

VPV Whisper™ Pump Identification Guide

9 535 233 785/02.05 1/20
Replaces: 03.02

Metric Version

Sizes 16–164



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Ordering Guide

Code Structure

The alpha-numeric ordering code system enables any particular type of pump to be specified. Preferred type are also identified by a 10-digit part number for computerized ordering.

Item No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Pump 1	0513	R	18	C	3	V	P	V	32	S	M	21	F	Z	B02
Pump 2***						V	P	V	32	S	M	21	F	Z	B02
Pump 3 (Gear Pump)						HY/Z	F	S11/	14	R	254				

Item No.	Code	
1		Code Digit
	0513	Vane Pump, stand alone version single pump or combination
2		Direction of Rotation
	R	Clockwise, viewed from shaft end
3		Speed
	10	Maximum speed; e.g. 950 rpm = 10
	12	1150 rpm = 12
	15	1450 rpm = 15
	18	1750 rpm = 18
4		Drive Shaft
	A	Key to DIN 6885
	C	Key to SAE Standard
	D	Spline to ANSI B92.1
5		Bearing Arrangement/Mounting Flange
	3	Standard bearing arrangement, mounting flange to SAE standards
	7	Standard bearing arrangement, mounting flange to DIN ISO 3019/2
6		Principle of Operation
	V	Vane Type
7		Mode of Operation
	P	Pump
8		Type of Construction
	V	Variable displacement pump (open circuit)
9		Displacement
	16	16 cc/rev = 0.98 cu in/rev
	25	25 cc/rev = 1.53 cu in/rev
	32	32 cc/rev = 1.95 cu in/rev
	45	45 cc/rev = 2.75 cu in/rev
	63	63 cc/rev = 3.84 cu in/rev
	80	80 cc/rev = 4.88 cu in/rev
	100	100 cc/rev = 6.10 cu in/rev
	130	130 cc/rev = 7.93 cu in/rev
	164	164 cc/rev = 10.00 cu in/rev

*** When trailing pump is another VPV pump, it can be coded by selecting items 6 through 15 for the alpha-numeric description. Consult factory for other models and descriptions of trailing pumps.

Product Literature Disclaimer

Specifications and/or pricing are subject to change without prior notice. Please consult factory.

Ordering Guide (continued)

Item No.	Code	
10		Housing
	S	210 bar = 3000 psi
11		Operating Fluid
	C	Water glycol (<i>Phased Out</i>)
	M	Mineral oil and phosphate ester
12		Operating Pressure
	14	Operating pressure e.g. 14 = 140 bar = 2000 psi
	21	21 = 210 bar = 3000 psi
13		Control/Regulator
	F	Pressure regulator - single stage
	G	Pressure regulator - single stage lockable 16/25/32 cc only
	H	Pressure regulator - two stage with remote option
	HL	Pressure regulator - two stage with locking 2nd stage (<i>Phased Out</i>)
	HX	Mooring control with high/low option (<i>Phased Out</i>)
	J	Combined pressure/flow compensator (load sense)
	S	Torpue limiter (available in 45 to 164 cc pumps only)
	T	Electronic proportional P/Q (<i>Phased Out</i>)
	VA	Proportional pressure w/DIN connector (<i>Phased Out</i>)
		Solenoid Operated Two Pressure, normally open (normally low pressure/energize to high)
	XA	115V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	XB	220V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	XC	12V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	XD	24V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	XE	115V N.O. w/flying leads
	XF	220V N.O. w/flying leads
	XG	12V N.O. w/flying leads
	XH	24V N.O. w/flying leads
	XJ	115V N.O. w/DIN 43650 and NG6
	XK	220V N.O. w/DIN 43650 and NG6
	XL	12V N.O. w/DIN 43650 and NG6
	XM	24V N.O. w/DIN 43650 and NG6
	XN	115V N.O. w/flying leads and NG6
	XO	220V N.O. w/flying leads and NG6
	XP	12V N.O. w/flying leads and NG6
	XR	24V N.O. w/flying leads and NG6
		Solenoid Operated Two Pressure, normally closed (normally high pressure/energize to low)
	YA	115V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	YB	220V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	YC	12V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	YD	24V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	YE	115V N.C. w/flying leads
	YF	220V N.C. w/flying leads
	YG	12V N.C. w/flying leads
	YH	24V N.C. w/flying leads
	YJ	115V N.C. w/DIN 43650 and NG6
	YK	220V N.C. w/DIN 43650 and NG6
	YL	12V N.C. w/DIN 43650 and NG6
	YM	24V N.C. w/DIN 43650 and NG6
	YN	115V N.C. w/flying leads and NG6
	YO	220V N.C. w/flying leads and NG6
	YP	12V N.C. w/flying leads and NG6
	YR	24V N.C. w/flying leads and NG6

Ordering Guide (continued)

Item No.	Code	
13 (cont.)		Solenoid Operated Vent Normally Open, (normally vented, energize to pressure)
	ZA	115V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	ZB	220V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	ZC	12V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	ZD	24V N.O. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	ZE	115V N.O. w/flying leads
	ZF	220V N.O. w/flying leads
	ZG	12V N.O. w/flying leads
	ZH	24V N.O. w/flying leads
		Solenoid Operated Vent Normally Closed, (normally at pressure, energize to vent)
	WA	115V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	WB	220V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	WC	12V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	WD	24V N.C. w/DIN 43650 and quick connect (compression fitting) with sentinel light
	WE	115V N.C. w/flying leads
	WF	220V N.C. w/flying leads
	WG	12V N.C. w/flying leads
	WH	24V N.C. w/flying leads
14		Accessories
	S	Special (consult factory)
	Y	Maximum delivery limiter
	Z	No other accessories
15	B01	Design Series
	P1	Pump 1 of a quick combination unit (adapter kit and coupling required to create a combination)

Gear Pump Guide

Item No.	Code	
6		Principle of Operation
	HY/Z	Hydraulic Gear Pump
7		Size Range
	F	4 cc to 22.5 cc
	G	22.5 cc to 56 cc
8		Type of Construction
	S11	Standard version
	S21	Duo (low noise version - phase out January 2001)
	S24	Silence version (4 cc to 28 cc)
9		Displacement
	4	4 cc/rev = 0.244 cu in/rev
	5.5	5.5 cc/rev = 0.355 cu in/rev
	8	8 cc/rev = 0.488 cu in/rev
	11	11 cc/rev = 0.671 cu in/rev
	14	14 cc/rev = 0.854 cu in/rev
	16	16 cc/rev = 0.979 cu in/rev
	19	19 cc/rev = 1.159 cu in/rev
	22.5	22.5 cc/rev = 1.372 cu in/rev
	28	28 cc/rev = 1.709 cu in/rev
	32	32 cc/rev = 1.953 cu in/rev
	38	38 cc/rev = 2.319 cu in/rev
	45	45 cc/rev = 2.746 cu in/rev
	56	56 cc/rev = 3.417 cu in/rev
10		Direction of Rotation
	R	Right hand (clockwise)
11		Details
	254	SAE "A" flange, 2 bolt, SAE keyed shaft
	253	SAE "A" flange, 2 bolt, ANSI spline shaft

Note: HY Product may be substituted with AZ Product, consult factory.

