

PARTS LIST / 6661AX-X-C FLUID SECTION

FLUID SECTION SERVICE KITS

☆ KITS INCLUDE: BALLS (See BALL Option, refer to -XX in chart below), DIAPHRAGMS (See DIAPHRAGM Option, refer to -XX in chart below), plus "O" ring items (2), (3), (4), (19) and (33) (listed below) plus a 93706-1 Key-Lube grease packet (see page 6).

SEAT OPTIONS 6661XX-XXX-C				BALL OPTIONS 6661XX-XXX-C							
"21"				☆ "22" (1-1/4" dia.)							
-XXX	Seat	Qty	[Mtl]	-XXX	Ball	Qty	[Mtl]	-XXX	Ball	Qty	[Mtl]
-2XX	95093	(4)	[SS]	-X1X	93278-1	(4)	[N]	-X8X	93278-8	(4)	[U]
-3XX	94707-1	(4)	[P]	-X2X	93278-2	(4)	[B]	-XAX	92408	(4)	[SS]
-4XX	94707-2	(4)	[K]	-X3X	93278-3	(4)	[V]	-XEX	93278-A	(4)	[SP]
-8XX	94706	(4)	[SH]	-X4X	93278-4	(4)	[T]	-XMX	93278-M	(4)	[SPM]
				-X5X	93278-5	(4)	[E]				

MATERIAL CODE
[B] = Nitrile
[C] = Carbon Steel
[E] = E.P.R.
[H] = Hytrel
[K] = P.V.D.F. (Kynar)
[N] = Neoprene
[P] = Polypropylene
[SP] = Santoprene
[SPM] = Medical Grade Santoprene
[SH] = Hard Stainless Steel
[SS] = Stainless Steel
[T] = Teflon
[U] = Polyurethane
[V] = Viton

DIAPHRAGM OPTIONS 6661XX-XXX-C

-XXX	☆ SERVICE KIT	☆ "7" / "8"		☆ "3"		☆ "4"		☆ "19"		☆ "33"	
	-XX = (Ball) -XX = (Diaphragm)	Diaphragm (2)	[Mtl]	"O" Ring (2) 5/8" o.d.	[Mtl]	"O" Ring (2) 11/16" o.d.	[Mtl]	"O" Ring (4) 2-1/8" o.d.	[Mtl]	"O" Ring (♣) 1-5/8" o.d.	[Mtl]
-XX1	637161-X1-C	90533-1	[N]	Y325-14	[B]	Y325-112	[B]	Y325-225	[B]	Y325-220	[B]
-XX2	637161-X2-C	90533-2	[B]	Y325-14	[B]	Y325-112	[B]	Y325-225	[B]	Y325-220	[B]
-XX3	637161-X3-C	90533-3	[V]	Y328-14	[T]	Y328-112	[T]	Y327-225	[V]	Y327-220	[V]
-XX4	637161-X4-C	93459-4 / 92973-B	[T/SP]	Y328-14	[T]	Y328-112	[T]	93282	[T]	93281	[T]
-XX5	637161-X5-C	90533-5	[E]	Y328-14	[T]	Y328-112	[T]	93280	[E]	93279	[E]
-XX9	637161-X9-C	90533-9	[H]	Y328-14	[T]	Y328-112	[T]	Y327-225	[V]	Y327-220	[V]
-XXB	637161-XB-C	90533-B	[SP]	Y328-14	[T]	Y328-112	[T]	93280	[E]	93279	[E]
-XXM	637161-XM-C	90533-M	[SPM]	Y328-14	[T]	Y328-112	[T]	93282	[T]	93281	[T]

♣ Quantity of eight (8) required for models 6661X3-X, 6661X4-X and 6661XP-X.

Quantity of four (4) required for models 6661XF-X, 6661XG-X, 6661XJ-X, 6661XK-X, 6661XL-X, 6661XN-X, 6661XR-X, 6661XS-X and 6661XT-X.

