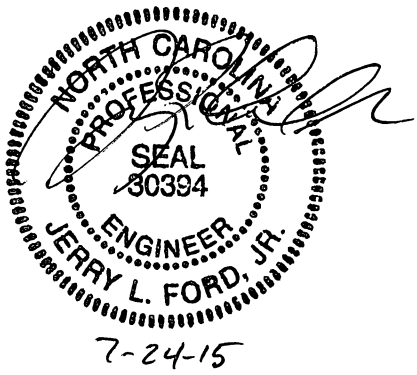
SOUTHEASTERN CONSULTING ENGINEERS, INC.

CHARLOTTE, NORTH CAROLINA

PROPOSALS
FOR THE
SALE OF A SURPLUS POWER TRANSFORMER
FROM
CITY OF CONCORD
CONCORD, NORTH CAROLINA
BID NO. 2265



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NOTICE AND INSTRUCTIONS TO BIDDERS

1. Sealed proposals for the purchase and removal of one surplus 12/16 MVA power transformer will be received by the City of Concord, North Carolina, on or before 2:30 P.M., Wednesday, August 19, 2015, in Conference Room 'C' of the Alfred M. Brown Operations Center at 850 Warren C. Coleman Boulevard, Concord, North Carolina 28025, at which time and place the proposals will be publicly opened and read.

2. Proposals and all supporting documents required to be attached thereto must be submitted in a sealed envelope addressed to:

City of Concord
Alfred M. Brown Operations Center
850 Warren C. Coleman Boulevard
Concord, North Carolina 28025
Attention: Mr. Scott Chunn

The name and address of the Bidder and the date and hour of the opening of bids must appear on the envelope in which the proposal is submitted.

3. The successful Bidder will be required to enter into an agreement with the City of Concord, North Carolina and to furnish all forms necessary to insure the proper disposition of the transformers and transformer liquids.

4. The successful Bidder will be required to remove the transformer within 60 days upon notification of award on a mutually agreeable date.

5. The City of Concord, North Carolina reserves the right to reject any and all bids.

6. The successful Bidder will be responsible for removing the transformer from its current location at 5431 Weddington Road, Concord, North Carolina 28025.

7. The successful Bidder must provide payment a minimum of ten days prior to removing the transformer.

CITY OF CONCORD
CONCORD, NORTH CAROLINA
Owner

SOUTHEASTERN CONSULTING
ENGINEERS, INC.
Engineer

Date: July 23, 2015

PROPOSAL

TO: CITY OF CONCORD
CONCORD, NORTH CAROLINA

GENTLEMEN:

The undersigned has carefully examined the annexed form of Notice and Instructions, Description of Surplus Equipment and hereby declares that he will take possession of the transformer, including insulating liquid, in the manner prescribed by all Local, State, and Federal agencies and provide certified copies of all disposition records to the City of Concord, North Carolina, and will pay said City the following amounts for the surplus equipment.

	AMOUNT
(1) 43.8-12.47 kV, 12/16 MVA, Power Transformer w/LTC	$_____

Additional Comments, or Explanations

_____
Bidder

_____ By_____
Title

_____ _____
Date

_____
Address

DESCRIPTION
OF
SURPLUS EQUIPMENT

A. SCOPE

The intent of this description of surplus equipment is to obtain a bid for one surplus 12/16 MVA liquid filled, three-phase power transformer with a load tap changer as hereinafter described.

B. RATING AND MANUFACTURER

The transformer was originally manufactured by Allis-Chalmers in 1969. The transformer is Class OA/FA, outdoor type, liquid insulated rated 12/16 MVA, 65 degrees centigrade, three-phase, 60 hertz. The high-voltage is 46,200 volts with two taps above and below 43,800 volts. High voltage BIL is 250 kV. The low-voltage is 7620/3200Y volts and the low-voltage BIL is 110 KV. Transformer impedance is 6.7%. Serial #28224-46564-2.

The transformer has a Siemens-Allis Load Tap Changer, Model #TLH-20.

Additional Information:

Case & Fittings	23,760 Lbs.
Core & Coil	32,300 Lbs.
Mineral Oil (Tank)	3,474 Gal.
Mineral Oil (LTC)	704 Gal.
Total Weight	87,400 lbs.

C. HISTORY

The transformer was purchased from Allis Chalmers in 1969 and has been out of service since 5/15/2003.

