

LAT-SERIES BOLTING PUMP REPAIR PARTS SHEET

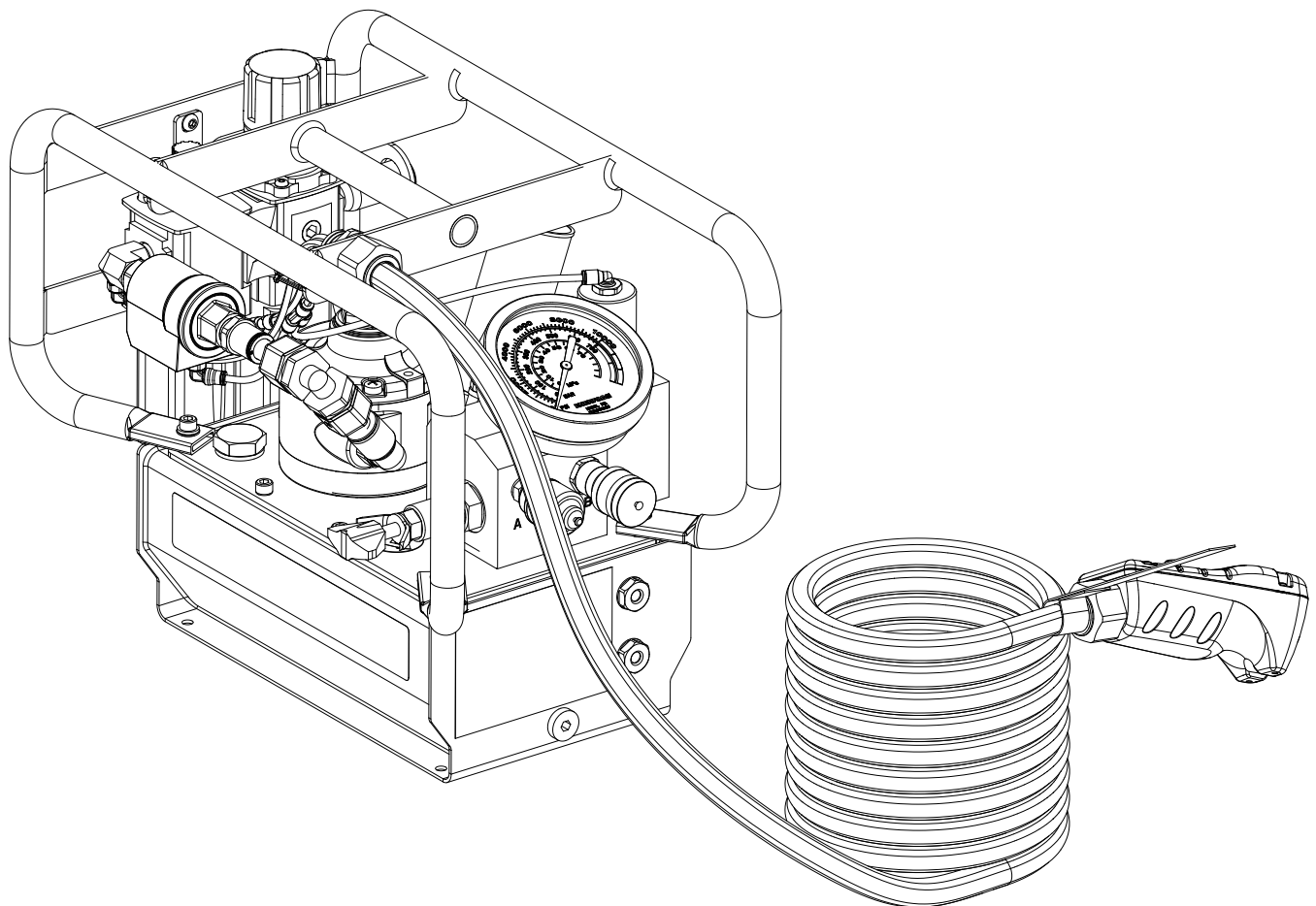
MODEL LA2504TX-QR

L4403

REV. D

10/21

FOR PRODUCT DATE CODES BEGINNING WITH THE LETTER "A"



NOTE: 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.

ENERPAC 

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 **WARNING** Shut off compressed air supply, disconnect air supply line and be sure all hydraulic pressure is completely relieved before performing any disassembly or repair procedures. Verify that hydraulic pressure gauge indicates zero (0) psi/bar.

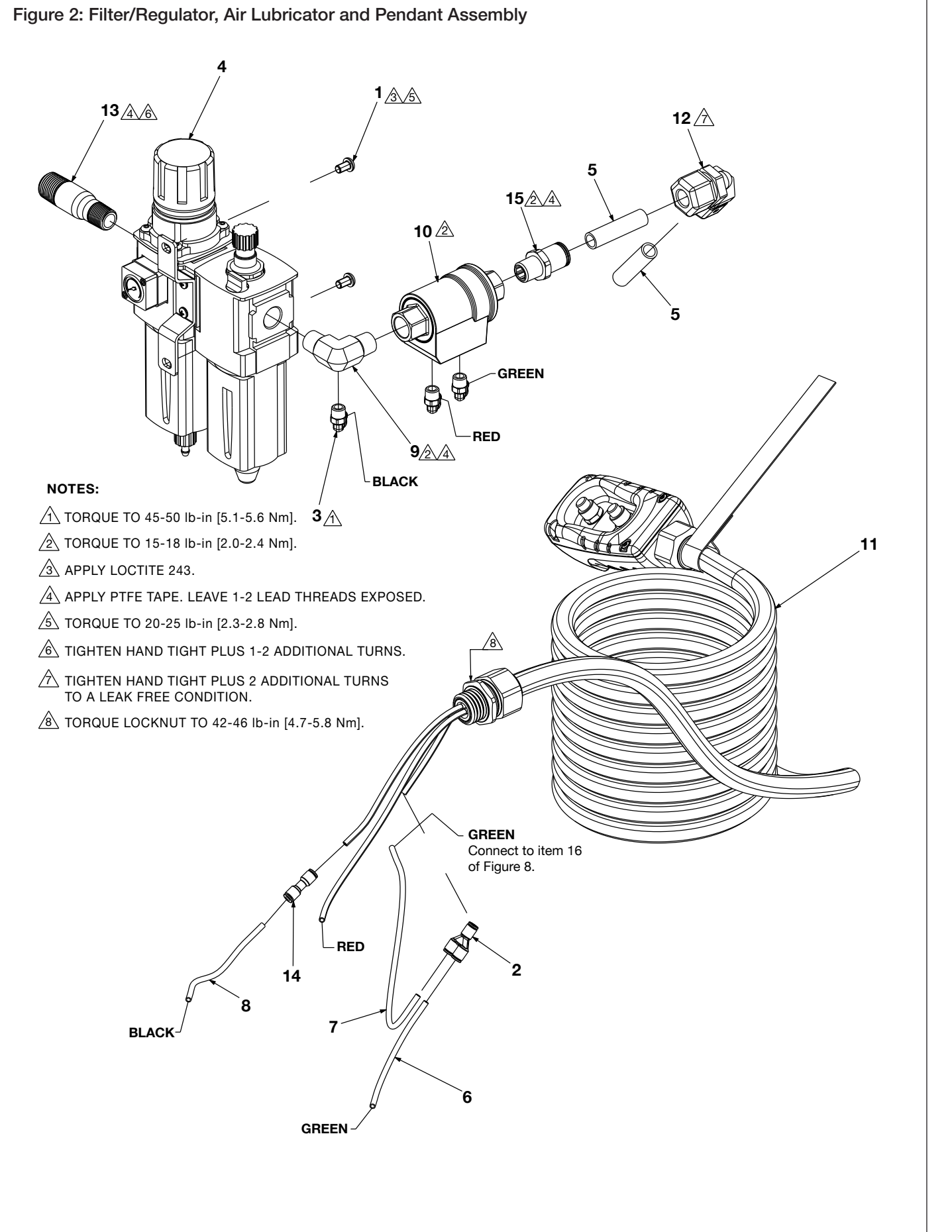
Figure 1: Main Assembly

This exploded view diagram illustrates the main assembly of a device. The components are numbered 1 through 5, with additional references to other figures (Fig. 2, 3, 4, 5, 6, 10-14). The assembly sequence is as follows:

- Component 1:** The base unit, which includes a motor and a control panel. It is shown with a reference to **See Fig. 5, 7, 8 & 9**.
- Component 2:** A long, flexible hose or cable that connects the base unit to the top housing. It is shown with a reference to **See Fig. 2 & 3**.
- Component 3:** A small, cylindrical component that fits into the base unit. It is shown with a reference to **See Fig. 10-14**.
- Component 4:** A rectangular, box-like component that fits into the base unit. It is shown with a reference to **See Fig. 6**.
- Component 5:** The top housing or cover, which is shown with a reference to **See Fig. 6**.

