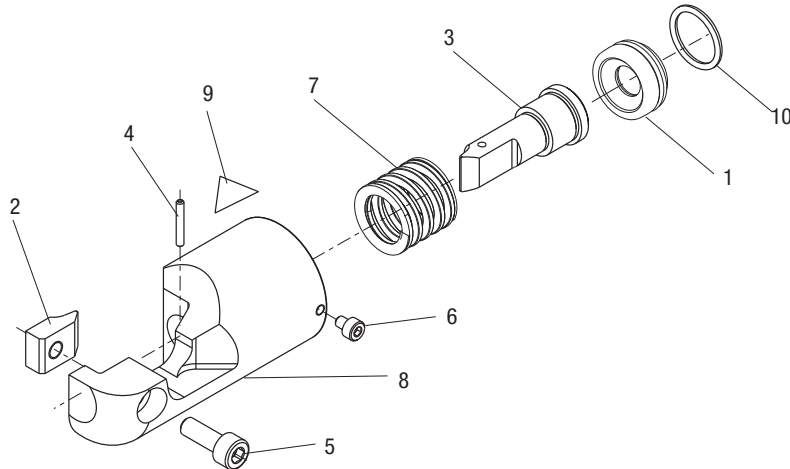
Key	Part No.	Description	Qty
	52024683	<b>CJ22 crimping jaw unit</b> for cUL and UL classified crimps	
	52025649	<b>CJXPJ crimping jaw unit</b> (includes 122-125)	
	52025648	<b>CJB single-use lock cutter</b> (includes 122-126)	
	52049402	Jaw pivot kit (includes 122, 123)	
122		Retaining ring .....	2
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

## Illustration and Parts List—Optional Accessories—EK628L

**CJD3BG**

**CJD30**

**CJD3**

**CJK Kearney**


Key	Part No.	Description	Qty
	52027121	<b>CJD3BG crimping jaw unit</b> (includes 110–118)	
	52027122	<b>CJD30 crimping jaw unit</b> (includes 110–118)	
	52024068	<b>CJD3 crimping jaw unit</b> (includes 110–118)	
	52020114	<b>CJK Kearney crimping jaw unit</b> (includes 110–118, 119–121)	
110A		Jaw, CJD3BG.....	2
110B		Jaw, CJK.....	2
110C		Jaw, CJD30.....	2
110D		Jaw, CJD3.....	2
111	52022544	Extension spring.....	1
	52049402	Jaw pivot kit (includes 113, 114)	
113		Retaining ring.....	2
114		Pin pivot.....	1
115		Bushing.....	2
116		Compression spring.....	2
117		Lock adapter.....	2
118A	52025125	Jaw covers, CJD30/CJD3BG (set of 2)....	1
118B	52022386	Jaw covers, CJK (set of 2).....	1
118C	52021086	Jaw covers, CJD3 (set of 2).....	1
119		Bushing.....	2
120		Ball, 3 mm.....	2
121		Locking pin.....	1
	50103750	Die pin kit, "W"-style dies (includes 115–117)	
	50105108	Die pin kit, Kearney-style dies (includes 116, 119–121)	

