

FOR REFERENCE ONLY

DWN <b>K</b>	CKD	APP	PAGE 1
DATE 4/2/87	DATE	DATE	OF 1
<b>TRANSFORMER NAMEPLATE</b>			
KUHLMAN ELECTRIC CO		DWG NO	ISSUE
CRYSTAL SPRINGS, MS		272700-6232	02

**KUHLMAN ELECTRIC COMPANY**  
CRYSTAL SPRINGS, 39059

**KUHLMAN**

**A DIVISION OF KUHLMAN CORPORATION**

**60 HERTZ THREE PHASE**

**LOAD TAP CHANGING TRANSFORMER**

KVA OA      KVA FA      IMPULSE LEVEL  
 CU HV 12000/13440    16000/17920    FULL WAVE TEST  
 CU LV 12000/13440    16000/17920    13800GRD V/7967    H V BIL 350 X350N KV  
 CU TV 4200      MFG DATE      % AT 12000 KVA    L V BIL 110 KV  
 SER NO      \*      IMPEDANCE HV/LV    % AT 12000 KVA

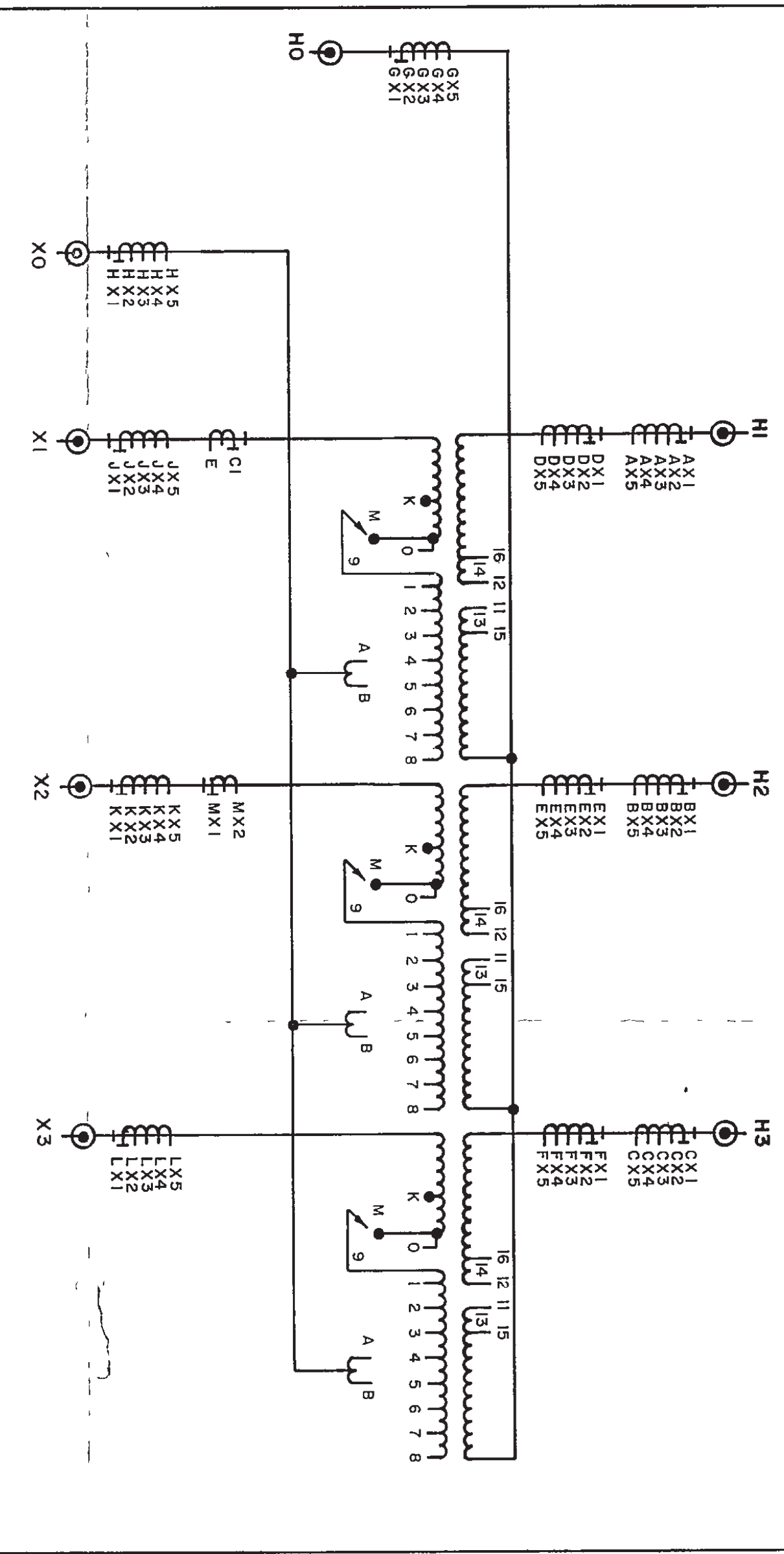
VOLTS      67000V/38680      17464  
 13800GRD V/7967    H V BIL 350 X350N KV    17464  
 7200      L V BIL 110 KV      9500  
 NEUT BIL 110 KV    T V BIL 110 KV      9500

