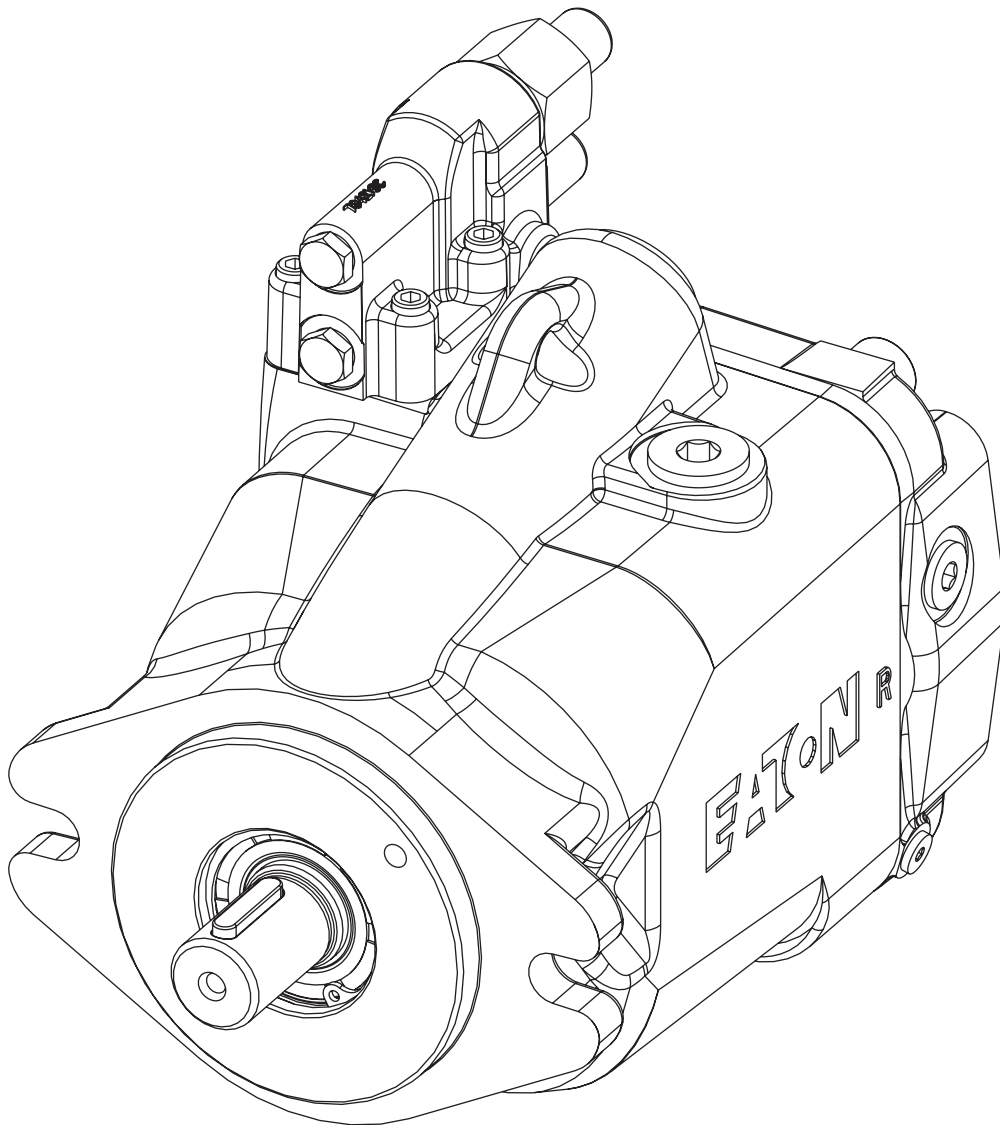




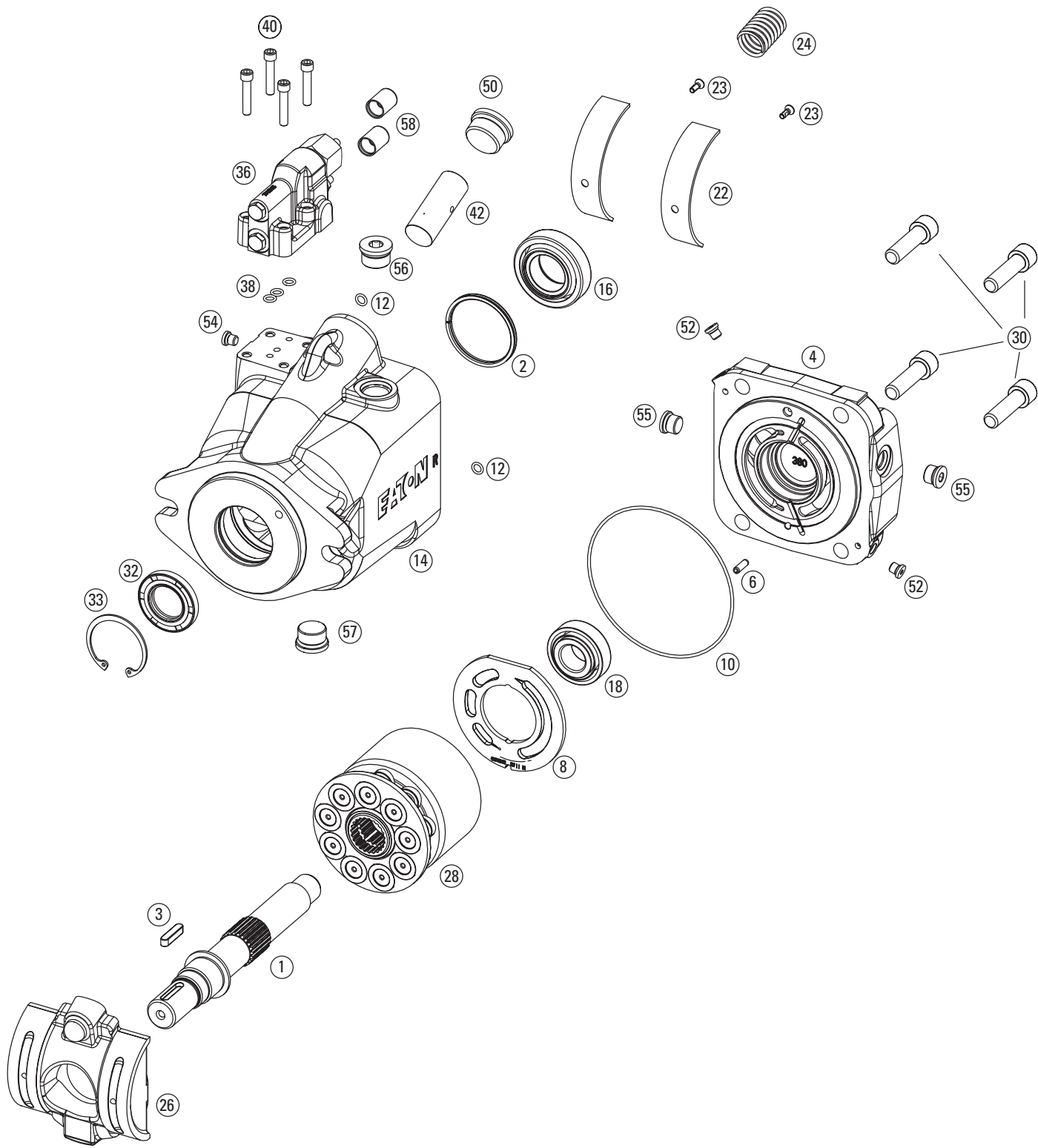
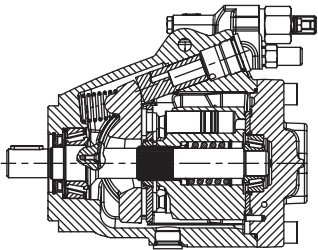
# Hydraulics

