

To Protect Your Warranty, Use Only ENERPAC Hydraulic Oil.

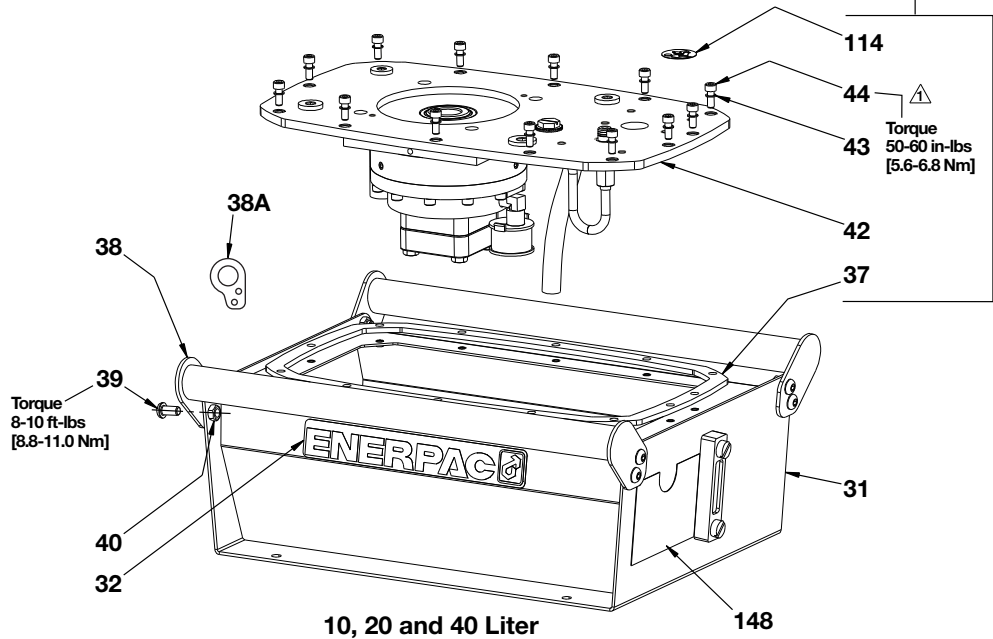
Enerpac recommends that all kit components be installed to insure optimum performance of the repaired product.

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English.....	1-14
Français.....	N/A
Deutsch.....	N/A
Italiano.....	N/A
Español.....	N/A
Nederlands.....	N/A
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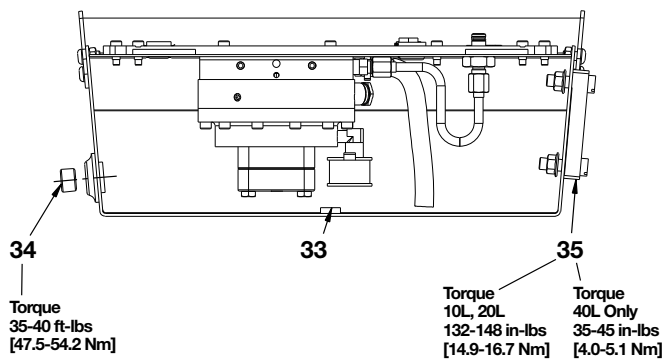
Notes:
 Apply Loctite 243 to threads.

