

PARTS LIST / PX10P-X FLUID SECTION

FLUID SECTION SERVICE KITS (637396-XX)

★ KITS INCLUDE: BALLS (see Ball Option, refer to -XX in Service Kit chart below), DIAPHRAGMS (see Diaphragm Option, refer to -XX in Service Kit chart below), and items 19, 70, 144, 175 and 180 (listed below) plus 174 and 94276 Lubriplate FML-2 grease (page 6).

SEAT OPTIONS PX10P-XXS-XXX				BALL OPTIONS PX10P-XXS-XXX				MATERIAL CODE			
"21"				★ "22" (1-1/4" dia.)							
- <u>XX</u>	Seat	Qty	[Mtl]	- <u>XX</u>	Ball	Qty	[Mtl]	[B]	= Nitrile		
-HXX	94706	(4)	[SH]	-XAX	93278-A	(4)	[SP]	[C]	= Carbon Steel		
-KXX	94707-2	(4)	[K]	-XCX	93278-C	(4)	[H]	[E]	= E.P.R.		
-PXX	94707-1	(4)	[P]	-XGX	93278-2	(4)	[B]	[H]	= Hytrel		
-SXX	96151	(4)	[SS]	-XTX	93278-4	(4)	[T]	[K]	= PVDF (Kynar)		
				-XVX	93278-3	(4)	[V]	[MSP]	= Medical Grade Santoprene		
								[P]	= Polypropylene		
								[SH]	= Hard Stainless Steel		
								[SP]	= Santoprene		
								[SS]	= Stainless Steel		
								[T]	= T.F.E. (Teflon)		
								[V]	= Viton		

DIAPHRAGM OPTIONS PX10P-XXS-XXX

- <u>XX</u>	★ Service Kit -XX = (Ball) -XX = (Diaphragm)	★ "7"			★ "8"			★ "19"			★ "33"		
		Diaphragm	Qty	[Mtl]	Diaphragm	Qty	[Mtl]	"O" Ring (1/8" x 2-1/8" o.d.)	Qty	[Mtl]	"O" Ring (1/8" x 1-5/8" o.d.)	Qty	[Mtl]
-XA	637396-XA	96267-A	(2)	[SP]	-----	----	---	93280	(4)	[E]	93279	(4)	[E]
-XC	637396-XC	96267-C	(2)	[H]	-----	----	---	Y327-225	(4)	[V]	Y327-220	(4)	[V]
-XG	637396-XG	96267-G	(2)	[B]	-----	----	---	Y325-225	(4)	[B]	Y325-220	(4)	[B]
-XM	637396-XM	96267-M	(2)	[MSP]	-----	----	---	93280	(4)	[E]	93279	(4)	[E]
-XT	637396-XT	96146-T	(2)	[T]	96145-A	(2)	[SP]	93282	(4)	[T]	93281	(4)	[T]
-XV	637396-XV	95989-3	(2)	[V]	-----	----	---	Y327-225	(4)	[V]	Y327-220	(4)	[V]

MANIFOLD / FLUID CAP MATERIAL OPTIONS PX10P-XXS-XXX

Item	Description (size)	Qty	PVDF (Kynar)			Polypropylene				
			PX10P-AKS-	PX10P-FKS-	PX10P-YKS-	PX10P-APS-	PX10P-BPS-	PX10P-FPS-	PX10P-YPS-	
6	Diaphragm Washer	(2)	96108-2	[K]	96108-2	[K]	96108-2	[K]	96108-1	[P]
15	Fluid Cap	(2)	96105-2	[K]	96105-2	[K]	96105-2	[K]	96105-1	[P]
60	Inlet Manifold	(1)	96200-[\diamond]	[K]	96195-2	[K]	96180-2	[K]	96200-[\square]	[P]
61	Outlet Manifold	(1)	96199-[\diamond]	[K]	96194-2	[K]	96179-2	[K]	96199-[\square]	[P]
										[P]

◊ For N.P.T.F. thread models (PX10P-AKS-), use "-2". For BSP thread models (PX10P-BKS-), use "-4".

■ For N.P.T.F. thread models (PX10P-APS-), use "-1". For BSP thread models (PX10P-BPS-), use "-3".