VPV16

Part Number	Description	Special Notes
0513300201	0513R15A7VPV16SM14FZB03	Active for Germany
0513300225	0513R15A7VPV16SM14FYB03	Active for Germany
0513300227	0513R15A7VPV16SM14HZB03	Active for Germany
0513300229	0513R15A7VPV16SM14HYB03	Active for Germany
0513300231	0513R15A7VPV16SM14JZB03	Active for Germany
0513300233	0513R15A7VPV16SM14JYB03	Active for Germany
0513300249	0513R15A7VPV16SM14GYB03	Active for Germany
0513300257	0513R15A7VPV16SM14FZP1	USE 0513300413
0513300279	0513R15A7VPV16SM14FYP1	USE 0513300415
0513300281	0513R15A7VPV16SM14HZP1	USE 0513300417
0513300401	0513R15A7VPV16SM21FZB03	
0513300403	0513R15A7VPV16SM21FYB03	
0513300405	0513R15A7VPV16SM21HZB03	
0513300407	0513R15A7VPV16SM21HYB03	
0513300409	0513R15A7VPV16SM21JZB03	
0513300411	0513R15A7VPV16SM21JYB03	
0513300413	0513R15A7VPV16SM21FZB03P1	
0513300415	0513R15A7VPV16SM21FYB03P1	
0513300417	0513R15A7VPV16SM21HZB03P1	
0513300419	0513R15A7VPV16SM21HYB03P1	
0513300421	0513R15A7VPV16SM21JZB03P1	
0513300423	0513R15A7VPV16SM21JYB03P1	
0513300425	0513R15A7VPV16SM21GYB03	
0513300427	0513R15A7VPV16SM21VASB03P1	<i>Phased Out</i>
0513300429	0513R15A7VPV16SM21ZAYB03	
0513300517	0513R15A7VPV16SM12HZB03P1	Pinned @140 bar

VPV16 Combination Pumps

Part Number	Description	Special Notes
0513301213	0513R15A7VPV16SM14FZVPV16SM14FZ	USE 0513301403
0513301401	0513R15A7VPV16SM21FYVPV16SM21FYB03	
0513301403	0513R15A7VPV16SM21FZVPV16SM21FZB03	
0513303209	0513R15A7VPV16SM14HZ/HY/ZFS21/11BR213	USE 0513303401
0513303215	0513R15A7VPV16SM14HY/HY/ZFS21/11BR213	Consult Factory
0513303401	0513R15A7VPV16SM21HZ/HY/ZFS11/11BR213	
0513303403	0513R15A7VPV16SM21FZ/HY/ZFS11/22.5R254	
0513303501	0513R15A7VPV16SM12HZ/HY/ZFS11/11BR213	Low Pressure Tuned

VPV25

Part Number	Description	Special Notes
0513400205	0513R15A7VPV25SM14FZB03	Active for Germany
0513400227	0513R15A7VPV25SM14FYB03	Active for Germany
0513400229	0513R15A7VPV25SM14HZB03	Active for Germany
0513400231	0513R15A7VPV25SM14HYB03	Active for Germany
0513400233	0513R15A7VPV25SM14JZB03	Active for Germany
0513400235	0513R15A7VPV25SM14JYB03	Active for Germany
0513400237	0513R15A7VPV25SM14GYB03	Active for Germany
0513400255	0513R15A7VPV25SM14FZP1	USE 0513400413
0513400259	0513R15A7VPV25SM14FYP1	USE 0513400415
0513400267	0513R15A7VPV25SM14HZP1	USE 0513400417
0513400401	0513R15A7VPV25SM21FZB03	
0513400403	0513R15A7VPV25SM21FYB03	
0513400405	0513R15A7VPV25SM21HZB03	
0513400407	0513R15A7VPV25SM21HYB03	
0513400409	0513R15A7VPV25SM21JZB03	
0513400411	0513R15A7VPV25SM21JYB03	
0513400413	0513R15A7VPV25SM21FZB03P1	
0513400415	0513R15A7VPV25SM21FYB03P1	
0513400417	0513R15A7VPV25SM21HZB03P1	
0513400419	0513R15A7VPV25SM21HYB03P1	
0513400421	0513R15A7VPV25SM21JZB03P1	
0513400423	0513R15A7VPV25SM21JYB03P1	
0513400425	0513R15A7VPV25SM21GYB03	
0513400427	0513R15A7VPV20SM12FSB03	Adjusted to 20cc/rev.
0513400429	0513R18A7VPV25SM21HYB03	Thrust Screw set @1800 rpm
0513400431	0513R18A7VPV25SM21HYB03P1	Thrust Screw set @1800 rpm
0513400517	0513R15A7VPV25SM12HZB03P1	Pinned @140 bar

VPV25 Combination Pumps

Part Number	Description	Special Notes
0513401209	0513R15A7VPV25SM14FZVPV25SM14FZ	USE 0513401401
0513401401	0513R15A7VPV25SM21FZVPV25SM21FZB03	
0513402205	0513R15A7VPV25SM14FYVPV16SM14FY	Consult Factory
0513404207	0513R15A7VPV25SM14HZ/HY/ZFS21/19R213	USE 0513404501
0513404401	0513R15A7VPV25SM21HZ/HY/ZFS21/19BR213	
0513404501	0513R15A7VPV25SM12HZ/HY/ZFS21/19BR213	Pinned @140 bar