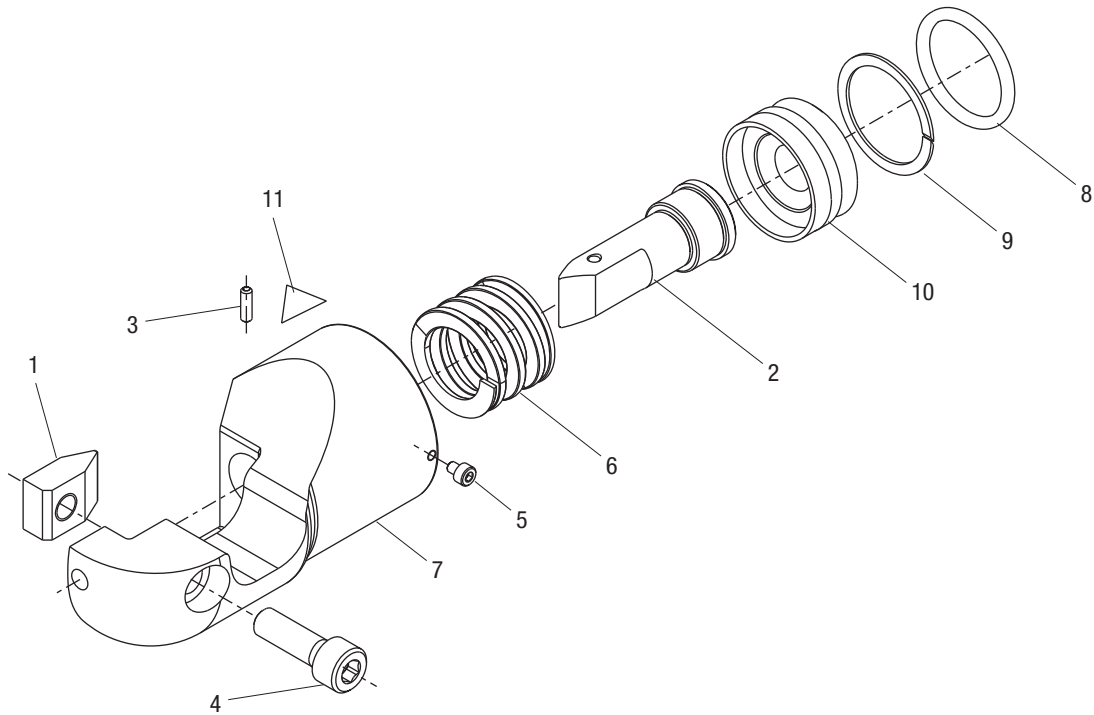
## Head and Ram Illustration and Parts List—ETS8L



Key	Part No.	Description	Qty
1	50120050	Bushing with seal .....	1
	52024565	Cutter blade kit (includes 2-5)	
2		Cutter plate .....	1
3		Cutting rod .....	1
4		Spring-type straight pin .....	1
5		Socket head cap screw, m5-14 .....	1

Key	Part No.	Description	Qty
6	50019295	Hex head cap screw, m3x4.....	1
7	50019120	Compression spring.....	1
8	52026760	Cutter head .....	1
9	52024564	Pinch hazard decal.....	1
10*		Seal bushing (included in 50047957) .....	1

