



Repair Parts Sheet

**BHP Puller Sets
and Attachments**

Note: See pages 6 through 12 for repair parts lists and diagrams.

Hinweis: Siehe Seiten 6 bis 12 für Ersatzteillisten und Schemata.

Nota: Véanse las páginas 6-12 para las listas de piezas de recambio y diagramas.

Remarque : Voir les pages 6 -12 pour les listes des pièces de rechange et les schémas.

Nota: Per consultare i diagrammi e gli elenchi dei pezzi di ricambio, fare riferimento alle pagine 6 - 12.

N.B.: Zie pagina's 6 tot en met 12 voor reparatielijsten en schema's.

Замечание: См. стр. 6-12 для запасных частей и схем.

illustration 5 - How to set up a Grip Puller. Numbers correspond with table A on page 7.

figure 5 - Comment assembler un extracteur à griffes. Les números correspondent à ceux de la table A page 7.

Abbildung 5 - Montieren der Abzugsätze.

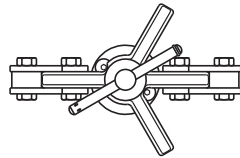
Die Zahlen stimmen mit Tabelle A auf Seite 7 überein.

figura 5 - Come montare un estrattore a griffe. I numeri corrispondono con quelli della tabella A a pagina 7.

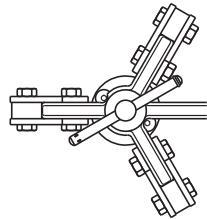
ilustración 5 - Modo de colocación de un extractor de garras. Los números corresponden con el cuadro A en la página 7.

illustratie 5 - Opbouwen van Trekkersets met trekarmen. De nummers komen overeen met tabel A op bladzijde 7.

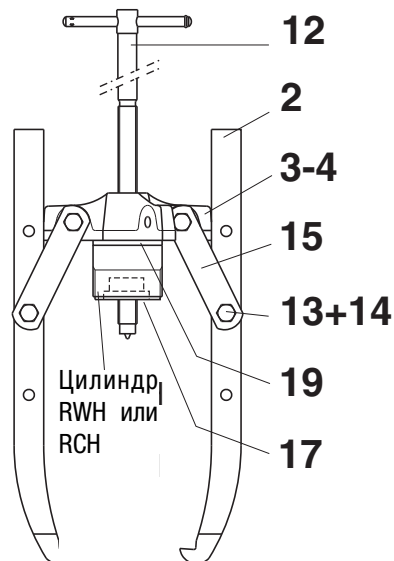
Рис. 5. Сборка зажимного съемника. Числа на рисунке соответствуют числам в таблице А (стр. 7).



2 grip arms
Tête à 2 griffes
Kreuzkopf 2-armig
Traversa 2 griffe
Cruceta doble
2-armig juk
Зажим с 2 лапами



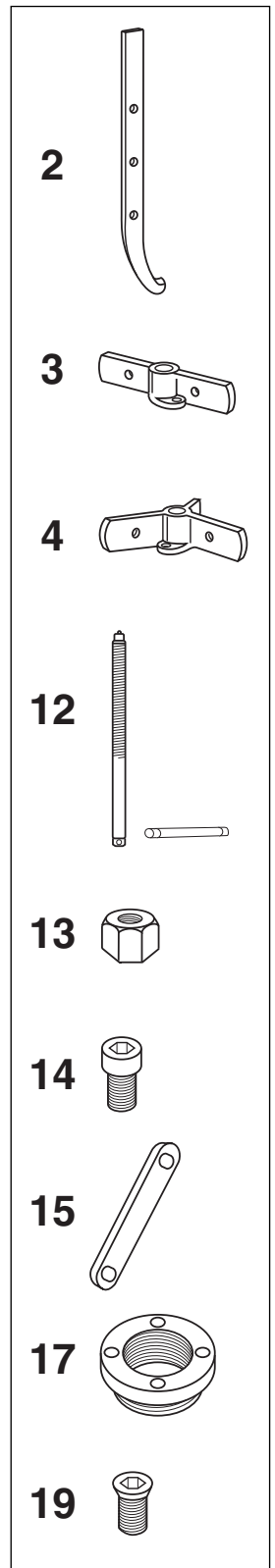
3 grip arms
Tête à 3 griffes
Kreuzkopf 3-armig
Traversa 3 griffe
Cruceta triple
3-armig juk
Зажим с 3 лапами



**Note: Refer to
Illustration 5
(page 6)**

TABLE A - INDIVIDUAL COMPONENTS OF GRIP PULLER SETS

Model Number - Grip Puller Sets		BHP-152	BHP-251G	BHP-351G	BHP-551G
Maximum Capacity		8 ton	20 ton	30 ton	50 ton
Hydraulic Components	Pump	P-142	P-392	P-392	P-80
	Cylinder	RWH-121	RCH-202	RCH-302	RCH-603
	Gauge	GF-120P (US) GF-120B (Eur) + GA-4 ¹⁾	GF-813P (US) GF-813B (Eur) + GA-3 ¹⁾	GF-813P (US) GF-813B (Eur) + GA-3 ¹⁾	GF-813P (US) GF-813B (Eur) + GA-3 ¹⁾
	Hose	HB-7206QB	HC-7206	HC-7206	HC-7206
Weight / Poids		22 kg 48 lbs	56 kg 123 lbs	91 kg 200 lbs	160 kg 353 lbs
1	Cyl. Adapter	--	--	--	--
2	Grip Arms	HP-1125 (3x)	HP-2125 (3x)	HP-3125 (3x)	HP-5125 (3x)
3	Double Crosshead	--	HP-2120	HP-3120	HP-5120
4	Triple Crosshead	HP-1130	HP-2130	HP-3130	HP-5130
12	Adjusting Rod	HP-1111	HP-2111	HP-3111	HP-5111
13	Strap Nut Kit (Includes 6 nuts)	HP-1123	HP-2023	HP-3123	HP-5023
14	Strap Screw Kit (includes 6 screws)	HP-1122	HP-2122	HP-3122	HP-5122
15	Straps	HP-1121 (6x)	HP-2121 (6x)	HP-3121 (6x)	HP-5121 (6x)
17	Threaded Saddle	--	HP-2015	HP-3015	HP-5016
19	Mounting Screw Kit (includes 2 screws)	HP-1120	HP-2213	HP-2013	HP-5013



1) GA = Gauge Adaptor

illustration 6 - How to set up a Cross Bearing Puller. Numbers correspond with table B on page 9

figure 6 - Comment assembler un extracteur à tirants. Les números correspondent à ceux de la table B page 9.

Abbildung 6 - Montieren der Jochabzieher. Die Zahlen stimmen mit Tabelle B auf Seite 9 überein.

figura 6 - Come montare un estrattore a tiranti. I numeri corrispondono con quelli della tabella B a pagina 9.

ilustración 6 - Modo de colocación de un extractor de cojinetes. Los números corresponden con el cuadro B en la página 9.

illustratie 6 - Opbouwen van brugstuk-lagertrekkers. De nummers komen overeen met tabel B op bladzijde 9.

Рис. 6. Сборка съемника-хомута. Числа на рисунке соответствуют числам в таблице В (стр. 9).

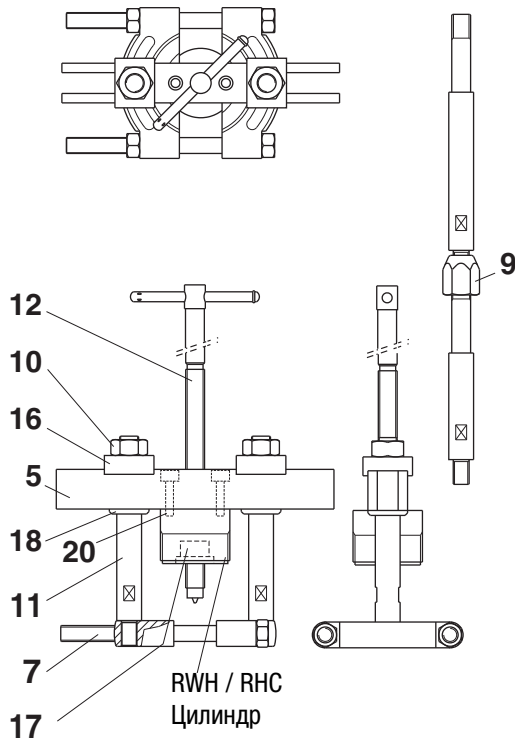


illustration 7 - How to set up a Internal Puller. Numbers correspond with table B on page 9

figure 7 - Comment assembler un extracteur intérieur. Les números correspondent à ceux de la table B page 9.

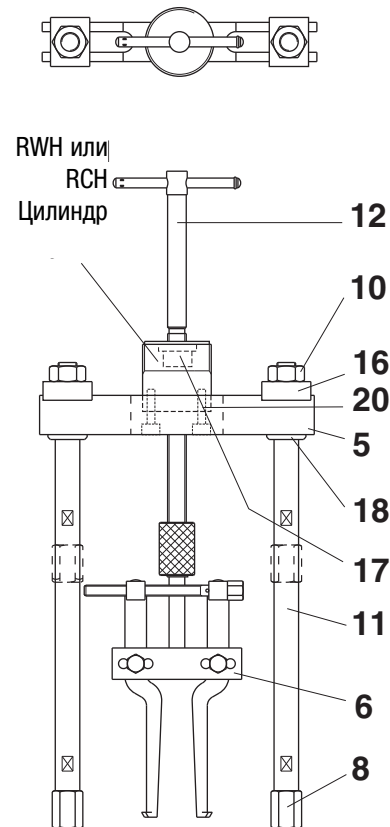
Abbildung 7 - Montieren der Lagerschalenabzieher. Die Zahlen stimmen mit Tabelle B auf Seite 9 überein.

figura 7 - Come montare un estrattore per interni. I numeri corrispondono con quelli della tabella B a pagina 9.

ilustración 7 - Modo de colocación de un extractor interior. Los números corresponden con el cuadro B en la página 9.

illustratie 7 - Opbouwen van inwendige lagertrekkers. De nummers komen overeen met tabel B op bladzijde 9.

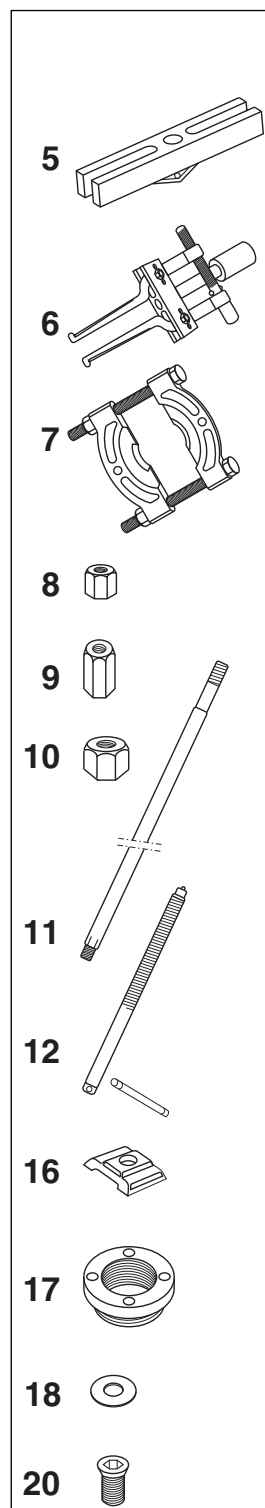
Рис. 7. Сборка съемника с внутренним захватом. Числа на рисунке соответствуют числам в таблице В (стр. 9).



**Note: Refer to
Illustration 6 or 7
(page 8)**

TABLE B - INDIVIDUAL COMPONENTS OF CROSS-BEARING PULLER SETS

Cross-Bearing Puller Sets		BHP-162	BHP-261G	BHP-361G	BHP-561G
Max. Capacity		8 ton	20 ton	30 ton	50 ton
Hydraulic Components	Pump	P-142	P-392	P-392	P-80
	Cylinder	RWH-121	RCH-202	RCH-302	RCH-603
	Gauge	GF-120P (US) GF-120B (Eur) + GA-4 ¹⁾	GF-813P (US) GF-813B (Eur) + GA-3 ¹⁾	GF-813P (US) GF-813B (Eur) + GA-3 ¹⁾	GF-813P (US) GF-813 (Eur) + GA-3 ¹⁾
	Hose	HB-7206QB	HC-7206	HC-7206	HC-7206
Weight		26 kg 57 lbs	62 kg 164 lbs	121 kg 267 lbs	185 kg 408 lbs
5	Slotted Crosshead	HP-1103	HP-2103	HP-3104	HP-5103
6	Bearing Cup Pull.	BHP-180	BHP-280	BHP-380	BHP-580
7	Bearing Puller	BHP-181	BHP-282	BHP-382	BHP-582
8	Leg End Kit (includes 2 leg ends)	HP-2009	HP-2009	HP-3039	--
9	Leg Reducer Kit (includes 4 reducers)	HP-2031	HP-2031	HP-3041	--
10	Leg Nut Kit (includes 2 nuts)	HP-2001	HP-2001	HP-3031	HP-5001
11	Leg ²⁾	HP-1136 (2x) HP-1137 (2x)	HP-2006 (2x) HP-2007 (2x) HP-2008 (2x) HP-2012 (2x)	HP-3036 (2x) HP-3037 (2x) HP-3038 (2x)	HP-5007 (2x) HP-5008 (2x)
12	Adjusting Rod	HP-1111	HP-2111	HP-3111	HP-5111
16	Slide Plate	HP-1105 (2x)	HP-2105 (2x)	HP-3135 (2x)	HP-5102 (2x)
17	Threaded Saddle	--	HP-2015	HP-3015	HP-5016
18	Washer Kit (includes 2 washers)	HP-1102	HP-2002	HP-3032	HP-5132
20	Mounting Screw Kit (includes 2 screws)	HP-1213	HP-2113	HP-3113	HP-5113

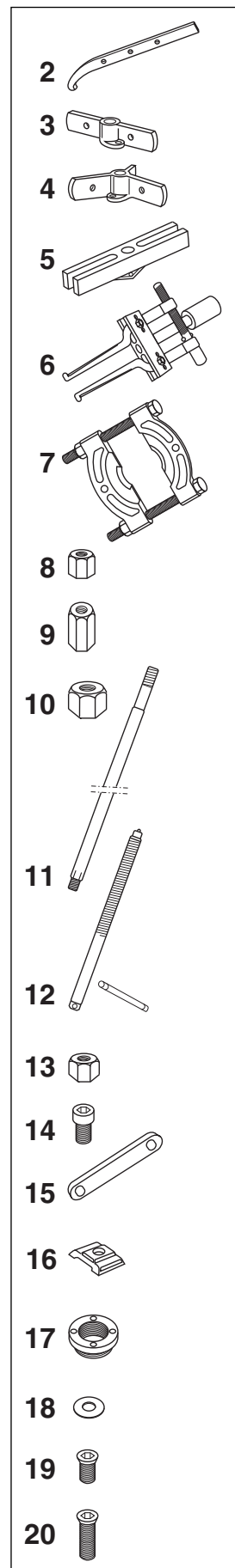


1) GA = Gauge Adaptor 2) See Leg Lengths table on page 11 for additional information.