VPV32

Part Number	Description	Special Notes
0513500205	0513R15A7VPV32SM14FZB03	Active for Germany
0513500209	0513R15A7VPV32SM14JZP1	USE 0513500421
0513500211	0513R15A7VPV32SM14JYP1	USE 0513500423
0513500213	0513R15A7VPV32SM14HYP1	USE 0513500419
0513500233	0513R15A7VPV32SM14FZP1	USE 0513500413
0513500239	0513R15A7VPV32SM14FYB03	Active for Germany
0513500241	0513R15A7VPV32SM14HZB03	Active for Germany
0513500243	0513R15A7VPV32SM14HYB03	Active for Germany
0513500245	0513R15A7VPV32SM14JZB03	Active for Germany
0513500247	0513R15A7VPV32SM14JYB03	Active for Germany
0513500249	0513R15A7VPV32SM14GYB03	Active for Germany
0513500261	0513R15A7VPV32SM14GYP1	Consult Factory
0513500269	0513R15A7VPV32SM14HZP1	
0513500273	0513R15A7VPV32SM14FYP1	USE 0513500415
0513500401	0513R15A7VPV32SM21FZB03	
0513500403	0513R15A7VPV32SM21FYB03	
0513500405	0513R15A7VPV32SM21HZB03	
0513500407	0513R15A7VPV32SM21HYB03	
0513500409	0513R15A7VPV32SM21JZB03	
0513500411	0513R15A7VPV32SM21JYB03	
0513500413	0513R15A7VPV32SM21FZB03P1	
0513500415	0513R15A7VPV32SM21FYB03P1	
0513500417	0513R15A7VPV32SM21HZB03P1	
0513500419	0513R15A7VPV32SM21HYB03P1	
0513500421	0513R15A7VPV32SM21JZB03P1	
0513500423	0513R15A7VPV32SM21JYB03P1	
0513500425	0513R15A7VPV32SM21GYB03	
0513500427	0513R15A7VPV32SM21TYB03	<i>Phased Out</i>
0513500429	0513R15A7VPV32SM21TZB03	<i>Phased Out</i>
0513500431	0513R18A7VPV32SM21XDYB03	Thrust Screw set @1800 rpm
0513500433	0513R18A7VPV32SM21HYB03	Thrust Screw set @1800 rpm
0513500435	0513R15A7VPV32SM21TZB03P1	<i>Phased Out</i>
0513500437	0513R18A7VPV32SM21ZDYB03P1	Thrust Screw set @1800 rpm
0513500439	0513R18A7VPV32SM21TZB03P1	<i>Phased Out</i>
0513500441	0513R18A7VPV32SM21HYB03P1	Thrust Screw set @1800 rpm
0513500443	0513R15A7VPV32SM21JSB03	Low Thrust Screw Setting, 200 psi, First Stage
0513500445	0513R15A7VPV32SM21JSB03	Low Thrust Screw Setting
0513500517	0513R15A7VPV32SM12HZB03P1	Pinned @140 bar
0513500525	0513R15A7VPV32SM12XDZB03P1	Low Pressure Tuned

VPV32 Combination Pumps

Part Number	Description	Special Notes
0513501205	0513R15A7VPV32SM14FZVPV32SM14FZ	USE 0513501401
0513501401	0513R15A7VPV32SM21FZVPV32SM21FZB03	
0513503207	0513R15A7VPV32SM14FZVPV16SM14FZ	Consult Factory
0513506207	0513R15A7VPV32SM14GY/HY/ZFS11/5.5R254	Consult Factory
0513506211	0513R15A7VPV32SM14HZ/HY/ZFS21/19BR213	USE 0513506401
0513506401	0513R15A7VPV32SM21HZ/HY/ZFS21/19BR213	
0513506403	0513R15A7VPV32SM21TZ/HY/ZFS11/5.5R254	<i>Phased Out</i>
0513506501	0513R15A7VPV32SM12HZ/HY/ZFS21/19BR213	Low Pressure Tuned

VPV45

Part Number	Description	Special Notes
0513600201	0513515A7VPV45SM14FZ	USE 0513600527
0513600243	0513R15A7VPV45SM14HZP1	USE 0513600417
0513600245	0513R15A7VPV45SM14HYP1	USE 0513600419
0513600247	0513R15A7VPV45SM14FZP1	USE 0513600417
0513600249	0513R15A7VPV45SM14FYP1	USE 0513600419
0513600251	0513R15A7VPV45SM14JZP1	USE 0513600421
0513600253	0513R15A7VPV45SM14JYP1	USE 0513600423
0513600405	0513R15A7VPV45SM21HZB05	
0513600407	0513R15A7VPV45SM21HYB05	
0513600409	0513R15A7VPV45SM21JZB05	
0513600411	0513R15A7VPV45SM21JYB05	
0513600417	0513R15A7VPV45SM21HZB05P1	
0513600419	0513R15A7VPV45SM21HYB05P1	
0513600421	0513R15A7VPV45SM21JZB05P1	
0513600423	0513R15A7VPV45SM21JYB05P1	
0513600425	0513R15A7VPV45SM21XDZB05	
0513600427	0513R15A7VPV45SM21XDYB05	
0513600429	0513R18A7VPV45SM21XDYB05	Thrust Screw set @1800 rpm
0513600431	0513R18A7VPV45SM21HYB05	Thrust Screw set @1800 rpm
0513600433	0513R15A7VPV45SM21TZB05	<i>Phased Out</i>
0513600435	0513R18A7VPV45SM21ZDYB05P1	Thrust Screw set @1800 rpm
0513600437	0513R18A7VPV45SM21TZB05P1	<i>Phased Out</i>
0513600439	0513R18A7VPV45SM21HYB05P1	Thrust Screw set @1800 rpm
0513600445	0513R15A7VPV45SM21JSB05	Low Thrust Screw Setting
0513600525	0513R15A7VPV45SM12XDZB05P1	Low Pressure Tuned
0513600527	0513R15A7VPV45SM14FYC01	
0513600529	0513R15A7VPV45SM14HYC01	
0513600531	0513R15A7VPV45SM14JYC01	

VPV45 Combination Pumps

Part Number	Description	Special Notes
0513601401	0513R15A7VPV45SM21HY/VPV45SM21HYB05	
0513602401	0513R18A7VPV45SM21TZVPV32SM21TZ+Den.	<i>Phased Out</i>
0513607205	0513R15A7VPV45SM14HZ/HY/ZFS21/19BR213	USE 0513607401
0513607401	0513R15A7VPV45SM21HZ/HY/ZFS21/19BR213	
0513608201	0513R15A7VPV45SM14FZ/RPV19SM28FY28	Consult Factory

