

**PARTS LIST / 66610X-X-C FLUID SECTION**

★ 637119-XX-C Fluid Section Service Kits include: Balls (see BALL Option, refer to -XX in chart below), Diaphragms (see DIAPHRAGM Option, refer to -XX in chart below), plus items: 2, 3, 19 and 93706-1 Key-Lube grease.

SEAT OPTIONS 6661XX-XXX-C				BALL OPTIONS 6661XX-XXX-C							
"21"				★ "22" (1" dia.) (Service Kit -XX)							
-XXX	Seat	Qty	[Mtl]	-XXX	Ball	Qty	[Mtl]	-XXX	Ball	Qty	[Mtl]
-1XX	92008-1	(4)	[A]	-X1X	90532-1	(4)	[N]	-X6X	90532-6	(4)	[D]
-2XX	90428-1	(4)	[SS]	-X2X	90532-2	(4)	[B]	-X8X	90532-8	(4)	[U]
-3XX	92926	(4)	[P]	-X3X	90532-3	(4)	[V]	-XAX	90948	(4)	[SS]
-4XX	92941	(4)	[K]	-X4X	90532-4	(4)	[T]	-XCX	90532-C	(4)	[H]
-5XX	95675-1	(4)	[C]	-X5X	90532-5	(4)	[E]	-XEX	90532-A	(4)	[SP]
-8XX	93367-1	(4)	[SH]								

MATERIAL CODE
[A] = Aluminum
[B] = Nitrile
[C] = Carbon Steel
[CI] = Cast Iron
[Co] = Copper
[D] = Acetal
[E] = E.P.R.
[H] = Hytrel
[K] = Kynar PVDF
[N] = Neoprene
[P] = Polypropylene
[SP] = Santoprene
[SH] = Hard Stainless Steel
[SS] = Stainless Steel
[T] = Teflon PTFE
[U] = Polyurethane
[V] = Viton

DIAPHRAGM OPTIONS 66610X-XXX-C													
-XXX	★ SERVICE KIT	★ "7"			★ "8"			★ "3"			★ "19"		
-XXX	-XX = (Ball) -XX = (Diaphragm)	Diaphragm	Qty	[Mtl]	Diaphragm	Qty	[Mtl]	"O" Ring 1/16" x 5/8" o.d.	Qty	[Mtl]	"O" Ring 3/32" x 1-9/16" o.d.	Qty	[Mtl]
-XX1	637119-X1-C	90533-1	(2)	[N]	-----	----	---	Y325-14	(4)	[B]	Y325-126	(4)	[B]
-XX2	637119-X2-C	90533-2	(2)	[B]	-----	----	---	Y325-14	(4)	[B]	Y325-126	(4)	[B]
-XX3	637119-X3-C	90533-3	(2)	[V]	-----	----	---	Y328-14	(4)	[T]	Y327-126	(4)	[V]
-XX4	637119-X4-C	93459-4	(2)	[T]	92973-B	(2)	[SP]	Y328-14	(4)	[T]	Y328-126	(4)	[T]
-XX5	637119-X5-C	90533-5	(2)	[E]	-----	----	---	Y328-14	(4)	[T]	90534	(4)	[E]
-XX9	637119-X9-C	90533-9	(2)	[H]	-----	----	---	Y328-14	(4)	[T]	Y327-126	(4)	[V]
-XXB	637119-XB-C	90533-B	(2)	[SP]	-----	----	---	Y328-14	(4)	[T]	90534	(4)	[E]

