

PARTS LIST / PX05X-XXX-XXX-B FLUID SECTION

① 637427-XX Fluid section service kit includes: Balls (see Ball Option, refer to -XX in chart below), Diaphragms (see Diaphragm Option, refer to -XX in chart below) and item 19 (listed below) plus items 144, 174 and 94276 Lubriplate FML-2 grease (pages 6 and 8).

SEAT OPTIONS PX05X-XXX-XXX-B				BALL OPTIONS PX05X-XXX-XXX-B							
"21"				① "22" (3/4" diameter)							
-XXX	Seat	Qty	Mtl	-XXX	Ball	Qty	Mtl	-XXX	Ball	Qty	Mtl
-FXX	95727	(4)	[A]	-XAX	93100-E	(4)	[Sp]	-XTX	93100-4	(4)	[T]
-PXX	93098-10	(4)	[P]	-XCX	93100-C	(4)	[H]	-XUX	93100-8	(4)	[U]
-SXX	93409-1	(4)	[SS]	-XGX	93100-2	(4)	[B]	-XVX	93100-3	(4)	[V]
				-XSX	93410-1	(4)	[SS]				

DIAPHRAGM OPTIONS PX05X-XXX-XXX-B										
-XXX	① Service Kit -XX = (Ball) -XX = (Diaphragm)	① "7"			① "8"			① "19" (3/32" x 1-5/16" o.d.)		
		Diaphragm	Qty	Mtl	Diaphragm	Qty	Mtl	"O" Ring	Qty	Mtl
-XXA	637427-XA	93465	(2)	[Sp]	-----	---	---	93763	(4)	[E]
-XXC	637427-XC	93465-9	(2)	[H]	-----	---	---	Y325-122	(4)	[B]
-XXG	637427-XG	93465-G	(2)	[B]	-----	---	---	Y325-122	(4)	[B]
-XXT	637427-XT	93111	(2)	[T]	93465	(2)	[Sp]	93265	(4)	[T]
-XXU	637427-XU	93112	(2)	[U]	-----	---	---	93119	(4)	[U]
-XXV	637427-XV	93581-3	(2)	[V]	-----	---	---	Y327-122	(4)	[V]

MATERIAL CODE
[A] = Aluminum
[B] = Nitrile
[C] = Carbon Steel
[E] = E.P.R.
[GFN] = Glass filled Nylon
[H] = Hytrel
[K] = Kynar PVDF
[P] = Polypropylene
[Sp] = Santoprene
[SS] = Stainless Steel
[T] = PTFE
[U] = Polyurethane
[V] = Viton

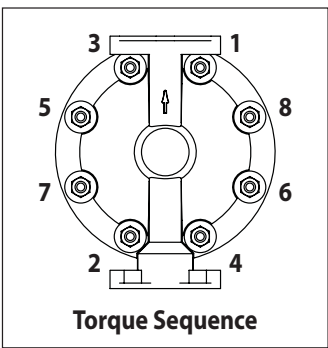
MANIFOLD / FLUID CAP MATERIAL OPTIONS PX05X-XXX-XXX-B										
Item	Description (size)	Qty	Aluminum				Stainless Steel			
			PX05X-AAS-XXX-B		PX05X-BAS-XXX-B		PX05X-ASS-XXX-B		PX05X-BSS-XXX-B	
			N.P.T.	BSP	N.P.T.	BSP				
Part No.	Mtl	Part No.	Mtl	Part No.	Mtl	Part No.	Mtl			
12	Washer	(2)	95092	[A]	95092	[A]	-----	---	-----	---
15	Fluid Cap	(2)	95064	[A]	95064	[A]	94624	[SS]	94624	[SS]
60	Inlet Manifold	(1)	95065	[A]	95065-2	[A]	94626	[SS]	94626-2	[SS]
61	Outlet Manifold	(1)	95066	[A]	95066-2	[A]	94625	[SS]	94625-2	[SS]
63	Pipe Plug (1/2 - 14 N.P.T. x 9/16")	(1)	Y17-13-S	[K]	-----	---	Y17-13-S	[K]	-----	---
	(R 1/2 [1/2 - 14 BSP taper])	(1)	-----	---	96764691	[K]	-----	---	96764691	[K]