Note: Refer to
Illustration 5 (page 6) or
illustrations 6 & 7 (page 8)

TABLE C - INDIVIDUAL COMPONENTS OF MULTI-PURPOSE PULLER SETS

Multi-Purpose Puller Sets		BHP-1752	BHP-2751G	BHP-3751G	BHP-5751G
Capacity		8 ton	20 ton	30 ton	50 ton
Hydraulic Components	Pump	P-142	P-392	P-392	P-80
	Cylinder	RWH-121	RCH-202	RCH-302	RCH-603
	Gauge	GF-120P (US) GF-120B (Eur) + GA-4 1)	GF-813P (US) GF-813B (Eur) + GA-3 1)	GF-813P (US) GF-813B (Eur) + GA-3 1)	GF-813P (US) GF-813B (Eur) + GA-3 1)
	Hose	HB-7206QB	HC-7206	HC-7206	HC-7206
2 Grip Arms		HP-1125 (3x)	HP-2125 (3x)	HP-3125 (3x)	HP-5125 (3x)
3 Double Crosshead		--	HP-2120	HP-3120	HP-5120
4 Triple Crosshead		HP-1130	HP-2130	HP-3130	HP-5130
5 Slotted Crosshead		HP-1103	HP-2103	HP-3104	HP-5103
6 Bearing Cup Pull.		BHP-180	BHP-280	BHP-380	BHP-580
7 Bearing Puller		BHP-181	BHP-282	BHP-382	BHP-582
8 Leg End Kit (includes 2 leg ends)		HP-2009	HP-2009	HP-3039	--
9 Leg Reducer Kit (includes 4 reducers)		HP-2031	HP-2031	HP-3041	--
10 Leg Nut Kit (includes 2 nuts)		HP-2001	HP-2001	HP-3031	HP-5001
11 Leg 2)		HP-1136 (2x) HP-1137 (2x)	HP-2006 (2x) HP-2007 (2x) HP-2008 (2x) HP-2012 (2x)	HP-3036 (2x) HP-3037 (2x) HP-3038 (2x)	HP-5007 (2x) HP-5008 (2x)
12 Adjusting Rod		HP-1111	HP-2111	HP-3111	HP-5111
13 Strap Nut Kit (includes 6 nuts)		HP-1123	HP-2023	HP-3123	HP-5023
14 Strap Screw Kit (includes 6 screws)		HP-1122	HP-2122	HP-3122	HP-5122
15 Straps		HP-1121 (6x)	HP-2121 (6x)	HP-3121 (6x)	HP-5121 (6x)
16 Slide Plate		HP-1105 (2x)	HP-2105 (2x)	HP-3135 (2x)	HP-5102 (2x)
17 Threaded Saddle		--	HP-2015	HP-3015	HP-5016
18 Washer Kit (includes 2 washers)		HP-1102	HP-2002	HP-3032	--
19 Short Mounting Screw Kit (includes 2 screws)		HP-1120	HP-2113	HP-2013	HP-5013
20 Long Mounting Screw Kit (includes 2 screws)		HP-1213	HP-2213	HP-3113	HP-5113

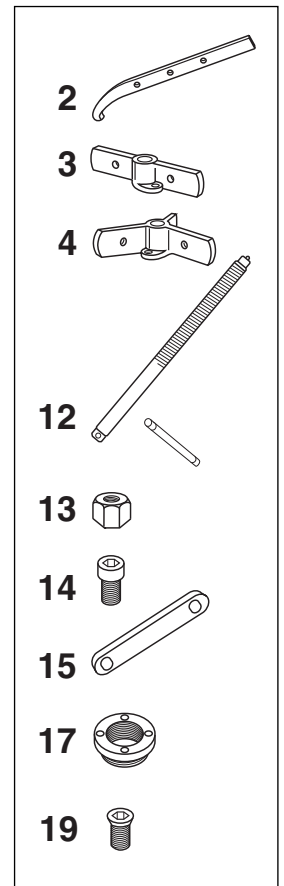


1) GA = Gauge Adaptor 2) See Leg Lengths table on page 11 for additional information.

Note: Refer to
Illustration 5
(page 6)

TABLE D - INDIVIDUAL COMPONENTS OF GRIP PULLER ATTACHMENTS

Grip Puller Attachments	BHP-1762	BHP-252	BHP-352	BHP-552
Capacity	8 ton	20 ton	30 ton	50 ton
2 Grip Arms	HP-1125 (3x)	HP-2125 (3x)	HP-3125 (3x)	HP-5125 (3x)
3 Double Crosshead	--	HP-2120	HP-3120	HP-5120
4 Triple Crosshead	HP-1130	HP-2130	HP-3130	HP-5130
12 Adjusting Rod	HP-1111	HP-2111	HP-3111	HP-5111
13 Strap Nut Kit (includes 6 nuts)	HP-1123	HP-2023	HP-3123	HP-5023
14 Strap Screw Kit (includes 6 screws)	HP-1122	HP-2122	HP-3122	HP-5122
15 Straps	HP-1121 (6x)	HP-2121 (6x)	HP-3121 (6x)	HP-5121 (6x)
17 Threaded Saddle	--	HP-2015	HP-3015	HP-5016
19 Mounting Screw Kit (includes 2 screws)	HP-1120	HP-2213	HP-2013	HP-5013



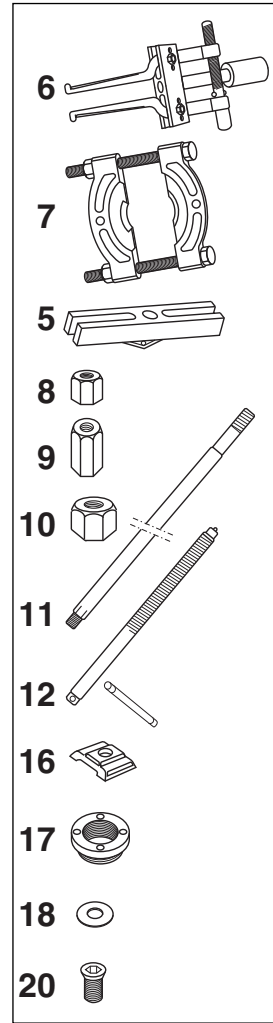
LEG LENGTHS (See item #11, tables B, C and E)

Leg Part Number	Leg Length inch [mm]	Used on Puller Models:
HP-1136	4.2 [106]	BHP162, BHP-1752, BHP-1772
HP-1137	14.1 [357]	
HP-2006	9.4 [240]	BHP-261G, BHP-2751G, BHP-262
HP-2007	16.5 [420]	
HP-2008	22.4 [570]	
HP-2012	4.5 [115]	
HP-3036	8.0 [204]	BHP-361G, BHP-3751G, BHP-362
HP-3037	18.1 [18.1]	
HP-3038	28.0 [710]	
HP-5007	24.0 [608.5]	BHP-561G, BHP-5751G, BHP-362
HP-5008	34.0 [863.5]	

Refer to Illustration
6 or 7 (page 8)

TABLE E - INDIVIDUAL COMPONENTS OF PULLER SETS ATTACHMENTS

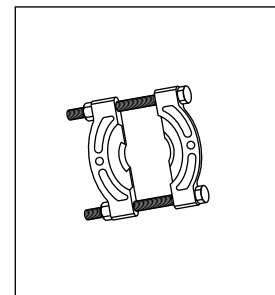
Puller Set Attachments	BHP-1772	BHP-262	BHP-362	BHP-562
Capacity	8 ton	20 ton	30 ton	50 ton
5 Slotted Crosshead	HP-1103	HP-2103	HP-3104	HP-5103
6 Bearing Cup Pull.	BHP-180	BHP-280	BHP-380	BHP-580
7 Bearing Puller.	BHP-181	BHP-282	BHP-382	BHP-582
8 Leg End Kit (includes 2 leg ends)	HP-2009	HP-2009	HP-3039	--
9 Leg Reducer Kit (includes 4 leg ends)	HP-2031	HP-2031	HP-3041	--
10 Leg Nut Kit (includes 2 nuts)	HP-2001	HP-2001	HP-3031	HP-5001
11 Leg 1)	HP-1136 (2x) HP-1137 (2x)	HP-2006 (2x) HP-2007 (2x) HP-2008 (2x) HP-2012 (2x)	HP-3036 (2x) HP-3037 (2x) HP-3038 (2x)	HP-5007 (2x) HP-5008 (2x)
12 Adjusting Rod	HP-1111	HP-2111	HP-3111	HP-5111
16 Slide Plate	HP-1105 (2x)	HP-2105 (2x)	HP-3135 (2x)	HP-5102 (2x)
17 Threaded Saddle	--	HP-2015	HP-3015	HP-5016
18 Washer Kit (includes 2 washers)	HP-1102	HP-2002	HP-3032	--
20 Mounting Screw Kit (includes 2 screws)	HP-1213	HP-2113	HP-3113	HP-5113



1) See Leg Lengths table on page 11 for additional information.

TABLE F - INDIVIDUAL COMPONENTS OF BEARING PULLER

Bearing Puller	BHP-181	BHP-282	BHP-382	BHP-582
Capacity	8 ton	20 ton	30 ton	50 ton
Rod	BHP181K	BHP282K	BHP582K	
Rod Nut				



To Protect Your Warranty, Use Only ENERPAC Hydraulic Oil.

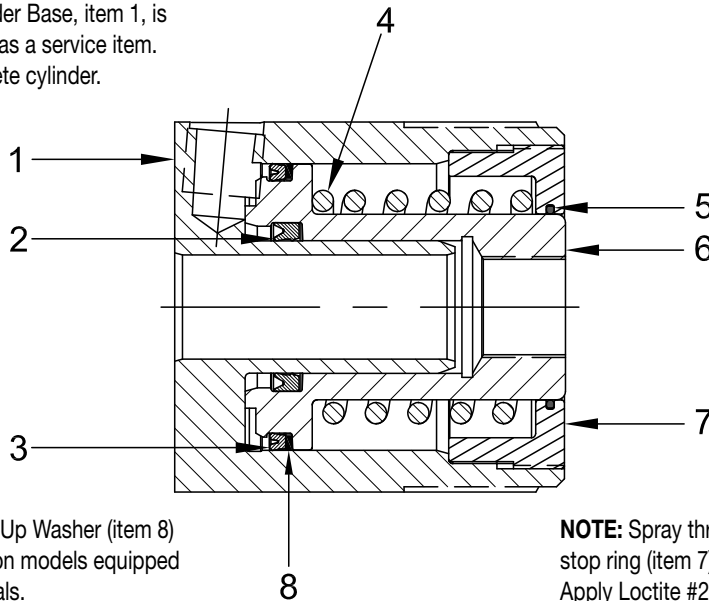
Enerpac recommends that all kit components be installed to insure optimum performance of the repaired product.



WARNING: STOP RINGS ON RWH CYLINDER MODELS ARE SPRING LOADED

IF NOT CONTAINED DURING DISASSEMBLY, SPRING AND STOP RING COULD CAUSE PERSONAL INJURY.

NOTE: Cylinder Base, item 1, is not available as a service item. Order complete cylinder.



NOTE: Back-Up Washer (item 8) is only used on models equipped with Viton seals.

NOTE: Spray threads on base (item 1) and stop ring (item 7) with Loctite Activator #7471. Apply Loctite #222 to threads after Activator has dried. Assemble and torque stop ring (item 7) to 50-100 In-Lbs (5-11 Nm).

Parts List - Models RWH-121 and RWH-121V

Item	Model Number		Qty.	Description
	RWH-121	RWH-121V		
1	CH970030	CH970030	1	Base (not available as a service item)
2	DW1253041	(not used)	1	★ U-Cup, Standard
	(not used)	CF476041	1	❖ U-Cup, Viton
3	CJ422041	(not used)	1	★ U-Cup, Standard
	(not used)	CA520041	1	❖ U-Cup, Viton
4	Y397110	Y397110	1	Spring
5	B1028803	(not used)	1	★ O-Ring, Standard
	(not used)	B1028203	1	❖ O-Ring, Viton
6	CH971040	CH971040	1	Plunger
7	B47035	B47035	1	Stop Ring
8	(not used)	B1225564	1	❖ Back-Up Washer, Viton

★ Items included in and available only as part of Standard Repair Kit RWH121K1.

❖ Items included in and available only as part of Viton Repair Kit QMH120VK.

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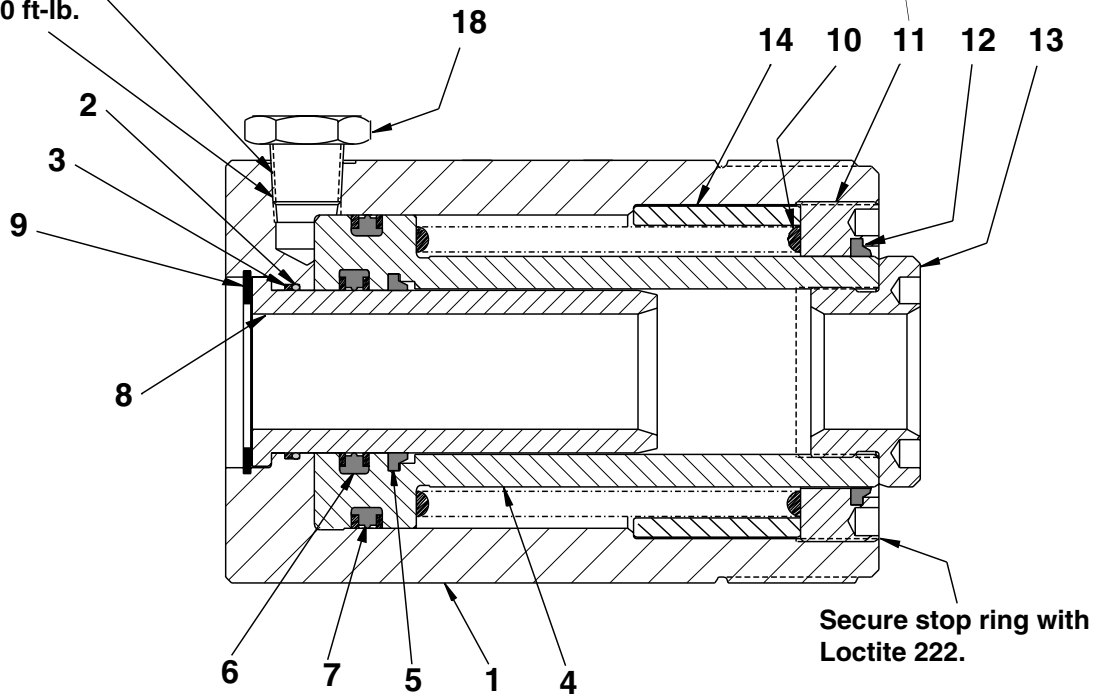
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⚠ WARNING
Stop rings on RCH and RWH models are spring loaded!
If not contained during disassembly, spring and stop ring could cause personal injury.

(S) Stop ring threads are staked. Stake mark must be removed prior to attempting to remove stop ring. Restake after testing repaired cylinder.

Use Loctite 545
or teflon tape.
Torque to 50-60 ft-lb.
[67,6-81,1 Nm]



Secure stop ring with
Loctite 222.

NOTE: Cylinder Base, Item #1 is
not available as a service item.
Order Complete Cylinder.

INSTALL ALL KIT COMPONENTS TO INSURE OPTIMUM PERFORMANCE OF THE REPAIRED CYLINDER.

REPAIR PARTS LIST

Item No.	RCH-202	RWH-200 RWH-200V	RWH-202 RWH-202V	Quantity	Description
1		Order Complete Cylinder		1	Cylinder Assembly
2	★	★	★	1	O-Ring
3	★	★	★	1	Back-up Ring
4	DA5164040	DA5163040	DA5164040	1	Plunger
5	★	★	★	1	Wiper Ring
6	★	★	★	1	G-T Ring
7	★	★	★	1	G-T Ring Viton
8	DA5160268	DA5159268	DA5160268	1	Center Tube
9	★	★	★	1	Retaining Ring
10	CF707110	CF707110	CF707110	1	Spring
11	CJ671044	CJ671044	CJ671044	1	Stop Ring
12	★	★	★	1	Wiper Ring Viton
13	CB894045	CB894045	CB894045	1	Saddle
14	CJ672044	CJ672044	CJ672044	1	Stop Ring
15	CR-400	—	—	1	Half Coupler (not shown)
18	—	FZ1630	FZ1630	1	Reducer Bushing

★ Indicates item included in and available only as part of Repair Kit RCH-202K.
For viton cylinders, order Repair Kit RCH-202KV1.