COMMON PARTS

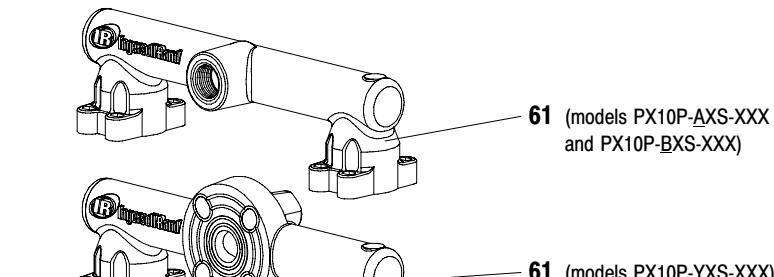
Item	Description (size)	Qty	Part No.	[Mtl]
1	Rod	(1)	95995	[C]
5	Backup Washer	(2)	95990-1	[SS]
26	Screw (M8 x 1.25 - 6g x 30 mm)	(16)	95880	[SS]
27	Screw (M8 x 1.25 - 6g x 50 mm)	(20)	96163	[SS]
28	Washer (8.5 mm i.d.)	(4)	96217	[SS]
29	Flange Nut (M8 x 1.25 - 6h)	(20)	96229	[SS]
68	Air Cap (models PD10P-X)	(1)	96104-1	[P]
	(models PE10P-X)	(1)	96104-3	[P]
69	Air Cap (models PD10P-X)	(1)	96104-2	[P]
	(models PE10P-X)	(1)	96104-4	[P]

Item	Description (size)	Qty	Part No.	[Mtl]
★✓ 70	Gasket	(2)	95843	[B]
● 74	Pipe Plug (1/4 - 18 N.P.T. x 7/16")	(2)	93832-3	[K]
○ 76	Pipe Plug (1/8 - 27 N.P.T. x .27")	(1)	Y17-50-S	[SS]
131	Screw (M8 x 1.25 - 6g x 100 mm)	(4)	96216	[SS]
★✓ 144	"U" Cup (3/16" x 1-1/8" o.d.)	(2)	Y186-49	[B]
★✓ 175	"O" Ring (3/32" x 13/16" o.d.)	(2)	Y325-114	[B]
★✓ 180	"O" Ring (2.5 mm x 12 mm o.d.)	(8)	96292	[B]
195	Hex Flange Nut (M8 x 1.25 - 6h)	(4)	95879	[SS]

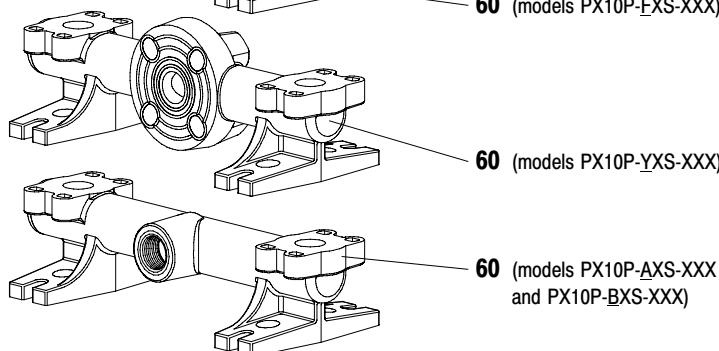
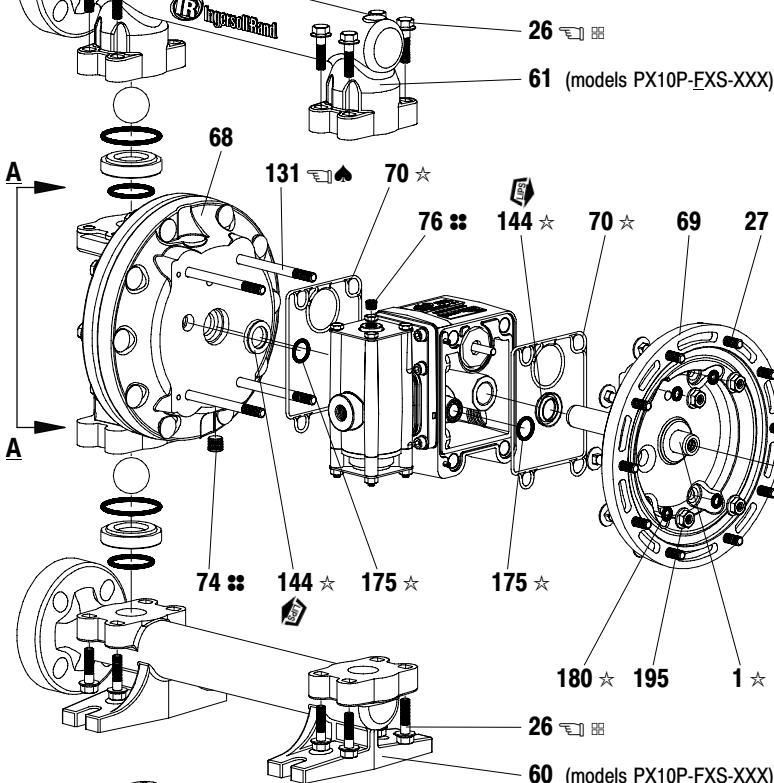
✓ Air Section Service Kit parts, see page 6.