D. INSPECTION

The transformer is located in Concord, North Carolina and may be inspected during any weekday between the hours of 8:00 A.M. and 3:00 P.M.

E. REMOVAL & SHIPMENT

The successful Bidder shall be responsible for all shipping cost, including the disassembly and loading of the surplus equipment. The successful Bidder shall schedule a time to remove the surplus equipment within 60 days upon notification of award.

Radiators and bushings may be removed by the successful Bidder on site. No further disassembly will be allowed.

The crane and trucking company must be pre-approved by the City before they will be allowed to enter the City's facility.

F. DRAWINGS

No original outline drawings for the transformers are available. Pictures of the transformers and nameplates are enclosed.

G. SUBMITTAL DATA

The Bidder shall submit with the proposal the methods which will be utilized in the disposition of the transformers (rebuild, scrap for metal, direct resale, etc.).

References and contact persons shall be provided on removal of similar size and type units.

Equipment Flex

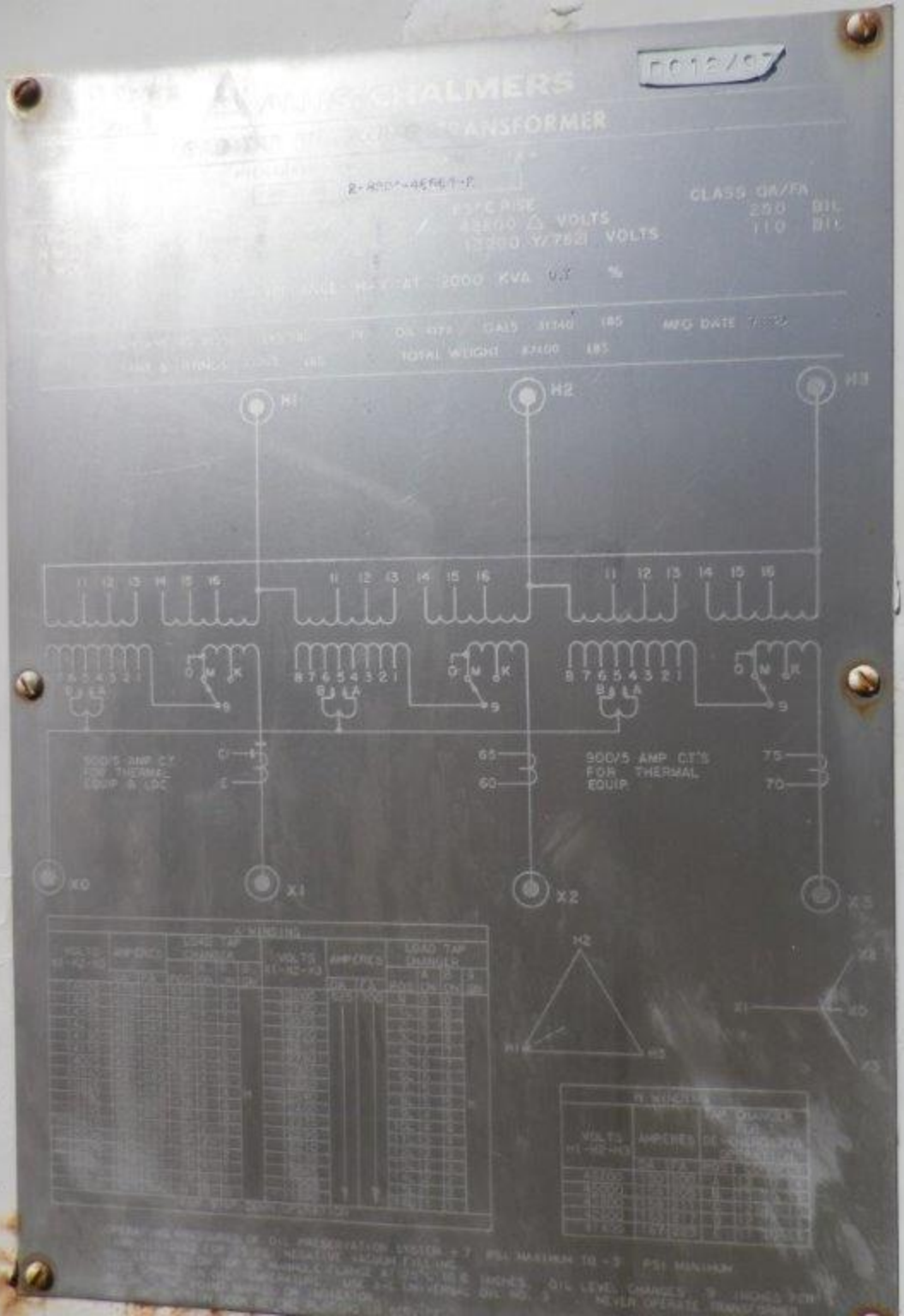
Location:	J	**Nom Voltage:**	
Equip #:		**Rating:**	
Equip Position:	Stored at sub J	**Class:**	44 KV LTC TX
Serial #:	28224465642	**Shop #:**	
Equip Catg:	Transformer	**Bankbay:**	
Equip Type:	LTCTransformer	**Status:**	Spare/NotInService
Manufacturer:	Allis-Chamers	**Criticality Value:**	1.00
Model:		**Health Value:**	0
Mfg Date:	9/1/1969	**Risk Value:**	0
Install Date:	6/18/2007		