All Models



See page 3 for parts list

10, 20 and 40 Liter



4 and 8 Liter

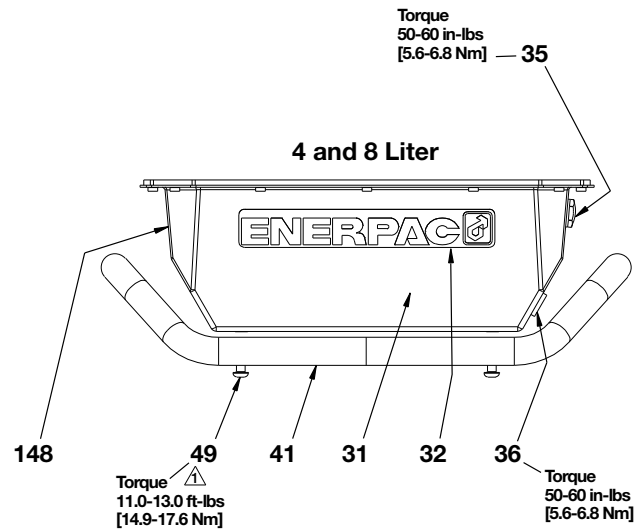


Figure 1, Reservoir Assembly

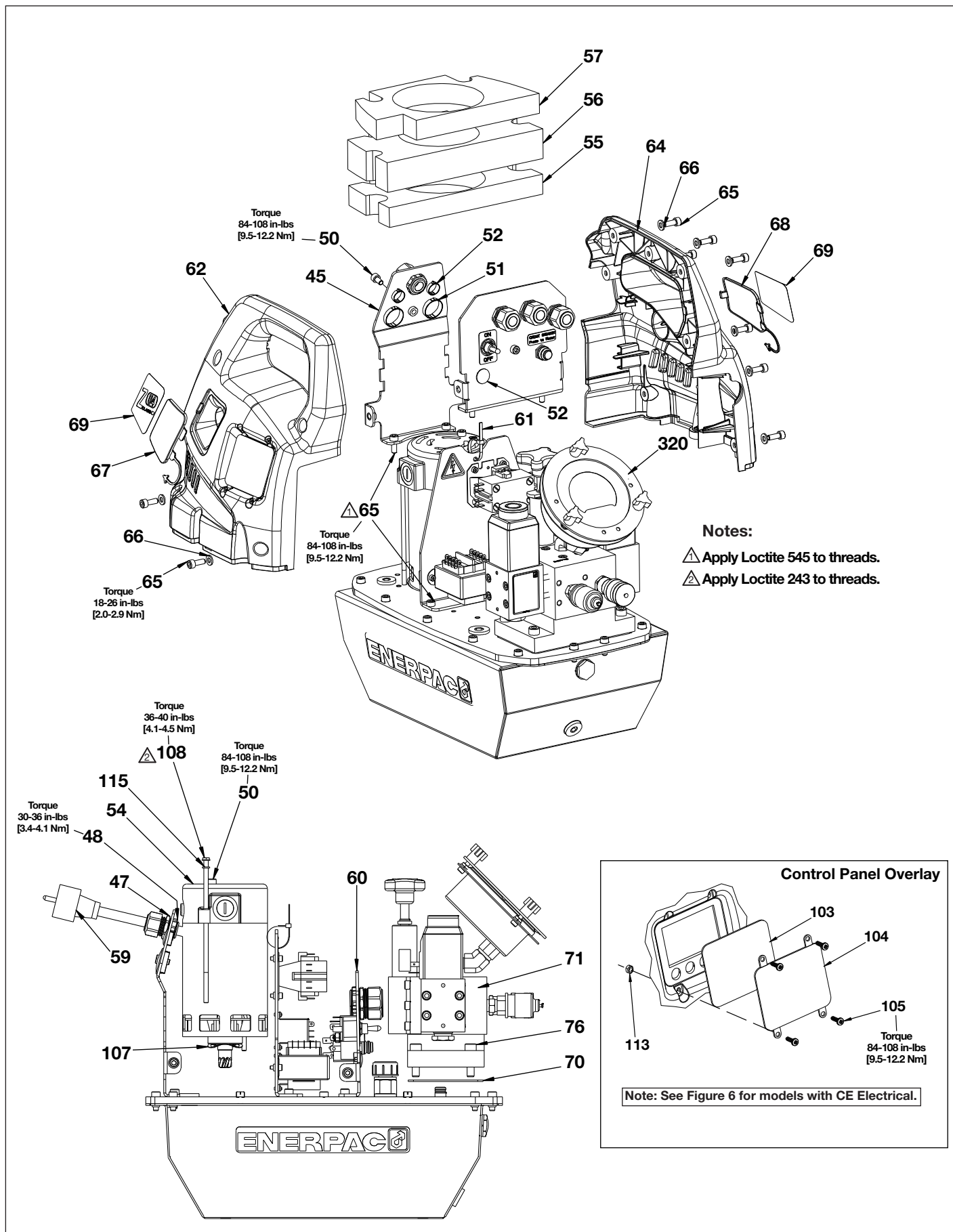


Figure 2, Pump Assembly

Repair Parts List for Figures 1 and 2

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
31	▲ DC9379025SR	1	Reservoir, 4L	54	(See Figure 7)	1	Motor, 230V
	▲ DC8136025SR	1	Reservoir, 8L	55	DC9401298	1	Baffle, Lower ZU4
	◆ DC9970025SR	1	Reservoir, 10L	56	DC9400298	1	Baffle, Middle ZU4
	◆ DC9971025SR	1	Reservoir, 20L	57	DC9402298	1	Baffle, Upper ZU4
	◆ DC9972025SR	1	Reservoir, 40L	59	DC8286960	1	Power Cord, 115V 15A
32	★ DC9596026	2	Reservoir Decal		DC8287960	1	Power Cord, 230V
33	C187018	1	Magnet		DC8288960	1	Power Cord, CE 230V
34	A1010245	1	Flush Plug, 1/2	60	(See Figure 4)	1	Bracket Assy, 115V
35	DC85900SR	1	Sight Glass, 4L & 8L			1	Bracket Assy, 230V
	DC2621223	1	3" Sight Glass, 10L	61	DC9876647	1	Cable Tie, Black
	DC2622223	1	5" Sight Glass, 20L	62	DC9640424	1	Enclosure, Left ZU4
	DC9969223	1	7" Sight Glass, 40L	64	DC9641424	1	Enclosure, Right ZU4
36	DC8249006	1	Plug, Magnetic SAE #8	65	CBE619028-1A	15	SHCS, M6 X 16
37	★ DC9551920	1	Reservoir Gasket, Z	66	CAE1060108-1A	9	Flat Washer, M6
38	DC9542920	2	Reservoir Handle, Z	67	DC9414424	1	Brush Cover, Left
38A	DC9895101	4	Lift Plate, 10, 20 & 40L	68	DC9413424	1	Brush Cover, Right
39	CBE819028-1E	8	BHCS, M8 X 16 mm	69	★ DC9598026	1	Cover Decals, LH & RH
40	CBE1080120-2A	8	Lock Nut, M8	70	★ DC9356037	1	Gasket, Valve
41	DC9590920	1	Skid Plate	71	(See Below)	1	Control Valve Assy.
42	(See Figure 3)	-	Basic Assembly	76	CBE825028-1A	4	SHCS
43	★ S3037	13	Gasket	103	DC8241037	1	Gasket, Overlay
44	CBE619028-1A	13	SHCS, M6 X 16 mm	104	DC8240026	1	Overlay
45	DC9405111	1	Back Bracket ZU4	105	CBE415028-1A	4	SHCS, M4
47	B1223503	1	O-Ring	107	DC9661066	1	Wavey Washer
48	DC9538021	1	Locking Nut, 20 mm	108	DC9653028	2	Bolt, #10-32x6.5
49	CBE817028-1E	4	BHCS, M8 X 12 mm	113	CBE1040120-1D	4	Nut, M4
50	CBE615028-1A	1	SHCS, M6 X 10 mm	114	DC9920026	1	Decal, Read Instructions
51	DC9435009	A/R	Dome Plug, 1"	115	B1080066	2	Star Washer
52	DC9436009	A/R	Dome Plug, 16 mm	148	DC8260026	1	Decal, Prod. Spec.
54	(See Figure 7)	1	Motor, 115V	320	DC7078900	1	Kit, Overlay, 10000 PSI

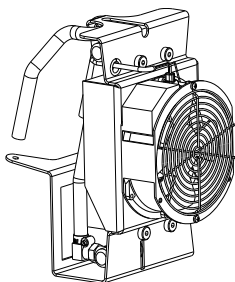
★ Items included in and available only as part of Repair Kit ZU4K.

A/R - As Required.

▲ Includes items 32, 35, 36 and 37.

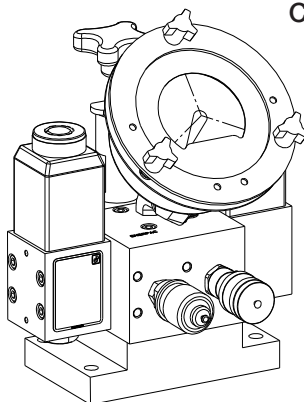
◆ Includes items 32, 33, 34, 35 and 37.

