



Repair Parts Sheet

E-Series Electric Pump Dump and Hold, Solenoid Valve

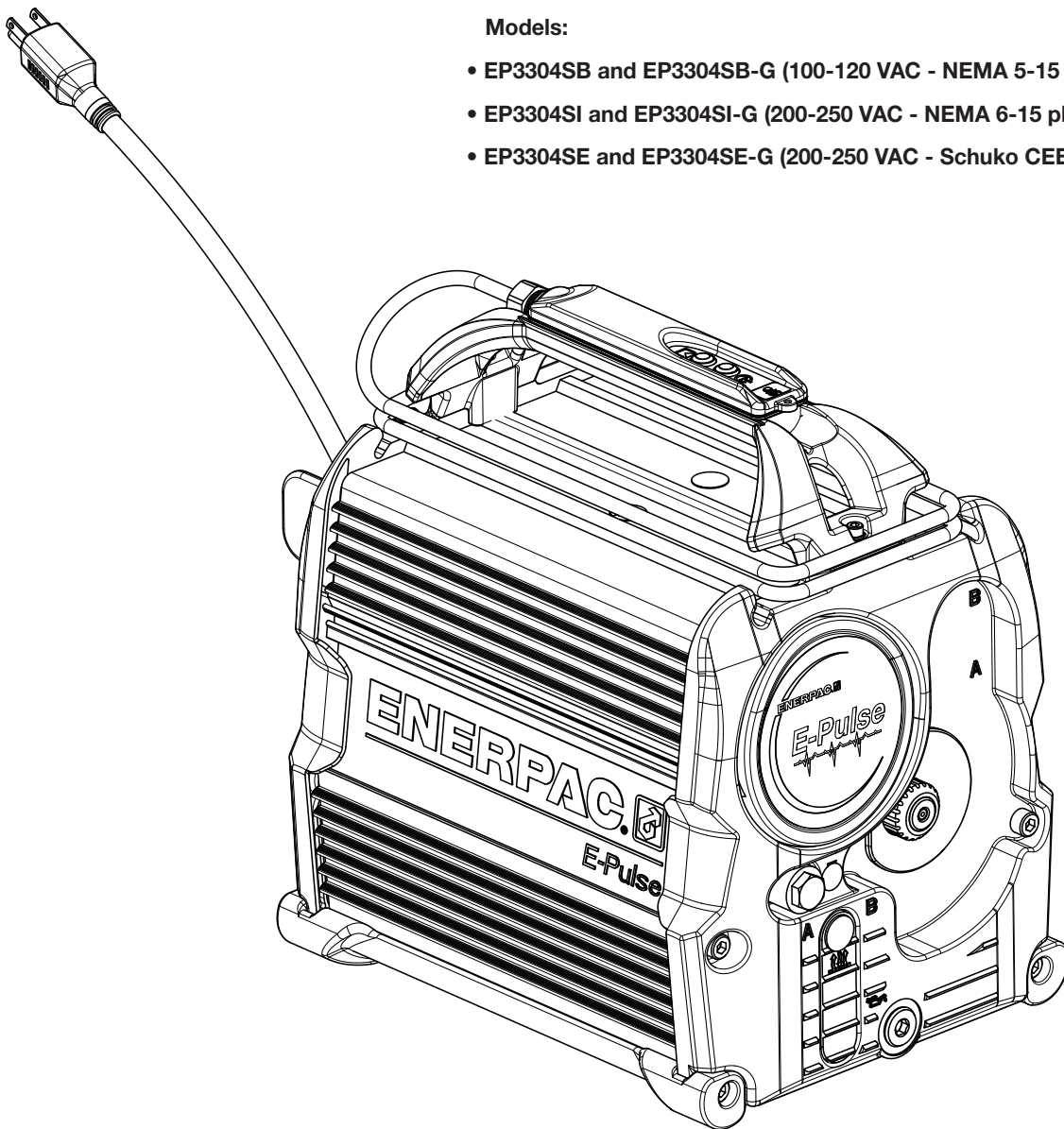
Document Number	Document Revision	Document Revision Date	Product Date Code Beginning With
L4352	B	10/2019	A

To Protect Your Warranty, Use Only ENERPAC Hydraulic Oil.

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

Models:

- EP3304SB and EP3304SB-G (100-120 VAC - NEMA 5-15 plug)
- EP3304SI and EP3304SI-G (200-250 VAC - NEMA 6-15 plug)
- EP3304SE and EP3304SE-G (200-250 VAC - Schuko CEE 7/7 plug)



⚠ WARNING Fully relieve hydraulic pressure, disconnect hydraulic hoses and unplug AC power cord from electrical outlet before beginning any inspection, maintenance or repair procedures. Failure to observe these precautions could result in death or serious personal injury. Appropriate shop safety procedures are to be followed during disassembly and reassembly to minimize any possibility of injury.

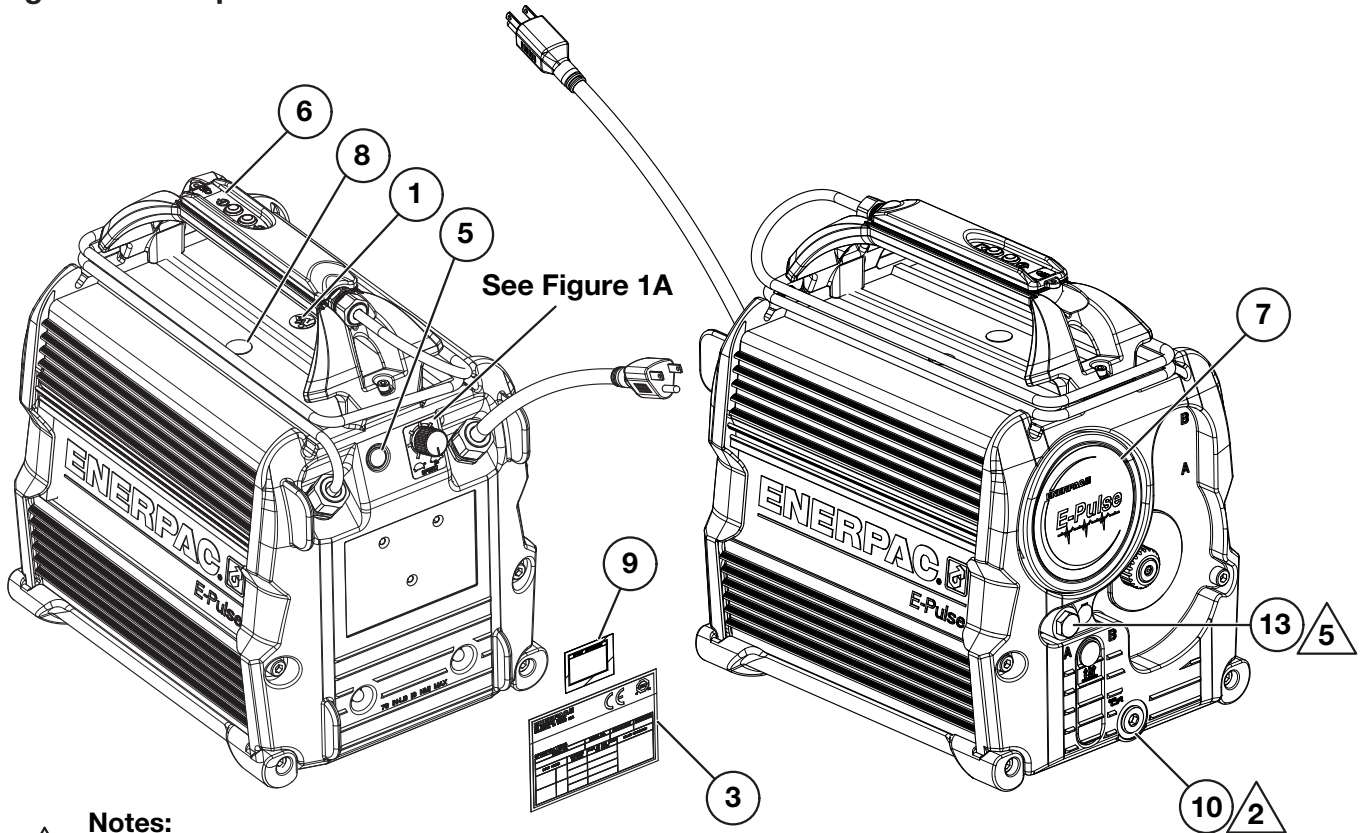
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Notes:

- Parts lists indicate the total quantity of each part used in a figure.
- The quantity of a part supplied in a repair kit or service assembly may be less than the total quantity shown in the parts list.
- Information contained in this document is subject to change without notice due to design variables, product improvements and other factors. Copyright © 2019 Enerpac. All rights reserved.

Figure 1 - Pump Exterior



Notes:

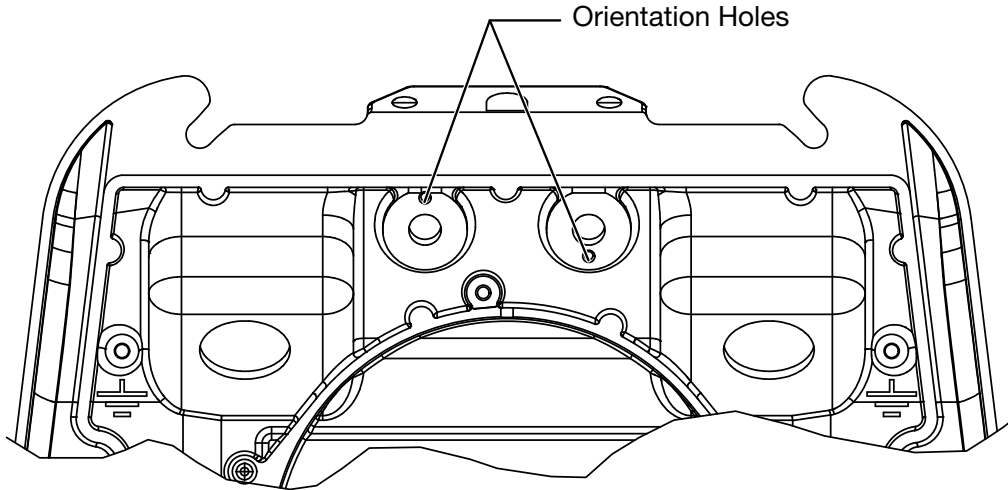
-  Torque to 13-16 ft-lbs [18-22 Nm].
-  Torque to 10-12 ft-lbs [14-16 Nm].

Repair Parts List for Figure 1

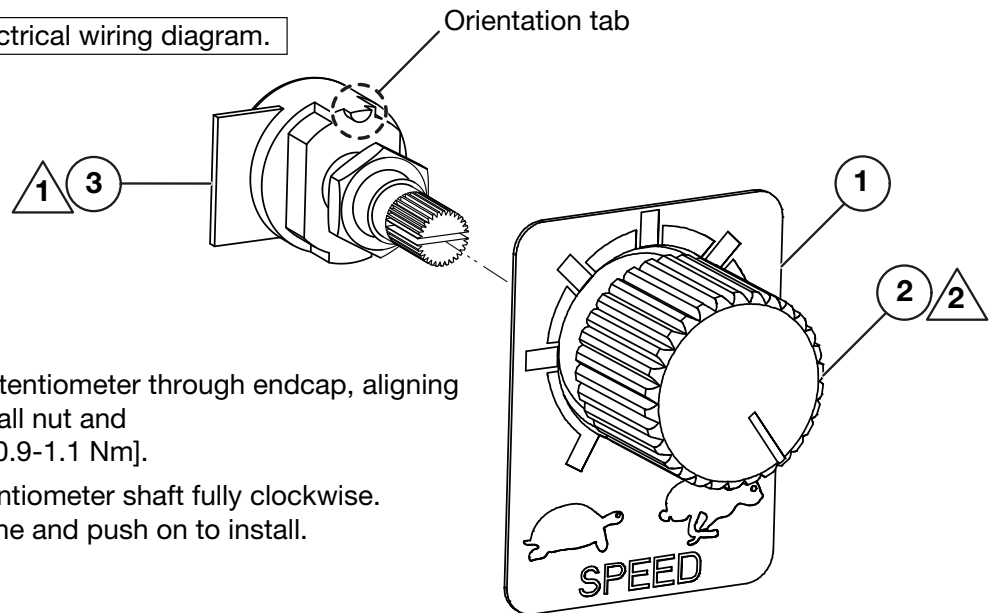
Item	Part Number	Qty.	Description
1	* DC7887026	1	CE Safety Label Read Instructions
3	DD6799026	1	Decal, Product Specification
5	DD7248009	1	Plug, Dome, 7.5 Dia
6	DD7350026	1	Decal, Pendant, Momentary/Continuous
7	DD7355026	1	Decal, Gauge Cap
8	* DD7417026	1	Decal, Unplug Cord
9	DD7443026	1	Decal, Valve Schematic, 3/2E
10	DD7557006	1	Plug, SAE #8, Zero-Leak
13	R515245-2	1	Plug

* - Included in Pump Cover Kit DD6792098SR.

Figure 1A - Speed Control Potentiometer and Cable Kit: DD7060960K



See Figure 14 for main electrical wiring diagram.



Notes:

- 1 Remove nut. Insert potentiometer through endcap, aligning orientation tab. Reinstall nut and torque to 8-10 in-lbs [0.9-1.1 Nm].
- 2 Apply decal, turn potentiometer shaft fully clockwise. Align knob with max line and push on to install.

APPLICATION
CONTROLLER
END

Wiring Diagram

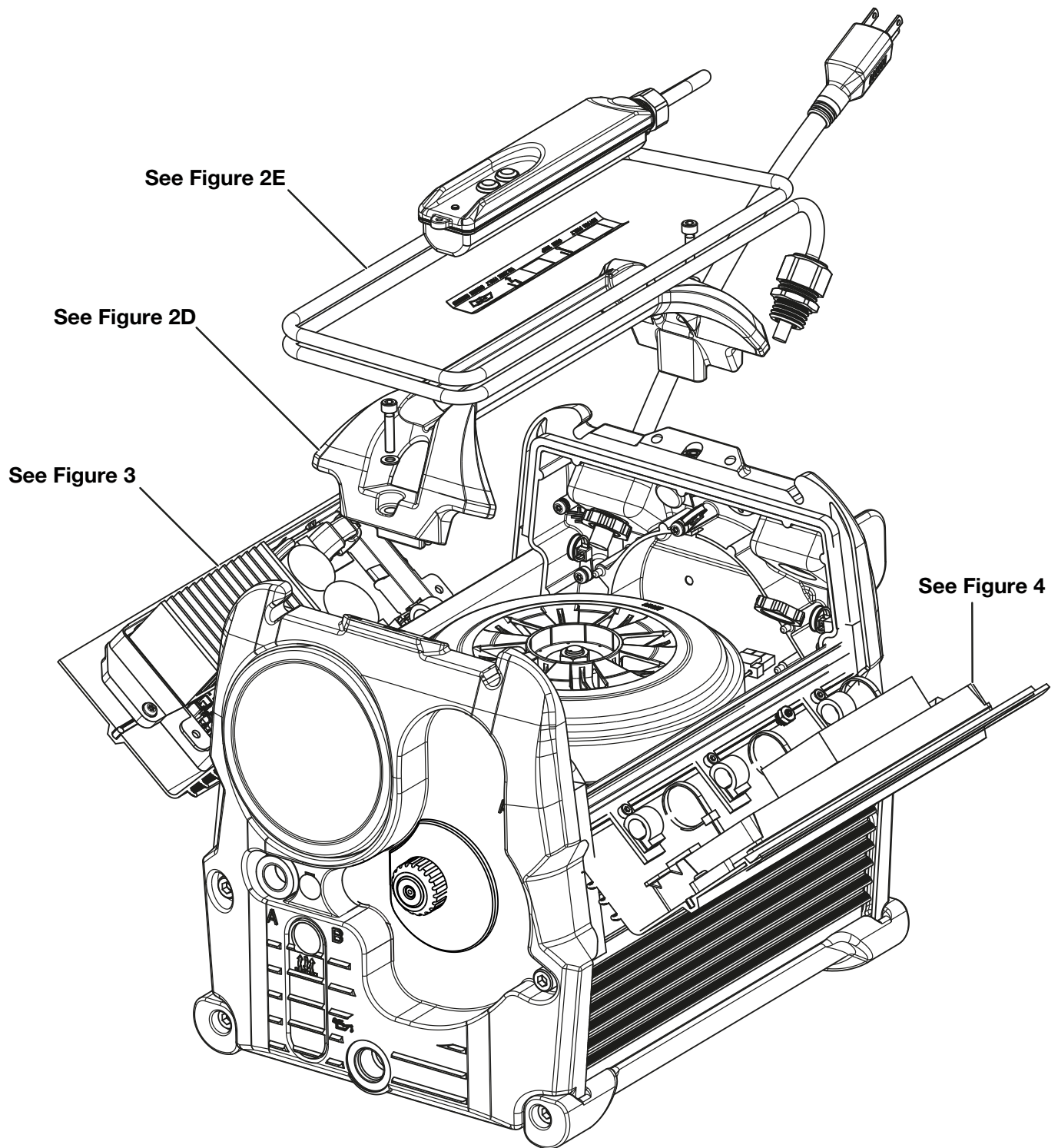


Repair Parts List for Figure 1A

Item	Part Number	Qty.	Description
1	DD6798026	1	Decal, Potentiometer, Speed Control
2	DD7029020	1	Knob Potentiometer
3	DD7060960	1	Cable Assembly, Potentiometer

Note: Speed Control Potentiometer and Cable Kit DD7060960K includes all items listed in the table above.