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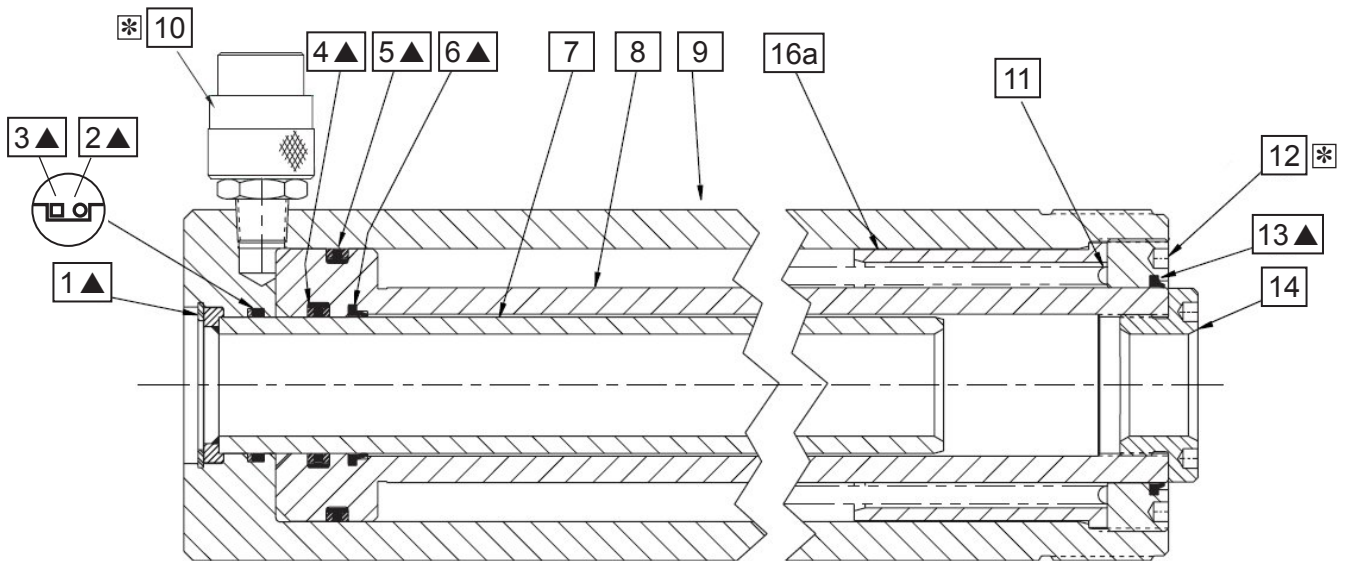
All Enerpac products are guaranteed against defects in workmanship and materials for as long as you own them.
Under this guarantee, free repair or replacement will be made to your satisfaction.

For your nearest authorized Enerpac Service Center, visit us at www.enerpac.com

Repair Parts Sheet	Revision	Revision Date	Product Code Beginning
L1627	Rev. J	11/2017	C



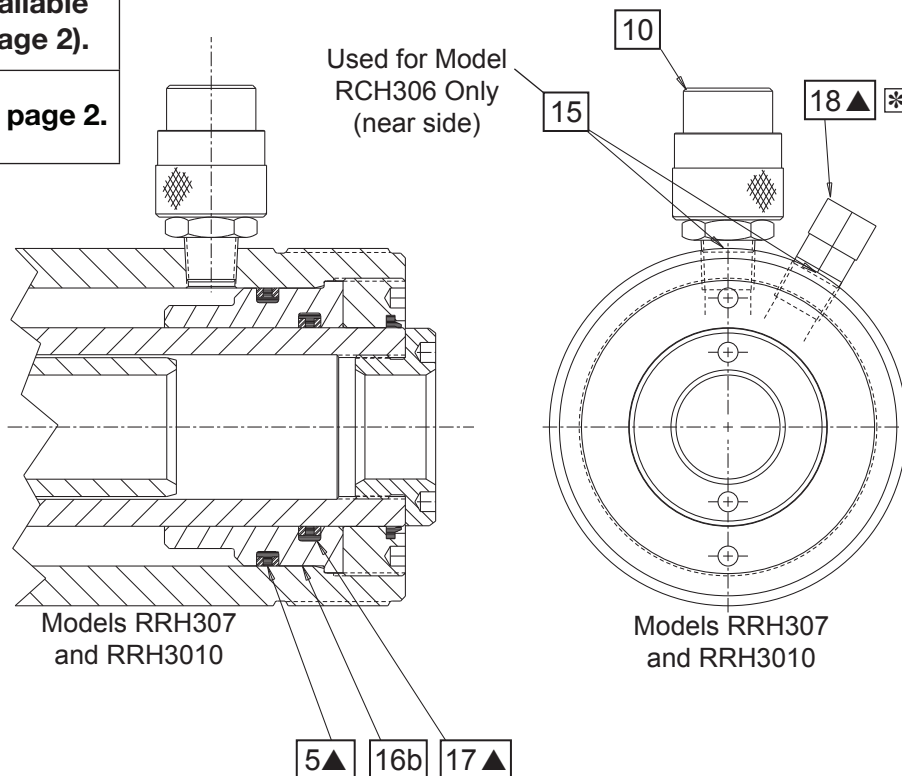
WARNING: STOP RINGS ON RCH MODELS ARE SPRING LOADED! IF NOT CONTAINED DURING DISASSEMBLY, SPRING AND STOP RING COULD CAUSE PERSONAL INJURY.



Models RCH302 and RCH306

▲ = Parts available in kits (see page 2).

* See  on page 2.



Models RRH307 and RRH3010

Models RRH307 and RRH3010

Repair Parts List						L1627
Item	Description	Qty.	RCH302	RCH306	RRH307	RRH3010
1	Retaining Ring ▲	1	A1006049	A1006049	A1006049	A1006049
2	O Ring ▲	1	B1090503	B1090503	B1090503	B1090503
3	Back Up Ring ▲	1	DA4984566	DA4984566	DA4984566	DA4984566
4	G T Ring ▲	1	B13271514	B13271514	B13271514	B13271514
	G T Ring ■	1	B13271516	B13271516	B13271516	B13271516
5	G T Ring ▲	1	B1338513	B1338513	B1338513 (Qty 2)	B1338513 (Qty 2)
	G T Ring ■	1	B1338515	B1338515	B1338515 (Qty 2)	B1338515 (Qty 2)
6	Wiper ▲	1	CJ142044	CJ142044	CJ142044	CJ142044
7	Center Tube	1	B1338515	B1338515	DA3468900	DA4101900
8	Plunger	1	DA4066040	DA3472040	DA3472040	DA4100040
9	Cylinder	1	Not available as service part. Order new cylinder.			
10	Coupler	1	CR400	CR400	---	---
	Coupler	2	---	---	CR400	CR400
11	Spring	1	CH259110	CR514110	---	---
12	Stopring	1	DA3464044	DA3464044	DA3464044	DA3464044
13	Wiper ▲	1	CJ50044	CJ50044	CJ50044	CJ50044
14	Saddle	1	CF698045	CF698045	CF698045	CF698045
15	Plug	1	---	A1009245	---	---
16a	Stop Tube	1	DA4069268	DA3466268	---	---
16b	Int. Stop Ring	1	---	---	DA3463044	DA3463044
17	G T Ring ▲	1	---	---	B1333514	B1333514
	G T Ring ■	1	---	---	B1333516	B1333516
18	Relief Valve ▲	1	---	---	CJ160900W	CJ160900W
19	Dust Cap (not shown) ▲	1	DD1782020	DD1782020	---	---
	Dust Cap (not shown) ▲	2	---	---	DD1782020	DD1782020
20	Thread Protector (not shown) ▲	1	CL402271	CL402271	CL402271	CL402271
21	Decal Warning (not shown) ▲	1	DA5625026	DA5625026	DA5625026	DA5625026
22	Decal Hollow (not shown) ▲	1	G668026	G668026	G668026	G668026
23	Decal, Warning (not shown) ▲	1	DA6027026	DA6027026	DC6154026	DC6154026
24	Coupler, O-Ring (not shown)	1	B1116803	B1116803	---	---
	Coupler, O-Ring (not shown)	2	---	---	B1116803	B1116803
	Repair Kit (standard seals)		RCH302K2	RCH302K2	RRH3010K2	RRH3010K2
	Repair Kit (Viton seals)		RWH302KV	RWH302KV	RWH302KV	RWH302KV

▲ = Indicates Items Included in Repair Kits RCH302K2 and RRH3010K2.

■ = Indicates Items Included in Repair Kits RWH302KV. Parts included in kits will vary, depending on kit ordered.

IMPORTANT: Shaded items are available only in kits (not sold separately).



Service Notes			L1627
Item	Model	Torque / Remark	
10	RCH / RRH	40 - 60 ft-lbs [54 - 81 Nm]	
10	RCH / RRH	Use Loctite 545 or Teflon tape	
12	RCH / RRH	Use Loctite 222	
18	RRH	40 - 60 ft-lbs [54 - 81 Nm]	
18	RRH	Set safety valve to 11,000 - 11,500 psi [760 - 795 bar]	
18	RRH	Use Loctite 545 or Teflon tape	



To maintain your warranty:

- Use only Enerpac Oil
- Have your products inspected and repaired by an Enerpac Authorized Service Center

ENERPAC

Visit www.enerpac.com for the location of the Enerpac Authorized Service Center nearest you.

To Protect Your Warranty, Use Only ENERPAC Hydraulic Oil.

Enerpac recommends that all kit components be installed to insure optimum performance of the repaired product.

WARNING! Stop rings on RCH models are spring loaded! If not contained during disassembly, spring and stop ring could cause personal injury.

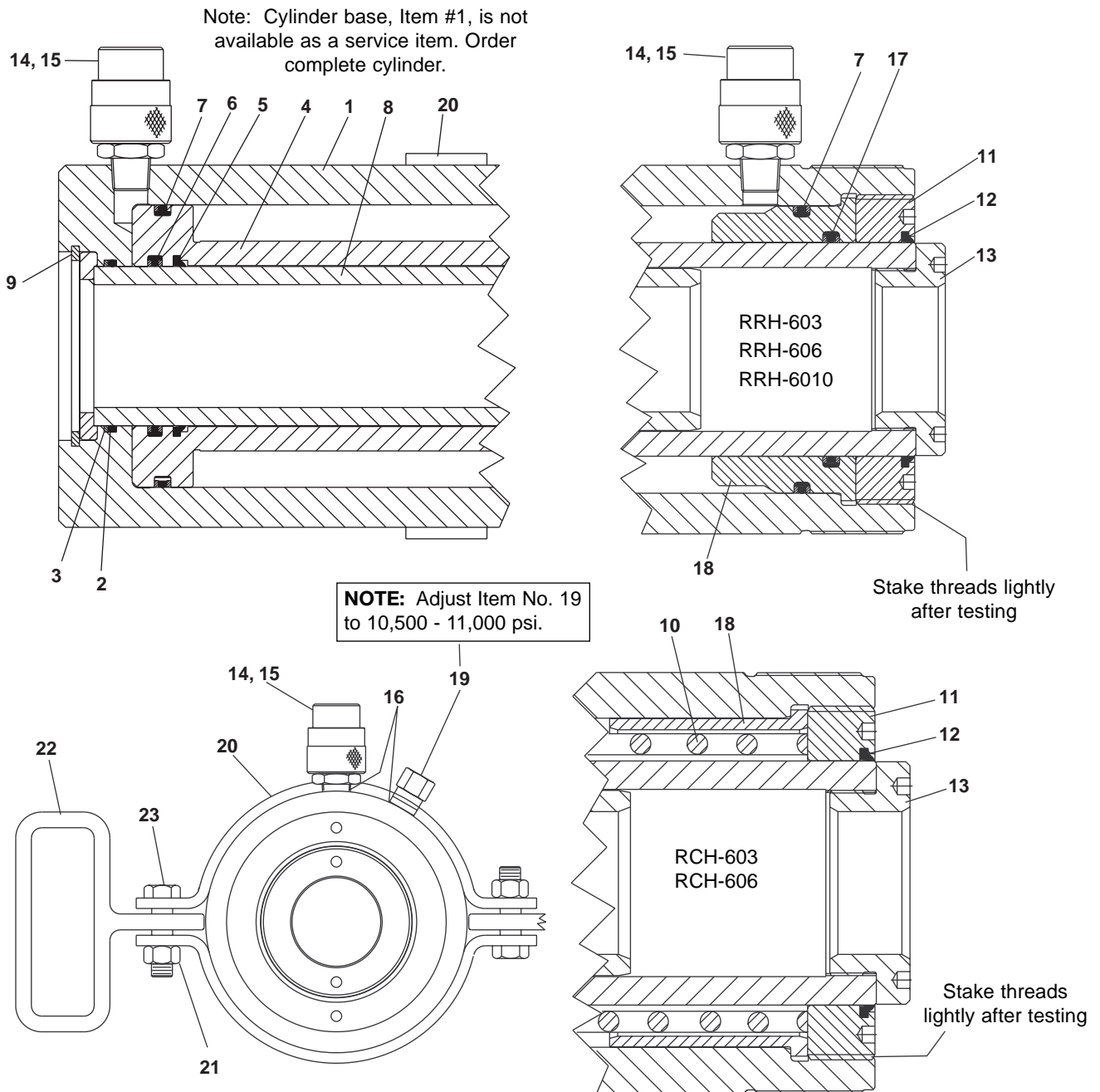


Figure 1

Item	RCH-603	RCH-606	RRH-603	RRH-606	RRH-6010	Qty.	Description
1		Order Complete	Cylinder			1	Cylinder
2	★	★	★	★	★	1	O-Ring
3	★	★	★	★	★	1	Back-Up Ring
4	DA4806040	DA4807040	DA4806040	DA4807040	DA4808040	1	Plunger
5	★	★	★	★	★	1	Wiper Ring
6	★	★	★	★	★	1	G-T Ring Assembly
7	★	★	★	★	★	2	G-T Ring Assembly (RCH Models use 1)
8	DA4809900	DA4810900	DA4809900	DA4810900	DA4811900	1	Center Tube
9	★	★	★	★	★	1	Retaining Ring
10	DA4816110	DA4816110	-----	-----	-----	1	Spring
11	CR106044	CR106044	CR106044	CR106044	CR106044	1	Stop Ring
12	★	★	★	★	★	1	Wiper Ring
13	CB891045	CB891045	CB891045	CB891045	CB891045	1	Saddle
14	CR400	CR400	CR400	CR400	CR400	2	Coupler (RCH Models use 1)
15	CD411	CD411	CD411	CD411	CD411	2	Dust Cap (Not Shown) (RCH Models use 1)
16	A1009245	A1009245	-----	-----	-----	2	Flush Plug (RCH Models Only)
17	-----	-----	★	★	★	1	G-T Ring Assembly
18	DA4814268	DA4814268	DA4813044	DA4813044	DA4813044	1	Inner Stop Ring
19	-----	-----	CJ160900W	CJ160900W	CJ160900W	1	Relief Valve Assembly
20	DA5238900SR	DA5238900SR	DA5238900SR	DA5238900SR	DA5238900SR	2	Collar (Incl.It.#21,22,23)
21	-----	-----	-----	-----	-----	2	Nut
22	-----	-----	-----	-----	-----	2	Handle
23	-----	-----	-----	-----	-----	2	Bolt
	RRH603K4	RRH603K4	RRH603K4	RRH603K4	RRH603K4	1	Repair Kit

★ Indicates Items Included in and Available Only in Repair Kits.

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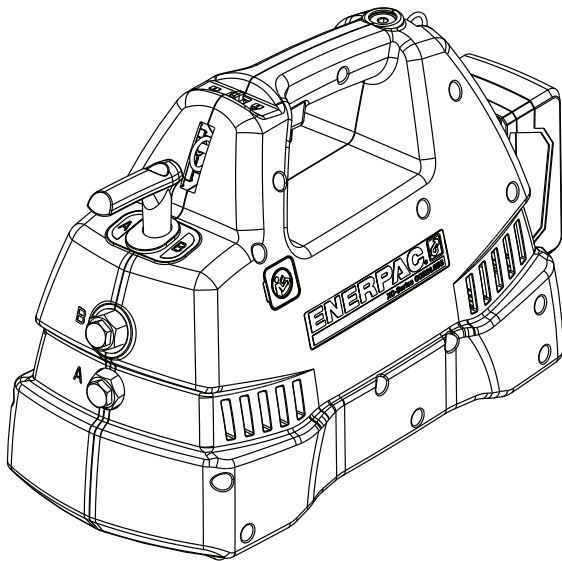
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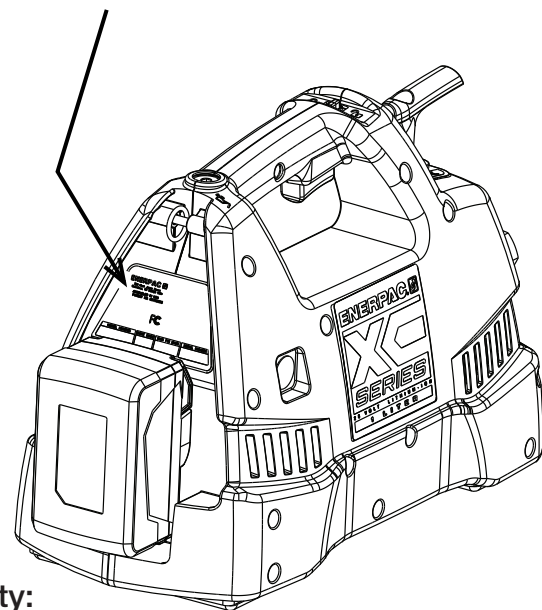
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Document Number	Document Revision	Document Revision Date	Product Date Code Beginning With
L4006	C	05/2017	A, B or C



Product Information: Model Number, Serial Number, Maximum Pressure and Date Code.