○ Used on models PE10P-XXS-XXX only.

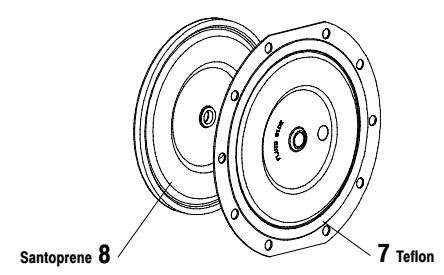
PARTS LIST / PX10P-X FLUID SECTION



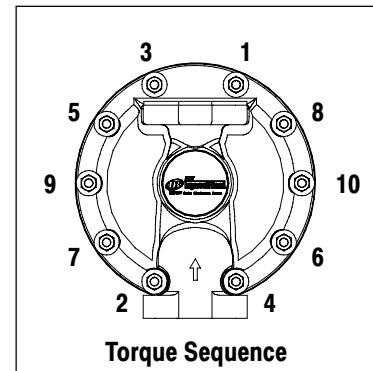
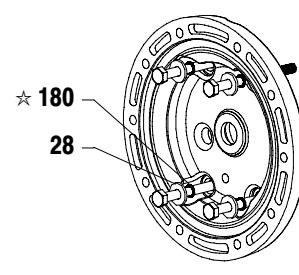
**FOR THE
AIR MOTOR SECTION
SEE PAGES 6 & 7**



VIEW OF TWO PIECE TEFILON DIAPHRAGM



AUXILIARY VIEW A-A



Torque Sequence

COLOR CODE		
MATERIAL	DIAPHRAGM COLOR	BALL COLOR
Hytrel	Cream	Cream
Nitrile	Black	Red (-)
Santoprene	Tan	Tan
Santoprene (Backup)	Green	N/A
T.F.E. (Teflon)	White	White
Viton	Yellow (-) (-) Dash	Yellow (+) (+) Dot

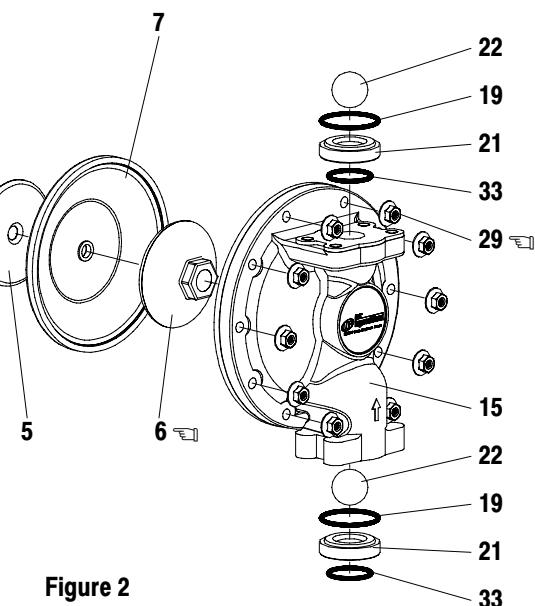


Figure 2

TORQUE REQUIREMENTS

**NOTE: DO NOT OVERTIGHTEN FASTENERS.
ALL FASTENERS ARE METRIC.**

- (6) Diaphragm washer, 25 - 30 ft lbs (33.9 - 40.7 Nm), lubricate face with Lubriplate grease and apply Loctite® 271 to threads.
- (26) Screws, 10 - 12 ft lbs (13.6 - 16.3 Nm).
- (29) Nuts, 10 - 12 ft lbs (13.6 - 16.3 Nm).
- (131) Screws, tighten to 11 - 14 ft lbs (14.9 - 19.0 Nm).

LUBRICATION / SEALANTS

- ★ Apply Lubriplate FML-2 grease to all "O" rings, "U" cups & mating parts.
- ◆ Apply Loctite 242 to threads at assembly.
- Apply anti-seize compound to threads and bolt and nut flange heads which contact pump case when using stainless steel fasteners.
- Apply Teflon tape to threads at assembly.

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

PARTS LIST / PX10P-X AIR SECTION

✓ Indicates parts included in 637397 Air Section Service Kit shown below and items (70), (144), (175) and (180) shown on page 4.

