



**VELJAN**

**Service Information**

**SS4-00139**

# **VT7EE - VT7EES**

## **Double vane pump**

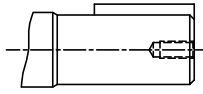
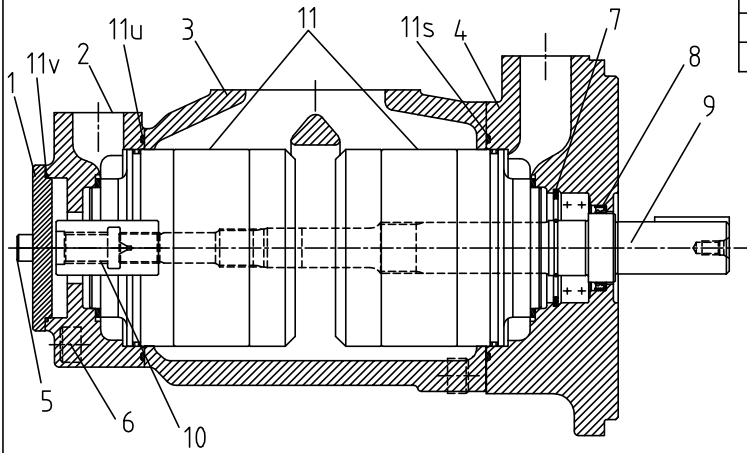


**PHOTO**

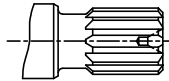
**Bold printed are recommended repair kits and assemblies**