IMPORTANT: To maintain your warranty:

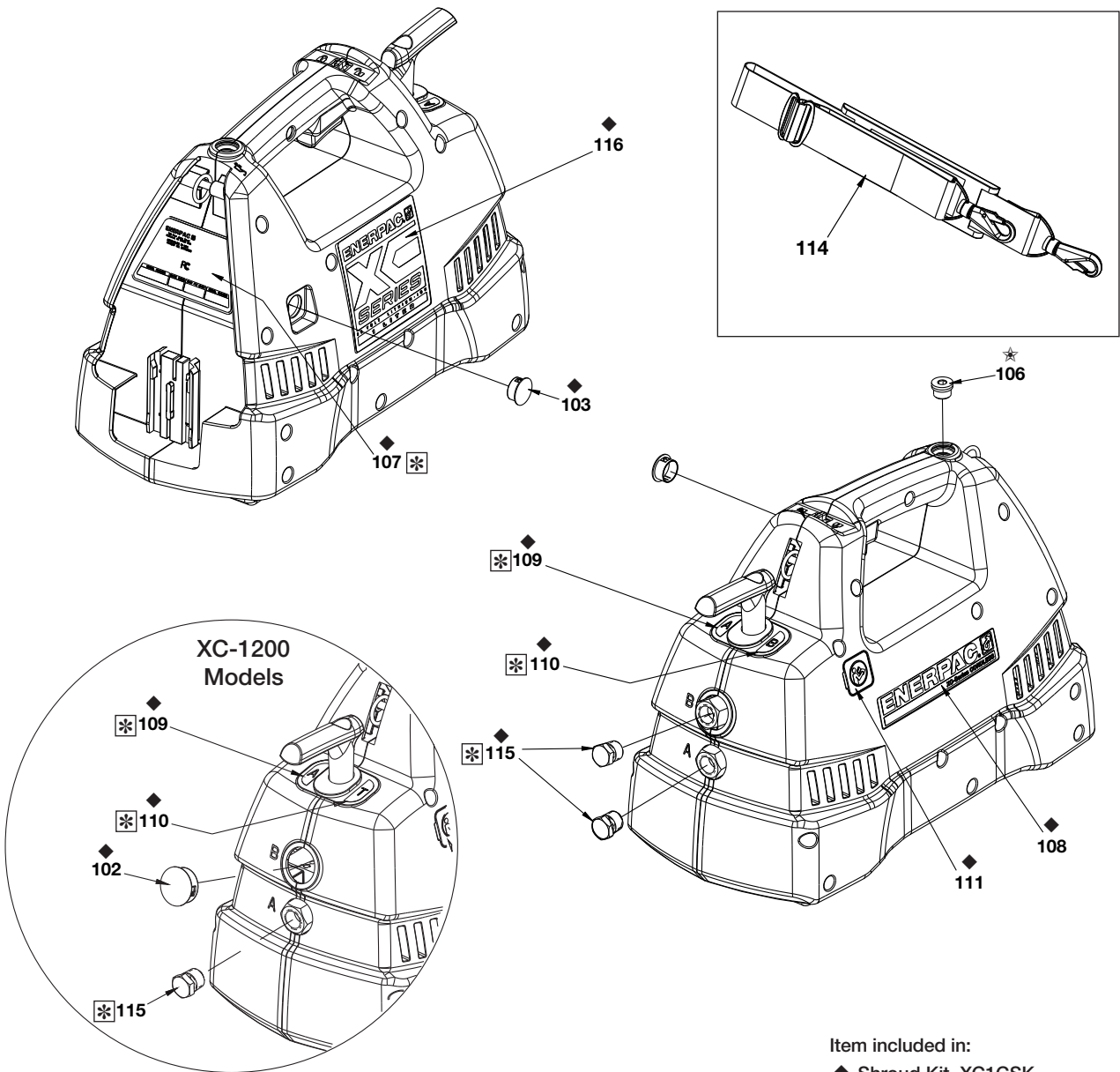
- Use only Enerpac Oil.
- Have your products inspected and repaired by an Enerpac Authorized Service Center.

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⚠ WARNING Fully relieve hydraulic pressure, remove battery, and disconnect hydraulic hoses before beginning any maintenance, repair or inspection procedures. Failure to observe these precautions could result in death or serious personal injury.

Fig. 1, Decals, Plugs, Caps & Shoulder Strap



Item included in:
 ◆ Shroud Kit, XC1CSK
 ☆ Oil Fill Service Kit, XC1VFK

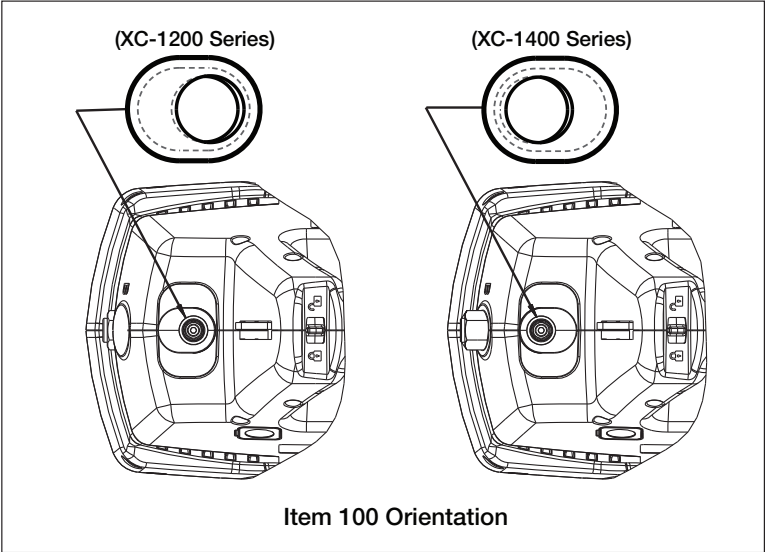
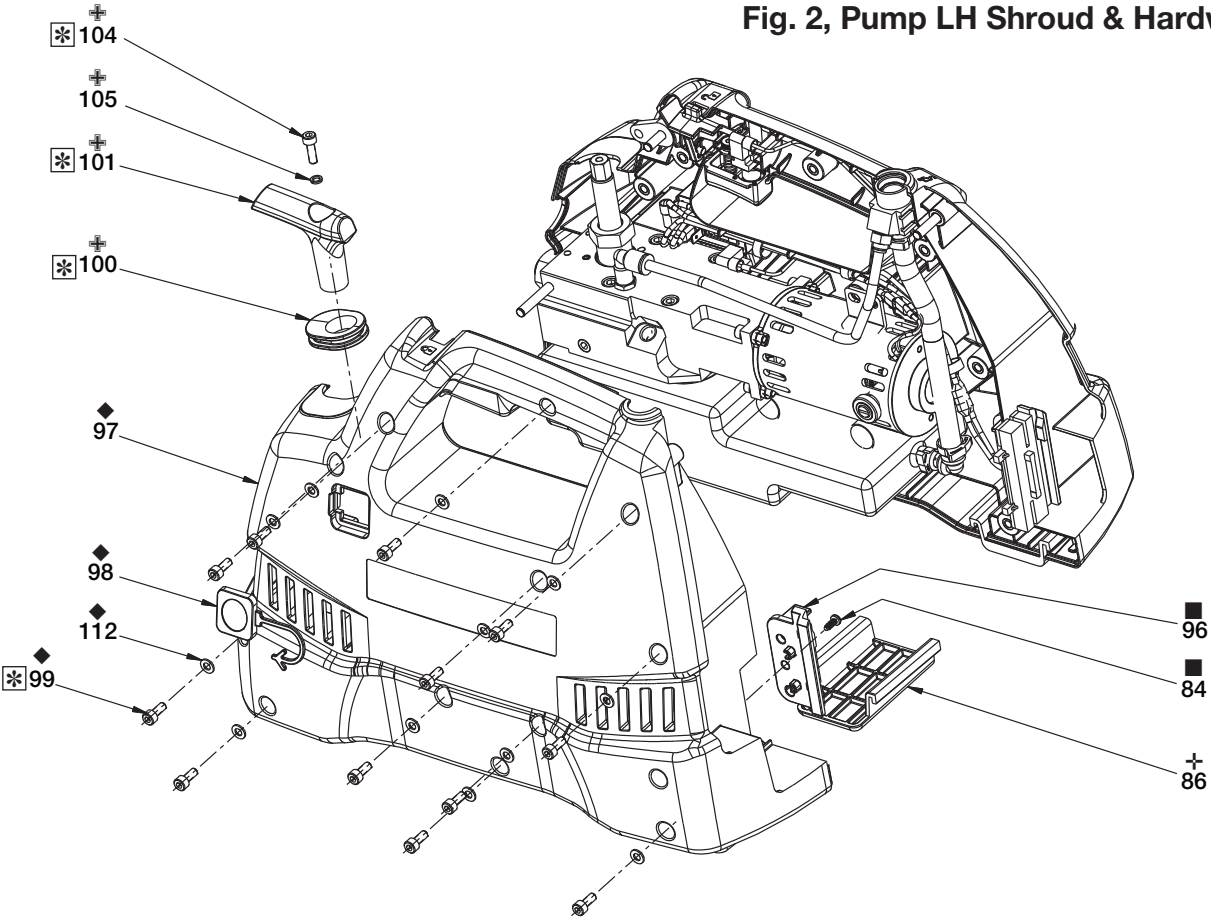
Repair Parts List, Fig. 1

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
102	◆ DD4112009	1	Plug, 28 mm (XC-1200)	111	◆ DC7887026	1	Label, Read Instructions
103	◆ DD4110009	1	Dome Plug, 19 mm	114	DD3418528	1	Strap, Shoulder
106	☆ DD3948006	1	Plug, SAE #6 Int. Hex.	115	R515245-2	1	Plug (XC-1200)
107	◆ DD3410026	1	Decal, Product Spec XC	115	R515245-2	2	Plug (XC-1400)
108	◆ DD3409026	1	Decal, Enerpac XC	116	◆ DD4023026	1	Decal, XC Classic 1L
109	◆ DD3937026	1	Decal, "A", XC Pump	116	◆ DD4241026	1	Decal, XC Classic 2L
110	◆ DD3938026	1	Decal, "T", (XC-1200)				
	◆ DD5577026	1	Decal, "B", (XC-1400)				

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 2, Pump LH Shroud & Hardware



- Item included in:
- ◆ Shroud Kit, XC1CSK
 - + Rubber Foot Kit, XC1FK
 - Battery Guide Kit, XC1BGK
 - + Handle Kit, XC1VHK



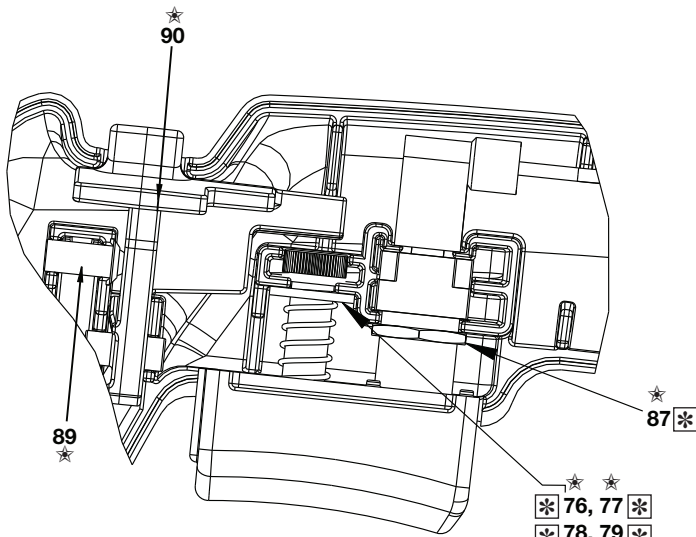
Repair Parts List, Fig. 2

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
84	■ DD3883028	1	Screw, M4 x 10 TRX	100	+ DD3888808	1	Grommet, Valve
86	+ DD3414339	2	Foot, Rubber	101	+ DD3398070	1	Handle
96	■ DD3420101	1	Battery Plate, LH	104	+ CBE517028-1A	1	Screw
97	◆ DD3405424	1	Shroud, LH	105	+ B1086066	1	Washer
98	◆ DD3408098	1	Cap, UARV	112	◆ CAE1050108-1A	12	Washer
99	◆ CBE517028-1A	12	SHCS, M5 x 12 Zinc				

IMPORTANT: Shaded items are available only in kits (not sold separately).

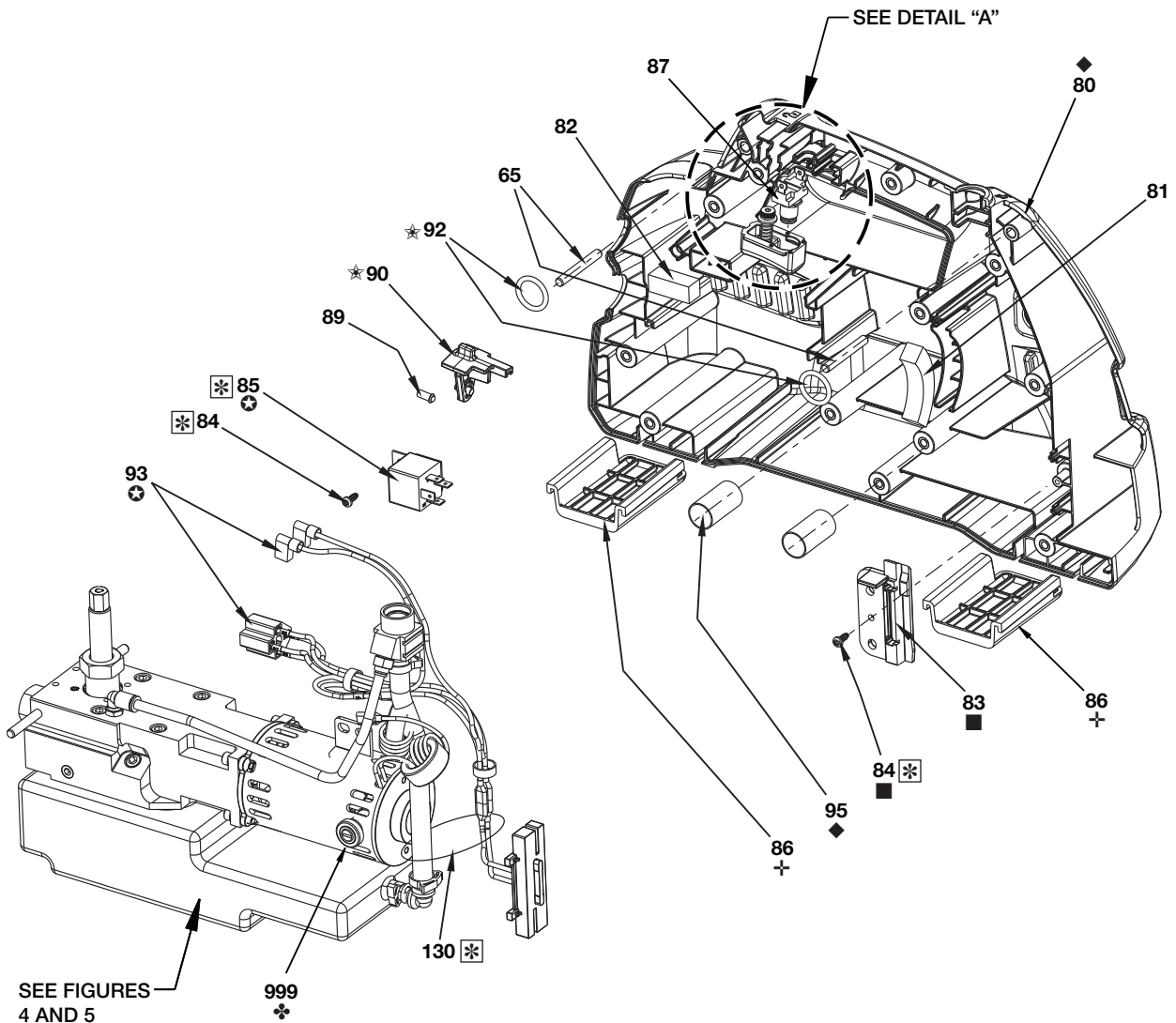
Fig. 3A, Pump RH Shroud & Electrical Components