Heat Exchanger (Optional Accessory)



See Repair Parts Sheet L2752

Control Valve & Manifold Assemblies (item 71)



Valve Model	Part Number
VE42Q 115 Volt	DC7714950
VE42Q 230 Volt	DC7715950
VE42QM 115 Volt	DC7716950
VE42QM 230 Volt	DC7717950

See Repair Parts Sheet L2617

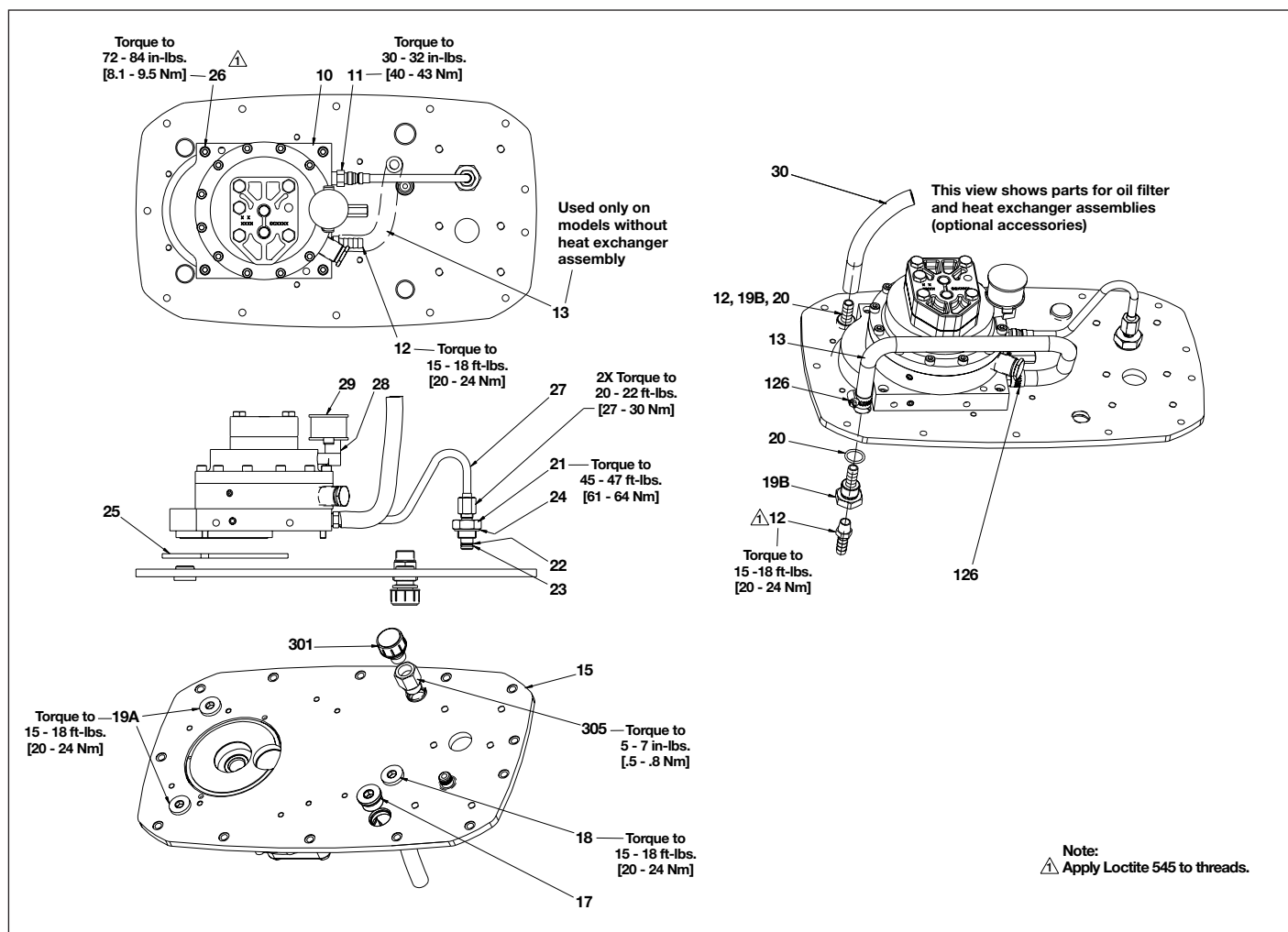


Figure 3, Basic Assembly

Repair Parts List for Figure 3							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
10	Pump Element	1	see RPS L2596 for MPE	24	★ DC9271167	1	Copper Gasket
11	F100094-246	1	Fitting 5-4 FTX-S	25	★ DC9551920	1	Pump Gasket
12	F100097-16	1	Fitting, Standard Pump	26	CBE621028-1A	4	SHCS, M6 X 20
13	DC9416646	1	Hose, Heat Exc. Pump 23"	27	DC9447920	1	Tube, ASM Steel
	DC9335646	1	Hose, Bypass 8"	28	DC9600268	1	Intake Tube, 1.6" 4L & 8L
15	DC9407101-P01	1	Cover Plate, Universal		DC9601268	1	Intake Tube, 2" 10L
17	B1007006	1	Plug SAE #10		DC9524268	1	Intake Tube, 3" 20L
18	B1006006	1	Plug, Socket		DC9603268	1	Intake Tube, 6.5" 40L
19A	B1006006	2	Plug, SAE #8 Std. Pump	29	DC9178118	1	Intake Filter
19B	DC9273097	2	Fitting, Heat Exc. Pump	30	DC9418646	1	Return Hose, Heat Exc.
20	★ B1908503	2	O-Ring, Heat Exc. Pump	126	DC9639299	2	Clamp, Heat Exc. Pump
21	DC9173690	1	Connector Fitting	301	DC8250006	1	Breather Assy
22	★ BSS0368D	1	Back-up	305	F100096-38	1	Adapter
23	★ B1012803	1	O-Ring				
★ Items included in Seal Kit ZU4K.							