MANIFOLD / FLUID CAP MATERIAL OPTIONS 6661XX-XXX-C

Item	Description (Size in inches)	Qty	POLYPROPYLENE						P.V.D.F.					
			6661X3- 6661XP-		6661XF- 6661XR-		6661XJ-, XL- 6661XS-, XT-		6661X4-		6661XG-		6661XK-, XN-	
			Part No.	Mtl	Part No.	Mtl	Part No.	Mtl	Part No.	Mtl	Part No.	Mtl	Part No.	Mtl
<input type="checkbox"/> 6	Diaphragm Nut (1/2" - 20)	(2)	93239-1	[P]	93239-1	[P]	93239-1	[P]	93239-2	[K]	93239-2	[K]	93239-2	[K]
15	Fluid Cap	(2)	93235-[O]	[P]	93235-[O]	[P]	93235-[O]	[P]	93235-2	[K]	93235-2	[K]	93235-2	[K]
34	Manifold, Outlet (Top)	(2)	93236-[O]	[P]					93236-2	[K]				
35	Manifold, Foot (Bottom)	(2)	93237-[O]	[P]					93237-2	[K]				
36	Swivel	(2)	93238-[O]	[P]					93238-2	[K]				
<input type="checkbox"/> 37	Clamp	(8)	93283	[SS]					93283	[SS]				
38	Bolt (1/4" - 20 x 1-1/2")	(8)	Y84-403-T	[SS]					Y84-403-T	[SS]				
39	Nut (1/4" - 20)	(8)	Y12-4-S	[SS]					Y12-4-S	[SS]				
60	Inlet Manifold (Bottom)	(1)			95746-[O]	[P]	95747-[B]	[P]			95746-2	[K]	95747-[O]	[K]
61	Outlet Manifold (Top)	(1)			95744-[O]	[P]	95745-[B]	[P]			95744-2	[K]	95745-[O]	[K]

⊞ For N.P.T.F. thread colorless Polypropylene models (6661XJ-), use "-1". For BSP thread colorless Polypropylene models (6661XL-), use "-3".
For N.P.T.F. thread gray Polypropylene models (6661XS-), use "-5". For BSP thread gray Polypropylene models (6661XT-), use "-6".

◇ For N.P.T.F. thread models (6661XK-), use "-2". For BSP thread models (6661XN-), use "-4".

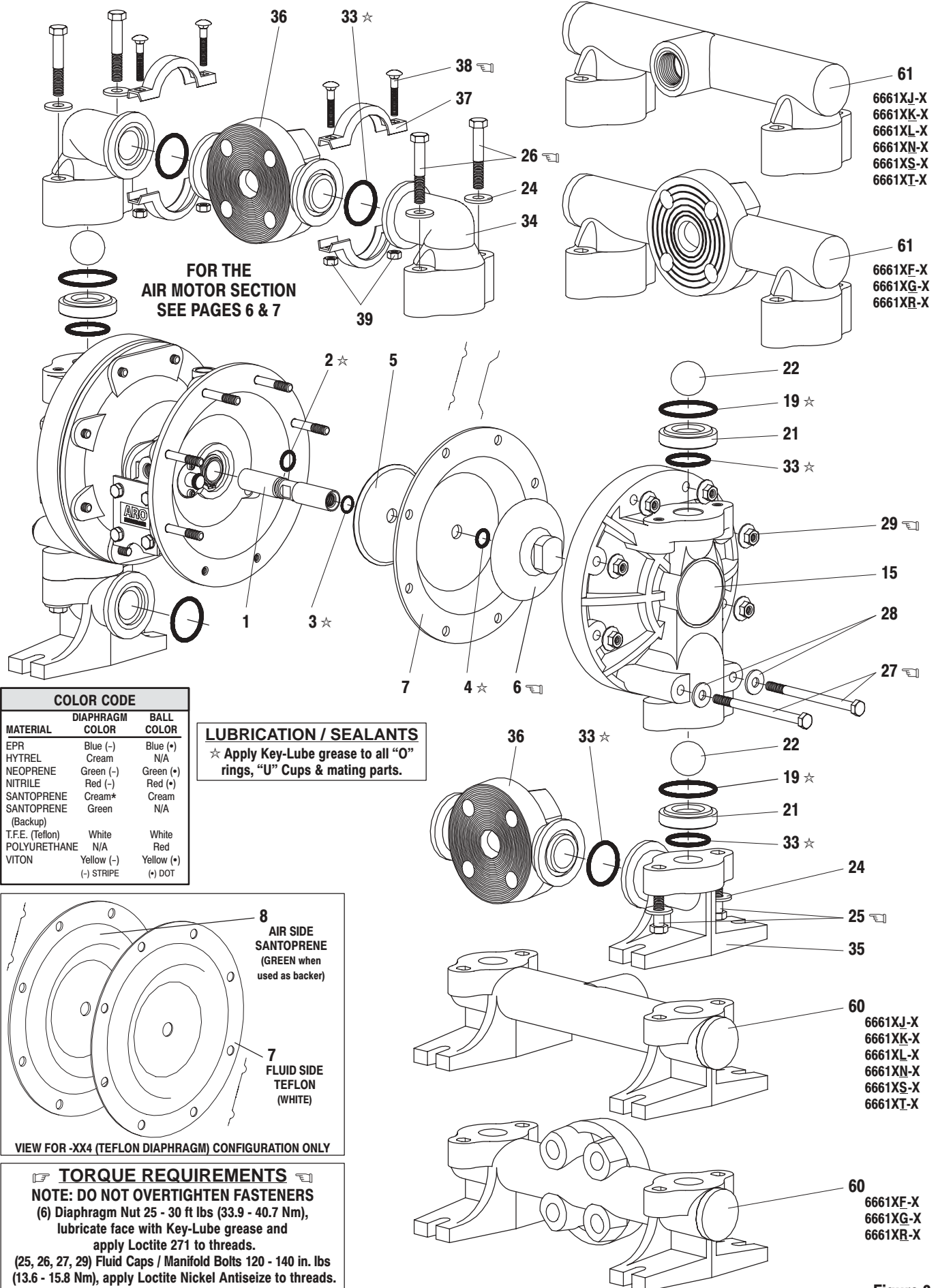
○ For colorless Polypropylene models (6661X3-, 6661XF-, 6661XJ-, 6661XL-), use "-1". For gray Polypropylene models (6661XP-, 6661XR-, 6661XS-, 6661XT-), use "-3".