DETAIL "A" - SWITCH AND TRIGGER

Item included in:

- + Rubber Foot Kit, XC1FK
- ★ Trigger Assembly, XC1TRK
- ◆ Shroud Kit, XC1CSK
- Battery Guide Kit, XC1BGK
- ⊕ Motor Brush Kit, XC1MBK
- ⊗ Harness & Relay Kit, DD6094380K



SEE FIGURES 4 AND 5

Repair Parts List, Fig. 3A			L4006
Item	Part Number	Qty.	Description
65	DD3417059	2	Pin, 6 mm x 45 mm Long
76	★ DD4114098	1	Cover, Trigger Switch (with insert)
77	★ DD3407110	1	Spring, Trigger
78	★ B1088108	1	Washer
79	★ DD4109028	1	Screw, Shoulder, 0.25 Dia.
80	◆ DD3406424	1	Shroud, RH
81	DD4113339	2	Bumper, Motor Isolator (one per shroud)
82	DD3887339	2	Bumper, Pump Isolator (one per shroud)
83	■ DD3426101	1	Guide, RH Battery Lock
84	■ DD3883028	1	Screw (secures item 83 to RH shroud)
84	DD3883028	1	Screw (secures item 85 to RH shroud)
85	⊕ DD6094380	1	Relay, 60 Amp, 24VDC
86	† DD3414339	2	Foot, Slide
87	★ DD3423379	1	Switch, On-Off, Momentary
89	★ DD3421013	1	Safety Detent
90	★ DD2998098	1	Safety Switch
92	DD4769667	2	Ring, Round
93	⊗ DD6095960	1	Wiring Harness
95	◆ DD3886268	2	Sleeve
130	DC9876647	1	Cable Tie, 6"
999	❖ Order Kit XC1MBK	1	Motor Brush Kit (each kit includes two brushes and two brush caps)

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 3B, Electrical Components, Old Style
(originally installed on pumps with date codes "A" and "B")

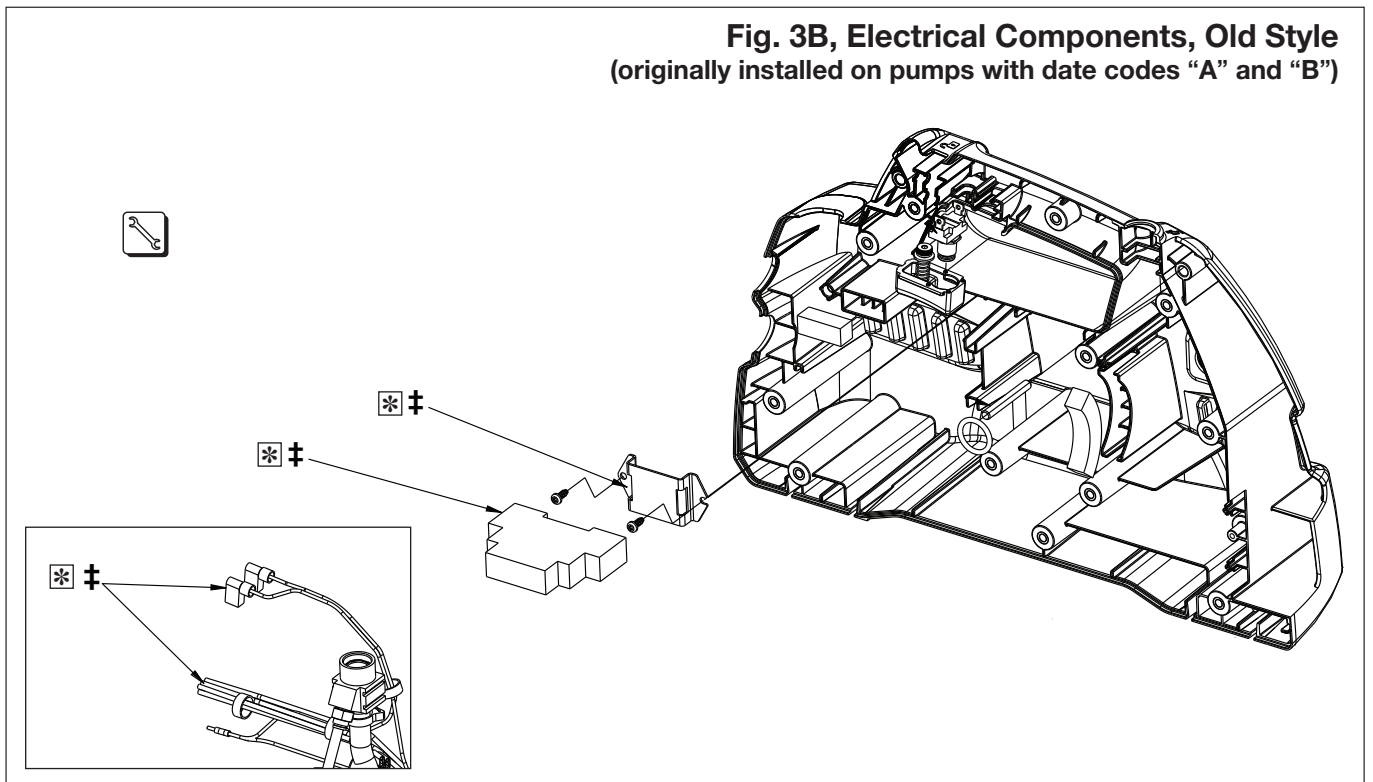
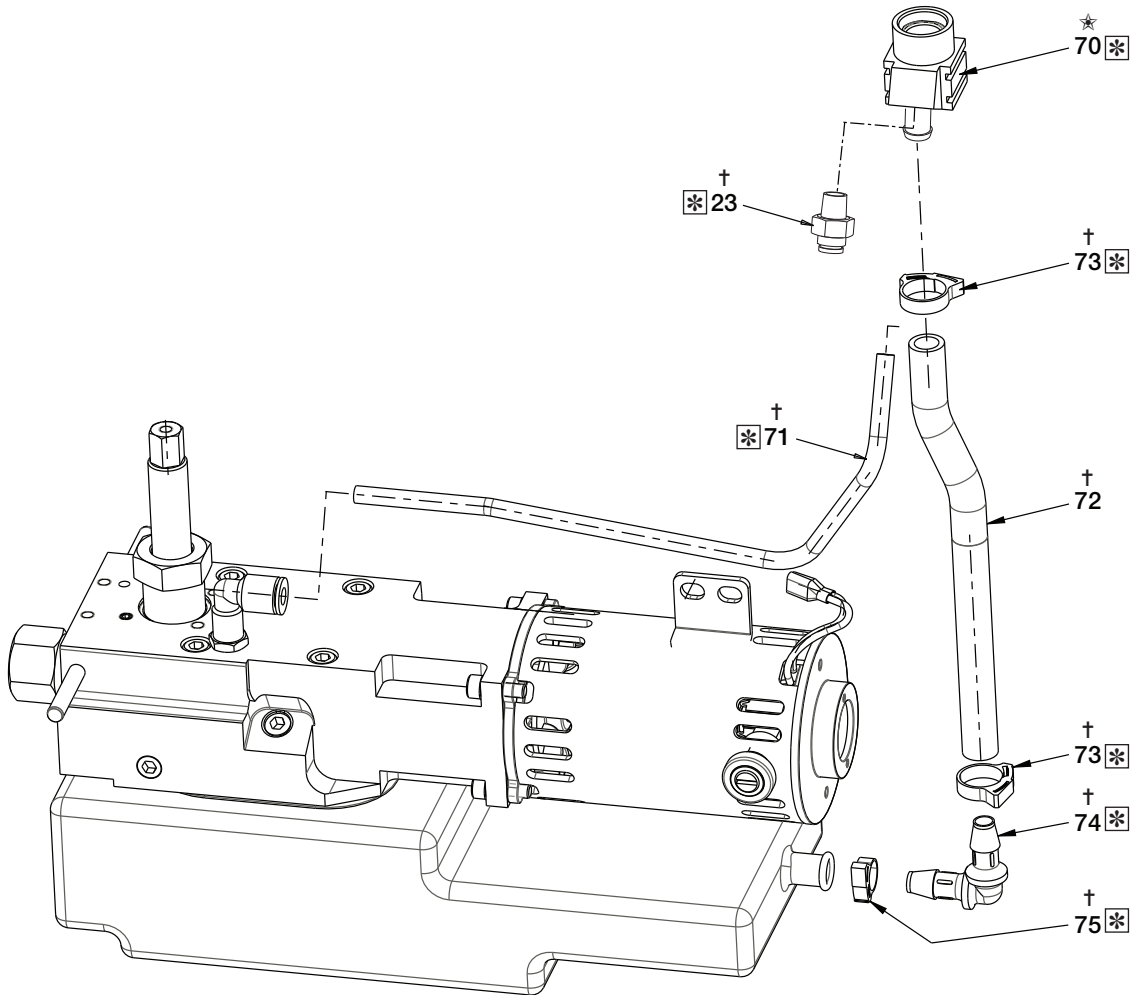


Fig. 4, Oil Fill & Vent Lines

Item included in:

- † Oil Fill Tubing Kit, XC1TK
- ★ Oil Fill Service Kit, XC1VFK



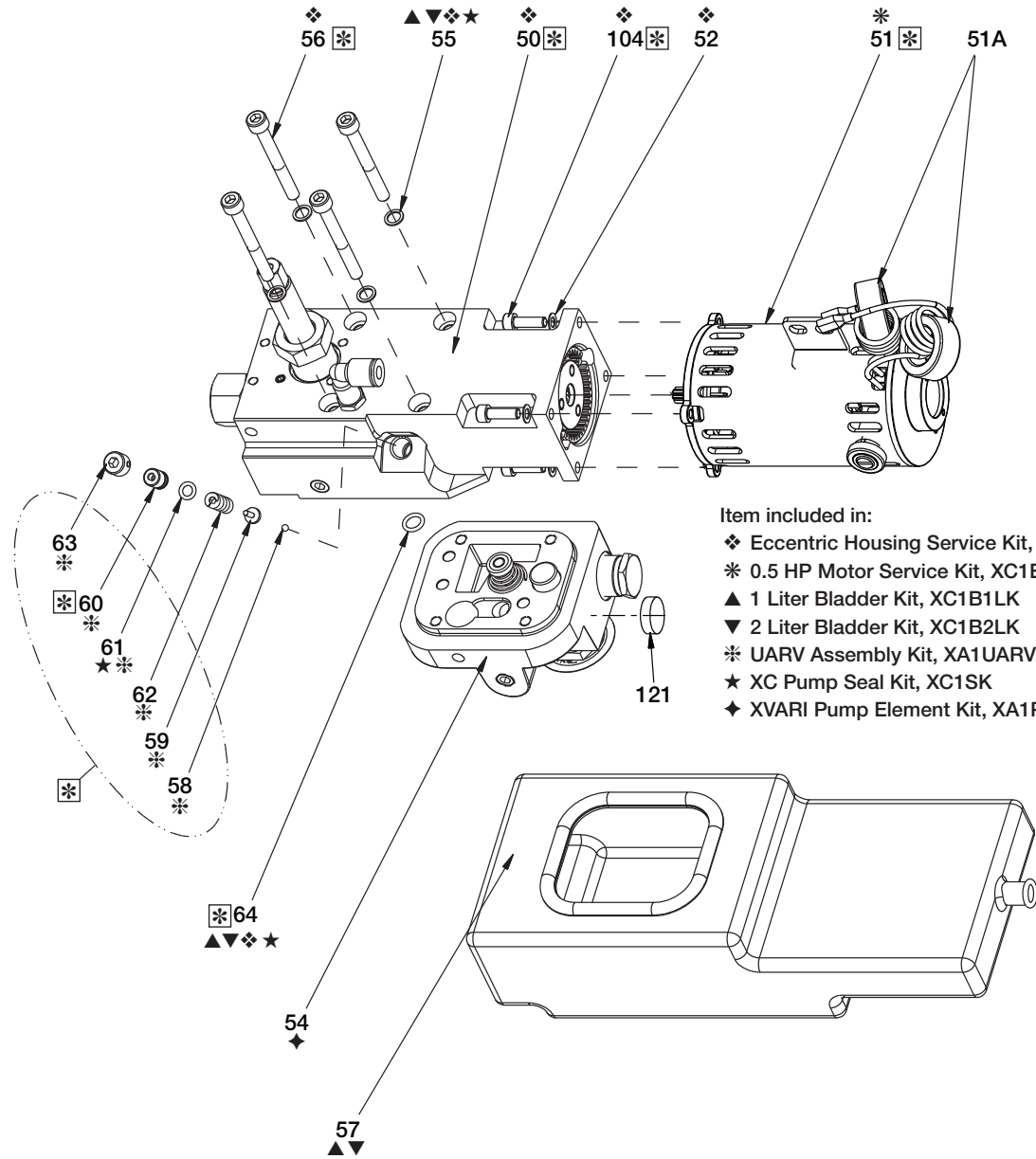
Repair Parts List, Fig. 4

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
23	† F100097-33	1	Fitting	73	† DD4118017	2	Clip, Oil Fill, Reusable
70	★ DD3403900	1	Fill Assembly, Vented	74	† DD3416097	1	Elbow, Barbed 0.38"
71	† DD4108646	1	Tube, Oil Vent	75	† DD3885017	1	Clip, Reusable 0.38"
72	† DD3415646	1	Tube, Oil Fill				

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 5, Power Unit Assembly

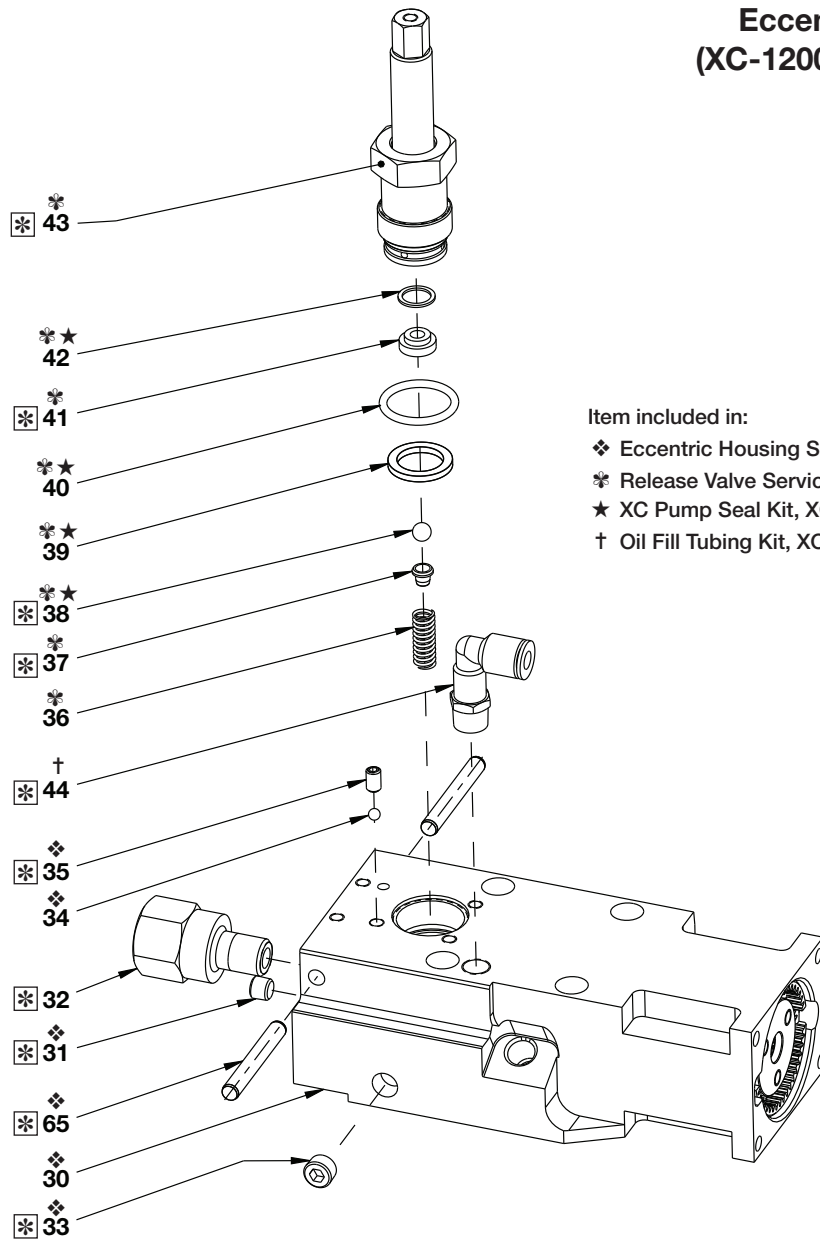


- Item included in:
- ◆ Eccentric Housing Service Kit, XC1ECK
 - * 0.5 HP Motor Service Kit, XC1EMK
 - ▲ 1 Liter Bladder Kit, XC1B1LK
 - ▼ 2 Liter Bladder Kit, XC1B2LK
 - * UARV Assembly Kit, XA1UARVK
 - ★ XC Pump Seal Kit, XC1SK
 - ◆ XVARI Pump Element Kit, XA1PEK

Repair Parts List, Fig. 5							L4006
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
50	(See Fig. 6)	1	(not sold as subassembly)	58	* B1003016	1	Ball, 1/8" Diameter
51	* DD2993259	1	Motor, PMDC 28VDC	59	* A8038570	1	Ball Cap
51A	DD4406380	1	Cores (included with 51)	60	* DC7234009	1	Plug
52	◆ CCE1050108-6A	4	Lock Washer	61	*★ B1004503	1	O-Ring
54	◆ (See Fig 11)	1	Pump Element	62	* A8126110	1	Spring, Coil, 2000 lbs.
55	▲▼◆★ S3037	4	Gasket	63	* DC10131048	1	Set Screw, Cup Pt. Nylok
56	◆ CCA635028-1A	4	Screw, SHCS M6 x 55	64	▲▼◆★ B1011803	1	O-Ring
57	▲ DD2995025	1	Bladder, 1 Liter	104	◆ CBE519028-1A	4	Capscrew
	▼ DD2991025	1	Bladder, 2 Liter	121	C187018	1	Magnet

IMPORTANT: Shaded items are available only in kits (not sold separately).