Standard

Notes:	Removed from service on 5/15/2003
Attachment Flag:	1
MxOrders Open:	0
Triggers State:	0
Alerts Unacknowledged:	0
No Spares:	0

Page 1

TX Size:	12/16 MVA
PRI:	43 KV
PRI BIL:	250 KV
Pri tap no load:	D
SEC:	13 KV
SEC BIL:	110 KV
Weight:	87400 lbs
Impedance:	6.70
Phase:	3
Cycle:	60 Cycles
Liquid Type:	MINERAL OIL
Main Tank Gallons of Liquid:	4178
Main Tank Full Vacuum:	y
LTC Model:	TLH-20
LTC Serial #:	12
LTC Type:	Auto-Trans
LTC Maufacture:	Seimens-Allis
LTC Liquid Type:	MINERAL OIL
LTC Gallons:	733
LTC Full Vacuum:	y


CHALMERS
TRANSFORMER
CLASS OA/FA
250 BIL
110 BIL
H1
H2
H3
X0
X1
X2
X3
900/5 AMP CTS FOR THERMAL EQUIP & LDC
900/5 AMP CTS FOR THERMAL EQUIP

D012/97

ALLIS-CHALMERS

LOAD TAP CHANGING TRANSFORMER

SERIAL NO 2-8224-48564-2

60 Hz

65°C RISE

CLASS OA/FA

250 BIL

110 BIL

REE PHASE

KVA 12000 OA/16000 FA 43800 △ VOLTS

WDG.

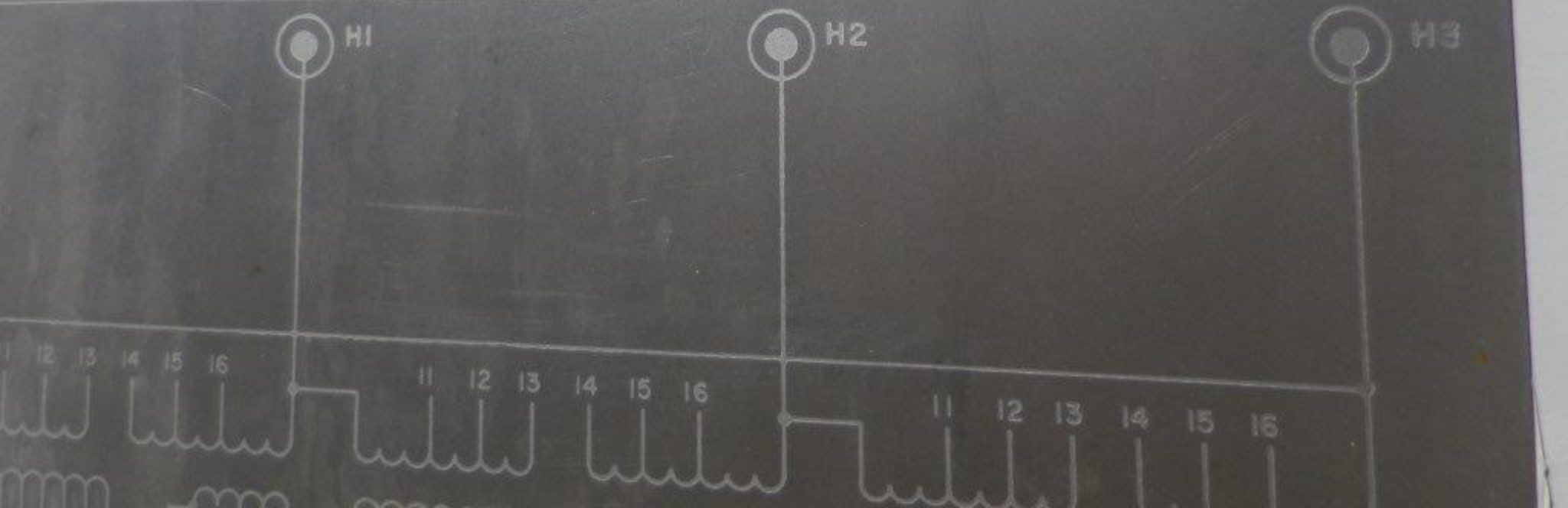
KVA 12000 OA/16000 FA 13200 Y/7621 VOLTS