## Head and Ram Illustration and Parts List—ETS12L

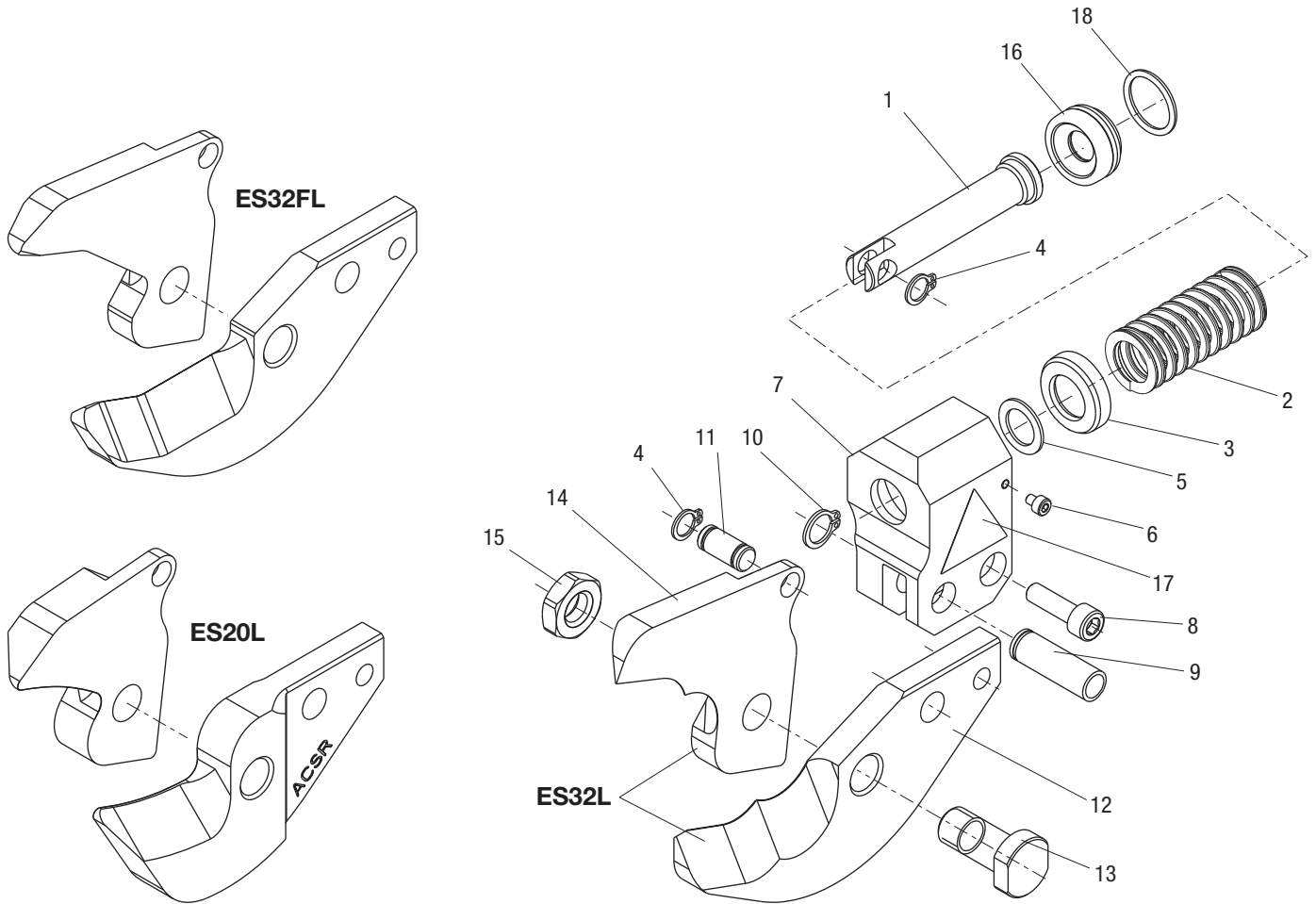


Key	Part No.	Description	Qty
	52033626	<b>Head assembly</b> (includes 1–7)	
	52033628	Cutter blade kit (includes 1–4).....	1
1		Fixed blade.....	1
2		Movable blade.....	1
3		Roll pin .....	1
4		Socket head cap screw.....	1
5	50019295	Hex head cap screw, m3x4.....	1

Key	Part No.	Description	Qty
6	50019236	Compression spring .....	1
7		Cutter head .....	1
8*		O-ring (included in 50047957).....	1
9*		Piston backup ring (included in 50047957) .....	1
10	50019082	Bushing .....	1
11	52024564	Pinch hazard decal.....	1