Figure 2 - Miscellaneous Assemblies



Refer to Figures 2A through 2D
for electrical cable assemblies.

Figure 2A - DC Power Cable Assembly: DD7061960

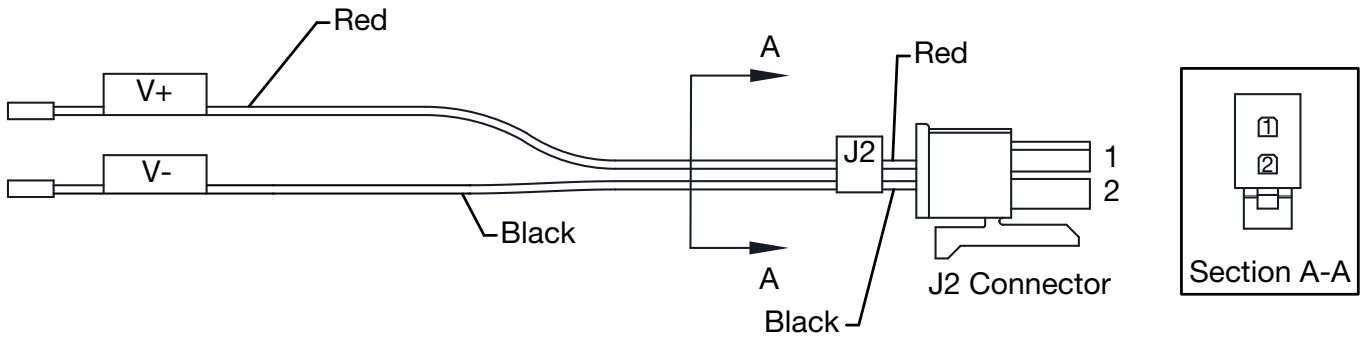


Figure 2C - Serial Communications Cable Assembly: DD7064960

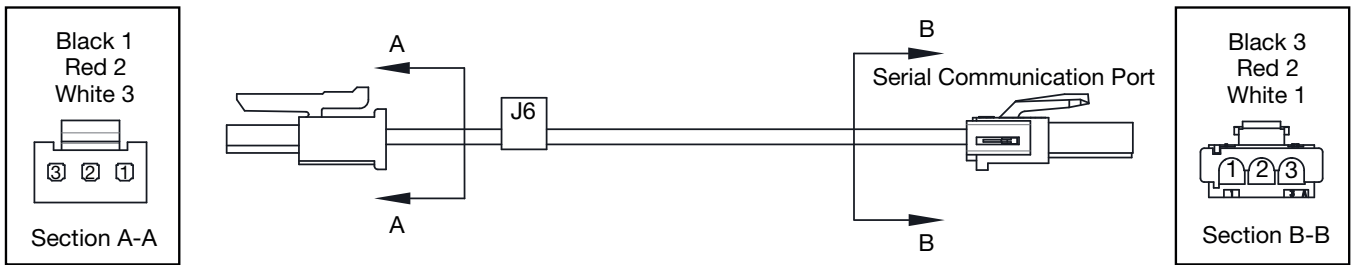
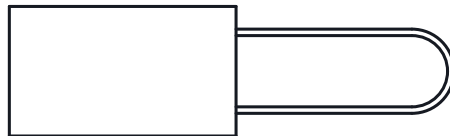


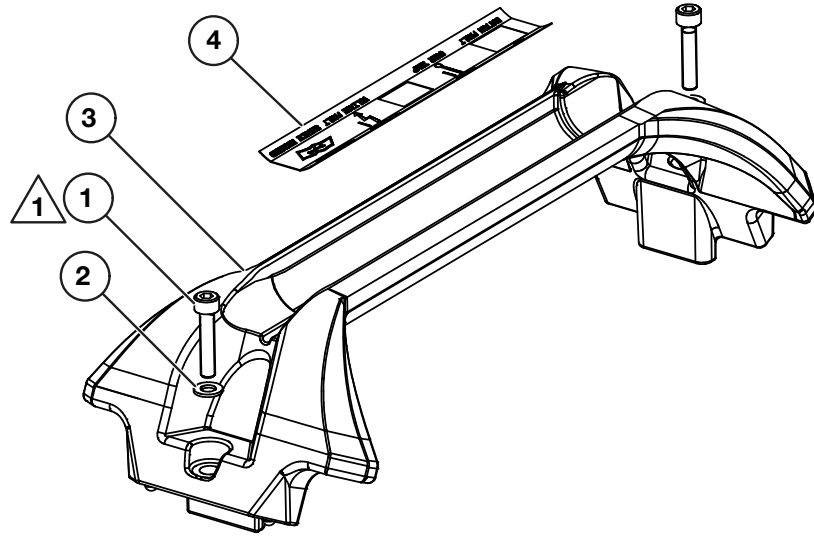
Figure 2C - Jumper Connection: DD7125960




Repair Parts List for Figure 2A, 2B and 2C

Item	Part Number	Qty.	Description
---	See Figure 2A	1	Cable Assembly, DC Power Supply
---	See Figure 2B	1	Cable Assembly, Serial Communications
---	See Figure 2C	1	Cable, Jumper, J8 and J9 Connection
---	DC9876647	3	Black Cable Tie 6" (not shown)

Figure 2D - Pump Handle Kit: DD6789800SR



Note:

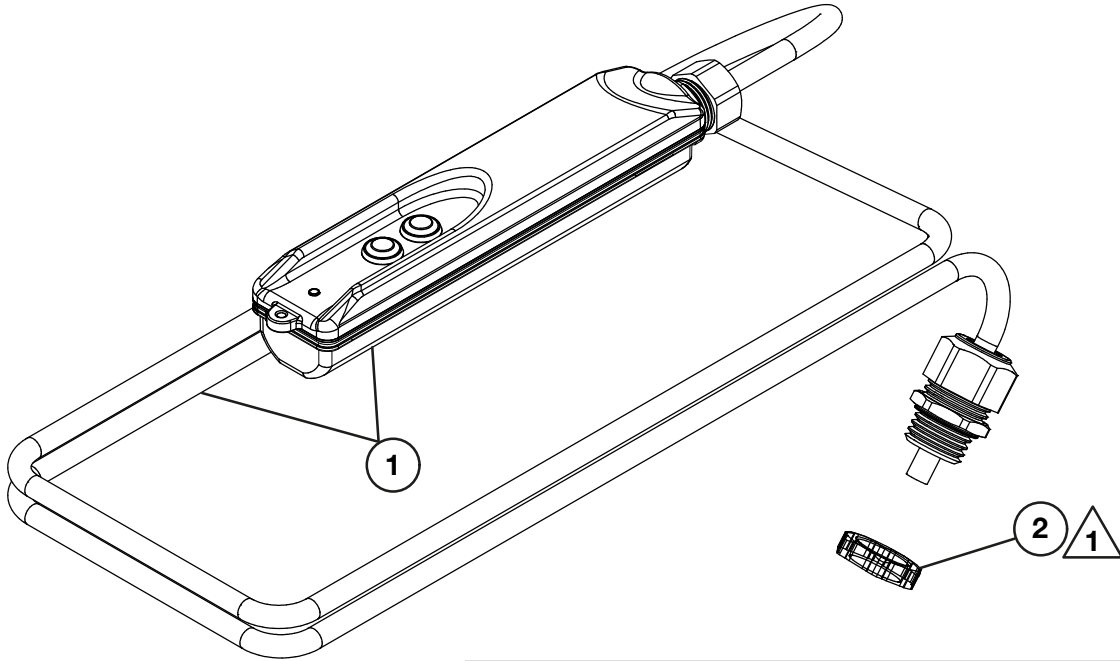
 Torque to 42-47 in-lbs [4.7-5.3 Nm].

Repair Parts List for Figure 2D

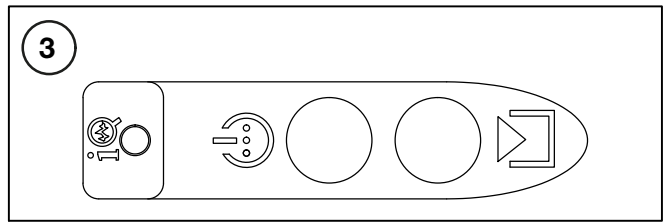
Item	Part Number	Qty.	Description
1	CAE1050108-1A	2	Flat Washer DIN125A M5
2	CCE523028-1A	2	Screw-SHCS, Hex, M5 x 0.8 x 25, 12.9, Zinc
3	DD6789800	1	Casting Handle Pump
4	DD7167026	1	Decal, Troubleshoot

Note: Pump Handle Kit DD6789800SR includes all items listed in the table above.

Figure 2E - 2 Button, Pendant Assembly: DD7278900SR2



See Figure 14 for main electrical wiring diagram.



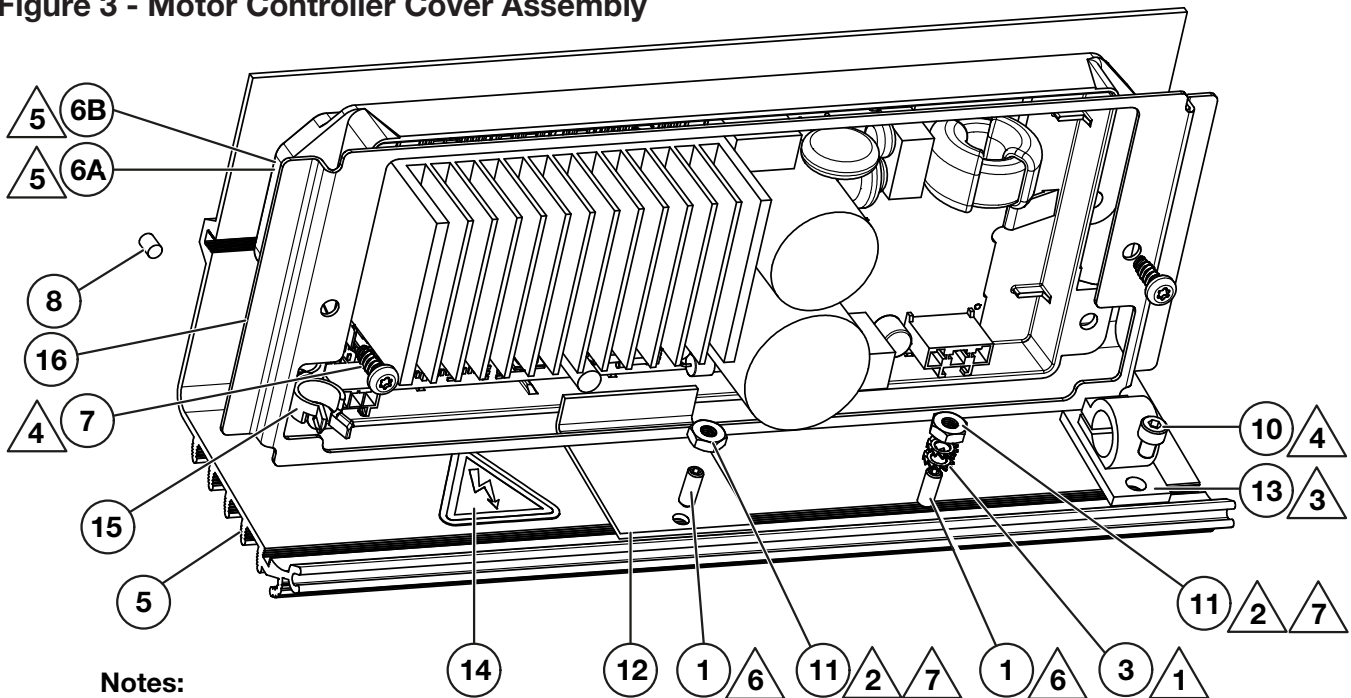
Note:

△1 Torque to finger tight plus an additional 1/4 turn.

Repair Parts List for Figure 2E			
Item	Part Number	Qty.	Description
1	DD7278900	1	Pendant and Cable Assembly, 2 Button
2	DC9538021	1	Locking Nut 20mm
3	DD7350026	1	Decal, Pendant

Note: 2 Button, Pendant Assembly DD7278900SR1 includes all items listed in the table above.

Figure 3 - Motor Controller Cover Assembly



Notes:

- ▲ 1 Install ground cable with ring terminal between star washers.
- ▲ 2 Torque to 8-10 in-lbs [0.9-1.1 Nm].
- ▲ 3 Remove adhesive backing before installation.
- ▲ 4 Torque to 6-7 in-lbs [0.7-0.8 Nm].
- ▲ 5 See parts list (items 6A & 6B) for voltage options.
- ▲ 6 Torque to 5-6 in-lbs [0.6-0.7 Nm].
- ▲ 7 Apply Loctite 243.

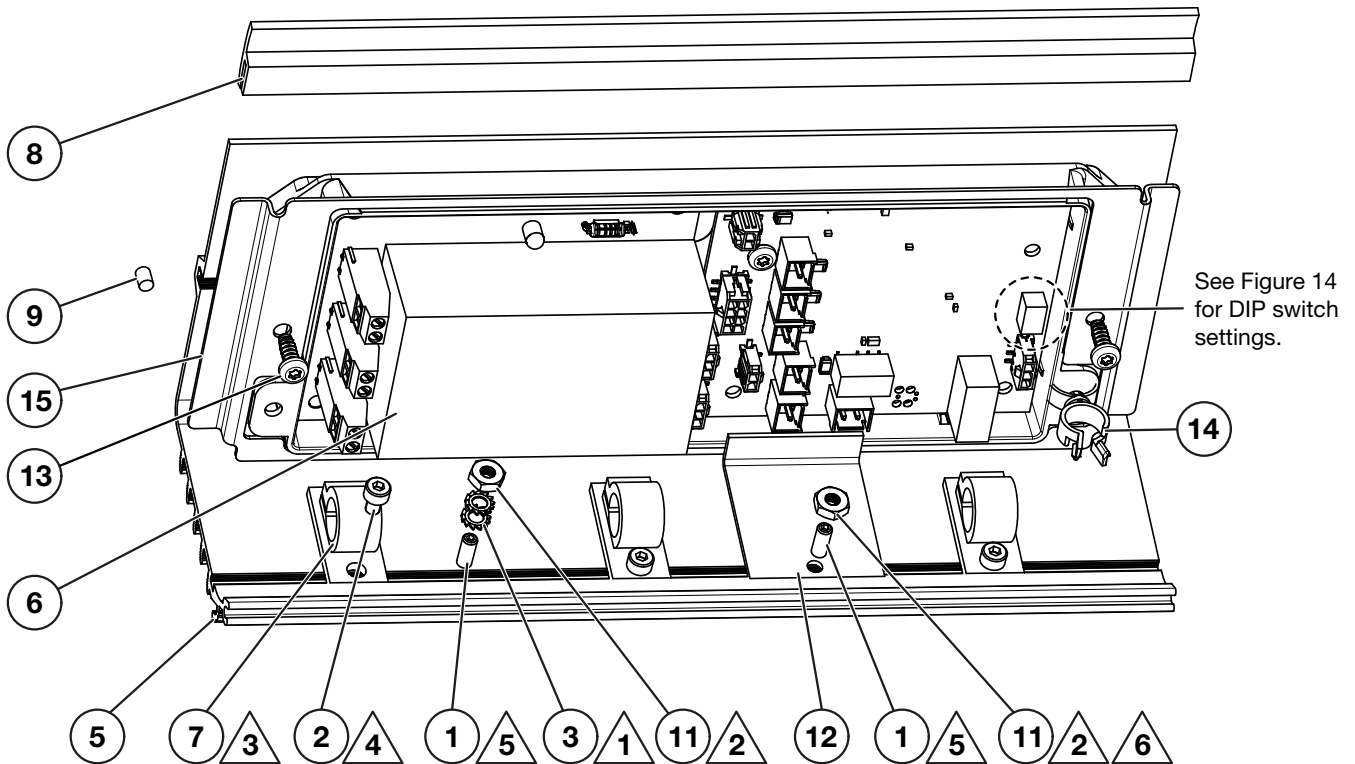
- Attach all wires including ground wire!
- Remove lip seal from old cover and attach to new cover if applicable (only one side has a lip seal).
- See wiring diagram Figure 14 for wire connections.
- See pump cover removal/installation instructions Figure 15.

