

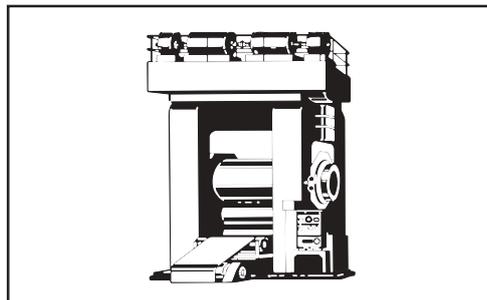
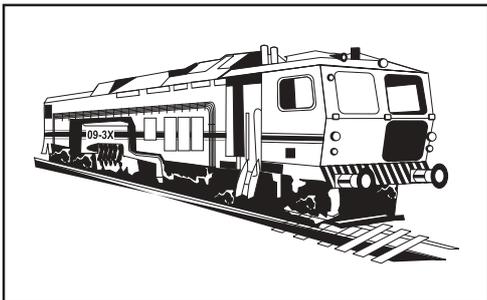
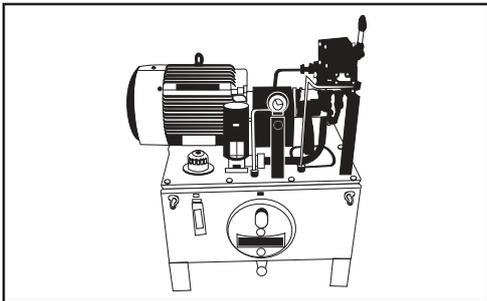
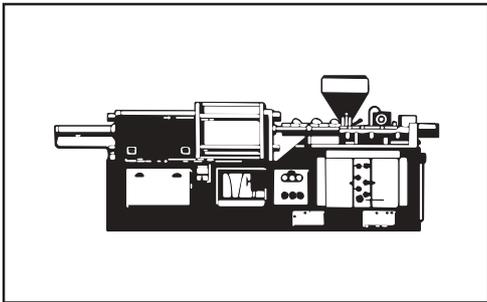