WDG.

IMPEDANCE: H-X AT 12000 KVA 6.7 %

UNTANKING 32300 LBS 280 IN OIL 4178 GALS 31340 LBS MFG DATE 9-68

TANK & FITTINGS 23760 LBS TOTAL WEIGHT 87400 LBS



Fluid Analysis Report

Equipment	28224465642	*Cooling*	OA/FA
Serial No.	28224465642	*Fluid volume*	4178
Apparatus type	TRN	*In-service*	0
Owner	City of Concord	*Spare*	1
Substation	J	*Tank*	DV
Norms	TRN_IEEE_69KV	*Norms used*	TRN_IEEE_69KV
Fluid type	OIL	*DGA result*	1/1
Description	LTCTransformer	*Fluid condition*	1/1
Manufacturer	Allis-Chamers	*Moisture code*	1/1
Year manufactured	1969	*PCB result code*	0/0
MVA ratings	16	*Oil test status*	REVIEWED
Rated kV	46.000		

Remarks

Concentrations of combustible gases not increasing

Gas Analysis

Lab Report Number	*149699-031*	*121671-023*	*116198-027*	*112101-022*	*109267-014*
Sample date	2008-09-30	2003-03-10	2002-01-28	2001-01-09	2000-03-14
Fluid temp	18	10	35	30	30
Hydrogen (H2)	10	14	10	16	12
Methane (CH4)	30	30	30	48	53
Ethane (C2H6)	45.0	52.0	54.0	98.0	98.0
Ethylene (C2H4)	8.0	8.0	8.0	13.0	14.0
Acetylene (C2H2)	0.0	0.0	0.0	0.0	0.0
Carbon Monoxide (CO)	84	59	60	75	84
Carbon Dioxide (CO2)	1248	1141	1148	1944	2083
Oxygen (O2)	1218	1231	1554	1058	1190
Nitrogen (N2)	88294	84651	84395	80080	83918
Total heat gas	83	90	92	159	165
TDCG	177	163	162	250	261
Equivalent TCG	0.096	0.087	0.083	0.121	0.117
Total partial press	104.0	104.2	91.9	89.0	93.3
Est. safe handling limit	7.8	6.5	7.0	6.6	7.1
Calculated monitor ppm	25	25	21	30	27
CO2/CO	14.857	19.339	19.133	25.920	24.798
Oxygen/Nitrogen (O2/N2)	0.014	0.015	0.018	0.013	0.014
DGA retest days	365	365	365	90	90
DGA retest date	2009-09-30	2004-03-09	2003-01-28	2001-04-09	2000-06-12
DGA reference days	2031.0	406.0	384.0	301.0	482.0
DGA result	1	1	1	2	2
DGA diagnosis				T2	T2

Gas Analysis Remarks

No anomalies.