COMMON PARTS										
Item	Description (size)	Qty	Part No.	Mtl	Item	Description (size)	Qty	Part No.	Mtl	
② 1	Connecting Rod	(1)	96379	[SS]	29	Hex Flange Nut (5/16" - 18)	(16)	93886	[SS]	
5	Diaphragm Washer	(2)	94645	[GFN]	43	Ground Strap (models PX05R-XXX-XXX-B only)(see page 9)	(1)	92956-1	[SS]	
② 6	Diaphragm Washer	(2)	94622	[SS]	57	Ground Kit Assembly (not shown)	(1)	66885-1	---	
14	Flange Bolt (5/16" - 18 x 3/4")	(2)	94628	[SS]	76	Pipe Plug (1/8 - 27 N.P.T. x 1/4")(models PE05X-XXX-XXX-B only)(see pages 7 and 9)	(1)	Y227-2-L	[C]	
26	Flange Bolt (5/16" - 18 x 3/4")	(8)	94628	[SS]						
27	Bolt (5/16" - 18 x 1-1/4") (PX05A-XXX-XXX-B)	(16)	Y84-502-T	[SS]						
	(PX05R-XXX-XXX-B)	(16)	93095	[SS]						

② "Smart Parts", keep these items on hand in addition to the service kits for fast repair and reduction of down time.

PARTS LIST / PX05X-XXX-XXX-B FLUID SECTION

COLOR CODE		
Material	Diaphragm Color	Ball Color
Hytrek	Cream	Black (-)
Nitrile	Black	Red (+)
Polyurethane	Clear	Red
Santoprene	Tan	Tan
PTFE	White	White
Viton	Yellow (-)	Yellow (+)
		(-) Dot



FOR THE AIR MOTOR SECTION, SEE PAGES 6 THRU 9.

