

Bulletin PM1624-10-M1/USA

## Parker Pumps Parts & Service



Effective: May, 2000 Supersedes: Febuary, 1996

PVP Series Variable Volume Piston Pump Service Bulletin

Model PVP41\*\*\*\* 10 PVP48\*\*\*\* 10

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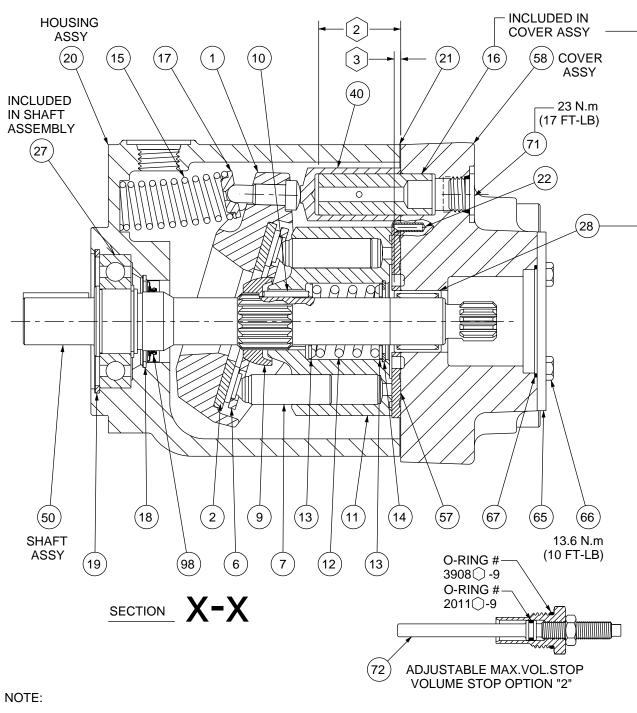
The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

### Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the "Offer of Sale".

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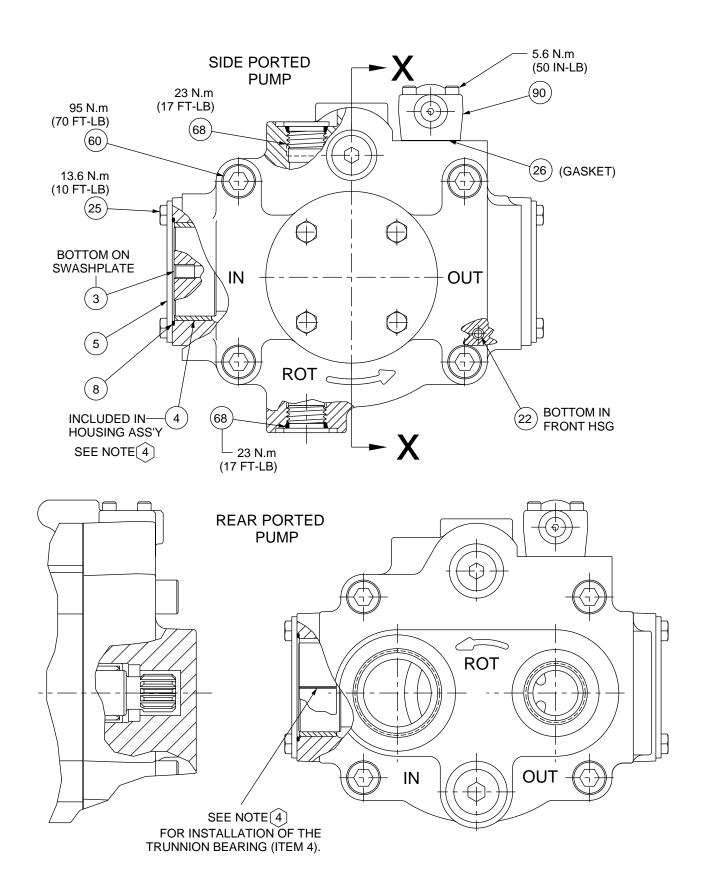


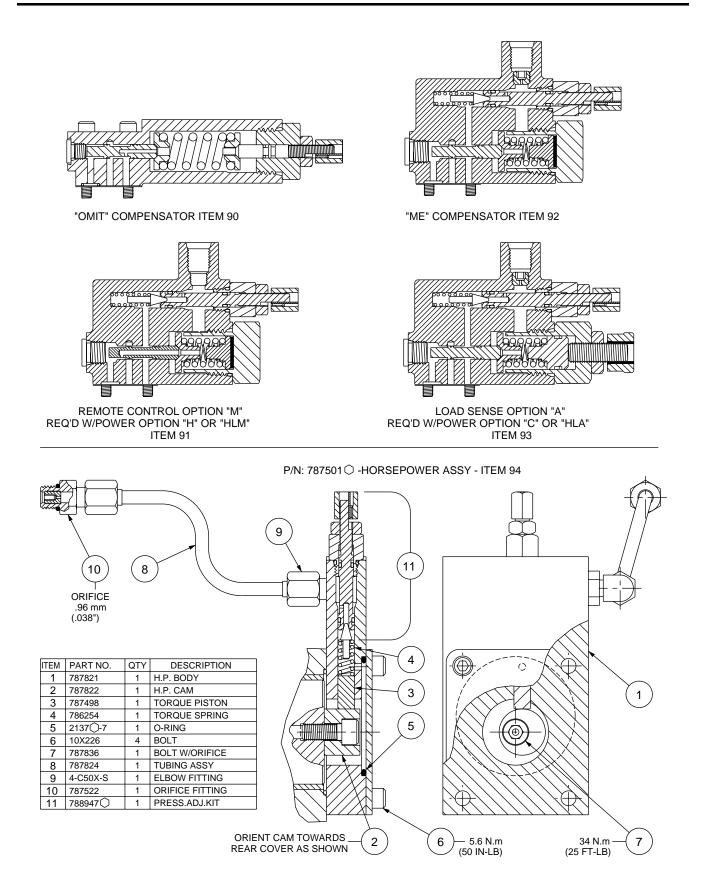
1 PUMP SHOWN IS A RIGHTHAND (CW) ROTATION PUMP. FOR A LEFTHAND (CCW) ROTATION PUMP THE INLET AND OUTLET PORTS WILL BE REVERSED.