## 420 Mobile Piston Pump Service Parts Manual

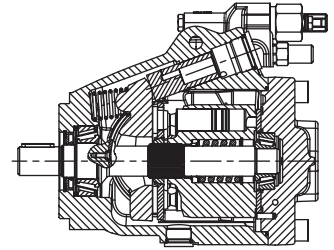
ADU041, ADU049, ADU062



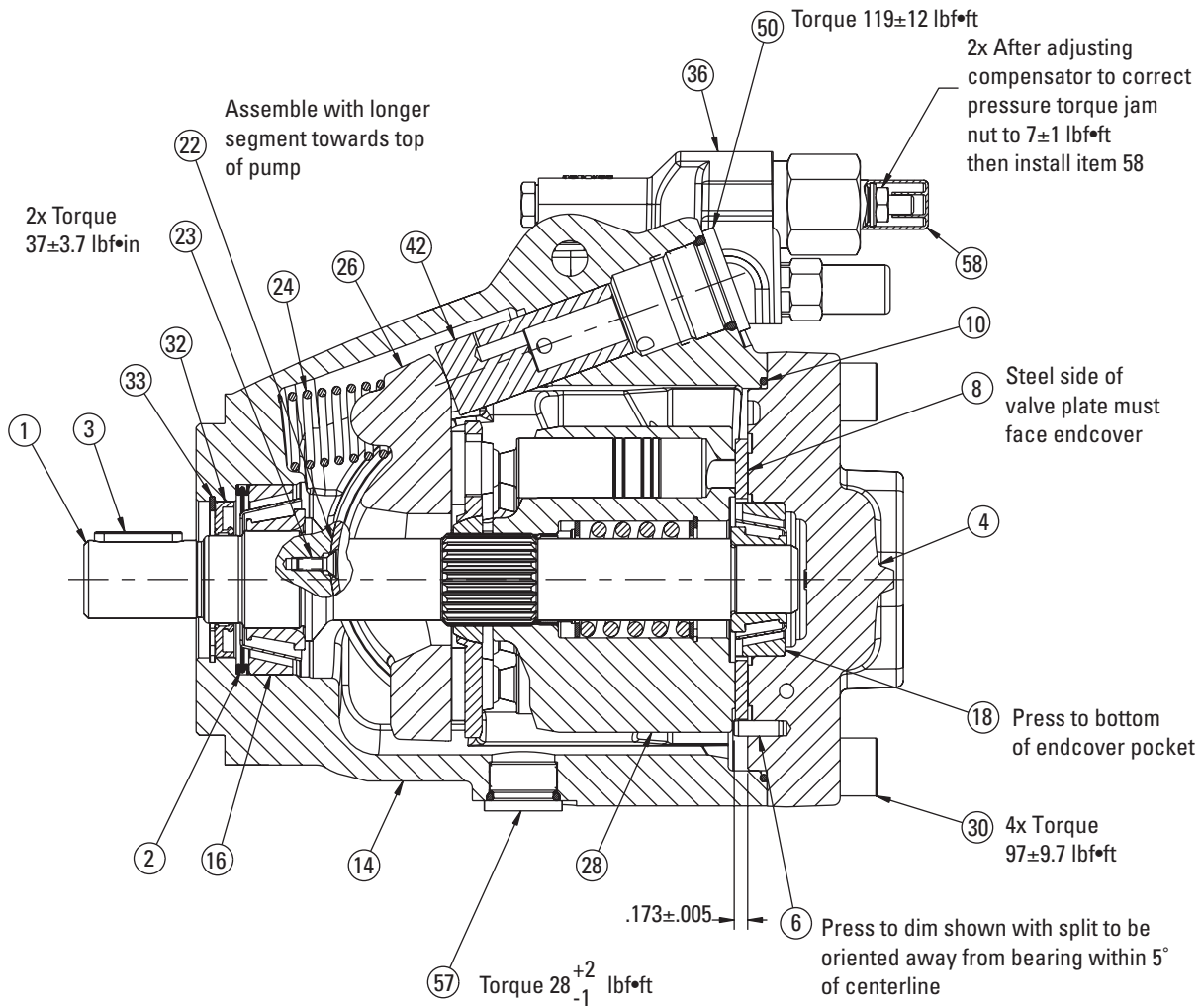
Exploded  
Assembly 420  
Series Pumps



# Typical Cross Section

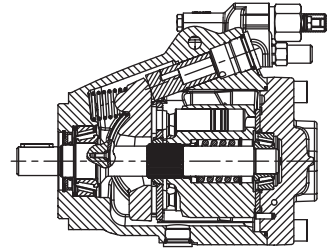


## Part item number/torque values

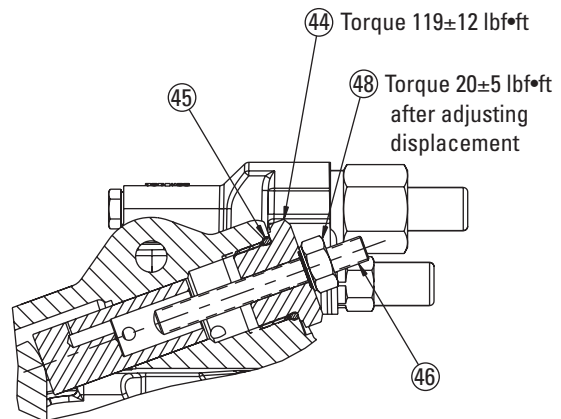
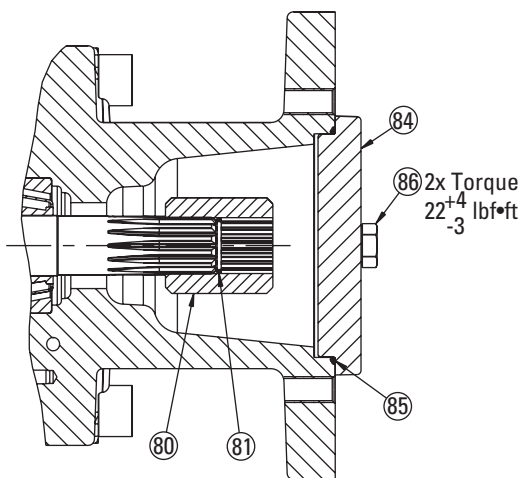
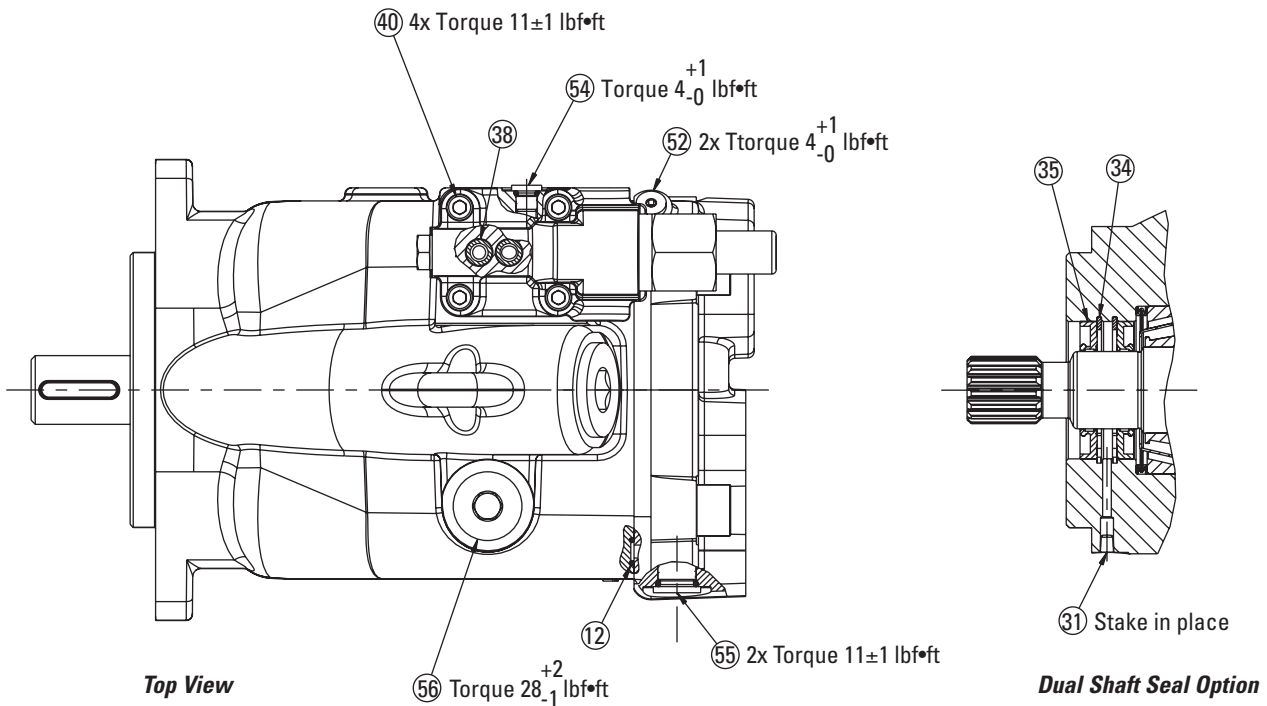