Repair Parts List for Figure 3

Item	Part Number	Qty.	Description
1	BF1607027AX	2	Set Screw, #8-36 x 0.438, Cup Point, Zinc
3	CCE1040108-7A	2	Lock Washer, External Tooth For M4
5	* DD6792098-P03	1	Pump Cover
6A	DD6987827K	1	Motor Controller Kit, 120V (Model EP3304SB)
6B	DD7318827K	1	Motor Controller Kit, 230V, 240V (Models EB3304SI and EP3304SE)
7	▲ DD7513001	2	Screw, Thread Forming, M4.55 x 10 Long
8	* DD7462037	2	Gasket, 4.0mm Dia x 5.50mm L Cord Stock
---	* See Figure 1	1	CE Safety Label Read Instructions
10	* CBE411028-1A	3	Screw-SHCS, Hex, M4 x 0.7 x 6, 8.8, Zinc
11	DD7516122	2	Nut-Hex Full, #8-36, GRD 2, Zinc
12	DD7609111	1	Bracket, Motor Controller Restraint
13	* DD7326217	3	Cable Tie, Screw Mount
14	* DC9922026	1	Decal High Voltage
15	DD7325217	1	Wire Lock, Standoff
16	DD7697111	1	Bracket, Motor Controller

▲ - Each motor controller kit (items 6A and 6B) includes two thread forming screws (item 7).
 * - Included in Pump Cover Kit DD6792098SR.

Figure 4 - Power/App Assembly



Notes:

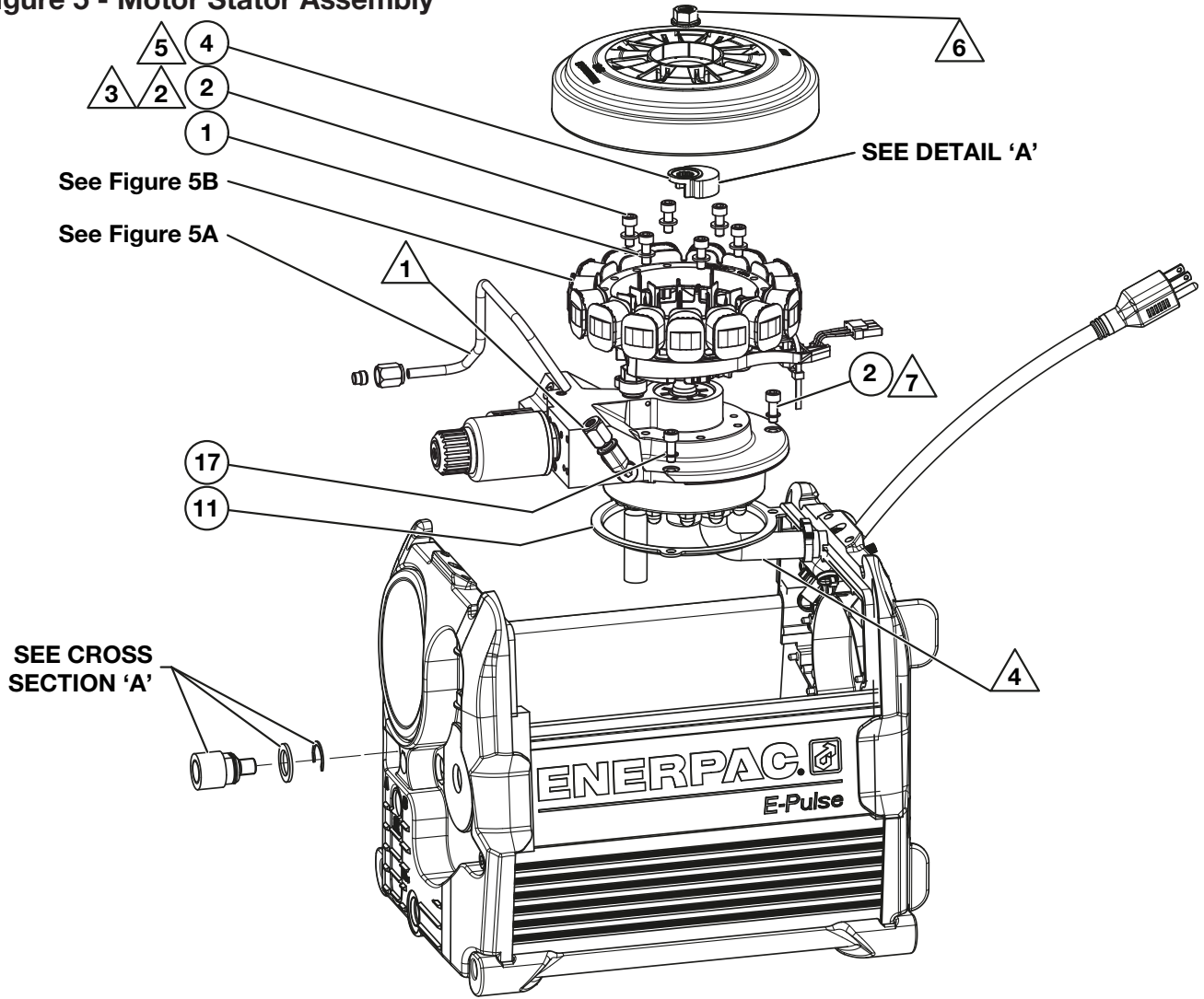
- ① Install ground cable with ring terminal between star washers.
- ② Torque to 8-10 in-lbs [0.9-1.1 Nm].
- ③ Remove adhesive backing before installation.
- ④ Torque to 6-7 in-lbs [0.7-0.8 Nm].
- ⑤ Torque to 5-6 in-lbs [0.6-0.7 Nm].
- ⑥ Apply Loctite 243.

Repair Parts List for Figure 4

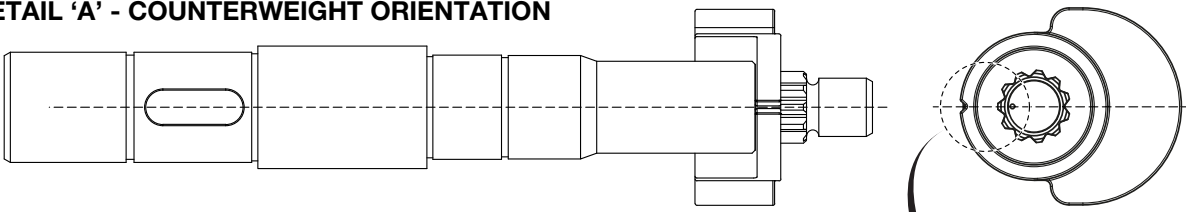
Item	Part Number	Qty.	Description
1	BF1607027AX	1	Set Screw, #8-36 x 0.438, Cup Point, Zinc
2	* CBE411028-1A	3	Screw-SHCS, Hex, M4 x 0.7 x 6, 8.8, Zinc
3	CCE1040108-7A	2	Lock Washer, External Tooth For M4
4	DC9876647	3	Black Cable Tie 6"
5	* DD6792098-P03	1	Cover, Machined, 1 Gal, Yellow
6	DD7298900	1	Power App Board Assembly
7	* DD7326217	3	Cable Tie, Screw Mount
8	DD7448037	1	Lip Seal, E-Pulse
9	* DD7462037	2	Gasket, 4.0mm Dia x 5.50mm L Cord Stock
11	DD7516122	1	Nut-Hex Full, #8-36, GRD 2, Zinc
12	DD7609111	1	Bracket, Motor Controller Restraint
13	DD7513001	2	Screw, Thread Forming, M4.55 x 10 Long
14	DD7325217	1	Wire Lock, Standoff
15	DD7697111	1	Bracket, Motor Controller
---	* See Figure 1	1	Decal, Unplug Cord (<i>not shown</i>)

* - Included in Pump Cover Kit DD6792098SR.

Figure 5 - Motor Stator Assembly

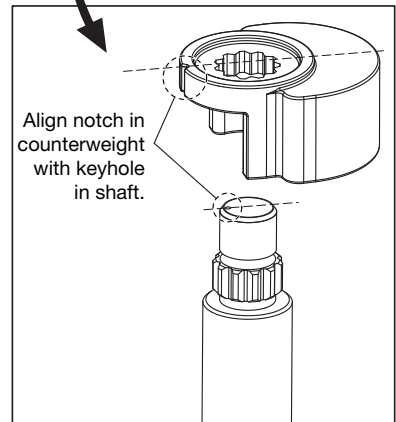


DETAIL 'A' - COUNTERWEIGHT ORIENTATION

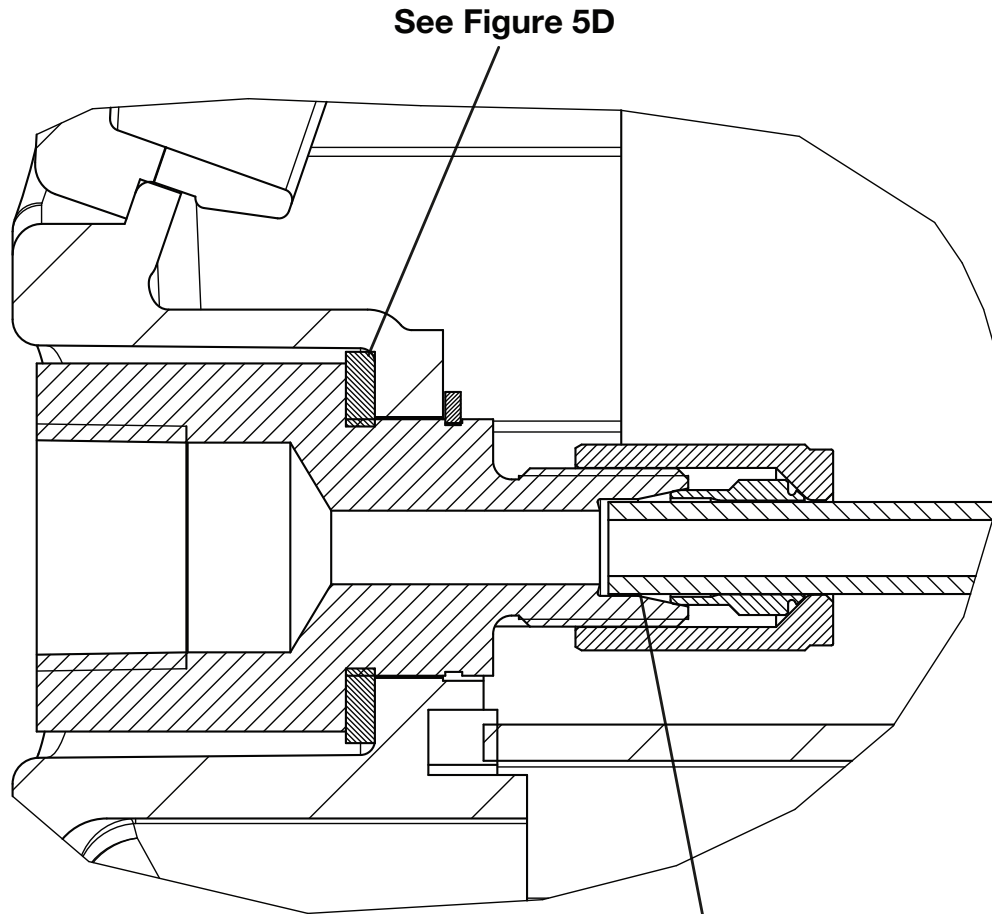


Notes:

- 1 Insert tubes and torque to 200-220 in-lbs [23-25 Nm].
(At manifold end prior to installing pump into reservoir)
- 2 Apply Loctite 243.
- 3 Torque to 42-47 in-lbs [4.7-5.3 Nm].
- 4 Bend tube vertical while installing pump into reservoir.
- 5 Align mark on counterweight with mark on shaft. (See detail A)
- 6 Torque to 100-120 in-lbs [11-14 Nm].
- 7 Torque to 50-60 in-lbs [5.6-6.8 Nm].



CROSS SECTION 'A' (Figure 5)



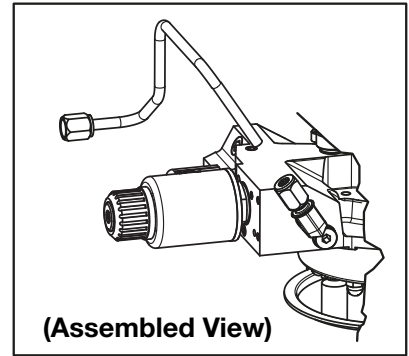
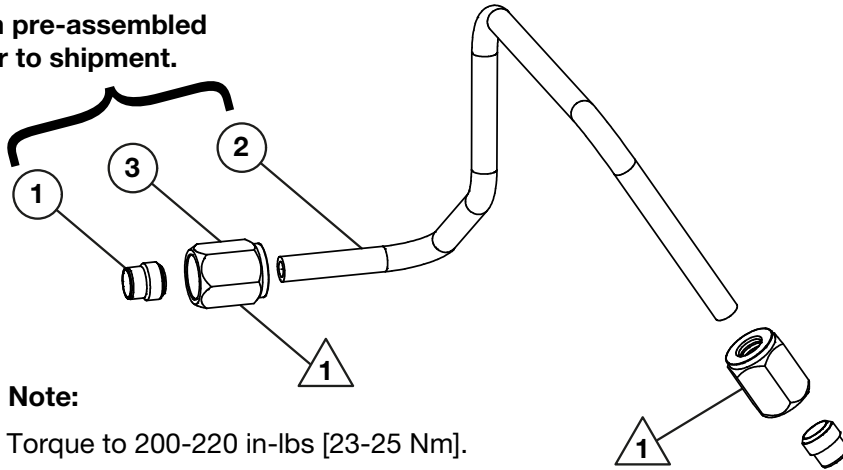
**ORIENT FERRULE FOR COMPRESSION
FITTING WITH SMALL OD TOWARD
TUBE END**

Repair Parts List for Figure 5

Item	Part Number	Qty.	Description
1	CAE1060108-1A	6	Washer-Flat, M6, 6.4 ID x 12 OD x 1.6, Din 125A, Zinc
2	CBE619028-1A	9	Screw-SHCS, Hex, M6 x 1 x 16, 8.8, Zinc
4	DD6763101	1	Plate, Counterweight
11	DD7319037	1	Gasket, Manifold
17	S3037	3	Gasket (See Figure 9D for seal kit)

Figure 5A - Flareless Tube Kit - A Port: DD7038268SR

Item pre-assembled prior to shipment.



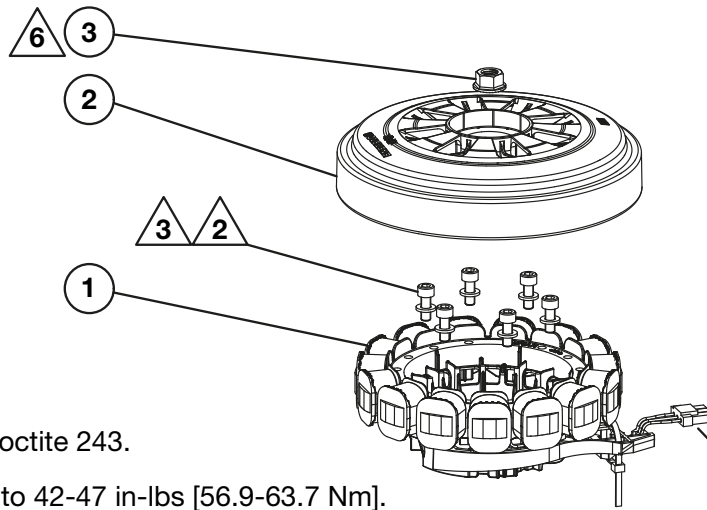
Note:
 1 Torque to 200-220 in-lbs [23-25 Nm].