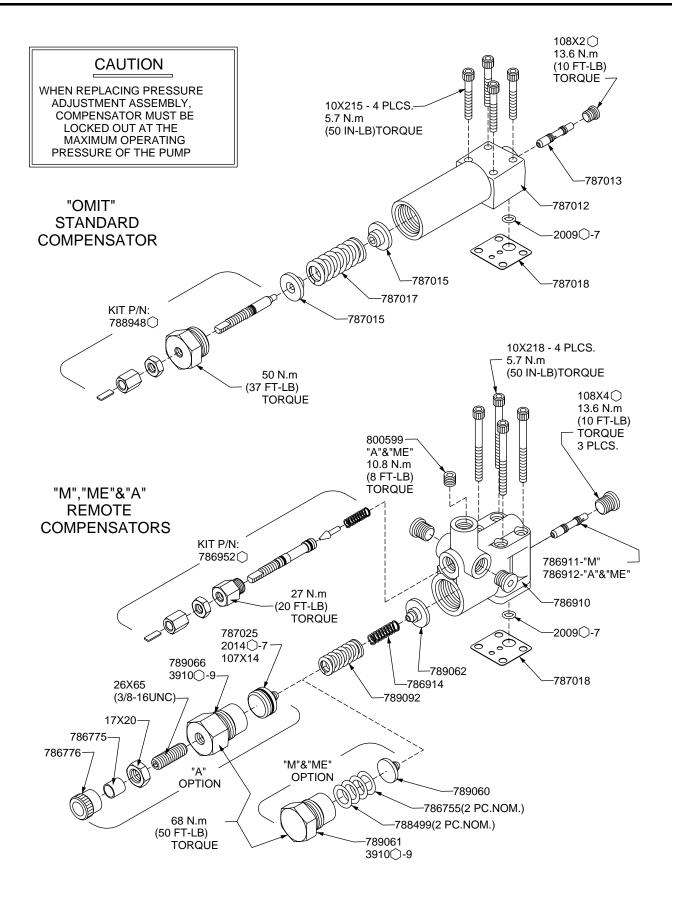
2 INSTALLED HEIGHT OF ITEM 16 (SERVO POST) ABOVE ITEM 58 (REAR COVER) TO BE 44.27/44.37mm (1.743/1.747").

3 INSTALLED HEIGHT OF ITEM 28 (NEEDLE BEARING) ABOVE ITEM 58 (REAR COVER) TO BE 3.30/3.81mm (.130/.150").

4 INSTALL ITEM 4 (TRUNNION BEARING) INTO HOUSING FLUSH WITH THE BOTTOM OF THE O-RING GROOVE.THE SEAM MUST BE ORIENTED TOWARDS THE REAR COVER WITHIN ±30°.





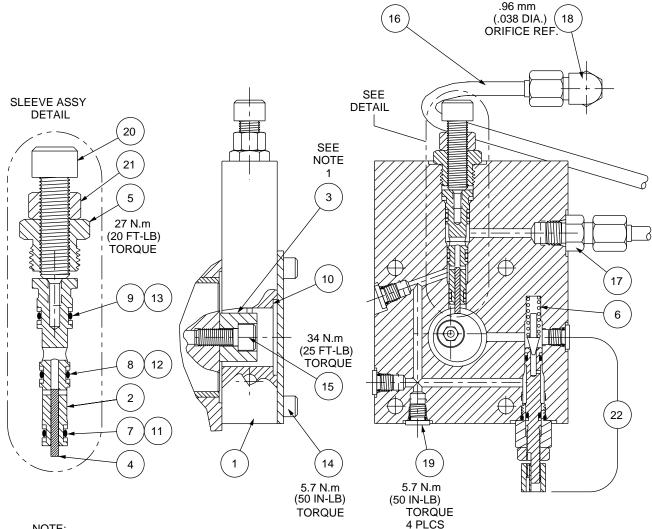


ITEM	PART NUMBER	QTY	DESCRIPTION
1	787976	1	HI-LO BODY
2	788713	1	HI-LO SLEEVE
3	787822	1	HP CONTROL CAM
4	787975	1	HI-LO SPOOL
5	787977	1	HI-LOW SLEEVE RET.
6	785170	1	SPRING
7	2008 🗘 -7	1	O-RING
8	2010 -7	1	O-RING
9	2011 🗘 -7	1	O-RING
10	2123() -7	1	O-RING
11	107X8	2	BACK-UP RING

	ITEM	PART NUMBER	QTY	DESCRIPTION
	12	107X10	2	BACK-UP RING
	13	107X11	2	BACK-UP RING
	14	10X227	4	1/4-20X1.5 CAP SCREW
	15	787836	1	BOLT - SPECIAL
	16	788490	1	TUBING ASSEMBLY
	17	4F50X-S 🗘	1	90-ELBOW FITTING
	18	787523 🗘	1	ORIFICE FITTING
	19	108X2()	4	-2 PLUG W/3902 -9
	20	10X89	1	3/8-24X1.25 CAP SCREW
	21	16X42	1	JAM NUT