**Side View**

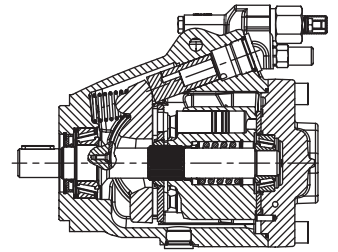
# Typical Cross Section



## Part item number/torque values (cont.)



# Part Identification - 420 Series Pumps

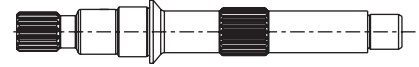


ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	See Table 1	1	SHAFT, DRIVE
2	4997176-001	1	RING, CRUSH/BEARING SHIM KIT 9900194-008
3	See Table 1	1	KEY, DRIVESHAFT
4	See Table 4	1	ENDCOVER
6	16026-610	1	ROLL PIN (VALVE PLATE)
8	See Table 8	1	PLATE, VALVE
10	16015-58-90	1	O-RING (END COVER PILOT) $\Delta$
12	16003-405-90	2	O-RING (END COVER/HOUSING) $\Delta$
14	See Table 14	1	HOUSING
16	4994698-001	1	BEARING ASSY, SHAFT (FRONT)
18	4994699-001	1	BEARING ASSY, SHAFT (REAR)
22	4993209-002	2	BEARING, SWASHPLATE
23	4993411-050	2	SCREW, CAP, SOCKET, FLAT, CSK (SWASH BEARING)
24	4993194-001	1	SPRING, BIAS
26	4997172-001	1	SWASHPLATE
28	See Table 28	1	ROTATING GROUP S/A
30	16147-816	4	SCREW, CAP (HOUSING/ENDCOVER)
31	882993	1	VFO DRAIN HOLE FILTER (DOUBLE SHAFT SEAL)
32	See Table 32	1	SEAL, SHAFT $\Delta$
33	16077-32	1	RING, RETAINING, INTERNAL (SHAFT SEAL) $\Delta$
34	16077-32	1	RING, RETAINING, INTERNAL (DOUBLE SHAFT SEAL)
35	See Table 32	1	SEAL, SHAFT (DOUBLE SHAFT SEAL)
36	See Table 36	1	COMPENSATOR KIT
38	16003-405-90	3	O-RING (COMPENSATOR/HOUSING) $\Delta$
39	16003-405-90	3	O-RING (SECONDARY COMPENSATOR/HOUSING) $\Delta$
40	See Table 40	4	SCREW, CAP (COMPENSATOR MOUNTING)
42	4998393-001	1	PISTON, CONTROL
44	4993570-001	1	PLUG, ADJUSTABLE VOLUME STOP $\blacksquare$
45	16133-14	1	O-RING (ADJUSTABLE VOLUME STOP) $\blacksquare$ $\Delta$
46	4993571-325	1	SCREW, SET (ADJUSTABLE VOLUME STOP) $\blacksquare$
48	692867	1	692855 – NUT, SEALING (ADJUSTABLE VOLUME STOP) $\blacksquare$
50	16103-314	1	PLUG ASSY (FIXED VOLUME STOP)
52	16103-302	2	PLUG (ENDCOVER)
54	16103-302	1	PLUG (HOUSING)
55	See Table 55	2	PLUG (DIAGNOSTIC PORTS)
56	See Table 55	1	PLUG (TOP CASE DRAIN PORT)
57	See Table 55	1	PLUG (BOTTOM CASE DRAIN PORT)
58	70422-618	1	COVER, TAMPER PROOF (COMPENSATOR ADJ. SCREWS)
80	See Table 80	1	COUPLER
81	16008-000	1	COUPLER LOCK RING
84	70142-600	1	COVER PLATE, AUX. MOUNT
85	16007-14	1	O-RING, COVER PLATE
86	16032-606	2	SCREW, CAP (COVER PLATE)

$\blacksquare$  Standard Seal Kit: 9900194-003 (Polyacrylate Shaft Seal)/ Optional Seal Kit: 9900194-007 (Fluorocarbon Shaft Seal)

