

## PARTS LIST / FLUID SECTION

✓ **KITS INCLUDE:** (22) BALLS, (7) DIAPHRAGM, items: 2, 3, 19, (Refer to chart below) and 93706-1 Key-Lube® grease.

| WETTED COMMON PARTS        |                                   |      |             |      |
|----------------------------|-----------------------------------|------|-------------|------|
| Item                       | Description (size)                | Qty  | Part No.    | Mtl  |
|                            | Fluid Section Service Kits        |      | 637137-63-C |      |
| <input type="checkbox"/> 1 | Rod                               | ☆(1) | 98724-1     | [C]  |
| ✓ 2                        | "O" Ring (3/32" x 3/4" o.d.)      | (1)  | Y330-113    | [B]  |
| ✓ 3                        | "O" Ring (1/16" x 5/8" o.d.)      | (4)  | Y327-14     | [V]  |
| 5                          | Washer (air side) (3-5/8" o.d.)   | (2)  | 93441-2     | [C]  |
| <input type="checkbox"/> 6 | Washer (fluid side) (3-5/8" o.d.) | (2)  | 93441-2     | [C]  |
| ✓ 7                        | Diaphragm                         | (2)  | 90533-3     | [V]  |
| 9                          | Washer (0.505" i.d.)              | (2)  | 93189-1     | [SS] |
| 14                         | Screw (1/2" - 20 x 1")            | (2)  | Y5-85-K     | [C]  |
| 15                         | Fluid Cap                         | (2)  | 94945       | [A]  |
| 16                         | Manifold (top with valve port)    | (1)  | 93127       | [A]  |
|                            | Manifold (bottom)                 | (1)  | 92001       | [A]  |
| ✓ 19                       | "O" Ring (3/32" x 1-9/16" o.d.)   | (4)  | Y327-126    | [V]  |
| 21                         | Seat                              | (4)  | 92941       | [K]  |
| ✓ 22                       | Ball (1" dia.)                    | (4)  | 90532-6     | [D]  |
| 26                         | Bolt (5/16" - 18 x 1")            | (8)  | Y6-55-C     | [C]  |
| 29                         | Nut (5/16" - 18)                  | (16) | Y12-5-C     | [C]  |
| 43                         | Ground Lug (see page 7)           | (1)  | 93004       | [Co] |
|                            | Relief Valve (see page 5)         | (1)  | 96333       | [Br] |

### MATERIAL CODE

[A] = Aluminum  
 [B] = Nitrile  
 [Br] = Brass  
 [C] = Carbon Steel  
 [Co] = Copper  
 [D] = Acetal  
 [K] = P.V.D.F. (Kynar)  
 [SS] = Stainless Steel  
 [V] = Viton

☆ 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.

### FLUID SECTION DISASSEMBLY

1. Remove top manifold(s).
2. Remove (22) balls, (19) "O" rings and (21) seats.
3. Remove (15) fluid caps.
4. Remove the (14) screw, (9) washer, (3) "O" ring, (6) plate, (7) diaphragm and (5) plate.
5. Remove (3) "O" rings.

NOTE: Do not scratch or mar the surface of (1) diaphragm rod.

### FLUID SECTION REASSEMBLY

- Reassemble in reverse order.
- Clean and inspect all parts. Replace worn or damaged parts with new parts as required.
- Lubricate (1) diaphragm rod and (2) "O" ring with Key-Lube grease.
- Use ARO pn / 98930-T bullet (installation tool) to aid in installation of (2) "O" ring on (1) diaphragm rod.
- Be certain (7) diaphragms align properly with (15) fluid caps before making final torque adjustments on bolt and nuts to avoid twisting the diaphragm.
- Re-check torque settings after pump has been re-started and run a while.

