



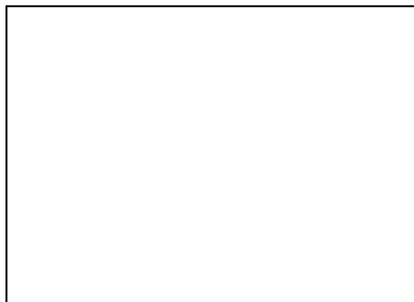
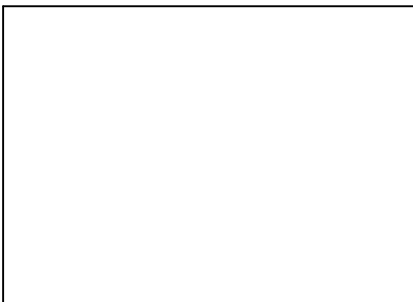
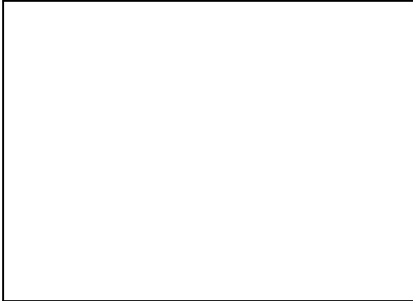
VELJAN

Service Information

SS4-00135

VT7DB - VT7DBS

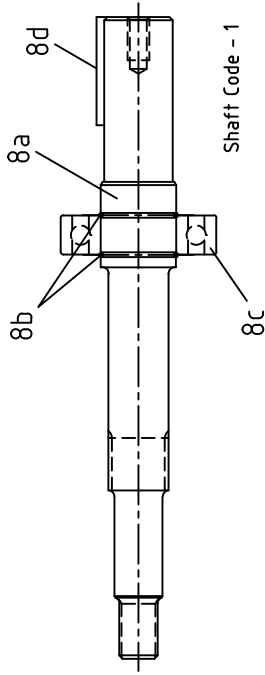
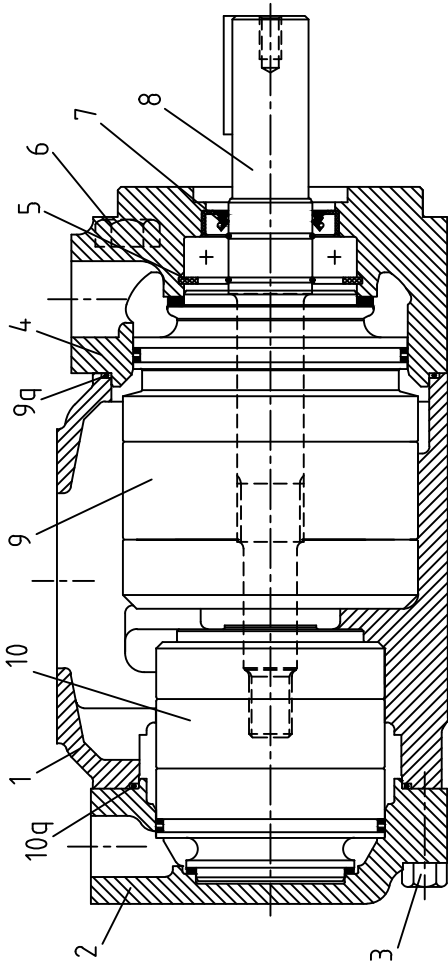
Double vane pump



