

DSL/SVK Lubricators*

313375B

Bulletin 51050

**- For delivering small flows of mineral or synthetic oil
to machinery lubrication points -**



Important Safety Instructions

Read all warnings and instructions in this manual.
Save these instructions.

End Rotary Drive

1:1 Model: 24A455, 24A456, 24A457, 24A458, 24A459, 24A460

37.5:1 / 75:1 Model: 24A461, 24A462, 24A463, 24A464, 24A465, 24A466, 24A467, 24A468, 24A469, 24A470, 24A471, 24A472, 24A473, 24A474, 24A475, 24A476

283:1 Model: 24A453, 24A454

Side Rotary Drive

40:1 / 60:1 Model: 24A477, 24A478, 24A479, 24A480, 24A481, 24A482, 24A483, 24A484, 24A485, 24A486, 24A487, 24A488, 24A489, 24A490, 24A491, 24A492, 24A493, 24A494, 24A495, 24A496, 24A497, 24A498, 24A499, 24A501, 24A502, 24A503, 24A504, 24A505

Bottom Rotary Drive

1:1 / 2.5:1 Model: 24A506, 24A507, 24A508, 24A509

Maximum Working Pressure (with DSL Pump): 3000 psi (20.6 MPA, 206 bar)

Maximum Working Pressure (with SVK Pump): 5000 psi (34.7 MPA, 345 bar)†

*Does not include Pumps and Accessory Kits.

†Sight glass required.

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

	 WARNINGS
	FIRE AND EXPLOSION HAZARD When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. To help prevent fire and explosion: • Use equipment only in well ventilated area. • Eliminate all ignition sources, such as cigarettes and portable electric lamps. • Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Ground all equipment in the work area. • Use only grounded hoses. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
 	SKIN INJECTION HAZARD High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment. • Do not point gun at anyone or at any part of the body. • Do not put your hand over the dispense outlet. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow Pressure Relief Procedure in this manual, when you stop dispensing and before cleaning, checking, or servicing equipment.
	EQUIPMENT MISUSE HAZARD Misuse can cause death or serious injury. • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. • Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the Pressure Relief Procedure in this manual when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. • Use equipment only for its intended purpose. Call your distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.

Repair

NOTE: Graco recommends using the Graco DSL/SVK Pumps with these lubricators. The following repair instructions are for lubricators using those pumps. If you use any other pump, these instructions may not apply exactly as written.

Pressure Relief Instructions



Follow this pressure relief procedure whenever you are instructed to relieve pressure or need to check or service equipment.

To relieve pressure, loosen vent screw on pump sight glass, allowing pressure to vent. Also refer to DSL/SVK Pump instruction manual 313261.

Draining Reservoir (FIG. 1)

To drain reservoir:

1. Position a waste container below drain plug to catch fluid as it drains from reservoir.
2. Remove drain plug (17) and allow reservoir to drain into a waste container.

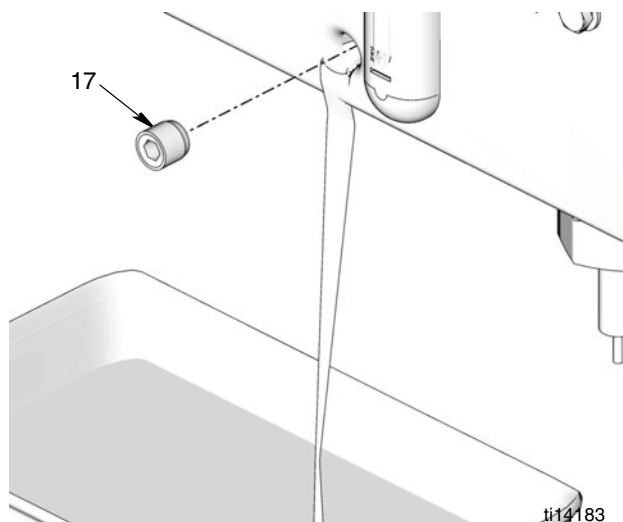


FIG. 1

Removing and Replacing Pump

Removal

1. Relieve Pressure.
2. Drain reservoir. See Draining Reservoir instructions.
3. Disconnect fluid lines (a) from pump (FIG. 2).

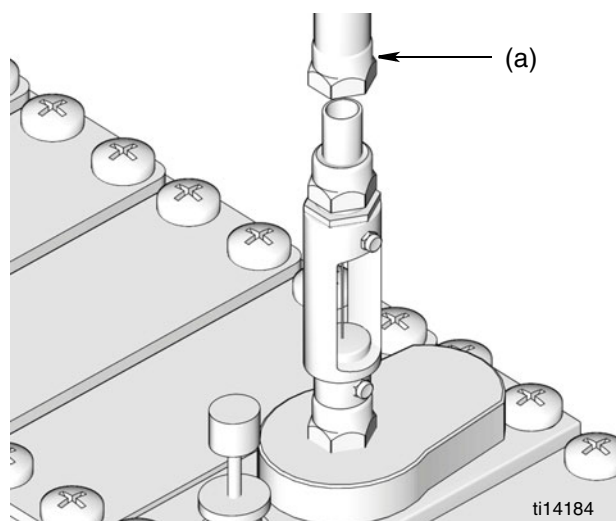


FIG. 2

4. Remove fasteners (9) from pump (FIG. 3).

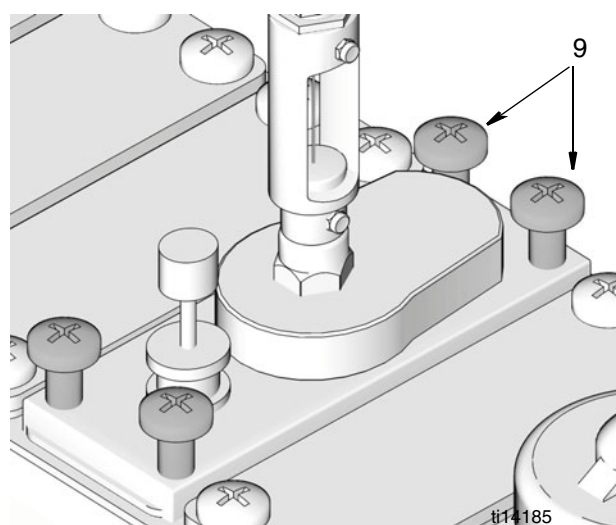


FIG. 3

5. Remove pump from top of reservoir. Make sure gasket (8) was removed with pump. If it is still in place in

top of reservoir, remove it. Discard gasket and use a new gasket for installation.