APPROXIMATE WEIGHT IN POUNDS    44325  
 UNTANKING HEAVIEST PIECE    17464  
 TANK AND FITTINGS    26411  
 3522 GALS MAIN TANK OIL    26411  
 133 GALS LTC COMPT. OIL    9500  
 TOTAL WEIGHT    93709

LIQUID LEVEL BELOW TOP OF MANHOLE FLANGE AT 25°C IS 10.4 INCHES. LIQUID LEVEL CHANGES .15" C .84" INCHES PER 10°C CHANGE IN LIQUID TEMPERATURE. MAXIMUM OPERATING PRESSURE OF OIL PRESERVATION SYSTEM IS 8.0 LBS. MAXIMUM O.5 LBS MINIMUM. TANK IS DESIGNED FOR 14.7 LBS VACUUM FILLING AND 10 LBS POSITIVE PRESSURE.

BEFORE OPERATION READ IN 3 010 AND OI X4991

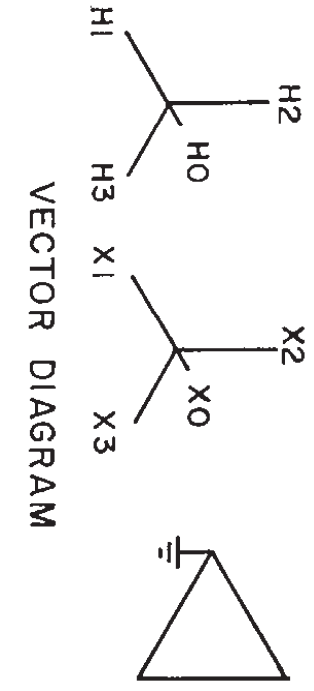
**CAUTION**  
DE-ENERGIZE TRANSFORMER BEFORE CHANGING HV TAPS



L V CONNECTIONS (COPPER CONDUCTORS)			
VOLTS	AMPERES AT POS	LOAD TAP CHANGER	LOAD TAP
X1-X2-X3	FA	A ON B ON I 9 ON	
15180	682	16R 8	8
15095	685	15R 7	8
15010	689	14R 6	7
14920	693	13R 5	7
14835	697	12R 4	6
14750	702	11R 3	6
14665	706	10R 2	5
14575	710	9R 1	5
14490	714	8R 0	4
14405	718	7R 3	4
14320	723	6R 2	3
14230	727	5R 1	3
14145	731	4R 2	2
14060	736	3R 1	2
13975	740	2R 0	1
13885	745	1R 0	1
13800		N 0	0
13715		1L 8	0
13630		2L 8	8
13540		3L 7	8
13455		4L 7	7
13370		5L 6	7
13285		6L 6	6
13195		7L 5	6
13110		8L 4	5
13025		9L 4	5
12940		10L 4	4
12850		11L 3	4
12765		12L 3	3
12680		13L 2	3
12595		14L 2	2
12505		15L 1	2
12420		16L 1	1