MANIFOLD / FLUID CAP MATERIAL OPTIONS 6661XX-XXX-C											
Item	Description (size)	Qty	Aluminum 6661X0-X, 6661XA-X			Stainless Steel 6661X1-, 1X9-, 1XB-, 1XD-			Cast Iron 6661X2-X, 6661XC-X		
			N.P.T.F.	BSP	[Mtl]	N.P.T.F.	BSP	[Mtl]	N.P.T.F.	BSP	[Mtl]
			Part No.	Part No.	[Mtl]	Part No.	Part No.	[Mtl]	Part No.	Part No.	[Mtl]
15	Fluid Cap	(2)	94945	94945	[A]	91045	91045	[SS]	94277	94277	[CI]
16	Manifold (6661X0, 1X1, 1X2, 1XA, 1XB, 1XC)	(2)	92001	92001-1	[A]	91044	91044-1	[SS]	94278	94278-1	[CI]
17	Outlet Manifold (6661X9-, 6661XD- only)	(2)	-----	-----	---	92846	92846-1	[SS]	-----	-----	---
18	Inlet Manifold (6661X9-, 6661XD- only)	(2)	-----	-----	---	92847	92847-1	[SS]	-----	-----	---
23	Spring (6661X9-, 6661XD- only)	(2)	-----	-----	---	22155	22155	[SS]	-----	-----	---

HARDWARE OPTIONS 6661XX-XXX-C						
Item	Description (size)	Qty	Carbon Steel 6661X0-, 1-, 2-, 9-		Stainless Steel 6661XA-, B-, C-, D-	
			Part No.	[Mtl]	Part No.	[Mtl]
5	Washer - Air Side (3-5/8" o.d.)	(2)	93441-2	[C]	93441-1	[SS]
24	Washer - models 6661X9 and 6661XD only (5/16")	(8)	Y13-5-C	[C]	Y13-5-T	[SS]
26	Bolt (5/16" - 18 x 1")	(8)	Y6-55-C	[C]	Y6-55-T	[SS]
29	Nut (5/16" - 18)	(16)	Y12-5-C	[C]	Y12-5-S	[SS]

**637167**  
**ABRASION RESISTANT**  
**CONVERSION KITS INCLUDE:**  
 "21" Seat 93367-1 (4)  
 "22" Ball 90532-8 (4)

COMMON PARTS									
Item	Description (size)	Qty	Part No.	[Mtl]	Item	Description (size)	Qty	Part No.	[Mtl]
<input type="checkbox"/> 1	Rod	(1)	98724-1	[C]	9	Washer (0.505" i.d.)	(2)	93189-1	[SS]
★ 2	"O" Ring (3/32" x 3/4" o.d.) *	(1)	Y330-113	[B]	14	Screw (1/2" - 20 x 1")	(2)	Y5-85-T	[SS]
<input type="checkbox"/> 6	Washer - Fluid Side	(2)	93441-1	[SS]	43	Ground Lug (see page 7)	(1)	93004	[Co]
	models 6661X0 and 6661X2 only	(2)	93441-2	[C]					

★ Service Note: Fluid Section Service Kits also include part no. 93131 (5) "O" rings for repair of "-B" (pre - 8/89) models.

Service Note: Part no. 98930-T installation tool is available separately for use with items 1 and 2.

"Smart Parts", keep these items on hand in addition to the service kits for fast repair and reduction of down time.

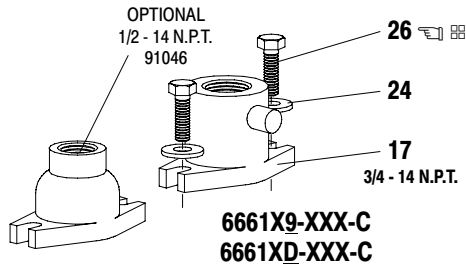
**PARTS LIST / 66610X-X-C FLUID SECTION**

COLOR CODE		
MATERIAL	DIAPHRAGM COLOR	BALL COLOR
Acetal	N/A	Orange
Nitrile	Red (-)	Red (+)
E.P.R.	Blue (-)	Blue (+)
Hydrel	Cream	Cream
Neoprene	Green (-)	Green (+)
Santoprene	Cream*	Cream
Teflon PTFE	White	White
Urethane	N/A	Red
Viton	Yellow (-)	Yellow (+)
	(-) Stripe	(+) Dot