VELJAN

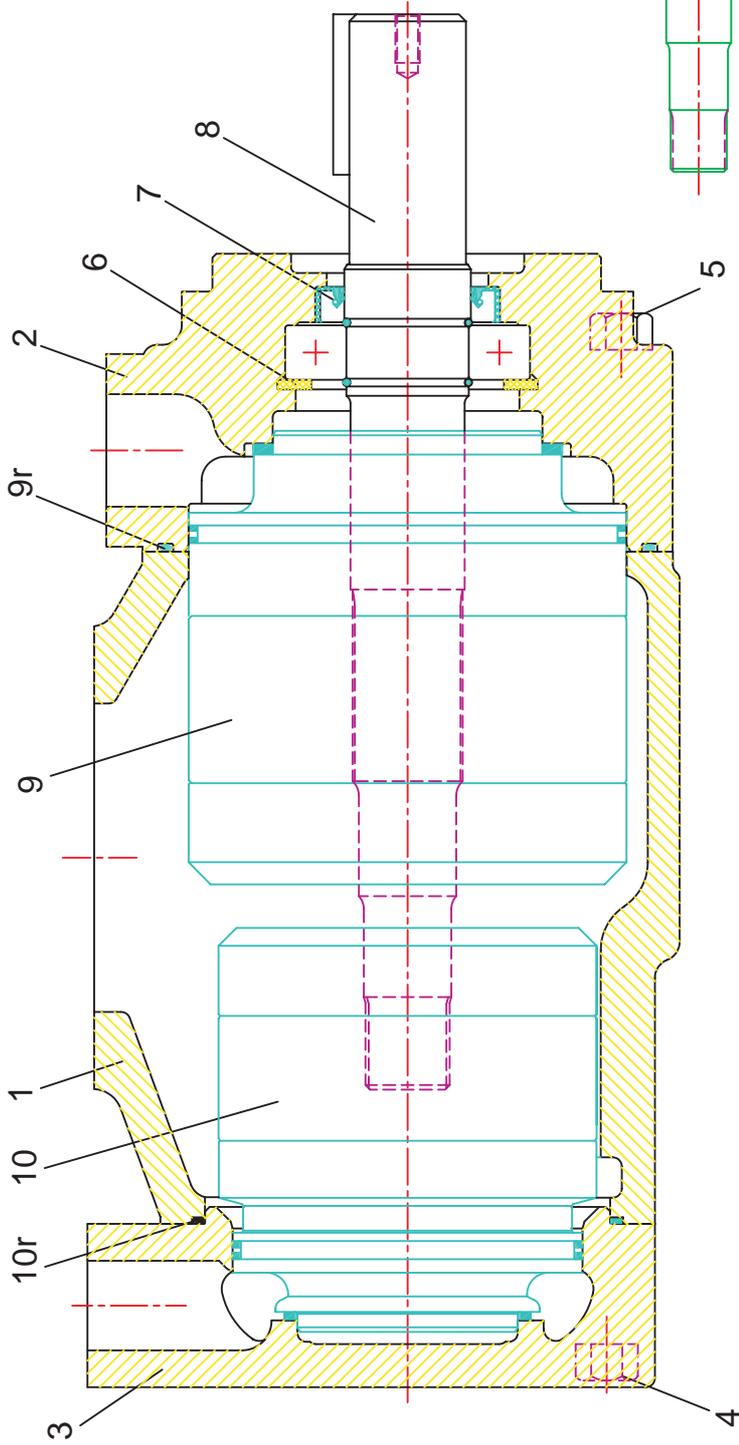
Service Information

SS4 - 00138

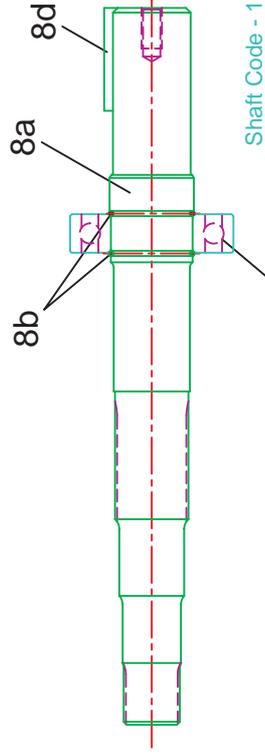
VT7ED - VT7EDS **Double vane pump**



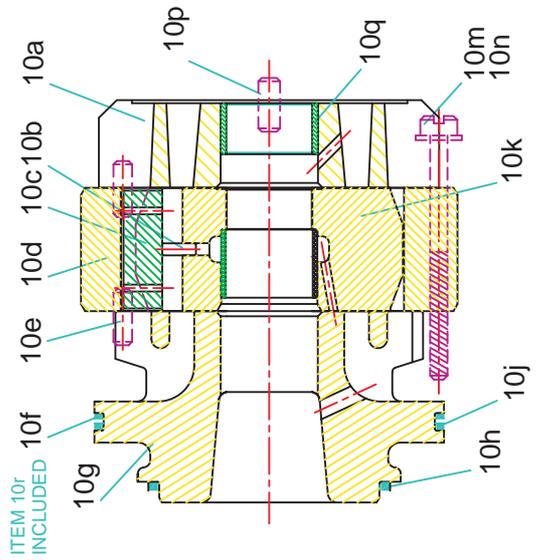
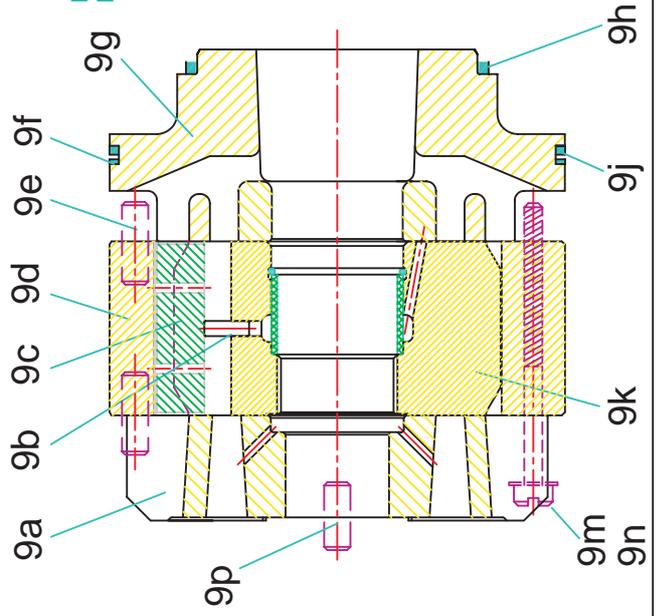
Bold printed are recommended repair kits and assemblies