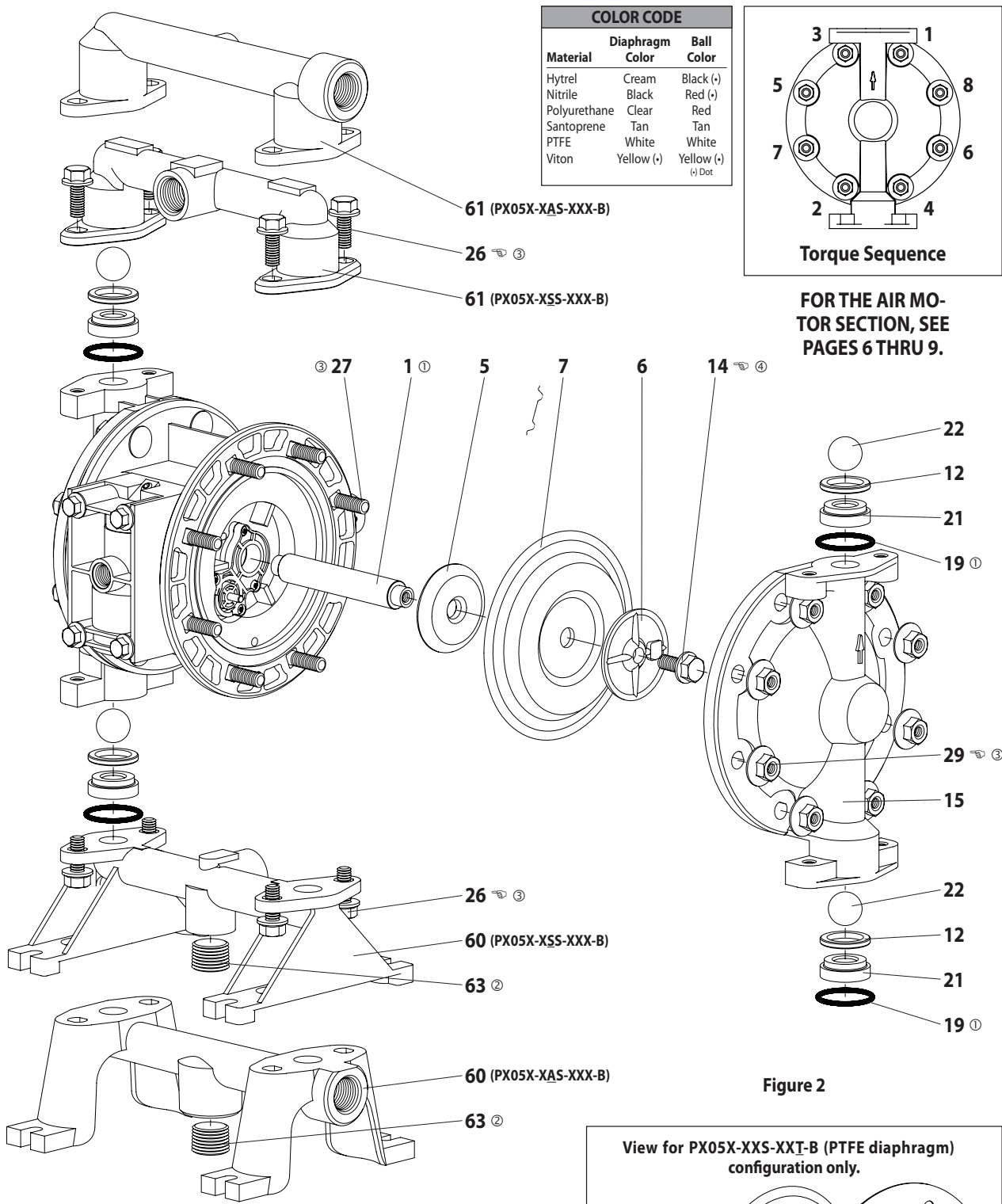
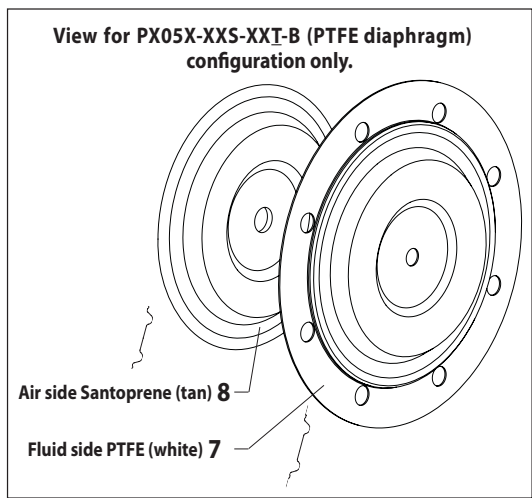


Figure 2



ASSEMBLY TORQUE REQUIREMENTS
NOTE: DO NOT OVERTIGHTEN FASTENERS.
 (14) bolt, 95 - 105 in. lbs (10.7 - 11.9 Nm).
 (26) bolt and (29) nut, 50 - 60 in. lbs (5.6 - 6.8 Nm), alternately and evenly, then re-torque after initial run-in.

LUBRICATION / SEALANTS

- ① Apply Lubriplate FML-2 grease to all "O" rings, "U" cups and mating parts.
- ② Apply pipe sealant to threads.
- ③ Apply anti-seize compound to threads and bolt and nut flange heads which contact pump case when using stainless steel fasteners.
- ④ Apply Loctite® 242® to threads.

Note: Lubriplate FML-2 is a white food grade petroleum grease.

PARTS LIST / PX05A-XXX-XXX-B AIR MOTOR SECTION

Ⓢ Indicates parts included in 637428 air section service kit.