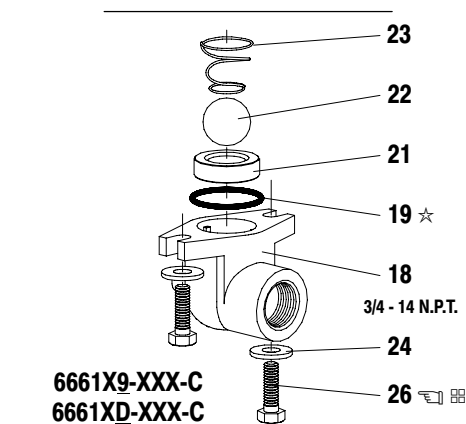
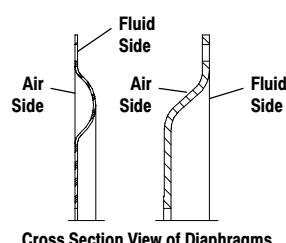
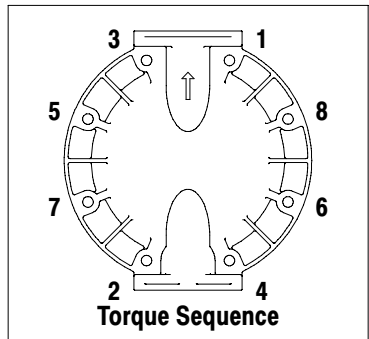
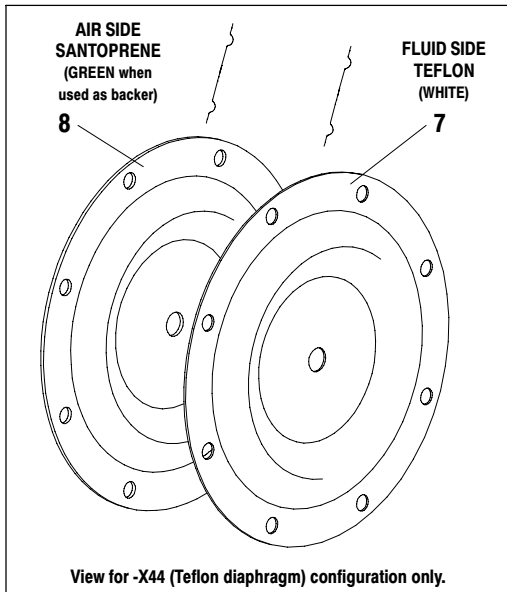
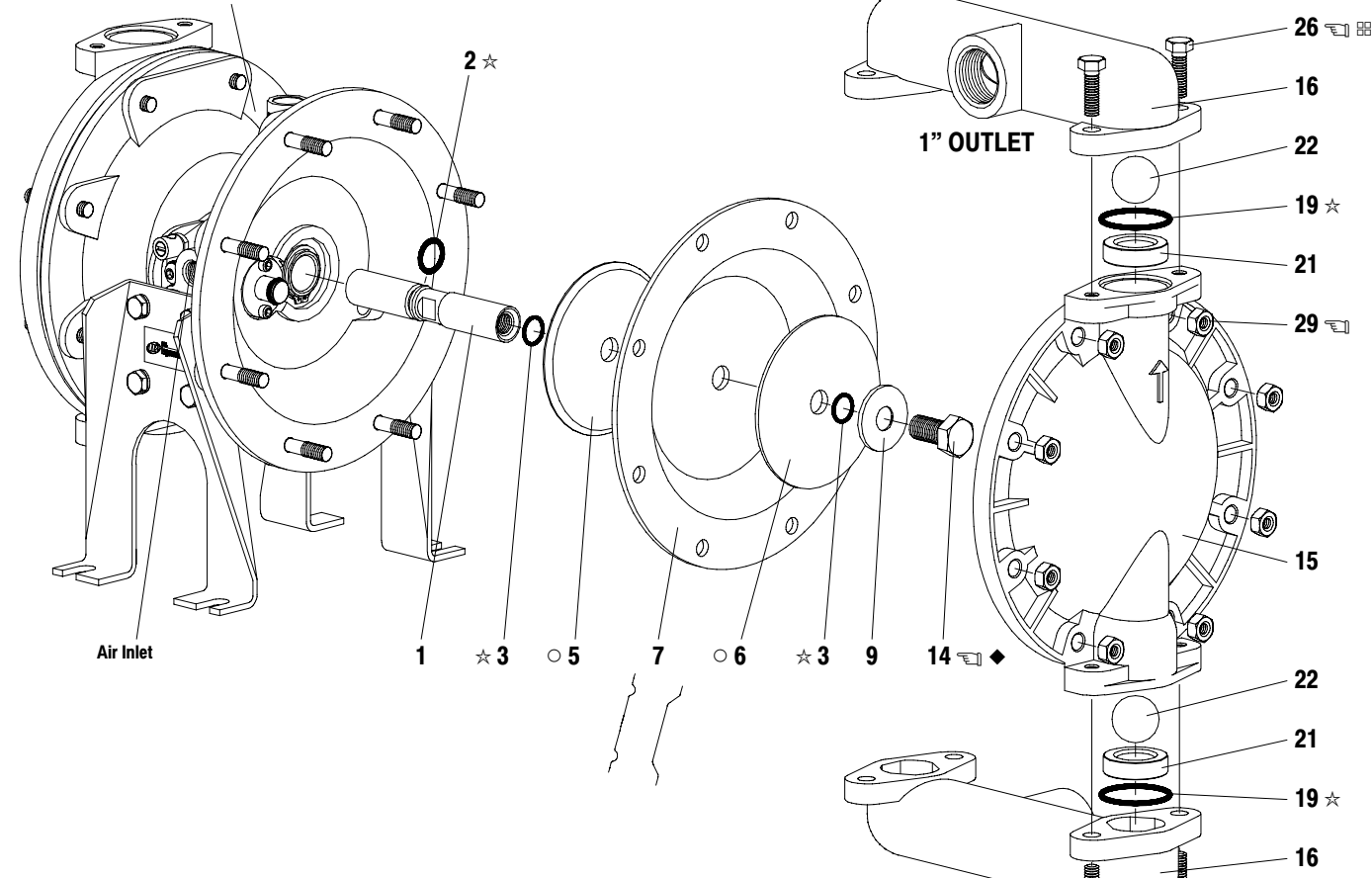
**TORQUE REQUIREMENTS**  
**NOTE: DO NOT OVERTIGHTEN FASTENERS**  
 (14) Bolt, 25 - 30 ft lbs (33.9 - 40.7 Nm).  
 (26) Bolts and (29) nuts, 120 - 140 in. lbs (13.6 - 15.8 Nm).