Repair Parts List for Figure 5A

Item	Part Number	Qty.	Description
1	CU421096	1	Ferrule, Ferulok, 0.25 Tube
2	DD7038268	1	Tube, Flareless, A Port
3	F100093-21	1	Nut, Ferulok, 7/16-20 THD, 0.25

Note: Flareless Tube Kit - A Port DD7038268SR includes all items listed in the table above.

Figure 5B - Motor Replacement Kit: DD6770259K



Notes:
 2 Apply Loctite 243.
 3 Torque to 42-47 in-lbs [56.9-63.7 Nm].
 6 Torque to 100-120 in-lbs [11-14 Nm].

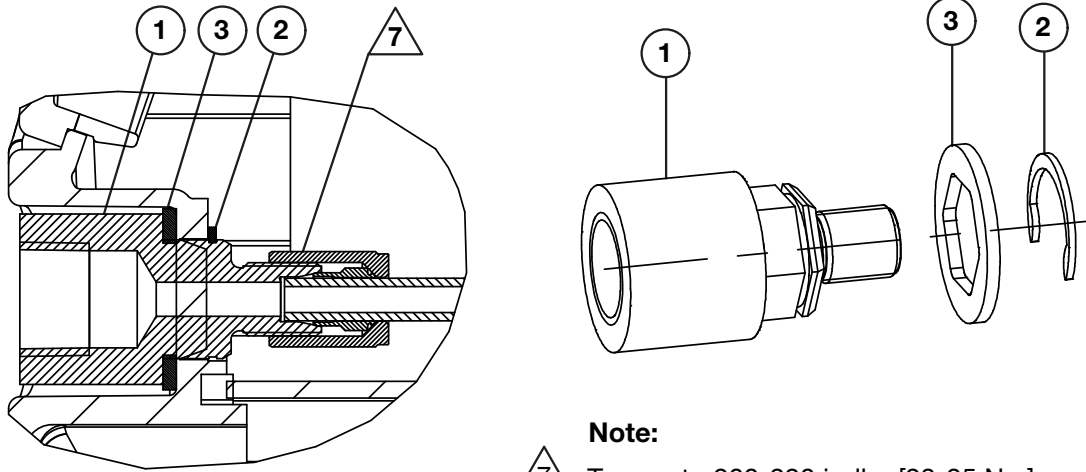
See Figure 14 for electrical wire connections.

Repair Parts List for Figure 5B

Item	Part Number	Qty.	Description
1	DD6770259	1	Motor Stator Assembly
2	DD6771257	1	Motor Rotor
3	DD7003021	1	Nut, Flange M10 x 1.25, With Counterbore

Note: Motor Replacement Kit DD6770259K includes all items listed in the table above.

Figure 5C - Bulkhead Fitting Kit: DD7105093K



Repair Parts List for Figure 5C

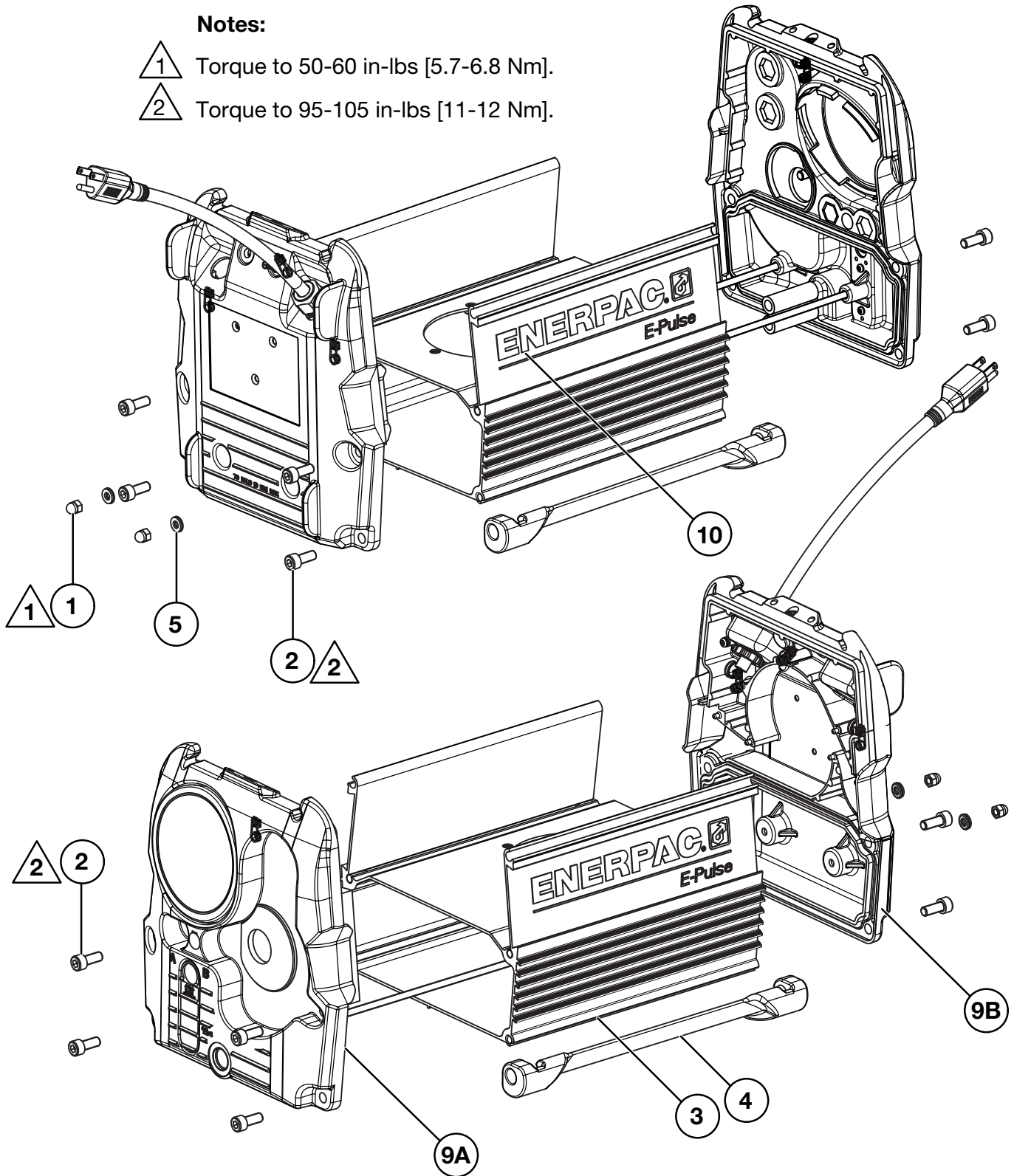
Item	Part Number	Qty.	Description
1	DD7105093	1	Bulkhead Fitting, 3/8" NPT x 0.25 Flareless
2	DD7106044	1	Retaining Ring, External, 13/16" Shaft
3	DD7447037	1	Gasket, Bulkead, E-Pulse

Note: Bulkhead Fitting Kit DD7105093K includes all items listed in the table above.

Figure 6 - Reservoir and End Cap Assembly

Notes:

- ① Torque to 50-60 in-lbs [5.7-6.8 Nm].
- ② Torque to 95-105 in-lbs [11-12 Nm].

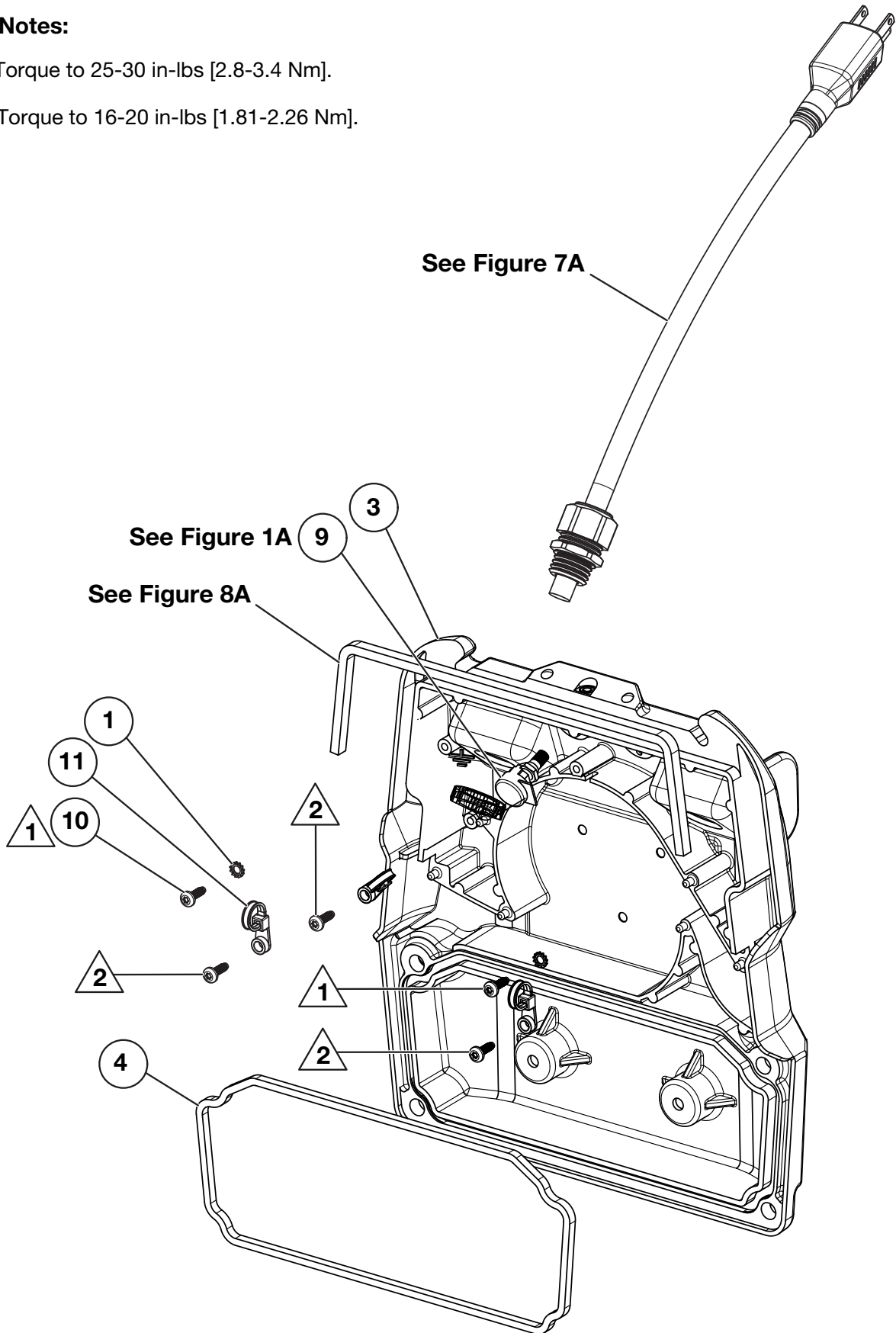


Repair Parts List for Figure 6			
Item	Part Number	Qty.	Description
1	CAE1060055-1A	2	Acorn Nut M6
2	CBE823028SR	8	Screw-SHCS, Hex, M8 x 1.25 x 25, 8.8, Zinc
3	❖ DD6788025-P03	1	Reservoir, Machined, 1 Gal, Yellow
4	DD6795870	2	Foot, Rubber
5	❖ DD7164108	2	Washer, Rubber Sealing, M6
9A	See Figure 8	1	Endcap Assembly, Front
9B	See Figure 7	1	Endcap Assembly, Rear
10	❖ DD7290026	2	Decal, Enerpac Logo, Die-cut
---	❖ S3037	3	Gasket (<i>See Figure 5, item 20</i>)
❖ - Included in Reservoir Kit DD6788025SR.			

Figure 7 - Rear End Cap Assembly

Notes:

- △1 Torque to 25-30 in-lbs [2.8-3.4 Nm].
- △2 Torque to 16-20 in-lbs [1.81-2.26 Nm].



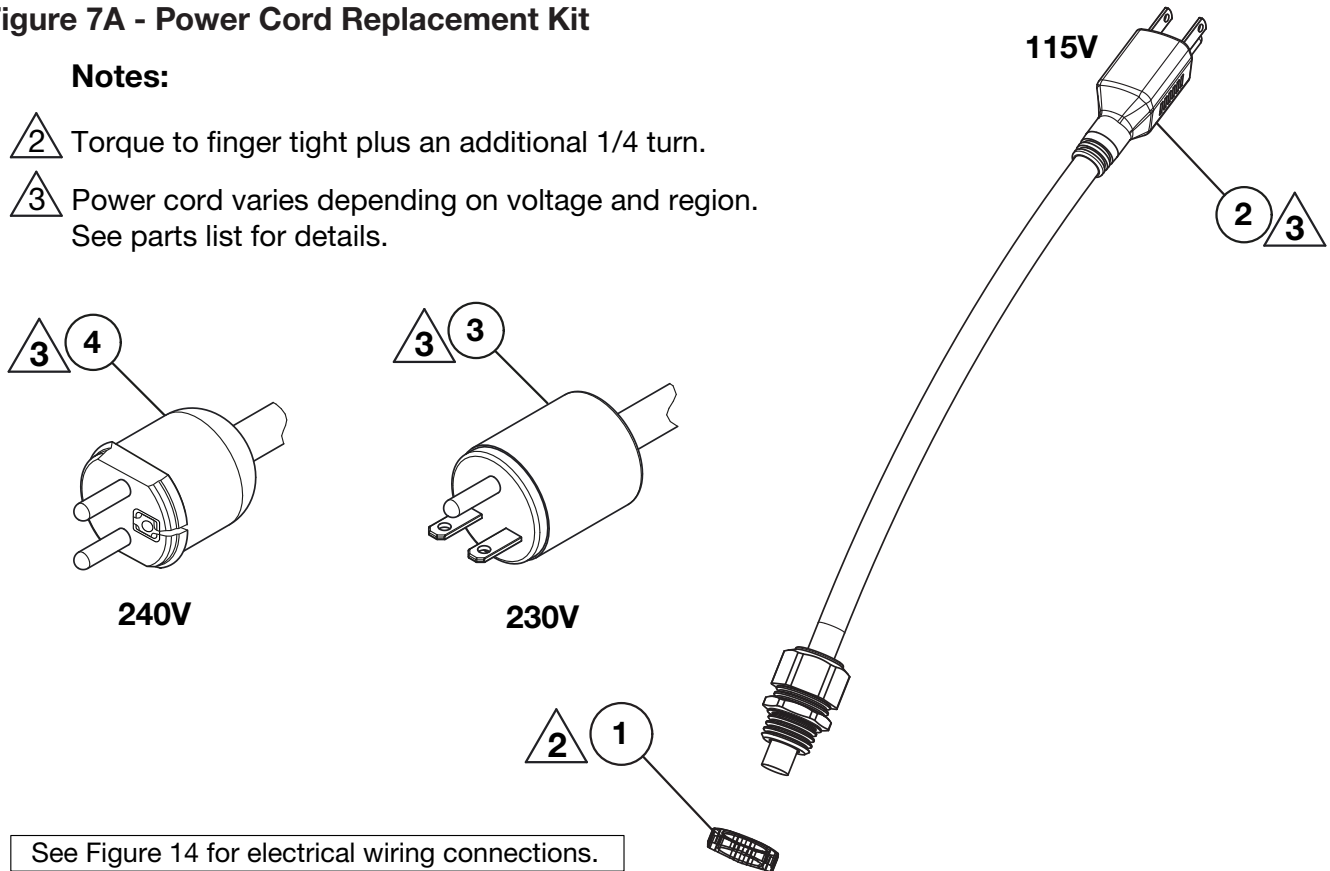
Repair Parts List for Figure 7			
Item	Part Number	Qty.	Description
1	CCE1040108-7A	5	Lock Washer, External Tooth For M4
3	DD6786020	1	End Cap, Rear, Machined, Black
4	✦ DD7017037	1	Gasket, Endcap
9	DD7060960	1	Cable Assembly, Potentiometer
10	DD7328001	5	Screw, Thread Forming, M4 x 12 Long
11	DD7331217	3	Cable Tie, Screw Mount

✦ - Included in Reservoir Kit DD6788025SR.