PHOTO

Bold printed are recommended repair kits and assemblies

Mounting torque			
Item pos.	3	6	
N-m	68	187	
ft-lbs	50	138	



Shaft Code - 1



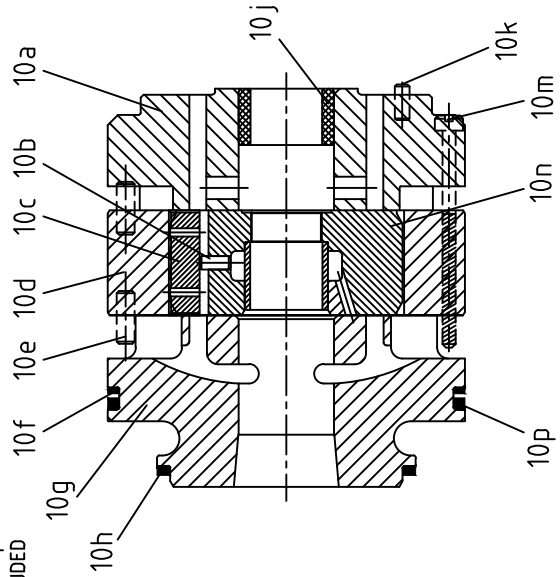
Shaft Code - 2

Shaft Code - 3

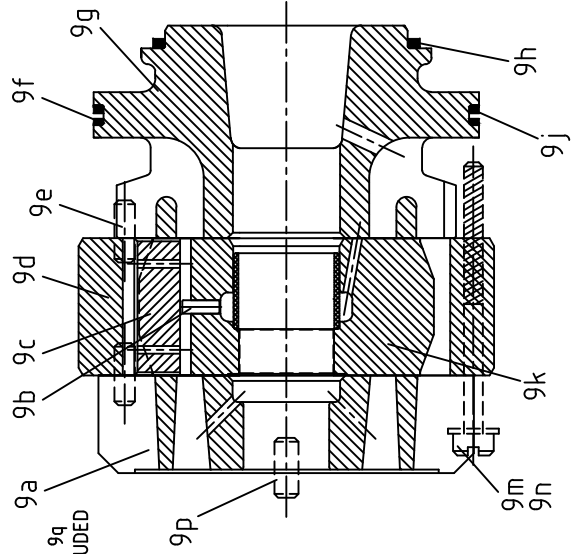
Shaft Code - 4

Shaft Code - 5

ITEM 10q INCLUDED



ITEM 9q INCLUDED



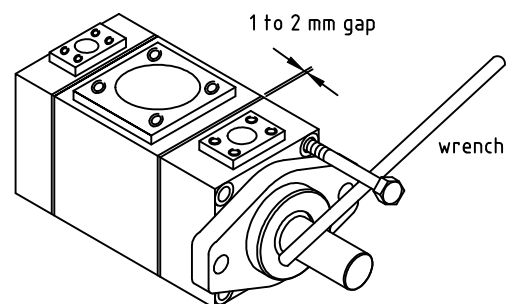
Item pos.	Description	Part No.	Qty
		VT7DB - VT7DBS	
1	Housing (UNC)	V034-48133	1
	Housing (Metric)	C-034-03065	
2	End cap (UNC) (P2=3/4")	V034-66523	1
	End cap (UNC) (P2=1")	V034-48579	
	End cap (METRIC) (P2=3/4")	H-034-66765	
	End cap (METRIC) (P2=1")	H-034-71327	
3	Mounting Screw	V306-40111	7
4	Mounting flange (UNC)	V034-48135	1
	Mounting flange (Metric)	C-034-03067	
	Mounting flange (Metric) (VT7DB)	H-034-67595	
5	Retaining ring	V356-32283	1
6	Mounting Screw	V306-40156	4
7	Shaft seal (S1-0.7 bar)	V620-82062	1
	Shaft seal (S4-S5-7 bar)	V620-82066	
8	Shaft and bearing ass'y (Code-1)	VS14-42520	1
	Shaft and bearing ass'y (Code-2)	VS14-42521	
	Shaft and bearing ass'y (Code-3)	VS14-42518	
	Shaft and bearing ass'y (Code-4)	VS14-42519	
	Shaft and bearing ass'y (Code-5) (VT7DB-VT7DBS)	VS24-45065	
8a	Shaft (Keyed) (Code-1)	V034-71363	1
	Shaft (Keyed) (Code-2)	V034-71364	
	Shaft (Splined) (Code-3)	V034-71361	
	Shaft (splined) (Code-4)	V034-71362	
	Shaft (Keyed) (Code-5) (VT7DB-VT7DBS)	H-034-66815	
8b	Round section ring	V034-70853	2
8c	Ball bearing	V230-00207	1
8d	Key (Code -1)	V034-46754	1
	Key (Code -2)	V034-49676	