**LUBRICATION / SEALANTS**

- ◆ Apply Loctite 271 to threads.
- ☆ Apply Key-Lube to all "O" rings, "U" Cups & mating parts.
- ▣ Apply anti-seize compound to threads and bolt and nut flange heads which contact pump case when using stainless steel fasteners.



\* See item 8 in inset below.  
**FOR THE AIR MOTOR SECTION**  
**SEE PAGES 6 & 7**



**Figure 2**

**PARTS LIST / 66610X-X-C AIR MOTOR SECTION**

✓ Indicates parts included in 637118-C Air Section Service Kit.

**SERVICE KIT NOTE:** Service Kit 637118-C is a general repair kit for all 1" and larger ARO diaphragm pump air motors. It contains extra "O" rings and extra parts that may not be needed to service this model.

Item	Description (size)	Qty	Part No.	[Mtl]
101	Motor Body (models 66610X, 66612X)	(1)	94743	[A]
	(models 66611X, 66613X)	(1)	94741	[C]
✓ 102	"O" Ring (1/16" x 1" o.d.)	(2)	Y325-20	[B]
□ 103	Sleeve	(1)	94527	[D]
✓ 104	Retaining Ring, TruArc (0.925" i.d.)	(2)	Y145-25	[C]
105	Screw/Wshr (1/4"-20 x 5/8") (-XX0, 1, 2, 9)	(8)	93860	[C]
	Cap Screw (1/4"-20 x 5/8") (-XXA, B, C, D)	(8)	Y6-42-T	[SS]
106	Lockwasher (1/4") (6661XA, 1XB, 1XC, 1XD)	(8)	Y14-416-T	[SS]
107	Leg (models 6661X0, 1X1, 1X2, 1X9)	(2)	92003	[C]
	(models 6661XA, 1XB, 1XC, 1XD)	(2)	92003-1	[SS]
✓ 108	Gasket (with notch)	(1)	92878	[B/Ny]
□ 109	Piston	(1)	92011	[D]
✓ 110	"U" Cup (3/16" x 1-3/8" o.d.)	(1)	Y186-51	[B]
□ 111	Spool (models 66610X, 66612X)	(1)	92005	[A]
	(models 66611X, 66613X)	(1)	93047	[C]
□ 112	Washer (1.557" o.d.)	(5)	92877	[Z]
✓ 113	"O" Ring (small) (1/8" x 1-1/4" o.d.)	(5)	Y325-214	[B]
✓ 114	"O" Ring (large) (3/32" x 1-9/16" o.d.)	(6)	Y325-126	[B]
□ 115	Spacer	(4)	92876	[Z]