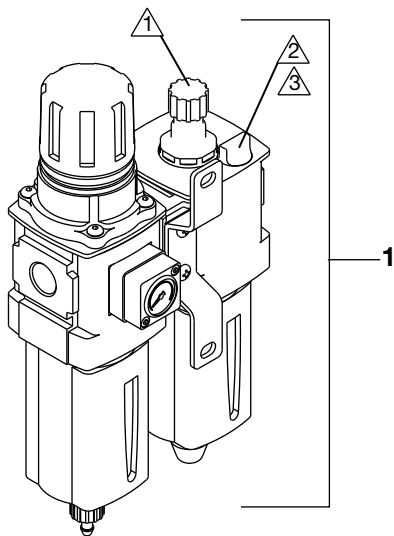
The diagram also includes several other references to other figures, indicating that the assembly process is detailed in those figures. For example, **See Fig. 4** points to the hose/cable, and **See Fig. 5** points to the small cylindrical component.

Repair Parts List for Figure 1								
Item	Part Number	Qty.	Description		Item	Part Number	Qty.	Description
1	(See Fig. 5 & 7-9)	1	Manifold Assembly		4	(See Fig. 6)	1	Reservoir Assembly
2	(See Fig. 2 & 3)	1	Air Logic Group		5	▲ DD7816500	1	Weldment, Roll Cage LAT
3	(See Fig. 10-14)	1	Pump Assy, Basic					
▲ Item included in Roll Cage Service Repair Kit DD7816500SR.								



Repair Parts List for Figure 2							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	✦ CBA615028-1E	2	Screw, BHCS Hex	9	DD7847095	1	Elbow, 3/8" NPTF
2	DC3574097	1	Y Fem to Fem Conn	10	DD7848660	1	Valve, Air Control
3	DC8170097	3	Elbow, Swivel	11	(See Fig. 4)	1	Assembly, Air Pendant
4	(See Fig. 3)	1	Air Filter Reg. Group	12	DD7996097	1	Elbow, 90 Deg Union
5	DD7760268	2	Tube, 1/2" OD x 2.25" Lg	13	DD8179431	1	Nipple - Swage
6	DD7842268	1	Air Tube, GRN, Short	14	E112041097	1	Coupling, Air 5/32 Nylon
7	DD7843268	1	Air Tube, GRN, Long	15	F100097-104	1	Connector, Male 3/8 - 1/2"
8	DD7844268	1	Air Tube, BLK				
✦ Included in Filter Regulator Lubricator Kit, LATRFLK.							

Figure 3: Filter/Regulator/Air Lubricator Group

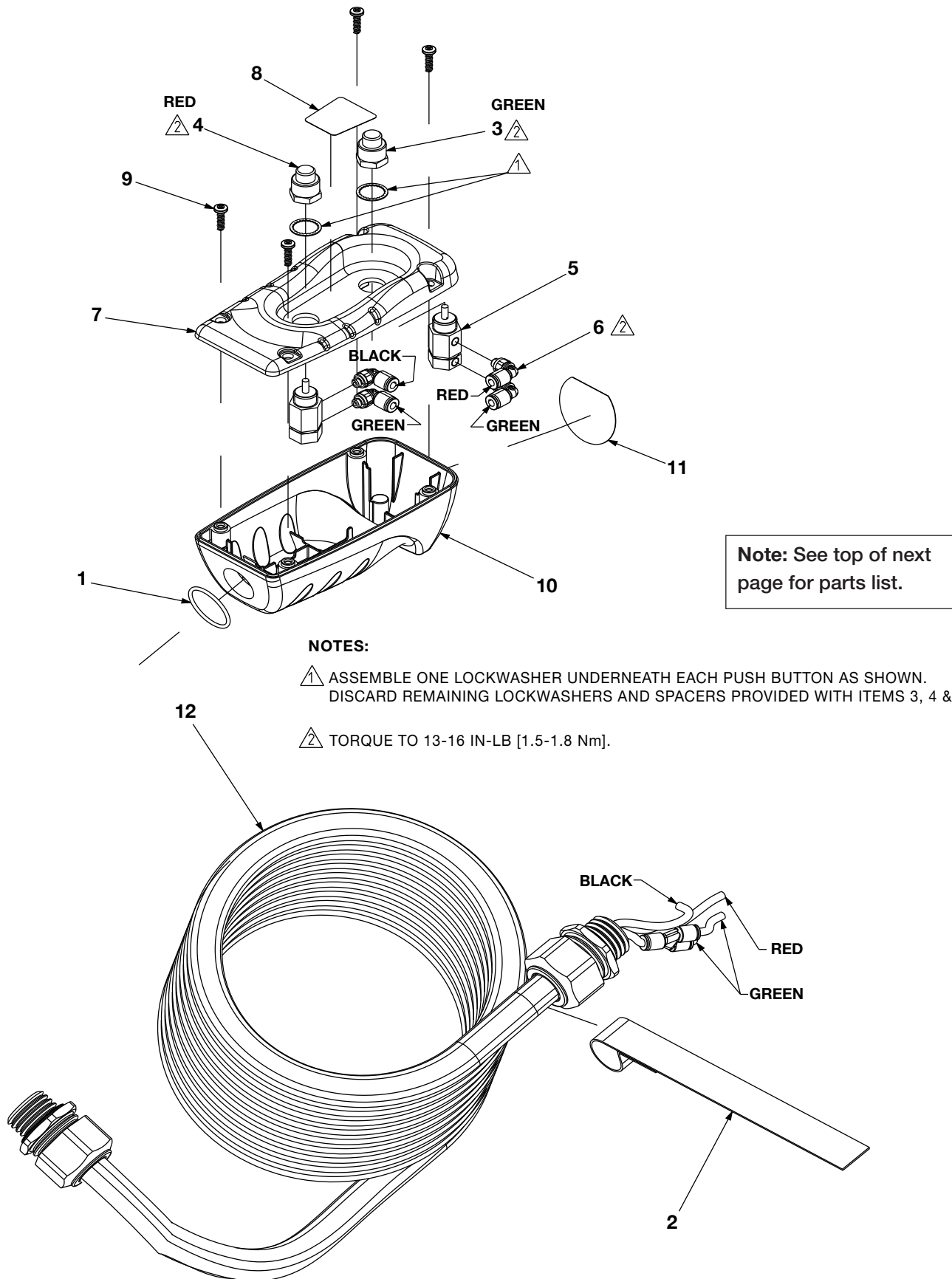


NOTES:

- ① ADJUST LUBRICATOR TO FEED 1 DROP OF OIL FOR EVERY 50 SCFM [1415 L/M] OF AIR WHILE THE UNIT IS RUNNING, OR 1 DROP OF OIL PER CONTINUOUS MINUTE OF RUN TIME. DO NOT OVERFEED OIL OR EXHAUST AIR MAY BE CONTAMINATED.
- ② FILL THE LUBRICATOR RESERVOIR TO THE PROPER LEVEL WITH SAE10W HIGH DETERGENT OR NON-DETERGENT MOTOR OIL.
- ③ FOR FOOD PROCESSING APPLICATIONS, USE MOBIL WHITE REX 425 FOOD GRADE MOTOR OIL OR OTHER FDA APPROVED OIL OF EQUIVALANT SPECIFICATIONS.