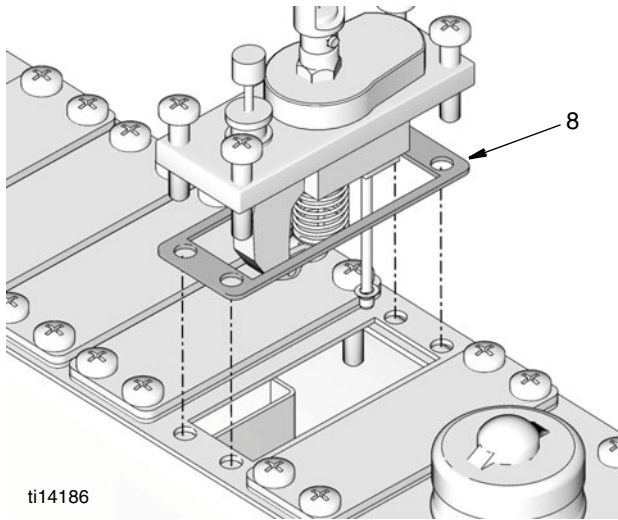


FIG. 4

Installation

1. Install new gasket (8) and pump in top of reservoir (FIG. 4).

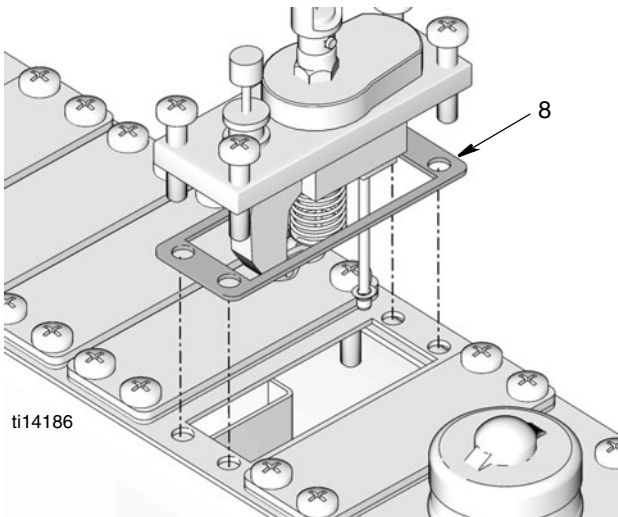


FIG. 5

2. Install fasteners (9). Hand tighten securely (FIG. 6).

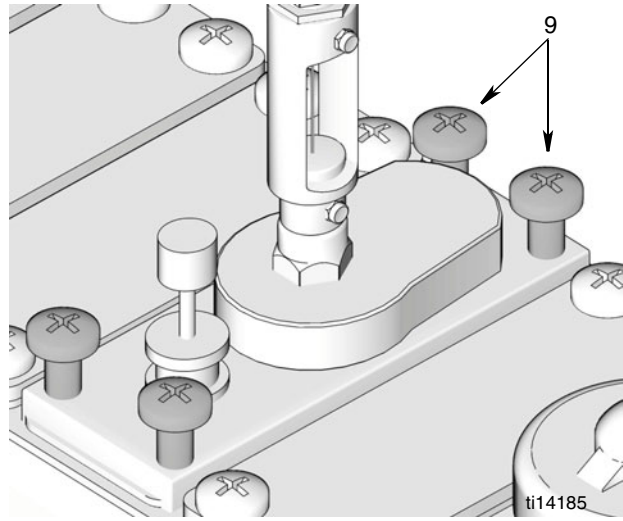


FIG. 6

3. Connect fluid lines (a) to pump (FIG. 7).

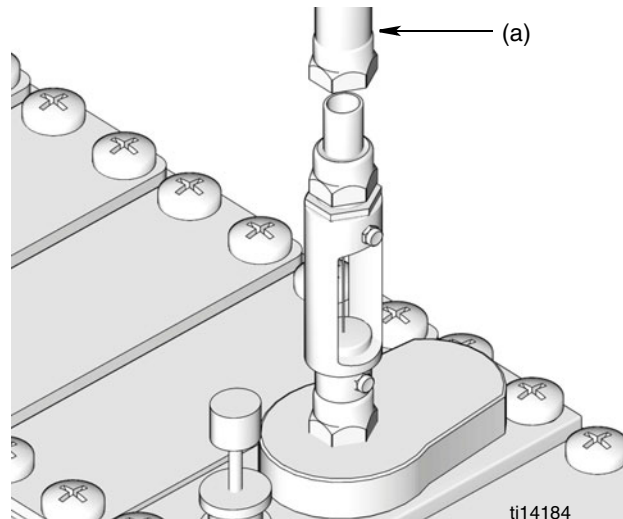


FIG. 7

4. Make sure reservoir drain plug (17) is installed. Fill reservoir with fluid.

Parts

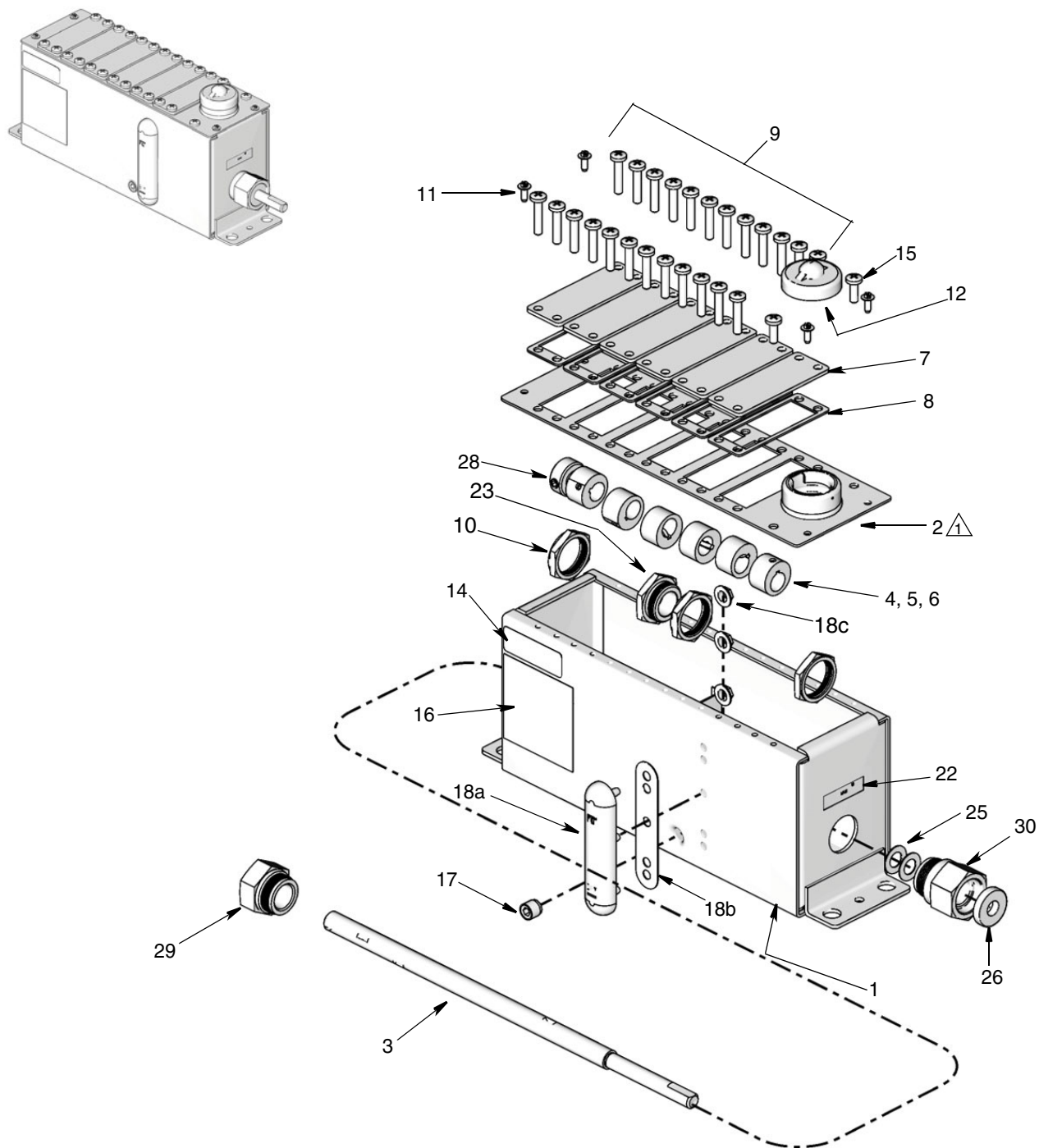
End Rotary Drive Models

1:1 Models: 24A455, 24A456, 24A457, 24A458, 24A459, 24A460

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1		RESERVOIR	1			NUT, lock (models 24A459 and 24A460)	4
2		COVER	1				
3	15V913	SHAFT, 3 feed, direct rotary, (models 24A455 and 24A456)	1	11	555355	SCREW, thf hh st 10-32 x .50 zn	4
	15V914	SHAFT, 6 feed, direct rotary, (models 24A457 and 24A458)	1	12	15U116	CAP, filler	1
	15V915	SHAFT, 9 feed, direct rotary, (models 24A459 and 24A460)	1	14	556872	LABEL, name serial	1
4	560288	CAM, pump actuating (models 24A455 and 24A456)	3	15	555318	SCREW, thf ph st 1/4-20 x .75	2
		CAM, pump actuating (models 24A457 and 24A458)	6	16	15R634	LABEL, logo, "G" 3" x 3"	1
		CAM, pump actuating (models 24A459 and 24A460)	9	17	556000	PLUG, pipe 1/4" nptf hex drive	1
5	555377	KEY, #3 USA 404 woodruff (models 24A455 and 24A456)	3	18	563923	KIT, sightglass, gauge	1
		KEY, #3 USA 404 woodruff (models 24A457 and 24A458)	6	18a		SIGHTGLASS, level	1
		KEY, #3 USA 404 woodruff (models 24A459 and 24A460)	9	18b		GASKET, level sight glass	1
6	555326	SCREW, set cp 1/4-20 x .25 (models 24A455 and 24A456)	3	18c		NUT, pal self thd	3
		SCREW, set cp 1/4-20 x .25 (models 24A457 and 24A458)	6	22	556929	LABEL, cw ccw rotn	1
		SCREW, set cp 1/4-20 x .25 (models 24A459 and 24A460)	9	23	562586	BEARING, 5/8" ID	1
7	555899	PLATE, blank unit, (models 24A455 and 24A456)	3			(model 24A457 and 24A458)	1
		PLATE, blank unit, (models 24A457 and 24A458)	6			(model 24A459 and 24A460)	2
		PLATE, blank unit, (models 24A459 and 24A460)	9	25	555905	BEARING, thr race	2
8	555947	GASKET, pumping unit (models 24A455 and 24A456)	3	26	556578	SEAL, lip .50 id 1.12 od .25 w	1
		GASKET, pumping unit (models 24A457 and 24A458)	6	28	556782	COLLAR, lock	1
		GASKET, pumping unit (models 24A459 and 24A460)	9	29	562977	BEARING, end 5/8 id	1
9	555304	SCREW, 1/4-20 x 1.25 ZN (models 24A455 and 24A456)	12	30	562983	BEARING, oil seal assy 1/2 id lg	1
		SCREW, 1/4-20 x 1.25 ZN (models 24A457 and 24A458)	24				
		SCREW, 1/4-20 x 1.25 ZN (models 24A459 and 24A460)	36				
10	556376	NUT, lock (models 24A455 and 24A456)	2				
		NUT, lock (models 24A457 and 24A458)	3				

1:1 End Rotary Drive Models

Model 24A457 Shown



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37.5:1 Models:**24A461, 24A462, 24A465, 24A466, 24A469, 24A470, 24A473, 24A474****75:1 Models:****24A463, 24A464, 24A467, 24A468, 24A471, 24A472, 24A475, 24A476**

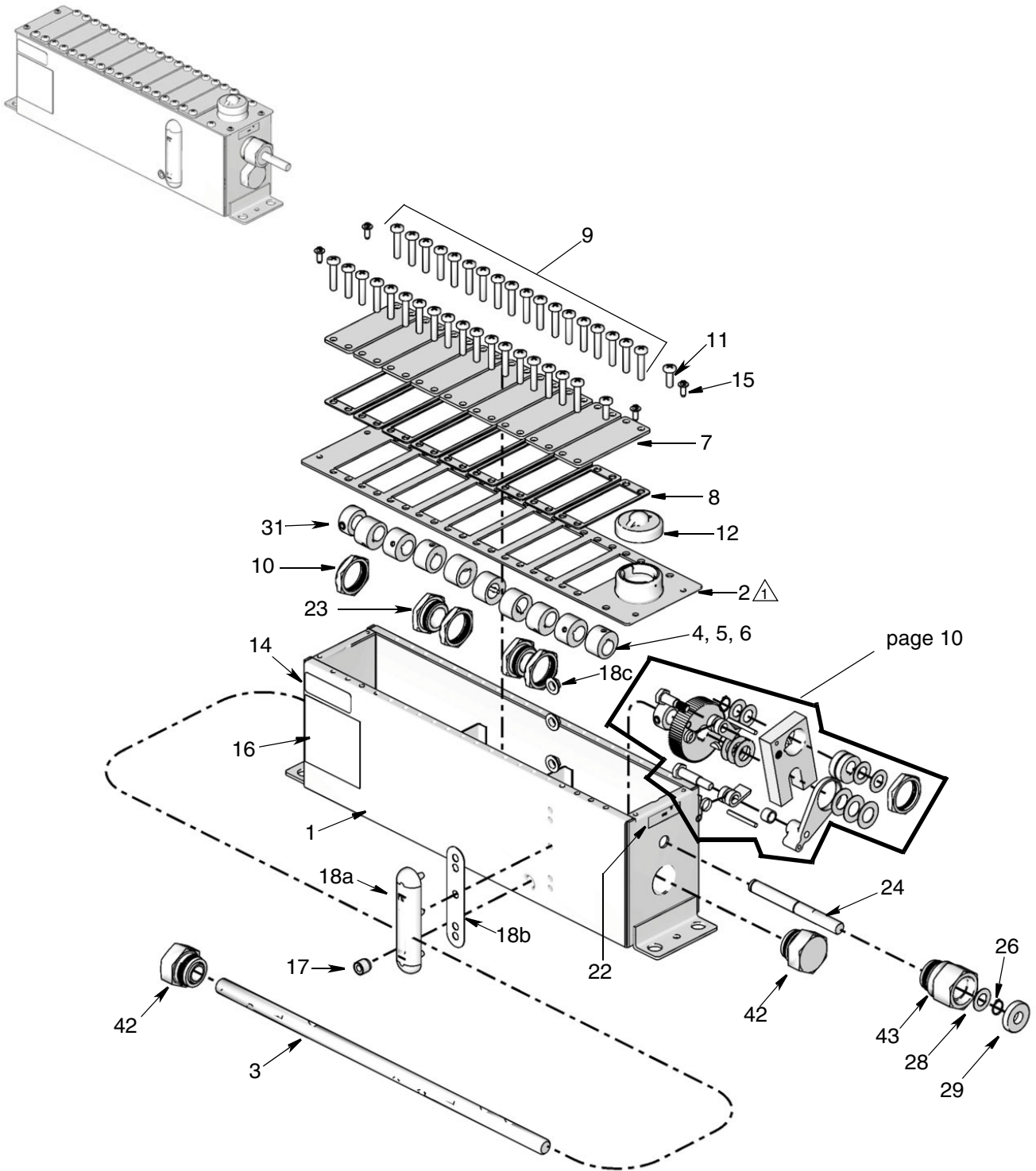
Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1		RESERVOIR	1			37.5:1 (models 24A473, 24A474),	12
2		COVER	1			75:1 (models: 24A475, 24A476)	
3	560376	SHAFT, 3 feed, (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	1	8	555947	GASKET, pumping unit, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	3
	560377	SHAFT, 6 feed, 37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	1			37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	6
	560378	SHAFT, 9 feed, 37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	1			37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	9
	561321	SHAFT, 12 feed, 37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	1	9	555304	SCREW, 1/4-20 x 1.25 zn, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	12
4	560288	CAM, pump actuating SVK, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	3			37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	24
		37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	6			37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	36
		37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	9			37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	48
		37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	12	10	556376	NUT, lock, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	2
5	555377	KEY, #3 USA 404 woodruff, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	5			37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	3
		37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	8			37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	4
		37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	11			37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	5
		37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	14	11	555355	SCREW, thf hh st 10-32 x .50 zn	4
6	555326	SCREW, set cp 1/4-20 x .25, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	3	12	15U116	CAP, filler	1
		37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	6	14	556872	LABEL, name serial	1
		37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	9	15	555318	SCREW, thf ph st 1/4-20 x .75	2
		37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	12	16	15R634	LABEL, logo, "G" 3" X 3"	1
7	555899	PLATE, blank unit, 37.5:1 (models 24A461, 24A462), 75:1 (models 24A463, 24A464)	3	17	556000	PLUG, pipe 1/4 nptf hex drive	1
		37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	6	18	563923	KIT, sightglass, gauge	1
		37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	9	18a		SIGHTGLASS, level	1
		37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	12	18b		GASKET, level sight glass	1
				18c		NUT, pal self thd	3
				22	556929	LABEL, cw ccw rotn	1
				23	562586	BEARING, 5/8" ID, 37.5:1 (models 24A465, 24A466), 75:1 (models 24A467, 24A468)	1
						37.5:1 (models 24A469, 24A470), 75:1 (models 24A471, 24A472)	2
						37.5:1 (models 24A473, 24A474), 75:1 (models: 24A475, 24A476)	3
				24	560366	SHAFT, drv end rot	1
				25	555430	PIN, roll .156 dia 1.50 lg	2