1

PRESS.ADJUST.KIT



P/N: 788017 - HI-LO ASSEMBLY - ITEM 95

22

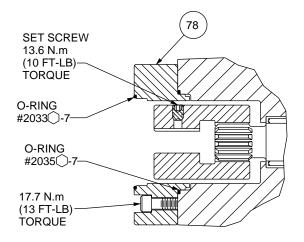
788947

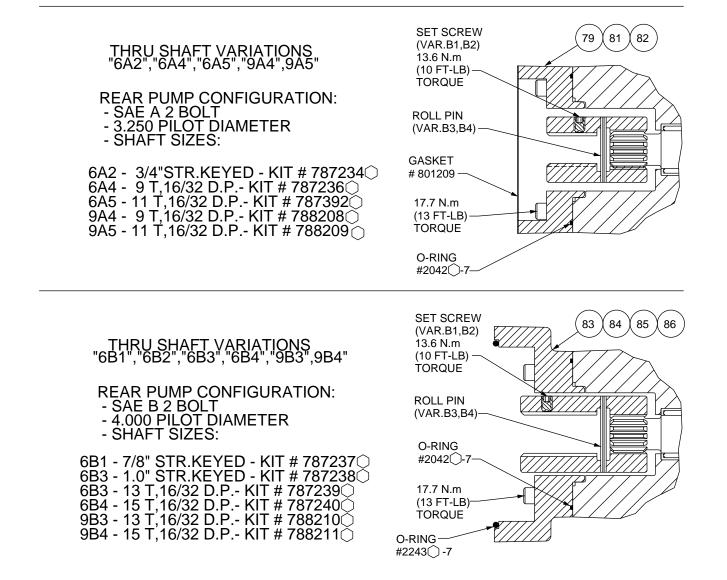
### NOTE:

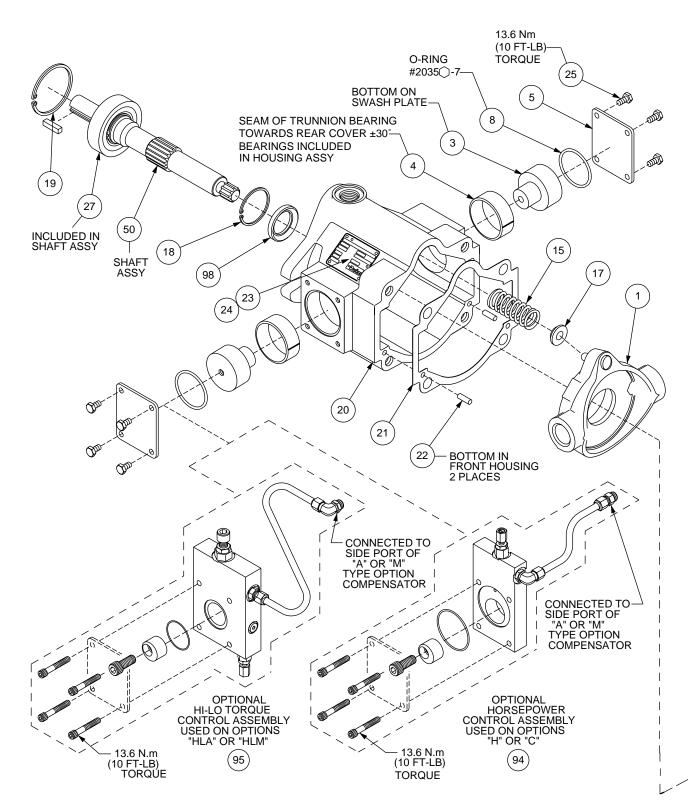
- 1. WITH THE PUMP AT FULL STROKE, INSTALL THE CAM (ITEM 3) CONCENTRIC WITH THE HOLE IN THE HI-LO BODY.
- 2. MUST BE USED WITH PROPER COMPENSATOR ASSEMBLY. HI-LOW (POWER) CONTROL ASS'Y DOES NOT INCLUDE PRESSURE COMPENSATOR ASS'Y. FOR "HLM" OPTION USE "M" COMPENSATOR, FOR "HLA" OPTION USE "A" COMPENSATOR.

THRU SHAFT VARIATION "6A1"

- REAR PUMP CONFIGURATION: - SAE AA 2 BOLT
  - 2.000 PILOT DIAMETER
  - SHAFT SIZE:
- 6A1 1/2"STR.KEYED KIT # 787233 ()



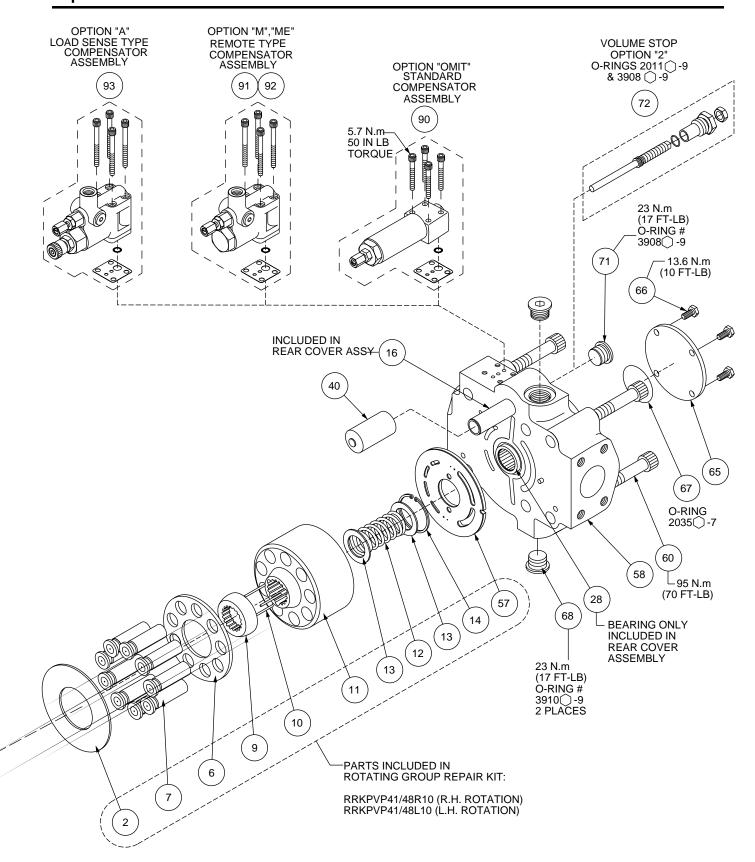




NOTE:

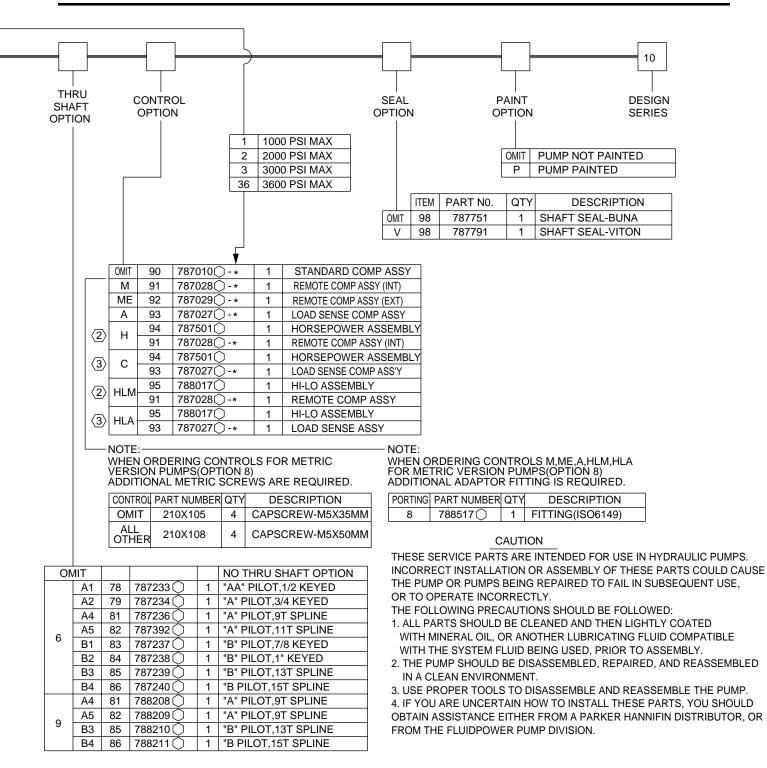
1. ILLUSTRATION SHOWS RIGHTHAND(CW) ROTATION PUMP.LEFTHAND(CCW) PUMPS WILL HAVE THE INLET AND OUTLET PORTS ON OPPOSITE SIDE AND PORT PLATE KIDNEYS REVERSED.

2. SEAL KIT(SKPVP41/48()10)CONSISTS OF: ALL O-RINGS,GASKETS,AND SHAFT SEAL.



	_	41			_		1	_				_
PVP										_		_
<u> </u>		48			L							
BASIC	D	ISPLACEME	ENT	PRESSURE SHAFT	POF	RTIN	G	DOT	ATION V	OL.ST	OP	
PUMP	)	CC/REV	,	RANGE OPTION	OP	TION	1	RUI	DN			
					7							
		10 1000	) PSI	MAX COMP.SETTING						TNO		
				MAX COMP.SETTING			r			T NO.	QTY DESCRIPTION	
			) PSI	MAX COMP.SETTING							1 PLUG 1 VOL.STOP KIT	
		36 3600	) PSI	MAX COMP.SETTING			l	2	72 7877	490	I VOL.STOP KIT	
								57	707700	1		
		ITEM PAR		QTY DESCRIPTION			R	57 57	787789		PORT PLATE - CW PORT PLATE - CCW	
	41	40 7877		1 SERVO PISTON				57	101190	1	FORT PLATE - COW	
	48	40 7877	-	1 SERVO PISTON								
	40		110				R	58	787819	1	CVR ASSY REAR PORT	
						МІТ	L	58	787820	1	CVR ASST REAR PORT	
	1	787761	1	SWASHPLATE ASS'Y			R	58	787815	1	CVR ASSY SIDE FLNG	
	2	787766	1	SLIPPER PLATE		2	L	58	787816	1	CVR ASSY SIDE FLNG	
	3	787775	2	TRUNNION PIN			R	58	787817	1	CVR ASSY SIDE THRD	
	4	788715	2	BEARING-TRUNNION		3	L	58	787818	1	CVR ASSY SIDE THRD	
	5	787772	2	TRUNNION PLATE		8	R	58	788889	1	CVR ASSY SIDE FLNG 6149	
P	6	787765	1	SLIPPER RETAINER			L	58	788890	1	CVR ASSY SIDE FLNG 6149	
	7	787115	11	PISTON ASSEMBLY		-	R	58	788891	1	CVR ASSY SIDE FLNG BSPP	
	8	2035()-7	2	O-RING		9	L	58	788892 🔿	1	CVR ASSY SIDE FLNG BSPP	
	9	787768	1	BALL SEAT						(COVER ASSEMBLY)		
	10	23X68	3	BARREL PIN								
	11	787759	1	BARREL		DMIT	60	1	0X296	4	CAP SCREW	
	12	787779	1	SPRING-BARREL			60	1	0X300	4	CAP SCREW	
V	13	787767	2	WASHER-SPRING		2	65	7	87232	1	COVER PLATE	
	14	56X321	1	RETAINING RING		&	66	1	2X221	4	BOLTS	
	15	787780	1	SWASH PLT SPRING		3	67	2	2035()-7	1	O-RING	
	16	787771	1	SERVO POST			68		8X10()	1	PLUG	
	17	787769	1	SPRING GUIDE			60		0X300	4	CAP SCREW	
	18 19	56X352 56X337	1	RETAINING RING RETAINING RING			65	787232 212X126		1	COVER PLATE	
	21	787763	1	GASKET-COVER		8	66			4	BOLTS	
P	21	99X127	2	ROLL PIN			67		)35 ()-7	1	O-RING	
	23	800511	1	NAMEPLATE			68		516-12	1	PLUG - ISO 6149	
	23	39X10	2	DRIVE SCREW			60		0X300	4	CAP SCREW	
	25	12X221	8	HEX BOLT			65		87232	1	COVER PLATE	
	26	787018	1	GASKET		9	66		12X126	4	BOLTS	
	27	787350	1	BALL BEARING			67		35 ()-7 8175 ()	1	O-RING	
	28	787781	1	NEEDLE BEARING			68	/0	01/5	1	PLUG - ISO 6149	
L												
					•	_						
					Г				1			
OMIT	50	787747	1	SHAFT ASSY-B STR.	0	DMIT	OMIT 2	20	788069	1	HSG ASSY - INCH	
В	50	787748	1	SHAFT ASSY-B SPL.		в	3					
С	50	787745	1	SHAFT ASSY-BB STR.		С	8	20	788535	1	HOUSING - 6149	
D	50	787746	1	SHAFT ASSY-BB SPL.	L	D	9	20	788171	1	HOUSING - INCH & METRIC	
К	50	788894	1	SHAFT ASSY-25mm		к	8	20	788817	1	HOUSING - METRIC	
				(SHAFT ASSEMBLY)	L		9	20	788172	1	HOUSING - METRIC	
											(HOUSING ASSEMBLY)	