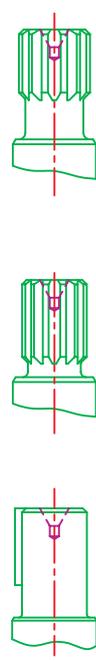
Mounting torque		
Item pos.	4	5
N-m	187	187
ft-lbs	138	138



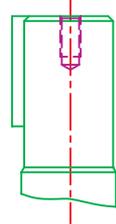
ITEM 9r
INCLUDED



ITEM 10r
INCLUDED



Shaft Code - 1
Shaft Code - 2
Shaft Code - 3
Shaft Code - 4



Shaft Code - 5

Item pos.	Description	Part No.	Qty
		VT7ED - VT7EDS	
1	Housing (UNC)	V034-70271	1
	Housing (Metric)	C-034-03072	
2	Mounting flange (Metric) (VT7ED)	H-034-67646	1
	Mounting flange (UNC)	V034-70265	
	Mounting flange (Metric)	H-034-66894	
3	End cap (UNC)	V034-70275	1
	End cap (Metric)	C-034-03070	
4	Mounting Screw	V306-40156	4
5	Mounting Screw	V306-40216	4
6	Retaining ring	V356-30315	1
7	Shaft seal (S1-0.7 bar)	V620-82064	1
	Shaft seal (S4-S5-7 bar)	V620-82072	
8	Shaft and bearing ass'y (Code-1)	VS14-28182	1
	Shaft and bearing ass'y (Code-2)	VS14-49214	
	Shaft and bearing ass'y (Code-3)	VS14-28180	
	Shaft and bearing ass'y (Code-4)	VS14-28181	
	Shaft and bearing ass'y (Code-5) (VT7ED -VT7EDS)	VS24-77695	
8a	Shaft (Keyed) (Code-1)	V034-71416	1
	Shaft (Keyed) (Code-2)	V034-66892	
	Shaft (Splined) (Code-3)	V034-71415	
	Shaft (splined) (Code-4)	V034-71417	
	Shaft (Splined) (Code-5) (VT7ED -VT7EDS)	H-034-67648	
8b	Round section ring	V034-70866	2
8c	Ball bearing	V230-03208	1
8d	Key (Code -1)	V034-70330	1
	Key (Code -2)	V034-49676	
	Key (Code -5) (VT7ED -VT7EDS)	V034-70330	
9	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	
	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	
9a	Port plate - rear C.W	H-034-67407	1
	Port plate - rear C.C.W	H-034-67435	
9b	Pin vane holdout	V034-59161	12
9c	Vane	V034-59162	12
9d	Cam ring - 042	H-034-67503	1
	Cam ring - 045	H-034-67504	
	Cam ring - 050	H-034-67505	
	Cam ring - 052	H-034-67506	
	Cam ring - 054	H-034-67619	
	Cam ring - 057	H-034-67507	
	Cam ring - 062	H-034-67508	