Mounting torque

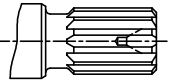
Item pos.	5	6
N-m	88	300
ft-lbs	65	222



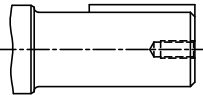
Shaft Code - 2



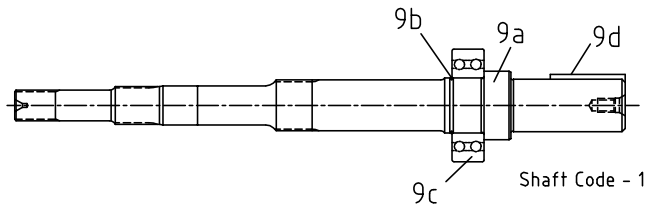
Shaft Code - 3



Shaft Code - 4



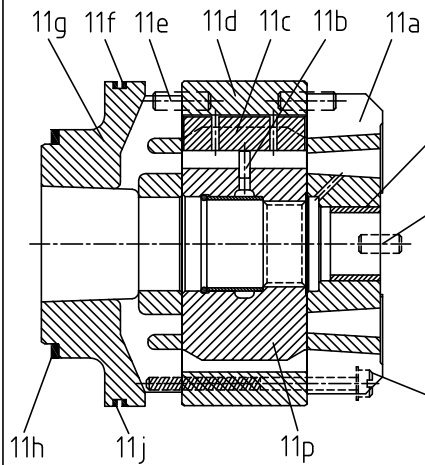
Shaft Code - 5



Shaft Code - 1

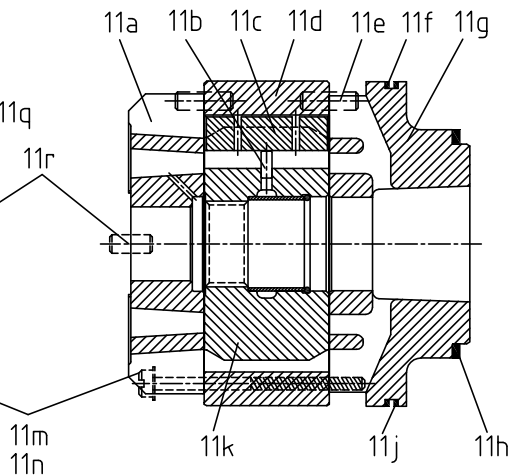
ITEM 11v, 11u INCLUDED

**P2**



**P1**

ITEM 11s INCLUDED



Item pos.	Description	Part No.	Qty
		VT7EE - VT7EES	
1	Cover plate	H-034-67313	1
2	End cap (UNC) ( VT7EES )	H-034-67307	1
	End cap (Metric) ( VT7EE - VT7EES )	H-034-67306	
3	Housing (UNC) ( VT7EES )	H-034-67304	1
	Housing (Metric) ( VT7EE - VT7EES )	H-034-67303	
4	Mounting flange (UNC) ( VT7EES )	H-034-66809	1
	Mounting flange (Metric) ( VT7EES )	H-034-67314	
	Mounting flange (Metric) ( VT7EE )	H-034-66781	
5	Mounting Screw	V361-12230-3	2
6	Mounting Screw	V361-14324-3	8
7	Retaining ring	V356-30315	1
8	Shaft seal (S1-0.7 bar)	V620-00018-3	1
	Shaft seal (S4-S5-7 bar)	V620-00019-3	
9	Shaft and bearing ass'y (Code-1)	VS24-69070	1
	Shaft and bearing ass'y (Code-2) ( VT7EE )	VS24-69071	
	Shaft and bearing ass'y (Code-3)	VS24-69072	
	Shaft and bearing ass'y (Code-4)	VS24-69761	
	Shaft and bearing ass'y (Code-5)	VS24-69762	
9a	Shaft keyed (Code-1)	H-034-67308	1
	Shaft keyed (Code-2) ( VT7EE )	H-034-67309	
	Shaft splined (Code-3)	H-034-67310	
	Shaft splined (Code-4)	H-034-67311	
	Shaft keyed (Code-5)	H-034-67312	
9b	Round section ring	V034-70866	1
9c	Ball bearing	V230-90018-3	1
9d	Key code-1	H-034-66981	1
	Key code-2 (VT7EE)	H-034-66786	
	Key code-5	H-034-66978	
10	Coupling (SAE-B)	H-034-66541	1
	Coupling (SAE-BB)	H-034-66544	
11	Cartridge assembly 042 C.W. (P1)	VS24-77675	1
	Cartridge assembly 042 C.C.W. (P1)	VS24-77676	
	Cartridge assembly 045 C.W. (P1)	VS24-77677	
	Cartridge assembly 045 C.C.W. (P1)	VS24-77678	
	Cartridge assembly 050 C.W. (P1)	VS24-77679	
	Cartridge assembly 050 C.C.W. (P1)	VS24-77680	
	Cartridge assembly 052 C.W. (P1)	VS24-77681	
	Cartridge assembly 052 C.C.W. (P1)	VS24-77682	

Item pos.	Description	Part No.	Qty
		VT7EE - VT7EES	
	Cartridge assembly 054 C.W. (P1)	VS24-77683	
	Cartridge assembly 054 C.C.W. (P1)	VS24-77684	
	Cartridge assembly 057 C.W. (P1)	VS24-77685	
	Cartridge assembly 057 C.C.W. (P1)	VS24-77686	
	Cartridge assembly 062 C.W. (P1)	VS24-77687	
	Cartridge assembly 062 C.C.W. (P1)	VS24-77688	
	Cartridge assembly 066 C.W. (P1)	VS24-77689	
	Cartridge assembly 066 C.C.W. (P1)	VS24-77690	
	Cartridge assembly 072 C.W. (P1)	VS24-77691	
	Cartridge assembly 072 C.C.W. (P1)	VS24-77692	
	Cartridge assembly 085 C.W. (P1)	VS24-77693	
	Cartridge assembly 085 C.C.W. (P1)	VS24-77694	
	Cartridge assembly 042 C.W. (P2)	VS24-90000	1
	Cartridge assembly 042 C.C.W. (P2)	VS24-90001	
	Cartridge assembly 045 C.W. (P2)	VS24-90002	
	Cartridge assembly 045 C.C.W. (P2)	VS24-90003	
	Cartridge assembly 050 C.W. (P2)	VS24-90004	
	Cartridge assembly 050 C.C.W. (P2)	VS24-90005	
	Cartridge assembly 052 C.W. (P2)	VS24-90006	
	Cartridge assembly 052 C.C.W. (P2)	VS24-90007	
	Cartridge assembly 054 C.W. (P2)	VS24-90008	
	Cartridge assembly 054 C.C.W. (P2)	VS24-90009	
	Cartridge assembly 057 C.W. (P2)	VS24-90010	
	Cartridge assembly 057 C.C.W. (P2)	VS24-90011	
	Cartridge assembly 062 C.W. (P2)	VS24-90012	
	Cartridge assembly 062 C.C.W. (P2)	VS24-90013	
	Cartridge assembly 066 C.W. (P2)	VS24-90014	
	Cartridge assembly 066 C.C.W. (P2)	VS24-90015	
	Cartridge assembly 072 C.W. (P2)	VS24-90016	
	Cartridge assembly 072 C.C.W. (P2)	VS24-90017	
	Cartridge assembly 085 C.W. (P2)	VS24-90018	
	Cartridge assembly 085 C.C.W. (P2)	VS24-90019	
11a	Port plate - rear C.W (P1)	H-034-67407	1
	Port plate - rear C.C.W (P1)	H-034-67435	
	Port plate - rear C.W (P2)	H-034-67407	
	Port plate - rear C.C.W (P2)	H-034-67435	
11b	Pin vane holdout	V034-59161	24
11c	Vane	V034-59162	24
11d	Cam ring - 042	H-034-67503	2
	Cam ring - 045	H-034-67504	
	Cam ring - 050	H-034-67505	
	Cam ring - 052	H-034-67506	
	Cam ring - 054	H-034-67619	