$\Delta$  Adjustable Maximum Displacement Volume Stop Kit: 9900194-004

# Drive Shaft Table



## Item 1 - Drive Shaft Table

PART NUMBER	DESCRIPTION	CODE POSITION			ITEM 3 KEY
		8,9	24,25	26	
4997174-005	.875 DIA. W/KEY, 1.62 EXT	01	00	0,1,2	24500-619
4997177-013	.875 DIA. W/KEY, 1.62 EXT	01	AA	0,1,2	24500-619
4997177-014	.875 DIA. W/KEY, 1.62 EXT	01	AB	0,1,2	24500-619
4997177-015	.875 DIA. W/KEY, 1.62 EXT	01	AC	0,1,2	24500-619
4997174-004	1.00 DIA W/KEY, 1.81 EXT	02	00	0,1,2	16246-516
4997177-007	1.00 DIA W/KEY, 1.81 EXT	02	AA	0,1,2	16246-516
4997177-008	1.00 DIA W/KEY, 1.81 EXT	02	AB	0,1,2	16246-516
4997177-009	1.00 DIA W/KEY, 1.81 EXT	02	AC	0,1,2	16246-516
4997174-002	SAE J744- 25-3 TAPER	04	00	0,1,2	20100-25
4997177-002	SAE J744- 25-3 TAPER	04	AA	0,1,2	20100-25
4997177-003	SAE J744- 25-3 TAPER	04	AB	0,1,2	20100-25
4997177-004	SAE J744- 25-3 TAPER	04	AC	0,1,2	20100-25
4995082-003	13 TOOTH, 1.62 EXT (DUAL SEAL)	05	00	3	-
4997174-003	13 TOOTH 16/32, 1.62 EXT	05	00	0,1,2	-
4997177-010	13 TOOTH	05	AA	0,1,2	-
4997177-011	13 TOOTH 16/32, 1.62 EXT	05	AB	0,1,2	-
4997177-012	13 TOOTH 16/32, 1.62 EXT	05	AC	0,1,2	-
4995082-001	15 TOOTH, 1.81 EXT (DUAL SEAL)	08	00	3	-
4997174-001	15 TOOTH 16/32, 1.81 EXT	08	00	0,1,2	-
4997177-001	15 TOOTH 16/32, 1.81 EXT	08	AA	0,1,2	-
4997177-005	15 TOOTH 16/32, 1.81 EXT	08	AB	0,1,2	-
4997177-006	15 TOOTH 16/32, 1.81 EXT	08	AC	0,1,2	-
4997596-001	15 TOOTH, 1.81 EXT (DUAL SEAL)	08	AC	3	-
4997174-006	1.00 TAPER W/.375-24 THD	30	00	0,1,2	-
4997177-016	1.00 TAPER W/.375-24 THD	30	AA	0,1,2	-
4997177-017	1.00 TAPER W/.375-24 THD	30	AB	0,1,2	-
4997177-018	1.00 TAPER W/.375-24 THD	30	AC	0,1,2	-
4997174-007	1.00 DIA. W/KEY & .375 THD	31	00	0,1,2	16246-516
4998481-001	14 TOOTH 12/24, 2.18 EXT.	32	00	3	-

# 420 Series Eaton Pumps

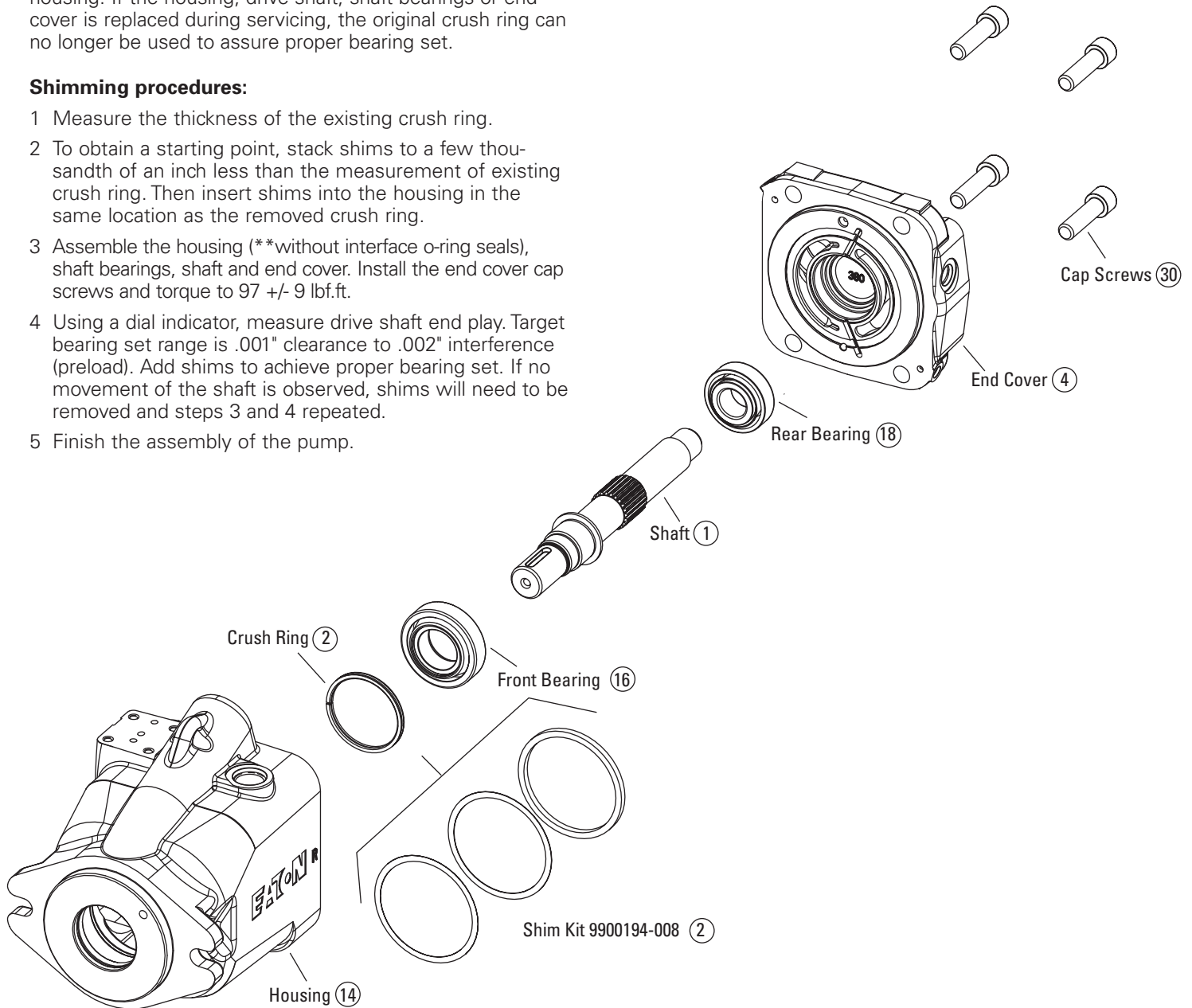
## Kit 9900194-008 Shimming Process Installation Information

### Introduction

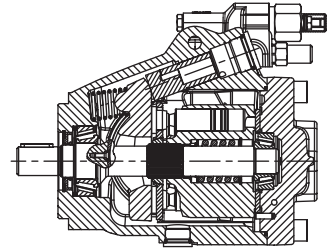
This shim kit is to replace the crush ring within the pump housing. If the housing, drive shaft, shaft bearings or end cover is replaced during servicing, the original crush ring can no longer be used to assure proper bearing set.

### Shimming procedures:

- 1 Measure the thickness of the existing crush ring.
- 2 To obtain a starting point, stack shims to a few thousandth of an inch less than the measurement of existing crush ring. Then insert shims into the housing in the same location as the removed crush ring.
- 3 Assemble the housing (\*\*without interface o-ring seals), shaft bearings, shaft and end cover. Install the end cover cap screws and torque to 97 +/- 9 lbf.ft.
- 4 Using a dial indicator, measure drive shaft end play. Target bearing set range is .001" clearance to .002" interference (preload). Add shims to achieve proper bearing set. If no movement of the shaft is observed, shims will need to be removed and steps 3 and 4 repeated.
- 5 Finish the assembly of the pump.