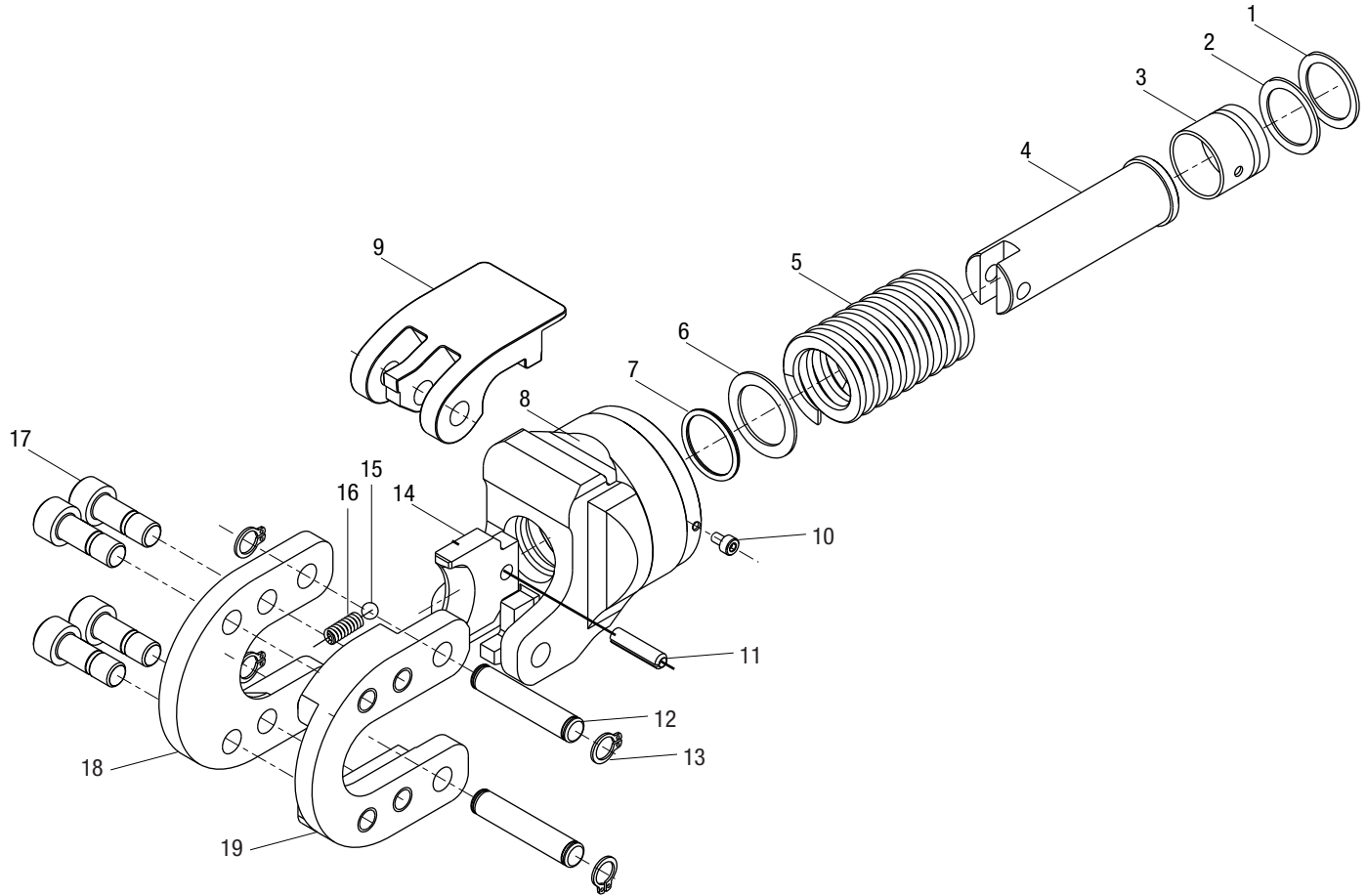
## Head and Ram Illustration and Parts List—ES32L, ES32FL, and ES20L