AIR MOTOR PARTS LIST

Item	Description (size)	Qty	Part No.	Mtl
101	Center Body	(1)	95978	[A]
103R	Cover (right side)	(1)	96091	[D]
103L	Cover (left side)	(1)	96351	[D]
111	Major Valve Spool	(1)	95919	[D]
118	Actuator Pin	(2)	97111	[SS]
Ⓢ 121	Washer	(2)	96092	[D]
123	Screw (#4 - 20 x 1/2")	(8)	96093	[SS]
129	Exhaust Cover	(1)	95979	[A]
130	Gasket	(1)	96632	[B]
Ⓢ 132	Air Manifold Gasket	(1)	96214-1	[B]
134	Flange Bolt (1/4" - 20 x 5-3/4")	(4)	94871	[SS]
135	Valve Block	(1)	95980	[Z]
136	Plug, Large (PD05A-XXX-XXX-B)	(1)	95982	[A]
	(PE05A-XXX-XXX-B)	(1)	96464	[A]
Ⓢ 137	"O" Ring (1/16" x 1-5/8" o.d.)	(2)	Y325-29	[B]
Ⓢ 138	"U" Cup Packing (1/8" x 1" o.d.)	(1)	94395	[U]
Ⓢ 139	"U" Cup Packing (1/8" x 1-7/16" o.d.)	(1)	96383	[U]

Item	Description (size)	Qty	Part No.	Mtl
140	Valve Insert	(1)	93276	(CK)
141	Valve Plate	(1)	96173	(CK)
Ⓢ 144	"U" Cup Packing (3/16" x 1" o.d.)	(2)	Y187-48	[B]
Ⓢ 167	Pilot Piston (includes 168 and 169)	(1)	67382	[D]
168	"O" Ring (1/16" x 7/16" o.d.)	(2)	96459	[U]
169	"U" Cup Packing (1/8" x 5/8" o.d.)	(1)	96384	[U]
170	Spool Bushing	(1)	96090	[D]
Ⓢ 171	"O" Ring (1/16" x 13/16" o.d.)	(2)	Y325-17	[B]
Ⓢ 173	"O" Ring (3/32" x 7/8" o.d.)	(2)	Y325-115	[B]
Ⓢ 174	"O" Ring (3/32" x 11/32" o.d.)	(2)	Y325-105	[B]
Ⓢ 200	Porting Gasket	(1)	96364	[B]
201	Muffler	(1)	93110	[C]
Ⓢ 232	"O" Ring (1/16" x 3/8" o.d.)	(4)	Y325-10	[B]
250	Screw (1/4" - 14 x 1/2" o.d.)	(1)	Y334-104-C	[C]
Ⓢ 1	Lubriplate FML-2 grease	(1)	94276	
	Lubriplate Grease Packets (10)		637308	

Ⓢ Indicates parts included in fluid section service kit, see page 4.

MATERIAL CODE

- | | |
|--------------------|------------------------|
| [A] = Aluminum | [D] = Acetal |
| [B] = Nitrile | [SS] = Stainless Steel |
| [C] = Carbon Steel | [U] = Polyurethane |
| [CK] = Ceramic | [Z] = Zinc |

AIR MOTOR SECTION SERVICE

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

- Air Motor Section service is continued from Fluid Section repair.

PILOT VALVE DISASSEMBLY

- Remove (123) screws, releasing (103) covers, (121) washers, (118) actuator pins and (167) pilot piston.
- Remove (170) spool bushing and inspect inner bore of bushing for damage.

PILOT VALVE REASSEMBLY

- Clean and lubricate parts not being replaced from service kit.
- Assemble (171) "O" rings to (170) bushing and assemble bushing into (101) center body.
- Lubricate and assemble (167) pilot piston assembly into (170) bushing.
- Assemble (173 and 174) "O" rings and (121) washers to (103) covers, then insert (118) actuator pins through assembly.
- Assemble (144) "U" cups (note the lip direction) and (103) covers to (101) center body, securing with (123) screws. NOTE: tighten (123) screws to 10 - 12 in. lbs (1.13 - 1.36 Nm).

MAJOR VALVE DISASSEMBLY

- Unthread (134) bolts, releasing (129) exhaust cover.
- Pull (135) valve block and components from (101) center body.
- Remove (132) gasket, (141) valve plate and (140) valve insert from (135) valve block.
- Remove (134) bolts, releasing (136) plug and (111) spool.