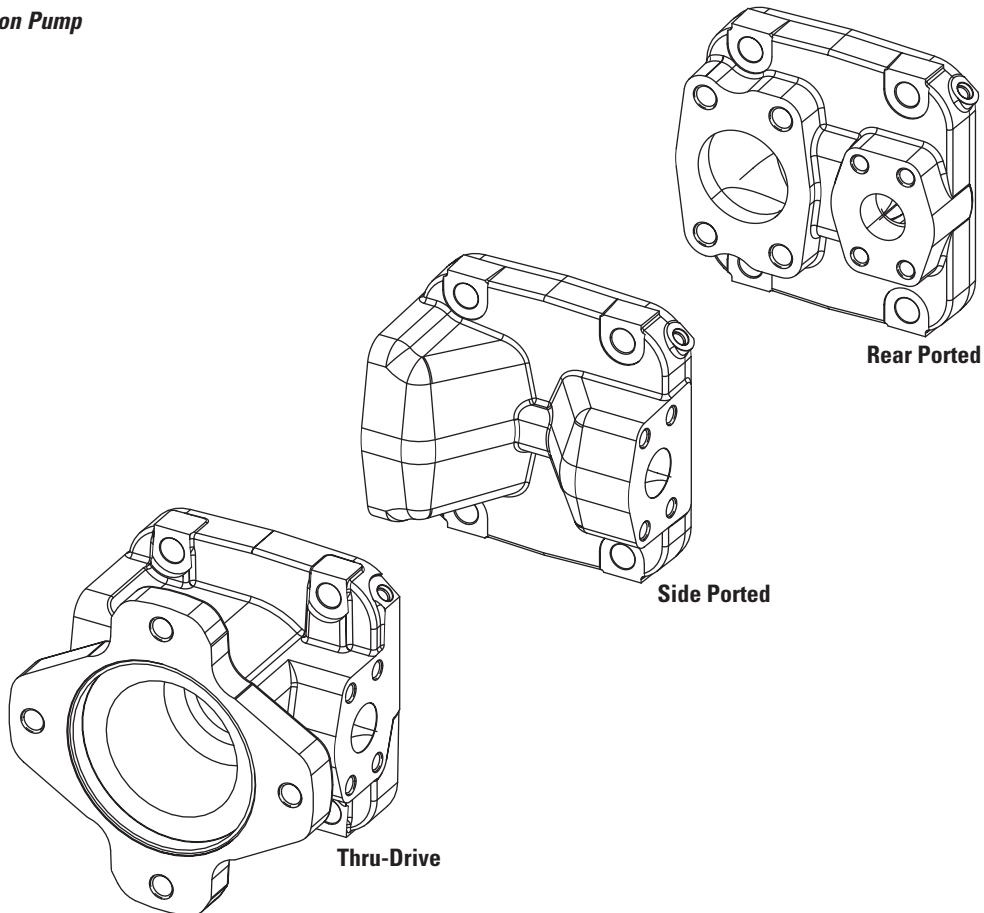
# End Cover Table



Item 4 - End Cover Table

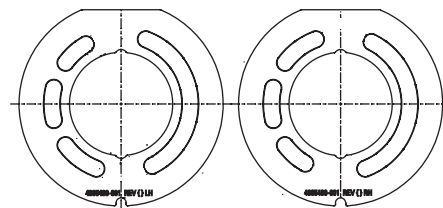
KIT NUMBER	PART NUMBER	DESCRIPTION	CODE POSITION			
			4,5,6	10,11	13	24,25
9900267-001	4993702-001	ENDCOVER, THRU-DRIVE DUAL B, CODE 61, 62CC	062	AB	0	AC
9900267-002	4993702-002	ENDCOVER, THRU-DRIVE DUAL B, CODE 61, METRIC 62CC	062	AD	0	AC
9900267-003	4993704-001	ENDCOVER, THRU-DRIVE DUAL B, CODE 61, 49CC	049	AB	0	AC
9900267-004	4993704-002	ENDCOVER, THRU-DRIVE DUAL B, CODE 61, METRIC 49CC	049	AD	0	AC
9900267-005	4993941-001	ENDCOVER, SIDE PORT, CODE 61, 62CC	062	AB	0	00
9900267-006	4993941-002	ENDCOVER, SIDE PORT, CODE 61, 62CC METRIC	062	AD	0	00
9900267-007	4993943-001	ENDCOVER, SIDE PORT, CODE 61, 49CC	049	AB	3	00
9900267-008	4993943-002	ENDCOVER, SIDE PORT, CODE 61, 49CC METRIC	049	AD	0	00
9900267-009	4994658-001	ENDCOVER, REAR PORT, CODE 61, 49CC	049	AA	0	00
9900267-010	4994658-002	ENDCOVER, REAR PORT, CODE 61, 62CC METRIC	049	AC	0	00
9900267-011	4994660-001	ENDCOVER, REAR PORT, CODE 61, 62CC	062	AA	0	00
9900267-012	4994660-002	ENDCOVER, REAR PORT, CODE 61, 62CC METRIC	062	AC	0	00
9900267-013	4995208-001	ENDCOVER, REAR PORT, SAE THREADED, 41CC	041	AF	0	00
9900267-014	4995212-001	ENDCOVER, SIDE PORT, SAE THREADED, 41CC	041	AF	0	00
9900267-015	4996582-001	ENDCOVER, THRU-DRIVE DUAL A, SAE THREADED, 41CC	041	AF	0	AA
9900267-016	4996582-002	ENDCOVER, THRU-DRIVE DUAL B, SAE THREADED, 41CC	041	AF	0	AC