Figure 7A - Power Cord Replacement Kit

Notes:

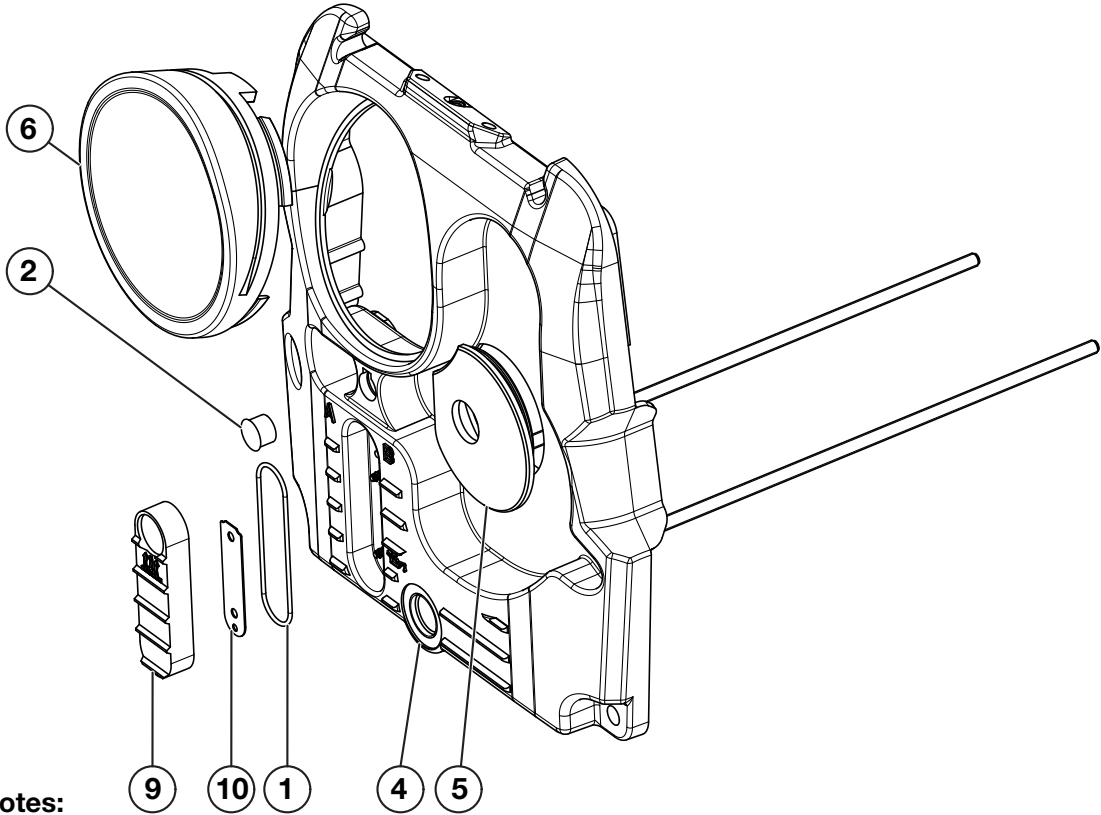
- △² Torque to finger tight plus an additional 1/4 turn.
- △³ Power cord varies depending on voltage and region. See parts list for details.



Repair Parts List for Figure 7A			
Item	Part Number	Qty.	Description
1	DC9538021	1	Locking Nut 20mm
2	DD7044960SR	1	Power Cord, 115 VAC, 50/60 Hz, NEMA 5-15 (Model EP3304SB)
3	DD7045960SR	1	Power Cord, 208/230 VAC, 50/60 Hz, NEMA 6-15 (Model EP3304SI)
4	DD7046960SR	1	Power Cord, 208/240 VAC, 50/60 Hz, CEE 7/7 EHUK (Model EP3304SE)

Note: Item 1 included in power cord kits.

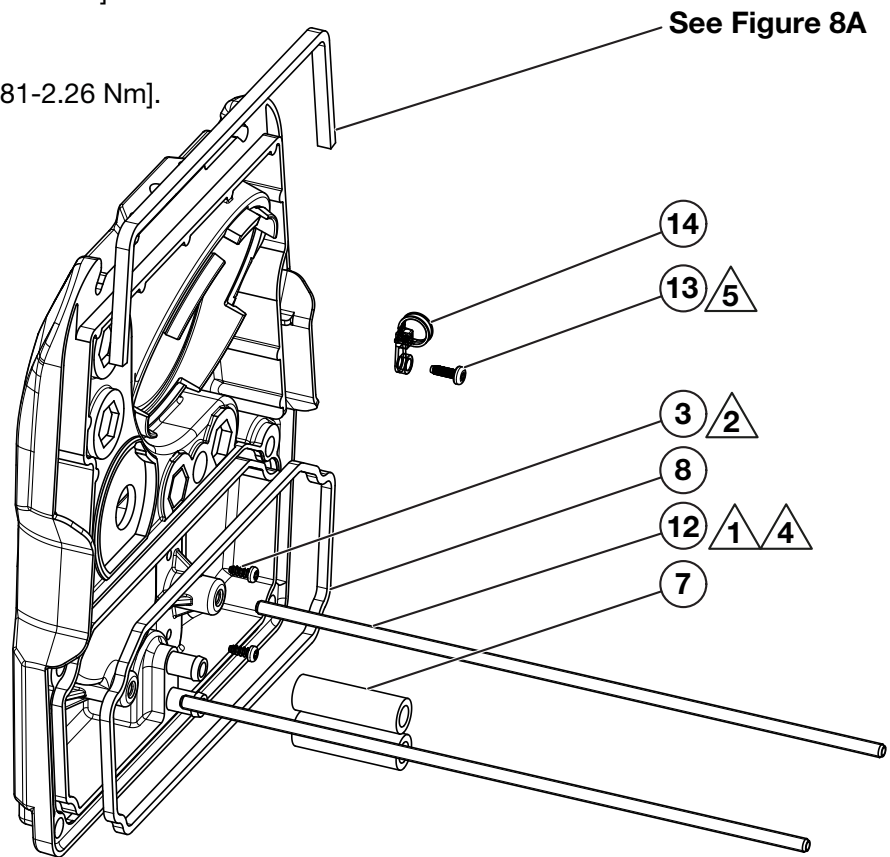
Figure 8 - Front End Cap Assembly



Notes:

- ▲ 1 Apply Loctite 2760.
- ▲ 2 Torque to 8-10 in-lbs [0.9-1.1 Nm].
- ▲ 4 Install to full depth.
- ▲ 5 Torque to 16-20 in-lbs [1.81-2.26 Nm].

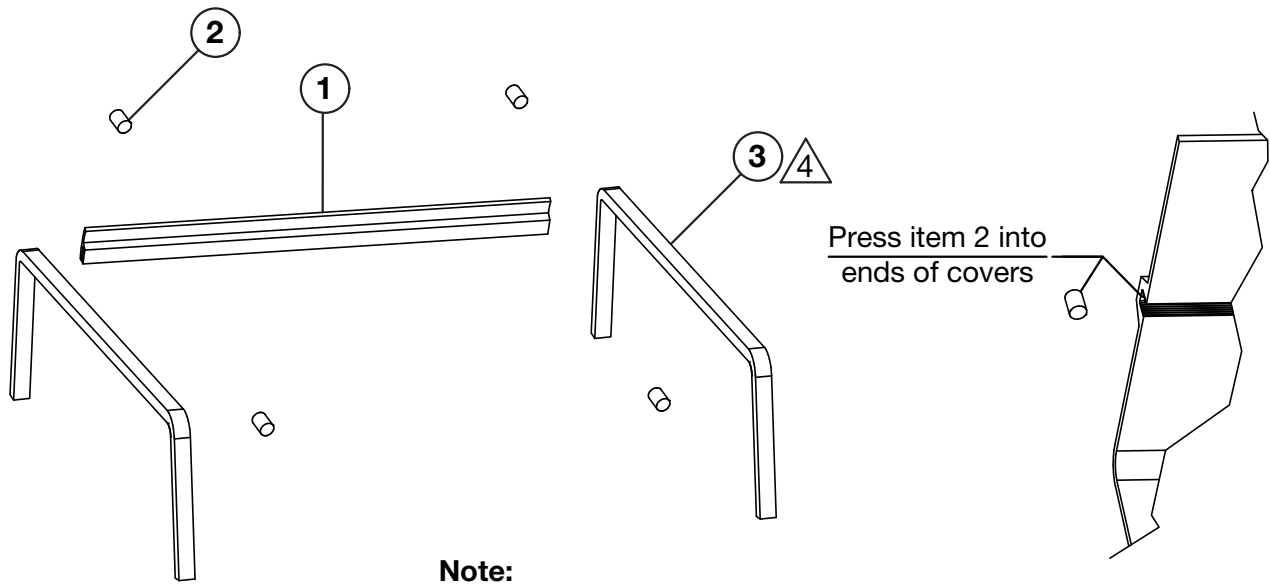
See Figure 12 for optional pressure gauge assembly.



Repair Parts List for Figure 8			
Item	Part Number	Qty.	Description
1	B1240503	1	O-Ring, 2-1/8 ID, 0.070 W
2	DC8228009	1	Dome Plug 1/2"
3	DD3883028	2	Screw M4 x 10 Thread FRM, TRX
4	DD6784020-1	1	End Cap, Front, Machined, Black
5	DD7264808	1	Grommet, Valve, Rubber, 3/2E
6	DD6997020	1	Cap, Gauge
7	DD7002646	2	Hose, Rubber, 9.52 x 15.88 x 50L
8	♣ DD7017037	1	Gasket, Endcap
9	DD7021223	1	Sight Gauge
10	DD7022225	1	Insert, Sight Gage
12	DD7107305	2	Threaded Rod, M6 x 1.0 x 300 Long
13	DD7328001	1	Screw, Thread Forming, M4 x 12 Long
14	DD7331217	1	Cable Tie, Screw Mount

♣ - Included in Reservoir Kit DD6788025SR.

Figure 8A - Water Ingress Seal Kit: EPWISK1



Note:
 ⚠ Remove adhesive backing before installation.

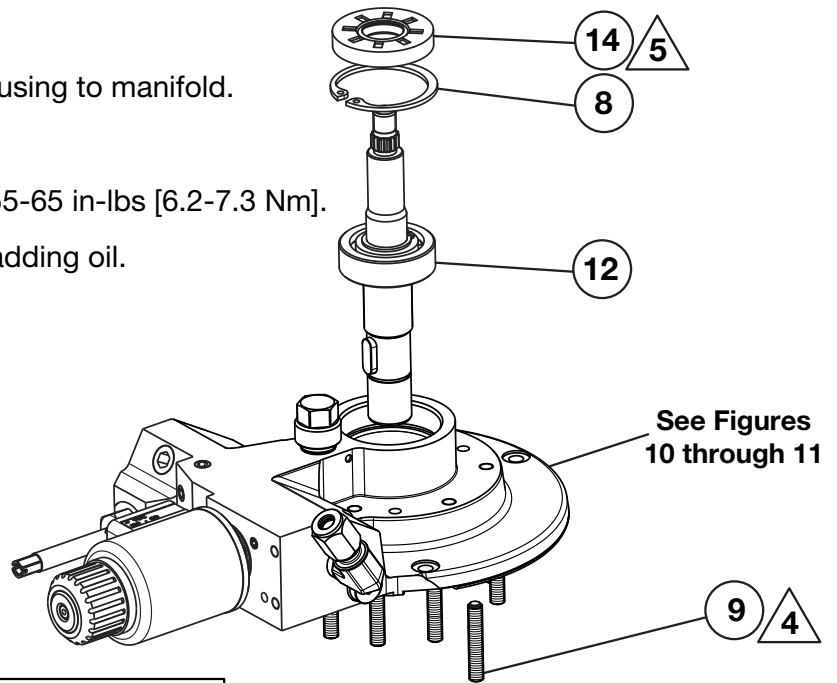
Repair Parts List for Figure 8A			
Item	Part Number	Qty.	Description
1	DD7448037	1	Lip Seal, E-Pulse
2	DD7462037	4	Gasket, 4.0mm Dia x 5.50mm L Cord Stock
3	DD7030037	1	Gasket Tape, 3/16" THK x 1/4" W x 12.25" L

Note: Water Ingress Seal Kit EPWISK1 includes all items listed in the table above.

Figure 9 - Housing Assembly

Notes:

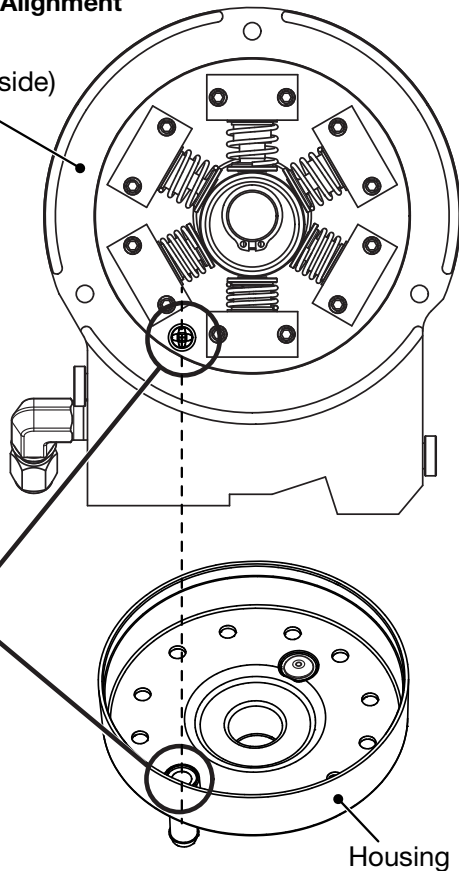
- ① Apply grease to aid assembly of housing to manifold.
- ② Torque to 7-9 ft-lbs [9.4-12.2 Nm].
- ④ Apply Loctite 2760, and torque to 55-65 in-lbs [6.2-7.3 Nm].
- ⑤ Install flush with top surface, after adding oil.
- ⑦ Orient as shown.



VIEW A - Drain Hole Alignment

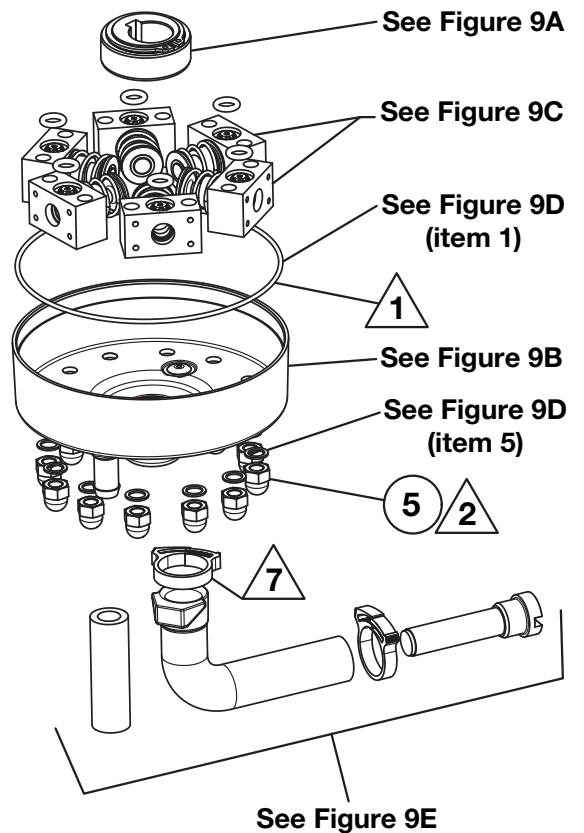
Manifold
(viewed from underside)

Drain Holes



Housing

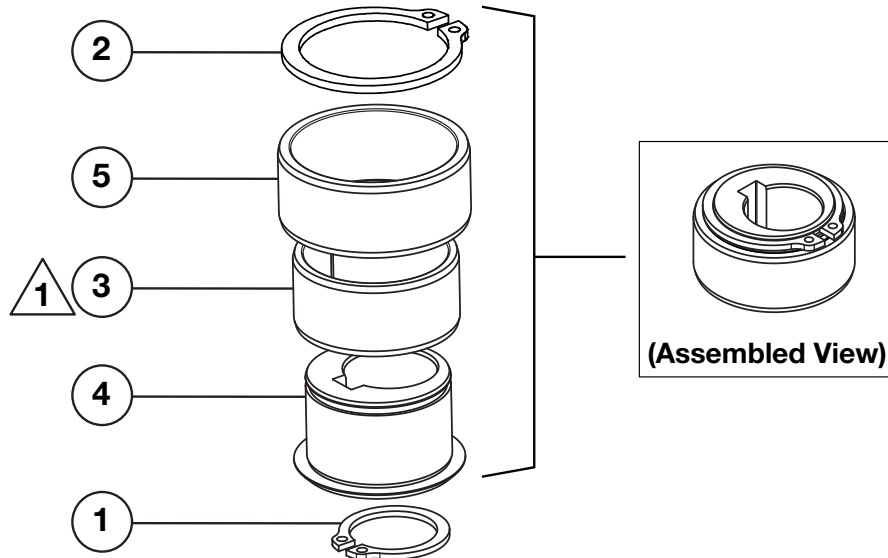
IMPORTANT: As parts are assembled, align drain hole in housing with drain hole on manifold.