MAJOR VALVE REASSEMBLY

- Assemble new (139 and 138) "U" cups on (111) spool - **LIPS MUST FACE EACH OTHER.**
- Assemble (137) "O" rings to (136) large plug.
- Insert (111) spool into (136) large plug, then insert (136) large plug into (135) valve block, being sure the (111) spool is rotated to accept (140) valve insert.
- Assemble (140) valve insert and (141) valve plate to (135) valve block. NOTE: Assemble (140) valve insert with "dished" side toward (141) valve plate. Assemble (141) valve plate with identification dot toward (132) gasket.
- Assemble (132 and 200) gaskets, (135) valve block, (130) gasket and (129) exhaust cover to (101) center body, securing with (134) bolts. NOTE: Tighten (134) bolts to 15 - 20 in. lbs (1.7 - 2.3 Nm).

PARTS LIST / PX05A-XXX-XXX-B AIR MOTOR SECTION

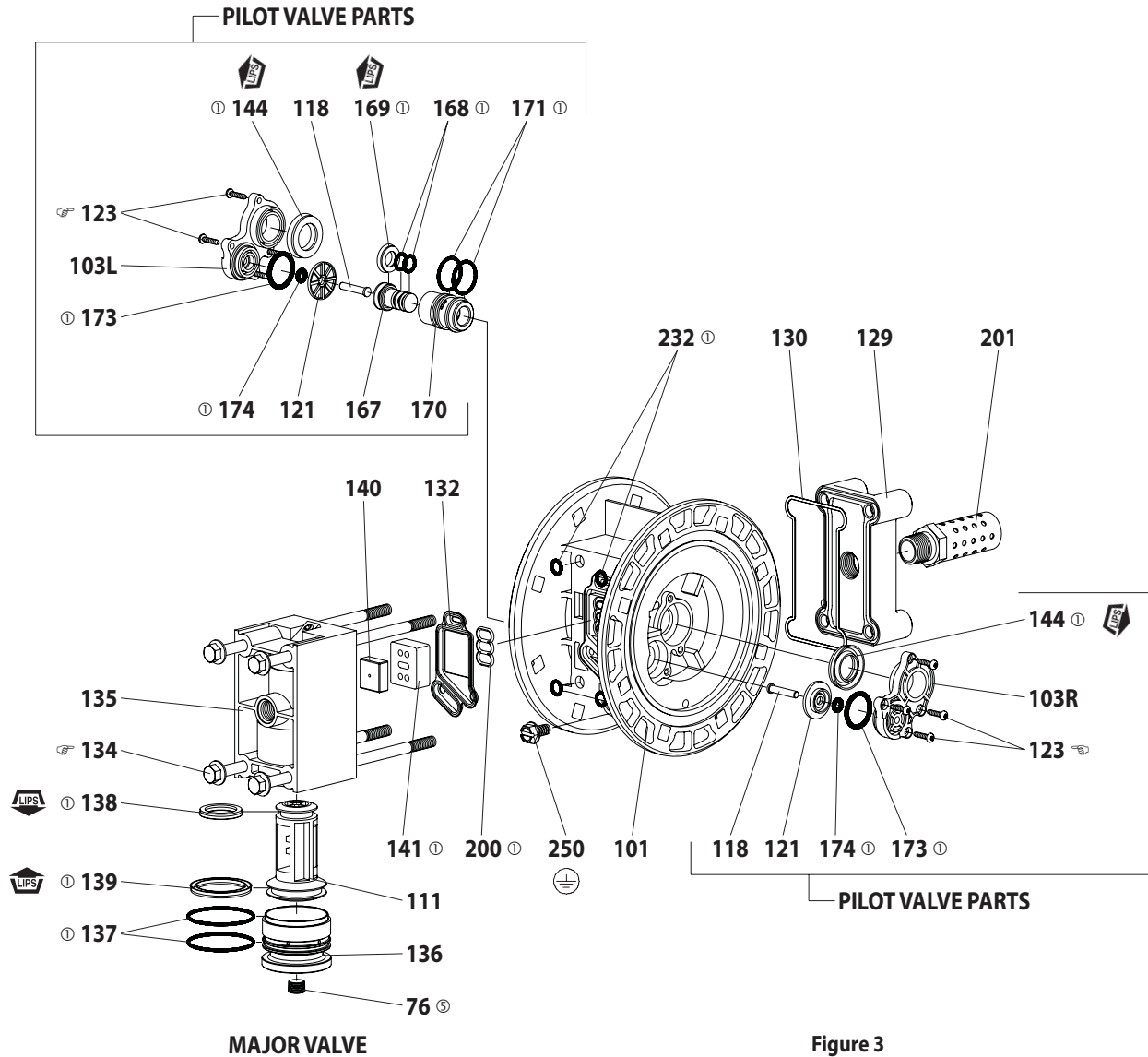


Figure 3

ASSEMBLY TORQUE REQUIREMENTS

NOTE: DO NOT OVERTIGHTEN FASTENERS.

(123) screw, 10 - 12 in. lbs (1.13 - 1.36 Nm).

(134) bolt, torque to 15 - 20 in. lbs (1.7 - 2.3 Nm), wait 10 minutes, then re-torque to 15 - 20 in. lbs (1.7 - 2.3 Nm).