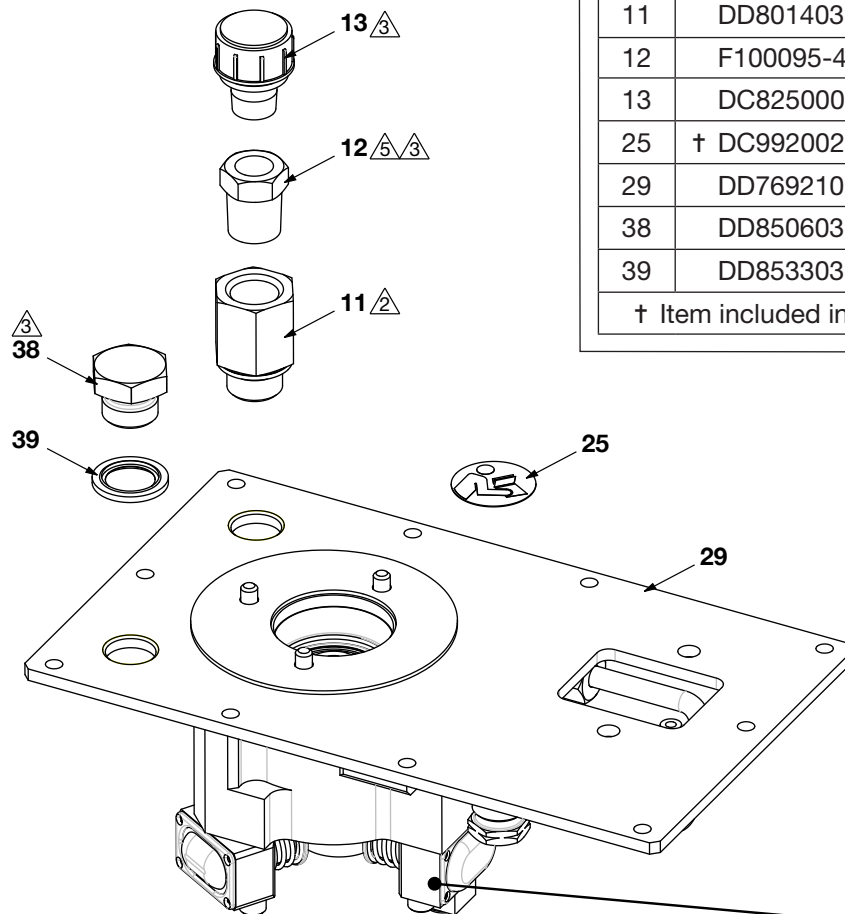
Repair Parts List for Figure 3			
Item	Part Number	Qty.	Description
1	✦ DD7646118	1	Filter/Regulator Air Lubricator Group
✦ Included in Filter Regulator Lubricator Kit, LATRFLK. Components not sold separately.			

Figure 4: Air Pendant Assembly



Repair Parts List for Figure 4			
Item	Part Number	Qty.	Description
1	✧ ♦ B1227503	1	O-Ring, Round
2	♦ DA7570217	1	Cord Strap
3	✧ ✧ ♦ DC3577379	1	Push Button, Green
4	✧ ✧ ♦ DC3578379	1	Push Button, Red
5	✧ ♦ DC8059379	2	Valve, Push Button
6	✧ ♦ DC8060097	4	Elbow, 10 x 5/32"
7	✧ ♦ DC8122424	1	Pendant Housing, Upper
8	† ✧ DC8127026	1	Pendant Decal
9	✧ ♦ DC9428008	4	Screw, Hi-Lo #8 x 1/2"
10	✧ ♦ DC9425424	1	Lower Pendant
11	† ✧ ♦ DD1394026	1	Decal, Pressure Relief
12	♦ DD7851646	1	Air Tube, Pendant
♦ Items included in Pendant Service Repair Kit, DD7860900SR. ✧ Items included in Pendant Housing Kit, LATPHK. ✧ Items included in Pendant Push Button Kit, LATPBK. ✧ Items included in Pendant Push Button Cap Kit, LATPBCK. † Items included in Decal Kit, LATDK.			

Figure 5: Coverplate Components



Repair Parts List for Figure 5			
Item	Part Number	Qty.	Description
11	DD8014038	1	Adapter, 1/2
12	F100095-49	1	Fitting
13	DC8250006	1	Plug, Breather
25	† DC9920026	1	Decal, Read Instructions
29	DD7692101	1	Coverplate
38	DD8506037	1	Plug, M21 Steel
39	DD8533037	1	Gasket
† Item included in Decal Kit, LATDK.			

NOTES:

- △ APPLY LOCTITE 243.
- △ TORQUE TO 8-10 LB-FT. [11-14 Nm].
- △ APPLY PTFE TAPE TO THREADS. LEAVE 1-2 LEADING THREADS EXPOSED.

See Fig. 10-11

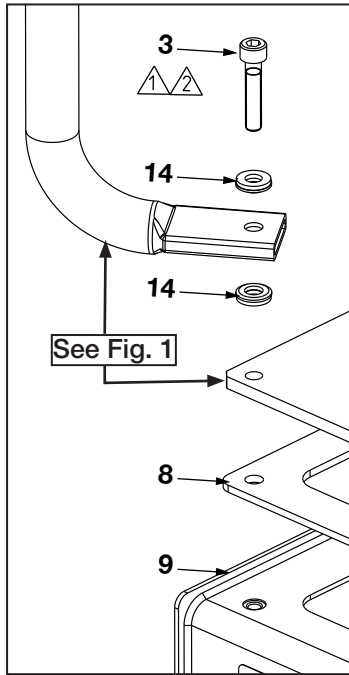
Figure 6: Hydraulic Reservoir

NOTES:

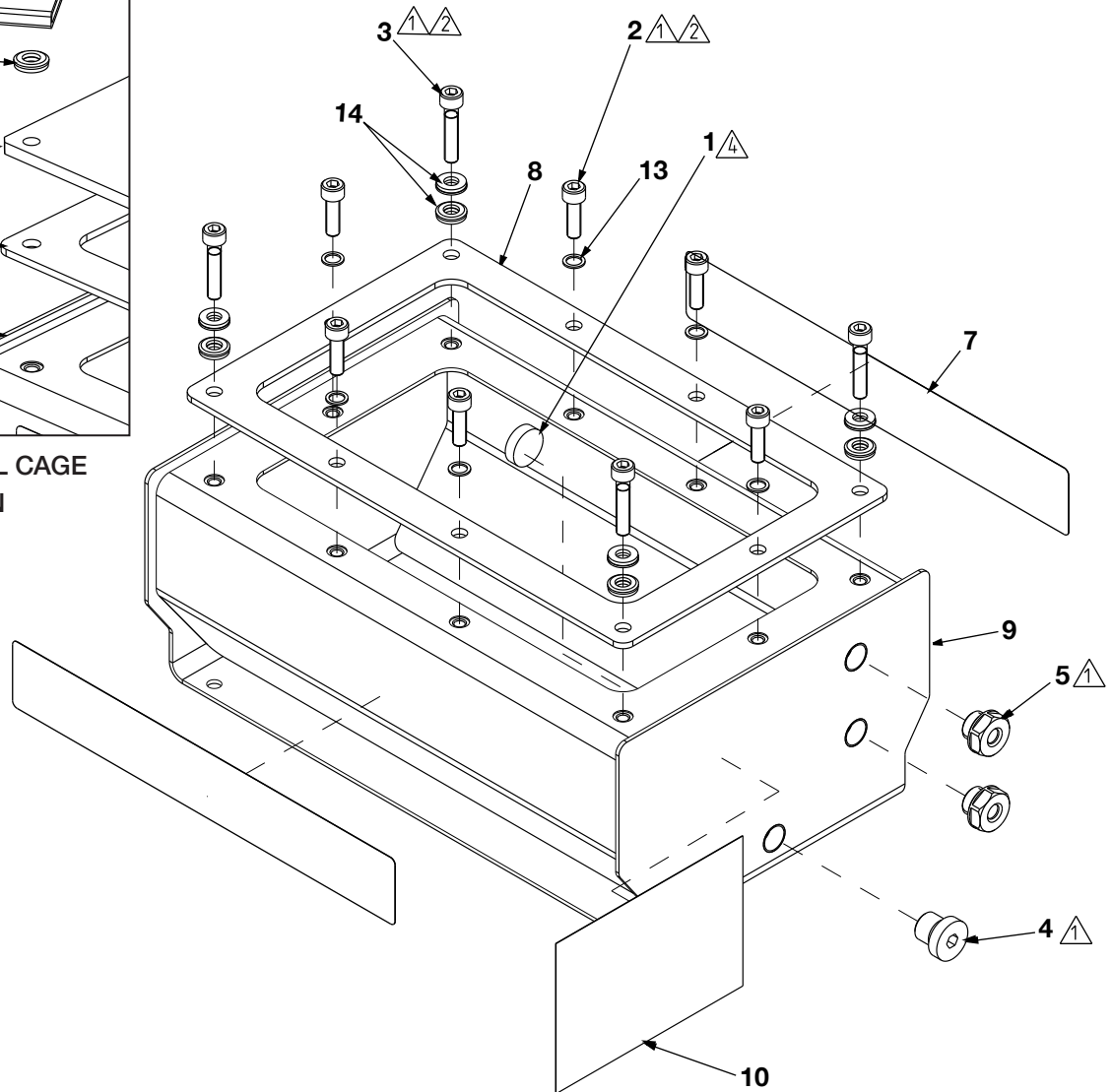
△1 TORQUE TO 60-75 lb-in [6.8-8.5 Nm].