Item pos.	Description	Part No.	Qty
		VT7ED - VT7EDS	
	Cam ring - 066	H-034-67509	
	Cam ring - 072	H-034-67447	
	Cam ring - 085	H-034-67455	
9e	Dowel pin	V324-22016	2
9f	Back-up ring	V618-15018	1
9g	Port plate - pressure C.W.	H-034-67408	1
	Port plate - pressure C.C.W.	H-034-67434	
9h	Sq. section seal	V691-10237	1
9j	Sq. section seal	V691-10253	1
9k	Rotor-insert ass'y	VS24-10185	1
9m	Screw	V310-10340	2
9n	Lockwasher internal tooth	V348-10010	2
9p	Dowel pin	V323-82014	1
9r	Sq. section seal	V671-10259	1
10	Cartridge assembly B14 C.W. (P2)	VS24-90570	1
	Cartridge assembly B14 C.C.W. (P2)	VS24-90571	
	Cartridge assembly B17 C.W. (P2)	VS24-90572	
	Cartridge assembly B17 C.C.W. (P2)	VS24-90573	
	Cartridge assembly B20 C.W. (P2)	VS24-90574	
	Cartridge assembly B20 C.C.W. (P2)	VS24-90575	
	Cartridge assembly B22 C.W. (P2)	VS24-90576	
	Cartridge assembly B22 C.C.W. (P2)	VS24-90577	
	Cartridge assembly B24 C.W. (P2)	VS24-90578	
	Cartridge assembly B24 C.C.W. (P2)	VS24-90579	
	Cartridge assembly B28 C.W. (P2)	VS24-90580	
	Cartridge assembly B28 C.C.W. (P2)	VS24-90581	
	Cartridge assembly B31 C.W. (P2)	VS24-90582	
	Cartridge assembly B31 C.C.W. (P2)	VS24-90583	
	Cartridge assembly B35 C.W. (P2)	VS24-90584	
	Cartridge assembly B35 C.C.W. (P2)	VS24-90585	
	Cartridge assembly B38 C.W. (P2)	VS24-90586	
	Cartridge assembly B38 C.C.W. (P2)	VS24-90587	
	Cartridge assembly B42 C.W. (P2)	VS24-90588	
	Cartridge assembly B42 C.C.W. (P2)	VS24-90589	
	Cartridge assembly B45 C.W. (P2)	VS24-10871	
	Cartridge assembly B45 C.C.W. (P2)	VS24-10872	
	Cartridge assembly B50 C.W. (P2)	VS24-40387	
	Cartridge assembly B50 C.C.W. (P2)	VS24-40388	
10a	Port plate - rear (Except cam rings 045-050)	H-034-67484	1
	Port plate - rear C.W (Only cam rings 045-050)	V034-59812	
	Port plate - rear C.C.W (Only cam rings 045-050)	v034-59813	
10b	Pin vane holdout (Except cam rings 045-050)	V034-59098	12
	Pin vane holdout (Only cam rings 045-050)	V034-59130	10
10c	Vane (Except cam rings 045-050)	H-034-67453	12
	Vane (Only cam rings 045-050)	V034-53588	10
10d	Cam ring - 014	H-034-67469	1
	Cam ring - 017	H-034-67470	
	Cam ring - 020	H-034-67159	
	Cam ring - 022	H-034-67482	
	Cam ring - 024	H-034-67158	
	Cam ring - 028	H-034-67157	
	Cam ring - 031	H-034-67156	
	Cam ring - 035	H-034-67155	
	Cam ring - 038	H-034-67154	
	Cam ring - 042	H-034-67153	
	Cam ring - 045	V034-59131	
	Cam ring - 050	V034-66737	
10e	Dowel pin	V324-21612	2
10f	Back-up ring	V618-15017	1