Repair Parts List for Figure 9			
Item	Part Number	Qty.	Description
5	CAE1060055-1A	12	Acorn Nut M6
8	CCA1042044-1C	1	Retaining Ring
9	CCA627028-5A	12	Screw-Set, Flat, HS, M6 x 1 x 35, 45H, Plain
12	DD7004900	1	Shaft, Sub Assembly
14	DD7008476	1	Seal, Rotary 17 x 42 x 7

Figure 9A - Eccentric Kit: DD72575375SR

Eccentric (items 1-4) is shipped pre-assembled. Parts are shown disassembled for reference purposes only. Item 1 is shipped loose with the eccentric assembly and attaches to the bottom of the motor shaft after the eccentric assembly is put on.



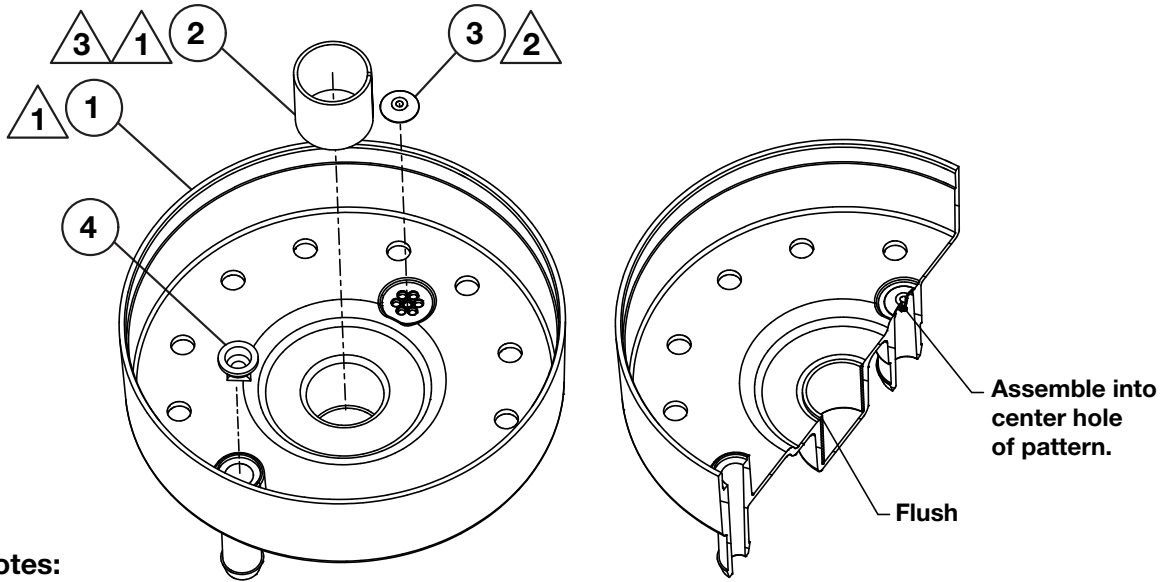
Note:

1 Press fit item 3 into item 5 with 1100 psi on 10 ton press.

Repair Parts List for Figure 9A			
Item	Part Number	Qty.	Description
1	CCA1018044-1A	1	Retaining Ring-Ext., 18mm, STL
2	CCA1028044-1A	1	Retaining Ring-Ext., 28mm, STL
3	DD6779350	1	Bearing, Sleeve, 28 x 32 x 15
4	DD7257537	1	Eccentric (3mm Offset)
5	DD7261350	1	Race, Cam

Note: Eccentric Kit DD72575375SR includes all items listed in the table above (pre-assembled).

Figure 9B - Pump Housing Kit: DD7005900SR



Notes:

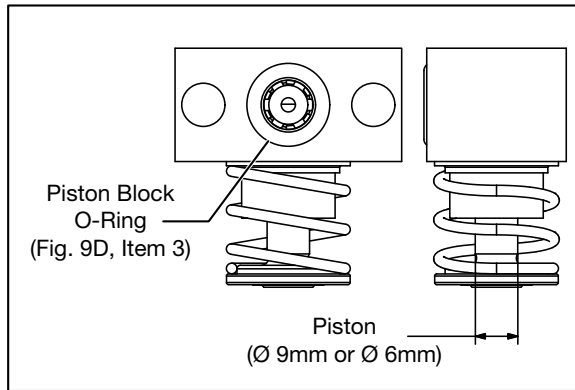
- 1 Press item 1 and 2 together flush as shown. 375-425 psi using 10 ton press.
- 2 Press using finger.
- 3 Lubricate with oil prior to assembly.

Repair Parts List for Figure 9B

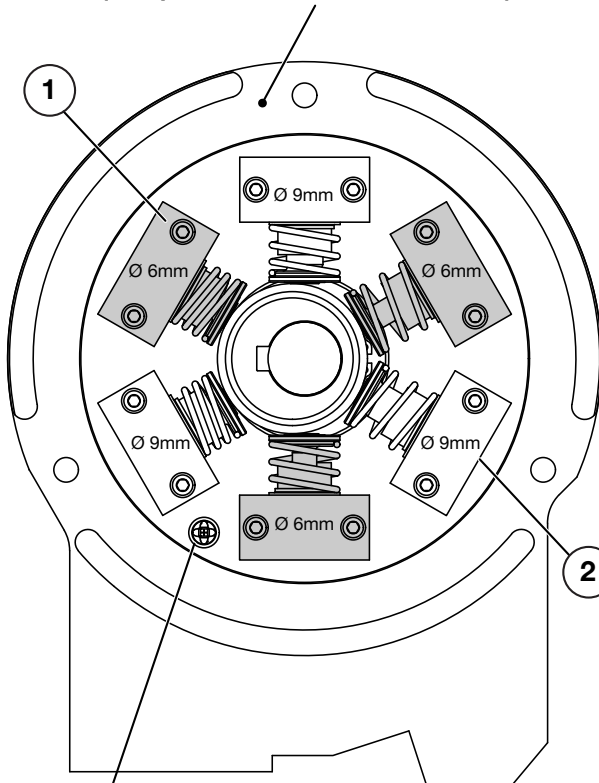
Item	Part Number	Qty.	Description
1	DD6762001	1	Housing, Pump
2	DD6775039	1	Bushing, 18 x 20 x 20, Housing
3	DD6965661	1	Inlet Check Umbrella Valve, Housing
4	DD7603101	1	Valve, Mini, Duckbill

Note: Pump Housing Kit DD7005900SR includes all items listed in the table above.

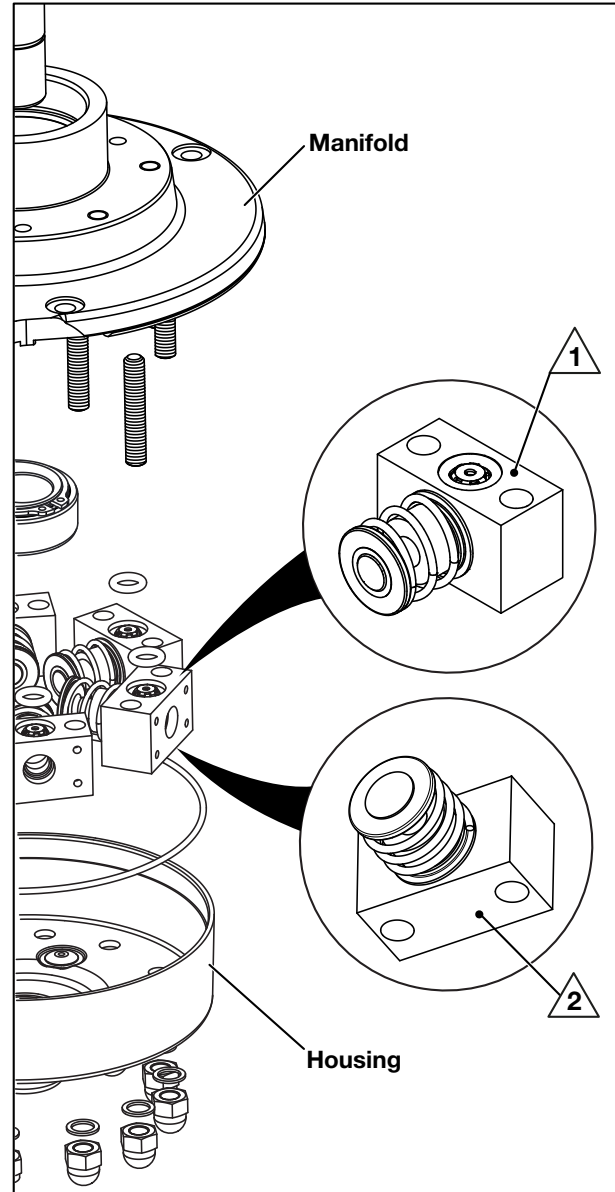
Figure 9C - Piston Block Assembly Kits: DD7230900SR and DD7231900SR



(Pump manifold viewed from below)



Oil Drain Hole



IMPORTANT:

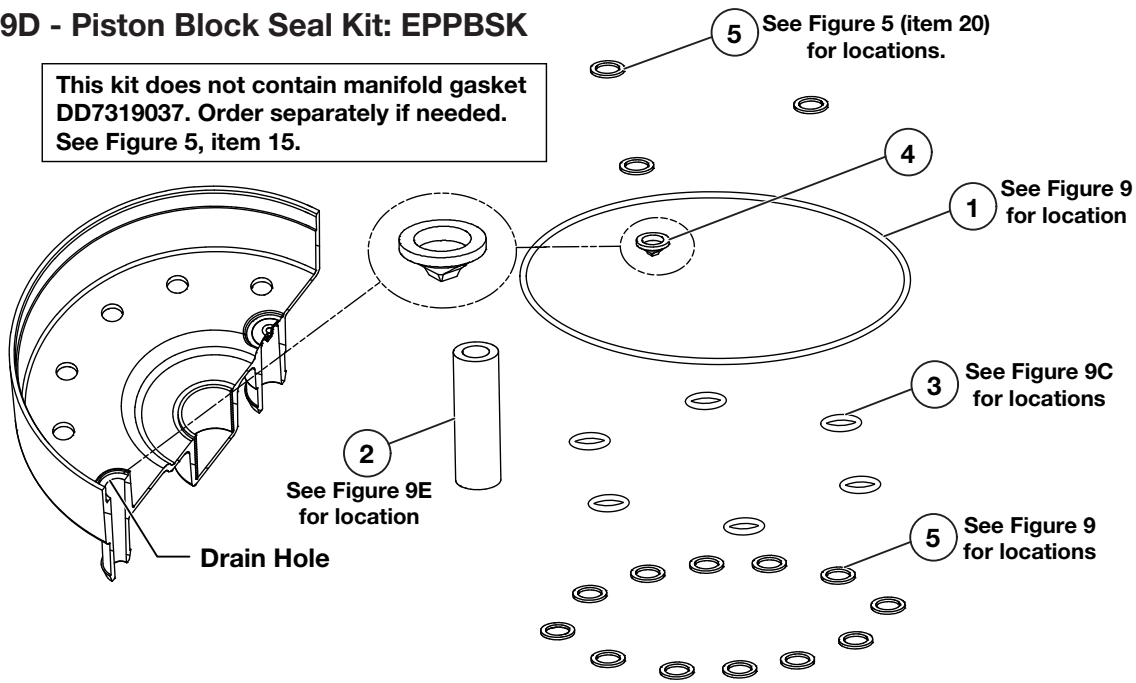
- 1 Side with oil port must face toward manifold.
- 2 Flat side must face toward housing.

- Each piston block kit includes 1 piston block and 1 piston block O-Ring (Figure 9D, item 3).
- It is recommended that new O-Rings be installed on ALL piston blocks, even if only some of the piston blocks are being replaced.
- A complete set of O-Rings and gaskets is provided in the piston block seal kit (order separately - See Figure 9D).
- Refer to Figures 9, 9A, 9B and 9D for torque values and additional assembly instructions.

Repair Parts List for Figure 9C			
Item	Part Number	Qty.	Description
1	DD7230900SR	3	Piston Block, Ø 6mm
2	DD7231900SR	3	Piston Block, Ø 9mm

Figure 9D - Piston Block Seal Kit: EPPBSK

This kit does not contain manifold gasket DD7319037. Order separately if needed. See Figure 5, item 15.

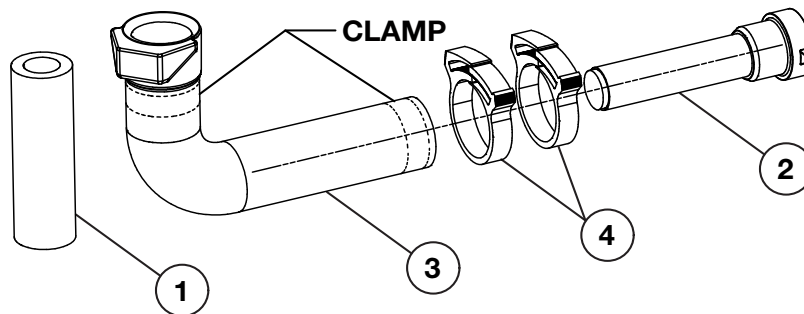


Repair Parts List for Figure 9D

Item	Part Number	Qty.	Description
1	B1400503	1	O-Ring 4-1/4", 4-3/8", 1/16", NBR, 70 Duro
2	DD7002646	1	Hose Rubber, 9.52 x 15.88 x 50L
3	DD7616903	6	O-Ring, Piston Block, Metric, 8 x 2, NBR, 90 Duro
4	DD7603101	1	Valve, Mini, Duck Bill
5	S3037	12	Gasket

Note: Piston Block Seal Kit EPPBSK includes all items listed in the table above.

Figure 9E - Intake Suction Filter Kit: DD7176118K

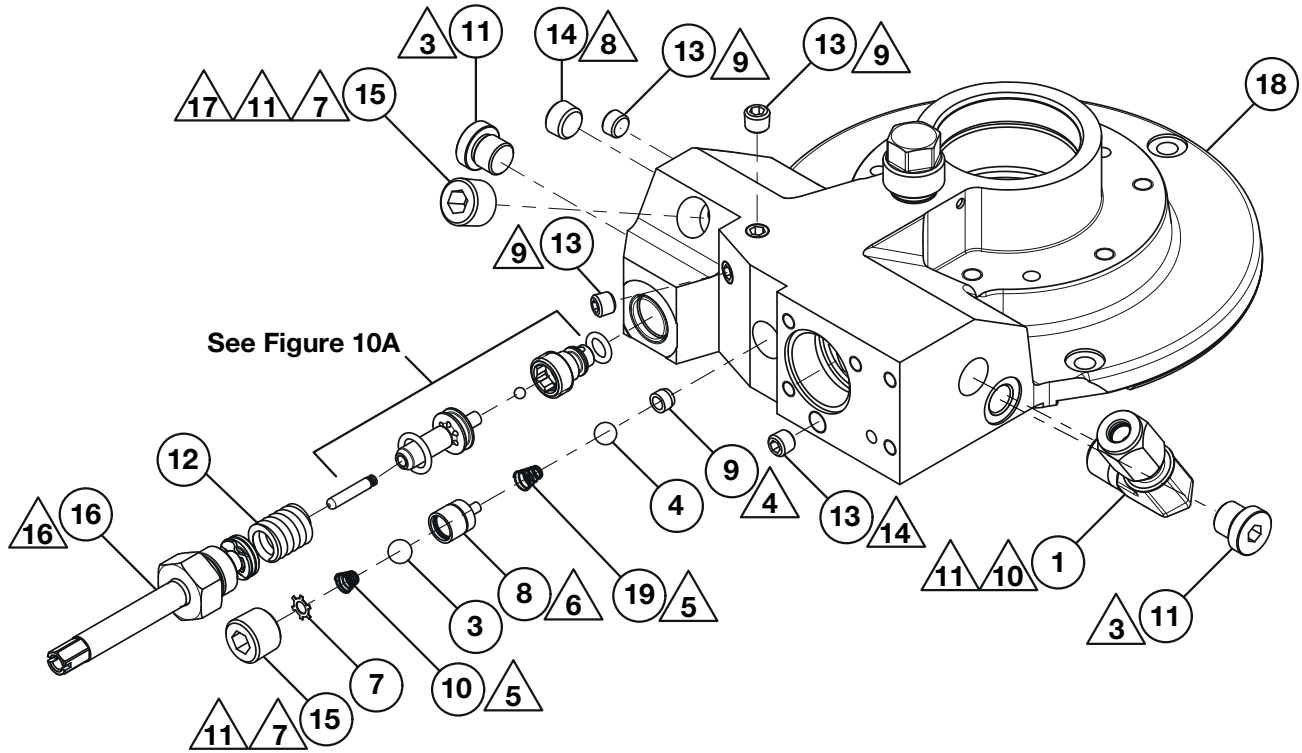


Repair Parts List for Figure 9E

Item	Part Number	Qty.	Description
1	DD7002646	1	Hose, Rubber, 9.52 x 15.88 x 50L
2	DD7176118	1	Filter, In Line
3	DD7177268	1	Tube, Inlet Filter
4	DD7222299	2	Clamp, Inlet Filter

Note: Intake Suction Filter Kit DD7176118K includes all items listed in the table above.

