

# *Sanitary PD Parts List*



ISO 9001  
CERTIFIED



**Waukesha  
Cherry-Burrell**

® An SPX Process Equipment Operation

Sanitary PD Parts



**INDEX**

**SANITARY PD PUMP PARTS PRICE LIST**

**PRICING IN U.S. DOLLARS**

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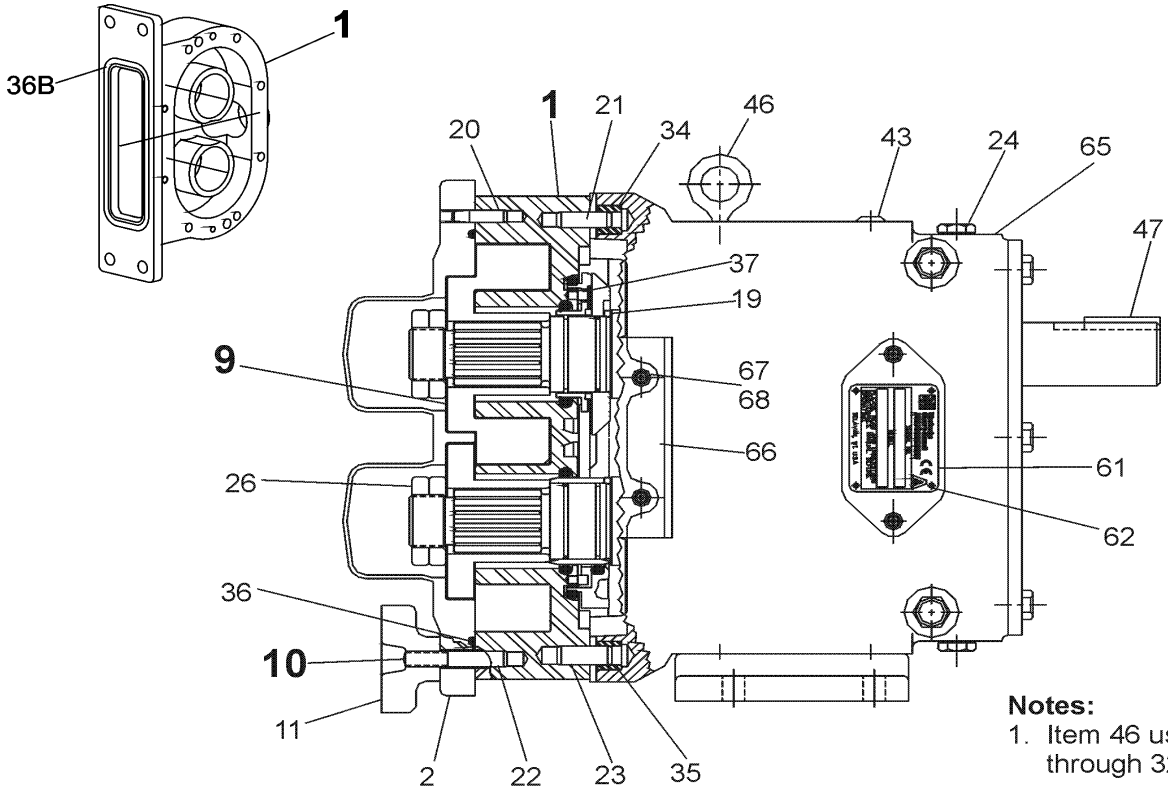
**006 - 014 - 015 - 018 - 024-U1 PUMP PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	006-U1 Pump Body	1	See Note 1	1
	006-U1 Pump Body with Flush	1	See Note 1	1
	015-U1 Pump Body	1	See Note 1	1
	015-U1 Pump Body with Flush	1	See Note 1	1
	014-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	014-U1 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	018-U1 Pump Body	1	See Note 1	1
	018-U1 Pump Body with Flush	1	See Note 1	1
	024-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	024-U1 Rect. Flange Inlet Body with Flush	1	See Note 1	1
7	006-014-015-U1 Drive Shaft	1	015 008 000	3
	006-014-015-U1 Drive Shaft	1	114642	4
	018-024-U1 Drive Shaft	1	018 008 000	3
	018-024-U1 Drive Shaft	1	114644	4
8	006-014-015-U1 Short Shaft	1	015 009 000	3
	006-014-015-U1 Short Shaft	1	114643	4
	018-024-U1 Short Shaft	1	018 009 000	3
	018-024-U1 Short Shaft	1	114645	4
9	006-U1 Rotor, Twin Wing, Alloy 88	2	006 010 000	2
	006-U1 Rotor, Twin Wing, 316SS	2	006 010 200	2
	006-U1 Rotor, Single Wing, Alloy 88	2	117238	2, 12
	014-015-U1 Rotor, Twin Wing, Alloy 88	2	015 010 000	2
	014-015-U1 Rotor, Twin Wing, 316SS	2	015 010 200	2
	015-U1 Rotor, Single Wing, Alloy 88	2	117255	2, 12A, 13
	018-024-U1 Rotor, Twin Wing, Alloy 88	2	018 010 000	2
	018-024-U1 Rotor, Twin Wing, 316SS	2	018 010 200	2
10A	006-015-U1 Stud	8	AD0 011 000	
10B	006-015-U1 Stud, Jacketed Cover	8	AD0 011 J00	
10C	014-U1 Stud	6	AD0 011 000	
	014-U1 Stud	2	35547	
10D	014-U1 Stud, Jacketed Cover	6	AD0 011 J00	
	014-U1 Stud, Jacketed Cover	2	35548	
10E	018-U1 Stud	8	018 011 000	
10F	018-U1 Stud, Jacketed Cover	8	AD0 011 100	
10G	024-U1 Stud	6	018 011 000	
	024-U1 Stud	2	35547	
10H	024-U1 Stud, Jacketed Cover	6	AD0 011 100	
	024-U1 Stud, Jacketed Cover	2	35548	
	Stud Retainer Assembly	1	020 064 000	5

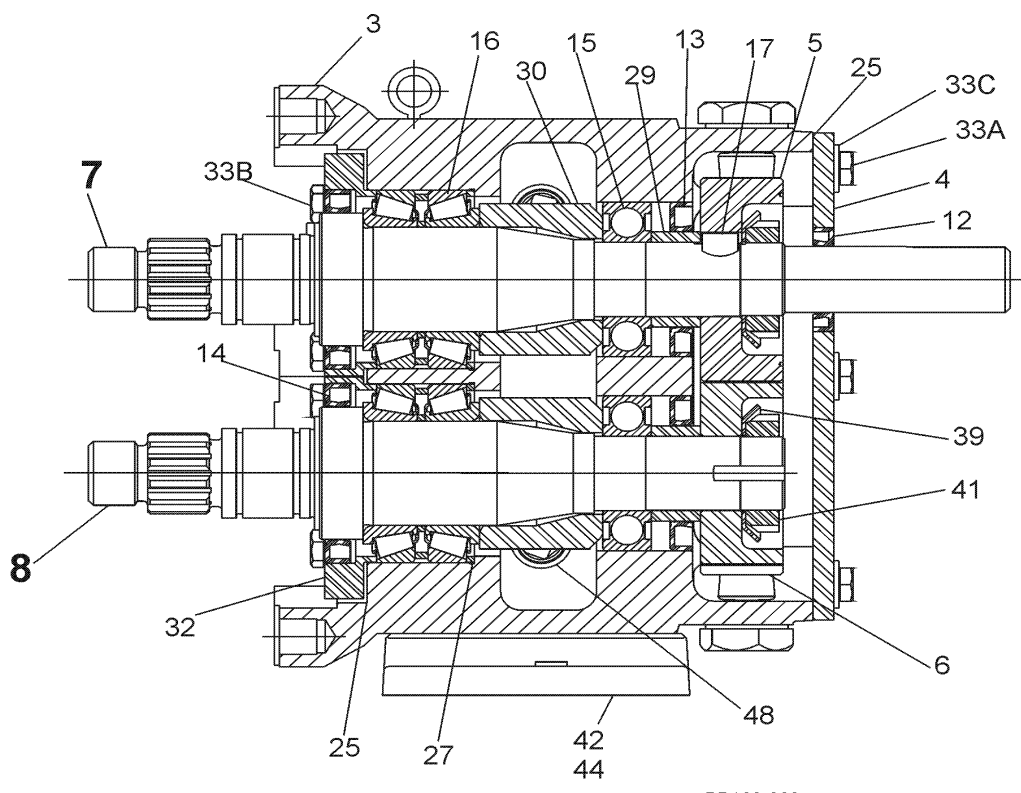
**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
3. Pumps shipped prior to July 30, 2001.
4. Pumps shipped starting July 30, 2001.
5. No longer manufactured, consult factory for upgrade of gear case subassembly.
12. Replaces 006 010 010 straight and 006 010 090 90° (degree) rotors.
- 12A. Replaces 015 010 010 straight and 015 010 090 90° (degree) rotors.
- 12B. Replaces 018 010 010 straight and 018 010 090 90° (degree) rotors.
13. Single wing rotors can not be used in Rectangular Flange Inlet pumps.

# 006 - 014 - 015 - 018 - 024-U1 Pump Parts Diagram



**Notes:**  
 1. Item 46 used on 60 through 320.



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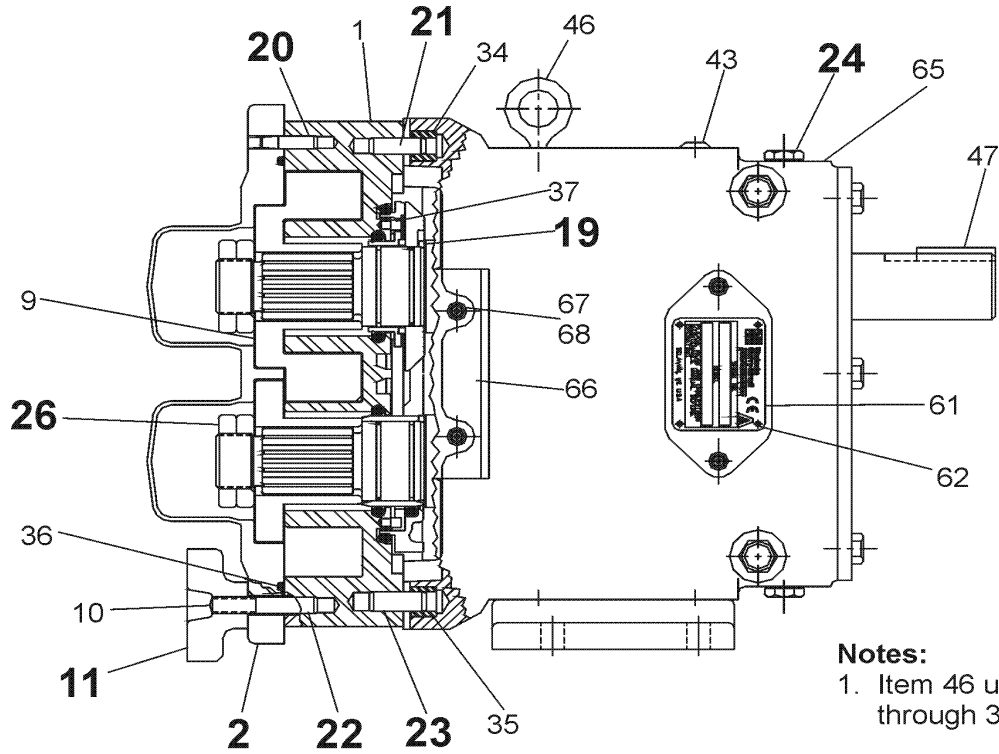
**006 - 014 - 015 - 018 - 024-U1 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	AD0 002 S00	
	Jacketed Cover	1	AD0 002 J10	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00027	
	Manual (under 150 PSI)	1	CVR00006	
	Pneumatic	1	CVR00004	
	Piston	1	CVR00005	
3	Gear Case, CI	1	020 005 000	3, 5
	Gear Case, SS; Optional	1	101830	3, 5
	Gear Case, CI	1	102276	4
	Gear Case, SS; Optional	1	101831	4
4	Gear Case Cover, Steel	1	020 106 000	
	Gear Case Cover, SS; Optional	1	102280	
5	Gear, Drive Shaft, Spur	1	107997	
6	Gear, Short Shaft, Spur	1	107997	
11	Wing Nut	8	105850	
	Hex Nut, optional	8	108369	
12	Oil Seal, Gear Case Cover	1	000 030 016	
13	Oil Seal, Gear Case Rear	2	000 030 017	
14	Grease Seal, Bearing Retainer	2	000 030 018	3
	Grease Seal, Bearing Retainer	2	121679	4
	Bearing Isolator Kit, includes Bearing Retainer	2	X06636-1	3
	Bearing Isolator Kit, includes Bearing Retainer	2	X06638-1	4
15	Bearing, Rear	2	015 035 000	
16	Bearing, Front	2	015 036 000	3
	Bearing, Front	2	101714	4
17	Key, Gear	2	015 037 000	
19	Drive Pin, Seal Seat and Sleeve	2	CD0 126 000	
20	Dowel Pin, Upper Cover Side	1	AD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	AD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	AD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	AD0 040 R10	
24	Fill, Drain, Level Plug	6	000 046 002	
25	Silicone Sealant	1	000 142 301	
26	Jam Nut, Rotor	4	AD0 052 001	
27	Shim, Front Bearing	AR	015-054-XXX	3
	Shim Kit	2	117889	4
29	Spacer, Gear to Rear Bearing	2	015 055 000	
30	Bearing Spacer	2	015 055 001	3
	Bearing Spacer	2	101814	4

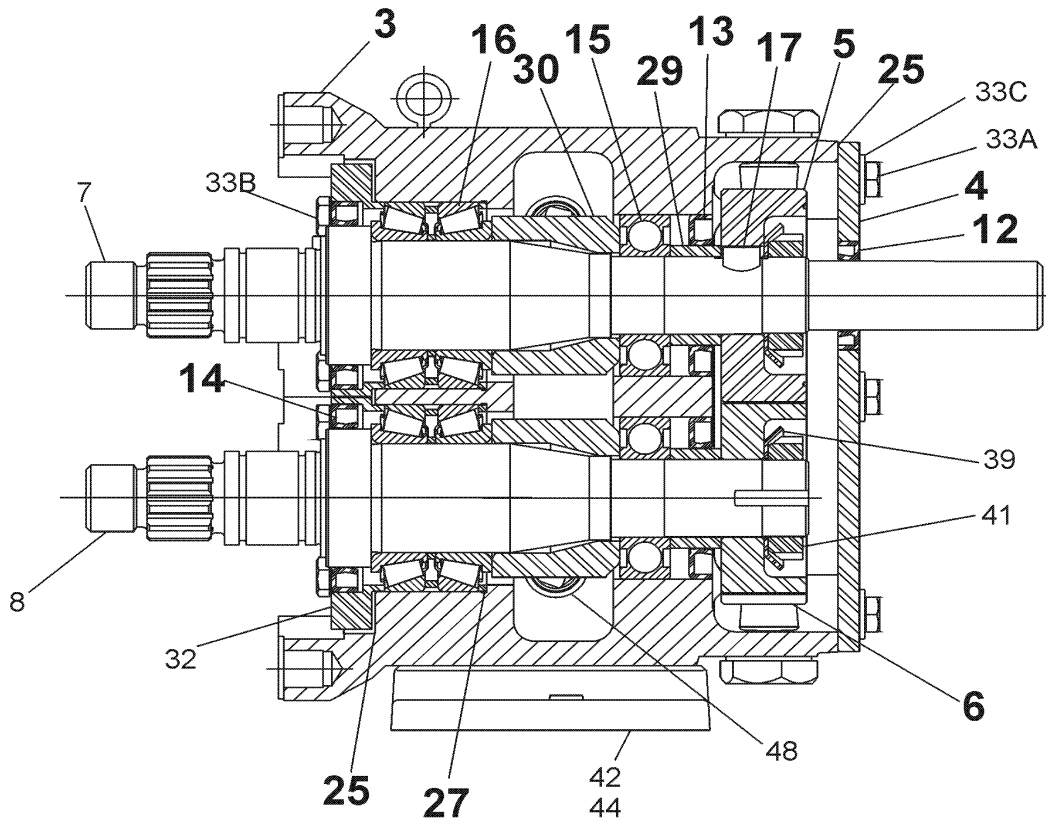
**NOTES:**

3. Pumps shipped prior to July 30, 2001.
4. Pumps shipped starting July 30, 2001
5. No longer manufactured, consult factory for upgrade of gear case subassembly.

006 - 014 - 015 - 018 - 024-U1 Common Parts Diagram



**Notes:**  
 1. Item 46 used on 60 through 320.



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**006 - 014 - 015 - 018 - 024-U1 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
32	Bearing Retainer, Front	2	015 080 000	3
	Bearing Retainer, Front	2	101810	4
33A, 33B	1/4-20 x .75" HHCS, Standard	14	30-287	
	1/4-20 x .75" HHCS, SS	14	30-58	
33C	1/4" Flat Washer, Gear Case Cover	6	43-108	
34	Dowel Bushing, Upper	1	AD0 116 000	
35	Dowel Bushing, Lower	1	AD0 116 100	
* * * * * * *	36 O-Ring, Pump Cover, Buna N	1	N70252	
	O-Ring, Pump Cover, EPDM	1	E70252	
	O-Ring, Pump Cover, FKM	1	V70252	
	O-Ring, Pump Cover, Silicone	1	S75251	
* * *	36B 014-U1 O-Ring, Rectangular Flange	1	N70241	
	024-U1 O-Ring, Rectangular Flange	1	N70241	14
	024-U1 O-Ring, Rectangular Flange	1	N70245	14
37	Stop Pin, Seal	2	015 126 000	
39	Lockwasher, Gear	2	STD 136 005	
41	Locknut, Gear	2	STD 236 005	
42	Gear Case Shim, CI	1	020 110 000	
	Gear Case Shim, SS; Optional	1	102284	
	Pump Pedestal, 6.75"; Optional	1	014 110 675	
43	Plastic Cap Plug	8	000 121 003	
44	5/16-18 x 1" SHCS, Standard	4	30-343	
	5/16-18 x 1" SHCS, SS	4	30-525	
45	006-014-015-U1 Body Retaining Screw, Opt.	2	30-523	15
	018-024-U1 Body Retaining Screw, Optional	2	30-211	15
47	Key, Coupling - 3/16 x 3/16 x 1-1/8"	1	000 037 001	
48	Cleanout Plug	2	35824	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
63	O-Ring Removal Tool	1	AD0 096 001	
64	Rotor Nut Wrench, SS	1	109895	
	Rotor Nut Wrench, Jacketed Cover	1	AD0 019 001	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-63	
67	006, 015, 018 - U1 Grease Fitting, 1/8"	4	BD0 092 000	
	014-024-U1 Grease Fitting, 1/8"	4	BD0 092 100	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

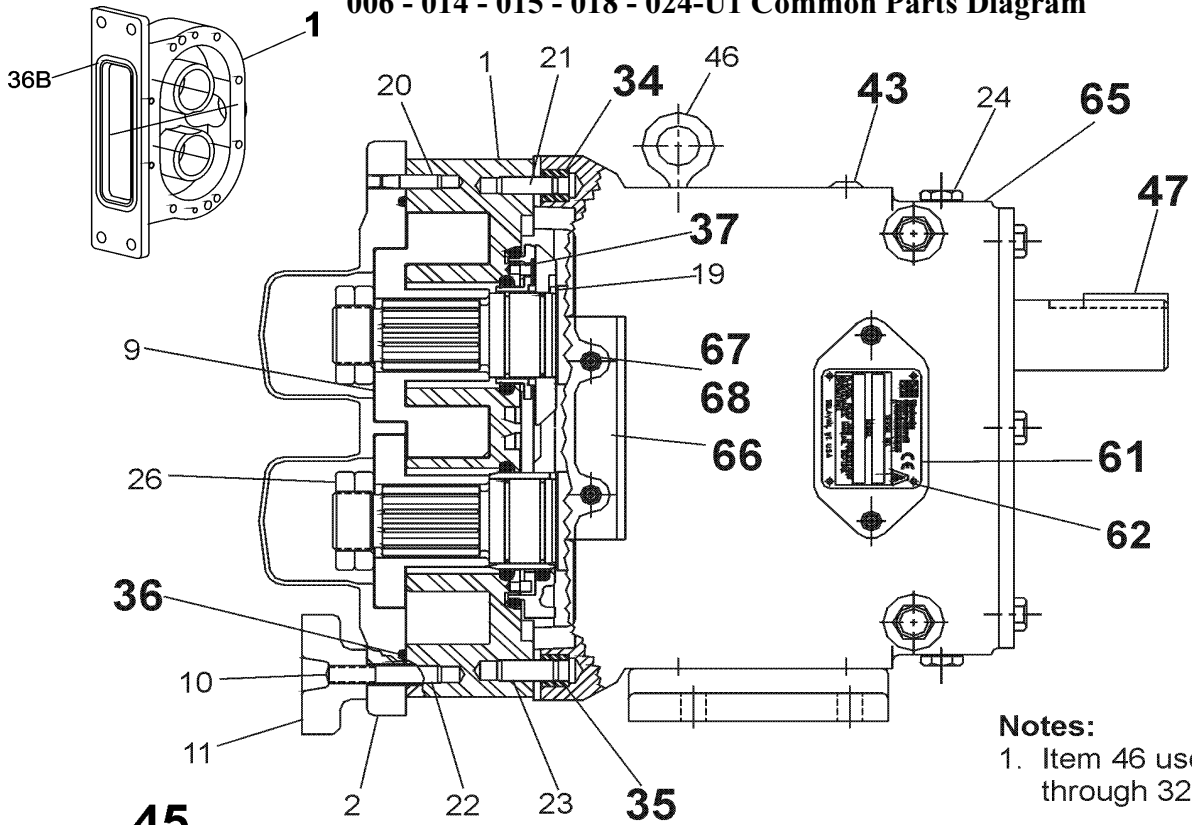
**NOTES:**

- 3. Pumps shipped prior to July 30, 2001.
- 4. Pumps shipped starting July 30, 2001.
- 14. New O-Rings N70245 (024) introduced in 2001. Fits close to inlet opening.
- 15. New standard for Rectangular Flange Inlet pumps. Optional for standard inlet pumps. Body must be drilled at factory to use.

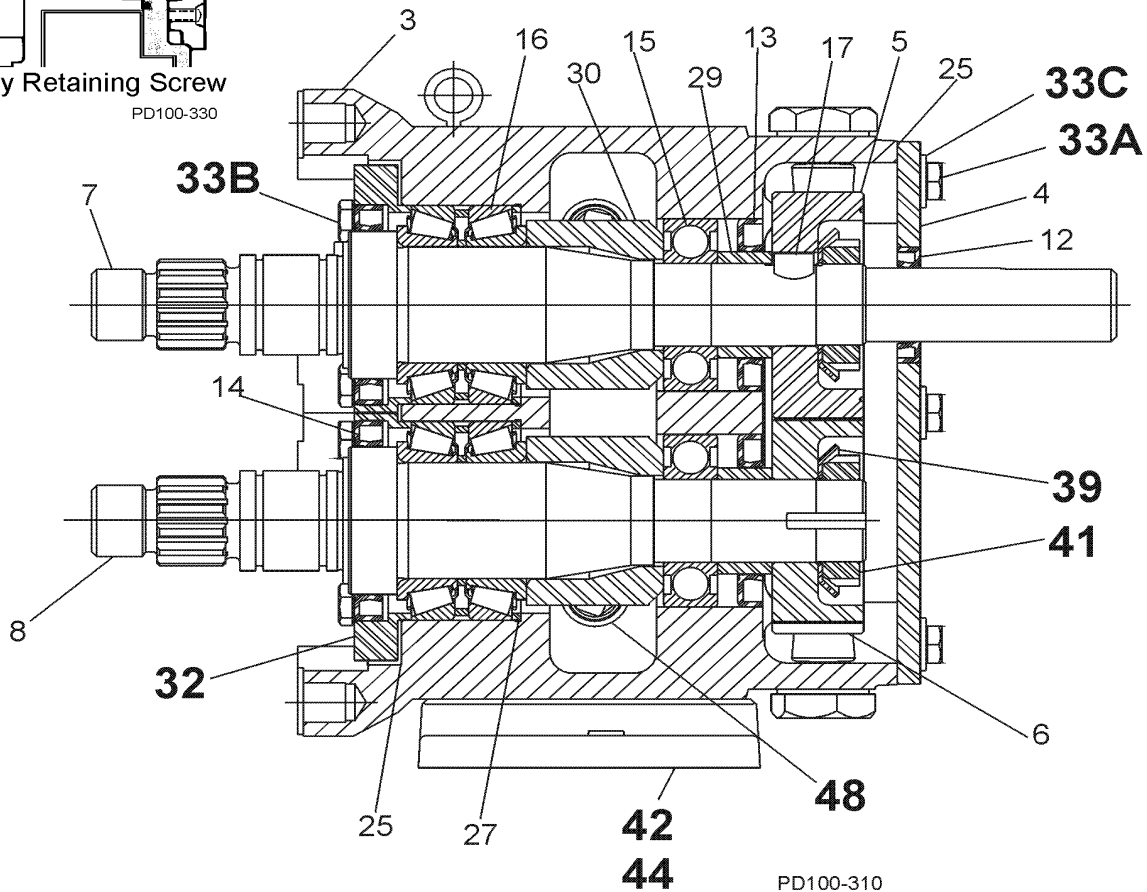
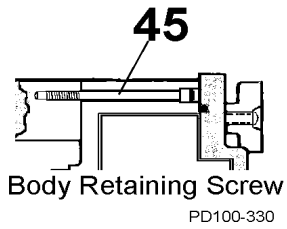
**\* Recommended Spare Parts**



006 - 014 - 015 - 018 - 024-U1 Common Parts Diagram



**Notes:**  
1. Item 46 used on 60 through 320.



PD100-310

**006 - 014 - 015 - 018 - 024-U1 SEAL PRICE LIST**

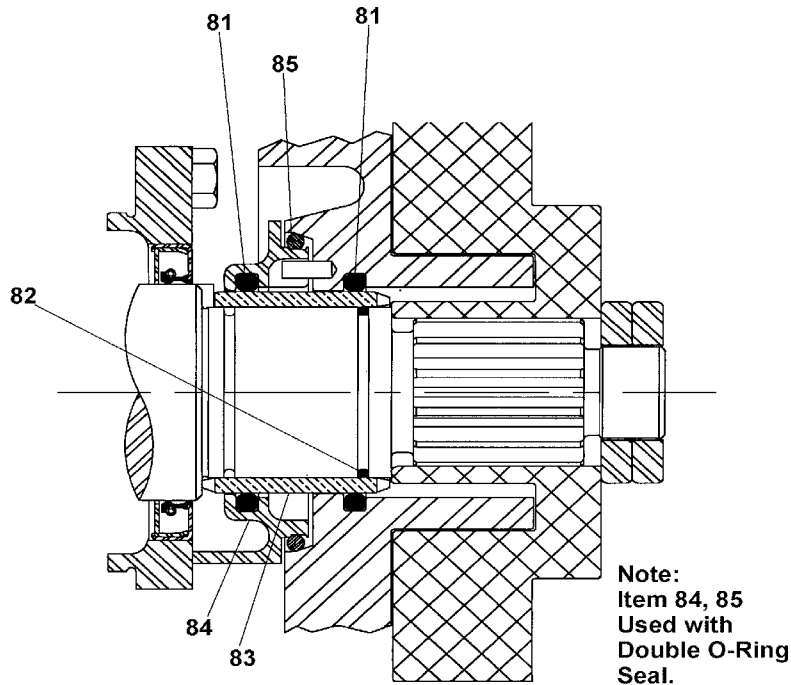
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECHANICAL SEAL PARTS</b>				
* 81	O-Ring, Body, Buna N	2	AD0 079 000	6, 25
* 81	O-Ring, Body, EPDM	2	AD0 079 002	6, 25
* 81	O-Ring, Body, FKM	2	AD0 079 V00	6
* 81	O-Ring, Body, Silicone	2	AD0 079 SC0	6
* 82	O-Ring, Shaft, Buna N	2	N70022	25
* 82	O-Ring, Shaft, EPDM	2	E70022	25
* 82	O-Ring, Shaft, FKM	2	V70022	25
* 82	O-Ring, Shaft, Silicone	2	S75022	25
* 83	Sleeve, SS	2	015 098 000	
* 83	Sleeve, Zirconia	2	015 098 004	
* 83	Sleeve, Chrome Oxide	2	015 098 002	
84	O-Ring Seal Carrier	2	015 034 000	7
* 85	O-Ring, Outer, Buna N - Seal Carrier	2	N50228	7, 8
* 86	Seal Seat, Ceramic	2	015 014 002	
* 86	Seal Seat, Chrome Oxide	2	015 014 001	
* 86	Seal Seat, Silicon Carbide	2	015 014 009	
* 87	Seal Inner, Carbon (2 piece)	2	015 306 001	
* 87	Seal Inner, Carbon (1 piece)	2	015 306 007	
* 87	Seal Inner, Ceramic	2	40635	
* 87	Seal Inner, Chrome Oxide	2	015 306 002	
* 87	Seal Inner, Silicon Carbide	2	015 306 009	
88	Wave Spring	2	015 304 000	
* 89	Outer Seal, Carbon (1 piece)	2	015 206 007	8

**NOTES:**

- 6. (4) needed per pump with double O-ring Seal.
- 7. Used with double O-Ring Seal.
- 8. Used with double Mechanical Seal.
- 25. Sold in Packages of 25 only.
- \* **Recommended Spare Parts**

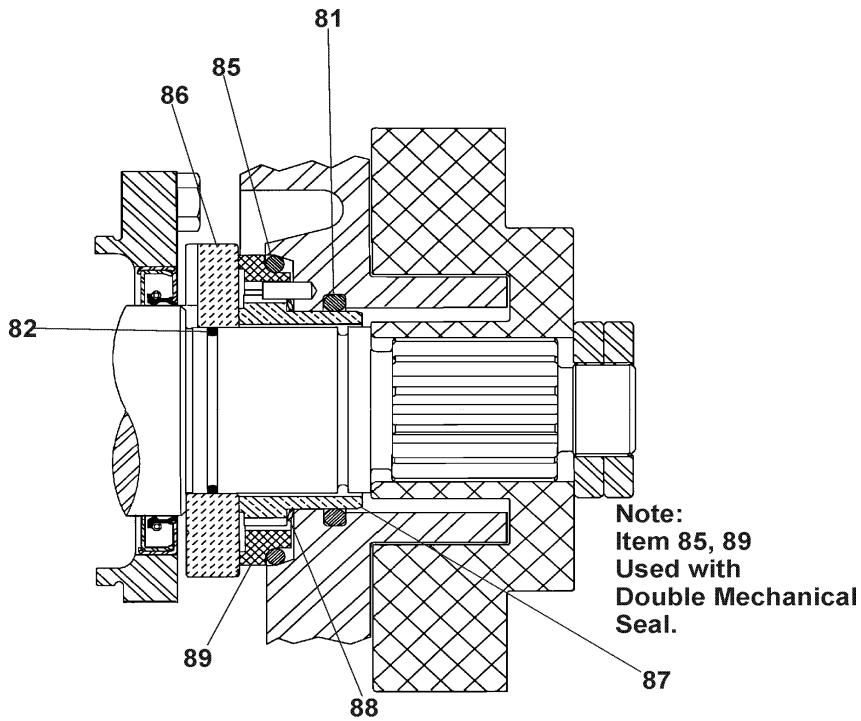
# 006 - 014 - 015 - 018 - 024-U1 Seals Parts Diagram

## O-Ring Seal



PD100-301

## Mechanical Seal



PD100-302

**006 - 014 - 015 - 018 - 024-U1 VENTED COVER PRICE LIST**

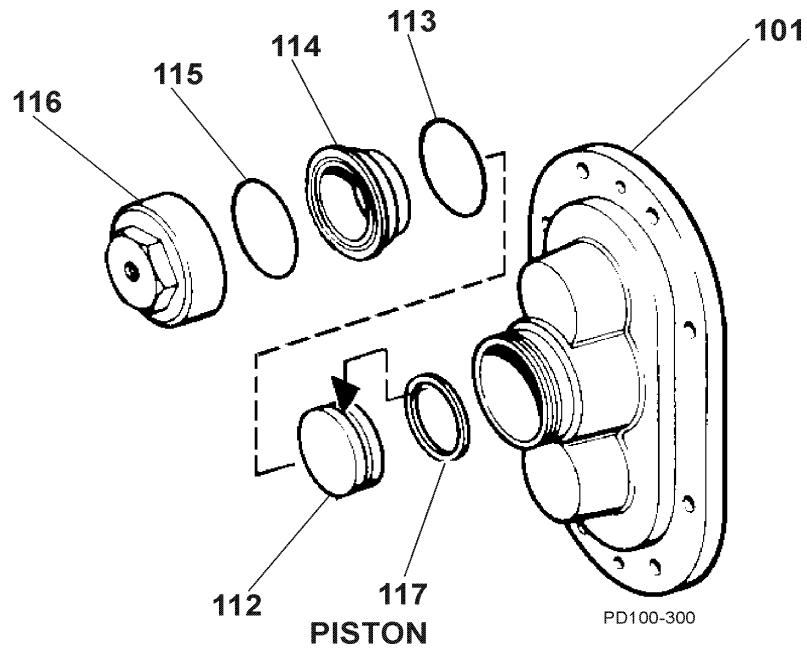
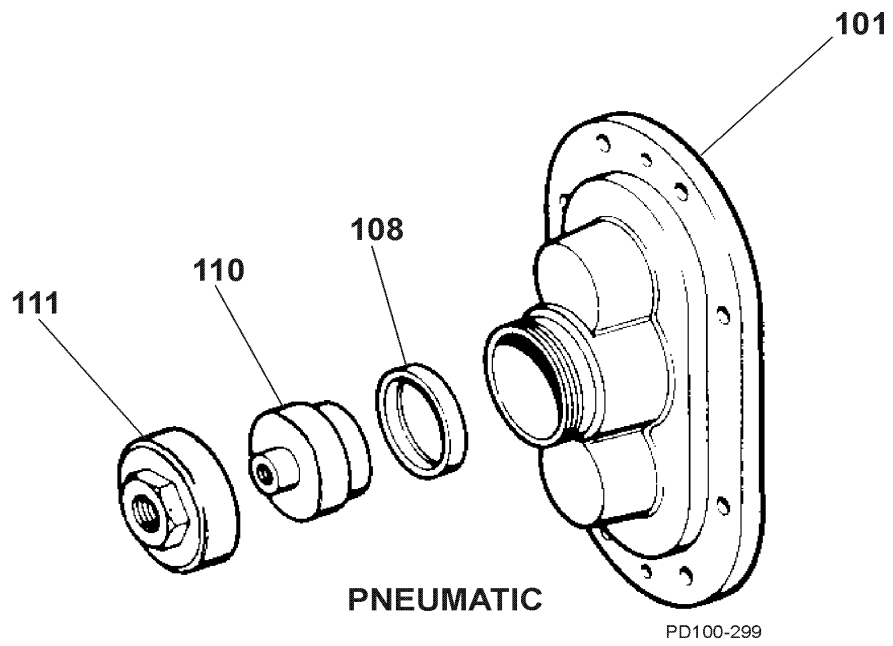
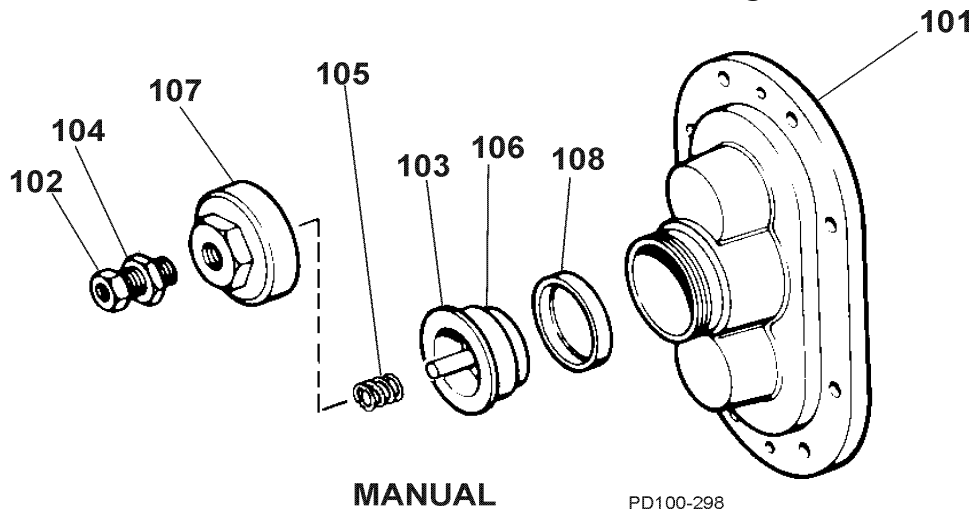
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	AD0 002 VS0	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	AD0 002 VS0	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	AD0 002 VS0	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

**NOTES:**

9. Quad Ring and O-ring can be interchanged.

\* **Recommended Spare Parts**

006 - 014 - 015 - 018 - 024-U1 Vented Cover Diagrams



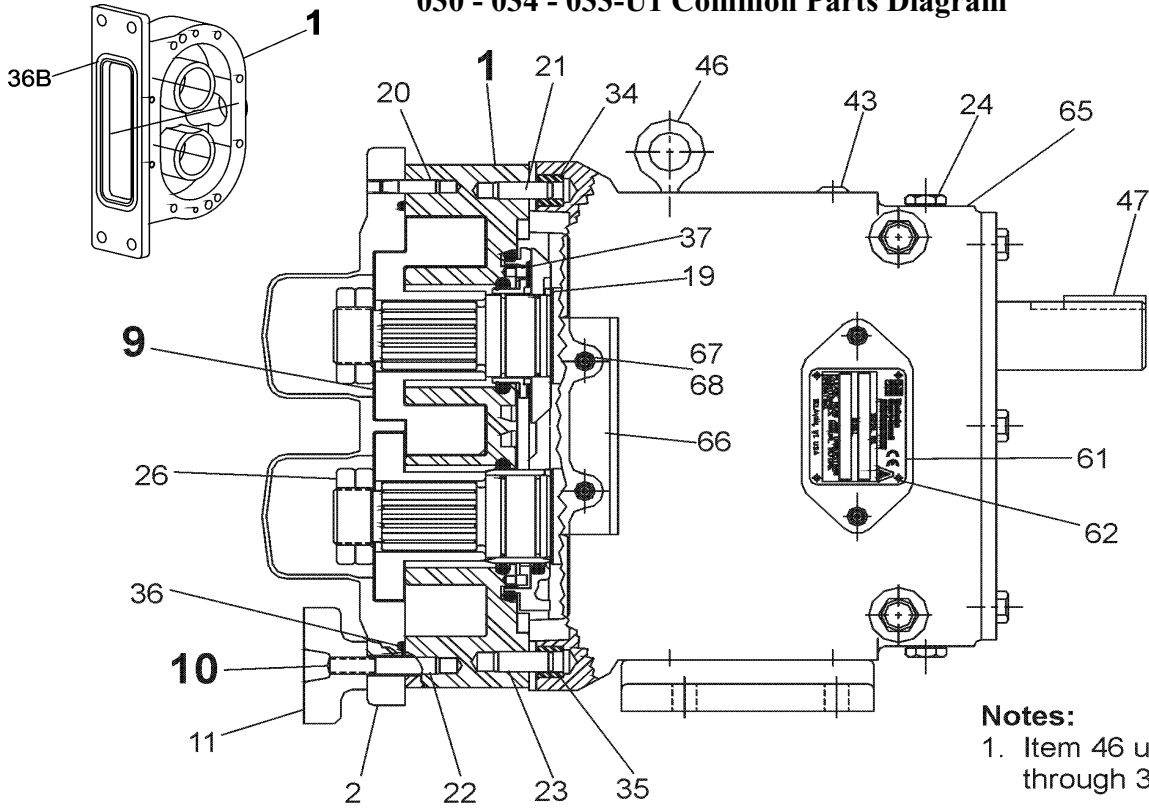
### 030 - 034 - 033-U1 PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	030-U1 Pump Body	1	See Note 1	1
	030-U1 Pump Body with Flush	1	See Note 1	1
	034-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	034-U1 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	033-U1 Pump Aseptic Body	1	033 001 020	
7	030-034-U1 Drive Shaft, Std.	1	030 008 000	3
	030-034-U1 Drive Shaft, Optional 17-4PH	1	35341	3
	030-034-U1 Drive Shaft, Std.	1	114646	4
	030-034-U1 Drive Shaft, Optional 17-4PH	1	114779	4
	033-U1 Drive Shaft, Std.	1	033 008 000	3
	033-U1 Drive Shaft, Std.	1	114648	4
8	030-034-U1 Short Shaft, Std.	1	030 009 000	3
	030-034-U1 Short Shaft, Optional 17-4PH	1	35342	3
	030-034-U1 Short Shaft, Std.	1	114647	4
	030-034-U1 Short Shaft, Optional 17-4PH	1	114780	4
	033-U1 Short Shaft, Std.	1	033 009 000	3
	033-U1 Short Shaft, Std.	1	114649	4
9	030-034-U1 Rotor, Twin Wing, Alloy 88	2	030 010 000	2
	030-034-U1 Rotor, Twin Wing, 316SS	2	030 010 200	2
	030-U1 Rotor, Single Wing, Alloy 88	2	117291	2, 12, 13
	033-U1 Rotor, Twin Wing, Alloy 88	2	33A 010 000	2
	033-U1 Rotor, Single Wing, Alloy 88	2	117326	2, 12A
10A	030-033-U1 Stud	8	108842	
10B	030-033-U1 Stud, Jacketed Cover	8	108845	
10C	034-U1 Stud	6	108842	
	034-U1 Stud	2	35555	
10D	034-U1 Stud, Jacketed Cover	6	108845	
	034-U1 Stud, Jacketed Cover	2	35549	
	Stud Retainer Assembly	1	040 064 000	5

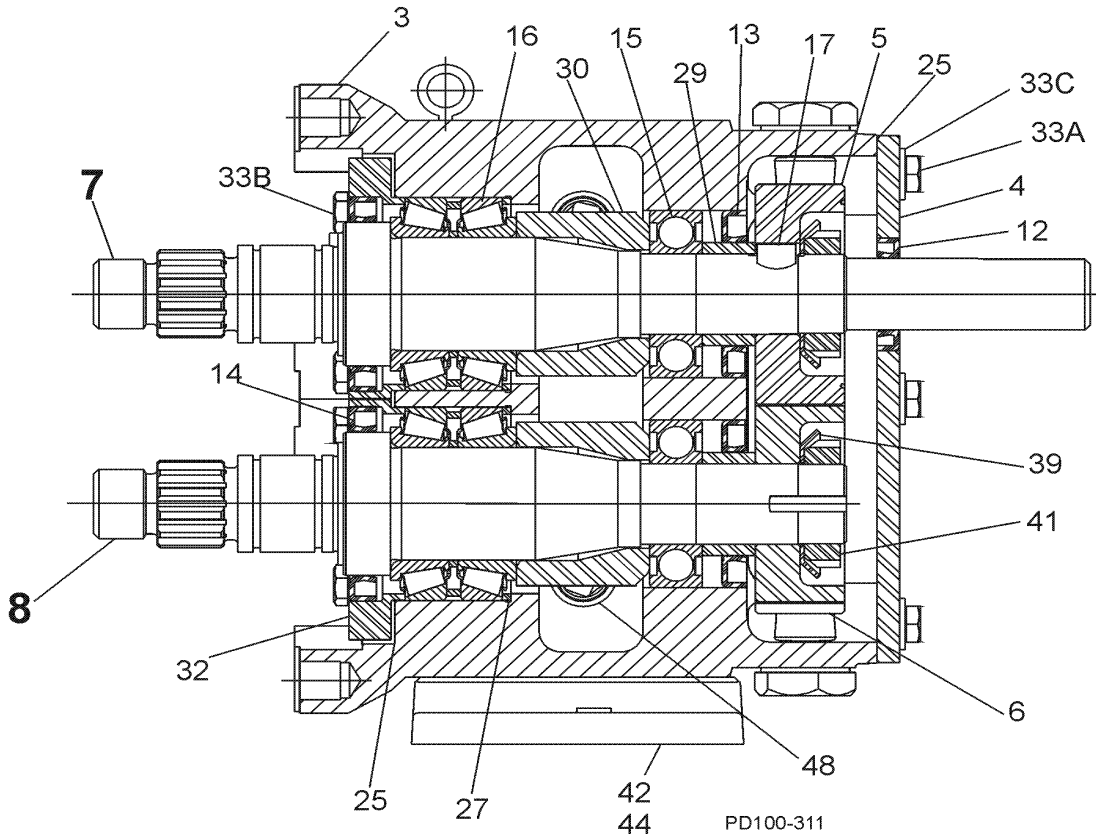
**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
3. Pumps shipped prior to July 30, 2001.
4. Pumps shipped starting July 30, 2001.
5. No longer manufactured, consult factory for upgrade of gear case subassembly.
12. Replaces 030 010 010 straight and 030 010 090 90° (degree) rotors.
- 12A. Replaces 33A 010 010 straight and 33A 010 090 90° (degree) rotors.
13. Single wing rotors can not be used in Rectangular Flange Inlet pumps.

### 030 - 034 - 033-U1 Common Parts Diagram



**Notes:**  
 1. Item 46 used on 60 through 320.



PD100-311

**030 - 034 - 033-U1 COMMON PARTS PRICE LIST**

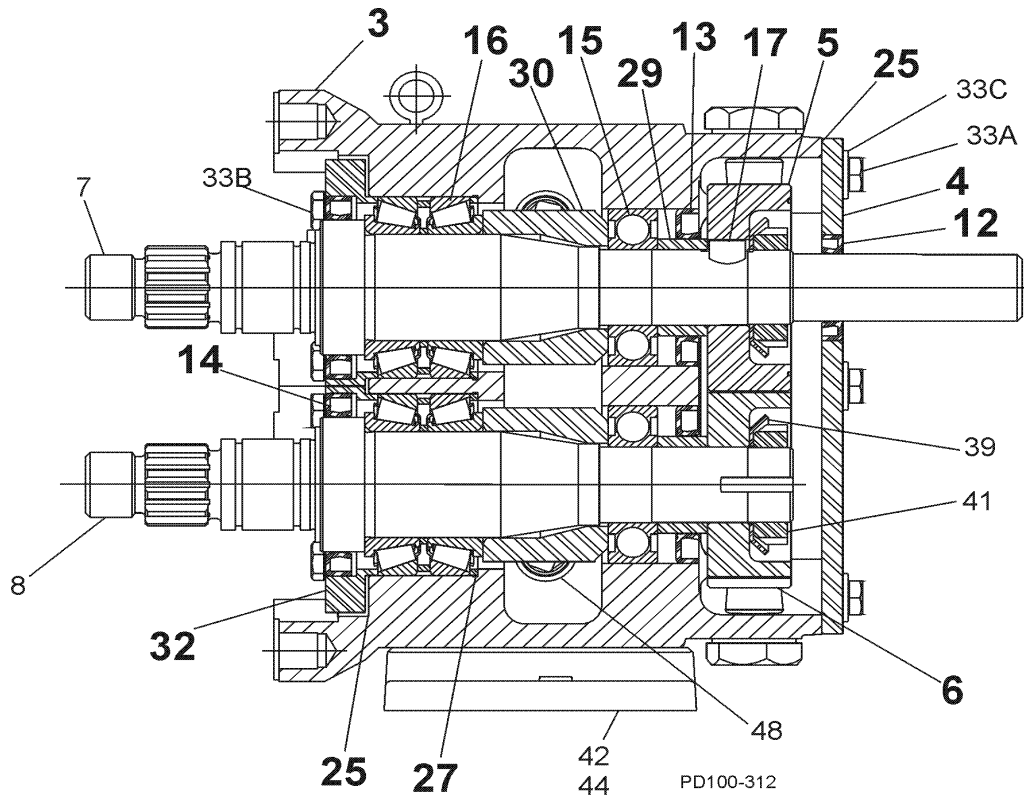
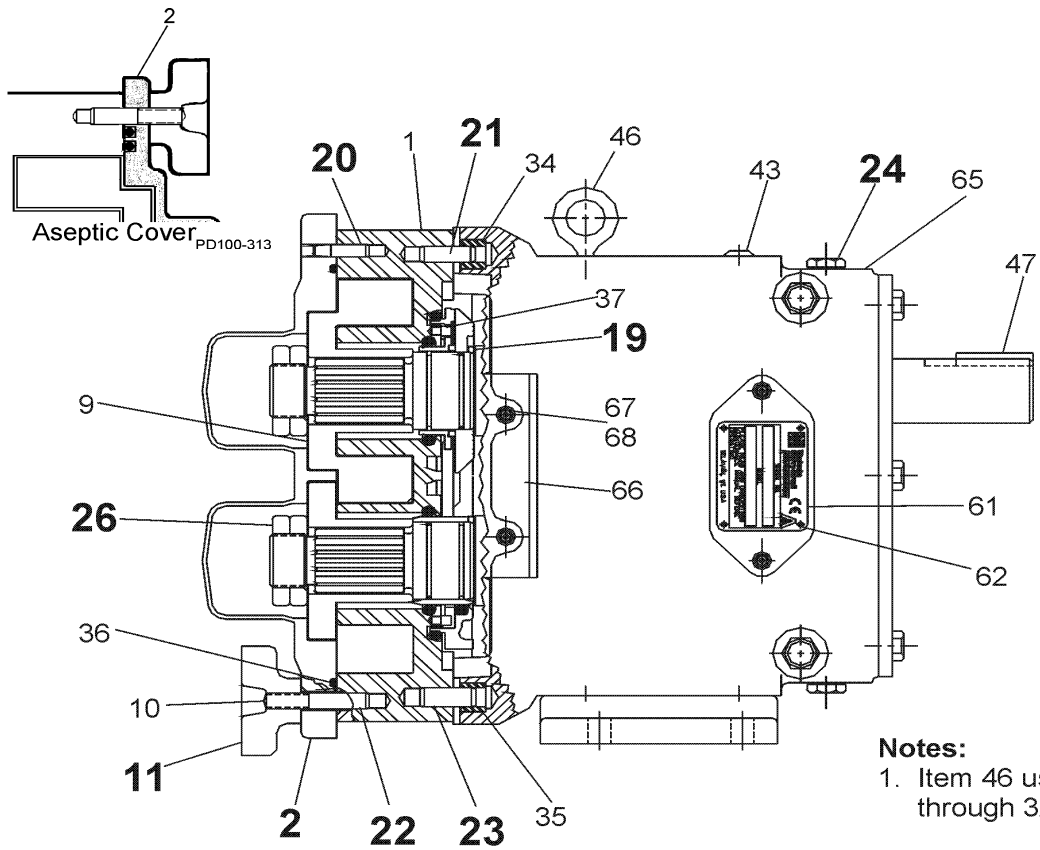
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	030-034-U1 Pump Cover	1	BD0 002 S00	
	030-034-U1 Jacketed Cover	1	BD0 002 J10	
	033-U1 Pump Cover	1	33A 002 020	
	<b>Pump Cover Vented - Complete Assembly</b>			
	030-034-U1 Manual (over 150 PSI)	1	CVR00007	
	030-034-U1 Manual (under 150 PSI)	1	CVR00014	
	030-034-U1 Pneumatic	1	CVR00010	
	030-034-U1 Piston	1	CVR00022	
3	Gear Case, CI	1	040 005 000	3, 5
	Gear Case, SS; Optional	1	101832	3, 5
	Gear Case, CI	1	102277	4
	Gear Case, SS; Optional	1	101833	4
4	Gear Case Cover, Steel	1	040 106 000	
	Gear Case Cover, SS; Optional	1	102281	
5	Gear, Drive Shaft, Spur	1	107999	
6	Gear, Short Shaft, Spur	1	107999	
11	Wing Nut	8	105851	
	Hex Nut, optional	8	108370	
12	Oil Seal, Gear Case Cover	1	000 030 013	
13	Oil Seal, Gear Case Rear	2	000 030 014	
14	Grease Seal, Bearing Retainer	2	000 030 015	3
	Grease Seal, Bearing Retainer	2	101717	4
	Bearing Isolator, includes Bearing Retainer	2	X06558-1	3
	Bearing Isolator, includes Bearing Retainer	2	X06639-1	4
15	Bearing, Rear	2	030 035 000	
16	Bearing, Front	2	030 036 000	3
	Bearing, Front	2	101715	4
17	Key, Gear	2	BD0 037 000	
19	Drive Pin, Seal Seat and Sleeve	2	CD0 126 000	
20	Dowel Pin, Upper Cover Side	1	BD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	BD0 040 200	
22	Dowel Pin, Lower Cover Side	1	BD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	BD0 040 300	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 003	
25	Silicone Sealant	1	000 142 301	
26	Jam Nut, Rotor	4	BD0 052 001	
27	Shim Kit	2	117890	
29	Spacer, Gear to Rear Bearing	2	030 055 000	
30	Bearing Spacer	2	030 055 001	3
	Bearing Spacer	2	101815	4
32	Bearing Retainer, Front	2	030 080 000	3
	Bearing Retainer, Front	2	101811	4

**NOTES:**

3. Pumps shipped prior to July 30, 2001.
4. Pumps shipped starting July 30, 2001.
5. No longer manufactured, consult Factory for upgrade of gear case assembly.



### 030 - 034 - 033-U1 Common Parts Diagram



**030 - 034 - 033-U1 COMMON PARTS PRICE LIST**

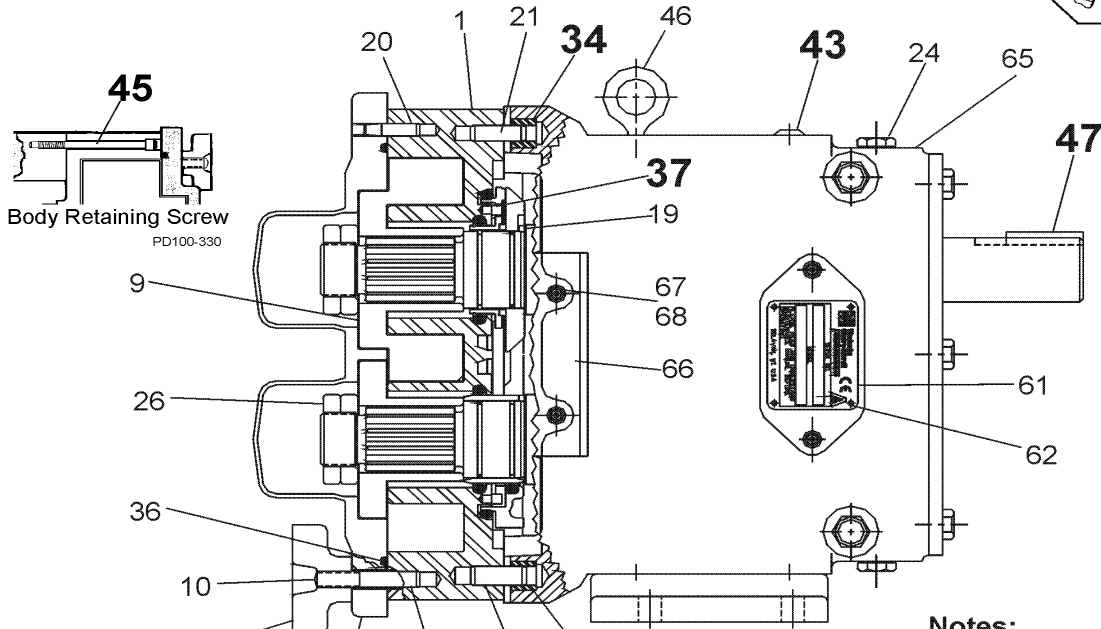
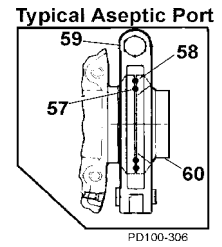
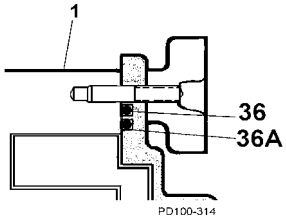
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
33A	5/16-18 x .75" HHCS, Std gear case	6	30-283	
	1/2-20 x .50" HHCS, SS Gear case	6	30-526	
33B	5/16-18 x .75" SHCS, Brg Ret. Std gear case	8	30-296	
	5/16-18 x .75" SHCS, Brg Ret., SS Gear case	8	30-29	
33C	5/16" Flat Washer, Std gear case	6	43-194	
34	Dowel Bushing, Upper	1	BD0 116 000	
35	Dowel Bushing, Lower	1	BD0 116 100	
* * * * * * *	<b>030-034-U1 O-Ring, Pump Cover, Buna N</b>	1	N70261	
	<b>030-034-U1 O-Ring, Pump Cover, EPDM</b>	1	E70261	
	<b>030-034-U1 O-Ring, Pump Cover, FKM</b>	1	V70261	
	<b>030-034-U1 O-Ring, Pump Cover, Silicone</b>	1	S75261	
	<b>033-U1 O-Ring, Pump Cover, Outer, EPDM</b>	1	033 117 012	11
	<b>033-U1 O-Ring, Pump Cover, Outer, FKM</b>	1	033 117 014	11
	<b>033-U1 O-Ring, Pump Cover, Outer, Silicone</b>	1	033 117 013	11
* * *	<b>033-U1 O-Ring, Pump Cover, Inner, EPDM</b>	1	033 117 002	11
	<b>033-U1 O-Ring, Pump Cover, Inner, FKM</b>	1	033 117 004	11
	<b>033-U1 O-Ring, Pump Cover, Inner, Silicone</b>	1	033 117 003	11
* *	<b>034-U1 O-Ring, Rectangular Flange</b>	1	N70260	14
	<b>034-U1 O-Ring, Rectangular Flange</b>	1	N70357	14
37	Stop Pin, Seal	2	030 126 000	
39	Lockwasher, Gear	2	CD0 036 W00	
41	Locknut, Gear	2	CD0 036 N00	
42	Gear Case Shim, CI	1	040 110 000	
	Gear Case Shim, SS	1	102285	
	Pump Pedestal, 6.25"	1	BD0 110 SM0	
43	Plastic Cap Plug	8	000 121 002	
44	3/8-16 x 1" SHCS, Std gear case	4	30-344	
	3/8-16 x 1" SHCS, SS gear case	4	30-189	
45	Body Retaining Screw, Optional	2	30-211	15
47	Key, Coupling - 1/4 x 1/4 x 1"	1	000 037 002	
48	Cleanout Plug	2	41013	
* *	<b>033-U1 O-Ring, Port, Inner</b>	2	S75223	11
	<b>033-U1 O-Ring, Port, Outer</b>	2	V70232	11
59	033-U1 2-1/2" 131 "I" Line Clamp	2	0344223	11
60	033-U1 Aseptic Ferrule , 2-1/2"	2	BD0 267 230	11

**NOTES:**

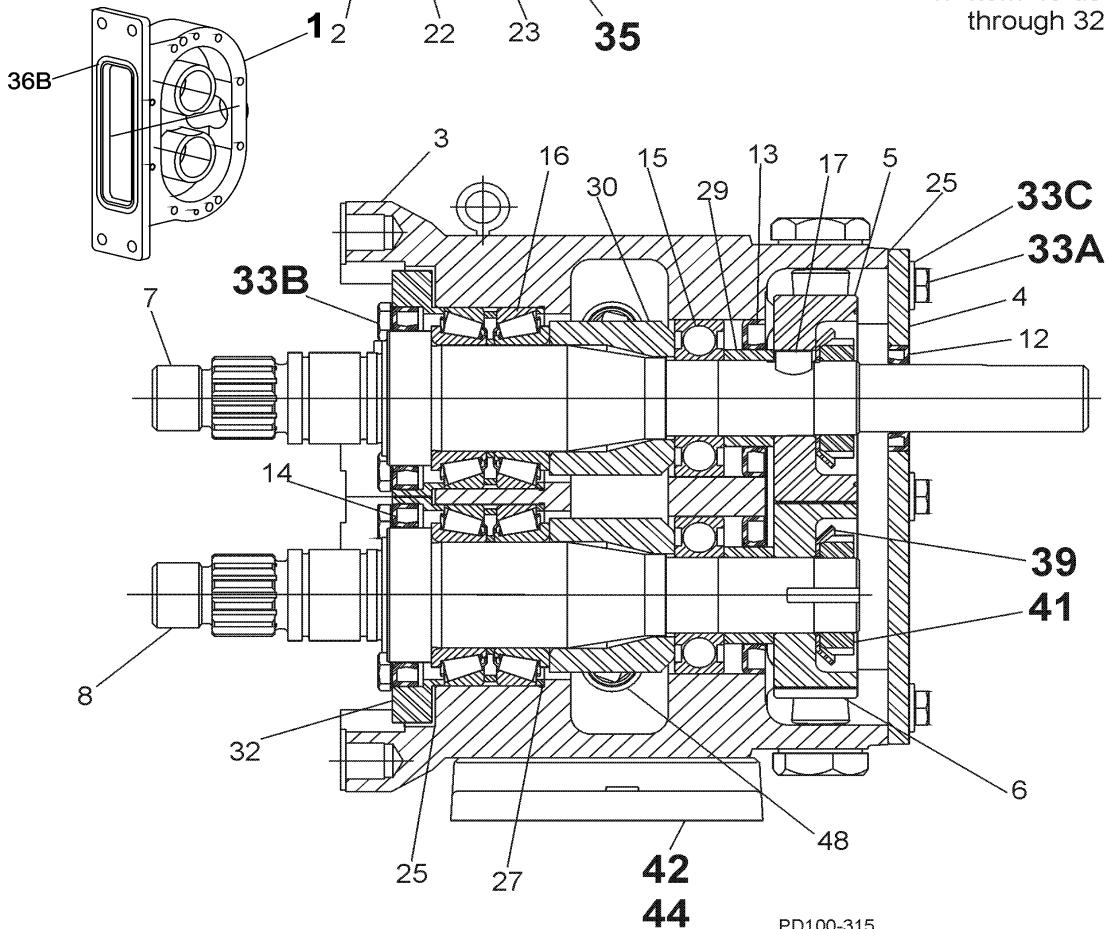
- 11. Used on 033-U1 only.
- 14. New O-Ring N70357 introduced in 2001. Fits close to inlet opening.
- 15. New standard for Rectangular Flange Inlet pumps. Optional for standard inlet pumps.  
Body must be drilled at Factory to use.

**\* Recommended Spare Parts**

# 030 - 034 - 033-U1 Common Parts Diagram



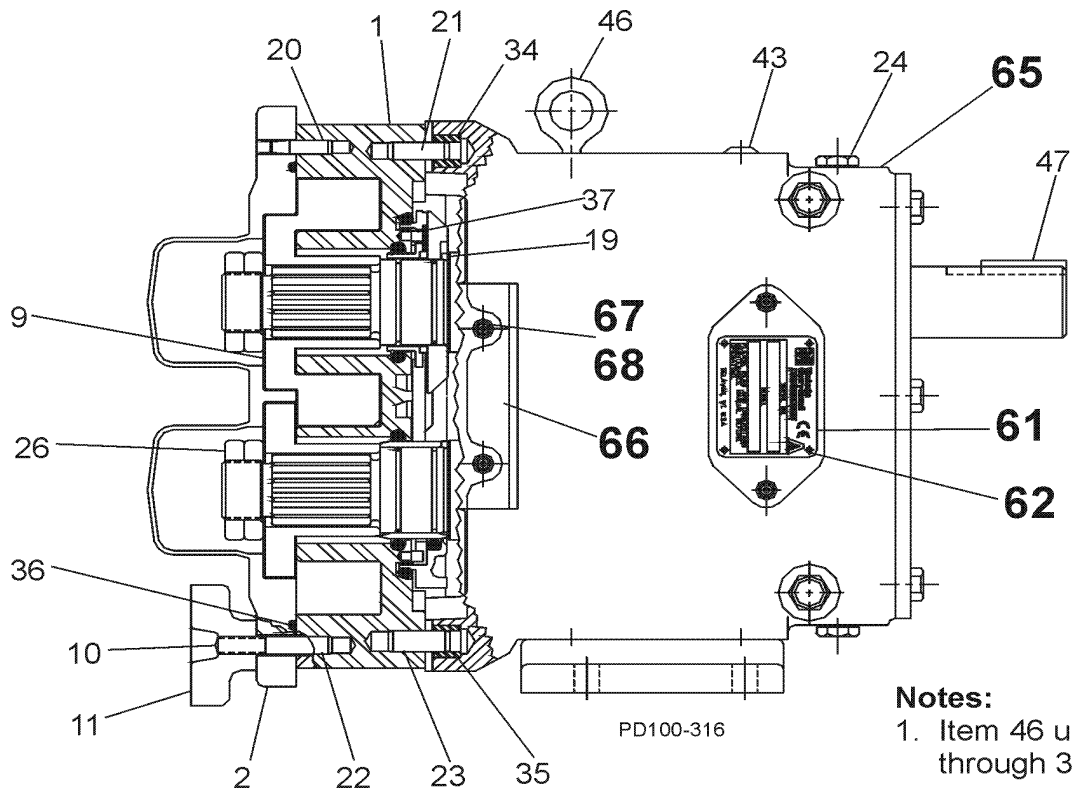
**Notes:**  
1. Item 46 used on 60 through 320.



**030 - 034 - 033-U1 COMMON PARTS PRICE LIST**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY. PER PUMP</b>	<b>PART NO.</b>	<b>NOTES</b>
<b>61</b>	Name Plate, Sanitary	1	001 061 002	
<b>62</b>	#2 x .125" RHDS	4	30-355	
<b>63</b>	O-ring Removal Tool	1	AD0 096 001	
<b>64</b>	Rotor Nut Wrench, SS	1	109896	
	030-034-U1 Wrench, Jacketed Cover	1	CD0 019 001	
<b>65</b>	Caution Plate	2	33-62	
<b>66</b>	Warning Label	2	33-63	
<b>67</b>	030-033-U1 Grease Fitting, 1/8"	4	BD0 092 000	
	034-U1 Grease Fitting, 1/8"	4	BD0 092 100	
<b>68</b>	Plastic Cap, Grease Fitting	4	BD0 093 000	

### 030 - 034 - 033-U1 Common Parts Diagram



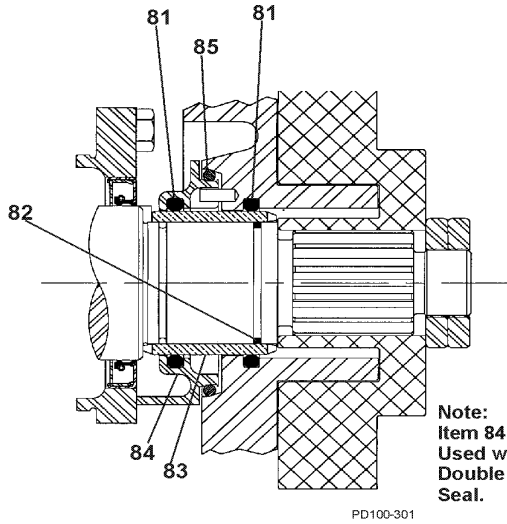
**030 - 034 - 033-U1 SEAL PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECHANICAL SEAL PARTS</b>				
* 81	O-Ring, Body, Buna N	2	N70327	6, 25
* 81	O-Ring, Body, EPDM	2	E70327	6, 25
* 81	O-Ring, Body, FKM	2	V70327	6
* 81	O-Ring, Body, Silicone	2	S75327	6
* 82	O-Ring, Shaft, Buna N	2	N70028	16, 25
* 82	O-Ring, Shaft, EPDM	2	E70028	16, 25
* 82	O-Ring, Shaft, FKM	2	V70028	16
* 82	O-Ring, Shaft, Silicone	2	S75028	16, 25
* 83	Sleeve, SS	2	030 098 000	
* 83	Sleeve, Zirconia	2	030 098 004	
* 83	Sleeve, Chrome Oxide	2	030 098 002	
84	O-Ring Seal Carrier	2	030 034 000	7
* 85	O-Ring, Outer, Buna N - Seal Carrier	2	N50335	7, 8
* 85	O-Ring, Outer, EPDM - Seal Carrier	2	E50335	7, 8
* 85	O-Ring, Outer, FKM - Seal Carrier	2	V50335	7, 8
* 85	O-Ring, Outer, Silicone - Seal Carrier	2	S50335	7, 8
* 86	030-034-U1 Seal Seat, Ceramic	2	030 014 002	
* 86	030-034-U1 Seal Seat, Chrome Oxide	2	030 014 001	
* 86	030-034-U1 Seal Seat, Silicon Carbide	2	030 014 009	
* 86	033-U1 Seal Seat, Ceramic	2	033 014 002	11
* 86	033-U1 Seal Seat, Chrome Oxide	2	033 014 001	11
* 86	033-U1 Seal Seat, Silicon Carbide	2	033 014 009	11
* 87	Seal Inner, Carbon (2 piece)	2	030 306 001	
* 87	Seal Inner, Carbon (1 piece)	2	030 306 007	
* 87	Seal Inner, Ceramic	2	40821	
* 87	Seal Inner, Chrome Oxide	2	030 306 002	
* 87	Seal Inner, Silicon Carbide	2	030 306 009	
88	Wave Spring	2	030 304 000	
* 89	Outer Seal, Carbon (1 piece)	2	030 206 007	8
* 89	Outer Seal, Chrome Oxide	2	030 206 002	8

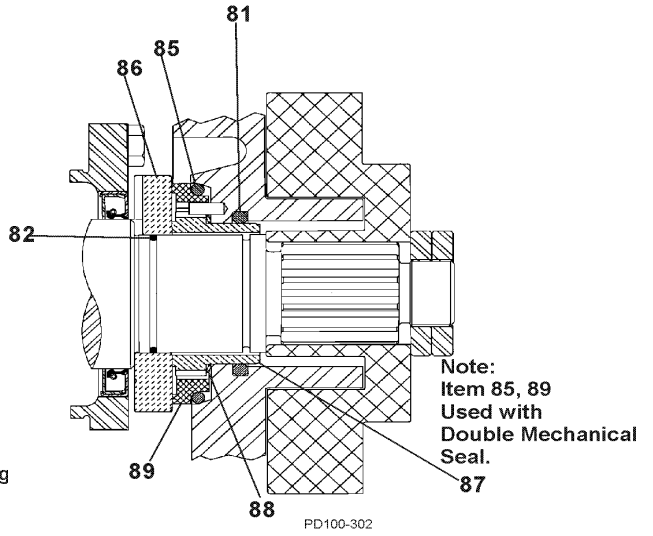
**NOTES:**

- 6. (4) needed per pump with Double O-ring Seal.
- 7. Used with Double O-Ring Seal.
- 8. Used with Double Mechanical Seal.
- 11. Used on 033-U1 only.
- 16. (4) needed per pump on 033-U1.
- 25. Sold in packages of 25 only.
- \* **Recommended Spare Parts**

# 030 - 034-U1 Seals Parts Diagram

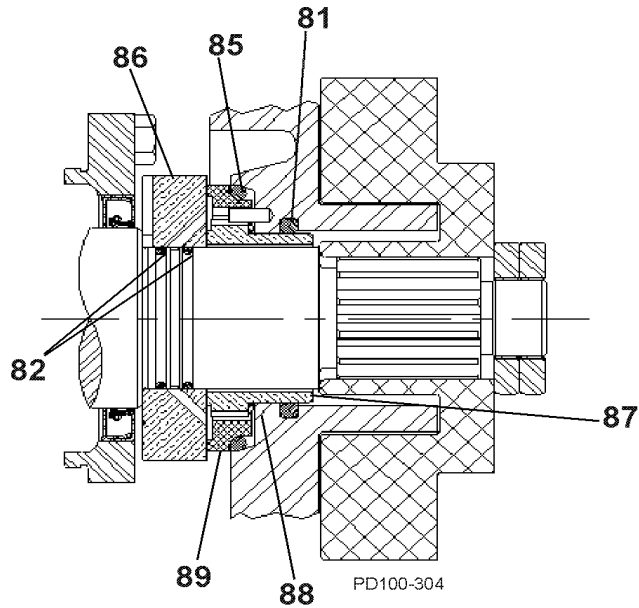


**O-Ring Seal**



**Mechanical Seal**

## 033-U1 Aseptic Seal



**030 - 034-U1 VENTED COVER PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
	<b>MANUAL VENTED COVER</b>			
101	Vented Cover	1	BD0 002 VS0	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
	<b>PNEUMATIC VENTED COVER</b>			
101	Vented Cover	1	BD0 002 VS0	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
	<b>PISTON VENTED COVER</b>			
101	Vented Cover	1	BD0 002 VS0	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

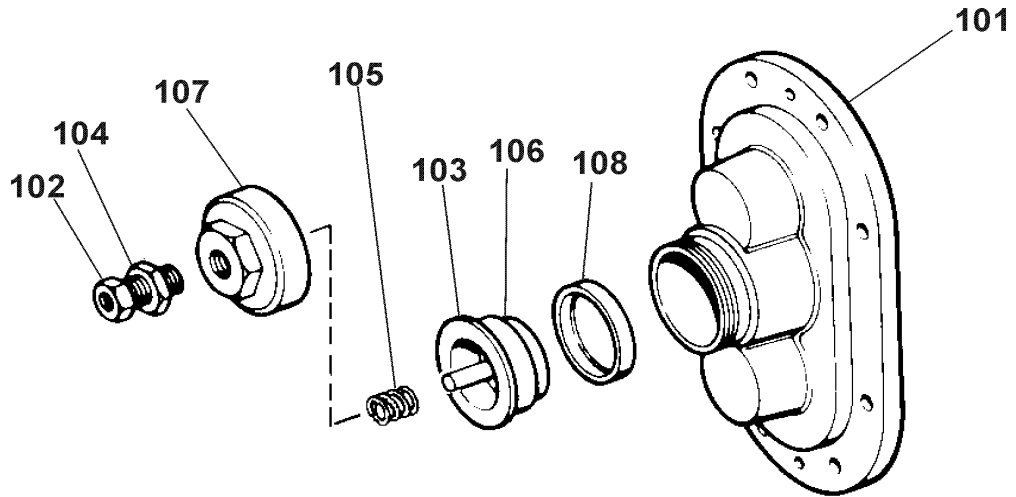
**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

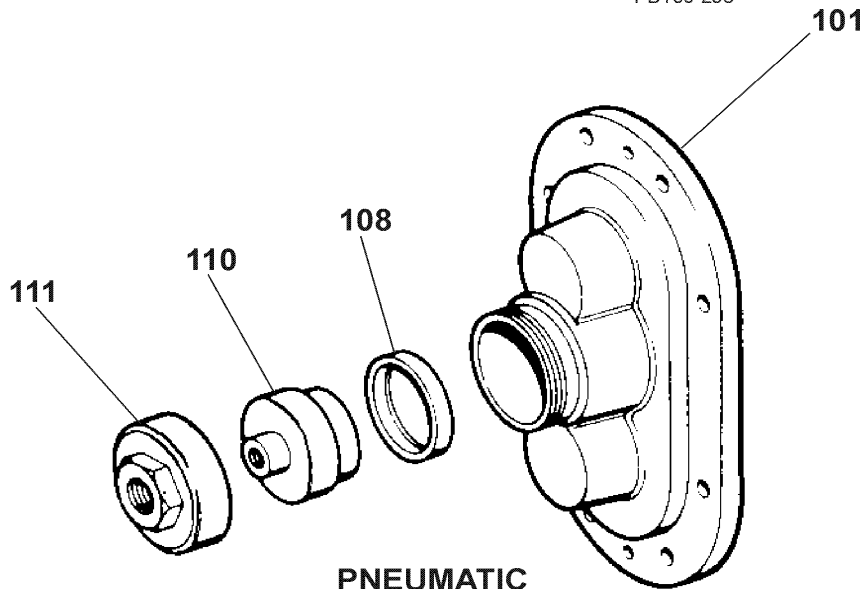


030 - 034-U1 Vented Cover Diagram (Not Used on 033-U1 Pump)



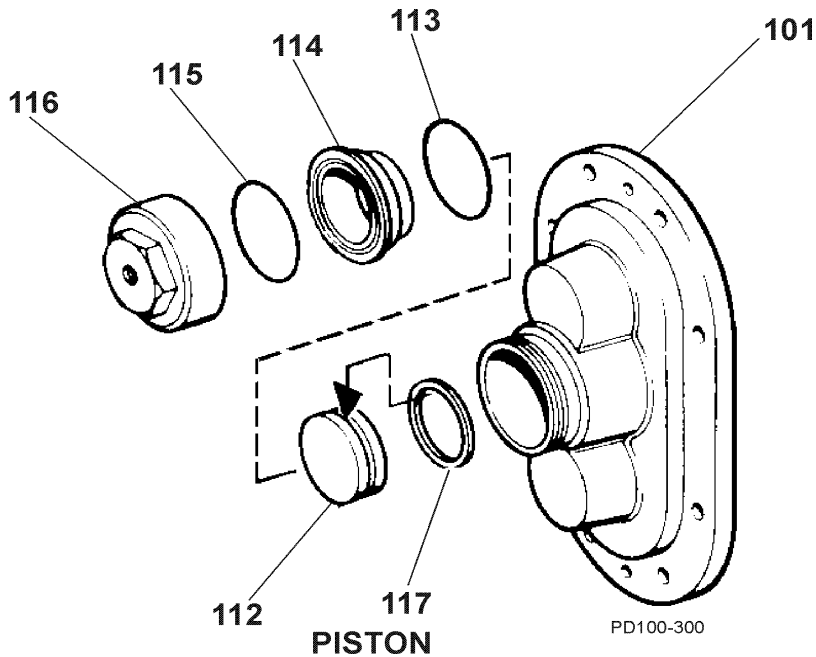
MANUAL

PD100-298



PNEUMATIC

PD100-299



PISTON

PD100-300

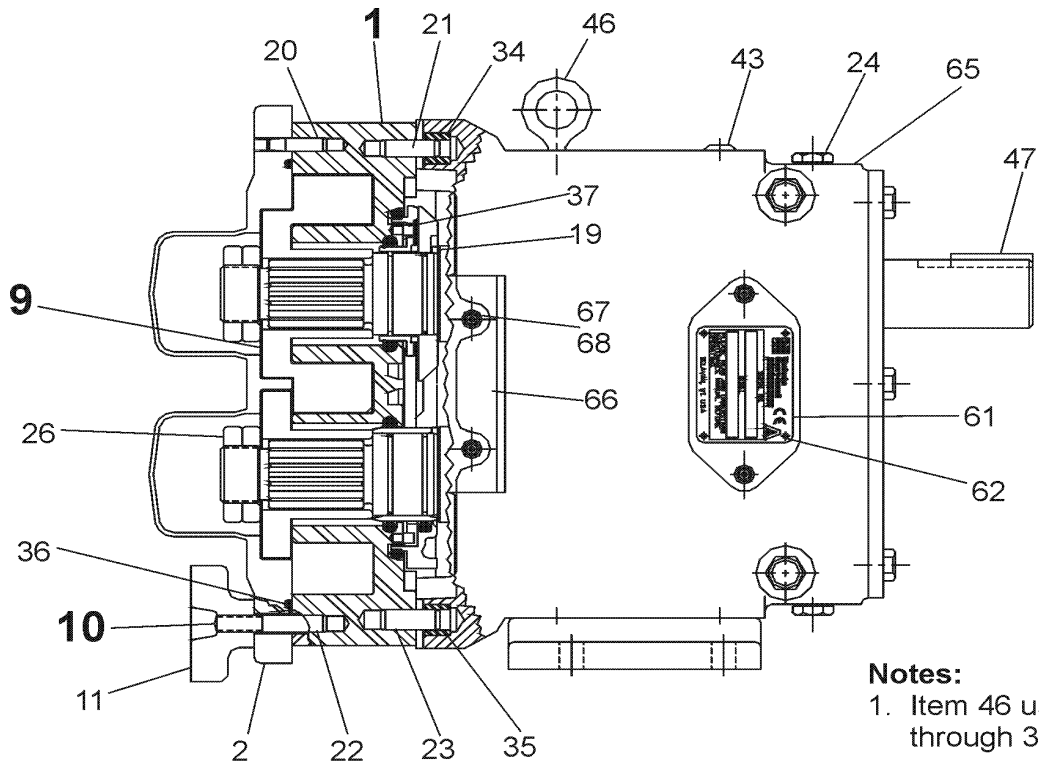
## 040-U1 PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	040-U1 Pump Body	1	See Note 1	1
	040-U1 Pump Body with Flush	1	See Note 1	1
7	040-U1 Drive Shaft, Std.	1	118718	
	040-U1 Drive Shaft, Optional 17-4PH	1	118812	
8	040-U1 Short Shaft, Std.	1	118719	
	040-U1 Short Shaft, Optional 17-4PH	1	118813	
9	040-U1 Rotor, Twin Wing, Alloy 88	2	118728	2
	040-U1 Rotor, Twin Wing, 316SS	2	118753	2
10	040-U1 Stud	8	118897	
	040-U1 Stud, Jacketed Cover	8	118898	

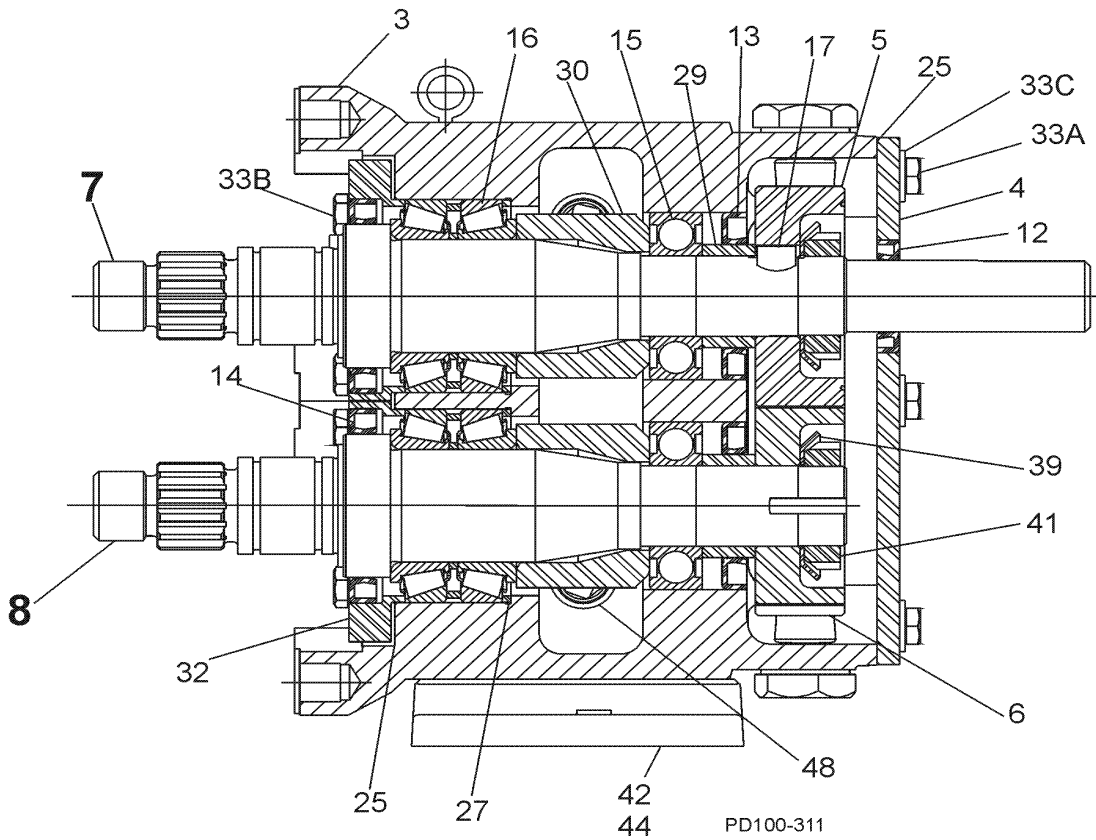
**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.