Fluid Quality

Lab Report Number	*149699-031*	*121671-023*	*116198-027*	*112101-022*	*109267-014*
Sample date	2008-09-30	2003-03-10	2002-01-28	2001-01-09	2000-03-14
Fluid temp	18	10	35	30	30
Dielectric breakdown D877	52.0	47.0	46.0	52.0	47.0
PF at 25 C	0.000		0.000	0.000	0.000
PF at 100 C	0.150		0.250	0.250	0.300
Acid number	0.010	0.018	0.010	0.010	0.010
Interfacial tension	36.8	37.3	37.7	37.5	37.5
Oxidation inhibitor	0.340	0.370	0.370	0.000	0.000
Specific Gravity	0.885	0.884	0.883	0.883	0.886
Color	1.0	1.0	1.0	1.0	1.5
Oil quality index	0.3	0.5	0.3	0.3	0.3
Visual	OK	CLEAR	OK	OK	DEBRIS
Fluid quality retest days	365	365	365	365	365
Fluid quality retest date	2009-09-30	2004-03-09	2003-01-28	2002-01-09	2001-03-14
Fluid condition	1	1	1	1	1

Fluid Quality Analysis Remarks

No oil quality problems were detected.

Moisture Analysis

Lab Report Number	*149699-031*	*121671-023*	*116198-027*	*112101-022*	*109267-014*
Sample date	2008-09-30	2003-03-10	2002-01-28	2001-01-09	2000-03-14
Fluid temp	18	10	35	30	30
Moisture	5	3	4	3	6
Relative saturation	10	9	4	4	7
Dew point	-26	-34	-30	-34	-23
Moisture code	1	1	1	1	1

Moisture Remarks

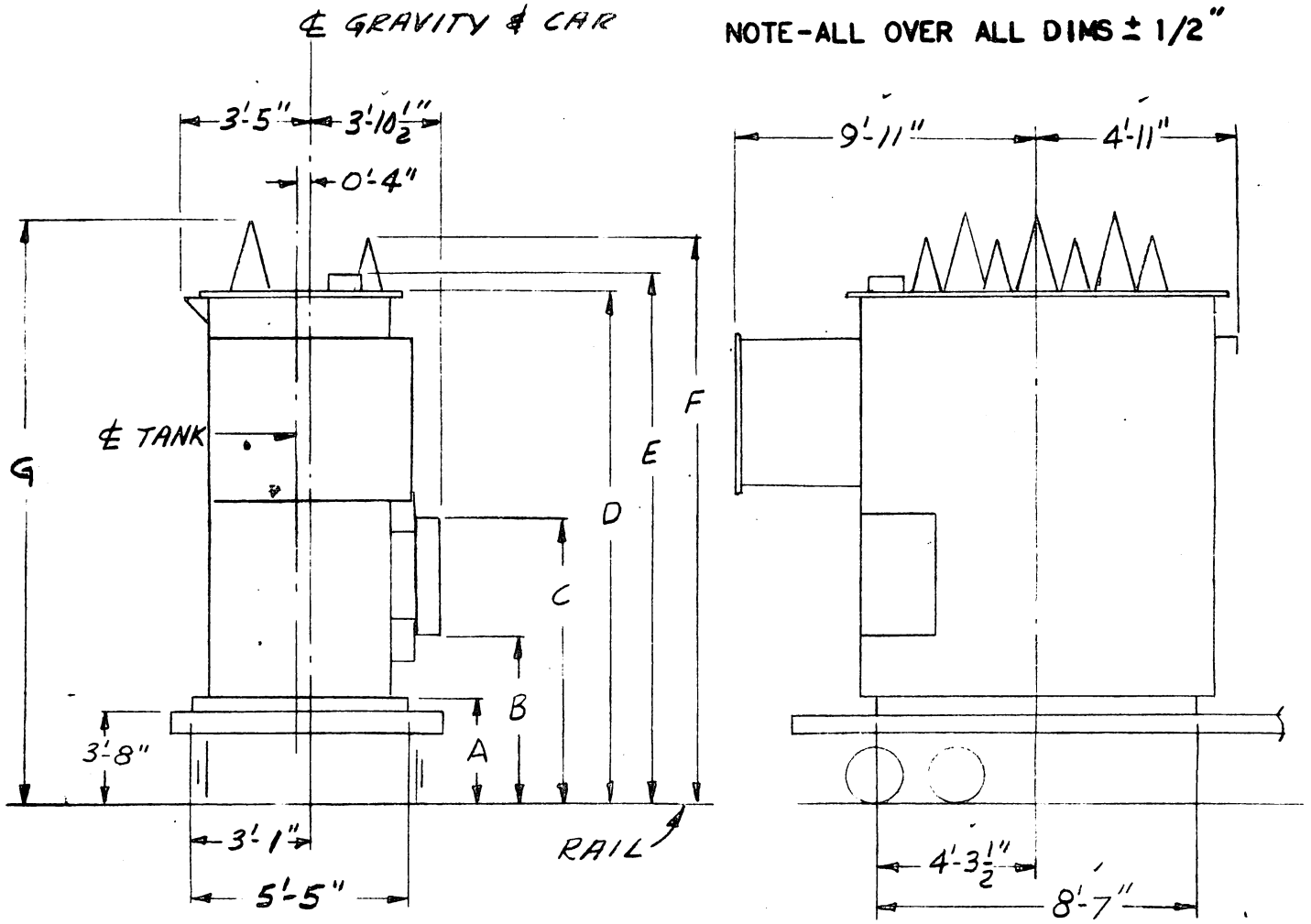
The water content of the oil seems acceptable.