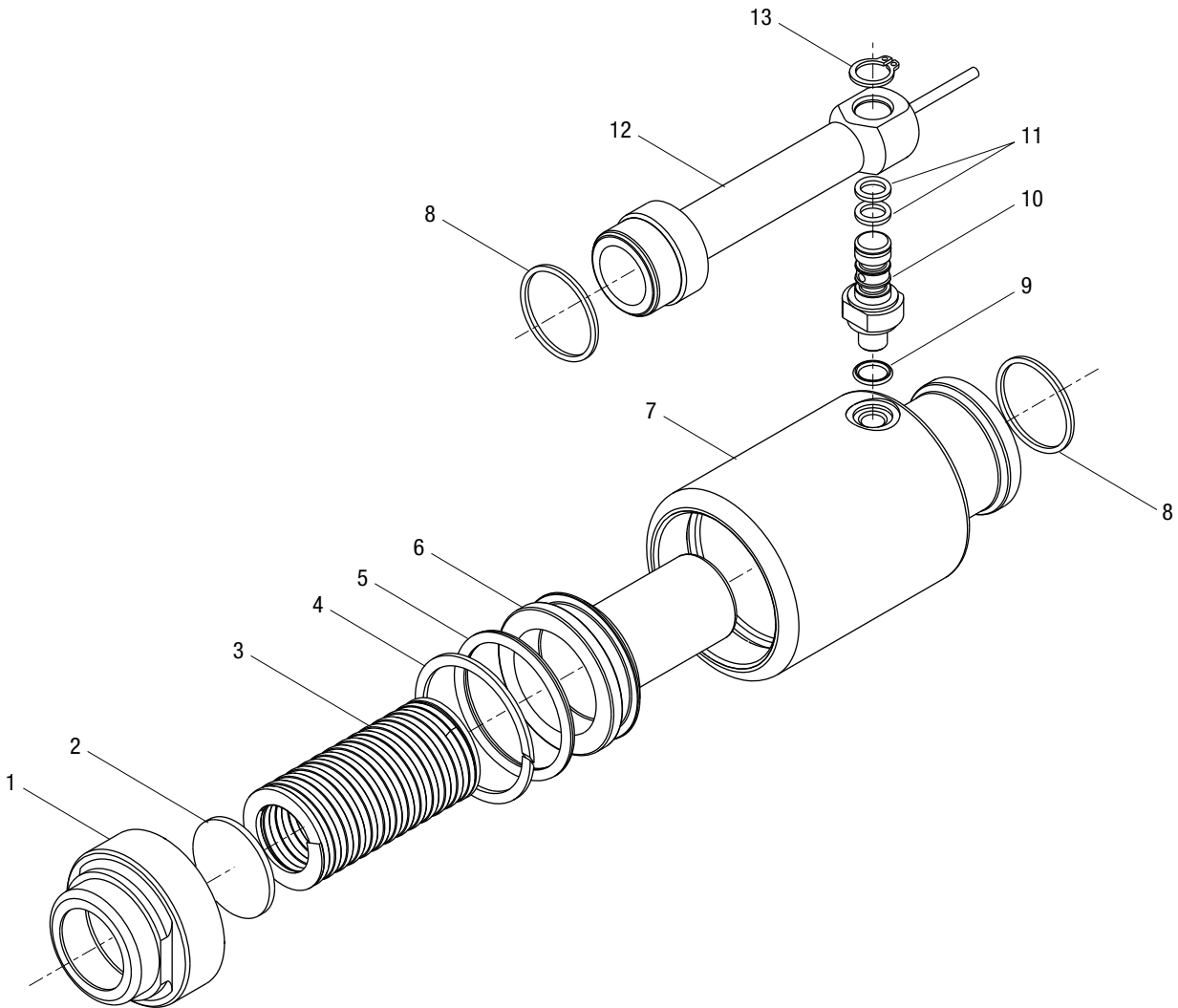
Key	Part No.	Description	Qty
	50121197	<b>Head unit assembly, ES32L</b> (includes 1–15)	
	52056587	<b>Head unit assembly, ES32FL</b> (includes 1–15)	
	52057273	<b>Head unit assembly, ES20L</b> (includes 1–15)	
	52055868	Ram kit (includes 1–3, 5)	
1		Piston .....	1
2		Coil spring .....	1
3		Steel washer.....	1
	52055870	Hardware kit (includes 4, 8–11, 13, 15)	
4		Retaining clip.....	2
5		Steel washer.....	1
6	50019295	Screw .....	1
7	50120913	Aluminum head .....	1