**Fig. 6, Release Valve & Eccentric Assembly
(XC-1200 Models Only)**



Item included in:

- ❖ Eccentric Housing Service Kit, XC1ECK
- * Release Valve Service Kit, XC1MVSK
- ★ XC Pump Seal Kit, XC1SK
- † Oil Fill Tubing Kit, XC1TK

Repair Parts List, Fig. 6

L4006

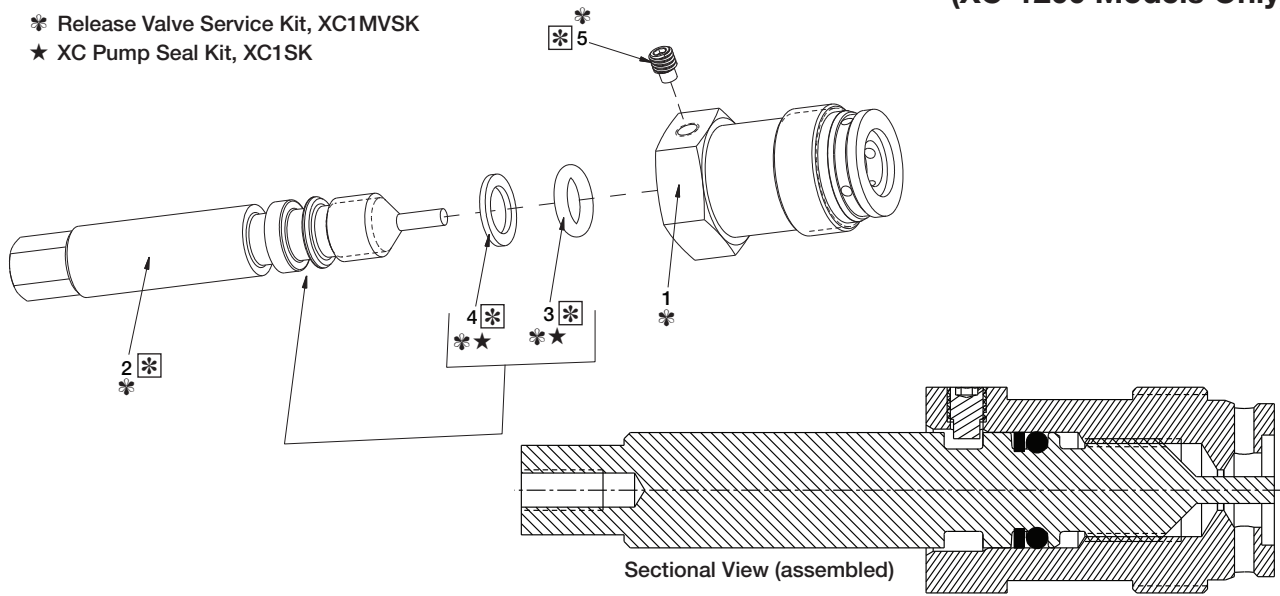
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
30	❖ (See Fig. 8)	1	Eccentric and Housing	38	*★ B1007016	1	Ball, 1/4" Dia.
31	❖ DC6792245	1	Plug, Flush NPTF .062	39	*★ CL344167	1	Gasket
32	FZ1055	1	Adapter	40	*★ B1118903	1	O-Ring
33	❖ DC6793245	1	Plug, Flush NPTF .125	41	* DC7305290	1	Seat
34	❖ B1004016	1	Ball, 5/32" Dia.	42	*★ P20037	1	Gasket
35	❖ CCA513028-5A	1	Screw, M5 x 8mm Flat Pt.	43	* (See Fig. 7)	1	Release Valve Subass'y
36	* DC10140110	1	Spring, Compression	44	† F100097-52	1	Elbow
37	* DC7309013	1	Ball Guide	65	❖ DD3417059	2	Pin, 6mm x 45mm Long

IMPORTANT: Shaded items are available only in kits (not sold separately).

**Fig. 7, Release Valve Subassembly
(XC-1200 Models Only)**

Item included in:

- * Release Valve Service Kit, XC1MVSK
- ★ XC Pump Seal Kit, XC1SK



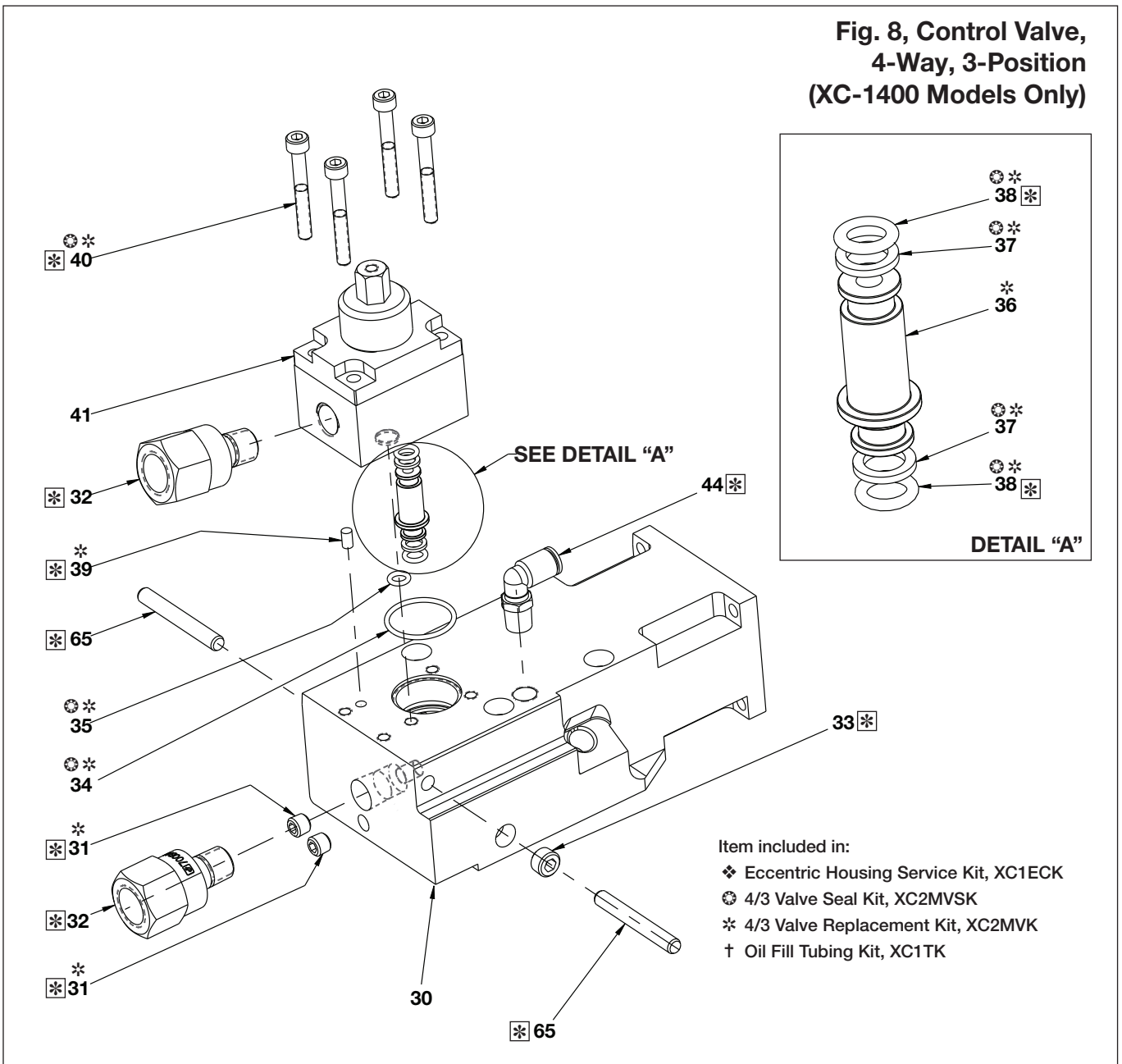
Repair Parts List, Fig. 7

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	* DD2988013	1	Body, Release Valve	4	*★ B1110564	1	Back-Up, Teflon
2	* DD2992010	1	Spindle, Release Valve	5	* DD3400027	1	Set Screw
3	*★ B1110203	1	O-Ring, Viton				

IMPORTANT: Shaded items are available only in kits (not sold separately).

**Fig. 8, Control Valve,
4-Way, 3-Position
(XC-1400 Models Only)**



- Item included in:
- ❖ Eccentric Housing Service Kit, XC1ECK
 - ⊗ 4/3 Valve Seal Kit, XC2MVSK
 - * 4/3 Valve Replacement Kit, XC2MVK
 - † Oil Fill Tubing Kit, XC1TK

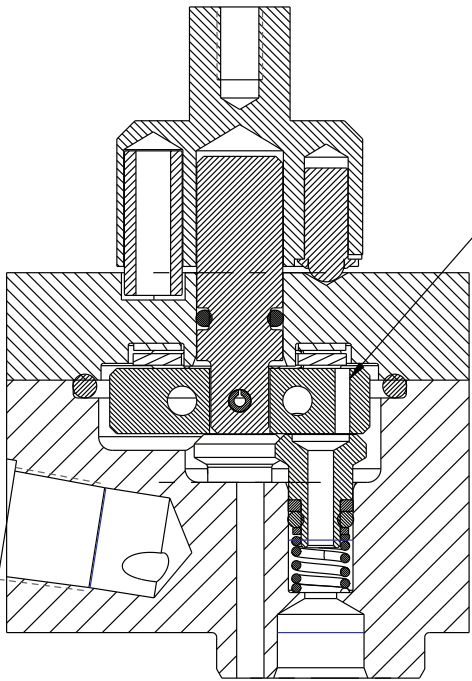
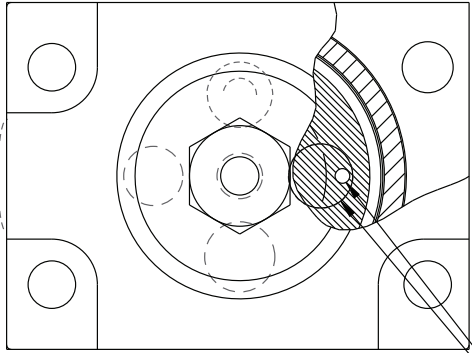
Repair Parts List, Fig. 8

L4006

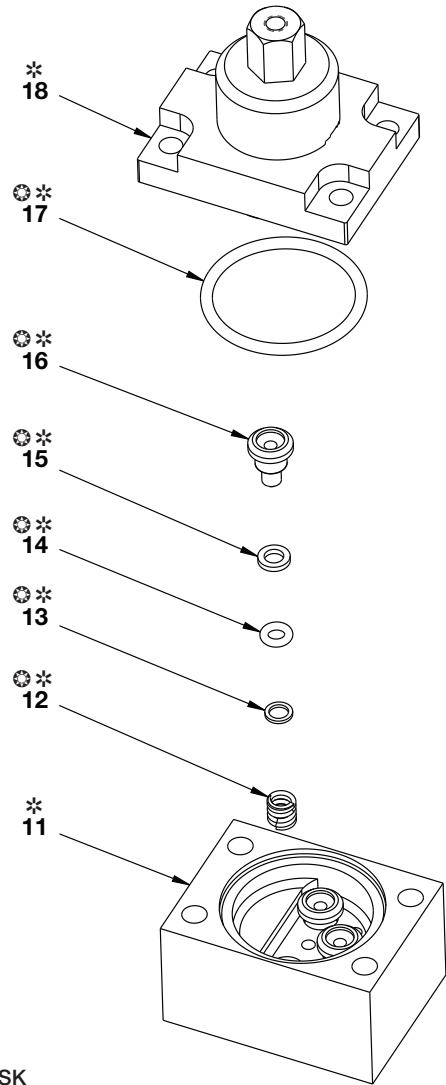
Item	Part Number	Qty.	Description
30	❖ (See Fig. 8)	1	Eccentric and Housing
31	❖ * DC6792245	1	Flush Plug, .062PTF_SAE
32	CF927038	1	Adaptor
33	❖ DC6793245	1	Plug, Flush NPTF .125
34	⊗ * B1227503	1	O-Ring 70 Duro -021
35	⊗ * B1009803	1	O-Ring, .22, x .34 x 06)
36	* DD2996268	2	Transfer Tube, 4/3 Valve XC
37	⊗ * B1010566	2	Teflon Washer
38	⊗ * B1005503	2	O-Ring
39	⊗ * CAA411061-2B	1	Dowel Pin, 4mm Dia. x 8mm Lg.
40	⊗ * CCA529028-1A	1	Screw, SHCS 5 x 40 CLS 12.9 Din 912
41	DD5253900	1	Valve Assembly, 4-Way, 3-Position Manual
44	† F100097.52	1	Elbow
65	❖ DD3417059	1	Pin, 6mm x 45mm Long

IMPORTANT: Shaded items are available only in kits (not sold separately).