## 040-U1 Common Parts Diagram



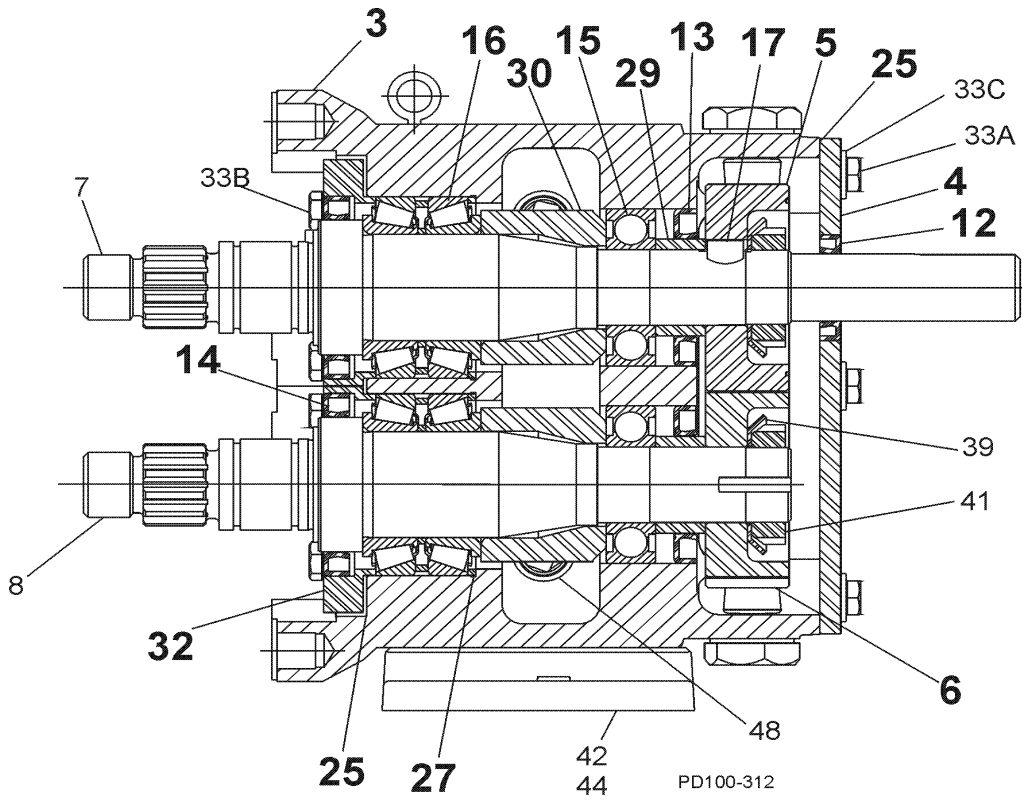
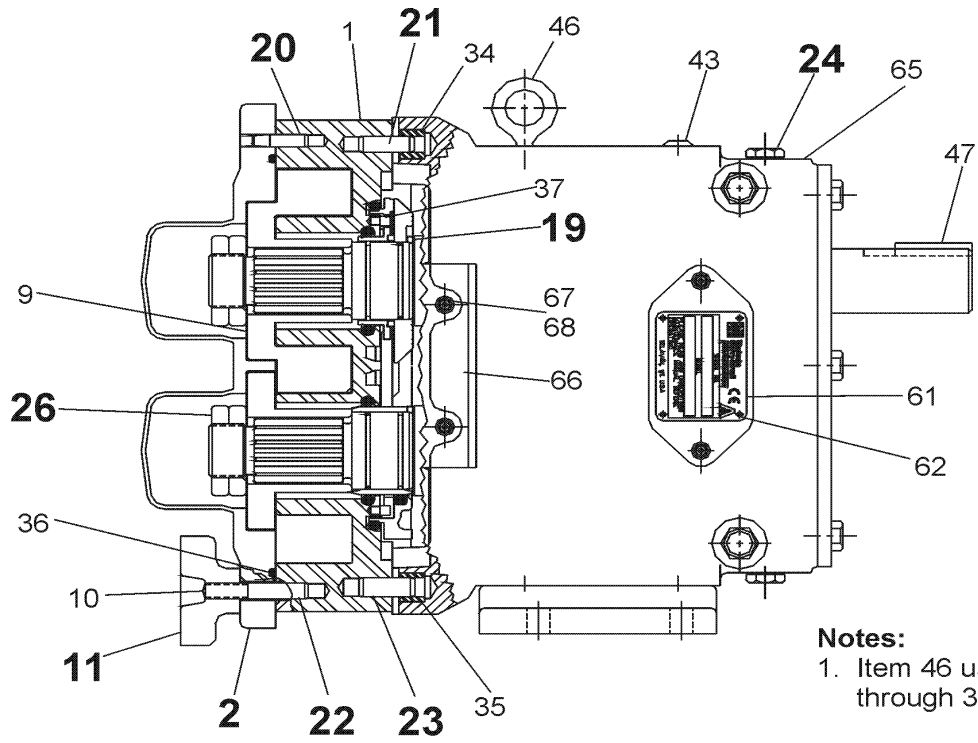
- Notes:**  
 1. Item 46 used on 60 through 320.



## 040-U1 COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	040-U1 Pump Cover	1	BD0 002 S00	
	040-U1 Jacketed Cover	1	BD0 002 J10	
	<b>Pump Cover Vented - Complete Assembly</b>			
	040-U1 Manual (over 150 PSI)	1	CVR00007	
	040-U1 Manual	1	CVR00014	
	040-U1 Pneumatic	1	CVR00010	
	040-U1 Piston	1	CVR00022	
3	Gear Case, CI	1	102277	
	Gear Case, SS; Optional	1	101833	
4	Gear Case Cover, Steel	1	040 106 000	
	Gear Case Cover, SS; Optional	1	102281	
5	Gear, Drive Shaft, Spur	1	107999	
6	Gear, Short Shaft, Spur	1	107999	
11	Wing Nut	8	105851	
	Hex Nut, optional	8	108370	
12	Oil Seal, Gear Case Cover	1	000 030 013	
13	Oil Seal, Gear Case Rear	2	000 030 014	
14	Grease Seal, Bearing Retainer	2	101717	
	Bearing Isolator, includes Bearing Retainer	2	X06639-1	
15	Bearing, Rear	2	030 035 000	
16	Bearing, Front	2	101715	
17	Key, Gear	2	BD0 037 000	
19	Drive Pin, Seal Seat and Sleeve	2	CD0 126 000	
20	Dowel Pin, Upper Cover Side	1	BD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	BD0 040 200	
22	Dowel Pin, Lower Cover Side	1	BD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	BD0 040 300	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 003	
25	Silicone Sealant	1	000 142 301	
26	Jam Nut, Rotor	4	BD0 052 001	
27	Shim Kit	2	117890	
29	Spacer, Gear to Rear Bearing	2	030 055 000	
30	Bearing Spacer	2	101815	
32	Bearing Retainer, Front	2	101811	

# 040-U1 Common Parts Diagram



PD100-312

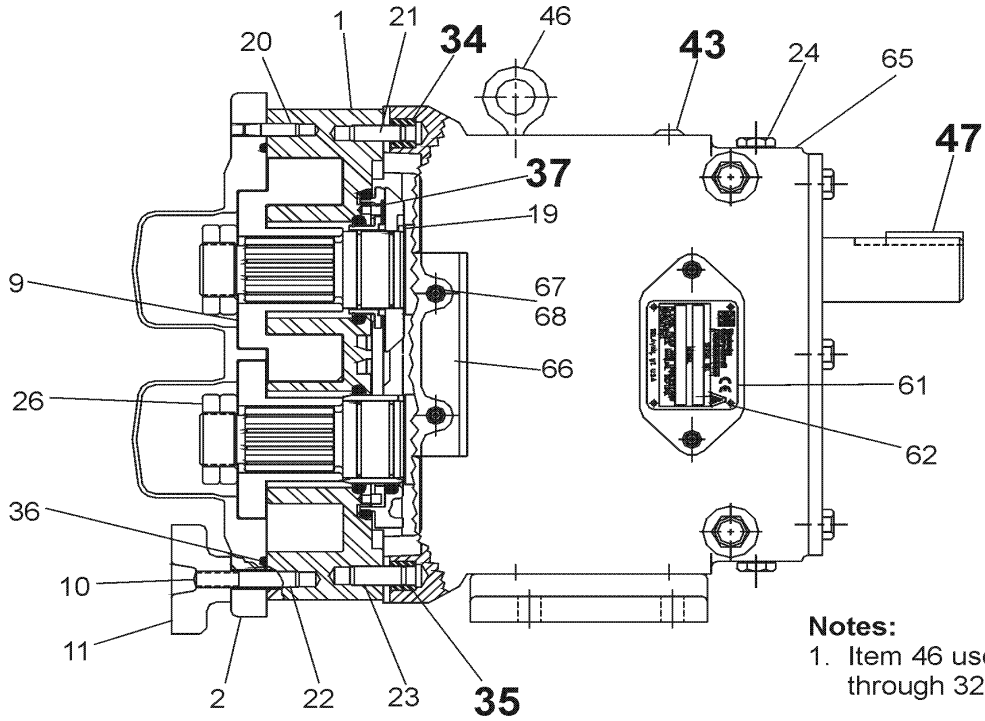
## 040-U1 COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES	
33A	5/16-18 x .75" HHCS, Std gear case	6	30-283		
	1/2-20 x .50" HHCS, SS Gear case	6	30-526		
33B	5/16-18 x .75" SHCS, Brg Ret. Std gear case	8	30-296		
	5/16-18 x .75" SHCS, Brg Ret., SS Gear case	8	30-29		
33C	5/16 Flat Washer, Std gear case	6	43-194		
34	Dowel Bushing, Upper	1	BD0 116 000		
35	Dowel Bushing, Lower	1	BD0 116 100		
* * * *	36	040-U1 O-Ring, Pump Cover, Buna N	1	N70261	
		040-U1 O-Ring, Pump Cover, EPDM	1	E70261	
		040-U1 O-Ring, Pump Cover, FKM	1	V70261	
		040-U1 O-Ring, Pump Cover, Silicone	1	S75261	
37	Stop Pin, Seal	2	030 126 000		
39	Lockwasher, Gear	2	CD0 036 W00		
41	Locknut, Gear	2	CD0 036 N00		
42	Gear Case Shim, CI	1	040 110 000		
	Gear Case Shim, SS	1	102285		
	Pump Pedestal, 6.25"	1	BD0 110 SM0		
43	Plastic Cap Plug	8	000 121 002		
44	3/8-16 x 1" SHCS, Std gear case	4	30-344		
	3/8-16 x 1" SHCS, SS gear case	4	30-189		
47	Key, Coupling - 1/4 x 1/4 x 1"	1	000 037 002		
48	Cleanout Plug	2	41013		

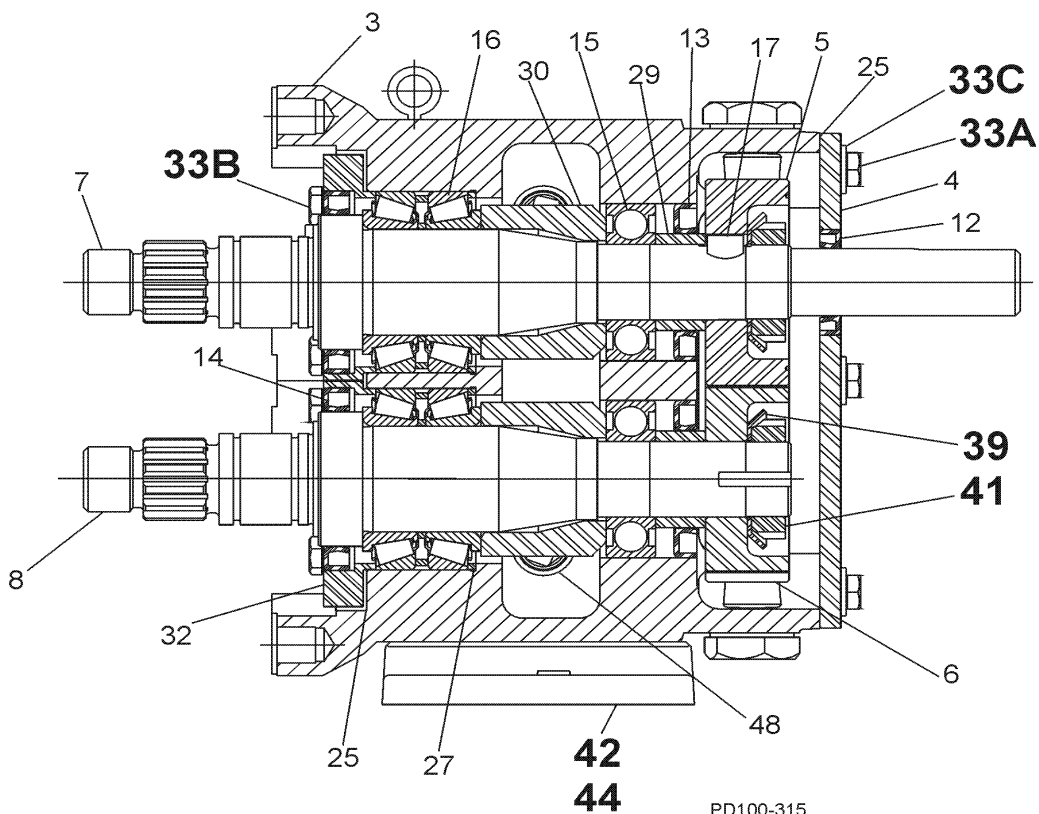
**NOTES:**

\* Recommended Spare Parts

# 040-U1 Common Parts Diagram



**Notes:**  
 1. Item 46 used on 60 through 320.



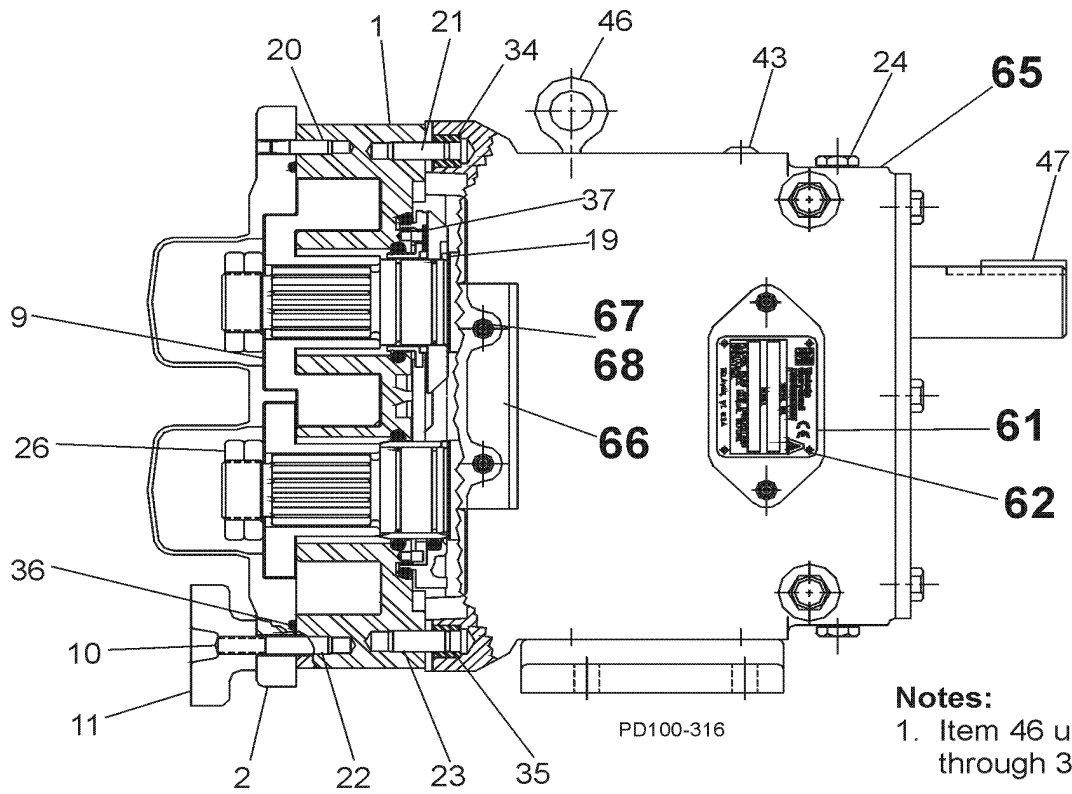
PD100-315

## 040-U1 COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
63	O-ring Removal Tool	1	AD0 096 001	
64	Rotor Nut Wrench, SS	1	109896	
	040-U1 Wrench, Jacketed Cover	1	CD0 019 001	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-63	
67	Grease Fitting, 1/8"	4	BD0 092 000	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	



## 040-U1 Common Parts Diagram



## 040-U1 SEAL PARTS PRICE LIST

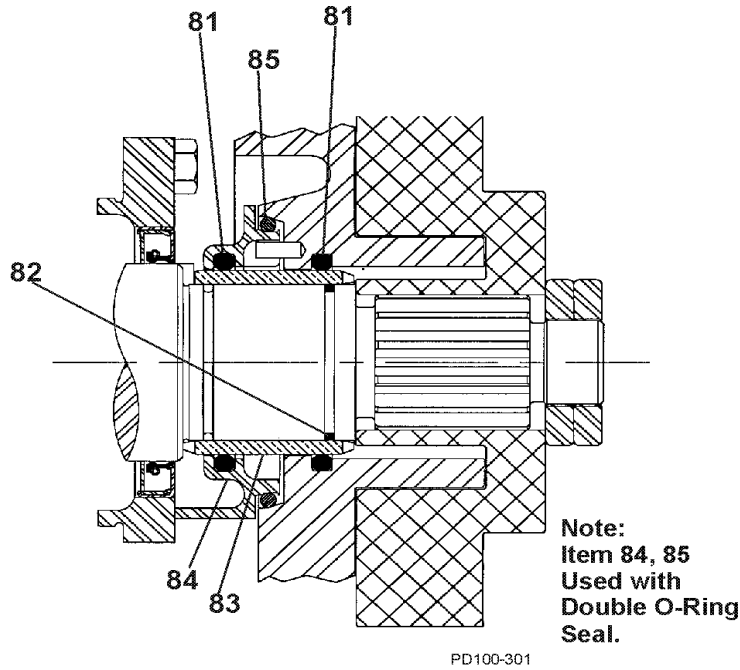
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECHANICAL SEAL PARTS</b>				
* 81	O-Ring, Body, Buna N	2	N70327	6, 25
* 81	O-Ring, Body, EPDM	2	E70327	6, 25
* 81	O-Ring, Body, FKM	2	V70327	6
* 81	O-Ring, Body, Silicone	2	S75327	6
* 82	O-Ring, Shaft, Buna N	2	N70028	16, 25
* 82	O-Ring, Shaft, EPDM	2	E70028	16, 25
* 82	O-Ring, Shaft, FKM	2	V70028	16
* 82	O-Ring, Shaft, Silicone	2	S75028	16, 25
* 83	Sleeve, SS	2	030 098 000	
* 83	Sleeve, Zirconia	2	030 098 004	
* 83	Sleeve, Chrome Oxide	2	030 098 002	
84	O-Ring Seal Carrier	2	030 034 000	7
* 85	O-Ring, Outer, Buna N - Seal Carrier	2	N50335	7, 8
* 85	O-Ring, Outer, EPDM - Seal Carrier	2	E50335	7, 8
* 85	O-Ring, Outer, FKM - Seal Carrier	2	V50335	7, 8
* 85	O-Ring, Outer, Silicone - Seal Carrier	2	S50335	7, 8
* 86	040-U1 Seal Seat, Ceramic	2	030 014 002	
* 86	040-U1 Seal Seat, Chrome Oxide	2	030 014 001	
* 86	040-U1 Seal Seat, Silicon Carbide	2	030 014 009	
* 87	Seal Inner, Carbon (2 piece)	2	030 306 001	
* 87	Seal Inner, Carbon (1 piece)	2	030 306 007	
* 87	Seal Inner, Ceramic	2	40821	
* 87	Seal Inner, Chrome Oxide	2	030 306 002	
* 87	Seal Inner, Silicon Carbide	2	030 306 009	
88	Wave Spring	2	030 304 000	
* 89	Outer Seal, Carbon (1 piece)	2	030 206 007	8
* 89	Outer Seal, Chrome Oxide	2	030 206 002	8

**NOTES:**

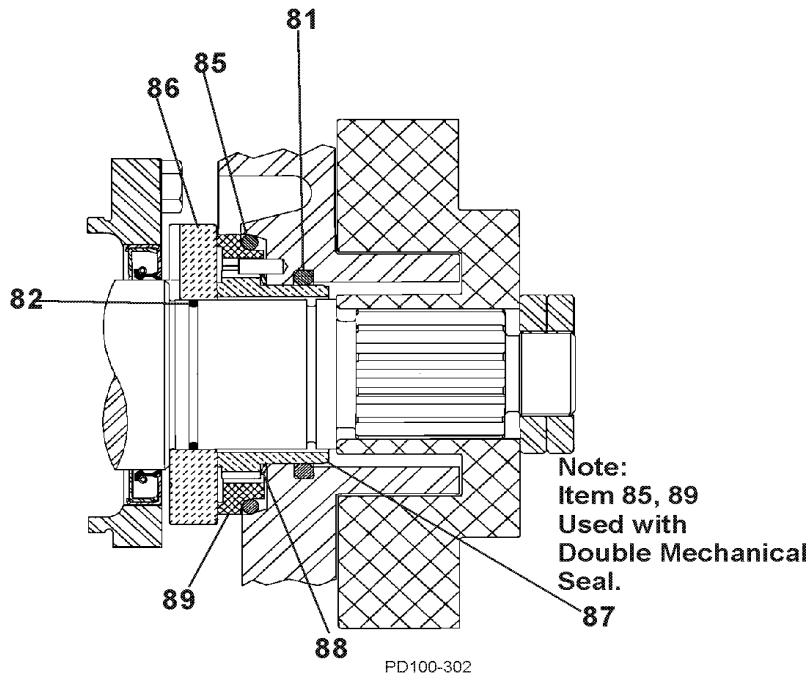
- 6. (4) needed per pump with Double O-ring Seal.
- 7. Used with Double O-Ring Seal.
- 8. Used with Double Mechanical Seal.
- 16. (4) needed per pump on 033-U1.
- 25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

# 040-U1 Seals Parts Diagram



O-Ring Seal



Mechanical Seal

**040-U1 VENTED COVER PARTS PRICE LIST**

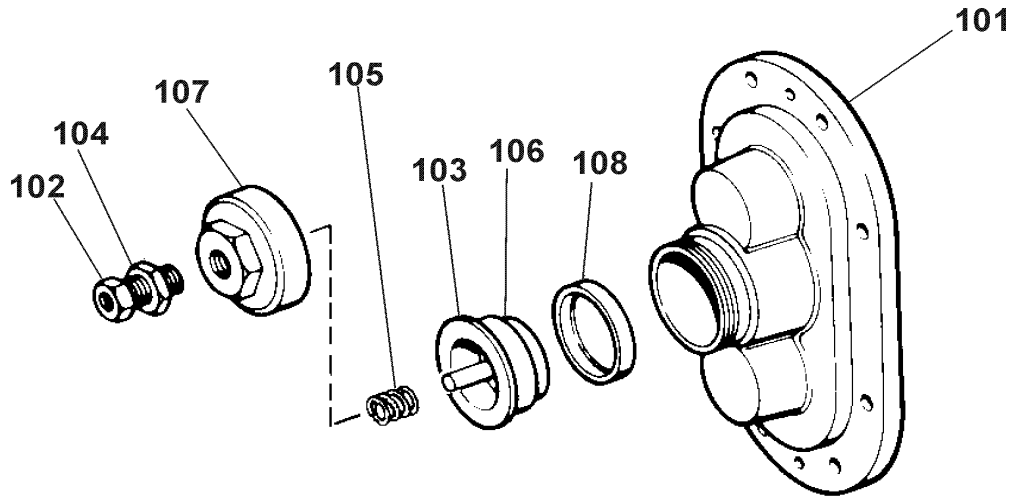
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	BD0 002 VS0	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	BD0 002 VS0	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	BD0 002 VS0	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

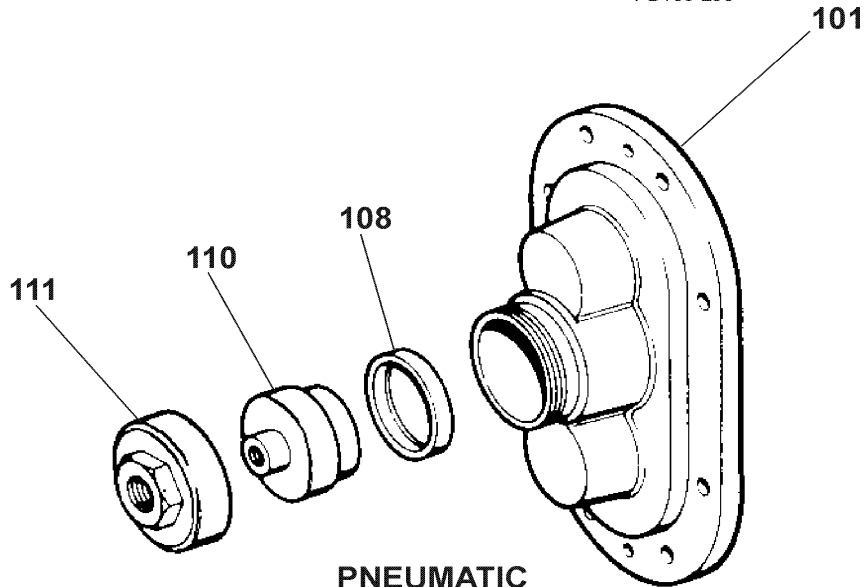
\* **Recommended Spare Parts**

### 040-U1 Vented Cover Diagram



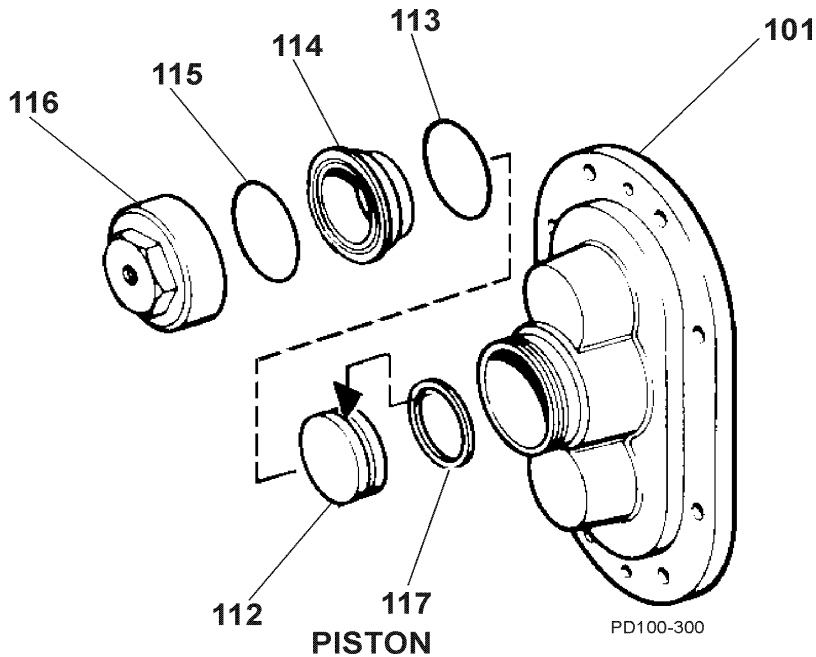
**MANUAL**

PD100-298



**PNEUMATIC**

PD100-299



**PISTON**

PD100-300

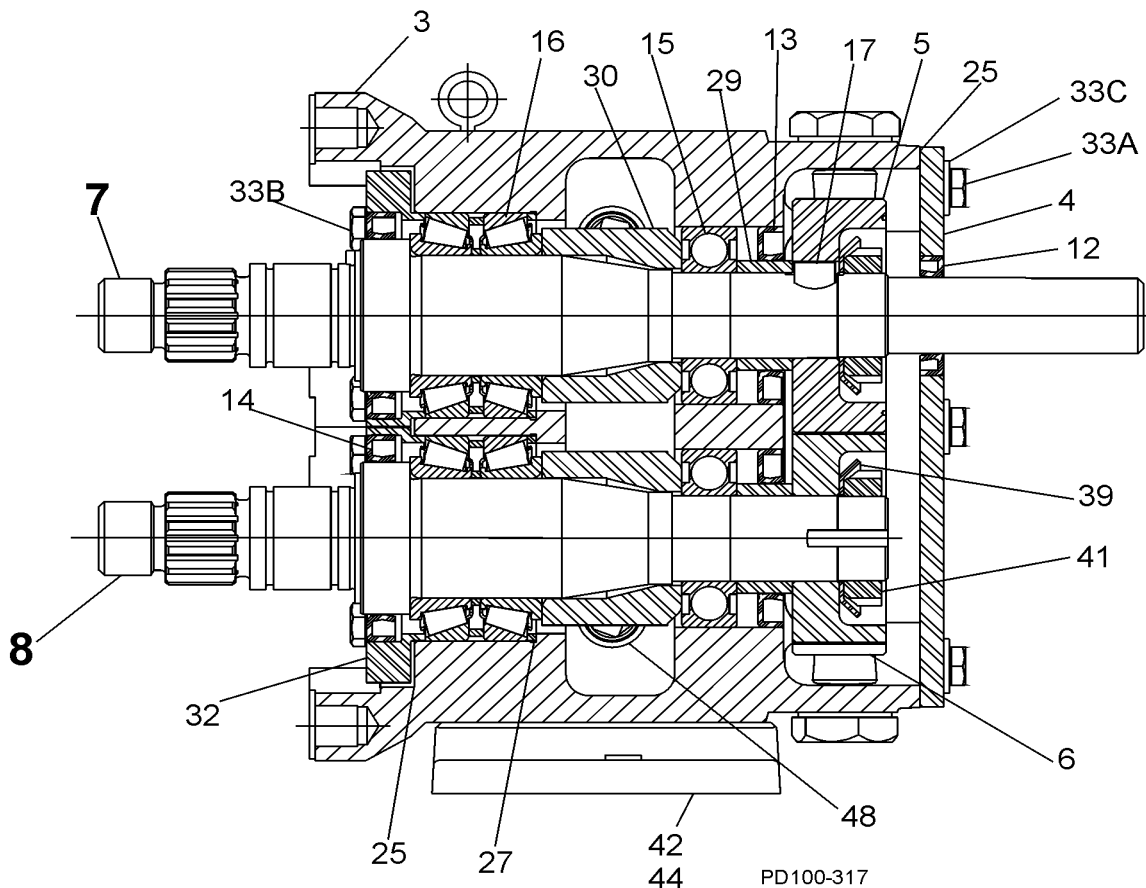
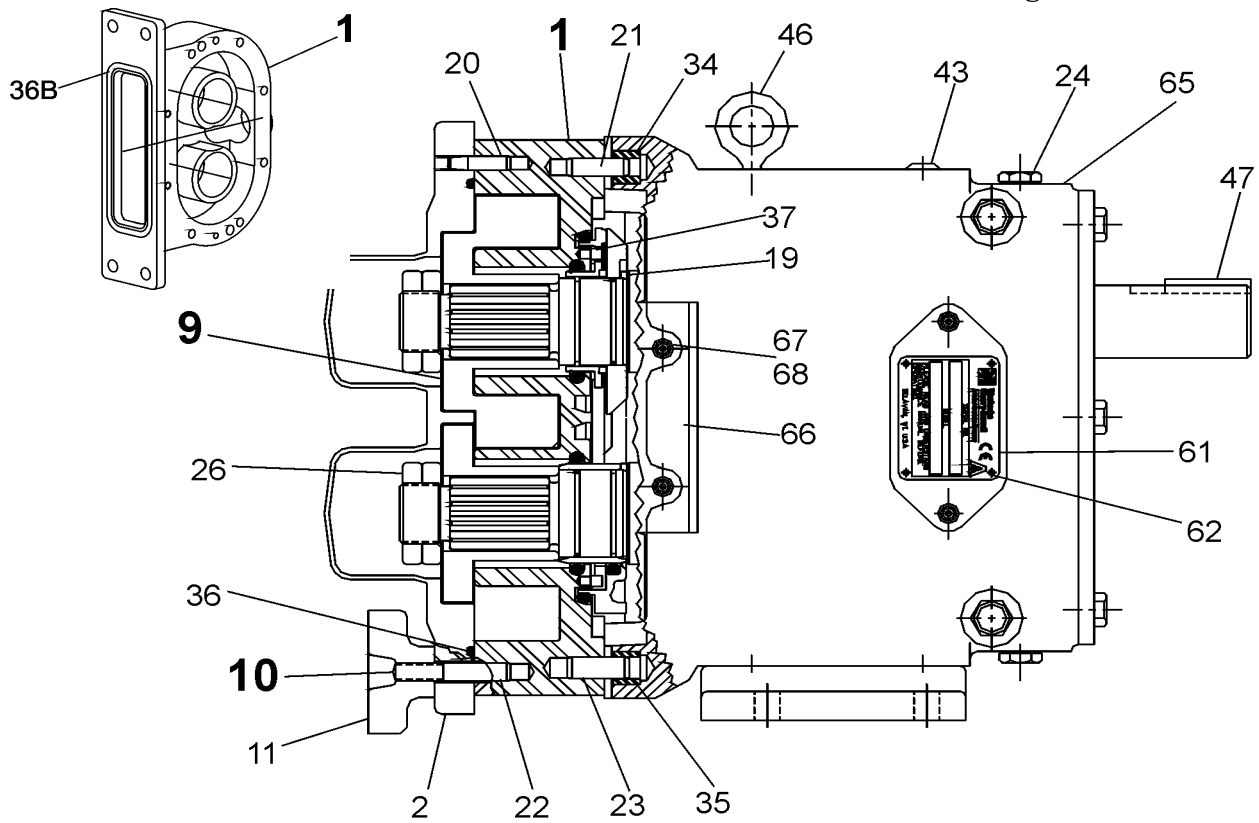
**060 - 064 - 130 - 134 - 133-U1 PUMP PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	060-U1 Pump Body	1	See Note 1	1
	060-U1 Pump Body with Flush	1	See Note 1	1
	064-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	064-U1 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	130-U1 Pump Body	1	See Note 1	1
	130-U1 Pump Body with Flush	1	See Note 1	1
	134-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	134-U1 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	133-U1 Pump Body with Flush	1	133 001 020	
7	060-064-U1 Drive Shaft	1	060 008 001	
	060-064-U1 Drive Shaft, Optional 17-4PH	1	35145	
	130-134-U1 Drive Shaft	1	130 008 001	
	130-134-U1 Drive Shaft, Optional 17-4PH	1	35394	
	133-U1 Drive Shaft	1	133 008 001	
	133-U1 Drive Shaft, Optional 17-4PH	1	34470	
8	060-064-U1 Short Shaft	1	060 009 001	
	060-064-U1 Short Shaft, Optional 17-4PH	1	35146	
	130-134-U1 Short Shaft	1	130 009 001	
	130-134-U1 Short Shaft, Optional 17-4PH	1	35392	
	133-U1 Short Shaft	1	133 009 001	
	133-U1 Short Shaft, Optional 17-4PH	1	34471	
9	060-064-U1 Rotor, Twin Wing, Alloy 88	2	060 010 000	2
	060-064-U1 Rotor, Twin Wing, 316SS	2	060 010 200	2
	060-U1 Rotor, Single Wing, Alloy 88	2	117343	2, 12, 13
	130-134-U1 Rotor, Twin Wing, Alloy 88	2	130 010 000	2
	130-134-U1 Rotor, Twin Wing, 316SS	2	130 010 200	2
	130-U1 Rotor, Single Wing, Alloy 88	2	117360	2, 12A, 13
	133-U1 Rotor, Twin Wing, Alloy 88	2	133 010 020	2
	133-U1 Rotor, Single Wing, Alloy 88	2	117377	2, 12B
<b>10A</b>	060-U1 Stud	8	108843	
<b>10B</b>	060-U1 Stud, Jacketed Cover	8	108846	
<b>10C</b>	060-U1 Stud Retainer Assembly	1	070 064 000	5
<b>10D</b>	064-U1 Stud	6	108843	
	064-U1 Stud	2	0C1 050 000	
<b>10E</b>	064-U1 Stud, Jacketed Cover	6	108846	
	064-U1 Stud, Jacketed Cover	2	35556	
<b>10F</b>	130-133-U1 Stud	8	130 011 000	
<b>10G</b>	130-U1 Stud, Jacketed Cover	8	130 011 001	
<b>10H</b>	130-133-U1 Stud Retainer Assembly	1	140 064 000	5
<b>10I</b>	134-U1 Stud	6	130 011 000	
	134-U1 Stud	2	0C1 050 000	
<b>10J</b>	134-U1 Stud, Jacketed Cover	6	130 011 001	
	134-U1 Stud, Jacketed Cover	2	35556	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
5. No longer manufactured, consult factory for upgrade of gear case subassembly.
12. Replaces 060 010 010 straight and 060 010 090 90° (degree) rotors.
- 12A. Replaces 130 010 010 straight and 130 010 090 90° (degree) rotors.
- 12B. Replaces 133 010 010 straight and 133 010 090 90° (degree) rotors.
13. Single wing rotors can not be used in Rectangular Flange Inlet pumps.

060 - 064 - 130 - 134 - 133-U1 Common Parts Diagram



PD100-317

**060 - 064 -130 - 134 - 133-U1 COMMON PARTS PRICE LIST**

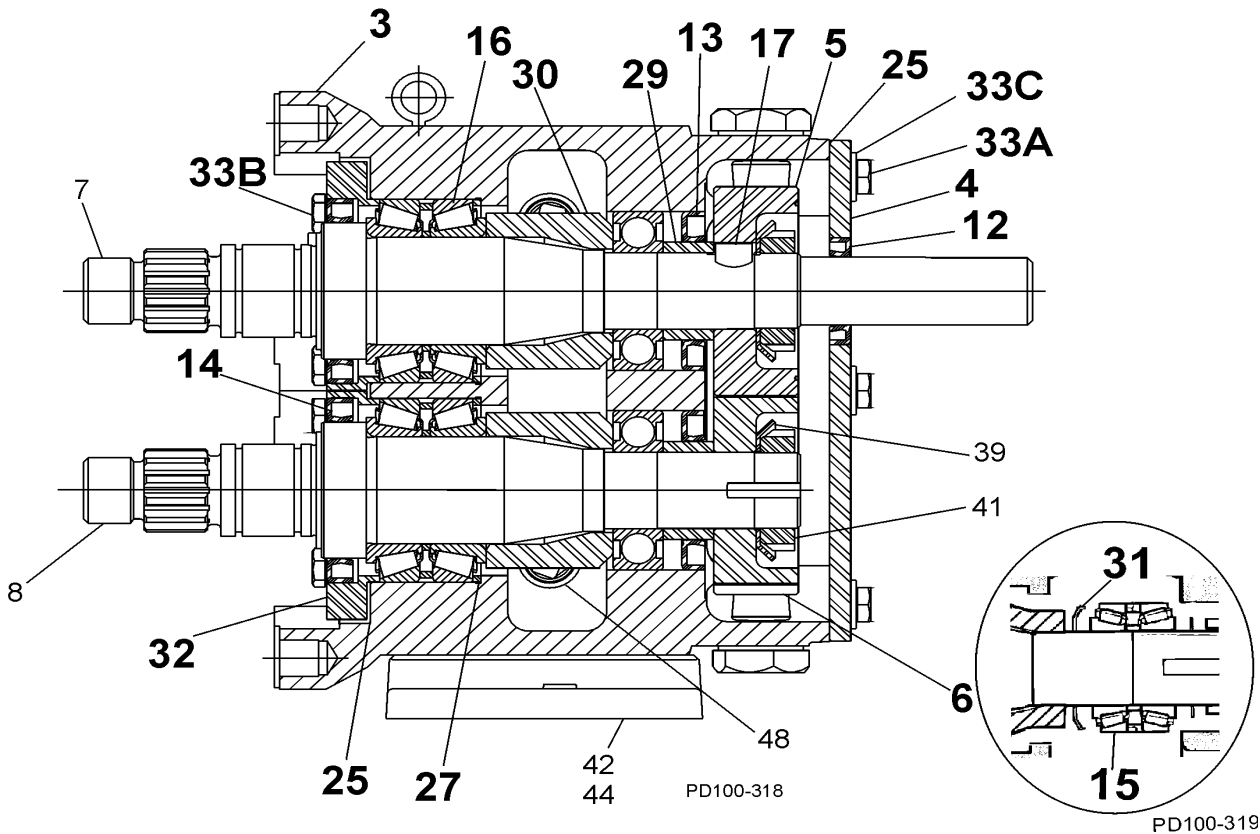
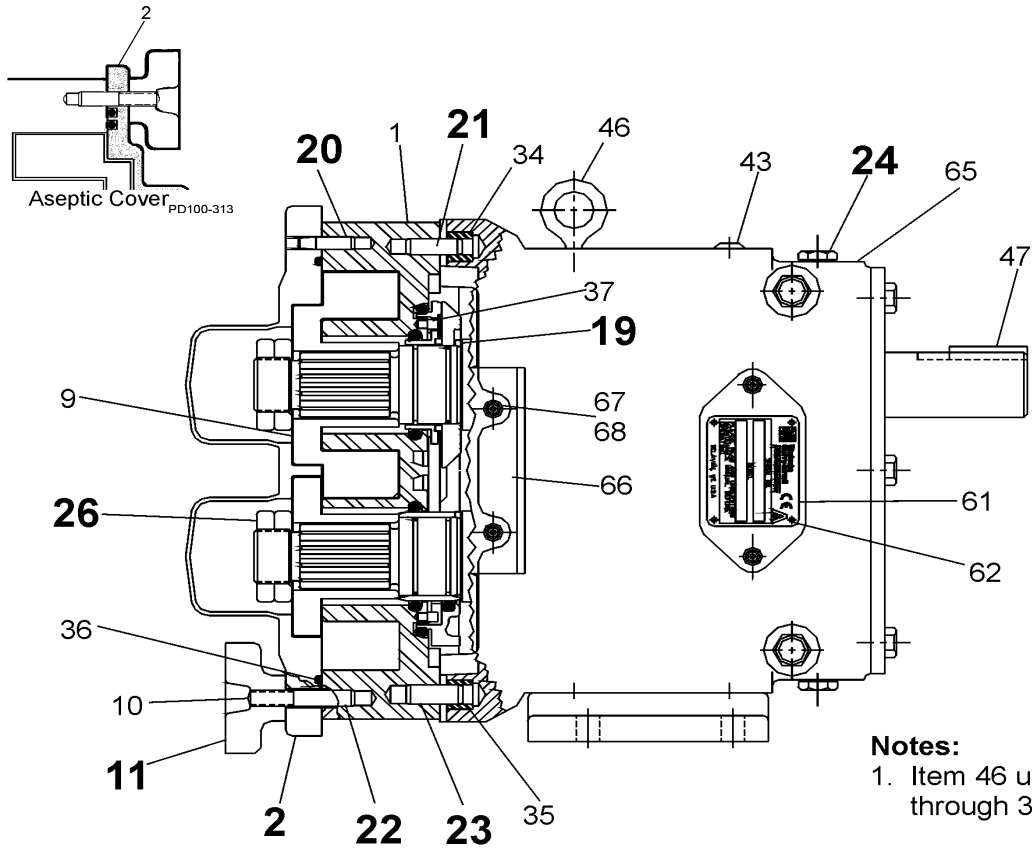
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	060-064-130-134-U1 Pump Cover	1	CD0 002 S00	
	060-064-130-134-U1 Jacketed Cover	1	CD0 002 J10	
	133-U1 Pump Cover	1	133 002 020	
	<b>Pump Cover Vented - Complete Assembly</b>			
	060-064-130-134-U1 Manual (over 150 PSI)	1	CVR00036	
	060-064-130-134-U1 Manual (under 150 PSI)	1	CVR00024	
	060-064-130-134-U1 Pneumatic	1	CVR00053	
3	060-064-130-134-U1 Piston	1	CVR00054	
	Gear Case, CI	1	070 005 000	
4	Gear Case, SS; Optional	1	101834	
	Gear Case Cover, Steel	1	070 106 000	
5	Gear Case Cover, SS; Optional	1	102282	
	Gear, Drive Shaft, Spur	1	107404	
6	Gear, Short Shaft, Spur	1	107404	
11	Wing Nut	8	105852	
	Hex Nut, Optional	8	108371	
12	Oil Seal, Gear Case Cover	1	000 030 012	
13	Oil Seal, Gear Case Rear	2	000 030 011	
14	Grease Seal, Bearing Retainer	2	000 030 009	
	Bearing Isolator Kit, Incl. STD Bearing Retainer	2	X06614-1	
	Bearing Isolator Kit, Incl. SS Bearing Retainer	2	X06614-2	
15	Bearing, Rear	2	107186	
16	Bearing, Front	2	060 036 000	
17	Key, Gear	2	060 037 000	
19	Drive Pin, Seal Seat and Sleeve	2	CD0 126 000	
20	Dowel Pin, Upper Cover Side	1	CD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	CD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	CD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	CD0 040 R10	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Jam Nut, Rotor	4	060 052 001	
27	Shim Kit	2	117891	
29	Spacer, Gear to Rear Bearing	2	107187	
30	Bearing Spacer	2	060 055 003	
31	Grease Retainer, Rear Bearing	2	STD 091 002	
32	Bearing Retainer, Front	2	060 080 000	
	Bearing Retainer, SS	2	101812	
33A	3/8-16 x .75" HHCS, STD Gear Case Cover	6	30-314	
	3/8-16 x .75" HHCS, SS Gear Case	6	30-50	
33B	3/8-16 x 1.25" HHCS, Brg. Ret., Std. Gear Case	8	30-351	
	3/8-16 x 1.25" HHCS, Brg. Ret. SS Gear Case	8	30-60	
33C	3/8" Flat Washer	6	43-189	

**NOTES:**

- 40. For pumps prior to 5/15/03
- 41. For pumps after 5/15/03



060 - 064 - 130 - 134 - 133-U1 Common Parts Diagram



**060 - 064 - 130 - 134 - 133-U1 COMMON PARTS PRICE LIST**

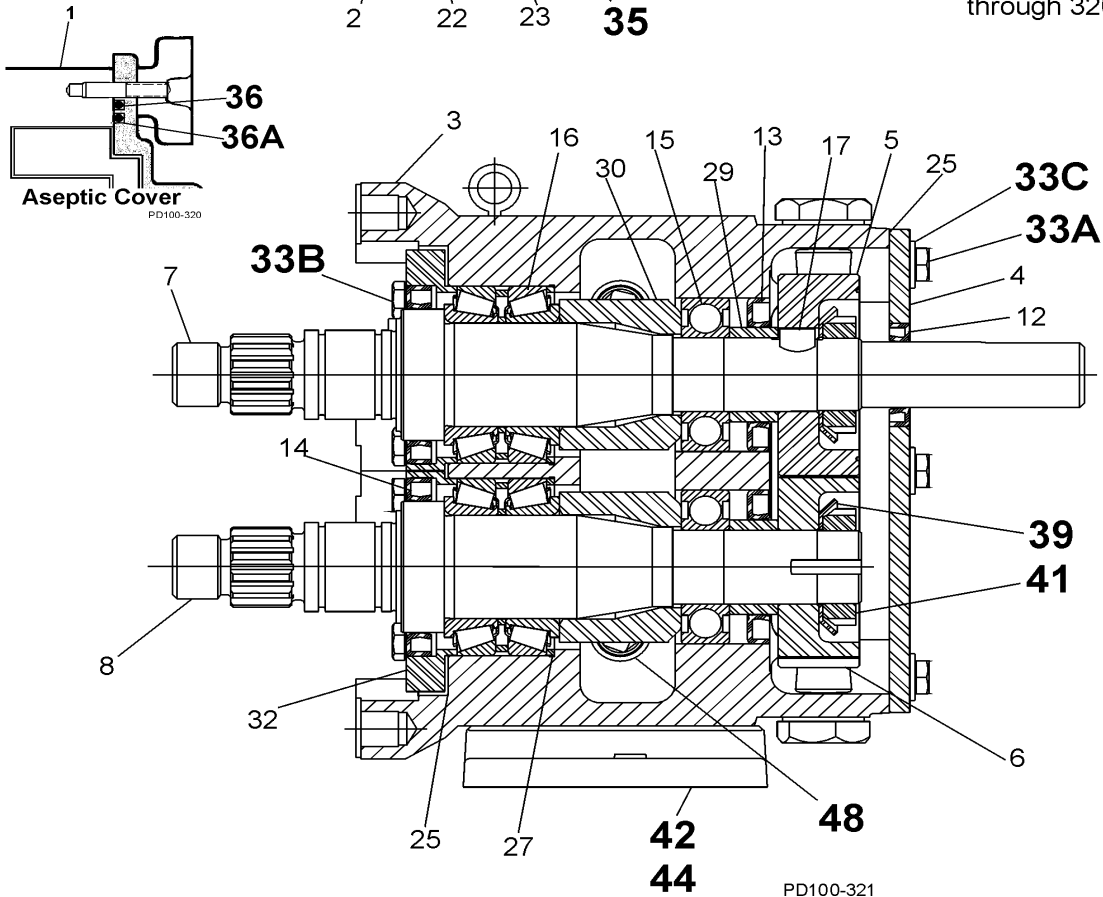
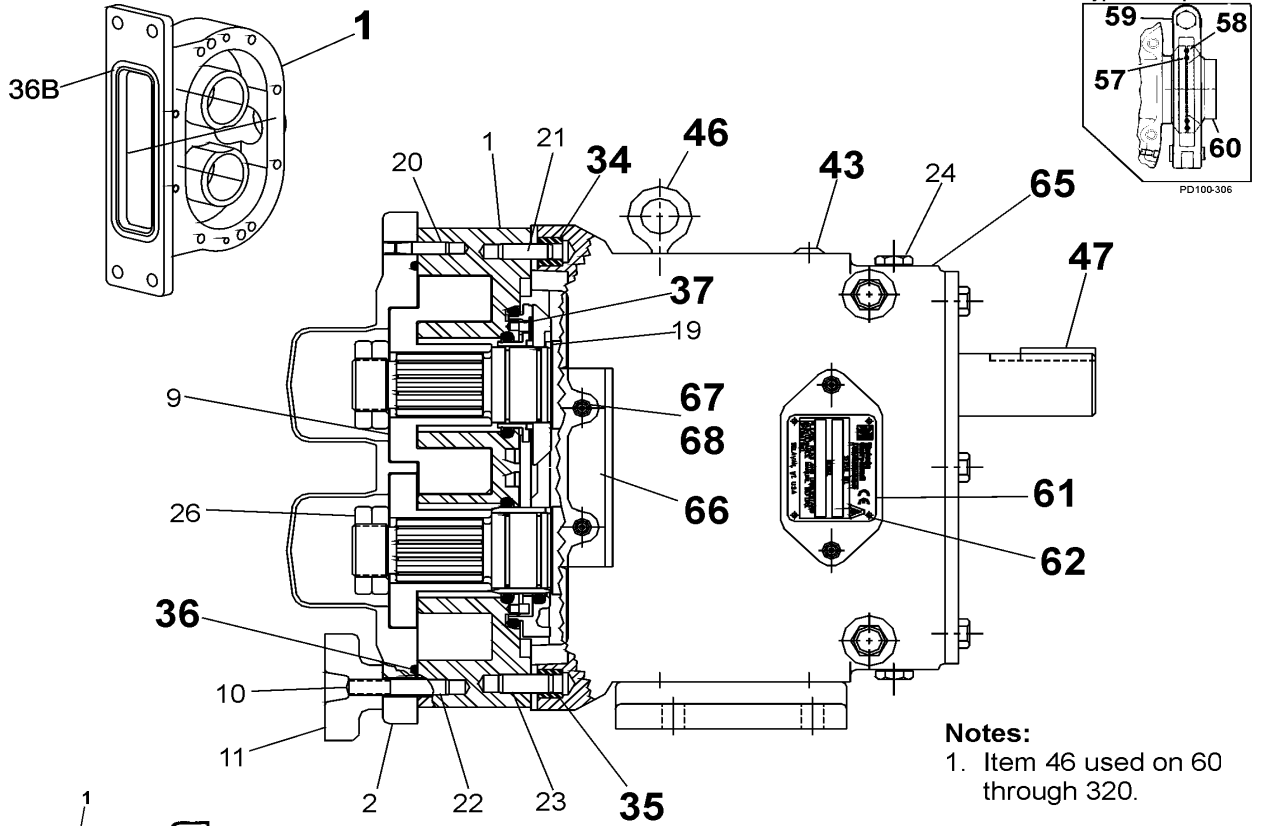
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
34	Dowel Bushing, Upper	1	CD0 116 000	
35	Dowel Bushing, Lower	1	CD0 116 100	
* 36	O-Ring, Pump Cover, Buna N	1	N70272	
* 36	O-Ring, Pump Cover, EPDM	1	E70272	
* 36	O-Ring, Pump Cover, FKM	1	V70272	
* 36	O-Ring, Pump Cover, Silicone	1	S75272	
* 36A	133-U1 O-Ring, Pump Cover, Inner, EPDM	1	133 117 002	11
* 36A	133-U1 O-Ring, Pump Cover, Inner, FKM	1	133 117 004	11
* 36A	133-U1 O-Ring, Pump Cover, Inner, Silicone	1	133 117 003	11
* 36B	064-U1 O-Ring, Rectangular Flange, Buna N	1	35360	14
* 36B	064-U1 O-Ring, Rectangular Flange, Buna N	1	N70366	14
* 36B	134-U1 O-Ring, Rectangular Flange, Buna N	1	N70272	14
* 36B	134-U1 O-Ring, Rectangular Flange, Buna N	1	N70369	14
37	Stop Pin, Seal	2	223 126 000	
39	Lockwasher, Gear	2	STD 136 009	
41	Locknut, Gear	2	STD 236 009	
42	Gear Case Shim, CI	1	070 110 000	
42	Gear Case Shim, SS; Optional	1	102286	
42	Pump Pedestal, 5.5", Optional	1	CD0 110 SM5	
42	Pump Pedestal, 10", Optional	1	CD0 110 SM1	
43	Plastic Cap Plug	8	000 121 001	
44	5/16-18 x 1" SHCS	4	30-275	
45	060-064-U1 Body Retaining Screw, Optional	2	30-319	15
45	130-133-134-U1 Body Retaining Screw, Optional	2	30-423	15
46	Eye Bolt	2	30-360	
47	Key, Coupling - 3/8 x 3/8 x 1-5/8"	1	000 037 003	
48	Cleanout Plug	2	41013	
* 57	133-U1 O-Ring, Port, Inner, Silicone	2	S75041	11
* 57	133-U1 O-Ring, Port, Inner, EPDM	2	E70041	11
* 58	133-U1 O-Ring, Port, Outer, Silicone	2	S75043	11
* 58	133-U1 O-Ring, Port, Outer, EPDM	2	E70043	11
* 59	133-U1 3" 131 "I" Line Clamp	2	0345223	11
* 60	133-U1 Aseptic Ferrule, 3"	2	133 267 000	11
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
63	O-Ring Removal Tool	1	AD0 096 001	
64	Rotor Nut Wrench, SS	1	109897	
64	060-064-130-134-U1 Wrench, Jacketed Cover	1	060 019 001	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	060, 130, 133-U1 Grease Fitting, 1/8"	4	BD0 092 000	
67	064-134-U1 Grease Fitting, 1/8"	4	BD0 092 100	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

- 11. Used on 133-U1 only.
- 14. New O-Rings N70366 (064) and N70369 (134) introduced in 2001. Fits close to inlet opening.
- 15. New standard for Rectangular Flange Inlet pumps. Optional for standard inlet pumps.  
Body must be drilled at Factory to use.

**\* Recommended Spare Parts**

# 060 - 064 - 130 - 134 - 133-U1 Common Parts Diagram



**060 - 064 - 130 - 134 - 133-U1 SEAL PARTS PRICE LIST**

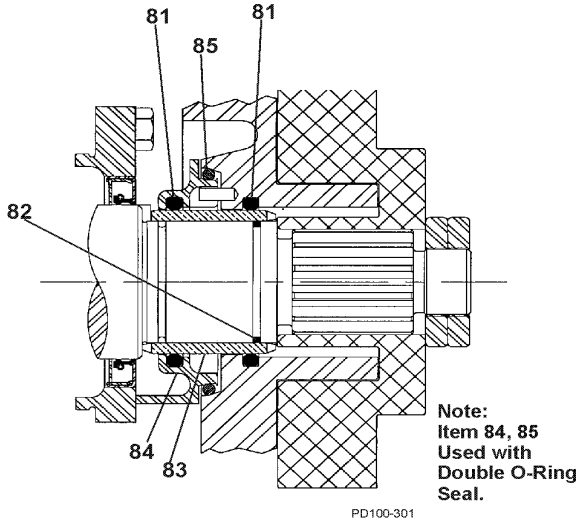
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECHANICAL SEAL PARTS</b>				
* 81	O-Ring, Body, Buna N	2	N70331	6, 25
* 81	O-Ring, Body, EPDM	2	E70331	6
* 81	O-Ring, Body, FKM	2	V70331	6
* 81	O-Ring, Body, Silicone	2	S75331	6
* 82	O-Ring, Shaft, Buna N	2	N70131	16, 25
* 82	O-Ring, Shaft, EPDM	2	E70131	16, 25
* 82	O-Ring, Shaft, FKM	2	V70131	16
* 82	O-Ring, Shaft, Silicone	2	S75131	16
* 83	Sleeve, SS	2	060 098 000	
* 83	Sleeve, Zirconia	2	060 098 004	
* 83	Sleeve, Chrome Oxide	2	060 098 002	
84	O-Ring Seal Carrier	2	060 034 000	7
* 85	O-Ring, Outer, Buna N - Seal Carrier	2	N50338	7, 8
* 85	O-Ring, Outer, EPDM - Seal Carrier	2	E50338	7, 8
* 85	O-Ring, Outer, FKM - Seal Carrier	2	V50338	7, 8
* 86	060-064-130-134-U1 Seal Seat, Ceramic	2	060 014 002	
* 86	060-064-130-134-U1 Seal Seat, Chrome Oxide	2	060 014 001	
* 86	060-064-130-134-U1 Seal Seat, Silicon Carbide	2	060 014 009	
* 86	133-U1 Seal Seat, Ceramic	2	133 014 002	11
* 86	133-U1 Seal Seat, Chrome Oxide	2	133 014 001	11
* 86	133-U1 Seal Seat, Silicon Carbide	2	133 014 009	11
* 87	Seal Inner, Carbon (2 Piece)	2	060 306 001	
* 87	Seal Inner, Carbon (1 Piece)	2	060 306 007	
* 87	Seal Inner, Ceramic	2	40642	
* 87	Seal Inner, Chrome Oxide	2	060 306 002	
* 87	Seal Inner, Silicon Carbide	2	060 306 009	
88	Wave Spring	2	060 304 000	
* 89	Outer Seal, Carbon (1 Piece)	2	060 206 007	8
* 89	Outer Seal, Chrome Oxide	2	060 206 002	8

**NOTES:**

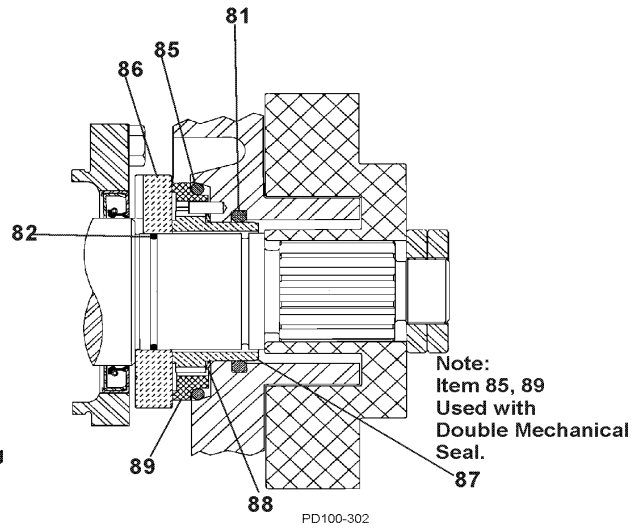
- 6. (4) needed per pump with double O-ring Seal.
- 7. Used with double O-Ring Seal.
- 8. Used with double Mechanical Seal.
- 11. Used on 133-U1 only.
- 16. (4) needed per pump on 133-U1.
- 25. Sold in packages of 25 only.

**\* Recommended Spare Parts**

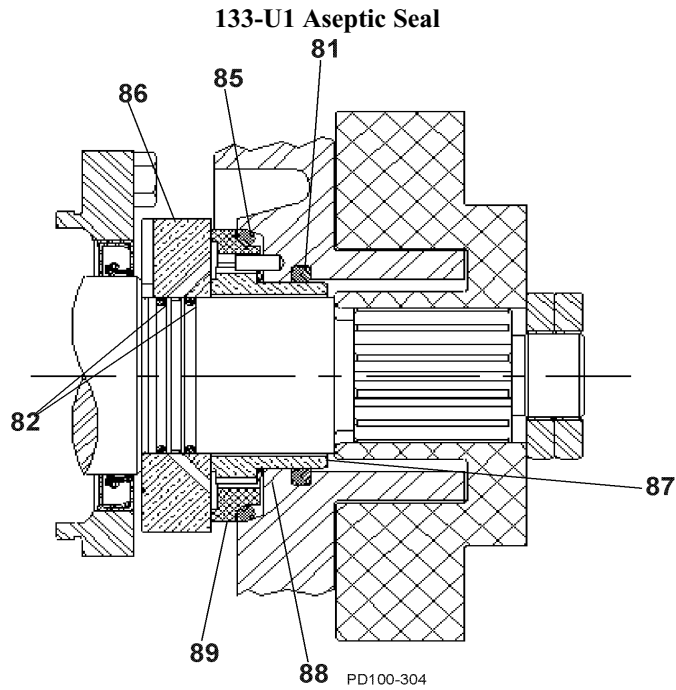
060 - 064 - 130 - 134-U1 Seals Parts Diagram



O-Ring Seal



Mechanical Seal



**060 - 064 - 130 - 134-U1 VENTED COVER PRICE LIST**

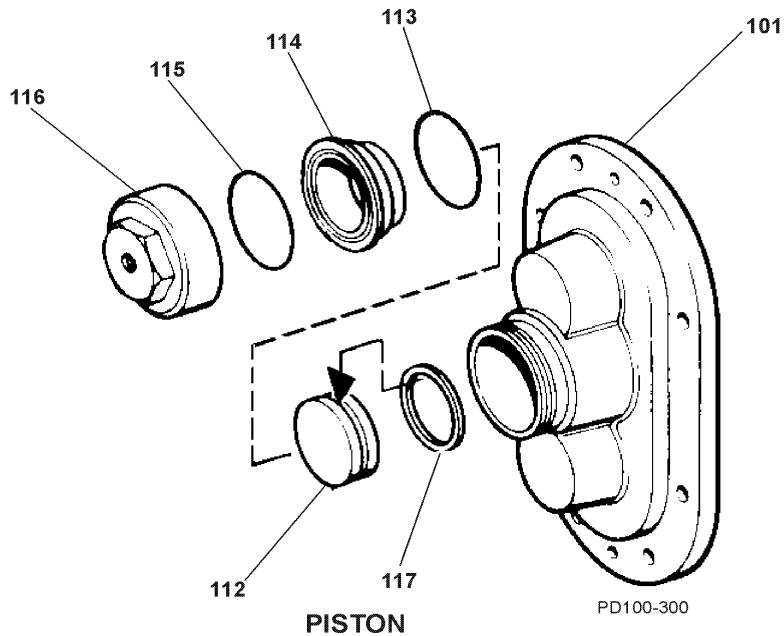
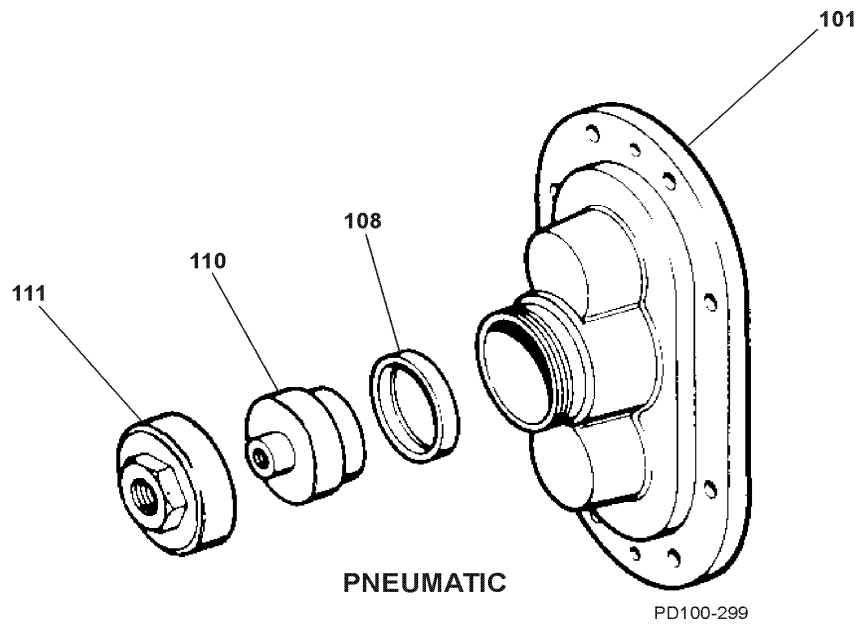
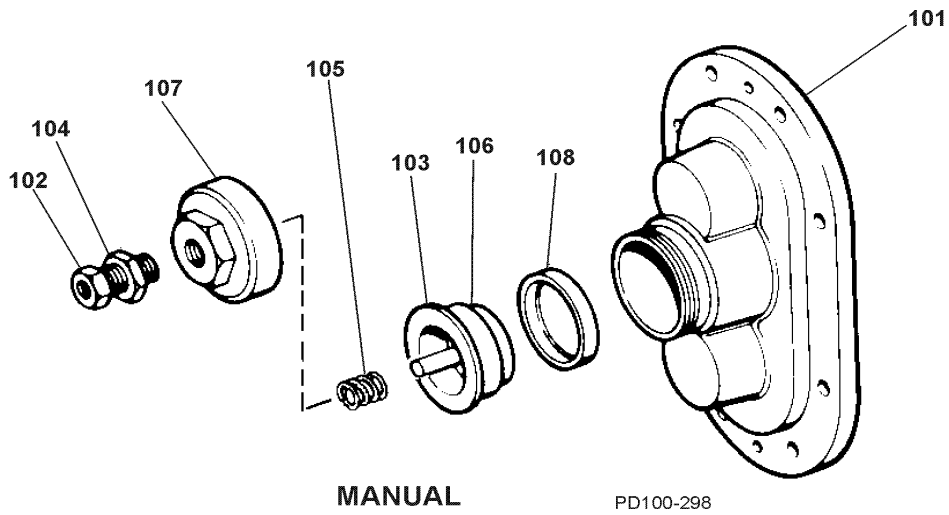
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	CD0 002 VS0	
102	Adjusting Screw	1	113657	
103	Spring Plunger	1	113397	
104	Locknut	1	GD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	113523	
	Spring, High (more than 150 PSI)	1	113400	
106	Diaphragm Bushing	1	CD0 077 000	
107	Cover Nut	1	113398	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	CD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	CD0 002 VS0	
* 108	<b>Diaphragm, Buna N</b>	1	CD0 078 000	
110	Diaphragm Bushing	1	CD0 077 P00	
111	Cover Nut	1	CD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	CD0 002 VS0	
112	Piston	1	CD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70239	
114	Diaphragm Bushing	1	CD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70240	
116	Cover Nut	1	CD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	CD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70236	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

060 - 064 - 130 - 134-U1 Vented Cover Diagram (Not Used on 133-U1 Pump)



## 220 - 224 - 223-U1 PUMP PARTS PRICE LIST

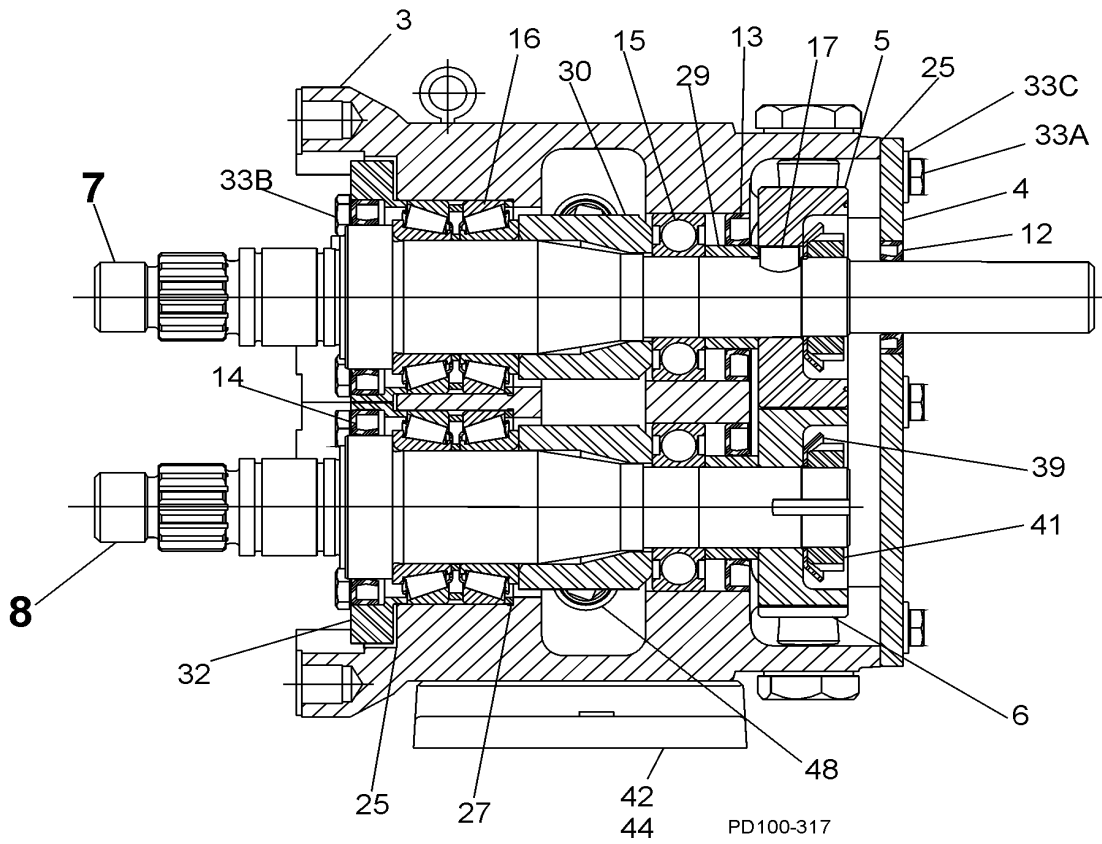
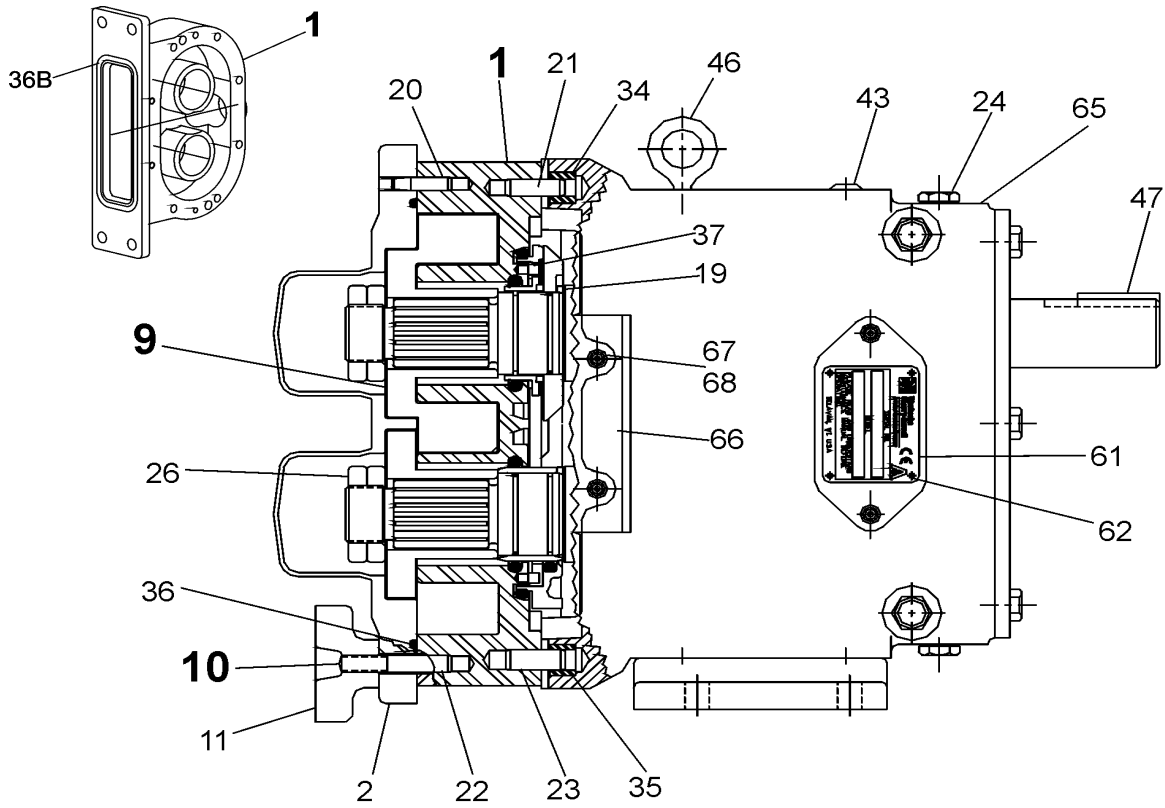
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	220-U1 Pump Body	1	See Note 1	1
	220-U1 Pump Body with Flush	1	See Note 1	1
	224-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	224-U1 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	223-U1 Pump Body	1	223 001 020	
7	220-224-U1 Drive Shaft, Std.	1	220 008 001	
	220-224-U1 Drive Shaft, Optional 17-4PH	1	35349	
	223-U1 Drive Shaft	1	223 008 001	
	223-U1 Drive Shaft, Optional 17-4PH	1	35726	
8	220-224-U1 Short Shaft, Std.	1	220 009 001	
	220-224-U1 Short Shaft, Optional 17-4PH	1	35350	
	223-U1 Short Shaft	1	223 009 001	
	223-U1 Short Shaft, Optional 17-4PH	1	35727	
9	220-224-U1 Rotor, Twin Wing, Alloy 88	2	220 010 000	2
	220-224-U1 Rotor, Twin Wing, 316SS	2	220 010 200	2
	220-224-U1 Rotor, Single Wing, Alloy 88	2	117391	2, 12, 13
	223-U1 Rotor, Twin Wing, Alloy 88	2	223 010 020	2
10A	220-U1 Stud	8	108844	
10B	220-U1 Stud, Jacketed Cover	8	108847	
10C	224-U1 Stud	6	108844	
	224-U1 Stud	2	35550	
10D	224-U1 Stud, Jacketed Cover	6	108847	
	224-U1 Stud, Jacketed Cover	2	36144	
	Stud Retainer Assembly	1	230 064 000	5

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearance and finish Part Number shown. Contact Factory for optional clearances and finishes.
5. No longer manufactured, consult factory for upgrade of gear case subassembly.
12. Replaces 220 010 010 straight and 220 010 090 90° (degree) rotors.
13. Single wing rotors can **not** be used in Rectangular Flange Inlet pumps.