## PARTS LIST / FLUID SECTION

| COLOR CODE |                 |            |
|------------|-----------------|------------|
| MATERIAL   | DIAPHRAGM COLOR | BALL COLOR |
| ACETAL     | N / A           | Orange     |
| VITON      | Yellow (-)      | N / A      |
|            | (-) Stripe      |            |

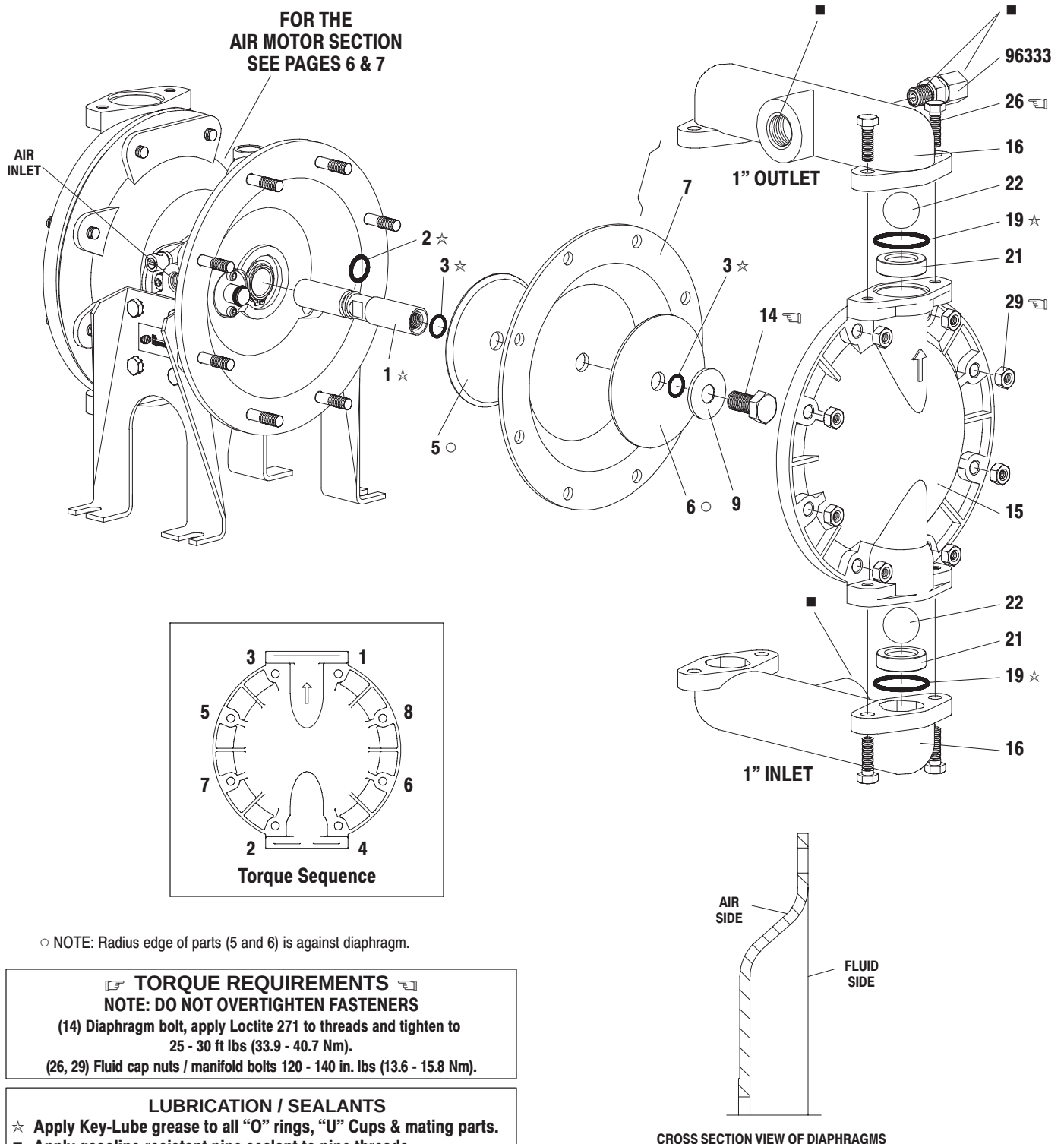


Figure 1

## PARTS LIST / AIR MOTOR SECTION

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

| Item | Description (size)                      | Qty | Part No.  | Mtl    |
|------|-----------------------------------------|-----|-----------|--------|
| 101  | Motor Body (includes items 195)         | (1) | 66836-1   | [A]    |
| □102 | "O" Ring (0.07" x 1" o.d.)              | (2) | 92959     | [B]    |
| □103 | Sleeve                                  | (1) | 94527     | [D]    |
| ✓104 | Retaining Ring, TruArc (0.925" i.d.)    | (2) | Y145-25   | [C]    |
| 105  | Cap Screw (1/4" - 20 x 5/8")            | (8) | 93860     | [C]    |
| 106  | Lock Washer (1/4")                      | (1) | Y14-416-T | [SS]   |
| 107  | Leg                                     | (2) | 92003     | [C]    |
| ✓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                                   | (1) | 92005     | [A]    |
| 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]    |

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

## 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 requirement 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.

| 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")           | (16) | 92866    | [C]    |
| 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") | (2)  | 94987    | [SS]   |
| 196  | 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   |        |

## MATERIAL CODE

|                |                    |                        |
|----------------|--------------------|------------------------|
| [A] = Aluminum | [C] = Carbon Steel | [SS] = Stainless Steel |
| [B] = Nitrile  | [D] = Acetal       | [U] = Polyurethane     |
| [Bz] = Bronze  | [NY] = Nylon       | [Z] = Zinc             |