Parts

Ref	Part No.	Description	Qty
26	555549	RING, retainer -50 basic ext	2
27	555873	BEARING, thr race	6
28	555905	BEARING, thr race	5
29	556578	SEAL, lip .50 id 1.12 od .25 w	1
31	556782	COLLAR, lock	2
32	556787	ARM, drv	1
33	557008	SPRING, rat drv model 76	2
34	557023	GEAR, rat 75 tooth	1
35		PAWL	1
36	560187	SCREW, shldr	1
37	560191	SCREW, shldr	1
38	560207	SPACER	1
39	560276	BRAKE	1
40	560291	ARM, ecc drv, 37.5:1 (models 24A461, 24A462, 24A465, 24A466, 24A469, 24A470, 24A473, 24A474)	1
	560292	ARM, ecc drv, 75:1 (models 24A463, 24A464, 24A467, 24A468, 24A471, 24A472, 24A475, 24A476)	1
41		PAWL, drv	1
42	562977	BEARING, end 5/8 id	2
43	562983	BEARING, oil seal assy 1/2 id lg	1

37.5:1 / 75:1 End Rotary Drive Models

Model 24A469 Shown

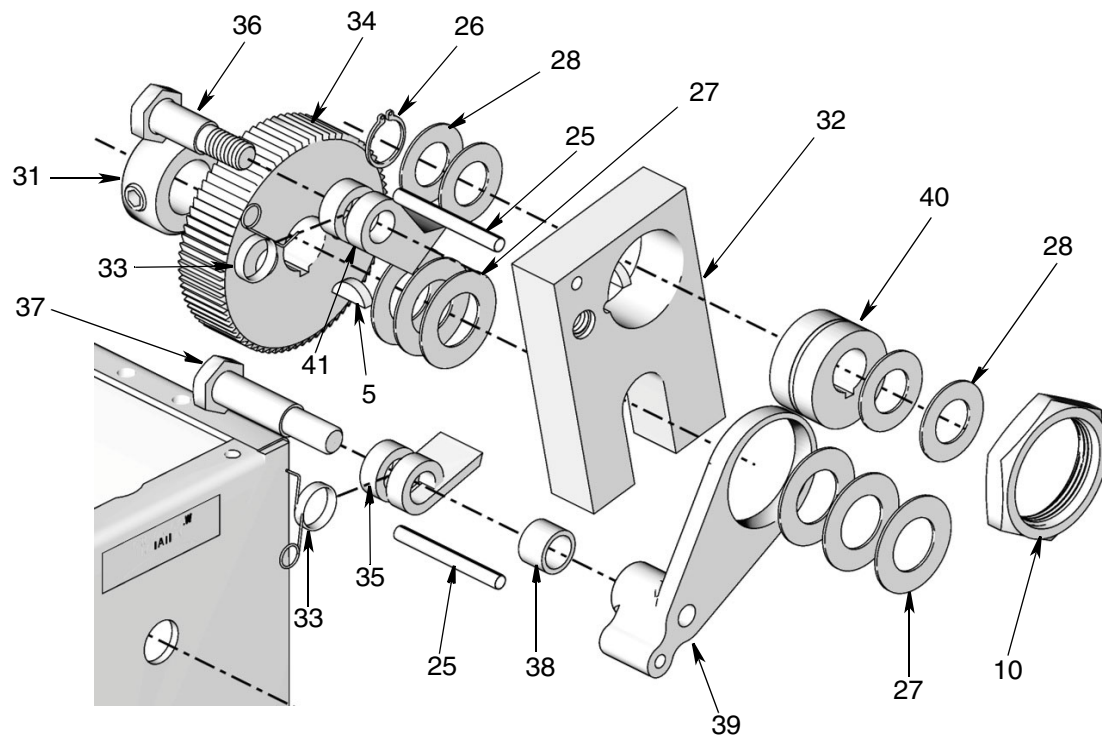


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37:5:1 / 75:1 End Rotary Drive Models
Exploded View (page 9)

