

TRANSFORMER DATA SHEET

DATE : 12/02/2017
 CUSTOMER : HVES
 CIRCUIT/LOCATION : HVES 82
 MANUFACTURER : Northeast Transformer
 TRANSFORMER TYPE : Pad Mount CLASS : ONAN
 S/N : NET6195111117

THREE PHASE SINGLE PHASE : 60 HERTZ
 VOLTAGE RATING: 4160 Delta x 13800 Delta - 208Y/120
 KVA RATING: 500 Continuous, Self Cooled
 Continuous, Forced Air

LV WINDING: ALUMINUM
 HV WINDING: COPPER
 LV: 65°C rise, BIL: 30 kV
 HV: 65°C rise, BIL: 95 kV

NAMEPLATE DATA

Core & Coils	1903
Case & Fittings	1880
Oil in Gallons	281
Weight in Pounds	5862

Impedance volts : 5.3 % at rated volts at : 500 KVA

MEGGER TEST RESULTS

TRANSFORMER TEST DATA

	1 Minute			POLARIZATION INDEX	CAPACITANCE		
High-> Ground	40k	M-Ohms, @	5	kV DC	1.3	0.02	micro-farad
Low -> Ground	30k	M-Ohms, @	1	kV DC	1.4	0.02	micro-farad
High-> Low	25k	M-Ohms, @	1	kV DC	1.5	0.02	micro-farad

TRANSFORMER TTR TESTS

TAP (V)	CALC. TTR	PHASE 1	PHASE 2	PHASE 3
14400	120.00	119.85	119.90	119.91
14100	117.50	117.54	117.52	117.53
13800	115.00	114.93	114.94	114.96
13500	112.50	112.48	112.47	112.49
13200	110.00	110.02	110.04	110.07
4160	34.67	34.72	34.76	34.80

COMMENTS

Tag 11446
 Set on 13,800V Tap

12/02/2017 Electrical tests done. Oil samples collected for analysis as per Consigli/Cannon requirements. Results to follow upon receipt from laboratory.

TRANSFORMER OIL DATA SHEET
Standard Oil Analysis

DATE : 12/05/2017
CUSTOMER : HVES
CIRCUIT/LOCATION : HVES-82
MANUFACTURER : Northeast Transformer
KVA/TYPE or M/N : 500
S/N : NET6195111117B

<u>TEST</u>	<u>ASTM</u>	<u>LIMITS*</u>	<u>RESULTS</u>
WATER CONTENT	D1533	20 Max	: 3 ppm
INTER-FACIAL TENSION	D971	32 Min	: 44.1 Dynes/ppm
NEUTRALITY	D974	0.10 Max	: 0.001 mg KOH/g
COLOR	D1500	3.5 Max	: 1.0
VISUAL EXAMINATION	D1524	N/A	: Clear & bright
DIELECTRIC	D877	26 Min	: 54 kV
SPECIFIC GRAVITY	D1298	0.91 Max	: 0.880

*NETA Table 100.4.1 and ANSI/IEEE C57.106-2002 "Guide for Acceptance and Maintenance of Insulating Oil in Equipment," Table 7.

COMMENTS:

Power Factor % at 100 C = 0.029

TRANSFORMER OIL DATA SHEET
Dissolved Gas-in-Oil Analysis As Per ASTM D-3612A

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 CIRCUIT/LOCATION : HVES-82
 MANUFACTURER : Northeast Transformer
 KVA/TYPE or M/N : 500
 S/N : NET6195111117B

<u>TEST</u>	<u>IN-SERVICE NORMS*</u>	<u>RESULTS</u>
HYDROGEN (H2)	240 ppm	: 0 ppm
METHANE (CH4)	160 ppm	: 0 ppm
ETHANE (C2H6)	115 ppm	: 0 ppm
ETHYLENE (C2H4)	190 ppm	: 0 ppm
ACETYLENE (C2H2)	11 ppm	: 0 ppm
CARBON MONOXIDE (CO)	580 ppm	: 0 ppm
CARBON DIOXIDE (CO2)	n/a	: 390 ppm
NITROGEN (N2)	n/a	: 59849 ppm
OXYGEN (O2)	n/a	: 27195 ppm
TOTAL GAS	n/a	: 87434 ppm
TOTAL COMBUSTIBLES	n/a	: 0 ppm
ESTIMATED TCG	n/a	: 0.00 %
CO2/CO RATIO		: 9999.99

ANALYSIS:

All gases are within accepted limits.

RECOMMENDATION:

Resample in 1 year.

*In-service Norms as follows:

	<u>GENERATING</u>	<u>TRANSMISSION</u>
HYDROGEN (H2)	240 ppm	100 ppm
METHANE (CH4)	160 ppm	120 ppm
ETHANE (C2H6)	115 ppm	65 ppm
ETHYLENE (C2H4)	190 ppm	30 ppm
ACETYLENE (C2H2)	11 ppm	35 ppm
CARBON MONOXIDE (CO)	580 ppm	350 ppm

COMMENTS:

NETS NORTHEAST TRANSFORMER SERVICES

3 PHASE TRANSFORMER		CLASS ONAN	60 HZ	65°C RISE
KVA 500	SERIAL		NET619511117	
HV 4160 DELTA X	13800 DELTA		HV BIL 95KV	HV Conductor CU
LV 208Y/120			LV BIL 30KV	LV Conductor AL

Contained <1 PPM
of PCBs At Time Of
Manufacture
SUBSTRACTIVE
POLARITY

% Imp.
At 85°C 5.3

Oil
(Gallons) 281

Weight
(lbs) 5862

**WARNING: TAP MUST
BE IN POSITON A FOR
4160 DELTA USE**

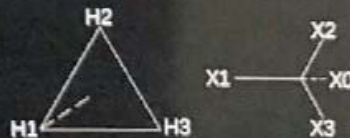
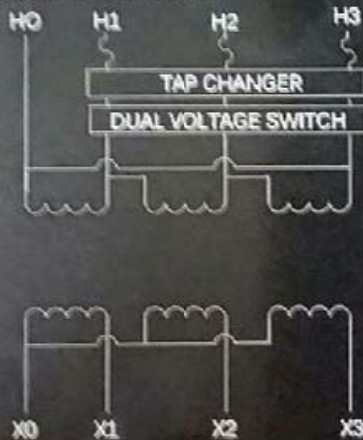
APPROXIMATE WEIGHTS
 CORE AND COIL 1903LBS
 TANK AND FITTINGS 1880LBS
 LIQUID 281 GALS 2079LBS
 TOTAL 5862LBS
 UNTANKNING 1903LBS

TAP CHANGER

POS	HIGH VOLTAGE
1 A	14400
2 B	14100
3 C	13800
4 D	13500
5 E	13200

DUAL VOLTAGE SWITCH

POS.	RATED VOLTS
1 A	4160
2 B	13800



3U-4-2-1-1-5-3-4

Preble, NY, U.S.A.

POSTER 416
100V 410V 200V 110V

A **B** **C** **D** **E**

WARNING

13.8
4.16

H1

H2

H3





X1

X3

X2

X0

NON-PCB
- MINERAL OIL -
WHEN MANUFACTURED
CONTAINED LESS THAN
1 PPM PCB

9076687493



NON-PCB
- MINERAL OIL -
WHICH MANUFACTURED
CONTAINED LESS THAN
1 PPM PCB