**Fig. 9, Control Valve,
4-Way, 3-Position
(XC-1400 Models Only)**



**ORIENT HOLES
AS SHOWN**

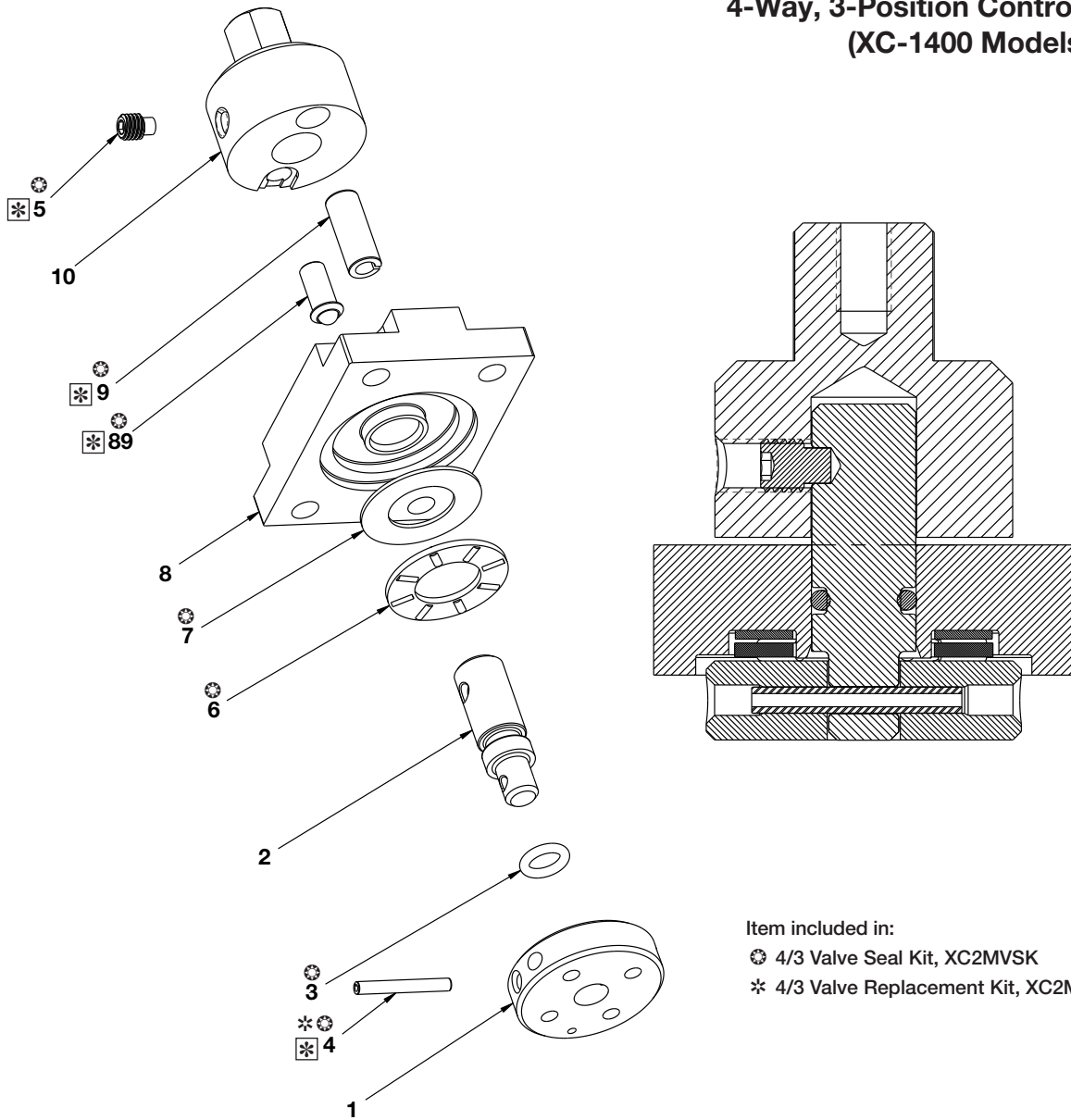


Item included in:
 ●* 4/3 Valve Seal Kit, XC2MVSK
 * 4/3 Valve Replacement Kit, XC2MVK

Repair Parts List, Fig. 9				L4006
Item	Part Number	Qty.	Description	
11	* DD2997840	1	Manifold, 4-Way, 3-Position Valve	
12	●* DD4446110	3	Spring, .25" OD, .172" ID	
13	●* DD4464108	3	Shim, .171 ID, .241 OD	
14	●* B1002503	3	O-Ring	
15	●* DA7285566	3	Back-Up Washer	
16	●* DA11071041	3	Metal Seal, Poppet	
17	●* B1259503	1	O-Ring	
18	* DD5252900	1	Cover Assembly, Valve	

IMPORTANT: Shaded items are available only in kits (not sold separately).

**Fig. 10, Valve Cover Assembly,
4-Way, 3-Position Control Valve
(XC-1400 Models Only)**



Item included in:

- ⊗ 4/3 Valve Seal Kit, XC2MVSK
- * ⊗ 4/3 Valve Replacement Kit, XC2MVK

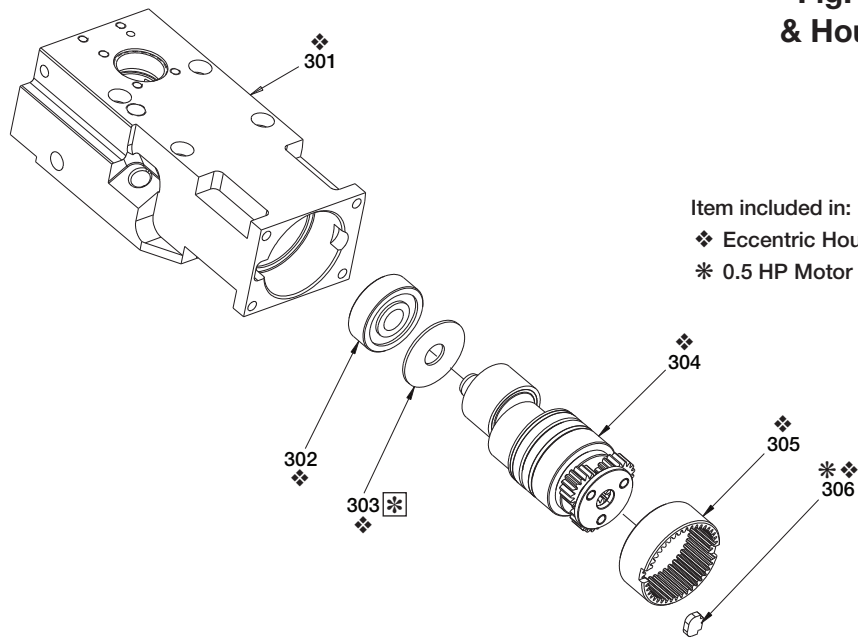
Repair Parts List, Fig. 10

L4006

Item	Part Number	Qty.	Description
01	DA7289900	1	Assembly, Plug and Disc
02	DD4470104	1	Shaft, Valve
03	⊗ B1005503	1	O-Ring
04	* ⊗ B1040057	1	Spring Pin
05	⊗ DD3400027	1	Set Screw, 10-32 x .25 Long Pt.
06	⊗ CB183155	1	Needle Bearing
07	⊗ CB184155	1	Thrust Race
08	DD4443098	1	Cover, Valve
09	B1126057	1	Roll Pin
10	DD2999489	1	Collar
89	⊗ DD3421013	1	Detent, Safety Lock XB

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 11, Eccentric Shaft & Housing Subassembly



Item included in:

- ❖ Eccentric Housing Service Kit, XC1ECK
- * 0.5 HP Motor Service Kit, XC1EMK

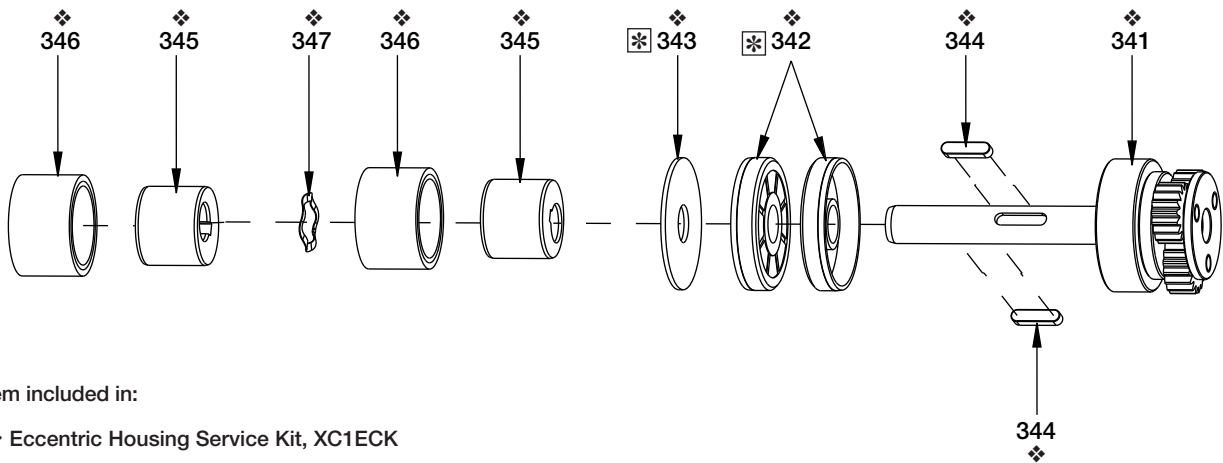
Repair Parts List, Fig. 11

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
301	❖ DD2989001	1	Housing, Eccentric	304	❖ (See Fig. 9)	1	Assy, Eccentric Shaft
302	❖ DC7096155	1	Bearing	305	❖ DC7089228	1	Inner Gear
303	❖ DC7464108	1	Bushing 12 x 37 x 1.5	306	*❖ DC7452251	1	Key, Gear Ring

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 12, Eccentric Shaft Subassembly



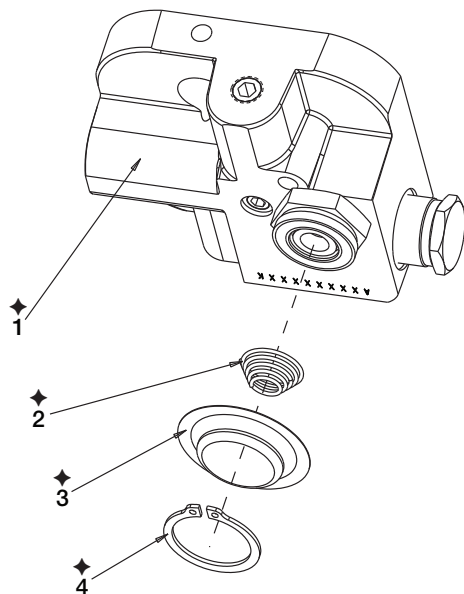
Repair Parts List, Fig. 12

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
341	❖ DC7870950	1	S/A, Eccentric Shaft	345	❖ DC7117537	2	Eccentric
342	❖ DC7090476	2	Lip Seal	346	❖ DC7755950	2	Subassembly, Cam
343	❖ DC7186108	1	Washer, Thrust	347	❖ DC7750410	1	Spring, Wave
344	❖ DC7191251	2	Key				

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 13, Pump Assembly



Item included in:
 ◆ XVARI Pump Element Kit, XA1PEK

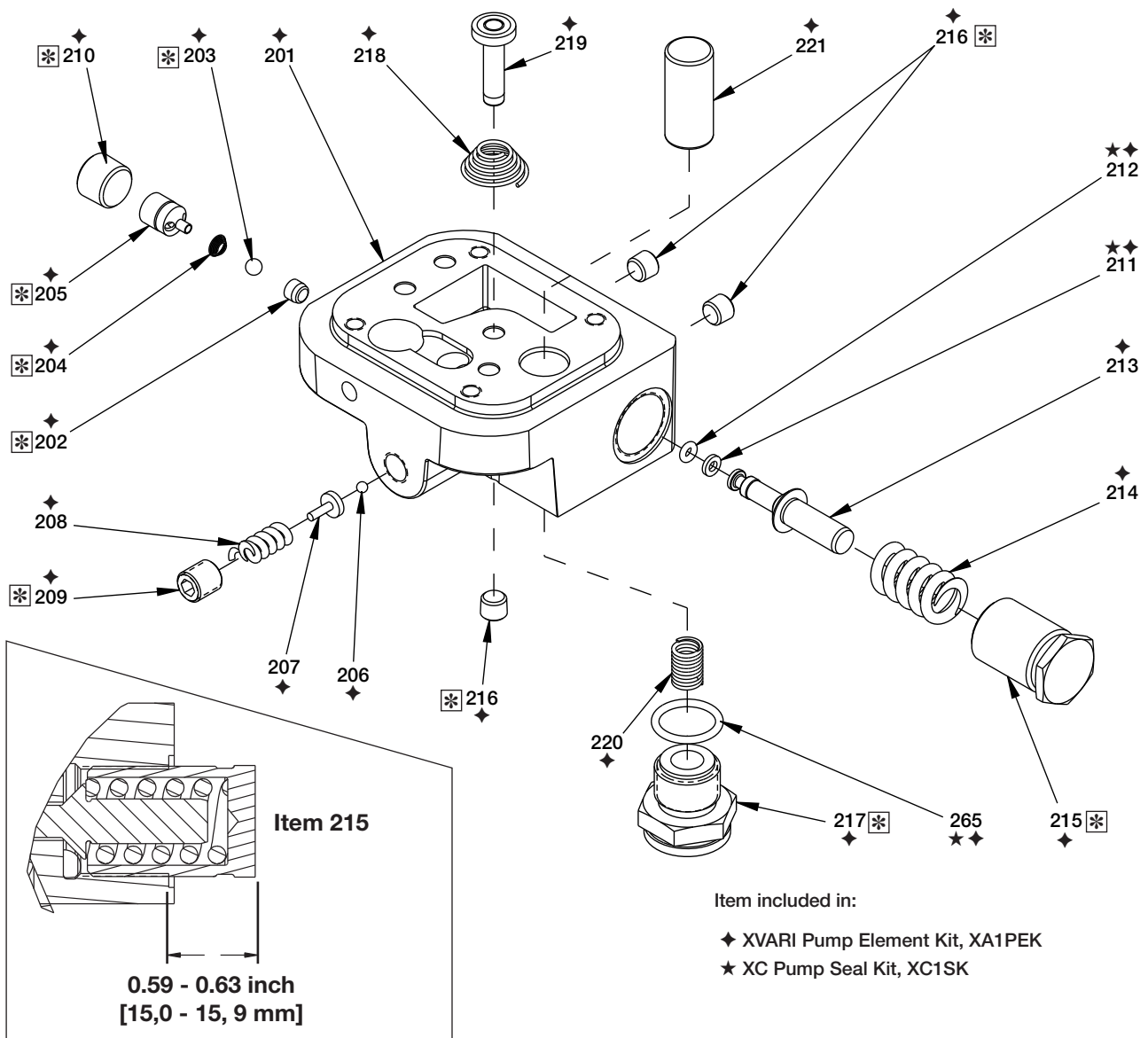
Repair Parts List, Fig. 13

L4006

Item	Part Number	Qty.	Description
1	◆ DC7206950	1	Assy, Pump Element (See Fig. 11)
2	◆ BSS5509D	1	Spring
3	◆ DC7152018	1	Screen
4	◆ CCA1025044-1A	1	Ring, Retaining

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 14, Pump Element



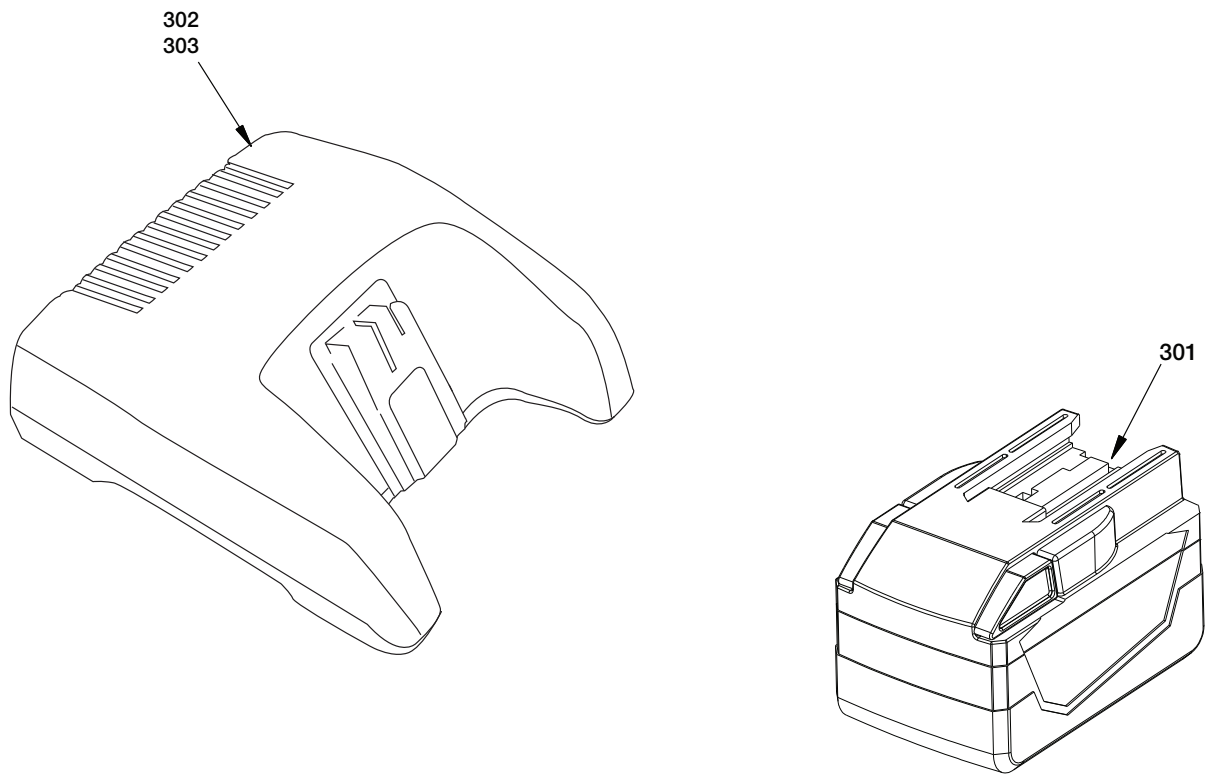
Repair Parts List, Fig. 14

L4006

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
201	◆ DC7201190	1	Body, Pump	212	★◆ B1006803	1	O-Ring, 0.25" O.D.
202	◆ BSS5358D	1	Ball Seat, Inlet	213	◆ DC9292051	1	Piston, Bypass
203	◆ B1005016	1	Ball, 3/16" Dia.	214	◆ DC394110	1	Spring, Bypass
204	◆ BSS5809D	1	Spring	215	◆ DC9208020	1	End Cap, Bypass
205	◆ DC7904900	1	Assy, Outlet Check	216	◆ A1006245	3	Plug, Flush 1/16"
206	◆ B1003016	1	Ball, 1/8" Dia	217	◆ DC7453950	1	Assembly, Inlet Check
207	◆ A8038570	1	Ball Cap	218	◆ BSS5509D	1	Spring, Conical
208	◆ A8126110	1	Spring	219	◆ DC9244920	1	Piston, 6 mm Dia
209	◆ DC1185048	1	Soc. Hd. Set Scw., Hollow	220	◆ DC7026110	1	Spring, Large Piston
210	◆ DC6794245	1	Plug, NPTF 1/4"	221	◆ DC7027051	1	Piston, 14 mm Dia
211	★◆ B1006564	1	Washer, B/U	265	★◆ B1908503	1	O-Ring

IMPORTANT: Shaded items are available only in kits (not sold separately).