(HOUSING ASSEMBLY)



NOTES:

- $\langle 1 \rangle$  O-RING COMPOUND DESIGNATION  $\bigcirc$  (OMIT) = NITRILE,  $\bigcirc$  =VITON
- 2 FOR PROPER OPERATION OF "HLM" CONTROL, IT MUST BE USED WITH A "M" OPTION COMPENSATOR.
- (3) FOR PROPER OPERATION OF "HLA" CONTROL, IT MUST BE USED WITH A "A" OPTION COMPENSATOR.
- (4) SEAL KIT P/N: SKPVP41/48() 10

ROTATING GROUP KIT P/N: RRKPVP41/48R10 (R.H. ROTATION) RRKPVP41/48L10 (L.H. ROTATION)

### SERVICE NOTES:

- USE A CLEAN LUBRICANT(COMPATIBLE WITH THE WORKING FLUID)ON ALL PUMP COMPONENTS DURING ASSEMBLY.
- THOROUGHLY CLEAN THE RESERVOIR, SUCTION LINES, SUCTION STRAINER, DRAIN LINES, ETC. BEFORE RE-INSTALLING THE PUMP.

MOST PREMATURE PUMP FAILURES OCCUR WHEN CONTAMINANTS FROM A PREVIOUS FAILURE HAVE NOT BEEN REMOVED FROM THE SYSTEM, OR CAUSE FOR PREVIOUS FAILURE IS STILL PRESENT(I.E.WATER IN OIL, FILTER BYPASSING, ETC.)

- ALWAYS FILL THE PUMP CASE WITH CLEAN FLUID BEFORE STARTING A NEW OR SERVICED PUMP.FOR FLOODED SUCTION,PURGE AIR FROM SUCTION LINES BY CRACKING THE INLET FITTING OR VENT PLUG ON PUMP.THIS SHOULD PREVENT AN AIRLOCK CONDITION AND ALLOW FOR FASTER PRIMING.
- STARTING THE PUMP SLOWLY BY JOGGING(OR TURNING OVER ENGINE WITHOUT ALLOWING IT TO START)WILL HELP THE PUMP PRIME AND MAKE IT EASIER TO DETERMINE WHEN PRIMING HAS OCCURED.
- START PUMP WITH AN OPEN CIRCUIT WHENEVER POSSIBLE.REDUCE THE COMPENSATOR TO ITS MINIMUM SETTING DURING START-UP.CYCLE THE PUMP ON AND OFF STROKE WHILE INCREASING THE COMPENSATOR TO ITS REQUIRED SETTING.
  THIS WILL ASSIST IN BREAK-IN OF NEW COMPONENTS AND HELP PURGE AIR FROM THE CASE.

### BASIC TROUBLESHOOTING:

### PUMP WILL NOT PRIME

- $\triangle$  PUMP SHOULD PRIME WITHIN 30 SECONDS.IF IT DOES NOT, STOP
- $\triangle$  CHECK FOR PROPER DRIVE ROTATION
- △ MAKE SURE PUMP SHAFT IS TURNING(I.E. KEY AT COUPLING HUBS IS ENGAGED)
- $\bigtriangleup$  Make sure reservoir is full
- △ CHECK FOR MAJOR SOURCES OF A SUCTION LEAK(VENT PLUG OPEN, SHAFT SEAL MISSING(PAVC), FLANGE NOT TIGHT, PINCHED O-RING AT FLANGE OR PUMP HOUSING)

### CANNOT BUILD ANY PRESSURE

- $\triangle$  MAKE SURE PUMP IS PRIMED
- $\triangle$  CHECK ALIGNMENT, ESPECIALLY ON PAVC PUMPS WITHOUT "9" OPTION
- △ MAKE SURE SYSTEM IS NOT AN OPEN CIRCUIT. A PUMP PRODUCES FLOW,NOT PRESSURE.IT CAN ONLY LIMIT PRESSURE WHEN THE SYSTEM REQUIREMENT IS HIGHER THAN THE PUMP COMPENSATOR SETTING.