220 - 224 - 223-U1 Common Parts Diagram



PD100-317

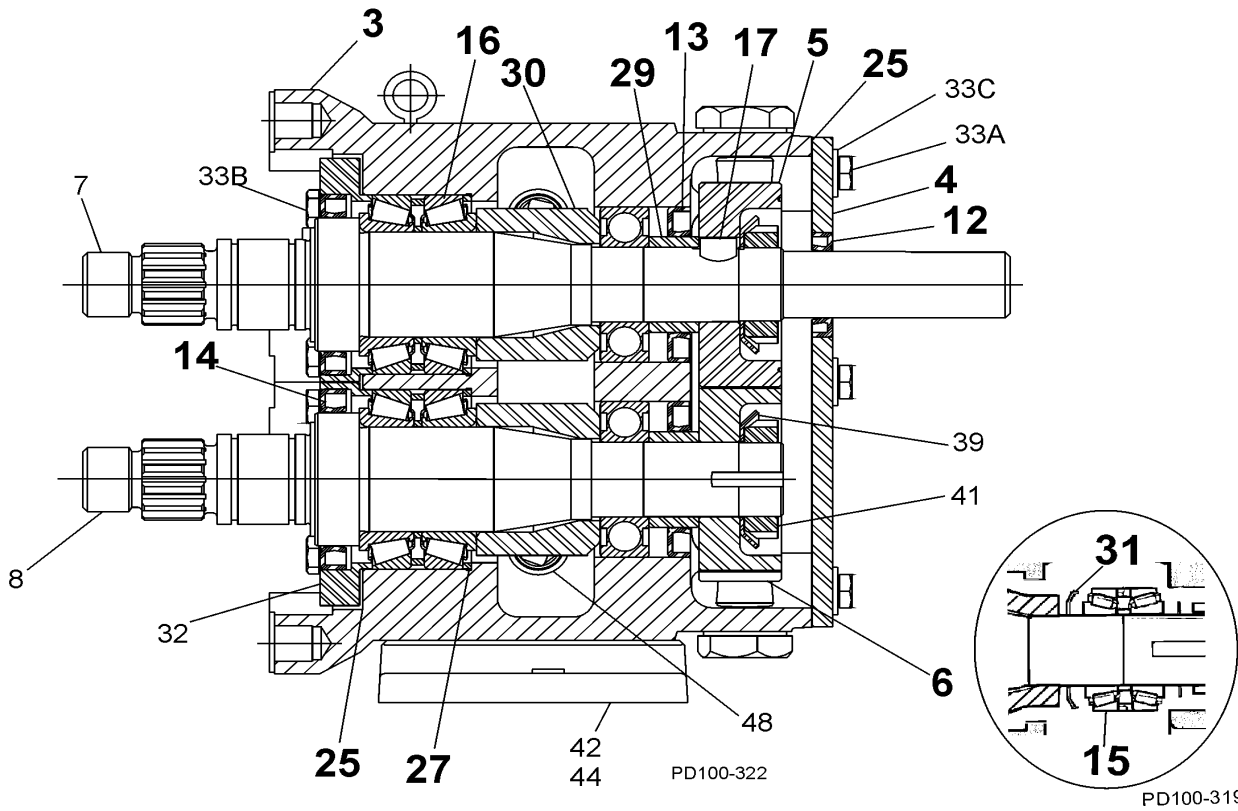
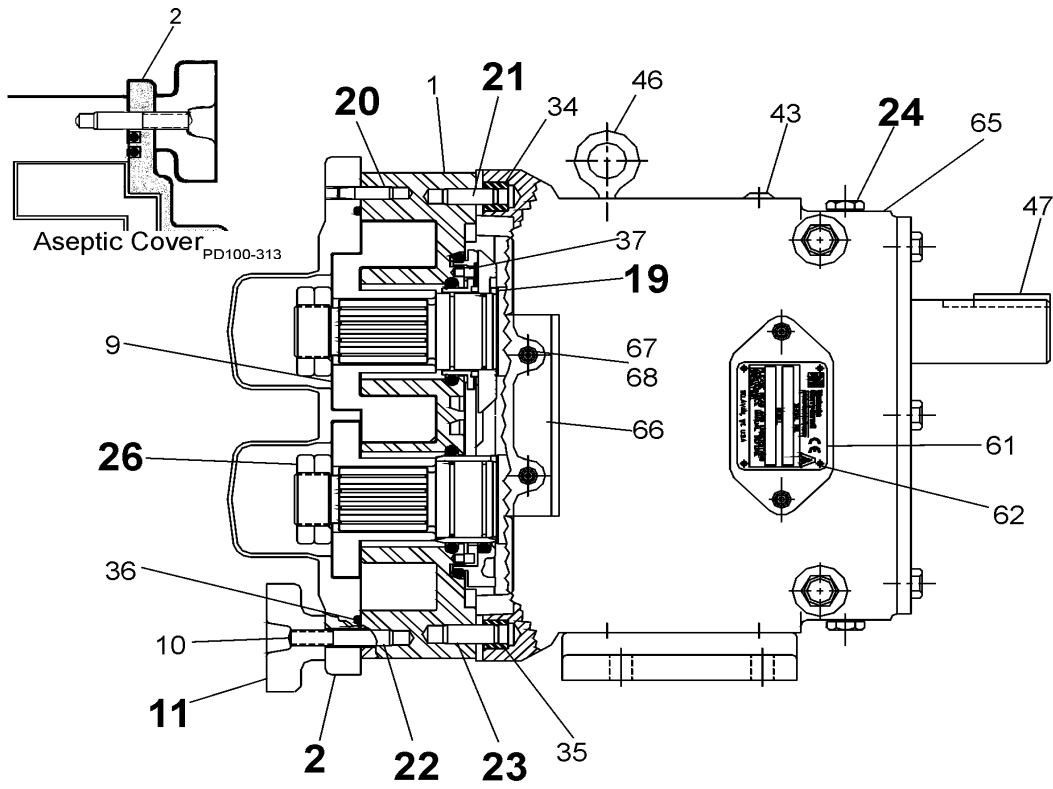
**220 - 224 - 223-U1 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	220-224-U1 Pump Cover	1	GD0 002 S00	
	220-224-U1 Jacketed Cover	1	GD0 002 J10	
	223-U1 Pump Cover	1	223 002 020	
	<b>Pump Cover Vented - Complete Assembly</b>			
	220-224-U1 Manual (over 150 PSI)	1	CVR00106	
	220-224-U1 Manual (under 150 PSI)	1	CVR00009	
	220-224-U1 Piston	1	CVR00008	
3	Gear Case, CI	1	230 005 000	
	Gear Case, SS; Optional	1	101836	
4	Gear Case Cover, Steel	1	230 106 000	
	Gear Case Cover, SS; Optional	1	102283	
5	Gear, Drive Shaft, Spur	1	110932	
6	Gear, Short Shaft, Spur	1	110932	
11	Wing Nut	8	105853	
	Hex Nut, optional	8	108372	
12	Oil Seal, Gear Case Cover	1	STD 030 006	
13	Oil Seal, Gear Case Rear	2	STD 119 002	
14	Grease Seal, Bearing Retainer	2	STD 030 002	
	Bearing Isolator, includes STD. Bearing Retainer	2	X06634-1	
	Bearing Isolator, includes SS Bearing Retainer	2	X06634-2	
15	Bearing, Rear	2	200 035 000	
16	Bearing, Front	2	200 036 000	
17	Key, Gear	2	200 037 000	
19	Drive Pin, Seal Seat and Sleeve	2	CD0 126 000	
20	Dowel Pin, Upper Cover Side	1	GD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	CD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	GD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	CD0 040 R10	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Jam Nut, Rotor	4	GD0 052 001	
27	Shim Kit	2	117892	
29	Spacer, Gear to Rear Bearing	2	40878	
30	Bearing Spacer	2	40752	

**NOTES:**

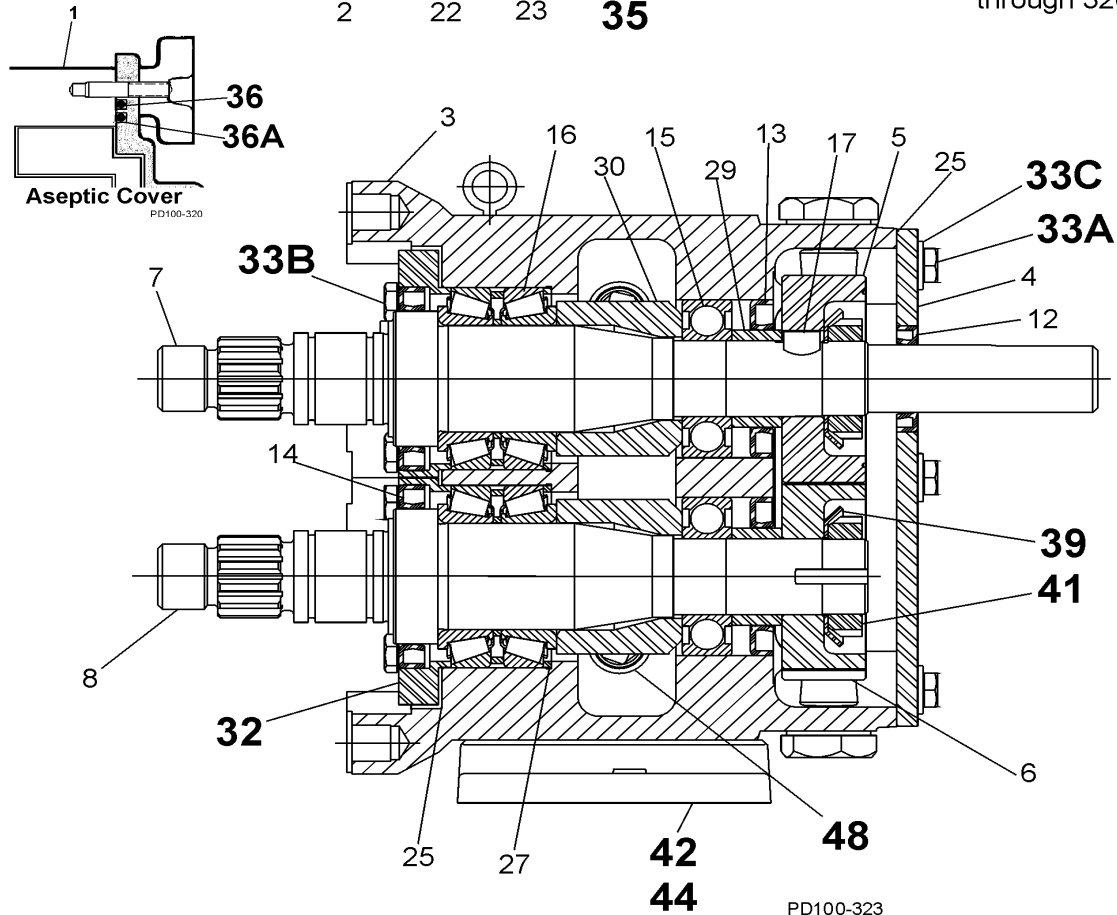
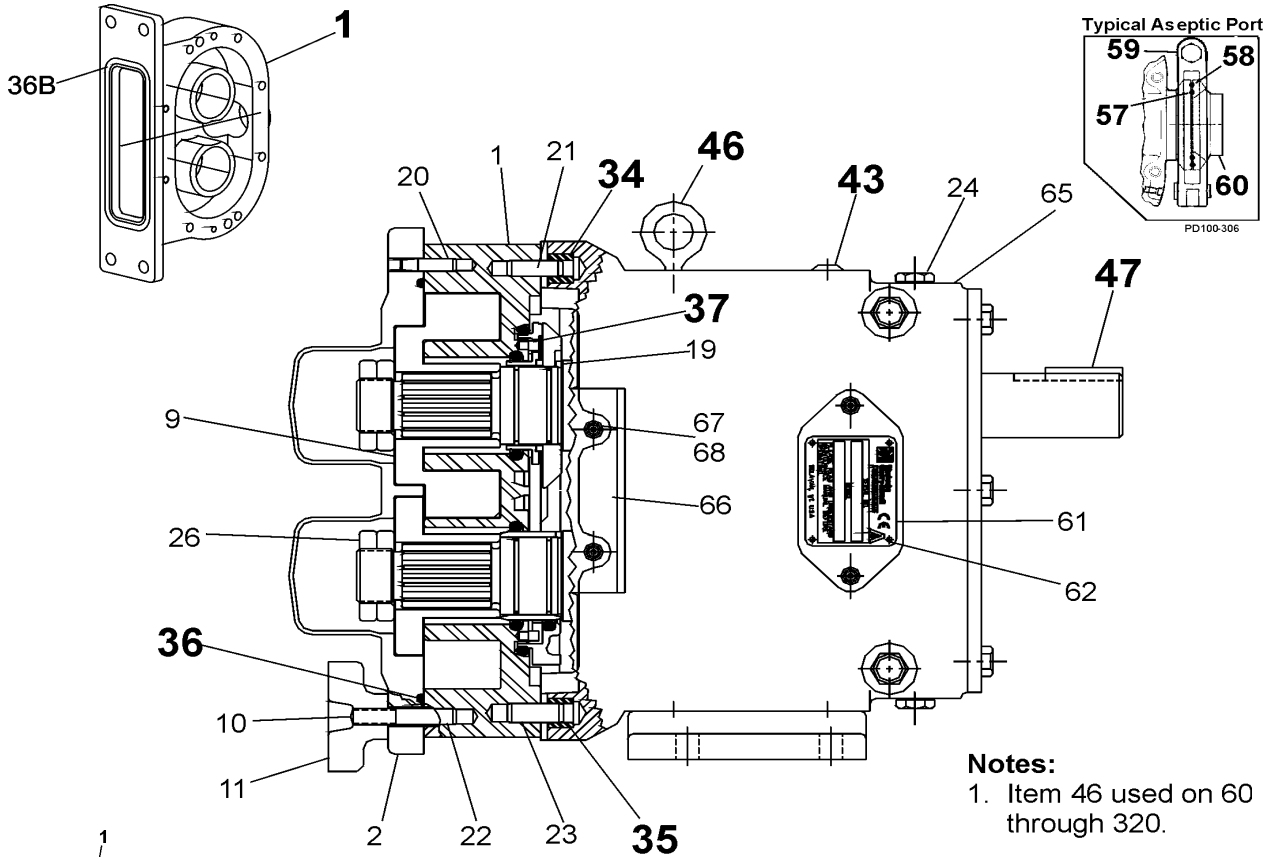
- 40. Pumps shipped prior to 5/15/03
- 41. Pumps shipped after 5/15/03

220 - 224 - 223-U1 Common Parts Diagram





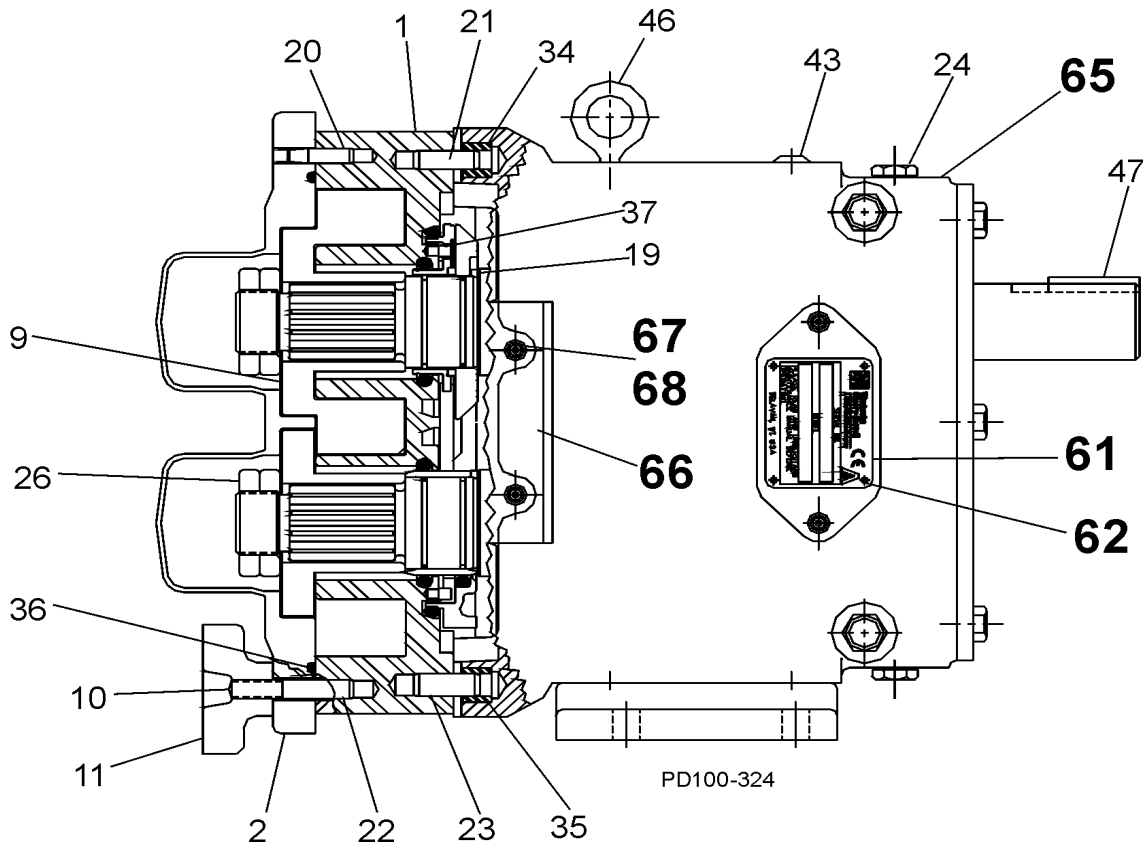
# 220 - 224 - 223-U1 Common Parts Diagram



**220 - 224 - 223-U1 COMMON PARTS PRICE LIST**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY. PER PUMP</b>	<b>PART NO.</b>	<b>NOTES</b>
<b>61</b>	Name Plate, Sanitary	1	001 061 002	
<b>62</b>	#2 x .125" RHDS	4	30-355	
<b>63</b>	O-ring Removal Tool	1	AD0 096 001	
<b>64</b>	Rotor Nut Wrench, SS	1	109898	
	220-224-U1 Wrench, Jacketed Cover	1	AD0 019 001	
<b>65</b>	Caution Plate	2	33-62	
<b>66</b>	Warning Label	2	33-60	
<b>67</b>	220-223-U1 Grease Fitting, 1/8"	4	BD0 092 000	
	224-U1 Grease Fitting, 1/8"	4	BD0 092 100	
<b>68</b>	Plastic Cap, Grease Fitting	4	BD0 093 000	

# 220 - 224 - 223-U1 Common Parts Diagram



**220 - 224 - 223-U1 SEAL PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECHANICAL SEAL PARTS</b>				
* 81	O-Ring, Body, Buna N	2	N70338	6, 25
* 81	O-Ring, Body, EPDM	2	E70338	6
* 81	O-Ring, Body, FKM	2	V70338	6
* 81	O-Ring, Body, Silicone	2	S75338	6
* 82	O-Ring, Shaft, Buna N	2	N70144	16, 25
* 82	O-Ring, Shaft, EPDM	2	E70144	16
* 82	O-Ring, Shaft, FKM	2	V70144	16
* 82	O-Ring, Shaft, Silicone	2	S75144	16
* 83	Sleeve, SS	2	220 098 000	
* 83	Sleeve, Zirconia	2	220 098 004	
* 83	Sleeve, Chrome Oxide	2	220 098 002	
* 84	O-Ring Seal Carrier	2	220 034 000	7
* 85	O-Ring, Outer, Buna N - Seal Carrier	2	N50344	7, 8
* 85	O-Ring, Outer, EPDM - Seal Carrier	2	E50344	7, 8
* 85	O-Ring, Outer, FKM - Seal Carrier	2	V50344	7, 8
* 85	O-Ring, Outer, Silicone - Seal Carrier	2	S50344	7, 8
* 86	220-224-U1 Seal Seat, Ceramic	2	220 014 002	
* 86	220-224-U1 Seal Seat, Chrome Oxide	2	220 014 001	
* 86	220-224-U1 Seal Seat, Silicon Carbide	2	220 014 009	
* 86	223-U1 Seal Seat, Ceramic	2	223 014 002	11
* 86	223-U1 Seal Seat, Chrome Oxide	2	223 014 001	11
* 86	223-U1 Seal Seat, Silicon Carbide	2	223 014 009	11
* 87	Seal Inner, Carbon (2 piece)	2	220 306 001	
* 87	Seal Inner, Carbon (1 piece)	2	220 306 007	
* 87	Seal Inner, Ceramic	2	40830	
* 87	Seal Inner, Chrome Oxide	2	220 306 002	
* 87	Seal Inner, Silicon Carbide	2	220 306 009	
* 88	Wave Spring	2	220 304 000	
* 89	Outer Seal, Carbon (1 piece)	2	220 206 007	8
* 89	Outer Seal, Chrome Oxide	2	220 206 002	8

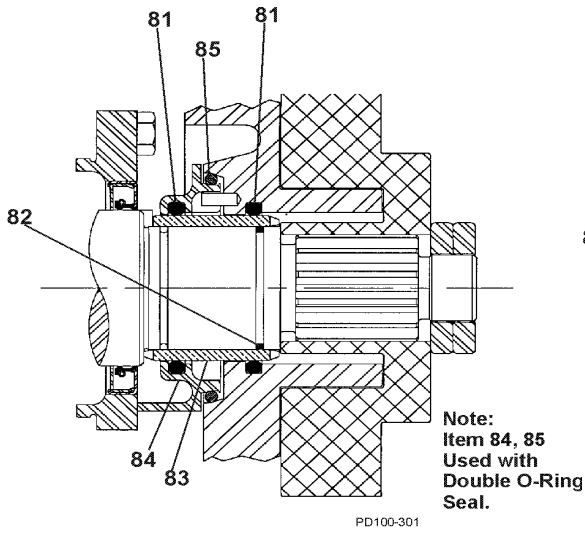
**NOTES:**

- 6. (4) needed per pump with double O-ring Seal.
- 7. Used with double O-Ring Seal.
- 8. Used with double Mechanical Seal.
- 11. Used on 223-U1 only.
- 16. (4) needed on pump on 223-U1.
- 25. Sold in packages of 25 only.

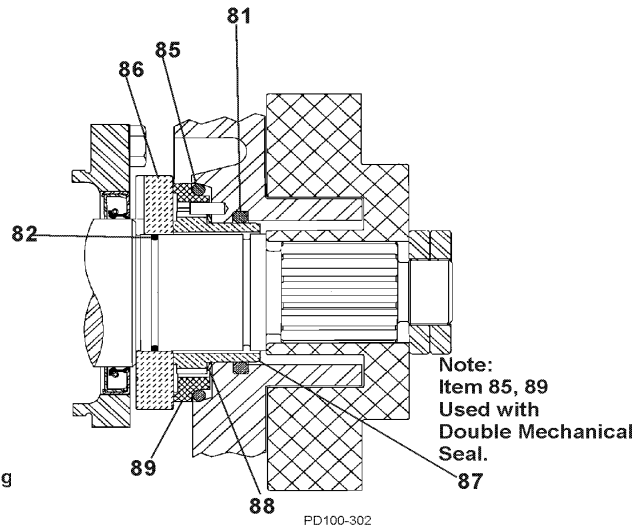
\* **Recommended Spare Parts**



## 220 - 224-U1 Seals Parts Diagram

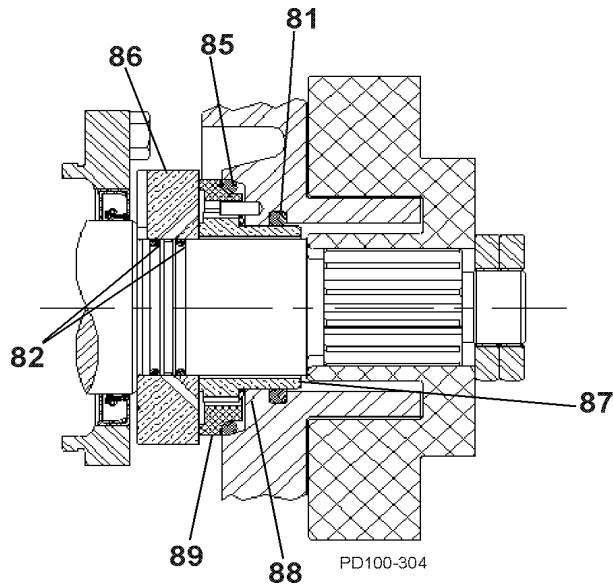


**O-Ring Seal**



**Mechanical Seal**

### 223-U1 Aseptic Seal



**220 - 224-U1 VENTED COVER PARTS PRICE LIST**

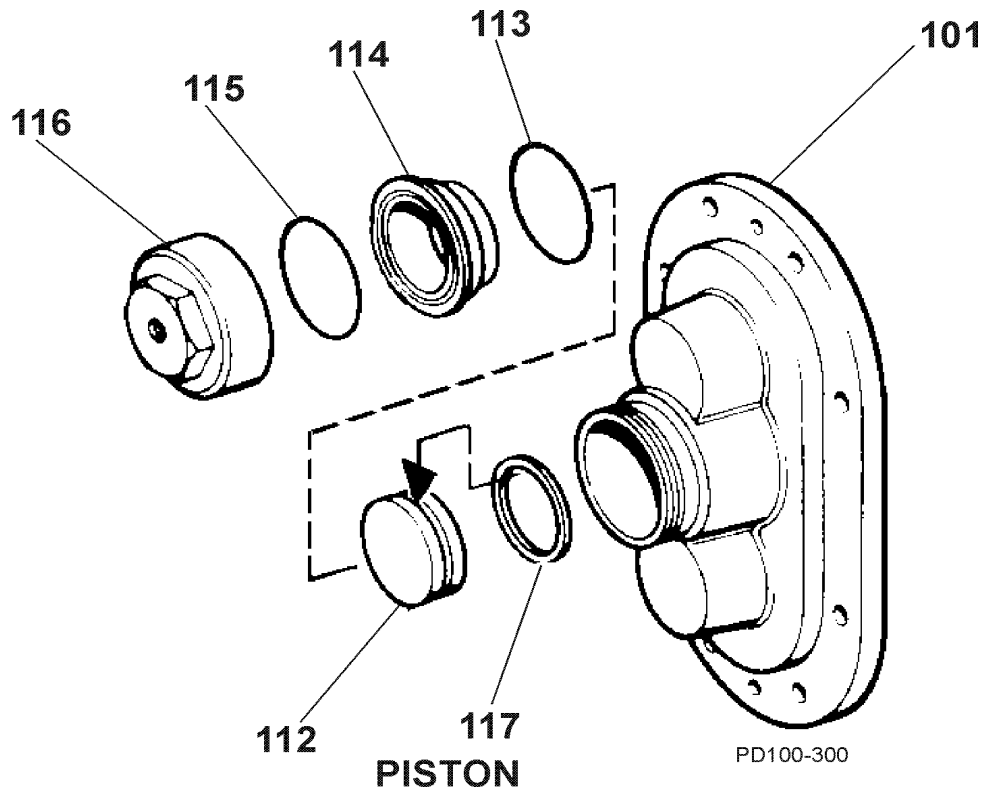
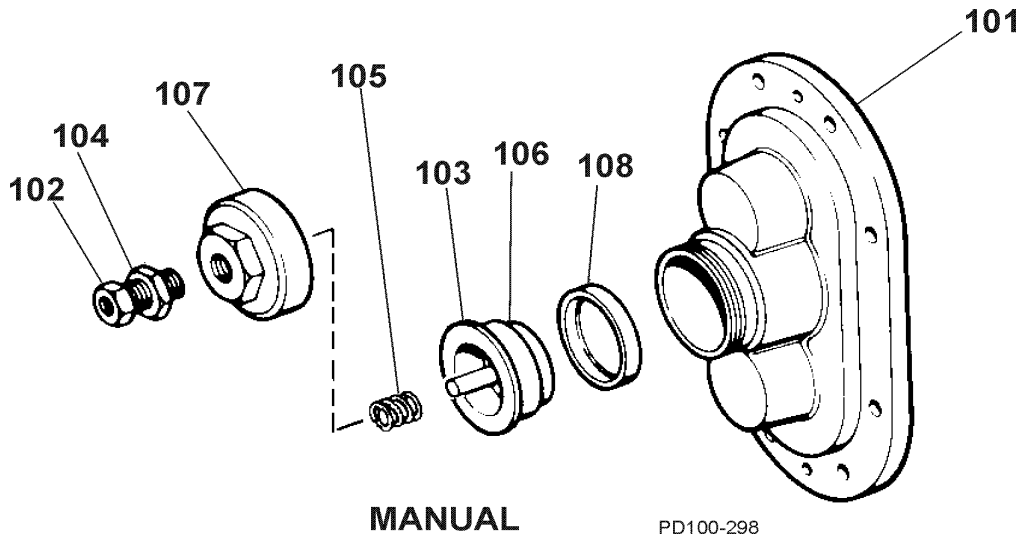
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	GD0 002 VS0	
102	Adjusting Screw	1	GD0 072 100	
103	Spring Plunger	1	GD0 073 000	
104	Locknut	1	GD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	113400	
	Spring, High (more than 150 PSI)	1	113524	
106	Diaphragm Bushing	1	GD0 077 000	
107	Cover Nut	1	GD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	GD0 078 000	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	GD0 002 VS0	
112	Piston	1	GD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70261	
114	Diaphragm Bushing	1	GD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70261	
116	Cover Nut	1	GD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	GD0 133 000	9
	<b>Piston Seal, O-Ring</b>	1	N70258	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

220 - 224-U1 Vented Cover Diagram (Not Used on 223-U1 Pump)



### 320 - 324 - 323-U1 PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	320-U1 Pump Body	1	See Note 1	1
	324-U1 Rectangular Flange Inlet Body	1	See Note 1	1
	323-U1 Pump Body	1	323 001 020	
7	Drive Shaft, Std.		OH1 008 002	3, 5
	Drive Shaft, Optional 17-4PH		33081	3, 5
	Drive Shaft Kit, Std.	1	113611	5A
	Drive Shaft Kit, Optional 17-4PH	1	113613	5A
	Drive Shaft, Std.	1	113518	4
	Drive Shaft, Optional 17-4PH	1	113520	4
8	Short Shaft, Std.		OH1 009 002	3, 5
	Short Shaft, Optional 17-4PH		33204	3, 5
	Short Shaft Kit, Std.	1	113612	5A
	Short Shaft Kit, Optional 17-4PH	1	113614	5A
	Short Shaft, Std.	1	113519	4
	Short Shaft, Optional 17-4PH	1	113521	4
9	320-324-U1 Rotor, Twin Wing, Alloy 88	2	320 010 000	2
	320-324-U1 Rotor, Twin Wing, 316SS	2	320 010 200	2
	323-U1 Rotor, Twin Wing, Alloy 88	2	323 010 000	2
10	320-323-U1 Stud, Cover, Long	4	111291	4
	324-U1 Stud, Long	4	111291	
	324-U1 Stud, Short	4	40699	
10A	Stud, Cover, Short	4	111292	

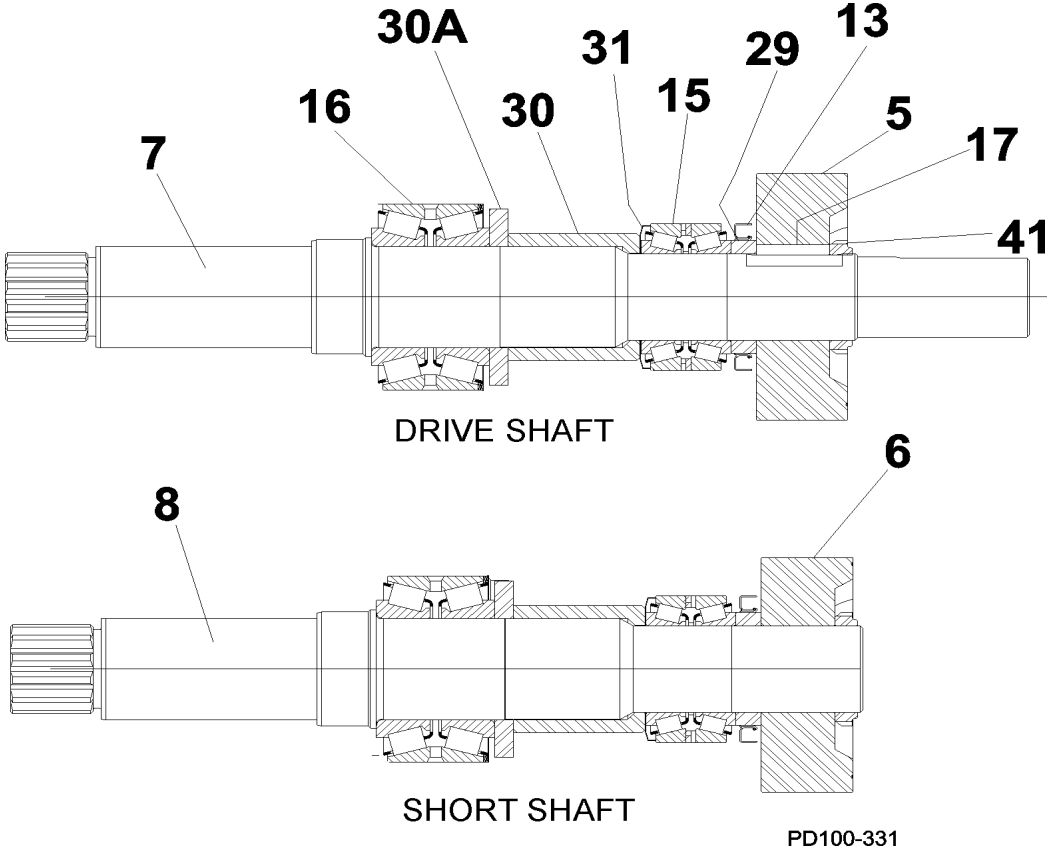
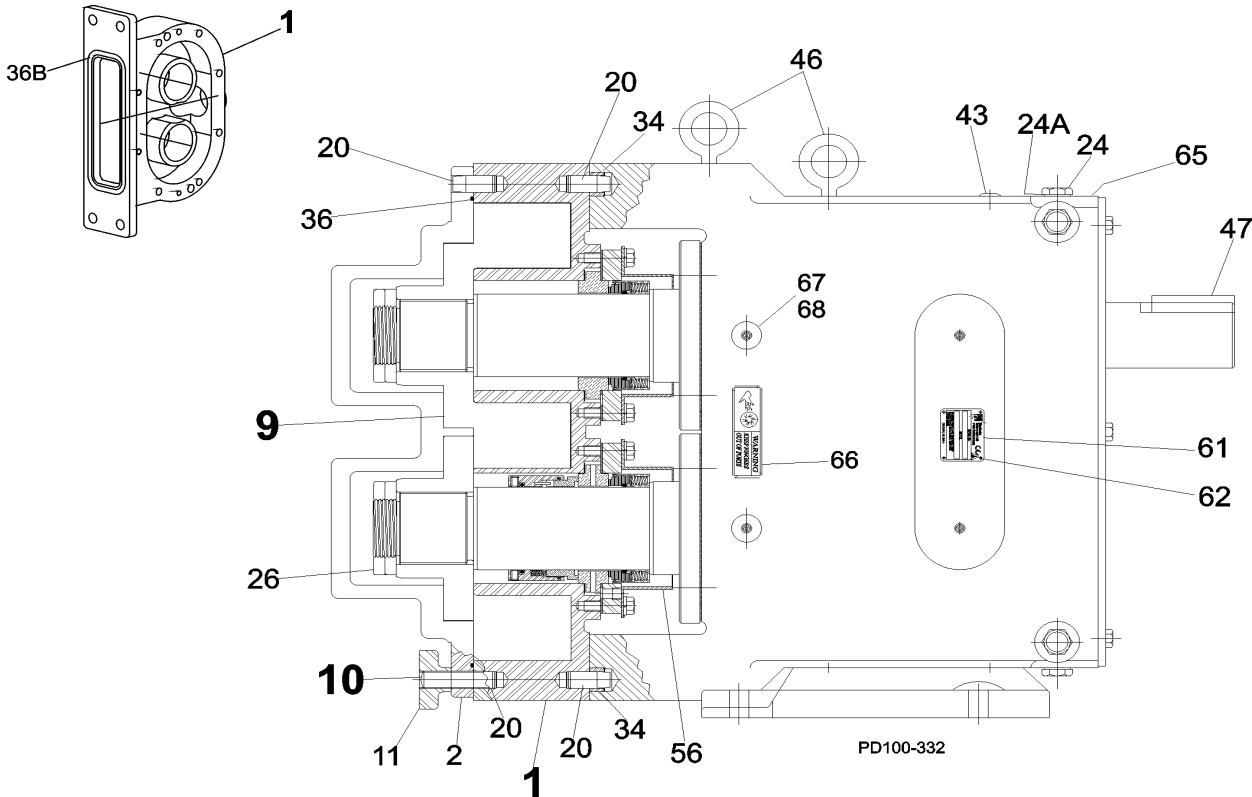
**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearance and finish Par Number shown. Contact Factory for optional clearances and finishes.
3. Pumps shipped prior to July 30, 2001
4. Pumps shipped starting July 30, 2001.
5. No longer manufactured, See shaft kits 113611 and 113613, 113612 and 113614.
- 5A. Kits replace obsolete shafts OH1 008 002, 33081, OH1 009 002, and 33204 used in obsolete gear case OH1 005 000, which was supplied for pumps shipped prior to July 30, 2001.

**Kits 113611, 113612, 113613, and 113614 Include:**

Item no.	Description	Item no.	Description
5,6	Gears P/N 102470	17	Key, Gear P/N OH1 037 000
7	Drive Shaft P/N 113518 or 113520	29	Spacer, Gear P/N 117691
8	Short Shaft P/N 113519 or 113521	30	Spacer Front Bearing P/N 102473
13	Oil Seal, Case Rear P/N STD 119 000	30A	Bearing Spacer P/N 102472
15	Bearing, Rear P/N OH1 036 000	31	Grease Retainer P/N STD 091 000
16	Bearing, Front P/N OH1 036 003	41	Locknut, Gear P/N 105697

### 320 - 324 - 323-U1 Common Parts Diagram



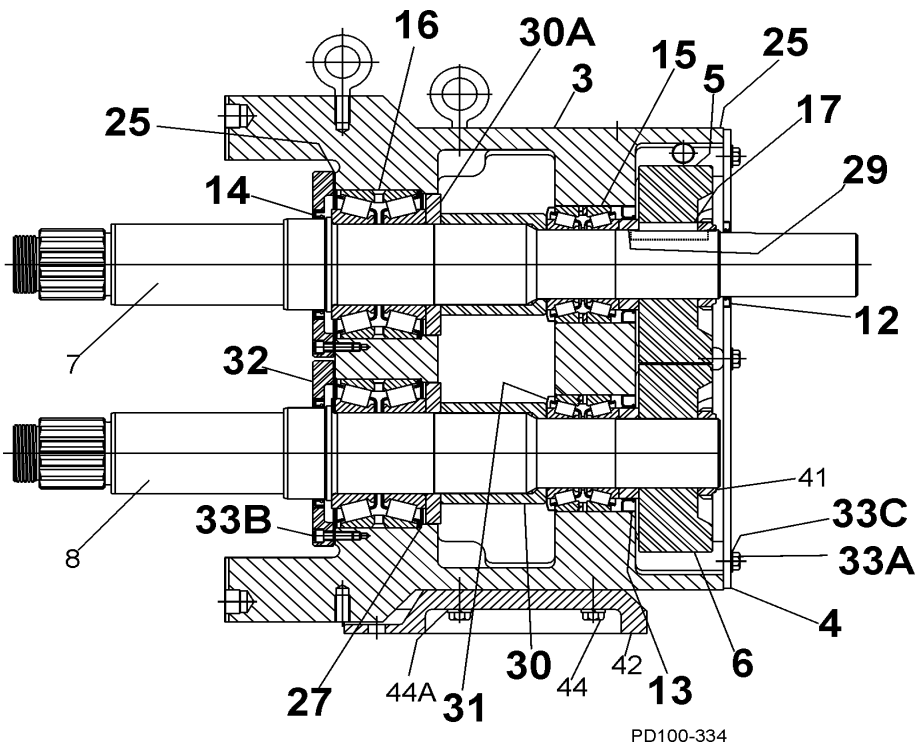
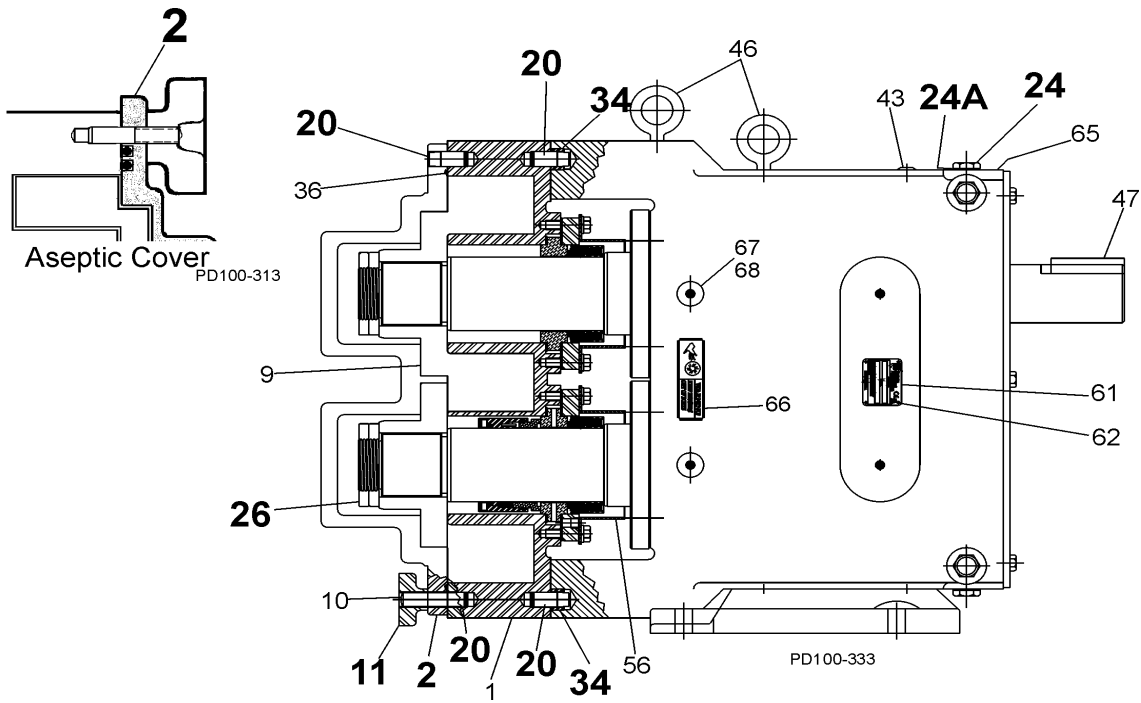
## 320 - 324 - 323-U1 COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	320-324-U1 Pump Cover	1	OH1 002 002	
	323-U1 Pump Cover	1	323 002 020	
3	Gear Case, CI	1	OH1 005 000	3, 5
	Gear Case, CI	1	40616	4
4	Gear Case Cover, Steel	1	40669	
5	Gear, Drive Shaft, Spur	1	102470	
6	Gear, Short Shaft, Spur	1	102470	
11	Wing Nut	8	110858	
	Hex Nut, optional	8	108373	
12	Oil Seal, Gear Case Cover	1	STD 030 004	
13	Oil Seal, Gear Case Rear	2	STD 119 000	3
	Oil Seal, Gear Case Rear	2	102475	4
14	Grease Seal, Bearing Retainer	2	STD 030 002	
	Bearing Isolator, includes STD. Bearing Retainer	2	X06634-3	
15	Bearing, Rear	2	OH1 036 000	
16	Bearing, Front	2	OH1 036 003	
17	Key, Gear	2	OH1 037 000	
20	Dowel Pins	4	OH1 040 000	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Jam Nut, Rotor	4	OH1 052 003	
27	Shim Kit	2	117893	
29	Spacer, Gear to Rear Bearing	2	117691	3
	Spacer, Gear to Rear Bearing	2	102474	4
30	Bearing Spacer	2	102473	4
30A	Spacer Front Bearing	2	102472	4
31	Grease Retainer, Rear Bearing	2	STD 091 000	
32	Bearing Retainer, Front	2	OH1 080 000	
33A	3/8-16 x .75" HHCS, Gear Case cover	6	30-314	
33B	5/16-18 x 1" SHCS, Bearing Retainer	8	30-343	
33C	3/8" Washer, Plain	6	43-189	
34	Dowel Bushings	2	OH1 116 000	

**NOTES:**

- 3. Pumps shipped prior to July 30, 2001
- 4. Pumps shipped starting July 30, 2001.
- 5. No longer manufactured, consult factory for upgrade of gear case subassembly.
- 40. Pumps shipped prior to 5/15/03
- 41. Pumps shipped after 5/15/03

320 - 324 - 323-U1 Common Parts Diagram



**320 - 324 - 323-U1 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
* * * *	O-Ring, Pump Cover, Buna N	1	N70280	
	O-Ring, Pump Cover, EPDM	1	E70280	
	O-Ring, Pump Cover, FKM	1	V70280	
	O-Ring, Pump Cover, Silicone	1	323 117 013	
* * *	323-U1 O-Ring, Pump Cover, Inner, EPDM	1	323 117 002	11
	323-U1 O-Ring, Pump Cover, Inner, FKM	1	323 117 004	11
	323-U1 O-Ring, Pump Cover, Inner, Silicone	1	323 117 003	11
36B	324-U1 O-Ring, Rectangular Flange	1	N70382	
41	Locknut, Gear	2	105697	
42	Gear Case Shim, CI	1	40288	
	Pump Pedestal, 22"	1	324 110 226	
43	Plastic Cap Plug	6	000 121 001	
44	1/2-13 x 1.75" SHCS	4	30-250	
44A	Lockwasher, 1/2"	4	43-177	
45	Body Retaining, 3/8-16 x 4" SHCS	2	30-323	
46	1/2-13 Eye Bolt	3	30-360	
47	Key, Coupling - 5/8 x 5/8 x 2"	1	000 037 005	
48	Cleanout Plug	2	41013	
50	Grease Retainer, Gear Case, Front Bearing	2	STD 030 003	3
52	Spacer, Rear Bearing	2	OH1 055 002	3
53	Locknut, Front Bearing	2	OH1 236 001	3
54	Lockwasher, Front Bearing	2	OH1 136 001	3
55	Spacer, Front Bearing	2	OH1 055 001	3
56	Guard, Seal	2	113505	
* * *	O-Ring, Port, Inner, Silicone	2	S75261	11
	O-Ring, Port, Inner, EPDM	2	E70261	11
	O-Ring, Port, Inner, FKM	2	V70261	11
* * *	O-Ring, Port, Outer, Silicone	2	S75265	11
	O-Ring, Port, Outer, EPDM	2	E70265	11
	O-Ring, Port, Outer, FKM	2	V70265	11
61	Name Plate	1	001 061 015	
62	#2 x .125" RHDS	4	30-355	
63	O-ring Removal Tool	1	AD0 096 001	
64	Rotor Nut Wrench, SS	1	112829	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	320-323-U1 Grease Fitting, 1/8"	4	BD0 092 000	
	324-U1 Grease Fitting, 1/8"	4	BD0 092 100	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

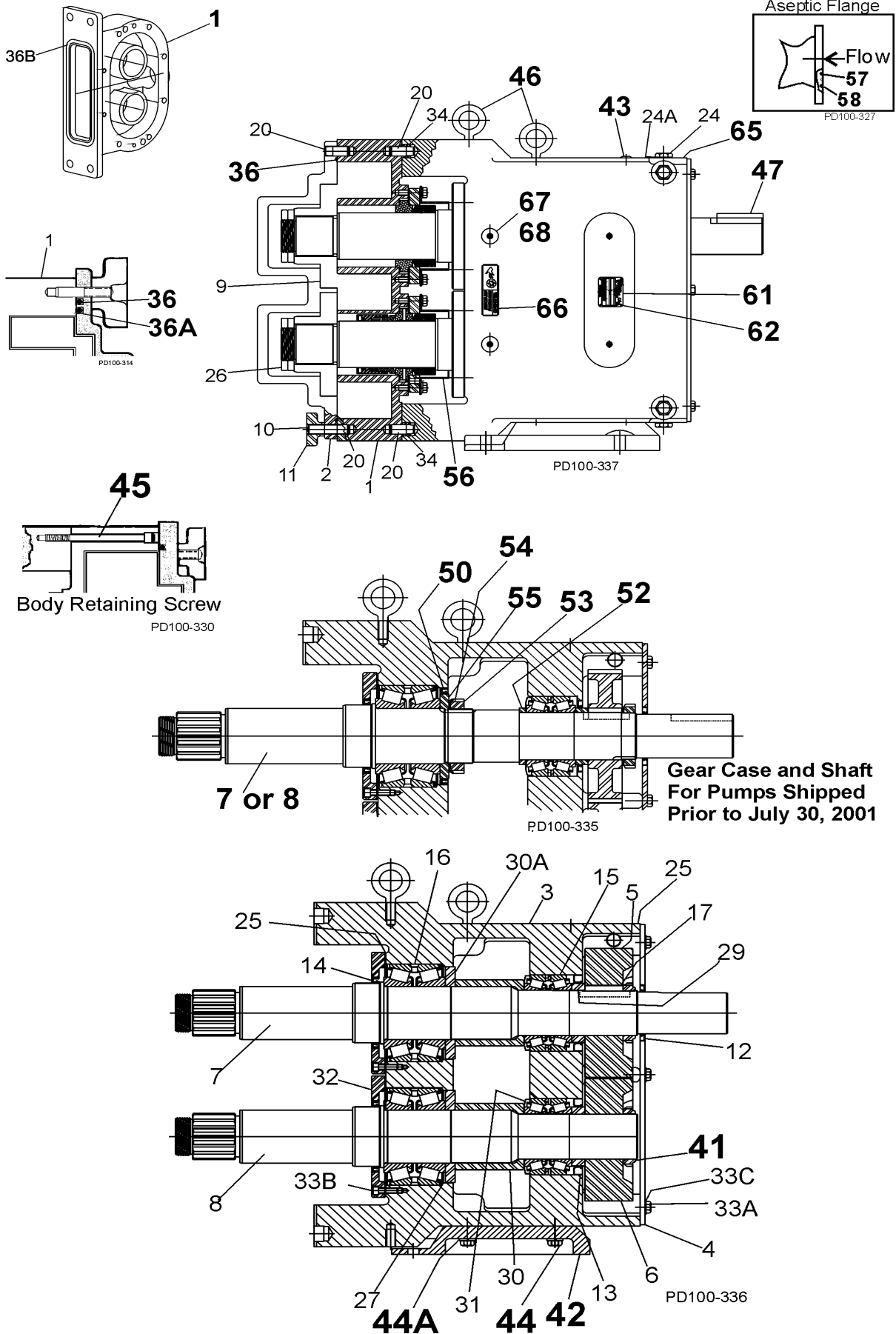
**NOTES:**

- 3. Pumps shipped prior to July 30, 2001
- 4. Pumps shipped starting July 30, 2001.
- 11. Used on 323-U1 only.

\* **Recommended Spare Parts**



# 320 - 324 - 323-U1 Common Parts Diagram



**320 - 324 - 323-U1 SEAL PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
<b>OUTER SEAL</b>				
* 70	Crane #8B2 Outer Seal, Carbon	2	323 114 003	30
* 70B	O-Ring, Outer Seal, Shaft, EPDM	2	E70234	
* 70B	O-Ring, Outer Seal, Shaft, FKM	2	V70234	
* 70B	O-Ring, Outer Seal, Shaft, Silicone	2	S75234	
* 72	"T" Seat, Plain, Ceramic	2	300 014 012	
* 72	"T" Seat, Plain, Tungsten Carbide	2	300 014 013	
* 72	"T" Seat, Plain, Silicon Carbide	2	300 014 016	
* 72B, 72C	Gasket, Inner and Outer	4	300 042 001	
73	Gland, Plain	2	300 034 001	
73B	3/8-16 x 1-1/4" HHCS	8	30-60	
73C	Lockwasher, 3/8"	8	43-28	
<b>INNER SEAL</b>				
* 71	Waukesha HD Inner Seal, Silicon Carbide	2	40572	16
* 71	Waukesha HD Inner Seal, Ceramic	2	40573	16
* 71	Waukesha HD Inner Seal, Chrome Oxide	2	40574	16
* 71A	Seal Face, Silicon Carbide	2	40754	
* 71A	Seal Face, Ceramic	2	40755	
* 71A	Seal Face, Chrome Oxide	2	40756	
* 71A	Seal Face, Tungsten Carbide	2	109347	
* 71A	Seal Face, Carbon	2	36027	
* 71B	O-Ring, Inner Seal, Shaft, EPDM	2	E70234	
* 71B	O-Ring, Inner Seal, Shaft, FKM	2	V70234	
* 71B	O-Ring, Inner Seal, Shaft, Silicone	2	S75234	
* 71D	Spring	12	40875	
* 71F	Set Screw	8	110038	
* 71H	O-Ring, Inner Seal, Seal Face, EPDM	2	E70238	
* 71H	O-Ring, Inner Seal, Seal Face, FKM	2	V70238	
* 71H	O-Ring, Inner Seal, Seal Face, Silicone	2	S75238	
<b>INNER - OUTER SEAL</b>				
71C	Carrier Inner Sub-Assembly	1	35284	
* 72A	"T" Seat, Flushed, Ceramic	2	300 014 027	
* 72A	"T" Seat, Flushed, Tungsten Carbide	2	300 014 028	
* 72A	"T" Seat, Flushed, Chrome Oxide	2	300 014 029	
* 72A	"T" Seat, Flushed, Silicon Carbide	2	300 014 031	
* 72B	Gasket, Inner	2	300 042 001	
* 72C	Gasket, Flushed Gland, Outer	2	300 042 002	
73A	Gland, Flushed	2	300 034 001	
73B	3/8-16 x 1-1/4" HHCS	8	30-60	
73C	3/8" Lockwasher	8	43-28	

**NOTES:**

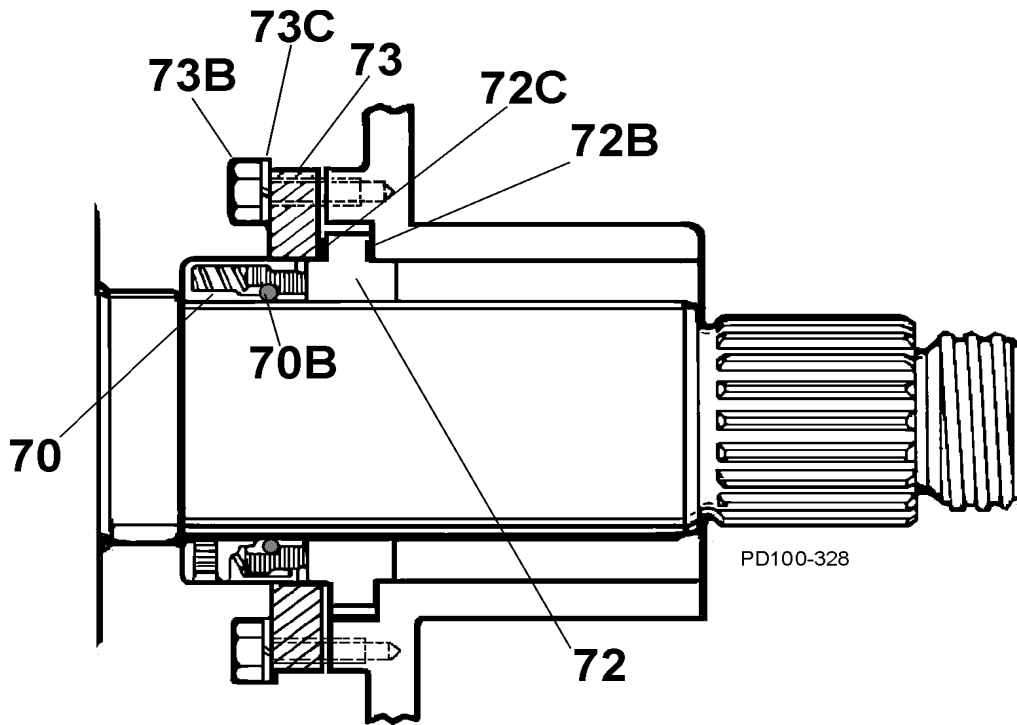
16. Complete Inner Seal with FKM O-Rings.

30. Alternate materials available. Standard is listed. Contact factory for information.

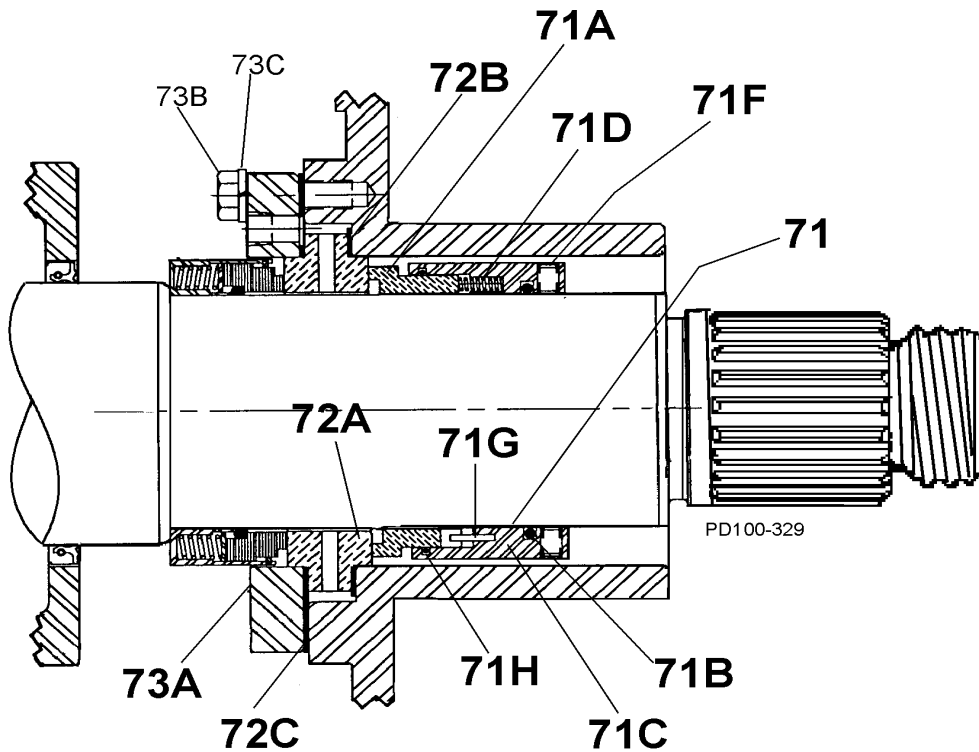
\* **Recommended Spare Parts**

# 320 - 324 - 323-U1 Seals Parts Diagram

## 320 - 324-U1 Outer Seal



## 320 - 324 - 323-U1 Inner-Outer Seal



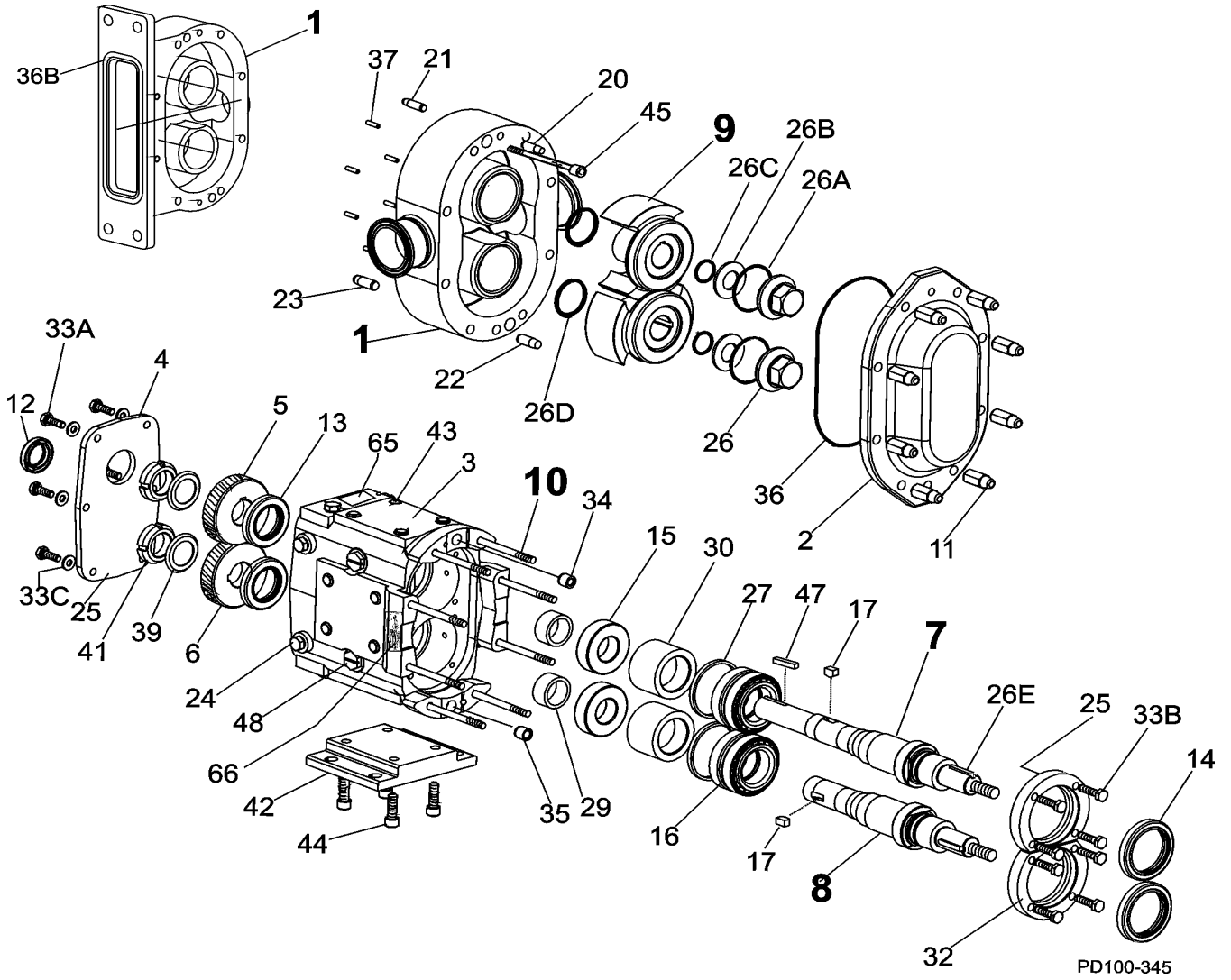
**006 - 014 - 015 - 018-U2 PUMP PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>1</b>	006-U2 Pump Body	1	See Note 1	1
	006-U2 Pump Body with Flush	1	See Note 1	1
	014-U2 Rectangular Flange Inlet Body	1	See Note 1	1
	014-U2 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	015-U2 Pump Body	1	See Note 1	1
	015-U2 Pump Body with Flush	1	See Note 1	1
	018-U2 Pump Body	1	See Note 1	1
	018-U2 Pump Body with Flush	1	See Note 1	1
<b>7</b>	006-014-015-U2 Drive Shaft	1	108405	
	018-U2 Drive Shaft	1	108407	
<b>8</b>	006-014-015-U2 Short Shaft	1	108406	
	018-U2 Short Shaft	1	108408	
<b>9</b>	006-U2 Rotor, Twin Wing, Alloy 88	2	101870	2
	006-U2 Rotor, Twin Wing, 316SS	2	102199	2
	014-015-U2 Rotor, Twin Wing, Alloy 88	2	101882	2
	014-015-U2 Rotor, Twin Wing, 316SS	2	102205	2
	015-U2 Rotor, Single Wing, Alloy 88	2	117060	2, 13
	018-U2 Rotor, Twin Wing, Alloy 88	2	101894	2
	018-U2 Rotor, Twin Wing, 316SS	2	102211	2
	018-U2 Rotor, Single Wing, Alloy 88	2	117072	2
<b>10A</b>	006-015-U2 Stud	8	AD0 011 000	
<b>10B</b>	006-015-U2 Stud, Jacketed Cover	8	AD0 011 J00	
<b>10C</b>	014-U2 Stud	6	AD0 011 000	
	014-U2 Stud	2	35547	
<b>10D</b>	014-U2 Stud, Jacketed Cover	6	AD0 011 J00	
	014-U2 Stud, Jacketed Cover	2	35548	
<b>10E</b>	018-U2 Stud	8	101721	
<b>10F</b>	018-U2 Stud, Jacketed Cover	8	107754	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
13. Single wing rotors can not be used in Rectangular Flange Inlet pumps.

# 006 - 014 - 015 - 018-U2 Pump Parts Diagram



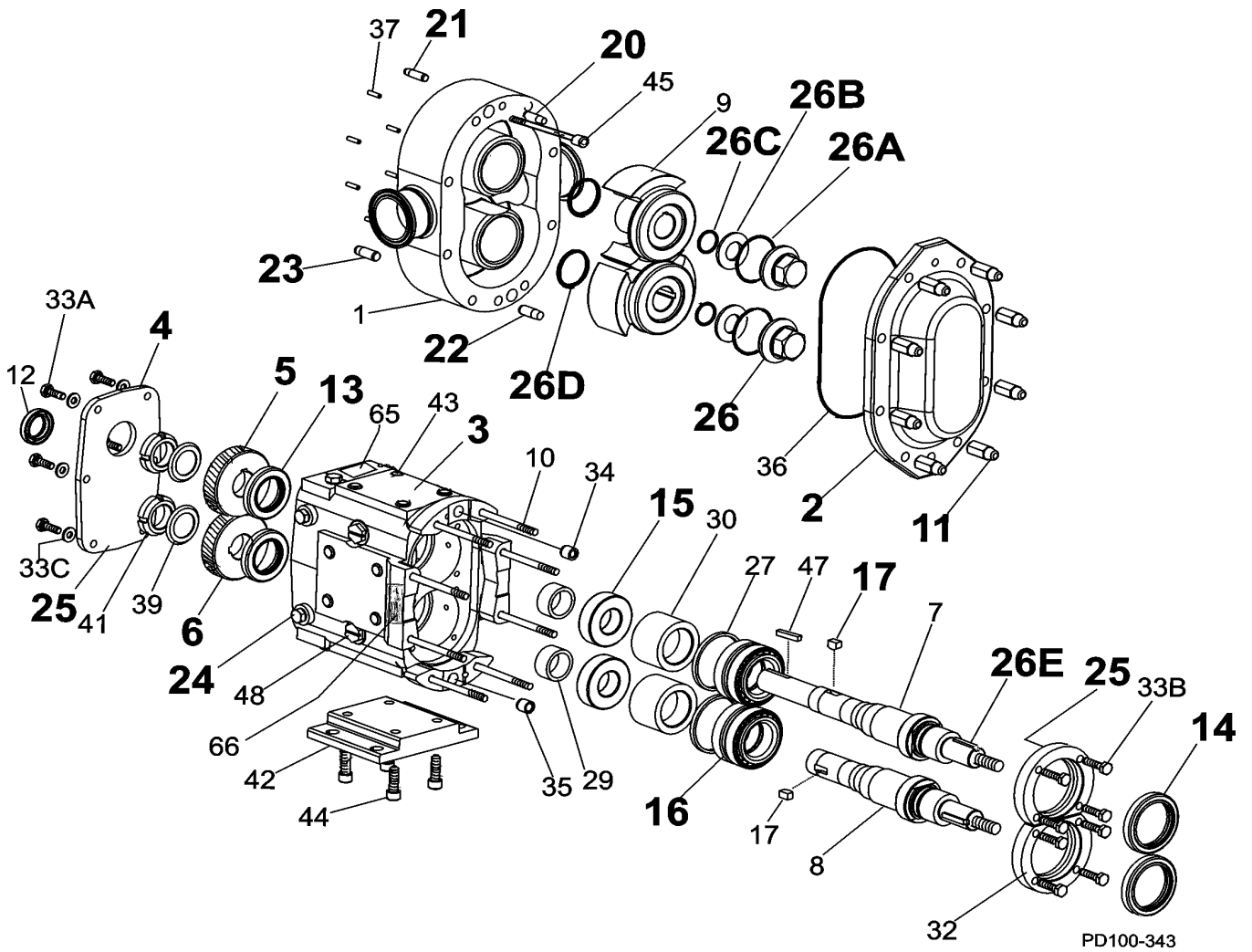
**006 - 014 - 015 - 018-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	101842	
	Jacketed Cover	1	107664	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00108	
	Manual (under 150 PSI)	1	CVR00063	
	Pneumatic Rubber Diaphragm	1	CVR00073	
	Pneumatic Piston	1	CVR00074	
3	Gear Case, CI	1	102276	
	Gear Case, SS; Optional	1	101831	
4	Gear Case Cover, Steel	1	020 106 000	
	Gear Case Cover, SS; Optional	1	102280	
5	Gear, Drive Shaft, Spur	1	107997	
6	Gear, Short Shaft, Spur	1	107997	
11	Hex Nut	8	108369	
	Wing Nut; Optional	8	105850	
12	Oil Seal, Gear Case Cover	1	000 030 016	
13	Oil Seal, Gear Case Rear	2	000 030 017	
14	Grease Seal, Bearing Retainer	2	101716	
	Bearing Isolator Kit, includes SS Bearing Retainer	2	X06638-1	
15	Bearing, Rear	2	015 035 000	
16	Bearing, Front	2	101714	
17	Key, Gear	2	015 037 000	
20	Dowel Pin, Upper Cover Side	1	AD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	AD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	AD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	AD0 040 R10	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 002	
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101804	
* * * 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70126	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70126	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70126	
26B	Washer, Belleville	2	101691	
* * * 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70112	
	<b>O-Ring, Retainer, EPDM</b>	2	E70112	
	<b>O-Ring, Retainer, FKM</b>	2	V70112	
* * * 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70121	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70121	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70121	
26E	006-014-015-U2 Key, Rotor	2	101817	
	018-U2 Key, Rotor	2	101819	

**NOTES:**

\* Recommended Spare Parts

006 - 014 - 015 - 018-U2 Common Parts Diagram



PD100-343

**006 - 014 - 015 - 018-U2 COMMON PARTS PRICE LIST**

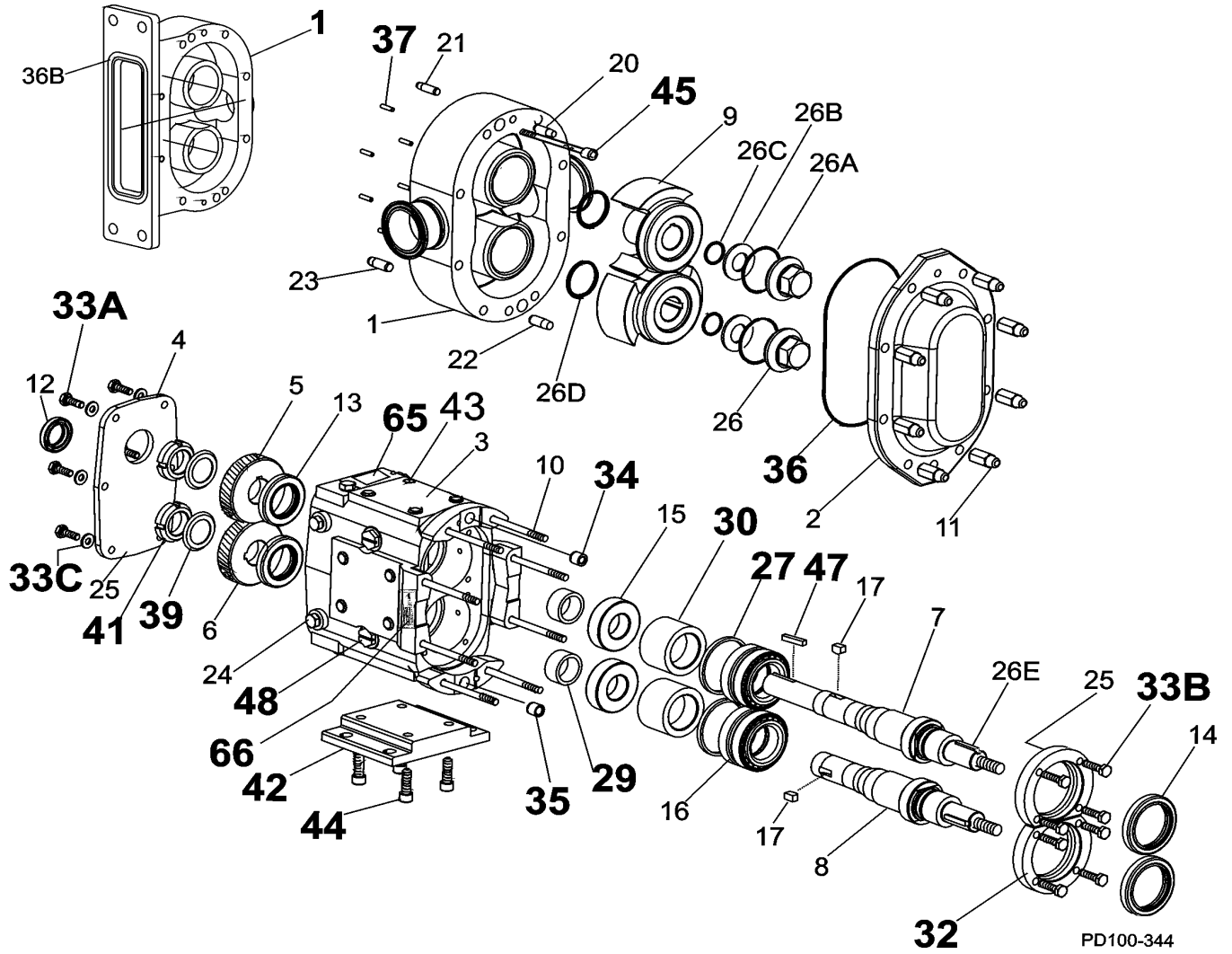
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
27	Shim Kit	2	117889	
29	Spacer, Gear to Rear Bearing	2	015 055 000	
30	Bearing Spacer	2	101814	
32	Bearing Retainer, Front	2	101810	
33A, 33B	1/4-20 x .75" HHCS, STD	14	30-287	
	1/4-20 x .75" HHCS, SS	14	30-58	
33C	1/4" Flat Washer	6	43-108	
34	Dowel Bushing, Upper	1	AD0 116 000	
35	Dowel Bushing, Lower	1	AD0 116 100	
* * *	<b>O-Ring, Pump Cover, Buna N</b>	1	N70249	
	<b>O-Ring, Pump Cover, EPDM</b>	1	E70249	
	<b>O-Ring, Pump Cover, FKM</b>	1	V70249	
36B	014-U2 O-Ring, Rectangular Flange	1	N70241	
37	Stop Pin, Seal	6	101718	
39	Lockwasher, Gear	2	STD 136 005	
41	Locknut, Gear	2	STD 236 005	
42	Gear Case Shim, CI	1	020 110 000	
	Gear Case Shim, SS; Optional	1	102284	
	Pump Pedestal, 6.75", Optional	1	014 110 675	
43	Plastic Cap Plug	8	000 121 003	
44	5/16-18 x 1" SHCS	4	30-343	
	5/16-18 x 1" SHCS, SS; Optional	4	30-525	
45	006-014-015-U2 Body Retaining Screw, 1/4-20 x 1-1/4"	2	30-523	
	018-U2 Body Retaining Screw, 1/4-20 x 2"	2	30-211	
47	Key, Coupling - 3/16 x 3/16 x 1-1/8"	1	000 037 001	
48	Cleanout Plug	2	35824	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-63	
67	006-015-018-U1 Grease Fitting, 1/8"	4	BD0 092 000	
	014-U1 Grease Fitting, 1/8"	4	BD0 092 100	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

\* Recommended Spare Parts



006 - 014 - 015 - 018-U2 Common Parts Diagram



PD100-344

**006 - 014 - 015 - 018-U2 SEAL PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70028	25
* 91	O-Ring, Body, EPDM	2	E70028	25
* 91	O-Ring, Body, FKM	2	V70028	
* 92	O-Ring, Shaft, Buna N	2	N70024	25
* 92	O-Ring, Shaft, EPDM	2	E70024	25
* 92	O-Ring, Shaft, FKM	2	V70024	
* 93	Seal Seat, Ceramic	2	101667	
* 93	Seal Seat, Silicon Carbide	2	101668	
* 94	Seal Inner, Carbon	2	101651	
* 94	Seal Inner, Ceramic	2	101652	
* 94	Seal Inner, Silicon Carbide	2	101653	
* 94	Seal Inner, Tungsten Carbide	2	101654	
95	Wave Spring, Inner Seal	2	101683	
* 96	O-Ring, Outer Seal, Buna N	2	N70035	8
* 96	O-Ring, Outer Seal, EPDM	2	E70035	
* 96	O-Ring, Outer Seal, FKM	2	V70035	
97	Wave Spring, Outer Seal	2	101684	8
* 98	Outer Seal, Carbon	2	101679	8

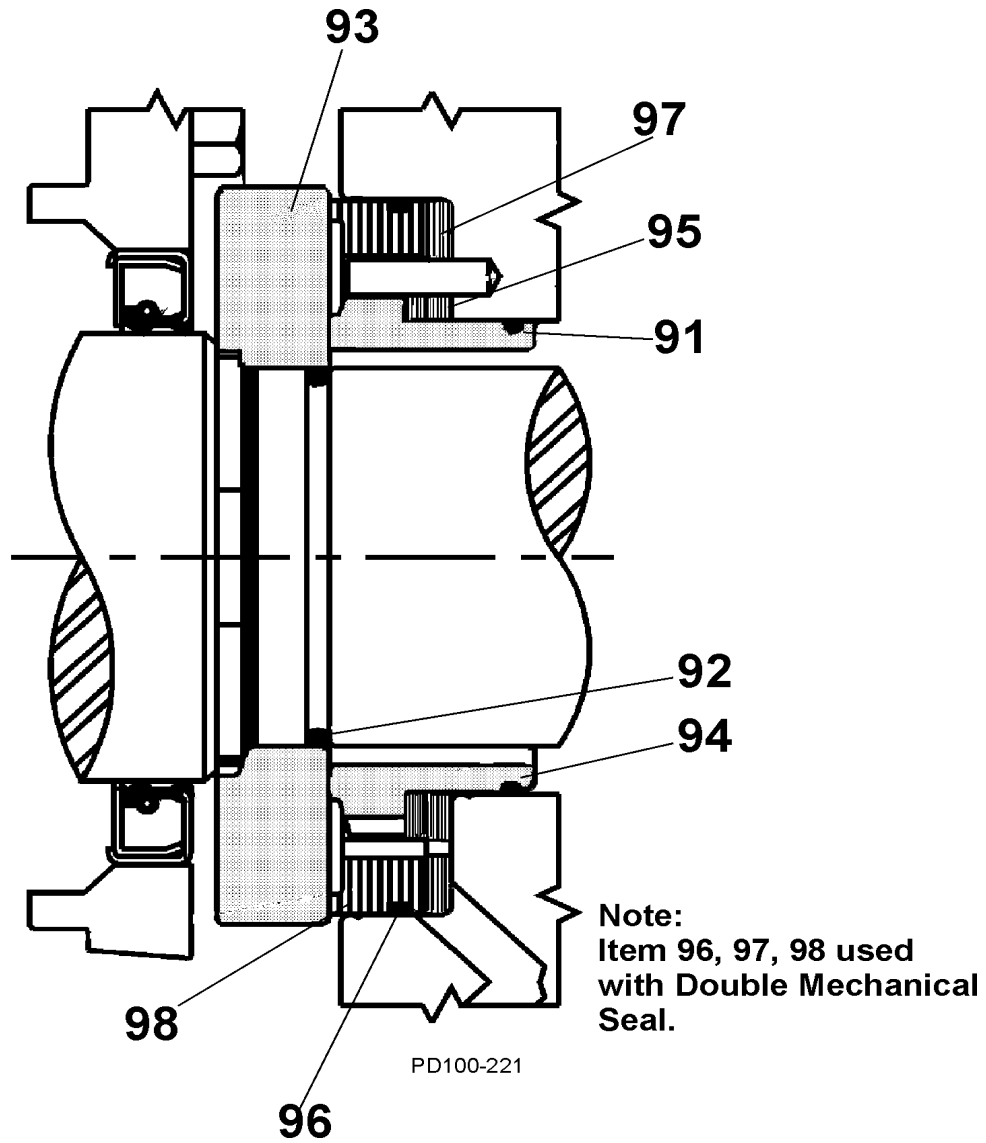
**NOTES:**

8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

006 - 014 - 015 - 018-U2 Seal Parts Diagram



**006 - 014 - 015 - 018-U2 VENTED COVER PRICE LIST**

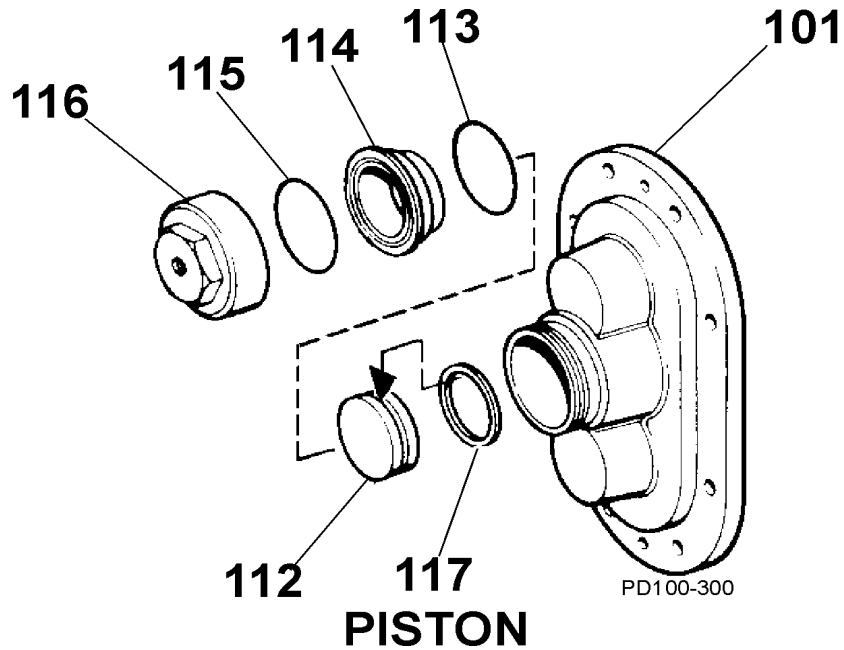
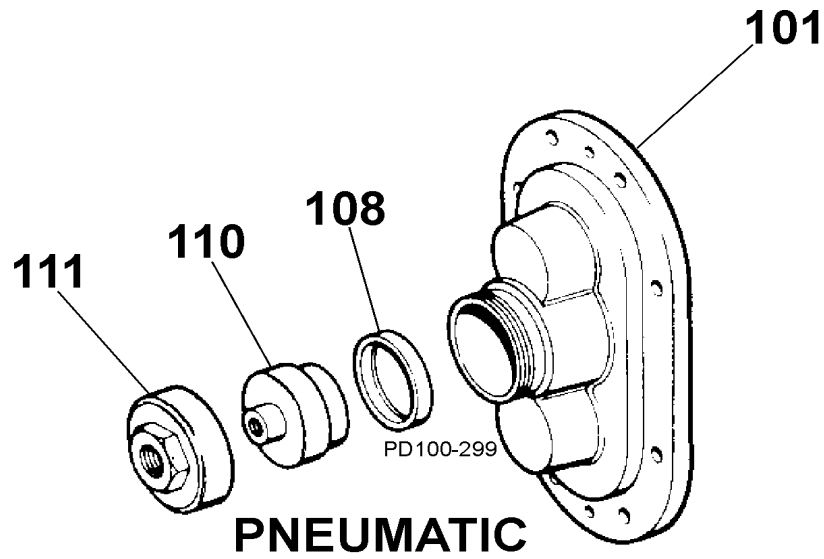
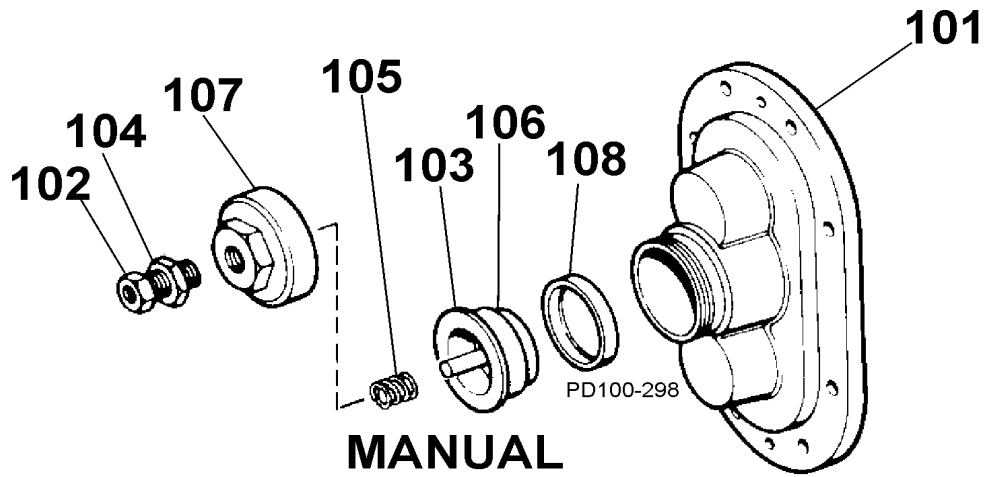
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103669	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103669	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103669	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

006 - 014 - 015 - 018-U2 Vented Cover Parts Diagram



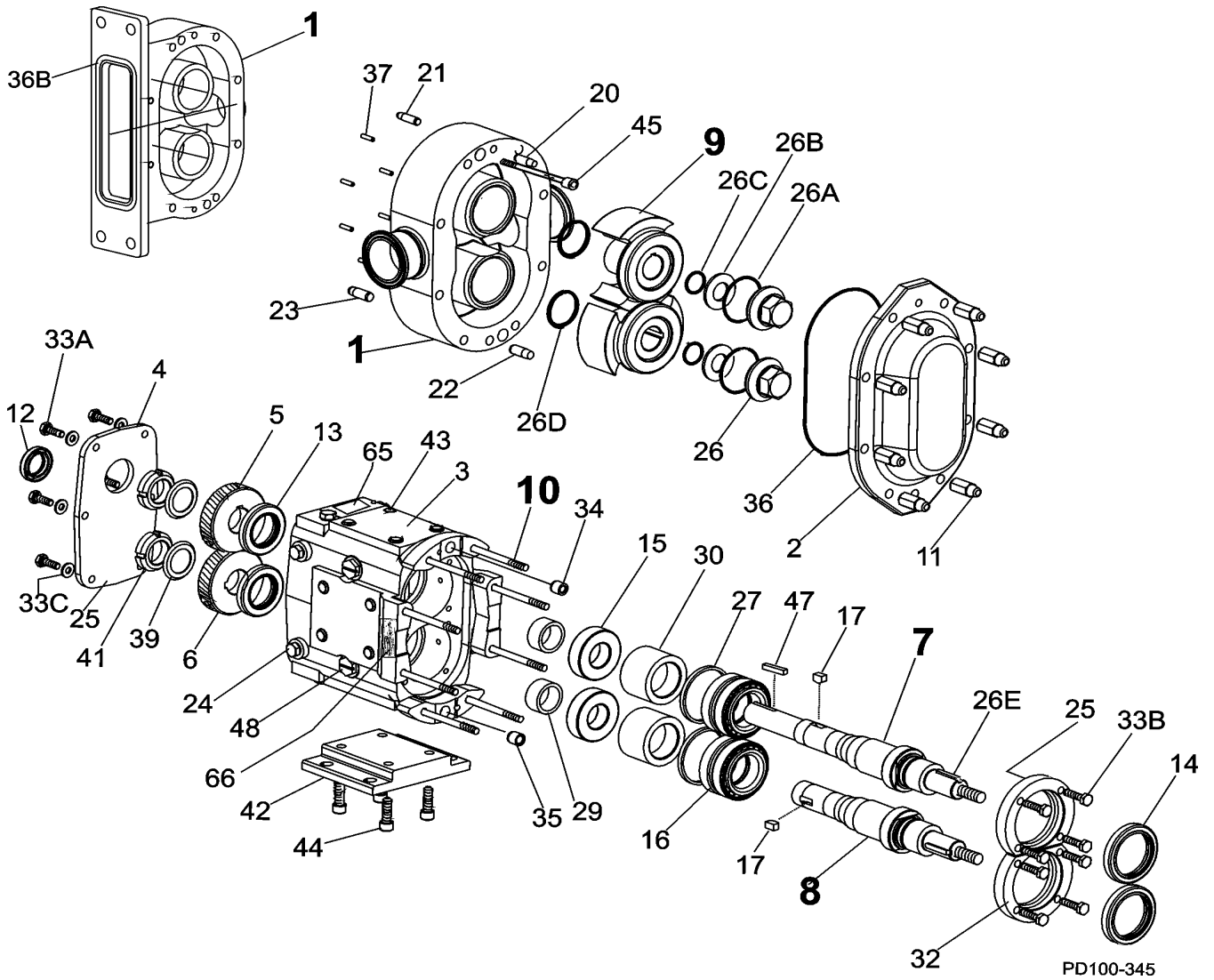
### 030 - 034-U2 PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>1</b>	030-U2 Pump Body	1	See Note 1	1
	030-U2 Pump Body with Flush	1	See Note 1	1
	034-U2 Rectangular Flange Inlet Body	1	See Note 1	1
	034-U2 Rectangular Flange Inlet Body with Flush	1	See Note 1	1
<b>7</b>	Drive Shaft	1	108409	
<b>8</b>	Short Shaft	1	108410	
<b>9</b>	030-034-U2 Rotor, Twin Wing, Alloy 88	2	102151	2
	030-034-U2 Rotor, Twin Wing, 316SS	2	102217	2
	030-U2 Rotor, Single Wing, Alloy 88	2	117084	2, 12, 13
	030-U2 Rotor, Single Wing, 316SS	2	117088	2, 12A, 13
<b>10A</b>	030-U2 Stud	8	108842	
<b>10B</b>	030-U2 Stud, Jacketed Cover	8	108845	
<b>10C</b>	034-U2 Stud	6	108842	
	034-U2 Stud	2	35555	
<b>10D</b>	034-U2 Stud, Jacketed Cover	6	108845	
	034-U2 Stud, Jacketed Cover	2	35549	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
12. Replaces P/N 104707 (straight) and P/N 104836 (90 degree) rotors.
- 12A. Replaces P/N 104719 (straight) and P/N 104848 (90 degree) rotors.
13. Single wing rotors can not be used in Rectangular Flange Inlet pumps.