Furans

Lab Report Number	*149699-031*	*116198-027*
Sample date	2008-09-30	2002-01-28
Fluid temp	18	35
Total furan	0	0

Furan Analysis Remarks

Furan levels are within acceptable limits.



TRANS. WTS

SHIP WT. OF UNIT (W/O OIL) (~~INCL OIL~~)	51320
RADS OIL REMOVED	6320
OIL SHIP SEP	
MISC SHIP SEP	50
TOTAL	57690

STEEL (EXCL ELECT STEEL) ..... 28200 (INC. RAD)
ELECT STEEL 20600
WT. OF OIL SHIPPED IN TRANSF .....

HT. DIM	EFF. WIDTH
A= 4'-0"	6'-2"
B= 6'-9"	7'-9"
C= 9'-8"	7'-9"
D= 16'-3"	6'-9"
E= 16'-9"	4'-0"
F= 17'-6"	3'-6"
G= 18'-7"	4'-10"
H=	
J=	
K=	
L=	

01	3-17-69		

CONFIDENTIAL—PROPERTY OF ALLIS-CHALMERS MFG. CO.
3572 MI PLANT

UNLESS OTHERWISE SPECIFIED:
1-PLACE DEC ±
2-PLACE DEC ±
3-PLACE DEC ±
ANGULAR ±
MACHINED SURFACE TEXTURE

DR KeB 3-17-69
CH Kube 3-19
AP KAS 3-21-69

SIMILAR TO —

SCALE NTS | SHEET —

NAME SHIPPING OUTLINE

MATL

WT R F

46564

BUL

PART NO. 63-114-164-449

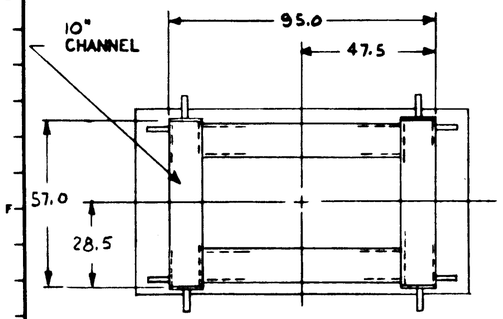
ISSUE 01

-SEGREGATED WTS-

CORE & COIL (UNTANKING)-----32300 LBS.
CASE & FITTINGS----------23760 LBS.
OIL (3474 GALS) MAIN TANK-26000 LBS.
OIL (704 GALS) L.T.C. COMPT. 5280 LBS.
TOTAL 87400 LBS.

GAL. OIL TO COVER CORE & COILS 1860 GALS.

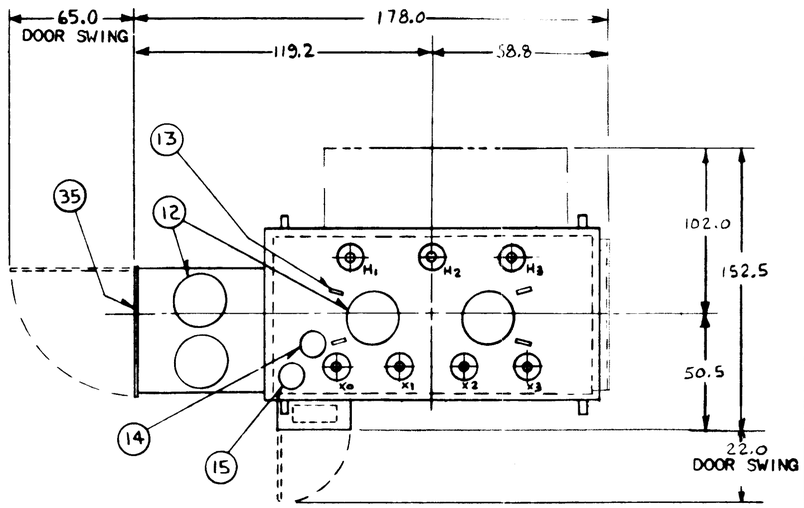
WHEN THIS UNIT IS FILLED WITH OIL, IT MUST BE FILLED UNDER VACUUM - SEE INSTRUCTION BOOK WITH UNIT.



