

TRANSFORMER DATA SHEET

DATE : 07/17/2007
 CUSTOMER : HVES
 CIRCUIT/LOCATION : HVES 47
 MANUFACTURER : Howard
 TRANSFORMER TYPE : Pad Mount CLASS : ONAN
 S/N : 3388332207
 THREE PHASE SINGLE PHASE : 60 HERTZ

VOLTAGE RATING: 4160Y/2400 - 480Y/277 LV WINDING: ALUMINUM
 KVA RATING: 2000 Continuous, Self Cooled HV WINDING: ALUMINUM
 Continuous, Forced Air LV: 65°C rise, BIL: 30 kV
 HV: 65°C rise, BIL: 95 kV

NAMEPLATE DATA

Core & Coils	5104
Case & Fittings	3145
Oil in Gallons	520/3901
Weight in Pounds	12150

Impedance volts : 6.0 % at rated volts at : 2000 KVA

TRANSFORMER TEST DATA

MEGGER TEST RESULTS

POLARIZATION

CAPACITANCE in

1 Minute

INDEX

MICRO-FARAD

High-> Ground	15k	M-Ohms, @	5	kV DC	1.92	.02
Low -> Ground	18k	M-Ohms, @	1	kV DC	1.98	.02
High-> Low	20k	M-Ohms, @	1	kV DC	1.99	.02

TRANSFORMER TTR TESTS

TAP (V)	CALC. TTR	PHASE 1	PHASE 2	PHASE 3
4360	9.0875	9.0812	9.0871	9.0874
4260	8.7910	8.7914	8.7912	8.7910
4160	8.6642	8.6674	8.6671	8.6672
4055	8.4518	8.4512	8.4518	8.4517
3950	8.2329	8.2328	8.2329	8.2324


COMMENTS

Tag 11099
 Date of manufacture: 07/2007
 Stored at Daves's Yard

NO. 61830041.182

THREE PHASE TRANSFORMER **HOWARD INDUSTRIES** LAUREL MS 39440 USA

READ INSTRUCTION HI 105 BEFORE OPERATING

KVA 2000 BIL HV 60 LV 30KV  %IMP

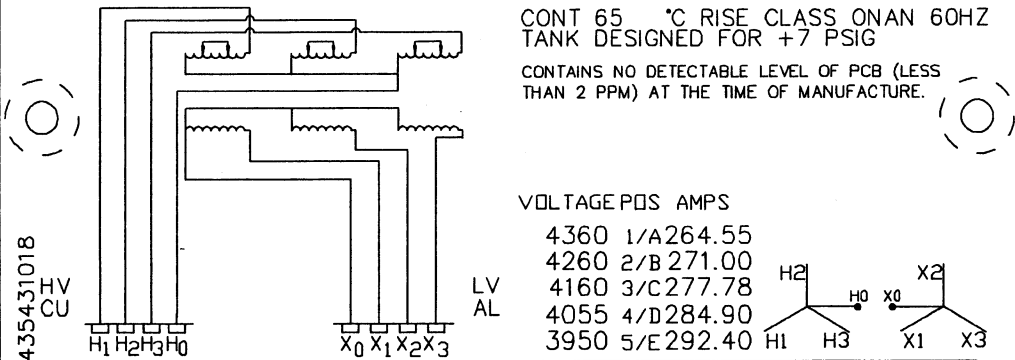
HV 4160Y/2400 LV 480Y/277 AMPS 2404

WT TANK 3145 c&c 5104 TYPE II 3901LBS TOTAL 12150 LBS

LB 520GAL

CONT 65 °C RISE CLASS ONAN 60HZ
TANK DESIGNED FOR +7 PSIG

CONTAINS NO DETECTABLE LEVEL OF PCB (LESS THAN 2 PPM) AT THE TIME OF MANUFACTURE.



VOLTAGE POS AMPS

4360	1/A	264.55
4260	2/B	271.00
4160	3/C	277.78
4055	4/D	284.90
3950	5/E	292.40

HV CU 9395435431018

LV AL

SER. NO. BAR CODE CAT. NO. BAR CODE

SER. NO.