Item pos.	Description	Part No.	Qty
		VT7EE - VT7EES	
	Cam ring - 057	H-034-67507	
	Cam ring - 062	H-034-67508	
	Cam ring - 066	H-034-67509	
	Cam ring - 072	H-034-67447	
	Cam ring - 085	H-034-67455	
11e	Dowel pin	V324-22016	4
11f	Back-up ring	V618-15018	2
11g	Pressure port plate C.W (P1)	H-034-67408	1
	Pressure port plate C.C.W (P1)	H-034-67434	
	Pressure port plate C.W (P2)	H-034-67408	
	Pressure port plate C.C.W (P2)	H-034-67434	
11h	Sq.section seal	V691-10237	2
11j	Sq.section seal	V691-10253	2
11k	Rotor-insert ass'y	H-S24-10185	1
11p	Rotor-insert ass'y	H-S24-69822	1
11m	Screw	V310-10340	4
11n	Lockwasher internal tooth	V348-10010	4
11r	Dowel pin	V323-82014	2
11q	Bearing bush	V034-70245	1
11s,11u	Sq.section seal	V671-10259	2
11v	Sq.section seal	V671-10155	1
11f,11h	Seal kit (S1 - 0,7 bar)	VS24-69073	1
11j, 8	Seal kit (S4 - 7 bar)	VS24-69073-4	
11s,11u	Seal kit (S5 - 7 bar)	VS24-69073-5	
11v			
11a,11r	Port plate - rear ass'y C.W. (P1)	VS24-73820	1
	Port plate - rear ass'y C.C.W. (P1)	VS24-76213	
11a,11r	Port plate - rear and bush ass'y C.W. (P2)	VS24-90551	1
11q	Port plate - rear and bush ass'y C.C.W (P2)	VS24-90552	
1, 5	Cover plate ass'y	VS24-69763	1

# MODEL CODE

VT7EE / VT7EES - 066 - 045 - 1 R 00 - A 1 0 00 -

Series

VT7EE Series - 250 B4HW  
 ISO 3019-2 mounting flange  
 VT7EES Series - SAE 4 bolts  
 Mounting flange J744c

Cam ring	Displacement	Cam ring	Displacement
	in <sup>3</sup> /rev (cm <sup>3</sup> /rev)		in <sup>3</sup> /rev (cm <sup>3</sup> /rev)
042	= 8.07 (132.3)	057	= 11.18 (183.2)
045	= 8.77 (142.5)	062	= 12.0 (196.6)
050	= 9.67 (158.5)	066	= 13.0 (213.0)
052	= 10.0 (163.8)	072	= 13.86 (227.1)
054	= 10.43 (170.9)	085	= 16.40 (268.7)

Type of shaft

VT7EE

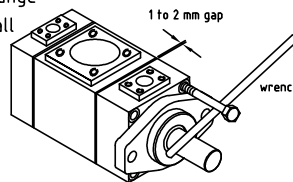
2 - keyed G45N (ISO 3019-2)

VT7EES

1 - keyed ( SAE CC )  
 3 - splined ( SAE CC )  
 4 - splined ( SAE D&E )  
 5 - keyed ( SAE D&E )

To change porting position, follow the steps below:

- 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.
- 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.

Modifications

Mounting w/connection variables  
 SAE 4 bolt flange (J518c)

	UNC	METRIC
VT7EE		M0
VT7EES	00	M0

Coupling adaptor

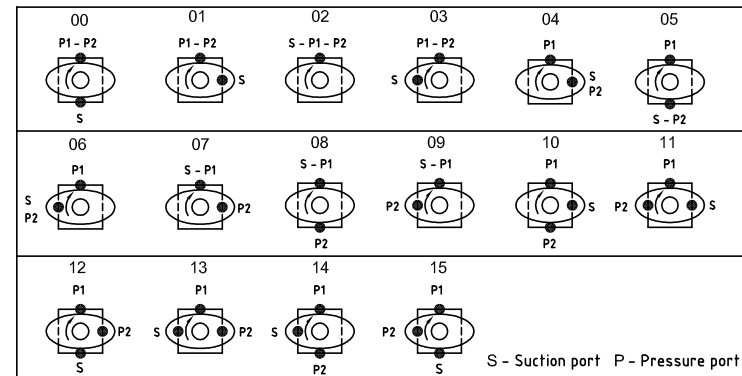
- 0 = None
- 2 = SAE 'B'
- 3 = SAE 'BB'

Seal class

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

Design letter

Porting combination



Direction of rotation (view on shaft end)

R - clockwise

L - counter-clockwise

Veljan Hydrair Limited , Balanagar , Hyderabad - 500 037 , INDIA . Phone : ++91 40 23772794,95 FAX : ++91 40 23773963 , E-mail : info@veljan.com

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