LUBRICATION / SEALANTS

① Apply Lubriplate FML-2 grease to all "O" rings, "U" cups and mating parts.

⑤ Apply Loctite® 572™ to threads.

PARTS LIST / PX05R-XXX-XXX-B AIR MOTOR SECTION

Ⓢ Indicates parts included in 637428 air section service kit.

AIR MOTOR PARTS LIST

Item	Description (size)	Qty	Part No.	Mtl
101	Center Body	(1)	96315	[PPG]
103R	Cover (right side)	(1)	96091	[D]
103L	Cover (left side)	(1)	96351	[D]
107	Plug, Small	(1)	96353	[D]
111	Major Valve Spool	(1)	95919	[D]
118	Actuator Pin	(2)	97111	[SS]
Ⓢ 121	Washer	(2)	96092	[D]
123	Screw (#4 - 20 x 1/2")	(8)	96093	[SS]
129	Muffler Assembly	(1)	67367	[PPG]
Ⓢ 129	Exhaust Cover (optional)	(1)	67366	[PPG]
Ⓢ 130	Gasket (optional)	(1)	93107	[Sy]
Ⓢ 132	Air Manifold Gasket	(1)	96214-1	[B]
134	Flange Bolt (1/4" - 20 x 5-3/4")	(4)	94871	[SS]
135	Valve Block	(1)	96204	[PPG]
136	Plug, Large (PD05R-XXX-XXX-B)	(1)	96352	[D]
	(PE05R-XXX-XXX-B)	(1)	96462	[D]
Ⓢ 137	"O" Ring (1/16" x 1-5/8" o.d.)	(3)	Y325-29	[B]
Ⓢ 138	"U" Cup Packing (1/8" x 1" o.d.)	(1)	94395	[U]
Ⓢ 139	"U" Cup Packing (1/8" x 1-7/16" o.d.)	(1)	96383	[U]