### CAN ONLY BUILD A FEW HUNDRED PSI

- riangle COMPENSATOR IS BACKED ALL THE WAY OUT
- $\bigtriangleup$   $\,$  The remote or load sense line is vented
- $\bigtriangleup$  Control orifice or spool is plugged
- $\triangle$  INCORRECT COMPENSATOR SPOOL(PVP).
- $\bigtriangleup$  PRESSURE CONTROL DART IS LODGED OPEN
- $\triangle$  TORQUE CONTROL PLUG IS MISSING(PAVC)

### PUMP WILL NOT COMPENSATE

- △ DIFFERENTIAL SPRING OVER-COMPRESSED(I.E. SPRING GUIDE DISLOCATED)
- $\triangle$  CONTROL DRAIN LINE BLOCKED(PAVC)
- $\bigtriangleup$   $\,$   $\,$  PRESSURE CONTROL STEM VENT HOLE IS PLUGGED  $\,$
- riangle Control spool travel is hindered
- $\triangle$  CONTROL ORIFICE IS MISSING(PAVC)
- $\bigtriangleup$  SATURATION ORIFICE IS MISSING IN LOAD SENSE CIRCUIT

### Offer of Sale

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1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer, Acceptance of Seller's products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

**3. Delivery:** Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WAR-RANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHAT-SOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

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6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be upon such terms and conditions as Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the

right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property, Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

**9. Taxes:** Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. Patents, U.S. Trademarks, copyrights, trade dress and trade secrets (hereinafter 'Intellectual Property Rights'). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights. If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter 'Events of Force Majeure'). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

**12. Entire Agreement/Governing Law:** The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

9/91-P



Parker Hannifin Corporation 2745 Snapps Ferry Road Greeneville, TN 37745 USA Tel: (423) 639-8151 FAX: (423) 787-2418 Web site: http://www.parker.com



PM 1624

## **Service Parts Guide**

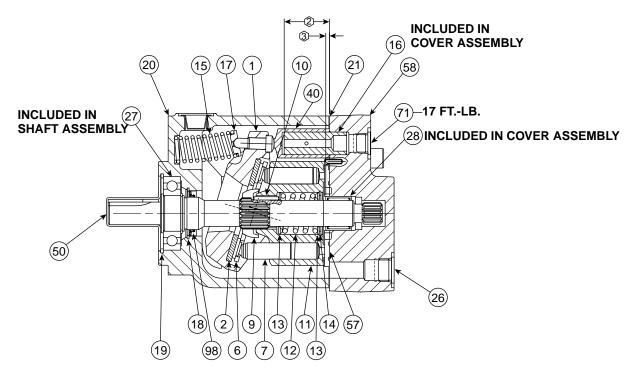
Effective: February, 1996

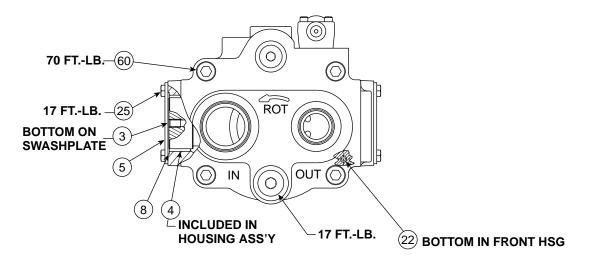
# PVP SERIES VARIABLE VOLUME PISTON PUMP

Model PVP 41 \* \* \* \* 10

Model PVP 48 \* \* \* \* 10

## **REAR PORTED PUMP**

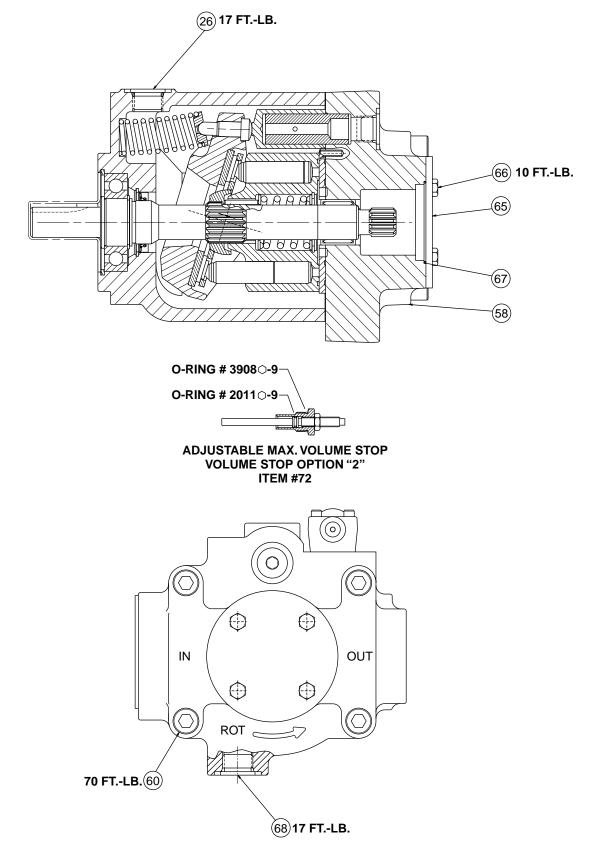




### NOTE:

- 1. PUMP SHOWN IS A RIGHTHAND (CW) ROTATION PUMP WITH REAR PORTS. FOR A LEFTHAND (CCW) ROTATION PUMP THE INLET AND OUTLET PORTS WILL BE REVERSED.
- (2) INSTALLED HEIGHT OF ITEM 16 (SERVO POST) ABOVE ITEM 58 (REAR COVER) TO BE 1.743/1.747.
- (3) INSTALLED HEIGHT OF ITEM 28 (NEEDLE BEARING) ABOVE ITEM 58 (REAR COVER) TO BE .150/.130.

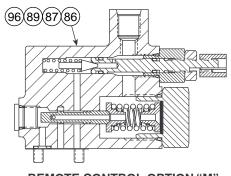
## SIDE PORTED PUMP



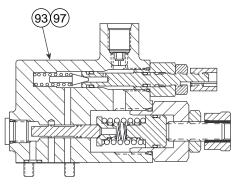
NOTE:

PUMP SHOWN IS A RIGHTHAND (CW) ROTATION, SIDE PORTED PUMP. FOR A LEFTHAND (CCW) ROTATION PUMP THE INLET AND OUTLET PORTS WILL BE REVERSED.