# 030 - 034-U2 Pump Parts Diagram



**030 - 034-U2 COMMON PARTS PRICE LIST**

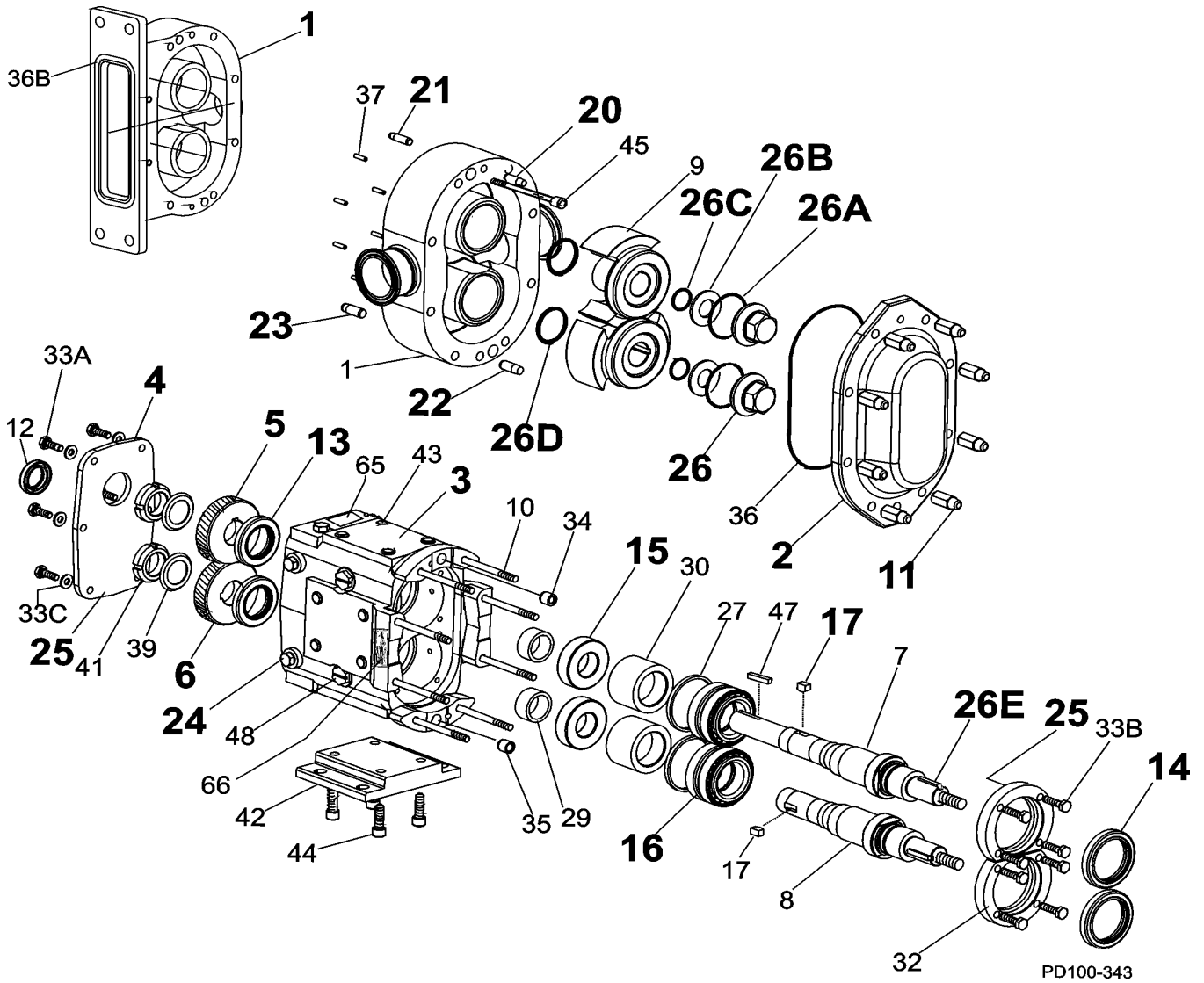
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	101845	
	Jacketed Cover	1	107666	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00109	
	Manual (under 150 PSI)	1	CVR00067	
	Pneumatic Rubber Diaphragm	1	CVR00075	
3	Pneumatic Piston	1	CVR00076	
	Gear Case, CI	1	102277	
4	Gear Case, SS; Optional	1	101833	
	Gear Case Cover, Steel	1	040 106 000	
5	Gear Case Cover, SS; Optional	1	102281	
6	Gear, Drive Shaft, Spur	1	107999	
11	Gear, Short Shaft, Spur	1	107999	
	Hex Nut	8	108370	
12	Wing Nut; Optional	8	105851	
	Oil Seal, Gear Case Cover	1	000 030 013	
13	Oil Seal, Gear Case Rear	2	000 030 014	
14	Grease Seal, Bearing Retainer	2	101717	
	Bearing Isolator Kit, includes SS Bearing Retainer	2	X06639-1	
15	Bearing, Rear	2	030 035 000	
16	Bearing, Front	2	101715	
17	Key, Gear	2	BD0 037 000	
20	Dowel Pin, Upper Cover Side	1	BD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	BD0 040 200	
22	Dowel Pin, Lower Cover Side	1	BD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	BD0 040 300	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 003	
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101805	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70130	
* 26A	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70130	
* 26A	<b>O-Ring, Rotor Nut, FKM</b>	2	V70130	
26B	Washer, Belleville	2	101692	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70115	
* 26C	<b>O-Ring, Retainer, EPDM</b>	2	E70115	
* 26C	<b>O-Ring, Retainer, FKM</b>	2	V70115	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70127	
* 26D	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70127	
* 26D	<b>O-Ring, Rotor Hub, FKM</b>	2	V70127	
* 26E	<b>Key, Rotor</b>	2	101821	

**NOTES:**

\* Recommended Spare Parts



030 - 034-U2 Common Parts Diagram



PD100-343

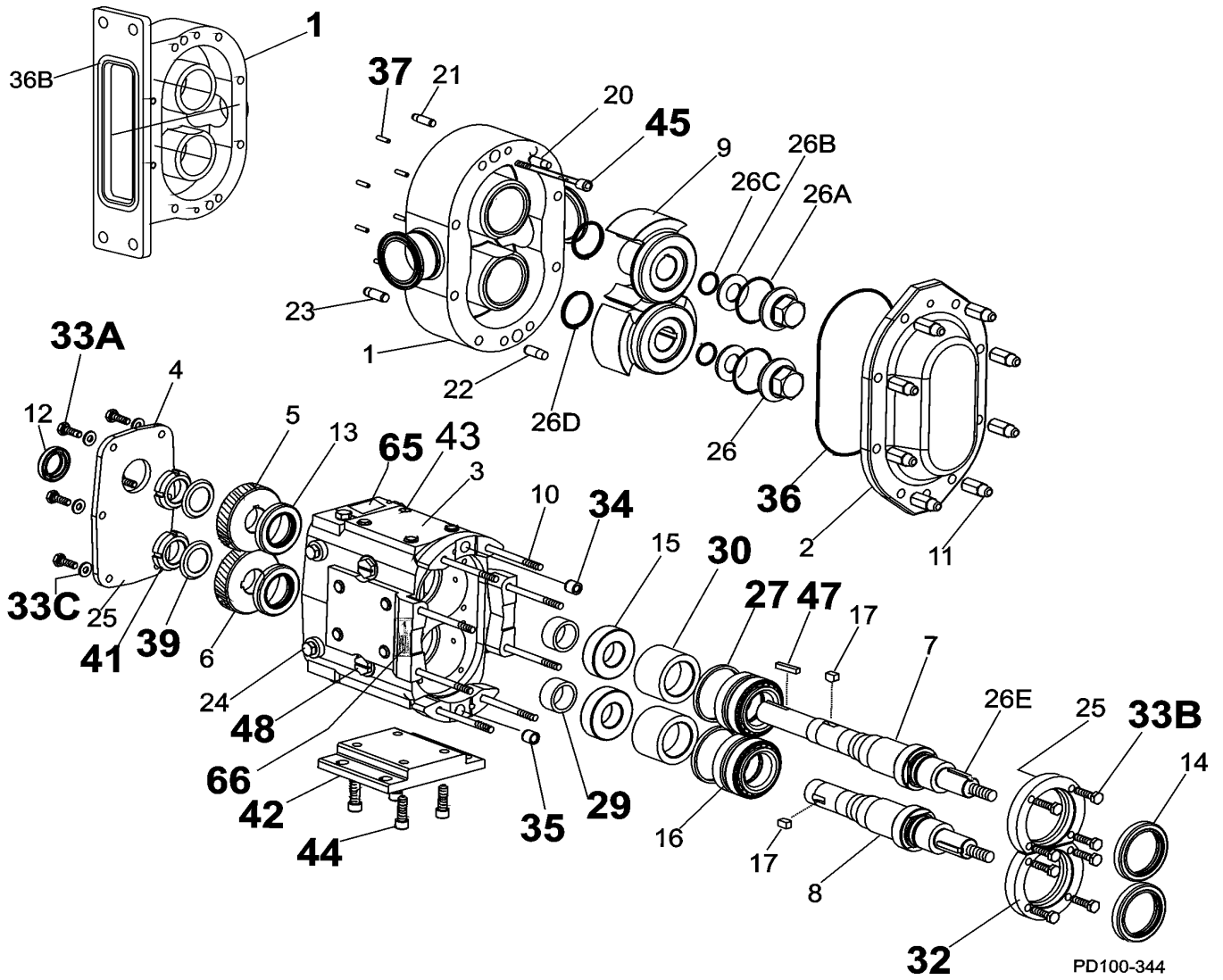
**030 - 034-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
27	Shim Kit	2	117890	
29	Spacer, Gear to Rear Bearing	2	030 055 000	
30	Bearing Spacer	2	101815	
32	Bearing Retainer, Front	2	101811	
33A	5/16-18 x 3/4" HHCS, STD	6	30-283	
	5/16-18 x 3/4" HHCS, SS	6	30-151	
33B	5/16-18 x 3/4" BSHCS, STD	8	30-296	
	5/16-18 x 3/4" SHCS, SS	8	30-29	
33C	5/16" Flat Washer	6	43-194	
34	Dowel Bushing, Upper	1	BD0 116 000	
35	Dowel Bushing, Lower	1	BD0 116 100	
* 36	<b>O-Ring, Pump Cover, Buna N</b>	1	N70259	
* 36	<b>O-Ring, Pump Cover, EPDM</b>	1	E70259	
* 36	<b>O-Ring, Pump Cover, FKM</b>	1	V70259	
* 36B	<b>034-U2 O-Ring, Rectangular Flange</b>	1	N70357	
37	Stop Pin, Seal	6	101719	
39	Lockwasher, Gear	2	CD0 036 W00	
41	Locknut, Gear	2	CD0 036 N00	
42	Gear Case Shim, CI	1	040 110 000	
	Gear Case Shim, SS; Optional	1	102285	
	Pump Pedestal, 6.25", Optional	1	BD0 110 SM0	
43	Plastic Cap Plug, 3/8"	8	000 121 002	
44	3/8-16 x 1" SHCS, STD	4	30-344	
	3/8-16 x 1" SHCS, SS; Optional	4	30-189	
45	Body Retaining Screw, 1/4-20 x 2"	2	30-211	
47	Key, Coupling - 1/4 x 1/4 x 1-3/4"	1	000 037 002	
48	Cleanout Plug	2	41013	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-63	
67	030-U2 Grease Fitting, 1/8"	4	BD0 092 000	
	034-U2 Grease Fitting, 1/8"	4	BD0 092 100	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

\* Recommended Spare Parts

030 - 034-U2 Common Parts Diagram



**030 - 034-U2 SEAL PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70031	25
* 91	O-Ring, Body, EPDM	2	E70031	
* 91	O-Ring, Body, FKM	2	V70031	
* 92	O-Ring, Shaft, Buna N	2	N70029	25
* 92	O-Ring, Shaft, EPDM	2	E70029	25
* 92	O-Ring, Shaft, FKM	2	V70029	
* 93	Seal Seat, Ceramic	2	101670	
* 93	Seal Seat, Silicon Carbide	2	101671	
* 94	Seal Inner, Carbon	2	101655	
* 94	Seal Inner, Ceramic	2	101656	
* 94	Seal Inner, Silicon Carbide	2	101657	
* 94	Seal Inner, Tungsten Carbide	2	101658	
95	Wave Spring, Inner Seal	2	101685	
* 96	O-Ring, Outer Seal, Buna N	2	N70041	8
* 96	O-Ring, Outer Seal, EPDM	2	E70041	8
* 96	O-Ring, Outer Seal, FKM	2	V70041	8
97	Wave Spring, Outer Seal	2	101686	8
* 98	Outer Seal, Carbon	2	101680	8

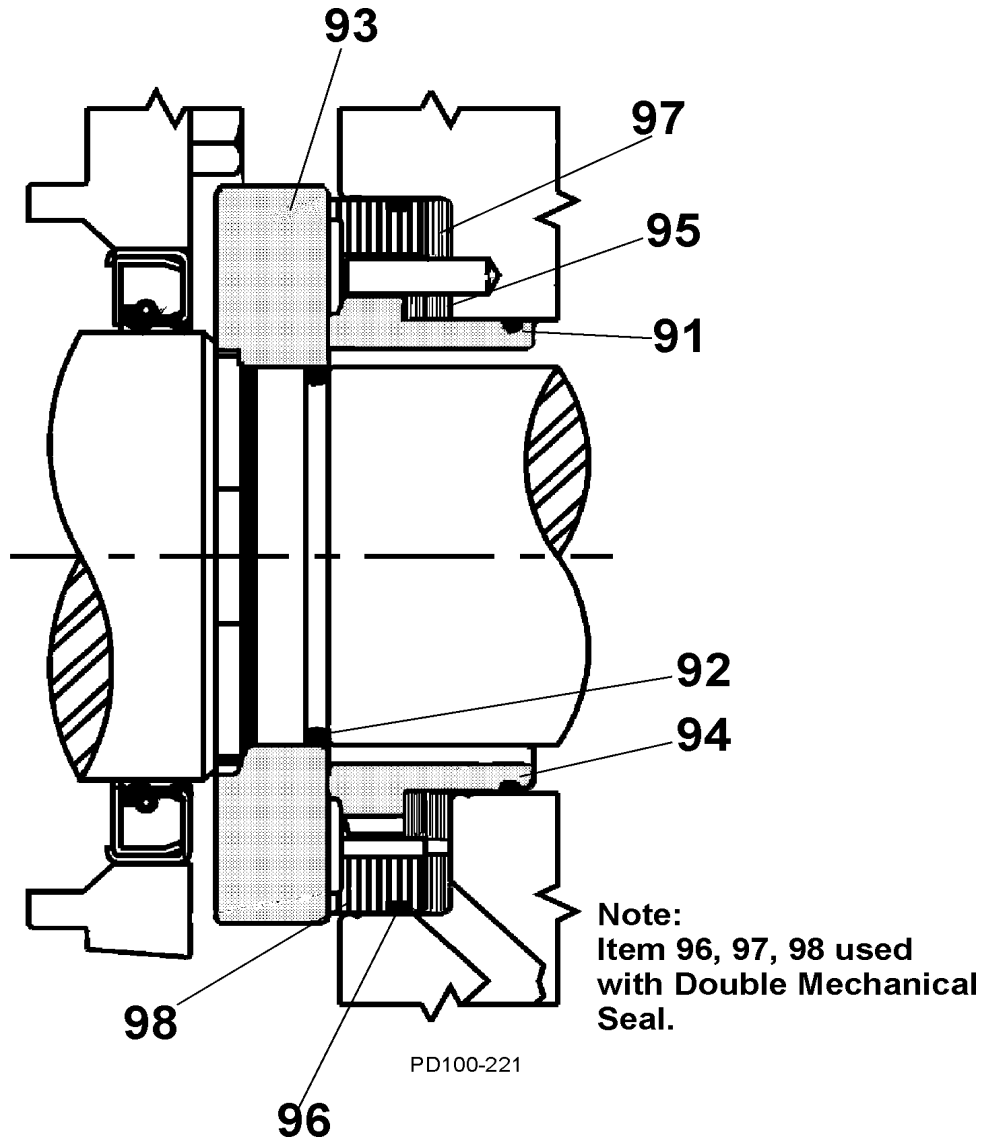
**NOTES:**

8. Used with double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

# 030 - 034-U2 Seal Parts Diagram



**030 - 034-U2 VENTED COVER PARTS PRICE LIST**

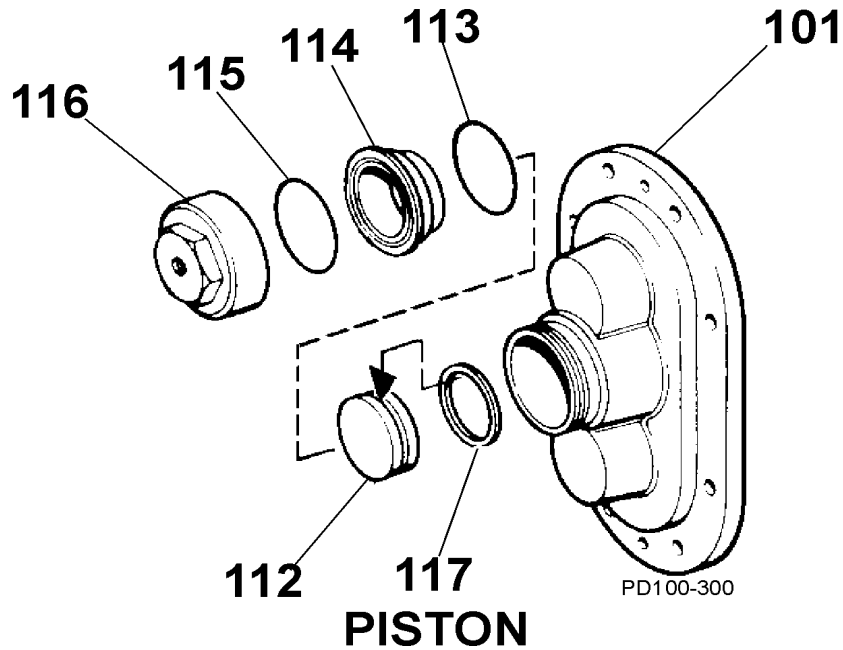
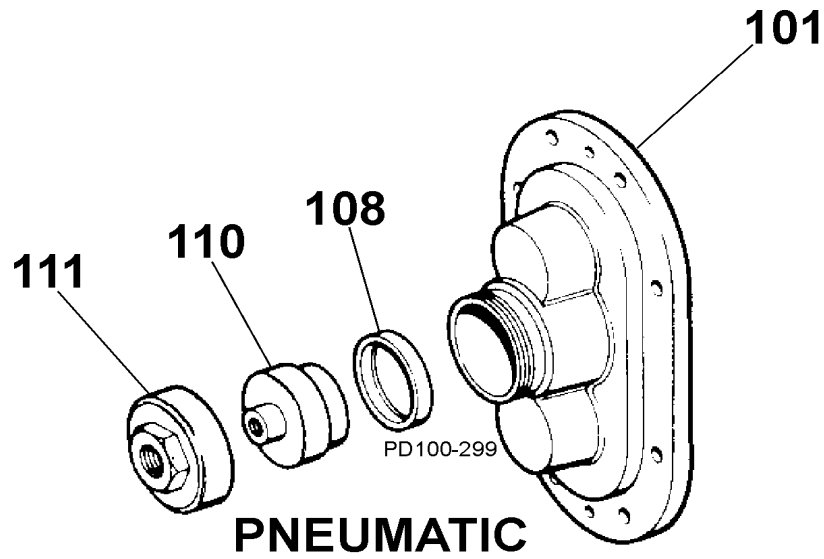
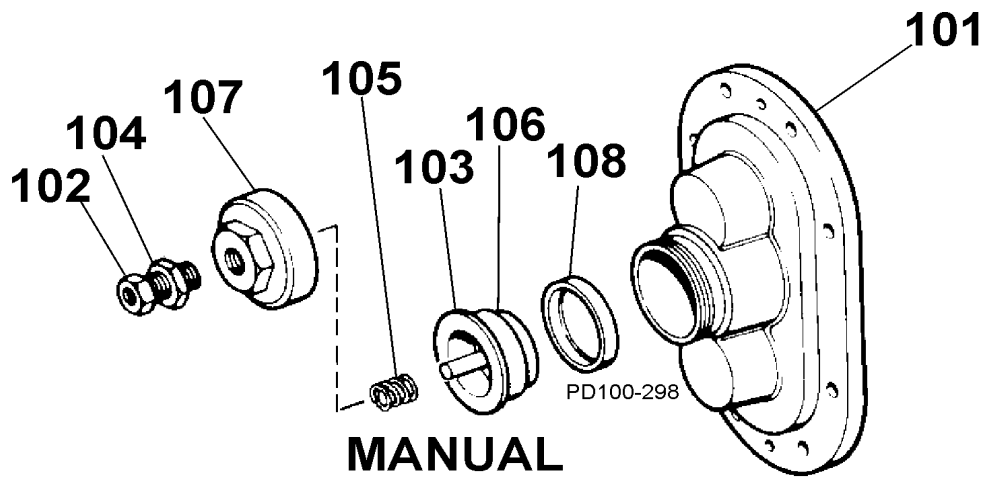
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103670	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103670	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103670	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

030 - 034-U2 Vented Cover Parts Diagram



## 040-U2 PUMP PARTS PRICE LIST

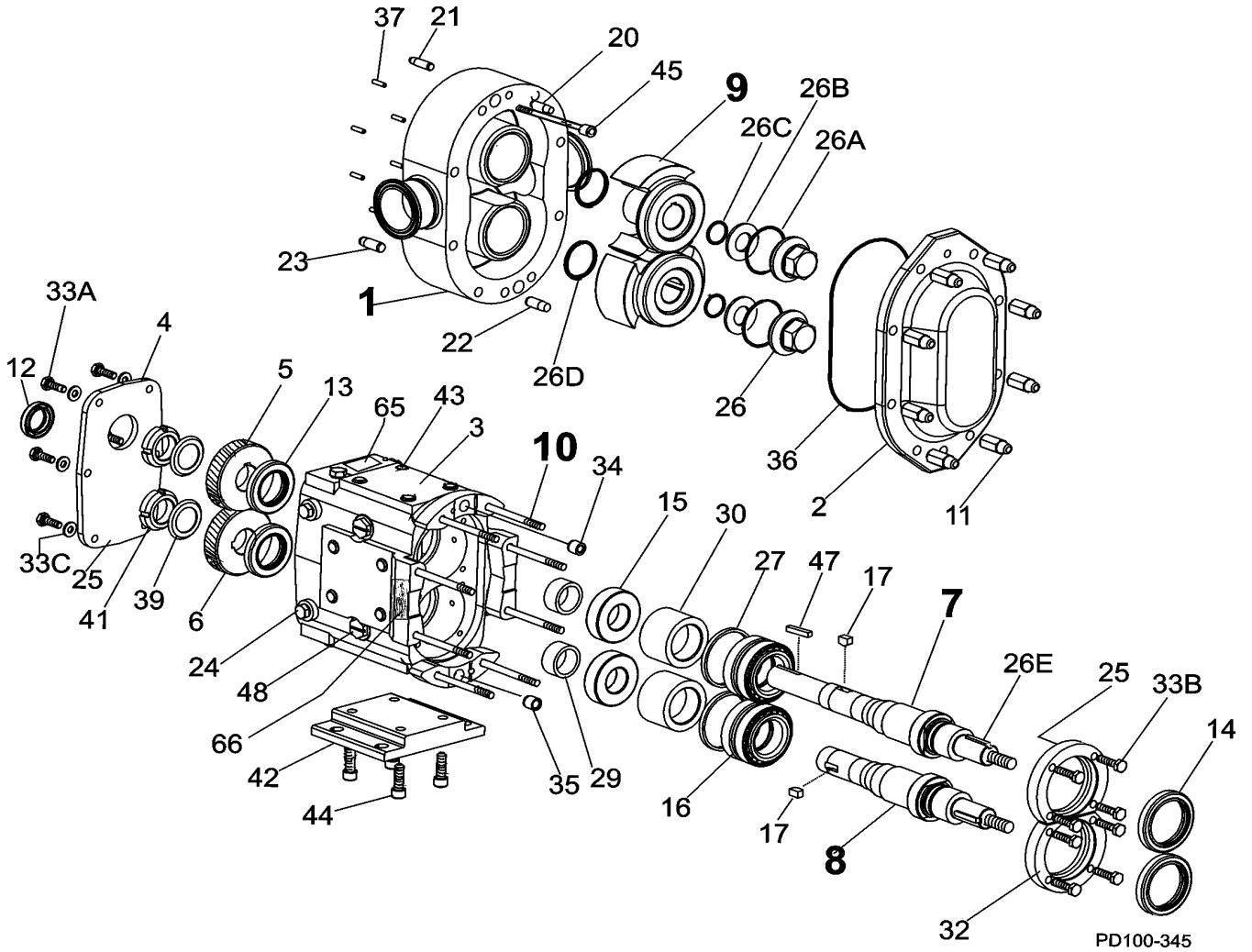
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	040-U2 Pump Body	1	See Note 1	1
	040-U2 Pump Body with Flush	1	See Note 1	1
7	Drive Shaft	1	118722	
8	Short Shaft	1	118723	
9	040-U2 Rotor, Twin Wing, Alloy 88	2	118766	2
	040-U2 Rotor, Twin Wing, 316SS	2	118779	2
10	Stud	8	118897	
	Stud, Jacketed Cover	8	118898	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.



# 040-U2 Pump Parts Diagram



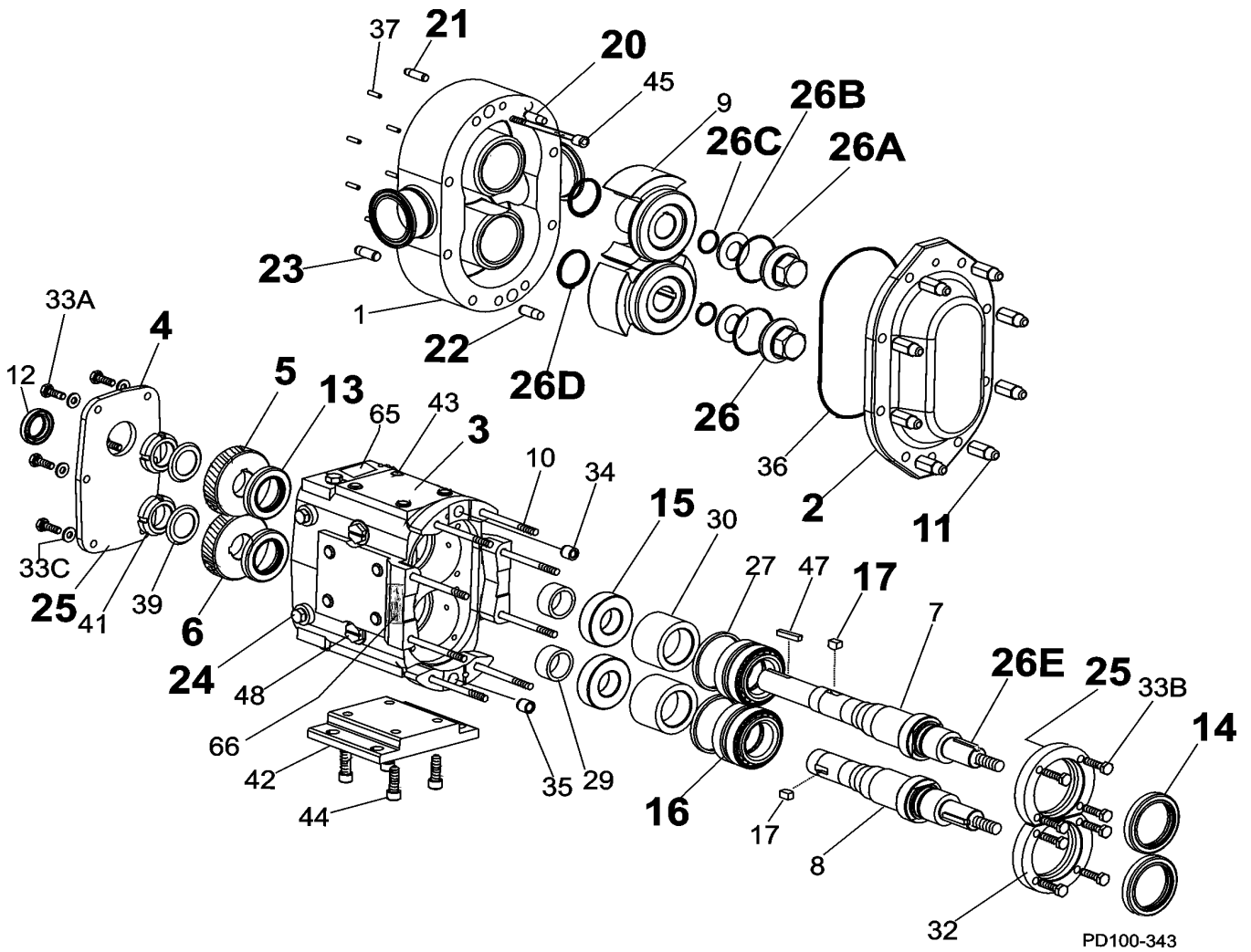
**040-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	101845	
	Jacketed Cover	1	107666	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00109	
	Manual (under 150 PSI)	1	CVR00067	
	Pneumatic Rubber Diaphragm	1	CVR00075	
	Pneumatic Piston	1	CVR00076	
3	Gear Case, CI	1	102277	
	Gear Case, SS; Optional	1	101833	
4	Gear Case Cover, Steel	1	040 106 000	
	Gear Case Cover, SS; Optional	1	102281	
5	Gear, Drive Shaft, Spur	1	107999	
6	Gear, Short Shaft, Spur	1	107999	
11	Hex Nut	8	108370	
	Wing Nut; Optional	8	105851	
12	Oil Seal, Gear Case Cover	1	000 030 013	
13	Oil Seal, Gear Case Rear	2	000 030 014	
14	Grease Seal, Bearing Retainer	2	101717	
	Bearing Isolator Kit, includes SS Bearing Retainer	2	X06639-1	
15	Bearing, Rear	2	030 035 000	
16	Bearing, Front	2	101715	
17	Key, Gear	2	BD0 037 000	
20	Dowel Pin, Upper Cover Side	1	BD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	BD0 040 200	
22	Dowel Pin, Lower Cover Side	1	BD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	BD0 040 300	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 003	
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101805	
* * * 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70130	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70130	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70130	
26B	Washer, Belleville	2	101692	
* * * 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70115	
	<b>O-Ring, Retainer, EPDM</b>	2	E70115	
	<b>O-Ring, Retainer, FKM</b>	2	V70115	
* * * 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70127	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70127	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70127	
* 26E	<b>Key, Rotor</b>	2	101821	

**NOTES:**

\* Recommended Spare Parts

# 040-U2 Common Parts Diagram



PD100-343

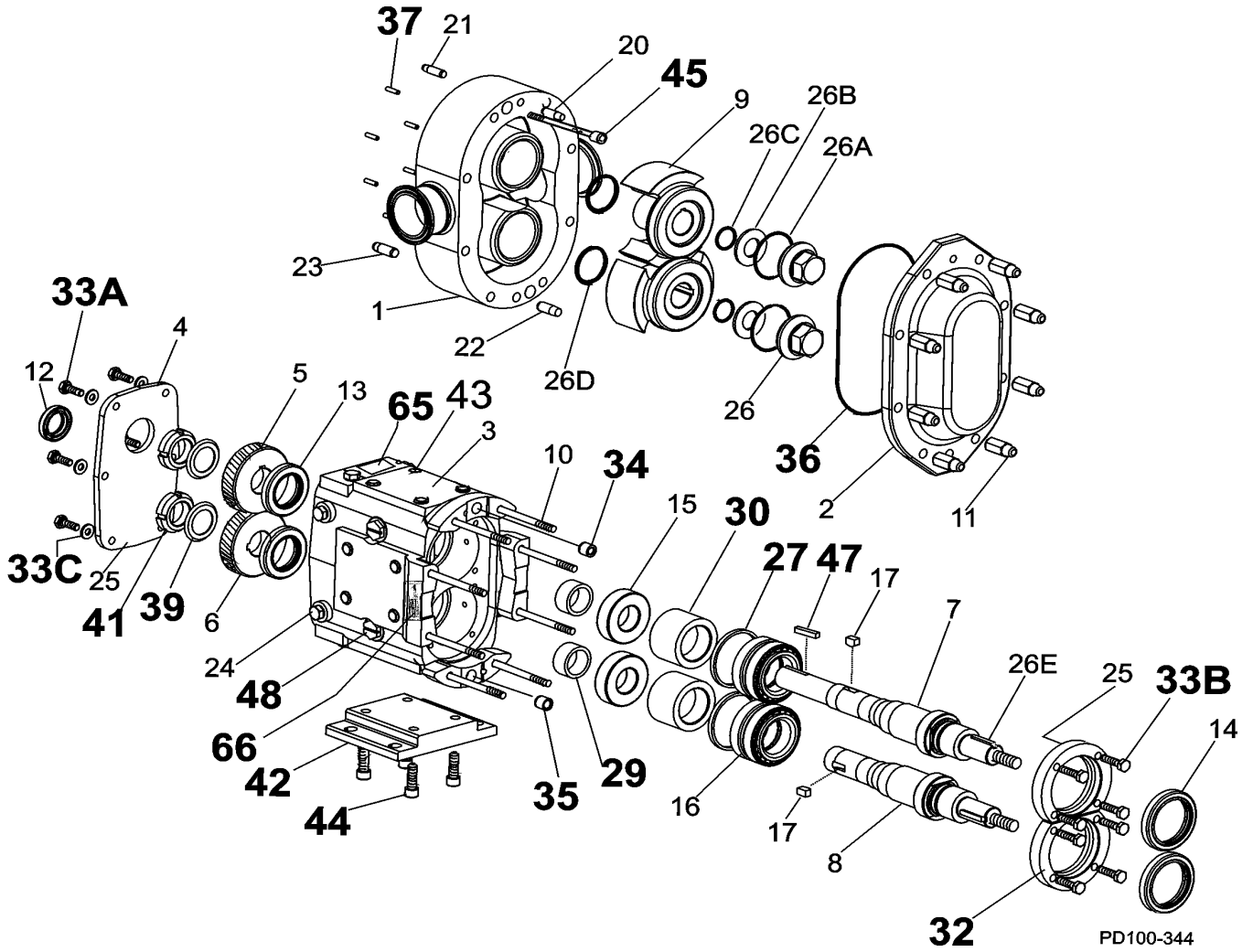
## 040-U2 COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
27	Shim Kit	2	117890	
29	Spacer, Gear to Rear Bearing	2	030 055 000	
30	Bearing Spacer	2	101815	
32	Bearing Retainer, Front	2	101811	
33A	5/16-18 x 3/4" HHCS, STD	6	30-283	
	5/16-18 x 3/4" HHCS, SS	6	30-151	
33B	5/16-18 x 3/4" BSHCS, STD	8	30-296	
	5/16-18 x 3/4" SHCS, SS	8	30-29	
33C	5/16" Flat Washer	6	43-194	
34	Dowel Bushing, Upper	1	BD0 116 000	
35	Dowel Bushing, Lower	1	BD0 116 100	
* * *	<b>O-Ring, Pump Cover, Buna N</b>	1	N70259	
	<b>O-Ring, Pump Cover, EPDM</b>	1	E70259	
	<b>O-Ring, Pump Cover, FKM</b>	1	V70259	
37	Stop Pin, Seal	6	101719	
39	Lockwasher, Gear	2	CD0 036 W00	
41	Locknut, Gear	2	CD0 036 N00	
42	Gear Case Shim, CI	1	040 110 000	
	Gear Case Shim, SS; Optional	1	102285	
	Pump Pedestal, 6.25", Optional	1	BD0 110 SM0	
43	Plastic Cap Plug, 3/8"	8	000 121 002	
44	3/8-16 x 1" SHCS, STD	4	30-344	
	3/8-16 x 1" SHCS, SS; Optional	4	30-189	
45	Body Retaining Screw, 1/4-20 x 2"	2	30-211	
47	Key, Coupling - 1/4 x 1/4 x 1-3/4"	1	000 037 002	
48	Cleanout Plug	2	41013	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-63	
67	Grease Fitting, 1/8"	4	BD0 092 000	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

\* Recommended Spare Parts

# 040-U2 Common Parts Diagram



PD100-344

## 040-U2 SEAL PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
*				
*	<b>91</b>			
	O-Ring, Inner Seal, Buna N	2	N70031	25
	O-Ring, Body, EPDM	2	E70031	
	O-Ring, Body, FKM	2	V70031	
*	<b>92</b>			
	O-Ring, Shaft, Buna N	2	N70029	25
	O-Ring, Shaft, EPDM	2	E70029	25
	O-Ring, Shaft, FKM	2	V70029	
*	<b>93</b>			
	Seal Seat, Ceramic	2	101670	
	Seal Seat, Silicon Carbide	2	101671	
*	<b>94</b>			
	Seal Inner, Carbon	2	101655	
	Seal Inner, Ceramic	2	101656	
	Seal Inner, Silicon Carbide	2	101657	
	Seal Inner, Tungsten Carbide	2	101658	
*	<b>95</b>			
	Wave Spring, Inner Seal	2	101685	
*	<b>96</b>			
	O-Ring, Outer Seal, Buna N	2	N70041	8
	O-Ring, Outer Seal, EPDM	2	E70041	8
	O-Ring, Outer Seal, FKM	2	V70041	8
*	<b>97</b>			
	Wave Spring, Outer Seal	2	101686	8
*	<b>98</b>			
	Outer Seal, Carbon	2	101680	8

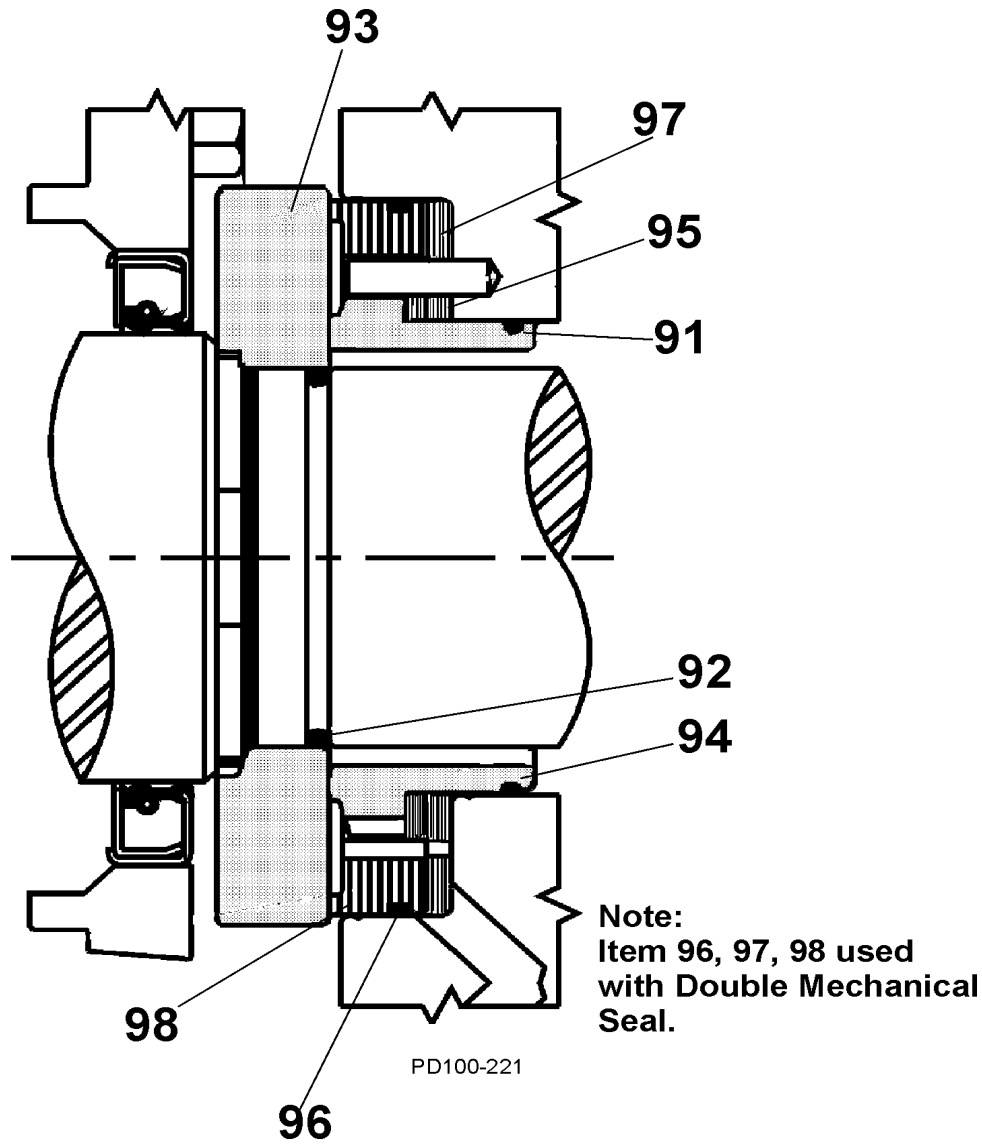
**NOTES:**

8. Used with double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

# 040-U2 Seal Parts Diagram



## 040-U2 VENTED COVER PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103670	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103670	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103670	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
	<b>Piston Seal, O-Ring</b>	1	N70218	9

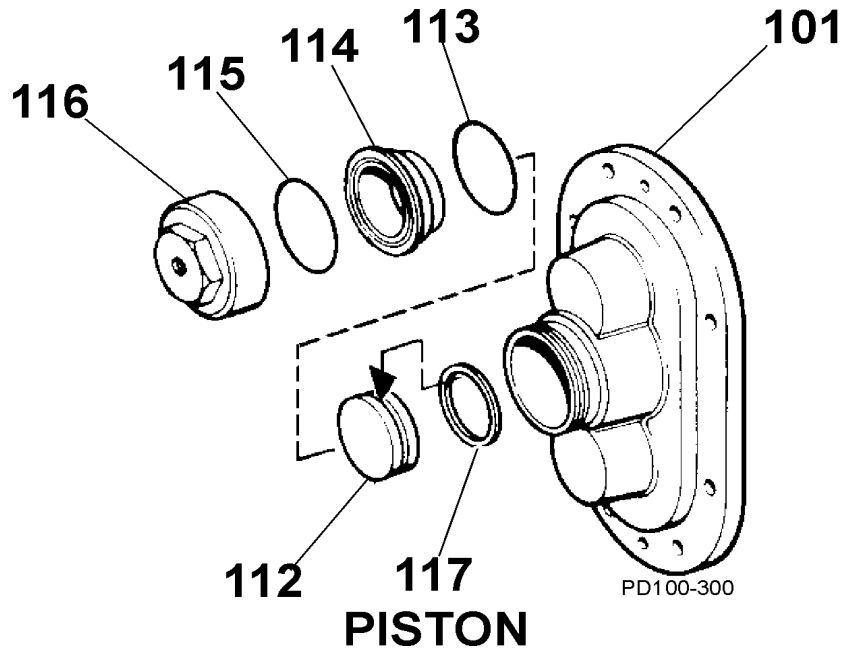
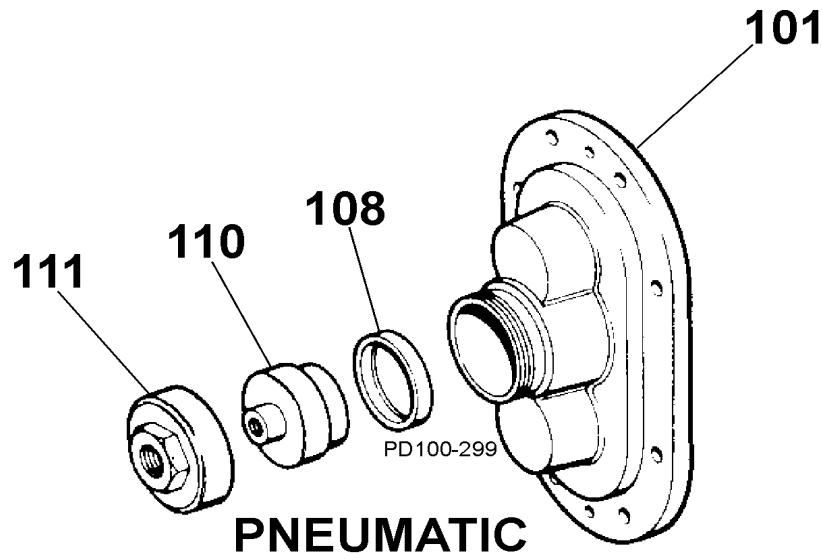
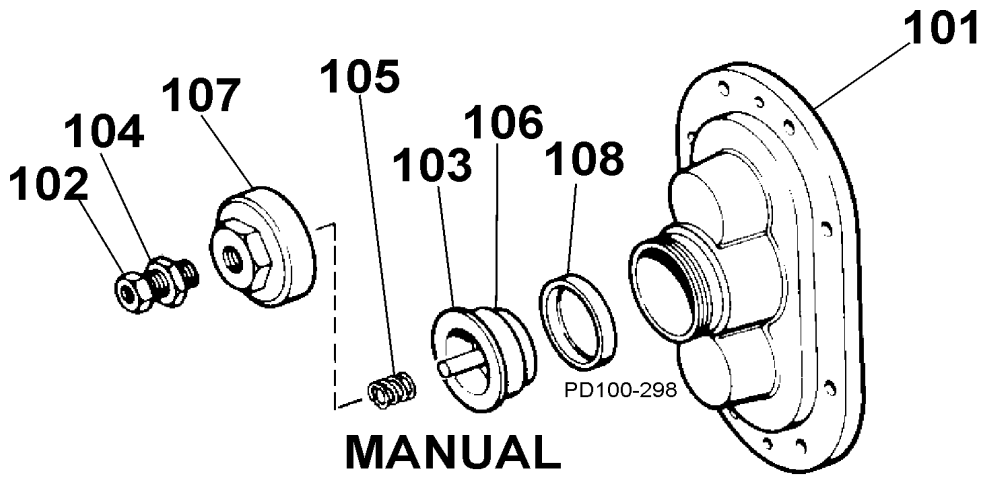
**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**



040-U2 Vented Cover Parts Diagram



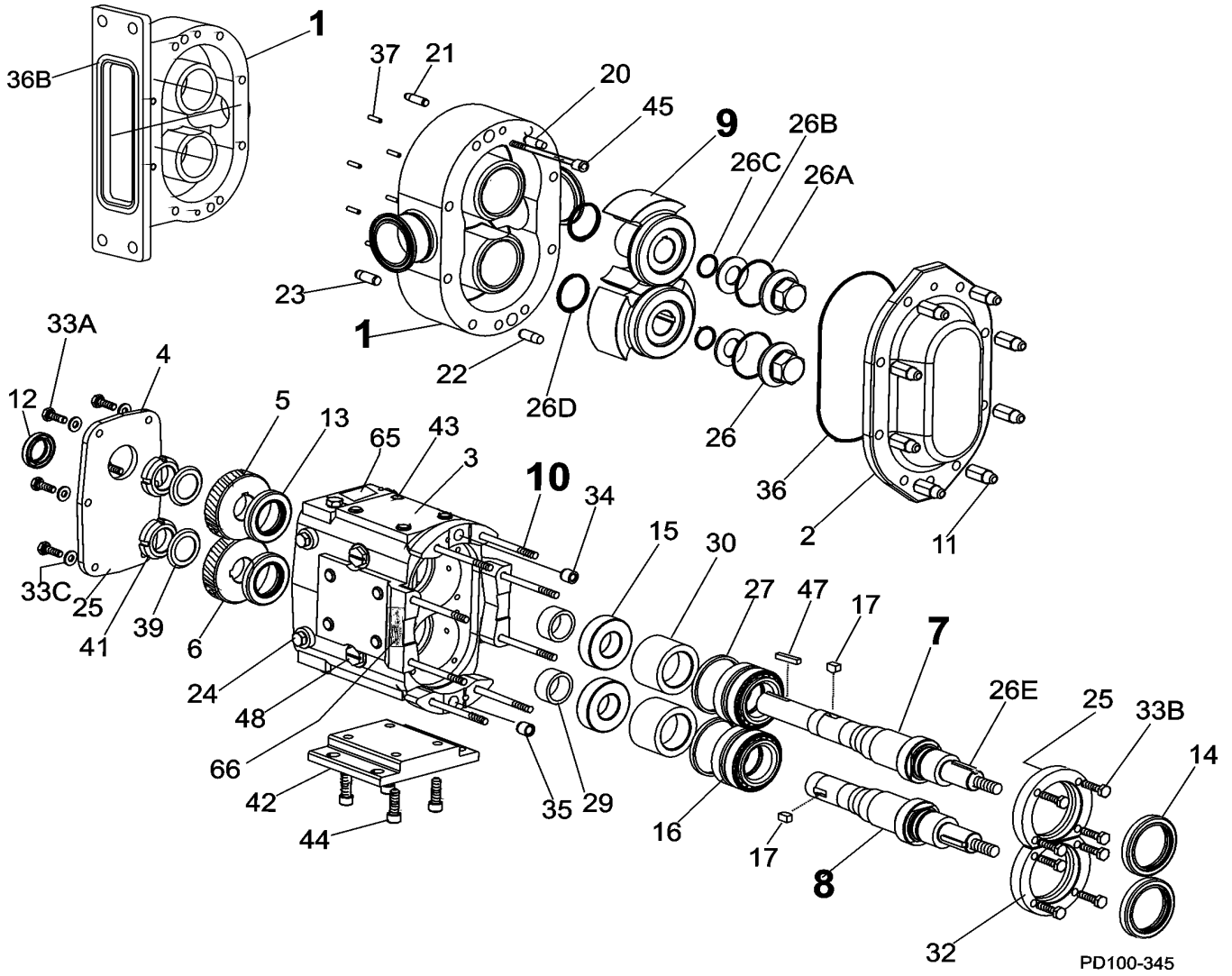
**045 - 060 - 064 - 130 - 134-U2 PUMP PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>1</b>	045-U2 Pump Body	1	See Note 1	1
	045-U2 Pump Body with Flush	1	See Note 1	1
	060-U2 Pump Body	1	See Note 1	1
	060-U2 Pump Body with Flush	1	See Note 1	1
	064-U2 Rectangular Flange Inlet Body	1	See Note 1	1
	064-U2 Rect. Flange Inlet Body with Flush	1	See Note 1	1
	130-U2 Pump Body	1	See Note 1	1
	130-U2 Pump Body with Flush	1	See Note 1	1
	134-U2 Rectangular Flange Inlet Body	1	See Note 1	1
	134-U2 Rect. Flange Inlet Body with Flush	1	See Note 1	1
<b>7</b>	045-U2 Drive Shaft	1	110021	
	060-064-U2 Drive Shaft	1	108411	
	130-134-U2 Drive Shaft	1	108413	
<b>8</b>	045-U2 Short Shaft	1	110022	
	060-064-U2 Short Shaft	1	108412	
	130-134-U2 Short Shaft	1	108414	
<b>9</b>	045-U2 Rotor, Twin Wing, Alloy 88	2	107252	2
	045-U2 Rotor, Twin Wing, 316SS	2	107264	2
	045-U2 Rotor, Single Wing, Alloy 88	2	117105	2
	060-064-U2 Rotor, Twin Wing, Alloy 88	2	102163	2
	060-064-U2 Rotor, Twin Wing, 316SS	2	102226	2
	060-U2 Rotor, Single Wing, Alloy 88	2	117117	2, 12, 13
	130-134-U2 Rotor, Twin Wing, Alloy 88	2	102175	2
	130-134-U2 Rotor, Twin Wing, 316SS	2	102232	2
	130-U2 Rotor, Single Wing, Alloy 88	2	117129	2, 12A, 13
<b>10A</b>	045-U2 Stud	8	107242	
<b>10B</b>	045-U2 Stud, Jacketed Cover	8	111584	
<b>10C</b>	060-U2 Stud	8	108843	
<b>10D</b>	060-U2 Stud, Jacketed Cover	8	108846	
<b>10E</b>	064-U2 Stud	6	108843	
	064-U2 Stud	2	0C1 050 000	
<b>10F</b>	064-U2 Stud, Jacketed Cover	6	108846	
	064-U2 Stud, Jacketed Cover	2	35556	
<b>10G</b>	130-U2 Stud	8	101722	
<b>10H</b>	130-U2 Stud, Jacketed Cover	8	130 011 001	
<b>10I</b>	134-U2 Stud	6	101722	
	134-U2 Stud	2	0C1 050 000	
<b>10J</b>	134-U2 Stud, Jacketed Cover	6	130 011 001	
	134-U2 Stud, Jacketed Cover	2	35556	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
12. Replaces P/N 104728 (straight) and P/N 104857 (90 degree) rotors.
- 12A. Replaces P/N 104746 (straight) and P/N 104875 (90 degree) rotors.
13. Single wing rotors can not be used with Rectangular Flange Inlet Pumps.

045 - 060 - 064 - 130 - 134-U2 Pump Parts Diagram



045 - 060 - 064 - 130 - 134-U2 COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	101848	
	Jacketed Cover	1	107668	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00077	
	Manual (under 150 PSI)	1	CVR00051	
	Pneumatic Rubber Diaphragm	1	CVR00078	
	Pneumatic Piston	1	CVR00079	
3	Gear Case, CI	1	070 005 000	
	Gear Case, SS; Optional	1	101834	
4	Gear Case Cover, Steel	1	070 106 000	
	Gear Case Cover, SS; Optional	1	102282	
5	Gear, Drive Shaft, Spur	1	107404	
6	Gear, Short Shaft, Spur	1	107404	
11	Hex Nut	8	108371	
	Wing Nut, Optional	8	105852	
12	Oil Seal, Gear Case Cover	1	000 030 012	
13	Oil Seal, Gear Case Rear	2	000 030 011	
14	Grease Seal, Bearing Retainer	2	101829	
	Bearing Isolator Kit, Includes STD Bearing Retainer	2	X06640-1	
	Bearing Isolator Kit, Includes SS Bearing Retainer	2	X06640-2	
15	Bearing, Rear	2	107186	
16	Bearing, Front	2	060 036 000	
17	Key, Gear	2	060 037 000	
20	Dowel Pin, Upper Cover Side	1	CD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	CD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	CD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	CD0 040 R10	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101806	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70227	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70227	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70227	
26B	Belleville Washer	2	101693	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70119	
	<b>O-Ring, Retainer, EPDM</b>	2	E70119	
	<b>O-Ring, Retainer, FKM</b>	2	V70119	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70224	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70224	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70224	

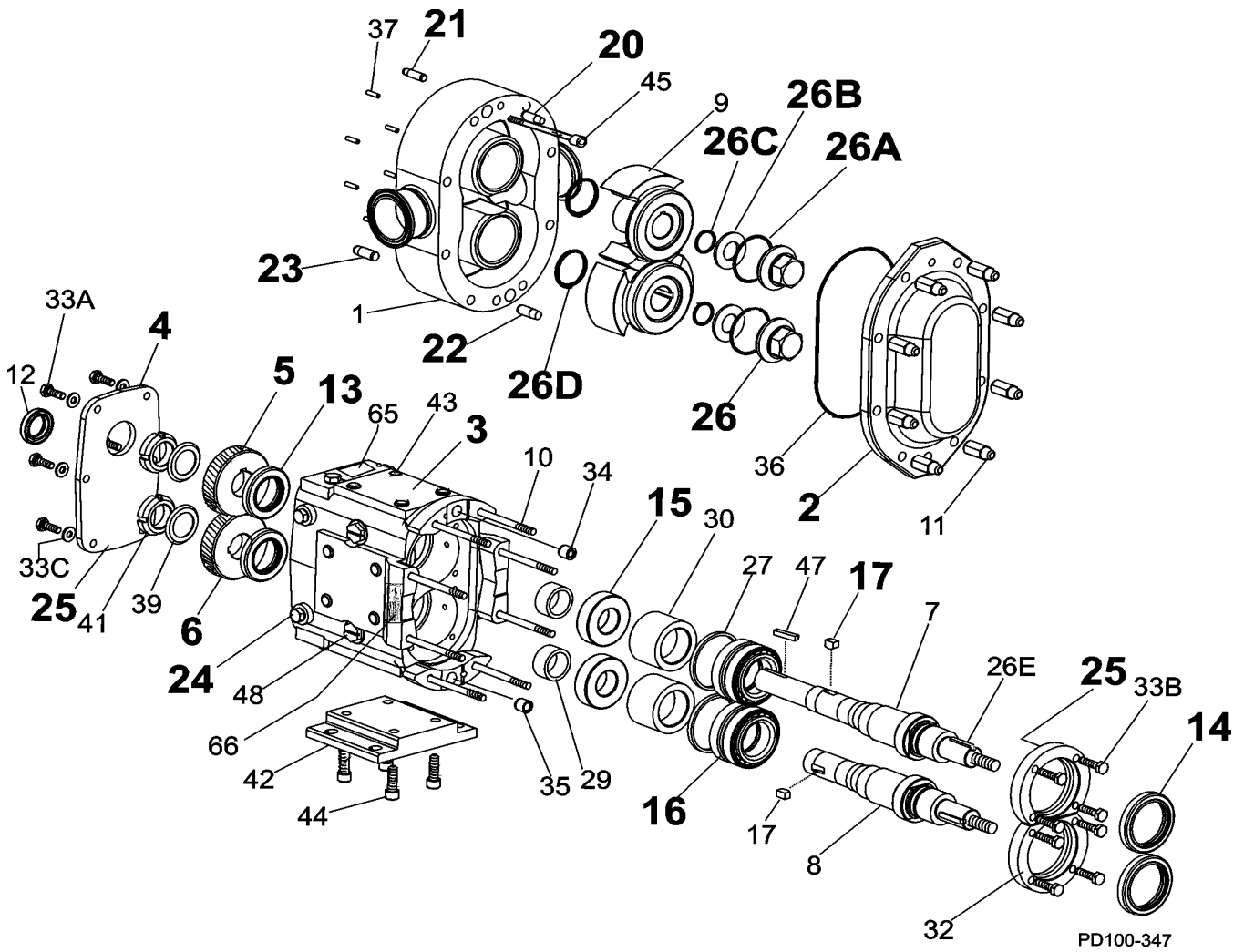
NOTES:

40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended Spare Parts**

045 - 060 - 064 - 130 - 134-U2 Common Parts Diagram



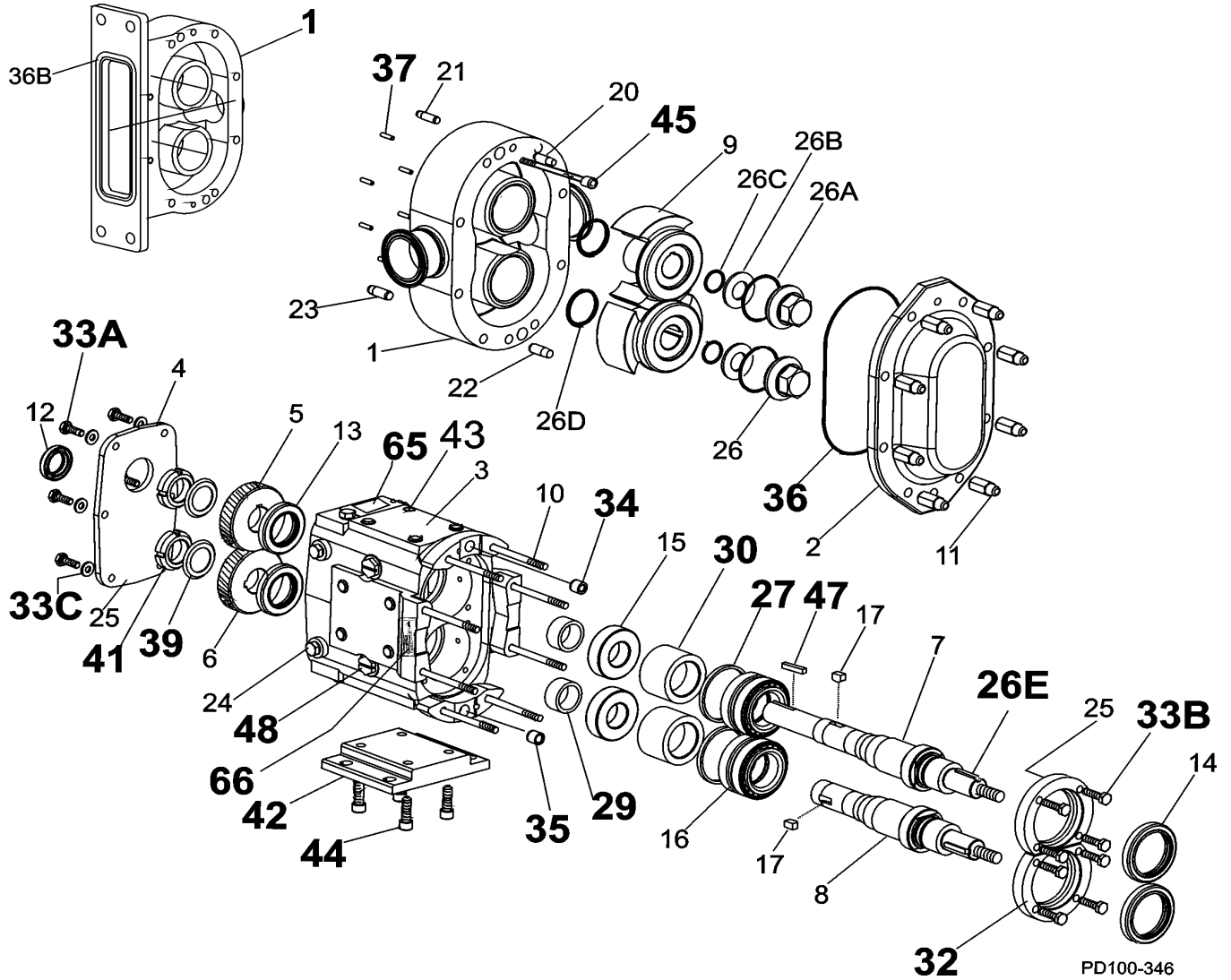
**045 - 060 - 064 - 130 - 134-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
26E	045-U2 Key, Rotor	2	110926	
	060-064-U2 Key, Rotor	2	101823	
	130-134-U2 Key, Rotor	2	101825	
27	Shim Kit	2	117891	
29	Spacer, Gear to Rear Bearing	2	107187	
30	Bearing Spacer	2	060 055 003	
31	Grease Retainer, Rear Bearing	2	STD 091 002	
32	Bearing Retainer, Front, STD	2	060 080 000	
	Bearing Retainer, Front, SS	2	101812	
33A	3/8-16 x 3/4" HHCS, STD Gear Case Cover	6	30-314	
	3/8-16 x 3/4" HHCS, SS Gear Case Cover	6	30-50	
33B	3/8-16 x 1-1/4" HHCS, STD Bearing Retainer	8	30-351	
	3/8-16 x 1-1/4" HHCS, SS Bearing Retainer	8	30-60	
33C	3/8" Flat Washer, Gear Case Cover	6	43-189	
34	Dowel Bushing, Upper	1	CD0 116 000	
35	Dowel Bushing, Lower	1	CD0 116 100	
* * * * * *	36 <b>O-Ring, Pump Cover, Buna N</b>	1	N70373	
	<b>O-Ring, Pump Cover, EPDM</b>	1	E70373	
	<b>O-Ring, Pump Cover, FKM</b>	1	V70373	
	<b>O-Ring, Pump Cover, Silicone</b>	1	S75373	
36B	<b>064-U2 O-Ring, Rectangular Flange</b>	1	N70366	
	<b>134-U2 O-Ring, Rectangular Flange</b>	1	N70369	
37	Stop Pin, Seal	6	101720	
39	Lockwasher, Gear	2	STD 136 009	
41	Locknut, Gear	2	STD 236 009	
42	Gear Case Shim, CI	1	070 110 000	
	Gear Case Shim, SS; Optional	1	102286	
	Pump Pedestal, 5.5", Optional	1	CD0 110 SM5	
	Pump Pedestal, 10", Optional	1	CD0 110 SM1	
43	Plastic Cap Plug	6	000 121 001	
44	1/2-13 x 1-1/4" SHCS	4	30-275	
	1/2-13 x 1-1/4" SS SHCS	4	30-503	
45	045-U2 Body Retaining Screws, 5/16-8 x 2-1/2"	2	30-615	
	060-064-U2 Body Retaining Screws, 5/16-8 x 3"	2	30-319	
	130-134-U2 Body Retaining Screws, 5/16-8 x 4"	2	30-423	
46	Eye Bolt, 1/2 -13	2	30-360	
47	Key, Coupling - 3/8 x 3/8 x 1-5/8"	1	000 037 003	
48	Cleanout Plug	2	41013	

**NOTES:**

**\* Recommended Spare Parts**

045 - 060 - 064 - 130 - 134-U2 Common Parts Diagram



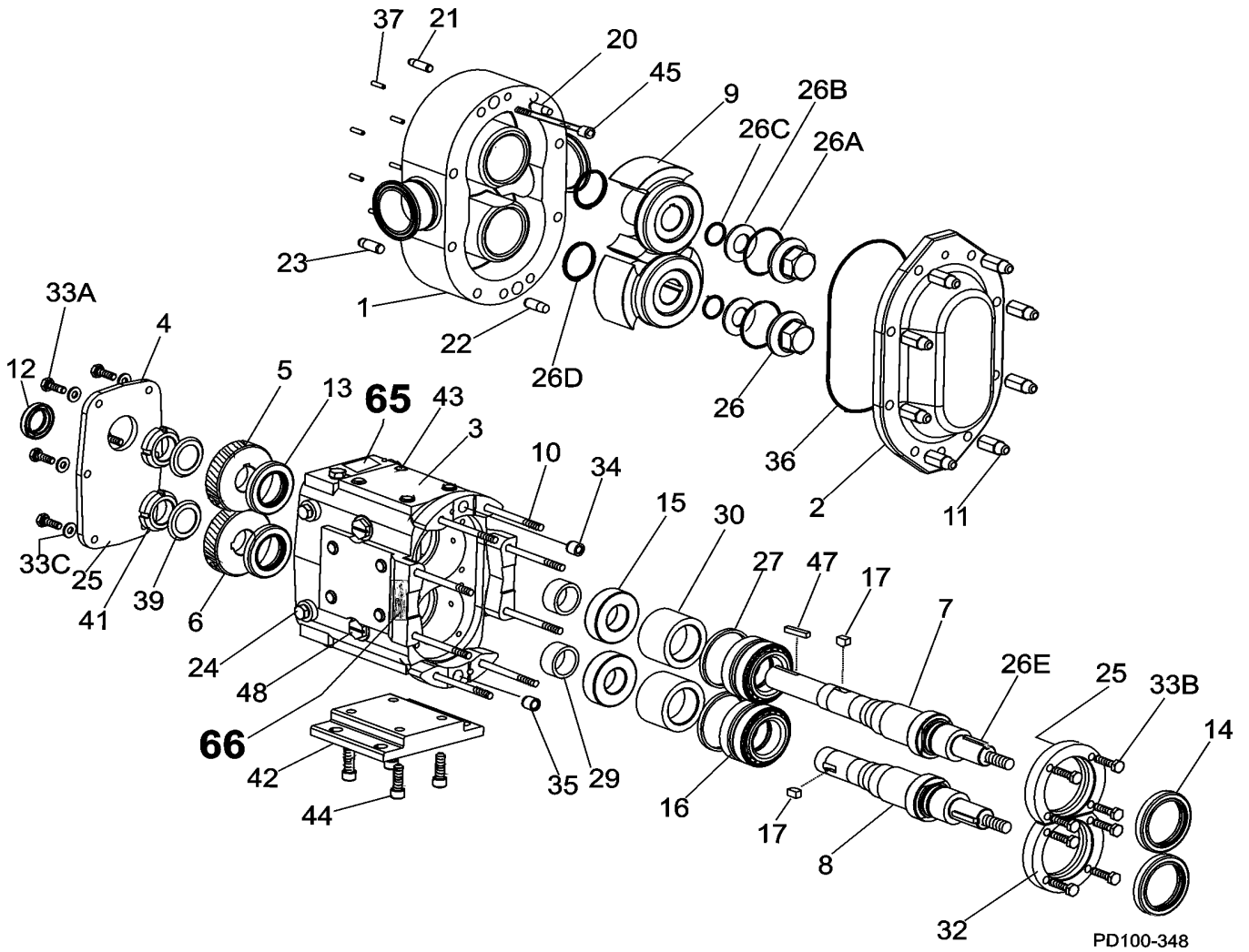
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**045 - 060 - 064 - 130 - 134-U2 COMMON PARTS PRICE LIST**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY. PER PUMP</b>	<b>PART NO.</b>	<b>NOTES</b>
<b>61</b>	Name Plate, Sanitary	1	001 061 002	
<b>62</b>	#2 x .125" RHDS	4	30-355	
<b>65</b>	Caution Plate	2	33-62	
<b>66</b>	Warning Label	2	33-60	
<b>67</b>	045-060-130-U2 Grease Fitting, 1/8"	4	BD0 092 000	
	064-134-U2 Grease Fitting, 1/8"	4	BD0 092 100	
<b>68</b>	Plastic Cap, Grease Fitting	4	BD0 093 000	



045 - 060 - 064 - 130 - 134-U2 Common Parts Diagram



**045 - 060 - 064 - 130 - 134-U2 SEAL PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70035	
* 91	O-Ring, Inner Seal, EPDM	2	E70035	
* 91	O-Ring, Inner Seal, FKM	2	V70035	
* 92	O-Ring, Shaft, Buna N	2	N70133	25
* 92	O-Ring, Shaft, EPDM	2	E70133	25
* 92	O-Ring, Shaft, FKM	2	V70133	
* 93	Seal Seat, Ceramic	2	101673	
* 93	Seal Seat, Silicon Carbide	2	101674	
* 94	Seal Inner, Carbon (1 Piece)	2	101659	
* 94	Seal Inner, Ceramic	2	101660	
* 94	Seal Inner, Silicon Carbide	2	101661	
* 94	Seal Inner, Tungsten Carbide	2	101662	
95	Wave Spring, Inner Seal	2	101687	
* 96	O-Ring, Outer Seal, Buna N	2	N70043	8
* 96	O-Ring, Outer Seal, EPDM	2	E70043	8
* 96	O-Ring, Outer Seal, FKM	2	V70043	8
97	Wave Spring, Outer Seal	2	101688	
* 98	Outer Seal, Carbon	2	101681	8