Figure 10 - Direct Drive Pump Assembly



Notes:

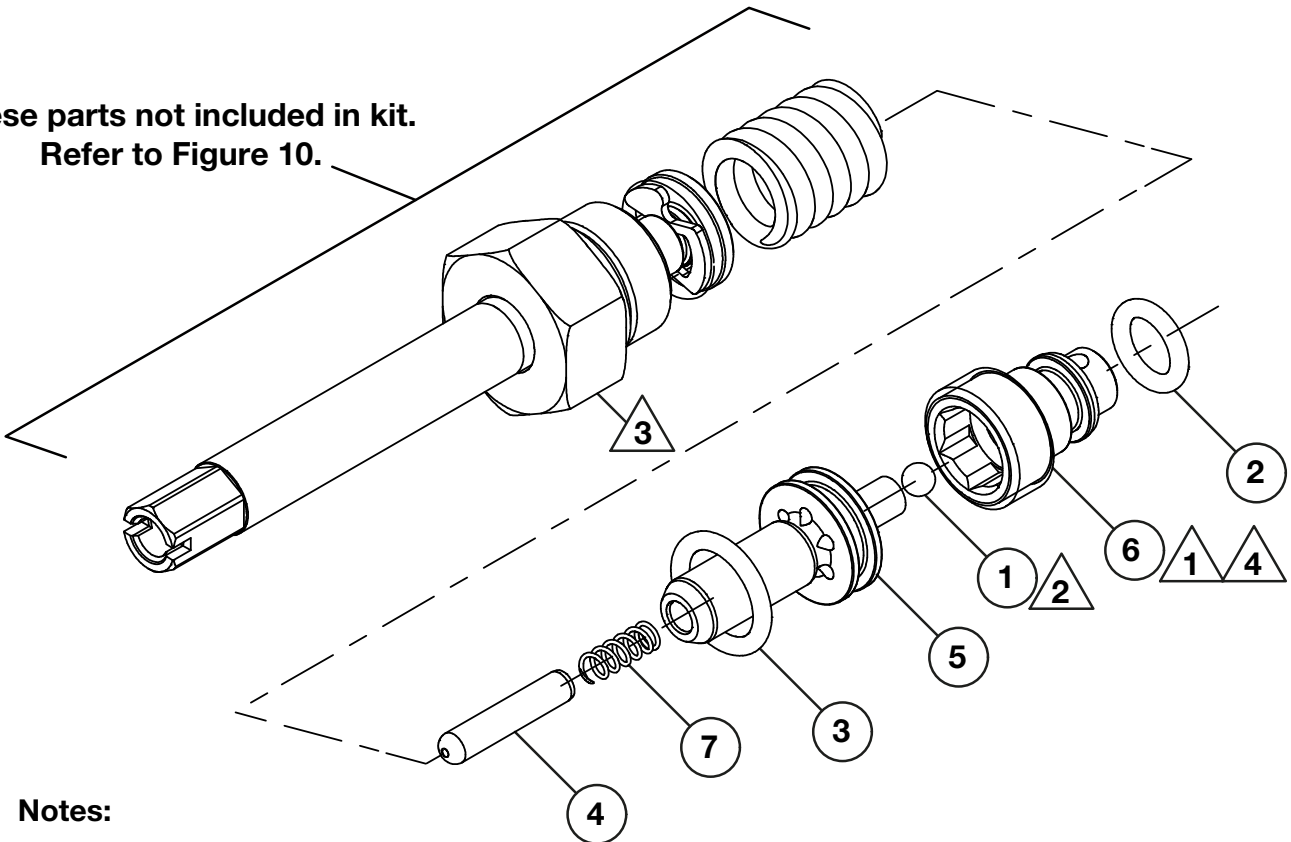
- △3 Torque to 10-12 ft-lbs [14-16 Nm].
- △4 Coin at 300 psi on 10 ton press after assembly, Press into manifold 500 psi on 10 ton press.
- △5 Observe direction.
- △6 Press fit at 1100 psi on 10 ton press.
- △7 Torque to 28-34 ft-lbs [38-46 Nm].
- △8 Lubricate and torque to 8-10 ft-lbs [10.9-13.6 Nm].
- △9 Torque to 6-8 ft-lbs [8-11 Nm].
- △10 Torque to orientation, 28 ft-lbs [40 Nm] min.
- △11 Apply Teflon tape to NPTF thread.
- △14 Torque to below flush, 7 ft-lbs [9.5 Nm] min.
- △16 Torque to 13-16 ft-lbs, [18-22 Nm].
- △17 Item not used on units equipped with optional pressure gauge (see Fig. 12).

Repair Parts List for Figure 10			
Item	Part Number	Qty.	Description
1	A8033096	1	Elbow Fitting 0.25 NPTF x 0.25 Flareless
3	B1005016	1	Ball, 3/16 Dia.
4	B1006016	1	Ball, 7/32 Dia.
6	BA0210059	1	Dowel Pin 1/8" x 5/8" Long
7	BSS5356D	1	Retaining Ring
8	BSS5357D	1	Seat Piston Upper
9	BSS5358D	1	Seat Piston Lower
10	BSS5809D	1	Conical Spring
11	CS236006	2	Plug G1/8 Steel W/Seal

Repair Parts List for Figure 10 (Continued)			
Item	Part Number	Qty.	Description
12	DA3282110	1	Spring-Comp.,320 lbs/in
13	DC6792245	4	PTF-SAE Flush Plug 0.062
14	DC6793245	1	PTF-SAE Flush Plug 0.125
15	93950	2	Pipe Plug 0.250
16	Not Available	1	Plug Asm. UARV
18	DD7052900	1	Direct Drive Pump, DMPE
19	DD7801110	1	Spring, Compression 0.228 O.D. x 0.327 F.I.

Figure 10A - Rebuild Kit, User-Adjustable Relief Valve: DD7234290K

**These parts not included in kit.
Refer to Figure 10.**



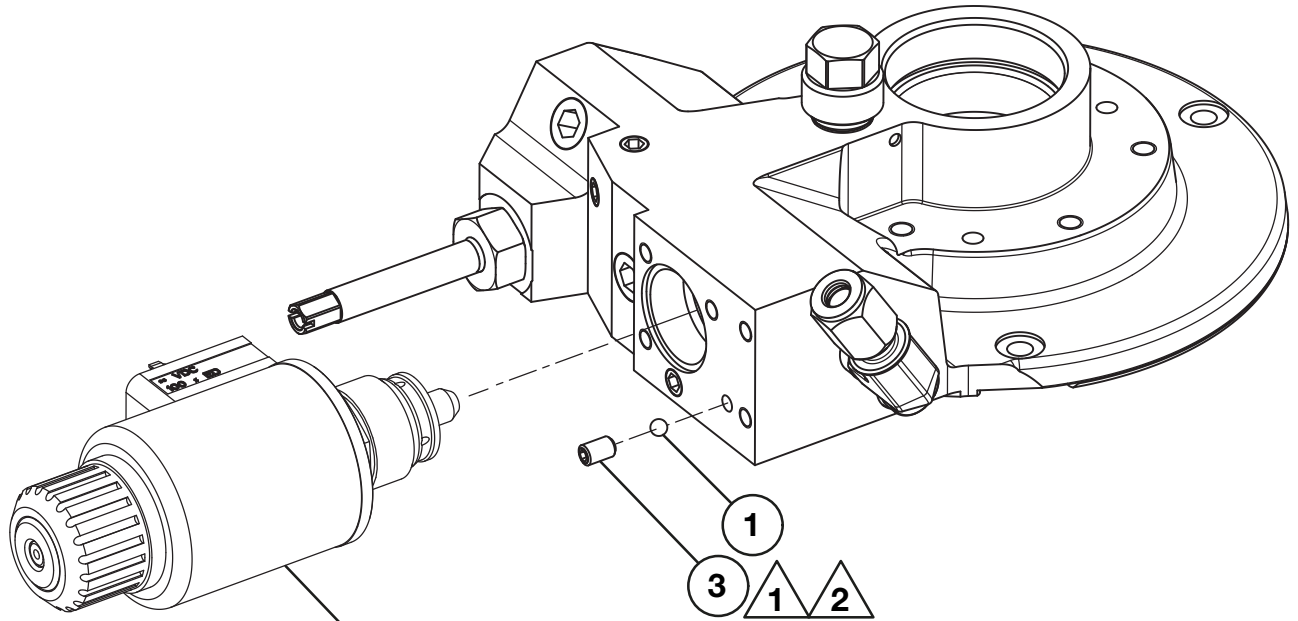
Notes:

- △ 1 Torque to 84-108 in-lbs [9.5-12.2 Nm]. Lubricate O-Ring.
- △ 2 Press fit 150-200 psi on 10 ton press, Item 1 onto item 5.
- △ 3 Torque to 13-16 ft-lbs [18-22 Nm].
- △ 4 Coin 150 psi on 10 ton press.

Repair Parts List for Figure 10A			
Item	Part Number	Qty.	Description
1	B1003016	1	Ball, 0.125 Dia.
2	B1010803	1	O-Ring-1/4", 3/8", 1/16", Disogrin, 92 Duro
3	B1012203	1	O-Ring-3/8", 1/2", 1/16", Viton, 90 Duro
4	BA0210059	1	Dowel Pin 1/8" x 5/8" Long
5	DD6780013	1	Ball Guide
6	DD7234290	1	Ball Seat
7	PA27110	1	Spring-Comp., 8.30 lbs/in

Note: Rebuild Kit, User-Adjustable Relief Valve DD7234290K includes all items listed in the table above.

Figure 11 - 3/2 Solenoid Valve Assembly



**Solenoid Valve
(See Figure 11A)**

Notes:

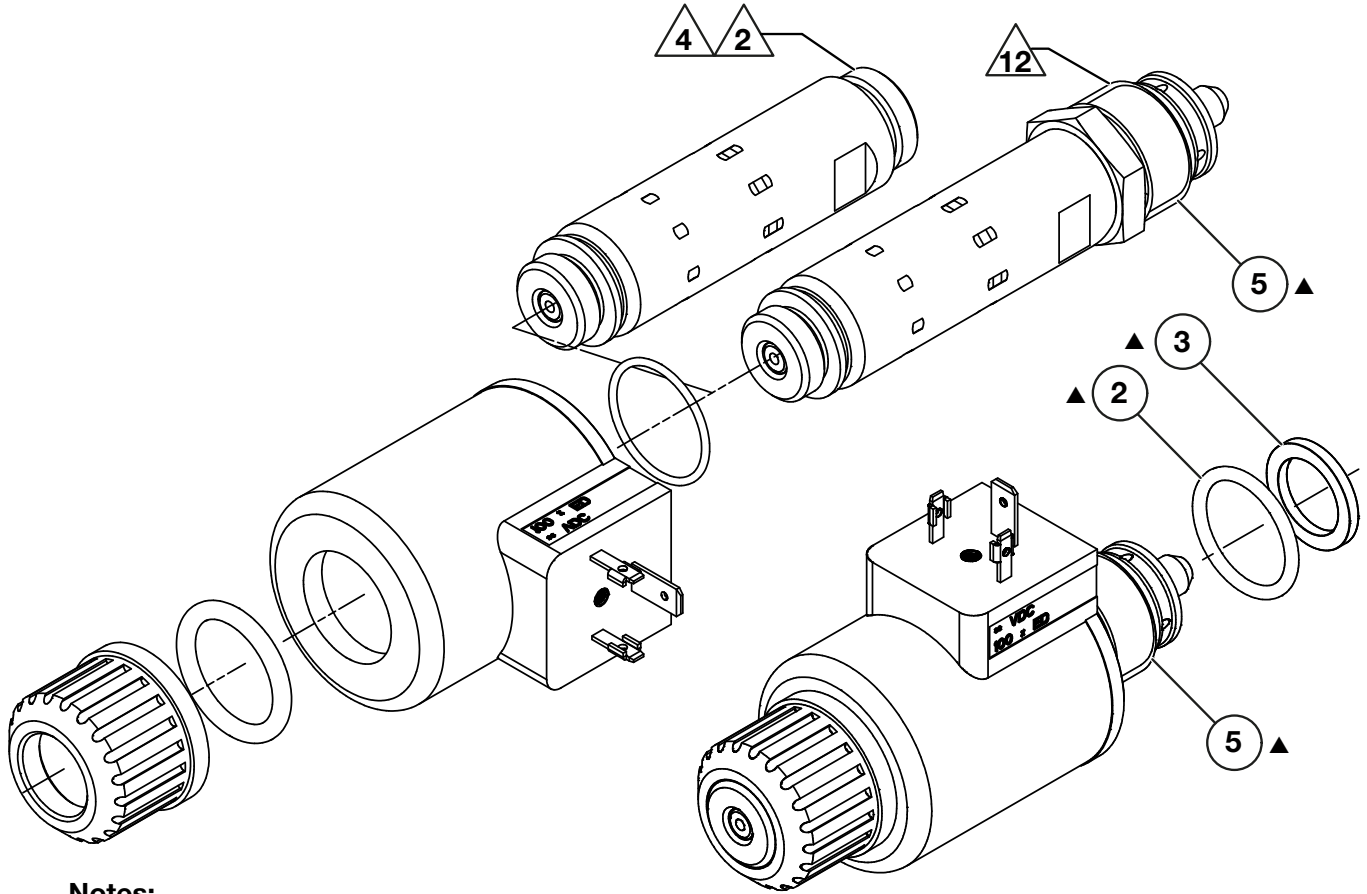
△ 1 Apply Loctite 243.

△ 2 Torque to 36-48 in-lbs [4.1-5.4 Nm].

Repair Parts List for Figure 11

Item	Part Number	Qty.	Description
1	B1004016	1	Ball, 5/32 Dia.
3	CCA513028-5A	1	Screw-Set, Flat, HS, M5 x 0.8 x 8, 45H, Plain

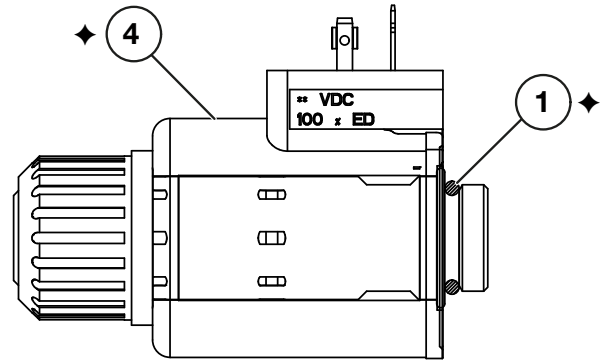
Figure 11A - 3/2 Solenoid Valve Kits: DD7096720SR and EP3SVK



Notes:

- ▲ 2 Apply Loctite 243.
- ▲ 4 Torque core tube to 10-12 ft-lbs [13.6-16.3 Nm].
- ▲ 12 Torque valve assembly to 90-95 ft-lbs [122-129 Nm].

- EP3SVK is a full service replacement and includes all items shown in the parts list.
- DD7096720SR is a solenoid assembly and includes items 1 and 4 only.
- Internal parts of valve (item 5) are NOT AVAILABLE.