TRANSFORMER MAY BE MOUNTED ON 2 PIERS EITHER DIRECTION OF BASE

INVERTED VIEW OF BASE

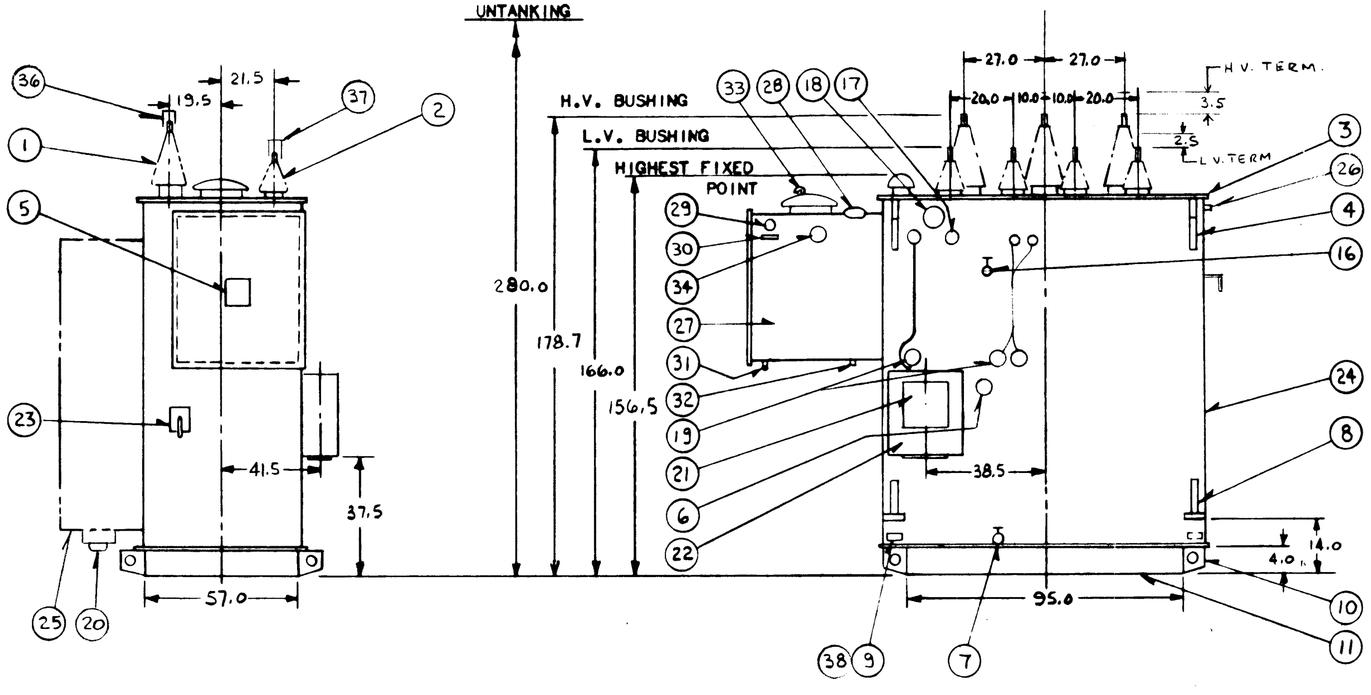
DIRECTION OF SHIPMENT



1. H.V. BUSHING-OIL FILLED 250BIL - 400/1200 AMP. - TOP TERMINAL 1.5-12 - 2.12 EFF. THRD. OBLCAT# 49253-5348
2. L.V. BUSHING-DRY TYPE 110BIL - 1200 AMP. - TOP TERMINAL - 1.5-12 - 2.12 EFF THRD. A-C DWG. 61-681-803-515
3. COVER - WELD ON
4. HOOKS - FOR LIFTING COMPLETE UNIT
5. ALLIS-CHALMERS MONOGRAM
6. PRESSURE VACUUM BLEEDER DEVICE AND GAUGE
7. DRAIN AND LOWER FILTER PRESS - 2.0 VALVE WITH .375 SAMPLING DEVICE
8. JACK PADS
9. GROUND PADS - DIAGONALLY OPPOSITE WITH TWO .50 - 13 TAPPED HOLES ON 1.75 CENTERS
10. PULLING EYE AND SKID NOSE W/ 1.50 DIA HOLE
11. BASE - PROVISION FOR SKIDDING IN BOTH DIRECTIONS - SEE DETAIL
12. MANHOLE- 19.0 WITH 1.0 VAC FILLING CONN.
13. LUG - FOR LIFTING COVER ONLY W/1.50 DIA HOLE
14. TERMINAL BOX - FOR C.T. LEADS
15. PRESSURE RELIEF DEVICE - MECHANICAL, AUTOMATIC RESETTING WITH INDICATOR -
16. UPPER FILTER PRESS - 1.5 VALVE
17. LIQUID TEMPERATURE INDICATOR - BULB INSERTED IN STD. OIL TIGHT WELL WITH ALARMS
18. LIQUID LEVEL INDICATOR - MAGNETIC TYPE W/ALARMS
19. THERMAL CONTROLS- FOR F.A. EQUIP. - BULB INSERTED IN STD. OIL TIGHT WELL
20. UNIT FANS - EXACT NUMBER NOT SHOWN
21. NAMEPLATE AND CONNECTION DIAGRAM
22. CONTROL CABINET - WITH 8.0 X 16.0 OPENING IN BOTTOM WITH BOLTED COVER PLATE FOR CUSTOMER'S CONDUIT