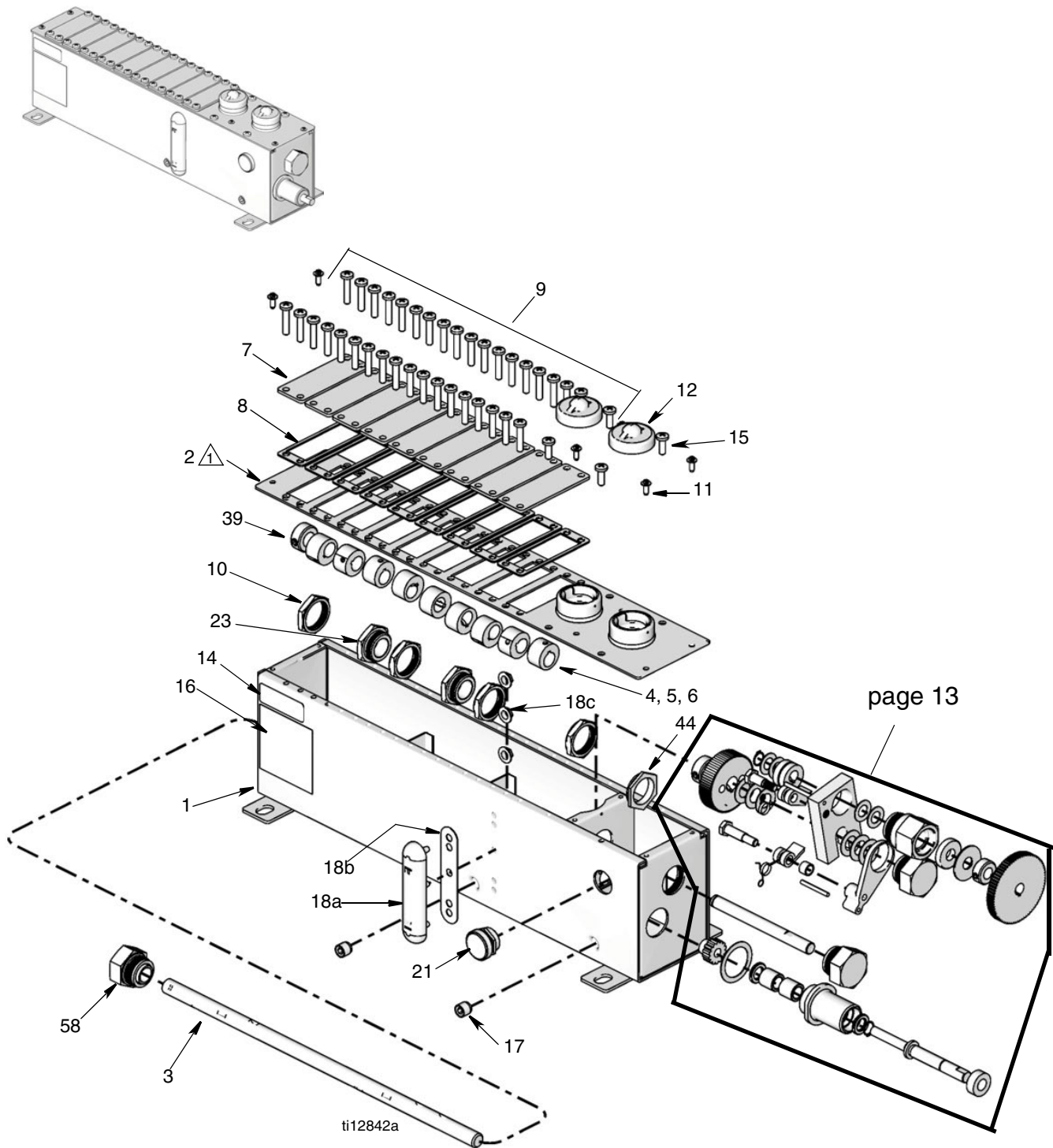


283:1 End Rotary Drive Models 24A453, 24A454

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1		RESERVOIR	1	42	557023	GEAR, rat 75 tooth	1
2		COVER	1	43		PAWL	1
3	560376	SHAFT, 3 feed (model 24A453)	1	44	560041	NUT, bearing lock	1
	560378	SHAFT, 9 feed (model 24A454)	1	45	560083	SHAFT, input	1
4	560288	CAM, pump actuating (model 24A453)	3	46	560084	WASHER, race thr .875odx.51x.12	2
		CAM, pump actuating (model 24A454)	9	47	560085	GEAR	1
5	555377	KEY, #3 USA 404 woodruff (model 24A453)	5	48	560086	HOUSING, bearing	1
		KEY, #3 USA 404 woodruff (model 24A454)	11	49	560087	GEAR, 3.00 pitch dia	1
6	555326	SCREW, set cp 1/4-20 x .25 (model 24A453)	3	50	560095	SHAFT, interm dbl redu	1
		SCREW, set cp 1/4-20 x .25 (model 24A454)	9	51	560187	SCREW, shldr	1
7	555899	PLATE, blank unit (model 24A453)	3	52	560191	SCREW, shldr	1
		PLATE, blank unit (model 24A454)	9	53	560207	SPACER	1
8	555947	GASKET, pumping unit (model 24A453)	3	54		BRAKE	1
		GASKET, pumping unit (model 24A454)	9	55	560292	ARM, ecc drv	1
9	555304	SCREW, 1/4-20 x 1.25 zn (models 24A453)	12	56		PAWL, drv	1
		SCREW, 1/4-20 x 1.25 zn (models 24A454)	36	57	562976	BEARING, end 1/2 id	1
10	556376	NUT, lock (models 24A453)	3	58	562977	BEARING, end 5/8 id	2
		NUT, lock (models 24A454)	5	59	562983	BEARING, oil seal assy 1/2 id lg	1
11	555355	SCREW, thf hh st 10-32 x .50 zn	6				
12	15U116	CAP, filler	2				
14	556872	LABEL, name serial	1				
15	555318	SCREW, thf ph st 1/4-20 x .75	4				
16	15R634	LABEL, logo, "G" 3" X 3"	1				
17	556000	PLUG, pipe 1/4 nptf hex drive	2				
18	563923	KIT, sightglass, gauge	1				
18a		SIGHTGLASS, level	1				
18b		GASKET, level sight glass	1				
18c		NUT, pal self thd	3				
21	555958	SIGHTGLASS, gauge scr type	1				
23	562586	BEARING, 5/8" ID, (model 24A454)	2				
25	555308	WASHER, flat sst	1				
26	555325	KEY, woodruff #2	1				
27	555349	PIN, roll st .12 x .62	1				
28	555352	SCREW, set cp st 10-24 x .38	1				
29	555430	PIN, roll .156 dia 1.50 lg	2				
30	555549	RING, retainer -50 basic ext	2				
31	555873	BEARING, thr race	6				
32	555891	BEARING, rad roller	2				
33	555894	COLLAR, lock .50idx1.0odx.44w	1				
34	555905	BEARING, thr race	4				
35	555907	SEAL, lip lth .50 x 1.00 x .38	1				
36	555924	WASHER, fl nob	1				
37	556578	SEAL, lip .50 id 1.12 od .25 w	1				
39	556782	COLLAR, lock	2				
40	556787	ARM, drv	1				
41	557008	SPRING, rat drv model 76	2				