COMMON PARTS

ITEM	DESCRIPTION (Size in inches)	Qty	Part No.	[Mtl]	ITEM	DESCRIPTION (Size in inches)	Qty	Part No.	[Mtl]
<input type="checkbox"/> 1	Rod	(1)	98724-1	[C]	26	Bolt (3/8" - 16 x 2-1/4")	(4)	Y6-610-T	[SS]
☆ 2	"O" Ring (3/32" x 3/4" o.d.)	(1)	Y330-113	[B]	27	Bolt (5/16" - 18 x 4-1/2")	(4)	Y6-518-T	[SS]
5	Plate	(2)	93441-2	[C]	28	Washer (5/16" i.d.)	(4)	93359-1	[SS]
24	Washer (13/32" i.d.)	(8)	93360-1	[SS]	29	Nut (5/16" - 18)	(12)	93886	[SS]
25	Bolt (3/8" - 16 x 1-1/2")	(4)	Y6-67-T	[SS]					

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

PARTS LIST / 6661AX-X-C FLUID SECTION

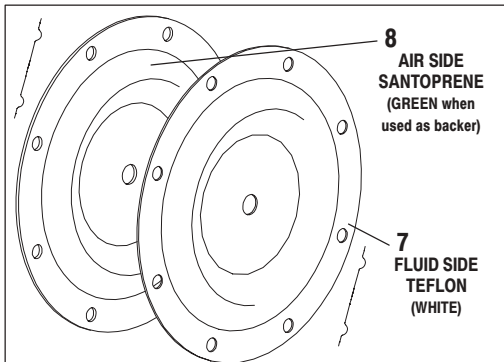


**FOR THE AIR MOTOR SECTION
 SEE PAGES 6 & 7**

COLOR CODE		
MATERIAL	DIAPHRAGM COLOR	BALL COLOR
EPR	Blue (-)	Blue (+)
HYTREL	Cream	N/A
NEOPRENE	Green (-)	Green (+)
NITRILE	Red (-)	Red (+)
SANTOPRENE	Cream*	Cream
SANTOPRENE (Backup)	Green	N/A
T.F.E. (Teflon)	White	White
POLYURETHANE	N/A	Red
VITON	Yellow (-)	Yellow (+)
	(-) STRIPE	(+) DOT

LUBRICATION / SEALANTS

★ Apply Key-Lube grease to all "O" rings, "U" Cups & mating parts.