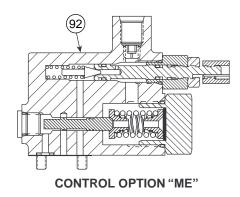
## **CONTROL OPTIONS**

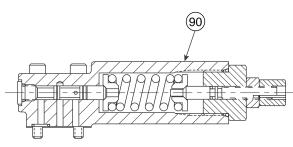


REMOTE CONTROL OPTION "M" REQUIRED W/POWER OPTION "H"



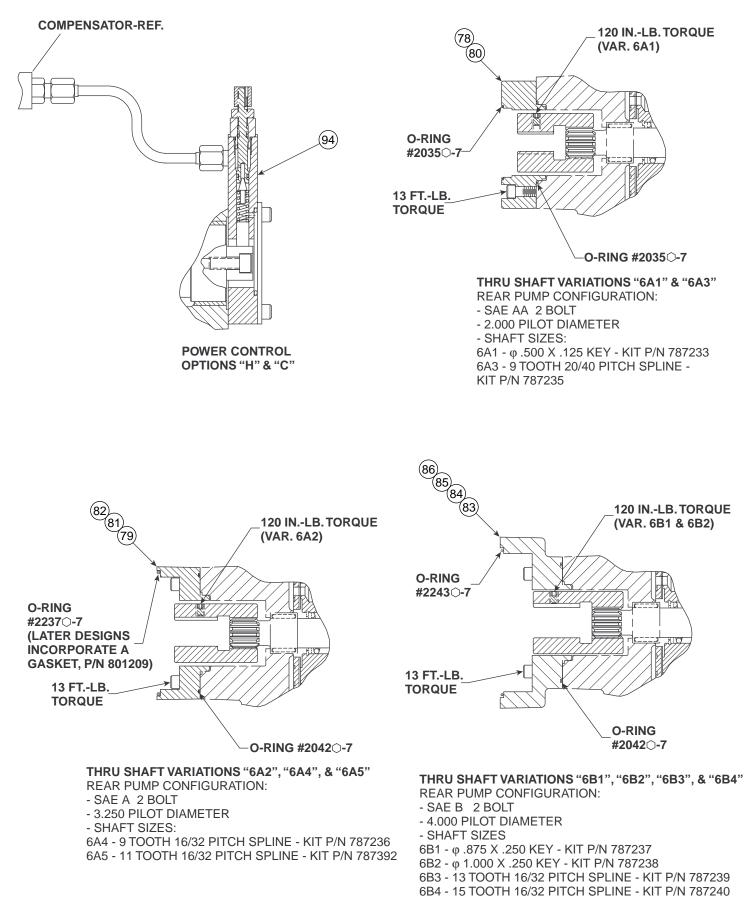
LOAD SENSE OPTION "A" REQUIRED W/POWER OPTION "C"

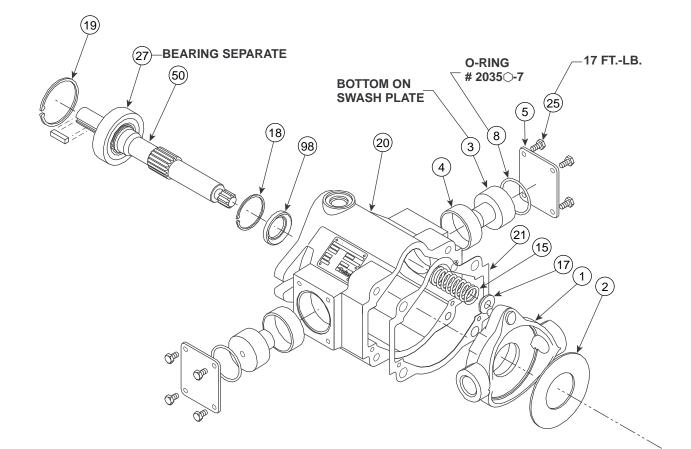




STANDARD CONTROL OPTION "OMIT"

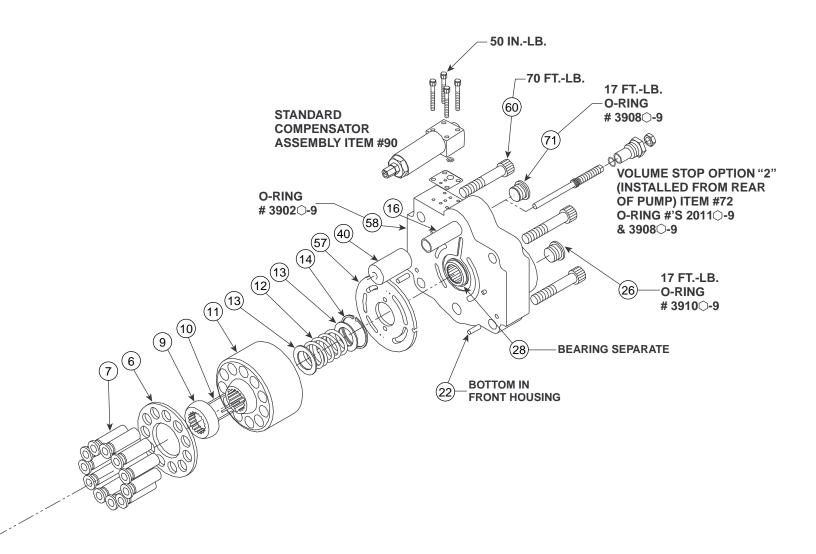
## **THRU SHAFT OPTIONS**





### NOTES:

1. PUMP SHOWN IS A RIGHTHAND (CW) ROTATION PUMP WITH REAR PORTS. FOR A LEFTHAND (CCW) ROTATION PUMP THE INLET AND OUTLET PORTS WILL BE REVERSED.