See Figure 9 for electrical diagram

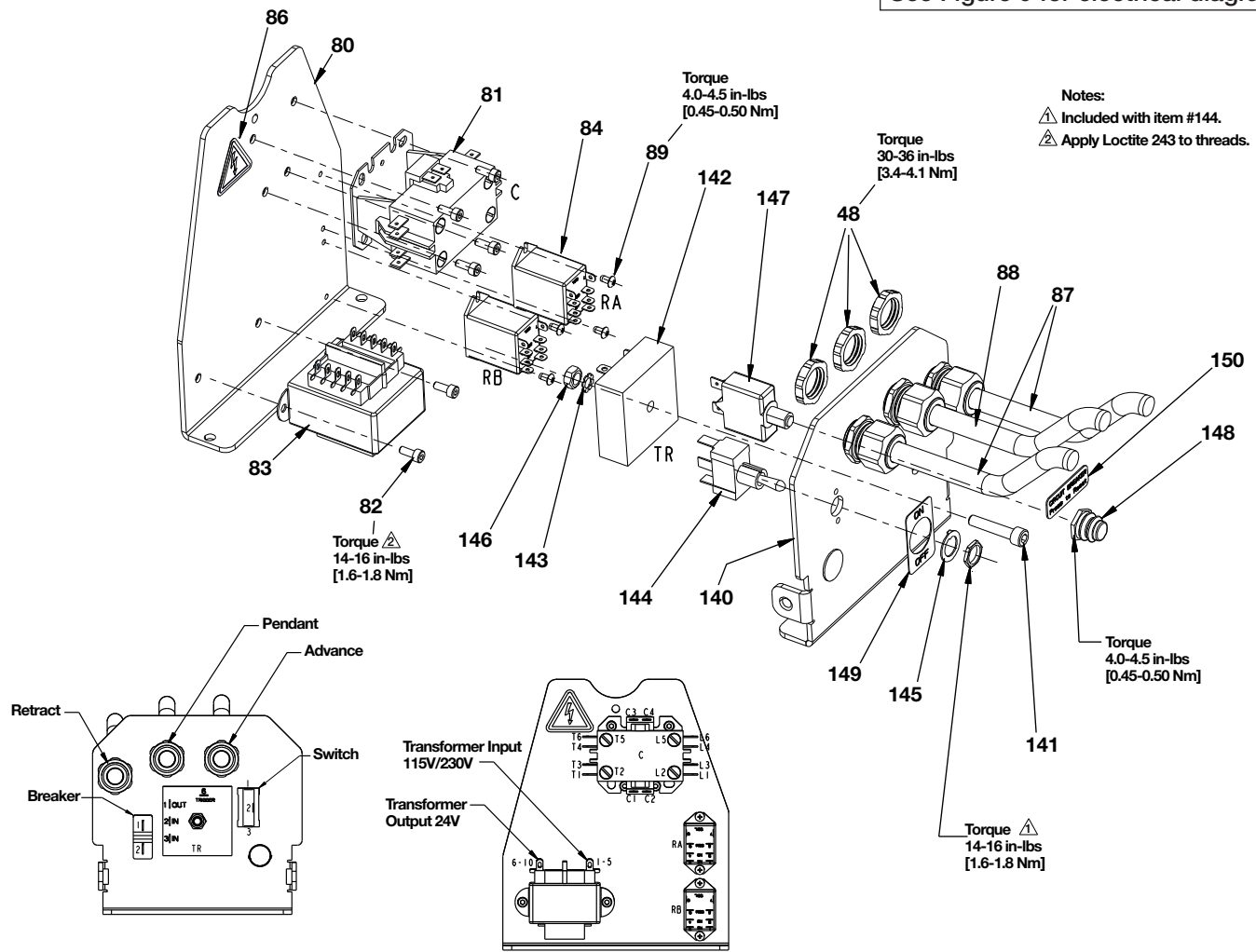


Figure 4, Front and Mid Bracket Assemblies

Repair Parts List for Figure 4

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
48	DC9538021	3	Locking Nut, 20mm	145	DC8230108	1	Ring, Locking
80	DC8354111	1	Bracket, Middle, PT/BTW	146	CBE1060120-1D	1	Nut, 6mm
81	DC8193398	1	Contactor	147	DC8309380	1	Circuit Breaker, 12A (230V)
82	CBE415028-1A	6	Screw, SHCS M4 x 10		DC8308380	1	Circuit Breaker, 25A (115V)
83	DC8279480SR	1	Transformer	148	DC8200380	1	Cap, Circuit Breaker
84	DC8280980	2	Relay	149	DC8292026	1	Decal, On-Off
86	DC9922026	1	Decal, High Voltage	150	DC8237026	1	Decal, CB Reset
87	DC8289960	2	Cable, Solenoid	260	▲ DC8317960	1	Wire, Contactor to timer
88	- - -	1	Pendant Assy (See Fig. 5)	261	▲ DC8316960	2	Power Cable, Solenoid
89	DA3639028	4	Self Tapping Screw	262	▲ DC8315960	1	Relay Bridge
140	DC8353111	1	Bracket, Front, PT/BTW	263	▲ DC8314960	2	Wire, Transformer Output
141	CBE625028-1A	1	Screw, M6 x 1 x 30 Zinc	264	▲ DC8313960	2	Wire, Contactor to Transformer
142	DC8281784	1	Timer, 15 Sec. BTW	265	▲ DC8312960	1	Wire, Overload to Contactor
143	CCE1060108-6A	1	Starwasher, 6mm	266	▲ DC8318960	1	Wire, Contactor to relay and timer
144	DC8307372	1	Switch, Motor	▲ Items 260-266 not shown.			