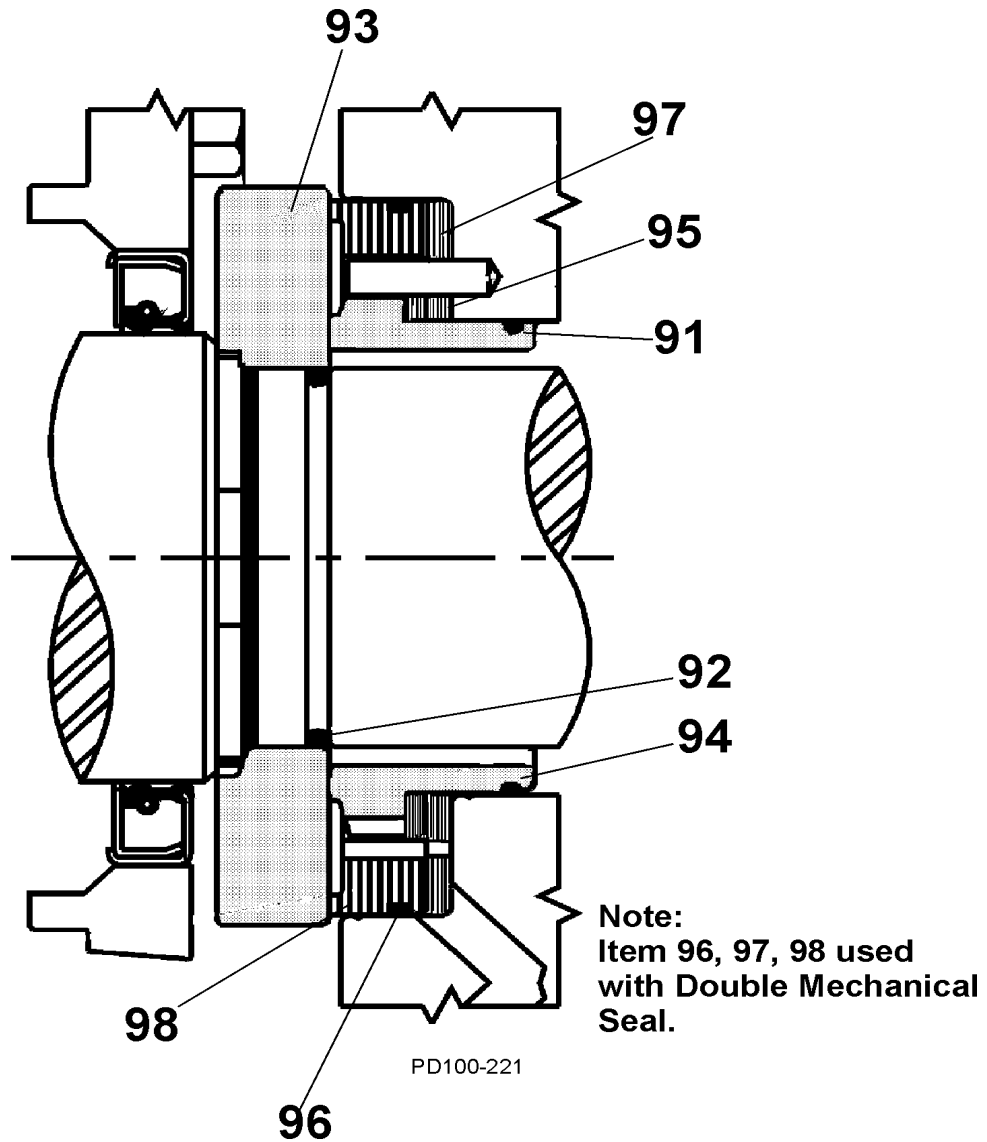
**NOTES:**

8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

045 - 060 - 064 - 130 - 134 -U2 Seal Parts Diagram



**045 - 060 - 064 - 130 - 134-U2 VENTED COVER PRICE LIST**

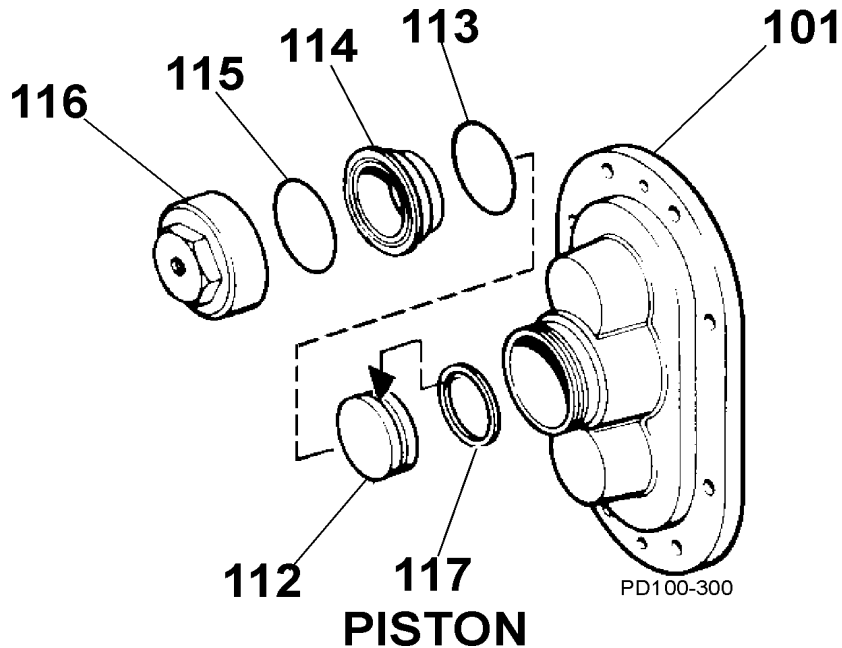
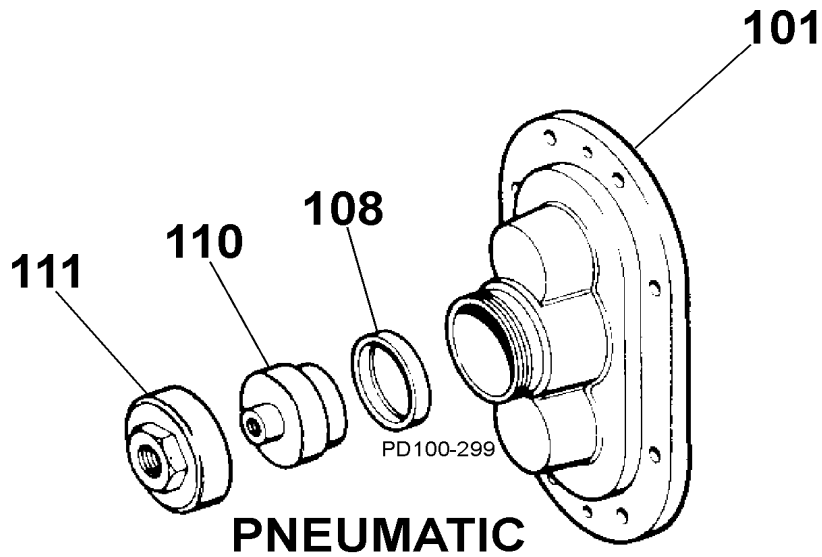
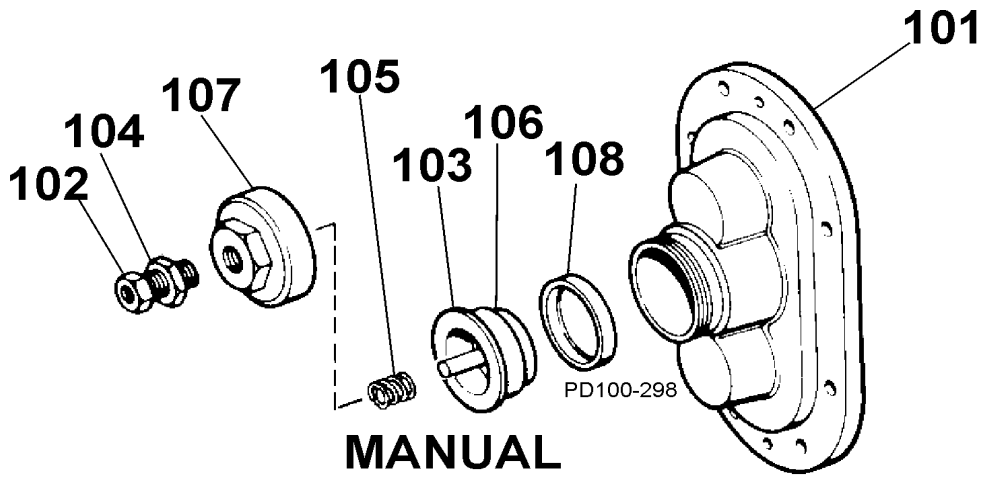
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103671	
102	Adjusting Screw	1	113657	
103	Spring Plunger	1	113397	
104	Locknut	1	GD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	113523	
	Spring, High (more than 150 PSI)	1	113400	
106	Diaphragm Bushing	1	CD0 077 000	
107	Cover Nut	1	113398	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	CD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103671	
* 108	<b>Diaphragm, Buna N</b>	1	CD0 078 000	
110	Diaphragm Bushing	1	CD0 077 P00	
111	Cover Nut	1	CD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103671	
112	Piston	1	CD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70239	
114	Diaphragm Bushing	1	CD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70240	
116	Cover Nut	1	CD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	CD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70236	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

045 - 060 - 064 - 130 - 134-U2 Vented Cover Parts Diagram



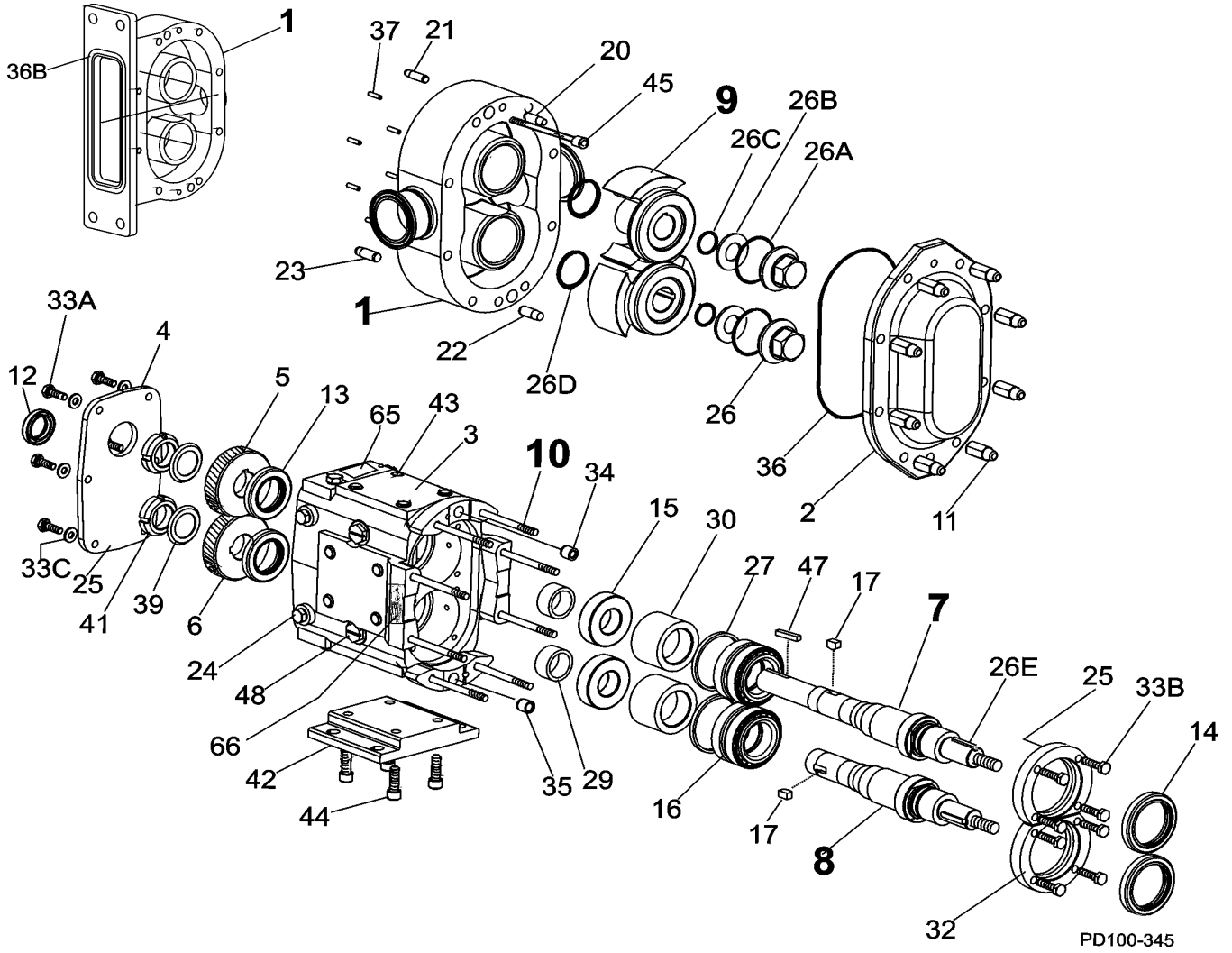
**180 - 184 - 220 - 224-U2 PUMP PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>1</b>	180-U2 Pump Body	1	See Note 1	1
	180-U2 Pump Body with Flush	1	See Note 1	1
	184-U2 Pump Body	1	See Note 1	1
	184-U2 Pump Body with Flush	1	See Note 1	1
	220-U2 Pump Body	1	See Note 1	1
	220-U2 Pump Body with Flush	1	See Note 1	1
	224-U2 Rectangular Flange Inlet Body	1	See Note 1	1
	224-U2 Rect. Flange Inlet Body with Flush	1	See Note 1	1
<b>7</b>	180-184-U2 Drive Shaft	1	110023	
	220-224-U2 Drive Shaft	1	108415	
<b>8</b>	180-184-U2 Short Shaft	1	110024	
	220-224 Short Shaft	1	108416	
<b>9</b>	180-184-U2 Rotor, Twin Wing, Alloy 88	2	107273	2
	180-184-U2 Rotor, Twin Wing, 316SS	2	107285	2
	220-224 -U2 Rotor, Twin Wing, Alloy 88	2	102187	2
	220-224 -U2 Rotor, Twin Wing, 316SS	2	102238	2
	220-U2 Single Wing, Alloy 88	2	117141	2, 12, 13
<b>10A</b>	180-184-U2 Stud	8	107243	
<b>10B</b>	180-184-U2 Stud, Jacketed Cover	8	112629	
<b>10C</b>	220-U2 Stud	8	108844	
<b>10D</b>	220-U2 Stud, Jacketed Cover	8	108847	
<b>10E</b>	224-U2 Stud	6	108844	
	224-U2 Stud	2	35550	
<b>10F</b>	224-U2 Stud, Jacketed Cover	6	108847	
	224-U2 Stud, Jacketed Cover	2	36144	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
12. Replaces P/N 104764 (straight) and P/N 104893 (90 degree) rotors.
13. Single wing rotors can not be used with Rectangular Flange Inlet Pumps.

# 180 - 184 - 220 - 224-U2 Pump Parts Diagram



**180 - 184 - 220 - 224-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	101851	
	Jacketed Cover	1	107670	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00112	
	Manual (under 150 PSI)	1	CVR00021	
	Pneumatic Piston	1	CVR00080	
3	Gear Case, CI	1	230 005 000	
	Gear Case, SS; Optional	1	101836	
4	Gear Case Cover, Steel	1	230 106 000	
	Gear Case Cover, SS; Optional	1	102283	
5	Gear, Drive Shaft, Spur	1	110932	
6	Gear, Short Shaft, Spur	1	110932	
11	Hex Nut	8	108372	
	Wing Nut, Optional	8	105853	
12	Oil Seal, Gear Case Cover	1	STD 030 006	
13	Oil Seal, Gear Case Rear	2	STD 119 002	
14	Grease Seal, Bearing Retainer	2	STD 030 002	
	Bearing Isolator Kit, Includes STD Bearing Retainer	2	X06634-1	
	Bearing Isolator Kit, Includes SS Bearing Retainer	2	X06634-2	
15	Bearing, Rear	2	200 035 000	
16	Bearing, Front	2	200 036 000	
17	Key, Gear	2	200 037 000	
20	Dowel Pin, Upper Cover Side	1	GD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	CD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	GD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	CD0 040 R10	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101807	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70235	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70235	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70235	
26B	Belleville Washer	2	101694	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70122	
	<b>O-Ring, Retainer, EPDM</b>	2	E70122	
	<b>O-Ring, Retainer, FKM</b>	2	V70122	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70230	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70230	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70230	

**NOTES:**

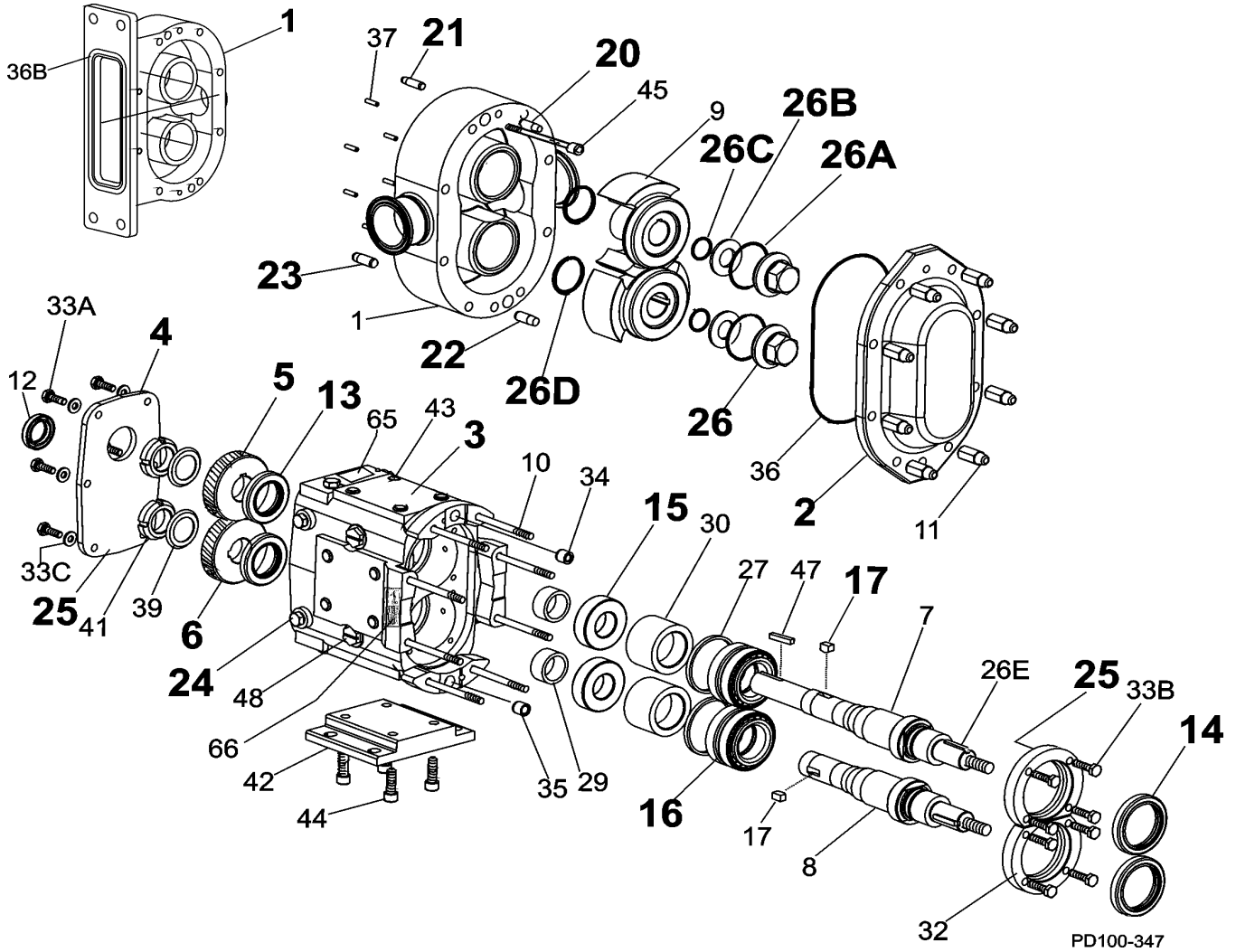
40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended spare parts**



180 - 184 - 220 - 224-U2 Common Parts Diagram



PD100-347

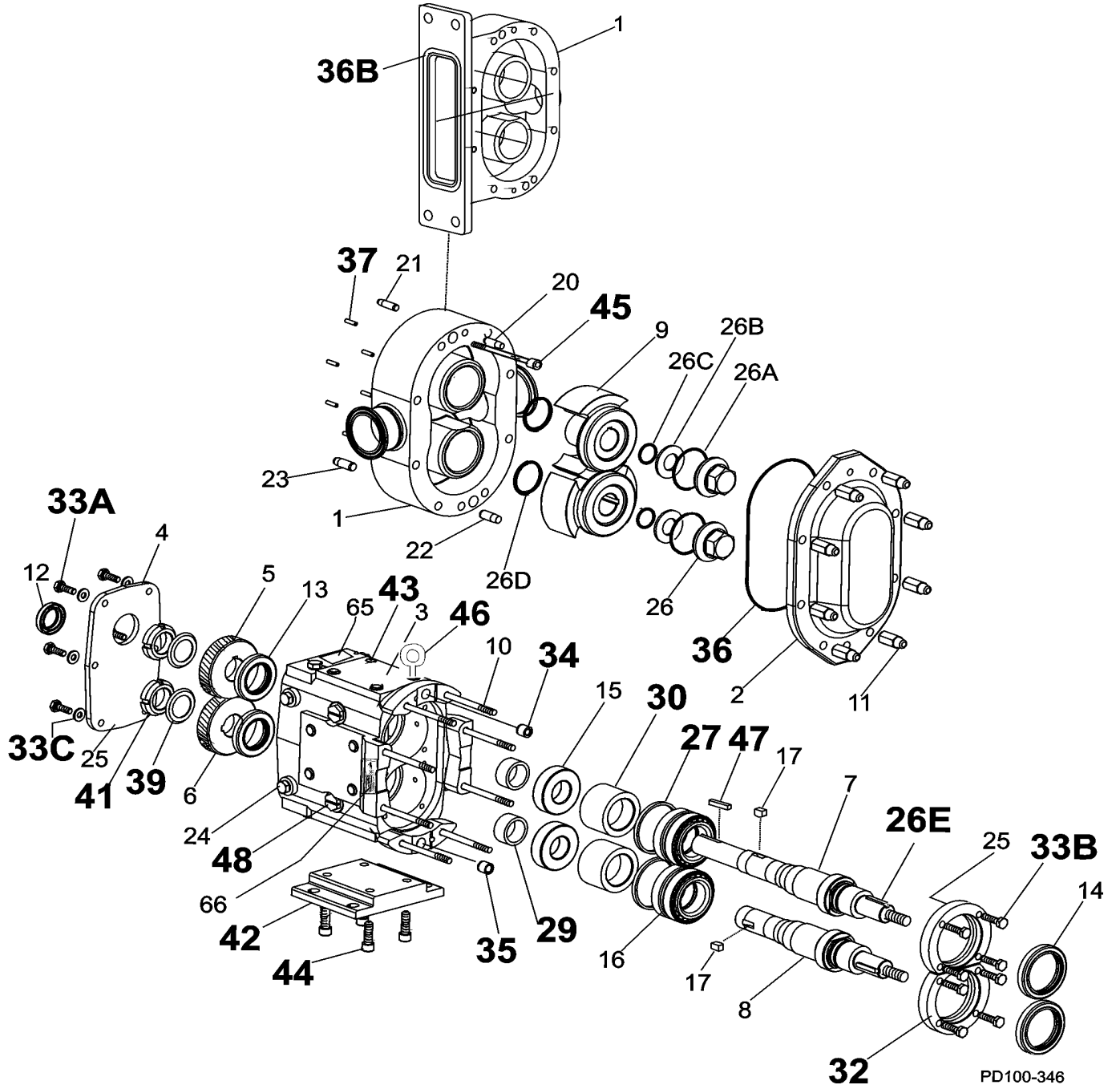
**180 - 220 - 224-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>26E</b>	180-184-U2 Key, Rotor	2	101828	
	220-224-U2 Key, Rotor	2	101827	
<b>27</b>	Shim Kit	2	117892	
<b>29</b>	Spacer, Gear to Rear Bearing	2	40878	
<b>30</b>	Bearing Spacer	2	40752	
<b>32</b>	Bearing Retainer, Front, STD	2	220 080 000	
	Bearing Retainer, Front, SS	2	101813	
<b>33A</b>	3/8-16 x 3/4" HHCS, STD Gear Case Cover	8	30-314	
	3/8-16 x 3/4" HHCS, SS Gear Case Cover	8	30-50	
<b>33B</b>	3/8-16 x 1-1/4" HHCS, STD Bearing Retainer	8	30-351	
	3/8-16 x 1-1/4" HHCS, SS Bearing Retainer	8	30-60	
<b>33C</b>	3/8" Flat Washer, Gear Case Cover	8	43-189	
<b>34</b>	Dowel Bushing, Upper	1	CD0 116 000	
<b>35</b>	Dowel Bushing, Lower	1	CD0 116 100	
* * * *	<b>36</b> O-Ring, Pump Cover, Buna N	1	N70381	
	O-Ring, Pump Cover, EPDM	1	E70381	
	O-Ring, Pump Cover, FKM	1	V70381	
	O-Ring, Pump Cover, Silicone	1	S75381	
* * *	<b>36B</b> 184-U2 O-ring, Rectangular Flange	1	N70374	
	224-U2 O-Ring, Rectangular Flange	1	N70272	
	224-U2 O-Ring, Rectangular Flange	1	N70376	
<b>37</b>	Stop Pin, Seal	6	101720	
<b>39</b>	Lockwasher, Gear	2	STD 136 011	
<b>41</b>	Locknut, Gear	2	STD 236 011	
<b>42</b>	Gear Case Shim, CI	1	230 110 000	
	Gear Case Shim, SS; Optional	1	102287	
	Pump Pedestal, 9", Optional	1	GD0 110 SM9	
	Pump Pedestal, 13", Optional	1	GD0 110 SM1	
<b>43</b>	Plastic Cap Plug	6	000 121 001	
<b>44</b>	1/2-13 x 2" SHCS	4	30-111	
	1/2-13 x 2" SS SHCS	4	30-44	
<b>45</b>	180-184-U2 Body Retaining Screws, 3/8-16 x 4"	2	30-323	
	220-224-U2 Body Retaining Screws, 3/8-16 x 4-1/2"	2	30-499	
<b>46</b>	Eye Bolt, 1/2 -13	2	30-360	
<b>47</b>	Key, Coupling - 1/2 x 1/2 x 1-7/8"	1	000 037 004	
<b>48</b>	Cleanout Plug	2	41013	
<b>61</b>	Name Plate, Sanitary	1	001 061 002	
<b>62</b>	#2 x .125" RHDS	4	30-355	
<b>65</b>	Caution Plate	2	33-62	
<b>66</b>	Warning Label	2	33-60	
<b>67</b>	180-184-220-U2 Grease Fitting, 1/8"	4	BD0 092 000	
	224-U2 Grease Fitting, 1/8"	4	BD0 092 100	
<b>68</b>	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

\* Recommended Spare Parts

180 - 184 - 220 - 224-U2 Common Parts Diagram



PD100-346

**180 - 184 - 220 - 224-U2 SEAL PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70041	25
* 91	O-Ring, Inner Seal, EPDM	2	E70041	
* 91	O-Ring, Inner Seal, FKM	2	V70041	
* 92	O-Ring, Shaft, Buna N	2	N70145	25
* 92	O-Ring, Shaft, EPDM	2	E70145	
* 92	O-Ring, Shaft, FKM	2	V70145	
* 93	Seal Seat, Ceramic	2	101676	
* 93	Seal Seat, Silicon Carbide	2	101677	
* 94	Seal Inner, Carbon (1 Piece)	2	101663	
* 94	Seal Inner, Ceramic	2	101664	
* 94	Seal Inner, Silicon Carbide	2	101665	
* 94	Seal Inner, Tungsten Carbide	2	101666	
95	Wave Spring, Inner Seal	2	101689	
* 96	O-Ring, Outer Seal, Buna N	2	N70046	8
* 96	O-Ring, Outer Seal, EPDM	2	E70046	8
* 96	O-Ring, Outer Seal, FKM	2	V70046	8
97	Wave Spring, Outer Seal	2	101690	
* 98	Outer Seal, Carbon	2	101682	8

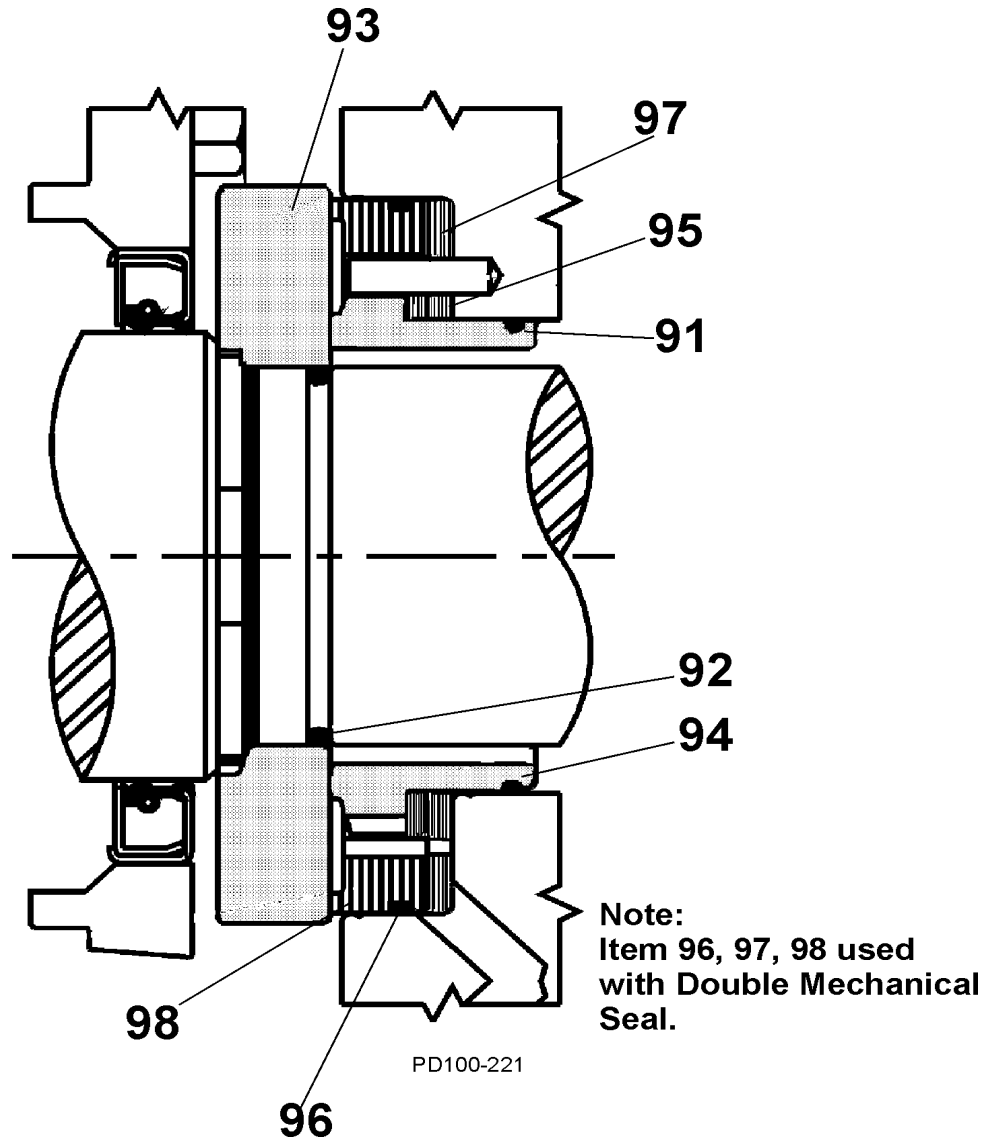
**NOTES:**

8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

**\*Recommended Spare Parts**

# 180 - 184 - 220 - 224 -U2 Seal Parts Diagram



**180 - 184 - 220 - 224-U2 VENTED COVER PRICE LIST**

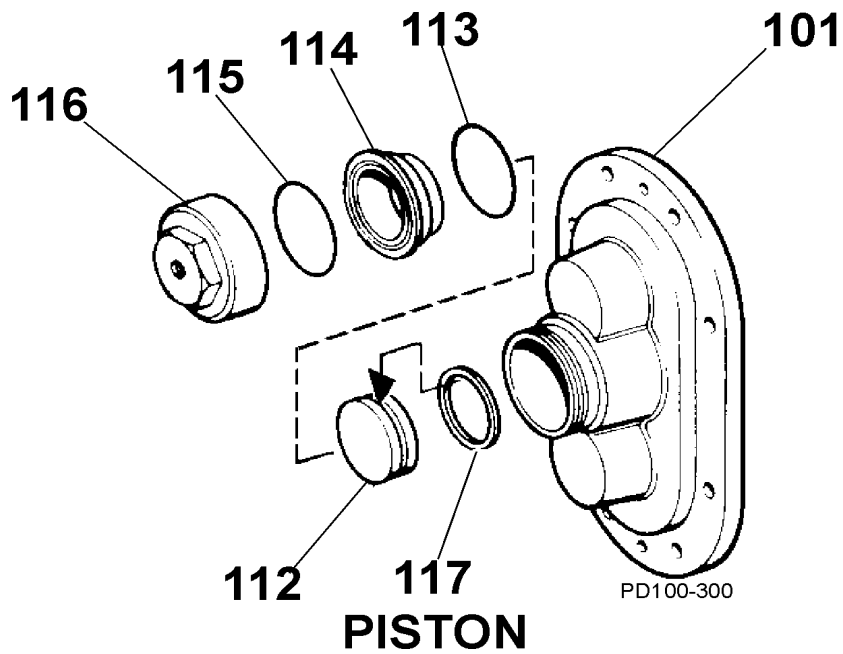
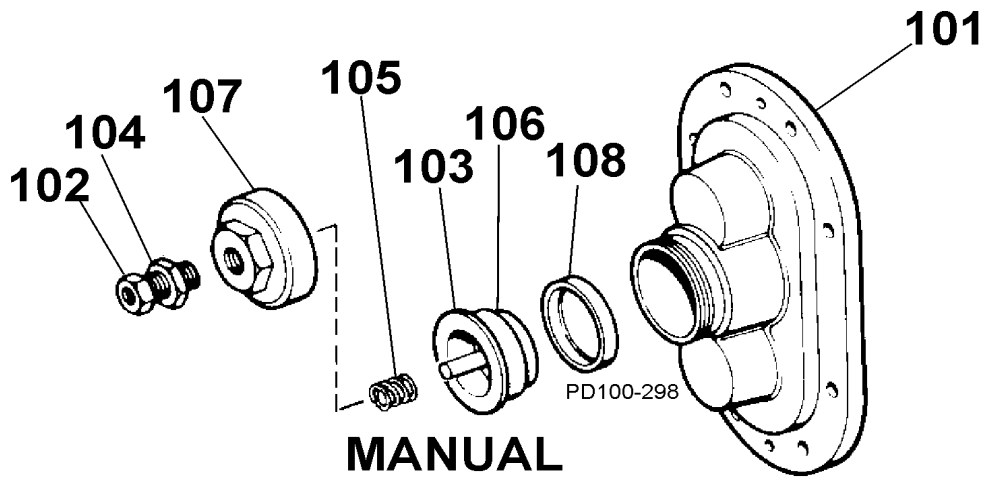
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103672	
102	Adjusting Screw	1	GD0 072 100	
103	Spring Plunger	1	GD0 073 000	
104	Locknut	1	GD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	113400	
	Spring, High (more than 150 PSI)	1	113524	
106	Diaphragm Bushing	1	GD0 077 000	
107	Cover Nut	1	GD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	GD0 078 000	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103672	
112	Piston	1	GD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70261	
114	Diaphragm Bushing	1	GD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70261	
116	Cover Nut	1	GD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	GD0 133 000	
* 117	<b>Piston Seal, O-Ring, Buna N</b>	1	N70258	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended spare parts**

180 - 184 - 220 - 224-U2 Vented Cover Parts Diagram



**210 - 213 - 224 - 320 - 323 - 324-U2 PUMP PARTS PRICE LIST**

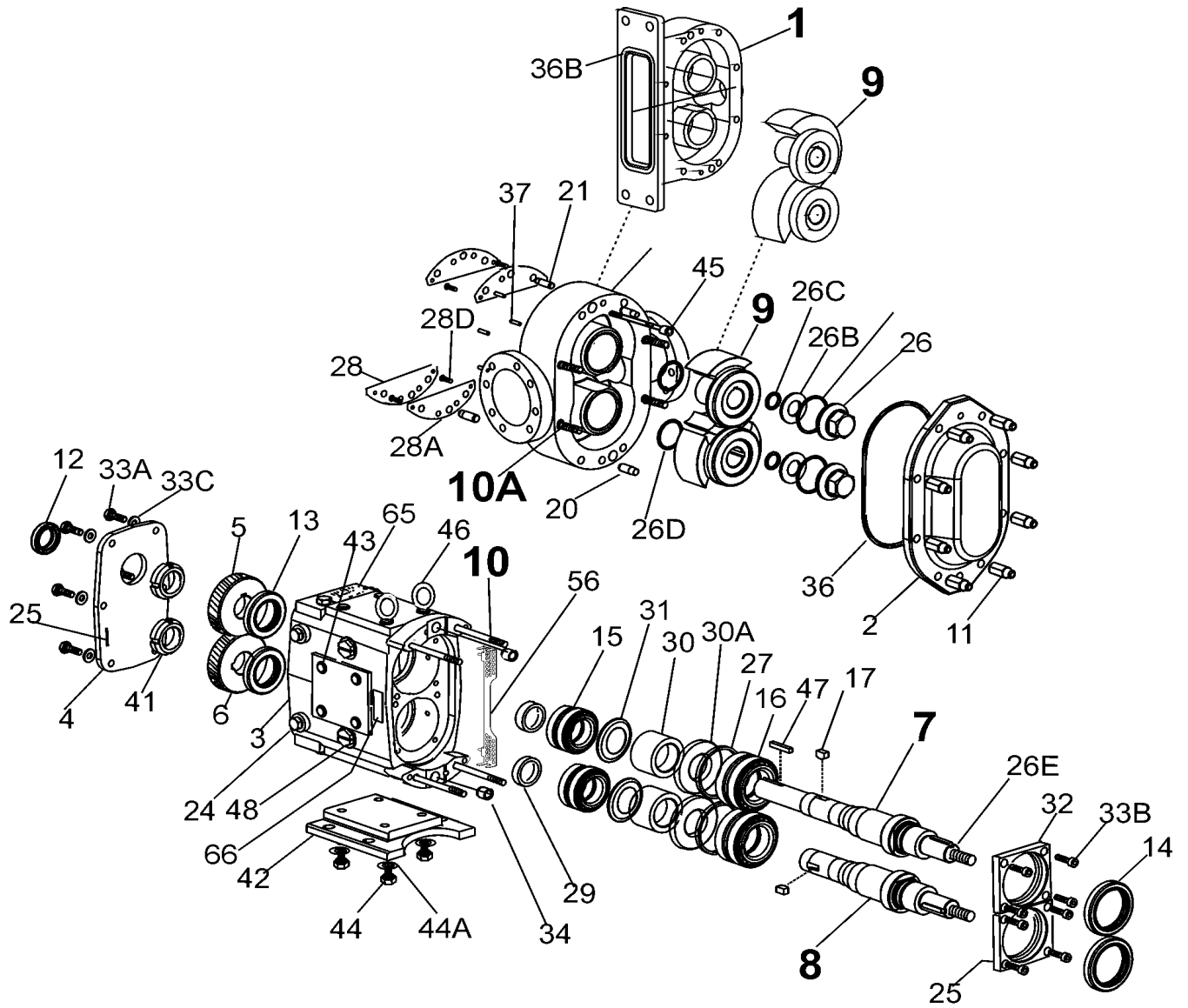
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	210-U2 Pump Body	1	See Note 1	1
	210-U2 Pump Body with Flush	1	See Note 1	1
	213-U2 Pump Body	1	See Note 1	1
	214-U2 Pump Body	1	See Note 1	1
	214-U2 Pump Body with Flush	1	See Note 1	1
	320-U2 Pump Body	1	See Note 1	1
	320-U2 Pump Body with Flush	1	See Note 1	1
	323-U2 Pump Body	1	See Note 1	1
	324-U2 Pump Body	1	See Note 1	1
	324-U2 Pump Body with Flush	1	See Note 1	1
7	210-224-U2 Drive Shaft	1	112186	
	213-U2 Drive Shaft	1	112188	
	320-324-U2 Drive Shaft	1	108417	
	323-U2 Drive Shaft	1	113960	
8	210-224-U2 Short Shaft	1	112187	
	213-U2 Short Shaft	1	112189	
	320-324-U2 Short Shaft	1	108418	
	323-U2 Short Shaft	1	113961	
9	210-213-214-U2 Rotor, Twin Wing, Alloy 88	2	112199	2
	210-213-214-U2 Rotor, Twin Wing, 316SS	2	112211	2
	210-213-214-U2 Rotor, Single Wing, Alloy 88	2	117220	2
	320-324-U2 Rotor, Twin Wing, Alloy 88	2	105427	2
	320-324-U2 Rotor, Twin Wing, 316SS	2	105439	2
	320-324-U2 Rotor, Single Wing, Alloy 88	2	117153	2, 12
	323-U2 Rotor, Twin Wing, Alloy 88	2	114022	2
10	213-320-323-324-U2 Stud, Long	4	111291	
	210-214-U2 Stud, Long, Jacketed Cover	4	112191	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
12. Replaces P/N 107662 (straight) and 107663 (90 degree) rotors.



210 - 213 - 214 - 320 - 323 - 324-U2 Pump Parts Diagram



PD100-354

**210 - 213 -224 - 320 - 323 - 324-U2 COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	210-224-U2 Pump Cover	1	112864	
	210-224-U2 Jacketed Cover	1	114358	
	320-324-U2 Pump Cover	1	105406	
	320-324-U2 Jacketed Cover	1	114359	
	213-323-U2 Pump Cover	1	112185	
3	Gear Case, CI	1	105478	
4	Gear Case Cover, Steel	1	40669	
5	Gear, Drive Shaft, Spur	1	102470	
6	Gear, Short Shaft, Spur	1	102470	
11	Hex Nut	8	108373	
	Wing Nut, Optional	8	110858	
12	Oil Seal, Gear Case Cover	1	STD 030 004	
13	Oil Seal, Gear Case Rear	2	102475	
14	Grease Seal, Bearing Retainer	2	STD 030 002	
	Bearing Isolator Kit, Incl. STD Bearing Retainer	2	X06634-3	
15	Bearing, Rear	2	OH1 036 000	
16	Bearing, Front	2	OH1 036 003	
17	Key, Gear	2	OH1 037 000	
20	Dowel Pins, Cover Side	2	OH1 040 000	
21	Dowel Pins, Gear Case Side	2	105871	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	105409	
* * * * 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70237	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70237	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70237	
	<b>O-Ring, Rotor Nut, Silicone</b>	2	S75237	
26B	Washer, Belleville	2	105411	
* * * * 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70125	
	<b>O-Ring, Retainer, EPDM</b>	2	E70125	
	<b>O-Ring, Retainer, FKM</b>	2	V70125	
	<b>O-Ring, Retainer, Silicone</b>	2	S75125	
* * * * 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70232	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70232	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70232	
	<b>O-Ring, Rotor Hub, Silicone</b>	2	S75232	
26E	210-213-224-U2 Key, Rotor	2	105422	
	320-323-324-U2 Key, Rotor	2	105421	
27	Shim Kit	2	117893	

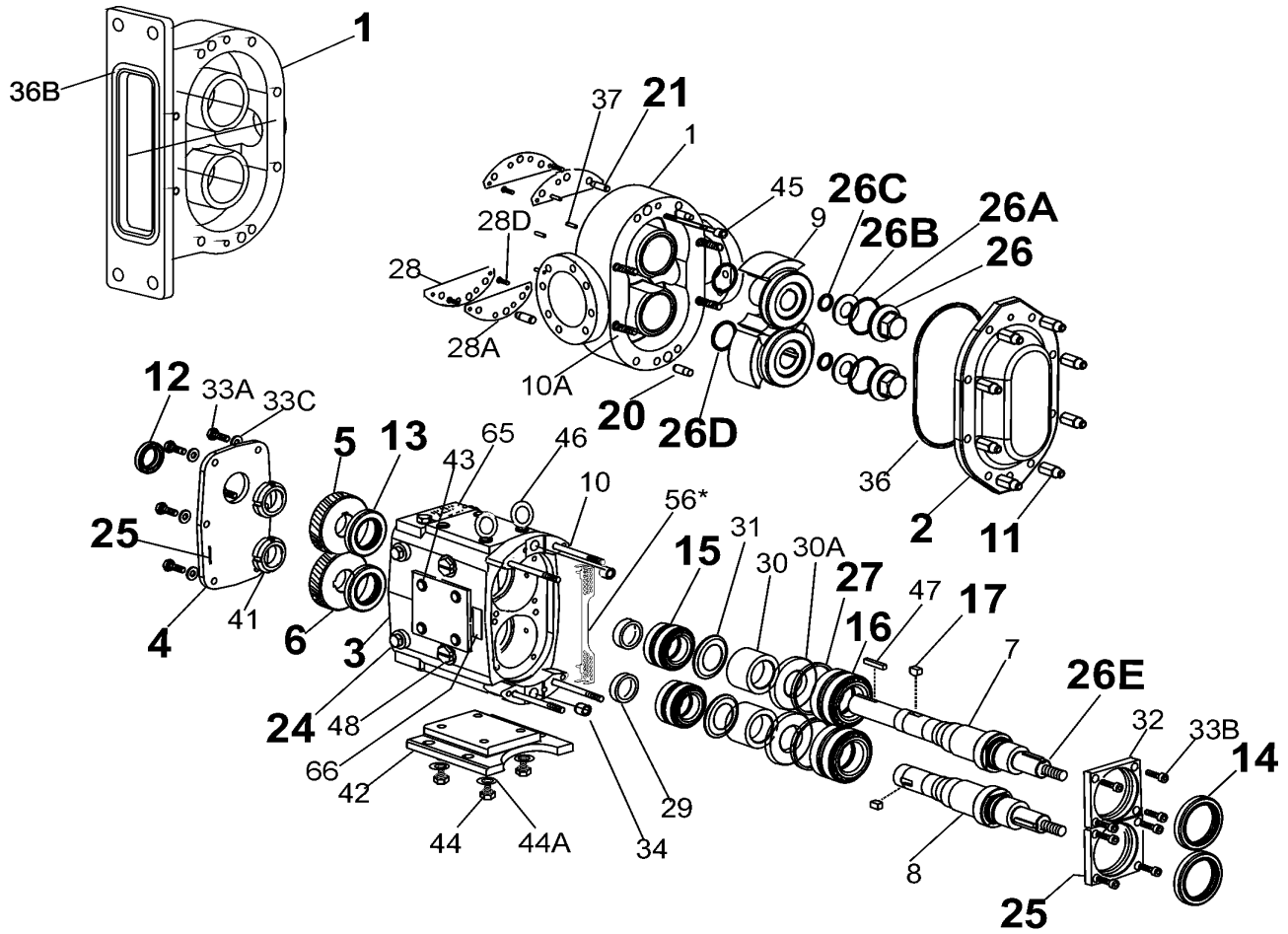
**NOTES:**

40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended Spare Parts**

210 - 213 - 224 - 320 - 323 - 324-U2 Common Parts Diagram



PD100-353

**210 - 213 - 224 - 320 - 323 - 324-U2 COMMON PARTS PRICE LIST**

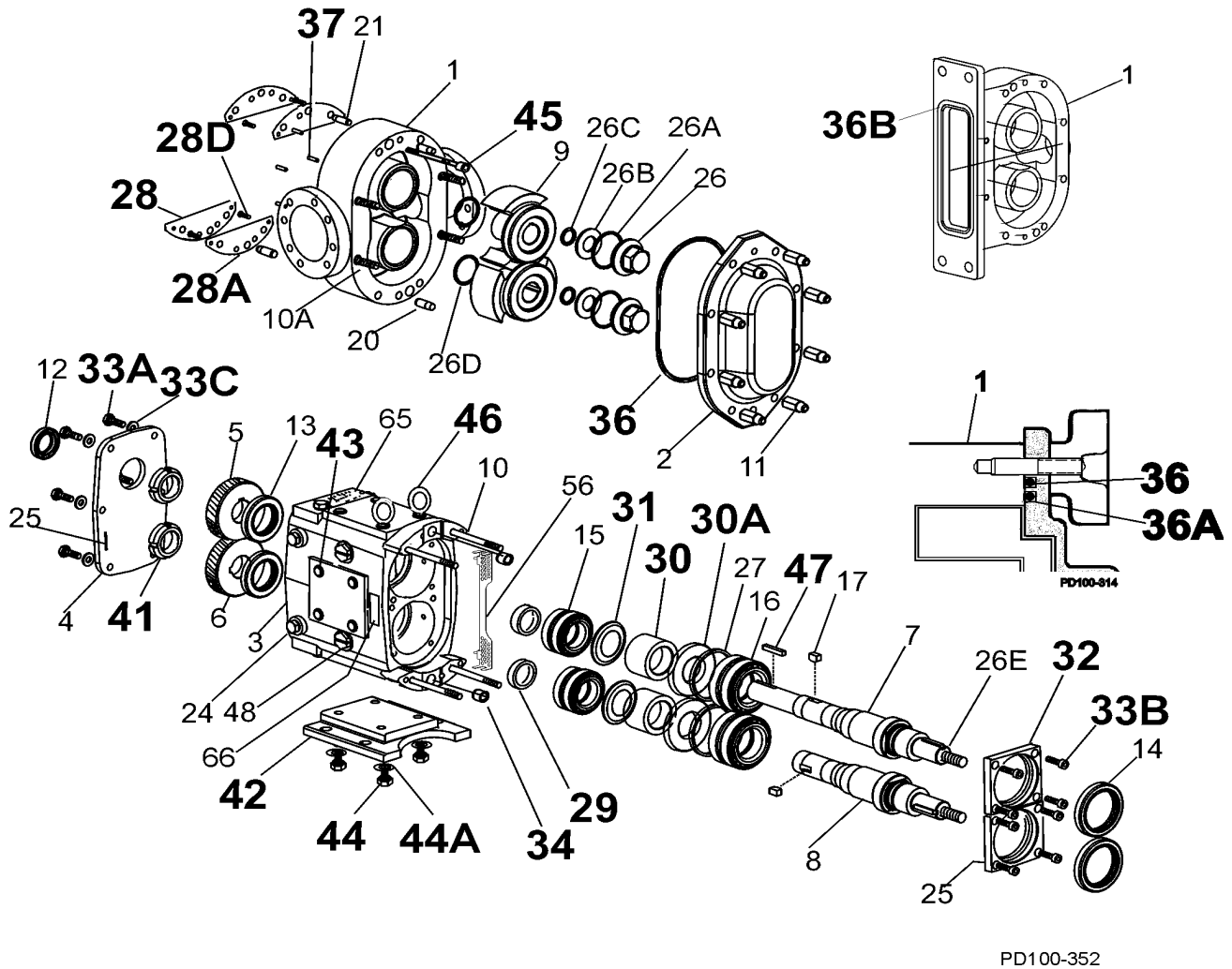
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
28	Shim Plate	2	105426	
28A	Shims, Body, .002	AR	105866	
	Shims, Body, .003	AR	105867	
	Shims, Body, .005	AR	105868	
	Shims, Body, .010	AR	105869	
	Shims, Body, .020	AR	105870	
28D	5/16-18 x 1" FHSCS	4	30-612	
29	Spacer, Gear to Rear Bearing	2	102474	
30	Bearing Spacer	2	102472	
30A	Spacer Seal	2	102473	
31	Retainer, Grease	2	STD 091 000	
32	Bearing Retainer, Front	2	OH1 080 000	
33A	3/8-16 x .75" HHCS	6	30-314	
33B	5/16-18 x 1" SHCS	8	30-343	
33C	3/8" Flat Washer	6	43-189	
34	Dowel Bushings	2	OH1 116 000	
* 36	<b>210-224-U2 O-Ring, Pump Cover, Buna N</b>	1	N70382	
* 36	<b>210-224-U2 O-Ring, Pump Cover, EPDM</b>	1	E70382	
* 36	<b>210-224-U2 O-Ring, Pump Cover, FKM</b>	1	V70382	
* 36	<b>210-224-U2 O-Ring, Pump Cover, Silicone</b>	1	S75382	
* 36	<b>320-324-U2 O-Ring, Pump Cover, Buna N</b>	1	N70383	
* 36	<b>320-324-U2 O-Ring, Pump Cover, EPDM</b>	1	E70383	
* 36	<b>320-324-U2 O-Ring, Pump Cover, FKM</b>	1	V70383	
* 36	<b>320-324-U2 O-Ring, Pump Cover, Silicone</b>	1	S75383	
* 36	<b>213-323-U2 O-Ring, Pump Cover, Outer, EPDM</b>	1	323 117 012	11
* 36	<b>213-323-U2 O-Ring, Pump Cover, Outer, Silicone</b>	1	323 117 013	11
* 36	<b>213-323-U2 O-Ring, Pump Cover, Outer, FKM</b>	1	323 117 014	11
* 36A	<b>213-323-U2 O-Ring, Pump Cover, Inner, EPDM</b>	1	323 117 002	11
* 36A	<b>213-323-U2 O-Ring, Pump Cover, Inner, Silicone</b>	1	323 117 003	11
* 36A	<b>213-323-U2 O-Ring, Pump Cover, Inner, FKM</b>	1	323 117 004	11
* 36B	<b>214-U2 Flange O-ring</b>	1	N70377	
* 36B	<b>324-U2 Flange O-ring</b>	1	N70378	
37	Stop Pin, Seal	6	102438	
41	Locknut, Gear	2	105697	
42	Gear Case Shim, CI	1	40288	
	Pump Pedestal, 22", Optional	1	324 110 226	
43	Plastic Cap Plug	8	000 121 001	
44	1/2-13 x 1-3/4" HHCS	4	30-250	
44A	Lock Washer, 1/2"	4	43-177	
45	210-213-224-U2 Body Retaining Screws - 3/8-16 x 3-1/2"	2	30-326	
	320-324-U2 Body Retaining Screws - 3/8-16 x 4-1/2"	2	30-499	
	323-U2 Body Retaining Screws - 3/8-16 x 4"	2	30-323	
46	Eye Bolt	3	30-360	
47	Key, Coupling - 5/8 x 5/8 x 2-3/4"	1	000 037 005	

**NOTES:**

11. Used on 213-U2 and 323-U2 only.

\* **Recommended Spare Parts**

210 - 213 - 224 - 320 - 323 - 324-U2 Common Parts Diagram



**210 - 213 - 224 - 320 - 323 - 324-U2 COMMON PARTS PRICE LIST**

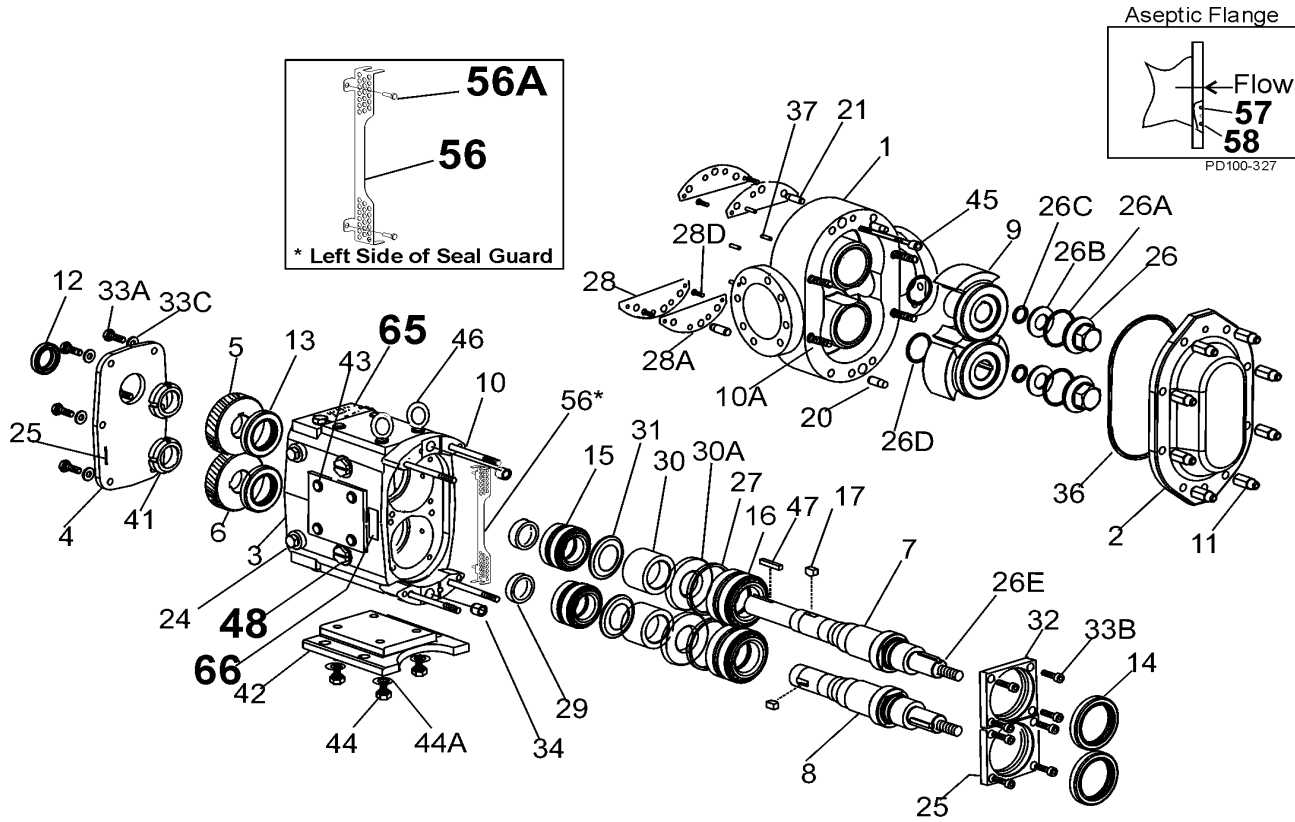
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
48	Cleanout Plug	2	41013	
56	210-213-224-U2 Seal Guard	2	113503	
	320-323-324-U2 Seal Guard	2	113504	
56A	1/4 - 20 x 3/8" HHCS	4	30-68	
* 57	O-Ring, Port, Inner, EPDM	2	E70245	11
	O-Ring, Port, Inner, FKM	2	V70245	11
	O-Ring, Port, Inner, Silicone	2	S75245	11
* 58	O-Ring, Port, Outer, EPDM	2	E70251	11
	O-Ring, Port, Outer, FKM	2	V70251	11
	O-Ring, Port, Outer, Silicone	2	S75251	11
60A	1/8-27 Aseptic Connection Pipe Plugs	10	STD 128 500	11
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	Grease Fitting, 1/8"	4	BD0 092 000	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

11. Used on 213-U2 and 323-U2 only.

\* **Recommended Spare Parts**

210 - 213 -214 - 320 - 323 - 324-U2 Common Parts Diagram



PD100-351

**210 - 213 - 214 - 320 - 323 - 324-U2 SEAL PARTS PRICE LIST**

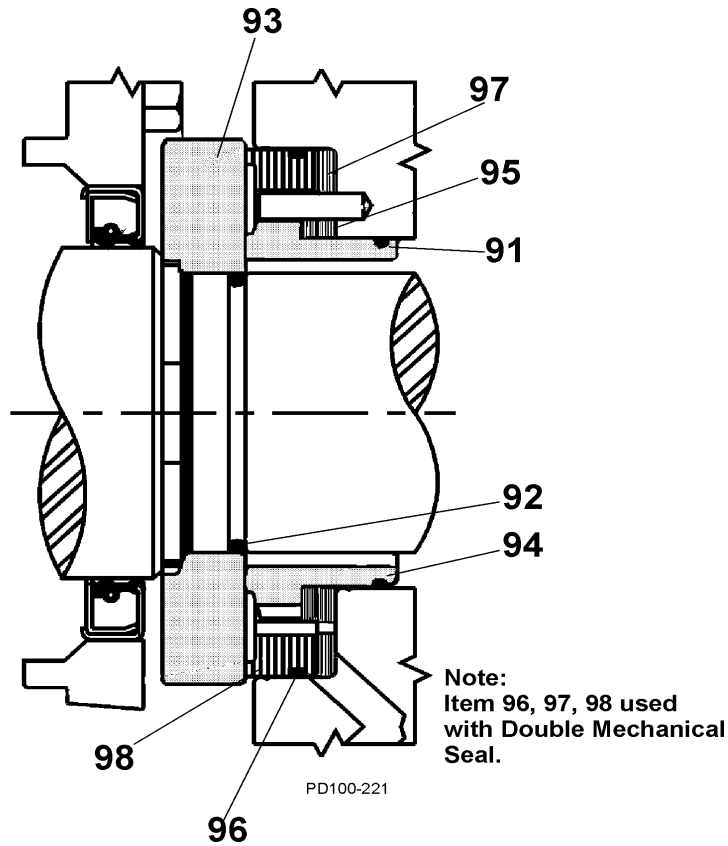
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECH SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70154	25
* 91	O-Ring, Inner Seal, EPDM	2	E70154	
* 91	O-Ring, Inner Seal, FKM	2	V70154	
* 92	O-Ring, Shaft, Buna N	2	N70149	16
* 92	O-Ring, Shaft, EPDM	2	E70149	16
* 92	O-Ring, Shaft, FKM	2	V70149	16
* 93	210-214-320-324-U2 Seal Seat, Ceramic	2	105416	
* 93	210-214-320-324-U2 Seal Seat, Silicon Carbide	2	105417	
* 93	213-323-U2 Seal Seat, Silicon Carbide	2	112192	
* 94	Seal Inner, Carbon (1 Piece)	2	105412	
* 94	Seal Inner, Ceramic	2	105413	
* 94	Seal Inner, Silicon Carbide	2	105414	
* 94	Seal Inner, Tungsten Carbide	2	105415	
95	Wave Spring, Inner Seal	2	105419	
* 96	O-Ring, Outer Seal, Buna N	2	N70160	8
* 96	O-Ring, Outer Seal, EPDM	2	E70160	8
* 96	O-Ring, Outer Seal, FKM	2	V70160	8
97	Wave Spring, Outer Seal	2	105420	8
* 98	Outer Seal, Carbon	2	105418	8

**Notes:**

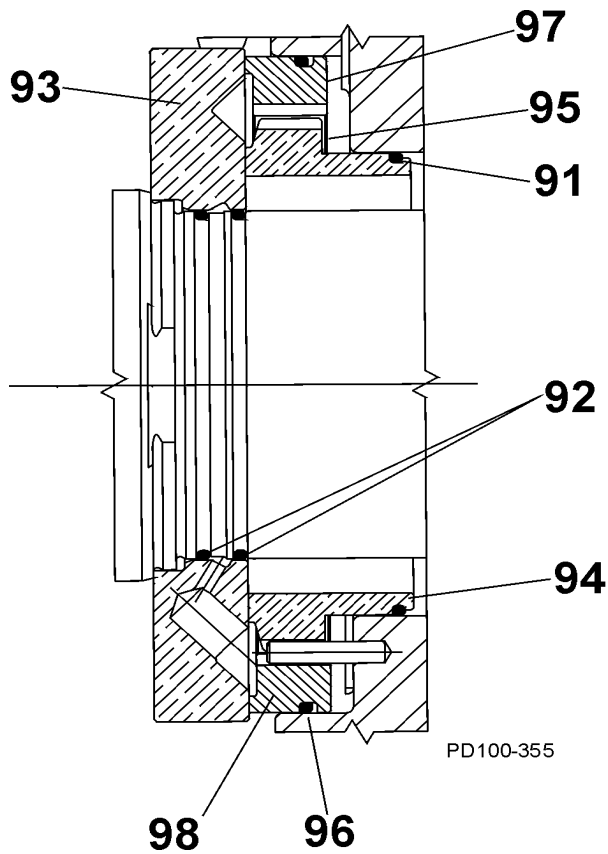
- 8. Used with Double Mechanical Seal.
- 16. (4) needed per pump on 213-U2 and 323-U2.
- 25. Sold in packages of 25 only.
- \* **Recommended Spare Parts**



210 - 224 - 320 - 324-U2 Seal Parts Diagram



213 - 323-U2 Seal Parts Diagram



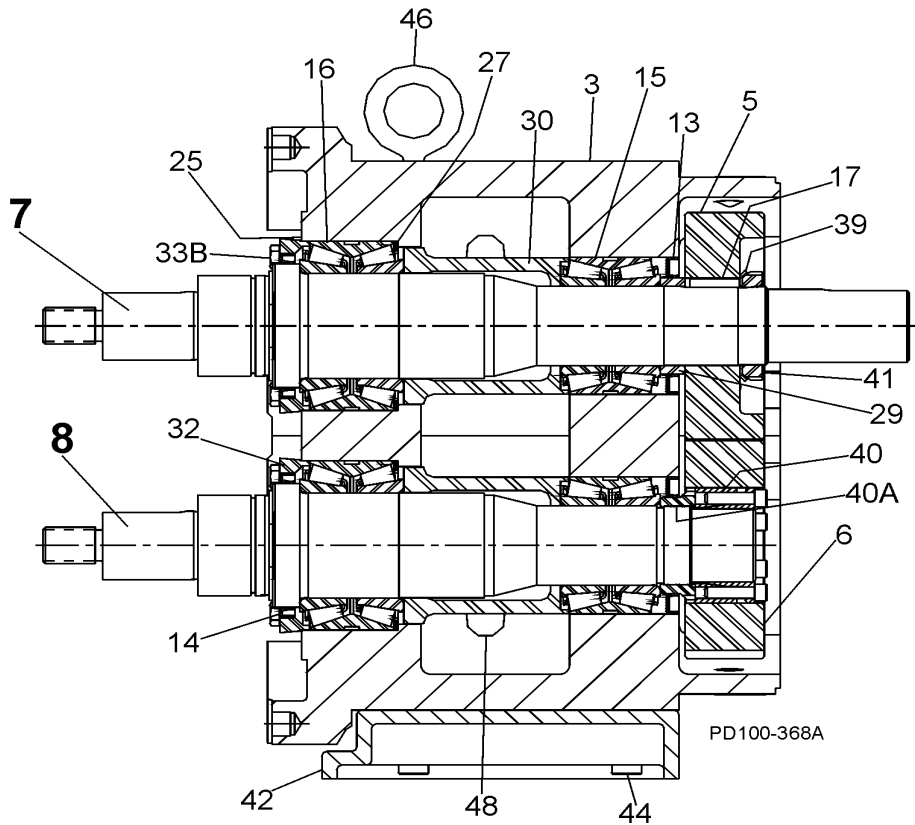
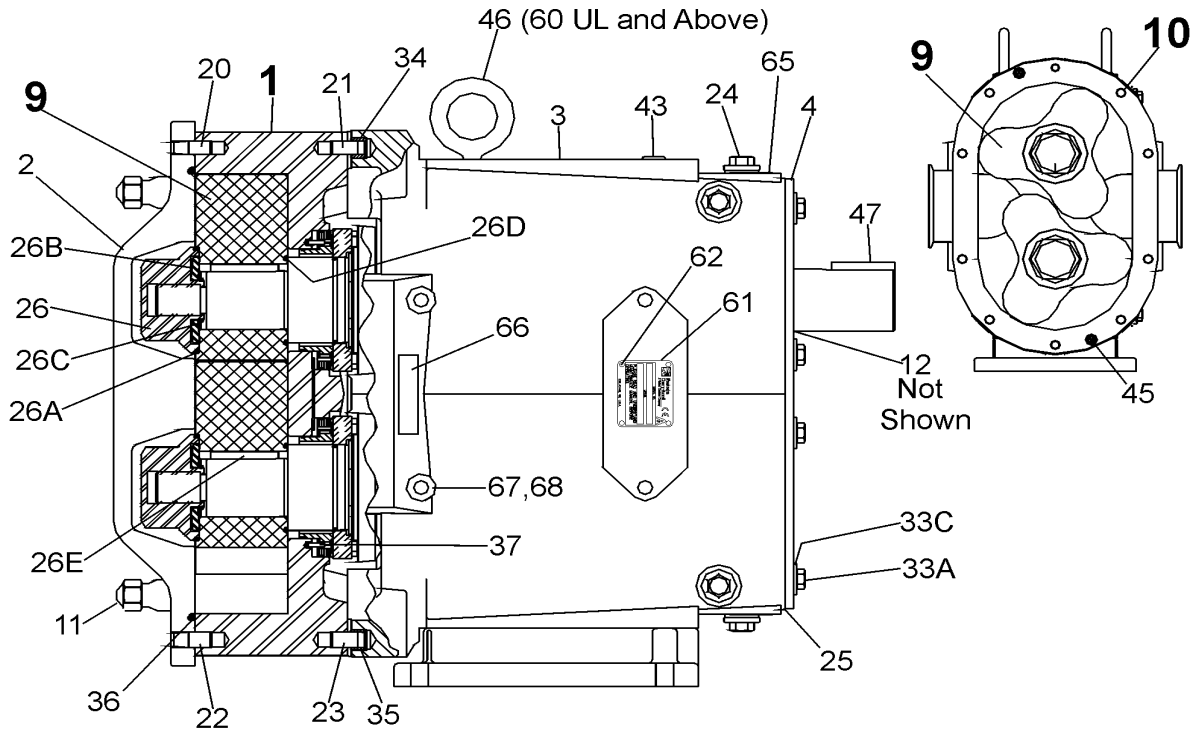
## 018-UL PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	Pump Body	1	See Note 1	1
	Pump Body with Flush	1	See Note 1	1
7	Drive Shaft (Obsoletes 103219)	1	108003	
8	Short Shaft (Obsoletes 103220)	1	108004	
9	Rotor, 3 Lobe, Alloy 88 (Obsoletes 103202)	2	117494	2, 22
	Rotor, 3 Lobe, 316SS (Obsoletes 105689)	2	117496	2, 22
10	Stud	8	101721	
	Stud, Jacketed Cover	8	107754	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
22. Replaced by new rotor profile in 2002. Do **NOT** mix old and new profile rotors.

# 018-UL Pump Parts Diagram



**018-UL COMMON PARTS PRICE LIST**

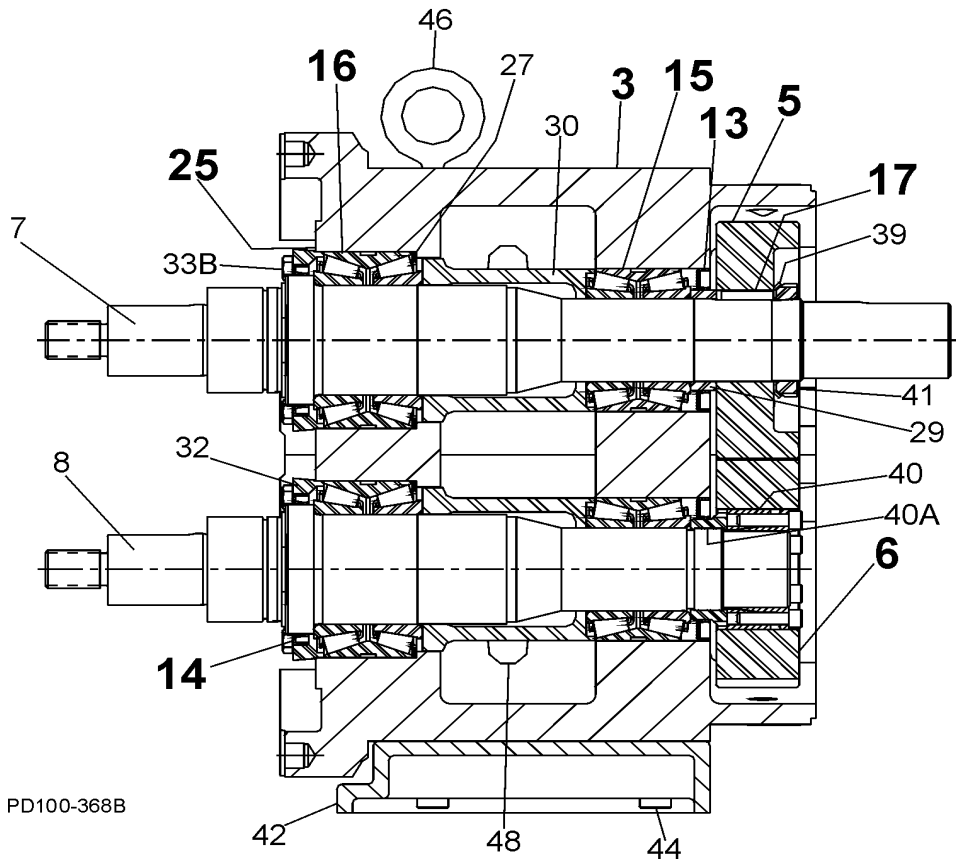
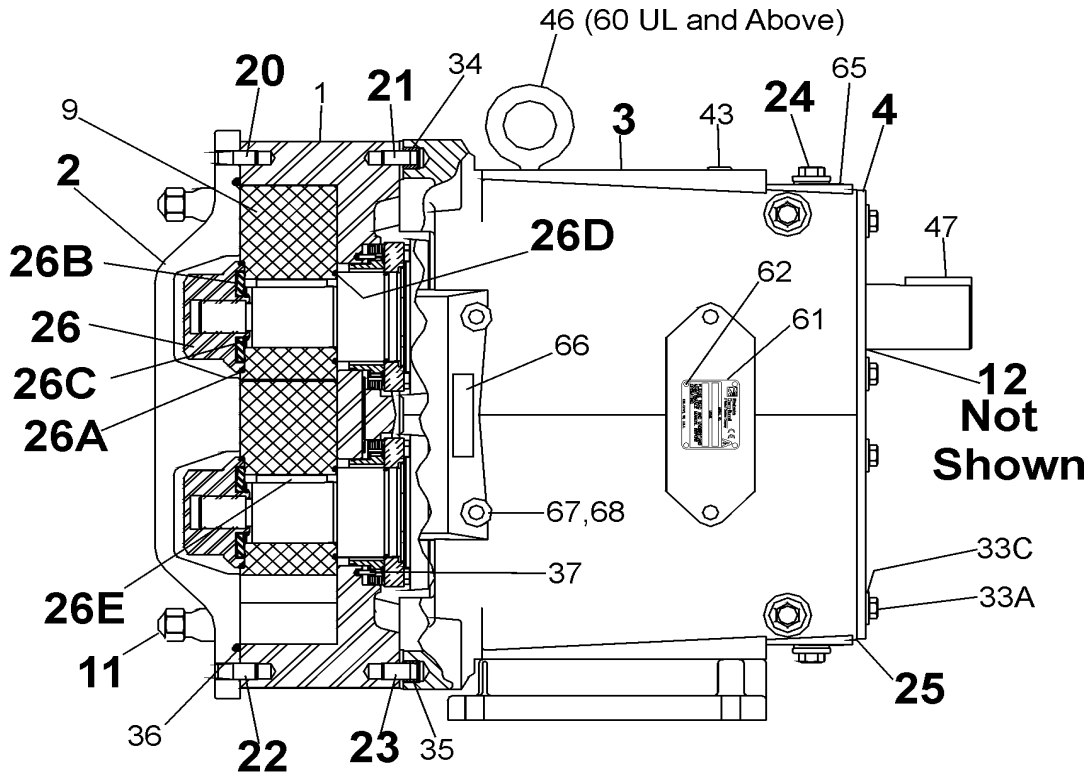
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	103213	
	Jacketed Cover	1	107665	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00113	
	Manual (under 150 PSI)	1	CVR00083	
	Pneumatic	1	CVR00084	
	Piston	1	CVR00085	
3	Gear Case, CI	1	102276	
	Gear Case, SS; Optional	1	101831	
4	Gear Case Cover, Steel	1	020 106 000	
	Gear Case Cover, SS; Optional	1	102280	
5	Gear, Drive Shaft, Spur (Obsoletes 015 007 001)	1	107997	19
6	Gear, Short Shaft, Spur (Obsoletes 103233)	1	107998	19
11	Hex Nut	8	108369	
	Wing Nut; Optional	8	105850	
12	Oil Seal, Gear Case Cover	1	000 030 016	
13	Oil Seal, Gear Case Rear	2	000 030 017	
14	Grease Seal, Bearing Retainer	2	101716	
	Bearing Isolator Kit, includes SS Bearing Retainer	2	X06638-1	
15	Bearing, Rear	2	015 035 000	
16	Bearing, Front	2	101714	
17	Key, Gear	2	015 037 000	
20	Dowel Pin, Upper Cover Side	1	AD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	AD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	AD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	AD0 040 R10	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 002	
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101804	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70126	
* 26A	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70126	
* 26A	<b>O-Ring, Rotor Nut, FKM</b>	2	V70126	
26B	Washer, Belleville	2	101691	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70112	
* 26C	<b>O-Ring, Retainer, EPDM</b>	2	E70112	
* 26C	<b>O-Ring, Retainer, FKM</b>	2	V70112	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70121	
* 26D	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70121	
* 26D	<b>O-Ring, Rotor Hub, FKM</b>	2	V70121	
26E	Key, Rotor	2	101817	

**NOTES:**

19. Old and new gears can not be mixed. Changed from helical to spur gears in 1997.

\* **Recommended Spare Parts**

# 018-UL Common Parts Diagram



## 018-UL COMMON PARTS PRICE LIST

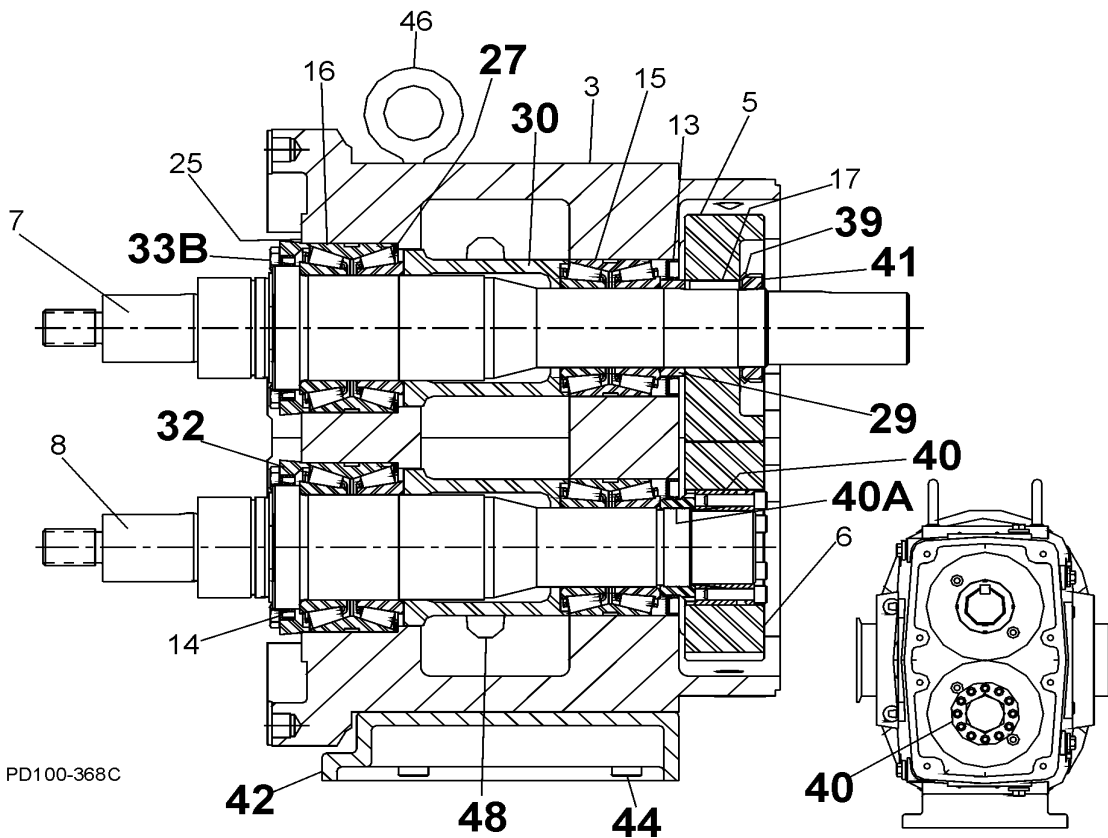
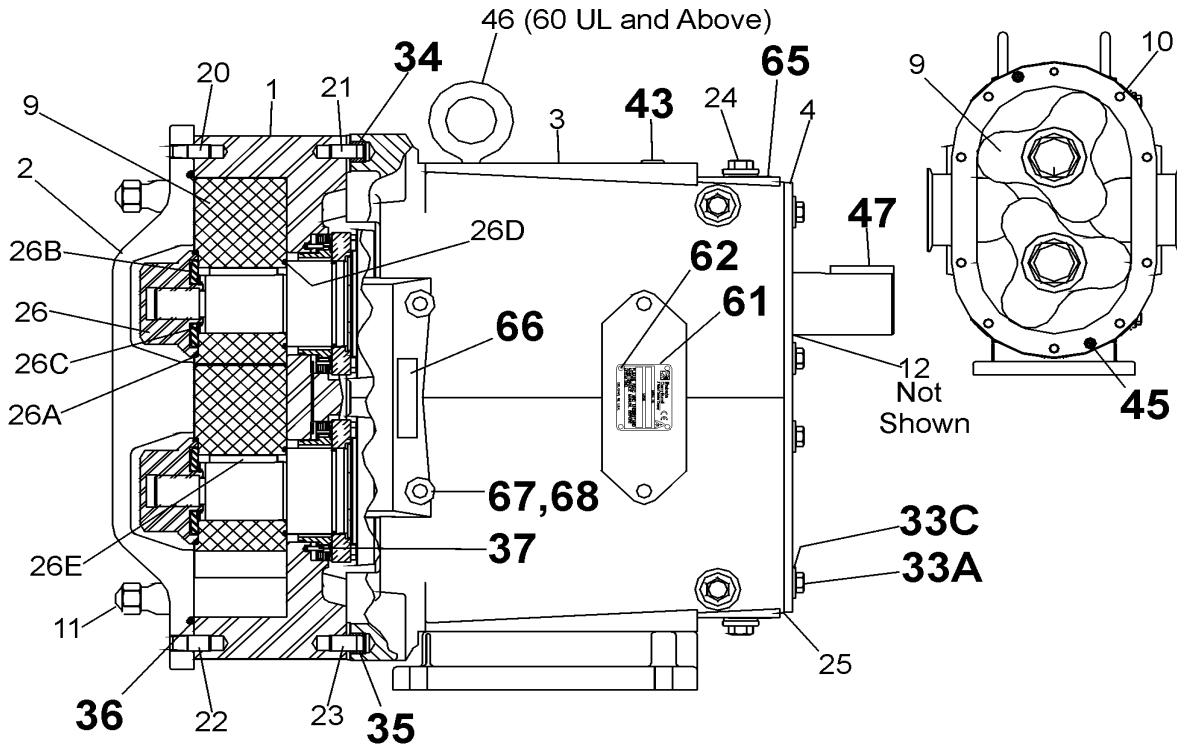
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
27	Shim Kit	2	117889	
29	Spacer, Gear to Rear Bearing	1	015 055 000	
30	Bearing Spacer	2	101814	
32	Bearing Retainer, Front	2	101810	
33A, 33B	1/4-20 x .75" HHCS, STD	14	30-287	
	1/4-20 x .75" HHCS, SS	14	30-58	
33C	1/4" Flat Washer	6	43-108	
34	Dowel Bushing, Upper	1	AD0 116 000	
35	Dowel Bushing, Lower	1	AD0 116 100	
* * *	<b>O-Ring, Pump Cover, Buna N</b>	1	N70249	
	<b>O-Ring, Pump Cover, EPDM</b>	1	E70249	
	<b>O-Ring, Pump Cover, FKM</b>	1	V70249	
37	Stop Pin, Seal	6	101718	
39	Lockwasher, Gear	2	STD 136 005	
40	Locking Assembly	1	103241	
40A	Locknut, Sleeve	1	108200	
	Locknut, Sleeve	1	103229	21
41	Locknut, Gear	2	STD 236 005	
42	Gear Case Shim, CI	1	020 110 000	
	Gear Case Shim, SS; Optional	1	102284	
	Pump Pedestal, 6.75", Optional	1	014 110 675	
43	Plastic Cap Plug	8	000 121 003	
44	5/16-18 x 1" SHCS	4	30-343	
	5/16-18 x 1" SHCS, SS; Optional	4	30-525	
45	Body Retaining Screw, 1/4-20 x 2"	2	30-211	
47	Key, Coupling - 3/16 x 3/16 x 1-1/8"	1	000 037 001	
48	Cleanout Plug	2	35824	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-63	
67	Grease Fitting, 1/8"	4	BD0 092 000	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