	Key (Code -5) (VT7DB-VT7DBS)	H-034-30168	
9	Cartridge assembly B14 C.W. (P1)	VS24-76963	1
	Cartridge assembly B14 C.C.W. (P1)	VS24-76964	
	Cartridge assembly B17 C.W. (P1)	VS24-76965	
	Cartridge assembly B17 C.C.W. (P1)	VS24-76966	
	Cartridge assembly B20 C.W. (P1)	VS24-76967	
	Cartridge assembly B20 C.C.W. (P1)	VS24-76968	
	Cartridge assembly B22 C.W. (P1)	VS24-76969	
	Cartridge assembly B22 C.C.W. (P1)	VS24-76970	
	Cartridge assembly B24 C.W. (P1)	VS24-76971	
	Cartridge assembly B24 C.C.W. (P1)	VS24-76972	
	Cartridge assembly B28 C.W. (P1)	VS24-76973	
	Cartridge assembly B28 C.C.W. (P1)	VS24-76974	
	Cartridge assembly B31 C.W. (P1)	VS24-76975	
	Cartridge assembly B31 C.C.W. (P1)	VS24-76976	
	Cartridge assembly B35 C.W. (P1)	VS24-76977	
	Cartridge assembly B35 C.C.W. (P1)	VS24-76978	
	Cartridge assembly B38 C.W. (P1)	VS24-76979	
	Cartridge assembly B38 C.C.W. (P1)	VS24-76980	
	Cartridge assembly B42 C.W. (P1)	VS24-76981	
	Cartridge assembly B42 C.C.W. (P1)	VS24-76982	
	Cartridge assembly B45 C.W. (P1)	VS24-10859	
Cartridge assembly B45 C.C.W. (P1)	VS24-10860		
Cartridge assembly B50 C.W. (P1)	VS24-40236		
Cartridge assembly B50 C.C.W. (P1)	VS24-40237		
9a	Port plate - rear (Except cam rings 045-050) - P1	H-034-67478	1
	Port plate - rear C.W. (Only cam rings 045-050) - P1	V034-59810	
	Port plate - rear C.C.W. (Only cam rings 045-050) - P1	V034-59811	
9b	Pin vane holdout (Except cam rings 045-050)	V034-59098	12
	Pin vane holdout (Only cam rings 045-050)	V034-59130	10