283:1 End Rotary Drive Models

Model 24A454 Shown

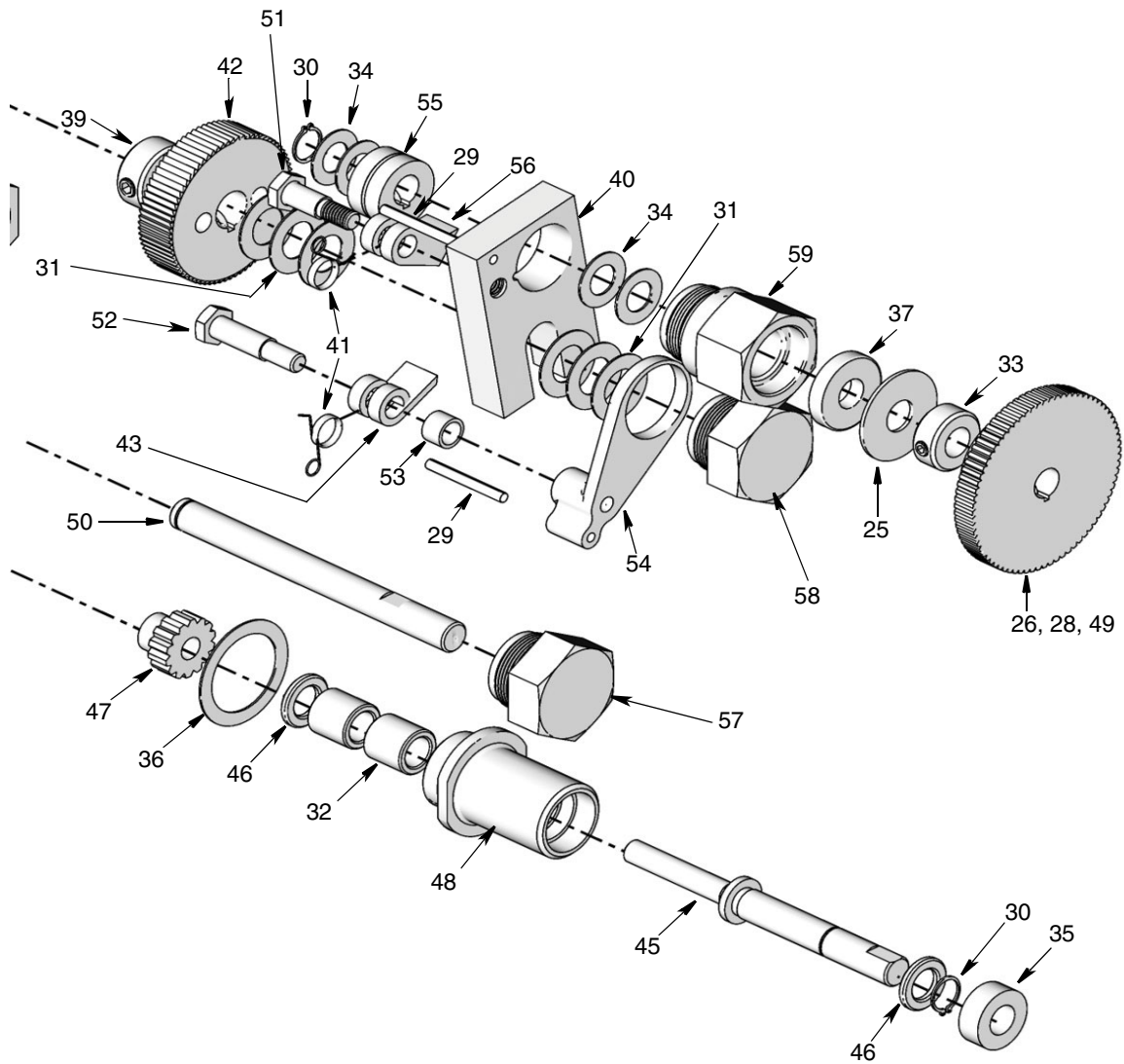


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283:1 End Rotary Drive Models

Exploded View (page 12)



Side Rotary Drive

40:1 Models:

24A477, 24A478, 24A481, 24A482, 24A485, 24A486, 24A489, 24A490, 24A493, 24A494, 24A497, 24A498

60:1 Models:

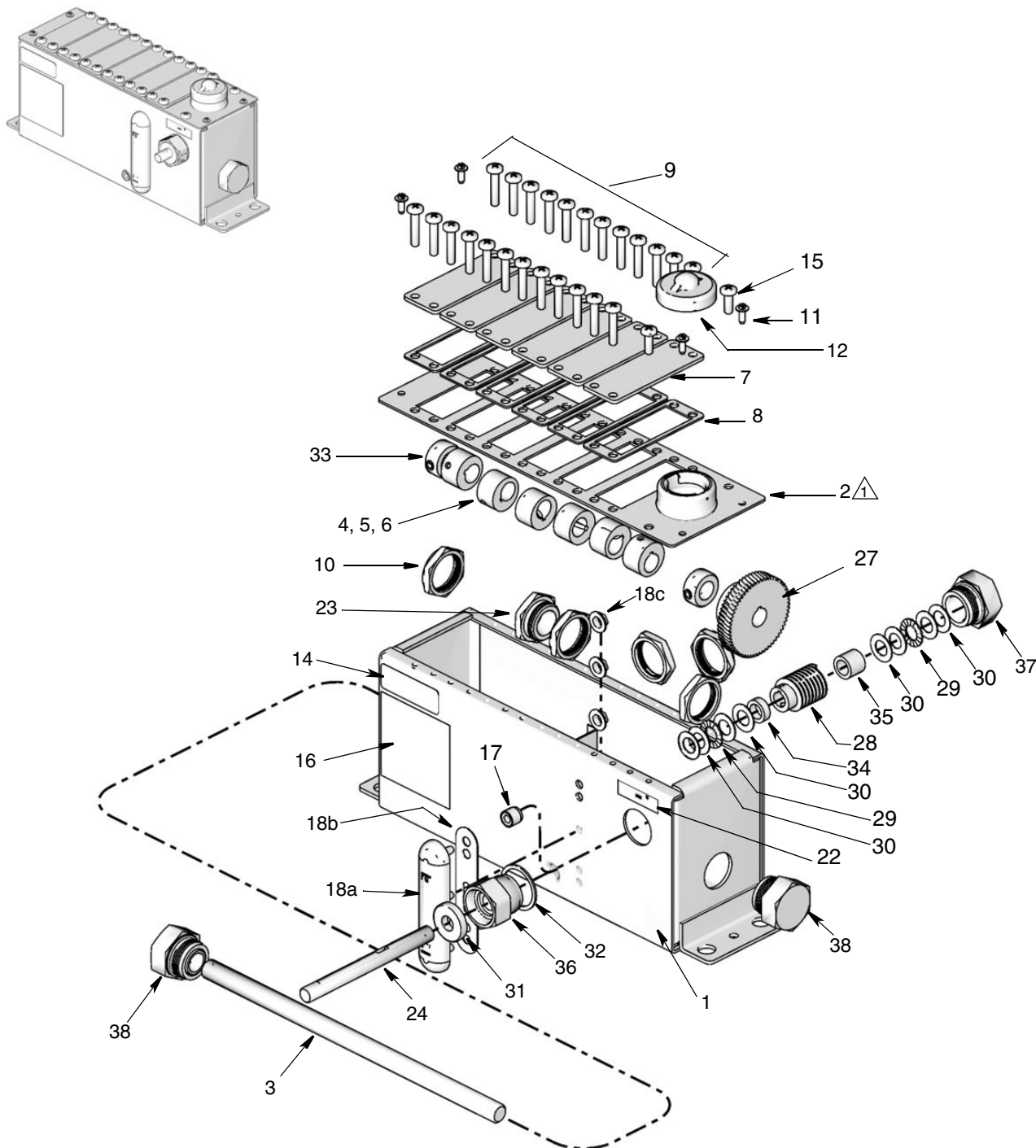
24A479, 24A480, 24A483, 24A484, 24A487, 24A488, 24A491, 24A492, 24A495, 24A496, 24A499, 24A501, 24A502, 24A503, 24A504, 24A505