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	ITEM	PART NUMBER	QTY	DESCRIPTION
	1	787761	1	SWASHPLATE ASS'Y
	2	787766	1	SLIPPER PLATE
	3	787775	2	TRUNNION PIN
P	4	787784	2	BEARING-TRUNNION
	5	787772	2	TRUNNION PLATE
	6	787765	1	SLIPPER RETAINER
	7	787115	11	PISTON ASSEMBLY
	8	20350-7	2	O-RING
	9	787768	1	BALL SEAT
	10	23X68	3	BARREL PIN
	11	787759	1	BARREL
	12	787779	1	SPRING-BARREL
V	13	787767	2	WASHER-SPRING
	14	56X321	1	RETAINING RING
	15	787780	1	SWASH PLATE SPRING
	16	787771	1	SERVO POST
	17	787769	1	SWASH SPRING GUIDE
	18	56X352	1	RETAINING RING
	19	56X337	1	RETAINING RING
	20	788069	1	HOUSING ASS'Y
	21	787763	1	GASKET-COVER
P	22	99X127	2	ROLL PIN
F	23	800511	1	NAMEPLATE
	24	39X10	2	DRIVE SCREW
	25	12X221	8	HEX BOLT
	26	108X10O	1	PLUG
	27	787350	1	BALL BEARING
	28	787781	1	NEEDLE BEARING

PVP

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	44			PART N	-					IPTIC					
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	10						1000 PS	I COM	P. S	ET					
	20					1	2000 PS	I COM	P. S	ET					
	30						3000 PS								
	36					:	3600 PS	I COM	P. S	ET					
	[														
	ON	1IT	50	78774	7	1	SHAFT	ASS'	Y-"B	" STR.					
	E	3	50	78774	.8	1	SHAFT	ASS'	Y-"B	" SPL.					
	C	;	50	78774	5	1	SHAFT	ASS'	Υ-"B	B" STR	<b>२</b> .				
	C	)	50	78774	6	1	SHAFT	ASS'	Y-"B	B" SPI	L.				
3				•											
	Г													 	
Е	ОМ	IT	60	10X29	96	4	CAP S	CREW							
			60	10X30	)0	4	CAP S	CREW							
		F	65	78723	32	1	COVER		E						
		F	66	12X22	21	4	BOLTS								
	2		67	2035	)-7	1	O-RINO	3							
		ľ	68	108X1	00	1	PLUG (	DRAIN	۷)						
		F	69	80075	57	1	FLANG	E COV	/ER	(1-1/2	2")				
		F	70	78779	99	1	FLANG				·				
			60	10X30	0	4	CAP S	CREW		. ,					
		F	65	78723	32	1	COVEF	R PLAT	E						
	3		66	12X22	21	4	BOLTS								
	ľ	- F	07	0005	~ 7	4		、 、							

O-RING

PLUG (DRAIN)

67 20350-7 1

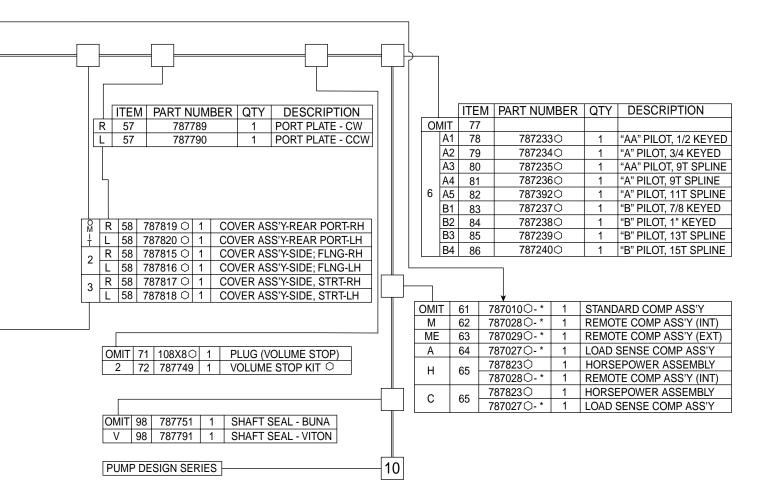
108X100 1

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### NOTES:

- 1. O-RING COMPOUND DESIGNATION ○(OMIT) =NITRILE, ∅=VITON
- 2. FOR PROPER OPERATION OF "H" CONTROL, IT MUST BE USED WITH A REMOTE COMPENSATOR ASS'Y. (OPTION "M" - PART NUMBER 787028)
- 3. FOR PROPER OPERATION OF 'C' CONTROL, IT MUST BE USED WITH A LOAD SENSE COMPENSATOR ASS'Y. (OPTION "A" - PART NUMBER 787027)
- 4. SEAL KIT P/N SKPVP □ ○\*\* (\*\* DESIGN SERIES)

- 5. ROTATING GROUP KIT RRKPVP T \*\* (\*\* DESIGN SERIES)
  - ⊢ R (CW) ⊢ L (CCW) ⊢ 41 (41 CC/REV) ⊢ 48 (48 CC/REV)



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These service parts are intended for use in hydraulic pumps. Incorrect installation or assembly of these parts could cause the pump or pumps being repaired to fail in subsequent use, or to operate incorrectly.

The following precautions should be followed:

- 1. All parts should be cleaned and then lightly coated with mineral oil, or another lubricating fluid compatible with the system fluid being used, prior to assembly.
- 2. The pump should be disassembled, repaired, and reassembled in a clean environment.
- 3. Use proper tools to disassemble and reassemble the pump.
- 4. If you are uncertain as to how to install these parts, you should obtain assistance either from a Parker Hannifin distributor, or from the Fluidpower Pump Division.



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