△2 APPLY LOCTITE 243

△4 SEE FIGURE 10 FOR LOCATION OF MAGNET (ITEM 1).

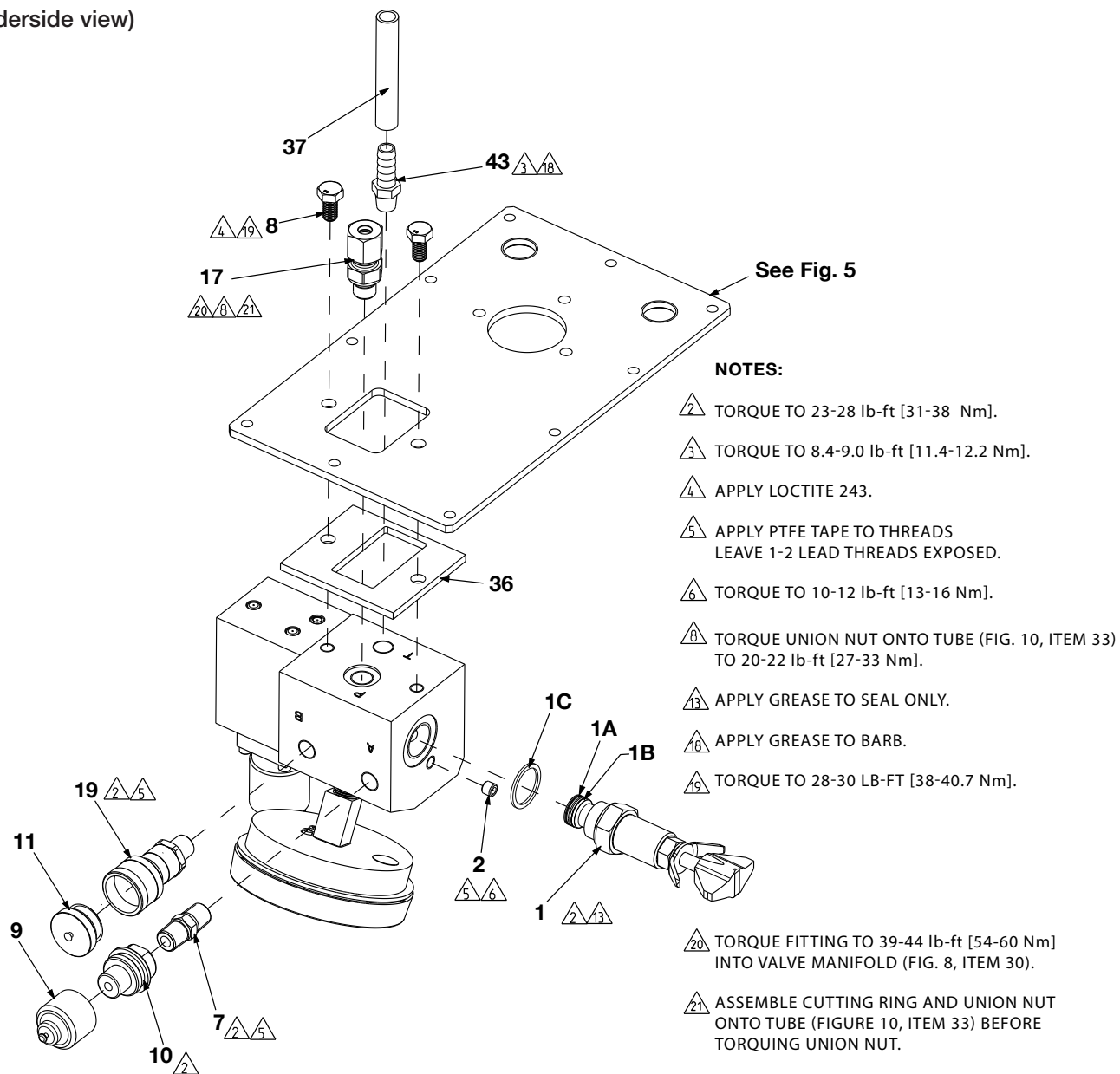


VIEW A - ROLL CAGE
INSTALLATION



Repair Parts List for Figure 6			
Item	Part Number	Qty.	Description
1	❖ C187018	1	Reservoir Magnet
2	❖ CBE621028-1A	6	SHCS, Hex M6 x 20
3	❖ CBE625028-1A	4	SHCS, Hex M6 x 30
4	❖ CS235006	1	Plug, Int. Hex, 1/4" BSPP Steel
5	❖ DB4519022	2	Oil Level Indicator
7	† ❖ DC9596026	2	Decal, Enerpac Res
8	▼ ❖ DD7737037	1	Gasket, Reservoir
9	❖ DD7813025	1	Reservoir, Hydraulic LAT
10	† ❖ DD7997026	1	Decal, Product LAT
13	★▼❖ S3037	6	Gasket
14	★▲▼❖ DD7164108	8	Washer, Sealing
❖ Items included in Reservoir Kit, DD7815900SR. ▼ Items included in Reservoir Gasket Kit, LATRGK. ▲ Item included in Roll Cage Service Repair Kit DD7816500SR. ★ Item included in Pump Seal Kit, LATPSK. † Items included in Decal Kit, LATDK.			