23. TAP CHANGER - FOR DE-ENERGIZED OPERATION- PROVISION FOR PADLOCKING IN ALL POSITIONS
24. MAIN TANK- SEALED TANK CONSTRUCTION
25. RADIATORS- BOLTED ON W/ SHUT OFF VALVES
26. GAS VENT - .250 CAPPED OUTLET
27. LOAD TAP CHGR. COMPT. & EQUIP.
28. POSITION INDICATOR - DIAL TYPE - LTC COMPT.
29. PROVISION FOR MANUAL OPERATION - LTC COMPT.
30. INSTRUCTION PLATE FOR MANUAL OPER.- LTC COMPT.
31. DRAIN & LOWER FILTER PRESS-1.0 VALVE LTC COMPT
32. BREATHER INLET - LTC COMPT.
33. BREATHER OUTLET & TOP FILTER PRESS -1.0 CONN. LTC - COMPT.
34. LIQUID LEVEL INDICATOR - MAGNETIC TYPE - LTC COMPT.
35. LTC COMPT - HINGED ACCESS DOOR
36. H.V. TERM. CLAMP TYPE FOR 4/0 STR. CU.
37. L.V. TERM. CLAMP TYPE FOR 2-500MCM CU.
38. GROUND TERM. CLAMP TYPE FOR 4/0 STR. CU.

01	3-11-69
WTS WERE :-	
CASE & FITTINGS	23760
OIL MAIN TANK	25230
TOTAL	88200
OIL TO COVER C&C	2150
EFF.	46564
02	5-16-69 AM

UNTANKING



LTC TRANSFORMER
CLASS - OA/FA 65°C RISE
KVA - 12000/16000
H.V. - 43800 Δ & TAPS 250 BIL
L.V. - 13200Y/7621 110 BIL
60 HZ - 3 PHASE

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8783 MI WORKS

UNLESS OTHERWISE SPECIFIED:
1 - PLACE DEC ±
2 - PLACE DEC ±
3 - PLACE DEC ±
ANGULAR ± .
MACHINED SURFACE TEXTURE

NAME: OUTLINE
MATL
WT R F

DR FJH 3-11-9
CH
AP KAS 3-19-69
SIMILAR TO 63-306-993-403
SCALE NTS
SHEET —
46564
PART NO 63-306-993-404

TRACE 02
63-306-993-404
DWG

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