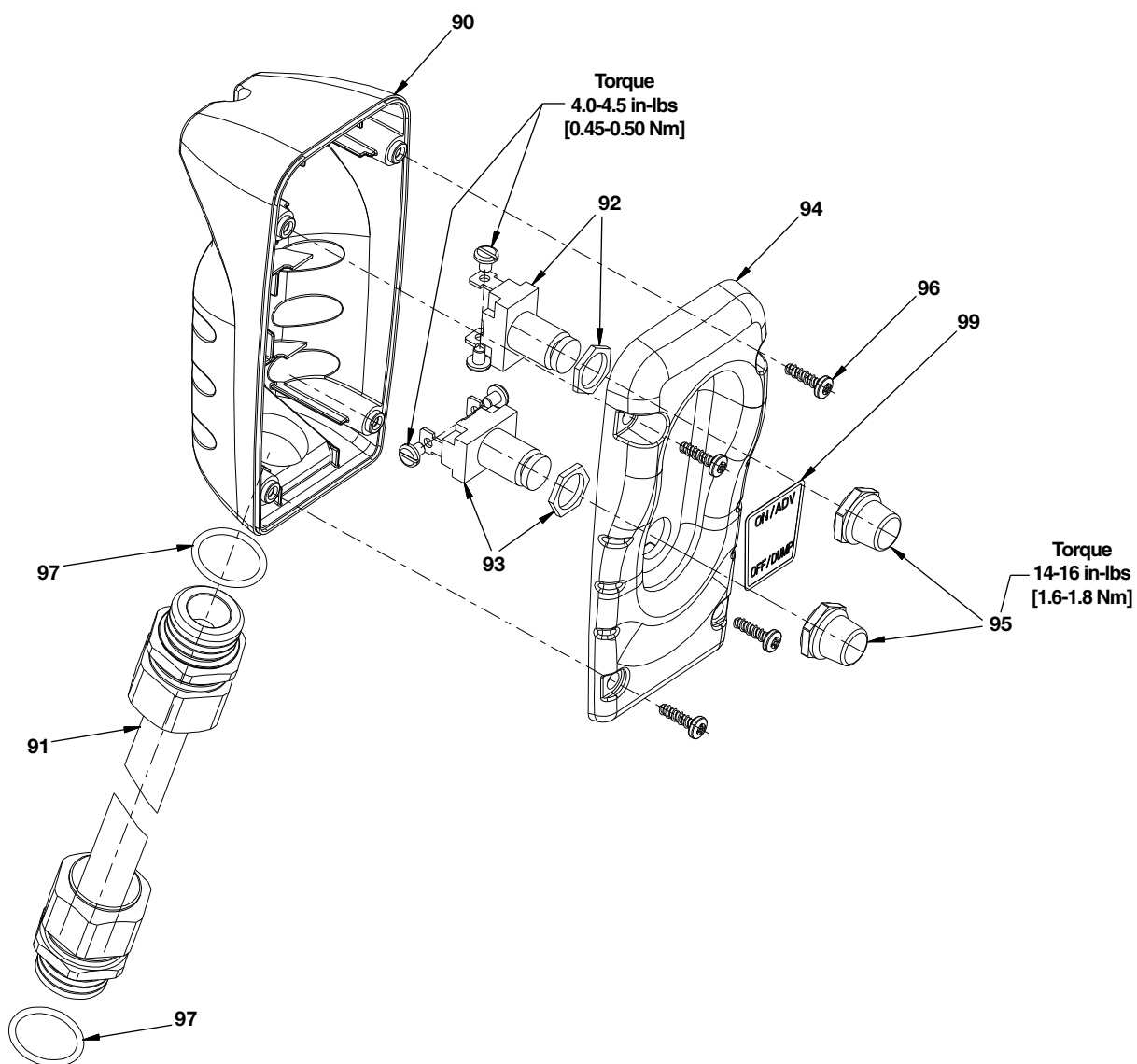


Figure 5, Pendant Assembly

Repair Parts List for Figure 5

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
90	DC9425424	1	Enclosure, Lower	95	DC8284379	2	Switch Cover
91	DC8285960	1	Pendant Wire, BTW	96	DC9428008	4	Screw, Hi-Low #8 x 1/2
92	DC8282379	1	Pendant Button, NO	97	B1223503	2	O-Ring
93	DC8283379	1	Pendant Button, NC	99	DC8127026	1	Decal, Pendant
94	DC8122424	1	Enclosure, Upper				

Note: Pendant Kit ZCP-2M includes all items shown above.

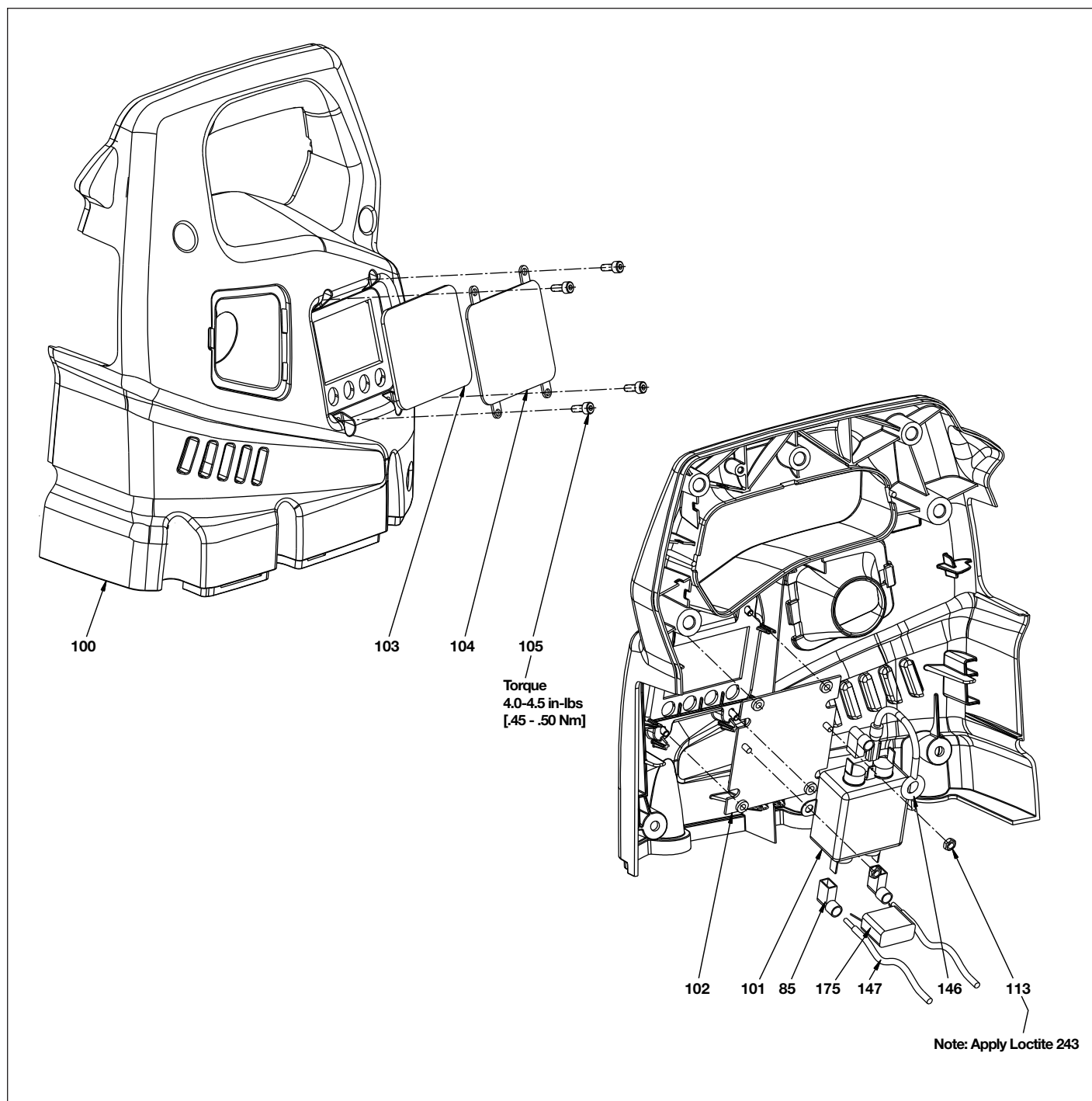


Figure 6, Shroud Assembly with R/F Filter (CE Models Only)

Repair Parts List for Figure 6							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
85	E1001352	4	Flag Connector, 1/4"	105	CBE415028-1A	4	SHCS, M4
100	DC9640424	1	Enclosure, Left ZU4	113	CBE1040120-1D	2	Nut, M4
101	DC9580380	1	RF In-line filter	146	DC9583960	1	Ground Earth Wire
102	DC8290111	1	CE Bracket	147	DC9893960	3	RF Filter Wire
103	DC8241037	1	Gasket, Overlay	175	DC9579382	1	Capacitor, 1 Microfarad
104	DC8240026	1	Overlay				