VPV63

Part Number	Description	Special Notes
0513700205	0513R15A7VPV63SM14FZ	USE 0513700525
0513700213	0513R15A7VPV63SM14HZ	USE 0513700527
0513700249	0513R15A7VPV63SM14FZP1	USE 0513700417
0513700253	0513R15A7VPV63SM14HZP1	USE 0513700417
0513700405	0513R15A7VPV63SM21HQB05	
0513700407	0513R15A7VPV63SM21HYB05	
0513700409	0513R15A7VPV63SM21JQB05	
0513700411	0513R15A7VPV63SM21JYB05	
0513700417	0513R15A7VPV63SM21HQB05P1	
0513700419	0513R15A7VPV63SM21HYB05P1	
0513700421	0513R15A7VPV63SM21JQB05P1	
0513700423	0513R15A7VPV63SM21JYB05P1	
0513700427	0513R15A7VPV63SM21XDYB05	
0513700429	0513R15A7VPV63SM21XDYB05P1	
0513700431	0513R18A7VPV63SM21XDYB05P1	Thrust Screw set @1800 rpm
0513700433	0513R18A7VPV63SM21XDYB05	Thrust Screw set @1800 rpm
0513700437	0513R18A7VPV63SM21HYB05P1	Thrust Screw set @1800 rpm
0513700439	0513R18A7VPV63SM21HYB05	Thrust Screw set @1800 rpm
0513700441	0513R15A7VPV63SM21TZB05P1	<i>Phased Out</i>
0513700443	0513R18A7VPV63SM21ZDYB05P1	Thrust Screw set @1800 rpm
0513700445	0513R18A7VPV63SM21ZDSB05P1	Thrust Screw set @1800 rpm
0513700447	0513R15A7VPV63SM21JSB05	Low Control Settings
0513700449	0513R15A7VPV63SM21JSB05	Low Thrust Screw Setting, Volume Control
0513700451	0513R15A7VPV63SM21JSB05	Low Thrust Screw Setting, No Volume Control
0513700453	0513R15A7VPV58SM21JSB05	58 cc/rev. Displacement
0513700455	0513R15A7VPV63SM21ZDZB05	
0513700525	0513R15A7VPV63SM14FYC01	
0513700527	0513R15A7VPV63SM14HYC01	
0513700529	0513R15A7VPV63SM14JYC01	

VPV63 Combination Pumps

Part Number	Description	Special Notes
0513701209	0513R15A7VPV63SM14FZVPV63SM14FZ	Consult Factory
0513701403	0513R15A7VPV63SM21XDYVPV63SM21XDYB05	
0513701405	0513R18A7VPV63SM21XDYVPV63SM21XDYB05	
0513701407	0513R18A7VPV63SM21HYVPV63SM21HYB05	
0513701409	0513R15A7VPV63SM21HZP1/VPV63SM21HZ	
0513702401	0513R15A7VPV63SM21XDYVPV45SM21XDYB05	
0513702403	0513R15A7VPV63SM21HYVPV45SM21HYB05	
0513703205	0513R15A7VPV63SM14FZVPV32SM14FZ	Consult Factory
0513703401	0513R15A7VPV63SM21HYVPV32SM21HYB05	
0513703403	0513R18A7VPV63SM21XDYVPV32SM21XDYB05	
0513703405	0513R18A7VPV63SM21HYVPV32SM21HYB05	
0513705205	0513R15A7VPV63SM14FZVPV16SM14FZ	Consult Factory
0513707401	0513R15A7VPV63SM21TZ/HY/ZGS11/32R408	<i>Phased Out</i>
0513708205	0513R15A7VPV63SM14HZ/HY/ZFS21/19BR213	USE 0513708403
0513708401	0513R15A7VPV63SM21HY/HY/ZFS21/19BR213	
0513708403	0513R15A7VPV63SM21HZ/HY/ZFS21/19BR213	

VPV80

Part Number	Description	Special Notes
0513800201	0513R15A7VPV80SM14FZ	USE 0513800525
0513800235	0513R15A7VPV80SM14HZP1	USE 0513800417
0513800241	0513R15A7VPV80SM14FZP1	USE 0513800417
0513800247	0513R15A7VPV80SM14FY	USE 0513800525
0513800405	0513R15A7VPV80SM21HZB05	
0513800407	0513R15A7VPV80SM21HYB05	
0513800409	0513R15A7VPV80SM21JZB05	
0513800411	0513R15A7VPV80SM21JYB05	
0513800417	0513R15A7VPV80SM21HZB05P1	
0513800419	0513R15A7VPV80SM21HYB05P1	
0513800421	0513R15A7VPV80SM21JZB05P1	
0513800423	0513R15A7VPV80SM21JYB05P1	
0513800425	0513R15A7VPV80SM21XDYB05P1	
0513800427	0513R15A7VPV80SM21TZB05	<i>Phased Out</i>
0513800429	0513R18A7VPV80SM21TZB05P1	<i>Phased Out</i>
0513800431	0513R18A7VPV80SM21ZDYB05P1	Thrust Screw set @1800 rpm
0513800433	0513R18A7VPV80SM21HYB05P1	Thrust Screw set @1800 rpm
0513800435	0513R15A7VPV80SM21JSB05	Low Control Settings
0513800437	0513R15A7VPV72SM21JSB05	72 cc/rev. Displacement
0513800439	0513R15A7VPV80SM21JSB05	Low Thrust Screw Setting
0513800525	0513R15A7VPV80SM14FYC01	
0513800527	0513R15A7VPV80SM14HYC01	
0513800529	0513R15A7VPV80SM14JYC01	

VPV80 Combination Pumps

Part Number	Description	Special Notes
0513701401	0513R15A7VPV80SM21HYVPV45SM21HYB05	
0513801207	0513R15A7VPV80SM21HZP1/VPV80SM21HZ	
0513802401	0513R15A7VPV80SM21XDYVPV63SM21XDYB05	
0513802403	0513R15A7VPV80SM21HYVPV63SM21HYB05	
0513803401	0513R18A7VPV80SM21TZVPV45SM21ZDYP1+Den.	<i>Phased Out</i>
0513803403	0513R15A7VPV80SM21TZVPV45SM21ZDYB05P1	<i>Phased Out</i>
0513804401	0513R18A7VPV80SM21TZVPV32SM21ZDYP1+Den.	<i>Phased Out</i>
0513804403	0513R18A7VPV80SM21TZVPV32SM21ZDYB05P1	<i>Phased Out</i>
0513809201	0513R15A7VPV80SM14HZ/HY/ZFS21/19BR213	USE 0513809401
0513809401	0513R15A7VPV80SM21HZ/HY/ZFS21/19BR213	