- CNP02 = NP87 HV BUSHINGS
- CNP03 = HV CONNECTION
- CNP04 = NP90 HV WDG
- CNP05 = FUSES
- CNPKV = DY POS. KV.

- CNP09 = NP115 TAP OR SM BOX
- CNP08 = NP8 LV PHASOR
- CNP10 = NP4 HV PHASOR
- CNP14 = NP177 NEUT PHASOR (VECTOR)
- CNP13 = NEUT WDG (COIL)
- CNP06 = LV CONNECTION
- CNP07 = NP88 LV WDG
- CNP11 = NP70 LV BUSHINGS
- CPR11 = 0
- CPR11E = 0
- CPR11F = 0
- CPR12A = 0
- CPHASH = WYE CPHASL = WYE

WDCOD =01A10A
BLACK ANNODIZED ALUMINUM

A	2/20/07	UNIT CHG FROM LIVE-LOOP TO LIVE-RAD REISSUE RECORD DWGS	TT	BJ
REV	DATE	REVISION	BY	APP

HOWARD INDUSTRIES INC.
LAUREL, MISS. USA 39440
MFG. OF DISTRIBUTION TRANSFORMERS

NAME: LASER NAME PLATE CC 857

DESCR: RF/TP/ Y-Y

ID 3TST7036 P.N. 0061830041.182

SCALE 1.000 DWG BY TT CHK BY BJ DATE 02/19/07

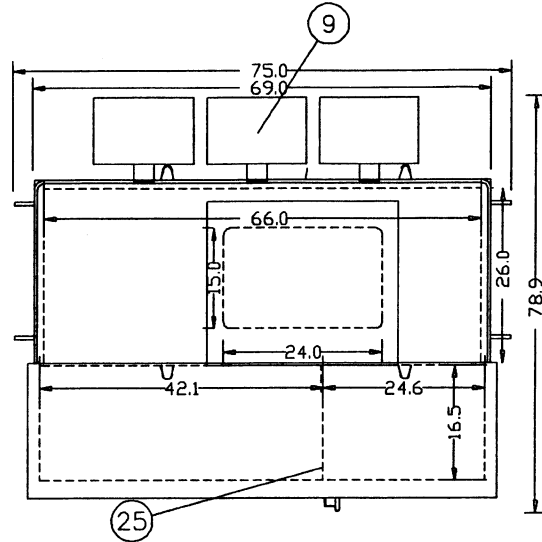
CAT. NO. 9395435431018

3TST7036

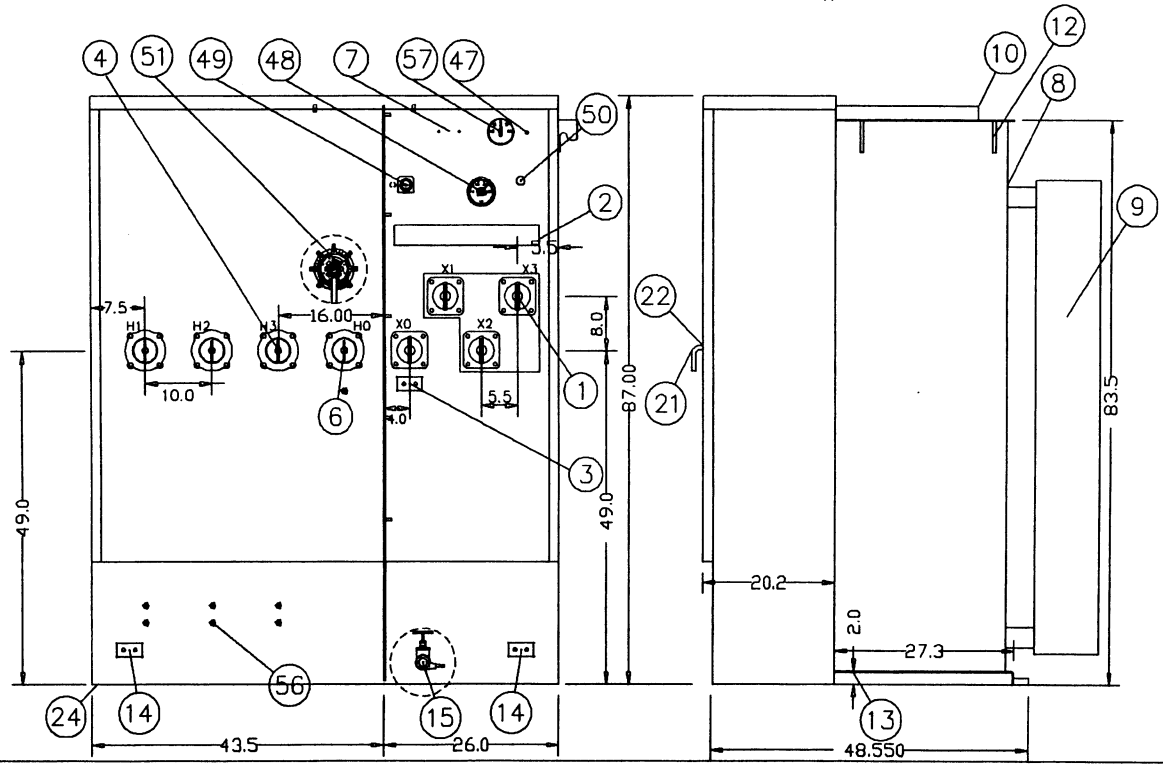
DESCRIPTION	
1	LV INT. 10-H BUSHING
2	LV BLADE SUPPORT
3	2 HOLE HORIZ NEMA GRD PAD
4	WARCO HV PORC 75BIL W/4H SPADE
6	NEUTRAL HV BUSHING
7	NP ON DOOR SER ON TANK
8	TANK
9	COOLING RADIATORS
10	HANDHOLE & SECURITY COVER
12	LIFTING LUGS
13	JACKING PROVISIONS
14	2 HOLE HORIZ NEMA GRD PAD