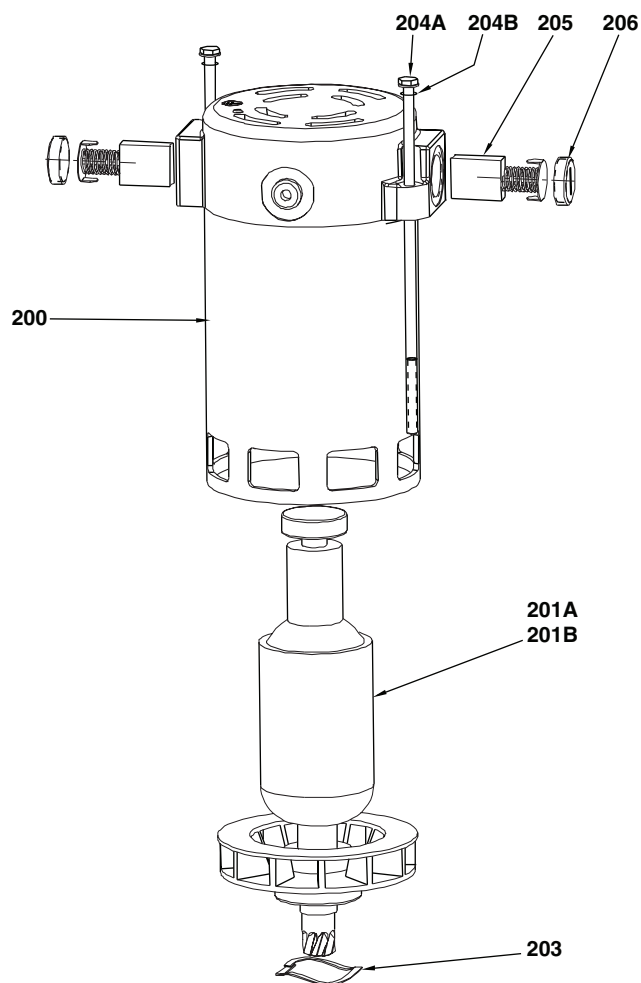


Figure 7, Motor Assembly, Universal

Repair Parts List for Figure 7			
Item	Part Number	Qty.	Description
85	E1001181	2	Terminal, Flag (not shown)
200	Not Available	-	Housing (order complete motor)
201A	DC8246736	1	Armature, 115V, ZU4
201B	DC8247736	1	Armature, 230V, ZU4
203	DC9661066	1	Spring Washer
204A	DC9653028	2	Bolt, #10-32 X 6.5"
204B	B1080066	2	Star Washer
205	DC9656259	2	Brush, ZU4
206	DC9655020	2	Brush Cap, ZU4
• DC8244259SR - Complete 115 V motor - Includes above parts. • DC8245259SR - Complete 230 V motor - Includes above parts.			

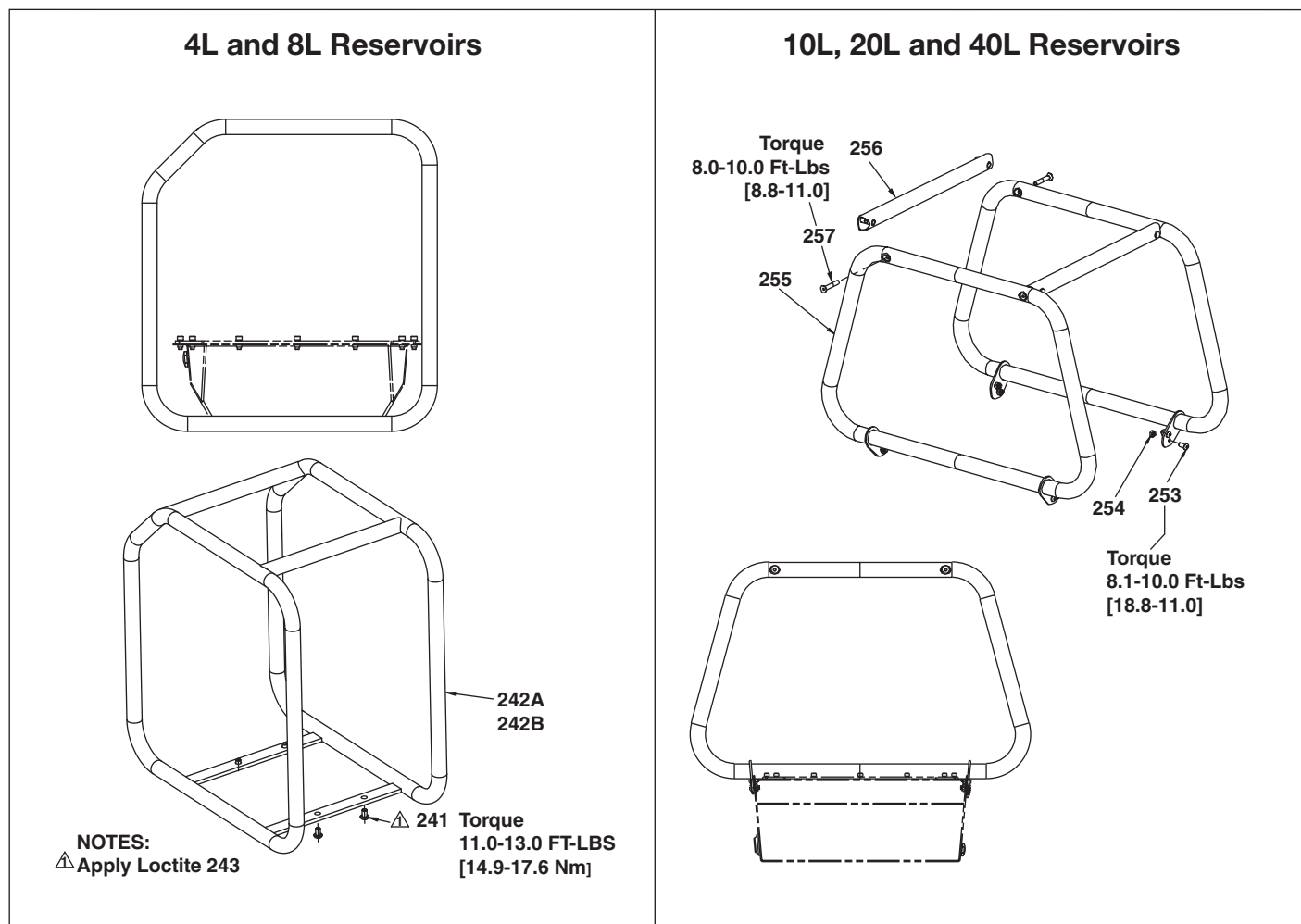


Figure 8, Roll Bar Assembly (optional accessory)

Repair Parts List for Figure 8							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
241	CBE817028-1E	4	BHCS M8 x12	254	CBE1080120-2A	8	M8 Lock Nut
242A	▲ DC8040920	1	Roll Cage, 4L & 8L, w/o HX		DC9460268	2	Roll Bar Spacer, 10L
242B	◆ DC8323920	1	Roll Cage, 4L & 8L, with HX	256	DC9461268	2	Roll Bar Spacer, 20L
253	CBE819028-1E	8	M8-1 x 16 mm BHCS		DC9462268	2	Roll Bar Spacer, 40L
255	DC9618920	2	Roll Bar Side, 10L, 20L & 40L	257	CBE837028-1B	4	M8 x 60 HSCH Screw
▲ Models without heat exchanger. ◆ Models with heat exchanger.				Note: See table below for complete roll bar kits.			