Key	Part No.	Description	Qty
8		Screw .....	1
9		Pivot .....	1
10		Retaining clip.....	1
11		Pivot .....	1
	52055869	Blade kit, ES32L (includes 12–15)	
	52056589	Blade kit, ES32FL (includes 12–15)	
	52057271	Blade kit, ES20L (includes 12–15)	
12		Fixed blade.....	1
13		Pivot bolt .....	1
14		Movable blade.....	1
15		Hex nut.....	1
16	50120050	Bushing with seal .....	1
17	52025832	Pinch hazard decal.....	1
18*		Seal bushing (included in 50047957) .....	1

## Head and Ram Illustration and Parts List—ESG25L

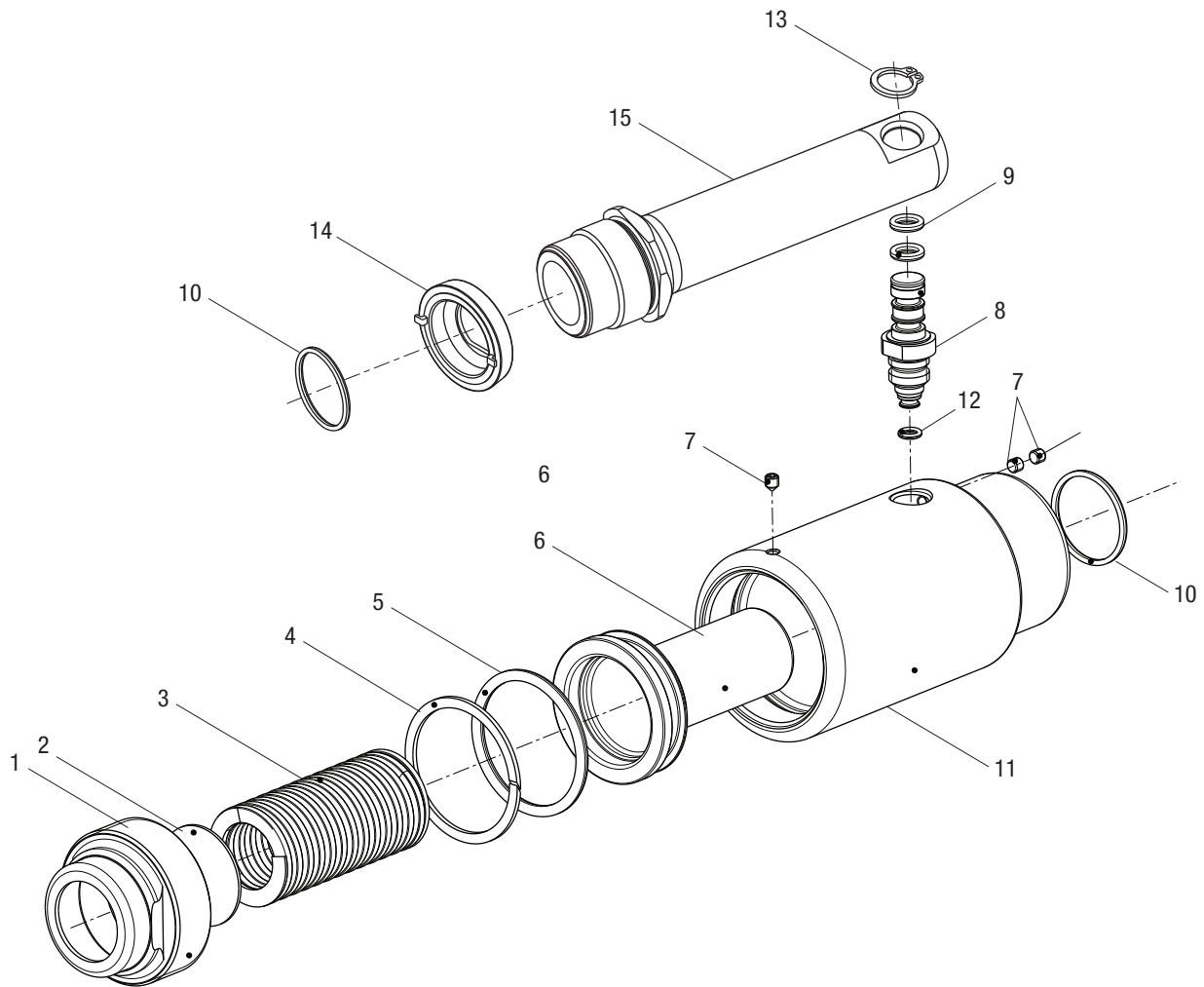


Key	Part No.	Description	Qty	Key	Part No.	Description	Qty
	52057103	<b>Head assembly</b> (includes 1–19)		10	52057106	Screw .....	1
1*		Backup ring (included in 50047957).....	1	11	52057111	Blade pin .....	1
2*		O-ring (included in 50047957).....	1	12	52057115	Pivot pin .....	2
3	52020648	Piston cup .....	1	13		Retaining clip.....	4