VPV100

Part Number	Description	Special Notes
0513850201	0513R15A7VPV100SM14FZ	USE 0513850525
0513850205	0513R15A7VPV100SM14HZP1	USE 0513850417
0513850207	0513R15A7VPV100SM14FY	USE 0513850525
0513850211	0513R15A7VPV100SM14HZ	USE 0513850527
0513850405	0513R15A7VPV100SM21HQB04	
0513850407	0513R15A7VPV100SM21HYB04	
0513850409	0513R15A7VPV100SM21JQB04	
0513850411	0513R15A7VPV100SM21JYB04	
0513850417	0513R15A7VPV100SM21HQB04P1	
0513850419	0513R15A7VPV100SM21HYB04P1	
0513850421	0513R15A7VPV100SM21JQB04P1	
0513850423	0513R15A7VPV100SM21JYB04P1	
0513850425	0513R15A7VPV100SM21XQB04	
0513850427	0513R15A7VPV100SM07HQB04	Low Pressure Tuned
0513850429	0513R18A7VPV100SM21TQB04P1	<i>Phased Out</i>
0513850431	0513R18A7VPV100SM21HYB04P1	Thrust Screw set @1800 rpm
0513850433	0513R15A7VPV100SM21JSB04	Low Thrust Screw Setting
0513850517	0513R15A7VPV100SM12HQB04P1	Low Pressure Tuned
0513850525	0513R15A7VPV100SM14FYC01	
0513850527	0513R15A7VPV100SM14HYC01	
0513850529	0513R15A7VPV100SM14JYC01	

VPV100 Combination Pumps

Part Number	Description	Special Notes
0513852401	0513R15A7VPV100SM21HYVPV80SM21HY/HY/ZFS11/16R254	
0513852405	0513R18A7VPV100SM21TZVPV80SM21ZDYB05P1	<i>Phased Out</i>
0513853403	0513R18A7VPV100SM21TZVPV63SM21ZDYB05P1	<i>Phased Out</i>
0513854403	0513R18A7VPV100SM21TZVPV45SM21ZDYB05P1	<i>Phased Out</i>
0513859403	0513R15A7VPV100SM07HZ/IPK32SM21	Low Pressure Tuned
0513859405	0513R15A7VPV100SM12HZ/IPK32SM21	Low Pressure Tuned
0513859501	0513R15A7VPV100SM12HZ/HY/ZGS11/32R408	Low Pressure Tuned

VPV130

Part Number	Description	Special Notes
0513860201	0513R15A7VPV131SM11FY	USE 0513860525
0513860203	0513R15A7VPV131SM11HY	USE 0513860527
0513860205	0513R15A7VPV131SM14FY	USE 0513860525
0513860207	0513R15A7VPV131SM21HY	USE 0513860407
0513860209	0513R15A7VPV131SM21GYB04	Consult Factory
0513860219	0513R15A7VPV130SM14FZ	USE 0513860525
0513860227	0513R15A7VPV130SM14HZP1	USE 0513860417
0513860233	0513R15A7VPV130SM14FZP1	USE 0513860417
0513860235	0513R15A7VPV130SM14FY	USE 0513860525
0513860247	0513R15A7VPV130SM14HZ	USE 0513860527
0513860265	0513R15A7VPV130SM14FYP1	USE 0513860419
0513860405	0513R15A7VPV130SM21HZB04	
0513860407	0513R15A7VPV130SM21HYB04	
0513860409	0513R15A7VPV130SM21JZB04	
0513860411	0513R15A7VPV130SM21JYB04	
0513860417	0513R15A7VPV130SM21HZB04P1	
0513860419	0513R15A7VPV130SM21HYB04P1	
0513860421	0513R15A7VPV130SM21JZB04P1	
0513860423	0513R15A7VPV130SM21JYB04P1	
0513860427	0513R18A7VPV130SM21TZB04P1	<i>Phased Out</i>
0513860429	0513R18A7VPV130SM21HYB04P1	Thrust Screw set @1800 rpm
0513860431	0513R15A7VPV130SM21JSB04	Low Thrust Screw Setting
0513860517	0513R15A7VPV130SM12HZB04P1	Low Pressure Tuned
0513860525	0513R15A7VPV130SM14FYC01	
0513860527	0513R15A7VPV130SM14HYC01	
0513860529	0513R15A7VPV130SM14JYC01	

VPV130 Combination Pumps

Part Number	Description	Special Notes
0513863403	0513R18A7VPV130SM21TZVPV80SM21ZDYB05P1	<i>Phased Out</i>
0513864407	0513R18A7VPV130SM21TZVPV63SM21ZDYB05P1	<i>Phased Out</i>
0513869257	0513R15A7VPV130SM14FZ/HY/ZGS11/45R407	Consult Factory
0513869451	0513R15A7VPV130SM21HZ/HY/ZGS11/32R408	
0513869453	0513R15A7VPV130SM12HZ/IPK32SM21	Low Pressure Tuned
0513869551	0513R15A7VPV130SM12HZ/HY/ZGS11/32R408	Low Pressure Tuned

VPV164

Part Number	Description	Special Notes
0513870209	0513R15A7VPV164SM14FZ	USE 0513870525
0513870213	0513R15A7VPV164SM14FY	USE 0513870525
0513870229	0513R15A7VPV164SM14FYP1	USE 0513870255
0513870233	0513R15A7VPV164SM14JYP1	USE 0513870259
0513870245	0513R15A7VPV164SM18HZ	USE 0513870405
0513870247	0513R15A7VPV164SM18HY	USE 0513870407
0513870249	0513R15A7VPV164SM18JZ	USE 0513870409
0513870251	0513R15A7VPV164SM18JY	USE 0513870411
0513870253	0513R15A7VPV164SM18HZP1	USE 0513870417
0513870255	0513R15A7VPV164SM18HYP1	USE 0513870419
0513870257	0513R15A7VPV164SM18JZP1	USE 0513870421
0513870259	0513R15A7VPV164SM18JYP1	USE 0513870423
0513870261	0513R15A7VPV164SM14HZP1	USE 0513870253
0513870405	0513R15A7VPV164SM21HQB04	
0513870407	0513R15A7VPV164SM21HYB04	
0513870409	0513R15A7VPV164SM21JQB04	
0513870411	0513R15A7VPV164SM21JYB04	
0513870417	0513R15A7VPV164SM21HQB04P1	
0513870419	0513R15A7VPV164SM21HYB04P1	
0513870421	0513R15A7VPV164SM21JQB04P1	
0513870423	0513R15A7VPV164SM21JYB04P1	
0513870427	0513R15A7VPV164SM21XQB04P1	
0513870429	0513R15A7VPV164SM21JSB04	200 psi diff. @1800 rpm
0513870431	0513R15A7VPV164SM21JSB04P1	200 psi diff. @1800 rpm
0513870433	0513R18A7VPV164SM21HYB04P1	Thrust Screw set @1800 rpm
0513870435	0513R15A7VPV155SM21JSB04	155 cc/rev. Displacement
0513870437	0513R15A7VPV140SM21JSB04	140 cc/rev. Displacement
0513870439	0513R15A7VPV164SM21JSB04	Low Thrust Screw Setting
0513870517	0513R15A7VPV164SM12HQB04P1	Low Pressure Tuned
0513870525	0513R15A7VPV164SM14FYC01	
0513870527	0513R15A7VPV164SM14HYC01	
0513870529	0513R15A7VPV164SM14JYC01	