Item pos.	Description	Part No.		Qty
			VT7DB - VT7DBS	
9c	Vane (Except cam rings 045-050)	H-034-67453		12
	Vane (Only cam rings 045-050)	V034-53588		10
9d	Cam ring - B14	H-034-67469		1
	Cam ring - B17	H-034-67470		
	Cam ring - B20	H-034-67159		
	Cam ring - B22	H-034-67482		
	Cam ring - B24	H-034-67158		
	Cam ring - B28	H-034-67157		
	Cam ring - B31	H-034-67156		
	Cam ring - B35	H-034-67155		
	Cam ring - B38	H-034-67154		
	Cam ring - B42	H-034-67153		
	Cam ring - 045	V034-59131		
	Cam ring - 050	V034-66737		
	9e	Dowel pin	V324-21612	
9f	Back-up ring	V618-15017		1
9g	Port plate - pressure (Except cam rings 045-050) - P1	H-034-67479		1
	Port plate - pressure C.W (Only cam rings 045-050) - P1	V034-59808		
	Port plate - pressure C.C.W (Only cam rings 045-050) - P1	V034-59809		
9h	Sq. section seal	V691-10232		1
9j	Sq. section seal	V691-10244		1
9k	Rotor-insert ass'y (Except cam rings 045-050)	H-S24-73783		1
	Rotor-insert ass'y (Only cam rings 045-050)	VS24-10121		
9m	Screw	V317-10320		2
9n	Lockwasher internal tooth	V348-10010		2
9p	Dowel pin	V323-82004		1
9q	Sq. section seal	V671-10159		1
10	Cartridge assembly B02 C.W (P2)	VS24-51513		1
	Cartridge assembly B02 C.C.W (P2)	VS24-51514		
	Cartridge assembly B03 C.W (P2)	VS24-51515		
	Cartridge assembly B03 C.C.W (P2)	VS24-51516		
	Cartridge assembly B04 C.W (P2)	VS24-51517		
	Cartridge assembly B04 C.C.W (P2)	VS24-51518		
	Cartridge assembly B05 C.W (P2)	VS24-51519		
	Cartridge assembly B05 C.C.W (P2)	VS24-51520		
	Cartridge assembly B06 C.W (P2)	VS24-51521		
	Cartridge assembly B06 C.C.W (P2)	VS24-51522		
	Cartridge assembly B07 C.W (P2)	VS24-59972		
	Cartridge assembly B07 C.C.W (P2)	VS24-59973		
	Cartridge assembly B08 C.W (P2)	VS24-51523		
	Cartridge assembly B08 C.C.W (P2)	VS24-51524		
	Cartridge assembly B09 C.W (P2)	VS24-77376		
	Cartridge assembly B09 C.C.W (P2)	VS24-77377		
	Cartridge assembly B10 C.W (P2)	VS24-51525		
	Cartridge assembly B10 C.C.W (P2)	VS24-51526		
	Cartridge assembly B11 C.W (P2)	VS24-77378		
	Cartridge assembly B11 C.C.W (P2)	VS24-77379		
	Cartridge assembly B12 C.W (P2)	VS24-59017		
Cartridge assembly B12 C.C.W (P2)	VS24-59018			
Cartridge assembly B14 C.W (P2)	VS24-77380			
Cartridge assembly B14 C.C.W (P2)	VS24-77381			
Cartridge assembly B15 C.W (P2)	VS24-59019			
Cartridge assembly B15 C.C.W (P2)	VS24-59020			
10a	Port plate - rear Bi-dir	C-034-03220		1
10b	Pin vane holdout	H-034-66920		12
10c	Vane	H-034-66917		12
10d	Cam ring - B02	H-034-66909		1
	Cam ring - B03	H-034-66910		
	Cam ring - B04	H-034-66911		
	Cam ring - B05	H-034-66912		

Item pos.	Description	Part No.		Qty
			VT7DB - VT7DBS	
	Cam ring - B06		H-034-66913	
	Cam ring - B07		H-034-67063	
	Cam ring - B08		H-034-66914	
	Cam ring - B09		H-034-67383	
	Cam ring - B10		H-034-66915	
	Cam ring - B11		H-034-67461	
	Cam ring - B12		H-034-67032	
	Cam ring - B14		H-034-67409	
	Cam ring - B15		H-034-67034	
10e	Dowel pin		V324-21208	2
10f	Back-up ring		V618-15016	1
10g	Port plate - pressure Bi-dir		H-034-66923	1
10h	Sq. section seal		V691-10229	1
10j	Bush		V034-70868	1
10k	Dowel pin		V323-82010	1
10m	Screw		V317-06266	2
10n	Rotor-insert ass'y		H-524-49820	1
10p	Sq. section seal		V691-10238	1
10q	Sq. section seal		V671-10156	1
7, 9f	Seal kit (S1-0.7 bar)		VS24-10170	1
9j, 9h	Seal kit (S4-7 bar)		VS24-10170-4	
9q, 10f	Seal kit (S5-7 bar)		VS24-10170-5	
10p, 10h 10q				
9a	Port plate rear ass'y (Except cam rings 045-050) - P1		VS24-76916	1
9p	Port plate rear ass'y C.W (Only cam rings 045-050) - P1		VS24-10831	
	Port plate rear ass'y C.C.W (Only cam rings 045-050) - P1		VS24-10832	
10a	Port plate rear and bush ass'y "P2"		VS24-51527	1
10k				
10j				

To change porting position, follow the steps below:

1. Secure pump and remove 4 bolts from mounting flange. Move the mounting flange 1 to 2 mm away from housing. Insert one bolt halfway to mounting flange. Install a wrench between the shaft and bolt and turn in the desired way, so that the required position of P1 port with respect to Suction is obtained. Reinstall the bolts and tighten to corresponding mounting torque as provided on page 2.
2. Follow similar procedure for changing P2 position. Use wrench between two bolts placed diagonally opposite.