4	52057107	Ram .....	1	14	52057105	Movable blade.....	1
5		Compression spring .....	1	15	52057114	Ball .....	1
6		Adapter disk.....	1	16	52057113	Spring.....	1
7*		O-ring (included in 50047957).....	1	17	52057112	Screw .....	4
8	52057109	Base .....	1	18	52057104	Fixed blade.....	1
9	52057108	Latch .....	1	19	52057110	Guide plate.....	1

**Head and Ram Illustration and Parts List—LS50L**


Key	Part No.	Description	Qty
	52056948	<b>Punch head assembly</b> (includes 1–13)	
1	52056937	End cap .....	1
2		Spring disc .....	1
3	50058258	Compression spring .....	1
4		Backup ring .....	1
5		Seal .....	1
6	52056941	Ram .....	1
7	52056942	Ram housing .....	1

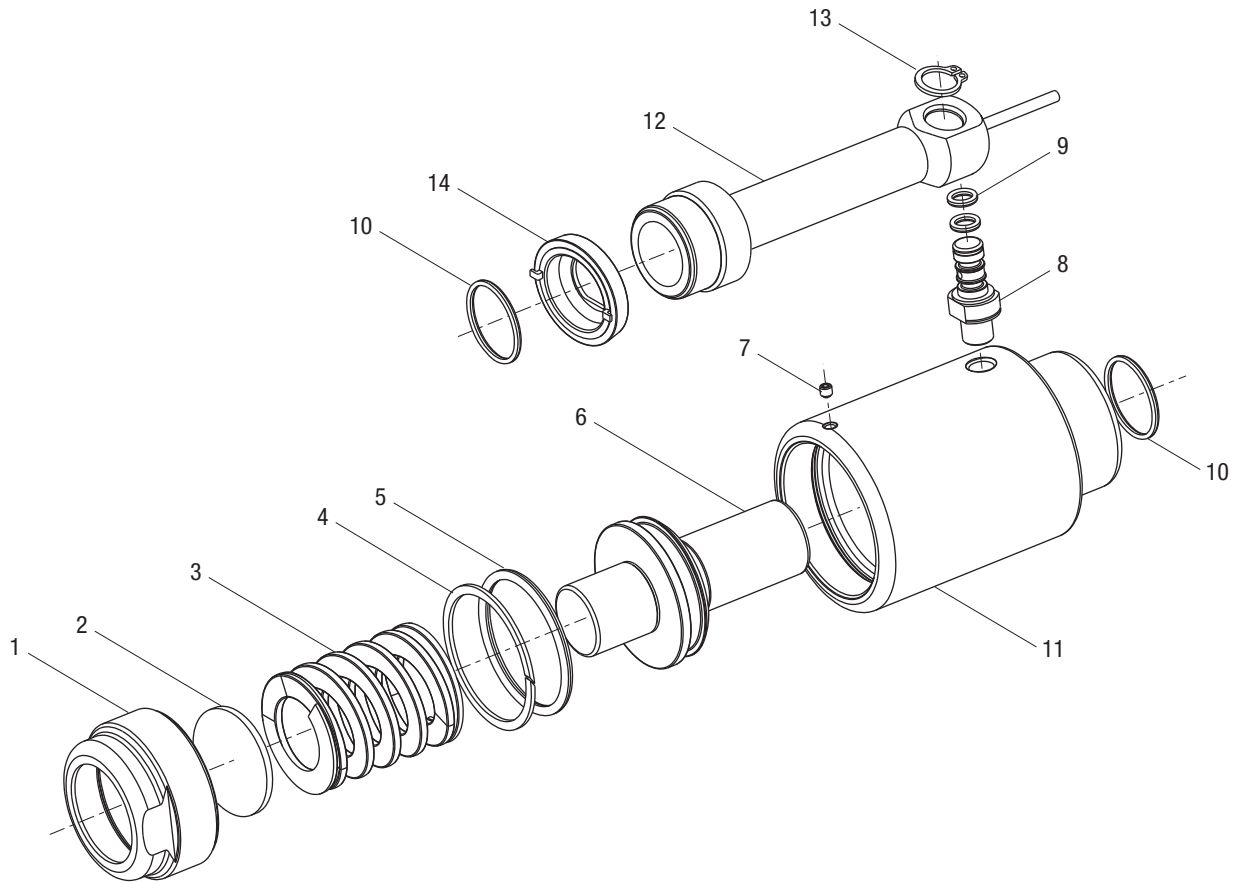
Key	Part No.	Description	Qty
8		Seal .....	2
9		O-ring .....	1
10	52056945	Swivel .....	1
11		Washer .....	2
12	52056947	Pump block extension.....	1
13		Retaining ring .....	1
	52057708	Ring kit (includes 2, 4, 5, 8, 9, 11, 13)	