VPV164 Combination Pumps

Part Number	Description	Special Notes
0513875401	0513R15A7VPV164SM21HYVPV63SM21HYB04	
0513876401	0513R15A7VPV164SM21HYVPV45SM21HYB04	
0513879251	0513R15A7VPV164SM14HZ/HY/ZGS11/32R408	USE 0513879451
0513879451	0513R15A7VPV164SM21HZ/HY/ZGS11/32R408	
0513879453	0513R15A7VPV164SM12HZ/IPK32MM21B04	Low Pressure Tuned
0513879551	0513R15A7VPV164SM12HZ/HY/ZGS11/32R408	Low Pressure Tuned

F Controls (Single Stage)

VPV16

Part Number	Description
0513300201	0513R15A7VPV16SM14FZ
0513300225	0513R15A7VPV16SM14FY
0513300401	0513R15A7VPV16SM21FZB03
0513300403	0513R15A7VPV16SM21FYB03
0513300413	0513R15A7VPV16SM21FZB03P1
0513300415	0513R15A7VPV16SM21FYB03P1

VPV25

Part Number	Description
0513400205	0513R15A7VPV25SM14FZ
0513400227	0513R15A7VPV25SM14FY
0513400401	0513R15A7VPV25SM21FZB03
0513400403	0513R15A7VPV25SM21FYB03
0513400413	0513R15A7VPV25SM21FZB03P1
0513400415	0513R15A7VPV25SM21FYB03P1
0513400427	0513R15A7VPV20SM12FS B03

VPV32

Part Number	Description
0513500205	0513R15A7VPV32SM14FZ
0513500239	0513R15A7VPV32SM14FY
0513500401	0513R15A7VPV32SM21FZB03
0513500403	0513R15A7VPV32SM21FYB03
0513500413	0513R15A7VPV32SM21FZB03P1
0513500415	0513R15A7VPV32SM21FYB03P1

VPV45–80

Part Number	Description
0513600527	0513R15A7VPV45SM14FYC01
0513700525	0513R15A7VPV63SM14FYC01
0513800525	0513R15A7VPV80SM14FYC01

VPV100–164

Part Number	Description
0513850525	0513R15A7VPV100SM14FYC01
0513860525	0513R15A7VPV130SM14FYC01
0513870525	0513R15A7VPV164SM14FYC01

H Controls (Two Stage and Remote)

VPV16

Part Number	Description
0513300227	0513R15A7VPV16SM14HZ
0513300229	0513R15A7VPV16SM14HY
0513300405	0513R15A7VPV16SM21HZB03
0513300407	0513R15A7VPV16SM21HYB03
0513300417	0513R15A7VPV16SM21HZB03P1
0513300419	0513R15A7VPV16SM21HYB03P1
0513300517	0513R15A7VPV16SM12HZB03P1

VPV 25

Part Number	Description
0513400229	0513R15A7VPV25SM14HZ
0513400231	0513R15A7VPV25SM14HY
0513400405	0513R15A7VPV25SM21HZB03
0513400407	0513R15A7VPV25SM21HYB03
0513400417	0513R15A7VPV25SM21HZB03P1
0513400419	0513R15A7VPV25SM21HYB03P1
0513400429	0513R18A7VPV25SM21HYB03
0513400431	0513R18A7VPV25SM21HYB03P1
0513400517	0513R15A7VPV25SM12HZB03P1

VPV32

Part Number	Description
0513500241	0513R15A7VPV32SM14HZ
0513500243	0513R15A7VPV32SM14HY
0513500405	0513R15A7VPV32SM21HZB03
0513500407	0513R15A7VPV32SM21HYB03
0513500417	0513R15A7VPV32SM21HZB03P1
0513500419	0513R15A7VPV32SM21HYB03P1
0513500433	0513R18A7VPV32SM21HYB03
0513500441	0513R18A7VPV32SM21HYB03P1
0513500517	0513R15A7VPV32SM12HZB03P1

VPV45

Part Number	Description
0513600405	0513R15A7VPV45SM21HZB05
0513600407	0513R15A7VPV45SM21HYB05
0513600417	0513R15A7VPV45SM21HZB05P1
0513600419	0513R15A7VPV45SM21HYB05P1
0513600431	0513R18A7VPV45SM21HYB05
0513600439	0513R18A7VPV45SM21HYB05P1
0513600529	0513R15A7VPV45SM14HYC01

VPV63

Part Number	Description
0513700405	0513R15A7VPV63SM21HZB05
0513700407	0513R15A7VPV63SM21HYB05
0513700417	0513R15A7VPV63SM21HZB05P1
0513700419	0513R15A7VPV63SM21HYB05P1
0513700437	0513R18A7VPV63SM21HYB05P1
0513700439	0513R18A7VPV63SM21HYB05
0513700527	0513R15A7VPV63SM14HYC01

VPV80

Part Number	Description
0513800405	0513R15A7VPV80SM21HZB05
0513800407	0513R15A7VPV80SM21HYB05
0513800417	0513R15A7VPV80SM21HZB05P1
0513800419	0513R15A7VPV80SM21HYB05P1
0513800433	0513R18A7VPV80SM21HYB05P1
0513800527	0513R15A7VPV80SM14HYC01

VP100

Part Number	Description
0513850405	0513R15A7VPV100SM21HZB04
0513850407	0513R15A7VPV100SM21HYB04
0513850417	0513R15A7VPV100SM21HZB04P1
0513850419	0513R15A7VPV100SM21HYB04P1
0513850427	0513R15A7VPV100SM07HZB04
0513850431	0513R18A7VPV100SM21HYB04P1
0513850517	0513R15A7VPV100SM12HZB04P1
0513850527	0513R15A7VPV100SM14HYC01

VPV130

Part Number	Description
0513860405	0513R15A7VPV130SM21HZB04
0513860407	0513R15A7VPV130SM21HYB04
0513860417	0513R15A7VPV130SM21HZB04P1
0513860419	0513R15A7VPV130SM21HYB04P1
0513860429	0513R18A7VPV130SM21HYB04P1
0513860517	0513R15A7VPV130SM12HZB04P1
0513860527	0513R15A7VPV130SM14HYC01