AIR MOTOR PARTS				
Item	Description (size)	Qty	Part No.	[Mtl]
101	Center Body	(1)	95970	[P]
103	Bushing	(1)	96000	[D]
105	Screw (M6 x 1 - 6g x 130 mm)	(4)	95886	[SS]
107	End Plate	(2)	95840	[SS]
✓ 111	Spool	(1)	96293	[D]
118	Actuator Pin	(2)	95999	[SS]
121	Sleeve	(2)	95123	[D]
✓ 132	Gasket	(1)	96170	[B]
133	Washer (M6)	(6)	95931	[SS]
134	Screw (M6 x 1 - 6g x 20 mm)	(6)	95887	[SS]
135	Valve Block (PD10P-XXS-XXX)	(1)	96174-1	[P]
	(PE10P-XXS-XXX)	(1)	96174-2	[P]
136	End Cap	(1)	95833	[P]
✓ 137	Gasket	(1)	95844	[B]
✓ 138	"U" Cup (3/16" x 1-5/8" o.d.)	(1)	Y186-53	[B]
✓ 139	"U" Cup (3/16" x 1-1/8" o.d.)	(1)	Y186-49	[B]
140	Valve Insert	(1)	95838	[AO]
141	Valve Plate	(1)	95885	[AO]
✓ 166	Gasket	(1)	96171	[B]
✓ 167	Pilot Piston (includes 168 and 169)	(1)	67164	[D]

MATERIAL CODE			
[AO] = Alumina Oxide	[D] = Acetal	[SS] = Stainless Steel	
[B] = Nitrile	[P] = Polypropylene	[U] = Polyurethane	
[Br] = Brass	[SP] = Santoprene		

* Fluid Section Service Kit parts, see page 4.

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 surfaces, and nicks or cuts in "O" rings.
- Take precautions to prevent cutting "O" rings upon installation.
- Lubricate "O" rings with Lubriplate FML-2 grease.
- Do not over-tighten fasteners, refer to torque specification block on view.
- Re-torque fasteners following restart.
- SERVICE TOOLS - To aid in the installation of (168) "O" rings onto the (167) pilot piston, use tool # 204130-T, available from ARO.

PILOT VALVE DISASSEMBLY

1. A light tapping on (118) should expose the opposite (121) sleeve, (167) pilot piston and other parts.
2. Remove (170) sleeve, inspect inner bore of sleeve for damage.

PILOT VALVE REASSEMBLY

1. Clean and lubricate parts not being replaced from service kit.
2. Install new (171 and 172) "O" rings, replace (170) sleeve.
3. Install new (168) "O" rings and (169) seal - Note the lip direction. Lubricate and replace (167).
4. Reassemble remaining parts, replace (173 and 174) "O" rings.

MAJOR VALVE DISASSEMBLY

1. Remove (135) valve block and (233) adapter plate, exposing (132 and 166) gaskets and (176) checks.
2. Insert a small flat blade screwdriver into the notch in the side of (135) valve block and push in on tab to remove (233) adapter plate, releasing (140) valve insert, (141) valve plate and (200) gasket.
3. Remove (136) end cap and (137) gasket, releasing (111) spool.

MAJOR VALVE REASSEMBLY

1. Install new (138 and 139) "U" cups on (111) spool - **LIPS MUST FACE EACH OTHER**.
2. Insert (111) spool into (135) valve block.
3. Install (137) gasket on (136) end cap and assemble end cap to (135) valve block, securing with (107) end plates and (105) screws. NOTE: Tighten (105) screws to 35 - 40 in. lbs (4.0 - 4.5 Nm).
4. Install (140) valve insert and (141) valve plate into (135) valve block. NOTE: Assemble (140) valve insert with "dished" side toward (141) valve plate. Assemble (141) valve plate with part number identification toward (140) valve insert.
5. Assemble (200) gasket and (233) adapter plate to (135) valve block. NOTE: Assemble (233) adapter plate with notched side down.
6. Assemble (132 and 166) gaskets and (176) checks and to (101) body.
7. Assemble (135) valve block and components to (101) body, securing with (134) screws. NOTE: Tighten (134) screws to 35 - 40 in. lbs (4.0 - 4.5 Nm).