**Head and Ram Illustration and Parts List—LS50L2**


Key	Part No.	Description	Qty
	52082687	<b>Punch head assembly</b> (includes 1–12)	
1	52056937	Cylinder cap .....	1
2	52056938	Cylinder cap cover .....	1
3	50058258	Spring, 40 mm.....	1
4		Backup ring .....	1
5		O-ring .....	1
6	5202690	Piston .....	1
7		Screw, set hex socket (DIN 916 M4 x 5) ...	3
8		Cylinder adapter.....	1

Key	Part No.	Description	Qty
9		O-ring, 6.7 x 2 mm (green) .....	2
10		O-ring, 26 x 2 mm (green) .....	2
11	52082701	Cylinder .....	1
12		O-ring .....	1
13		Retaining ring .....	1
14	52082689	Cover.....	1
15	52079480	Pump block extension.....	1
	52082688	Seal kit (includes 4, 5, 7, 9, 10, 12, 13)	
	52079983	Adapter kit (includes 8, 9, 12, 13)	

## Head and Ram Illustration and Parts List—LS100L



Key	Part No.	Description	Qty	Key	Part No.	Description	Qty
	52068307	<b>Punch head assembly</b> (includes 1–14)	9			O-ring, 6.7 x 2 mm (green) .....	2
1	52068308	Cylinder cap .....	1			O-ring, 26 x 2 mm (green) .....	2
2	52068309	Cylinder cap cover .....	1	52068312		Cylinder .....	1
3	50066919	Spring, 40 mm.....	1	52056947		Pump block extension.....	1
4		Backup ring .....	1			Retaining ring .....	1
5		O-ring, 44 x 3 mm (black).....	1	52068306		Cover.....	1
6	52068310	Piston .....	1	52069044		Seal kit (includes 4, 5, 7, 9, 10, 13)	
7		Screw, set hex socket (DIN 916 M4 x 4) ...	1	52069042		Adapter kit (includes 8, 9, 13)	
8		Cylinder adapter.....	1				