**Figure 7: Control Valve
(underside view)**

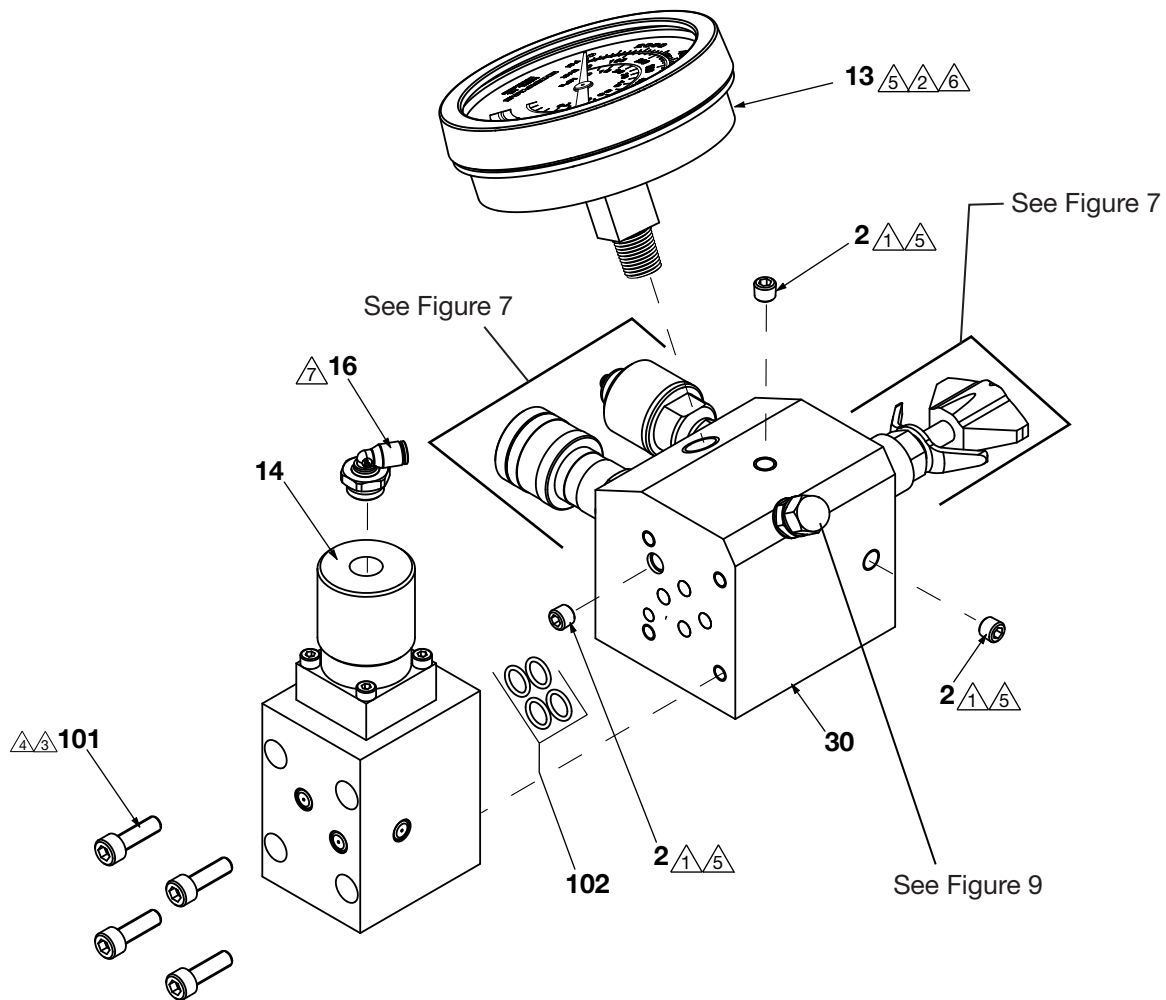


Repair Parts List for Figure 7

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	❖45423SR	1	Cartridge, Relief Valve	10	❖ TH630	1	Coupler, Male
1A	★†❖B1112903	1	O-Ring	11	DC6629020	1	Dust Cap
1B	★†❖B1112564	1	Backup Ring	17	DB2327095	1	Fitting, 1/4" BSP w/nut
1C	★†❖DD8666476	1	Alum. Metal Washer	19	❖ TR630	1	Coupler, Female
2	❖A1006245	4	Plug, Flush Hex	36	DD8017037	1	Gasket, Valve Manifold
7	❖CJ647096	1	Nipple, Pipe 1/4 NPT	37	❖ DD8029268	1	Tubing, Inlet
8	❖CBB0819046-1B	2	Screw, HHCS M8 x 16	43	❖ F100097-16	1	Fitting, Hose Barb
9	DC6187234	1	Dust Cap				

† Items included in Valve Body Service Repair Kit, DD7707038SR. ★ Item included in Pump Seal Kit, LATPSK.
❖ Items included in Valve Service Repair Kit, DD7710900SR. † Items included in UARV Seal Kit LATUARVSK.

Figure 8: Control Valve (top view)



NOTES:

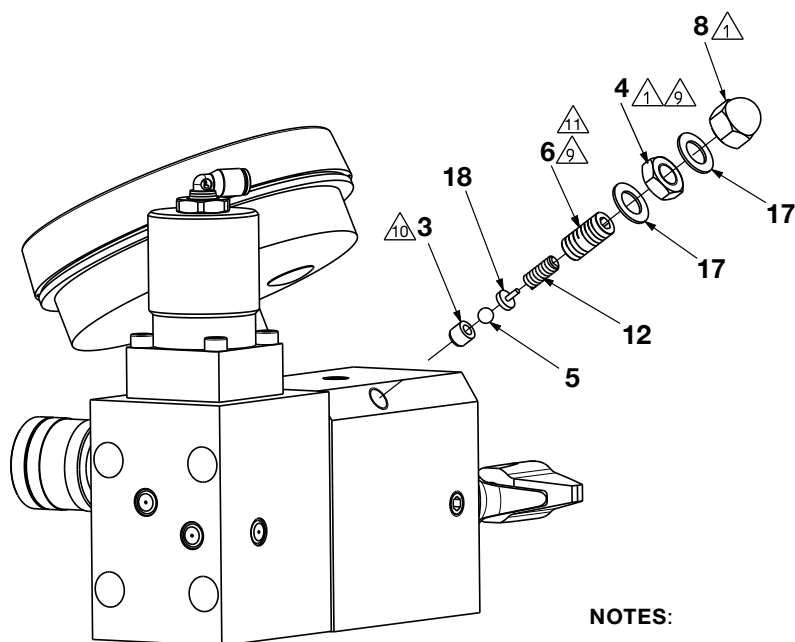
- | | |
|---|---|
| ① TORQUE TO 10-12 lb-ft [13-16 Nm]. | ⑤ APPLY PTFE TAPE TO THREADS
LEAVE 1-2 LEAD THREADS EXPOSED. |
| ② TORQUE TO 23-28 lb-ft [31-38 Nm]. | ⑥ ORIENT AS SHOWN. |
| ③ TORQUE TO 8.4-9.0 lb-ft [11.4-12.2 Nm]. | ⑦ TORQUE TO 45-50LB-IN [5.1-5.6 Nm]. |
| ④ APPLY LOCTITE 243. | |

Repair Parts List for Figure 8





Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
2	❖ A1006245	4	Plug, Flush Hex	30	❖ DD7077038	1	Manifold, Valve
13	★❖ DD6988223	1	Gauge	101	★❖ CCZ627028-1A	4	SHCS, M6 x 1", 35 mm
14	★❖ DD7578660	1	Valve, Pneumatic Op	102	■❖ B1012803	4	O-Ring
16	★❖ DD8024097	1	Elbow G1/4 x 5/32"				

- + Items included in Valve Body Service Repair Kit DD7707038SR. ■ Items included in Valve Seal Kit, LATVSK.
 ★ Items included in Pneumatic Solenoid Valve Kit, DD7578660SR. ★ Items included in Gauge Kit, LATGK.
 ❖ Items included in Valve Service Repair Kit DD7710900SR.

Figure 9: Control Valve (B-side relief assembly)



NOTES:

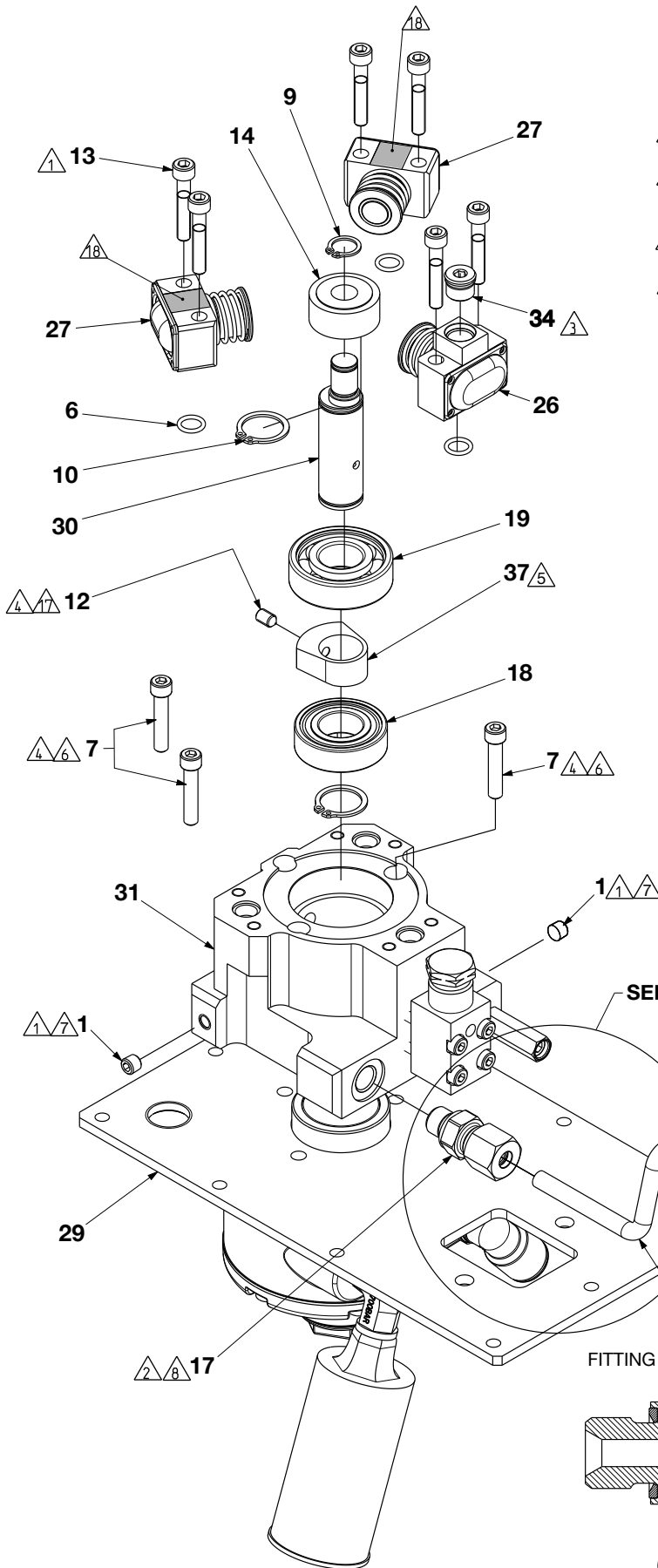
-  TORQUE TO 60-75 lb-in [6.8-8.5 Nm].
-  HOLD FLAT POINT SET SCREW (ITEM 6) STATIONARY WHILE TORQUING HEX JAM NUT (ITEM 4) TO KEEP IT FROM TURNING.
-  SEAT (ITEM 3) IS INCLUDED AND PREINSTALLED IF REPLACEMENT MANIFOLD IS ORDERED (SEE FIG. 8, ITEM 30).
-  PRESSURE SETTING, B PORT RELIEF VALVE: 2600 PSI (+/- 100 PSI) [180 BAR (+/- 7 BAR)].