21. Sleeve locknut for pump made prior to change in 1997.

\* **Recommended Spare Parts**

# 018-UL Common Parts Diagram



PD100-368C

## 018-UL SEAL PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
*				
*	<b>O-Ring, Inner Seal, Buna N</b>	2	N70028	25
*	<b>91 O-Ring, Body, EPDM</b>	2	E70028	25
*	<b>O-Ring, Body, FKM</b>	2	V70028	
*	<b>O-Ring, Shaft, Buna N</b>	2	N70024	25
*	<b>92 O-Ring, Shaft, EPDM</b>	2	E70024	25
*	<b>O-Ring, Shaft, FKM</b>	2	V70024	
*	<b>93 Seal Seat, Ceramic</b>	2	101667	
*	<b>Seal Seat, Silicon Carbide</b>	2	101668	
*	<b>94 Seal Inner, Carbon</b>	2	101651	
*	<b>Seal Inner, Ceramic</b>	2	101652	
*	<b>Seal Inner, Silicon Carbide</b>	2	101653	
*	<b>Seal Inner, Tungsten Carbide</b>	2	101654	
*	<b>95 Wave Spring, Inner Seal</b>	2	101683	
*	<b>96 O-Ring, Outer Seal, Buna N</b>	2	N70035	8
*	<b>97 Wave Spring, Outer Seal</b>	2	101684	8
*	<b>98 Outer Seal, Carbon</b>	2	101679	8

**NOTES:**

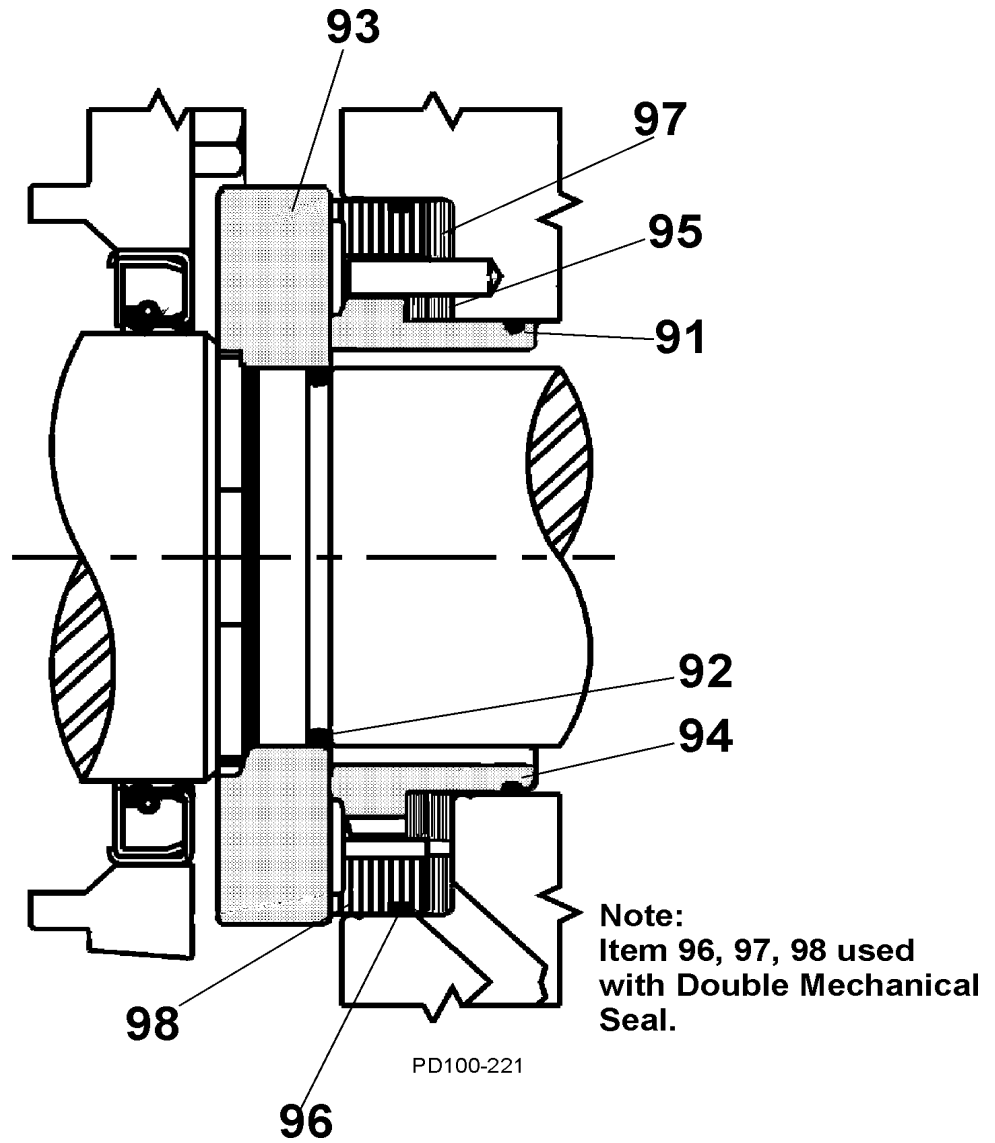
8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**



# 018-UL Seal Parts Diagram



**018-UL VENTED COVER PRICE LIST**

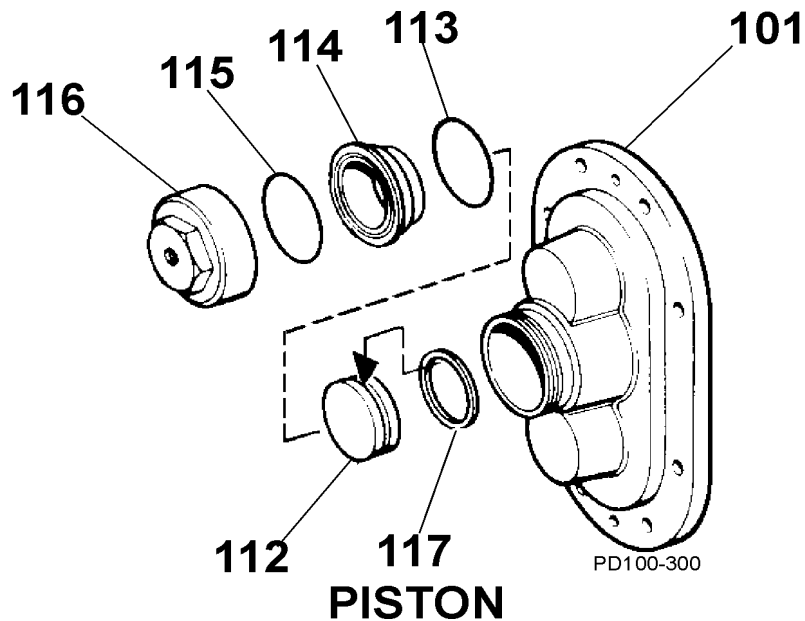
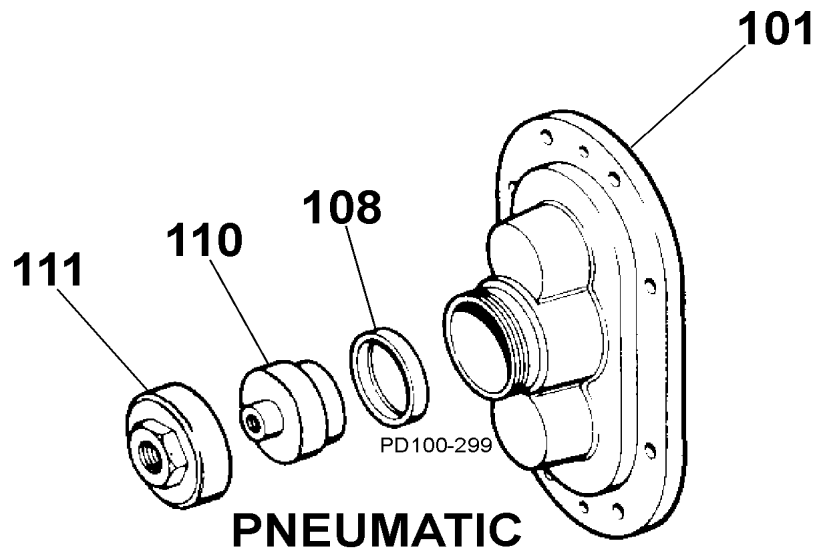
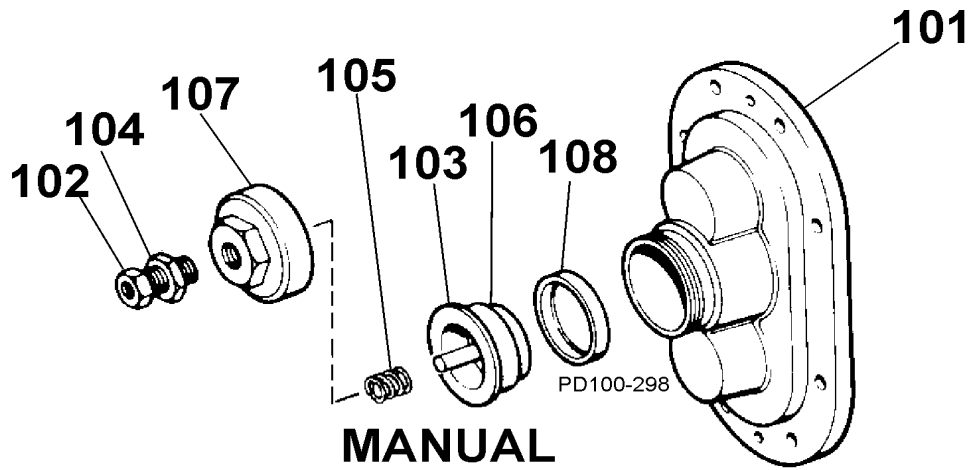
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103673	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103673	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103673	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

018-UL Vented Cover Parts Diagram



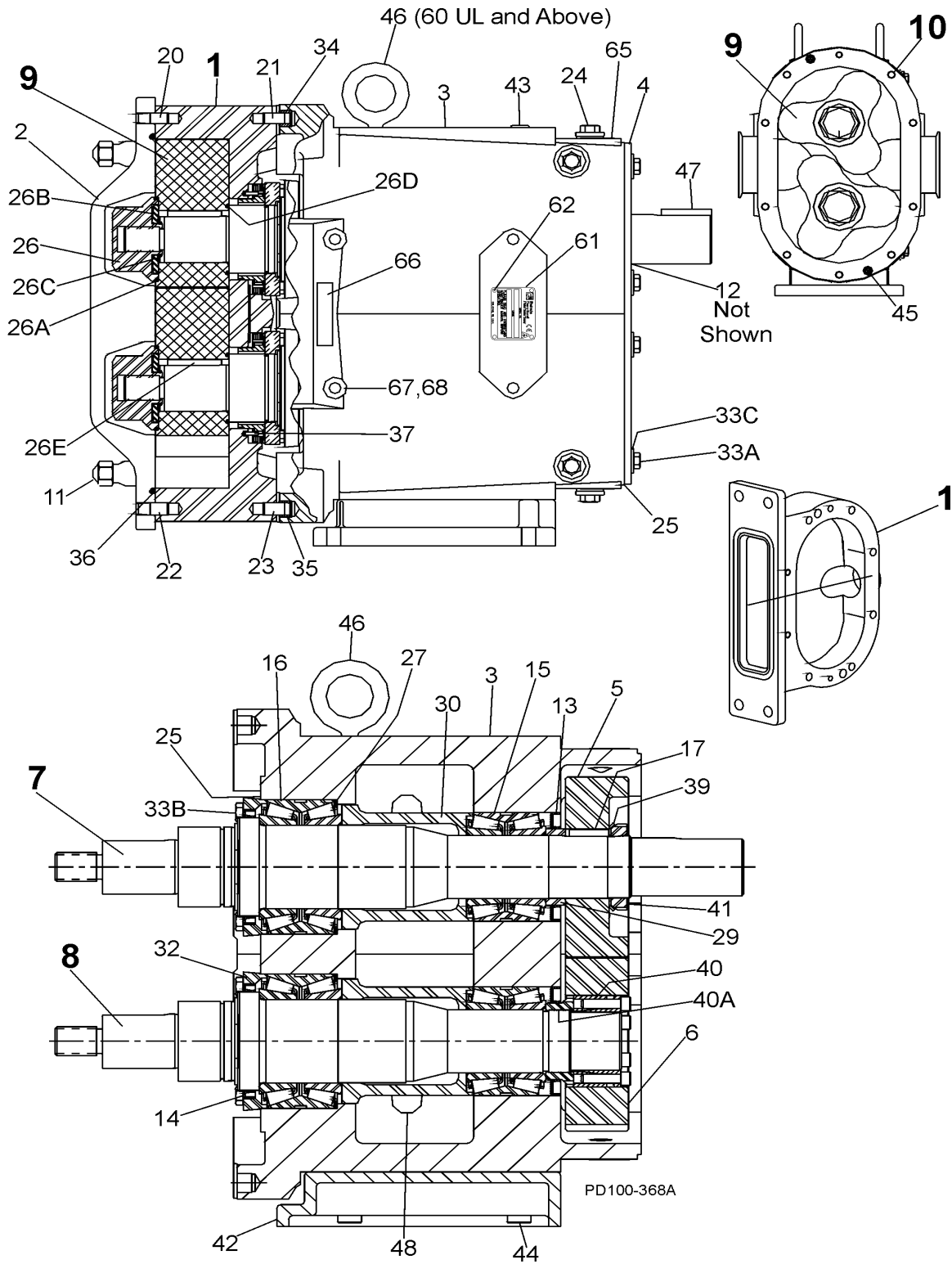
**030 - 034 - 050 - 054-UL PUMP PARTS PRICE LIST**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY. PER PUMP</b>	<b>PART NO.</b>	<b>NOTES</b>
<b>1</b>	030-UL Pump Body	1	See Note 1	1
	030-UL Pump Body with Flush	1	See Note 1	1
	034-UL Rectangular Flange Inlet Body	1	See Note 1	1
	034-UL Rectangular Flange Inlet Body with Flush	1	See Note 1	1
	050-UL Pump Body	1	See Note 1	1
	050-UL Pump Body with Flush	1	See Note 1	1
	054-UL Rectangular Flange Inlet Body	1	See Note 1	1
	054-UL Rectangular Flange Inlet Body with Flush	1	See Note 1	1
<b>7</b>	030-034-UL Drive Shaft (Obsoletes 103221)	1	108419	
	050-054-UL Drive Shaft	1	109859	
<b>8</b>	030-034-UL Short Shaft (Obsoletes 103222)	1	108420	
	050-054-UL Short Shaft	1	109860	
<b>9</b>	030-034-UL Rotor, 3 Lobe, Alloy 88 (Obsoletes 103203)	2	117498	2, 22
	030-034-UL Rotor, 3 Lobe, 316SS (Obsoletes 104344)	2	117500	2, 22
	050-054-UL Rotor, 3 Lobe, Alloy 88 (Obsoletes 109861)	2	117502	2, 22
	050-054-UL Rotor, 3 Lobe, 316SS (Obsoletes 109863)	2	117504	2, 22
<b>10A</b>	030-UL Stud	8	108842	
<b>10B</b>	030-UL Stud, Jacketed Cover	8	108845	
<b>10C</b>	034-UL Stud	6	108842	
	034-UL Stud	2	35555	
<b>10D</b>	034-UL Stud, Jacketed Cover	6	108845	
	034-UL Stud, Jacketed Cover	2	35549	
<b>10E</b>	050-UL Stud	8	109865	
<b>10F</b>	050-UL Stud, Jacketed Cover	8	TBD	
<b>10G</b>	054-UL Stud	6	109865	
	054-UL Stud	2	35555	
<b>10H</b>	054-UL Stud, Jacketed Cover	6	TBD	
	054-UL Stud, Jacketed Cover	2	35549	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
22. Replaced by new rotor profile in 2002. Do NOT mix old and new profile rotors.

030 - 034 -050 - 054-UL Pump Parts Diagram



**030 - 034 - 050 - 054-UL COMMON PARTS PRICE LIST**

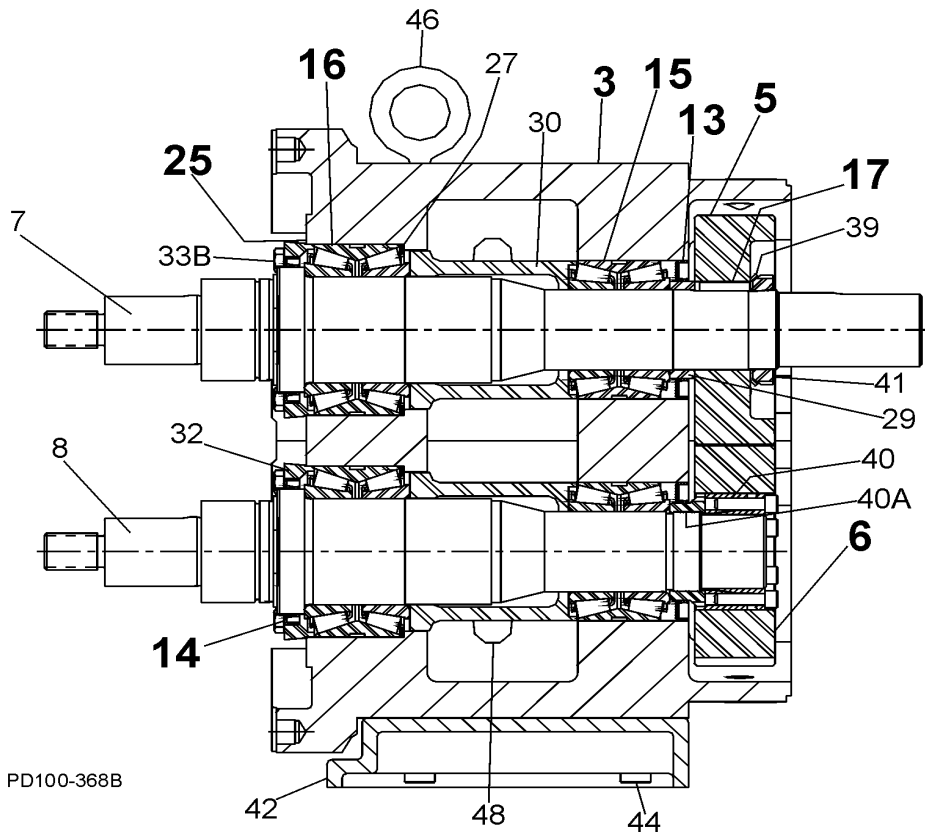
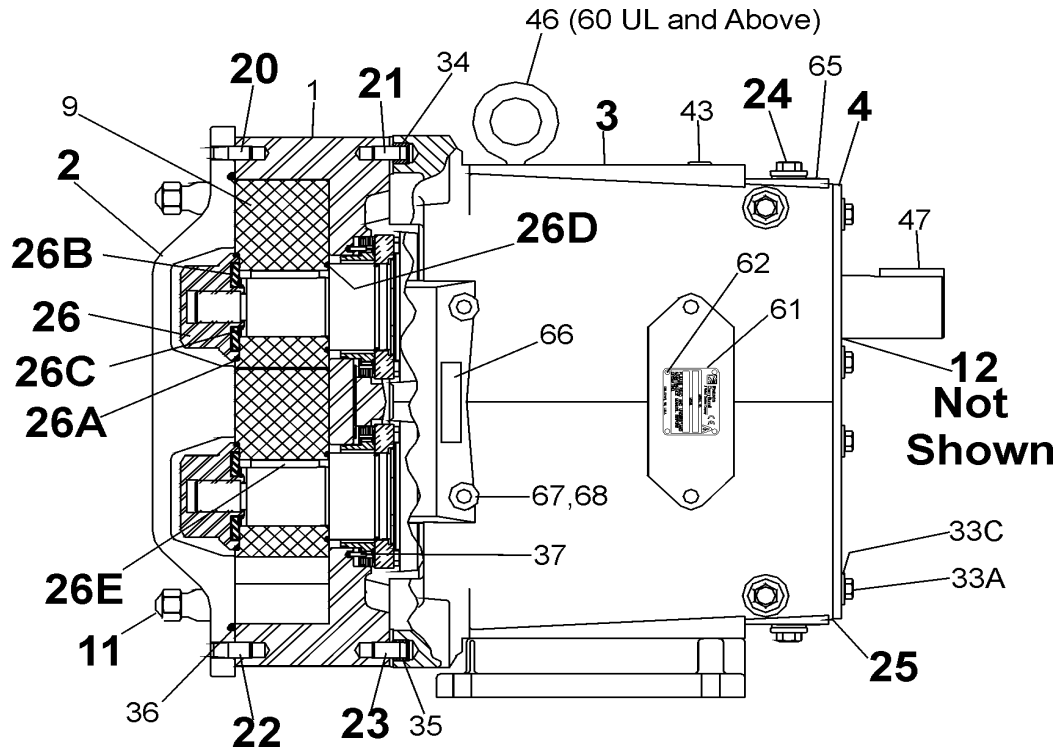
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	103214	
	Jacketed Cover	1	107667	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00018	
	Manual (under 150 PSI)	1	CVR00044	
	Pneumatic	1	CVR00086	
	Piston	1	CVR00087	
3	Gear Case, CI	1	102277	
	Gear Case, SS; Optional	1	101833	
4	Gear Case Cover, Steel	1	040 106 000	
	Gear Case Cover, SS; Optional	1	102281	
5	Gear, Drive Shaft, Spur (Replaces 030 007 001)	1	107999	19
6	Gear, Short Shaft, Spur (Replaces 103234)	1	108000	19
11	Hex Nut	8	108370	
	Wing Nut; Optional	8	105851	
12	Oil Seal, Gear Case Cover	1	000 030 013	
13	Oil Seal, Gear Case Rear	2	000 030 014	
14	Grease Seal, Bearing Retainer	2	101717	
	Bearing Isolator Kit, includes SS Bearing Retainer	2	X06639-1	
15	Bearing, Rear	2	030 035 000	
16	Bearing, Front	2	101715	
17	Key, Gear	2	BD0 037 000	
20	Dowel Pin, Upper Cover Side	1	BD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	BD0 040 200	
22	Dowel Pin, Lower Cover Side	1	BD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	BD0 040 300	
24	Hex Capscrew; Fill, Drain, Level	6	000 046 003	
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101805	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70130	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70130	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70130	
26B	Washer, Belleville	2	101692	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70115	
	<b>O-Ring, Retainer, EPDM</b>	2	E70115	
	<b>O-Ring, Retainer, FKM</b>	2	V70115	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70127	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70127	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70127	
26E	030-034-UL Key, Rotor	2	101822	
	050-054-UL Key, Rotor	2	109866	

**NOTES:**

19. Old and new gears can not be mixed. Changed from helical to spur gears in 1997.

\* **Recommended Spare Parts**

030 - 034 - 050 - 054-UL Common Parts Diagram



PD100-368B

**030 - 034 - 050 - 054-UL COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES	
27	Shim Kit	2	117890		
29	Spacer, Gear to Rear Bearing	1	030 055 000		
30	Bearing Spacer	2	101815		
32	Bearing Retainer, Front	2	101811		
33A	5/16-18 x 3/4" HHCS, STD	6	30-283		
	5/16-18 x 3/4" SHCS, SS	6	30-29		
33B	5/16-18 x 3/4" BSHCS, STD	8	30-296		
	5/16-18 x 3/4" SHCS, SS	8	30-29		
33C	5/16" Flat Washer	6	43-194		
34	Dowel Bushing, Upper	1	BD0 116 000		
35	Dowel Bushing, Lower	1	BD0 116 100		
* * * * *	36	O-Ring, Pump Cover, Buna N	1	N70259	
		O-Ring, Pump Cover, EPDM	1	E70259	
		O-Ring, Pump Cover, FKM	1	V70259	
* *	36B	034-UL O-Ring, Rectangular Flange	1	N70357	
		054-UL O-Ring, Rectangular Flange	1	N70259	
37	Stop Pin, Seal	6	101719		
39	Lockwasher, Gear	2	CD0 036 W00		
40	Locking Assembly (Replaces 103242)	1	108784		
40A	Locknut, Sleeve	1	108201		
	Locknut, Sleeve	1	103230	21	
41	Locknut, Gear	2	CD0 036 N00		
42	Gear Case Shim, CI	1	040 110 000		
	Gear Case Shim, SS; Optional	1	102285		
	Pump Pedestal, 6.25", Optional	1	BD0 110 SM0		
43	Plastic Cap Plug, 3/8"	8	000 121 002		
44	3/8-16 x 1" SHCS, STD	4	30-344		
	3/8-16 x 1" SHCS, SS; Optional	4	30-189		
45	030-034-UL Body Retaining Screw, 1/4-20 x 2"	2	30-211		
	050-054-UL Body Retaining Screw, 1/4-20 x 2"	2	30-613		
47	Key, Coupling - 1/4 x 1/4 x 1-3/4"	1	000 037 002		
48	Cleanout Plug	2	41013		
61	Name Plate, Sanitary	1	001 061 002		
62	#2 x .125" RHDS	4	30-355		
65	Caution Plate	2	33-62		
66	Warning Label	2	33-63		
67	030-050-UL Grease Fitting, 1/8"	4	BD0 092 000		
	034-054-UL Grease Fitting, 1/8"	4	BD0 092 100		
68	Plastic Cap, Grease Fitting	4	BD0 093 000		

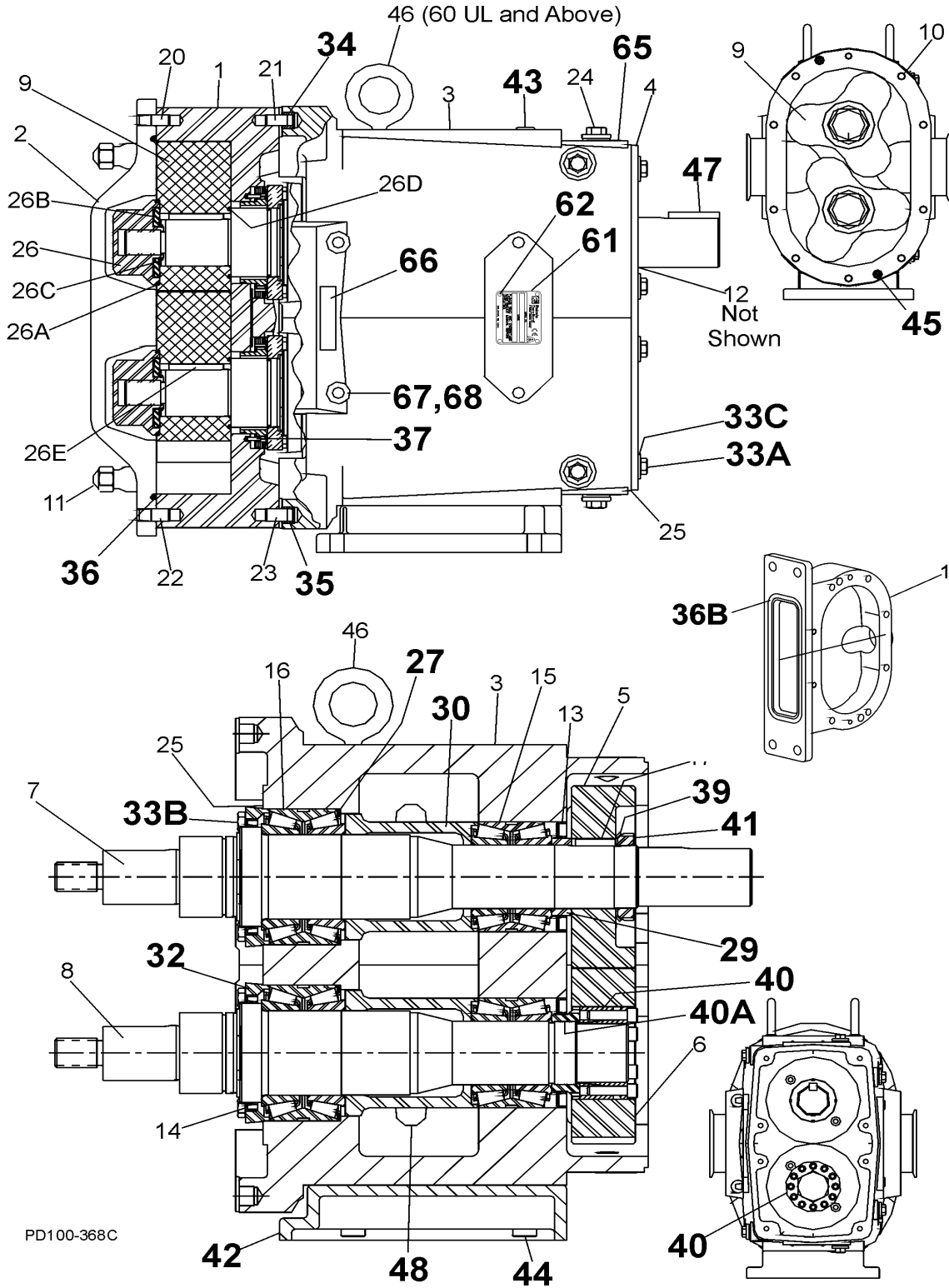
**NOTES:**

21. Sleeve locknut required for pump made prior to change in 1997.

\* **Recommended Spare Parts**



030 - 034 - 050 - 054-UL Common Parts Diagram



**030 - 034 - 050 - 054-UL SEAL PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70031	25
* 91	O-Ring, Body, EPDM	2	E70031	25
* 91	O-Ring, Body, FKM	2	V70031	
* 92	O-Ring, Shaft, Buna N	2	N70029	25
* 92	O-Ring, Shaft, EPDM	2	E70029	25
* 92	O-Ring, Shaft, FKM	2	V70029	
* 93	Seal Seat, Ceramic	2	101670	
* 93	Seal Seat, Silicon Carbide	2	101671	
* 94	Seal Inner, Carbon	2	101655	
* 94	Seal Inner, Ceramic	2	101656	
* 94	Seal Inner, Silicon Carbide	2	101657	
* 94	Seal Inner, Tungsten Carbide	2	101658	
95	Wave Spring, Inner Seal	2	101685	
* 96	O-Ring, Outer Seal, Buna N	2	N70041	8
* 96	O-Ring, Outer Seal, EPDM	2	E70041	8
* 96	O-Ring, Outer Seal, FKM	2	V70041	8
97	Wave Spring, Outer Seal	2	101686	8
* 98	Outer Seal, Carbon	2	101680	8

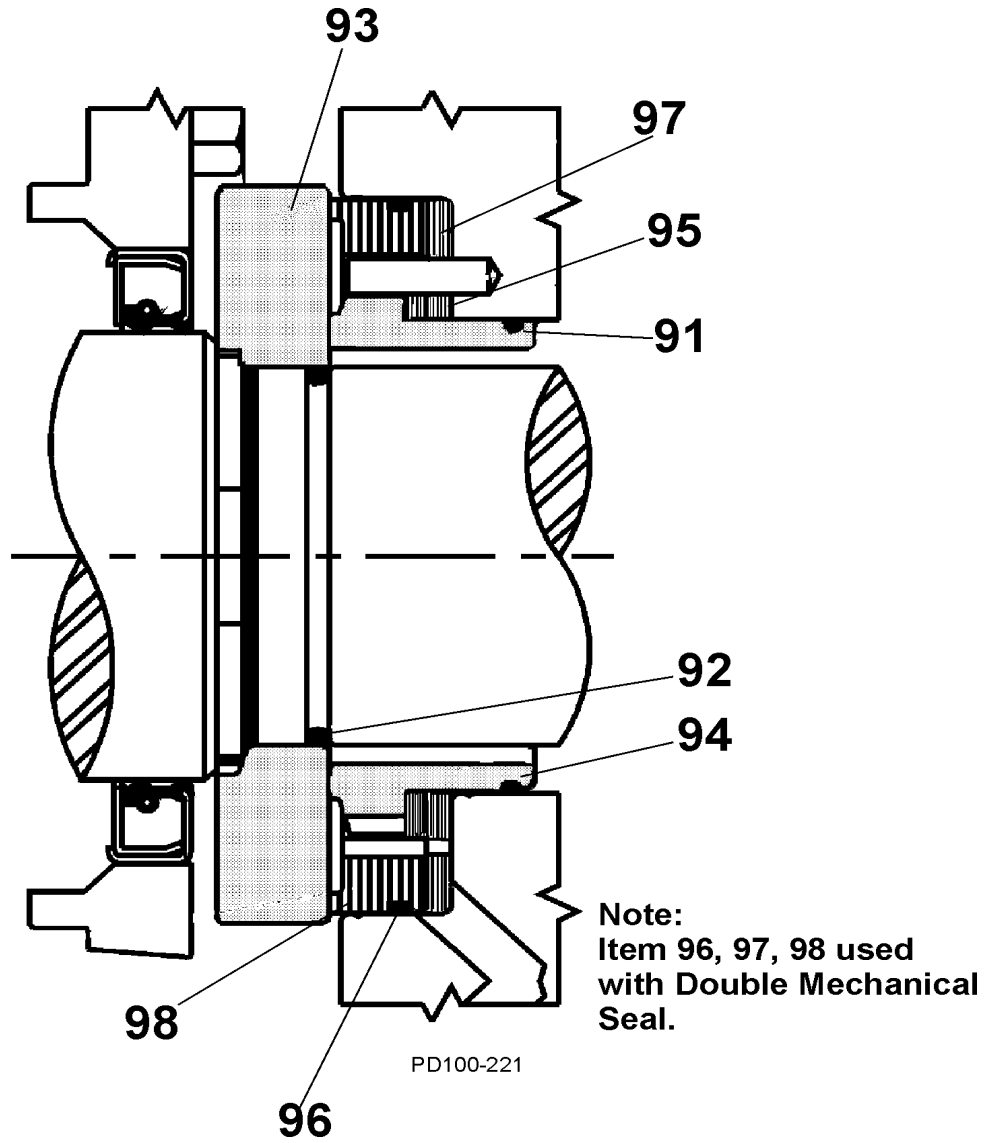
**NOTES:**

8. Used with double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

030 - 034 - 050 - 054-UL Seal Parts Diagram



**030 - 034 - 050 - 054-UL VENTED COVER PARTS PRICE LIST**

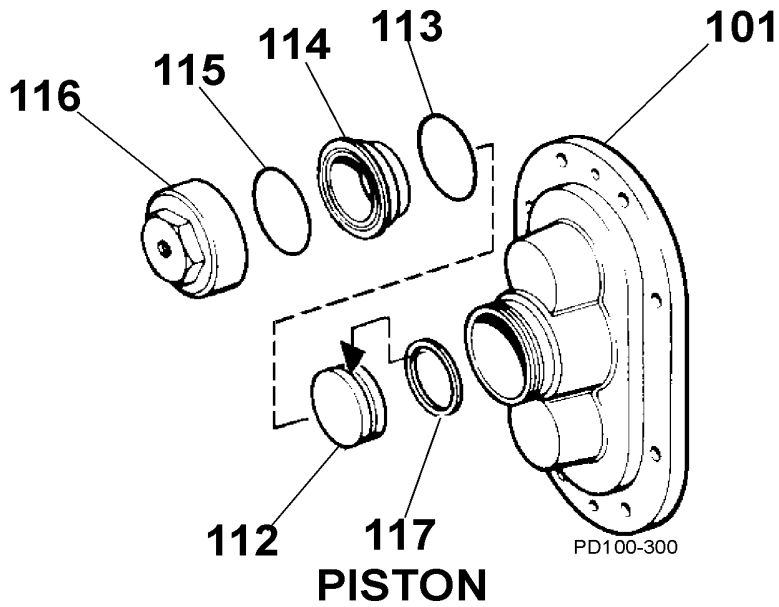
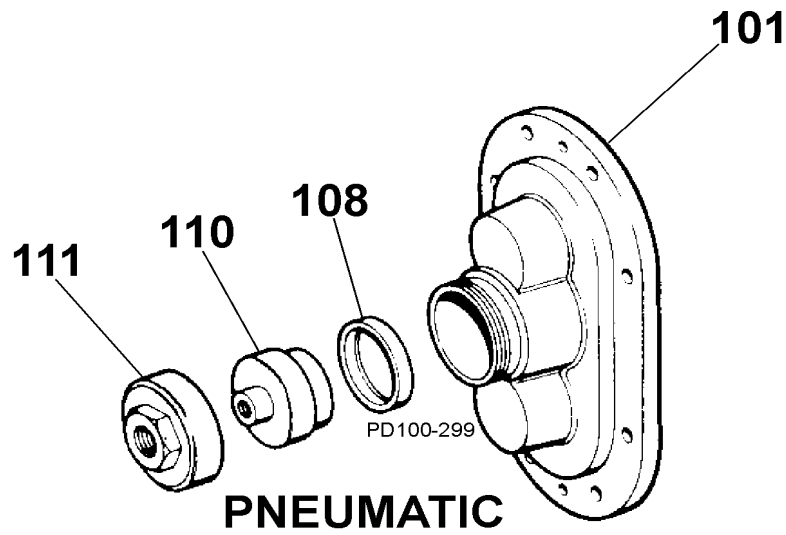
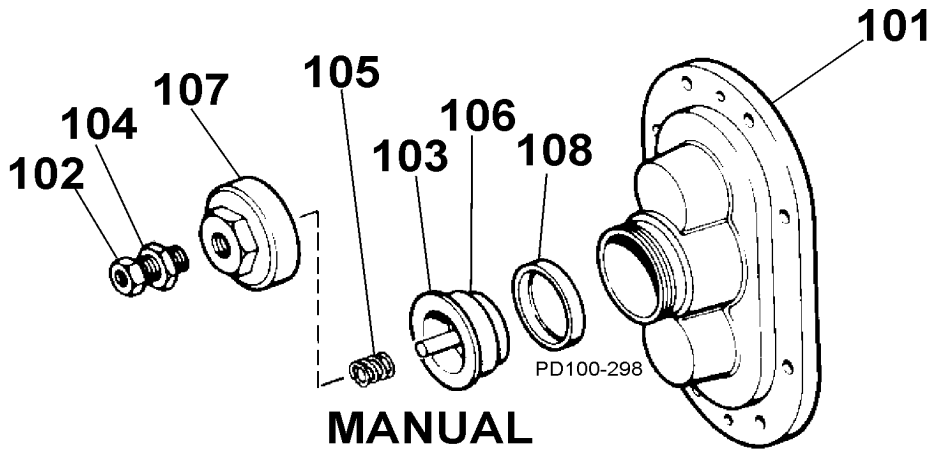
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103674	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	AD0 076 000	
	Spring, High (more than 150 PSI)	1	ABB 076 100	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	AD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103674	
* 108	<b>Diaphragm, Buna N</b>	1	AD0 078 000	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103674	
112	Piston	1	AD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70223	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70224	
116	Cover Nut	1	AD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	AD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70218	9

**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**

030 - 034 - 050 - 054-UL Vented Cover Parts Diagram



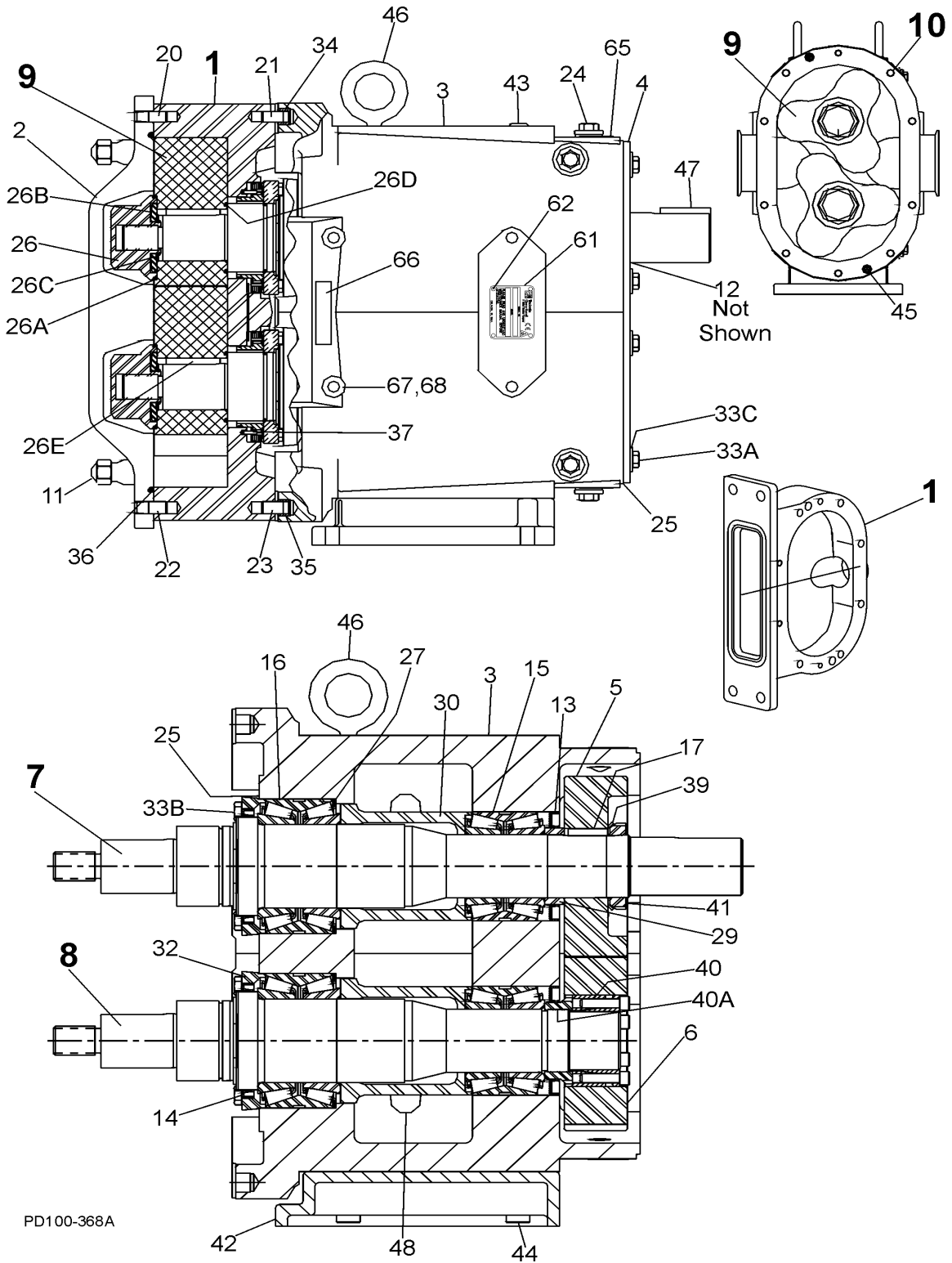
## 060 - 130 - 134-UL Pump Parts

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>1</b>	060-UL Pump Body	1	See Note 1	1
	060-UL Pump Body with Flush	1	See Note 1	1
	130-UL Pump Body	1	See Note 1	1
	130-UL Pump Body with Flush	1	See Note 1	1
	134-UL Rectangular Flange Inlet Body	1	See Note 1	1
	134-UL Rect. Flange Inlet Body with Flush	1	See Note 1	1
<b>7</b>	060-UL Drive Shaft (Obsoletes 103223)	1	108421	
	130-134-UL Drive Shaft (Obsoletes 103225)	1	108423	
<b>8</b>	060-UL Short Shaft (Obsoletes 103224)	1	108422	
	130-134-UL Short Shaft (Obsoletes 103226)	1	108424	
<b>9</b>	060-UL Rotor, 3 Lobe, Alloy 88 (Obsoletes 103204)	2	117506	2, 22
	060-UL Rotor, 3 Lobe, 316SS (Obsoletes 104346)	2	117508	2, 22
	130-134-UL Rotor, 3 Lobe, Alloy 88 (Obsoletes 103205)	2	117510	2, 22
	130-134-UL Rotor, 3 Lobe, 316SS (Obsoletes 104348)	2	117512	2, 22
<b>10A</b>	060-UL Stud	8	108843	
<b>10B</b>	060-UL Stud, Jacketed Cover	8	108846	
<b>10C</b>	130-UL Stud	8	101722	
<b>10D</b>	130-UL Stud, Jacketed Cover	8	130 011 001	
<b>10E</b>	134-UL Stud	6	130 011 000	
	134-UL Stud	2	0C1 050 000	
<b>10F</b>	134-UL Stud, Jacketed Cover	6	130 011 001	
	134-UL Stud, Jacketed Cover	2	35556	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
22. Replaced by new rotor profile in 2002. Do NOT mix old and new profile rotors.

# 060 - 130 - 134-UL Pump Parts Diagram



**060 - 130 - 134-UL COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	103215	
	Jacketed Cover	1	107669	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00036	
	Manual (under 150 PSI)	1	CVR00088	
	Pneumatic	1	CVR 00089	
	Piston	1	CVR00090	
3	Gear Case, CI	1	070 005 000	
	Gear Case, SS; Optional	1	101834	
4	Gear Case Cover, Steel	1	070 106 000	
	Gear Case Cover, SS; Optional	1	102282	
5	Gear, Drive Shaft, Spur (Replaces 060 007 001)	1	107404	19
6	Gear, Short Shaft, Spur (Replaces 103235)	1	107405	19
11	Hex Nut	8	108371	
	Wing Nut, Optional	8	105852	
12	Oil Seal, Gear Case Cover	1	000 030 012	
13	Oil Seal, Gear Case Rear	2	000 030 011	
14	Grease Seal, Bearing Retainer	2	101829	
	Bearing Isolator Kit, Includes STD Bearing Retainer	2	X06614-1	
	Bearing Isolator Kit, Includes SS Bearing Retainer	2	X06614-2	
15	Bearing, Rear	2	107186	
16	Bearing, Front	2	060 036 000	
17	Key, Gear	2	060 037 000	
20	Dowel Pin, Upper Cover Side	1	CD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	CD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	CD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	CD0 040 R10	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101806	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70227	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70227	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70227	
26B	Belleville Washer	2	101693	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70119	
	<b>O-Ring, Retainer, EPDM</b>	2	E70119	
	<b>O-Ring, Retainer, FKM</b>	2	V70119	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70224	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70224	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70224	
26E	060-UL Key, Rotor	2	101824	
	130-134-UL Key, Rotor	2	101826	

**NOTES:**

19. Old and new gears can not be mixed. Changed from helical to spur gears in 1997.

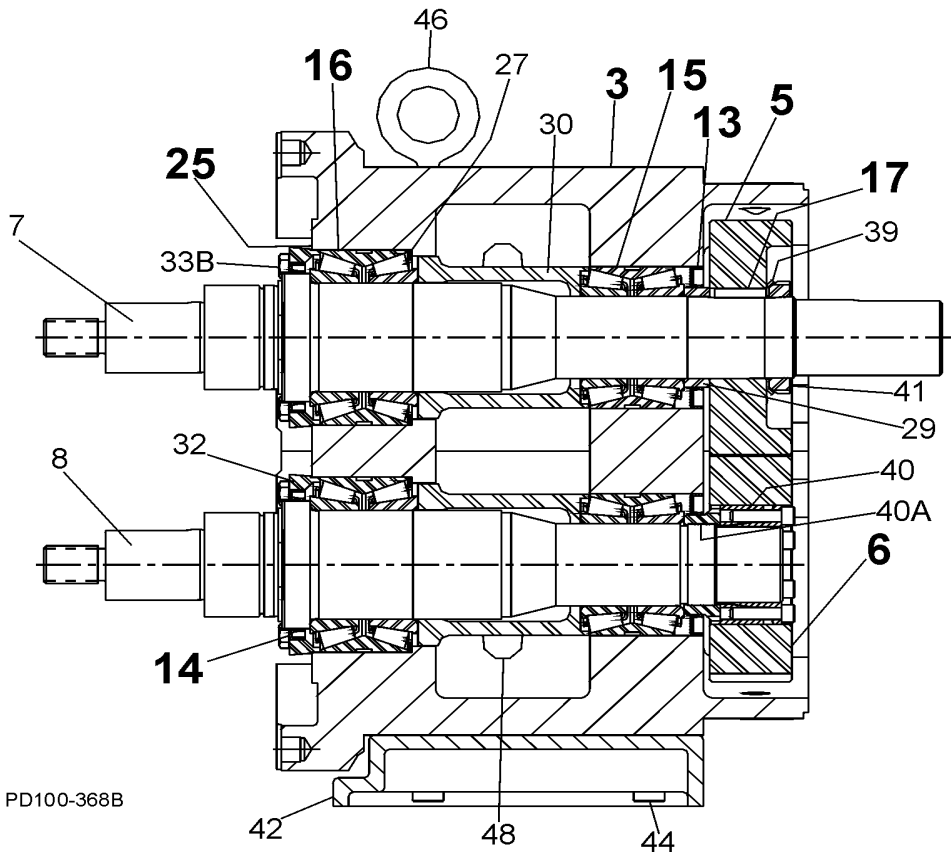
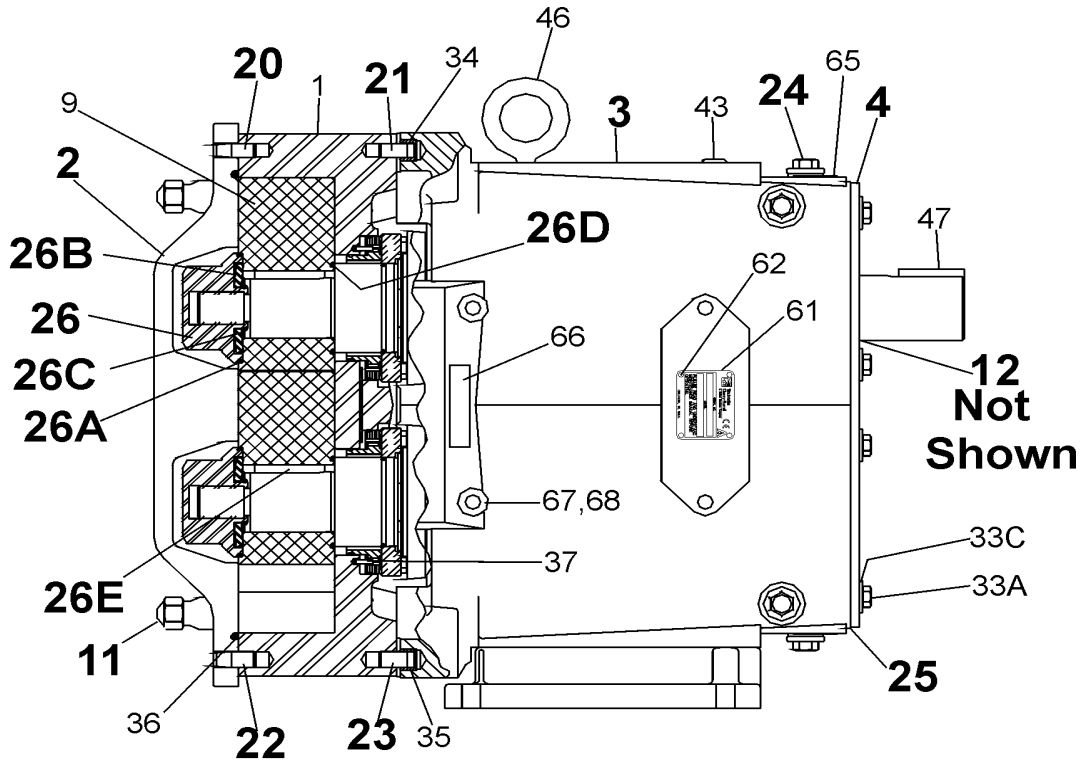
40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended Spare Parts**



060 - 130 - 134-UL Common Parts Diagram



PD100-368B

**060 - 130 - 134-UL COMMON PARTS PRICE LIST**

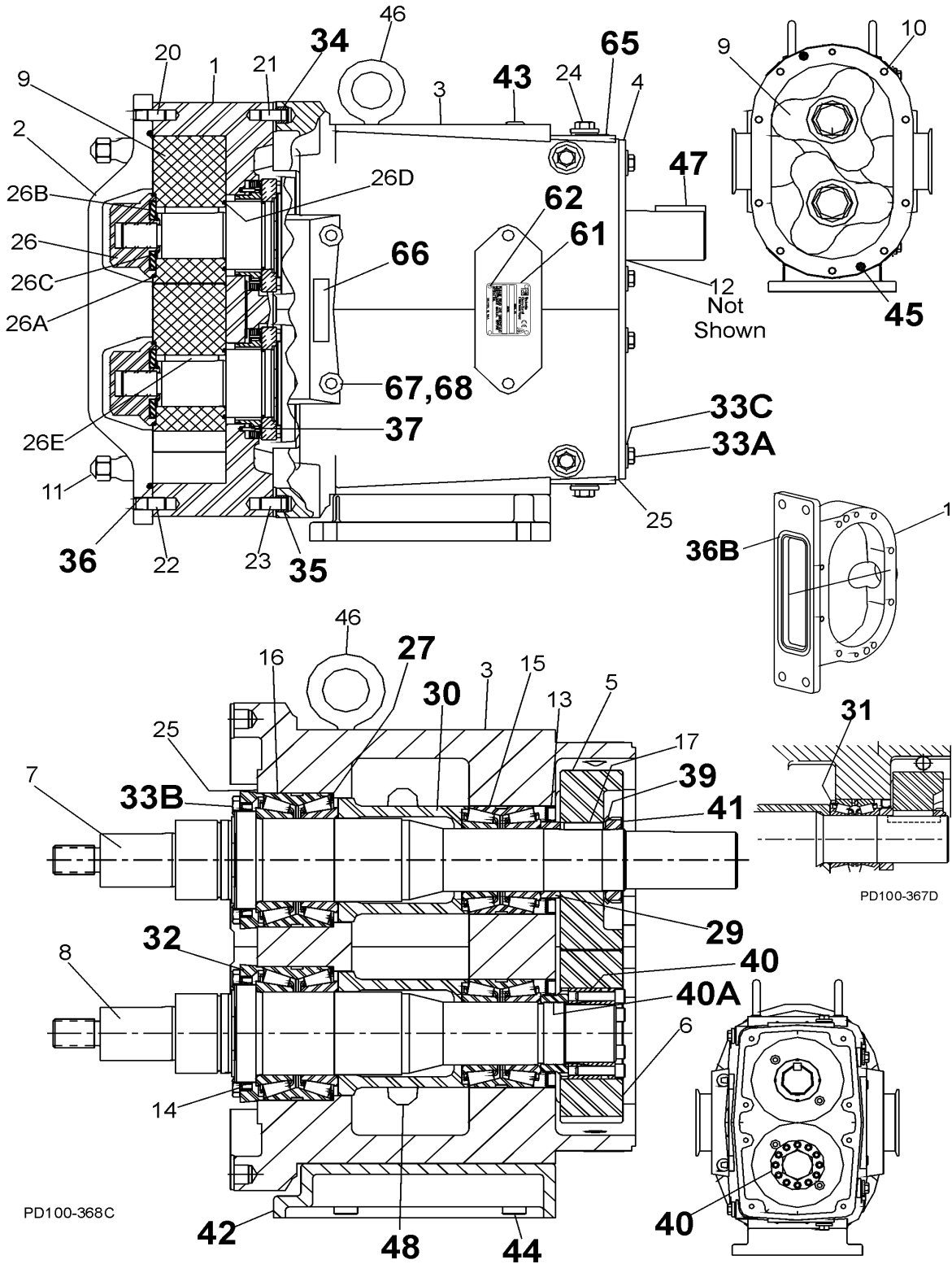
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
27	Shim Kit	2	117891	
29	Spacer, Gear to Rear Bearing	2	107187	
30	Bearing Spacer	2	060 055 003	
31	Grease Retainer, Rear Bearing	2	STD 091 002	
32	Bearing Retainer, Front, STD	2	060 080 000	
	Bearing Retainer, Front, SS	2	101812	
33A	3/8-16 x 3/4" HHCS, STD Gear Case Cover	6	30-314	
	3/8-16 x 3/4" HHCS, SS Gear Case Cover	6	30-50	
33B	3/8-16 x 1-1/4" HHCS, STD Bearing Retainer	8	30-351	
	3/8-16 x 1-1/4" HHCS, SS Bearing Retainer	8	30-60	
33C	3/8" Flat Washer, Gear Case Cover	6	43-189	
34	Dowel Bushing, Upper	1	CD0 116 000	
35	Dowel Bushing, Lower	1	CD0 116 100	
* * * * *	<b>O-Ring, Pump Cover, Buna N</b>	1	N70373	
	<b>O-Ring, Pump Cover, EPDM</b>	1	E70373	
	<b>O-Ring, Pump Cover, FKM</b>	1	V70373	
	<b>O-Ring, Pump Cover, Silicone</b>	1	S75373	
36B	<b>134-UL O-Ring, Rectangular Flange</b>	1	N70369	
37	Stop Pin, Seal	6	101720	
39	Lockwasher, Gear	2	STD 136 009	
40	Locking Assembly (Replaces 103243)	1	108785	
40A	Locknut, Sleeve	1	108202	
	Locknut, Sleeve	1	103231	21
41	Locknut, Gear	2	STD 236 009	
42	Gear Case Shim, CI	1	070 110 000	
	Gear Case Shim, SS; Optional	1	102286	
	Pump Pedestal, 5.5", Optional	1	CD0 110 SM5	
	Pump Pedestal, 10", Optional	1	CD0 110 SM1	
43	Plastic Cap Plug	6	000 121 001	
44	1/2-13 x 1-1/4" SHCS	4	30-275	
	1/2-13 x 1-1/4" SS SHCS	4	30-503	
45	060-UL Body Retaining Screws, 5/16-8 x 3"	2	30-319	
	130-134-UL Body Retaining Screws, 5/16-8 x 4"	2	30-423	
46	Eye Bolt, 1/2 -13	2	30-360	
47	Key, Coupling - 3/8 x 3/8 x 1-5/8"	1	000 037 003	
48	Cleanout Plug	2	41013	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	060-130-UL Grease Fitting, 1/8"	4	BD0 092 000	
	134-UL Grease Fitting, 1/8"	4	BD0 092 100	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

21. If new sleeve locknut required for pump made prior to change in 1997, new P/N short shafts, and new P/N gears are required.

**\* Recommended Spare Parts**

# 060 - 130 - 134-UL Common Parts Diagram



**060 - 130 - 134-UL SEAL PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
* 91	O-Ring, Inner Seal, Buna N	2	N70035	
* 91	O-Ring, Inner Seal, EPDM	2	E70035	
* 91	O-Ring, Inner Seal, FKM	2	V70035	
* 92	O-Ring, Shaft, Buna N	2	N70133	25
* 92	O-Ring, Shaft, EPDM	2	E70133	25
* 92	O-Ring, Shaft, FKM	2	V70133	
* 93	Seal Seat, Ceramic	2	101673	
* 93	Seal Seat, Silicon Carbide	2	101674	
* 94	Seal Inner, Carbon (1 Piece)	2	101659	
* 94	Seal Inner, Ceramic	2	101660	
* 94	Seal Inner, Silicon Carbide	2	101661	
* 94	Seal Inner, Tungsten Carbide	2	101662	
95	Wave Spring, Inner Seal	2	101687	
* 96	O-Ring, Outer Seal, Buna N	2	N70043	8
* 96	O-Ring, Outer Seal, EPDM	2	E70043	8
* 96	O-Ring, Outer Seal, FKM	2	V70043	8
97	Wave Spring, Outer Seal	2	101688	
* 98	Outer Seal, Carbon	2	101681	8

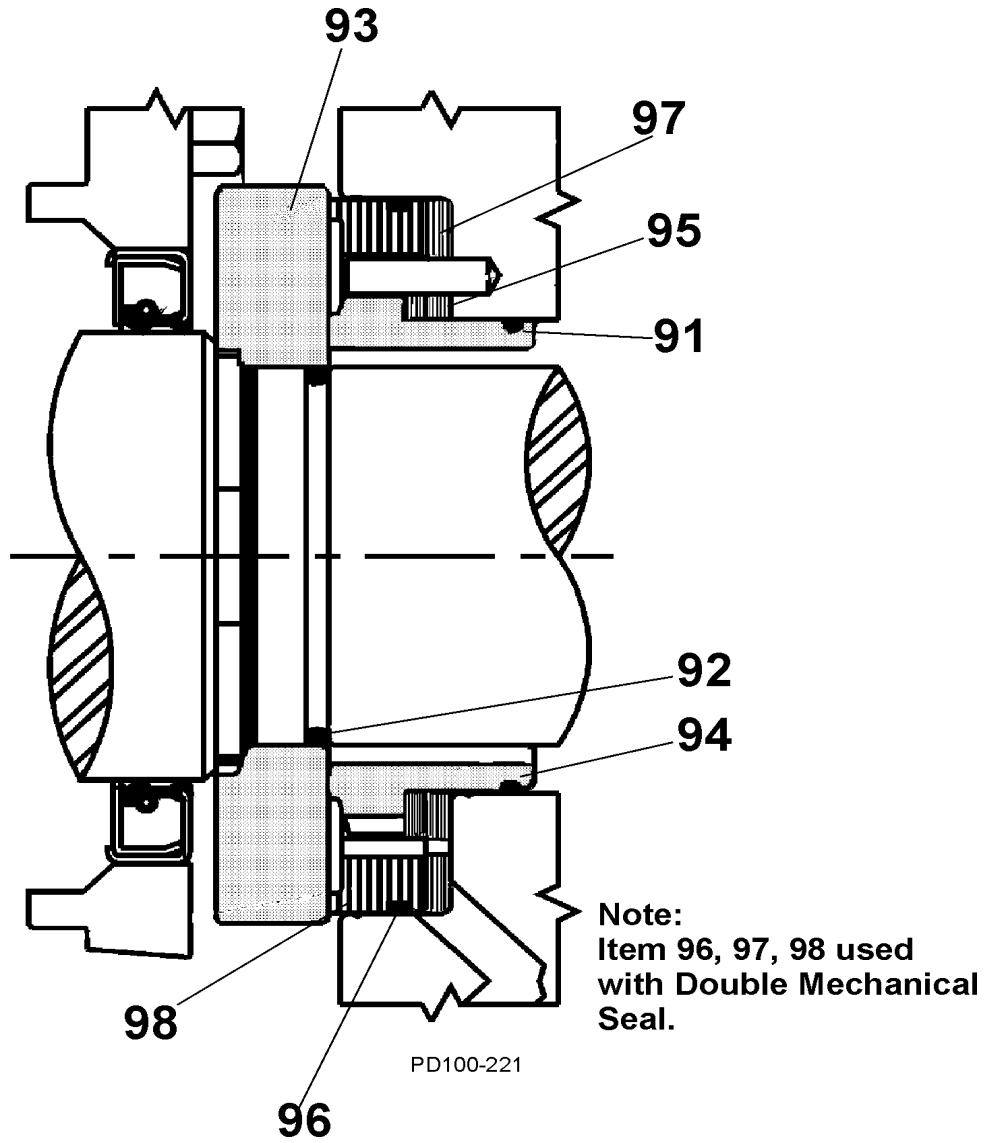
**NOTES:**

8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

060 - 130 - 134 -UL Pump Seal Parts Diagram



**060 - 130 - 134-UL VENTED COVER PRICE LIST**

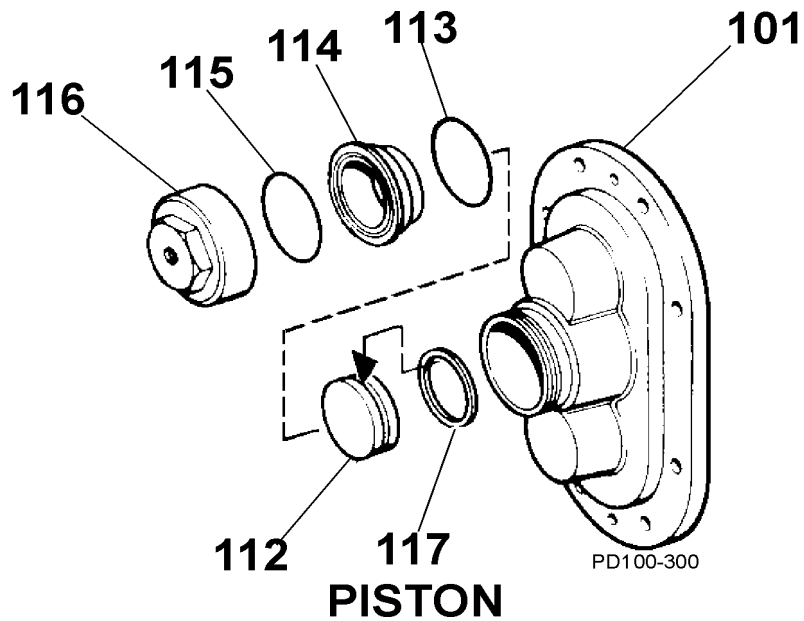
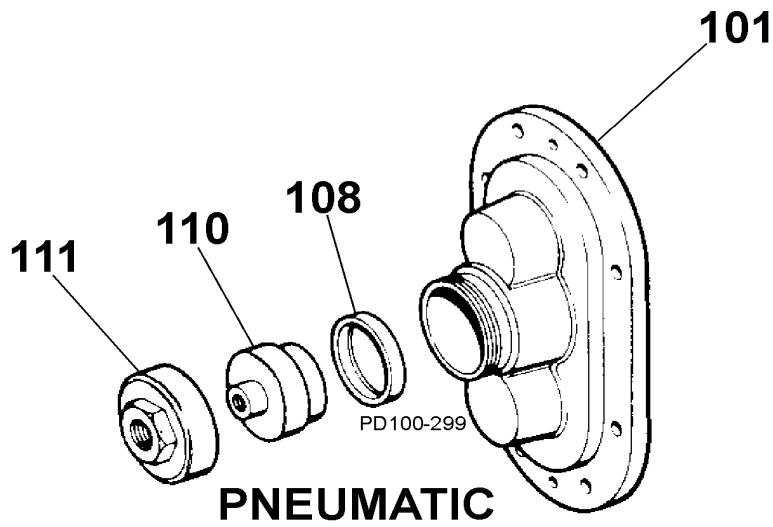
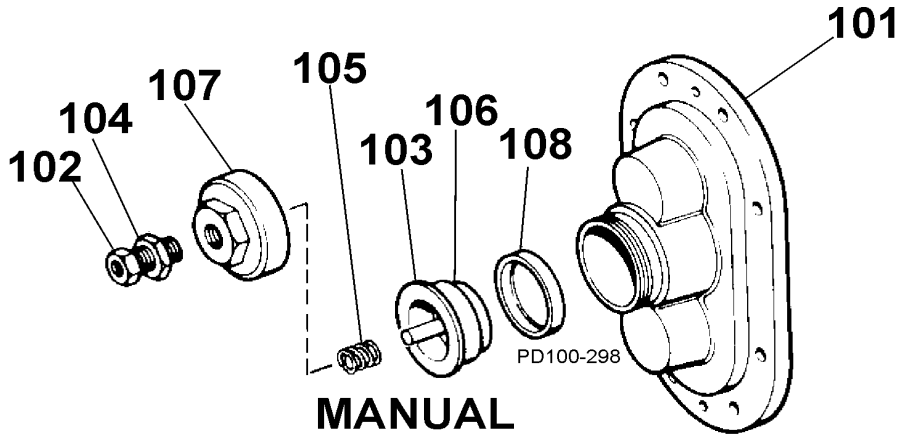
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MANUAL VENTED COVER</b>				
101	Vented Cover	1	103675	
102	Adjusting Screw	1	113657	
103	Spring Plunger	1	113397	
104	Locknut	1	GD0 074 000	
105	Spring, Medium (less than 150 PSI)	1	113523	
	Spring, High (more than 150 PSI)	1	113400	
106	Diaphragm Bushing	1	CD0 077 000	
107	Cover Nut	1	113398	
* 108	<b>Rubber Diaphragm, Buna N</b>	1	CD0 078 000	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	103675	
* 108	<b>Diaphragm, Buna N</b>	1	CD0 078 000	
110	Diaphragm Bushing	1	CD0 077 P00	
111	Cover Nut	1	CD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	103675	
112	Piston	1	CD0 073 P10	
* 113	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70239	
114	Diaphragm Bushing	1	CD0 077 P10	
* 115	<b>O-Ring, Nut Seal, Buna N</b>	1	N70240	
116	Cover Nut	1	CD0 075 P10	
* 117	<b>Piston Seal, Quad Ring</b>	1	CD0 133 000	9
* 117	<b>Piston Seal, O-Ring</b>	1	N70236	9

**NOTES:**

9. Quad ring and o-ring can be interchanged.

\* **Recommended Spare Parts**

060 - 130 - 134-UL Pump Vented Cover Parts Diagram



## 220-UL PUMP PARTS PRICE LIST

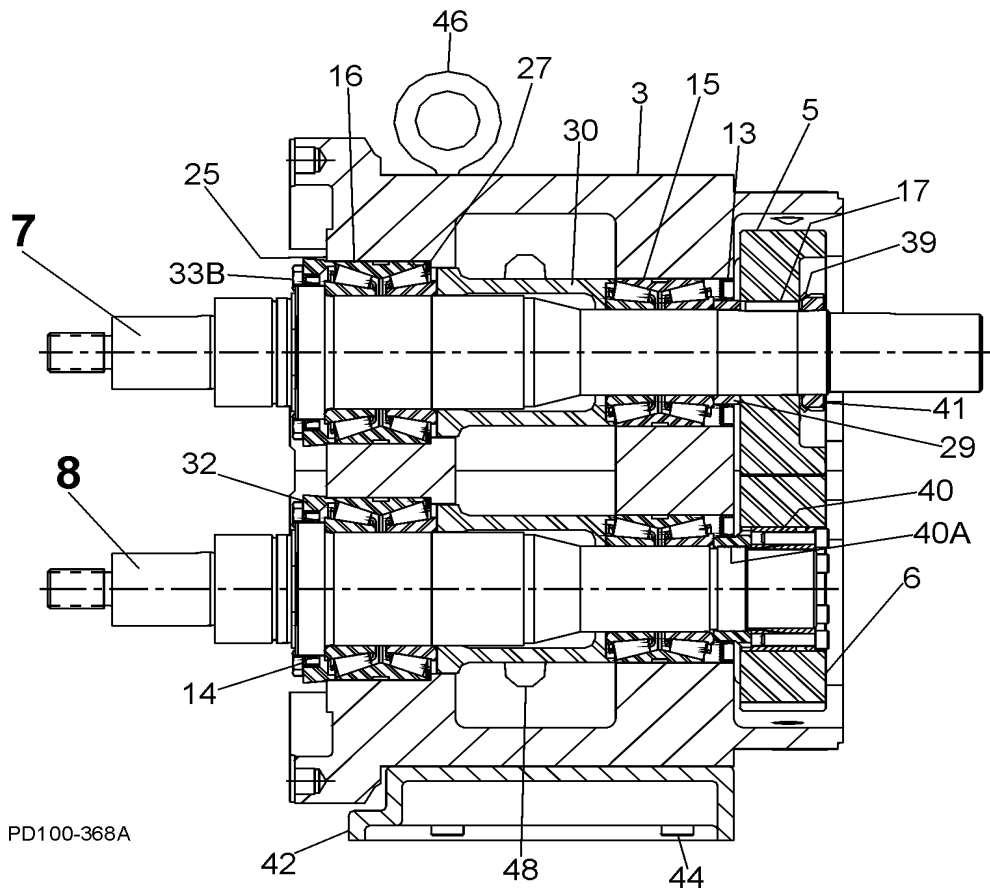
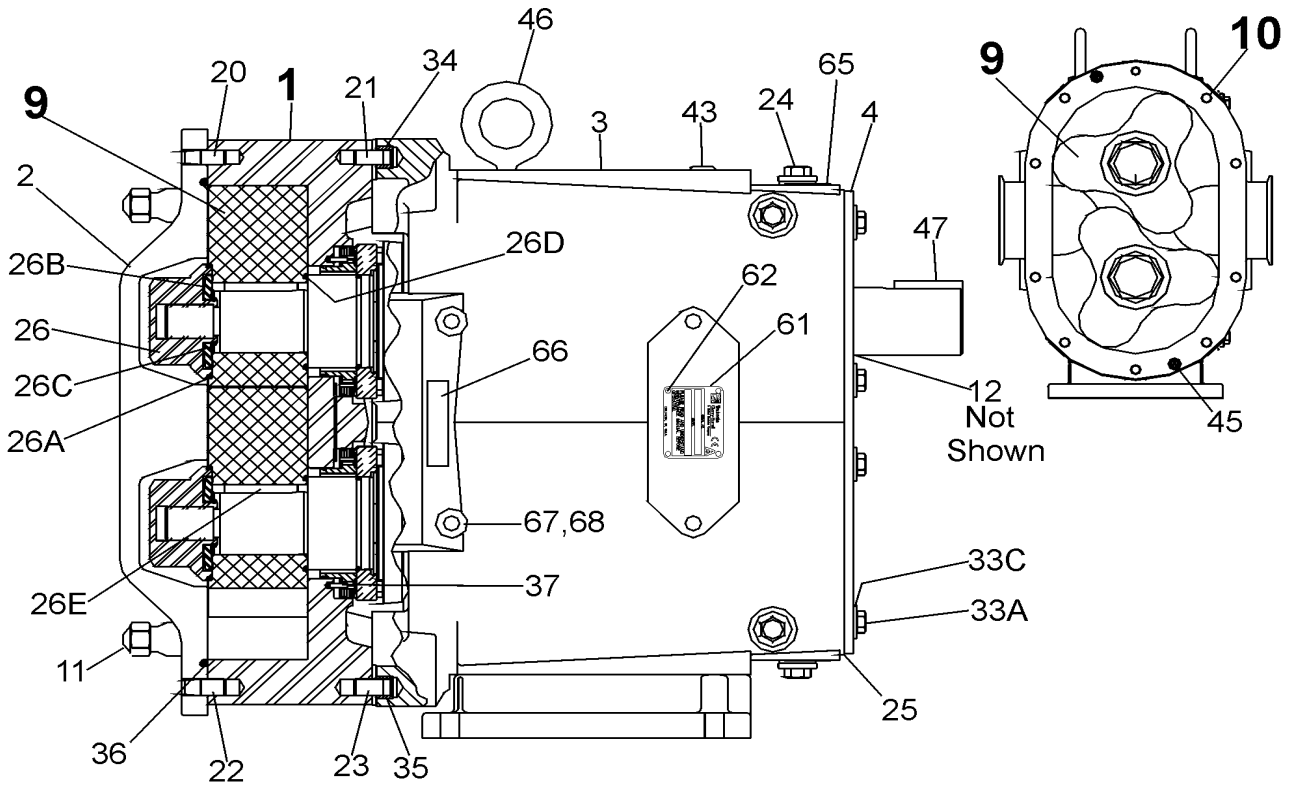
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	Pump Body	1	See Note 1	1
	Pump Body with Flush	1	See Note 1	1
7	Drive Shaft (Replaces 103227)	1	108425	
8	Short Shaft (Replaces 103228)	1	108426	
9	Rotor, 3 Lobe, Alloy 88 (Obsoletes 103206)	2	117514	2, 22
	Rotor, 3 Lobe, 316SS (Obsoletes 104350)	2	117516	2, 22
10	Stud	8	108844	
	Stud, Jacketed Cover	8	108847	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
22. Replaced by new rotor profile in 2002. Do NOT mix old and new profile rotors.



## 220-UL Pump Parts Diagram



PD100-368A

## 220-UL COMMON PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	103216	
	Jacketed Cover	1	107671	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual (over 150 PSI)	1	CVR00114	
	Manual (under 150 PSI)	1	CVR00064	
3	Piston	1	CVR00091	
	Gear Case, CI	1	230 005 000	
4	Gear Case, SS; Optional	1	101836	
	Gear Case Cover, Steel	1	230 106 000	
5	Gear Case Cover, SS; Optional	1	102283	
	Gear, Drive Shaft, Spur (Replaces 200 007 001)	1	110932	19
6	Gear, Short Shaft, Spur (Replaces 103236)	1	112105	19
11	Hex Nut	8	108372	
	Wing Nut, Optional	8	105853	
12	Oil Seal, Gear Case Cover	1	STD 030 006	
13	Oil Seal, Gear Case Rear	2	STD 119 002	
14	Grease Seal, Bearing Retainer	2	STD 030 002	
	Bearing Isolator Kit, Includes STD Bearing Retainer	2	X06634-1	
	Bearing Isolator Kit, Includes SS Bearing Retainer	2	X06634-2	
15	Bearing, Rear	2	200 035 000	
16	Bearing, Front	2	200 036 000	
17	Key, Gear	2	200 037 000	
20	Dowel Pin, Upper Cover Side	1	GD0 040 000	
21	Dowel Pin, Upper Gear Case Side	1	CD0 040 R00	
22	Dowel Pin, Lower Cover Side	1	GD0 040 100	
23	Dowel Pin, Lower Gear Case Side	1	CD0 040 R10	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	101807	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70235	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70235	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70235	
26B	Belleville Washer	2	101694	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70122	
	<b>O-Ring, Retainer, EPDM</b>	2	E70122	
	<b>O-Ring, Retainer, FKM</b>	2	V70122	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70230	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70230	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70230	
26E	Key, Rotor	2	101828	

**NOTES:**

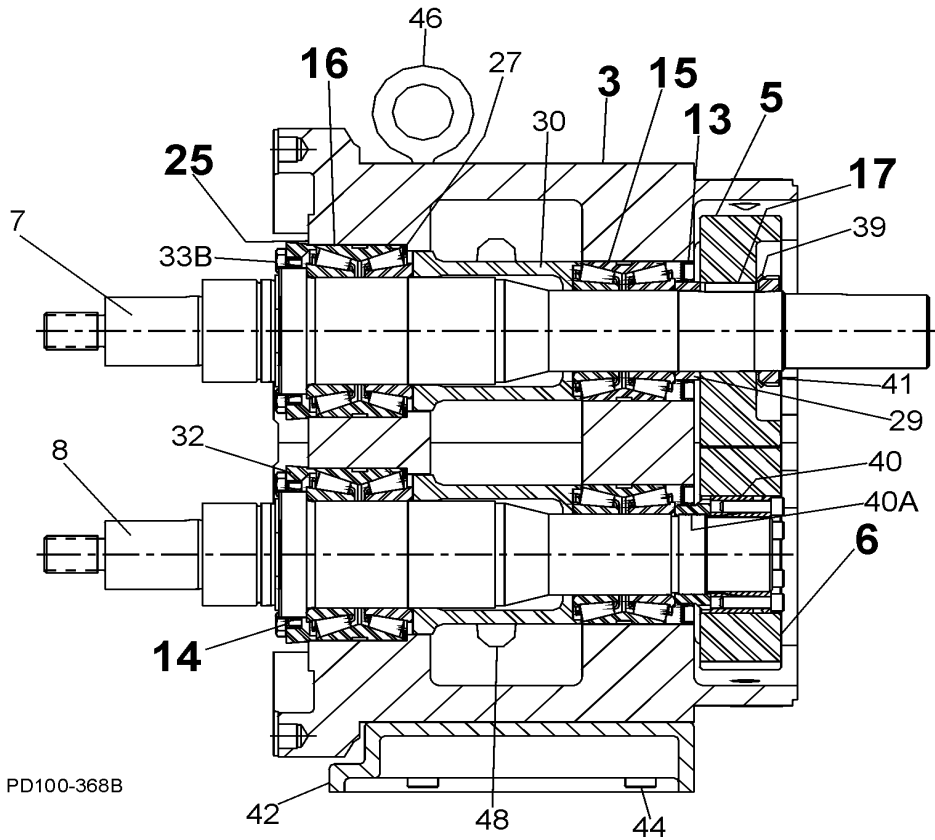
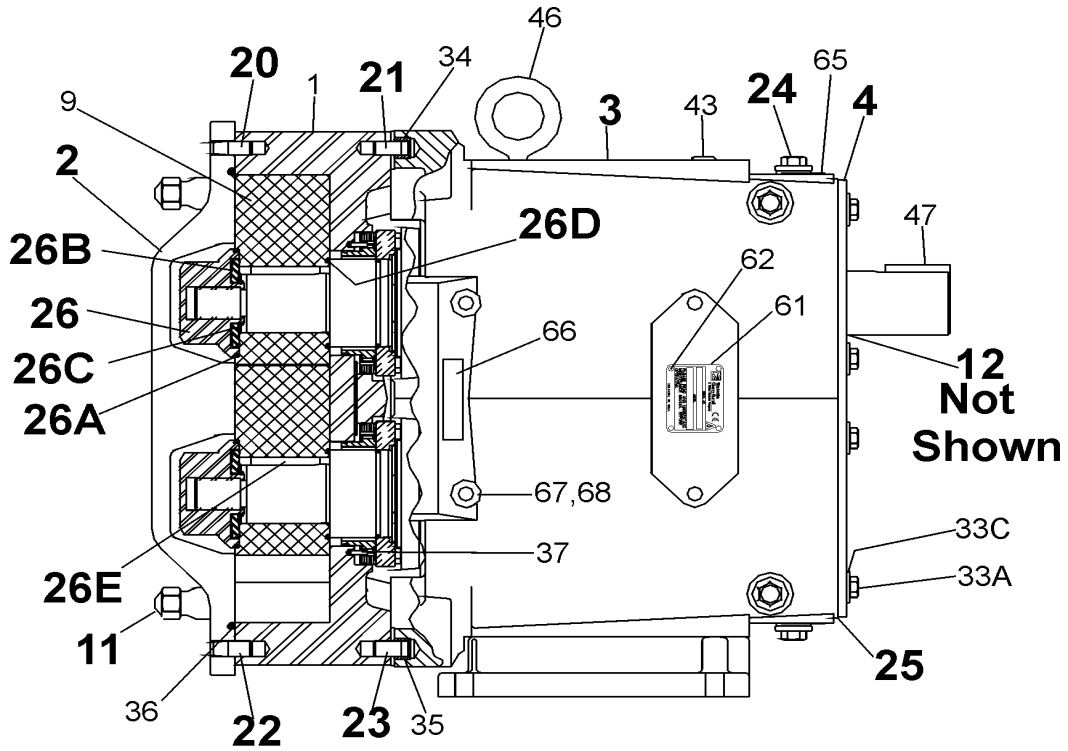
19. Old and new gears can not be mixed. Changed from helical to spur gears in 1997.