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1		RESERVOIR	1	6	555326	SCREW, set cp 1/4-20 x .25, 40:1	3
2		COVER	1			(models 24A477, 24A478, 24A481,	
3	560376	SHAFT, 3 feed, 40:1 (models	1			24A482), 60:1 (models 24A479,	
		24A477, 24A478, 24A481,				24A480, 24A483, 24A484)	
		24A482), 60:1 (models 24A479,				40:1 (models 24A485, 24A486,	6
		24A480, 24A483, 24A484)				24A489, 24A490,) 60:1 (models	
	560377	SHAFT, 6 feed, 40:1 (models	1			24A487, 24A488, 24A491, 24A492)	
		24A485, 24A486, 24A489,				40:1 (models 24A493, 24A494,	9
		24A490,) 60:1 (models 24A487,				24A497, 24A498,) 60:1 (models	
		24A488, 24A491, 24A492)				24A495, 24A496, 24A499, 24A501)	
	560378	SHAFT, 9 feed, 40:1 (models	1			60:1 (models 24A502, 24A503,	15
		24A493, 24A494, 24A497,				24A504, 24A505)	
		24A498,) 60:1 (models 24A495,		7	555899	PLATE, blank unit, 40:1 (models	3
		24A496, 24A499, 24A501)				24A477, 24A478, 24A481,	
	560098	SHAFT, 15 feed, 60:1 (models	1			24A482), 60:1 (models 24A479,	
		24A502, 24A503, 24A504, 24A505)				24A480, 24A483, 24A484)	
4	560288	CAM, pump, 40:1 (models 24A477,	3			40:1 (models 24A485, 24A486,	6
		24A478, 24A481, 24A482), 60:1				24A489, 24A490,) 60:1 (models	
		(models 24A479, 24A480, 24A483,				24A487, 24A488, 24A491, 24A492)	
		24A484)				40:1 (models 24A493, 24A494,	9
		40:1 (models 24A485, 24A486,	6			24A497, 24A498,) 60:1 (models	
		24A489, 24A490,) 60:1 (models				24A495, 24A496, 24A499, 24A501)	
		24A487, 24A488, 24A491, 24A492)				60:1 (models 24A502, 24A503,	15
		40:1 (models 24A493, 24A494,	9			24A504, 24A505)	
		24A497, 24A498,) 60:1 (models		8	555947	GASKET, pumping unit, 40:1 (mod-	3
		24A495, 24A496, 24A499, 24A501)				els 24A477, 24A478, 24A481,	
		60:1 (models 24A502, 24A503,	15			24A482), 60:1 (models 24A479,	
		24A504, 24A505)				24A480, 24A483, 24A484)	
5	555377	KEY, #3 USA 404 woodruff, 40:1	5			40:1 (models 24A485, 24A486,	6
		(models 24A477, 24A478, 24A481,				24A489, 24A490,) 60:1 (models	
		24A482), 60:1 (models 24A479,				24A487, 24A488, 24A491, 24A492)	
		24A480, 24A483, 24A484)				40:1 (models 24A493, 24A494,	9
		40:1 (models 24A485, 24A486,	8			24A497, 24A498,) 60:1 (models	
		24A489, 24A490,) 60:1 (models				24A495, 24A496, 24A499, 24A501)	
		24A487, 24A488, 24A491, 24A492)				60:1 (models 24A502, 24A503,	15
		40:1 (models 24A493, 24A494,	11			24A504, 24A505)	
		24A497, 24A498,) 60:1 (models		9	555304	SCREW, 1/4-20 x 1.25 zn, 40:1	12
		24A495, 24A496, 24A499, 24A501)				(models 24A477, 24A478, 24A481,	
		60:1 (models 24A502, 24A503,	17			24A482), 60:1 (models 24A479,	
		24A504, 24A505)				24A480, 24A483, 24A484)	

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
		40:1 (models 24A485, 24A486, 24A489, 24A490,) 60:1 (models 24A487, 24A488, 24A491, 24A492)	24	28	555879	GEAR, worm 40:1 (models 24A477, 24A478, 24A481, 24A482, 24A485, 24A486, 24A489, 24A490, 24A493, 24A494, 24A497, 24A498)	1
		40:1 (models 24A493, 24A494, 24A497, 24A498,) 60:1 (models 24A495, 24A496, 24A499, 24A501)	36		555883	GEAR, worm 60:1 (models 24A479, 24A480, 24A483, 24A484, 24A487, 24A488, 24A491, 24A492, 24A495, 24A496, 24A499, 24A501, 24A502, 24A503, 24A504, 24A505)	1
10	556376	NUT, lock, 40:1 (models 24A477, 24A478, 24A481, 24A482), 60:1 (models 24A479, 24A480, 24A483, 24A484)	4	29	555904	BEARING, thr roller	2
		40:1 (models 24A485, 24A486, 24A489, 24A490,) 60:1 (models 24A487, 24A488, 24A491, 24A492)	5	30	555905	BEARING, thr race	8
		40:1 (models 24A493, 24A494, 24A497, 24A498,) 60:1 (models 24A495, 24A496, 24A499, 24A501)	6	31	556578	SEAL, lip .50 id 1.12 od .25 w	1
		60:1 (models 24A502, 24A503, 24A504, 24A505)	8	32	556751	GASKET, end brg	1
11	555355	SCREW, thf hh st 10-32 x .50 zn	4	33	556782	COLLAR, lock	2
12	15U116	CAP, filler	1	34	560210	SPACER,, 510 id x .75 od x .25 lg	1
14	556872	LABEL, name serial	1	35	560211	SPACER,, 510 id x .75 od	1
15	555318	SCREW, thf ph st 1/4-20 x .75	2	36	562590	BEARING, assy 1 / id short	1
16	15R634	LABEL, logo, "G" 3" x 3"	1	37	562976	BEARING, end 1/2 id	1
17	556000	PLUG, pipe 1/4 nptf hex drive	1	38	562977	BEARING, end 5/8 id	2
18	563923	KIT, sightglass, gauge	1				
18a		SIGHTGLASS, level	1				
18b		GASKET, level sight glass	1				
18c		NUT, pal self thd	3				
22	556929	LABEL, cw ccw rotn	1				
23	562586	BEARING, 5/8" ID 40:1 (models 24A485, 24A486, 24A489, 24A490,) 60:1 (models 24A487, 24A488, 24A491, 24A492)	1				
		40:1 (models 24A493, 24A494, 24A497, 24A498,) 60:1 (models 24A495, 24A496, 24A499, 24A501)	2				
		60:1 (models 24A502, 24A503, 24A504, 24A505)	4				
24	560364	SHAFT, drv f/r rot	1				
25	555328	SCREW, set cp 5/16-18 x .25	1				
26	555530	SCREW, set 1/4-20 x .187 soc cup	1				
27	555877	GEAR, worm whl 40:1 (models 24A477, 24A478, 24A481, 24A482, 24A485, 24A486, 24A489, 24A490, 24A493, 24A494, 24A497, 24A498)	1				
	555880	GEAR, worm whl 60:1 (models 24A479, 24A480, 24A483, 24A484, 24A487, 24A488, 24A491, 24A492, 24A495, 24A496, 24A499, 24A501, 24A502, 24A503, 24A504, 24A505)	1				