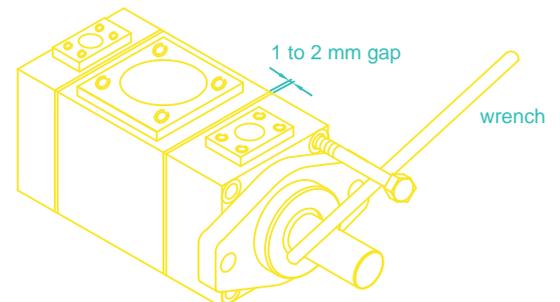
Item pos.	Description	Part No.	Qty
		VT7ED - VT7EDS	
10g	Port plate - pressure (Except cam rings 045-050)	H-034-67479	1
	Port plate - pressure C.W (Only cam rings 045-050)	V034-59808	
	Port plate - pressure C.C.W (Only cam rings 045-050)	V034-59809	
10h	Sq. section seal	V691-10232	1
10j	Sq. section seal	V691-10244	1
10k	Rotor-insert ass'y (Except cam rings 045-050)	H-S24-73783	1
	Rotor-insert ass'y (Only cam rings 045-050)	VS24-10121	
10m	Screw	V317-10320	2
10n	Lockwasher internal tooth	V348-10010	2
10q	Dowel pin	V323-82004	1
10p	Bush	V034-59901	1
10r	Sq. section seal	V671-10159	1
7 9f,9h 9j,9r 10f,10h 10j,10r	Seal kit (S1 - 0,7 bar)	VS24-10219	1
	Seal kit (S4 - 7 bar)	VS24-10219-4	
	Seal kit (S5 - 7 bar)	VS24-10219-5	
		VS24-40348	
9a,9p	Port plate - rear ass'y C.W. (P1)	VS24-76148	1
	Port plate - rear ass'y C.C.W. (P1)	VS24-76149	
10a	Port plate - rear and bush ass'y C.W. (P2)	VS24-10833	1
10p	Port plate - rear and bush ass'y C.C.W. (P2)	VS24-10834	
10q	Port plate - rear and bush ass'y Bi-dir (P2)	VS24-73820	

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

VT7ED / VT7EDS - 042 - B22 - 1 R 00 - A 1 - M0 - ..

Series

VT7ED-ISO-2 bolts 3019-2

Mounting flange 125 B4 HW

VT7EDS-SAE-C 2 Bolts

Mounting flange J744

Modification

Mounting w/connection variables

4 bolts SAE flange J518c

P1= 1½"	P2= 1¼"	S=4"
VT7EDS	VT7ED-VT7EDS	
UNC	METRIC	
01	M1	

Cam ring — Displacement — Cam ring — Displacement

	in ³ /rev (cm ³ /rev)		in ³ /rev (cm ³ /rev)
042 =	8.07 (132.30)	057 =	11.02 (180.70)
045 =	8.70 (142.40)	062 =	12.00 (196.70)
050 =	9.67 (158.50)	066 =	13.00 (213.30)
052 =	10.00 (164.80)	072 =	13.86 (227.10)
054 =	10.43 (170.90)	085 =	16.40 (269.80)

Cam ring — Displacement — Cam ring — Displacement

	in ³ /rev (cm ³ /rev)		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 (81.3)	045 =	8.89 (145.7)
B28 =	5.49 (89.9)	050 =	9.64 (157.9)

Type of Shaft

VT7EDS

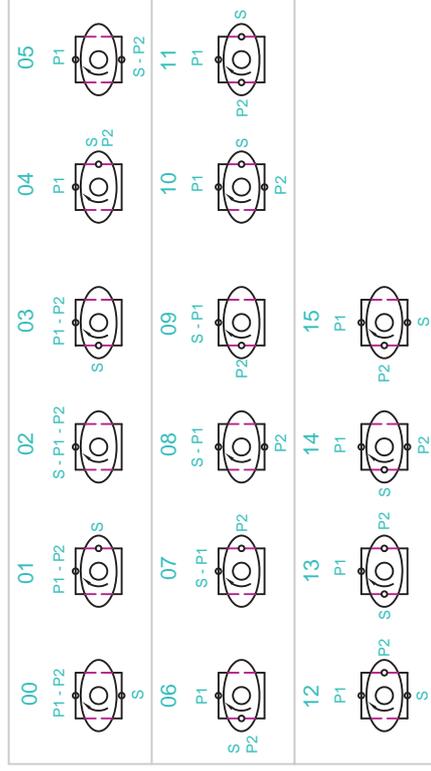
- 1 = Keyed (SAE-CC)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE-C)
- 4 = Splined (SAE-CC)

VT7ED-VT7EDS

- 5 = Keyed (ISO/R775-G38M)

Design letter

Porting combination : (00 = Standard)



Direction of rotation

R = Clockwise

L = Counter - clockwise

Print	—
Replace	—
Revision	—