

TRANSFORMER DATA SHEET

DATE : 05/01/2003  
 CUSTOMER : HVES  
 CIRCUIT/LOCATION : HVES 19  
 MANUFACTURER : Alstom  
 TRANSFORMER TYPE : Pad Mount CLASS : OA  
 S/N : PID-0297

THREE PHASE  SINGLE PHASE  : 60 HERTZ

VOLTAGE RATING: 2400X4160 Delta - 480Y/277

KVA RATING: 1000 Continuous, Self Cooled  
 Continuous, Forced Air

LV WINDING: ALUMINUM

HV WINDING: ALUMINUM

LV: 65°C rise, BIL: 30kV

HV: 65°C rise, BIL: 60kV

NAMEPLATE DATA

|                  |          |
|------------------|----------|
| Core & Coils     | 2653     |
| Case & Fittings  | 2471     |
| Oil in Gallons   | 269/1986 |
| Weight in Pounds | 7110     |

Fluid Type : Mineral Oil

Impedance volts : 5.82 % at rated volts at : 1000 KVA

MEGGER TEST RESULTS

**TRANSFORMER TEST DATA**

|               | 1 Minute |           |   | POLARIZATION INDEX | CAPACITANCE |                  |
|---------------|----------|-----------|---|--------------------|-------------|------------------|
| High-> Ground | 29.2k    | M-Ohms, @ | 5 | kV DC              | 2.10        | 0.01 micro-farad |
| Low -> Ground | 19.1k    | M-Ohms, @ | 1 | kV DC              | 2.94        | 0.01 micro-farad |
| High-> Low    | 20.0k    | M-Ohms, @ | 1 | kV DC              | 2.38        | 0.01 micro-farad |

TRANSFORMER TTR TESTS

| TAP (V) | CALC. TTR | PHASE 1 | PHASE 2 | PHASE 3 |
|---------|-----------|---------|---------|---------|
| 4368    | 15.769    | 15.757  | 15.761  | 15.755  |
| 4264    | 15.394    | 15.403  | 15.408  | 15.403  |
| 4160    | 15.018    | 14.992  | 14.996  | 14.992  |
| 4056    | 14.643    | 14.640  | 14.643  | 14.639  |
| 3952    | 14.267    | 14.640  | 14.643  | 14.227  |
|         |           |         |         |         |
| 2400    | 8.664     | 8.648   | 8.644   | 8.642   |
|         |           |         |         |         |

COMMENTS

Tag 10736  
 Date of manufacture: 4/2003  
 Stored at Dave's Yard

10 Minute Megger Test  
 H-G: 61.0k M-ohms  
 L-G: 56.0k M-Ohms  
 H-L: 47.6k M-ohms

5.50

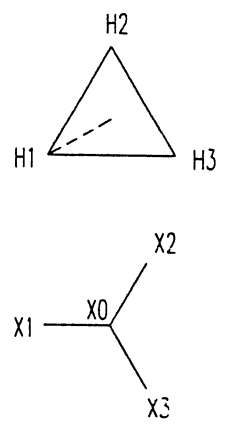
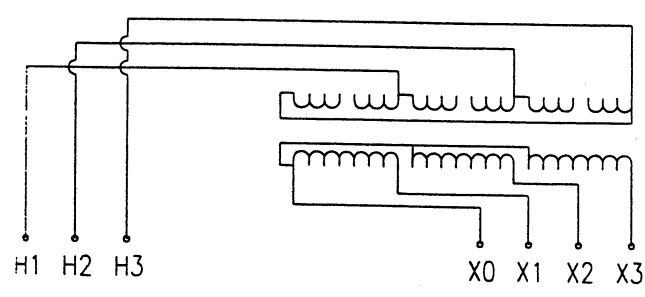
# ALSTOM

KVA  OA   °C RISE  
 HV  BIL  KV  
 LV  BIL  KV  
 PHASE  HZ TRANSFORMER,  % IZ AT BASE KVA RATING  
 HV  LV COND. ELEMENT  LBS. TOTAL WEIGHT  LBS.  
 GAL  AT  LBS. LEVEL CHANGES  INCH PER. 10°C.  
 FLUID LEVEL  INCHES FROM TOP OF HAND HOLE AT 25°C.  
 MAX TANK PRESS. POS  NEG  PSI  
 SERIAL #  DATE OF MFG:

INSTRUCT ON REFERENCE MANUAL 1B9.210

| TAPS                                    | A                                 | B                                 | C                                 | D                                 | E                                 |                               |                               |
|---|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------|-------------------------------|
| <input type="text" value="4160"/> VOLTS | <input type="text" value="4368"/> | <input type="text" value="4264"/> | <input type="text" value="4160"/> | <input type="text" value="4056"/> | <input type="text" value="3952"/> | <input type="text" value=""/> | <input type="text" value=""/> |
| <input type="text" value="2400"/> VOLTS | <input type="text" value=""/>     | <input type="text" value=""/>     | <input type="text" value="2400"/> | <input type="text" value=""/>     | <input type="text" value=""/>     | <input type="text" value=""/> | <input type="text" value=""/> |

TAPCHANGER MUST BE IN 'C' POSITION FOR 2400 VOLTS



NON-PCB  
10486351-18635

300 WEST ANTELOPE ROAD, MEDFORD OREGON 97503-1089 USA

8.00

5/32 DIA

MATERIAL (.025) STAINLESS STEEL

REVISIONS

## ALSTOM

300 WEST ANTELOPE ROAD  
MEDFORD, OREGON 97503-1089 USA

|                  |                   |          |       |
|------------------|-------------------|----------|-------|
| NAMEPLATE PART # | 52-637-0022-07-00 |          |       |
| DRAWN BY:        | R.M.J. GABB       | REVISION | :     |
| APPROVED BY      | LO                | DATE     | 4-2-3 |
| SCALE:           | 1" = ...          |          |       |

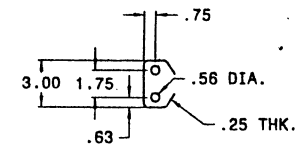
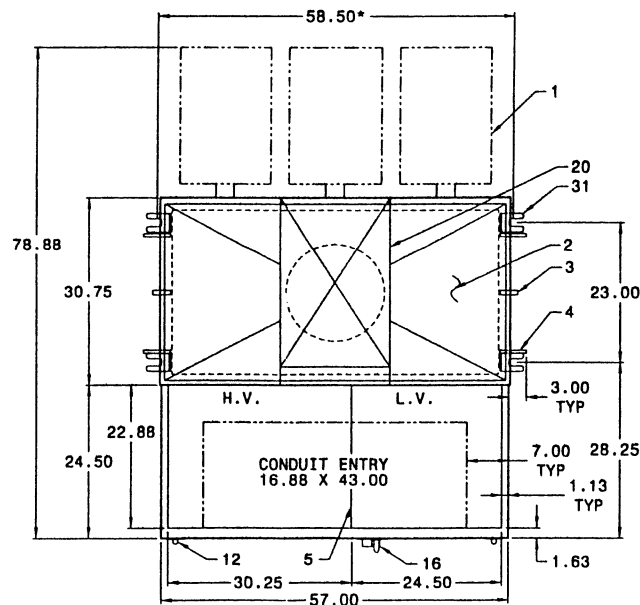
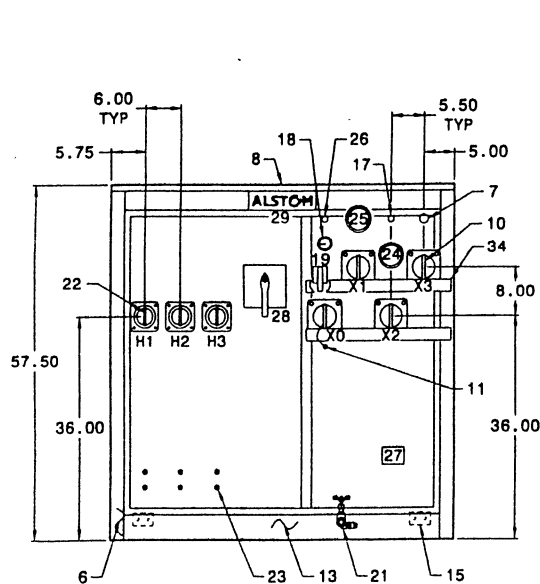
- 1 COOLING PANELS (FLAT PANELS IN A COMMON HEADER)
- 2 TRANSFORMER TANK WITH WELDED COVER DOWMED TO SHED WATER
- 3 JACK LUGS
- 4 LIFT LUGS FOR LIFTING TRANSFORMER COMPLETE WITH LIQUID
- 5 DIVIDER BETWEEN H.V. & L.V. COMPARTMENTS
- 6 H.V. & L.V. COMPARTMENT INTERNALLY BOLTED TO TANK FLANGE
- 7 H.V. DOOR IS SECURED BY BOLTS ACCESSIBLE AFTER L.V. DOOR IS OPENED
- 8 1 IN. FILL PLUG & UPPER FILTER PRESS CONNECTION
- 9 REMOVABLE COMPARTMENT COVER
- 10 STAINLESS STEEL NAMEPLATE & CONNECTION DIAGRAM ON L.V. DOOR
- 11 L.V. BUSHING WITH SPADE TERMINAL (SEE DETAIL)
- 12 1/2-13 TAPPED GROUND PAD WITH REMOVABLE GROUND STRAP
- 13 LIFT-OFF TYPE STAINLESS STEEL HINGES WITH 3/8 PINS
- 14 REMOVABLE FRONT SILL TO PERMIT SLIDING COMP'T OVER ENTRANCE CONDUIT
- 15 ADJUSTABLE MOUNTING PLATE WITH .81 x 3.00 SLOTS (NOT SHOWN)
- 16 NEMA GROUND PADS WITH (2) 1/2-13 TAPPED HOLES
- 17 PADLOCKABLE DOOR HANDLE WITH 3-POINT LATCH AND CAPTIVE LOCKBOLT
- 18 PRESSURE RELIEF VALVE
- 19 LIQUID LEVEL GAUGE