Item	Description (size)	Qty	Part No.	Mtl
140	Valve Insert	(1)	93276	[Ck]
141	Valve Plate	(1)	96173	[Ck]
Ⓢ Ⓢ 144	"U" Cup Packing (3/16" x 1" o.d.)	(2)	Y187-48	[B]
Ⓢ 166	"O" Ring (1/16" x 1-1/4" o.d.)	(1)	Y325-24	[B]
Ⓢ 167	Pilot Piston (includes 168 and 169)	(1)	67382	[D]
168	"O" Ring (1/16" x 7/16" o.d.)	(2)	96459	[U]
169	"U" Cup Packing (1/8" x 5/8" o.d.)	(1)	96384	[U]
170	Spool Bushing	(1)	96090	[D]
Ⓢ 171	"O" Ring (1/16" x 13/16" o.d.)	(2)	Y325-17	[B]
Ⓢ 173	"O" Ring (3/32" x 7/8" o.d.)	(2)	Y325-115	[B]
Ⓢ Ⓢ 174	"O" Ring (3/32" x 11/32" o.d.)	(2)	Y325-105	[B]
Ⓢ 200	Porting Gasket	(1)	96364	[B]
201	Muffler (optional)	(1)	93110	[C]
Ⓢ 232	"O" Ring (1/16" x 3/8" o.d.) (optional)	(4)	Y325-10	[B]
Ⓢ	Ported Exhaust Kit (includes items 129, 130 and 232) (optional)	(1)	637438	---
Ⓢ Ⓢ	Lubriplate FML-2 grease	(1)	94276	
	Lubriplate Grease Packets (10)		637308	

Ⓢ Indicates parts included in fluid section service kit, see page 4.

MATERIAL CODE

[B] = Nitrile	[PPG] = Glass filled Polypropylene
[C] = Carbon Steel	[SS] = Stainless Steel
[Ck] = Ceramic	[Sy] = Syn-Seal
[D] = Acetal	[U] = Polyurethane

AIR MOTOR SECTION SERVICE

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

- Air Motor Section service is continued from Fluid Section repair.

PILOT VALVE DISASSEMBLY

- Remove (123) screws, releasing (103) covers, (121) washers, (118) actuator pins and (167) pilot piston.
- Remove (170) spool bushing and inspect inner bore of bushing for damage.

PILOT VALVE REASSEMBLY

- Clean and lubricate parts not being replaced from service kit.
- Assemble (171) "O" rings to (170) bushing and assemble bushing into (101) center body.
- Lubricate and assemble (167) pilot piston assembly into (170) bushing.
- Assemble (173 and 174) "O" rings and (121) washers to (103) covers, then insert (118) actuator pins through assembly.
- Assemble (144) "U" cups (note the lip direction) and (103) covers to (101) center body, securing with (123) screws. NOTE: tighten (123) screws to 4 - 6 in. lbs (0.45 - 0.68 Nm).

MAJOR VALVE DISASSEMBLY

- Unthread (134) bolts, releasing (129) muffler assembly.
- Pull (135) valve block and components from (101) center body.
- Remove (132) gasket, (141) valve plate and (140) valve insert from (135) valve block.
- Remove (134) bolts, releasing (107 and 136) plugs and (111) spool.

MAJOR VALVE REASSEMBLY

- Assemble new (139 and 138) "U" cups on (111) spool - **LIPS MUST FACE EACH OTHER.**
- Assemble (137) "O" rings to (136) large plug.
- Assemble (137 and 166) "O" rings to (107) small plug.
- Insert (111) spool into (136) large plug, then insert (136) large plug into (135) valve block, being sure the (111) spool is rotated to accept (140) valve insert.
- Assemble (107) small plug into (135) valve block.
- Assemble (140) valve insert and (141) valve plate to (135) valve block. NOTE: Assemble (140) valve insert with "dished" side toward (141) valve plate. Assemble (141) valve plate with identification dot toward (132) gasket.
- Assemble (132 and 200) gaskets, (135) valve block and (129) muffler assembly to (101) center body, securing with (134) bolts. NOTE: Tighten (134) bolts to 15 - 20 in. lbs (1.7 - 2.3 Nm).