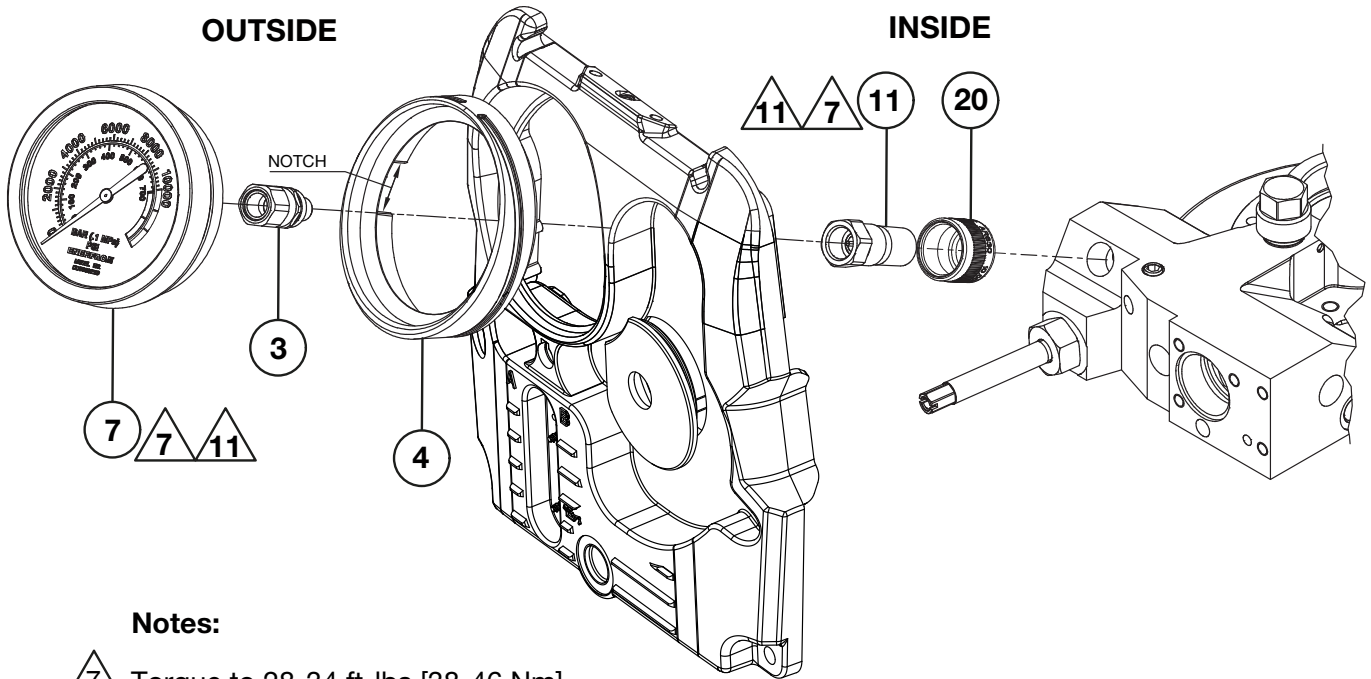
Repair Parts List for Figure 11A

Item	Part Number	Qty.	Description
1	◆ B1012503	1	O-Ring 5/8", 13/16", NBR, 90 Duro
2	▲ B1118903	1	O-Ring 7/8", 1-1/16", 3/32", NBR, 90 Duro
3	▲ CL344167	1	Gasket
4	◆ DD7096720	1	Solenoid, 2mm Stroke, 38W 24DC, Continuous Duty
5	▲ DD7070900	1	Valve Assembly, 3/2 Solenoid Valve



◆ - Included in Solenoid Valve Kit DD7096720SR.

▲ - Included in Solenoid Valve Kit EP3SVK.

Figure 12: Hydraulic Pressure Gauge Kit: EPGK



Notes:

-  Torque to 28-34 ft-lbs [38-46 Nm].
-  Apply Teflon tape to NPTF thread.

Repair Parts List for Figure 12

Item	Part Number	Qty.	Description
3	CF773900	1	Half Coupler, Hose End
4	DD6796808	1	Grommet, Gauge, Rubber
7	DD6988223	1	Gauge
11	CF778900	1	Ram Coupler Purch Comp
20	M49489	1	Collar

Notes:

- Hydraulic Pressure Gauge Kit EPGK includes all items listed in the table above.
- Hydraulic Pressure Gauge (optional accessory) is factory installed on pumps with model numbers ending in “-G”.
- Kit EPGK may be installed on pumps that were not equipped with a pressure gauge at time of manufacture.

Figure 13 - Hydraulic Schematic Diagram

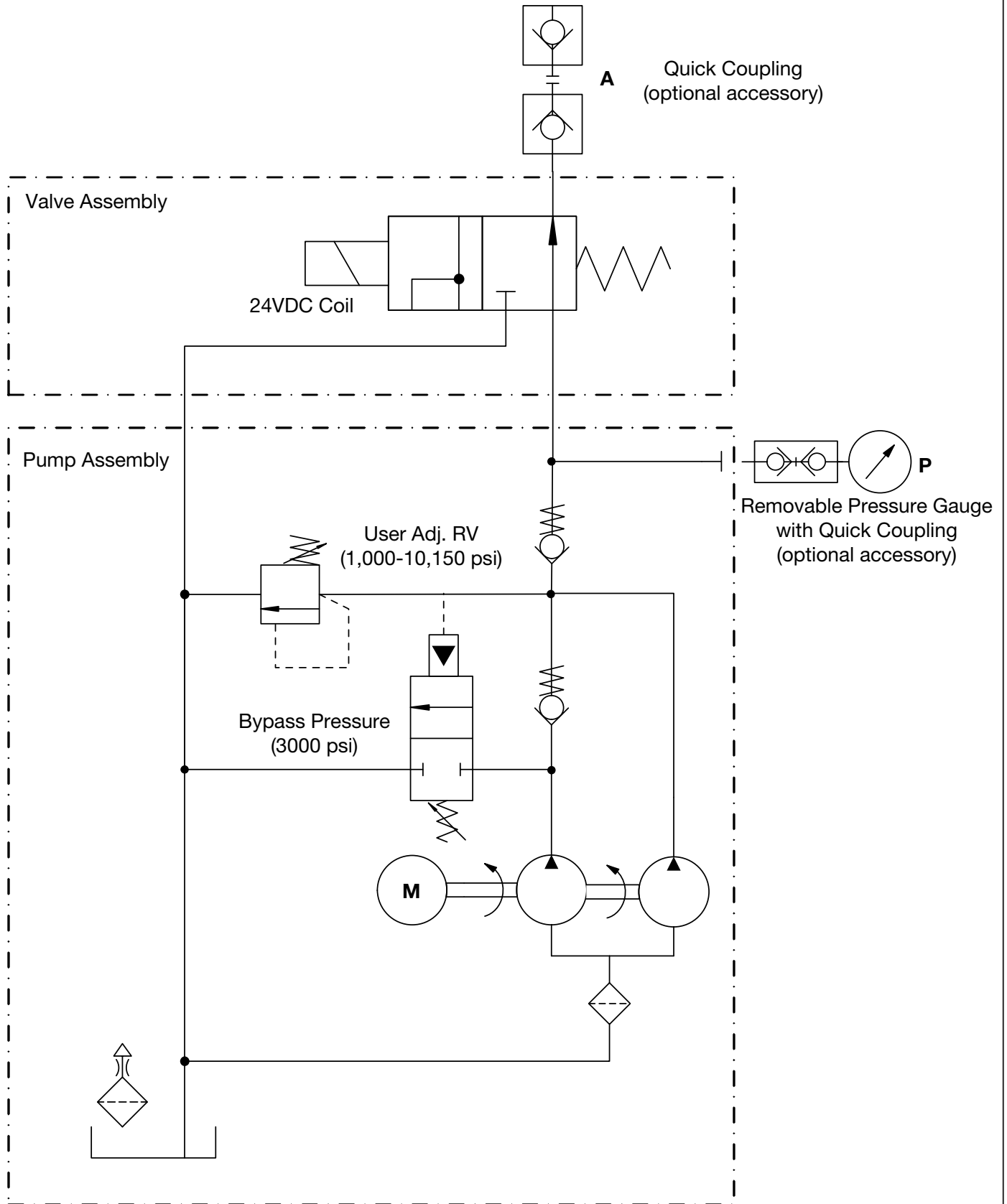


Figure 14 - Electrical Wiring Diagram

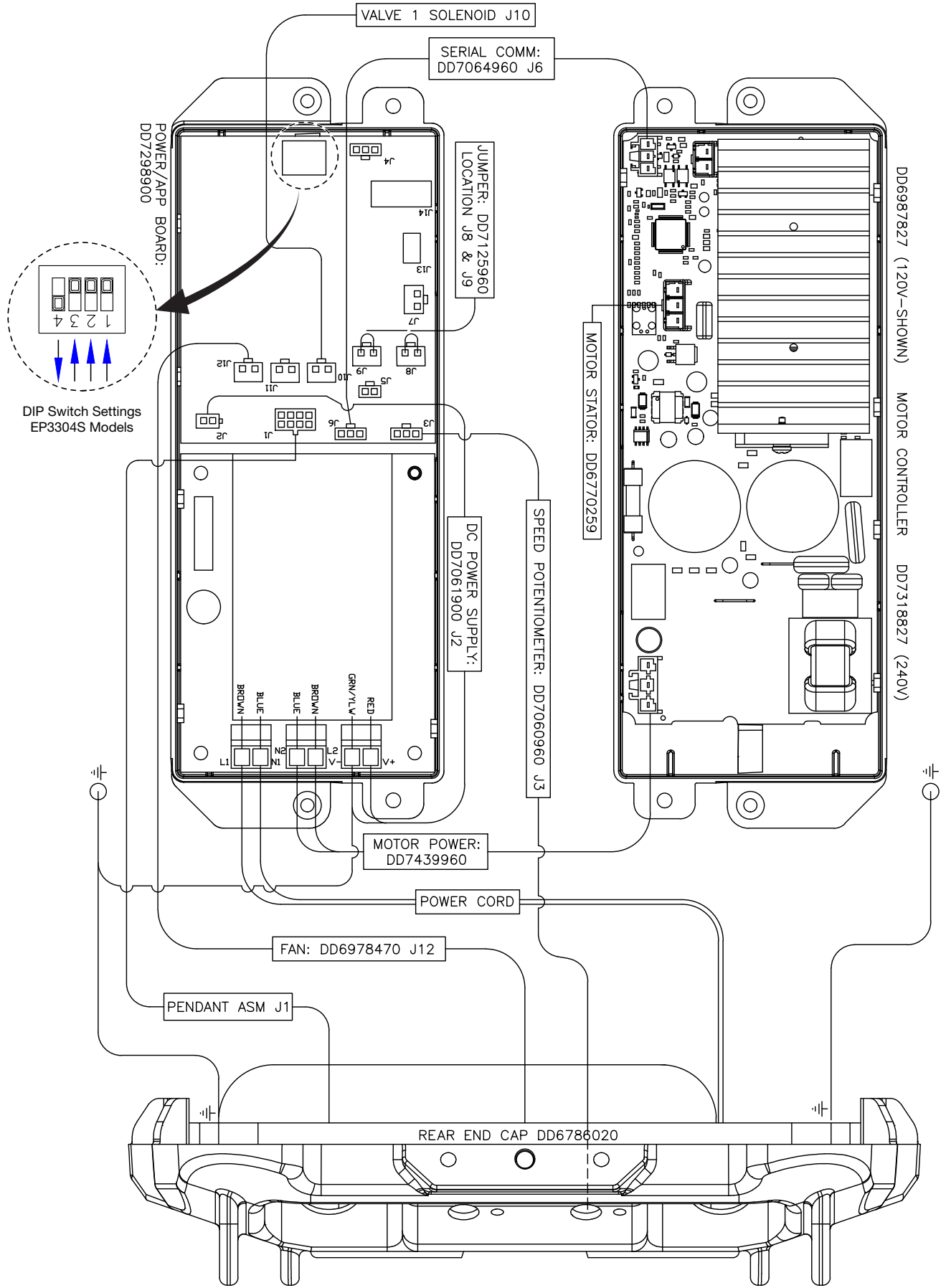
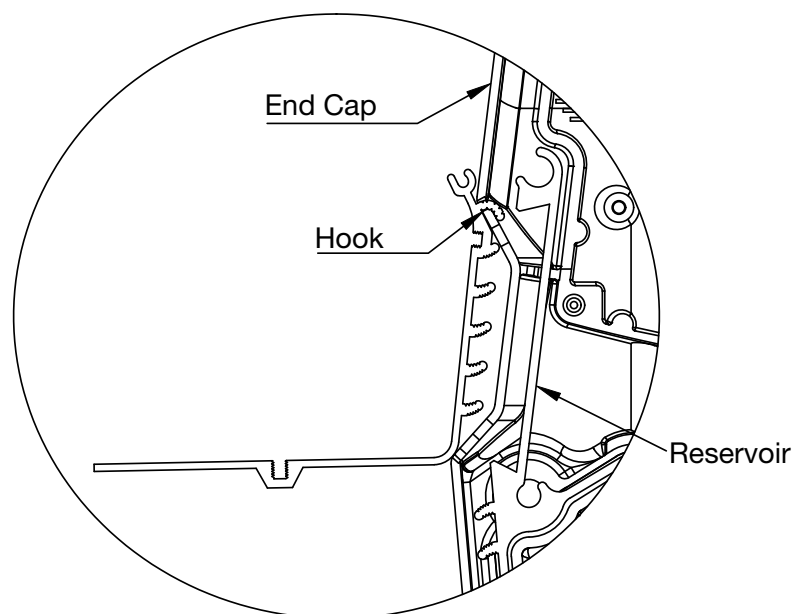
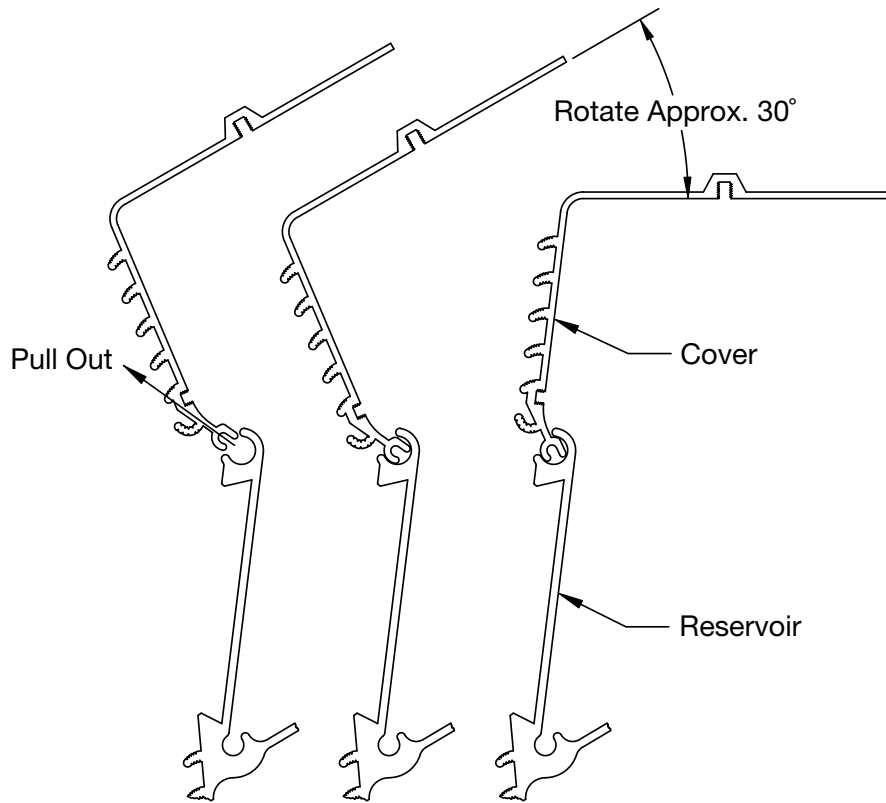


Figure 15 - Pump Cover Removal/Installation Instructions



Removal/installation instructions:

1. Remove 2 pump handle screws and washers.
2. Remove pump handle.
3. Open cover and remove wire connections.
4. Rotate cover approximately 30° from closed position.
5. Pull cover out as shown.
6. Reverse directions for installation. Refer to wiring diagram (Figure 14) and electrical subassembly diagrams (Figures 3 and 4) for wiring and torques.
7. Torque handle screws to 42-47 in-lbs [4.7-5.3 Nm].

NOTES:

A large rectangular box containing 20 horizontal lines, intended for writing notes.

NOTES:

A large rectangular box containing 20 horizontal lines, intended for writing notes.