VPV164

Part Number	Description
0513870405	0513R15A7VPV164SM21HZB04
0513870407	0513R15A7VPV164SM21HYB04
0513870417	0513R15A7VPV164SM21HZB04P1
0513870419	0513R15A7VPV164SM21HYB04P1
0513870433	0513R18A7VPV164SM21HYB04P1
0513870517	0513R15A7VPV164SM12HZB04P1
0513870527	0513R15A7VPV164SM14HYC01

J Controls (Load Sense)

VPV16

Part Number	Description
0513300231	0513R15A7VPV16SM14JZ
0513300233	0513R15A7VPV16SM14JY
0513300409	0513R15A7VPV16SM21JZB03
0513300411	0513R15A7VPV16SM21JYB03
0513300421	0513R15A7VPV16SM21JZB03P1
0513300423	0513R15A7VPV16SM21JYB03P1

VPV25

Part Number	Description
0513400233	0513R15A7VPV25SM14JZ
0513400235	0513R15A7VPV25SM14JY
0513400409	0513R15A7VPV25SM21JZB03
0513400411	0513R15A7VPV25SM21JYB03
0513400421	0513R15A7VPV25SM21JZB03P1
0513400423	0513R15A7VPV25SM21JYB03P1

VPV32

Part Number	Description
0513500245	0513R15A7VPV32SM14JZ
0513500247	0513R15A7VPV32SM14JY
0513500409	0513R15A7VPV32SM21JZB03
0513500411	0513R15A7VPV32SM21JYB03
0513500421	0513R15A7VPV32SM21JZB03P1
0513500423	0513R15A7VPV32SM21JYB03P1
0513500443	0513R15A7VPV32SM21JSB03
0513500445	0513R15A7VPV32SM21JSB03

VPV45

Part Number	Description
0513600409	0513R15A7VPV45SM21JZB05
0513600411	0513R15A7VPV45SM21JYB05
0513600421	0513R15A7VPV45SM21JZB05P1
0513600423	0513R15A7VPV45SM21JYB05P1
0513600445	0513R15A7VPV45SM21JSB05
0513600531	0513R15A7VPV45SM14JYC01

VPV63

Part Number	Description
0513700409	0513R15A7VPV63SM21JZB05
0513700411	0513R15A7VPV63SM21JYB05
0513700421	0513R15A7VPV63SM21JZB05P1
0513700423	0513R15A7VPV63SM21JYB05P1
0513700447	0513R15A7VPV63SM21JSB05
0513700449	0513R15A7VPV63SM21JSB05
0513700451	0513R15A7VPV63SM21JSB05
0513700453	0513R15A7VPV58SM21JSB05
0513700529	0513R15A7VPV63SM14JYC01

VPV80

Part Number	Description
0513800409	0513R15A7VPV80SM21JZB05
0513800411	0513R15A7VPV80SM21JYB05
0513800421	0513R15A7VPV80SM21JZB05P1
0513800423	0513R15A7VPV80SM21JYB05P1
0513800435	0513R15A7VPV80SM21JSB05
0513800437	0513R15A7VPV72SM21JSB05
0513800439	0513R15A7VPV80SM21JSB05
0513800529	0513R15A7VPV80SM14JYC01

VPV100

Part Number	Description
0513850409	0513R15A7VPV100SM21JZB04
0513850411	0513R15A7VPV100SM21JYB04
0513850421	0513R15A7VPV100SM21JZB04P1
0513850423	0513R15A7VPV100SM21JYB04P1
0513850433	0513R15A7VPV100SM21JSB04
0513850529	0513R15A7VPV100SM14JYC01

VPV130

Part Number	Description
0513860409	0513R15A7VPV130SM21JZB04
0513860411	0513R15A7VPV130SM21JYB04
0513860421	0513R15A7VPV130SM21JZB04P1
0513860423	0513R15A7VPV130SM21JYB04P1
0513860431	0513R15A7VPV130SM21JSB04
0513860529	0513R15A7VPV130SM14JYC01

VPV164

Part Number	Description
0513870409	0513R15A7VPV164SM21JZB04
0513870411	0513R15A7VPV164SM21JYB04
0513870421	0513R15A7VPV164SM21JZB04P1
0513870423	0513R15A7VPV164SM21JYB04P1
0513870429	0513R15A7VPV164SM21JSB04
0513870431	0513R15A7VPV164SM21JSB04P1
0513870435	0513R15A7VPV155SM21JSB04
0513870437	0513R15A7VPV140SM21JSB04
0513870439	0513R15A7VPV164SM21JSB04
0513870529	0513R15A7VPV164SM14JYC01