PARTS LIST / PX05R-XXX-XXX-B AIR MOTOR SECTION

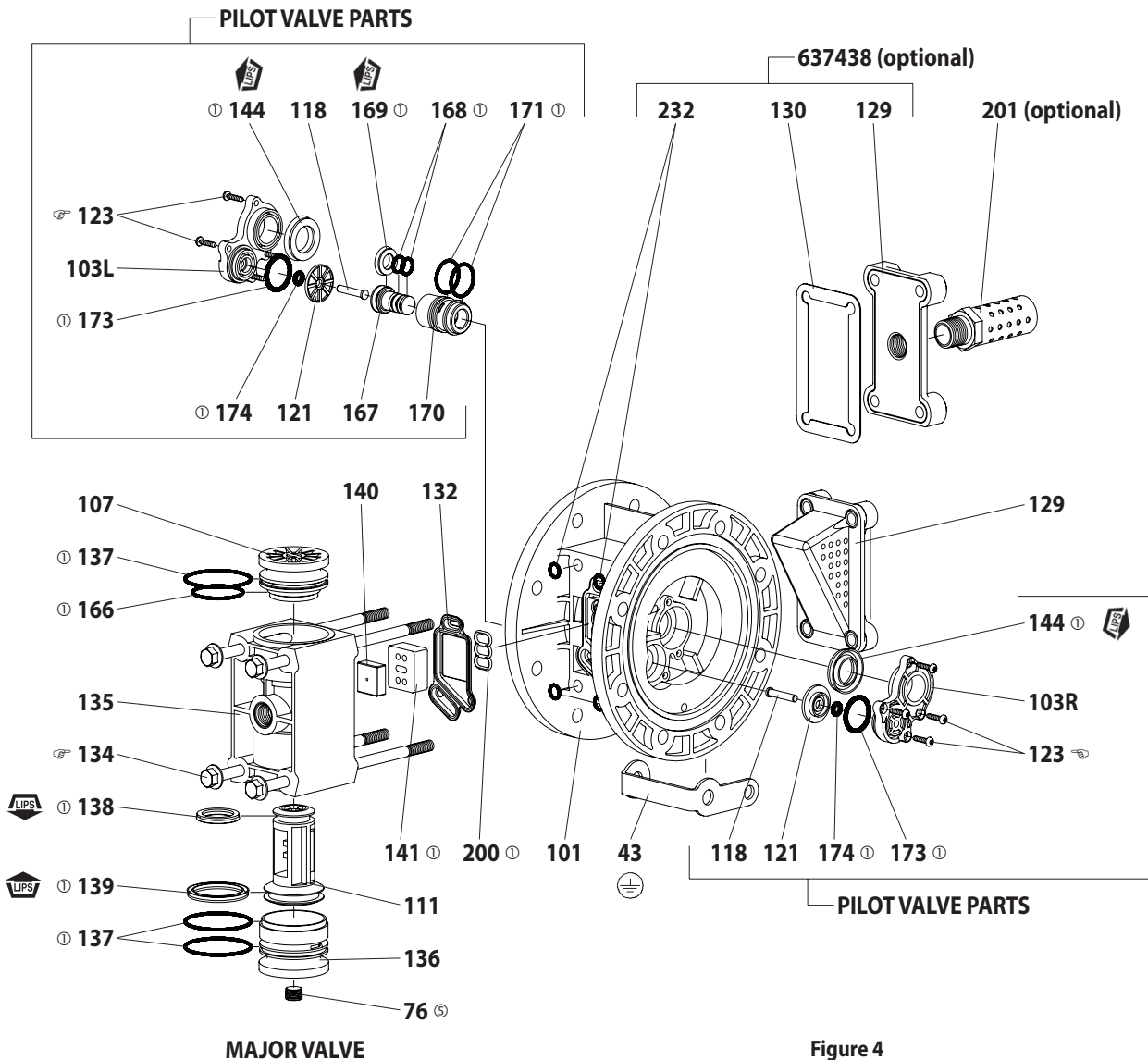


Figure 4

ASSEMBLY TORQUE REQUIREMENTS

NOTE: DO NOT OVERTIGHTEN FASTENERS.

(123) screw, 4 - 6 in. lbs (0.45 - 0.68 Nm).
 (134) bolt, torque to 15 - 20 in. lbs (1.7 - 2.3 Nm), wait 10 minutes, then re-torque to 15 - 20 in. lbs (1.7 - 2.3 Nm).

LUBRICATION / SEALANTS

① Apply Lubriplate FML-2 grease to all "O" rings, "U" cups and mating parts.
 ⑤ Apply Loctite® 572™ to threads.