Repair Parts List for Figure 9

Item	Part Number	Qty.	Description
3	+ ❖ A8015290	1	Seat
4	✕ ❖ B1004124	1	Nut, Jam
5	✕ ❖ B1005016	1	Ball, 0.188
6	❖ BF3110027F	1	Set Screw
8	✕ ❖ DC5625055	1	Nut, Acorn
12	✕ ❖ DC6632110	1	Spring
17	✕ ❖ G909167	1	Gasket
18	✕ ❖ K1013	1	Guide
+ Items included in Valve Body Service Repair Kit, DD7707038SR. ❖ Items included in Valve Service Repair Kit, DD7710900SR. ✕ Items included in B-Port Relief Valve Kit, LATBPRVK.			

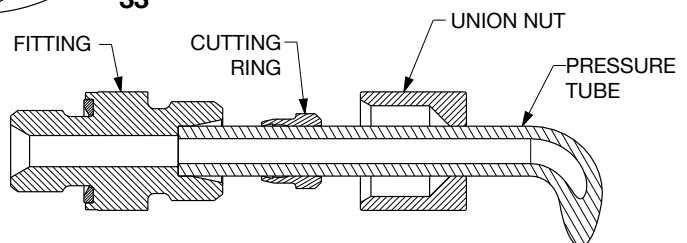
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Figure 10: Pump Assembly (underside view)



NOTES:

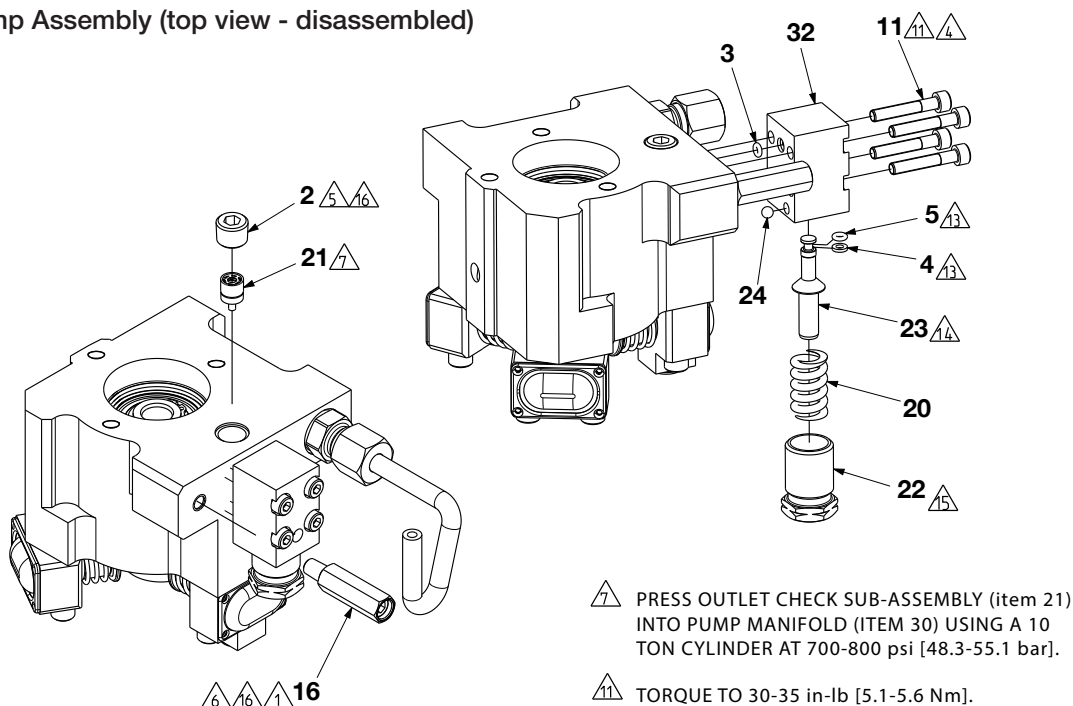
- ① TORQUE TO 10-12 lb-ft [13-16 Nm].
- ② TORQUE FITTING TO 39-44 lb-ft [54-60 Nm]. INTO PUMP MANIFOLD (ITEM 31).
- ③ TORQUE TO 8.4-9.0 lb-ft [11.4-12.2 Nm].
- ④ APPLY LOCTITE 243.
- ⑤ INSTALL ONTO SHAFT WITH 5 DEGREE ANGLED SURFACE TOWARDS ITEM #18.
- ⑥ TORQUE TO 8-10 lb-ft [11-14 Nm].
- ⑦ APPLY PTFE TAPE TO THREADS LEAVING 1-2 LEAD THREADS EXPOSED.
- ⑧ TORQUE UNION NUT ONTO TUBE (ITEM 33) TO 20-22 lb-ft [27-33 Nm].
- ⑦ TORQUE TO 6-6.5 lb-ft [8.1-8.9 Nm].
- ⑧ PLACE RESERVOIR MAGNET (FIGURE 6, ITEM 1) IN ONE OF THE SHADED LOCATIONS.



SECTION A-A
(ENLARGED VIEW - ITEMS 17 AND 33)

Repair Parts List for Figure 10			
Item	Part Number	Qty.	Description
1	* A1006245	2	Plug, Flush, Hex, 27mm Steel, Teflon
6	★ ◐ ◑ * B1012803	3	O-Ring-Round, 0.375, 0.500, 0.063 Disogrin, 92
7	* B1013028	3	Screw, SHCS, HS, 1/4-20, 1 1/4" long
9	◆ * CCA1012044-1A	1	Retaining Ring, Ext, 20mm, Steel
10	* CCA1020044-1A	2	Retaining Ring, Ext 12mm, Steel
12	* CCA615028-5C	1	Screw, Set, Cone, HS, M6 x 10
13	◇ ◐ ◑ * CCA627028-1A	6	Screw, SHCS, Hex, M6 x 35.0, Steel
14	◆ * CW302107	1	Bearing
17	* DB2327095	1	Fitting, 1/4" BSPP, 8S w/Nut/Ring 800 Bar
18	* DBS0005155-2	1	Bearing
19	* DBS0005155-3	1	Bearing
26	◑ * DD1449051SR	1	Piston Block, 14mm
27	◐ * DD1450051SR	2	Piston Block, 6mm
29	DD7692101	1	Cover Plate
30	◆ * DD7720537	1	Eccentric Shaft
31	* DD7721190	1	Pump Manifold
33	* DD7751268	1	Pressure Tube, 8 x 2
34	◑ * DD7911006	1	Plug, Zero Leak Gold, 1/2" - 20
37	* DY3858186	1	Counterbalance Spacer
* Items included in Pump Element Service Repair Kit, DD7726900SR. ◐ Items included in High Pressure Piston Block Kit, LATHPPBK. ◑ Items included in Low Pressure Piston Block Kit, LATLPPBK. ◇ Items included in Piston Block Bolt Kit, LATPBBK. ◆ Items included in Eccentric Shaft Kit, LATESK. ★ Item included in Pump Seal Kit, LATPSK.			