40:1 / 60:1 Side Rotary Drive Models

Model 24A488 Shown



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Bottom Rotary Drive

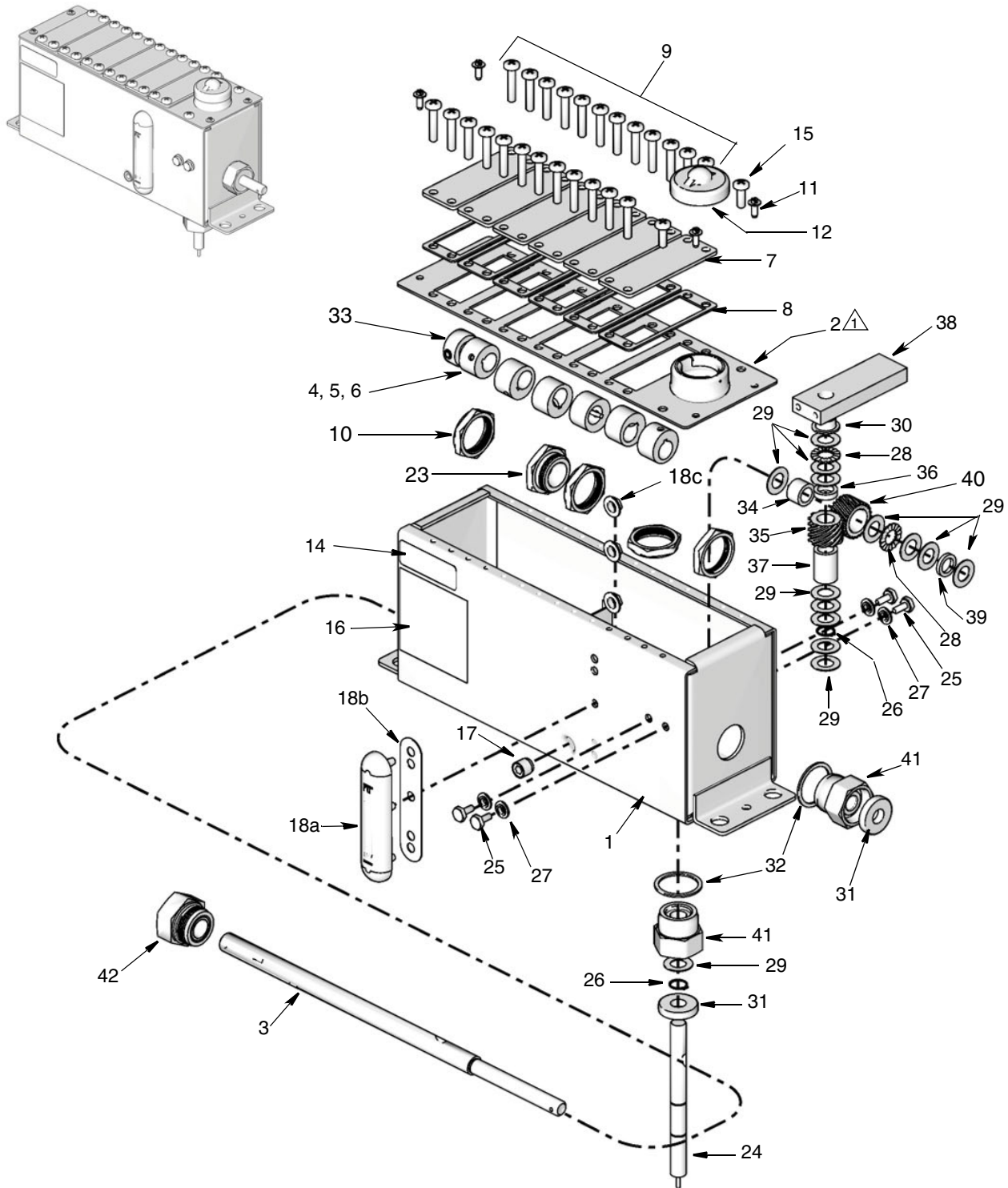
1:1 Model 24A506, 24A508

2.5:1 Models: 24A507, 24A509

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1		RESERVOIR	1		557013	GEAR, helical drv shaft 2.5:1 (mod-	1
2		COVER	1			els 24A507, 24A509)	
3	560374	SHAFT, 3 feed, cam (models	1	36	560077	SPACER, .75od x .51id x .187 lg	1
		24A506, 24A507)		37	560078	SPACER, .75od x .51id x 1.06lg	1
	560375	SHAFT, 6 feed, cam (models	1	38	560147	SUPPORT, drive	1
		24A508, 24A509)		39	560212	SPACER, .510 id x .75 od	1
4	560288	CAM, pump (models 24A506,	3	40	561347	GEAR, helical camshaft 1:1 (mod-	1
		24A507)				els 24A506, 24A508)	
		(models 24A508, 24A509)	6		560300	GEAR, helical camshaft 2.5:1	1
5	555377	KEY, #3 USA 404 woodruff (models	4			(models 24A507, 24A509)	
		24A506, 24A507)	7	41	562590	BEARING, assy 1 / id short	2
		(models 24A508, 24A509)		42	562977	BEARING, end 5/8 id	1
6	555326	SCREW, set cp 1/4-20 x .25 (mod-	3				
		els 24A506, 24A507)	6				
		(models 24A508, 24A509)					
7	555899	PLATE, blank unit (models 24A506,	3				
		24A507)	6				
		(models 24A508, 24A509)					
8	555947	GASKET, pumping unit (models	3				
		24A506, 24A507)	6				
		(models 24A508, 24A509)					
9	555304	SCREW, 1/4-20 x 1.25 zn (models	12				
		24A506, 24A507)	24				
		(models 24A508, 24A509)					
10	556376	NUT, lock (model 24A506, 24A507)	3				
		(model 24A508, 24A509)	4				
11	555355	SCREW, thf hh st 10-32 x .50 zn	4				
12	15U116	CAP, filler	1				
14	556872	LABEL, name serial	1				
15	555318	SCREW, thf ph st 1/4-20 x .75	2				
16	15R634	LABEL, logo, "G" 3" x 3"	1				
17	556000	PLUG, pipe 1/4 nptf hex drive	1				
18	563923	KIT, sightglass, gauge	1				
18a		SIGHTGLASS, level	1				
18b		GASKET, level sight glass	1				
18c		NUT, pal self thd	3				
22	556927	LABEL, cw rotn	1				
23	562586	BEARING, 5/8" ID (model 24A508,	1				
		24A509)					
24	560362	SHAFT, drv bot rot 2.50 ext	1				
25	555357	SCREW, hh st 1/4-20x.500 zn	4				
26	555549	RING, retainer -50 basic ext	2				
27	555735	SEAL, wshr 4-20 thd	4				
28	555904	BEARING, thr roller	2				
29	555905	BEARING, thr race	14				
30	556355	BEARING, flng	1				
31	556578	SEAL, lip .50 id 1.12 od .25 w	2				
32	556751	GASKET, end brg	2				
33	556782	COLLAR, lock	1				
34	556794	ROLLER, clutch	1				
35	558839	GEAR, helical drv shaft 1:1	1				
		(models 24A506, 24A508)					

1:1 / 2.5:1 Bottom Rotary Drive Models

Model 24A509 Shown



ti12848a

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Notes

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