Instruction : Do not remove mounting flange/end cap completely from the housing but only just 1 to 2 mm to avoid the cartridge pin to move out from the housing dowel pin hole. Make sure no piece of paint enters into the gap to avoid leakage.

If it is difficult to turn mounting flange/end cap put some hydraulic oil in to the pressure port to lubricate the pressure port seals.

MODEL CODE

Series

VT7DB series-125 A2 HW
ISO 2 bolts 3019-2 mounting flange

VT7DBS series- SAE C 2 bolts
Mounting flange J744c

Cam ring	Displacement in ³ /rev (cm ³ /rev)	Cam ring	Displacement in ³ /rev (cm ³ /rev)
B14	= 2.68 (43.9)	B31	= 6.05 (99.1)
B17	= 3.36 (55.0)	B35	= 6.92 (113.4)
B20	= 4.03 (66.0)	B38	= 7.36 (120.6)
B22	= 4.29 (70.3)	B42	= 8.39 (137.5)
B24	= 4.95 (81.1)	045	= 8.89 (145.7)
B28	= 5.49 (89.9)	050	= 9.64 (157.9)

Cam ring	Displacement in ³ /rev (cm ³ /rev)	Cam ring	Displacement in ³ /rev (cm ³ /rev)
B02	= 0.35 (5.7)	B09	= 1.71 (28.0)
B03	= 0.60 (9.8)	B10	= 1.94 (31.8)
B04	= 0.78 (12.8)	B11	= 2.13 (34.9)
B05	= 0.97 (15.9)	B12	= 2.50 (40.9)
B06	= 1.21 (19.8)	B14	= 2.75 (45.1)
B07	= 1.37 (22.5)	B15	= 3.05 (50.0)
B08	= 1.52 (24.9)		

Type of Shaft

- 1 = Keyed (SAE -C)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE -C)
- 4 = Splined (no-SAE)

VT7DBS

- 1 = Keyed (SAE -C)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE -C)
- 4 = Splined (no-SAE)
- 5 = Keyed (ISO 3019-2 - G32M)

VT7DB / VT7DBS - B42 - B10 - 1 R 00 - A 1 - M1 - ..

Modification
Port connection variables

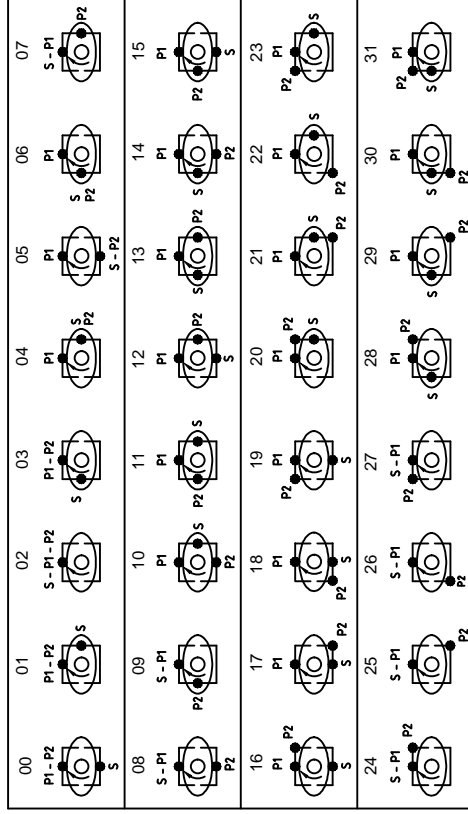
UNC	Metric
VT7DBS	VT7DB - VT7DBS
00	01 M0 M1
P2	1" 3/4" 1" 3/4"

Seal class

- 1 = S1 - BUNA N
- 4 = S4 - EPDM
- 5 = S5 - VITON

Design letter

Porting combination : (00 = Standard)



Direction of rotation

- R = Clockwise
- L = Counter - clockwise

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