Figure 11: Pump Assembly (top view - disassembled)



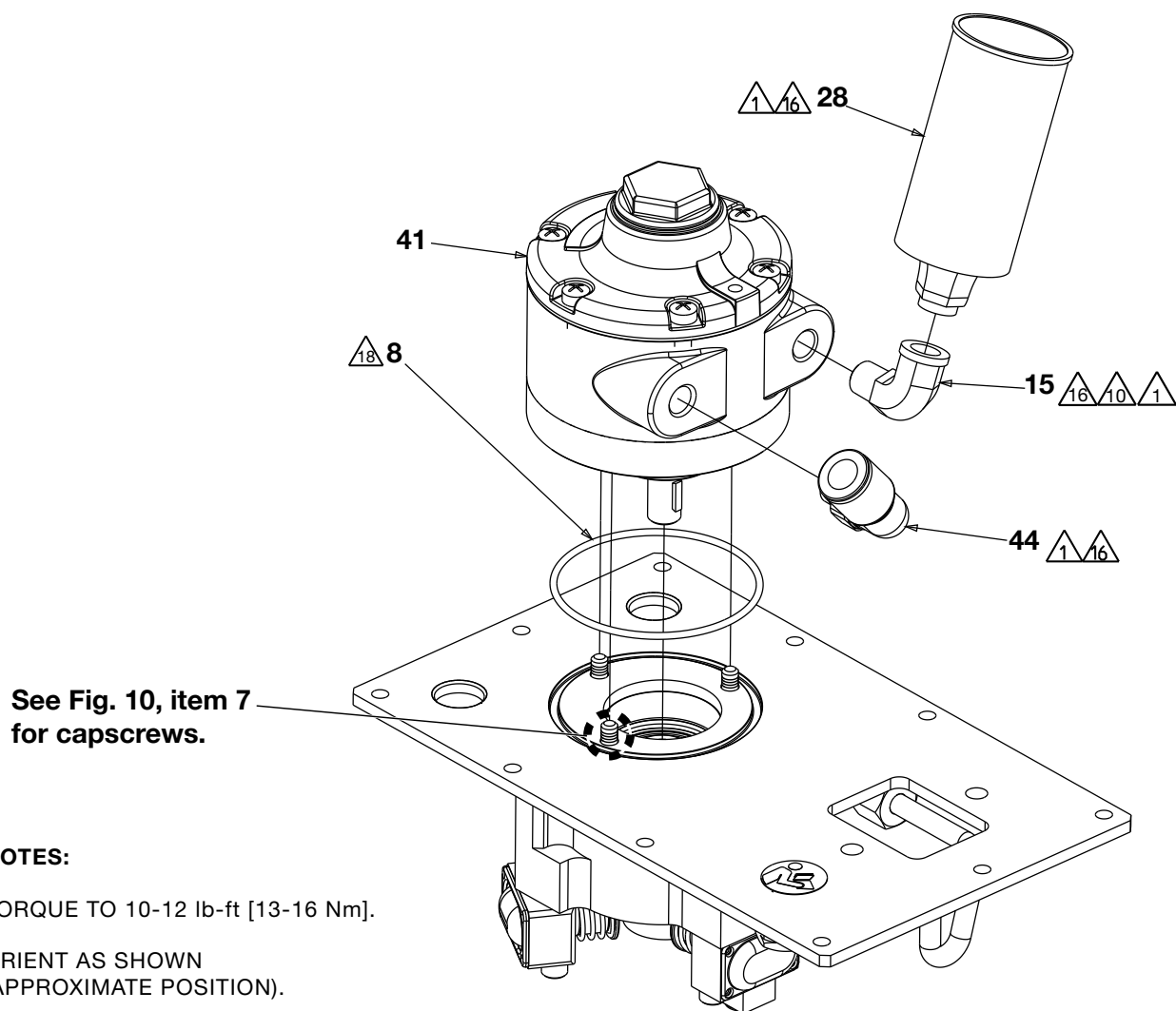
NOTES:

- 1 TORQUE TO 10-12 lb-ft [13-16 Nm].
- 4 APPLY LOCTITE 243.
- 5 TORQUE TO 32-39 lb-ft [43-53 Nm].
- 6 SET TO 10,650-10,950 psi [734.5 - 755 bar].
- 7 PRESS OUTLET CHECK SUB-ASSEMBLY (item 21) INTO PUMP MANIFOLD (ITEM 30) USING A 10 TON CYLINDER AT 700-800 psi [48.3-55.1 bar].
- 11 TORQUE TO 30-35 in-lb [5.1-5.6 Nm].
- 13 LUBRICATE BACK-UP WASHER (ITEM 4) AND O-RING (ITEM 5) WITH OIL PRIOR TO ASSEMBLY.
- 14 COIN PISTON BYPASS (ITEM 23) ONTO SEAT OF BYPASS VALVE BODY (ITEM 32).
- 15 SET HEIGHT OF END CAP BYPASS (ITEM 22) TO 0.85 INCH ± 0.01 [21.6 mm ± 0.2].
- 16 APPLY PTFE TAPE TO THREADS. LEAVE 1-2 LEADING THREADS EXPOSED.