**420 Series Mobile Piston Pump  
End Cover Views**



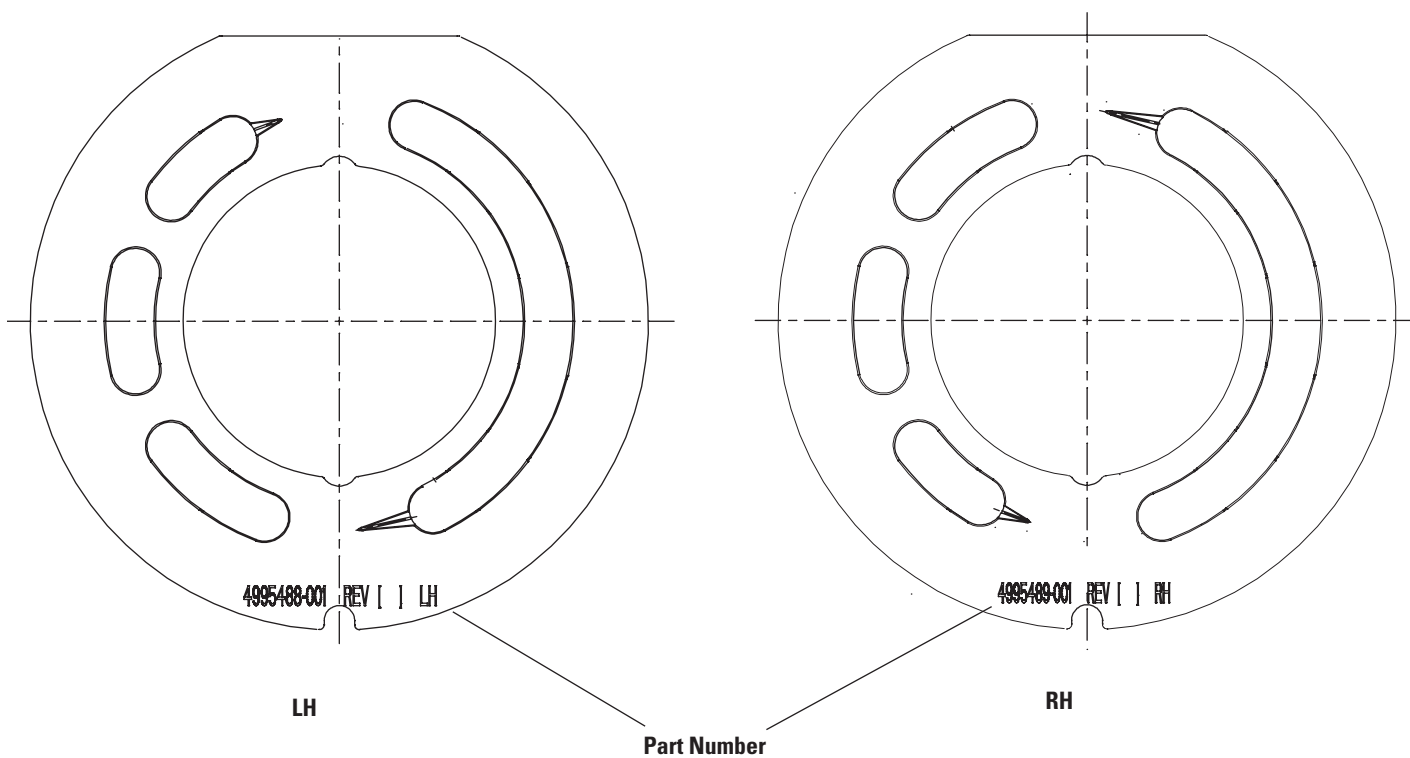


# Timing Plate Table



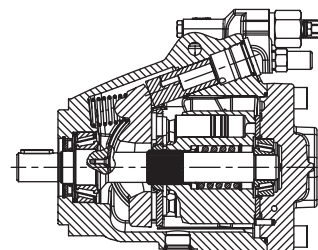
## Item 8 - Timing Plate Table

PART NUMBER	DESCRIPTION	CODE POSITION	
		4,5,6	7
4995488-003	PLATE, VALVE 49cc (LH, 3.00)	049	L
4995489-003	PLATE, VALVE 49cc (RH, 3.00)	049	R
4995491-001	PLATE, VALVE 62cc (LH, 3.80)	062	L
4995492-001	PLATE, VALVE 62cc (RH, 3.80)	062	R
4997402-003	PLATE, VALVE 41cc (LH, 2.50)	041	L
4997403-003	PLATE, VALVE 41cc (RH, 2.50)	041	R



**Timing Plate Identification**

# Housing Rotating Groups Shaft Seals



## Item 14 - Housing Table

PART NUMBER	DESCRIPTION	CODE POSITION			
		8,9	12	26	27,28
4994972-001	HOUSING (DOUBLE SEAL)	not 32	1,2	3	not AB, AC
4994972-002	HOUSING (DOUBLE SEAL, METRIC)	not 32	3,4	3	not AB, AC
4994972-003	HOUSING (DOUBLE SEAL, SWASH SENSOR)	not 32	1,2	3	AB
4997173-001	HOUSING	not 32	1,2	not 3	not AB, AC
4997173-002	HOUSING (METRIC)	not 32	3,4	not 3	not AB, AC
4997173-003	HOUSING (SWASH SENSOR)	not 32	1,2	not 3	AB
4998580-001	HOUSING (C MOUNT, DOUBLE SEAL)	32	1,2	3	00

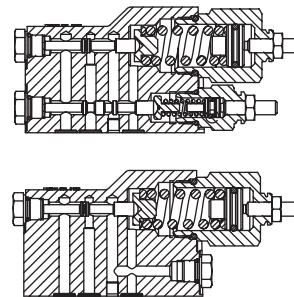
## Item 28 - Rotating Group Table

PART NUMBER	DESCRIPTION	CODE POSITION	
		4,5,6	27,28
4993463-001	ROTATING GROUP S/A 49cc (3.00 in3)	049	not AC
4993556-001	ROTATING GROUP S/A 41cc (2.50 in3)	041	not AC
4993735-001	ROTATING GROUP S/A 62cc (3.80 in3)	062	not AC

## Item 32 - Shaft Seal

PART NUMBER	DESCRIPTION	CODE POSITION	
		8,9	26
16253-218	SEAL, SHAFT, FLUOROCARBON, SAE B	Not 32	2 or 3
4993012-001	SEAL, SHAFT, POLYACRYLATE, SAE B	Not 32	1
4998834-001	SEAL, SHAFT, FLUOROCARBON, SAE C SHAFT	32	3

# Compensator Kits - Factory Set



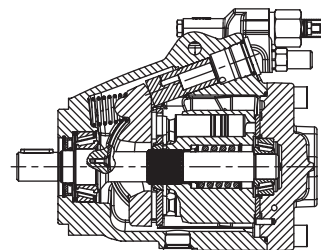
## Item 36 - Compensator (Pump Controls)

KIT NUMBER	CONTROL CODE 14	CODE 15,16	PRESSURE LIMIT SETTING	CODE 17,18	FLOW SETTING	CODE 21,22
9900250-003	A	27	199.9-206.8 bar [2900-3000 lbf/in <sup>2</sup> ]	25	23.44-26.89 bar [340-390 lbf/in <sup>2</sup> ]	00
9900250-013	A	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	10	9.65-12.41 bar [140-180 lbf/in <sup>2</sup> ]	0A
9900250-022 *	A	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	00
9900250-026 *	A	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	0A
9900250-001	A	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	23	23.10-25.17 bar [335-365 lbf/in <sup>2</sup> ]	00
9900250-032	A	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	24	22.75-25.51 bar [330-370 lbf/in <sup>2</sup> ]	00
9900250-017	A	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	30	28.27-31.72 bar [410-460 lbf/in <sup>2</sup> ]	00
9900250-002	A	32	226.5-233.4 bar [3285-3385 lbf/in <sup>2</sup> ]	16	13.79-16.55 bar [200-240 lbf/in <sup>2</sup> ]	00
9900250-028	A	35	241.3-248.2 bar [3500-3600 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	00
9900250-014	A	36	246.5-253.4 bar [3575-3675 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	00
9900250-031	A	36	246.5-253.4 bar [3575-3675 lbf/in <sup>2</sup> ]	22	20.68-23.44 bar [300-340 lbf/in <sup>2</sup> ]	0A
9900250-005	A	40	262.0-268.9 bar [3800-3900 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	0A
9900250-027	A	40	262.0-268.9 bar [3800-3900 lbf/in <sup>2</sup> ]	10	9.65-12.41 bar [140-180 lbf/in <sup>2</sup> ]	00
9900250-007	A	42	272.4-279.3 bar [3950-4050 lbf/in <sup>2</sup> ]	10	9.65-12.41 bar [140-180 lbf/in <sup>2</sup> ]	00
9900250-006	A	42	272.4-279.3 bar [3950-4050 lbf/in <sup>2</sup> ]	10	9.65-12.41 bar [140-180 lbf/in <sup>2</sup> ]	0A
9900250-010 ●	A	43	275.8-282.7 bar [4000-4100 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	00
9900250-015 ●	A	43	275.8-282.7 bar [4000-4100 lbf/in <sup>2</sup> ]	14	12.41-15.17 bar [180-220 lbf/in <sup>2</sup> ]	0A
9900250-008	A	43	275.8-282.7 bar [4000-4100 lbf/in <sup>2</sup> ]	16	13.79-16.55 bar [200-240 lbf/in <sup>2</sup> ]	00
9900250-018	A	43	275.8-282.7 bar [4000-4100 lbf/in <sup>2</sup> ]	24	22.75-25.51 bar [330-370 lbf/in <sup>2</sup> ]	00
9900250-012	B	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	24	22.75-25.51 bar [330-370 lbf/in <sup>2</sup> ]	00
9900250-019	B	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	28	26.20-28.96 bar [380-420 lbf/in <sup>2</sup> ]	0A
9900250-011	B	43	275.8-282.7 bar [4000-4100 lbf/in <sup>2</sup> ]	24	22.75-25.51 bar [330-370 lbf/in <sup>2</sup> ]	00
9900250-021	C	12	137.9-144.8 bar [2000-2100 lbf/in <sup>2</sup> ]	00	NO FLOW COMP. SETTING	00
9900250-023	C	19	168.9-175.8 bar [2450-2550 lbf/in <sup>2</sup> ]	00	NO FLOW COMP. SETTING	00
9900250-029	C	21	179.3-186.2 bar [2600-2700 lbf/in <sup>2</sup> ]	00	NO FLOW COMP. SETTING	00
9900250-016 □	C	28	206.8-213.7 bar [3000-3100 lbf/in <sup>2</sup> ]	00	NO FLOW COMP. SETTING	00
9900250-009 ▲	C	43	275.8-282.7 bar [4000-4100 lbf/in <sup>2</sup> ]	00	NO FLOW COMP. SETTING	00
9900250-004	C	45	306.8-313.7 bar [4450-4550 lbf/in <sup>2</sup> ]	00	NO FLOW COMP. SETTING	00

