



# VA TECH FERRANTI-PACKARD TRANSFORMERS LTD.

OIL FILLED CLASS DNAME/DNAF/DNAF TRANSFORMER  
3 PHASE 60 Hz

TYPE	TEMP. RISE	MVA
DNAME	65	30
DNAF	65	40
DNAF	65	50

H<sub>1</sub> WINDING VOLTS - X<sub>1</sub> WINDING VOLTS  
13800 Δ - 12000Y/6928  
6900 Δ - 12000Y/6928

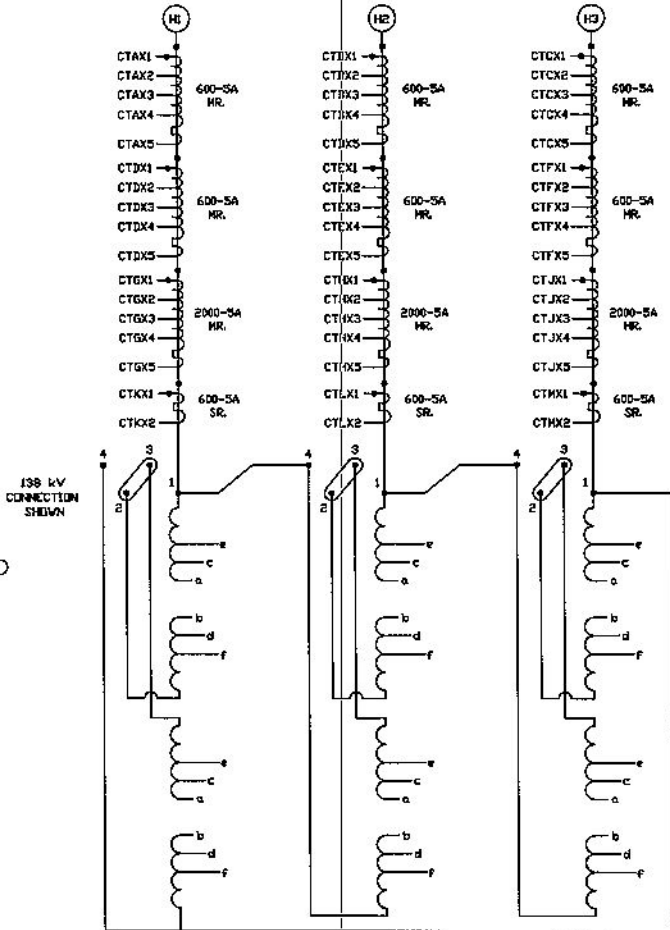
2% IMPEDANCE AT 30 MVA WITH  
LOAD-TAP CHANGER ON POSITION 'H' POSITION  
WINDING MATERIAL: H<sub>1</sub> WINDING, COPPER  
X<sub>1</sub> WINDING, COPPER

FULL WAVE IMPULSE LEVELS:

H<sub>1</sub> WINDING 650 KV BIL  
H<sub>2</sub> WINDING 350 KV BIL  
X<sub>1</sub> WINDING 150 KV BIL  
X<sub>2</sub> WINDING NEUTRAL 150 KV BIL

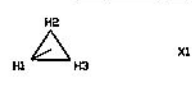
HV BUSHING 650 KV BIL  
LV BUSHING 150 KV BIL  
LV NEUTRAL BUSHING 150 KV BIL

DE-ENERGIZED TAP CHANGER		H <sub>1</sub> WINDING VOLTAGES AND CURRENTS WITH LOAD-TAP CHANGER ON POSITION 'H'		LINKS CONNECT EACH PHASE
ON POSITION	CONNECTS	VOLTS	AMPERES @ 50 MVA	
1	a-b	144900	1992	2 TO 3
2	b-c	141450	2041	
3	c-d	138000	2092	
4	d-e	134550	2146	
5	e-f	131100	2202	
1	a-b	72450	3985	1 TO 3 & 2 TO 4
2	b-c	70725	4082	
3	c-d	69000	4184	
4	d-e	67275	4291	
5	e-f	65550	4404	

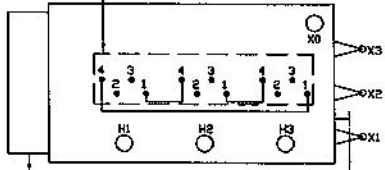


LOAD-TAP CHANGER REDBAUM TYPE RMV II 2500 AMP - 25					
CONNECTION		H <sub>1</sub> WINDINGS VOLTAGES & CURRENTS		AMPERES	
POSITION	P1 TO P2	VOLTS	50 MVA		
RAISE LV VOLTS	R16 11 11	13200	2187		
	R15 10 11	13125	2199		
	R14 10 10	13050	2212		
	R13 9 10	12975	2225		
	R12 9 9	12900	2238		
	R11 8 9	12825	2251		
	R10 8 8	12750	2264		
	R9 7 8	12675	2276		
	R8 7 7	12600	2289		
	R7 6 7	12525	2302		
	R6 6 6	12450	2315		
	R5 5 6	12375	2328		
	R4 5 5	12300	2341		
	R3 4 5	12225	2354		
	R2 4 4	12150	2367		
	R1 4 4	12075	2380		
LOWER LV VOLTS	L1 11 11	12000	2406		
	L2 10 11	11925	2419		
	L3 10 10	11850	2432		
	L4 10 10	11775	2445		
	L5 9 10	11700	2458		
	L6 9 9	11625	2471		
	L7 9 9	11550	2484		
	L8 8 9	11475	2497		
	L9 8 8	11400	2510		
	L10 7 8	11325	2523		
	L11 7 7	11250	2536		
	L12 6 7	11175	2549		
	L13 6 6	11100	2562		
	L14 5 6	11025	2575		
	L15 5 5	10950	2588		
	L16 4 5	10875	2601		