Repair Parts List for Figure 11

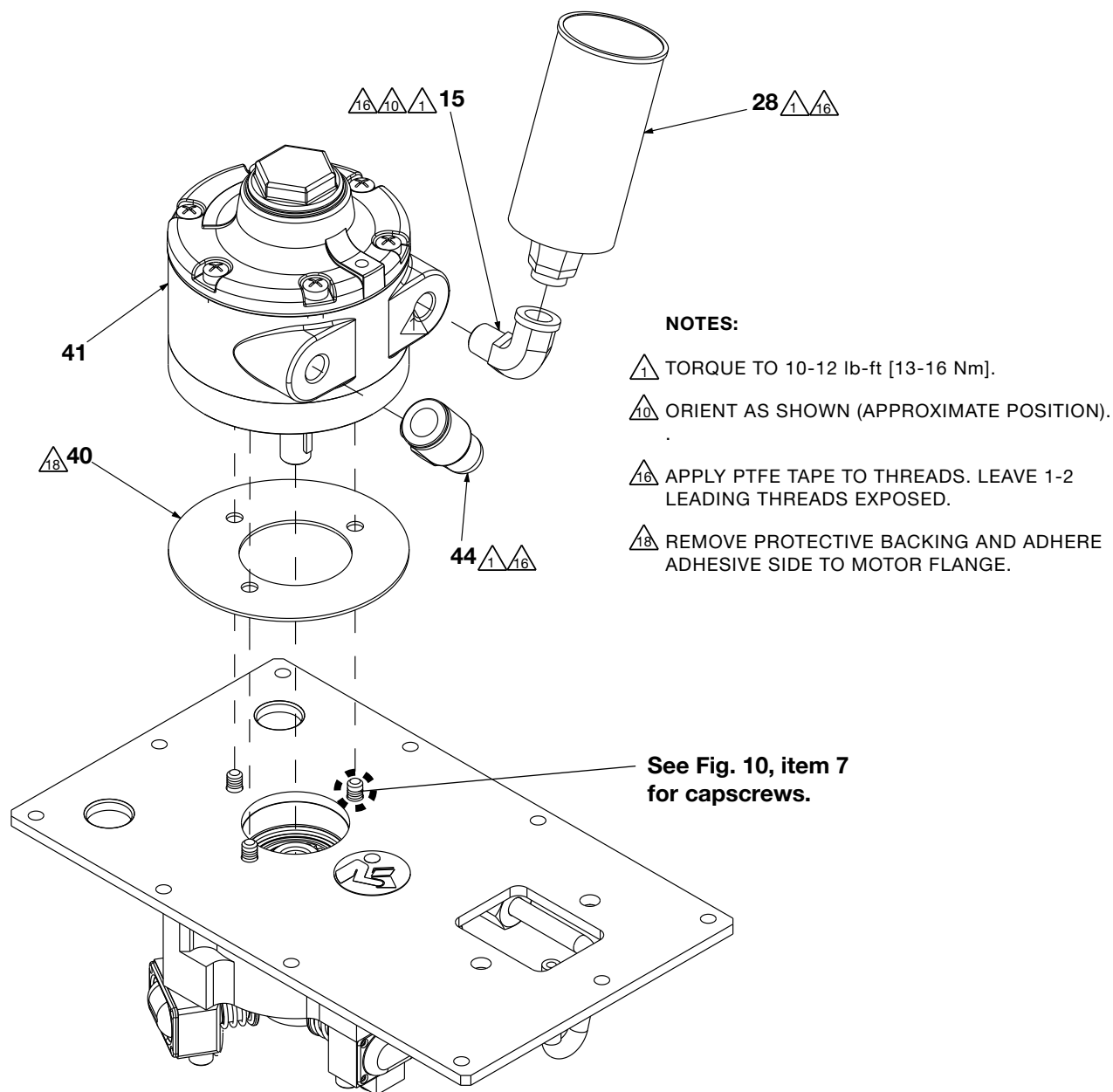
Item	Part Number	Qty.	Description
2	* A1008245	1	Plug, Flush, Hex 18mm Steel, Teflon
3	✿★✿ B1005803	2	O-Ring-Round, 0.0894, 0.219, 0.063, Disogrin, 92
4	✿★✿ B1006564	1	Back Up, Split, 0.235, 0.250, 0.063 Disogrin, 92
5	✿★✿ B1006803	1	O-Ring-Round, 0.125, 0.250, 0.063 Disogrin, 92
11	✿✿ CCA525028-1A	4	Screw, SHCS, Hex, M5 x 30.0
16	* DA8802900SR	1	Relief Valve Assembly (Factory pre-set to 10,650-10,950 psi)
17	* DB2327095	1	Fitting, 1/4" BSPP, 8S w/Nut/Ring 800 Bar
18	* DBS0005155-2	1	Bearing
19	* DBS0005155-3	1	Bearing
20	✿✿ DC394110	1	Bypass Spring
21	* DC7904900SR	1	Outlet Check Sub Assembly
22	✿✿ DC8374020	1	End Cap, Bypass
23	✿✿ DC9292051	1	Piston Bypass, Parametric
24	✿★✿ DC9293016	1	Ball, Nylon, 3/16"
32	✿✿ DD7722190	1	Valve Body, Bypass
<p>* Items included in Pump Element Service Repair Kit, DD7726900SR. ✿ Item included in Bypass Seal Kit, LATBPVSK. ★ Item included in Pump Seal Kit, LATPSK. ✿ Item included in Bypass Valve Kit, LATBPVK.</p>			

Figure 12: Air Motor Assembly and Fittings (early models)



Repair Parts List for Figure 12			
Item	Part Number	Qty.	Description
8	See Note 18 (above)	1	O-Ring, Air Motor
15	DA1840095	1	Pipe Elbow, 90 Degree
28	DD7684116	1	Muffler, Air Motor
41	DY3828259	1	Motor, Air Driven
44	F100097-61	1	Connector, NPTF Male
* Items included in Motor Service Kit, LATMTR.			

Figure 13: Air Motor Assembly and Fittings (later models)



Repair Parts List for Figure 13

Item	Part Number	Qty.	Description
15	☼ DA184095	1	Pipe Elbow, 90 Degree
28	☼ DD7684116	1	Muffler, Air Motor
40	☼ DD8533037	1	Gasket, Motor LAT
41	☼ DY3828259	1	Motor, Air Driven
44	☼ F100097-61	1	Connector, NPTF Male
☼ Items included in Motor Service Repair Kit, LATMTR.			

⚠ WARNING

Shut off compressed air supply, disconnect air supply line and be sure all hydraulic pressure is completely relieved before performing any disassembly or repair procedures. Verify that hydraulic pressure gauge indicates zero (0) psi/bar.

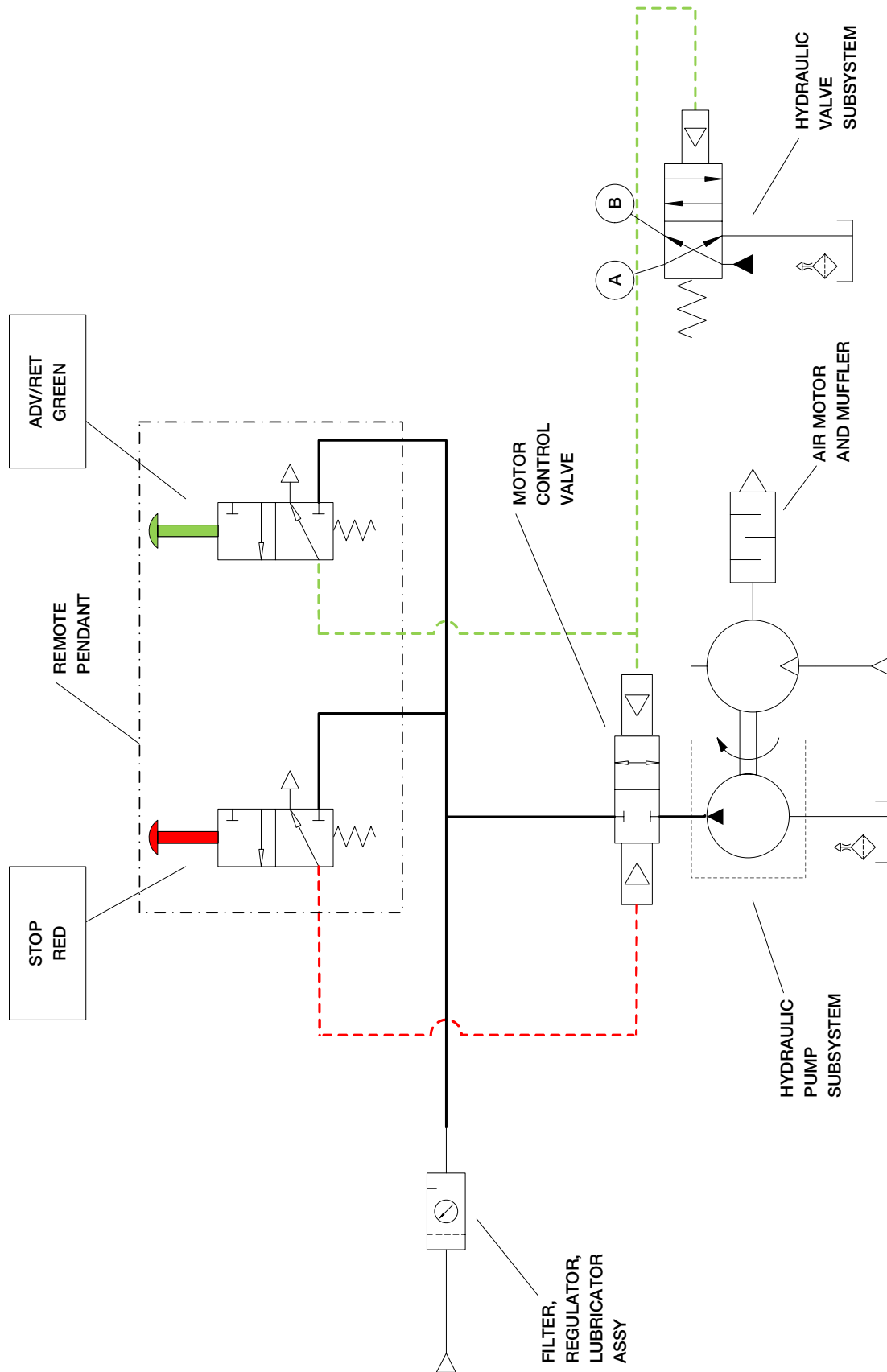


Figure 14: Air Logic & Schematic Diagram



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