Item	Description (size)	Qty	Part No.	[Mtl]
□ 116	Spacer	(1)	92006	[Z]
✓ 117	Gasket	(1)	92004	[B/Ny]
118	Pilot Rod	(1)	93309-1	[C]
✓ 119	"O" Ring (1/8" x 3/4" o.d.)	(4)	93075	[U]
120	Spacer	(3)	115959	[Z]
121	Sleeve Bushing	(2)	98723-1	[Bz]
✓ 122	"O" Ring (3/32" x 9/16" o.d.)	(2)	94820	[U]
✓ 123	Screw (#8 - 32 x 3/8")	(4)	Y154-41	[C]
124	Stud (5/16" - 18 x 1-3/4") (6661X0, 1X1, 1X2, 1X9)	(16)	92866	[C]
	(5/16" - 18 x 1-3/4") (6661XA, 1XB, 1XC, 1XD)	(16)	92866-1	[SS]
128	Pipe Plug (1/8 - 27 N.P.T. x 1/4")	(1)	Y227-2-L	[C]
133	Lockwasher (1/4")	(1)	Y14-416-T	[SS]
197	Button Head Screw (1/4" - 20 x 1/4")	(2)	94987	[SS]
198	Button Head Screw (1/4" - 20 x 3/8")	(1)	94987-1	[SS]
201	Muffler	(1)	93110	[C]
✓	Key-Lube "O" Ring Lubricant	(1)	93706-1	
	10 Pak of Key-Lube		637175	
✓	Service Kits include: Y212-101 (2) screws (#10 - 32 x 1/4") used on units mf'd between 8/90 and 4/92 to retain the pilot bushing.			

**AIR MOTOR SECTION SERVICE**

Service is divided into two parts - 1. Pilot Valve, 2. Major Valve.

**GENERAL REASSEMBLY NOTES:**

- Air Motor Section Service is continued from Fluid Section repair.
- Inspect and replace old parts with new parts as necessary. Look for deep scratches on metallic surfaces, and nicks or cuts in "O" rings.
- Take precautions to prevent cutting "O" rings upon installation.
- Lubricate "O" rings with Key-Lube grease.
- Do not over-tighten fasteners, refer to torque specification block on view.
- Re-torque fasteners following restart.

**PILOT VALVE DISASSEMBLY**

1. Remove (104) retaining ring.
2. Remove (123) screws and (122) "O" rings.
3. Remove (118) piston rod, (121) sleeve bushing, (119) "O" rings and (120) spacers from the (101) motor body.
4. Remove (103) sleeve and (102) "O" rings.

**PILOT VALVE REASSEMBLY**

1. Replace two (102) "O" rings, if worn or damaged, and reinstall (103) sleeve.
2. Install one of the (121) sleeve bushings, (119) "O" rings, (120) spacers and the remaining (121) bushing.
3. Carefully push (118) pilot rod into bushings etc. and retain on each end with the two (122) "O" rings, retain with (123) screws.
4. Replace (104) retaining rings.

✓ Parts Y145-26 (1.156" i.d.) (qty 2) retaining rings and Y325-24 "O" rings (qty 2) are included in the service kit for the repair of larger pumps.