H V CONNECTIONS (COPPER CONDUCTOR)			
VOLTS	AMPERES AT POS	TAP CHANGER FOR DE-ENERGIZED OPERATION	TAP CONNECTS
H1-H2-H3	FA		
70350	147	A	11 TO 12
68675	151	B	12 TO 13
67000	154	C	13 TO 14
65325	158	D	14 TO 15
63650	163	E	15 TO 16

BCT-A,B,C,D,E,F,G-600/5 MULTI-RATIO AC C200  
 BCT-H,J,K,L-1200/5 MULTI-RATIO AC C200  
 BCT-E-TO CI-750/5 RATIO FOR LDC  
 BCT-M-750/5 RATIO FOR WT I



L V CONNECTIONS (COPPER CONDUCTORS)			
VOLTS	AMPERES AT POS	LOAD TAP CHANGER	LOAD TAP
X1-X2-X3	FA	A ON B ON I 9 ON	
15180	682	16R 8	8
15095	685	15R 7	8
15010	689	14R 6	7
14920	693	13R 5	7
14835	697	12R 4	6
14750	702	11R 3	6
14665	706	10R 2	5
14575	710	9R 1	5
14490	714	8R 0	4
14405	718	7R 3	4
14320	723	6R 2	3
14230	727	5R 1	3
14145	731	4R 2	2
14060	736	3R 1	2
13975	740	2R 0	1
13885	745	1R 0	1
13800		N 0	0
13715		1L 8	0
13630		2L 8	8
13540		3L 7	8
13455		4L 7	7
13370		5L 6	7
13285		6L 6	6
13195		7L 5	6
13110		8L 4	5
13025		9L 4	5
12940		10L 4	4
12850		11L 3	4
12765		12L 3	3
12680		13L 2	3
12595		14L 2	2
12505		15L 1	2
12420		16L 1	1

CURRENT TRANSFORMER 600/5 AMP MULTI-RATIO			
RATIO	TAPS	CURRENT TRANSFORMER 1200/5 AMPS MULTI-RATIO	
50-5	X2-X3	100-5	X2-X3
100-5	X1-X2	200-5	X1-X2
150-5	X1-X3	300-5	X1-X3
200-5	X4-X5	400-5	X4-X5
250-5	X3-X4	500-5	X3-X4
300-5	X2-X4	600-5	X2-X4
400-5	X1-X4	800-5	X1-X4
450-5	X3-X5	900-5	X3-X5
500-5	X2-X5	1000-5	X2-X5
600-5	X1-X5	1200-5	X1-X5

\* DATA TO BE STAMPED AFTER TEST.

S/O #	S/N #	IMPED. %	MFG. DATE
272700	*272700-1	*	*

ENG.	NMA	01-26-2020	RECORD DRAWINGS
DR	NMA		
CK	NMA	09-18-2018	QA/QV REVISIONS
APP	MPM	08-15-2018	BDS & CONSTRUCTION
		08-10-2018	OWNER REVIEW
DATE			ISSUED FOR

**GRP Engineering, Inc.**  
 PETOSKEY, MICHIGAN, 231-439-9683  
 GRAND RAPIDS, MICHIGAN, 616-942-7183

**TRAVERSE CITY LIGHT & POWER**  
 PARSONS ROAD SUBSTATION - 69kV SWITCH STATION  
 TRAVERSE CITY, MICHIGAN  
 NAMEPLATE DIAGRAM - TRANSFORMER NO.1

PROJECT NUMBER: 18-0929.01  
 DRAWING NUMBER: 850