Qty 1)  
PHASE RELATION



HV. LINK BOARD TO CHANGE 138 KV TO 69 KV  
DE-ENERGIZE TRANSFORMER TO OPERATE



2 DE-ENERGIZED TAP CHANGERS  
WARNING: DO NOT ENERGIZE TRANSFORMER  
UNLESS BOTH OFF CIRCUIT TAP CHANGERS  
INDICATE THE SAME POSITION NUMBER

TANK STRENGTH	+ 14.7	- 14.7	PSI
MAX. OPER. PRESS.	+ 10	- 10	PSI
F.P. CID NO.	CL 5017		
F.P. SER. NO.	5017		
F.P. SPEC. NO.	31456		
CUST. ORDER NO.	PG11761004263		
CUST. SPEC. NO.			
DESIGNED TO	ANSI C57.12.00-2000		
MADE IN CANADA	DATE		

CURRENT TRANSFORMERS			
CT	CONNECTION	RATIO	ACCURACY
H1	CTAX1 - CTAX5	600 - 5A	C800 e 600 - 5A
	CTAX2 - CTAX5	500 - 5A	
	CTAX3 - CTAX5	450 - 5A	
	CTAX1 - CTAX4	400 - 5A	
	CTAX2 - CTAX4	300 - 5A	
	CTAX3 - CTAX4	250 - 5A	C800 e 600 - 5A
	CTAX4 - CTAX5	200 - 5A	
	CTAX1 - CTAX3	150 - 5A	
	CTAX1 - CTAX2	100 - 5A	
	CTAX2 - CTAX3	50 - 5A	
	CTBX1 - CTBX5	600 - 5A	C800 e 600 - 5A
	CTBX2 - CTBX5	500 - 5A	
	CTBX3 - CTBX5	450 - 5A	
	CTBX1 - CTBX4	400 - 5A	
	CTBX2 - CTBX4	300 - 5A	
H2	CTDX1 - CTDX5	600 - 5A	C800 e 600 - 5A
	CTDX2 - CTDX5	500 - 5A	
	CTDX3 - CTDX5	450 - 5A	
	CTDX1 - CTDX4	400 - 5A	
	CTDX2 - CTDX4	300 - 5A	
	CTDX3 - CTDX4	250 - 5A	C800 e 600 - 5A
	CTDX4 - CTDX5	200 - 5A	
	CTDX1 - CTDX3	150 - 5A	
	CTDX1 - CTDX2	100 - 5A	
	CTDX2 - CTDX3	50 - 5A	
	CTGX1 - CTGX5	2000 - 5A	C800 e 2000 - 5A
	CTGX2 - CTGX5	1600 - 5A	
	CTGX3 - CTGX5	1200 - 5A	
	CTGX1 - CTGX4	1100 - 5A	
	CTGX2 - CTGX4	800 - 5A	
X1	CTGX4 - CTGX5	600 - 5A	C800 e 3000 - 5A
	CTGX1 - CTGX3	500 - 5A	
	CTGX2 - CTGX3	400 - 5A	
	CTGX3 - CTGX4	300 - 5A	
	CTGX4 - CTGX5	200 - 5A	
	CTRX1 - CTRX5	3000 - 5A	C800 e 3000 - 5A
	CTRX2 - CTRX5	2500 - 5A	
	CTRX3 - CTRX5	2000 - 5A	
	CTRX1 - CTRX4	1500 - 5A	
	CTRX2 - CTRX4	1000 - 5A	
X2	CTRX3 - CTRX5	1000 - 5A	C800 e 1000 - 5A
	CTRX4 - CTRX5	800 - 5A	
	CTRX1 - CTRX3	700 - 5A	
	CTRX2 - CTRX3	600 - 5A	
	CTRX3 - CTRX4	500 - 5A	
	CTRX4 - CTRX5	400 - 5A	C800 e 1000 - 5A
	CTRX1 - CTRX2	300 - 5A	
	CTRX2 - CTRX3	200 - 5A	
	CTRX3 - CTRX4	150 - 5A	
	CTRX4 - CTRX5	100 - 5A	
X3	CTSS1 - CTSS2	2900 - 5A	WTI
	CTSS3 - CTSS4	2900 - 5A	LDC
	CTUS1 - CTUS2	2500 - 5A	OVERLOAD
	CTUS3 - CTUS4	2500 - 5A	OVERLOAD

APPROXIMATE MASS		
INTERNAL CONNECTIONS		16385 lb.
CORE		40700 lb.
COPPER WINDINGS		22900 lb.
TANK AND FITTINGS		43125 lb.
CONSERVATOR TANK		2670 lb.
REMOVABLE RAILS		13515 lb.
LIQUID TRANSFORMER		70415 lb.
LIQUID GASOLINE		4720 lb.
LIQUID CONSERVATOR		3255 lb.
LIQUID LOAD-TAP CHANGER		2495 lb.
TOTAL MASS WITH OIL		220090 lb.
TOTAL MASS WITHOUT OIL		139195 lb.
CELLULOSE INSULATION IN TRANSFORMER		4600 lb.
UNWINDING MASS (HEAVIEST PIECE)		80430 lb.