40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended Spare Parts**

## 220-UL Common Parts Diagram



## 220-UL COMMON PARTS PRICE LIST

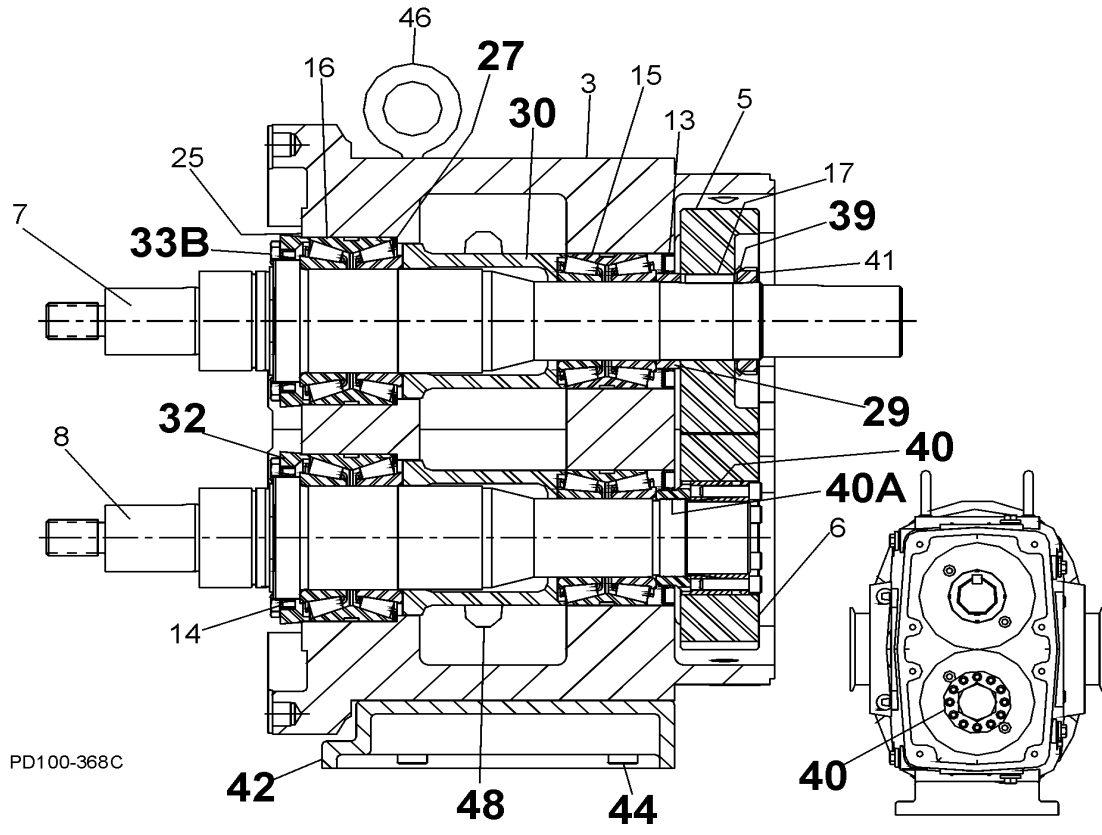
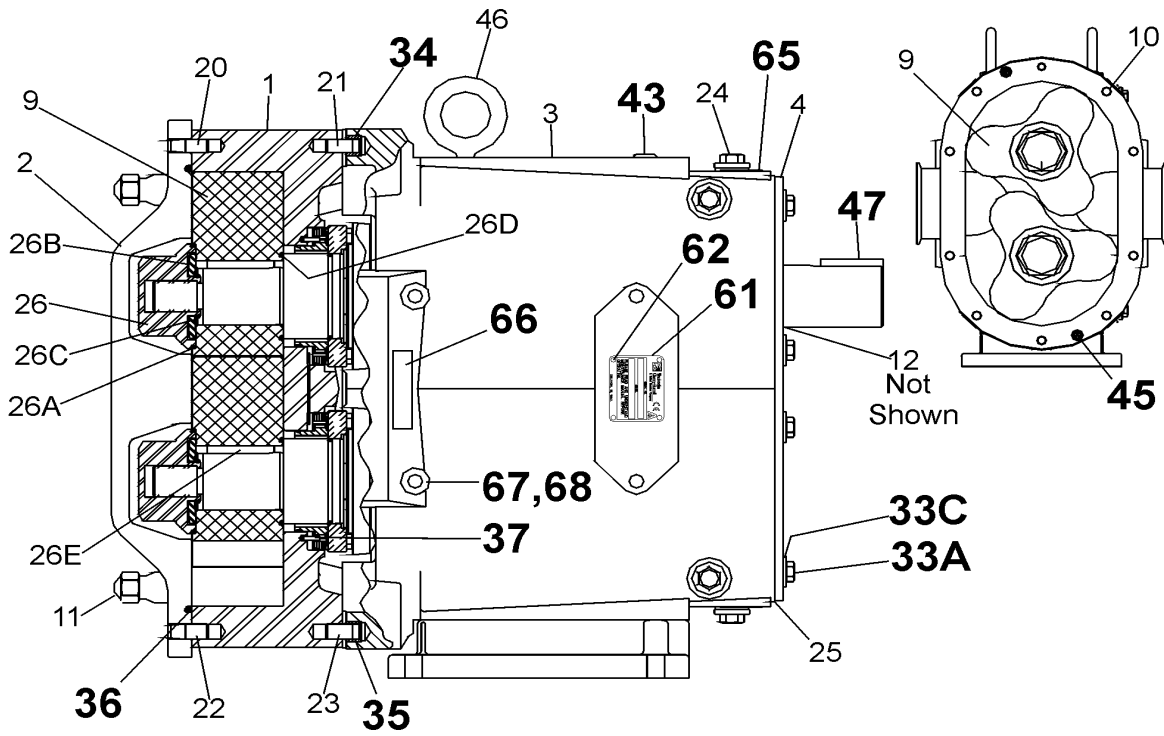
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
27	Shim Kit	2	117892	
29	Spacer, Gear to Rear Bearing	2	40878	
30	Bearing Spacer	2	40752	
32	Bearing Retainer, Front, STD	2	220 080 000	
	Bearing Retainer, Front, SS	2	101813	
33A	3/8-16 x 3/4" HHCS, STD Gear Case Cover	8	30-314	
	3/8-16 x 3/4" HHCS, SS Gear Case Cover	8	30-50	
33B	3/8-16 x 1-1/4" HHCS, STD Bearing Retainer	8	30-351	
	3/8-16 x 1-1/4" HHCS, SS Bearing Retainer	8	30-60	
33C	3/8" Flat Washer, Gear Case Cover	8	43-108	
34	Dowel Bushing, Upper	1	CD0 116 000	
35	Dowel Bushing, Lower	1	CD0 116 100	
* * * *	<b>O-Ring, Pump Cover, Buna N</b>	1	N70381	
	<b>O-Ring, Pump Cover, EPDM</b>	1	E70381	
	<b>O-Ring, Pump Cover, FKM</b>	1	V70381	
	<b>O-Ring, Pump Cover, Silicone</b>	1	S75381	
37	Stop Pin, Seal	6	101720	
39	Lockwasher, Gear	2	STD 136 011	
40	Locking Assembly (Replaces 103244)	1	108786	
40A	Locknut, Sleeve	1	108203	
	Locknut, Sleeve	1	103232	21
41	Locknut, Gear	2	STD 236 011	
42	Gear Case Shim, CI	1	230 110 000	
	Gear Case Shim, SS, Optional	1	102287	
	Pump Pedestal, 9", Optional	1	GD0 110 SM9	
	Pump Pedestal, 13", Optional	1	GD0 110 SM1	
43	Plastic Cap Plug	6	000 121 001	
44	1/2-13 x 2" SHCS	4	30-111	
	1/2-13 x 2" SS SHCS	4	30-44	
45	Body Retaining Screws, 3/8-16 x 4-1/2"	2	30-499	
46	Eye Bolt, 1/2 -13	2	30-360	
47	Key, Coupling - 1/2 x 1/2 x 1-7/8"	1	000 037 004	
48	Cleanout Plug	2	41013	
61	Name Plate, Sanitary	1	001 061 002	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	Grease Fitting, 1/8"	4	BD0 092 000	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

21. Sleeve locknut required for pump made prior to change in 1997.

\* **Recommended Spare Parts**

## 220-UL Common Parts Diagram



PD100-368C

## 220-UL SEAL PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
*				
*	<b>O-Ring, Inner Seal, Buna N</b>	2	N70041	25
*	<b>91</b>			
	<b>O-Ring, Inner Seal, EPDM</b>	2	E70041	
	<b>O-Ring, Inner Seal, FKM</b>	2	V70041	
*				
*	<b>O-Ring, Shaft, Buna N</b>	2	N70145	25
*	<b>92</b>			
	<b>O-Ring, Shaft, EPDM</b>	2	E70145	
	<b>O-Ring, Shaft, FKM</b>	2	V70145	
*				
*	<b>Seal Seat, Ceramic</b>	2	101676	
*	<b>Seal Seat, Silicon Carbide</b>	2	101677	
*				
*	<b>Seal Inner, Carbon (1 Piece)</b>	2	101663	
*	<b>94</b>			
	<b>Seal Inner, Ceramic</b>	2	101664	
	<b>Seal Inner, Silicon Carbide</b>	2	101665	
	<b>Seal Inner, Tungsten Carbide</b>	2	101666	
*				
*	<b>95</b>	2	101689	
	<b>Wave Spring, Inner Seal</b>			
*				
*	<b>O-Ring, Outer Seal, Buna N</b>	2	N70046	8
*	<b>96</b>			
	<b>O-Ring, Outer Seal, EPDM</b>	2	E70046	8
	<b>O-Ring, Outer Seal, FKM</b>	2	V70046	8
*				
*	<b>97</b>	2	101690	
	<b>Wave Spring, Outer Seal</b>			
*				
*	<b>98</b>	2	101682	8
	<b>Outer Seal, Carbon</b>			

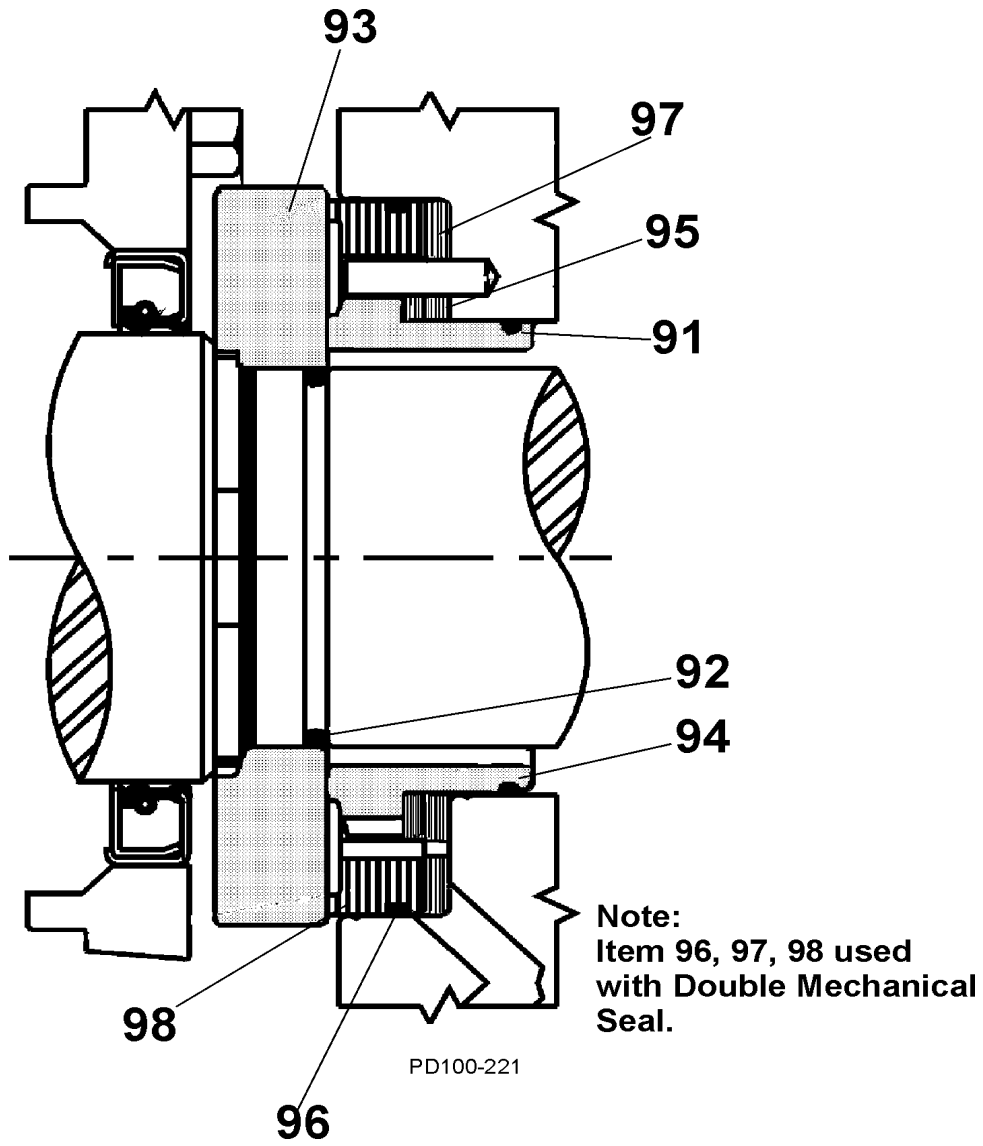
**NOTES:**

8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

# 220 -UL Seal Parts Diagram



## 220-UL VENTED COVER PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES	
<b>MANUAL VENTED COVER</b>					
101	Vented Cover	1	103676		
102	Adjusting Screw	1	GD0 072 100		
103	Spring Plunger	1	GD0 073 000		
104	Locknut	1	GD0 074 000		
105	Spring, Medium (less than 150 PSI)	1	113400		
	Spring, High (more than 150 PSI)	1	113524		
106	Diaphragm Bushing	1	GD0 077 000		
107	Cover Nut	1	GD0 075 000		
*	<b>108</b>	<b>Rubber Diaphragm, Buna N</b>	1	GD0 078 000	
<b>PISTON VENTED COVER</b>					
101	Vented Cover	1	103676		
112	Piston	1	GD0 073 P10		
*	<b>113</b>	<b>O-Ring, Bushing Seal, Buna N</b>	1	N70261	
114	Diaphragm Bushing	1	GD0 077 P10		
*	<b>115</b>	<b>O-Ring, Nut Seal, Buna N</b>	1	N70261	
116	Cover Nut	1	GD0 075 P10		
*	<b>117</b>	<b>Piston Seal, Quad Ring</b>	1	GD0 133 000	9
*		<b>Piston Seal, O-Ring, Buna N</b>	1	N70258	9

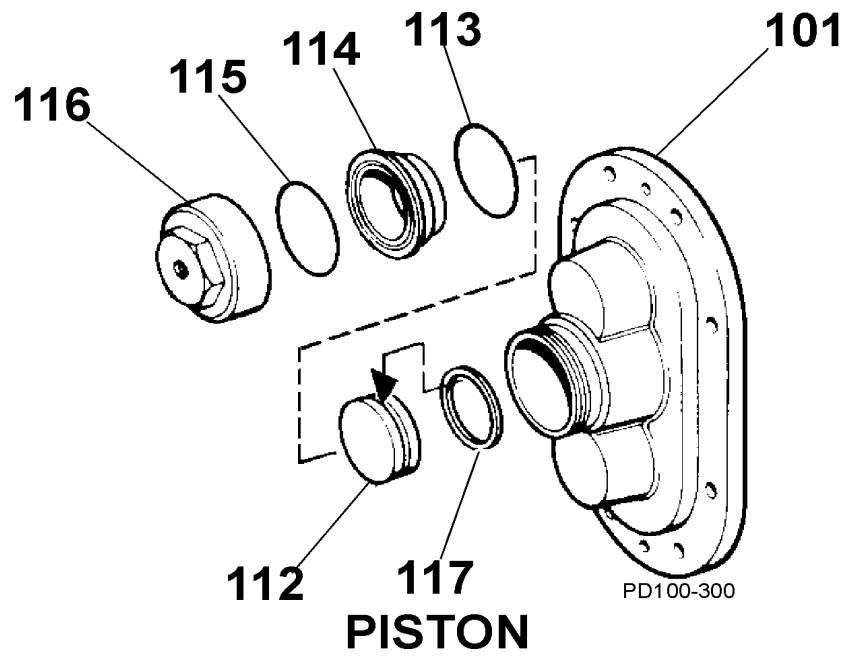
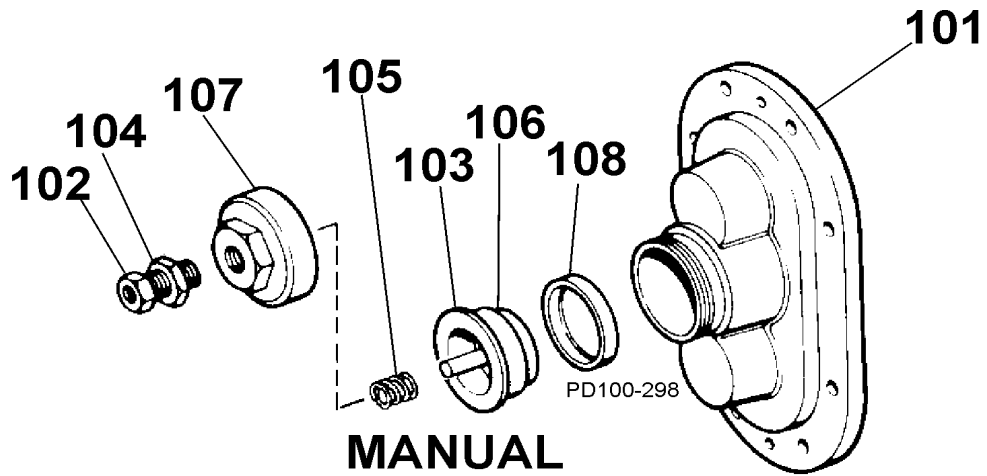
**NOTES:**

9. Quad Ring and O-Ring can be interchanged.

\* **Recommended Spare Parts**



# 220-UL Vented Cover Parts Diagram



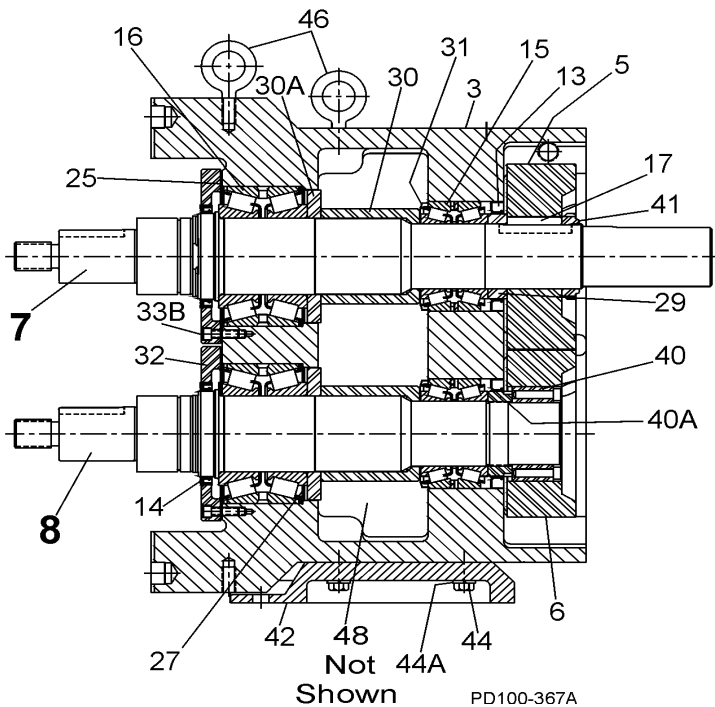
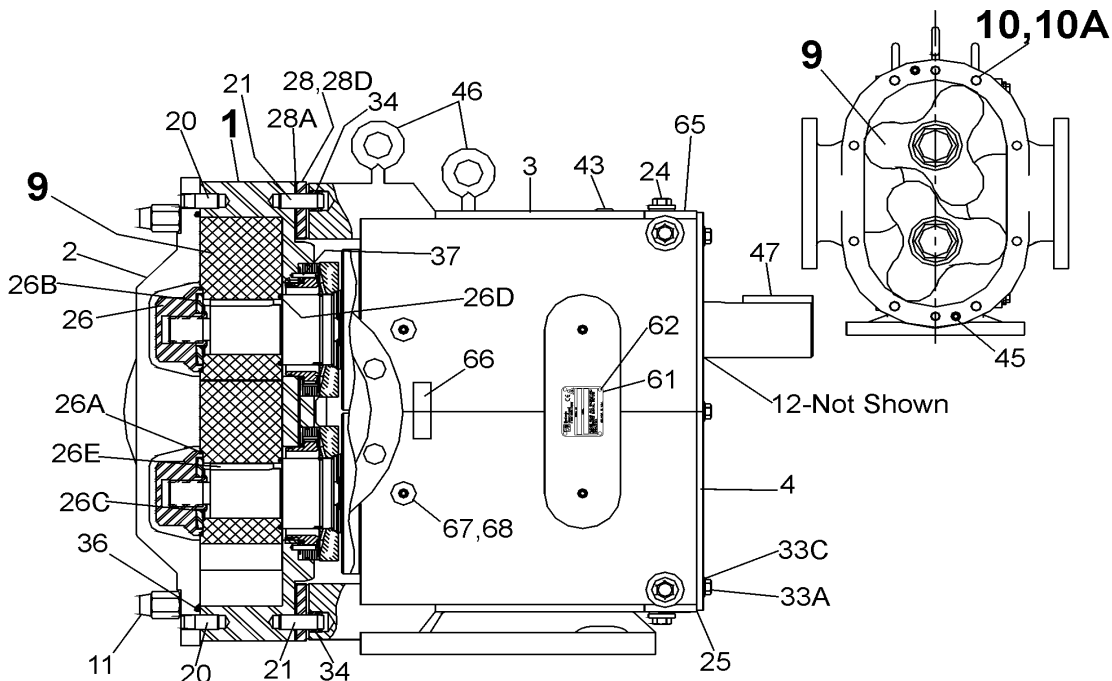
### 320-UL PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	Pump Body	1	See Note 1	1
	Pump Body with Flush	1	See Note 1	1
7	Drive Shaft (Obsoletes 105472)	1	108427	
8	Short Shaft (Obsoletes 105473)	1	108428	
9	Rotor, 3 Lobe, Alloy 88 (Obsoletes 105496)	2	117518	2, 22
	Rotor, 3 Lobe, 316SS (Obsoletes 105498)	2	117520	2, 22
10	Stud, Long	4	111291	
	Stud, Long, Jacketed Cover	4	111291	
10A	Stud, Short	4	111292	
	Stud, Short, Jacketed Cover	4	111292	

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor Part Numbers shown. Contact Factory for optional clearances and finishes.
22. Replaced by new rotor profile in 2002. Do NOT mix old and new profile rotors.

### 320-UL Pump Parts Diagram



### 320-UL COMMON PARTS PRICE LIST

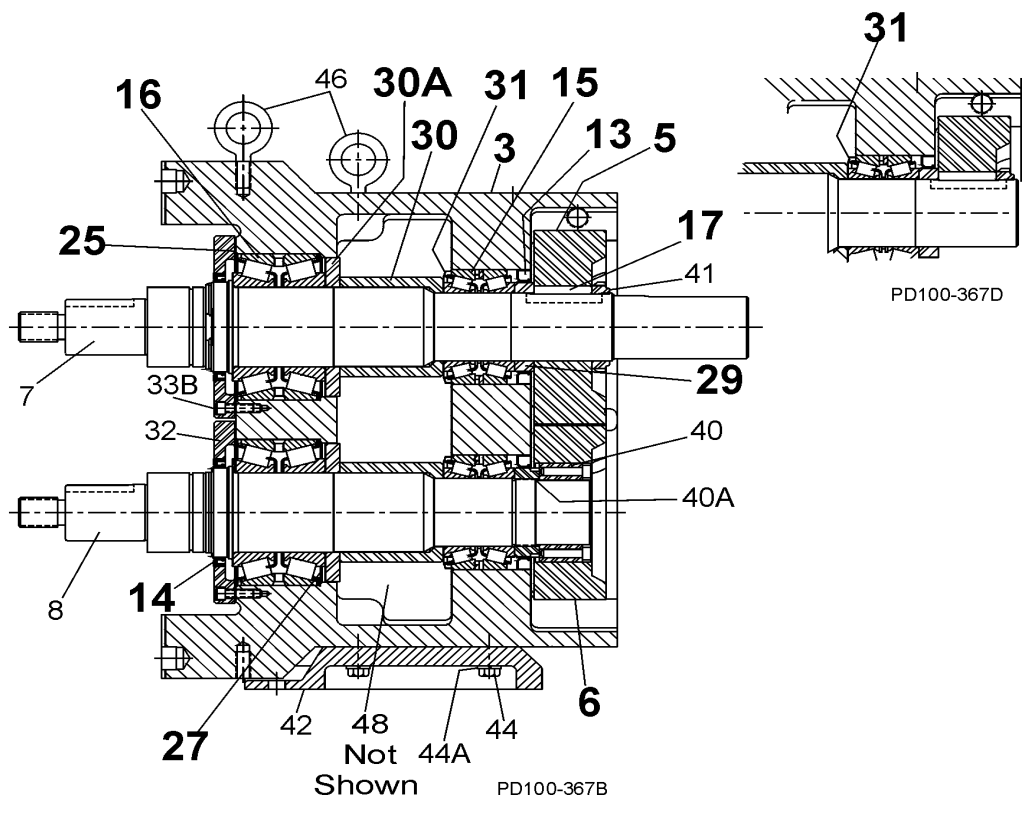
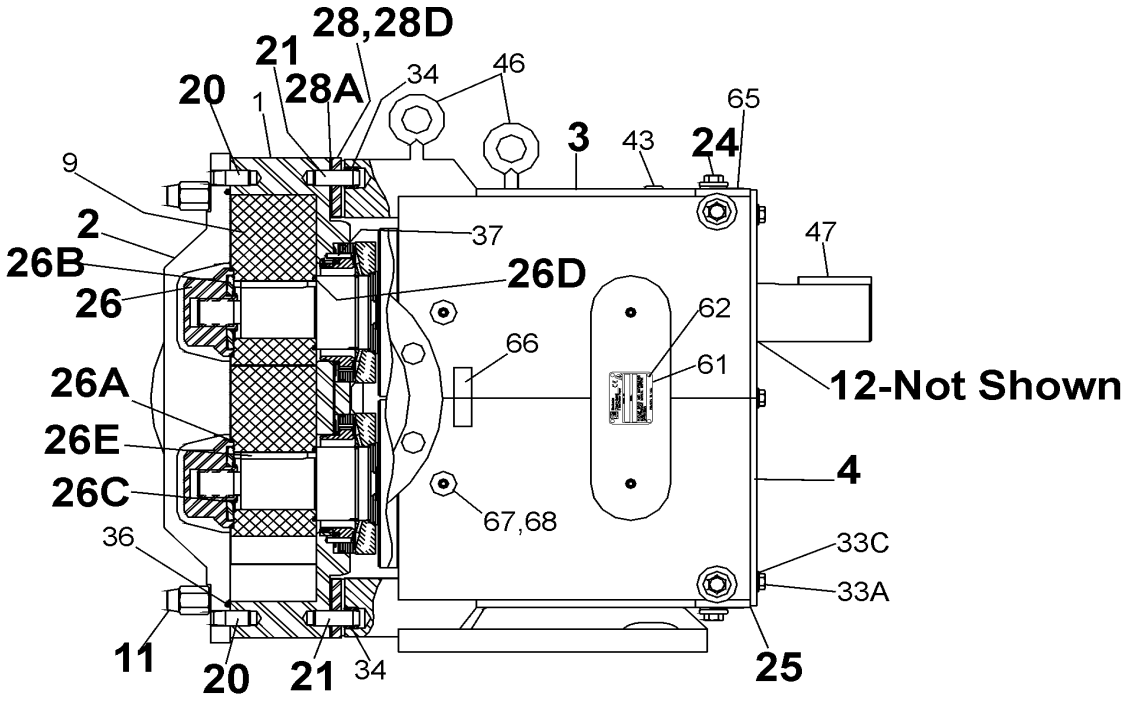
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Pump Cover	1	105425	
3	Gear Case, CI	1	105478	
4	Gear Case Cover, Steel	1	40669	
5	Gear, Drive Shaft, Spur	1	102470	
6	Gear, Short Shaft, Spur	1	102471	
11	Hex Nut	8	108373	
	Wing Nut, Optional	8	110858	
12	Oil Seal, Gear Case Cover	1	STD 030 004	
13	Oil Seal, Gear Case Rear	2	102475	
14	Grease Seal, Bearing Retainer	2	STD 030 002	
	Bearing Isolator Kit, Incl. STD Bearing Retainer	2	X06634-3	
15	Bearing, Rear	2	OH1 036 000	
16	Bearing, Front	2	OH1 036 003	
17	Key, Gear	2	OH1 037 000	
20	Dowel Pins, Cover Side	2	OH1 040 000	
21	Dowel Pins, Gear Case Side	2	105871	
24	Plug w/ washer, 3/4-16	6	000 046 004	40
	Oil Plug, M20 x 1.5"	5	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Nut, Rotor	2	105409	
* 26A	<b>O-Ring, Rotor Nut, Buna N</b>	2	N70237	
	<b>O-Ring, Rotor Nut, EPDM</b>	2	E70237	
	<b>O-Ring, Rotor Nut, FKM</b>	2	V70237	
	<b>O-Ring, Rotor Nut, Silicone</b>	2	S75237	
26B	Washer, Belleville	2	105411	
* 26C	<b>O-Ring, Retainer, Buna N</b>	2	N70125	
	<b>O-Ring, Retainer, EPDM</b>	2	E70125	
	<b>O-Ring, Retainer, FKM</b>	2	V70125	
	<b>O-Ring, Retainer, Silicone</b>	2	S75125	
* 26D	<b>O-Ring, Rotor Hub, Buna N</b>	2	N70232	
	<b>O-Ring, Rotor Hub, EPDM</b>	2	E70232	
	<b>O-Ring, Rotor Hub, FKM</b>	2	V70232	
	<b>O-Ring, Rotor Hub, Silicone</b>	2	S75232	
26E	Key, Rotor	2	105422	
27	Shim Kit	2	117893	
28	Shim Plate	2	105426	
28A	Shims, Body, .002	AR	105866	
	Shims, Body, .003	AR	105867	
	Shims, Body, .005	AR	105868	
	Shims, Body, .010	AR	105869	
	Shims, Body, .020	AR	105870	
28D	5/16-18 x 1" FHSCS	4	30-612	
29	Spacer, Gear to Rear Bearing	2	102474	
30	Bearing Spacer	2	102472	
30A	Spacer Seal	2	102473	
31	Retainer, Grease	2	STD 091 000	

**NOTES:**

40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended Spare Parts**



### 320-UL COMMON PARTS PRICE LIST

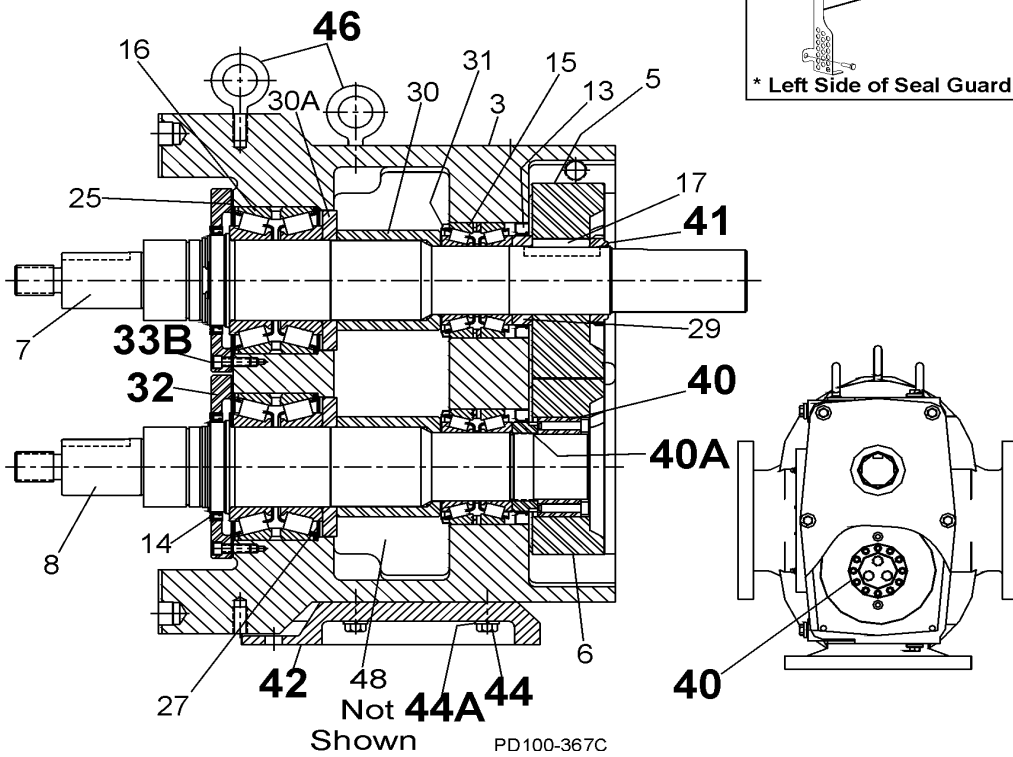
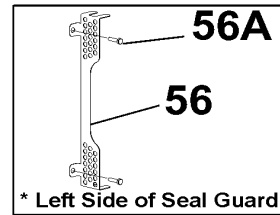
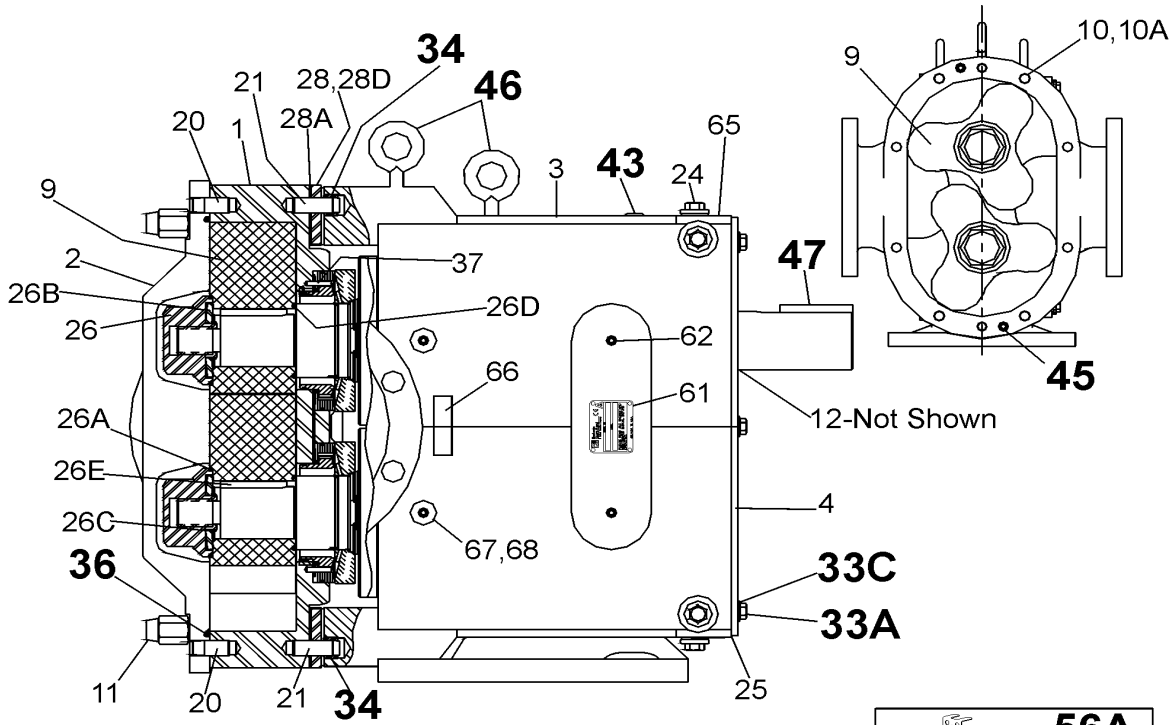
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
32	Bearing Retainer, Front	2	OH1 080 000	
33A	3/8-16 x .75" HHCS	6	30-314	
33B	5/16-18 x 1" SHCS	8	30-343	
33C	3/8" Flat Washer	6	43-189	
34	Dowel Bushings	2	OH1 116 000	
* 36	<b>O-Ring, Pump Cover, Buna N</b>	1	N70383	
* 36	<b>O-Ring, Pump Cover, EPDM</b>	1	E70383	
* 36	<b>O-Ring, Pump Cover, FKM</b>	1	V70383	
* 36	<b>O-Ring, Pump Cover, Silicone</b>	1	S75383	
37	Stop Pin, Seal	6	102438	
40	Locking Assembly	1	105475	
40A	Locknut, Sleeve	1	108204	
40A	Locknut, Sleeve	1	105476	21
41	Locknut, Gear	1	105697	
42	Gear Case Shim, CI	1	40288	
42	Pump Pedestal, 22", Optional	1	324 110 226	
43	Plastic Cap Plug	8	000 121 001	
44	1/2-13 x 1-3/4" HHCS	4	30-250	
44A	Lock Washer, 1/2"	4	43-177	
45	Body Retaining Screws	2	30-499	
46	Eye Bolt	3	30-360	
47	Key, Coupling - 5/8 x 5/8 x 2-3/4"	1	000 037 005	
48	Cleanout Plug	2	41013	
56	Seal Guard	2	113504	
56A	5/16 - 18 x 1/2" HHCS	4	30-163	
61	Name Plate	1	001 061 015	
62	#2 x .125" RHDS	4	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	Grease Fitting, 1/8"	4	BD0 092 000	
68	Plastic Cap, Grease Fitting	4	BD0 093 000	

**NOTES:**

21. Sleeve locknut required for pump made prior to change in 1997.

\* **Recommended Spare Parts**

# 320-UL Common Parts Diagram



### 320-UL SEAL PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING AND MECH SEAL PARTS</b>				
*				
*	<b>O-Ring, Inner Seal, Buna N</b>	2	N70154	25
*	<b>91 O-Ring, Inner Seal, EPDM</b>	2	E70154	
*	<b>O-Ring, Inner Seal, FKM</b>	2	V70154	
*	<b>O-Ring, Shaft, Buna N</b>	2	N70149	
*	<b>92 O-Ring, Shaft, EPDM</b>	2	E70149	
*	<b>O-Ring, Shaft, FKM</b>	2	V70149	
*	<b>93 Seal Seat, Ceramic</b>	2	105416	
*	<b>Seal Seat, Silicon Carbide</b>	2	105417	
*	<b>94 Seal Inner, Carbon (1 Piece)</b>	2	105412	
*	<b>Seal Inner, Ceramic</b>	2	105413	
*	<b>Seal Inner, Silicon Carbide</b>	2	105414	
*	<b>Seal Inner, Tungsten Carbide</b>	2	105415	
*	<b>95 Wave Spring, Inner Seal</b>	2	105419	
*	<b>O-Ring, Outer Seal, Buna N</b>	2	N70160	8
*	<b>96 O-Ring, Outer Seal, EPDM</b>	2	E70160	8
*	<b>O-Ring, Outer Seal, FKM</b>	2	V70160	8
*	<b>97 Wave Spring, Outer Seal</b>	2	105420	8
*	<b>98 Outer Seal, Carbon</b>	2	105418	8

**NOTES:**

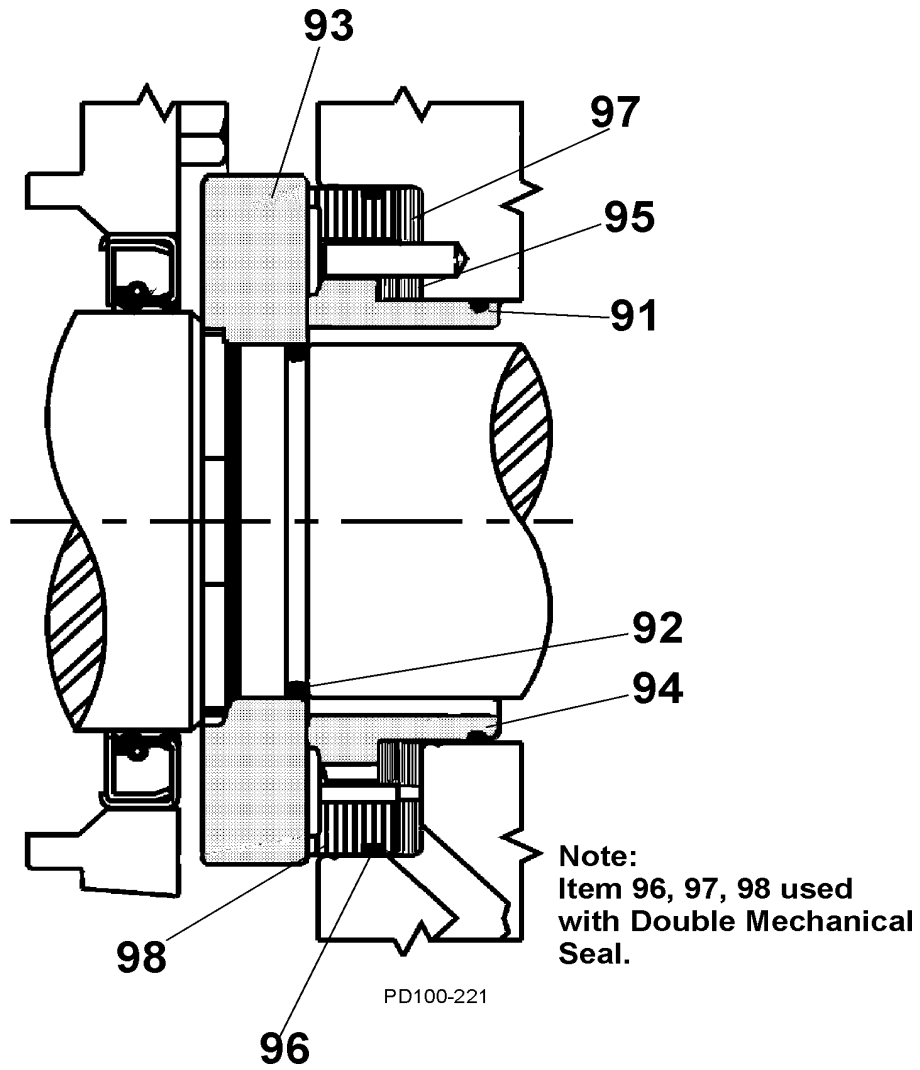
8. Used with Double Mechanical Seal.

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**



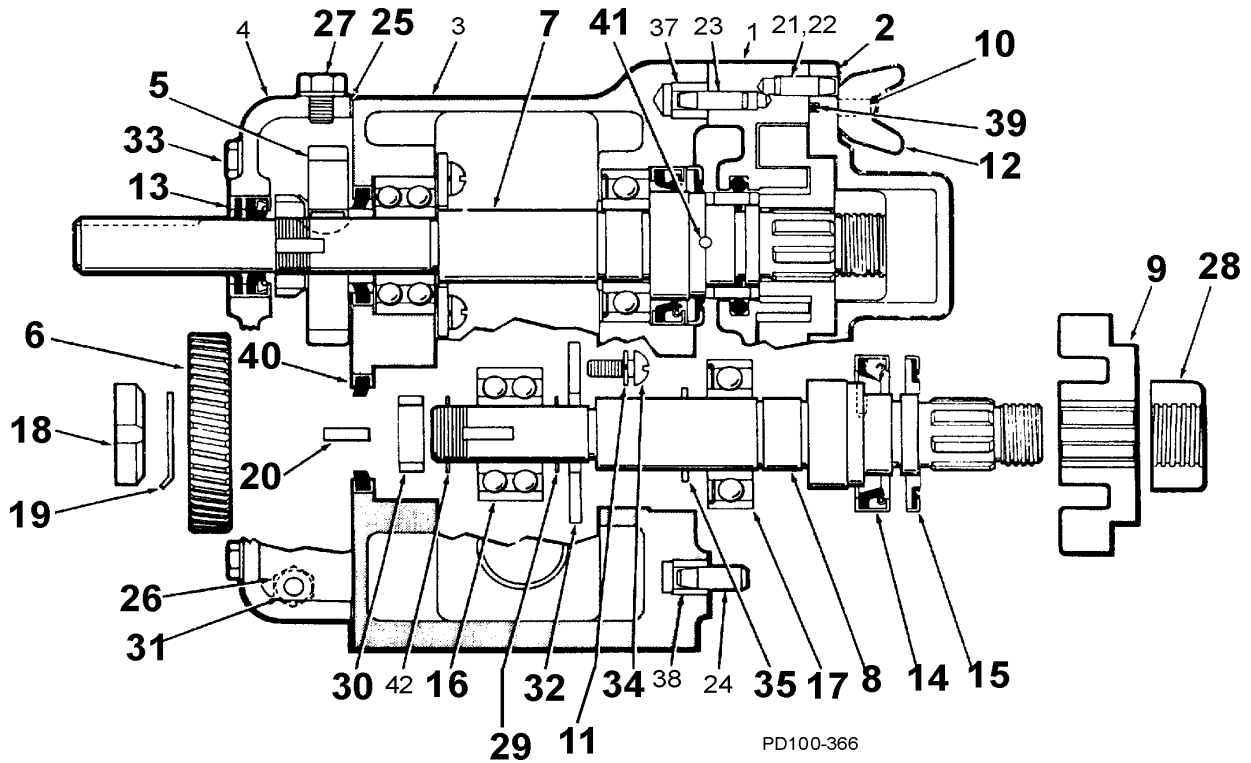
# 320-UL Seal Parts Diagram



### 3 - 10 - 16-DO PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Cover	1	AD0 002 S00	
	Cover, Jacketed	1	AD0 002 J10	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual	1	CVR00006	
	Pneumatic	1	CVR00004	
	Piston	1	CVR00005	
5	Gear, Drive Shaft	1	AD0 007 H10	
6	Gear, Short Shaft	1	AD0 007 H20	
7	3-10-DO Drive Shaft	1	AD0 008 000	
	16-DO Drive Shaft	1	AD0 008 160	
8	3-10-DO Short Shaft	1	AD0 009 000	
	16-DO Short Shaft	1	AD0 009 160	
9	3-DO Rotor Twin Blade #88 Alloy	2	AD0 010 230	
	10-DO Rotor Twin Blade #88 Alloy	2	AD0 010 000	
	16-DO Rotor Twin Blade #88 Alloy	2	AD0 010 160	
10	3-10-DO Stud	8	AD0 011 000	
	16-DO Stud (Replaces AD0 011 160)	8	018 011 000	
	3-10-DO Stud, Jacketed Cover	8	AD0 011 J00	
	16-DO Stud, Jacketed Cover	8	AD0 011 J00	
11	Lockwasher (Replaces AD0 013 000)	8	43-106	
12	Wing Nut (Replaces AD0 016 000)	8	105850	
13	Oil Seal, Bearing Housing Cover	1	AD0 030 000	
14	Oil Seal, Front (Replaces AD0 030 100)	2	000 030 018	
15	Wiper Seal	2	AD0 030 1W0	
16	Bearing, Rear	2	AD0 036 000	
17	Bearing, Front	2	015 035 000	
18	Locknut, Gear	2	AD0 036 N00	
19	Lockwasher, Gear	2	AD0 036 W00	
20	Woodruff Key, Gear	2	AD0 037 000	
25	Sealant RTV 3 Oz. Tube (Replaces STD Gaskets)	1	000 142 301	
26	Hex Cap Screw (Replaces AD0 046 000)	3	30-334	
27	Breather Screw	1	AD0 046 100	
28	Rotor Retaining Nut (Replaces AD0 052 000)	4	AD0 052 001	
29	Shim .002	as req'd	AD0 054 002	
	Shim .006	as req'd	AD0 054 006	
30	Spacer	2	AD0 055 000	
31	Fiber Washer	3	BD0 065 100	
32	Bearing Retaining Plate	2	AD0 080 000	
33	Hex Cap Screw (Replaces AD0 081 000)	6	30-335	
34	RD HD Capscrew (Replaces AD0 083 000)	8	30-338	
35	Truarc Ring	2	AD0 087 R00	
36	Grease Fitting	4	BD0 092 000	

### 3 - 10 - 16-DO Pump Parts Diagram



ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
* * * * *	O-Ring, Cover, Buna N (Replaces AD0 117 000)	1	N70252	
	O-Ring, Cover, EPDM (Replaces AD0 110 002)	1	E70252	
	O-Ring, Cover, Silicone (Replaces AD0 117 SC0)	1	S75252	
	O-Ring, Cover, FKM (Replaces AD0 117 V00)	1	V70252	
	O-Ring, Cover, Teflon Encap. (Replaces AD0 117 T00)	1	T80252	
40	Oil Seal, Rear	2	AD0 119 000	
41	Drive Pin	2	CD0 126 000	
N/S	Rotor Nut Wrench (Replaces AD0 019 000)	1	109895	
N/S	O-Ring Removal Tool	1	AD0 096 001	
N/S	Plastic Clean Out Plug	1	BD0 121 100	

**NOTES:**

\* **Recommended Spare Parts**

N/S - Not shown.

**3 - 10 - 16-DO PUMP PARTS PRICE LIST**

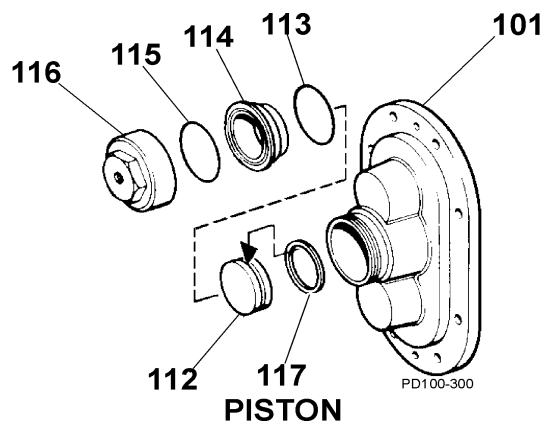
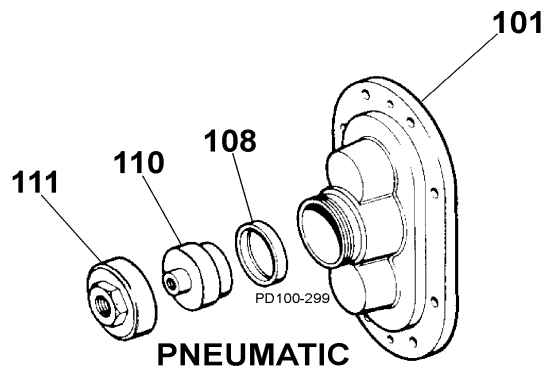
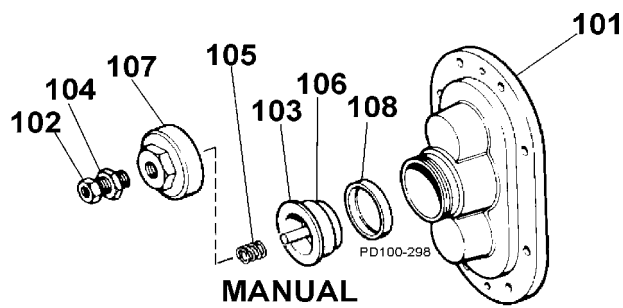
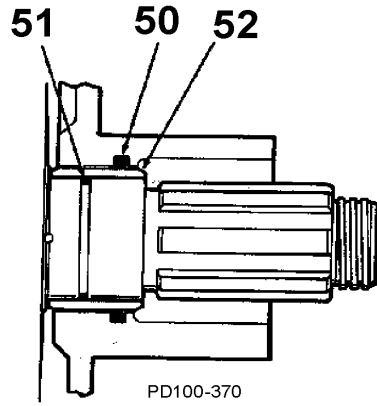
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING SEALS</b>				
* 50	O-Ring, Body, Buna N	2	AD0 079 000	25
* 50	O-Ring, Body, EPDM	2	AD0 079 002	25
* 50	O-Ring, Body, Silicone	2	AD0 079 SC0	
* 50	O-Ring, Body, FKM	2	AD0 079 V00	
* 50	O-Ring, Body, Kalrez	2	33315	
* 50	U-Cup Seal, Buna N (Replaces AD0 079 U00)	2	41413	
* 51	O-Ring, Shaft, Buna N (Replaces AD0 097 000)	2	N70119	25
* 51	O-Ring, Shaft, EPDM (Replaces AD0 097 002)	2	E70119	25
* 51	O-Ring, Shaft, Silicone (Replaces AD0 097 SC0)	2	S75119	
* 51	O-Ring, Shaft, FKM (Replaces AD0 097 V00)	2	V70119	
* 52	Sleeve, Prong	2	AD0 098 001	
<b>MANUAL VENTED COVER</b>				
101	Pump Cover	1	AD0 002 VS0	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, Low (0-20 PS)	1	AD0 076 L00	
105	Spring, Medium (20 -60 PS)	1	AD0 076 000	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	Rubber Diaphragm, Buna N	1	AD0 078 000	
* 108	Rubber Diaphragm, Silicone	1	AD0 078 SC0	
* 108	Rubber Diaphragm, FKM	1	AD0 078 V00	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	AD0 002 VS0	
* 108	Diaphragm, Buna N	1	AD0 078 000	
* 108	Diaphragm, Silicone	1	AD0 078 SC0	
* 108	Diaphragm, FKM	1	AD0 078 V00	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	AD0 002 VS0	
112	Piston	1	AD0 073 P10	
* 113	Bushing Seal (Replaces AD0 133 200)	1	N70224	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	Nut Seal (Replaces AD0 133 100)	1	N70223	
116	Cover Nut	1	AD0 075 P10	
* 117	Piston Seal	1	AD0 133 000	

**NOTES:**

25. Sold in packages of 25 only.

\* Recommended Spare Parts

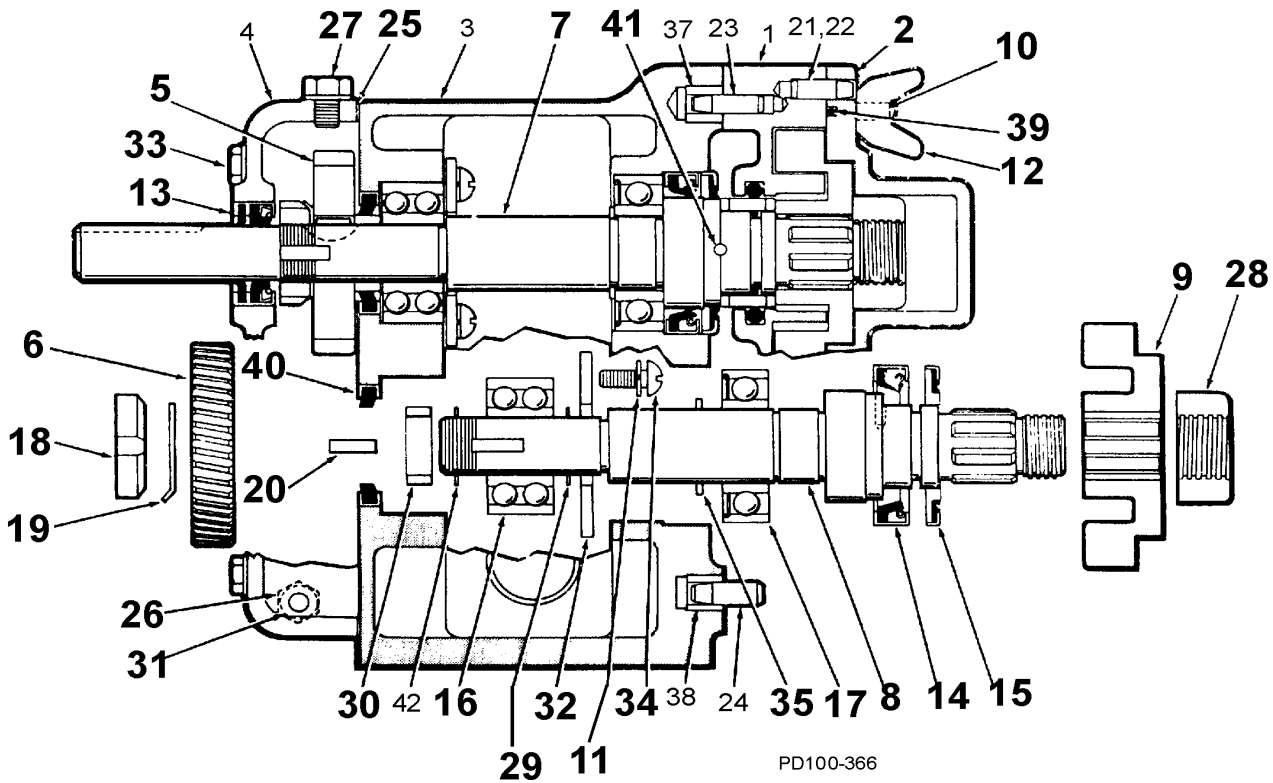
### 3 - 10 - 16-DO Seal and Vented Cover Parts Diagram



## 25-DO PUMP PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Cover	1	BD0 002 S00	
	Cover, Jacketed	1	BD0 002 J10	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual	1	CVR00014	
	Pneumatic	1	CVR00010	
	Piston	1	CVR00022	
5	Gear, Drive Shaft	1	BD0 007 H10	
6	Gear, Short Shaft	1	BD0 007 H20	
7	Drive Shaft	1	BD0 008 000	
8	Short Shaft	1	BD0 009 000	
9	Rotor Twin Blade #88 Alloy	2	BD0 010 000	
10	Stud	8	BD0 011 000	
	Stud, Jacketed Cover	8	BD0 011 J00	
11	Lockwasher (Replaces BD0 113 000)	8	43-106	
12	Wing Nut (Replaces BD0 116 002)	8	105851	
13	Oil Seal, Bearing Housing Cover	1	BD0 030 000	
14	Oil Seal, Front	2	BD0 030 100	
15	Wiper Seal	2	BD0 030 1W0	
16	Bearing, Rear	2	BD0 036 000	
17	Bearing, Front	2	BD0 036 300	
18	Locknut, Gears	2	BD0 036 N00	
19	Lockwasher, Gears	2	BD0 036 W00	
20	Woodruff Key, Gears	2	BD0 037 000	
25	Sealant RTV 3 Oz. Tube (Replaces STD Gaskets)	1	000 142 301	
26	Hex Cap Screw (Replaces BD0 046 000)	3	30-336	
27	Breather Screw	1	BD0 046 100	
28	Rotor Retainer Nut #88 Alloy	2	BD0 052 000	
	Jam Nut	4	BD0 052 001	
29	Thrust Shim .002	as req'd	BD0 054 002	
	Thrust Shim .006	as req'd	BD0 054 006	
30	Spacer	2	BD0 055 000	
31	Fiber Washer	3	BD0 065 100	
32	Bearing Retaining Plate	2	BD0 080 000	
33	Hex Cap Screw (Replaces BD0 081 000)	6	30-337	
34	RD HD Cap Screw (Replaces BD0 083 000)	8	30-338	
35	Truarc Ring	2	BD0 087 R00	
36	Grease Fitting	4	BD0 092 000	

## 25-DO Pump Parts Diagram



PD100-366

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
* * * * *	O-Ring, Cover, Buna N (Replaces BD0 117 000)	1	N70261	
	O-Ring, Cover, EPDM (Replaces BD0 117 002)	1	E70261	
	O-Ring, Cover, Silicone (Replaces BD0 117 SC0)	1	S75261	
	O-Ring, Cover, FKM (Replaces BD0 117 V00)	1	V70261	
	O-Ring, Cover, Teflon Encap. (Replaces BD0 117 T00)	1	T80261	
40	Oil Seal, Rear	2	BD0 119 000	
41	Drive Pin	2	BD0 126 000	
N/S	Rotor Nut Wrench (Replaces CD0 019 000)	1	109896	
N/S	O-Ring Removal Tool	1	AD0 096 001	
N/S	Plastic Clean Out Plug	1	BD0 121 100	

**NOTES:**

- \* **Recommended Spare Parts**
- N/S - Not shown.

**25-DO SEAL & VENTED COVER PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING SEALS</b>				
* 50	O-Ring, Body, Buna N	2	BD0 079 000	25
* 50	O-Ring, Body, EPDM	2	BD0 079 002	
* 50	O-Ring, Body, Silicone	2	BD0 079 SC0	
* 50	O-Ring, Body, FKM	2	BD0 079 V00	
* 50	U-Cup Seal, Buna N	2	BD0 079 00	
* 51	O-Ring, Shaft, Buna N (Replaces BD0 097 000)	2	N70122	25
* 51	O-Ring, Shaft, EPDM (Replaces BD0 097 002)	2	E70122	25
* 51	O-Ring, Shaft, Silicone (Replaces BD0 097 SC0)	2	S75122	
* 51	O-Ring, Shaft, FKM (Replaces BD0 097 V00)	2	V70122	
* 52	Sleeve (Prong)	2	BD0 098 001	
<b>MANUAL VENTED COVER</b>				
101	Pump Cover	1	BD0 002 VS0	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	AD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, 0 to 20 PSI	1	AD0 076 L00	
	Spring, 20 to 60 PSI	1	AD0 076 000	
	Spring, 60 to 100 PSI	1	ABB 076 100	
	Spring, 100 to 200 PSI	1	ABB 076 200	
106	Diaphragm Bushing	1	AD0 077 000	
107	Cover Nut	1	AD0 075 000	
* 108	Rubber Diaphragm, Buna N	1	AD0 078 000	
* 108	Rubber Diaphragm, Silicone	1	AD0 078 SC0	
* 108	Rubber Diaphragm, FKM	1	AD0 078 V00	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	BD0 002 VS0	
* 108	Diaphragm, Buna N	1	AD0 078 000	
* 108	Diaphragm, Silicone	1	AD0 078 SC0	
* 108	Diaphragm, FKM	1	AD0 078 V00	
110	Diaphragm Bushing	1	AD0 077 P00	
111	Cover Nut	1	AD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover		BD0 002 VS0	
112	Piston	1	AD0 073 P10	
* 113	Bushing Seal (Replaces AD0 133 200)	1	N70224	
114	Diaphragm Bushing	1	AD0 077 P10	
* 115	Nut Seal (Replaces AD0 133 100)	1	N70223	
116	Cover Nut	1	AD0 075 P10	
* 117	Piston Seal	1	AD0 133 000	

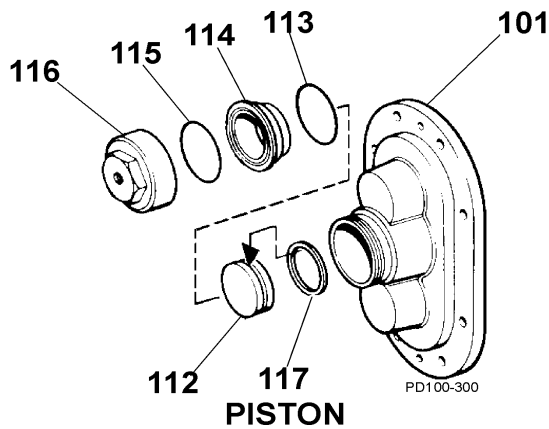
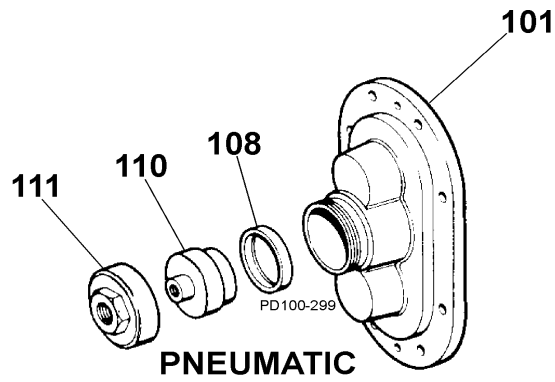
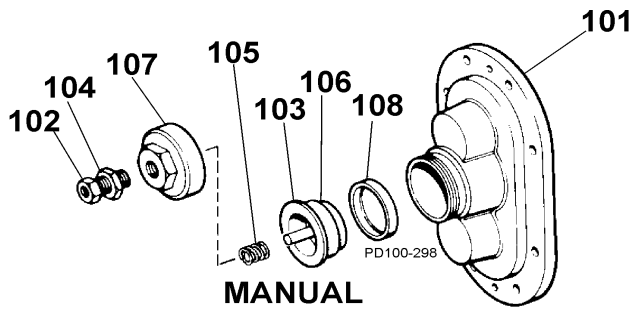
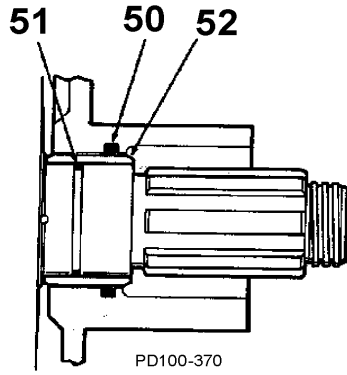
**NOTES:**

25. Sold in packages of 25 only.

\* Recommended Spare Parts



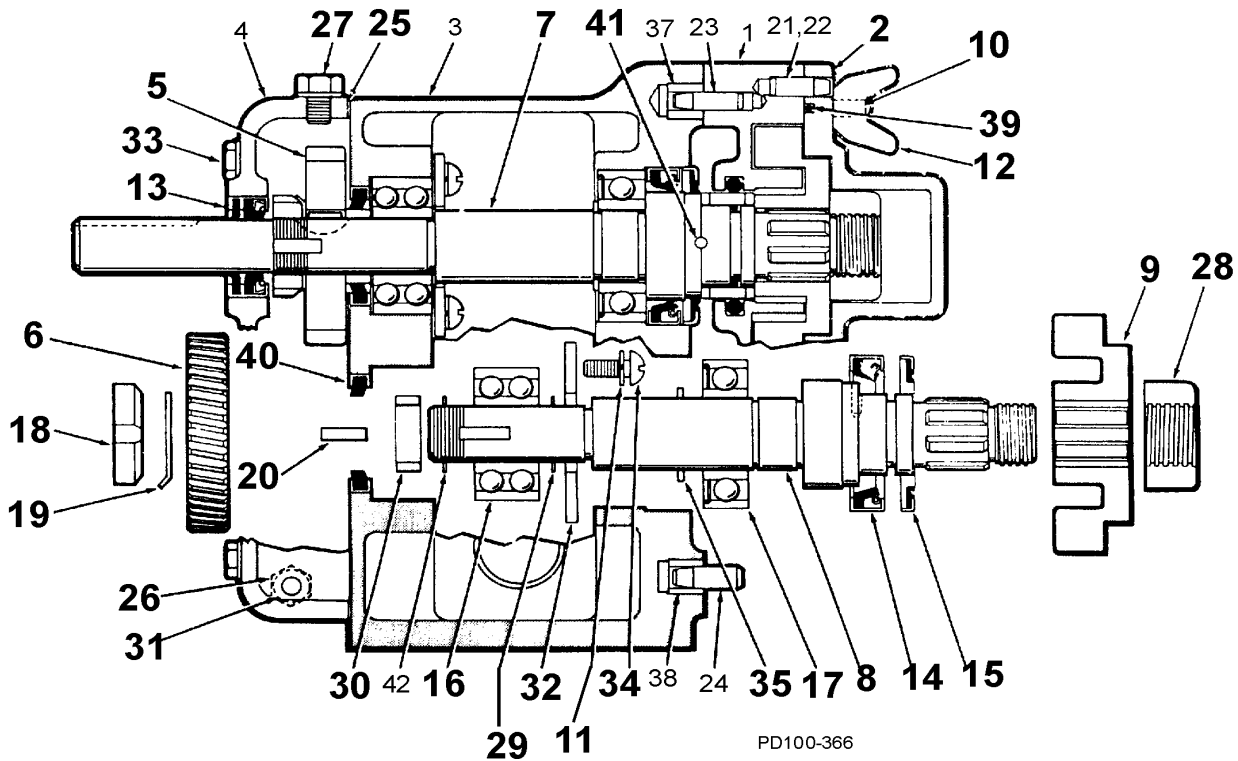
# 25-DO Seal and Vented Cover Parts Diagram



**55 - 125-DO PUMP PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	Cover	1	CD0 002 S00	
	Cover, Jacketed	1	CD0 002 J10	
	<b>Pump Cover Vented - Complete Assembly</b>			
	Manual	1	CVR00024	
	Pneumatic	1	CVR00053	
	Piston	1	CVR00054	
5	Gear, Drive Shaft	1	CD0 007 H10	
6	Gear, Short Shaft	1	CD0 007 H20	
7	55-DO Drive Shaft	1	CD0 008 000	
	125-DO Drive Shaft	1	ED0 008 000	
8	55-DO Short Shaft	1	CD0 009 000	
	125-DO Short Shaft	1	ED0 009 000	
9	55-DO Rotor Twin Blade #88 Alloy	2	CD0 010 000	
	125-DO Rotor Twin Blade #88 Alloy	2	ED0 010 000	
10	55-DO Stud	8	CD0 011 000	
	125-DO Stud	8	ED0 011 000	
	55-DO Stud, Jacketed Cover	8	CD0 011 J00	
	125-DO Stud, Jacketed Cover	8	ED0 011 J00	
11	Lockwasher (Replaces CD0 113 000)	8	43-187	
12	Wing Nut (Replaces CD0 116 002)	8	105852	
13	Oil Seal, Bearing HouseCover	1	CD0 030 000	
14	Oil Seal, Front	2	CD0 030 100	
15	Wiper Seal	2	CD0 030 1W0	
16	Bearing, Rear	2	CD0 036 000	
17	Bearing, Front	2	CD0 036 300	
18	Locknut, Gears	2	CD0 036 N00	
19	Lockwasher, Gears	2	CD0 036 W00	
20	Woodruff Key, Gears	2	CD0 037 000	
25	Sealant RTV 3 oz. Tube (Replaces STD Gaskets)	1	000 142 301	
26	Hex Cap Screw	2	CD0 046 000	
27	Breather Cap Screw (Replaces CD0 046 100)	1	CD0 046 100	
28	Rotor Retaining Nut	4	BD0 052 001	
29	Shim .002	as req'd	CD0 054 002	
	Shim .006	as req'd	CD0 054 006	
30	Spacer	2	CD0 055 000	
31	Fiber Washer	3	AD0 064 000	
32	Bearing Retaining Plate	2	CD0 080 000	
33	Hex Cap Screw (Replaces CD0 081 000)	6	30-339	
34	RD HD Cap Screw (Replaces CD0 083 000)	8	30-340	
35	Truarc Ring	2	CD0 087 R00	
36	Grease Fitting	4	BD0 092 000	

## 55 - 125-DO Pump Parts Diagram



PD100-366

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
* * * * *	O-Ring, Cover, Buna N (Replaces CD0 117 000)	1	N70272	
	O-Ring, Cover, EPDM (Replaces CD0 117 002)	1	E70272	
	O-Ring, Cover, Silicone (Replaces CD0 117 SC0)	1	S75272	
	O-Ring, Cover, FKM (Replaces CD0 117 V00)	1	V70272	
	O-Ring, Cover, Teflon Encap. (Replaces CD0 117 T00)	1	T80272	
40	Oil Seal, Rear	2	CD0 119 000	
41	Drive Pin	2	CD0 126 000	
N/S	Rotor Nut Wrench Replaces CD0 019 000)	1	109896	
N/S	O-Ring Removal Tool	1	AD0 096 001	
N/S	Plastic Clean Out Plug	1	BD0 121 100	

**NOTES:**

\* **Recommended Spare Parts**

N/S - Not Shown

**55 - 125-DO PUMP PARTS PRICE LIST**

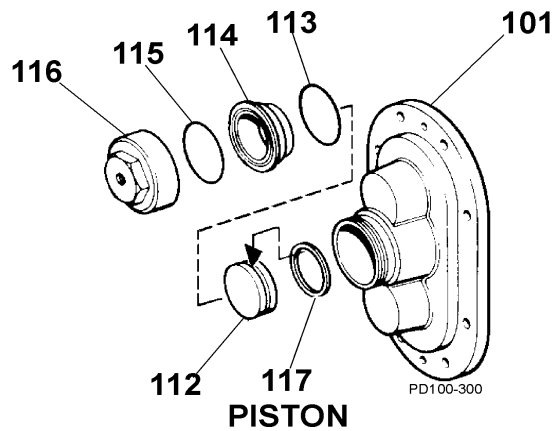
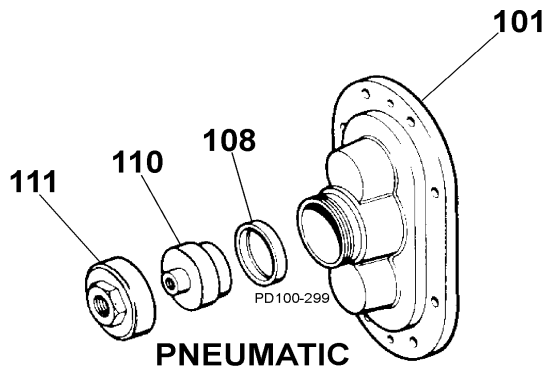
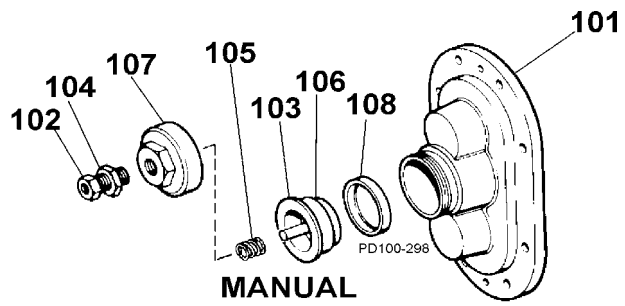
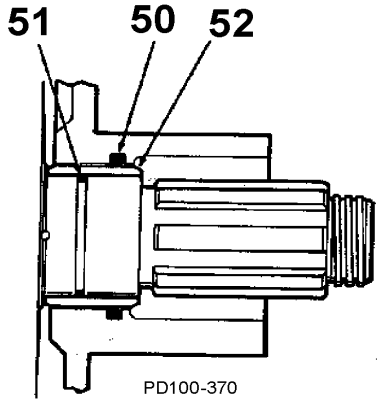
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>O-RING SEAL</b>				
* 50	O-Ring, Body, Buna N	2	CD0 079 000	25
* 50	O-Ring, Body, EPDM	2	CD0 079 002	
* 50	O-Ring, Body, Silicone	2	CD0 079 SC0	
* 50	O-Ring, Body, FKM	2	CD0 079 V00	
* 50	U-Cup Seal, Buna N	2	CD0 079 U00	
* 51	O-Ring, Shaft, Buna N (Replaces CD0 097 000)	2	N70126	25
* 51	O-Ring, Shaft, EPDM (Replaces CD0 097 002)	2	E70126	
* 51	O-Ring, Shaft, Silicone (Replaces CD0 097 SC0)	2	S75126	
* 51	O-Ring, Shaft, FKM (Replaces CD0 097 V00)	2	V70126	
* 52	Sleeve (Prong)	2	CD0 098 001	
<b>VENTED COVER</b>				
101	Pump Cover	1	CD0 002 VS0	
102	Adjusting Screw	1	AD0 072 000	
103	Spring Plunger	1	CD0 073 000	
104	Locknut	1	AD0 074 000	
105	Spring, 0 to 20 PSI	1	AD0 076 L00	
	Spring, 20 to 60 PSI	1	AD0 076 000	
	Spring, 60 to 100 PSI	1	ABB 076 100	
	Spring, 100 to 200 PSI	1	ABB 076 200	
106	Diaphragm Bushing	1	CD0 077 000	
107	Cover Nut	1	CD0 075 000	
* 108	Rubber Diaphragm, Buna N	1	CD0 078 000	
* 108	Rubber Diaphragm, Silicone	1	CD0 078 SC0	
* 108	Rubber Diaphragm, FKM	1	CD0 078 V00	
* 108	Rubber Diaphragm, Reinforced Buna N	1	CD0 078 R00	
<b>PNEUMATIC VENTED COVER</b>				
101	Vented Cover	1	CD0 002 VS0	
* 108	Diaphragm, Buna N	1	CD0 078 000	
* 108	Diaphragm, Silicone	1	CD0 078 SC0	
* 108	Diaphragm, FKM	1	CD0 078 V00	
* 108	Diaphragm, Reinforced Buna N	1	CD0 078 R00	
110	Diaphragm Bushing	1	CD0 077 P00	
111	Cover Nut	1	CD0 075 P00	
<b>PISTON VENTED COVER</b>				
101	Vented Cover	1	CD0 002 VS0	
112	Piston	1	CD0 073 P10	
* 113	Bushing Seal (Replaces CD0 133 200)	1	N70240	
114	Diaphragm Bushing	1	CD0 077 P10	
* 115	Nut Seal (Replaces CD0 133 100)	1	N70239	
116	Cover Nut	1	CD0 075 P10	
* 117	Piston Seal	1	CD0 133 000	

**NOTES:**

25. Sold in packages of 25 only.

\* **Recommended Spare Parts**

55 - 125-DO Seal and Vented Cover Parts Diagram



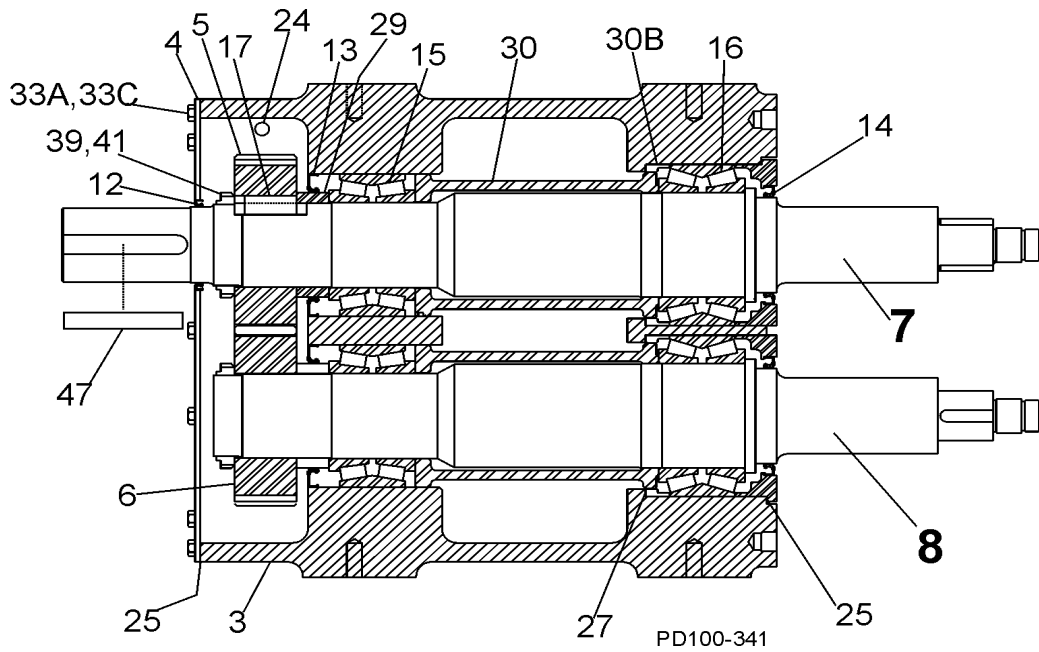
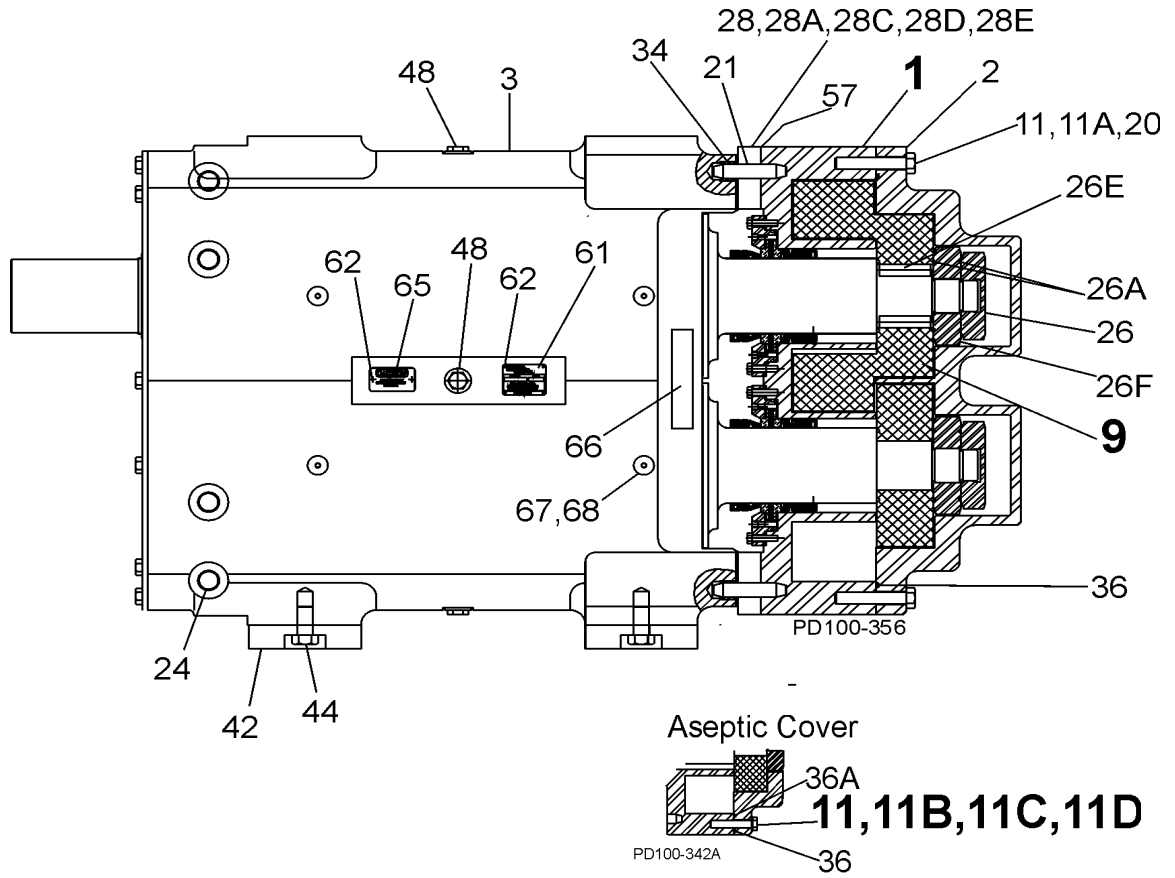
**420 - 423 - 520 - 523-UHC PUMP PARTS PRICE LIST**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY. PER PUMP</b>	<b>PART NO.</b>	<b>NOTES</b>
<b>1</b>	420-UHC Pump Body w/ 150 LB Ports	1	100478	1
	420-UHC Pump Body w/ 300 LB Ports	1	101401	1
	423-UHC Pump Body w/ 150 LB Aseptic Ports	1	101706	1
	520-UHC Pump Body w/ 150 LB Ports	1	101404	1
	520-UHC Pump Body w/ 300 LB Ports	1	100677	1
	523-UHC Pump Body w/ 150 LB Aseptic Ports	1	101709	1
<b>7</b>	420-423-UHC Drive Shaft	1	100532	
	520-523-UHC Drive Shaft	1	100673	
<b>8</b>	420-423-UHC Short Shaft	1	100424	
	520-523-UHC Short Shaft	1	100675	
<b>9</b>	420-423-UHC Rotor, Twin Wing, Alloy 88	2	100523	2
	420-423-UHC Rotor, Twin Wing, 316L SS	2	101434	2
	520-523-UHC Rotor, Twin Wing, Alloy 88	2	100683	2
	520-523-UHC Rotor, Twin Wing, 316L SS	2	102375	2
<b>11</b>	3/4-10 x 2-1/2" HHCS	12	30-444	
<b>11B</b>	420-520-UHC Flat Washer, 3/4"	12	43-55	
	423-523-UHC Sealing Washer, 3/4"	12	43-204	11
<b>11C</b>	1/2-13 x 5/8" HHCS	2	30-497	11
<b>11D</b>	423-523-UHC Sealing Washer, 1/2"	2	43-203	11

**NOTES:**

1. Contact Factory with Serial Number of pump for Part Number.
2. Standard clearances and finishes for Rotor part Numbers shown. Contact factory for optional clearances and finishes.
11. Used on 423-523-UHC only.