### Distributor Service Kits

- \* Low pressure range, pressure and flow compensator, SAE Ports
- High pressure range, pressure and flow compensator, SAE Ports
- Low pressure range, pressure compensator
- ▲ High pressure range, pressure compensator

# Mounting Screws Plug Assemblies Couplings



## Item 40 - Compensator Mounting Screw

PART NUMBER	DESCRIPTION	CODE POSITION		
		14	19,20	21,22
16148-412	SCREW, CAP (COMPENSATOR MOUNTING)	A,B,C	00	00,0A
16148-434	SCREW, CAP (PROP. COMP. MOUNTING)	D	00	0B,0C

## Items 55, 56, 57 - Plug Subassemblies

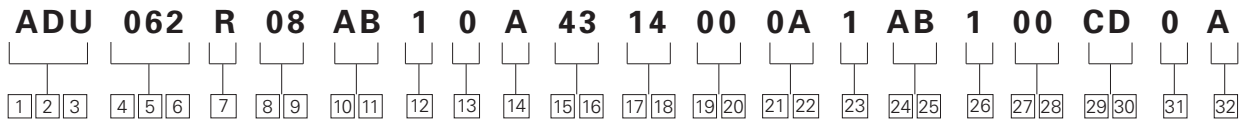
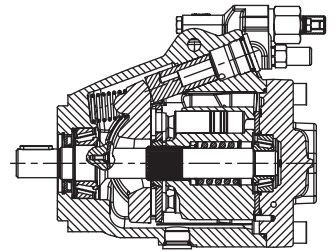
PART NUMBER	DESCRIPTION	CODE POSITION			
		10,11	12	13	24,25
16103-304	PLUG (DIAGNOSTIC PORTS) .4375-20 THD	Side	1,2	3	N/A
16103-306	PLUG (DIAGNOSTIC PORTS) .5625-18 THD	Rear	1,2	1	-
9237-002	PLUG (DIAGNOSTIC PORTS) M12 x 1.5 THD	Side	3,4	4	N/A
9237-003	PLUG (DIAGNOSTIC PORTS) M14 x 1.5 THD	Rear	3,4	2	-
16103-310	PLUG (TOP CASE DRAIN PORT) .875-14 THD	-	2	1,3	-
9237-005	PLUG (TOP CASE DRAIN PORT) M22 x 1.5 THD	-	4	2,4	-
16103-310	PLUG (BOTTOM CASE DRAIN PORT) .875-14 THD	-	1	1,3	-
9237-005	PLUG (BOTTOM CASE DRAIN PORT) M22 x 1.5 THD	-	3	2,4	-

## Item 80 - Thrudrive Couplings

PART NUMBER	DESCRIPTION	CODE POSITION
		24,25
70111-687	COUPLER, 11 TOOTH (SAE A)	AB
70411-638	COUPLER S/A, 13 TOOTH (SAE B)	AC

# Model Codes

420 Mobile Piston Pump



**1 2 3 Pump Series**

**ADU** – 420 Series Open Circuit Piston Pump

**4 5 6 Pump Displacement**

**041** – 41.0 cm<sup>3</sup>/r [2.50 in<sup>3</sup>/r]  
**049** – 49.2 cm<sup>3</sup>/r [3.00 in<sup>3</sup>/r]  
**062** – 62.3 cm<sup>3</sup>/r [3.80 in<sup>3</sup>/r]

**7 Input Shaft Rotation**

**R** – Right Hand (Clockwise)  
 Right Side Suction Port;  
 Left Side Pressure Port  
**L** – Left Hand  
 (Counter-clockwise)  
 Left Side Suction Port;  
 Right Side Pressure Port

**8 9 Front Mount and Shaft**

**01** – 2 Bolt B (SAE J744-101-2) with 22.2mm (0.88in.) Diameter Straight Key Shaft (SAE J744-22-1) (Key Included)  
**02** – 2 Bolt B (SAE J744-101-2) with 25.4mm (1.00in.) Diameter Straight Key Shaft (SAE J744-25-1) (Key Included)  
**04** – 2 Bolt B (SAE J744-101-2) with 25.4mm (1.00in.) Diameter Tapered Key Shaft (SAE J744-25-3) (Key Included), .750-16 UNF-2B Thread, Shaft Extension 69.8mm (2.75in.)  
**05** – 2 Bolt B (SAE J744-101-2) with 13 Tooth 16/32 Spline (ANSI B92. 1-1996 MOD.), Shaft Extension 41.1mm (1.62in.)

**08** – 2 Bolt B (SAE J744-101-2) with 15 Tooth 16/32 Spline (ANSI B92. 1-1996 MOD.), Shaft Extension 46mm (1.81in.)  
**30** – 2 Bolt B (SAE J744-101-2) with .125:1 25.4mm (1.00in.) Diameter Tapered Shaft, 6.38mm (.251in.) Wide x 19.8mm (0.78in.) Long Keyway, .375-24 UNF-2B Thread; 35.1mm (1.38in.) Shaft Extension  
**31** – 2 Bolt B (SAE J744-101-2) with 25.4 [1.00] Diameter Straight Key Shaft w/Internal .375-24 UNF-2B Thread

**10 11 Main Ports Size & Location**

**AA** – Rear Ports; Suction - 2.00 SAE J518 4-Bolt Split Flange Port Standard Pressure Series (Code 61); Pressure - 1.00 SAE J518 4-Bolt Split Flange Port Standard Pressure Series (Code 61)  
**AB** – Side Ports, Suction - 2.00 SAE J518 4-Bolt Split Flange Port Standard Pressure Series (Code 61); Pressure - 1.00 SAE J518 4-Bolt Split Flange Port Standard Pressure Series (Code 61)  
**AC** – Rear Ports, Suction - 2.00 4-Bolt Split Flange Port Standard Pressure Series (Code 61) with M12 x 1.75 Thread; Pressure - 1.00 4-Bolt Split Flange Port Standard Pressure Series (Code 61) with M10 x 1.5 Thread

**AD** – Side Ports, Suction - 2.00 4-Bolt Split Flange Port Standard Pressure Series (Code 61) with M12 x 1.75 Thread; Pressure - 1.00 4-Bolt Split Flange Port Standard Pressure Series (Code 61) with M10 x 1.5 Thread  
**AE** – Rear Ports, Suction - 1.875-12 UN-2B SAE O-Ring Port; Pressure - 1.3125-12 UN-2B SAE O-Ring Port (ADU041 and ADU049 Only)  
**AF** – Side Ports, Suction - 1.875-12 UN-2B SAE O-Ring Port; Pressure - 1.3125-12 UN-2B SAE O-Ring Port (ADU041 and ADU049 Only)  
**AG** – Rear Ports, Suction - M48 x 2 Metric O-Ring Port; Pressure - M33 x 2 Metric O-Ring Port (ADU041 and ADU049 Only)  
**AH** – Side Ports, Suction - M48 x 2 Metric O-Ring Port; Pressure - M33 x 2 Metric O-Ring Port (ADU041 and ADU049 Only)  
**AK** – Rear Ports, Suction - 2.00 SAE J518 4-Bolt Split Flange Port Standard Pressure Series (Code 61); Pressure - 1.3125-12 UN-2B SAE O-Ring Port (ADU062 Only)