VIEW FOR -XX4 (TEFLON DIAPHRAGM) CONFIGURATION ONLY

TORQUE REQUIREMENTS

NOTE: DO NOT OVERTIGHTEN FASTENERS
 (6) Diaphragm Nut 25 - 30 ft lbs (33.9 - 40.7 Nm), lubricate face with Key-Lube grease and apply Loctite 271 to threads.
 (25, 26, 27, 29) Fluid Caps / Manifold Bolts 120 - 140 in. lbs (13.6 - 15.8 Nm), apply Loctite Nickel Antizeize to threads.
 (38) Bolt 40 - 45 in. lbs (4.5 - 5.1 Nm).

- 6661XJ-X
- 6661XK-X
- 6661XL-X
- 6661XN-X
- 6661XS-X
- 6661XT-X

- 6661XF-X
- 6661XG-X
- 6661XR-X

- 6661XJ-X
- 6661XK-X
- 6661XL-X
- 6661XN-X
- 6661XS-X
- 6661XT-X

- 6661XF-X
- 6661XG-X
- 6661XR-X

Figure 3

PARTS LIST / 6661AX-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 in inches)	Qty	Part No.	[Mtl]
101	Motor Body (6661AX-XXX-C)	(1)	94743	[A]
	(6661BX-XXX-C)	(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 (.925" i.d.)	(2)	Y145-25	[C]
105	Screw (1/4" - 20 x 5/8")	(8)	Y6-42-T	[SS]
106	Lock Washer (1/4")	(8)	Y14-416-T	[SS]
107	Plate	(2)	93707-1	[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 (6661AX-XXX-C)	(1)	92005	[A]
	(6661BX-XXX-C)	(1)	93047	[C]
□112	Washer (1.557" o.d.)	(5)	92877	[Z]
✓113	"O" Ring (1/8" x 1-1/4" o.d.)	(5)	Y325-214	[B]
✓114	"O" Ring (3/32" x 1-9/16" o.d.)	(6)	Y325-126	[B]
□115	Spacer	(4)	92876	[Z]

ITEM	DESCRIPTION (Size in inches)	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	Screw (5/16" - 18 x 2-3/8")	(12)	93277	[SS]
128	Pipe Plug (1/8 - 27 N.P.T. x 1/4")	(1)	Y227-2-L	[C]
195	Button Head Screw (1/4" - 20 x 1/4")	(3)	94987	[SS]
201	Muffler	(1)	93110	[C]
✓	Key-Lube "O" Ring Lubricant	(1)	93706-1	
	Pak of 10 Key-Lube	(10)	637175	
✓	Service Kits include: Y212-101 (2) Screws (#10 - 32 x 1/4") used on units manufactured 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.