Solenoid Two Pressure, Normally Low

VPV16–164

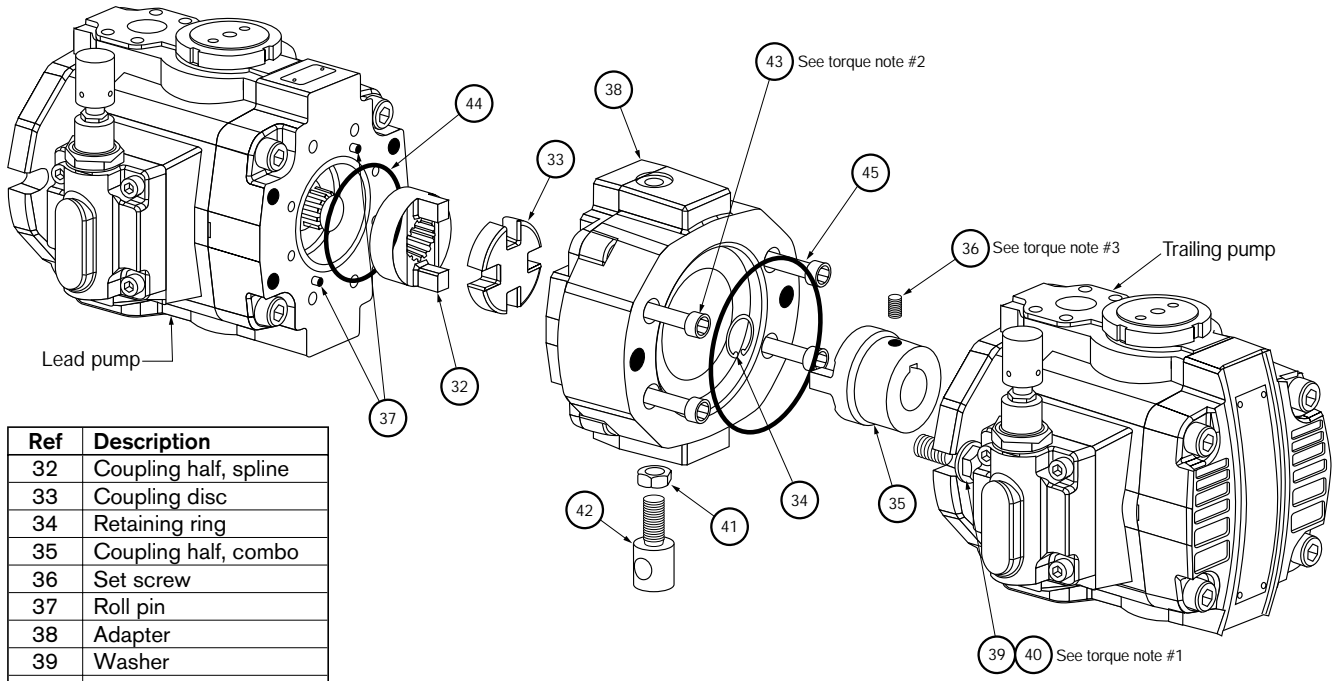
Part Number	Description
0513500431	0513R18A7VPV32SM21XDYB03
0513500525	0513R15A7VPV32SM12XDZB03P1
0513600425	0513R15A7VPV45SM21XDZB05
0513600427	0513R15A7VPV45SM21XDYB05
0513600429	0513R18A7VPV45SM21XDYB05
0513600525	0513R15A7VPV45SM12XDZB05P1
0513700427	0513R15A7VPV63SM21XDYB05
0513700429	0513R15A7VPV63SM21XDYB05P1
0513700431	0513R18A7VPV63SM21XDYB05P1
0513700433	0513R18A7VPV63SM21XDYB05
0513800425	0513R15A7VPV80SM21XDYB05P1
0513850425	0513R15A7VPV100SM21XDZB04
0513870427	0513R15A7VPV164SM21XDZB04P1

Solenoid Vent, Normally Vented

VPV16–164

Part Number	Description
0513300429	0513R15A7VPV16SM21ZAYB03
0513500437	0513R18A7VPV32SM21ZDYB03P1
0513600435	0513R18A7VPV45SM21ZDYB03P1
0513700443	0513R18A7VPV63SM21ZDYB05P1
0513700445	0513R18A7VPV63SM21ZDSB05P1
0513700455	0513R15A7VPV63SM21ZDZB05
0513800431	0513R18A7VPV80SM21ZDYB05P1

Adapter Kits VPV Combinations Using "P1" Pumps



Ref	Description
32	Coupling half, spline
33	Coupling disc
34	Retaining ring
35	Coupling half, combo
36	Set screw
37	Roll pin
38	Adapter
39	Washer
40	Hex head cap screw
41	Jam nut
42	Support
43	Soc. head cap screw
44	O-ring, ASA-043
45	O-ring

Adapter Kits	
List Number	Description
9 511 230 520	VPV 16 to VPV 16 Metric
9 511 230 518	VPV 16 to VPV 16 SAE
R978711779	VPV 16 to "F" Gear SAE Key
9 511 230 673	VPV 16 to "F" Gear SAE Spline
9 511 230 522	VPV 25/32 to VPV 25/32 Metric
9 511 230 523	VPV 25/32 to VPV 25/32 SAE
9 511 230 524	VPV 25/32 to VPV 16 Metric
9 511 230 525	VPV 25/32 to VPV 16 SAE
R978711780	VPV 25/32 to "F" Gear SAE Key
9 511 230 674	VPV 25/32 to "F" Gear SAE Spline
R978711792	VPV 25/32 to "G" Gear SAE Key
9 511 230 531	VPV 45/63/80 to VPV 16 Metric
9 511 230 532	VPV 45/63/80 to VPV 16 SAE
9 511 230 529	VPV 45/63/80 to VPV 25/32 Metric
9 511 230 530	VPV 45/63/80 to VPV 25/32 SAE
9 511 230 527	VPV 45/63/80 to VPV 45/63/80 Metric
9 511 230 528	VPV 45/63/80 to VPV 45/63/80 SAE
R978711781	VPV 45/63/80 to "F" Gear SAE Key
9 511 230 675	VPV 45/63/80 to "F" Gear SAE Spline
R978711782	VPV 45/63/80 to "G" Gear SAE Key
9 511 230 541	VPV 100/130/164 to VPV 16 Metric
9 511 230 542	VPV 100/130/164 to VPV 16 SAE
9 511 230 539	VPV 100/130/164 to VPV 25/32 Metric
9 511 230 540	VPV 100/130/164 to VPV 25/32 SAE
9 511 230 537	VPV 100/130/164 to VPV 45/63/80 Metric
9 511 230 538	VPV 100/130/164 to VPV 45/63/80 SAE
9 511 230 535	VPV 100/130/164 to VPV 100/130/164 Metric
9 511 230 536	VPV 100/130/164 to VPV 100/130/164 SAE
R978711804	VPV 100/130/164 to SAE "B" Spline
9 511 230 682	VPV 100/130/164 to SAE "C" Spline
R978711783	VPV 100/130/164 to "F" Gear SAE Key
R978711808	VPV 100/130/164 to "G" Gear SAE Key

Torque Note #1	
Torque to 2000 lb/in (Torque to 225 Nm)	"VPV 100/130/164"
Torque to 1800 lb/in (Torque to 204 Nm)	"VPV 45/63/80"
Torque to 1050 lb/in (Torque to 119 Nm)	"VPV 25/32"
Torque to 780 lb/in (Torque to 88 Nm)	"VPV 16" & Type 'G' gear pump
Torque to 550 lb/in (Torque to 62 Nm)	Type 'F' gear pump
Torque Note #2	
Torque to 2300 lb/in (Torque to 260 Nm)	"VPV 100/130/164"
Torque to 850 lb/in (Torque to 96 Nm)	"VPV 45/63/80"
Torque to 550 lb/in (Torque to 62 Nm)	"VPV 25/32" & Type 'G' gear pump
Torque to 400 lb/in (Torque to 46 Nm)	"VPV 16" & Type 'F' gear pump
Torque Note #3	
Torque to 800 lb/in (Torque to 90 Nm)	"VPV 100/130/164"
Torque to 330 lb/in (Torque to 37 Nm)	"VPV 45/63/80"
Torque to 280 lb/in (Torque to 31.5 Nm)	"VPV 25/32" & Type 'G' gear pump
Torque to 200 lb/in (Torque to 22.5 Nm)	Type 'F' gear pump

Notes

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Subject to change.