**MATERIAL CODE**

[A] = Aluminum	[C] = Cast Iron	[U] = Polyurethane
[B] = Nitrile	[D] = Acetal	[SS] = Stainless Steel
[Bz] = Bronze	[Ny] = Nylon	[Z] = Zinc
[C] = Carbon Steel		

**MAJOR VALVE DISASSEMBLY**

1. Remove (107) plate (or leg depending on model), (108 and 117) gaskets.
2. On the side opposite the air inlet, push on the inner diameter (111) spool. This will force the (109) piston out. Continue pushing the (111) spool and remove. Check for scratches and gouges.
3. Reach into the air section (exhaust side) and remove (116) spacer, (115) spacers, (113) "O" rings, (114) "O" rings, (112) washers, etc. Check for damaged "O" rings.

**MAJOR VALVE REASSEMBLY**

1. Replace (112) washer, (114) "O" ring and (113) "O" ring onto (115) spacer and insert etc.
- NOTE: Be careful to orient spacer legs away from blocking internal ports.**
2. Lubricate and carefully insert (111) spool.
  3. Install (117) gasket and (107).
  4. Lubricate and install (110) packing cup and insert (109) piston into (air inlet side) cavity, the (110) packing cup lips should point outward.
  5. Install (108) gasket and replace (107).

**PARTS LIST / 66610X-X-C AIR MOTOR SECTION**

**IMPORTANT**  
BE CERTAIN TO ORIENT (115) SPACER LEGS  
AWAY FROM BLOCKING INTERNAL PORTS  
WHEN REASSEMBLING AIR SECTION.