**12 Case Drain Ports**

**1** – .875-14 UNF-2B O-Ring Port - Top  
**2** – .875-14 UNF-2B O-Ring Port - Bottom  
**3** – M22 x 1.5 O-Ring Port - Top  
**4** – M22 x 1.5 O-Ring Port - Bottom

**13 Diagnostic Pressure Ports-**

**0** – No Diagnostic Pressure Ports  
**1** – .5625-18 UNF-2B SAE O-Ring Ports - Suction and Pressure Ports - Plugged (Rear Ports Only)  
**2** – M14 x 1.5 Metric O-Ring Ports - Suction and Pressure Ports - Plugged (Rear Ports Only)  
**3** – .4375-20 UNF-2B SAE O-Ring Ports - Suction and Pressure Ports - Plugged (Side Ports Only)  
**4** – M12 x 1.5 Metric O-Ring Ports - Suction and Pressure Ports - Plugged (Side Ports Only)

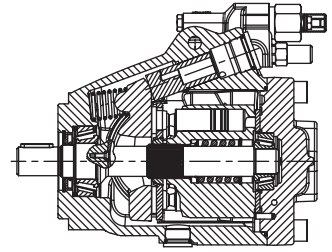
**14 Controller Type**

**A** – Pressure Flow Compensator With .4375-20 SAE O-Ring Load Sense Port  
**B** – Pressure Flow Compensator With M14 x 1.5 Metric O-Ring Load Sense Port  
**C** – Pressure Compensator Only

\*Not available on thru-drive end covers

# Model Codes

420 Mobile Piston Pump



**ADU 062 R 08 AB 1 0 A 43 14 00 0A 1 AB 1 00 CD 0 A**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

**15 16 Pressure Compensator Setting (Tolerance on Setting)**

- 28** – 206.8-213.7 bar [3000-3100 lbf/in<sup>2</sup>]
- 35** – 241.3-248.2 bar [3500-3600 lbf/in<sup>2</sup>]
- 43** – 275.8-282.7 bar [4000-4100 lbf/in<sup>2</sup>]

**17 18 Flow Compensator Setting (Tolerance on Setting)**

- 00** – No Flow Compensator Setting
- 10** – 9.65-12.41 bar [140-180 lbf/in<sup>2</sup>]
- 14** – 12.41-15.17 bar [180-220 lbf/in<sup>2</sup>]
- 20** – 17.24-19.99 bar [250-290 lbf/in<sup>2</sup>]
- 24** – 22.75-25.51 bar [330-370 lbf/in<sup>2</sup>]

**19 20 Secondary Compensator Setting**

- 00** – No Secondary Compensator

**21 22 Control Special Features**

- 00** – No Control Special Features
- 0A** – Bleed Down Orifice

**23 Maximum Displacement Option**

- 1** – Standard Displacement (As Given In Code Title)
- 2** – External Manual Stroke Adjustment

**24 25 Auxiliary (Rear) Mount & Output Shaft**

- 00** – No Auxiliary Mounting Features
- AA** – Dual SAE J744 Flange 82-2 (2 Bolt A); Accepts 9T 16/32 Spline with 31.7 [1.25] Shaft Extension (No Coupler Required)
- AB** – Dual SAE J744 Flange 82-2 (2 Bolt A); Accepts 11T 16/32 Spline with 31.7 [1.25] Shaft Extension (Coupler Included)
- AC** – Dual SAE J744 Flange 101-2 (2 Bolt B); Accepts 13T 16/32 Spline with 41.2 [1.62] Extension (Coupler Included)

**26 Shaft Seal**

- 0** – No Shaft Seal
- 1** – Standard Polyacrylate Shaft Seal
- 2** – Fluorocarbon Rubber Shaft Seal
- 3** – Double, Two-Way Shaft Seal, Fluorocarbon With VHO Filter

**27 28 Pump Special Features**

- 00** – No Special Features
- AA** – Auxiliary Mounting Cover Plate
- AB** – Swash Position Sensor
- AC** – Shaft Speed Sensor

**29 30 Paint**

- 00** – No Paint
- CD** – Blue Per Spec 209-13CD

**31 Identification/Packaging**

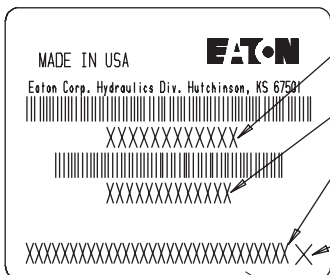
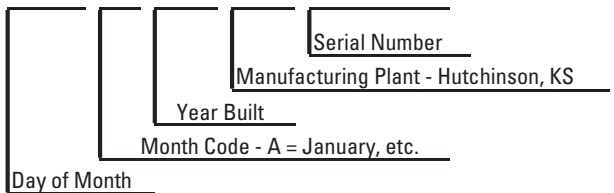
- 0** – Standard Eaton Identification Box Packaging

**32 Design Level**

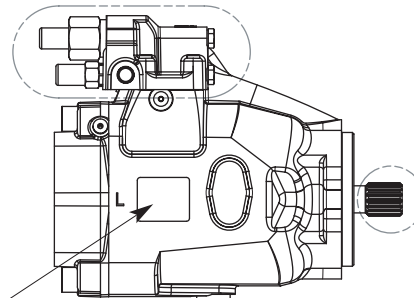
- A** – First Design

SERIAL NUMBER/DATE CODE INTERPRETATION

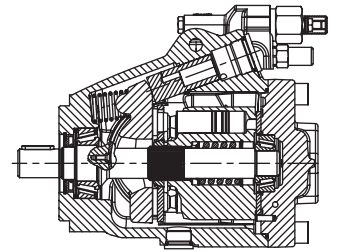
**17 I 03 UF 1010**



- Eaton product number or customer number
- Serial number/date code
- Complete model code or model code up to rotation if requested (no bar code)
- Parts list revision level



# Pump Startup



Make sure the reservoir and circuit are clean and free of dirt and debris prior to filling with hydraulic fluid.

Fill the reservoir with filtered oil to a level sufficient to prevent vortexing at suction connection to pump inlet. It is good practice to clean the system by flushing and filtering using an external slave pump.

Before starting the pump, fill with fluid through one of the ports. This is particularly important if the pump is above the fluid level of the reservoir.

When initially starting the pump, remove all trapped air from the system. This can be accomplished by loosening the pump outlet fittings or connections before starting the pump, or by using an air

bleed valve. All inlet connections must be tight to prevent air leaks.

Once the pump is started, it should prime within a few seconds. If the pump does not prime, check to make sure that there are no air leaks in the inlet line and connections. Also check to make sure that trapped air can escape at the pump outlet.

After the pump is primed, tighten the loose outlet connections, then operate for five to ten minutes (unloaded) to remove all trapped air from the circuit. If reservoir has a sight gage, make sure the fluid is clear—not milky.

Add fluid to the reservoir up to the proper fill level.

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