- 19 DE-ENERGIZED TAPCHANGER
- 20 TAMPER PROOF HANDHOLE (16.00 DIA.)
- 21 1 IN. DRAIN VALVE & SAMPLER
- 22 H.V. BUSHING WITH G-SPADE CONNECTOR
- 23 PROVISIONS FOR ARRESTER MOUNTING TAPPED 1/2-13
- 24 DIAL TYPE THERMOMETER
- 25 PRESSURE VACUUM GAUGE
- 26 GAS SAMPLE VALVE (SCHRADER)
- 27 NON-PCB LABEL
- 28 DUAL VOLTAGE SWITCH
- 29 ALSTOM ID PLATE
- 30
- 31 BOLT DOWN PROVISIONS (1.25 x 2.50 OPEN END SLOT)
- 32
- 33
- 34 LV BUSHING SUPPORT

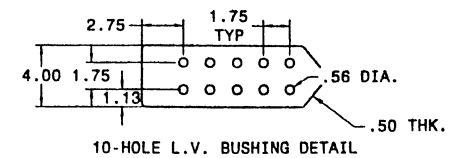
CUSTOMER: HIGH VOLTAGE ELECTRIC SERVICE, INC.  
 P.O. : 032403GM  
 P.N. : I0486351-I8635  
 KVA : 1000  
 H.V. : 2400 X 4160 DELTA (60 KV BIL)  
 L.V. : 480Y/277 (30 KV BIL)  
 TAPS : 2-2 1/2% FCAN & BN ON 4160V ONLY  
 LIQUID TYPE : OIL  
 LIQUID VOL : 269 GALS.  
 TOTAL WEIGHT : 7110 LBS.  
 COLOR : PADMOUNT GREEN  
 TEMP : 65°C OA

\* BOLT DOWN PROVISION DIMENSIONS

-TAPCHANGER MUST BE IN 'C' POSITION FOR 2400 VOLT OPERATION



H.V. BUSHING SPADE DETAIL



10-HOLE L.V. BUSHING DETAIL

REVISIONS

86351

|                             |                    |
|-----------------------------|--------------------|
| DPTN<br><b>R.M.J. GABB</b>  |                    |
| APP'D<br><i>[Signature]</i> | DATE<br>4.2.3      |
| DWN'D<br><b>I86351-O</b>    |                    |
| REVISION<br>0               | QWS SIZE<br>B      |
| SCALE<br>5/8"=1'            | TOLERANCE<br>±0.06 |

**ALSTOM**

300 WEST ANTELOPE ROAD  
 MEDFORD, OREGON USA 97503-1089

TITLE 1000 KVA PADMOUNT OUTLINE

SHEET 1 OF 1

Path: U:\86351\186351-O.dwg, Layer: E, Color: 255,255,255,11,0,0,0

ALSTOM

**UNIT 19 NON PCB**  
**1000KVA Z=5.75%**  
**HV 4160x2400 LV 480Y/277**  
**WT=7500 LBS**  
**TAPS: 4368 / 4264 / 4160**  
**4056 / 3952 / 2400**  
**FULL LOAD AMPS=138 AT 4160V**  
**FULL LOAD AMPS=240 AT 2400V**