420 - 423 - 520 - 523-UHC Pump Parts Diagram



**420 - 423 - 520 - 523-UHC COMMON PARTS PRICE LIST**

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
2	420-520-UHC Pump Cover	1	100479	
	423-523-UHC Pump Cover	1	101444	
3	Gear Case, CI	1	100336	
4	Gear Case Cover, Steel	1	100530	
5	Gear, Drive Shaft	1	107659	
6	Gear, Short Shaft	1	107659	
12	Oil Seal, Gear Case Cover	1	100531	
13	Oil Seal, Gear Case Rear	2	100431	
14	Grease Seal, Bearing Retainer	2	100442	
15	Bearing, Rear	2	100429	
16	Bearing, Front	2	100425	
17	Key, Gear	2	100434	
20	Dowel Pins, Cover Side	2	100470	
21	Dowel Pins, Gear Case Side	2	100477	
24	Plug w/ washer, 3/4-16	4	000 046 004	40
	Oil Plug, M20 x 1.5"	3	115798	41
	Oil Level Indicator, M20 x 1.5"	1	115799	41
25	Silicone Sealant	1	000 142 301	
26	Rotor Nut, Outer	2	108787	
* 26A	<b>O-Ring, Inner &amp; Outer Rotor Nut, Buna N</b>	4	N70238	
	<b>O-Ring, Inner &amp; Outer Rotor Nut, EPDM</b>	4	E70238	
	<b>O-Ring, Inner &amp; Outer Rotor Nut, FKM</b>	4	V70238	
26E	Key, Rotor	4	100481	
26F	Rotor Nut, Inner	2	100482	
* 26G	<b>O-Ring, Inner Rotor Seal, Buna N</b>	2	N70153	
	<b>O-Ring, Inner Rotor Seal, EPDM</b>	2	E70153	
	<b>O-Ring, Inner Rotor Seal, FKM</b>	2	V70153	
	<b>O-Ring, Inner Rotor Seal, Silicone</b>	2	S75153	
27	Shim, Front Bearing	AR	1004XX	
28	Mounting Plate	2	100471	
28A	Body Shim, .002	AR	100472	
	Body Shim, .003	AR	100473	
	Body Shim, .005	AR	100474	
	Body Shim, .010	AR	100475	
	Body Shim, .020	AR	100476	
28C	5/8-11 x 1-3/4" SHCS	8	30-228X	
28D	3/4-10 x 3-1/2" HHCS	4	30-502	
28E	3/4" Plain Washer	4	43-55	
29	Spacer, Gear to Rear Bearing	2	100430	
30	Bearing Spacer	2	108378	
30B	Seal, Front Bearing	2	100435	
32	Bearing Retainer, Front , SS	2	114820	

**NOTES:**

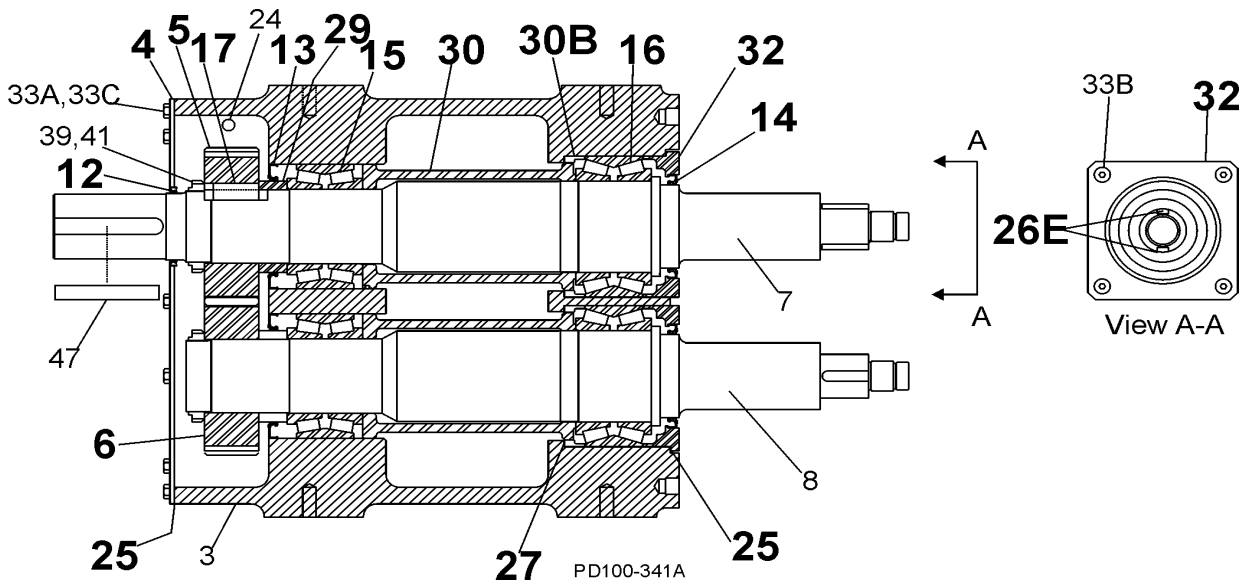
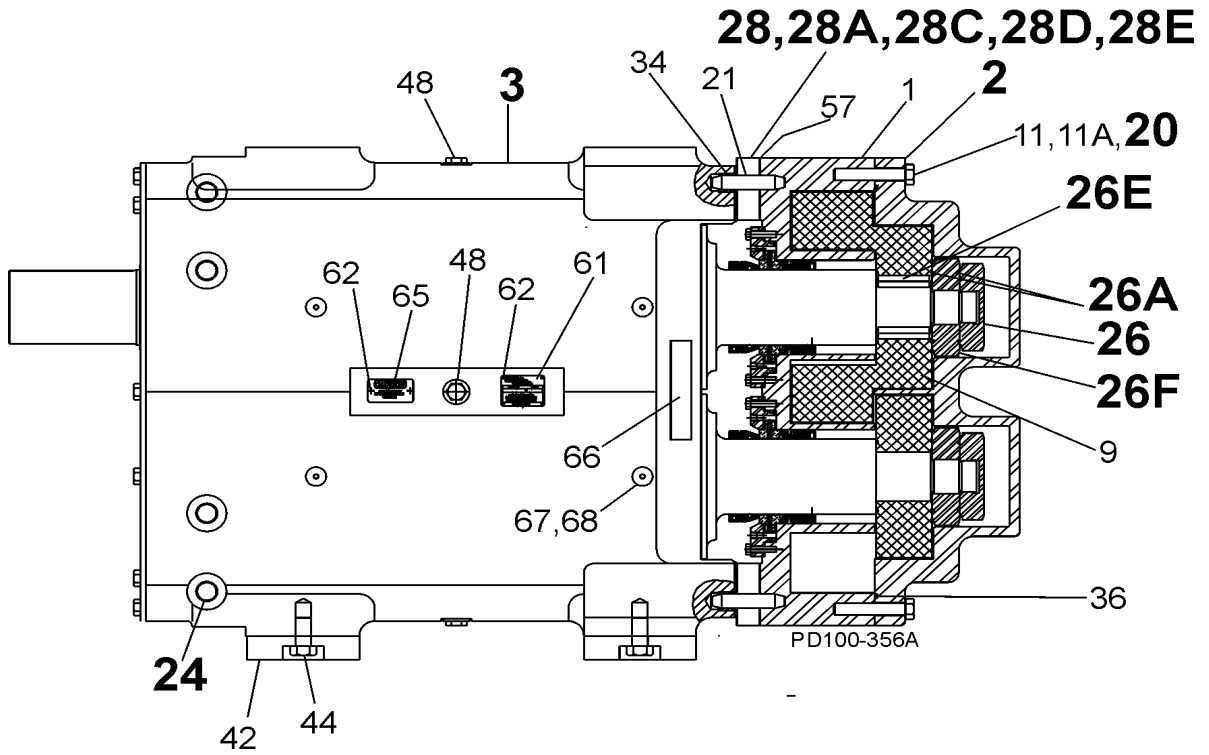
40. Pumps shipped prior to 5/15/03

41. Pumps shipped after 5/15/03

\* **Recommended Spare Parts**



420 - 423 - 520 - 523-UHC Common Parts Diagram



**420 - 423 - 520 - 523-UHC COMMON PARTS DIAGRAM**

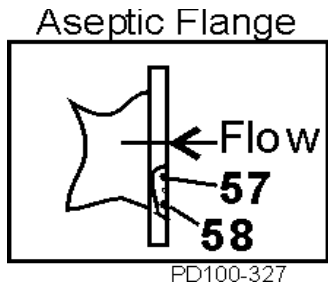
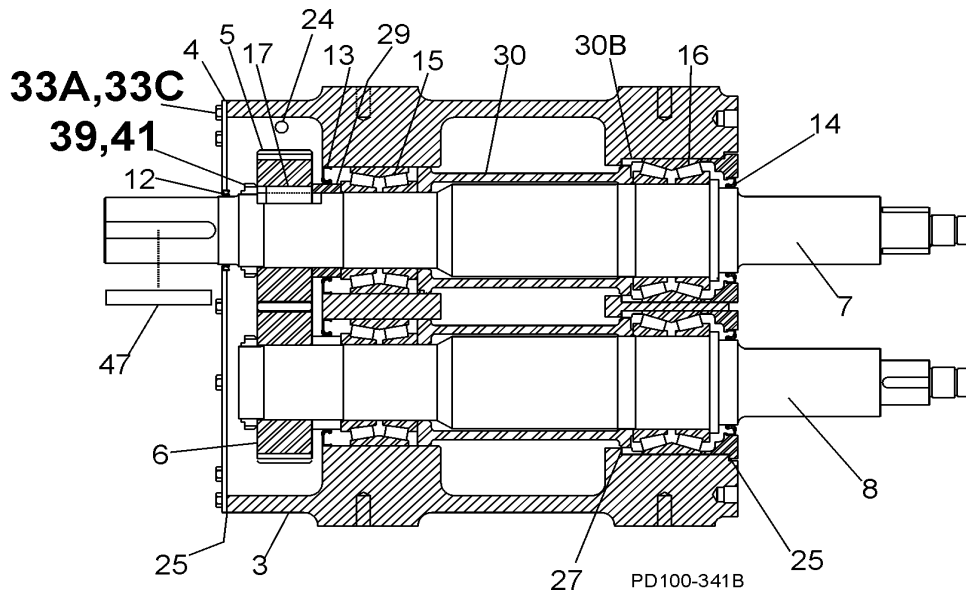
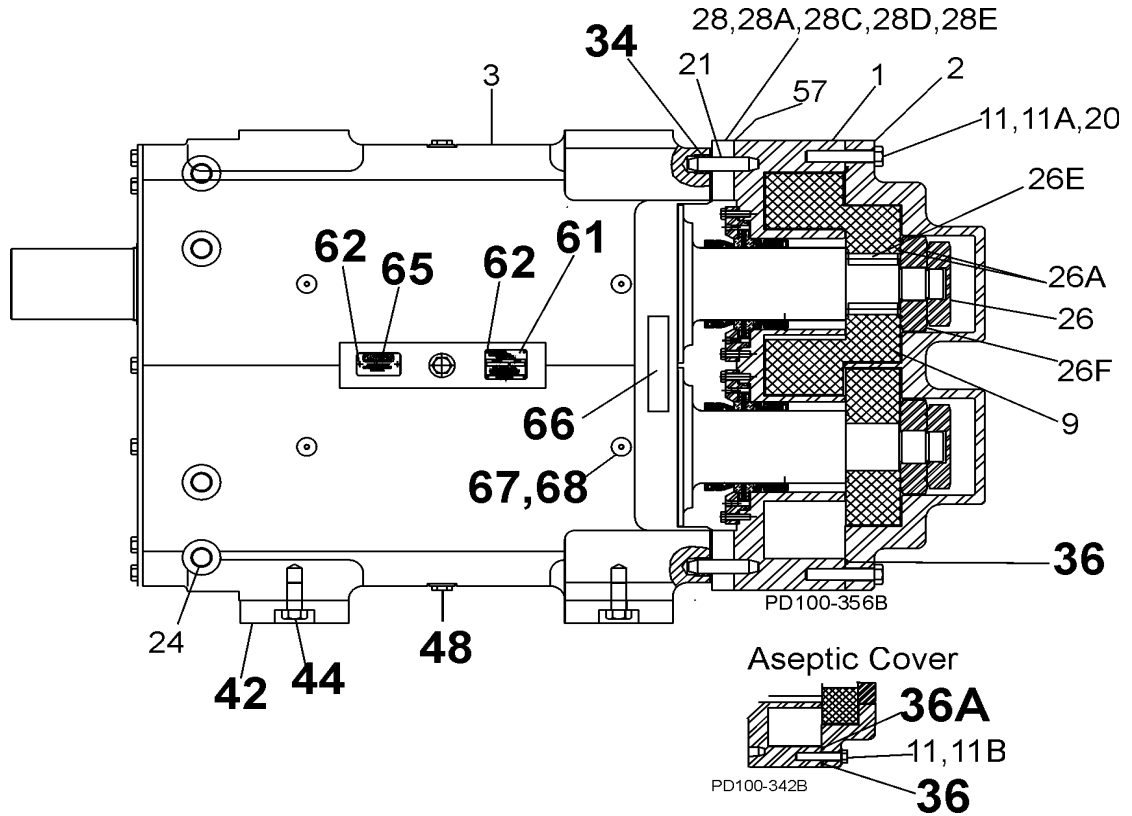
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
33A	3/8-16 x 1" HHCS, Gear Case cover	12	30-30	
33B	1/2-13 x 1" FHHSCS, Bearing Retainer	8	30-478	
33C	3/8" Washer, Plain	12	43-189	
34	Dowel Bushings	2	100334	
* 36	O-Ring, Pump Cover, Buna N	1	N70387	
* 36	O-Ring, Pump Cover, EPDM	1	E70387	
* 36	O-Ring, Pump Cover, FKM	1	V70387	
* 36	O-Ring, Pump Cover, Silicone	1	S75387	
* 36A	423-523-UHC O-Ring, Pump Cover, Silicone	1	102666	11
39	Lockwasher, Gear	2	STD 136 022	
41	Locknut, Gear	2	STD 236 022	
42	Gear Case Shim, CI	2	100469	
44	3/4-10 x 2" HHCS	4	30-383	
47	Key, Coupling 1 x 1 x 4-3/8"	1	112746	
48	Cleanout Plug	4	102297	
* 57	423-UHC O-Ring, Port, Inner, Silicone	2	S75261	11
* 57	423-UHC O-Ring, Port, Inner, EPDM	2	E70261	11
* 57	423-UHC O-Ring, Port, Inner, FKM	2	V70261	11
* 57	523-UHC O-Ring, Port, Inner, Silicone	2	S75267	11
* 57	523-UHC O-Ring, Port, Inner, EPDM	2	E70267	11
* 57	523-UHC O-Ring, Port, Inner, FKM	2	V70267	11
* 58	423-UHC O-Ring, Port, Inner, Silicone	2	S75265	11
* 58	423-UHC O-Ring, Port, Outer, EPDM	2	E70265	11
* 58	423-UHC O-Ring, Port, Outer, FKM	2	V70265	11
* 58	523-UHC O-Ring, Port, Inner, Silicone	2	S75272	11
* 58	523-UHC O-Ring, Port, Outer, EPDM	2	E70272	11
* 58	523-UHC O-Ring, Port, Outer, FKM	2	V70272	11
61	Name Plate	1	001 061 015	
62	#2 x .125" RHDS	8	30-355	
65	Caution Plate	2	33-62	
66	Warning Label	2	33-60	
67	Grease Fitting, 1/8"	8	BD0 092 000	
68	Plastic Cap, Grease Fitting	8	BD0 093 000	

**NOTES:**

11. Used on 423 - 523-UHC only.

\* **Recommended Spare Parts**

420 - 423 - 520 - 523-UHC Common Parts Diagram



**420 - 423 - 520 - 523-UHC SEAL PARTS PRICE LIST**

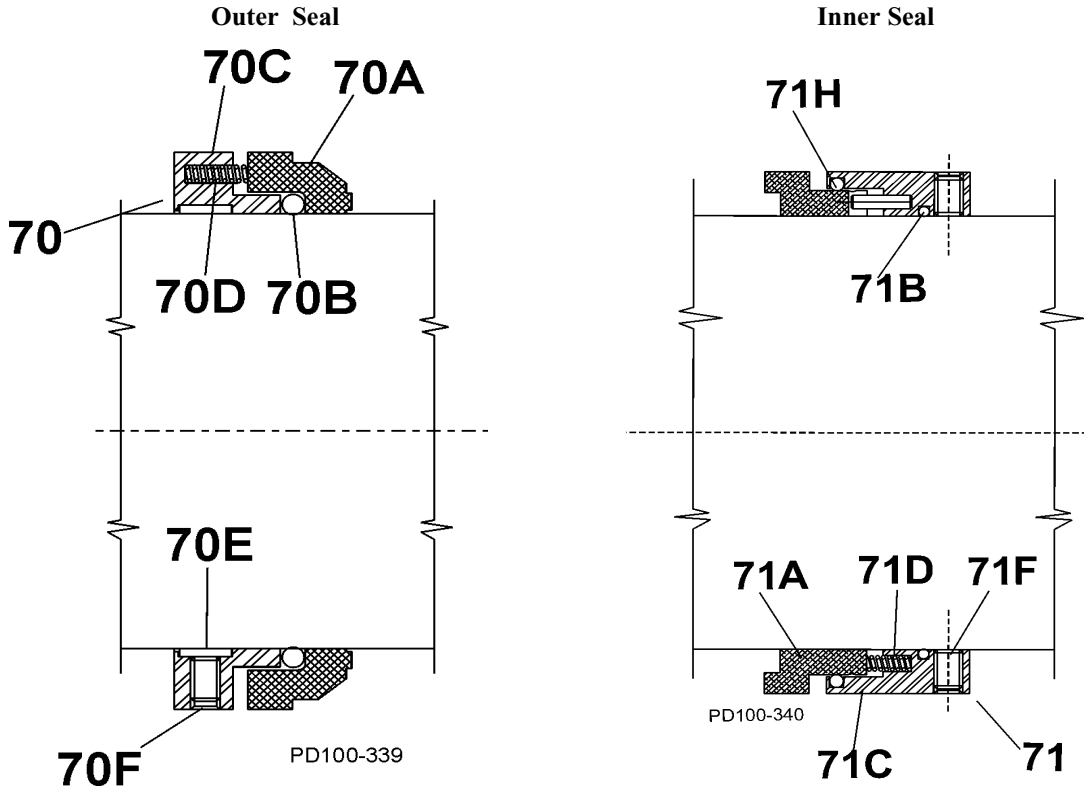
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>MECHANICAL SEAL PARTS</b>				
<b>OUTER SEAL</b>				
* 70	Complete Seal Assembly, w/ Silicone O-ring	2	100513	25
* 70	Complete Seal Assembly, w/ FKM O-ring	2	102508	25
* 70	Complete Seal Assembly, w/ EPDM O-ring	2	102509	25
* 70A	Seal Face, Carbon	2	102659	
* 70A	Seal Face, Tungsten Carbide	2		
* 70B	O-Ring, Shaft, Silicone	2	S75345	
* 70B	O-Ring, Shaft, FKM	2	V70345	
* 70B	O-Ring, Shaft, EPDM	2	E70345	
70C	Retainer	2	102661	
70D	Spring	18	102693	
70E	Split Ring	2	102662	
70F	Set Screw	6	102663	
<b>INNER SEAL</b>				
* 71	Complete Seal Assembly, w/ Silicone O-ring	2	100512	
* 71	Complete Seal Assembly, w/ FKM O-ring	2	102503	
* 71	Complete Seal Assembly, w/ EPDM O-ring	2	102504	
* 71A	Seal Face, Silicon Carbide	2	102526	
* 71B	O-Ring, Shaft, Silicone	2	S75242	
* 71B	O-Ring, Shaft, FKM	2	V70242	
* 71B	O-Ring, Shaft, EPDM	2	E70242	
71C	Retainer	2	102527	
71D	Spring	48	102528	
71F	Set Screw	16	102529	
* 71H	O-Ring, Retainer, Silicone	2	S75246	
* 71H	O-Ring, Retainer, FKM	2	V70246	
* 71H	O-Ring, Retainer, EPDM	2	E70246	
<b>DOUBLE OUTER AND INNER SEAL</b>				
* 72A	Seal Seat, Flushed, Silicon Carbide	2	420-014-031	
* 72B	Gasket, Seal Seat, Inner & Outer, Silicone	4	100515	
* 72B	Gasket, Seal Seat, Inner & Outer, FKM	4	102524	
* 72B	Gasket, Seal Seat, Inner & Outer, EPDM	4	102525	
73A	Gland, Flushed	2	100514	
73B	5/16-18 x 1-1/4" HHCS	12	30-353	
73C	5/16" Lockwasher	12	43-15	
* 73D	O-Ring, Gland, Silicone	2	S75260	
* 73D	O-Ring, Gland, FKM	2	V70260	
* 73D	O-Ring, Gland, EPDM	2	E70260	
74	Slinger	2	114035	

**NOTES:**

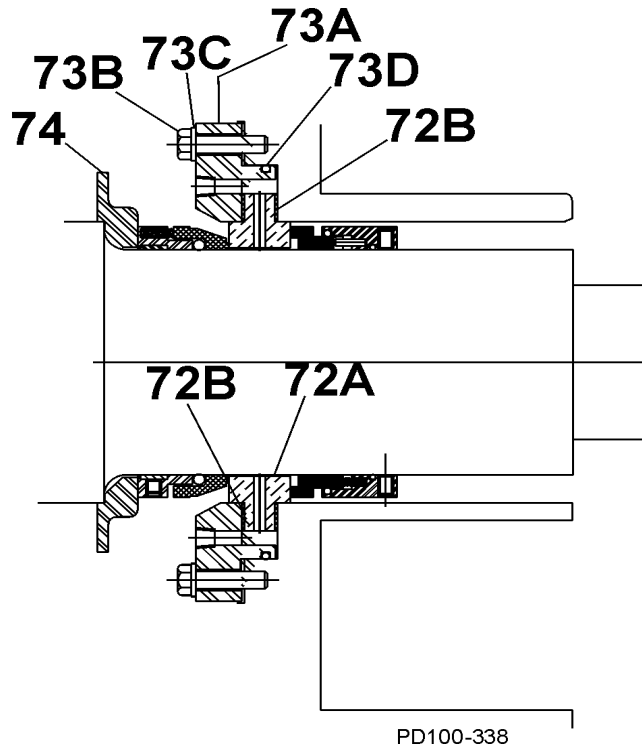
25. Price includes Carbon Seal Face. Contact factory if Tungsten Carbide required.

\* **Recommended Spare Parts**

420 - 423 - 520 - 523-UHC Seal Parts Diagram



Double Mechanical Seal



## 049-ISR REDUCER PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	Gear Box, Front	1	049 005 001	
2	Gear Box, Rear	1	049 005 005	
3	Narrow Gear, Idler to Pinion Shafts (44 Teth)	1	079 007 144	
4	Shaft, Pinion	1	079 008 000	
5	Shaft, Output	1	049 009 000	
6	Oil Seal	1	000 030 022	
7, 10	Bearing;Rear Output and Front Idler	4	079 036 004	
8	Bearing, Front Output	1	049 036 002	
9	Bearing;Rear Idler	1	079 036 003	
11	Bearing, Pinion Shaft	1	079 036 005	
12	Key, Output Shaft to Gear, 5/16 x 5/16 x 1-1/8"	1	000 037 010	
13	SHCS, 5/16 - 18 x 1-1/4"	6	30-216	
14	Silicone Sealant	1	000 142 301	
15	Oil Drain Plug	1	000 046 003	
	Oil Drain Plug, Metric	1	115798	23
17	Spacer, Pinion Shaft	1	079 055 000	
19, 35	Spacer, Idler Shaft Rear	2	049 055 001	
20	Hex Nm Nut, 1/2 -13	2	36-92	
21	Seal Retainer	1	079 080 000	
22	SHCS, #0-32 x 1/2"	8	30-276	
23	HHCS, 3/8 - 16 x 1-1/2"	6	30-289	
24	Drain / Level Plug, 3/4 -16	2	000 046 004	
	Drain Plug, Metric	1	115798	23
25	HHCS, 1/2 - 13 x 2"	2	30-290	
26	External Retaining Ring, Pinion	1	000 087 007	
27	External Retaining Ring, Output	1	000 087 006	
* 28	<b>O-ring, Buna-N</b>	1	N70043	
29	Lockwasher, 3/8"	6	43-180	
37	Name Plate	1	33-64	
38	7/8 x .125" RDDS	4	30-355	
40	Woodruff Key, 4.30, 6.01, 7.25 ratios	2	000 037 007	
	Woodruff Key, 9.48 ratio	1	000 037 007	
42	Level Indicator, Metric	1	115799	23
43	Idler Shaft, 4.30, 6.01, 7.25 ratios	1	049 009 002	27
	Idler Shaft, 9.48 ratio	1	049 009 003	
44	Key, Pump, 1/4 x 1/4 x 1-3/4"	1	000 037 002	
45	Pedestal, Optional, Side-mount only	1	33090	

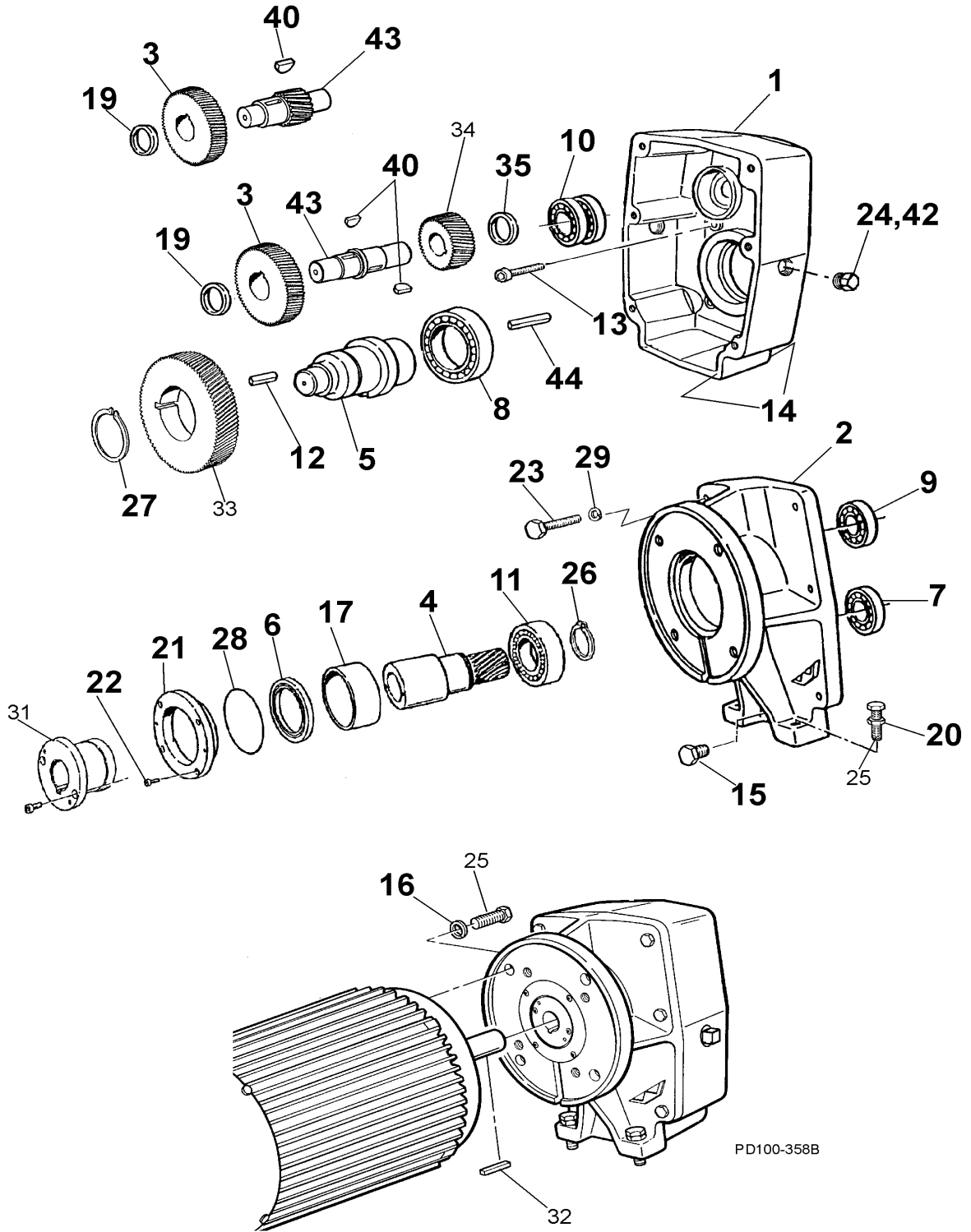
**NOTES:**

23. Introduced in 2002. Is metric thread.

27. Used on 4:30, 6:01, 7:25:1 Ratios. Not used on 9:48:1 Ratio.

**\* Recommended Spare Parts**

# 049-ISR Reducer Parts Diagram



PD100-358B

**049-ISR REDUCER PARTS PRICE LIST**

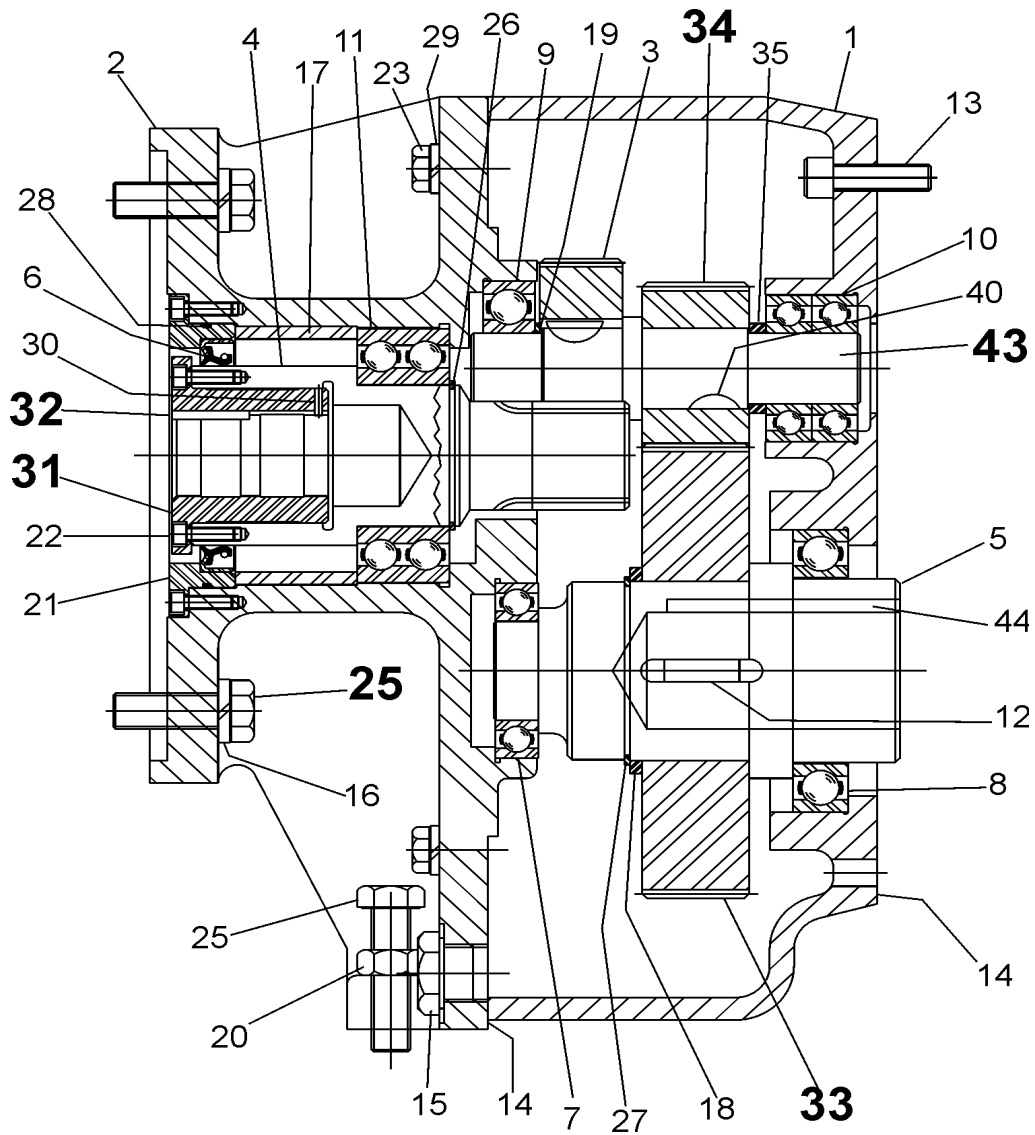
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>RATIO FACTOR COMPONENTS</b>				
	Ratio 9.48:1, 118.7 RPM tiling 1125 RPM Motor & Ratio 9.48:1, 184.1 RPM tiling 1745 RPM Motor			
33	Output Gear, Ø5 (eth)	1	049 007 095	
43	Idler Shaft Ø1 (eth)	1	049 009 003	25, 26
	Ratio 7.25:1, 155.1 RPM tiling 1125 RPM Motor & Ratio 7.25:1, 240.6 RPM tiling 1745 RPM Motor			
33	Output Gear Ø0 (eth)	1	049 007 090	
34	Wide Idler Gear Ø6 (eth)	1	049 007 026	
	Ratio 6.01:1, 187.1 RPM tiling 1125 RPM Motor & Ratio 6.01:1, 290.3 RPM tiling 1745 RPM Motor			
33	Output Gear Ø6 (eth)	1	049 007 086	
34	Wide Idler Gear Ø0 (eth)	1	049 007 030	
	Ratio 4.30:1, 261.6 RPM tiling 1125 RPM Motor & Ratio 4.30:1, 405.8 RPM tiling 1745 RPM Motor			
33	Output Gear Ø8 (eth)	1	049 007 078	
34	Wide Idler Gear Ø8 (eth)	1	049 007 038	
<b>MOTOR ATTACHMENT PARTS</b>				
<b>Motor Frame 143TC</b>				
16	HHCS, 3/8 - 16 x 1-1/4"	4	30-351	
16A	Lockwasher, 3/8"			
31	Bushing, Motor	1	049 116 000	
32	Key, Motor Bushing, 3/16 x 3/16 x 1"	1	000 037 001	
<b>Motor Frame 182TC &amp; 184TC</b>				
16	HHCS, 1/2 - 13 x 1-1/2"	4	30-291	
16A	Lockwasher, 1/2"			
31	Bushing, Motor	1	079 116 001	
32	Key, Motor Bushing, 1/4 x 1/4 x 1"	1	000 037 015	
<b>Motor Frame 213TC &amp; 215TC</b>				
16	HHCS, 1/2 - 13 x 1-1/2"	4	30-291	
16A	Lockwasher, 1/2"			
31	Bushing, Motor	1	079 116 002	
32	Key, Motor Bushing, 5/16 x 5/16 x 1-1/8"	1	000 037 010	

**NOTES:**

- 25. Only (1) Item 40 Woodruff Key Required.
- 26. Item 35 not required.



# 049-ISR Ratio-Motors Parts Diagram



PD100-369A

**079-ISR REDUCER PARTS PRICE LIST**

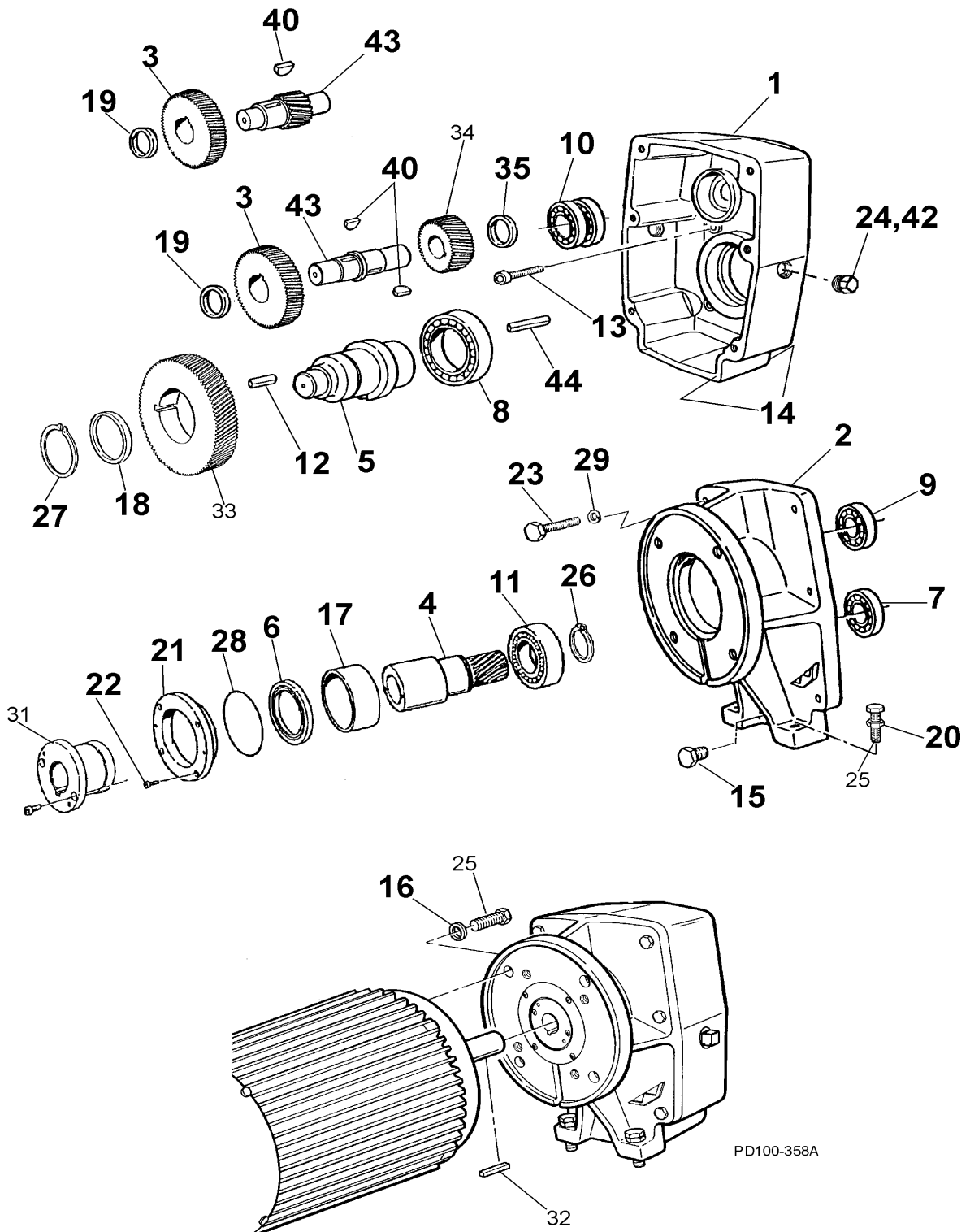
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	Gear Box, Front	1	079 005 001	
2	Gear Box, Rear	1	079 005 005	
3	Narrow Gear, Idler to Pinion Shafts (44 Teth)	1	079 007 144	
4	Shaft, Pinion	1	079 008 000	
5	Shaft, Output	1	079 009 000	
6	Oil Seal	1	000 030 022	
7	Bearing;Rear Output	1	079 036 001	
8	Bearing, Front Output	1	079 036 002	
9	Bearing;Rear Idler	1	079 036 003	
10	Bearing;Front Idler	2	079 036 004	
11	Bearing, Pinion Shaft	1	079 036 005	
12	Key, Output Shaft to Gear, 3/8 x 3/8 x 1-13/16"	1	000 037 009	
13	SHCS, 3/8 - 16 x 1-1/4"	6	30-346	
14	Silicone Sealant	1	000 142 301	
15	Oil Drain Plug	1	000 046 003	
	Oil Drain Plug, Metric	1	115798	23
17	Spacer, Pinion Shaft	1	079 055 000	
18	Spacer, Output Shaft	1	079 055 001	
19	Spacer, Idler Shaft Rear	1	049 055 001	
20	Hex Nm Nut, 1/2 -13	2	36-92	
21	Seal Retainer	1	079 080 000	
22	SHCS, #0-32 x 1/2"	8	30-276	
23	HHCS, 3/8 - 16 x 1-1/2"	6	30-289	
24	Drain / Level Plug, 3/4 -16	2	000 046 004	
	Drain Plug, Metric	1	115798	23
25	HHCS, 1/2 - 13 x 2"	2	30-290	
26	External Retaining Ring, Pinion	1	000 087 007	
27	External Retaining Ring, Output	1	000 087 008	
* 28	<b>O-ring, Buna N</b>	1	N70043	
29	Lockwasher, 3/8"	6	43-180	
35	Spacer, Idler Shaft Rear	1	079 055 002	
37	Name Plate	1	33-64	
38	3/8 x .125" RDDS	4	30-355	
40	Woodruff Key, 4.43, 6.35, 7.47 ratios	2	000 037 007	
	Woodruff Key, 11.57 ratio	1	000 037 007	
42	Level Indicator, Metric	1	115799	23
43	Idler Shaft, 4.43, 6.35, 7.47 ratios	1	079 009 002	
	Idler Shaft, 11.57 ratio	1	079 009 003	
44	Key, Pump, 3/8 x 3/8 x 1-5/8"	1	000 037 003	
45	Pedestal, Optional, Side-mount only	1	33090	

**NOTES:**

23. Introduced in 2002. Now uses metric thread.

\* **Recommended Spare Parts**

# 079-ISR Reducer Parts Diagram



PD100-358A

## 079-ISR REDUCER PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>RATIO FACTOR COMPONENTS</b>				
	Ratio 11.57:1, 97.2 RPM <del>using</del> 1125 RPM Motor & Ratio 11.57:1, 150.8 RPM <del>using</del> 1745 RPM Motor			
33	Output Gear, (16 <del>teeth</del> )	1	079 007 116	
43	Idler Shaft (1 <del>teeth</del> )	1	079 009 003	25, 26
	Ratio 7.47:1, 150.6 RPM <del>using</del> 1125 RPM Motor & Ratio 7.47:1, 233.6 RPM <del>using</del> 1745 RPM Motor			
33	Output Gear (107 <del>teeth</del> )	1	079 007 107	
34	Wide Idler Gear (60 <del>teeth</del> )	1	079 007 030	
	Ratio 6.35:1, 177.2 RPM <del>using</del> 1125 RPM Motor & Ratio 6.35:1, 274.8 RPM <del>using</del> 1745 RPM Motor			
33	Output Gear (103 <del>teeth</del> )	1	079 007 103	
34	Wide Idler Gear (64 <del>teeth</del> )	1	079 007 034	
	Ratio 4.43:1, 254.0 RPM <del>using</del> 1125 RPM Motor & Ratio 4.43:1, 393.9 RPM <del>using</del> 1745 RPM Motor			
33	Output Gear (93 <del>teeth</del> )	1	079 007 093	
34	Wide Idler Gear (44 <del>teeth</del> )	1	079 007 044	
<b>MOTOR ATTACHMENT PARTS</b>				
<b>Motor Frame 182TC &amp; 184TC</b>				
16	HHCS, 1/2 - 13 x 1-1/2"	4	30-291	
16A	Lockwasher, 1/2"	4	43-177	
31	Bushing, Motor	1	079 116 001	
32	Key, Motor Bushing, 1/4 x 1/4 x 1"	1	000 037 015	
<b>Motor Frame 213TC &amp; 215TC</b>				
16	HHCS, 1/2 - 13 x 1-1/2"	4	30-291	
16A	Lockwasher, 1/2"	4	43-177	
31	Bushing, Motor	1	079 116 002	
32	Key, Motor Bushing, 5/16 x 5/16 x 1-1/8"	1	000 037 010	

**NOTES:**

- 25. Only (1) Item 40 Woodruff Key Required.
- 26. Item 35 not required.



## 239-ISR REDUCER PARTS PRICE LIST

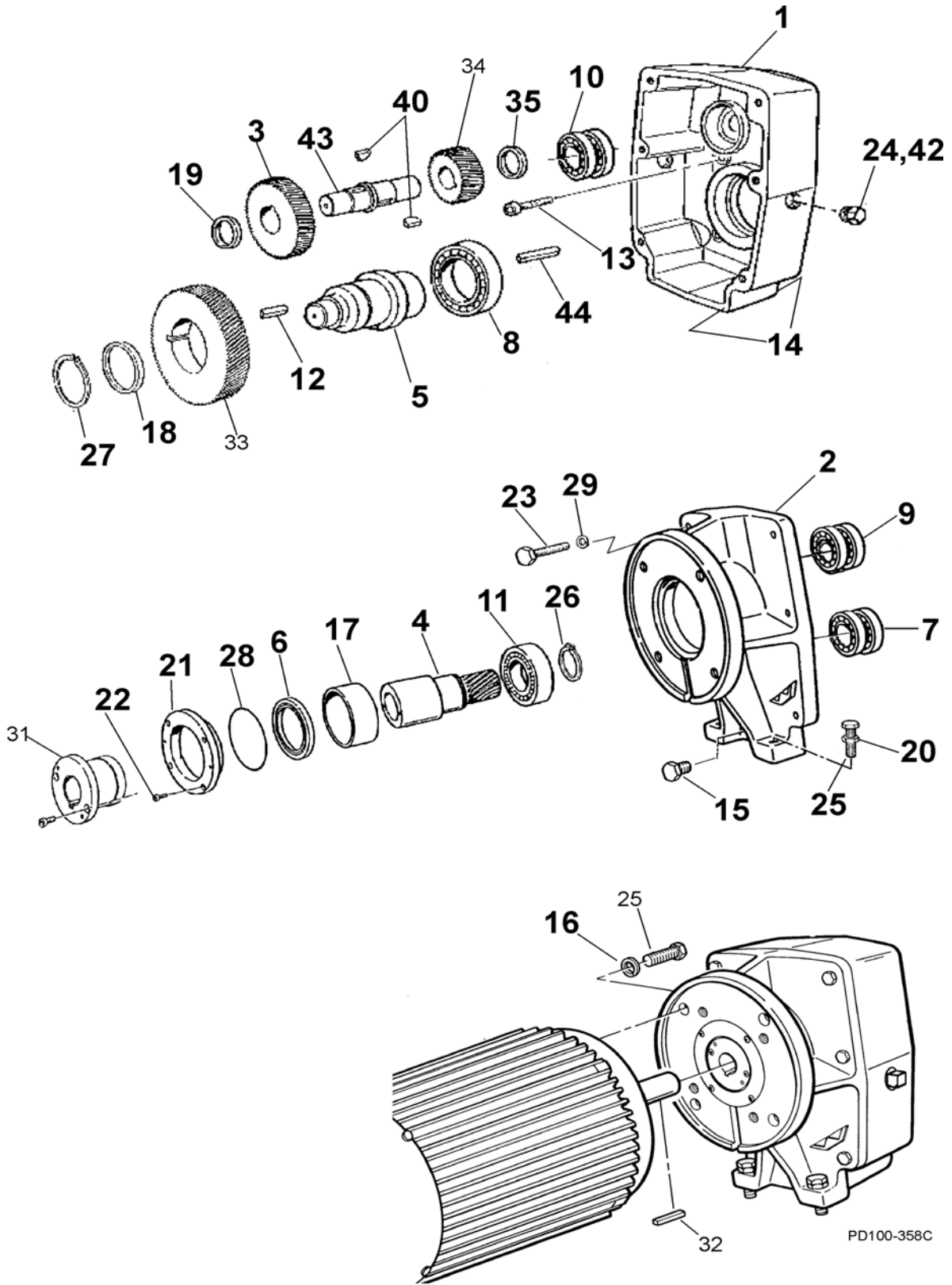
ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
1	Gear Box, Front	1	239 005 001	
2	Gear Box, Rear	1	239 005 005	
3	Narrow Gear, Idler to Pinion Shafts (ø2 Teth)	1	239 007 082	
4	Shaft, Pinion	1	239 008 001	
5	Shaft, Output	1	239 009 000	
6	Oil Seal	1	000 030 023	
7	Bearing;Rear Output;Front and Rear Idler	2	239 036 002	
8	Bearing, Front Output	1	239 036 001	
9	Bearing;Rear Output;Front and Rear Idler	2	239 036 002	
10	Bearing;Rear Output;Front and Rear Idler	2	239 036 002	
11	Bearing, Pinion Shaft	1	239 036 003	
12	Key, Output Shaft to Gear, 1/2 x 1/2 x 1-1/2"	1	000 037 011	
13	SHCS, 3/8 - 16 x 2"	8	30-316	
14	Silicone Sealant	1	000 142 301	
15	Oil Drain Plug	1	000 046 003	
	Oil Drain Plug, Metric	1	115798	23
29	Lockwasher, 1/2"	8	43-177	
17	Spacer, Pinion Shaft	1	239 055 000	
18	Spacer, Output Shaft	1	239 055 001	
19	Spacer, Idler Shaft Rear	2	239 055 002	
20	Hex Nm Nut, 1/2 -13	2	36-92	
21	Seal Retainer	1	239 080 000	
22	SHCS, #0-32 x 1/2"	8	30-276	
23	HHCS, 1/2 - 13 x 2"	8	30-290	
24	Drain / Level Plug, 3/4 -16	2	000 046 004	
	Drain Plug, Metric	1	115798	23
25	HHCS, 1/2 - 13 x 2"	2	30-290	
26	External Retaining Ring, Pinion	1	000 087 009	
27	External Retaining Ring, Output	1	000 087 010	
* 28	<b>O-ring, Buna-N</b>	1	N70049	
35	Spacer, Idler	1	239 055 003	
37	Name Plate	1	33-64	
38	3/8 x .125" RDDS	4	30-355	
40	Woodruff Key	2	000 037 008	
42	Level Indicator, Metric	1	115799	23
43	Idler Shaft	1	239 009 002	
44	Key, Pump, 1/2 x 1/2 x 1-7/8"	1	000 037 004	
45	Pedestal, Optional, Side-mount only	1	33438	

**NOTES:**

23. Introduced in 2002. Uses metric thread.

**\* Recommended Spare Parts**

# 239-ISR Reducer Parts Diagram



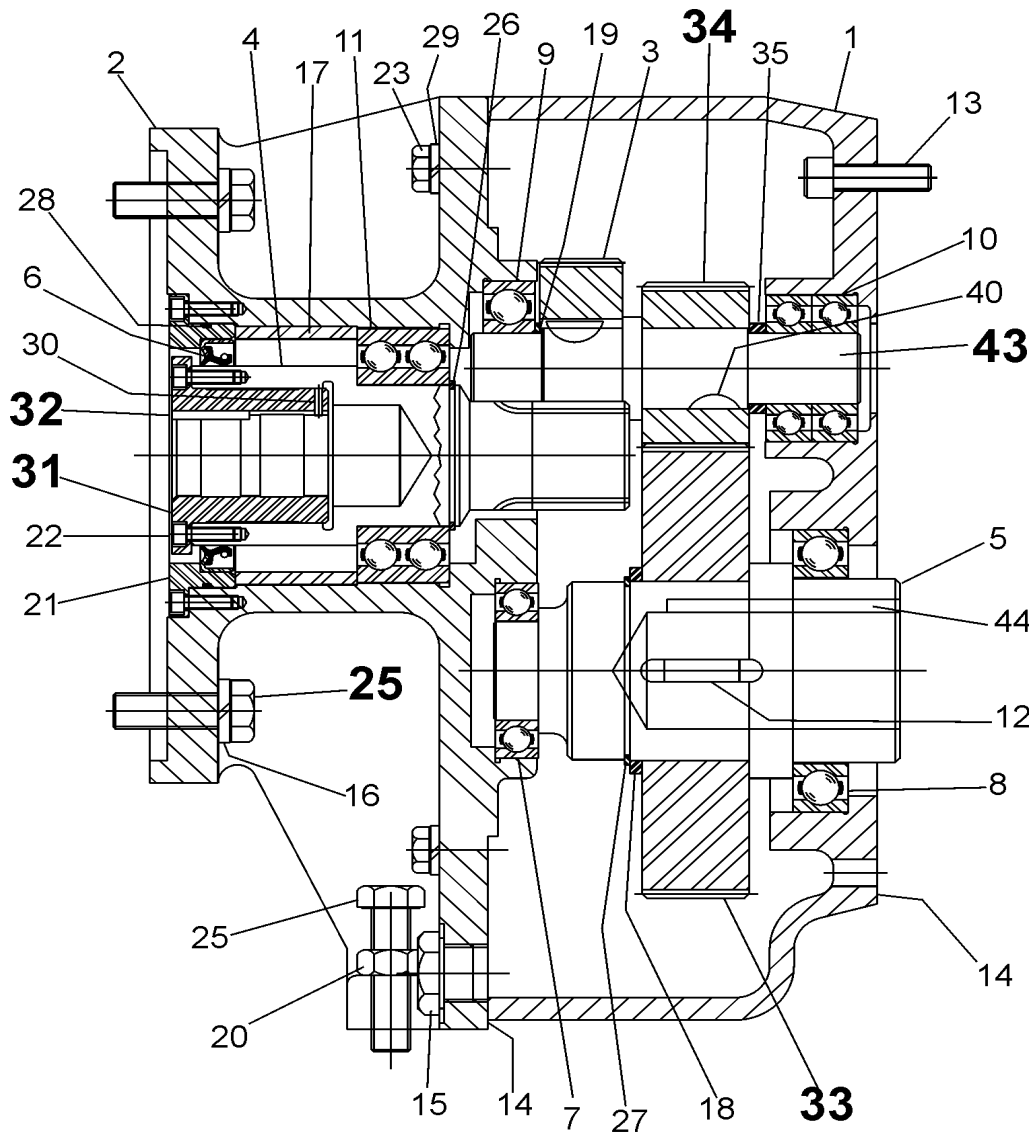
PD100-358C

## 239-ISR REDUCER PARTS PRICE LIST

ITEM NO.	DESCRIPTION	QTY. PER PUMP	PART NO.	NOTES
<b>RATIO FACTOR COMPONENTS</b>				
Ratio 11.22:1, 100.2 RPM <del>tiling</del> 1125 RPM Motor & Ratio 11.22:1, 155.5 RPM <del>tiling</del> 1745 RPM Motor				
33	Output Gear, (71 <del>teeth</del> )	1	239 007 171	
34	Wide Idler Gear (60 <del>teeth</del> )	1	239 007 050	
Ratio 9.01:1, 124.9 RPM <del>tiling</del> 1125 RPM Motor & Ratio 9.01:1, 193.8 RPM <del>tiling</del> 1745 RPM Motor				
33	Output Gear (62 <del>teeth</del> )	1	239 007 162	
34	Wide Idler Gear (69 <del>teeth</del> )	1	239 007 059	
Ratio 7.70:1, 146 RPM <del>tiling</del> 1125 RPM Motor & Ratio 7.70:1, 226.5 RPM <del>tiling</del> 1745 RPM Motor				
33	Output Gear (55 <del>teeth</del> )	1	239 007 155	
34	Wide Idler Gear (66 <del>teeth</del> )	1	239 007 066	
Ratio 6.65:1, 169.2 RPM <del>tiling</del> 1125 RPM Motor & Ratio 6.65:1, 262.4 RPM <del>tiling</del> 1745 RPM Motor				
33	Output Gear (48 <del>teeth</del> )	1	239 007 148	
34	Wide Idler Gear (73 <del>teeth</del> )	1	239 007 073	
Ratio 5.35:1, 210.3 RPM <del>tiling</del> 1125 RPM Motor & Ratio 5.35:1, 326.2 RPM <del>tiling</del> 1745 RPM Motor				
33	Output Gear (37 <del>teeth</del> )	1	239 007 137	
34	Wide Idler Gear (84 <del>teeth</del> )	1	239 007 084	
<b>MOTOR ATTACHMENT PARTS</b>				
<b>Motor Frame 213TC &amp; 215TC</b>				
16	HHCS, 1/2 - 13 x 1-3/4"	4	30-250	
16A	Lockwasher, 1/2"	4	43-177	
31	Bushing, Motor	1	239 116 002	
32	Key, Motor Bushing, 3/8 x 3/8 x 1-1/4"	1	000 037 012	
<b>Motor Frame 254TC &amp; 256TC</b>				
16	HHCS, 1/2 - 13 x 1-3/4"	4	30-250	
16A	Lockwasher, 1/2"	4	43-177	
31	Bushing, Motor	1	239 116 003	
32	Key, Motor Bushing, 3/8 x 3/8 x 1-3/8"	1	000 037 013	
<b>Motor Frame 284TC &amp; 286TC</b>				
16	HHCS, 1/2 - 13 x 2"	4	30-290	
16A	Lockwasher, 1/2"	4	43-177	
31	Bushing, Motor	1	239 116 004	
32	Key, Motor Bushing, 1/2 x 1/2 x 1-3/8"	1	000 037 014	



## 239-ISR Ratio-Motors Parts Diagram



PD100-369A

## U1 Seal Kits

Pump Model Size	Shaft Seal Type	O-ring/Sleeve or Seal Material	Kit Type	Kit Part Number
006/015/018	Single O-ring	Buna	O-ring	105255
		Buna/SS	O-ring/Sleeve	105247
		Buna/Ceramic	O-ring/Sleeve	105248
		FKM	O-ring	105256
		FKM/SS	O-ring/Sleeve	105251
		FKM/Ceramic	O-ring/Sleeve	105252
	Double O-ring	Buna	O-ring	105257
		Buna/SS	O-ring/Sleeve	105249
		Buna/Ceramic	O-ring/Sleeve	105250
		FKM	O-ring	105258
		FKM/SS	O-ring/Sleeve	105253
		FKM/Ceramic	O-ring/Sleeve	105254
	Single Mechanical	Buna	O-ring	105255
		Buna/Ca/Cer	O-ring/Seal/Spring	105295
		Buna/Ca/SC	O-ring/Seal/Spring	105297
		FKM	O-ring	105256
		FKM/Ca/Cer	O-ring/Seal/Spring	105296
		FKM/Ca/SC	O-ring/Seal/Spring	105298
	Double Mechanical	Buna	O-ring	105303
		Buna/Ca/Cer/Ca/Cer	O-ring/Seal/Spring	105299
		Buna/SC/SC/Ca/SC	O-ring/Seal/Spring	105301
FKM		O-ring	105304	
FKM/Ca/Cer/Ca/Cer		O-ring/Seal/Spring	105300	
FKM/SC/SC/Ca/SC		O-ring/Seal/Spring	105302	
030	Single O-ring	Buna	O-ring	105267
		Buna/SS	O-ring/Sleeve	105259
		Buna/Ceramic	O-ring/Sleeve	105260
		FKM	O-ring	105268
		FKM/SS	O-ring/Sleeve	105263
		FKM/Ceramic	O-ring/Sleeve	105264
	Double O-ring	Buna	O-ring	105269
		Buna/SS	O-ring/Sleeve	105261
		Buna/Ceramic	O-ring/Sleeve	105262
		FKM	O-ring	105270
		FKM/SS	O-ring/Sleeve	105265
		FKM/Ceramic	O-ring/Sleeve	105266
	Single Mechanical	Buna	O-ring	105267
		Buna/Ca/Cer	O-ring/Seal/Spring	105305
		Buna/Ca/SC	O-ring/Seal/Spring	105307
		FKM	O-ring	105268
		FKM/Ca/Cer	O-ring/Seal/Spring	105306
		FKM/Ca/SC	O-ring/Seal/Spring	105308
	Double Mechanical	Buna	O-ring	105313
		Buna/Ca/Cer/Ca/Cer	O-ring/Seal/Spring	105309
		Buna/SC/SC/Ca/SC	O-ring/Seal/Spring	105311
FKM		O-ring	105314	
FKM/Ca/Cer/Ca/Cer		O-ring/Seal/Spring	105310	
FKM/SC/SC/Ca/SC		O-ring/Seal/Spring	105312	

## U1 Seal Kits

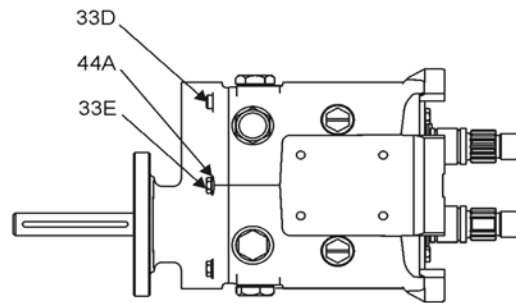
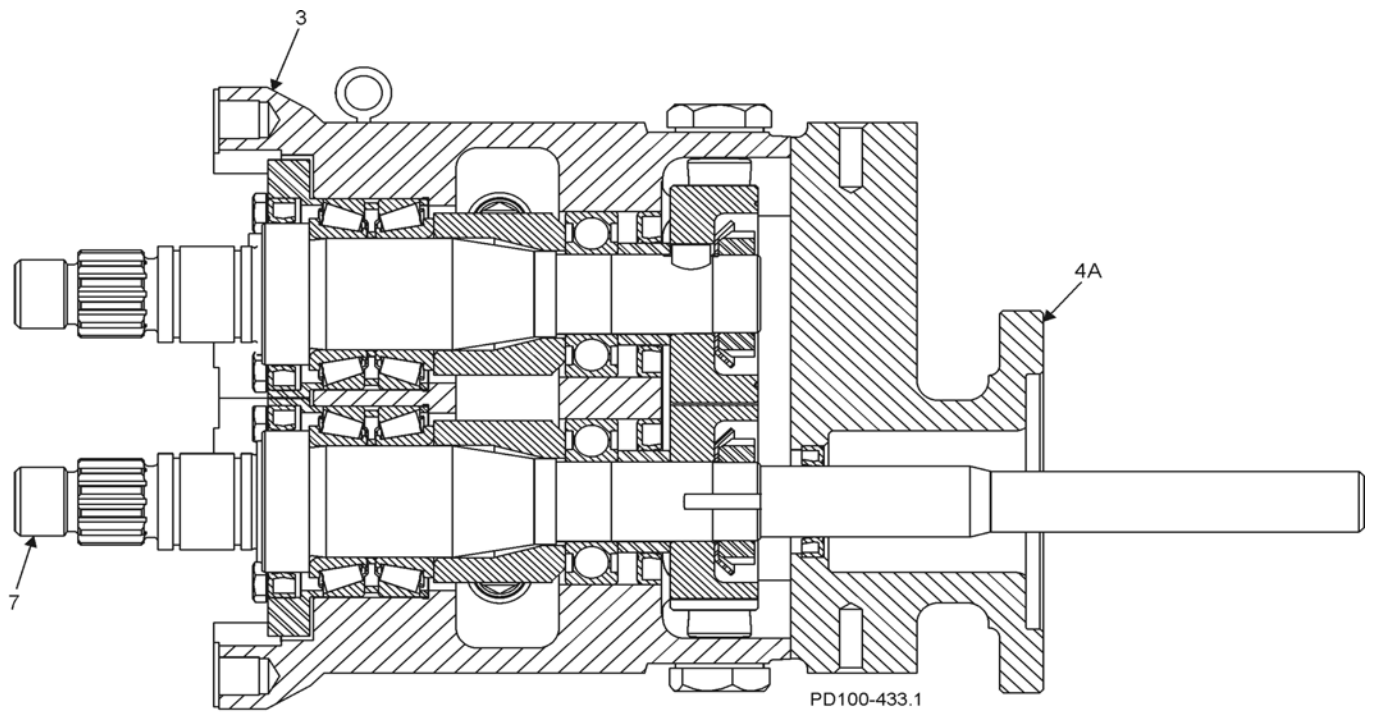
Pump Model Size	Shaft Seal Type	O-ring/Sleeve or Seal Material	Kit Type	Kit Part Number
060/130	Single O-ring	Buna	O-ring	105279
		Buna/SS	O-ring/Sleeve	105271
		Buna/Ceramic	O-ring/Sleeve	105272
		FKM	O-ring	105280
		FKM/SS	O-ring/Sleeve	105275
		FKM/Ceramic	O-ring/Sleeve	105276
	Double O-ring	Buna	O-ring	105281
		Buna/SS	O-ring/Sleeve	105273
		Buna/Ceramic	O-ring/Sleeve	105274
		FKM	O-ring	105282
		FKM/SS	O-ring/Sleeve	105277
		FKM/Ceramic	O-ring/Sleeve	105278
	Single Mechanical	Buna	O-ring	105279
		Buna/Ca/Cer	O-ring/Seal/Spring	105315
		Buna/Ca/SC	O-ring/Seal/Spring	105317
		FKM	O-ring	105280
		FKM/Ca/Cer	O-ring/Seal/Spring	105316
		FKM/Ca/SC	O-ring/Seal/Spring	105318
	Double Mechanical	Buna	O-ring	105323
		Buna/Ca/Cer/Ca/Cer	O-ring/Seal/Spring	105319
		Buna/SC/SC/Ca/SC	O-ring/Seal/Spring	105321
		FKM	O-ring	105324
		FKM/Ca/Cer/Ca/Cer	O-ring/Seal/Spring	105320
		FKM/SC/SC/Ca/SC	O-ring/Seal/Spring	105322
220	Single O-ring	Buna	O-ring	105291
		Buna/SS	O-ring/Sleeve	105283
		Buna/Ceramic	O-ring/Sleeve	105284
		FKM	O-ring	105292
		FKM/SS	O-ring/Sleeve	105287
		FKM/Ceramic	O-ring/Sleeve	105288
	Double O-ring	Buna	O-ring	105293
		Buna/SS	O-ring/Sleeve	105285
		Buna/Ceramic	O-ring/Sleeve	105286
		FKM	O-ring	105294
		FKM/SS	O-ring/Sleeve	105289
		FKM/Ceramic	O-ring/Sleeve	105290
	Single Mechanical	Buna	O-ring	105291
		Buna/Ca/Cer	O-ring/Seal/Spring	105325
		Buna/Ca/SC	O-ring/Seal/Spring	105327
		FKM	O-ring	105292
		FKM/Ca/Cer	O-ring/Seal/Spring	105326
		FKM/Ca/SC	O-ring/Seal/Spring	105328
	Double Mechanical	Buna	O-ring	105333
		Buna/Ca/Cer/Ca/Cer	O-ring/Seal/Spring	105329
		Buna/SC/SC/Ca/SC	O-ring/Seal/Spring	105331
		FKM	O-ring	105334
		FKM/Ca/Cer/Ca/Cer	O-ring/Seal/Spring	105330
		FKM/SC/SC/Ca/SC	O-ring/Seal/Spring	105332

## Tru-Fit™ Universal 1 PD Pumps Parts List

ITEM NO.	DESCRIPTION	Pump Size			
		006, 014, 015	018, 024	030, 034	040
3	Gear Case, CI	118986	118986	121687	121687
4A	Gear Case Cover, Adapter	118982	118982	118678	118678
7	Drive Shaft	119174	119175	119176	119177
33D	1/4-20 x 1" HHCS	30-93	30-93	N/A	N/A
	5/16-18 x 1-1/8" HHCS	N/A	N/A	30-237	30-237
33E	5/16" x 3/4" lg. SHSB	30-690	30-690	N/A	N/A
	3/8" x 3/4" lg. SHSB	N/A	N/A	30-691	30-691
44A	Flat Washer, 5/16"	43-246	43-246	N/A	N/A
	Flat Washer, 3/8"	N/A	N/A	43-30	43-30

ITEM NO.	DESCRIPTION	Pump Size			
		060, 064	130, 134	220, 224	320, 324
3	Gear Case, CI	118987	118987	118988	118989
4A	Gear Case Cover, Adapter	118983	118983	S/N Req'd	S/N Req'd
7	Drive Shaft	119178	119179	119180	119181
33D	3/8-16 x 1-1/2" HHCS	30-50	30-50	30-50	N/A
	1/2-13 x 1-1/2" HHCS	N/A	N/A	N/A	30-103
33E	1/2" x 1" lg. SHSB	30-692	30-692	30-692	N/A
	5/8" x 1" lg. SHSB	N/A	N/A	N/A	30-693
44A	Flat Washer, 1/2"	43-31	43-31	43-31	43-31

# Tru-Fit™ Universal 1 PD Pumps Parts Diagram



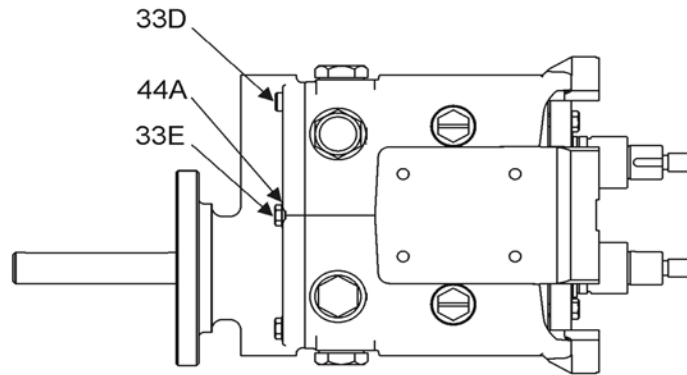
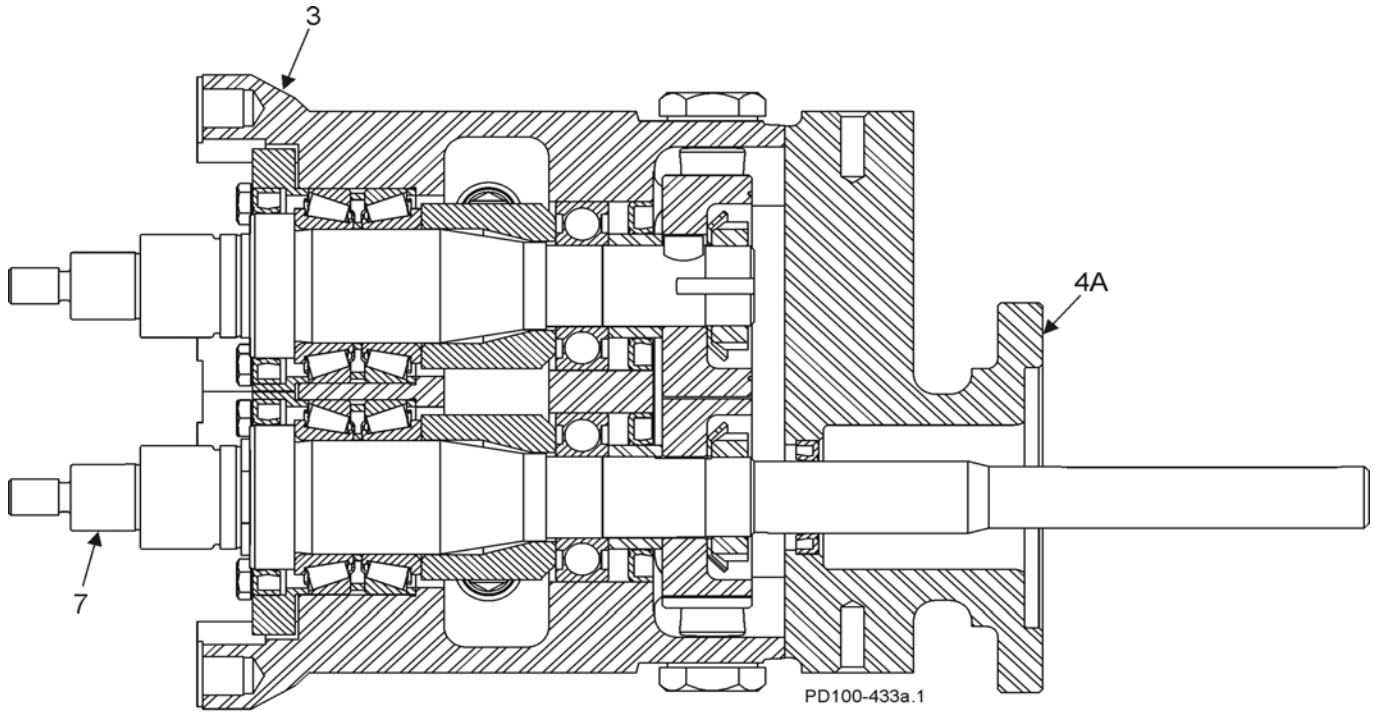
OPPOSITE SIDE

## Tru-Fit™ Universal 2 PD Pumps Parts List

ITEM NO.	DESCRIPTION	Pump Size			
		006, 014, 015	018, 024	030, 034	040
3	Gear Case, CI	118986	118986	121687	121687
4A	Gear Case Cover, Adapter	118982	118982	118678	118678
7	Drive Shaft	119182	118183	119184	119185
33D	1/4-20 x 1" HHCS	30-93	30-93	N/A	N/A
	5/16-18 x 1-1/8" HHCS	N/A	N/A	30-237	30-237
33E	5/16" x 3/4" lg. SHSB	30-690	30-690	N/A	N/A
	3/8" x 3/4" lg. SHSB	N/A	N/A	30-691	30-691
44A	Flat Washer, 5/16"	43-246	43-246	N/A	N/A
	Flat Washer, 3/8"	N/A	N/A	43-30	43-30

ITEM NO.	DESCRIPTION	Pump Size						
		045	060, 064	130, 134	180, 184	220, 224	210, 214	320, 324
3	Gear Case, CI	118987	118987	118987	118988	118988	119009	119009
4A	Gear Case Cover, Adapter	118983	118983	118983	S/N Req'd	S/N Req'd	S/N Req'd	S/N Req'd
7	Drive Shaft	119186	119187	119188	119189	119190	119191	119192
33D	3/8-16 x 1-1/2" HHCS	30-50	30-50	30-50	30-50	30-50	N/A	N/A
	1/2-13 x 1-1/2" HHCS	N/A	N/A	N/A	N/A	N/A	30-103	30-103
33E	1/2" x 1" lg. SHSB	30-692	30-692	30-692	30-692	30-692	N/A	N/A
	5/8" x 1" lg. SHSB	N/A	N/A	N/A	N/A	N/A	30-693	30-693
44A	Flat Washer, 1/2"	43-31	43-31	43-31	43-31	43-31	43-31	43-31

# Tru-Fit™ Universal 2 PD Pumps Parts Diagram



OPPOSITE SIDE





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