## MAJOR VALVE DISASSEMBLY

1. Remove (107) legs, (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

**NOTE: Replace worn parts as necessary. Lubricate "O" ring with Key-Lube grease when reassembling.**

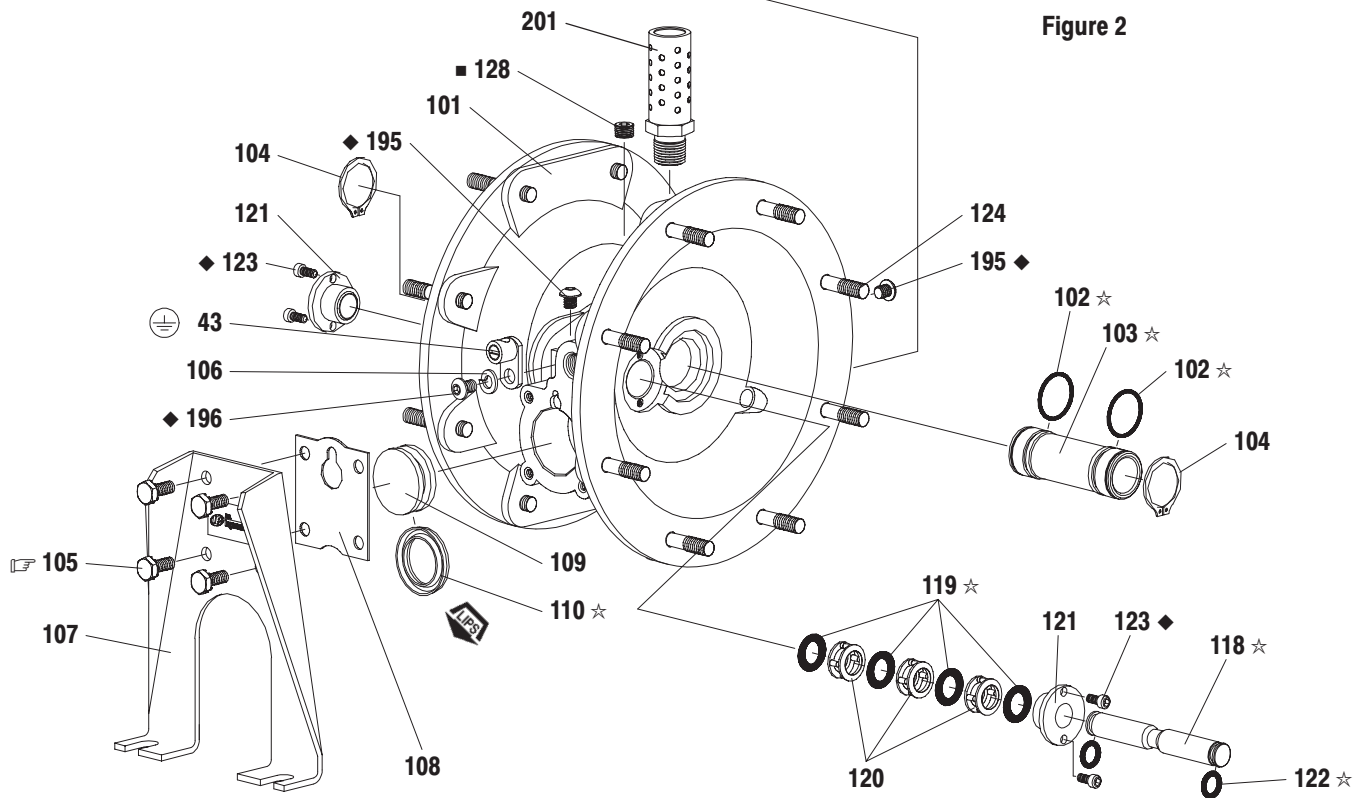
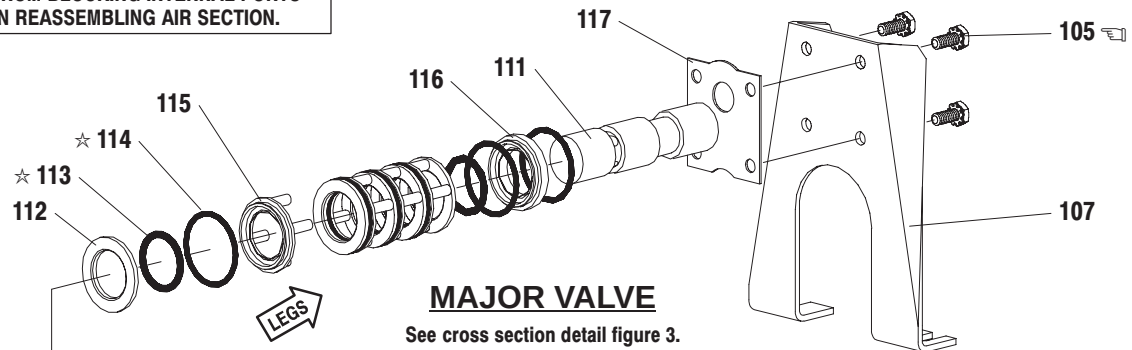
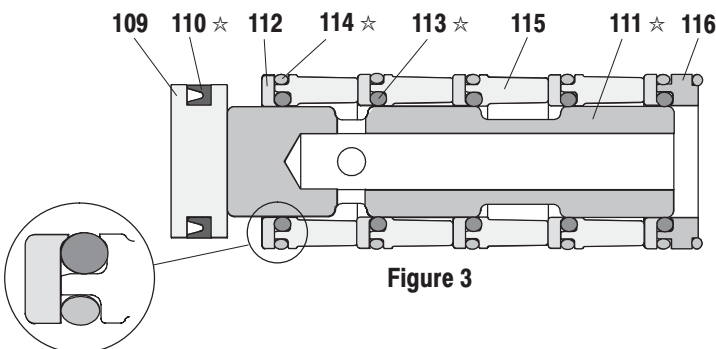
1. Replace (112) washer, (114) "O" ring and (113) "O" ring onto (115) spacer and insert etc.

**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 / AIR MOTOR SECTION

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

**MAJOR VALVE CROSS SECTION DETAIL****Figure 3****PILOT  
VALVE****TORQUE REQUIREMENTS**

**NOTE: DO NOT OVERTIGHTEN FASTENERS**

(105) 40 - 50 in. lbs (4.5 - 5.6 Nm),  
apply Loctite Nickel Antiseize to threads.

**LUBRICATION / SEALANTS**

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