15	1 IN DRAIN VALVE AND SAMPLER
21	PAD LOCKABLE DOOR HANDLE
22	3 PT LATCH PENTA SEC BOLT
24	18 IN REMOVABLE SILL
25	METAL LV-HV BARRIER
47	PRESS. REL VALVE
48	DIAL THERM W/MAX POINTER
49	2" MAG LL GAUGE: LV COMP
50	OIL LEVEL PLUG
51	TAP CHANGER HANDLE
56	PROVISIONS FOR LTG ARR
57	PRES VAC GAUGE

SPECIAL NOTES	
A	
B	
C	
D	
E	

CAT NO	9395435431018	
DWG BY:	TT	DATE: 02/19/07
APP BY:	BJ	CC. 745



DWG NO. 0073170227.062			
HOWARD INDUSTRIES INC.			
LAUREL, MISS. USA 39440			
THREE PHASE PAD DISTRIBUTION TRANSFORMERS			
CUSTOMER : GENERGY			
SPEC. H.I. STD.		DATED	
KVA 2000.0BIL 60 TAPS TS-2 ABOVE 2 BELOW			
HIGH VOLTAGE 4160Y/2400			
LOW VOLTAGE 480Y/277			
APPROX. CORE AND COIL WEIGHT		5104	
APPROX. TANK AND ACCESS. WEIGHT		3145	
GAL. OF OIL 520; APPROX. WEIGHT		3901	
APPROX. TOTAL WEIGHT		12150	
REV.	DATE	DESCRIPTION	BY APP
A	2/20/07	UNIT CHG FROM LIVE-LOOP TO LIVE-ROAD REISSUE RECORD DWGS	TT BJ
ID 3TST7015		P.N. 0073170227.062	



9395-435431-018 GENERGY



DANGER
HIGH VOLTAGE
KEEP OUT

DANGER
HIGH VOLTAGE
KEEP OUT

UNIT 47

UNIT 47 NON PCB
2000KVA Z= 6.0%
HV 480V / 2400
LV 480V / 277
WT=12160LBS
TAPS 4380 / 4230 / 4180 / 4055
/ 3950

ALSTO