MATERIAL CODE

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

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 / 6661AX-X-C AIR SECTION

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

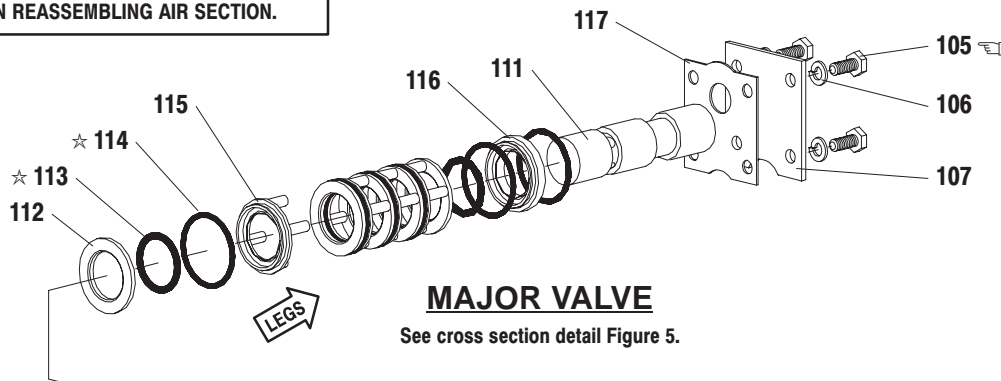
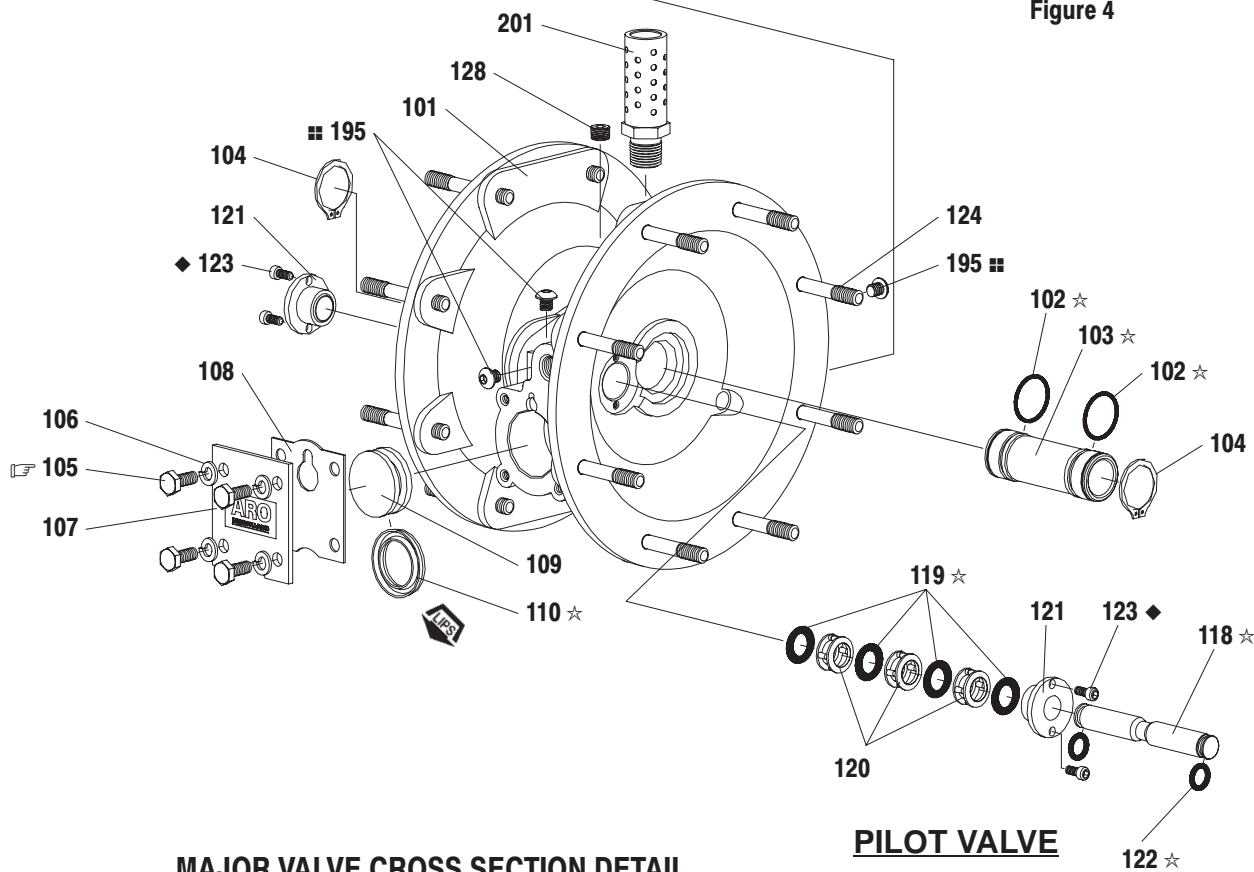
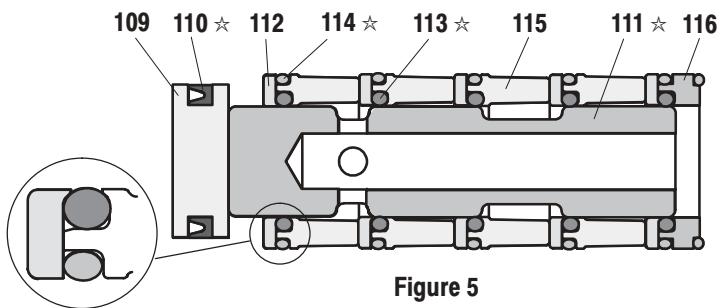


Figure 4



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 to all "O" rings, "U" Cups & mating parts.
 ◆ Apply Loctite 271 to threads.
 ■ Apply Dri-Loc 204 to threads.