Roll Bar Kits	
Part Number	Fits Reservoir Size
ZRC-04	4L & 8L without heat exchanger
ZRC-04H	4L & 8L with heat exchanger
ZRB-10	10L
ZRB-20	20L
ZRB-40	40L

115 Volts or 230 Volts 50 or 60 Hz., AC
Line Voltage In

Power Cord
DC8286960 for 115V, DC8287960 for 230V,
DC8288960 for CE 230V

FUNCTIONAL CHART:

DESCRIPTION	a2	b1	b2	RA	RB	TR	C	M1 & M2	S1	S2
	OFF	released	released	OFF	OFF	OFF	OFF	STOP	OFF	ON
	ON	released	released	ON	OFF	OFF	OFF	STOP	OFF	OFF
C, M1 & M2 will be off after the time delay	ON	released	pressed & released	ON	ON	ON	ON	RUN	ON	OFF
	ON	pressed	released	OFF	OFF	OFF	OFF	STOP	OFF	ON

Dual Primary Transformer
25 VA. Class 2
DC8279480

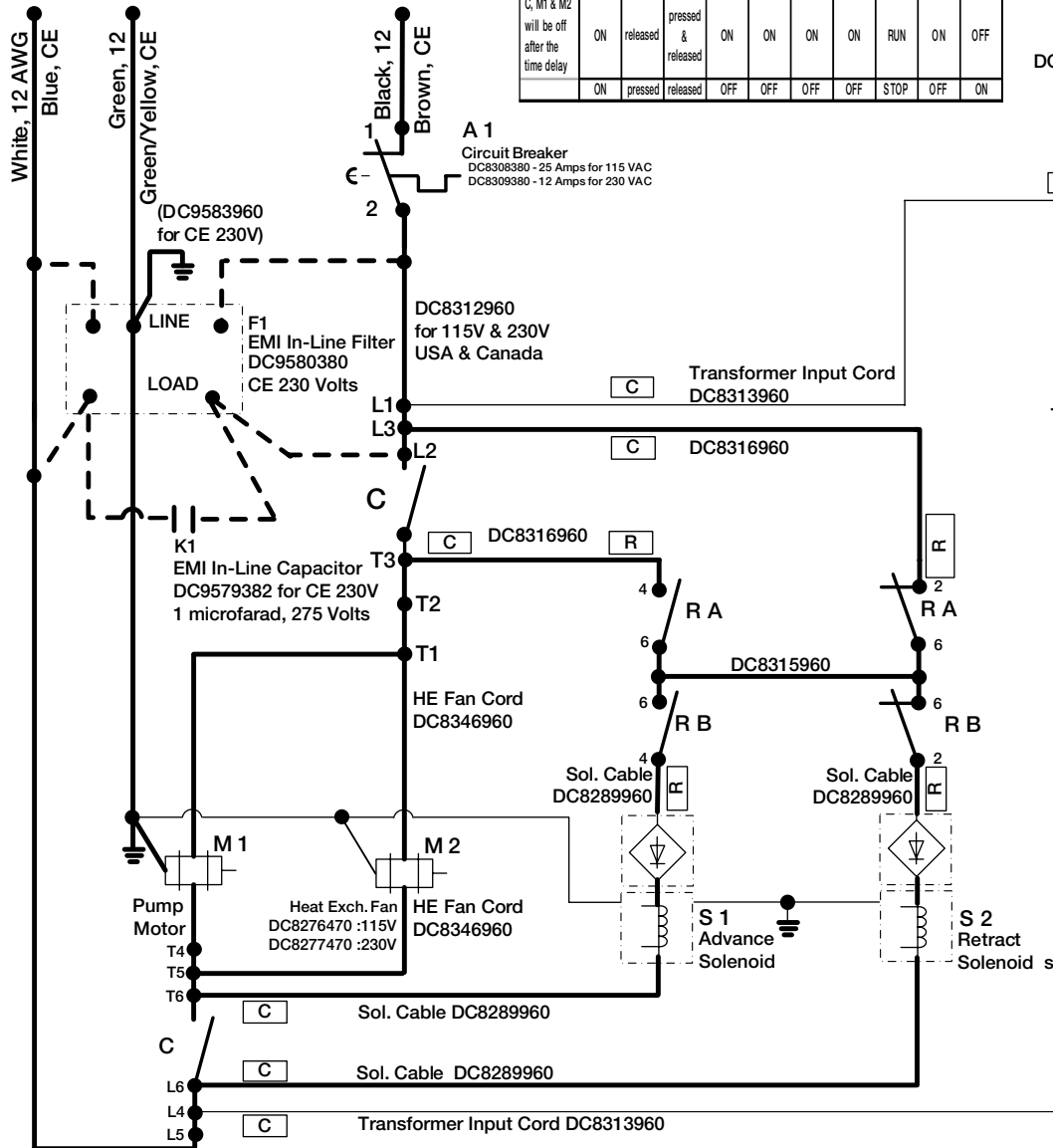
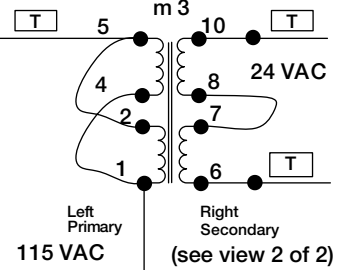
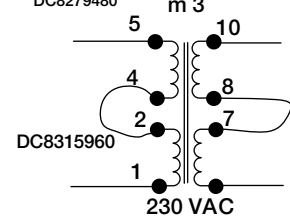


Figure 9, Electrical Diagram, ZU4 Classic Bolting Pump (View 1 of 2)