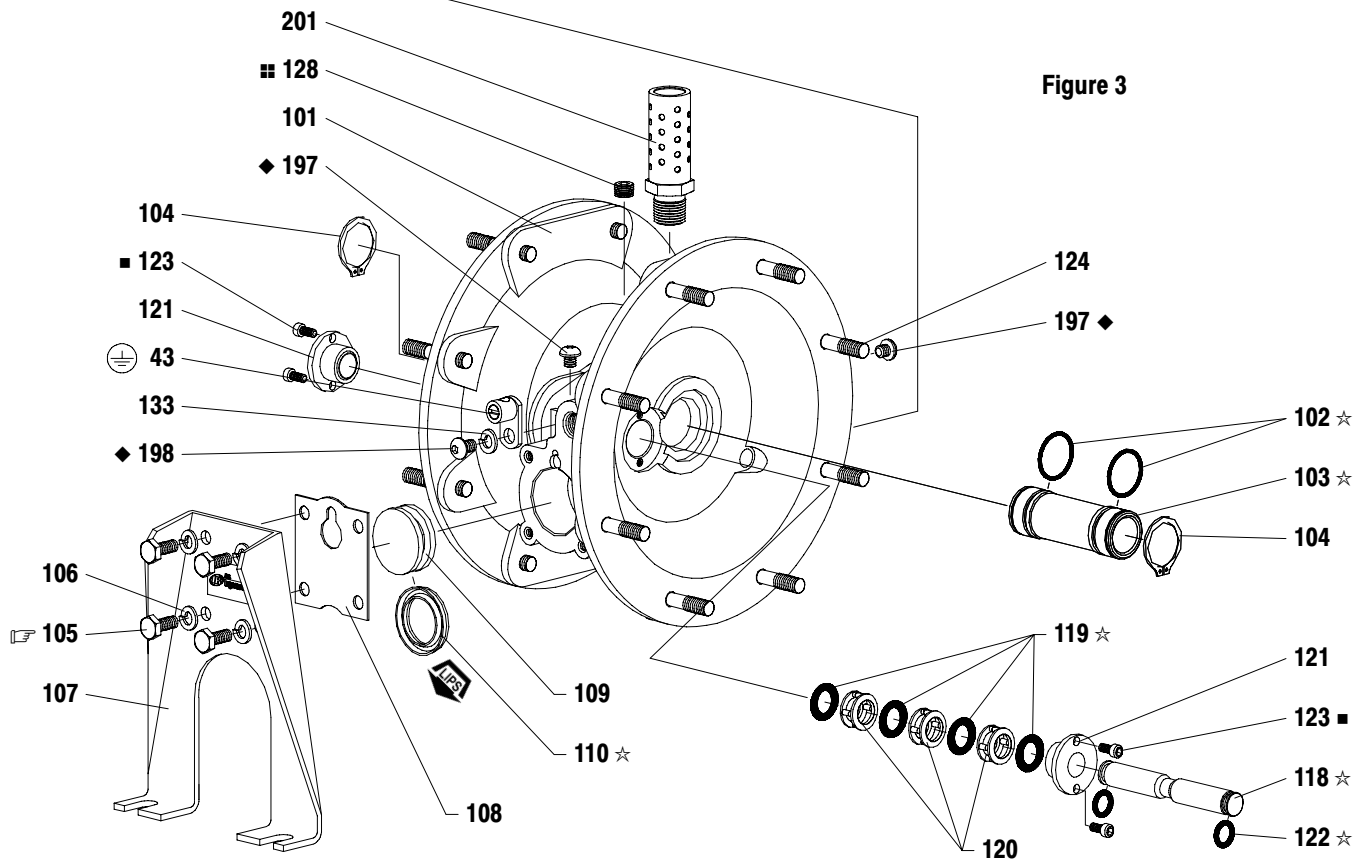
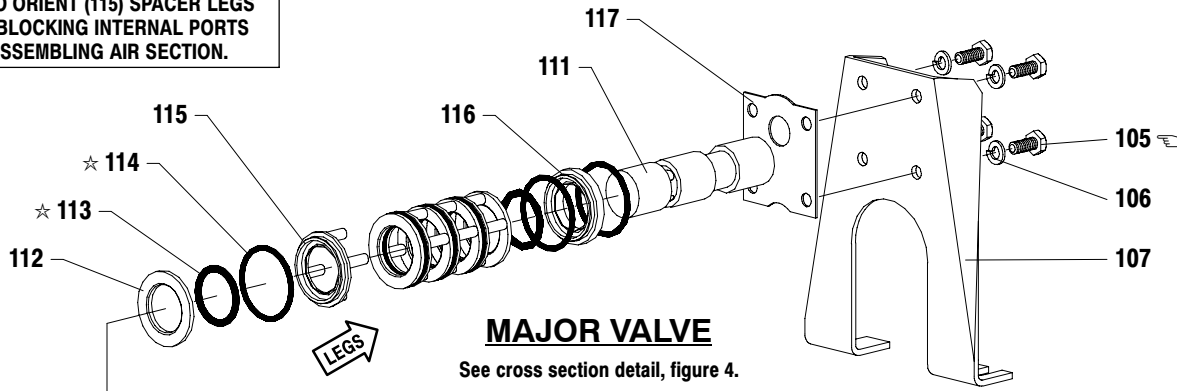
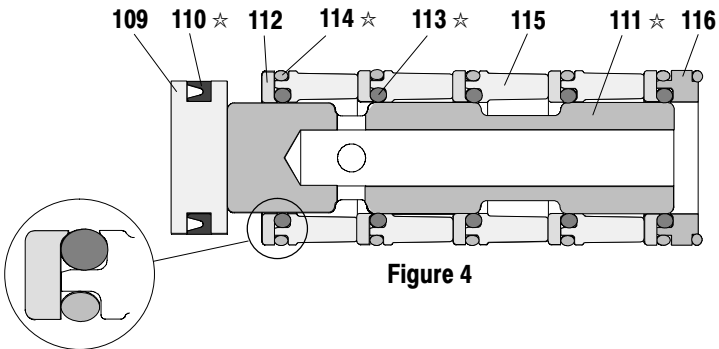


Figure 3

**MAJOR VALVE CROSS SECTION DETAIL**



**TORQUE REQUIREMENTS**  
NOTE: DO NOT OVERTIGHTEN FASTENERS.  
(105) 40 - 50 in. lbs (4.5 - 5.6 Nm).

**LUBRICATION / SEALANTS**

- ★ Apply Key-Lube grease to all "O" rings, "U" Cups & mating parts.
- ◆ Apply Loctite 271 to threads.
- Apply Loctite 262 to threads.
- ▣ Apply Loctite 572 to threads.