PARTS LIST / PX10P-X AIR SECTION

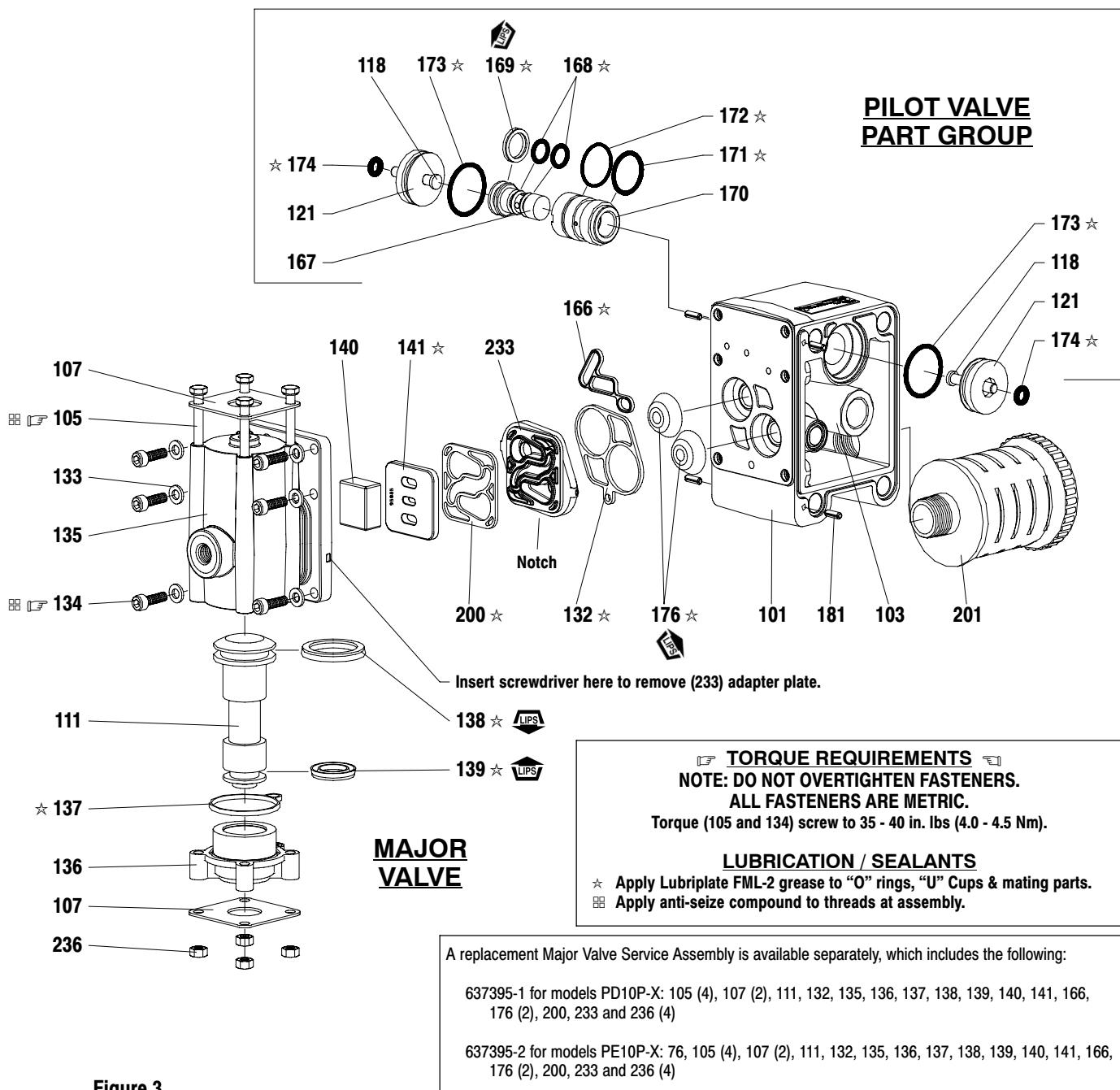


Figure 3

TROUBLE SHOOTING

Product discharged from exhaust outlet.

- Check for diaphragm rupture.
- Check tightness of (6) diaphragm washer.

Air bubbles in product discharge.

- Check connections of suction plumbing.
- Check "O" rings between intake manifold and inlet side fluid caps.
- Check tightness of (6) diaphragm washer.

Motor blows air or stalls.

- Check (176) check valve for damage or wear.
- Check for restrictions in valve / exhaust.

Low output volume, erratic flow, or no flow.

- Check air supply.
- Check for plugged outlet hose.
- Check for kinked (restrictive) outlet material hose.
- Check for kinked (restrictive) or collapsed inlet material hose.
- Check for pump cavitation – suction pipe should be sized at least as large as the inlet thread diameter of the pump for proper flow if high viscosity fluids are being pumped. Suction hose must be a non-collapsing type, capable of pulling a high vacuum.
- Check all joints on the inlet manifolds and suction connections. These must be air tight.
- Inspect the pump for solid objects lodged in the diaphragm chamber or the seat area.