Troubleshooting Guide			
Symptoms:	Probable Causes:	Check and/or inspect:	Corrective Action:
1. Pump does not start when ON/ADV button is pressed.	a. Power cord unplugged.	a. Is the power cord plugged-in?	a. No: Plug-in the power cord.
	b. Pump on/off switch in "OFF" position.	b. Is the switch in the "OFF" position?	b. Yes: Move the switch to the "ON" position.
	c. No power or line voltage too low.	c. Does the power outlet provide the required voltage and current? Check description, check line voltage, check line fuses/circuit breaker.	c. No: Replace blown fuses and/or change over to an outlet with the appropriate voltage and current rating.
	d. Power cord damaged.	d. Are there any visible damages (kinks, loose wire, missing insulation, etc.) on the power cord?	d. Yes: Replace the power cord.
	e. Pendant cord damaged.	e. Are there any visible damages (kinks, loose wire, missing insulation, etc.) on the pendant cord?	e. Yes: Replace the pendant cord.
	f. Pump circuit breaker (A1) tripped.	f. Is the pump circuit breaker button extended?	f. Yes: Push the pump circuit breaker button to reset.
	g. Motor brushes need replacement.	g. Are the brushes worn down (.25" or less), damaged or burnt-out?	g. Yes: Replace the brushes.
	h. Transformer (m1) defective. ♦	h. Is 24 VAC present at the transformer secondary terminals?	h. No: Replace the transformer (m1).
	i. Main relay (RA) defective. ♦	i. Is the relay (RA) energized when the on/off switch (a2) is depressed?	i. No: Replace the relay (RA).
	j. Timer module (TR) defective. ♦	j. Does the timer Module "TR" contact close when the ON/ADV button (b2) is depressed?	j. No: Replace the timer module (TR).
	k. Contactor (C) defective. ♦	k. Do the contactor "C" contacts close when the ON/ADV button (b2) is depressed?	k. No: Replace the contactor (C).
	l. Pump element mechanically blocked. ♦	l. Does the motor (M1) try to start but not rotate when the motor is switched-on?	l. Yes: Remove and inspect the pump element. Repair or replace if necessary. Refer to Enerpac Repair Parts Sheet L2596 for additional information.
	a. Power cord damaged.	a. Is there any visual damage (kinks, loose wire, missing insulation, etc.) on the power cord?	a. Yes: Replace the power cord.
	b. Line voltage too low.	b. Does the power outlet provide the required voltage and current? Check description, check line voltage, check line fuses/circuit breaker.	b. No: Replace blown fuses and/or change over to an outlet with the appropriate voltage and current rating.
	c. Pump circuit breaker (A1) tripped.	c. Is the pump circuit breaker button extended?	c. Yes: Push the pump circuit breaker button to reset.
	d. Automatic shut-off has occurred.	d. Does the pump motor shut off approximately 15-20 seconds after the ON/ADV button is released?	d. Yes: Normal operation. Timer module (T1) automatically shuts-off pump if the ON/ADV button is not depressed again within approximately 15-20 seconds.
2. Pump stops running during idle or normal operation.			

♦ It is recommended that these troubleshooting steps be performed by an Enerpac Authorized Service Center. To find your nearest Enerpac Authorized Service Center, please visit us at www.enerpac.com. Contact information for Enerpac worldwide locations can be found on the back page of this document.

Important: all repair procedures should be performed only by a trained and qualified repair technician.

Troubleshooting Guide (Continued)

Symptoms:	Corrective Action:	Check and/or inspect:	Corrective Action:
3. Wrench does not advance when ON/ADV button is depressed and held down.	a. User adjustable relief valve set too low.	a. Is pressure set high enough for the bolting application?	a. No: Raise relief valve pressure. Refer to Enerpac Instruction Sheet L2726 for adjustment procedure.
	b. Torque greater than wrench capacity at full pressure.	b. Is torque wrench sized too small?	b. Yes: Use torque wrench with larger capacity.
	c. Advance flow line restricted or blocked.	c. Is a restriction in flow suspected?	c. Yes: Check couplers for full engagement.
	d. Advance solenoid coil (S1) defective. ♦	d. Is line voltage present at terminals of advance solenoid coil (S1)?	d. Yes: Replace advance solenoid coil (S1).
	e. Solenoid switching relay (RB) defective. ♦	e. Does the relay (RB) close when the ON/ADV button (b2) is depressed?	e. No: Replace the relay (RB).
	f. Control valve out of adjustment or damaged. ♦	f. Is the control valve operating properly?	f. No: Repair or replace control valve. Refer to Enerpac Repair Parts Sheet L2617 for additional information.
	g. Pump element worn or damaged. ♦	g. Does the pump appear to be operating properly?	g. No: Remove and inspect the pump element. Repair or replace if necessary. Refer to Enerpac Repair Parts Sheet L2596 for additional information.
	a. Return flow line restricted or blocked.	a. Is a restriction in flow suspected?	a. Yes: Check couplers for full engagement.
	b. Retract solenoid coil (S2) defective. ♦	b. Is line voltage present at terminals of retract solenoid coil (S2)?	b. Yes: Replace retract solenoid coil (S2).
4. Wrench will not retract when ON/ADV button is released.	c. Solenoid switching relay (RB) defective. ♦	c. Does the relay (RB) open when the ON/ADV button (b2) is released?	c. No: Replace the relay (RB).
	d. Control valve out of adjustment or damaged. ♦	d. Is the control valve operating properly?	d. No: Repair or replace control valve. Refer to Enerpac Repair Parts Sheet L2617 for additional information.
	e. Pump element worn or damaged. ♦	e. Does the pump appear to be operating properly?	e. No: Remove and inspect the pump element. Repair or replace if necessary. Refer to Enerpac Repair Parts Sheet L2596 for additional information.
	a. Timer module (TR) defective.	a. Does the pump continue running for more than 20 seconds after the ON/ADV button is released?	a. Yes: Replace Timer Module (TR).
5. Pump does not automatically shut-off after ON/ADV button is released.			

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Troubleshooting Guide (Continued)			
Symptoms:	Corrective Action:	Check and/or inspect:	Corrective Action:
6. Pump fails to build pressure or builds less than full pressure.	a. Low oil level.	a. Check oil level in sight glass. Is oil level low?	a. Yes: Add oil as required. Refer to Enerpac Instruction Sheet L2726 for instructions.
	b. Relief valve set too low. ♦	b. Is the relief valve set too low for the application?	b. Yes: Raise the relief valve setting. Refer to Enerpac instruction sheet L2726 for adjustment procedure.
	c. External system leak	c. Is an external leak visible?	c. Yes: Repair leak(s) as required.
	d. Torque wrench malfunctioning	d. Does the torque wrench appear to be operating properly?	d. No: Repair torque wrench in accordance with manufacturer's instructions.
	e. Control valve out of adjustment or damaged. ♦	e. Is the control valve operating properly?	e. No: Repair or replace control valve. Refer to Enerpac Repair Parts Sheet L2617.
	f. Pump element worn or damaged. ♦	f. Does the pump appear to be operating properly?	f. No: Remove and inspect the pump element. Repair or replace if necessary. Refer to Enerpac Repair Parts Sheet L2596 for additional information.
7. Pump runs hot.	a. Advance or retract flow restricted.	a. Is a restriction in flow suspected?	a. Yes: Check couplers for full engagement.
	b. High ambient temperature	b. Is the pump running hot?	b. Yes: Install a heat exchanger.
	c. Heat exchanger airflow restricted (models equipped with heat exchanger only)	c. Is heat exchanger airflow obstructed?	c. Yes: Remove any dirt from heat exchanger vents. Be sure that airflow is not obstructed by objects or walls.
	d. Heat exchanger fan not operational (models equipped with heat exchanger only)	d. Does the fan turn-on when the pump motor is on?	d. No: Check heat exchanger fan motor and wiring. Repair or replace components as required.

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