

SERVICE KIT

637428

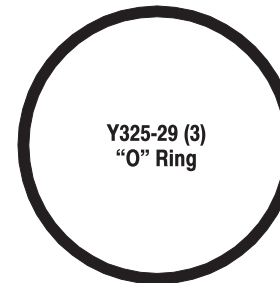
PARTS IDENTIFICATION

Air Section Repair Kit for 3/8" and 1/2" "PD" series Diaphragm Pumps.

RELEASED: 11-23-05

REVISED: 3-12-13

REV: C

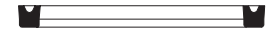


Y325-29 (3)
"O" Ring



Y325-10 (4)
"O" Ring

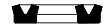
Y325-24 (1) "O" Ring



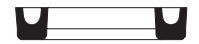
96383 (1) "U" Cup



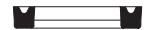
94395 (1) "U" Cup



96957 (1) "U" Cup



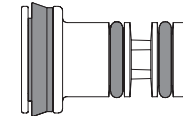
Y187-48 (2) "U" Cup



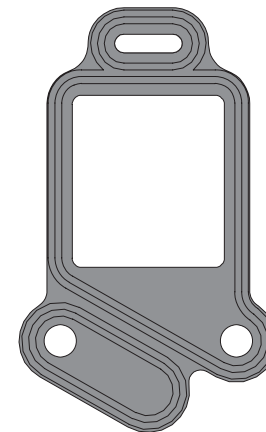
Y187-47 (2) "U" Cup



96364 (1) Gasket



67382 (1) Pilot Piston



96214-1 (1) Gasket



Y325-115 (2) "O" Ring



Y325-17 (2) "O" Ring



Y325-105 (2) "O" Ring

PARTS LIST / AIR MOTOR SECTION

■ Indicates parts included in 637428 Air Section Service Kit.

Item	Description (size)	Qty	Part No.	Mtl
101	Center Body	(1)		
103R	Cover (right side)	(1)		
103L	Cover (left side)	(1)		
107	Plug, Small	(1)		
111	Major Valve Spool	(1)		
118	Actuator Pin	(2)		
121	Washer	(2)	96092	[D]
123	Screw (#4 - 20 x 1/2")	(8)		
128	Plug (#10 - 32 x 5/32")	(1)		
129	Muffler Assembly	(1)		
■ 132	Air Manifold Gasket	(1)	96214-1	[B]
134	Flange Bolt	(4)		
135	Valve Block (PD0XX-X-X)	(1)		
135	Porting Plate (PEX0X-X-X)	(1)		
136	Plug, Large	(1)		
■ 137	"O" Ring (1/16" x 1-5/8" o.d.)	(3)	Y325-29	[B]
■ 138	"U" Cup (1/8" x 1" o.d.)	(1)	94395	[U]

MATERIAL CODE

[B] = Nitrile [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).

VALVE BLOCK DISASSEMBLY (PE0XX-X-X)

- Unthread (134) bolts, releasing (129) muffler assembly.
- Pull (135) porting plate and (132 and 200) gaskets from (101) center body.

Item	Description (size)	Qty	Part No.	Mtl
■ 139	"U" Cup (1/8" x 1-7/16" o.d.)	(1)	96383	[U]
140	Valve Insert	(1)		
141	Valve Plate	(1)		
■ 144	"U" Cup			
	models PX03X-X-X (1/8" x 3/4" o.d.)	(2)	Y187-47	[B]
	models PX05X-X-X (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 & 169)	(1)	67382	[D]
168	"O" Ring (1/16" x 7/16" o.d.)	(2)		
169	"U" Cup (1/8" x 5/8" o.d.)	(1)		
170	Spool Bushing	(1)		
■ 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]
■ 232	"O" Ring (1/16" x 3/8" o.d.)	(4)	Y325-10	[B]
419	"U" Cup	(1)	96957	[B]
■	Lubriplate® FML-2 Grease	(1)		

VALVE BLOCK REASSEMBLY (PE0XX-X-X)

- Assemble (132 and 200) gaskets, (135) porting plate 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).

MAJOR VALVE DISASSEMBLY (PD0XX-X-X)

- 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.

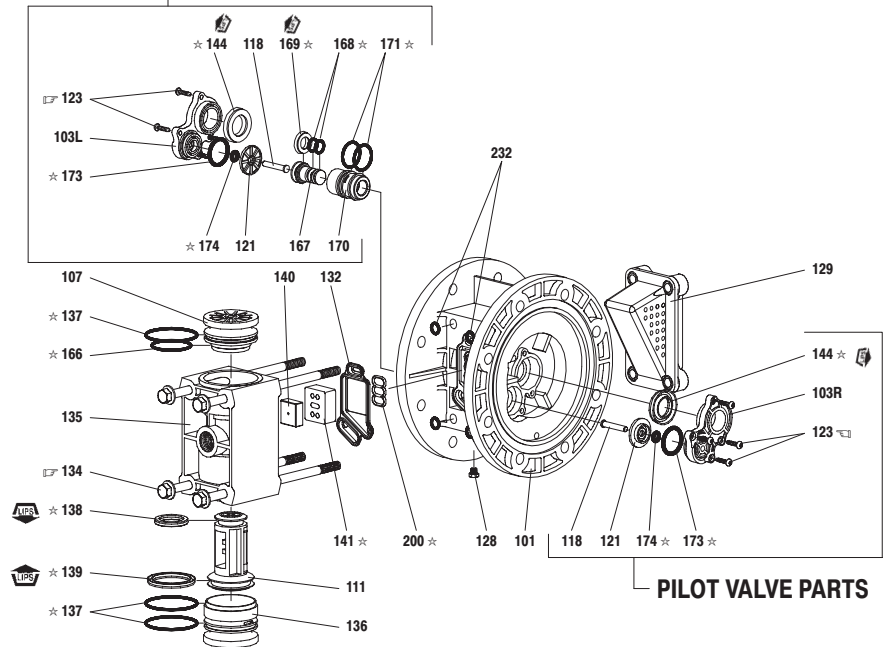
MAJOR VALVE REASSEMBLY (PD0XX-X-X)

- 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).

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PARTS LIST / AIR MOTOR SECTION

PILOT VALVE PARTS

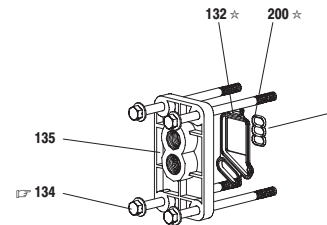


PILOT VALVE PARTS

MAJOR VALVE

Models: PD03X-X-X & PD05X-X-X-B

Models: PE03X-X-X & PE05X-X-X-B



TORQUE REQUIREMENTS

NOTE: DO NOT OVERTIGHTEN FASTENERS.

(123) Torque to 4 - 6 in. lbs (0.45 - 0.68 Nm).

(134) 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

★ Apply Lubriplate (94276) to all "O" rings, "U" cups and mating parts.