Fig. 15, Battery & Charger

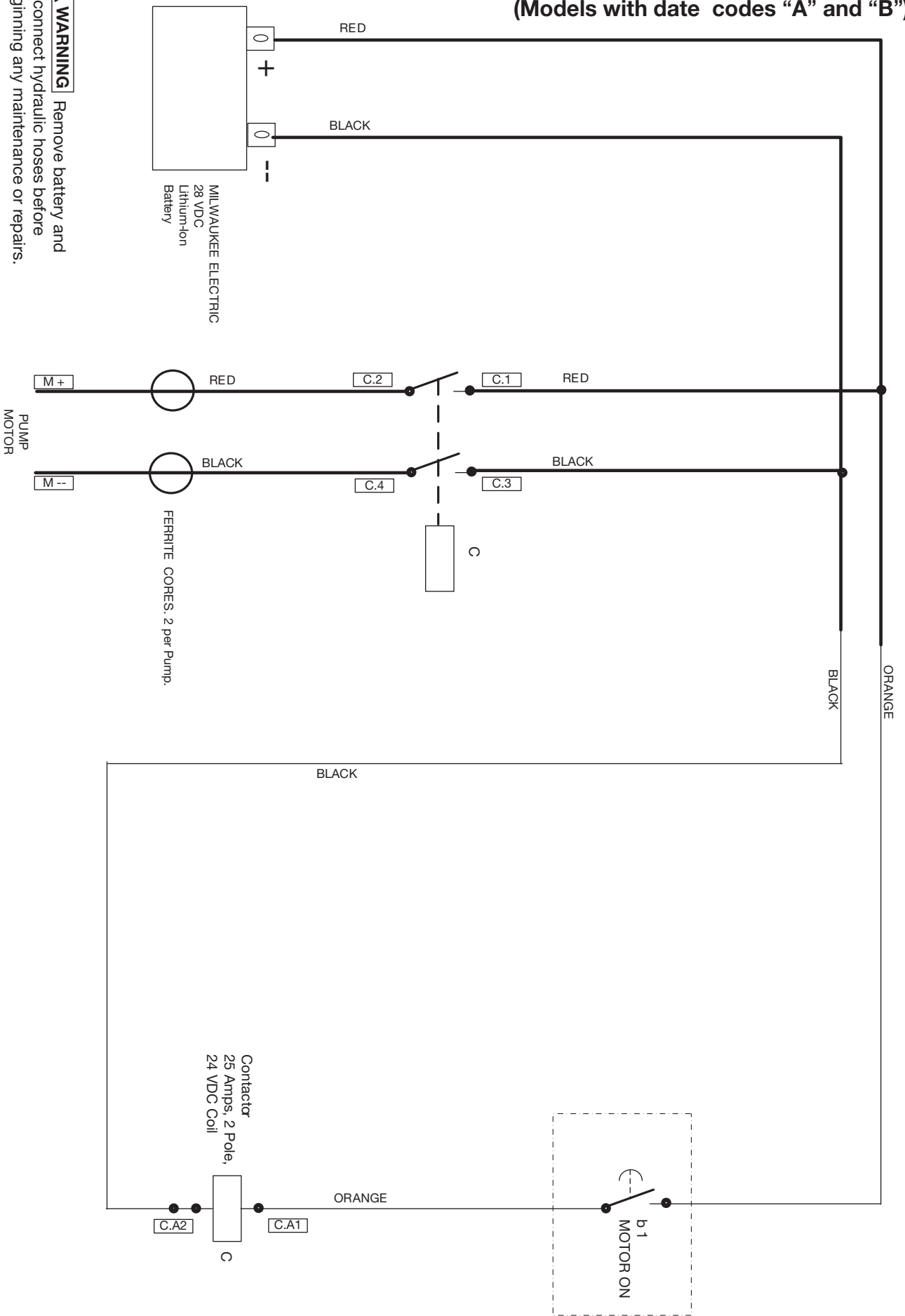


Repair Parts List, Fig. 15			L4006
Item	Part Number	Qty.	Description
301	XC28V	1	Battery, 28 Volt Li-Ion
302	XC115VC	1	Battery Charger, 115 VAC input
303	XC230VC	1	Battery Charger, 230 VAC input

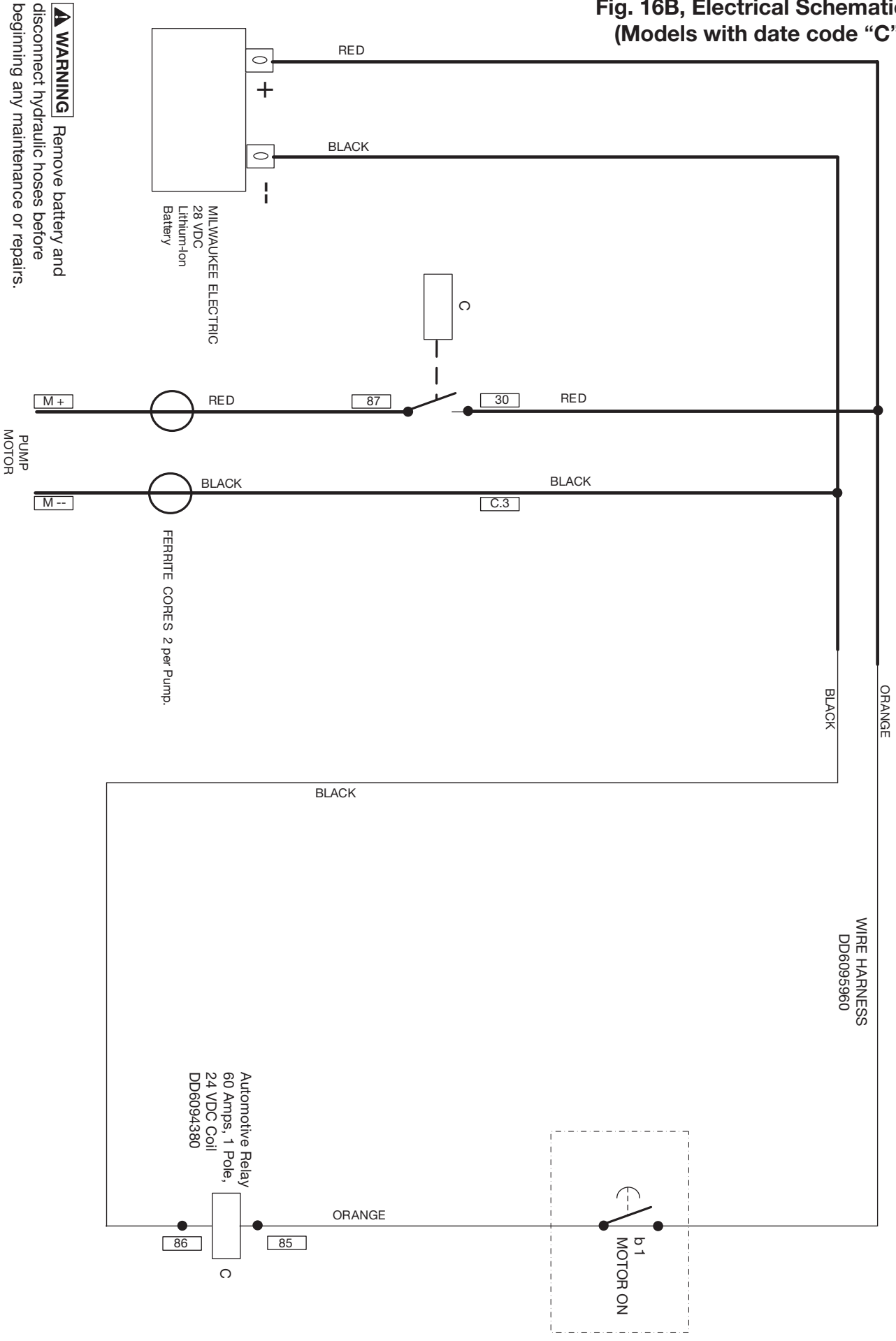
Note: "M28™" and the Milwaukee Electric Tool logo are trademarks and intellectual property of Milwaukee Electric Tool Corporation. Exact appearance of battery and charger may vary.

**Fig. 16A, Electrical Schematic
(Models with date codes "A" and "B")**

⚠ WARNING Remove battery and disconnect hydraulic hoses before beginning any maintenance or repairs.



**Fig. 16B, Electrical Schematic
(Models with date code "C")**





* Service Information		L4006
Fig.	Item	Torque / notes
1	106	4,5 - 5,7 Nm [40 - 50 In - Lbs.]
1	107	Apply self adhesive label. Locate as shown.
1	108	Apply self adhesive label. Locate as shown.
1	109	Apply self adhesive label. Locate as shown.
1	110	Apply self adhesive label. Locate as shown.
1	111	Apply self adhesive label. Locate as shown.
1	115	13,6 - 16,3 Nm [10 - 12 Ft - Lbs]
1	115	When loosening plug (Fig. 1, item 115), use a second wrench to prevent adapter fitting (Fig. 6, item 32) from turning.
2	84	0,9 - 1,1 Nm [8 - 10 In - Lbs]
2	97	No gap between LH and RH shroud halves when assembled.
2	99	2 - 3 Nm [18 - 26 In - Lbs]
2	100	Be sure that item 100 is properly oriented for your pump model. See diagram at bottom of Fig. 2.
2	101	Before installing handle, rotate valve clockwise until it stops.
2	104	Apply Loctite 243.
2	104	2 - 3 Nm [18 - 26 In - Lbs]
3A	76, 77, 78 & 79 and Detail A	Assemble washer and spring below tab in housing.
3A	80	No gap between LH and RH shroud halves when assembled.
3A	84	0,9 - 1,1 Nm [8 - 10 In - Lbs]
3A	85	Orient as shown.
3A	87	Apply Loctite 2760.
3A	87	Install switch mounting nut finger tight on shroud rib, then remove and screw nut on 1/2 turn. Reinstall.
3A	130	Secure cables with wire ties.
3B	‡	Old style relay, bracket and wiring harness (parts marked with ‡) are no longer available. Order harness and relay kit, DD6094380K if replacement is necessary. Replace both wiring harness and relay as a set. Old relay mounting plate is no longer needed and can be discarded. Refer to Figure 3A for new parts arrangement.
4	23	Torque to 4,0 - 5,6 Nm [36 - 50 In - Lbs]
4	70	Apply grease as required when assembling tubes to fitting.
4	71	Push to connect.
4	73	Squeeze until tight.
4	74	Apply grease as required when assembling tube to fitting.
4	75	Squeeze until tight.
5	50, 51	Apply grease to ring gear teeth before installing motor.
5	51	Orient with tab UP.
5	51A	Ferrite cores (item 51A) are included with motor (item 50).
5	104	Apply Loctite 243.
5	104	5,3 - 7,6 Nm [45 - 60 In - Lbs]
5	56	Apply Loctite 2760.
5	56	17,0 - 20,5 Nm [12 - 15 Ft - Lbs]
5	58 - 63	Install last - after pump, bladder and motor.
5	60	Plug includes M4 tapped hole. Remove using M4 screw.
5	64	Install on eccentric housing.

(Continued on next page.)



* Service Information (Continued)		L4006
Fig.	Item	Torque / notes
6	31	Apply Teflon tape to threads.
6	31	13,5 - 16,3 Nm [10 - 12 Ft - Lbs]
6	32	Apply Teflon tape to threads.
6	32	43 - 53 Nm [32 - 39 Ft - Lbs]
6	33	Apply Teflon tape to threads.
6	33	22,0 - 25,0 Nm [16 - 19 Ft - Lbs]
6	35	Apply Loctite 243.
6	35	4,1 - 6,8 Nm [36 - 60 In - Lbs]
6	37	Apply grease to aid assembly.
6	38, 41	Coin seat before installation.
6	43	Apply Loctite 243.
6	43	122,0 - 128,8 Nm [90 - 95 Ft - Lbs] (valve body)
6	44	Apply Teflon tape to threads.
6	44	4,1 - 6,8 Nm [30 - 60 In - Lbs]
6	65	Press fit.
7	2	Turn counter-clockwise to assemble. Turn-in until groove is seen in body through hole.
7	3, 4	Apply grease to O-Ring and back-up after assembly to spindle, before assembly to body.
7	5	Apply Loctite 243.
7	5	2,4 - 3,0 Nm [21 - 26 In - Lbs]
8	31	13,5 - 16,3 Nm [10 - 12 Ft - Lbs]
8	32	Apply Teflon tape to threads.
8	32	43 - 53 Nm [32 - 39 Ft - Lbs]
8	33	22,0 - 25,0 Nm [16 - 19 Ft - Lbs]
8	38	Lubricate seals before assembling them into items 41 and 30.
8	39	Press fit.
8	40	Apply Loctite 243.
8	40	4,6 - 5,4 Nm [55 - 65 In - Lbs]
8	44	Torque to 4,0 - 7,6 Nm [36 - 60 In - Lbs]
8	65	Press fit.
10	1	Orient as shown before assembly.
10	4	Press fit into item 1 when aligned with item 2.
10	5	Apply Loctite 243.
10	5	2,4 - 3,0 Nm [21 - 26 In - Lbs]
10	9	Press fit into item 10.
10	89	Press fit into item 10.

(Continued on next page.)

* Service Information (Continued)		L4006
Fig.	Item	Torque / notes
12	303	Position gray coated side of bushing (item #303) toward eccentric (item #304).
12	342, 343	Position gray coated side of thrust washer (item 343) toward eccentric (item 345).
14	202, 203 204, 205	Outlet check valve components are permanently installed in valve body. These components cannot be removed.
14	209	Set safety relief valve pressure to 711 - 737 Bar [10300 - 10700 Psi].
14	210	Apply Teflon tape to threads.
14	210	60 - 71 Nm [44.2 - 52.3 Ft - Lbs]
14	215	Bypass setting end cap dimension: 15,0 - 15,9 mm [0.59 - 0.63 inch] (measured from counterbore to edge of cap)
14	216	Apply Teflon tape to threads.
14	216	13 - 16 Nm [9.8 - 11.8 Ft - Lbs]
14	217	25 - 30 Nm [18.4 - 22.1 Ft - Lbs]

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