RC

3

INVENTORY 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95

Ward Transformer Co., Inc.

TRANSFORMER DEPT.

№ 2295

Received From: Texas Gulf

Town: Aurora State N.C.

Received Via: Date: 7-16-87

Card Made: Jack Lafore P. O. No:

Sold To:

Original Cost:

Shop Cost:

Incoming Freight:

Date Billed:

Our R No:

Cust. Order No:

10816784

EQUIPMENT: POLE MOUNT TRANSFORMER

Serial No. N 16737

Make: DELTA STAR	K.V.A. 167	Imp. 4.6	Phase: 1	Style No.
H. Volts: 23,900	Type: HS	Form:	Cycles: 60	Cat. No.
L. Volts 240/480	Gals Oil:	Pol: SUBT	N. P. No. 65°C	Spec. No.
No. Taps 4 2½ Taps	Up 2 Down 2	YEAR BUILT:		

Pocket Pri Sec — Top Pri Sec — Steel ☒ — Cast ☐ — Cast Top Bot.

Stud Pri Sec — Oblong ☐ — Straight ☐ — Round ☒ — Corregated ☐ — Tube ☐

Ht. top of H. V.: 54"

Tank & Fittings:

Ht. No. H. V. Bush: 44"

C & C Wt:

Dia: Wide: 44"

Oil Wt:

Deep: 33"

Total Wt: 1580

Oil Level Gauge ☐ Thermometer ☐

Tap Changer: External ☒ Internal ☐

NEW USER:

REBUILT USER:

DEALER:

BOLTED DOWN TOP

REMARKS:

A - 50.099 L-G - 300 - 1000 V.

B - 48.900 H-G - 8000 - 1000 V.

C - 47.699 - 100% H-L - 10,000 - 1000 V.

D - 46.533 O.I. DI-ELECTRIC, CLEAR, CLEAN.

E - 45.333 28 KV - 28 KV. 30 KV.

TRANSFORMER TEST

Continuity ☐	Lead Clearances ☐	Exciting Current _____ At _____ Volts	Core Loss _____ At _____ Volts
Oil N R	Oil Level ☐	500 Cycles ☐ At _____ L. Volts	High Pot. ☐ High To Grd. _____ K. V.
Grd Terminals 1 2	Surge Tested ☐	Radio Interference OK ☐ Polprity A S	Low To Grd _____ K. V.
Oil Leaks ☐	Anti Siphon Joints ☐	Impeadence Calculated _____ At _____ Volts	High To Low _____ K.V.
Pri. Grd. Connected Y N	Sec. Grd. Connected Y N	Number Taps _____ What %	Up ☐ Down ☐

SECONDARY BREAKER	Position	% Tap	Connect	Pot. Difference	T.T.R. Ratio	Calculated Ratio
Breaker No.						
Trip and Reset ☐ Oil Temp °C						
Factory Trip Allowable To Secs.						
Factory Trip Current At °C						
Shop Trip Current At °C						
Shop Trip Time Right Side Secs.						
Shop Trip Time Left Side Secs.						

INSULATION POWER FACTOR	OIL TEST		INCOMING ☐	OUTGOING ☐
High to Grd. I.P.F. M.F.	SHOT A		SHOT B	Color
High to Low I.P.F. M.F.	No. 1	K. V.	No. 1 K. V.	Nevt No.
Low to Grd. I.P.F. M.F.	No. 2	K. V.	No. 2 K. V.	I. F. T.
Megger High to Grd. In Out	No. 3	K. V.	No. 3 K. V.	Power Factor
Megger Low to Grd In Out	No. 4	K. V.	No. 4 K. V.	Oxidation % Time
Megger High to Low In Out	No. 5	K. V.	No. 5 K. V.	Oxidation % Time
	TOTAL	K. V.	TOTAL K. V.	Average K. V.

Fuse No. Good ☐ Bad ☐	GRD. Clamps ☐	OUT	Approved: YES
Hangers IN OUT	Pri. Bushing Good ☐	OUT	Date Tested:
Arrestors IN OUT	Sec. Bushing Good ☐	OUT	Tested
Paint OUT	Sec. Breaker IN	OUT	By:

REMARKS:

RC

INVENTORY 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95

Ward Transformer Co., Inc.

TRANSFORMER DEPT.

№ 2296

Received From: AURORA TEXAS Gulf

Town: AURORA State N.C.

Received Via: Date: 7-16-87

Card Made: Jack Taylor P. O. No:

Sold To:

Original Cost:
Shop Cost:
Incoming Freight:
Date Billed:
Our R No:
Cust. Order No:

EQUIPMENT: Pole mount TRANSFORMER

Serial No. N-16736

Make: DELTA STAR	K.V.A. 167	Imp. 4.6	Phase: 1	Style No.
H. Volts: 22900	Type: HS	Form:	Cycles: 60	Cat. No.
L. Volts: 240/480	Gals Oil	Pol: Subt	N. P. No. 65a	Spec. No.
No. Taps 4 2½ Taps	Up 2 Down 2	YEAR BUILT:		
	Pocket Pri Sec	Top Pri Sec	Steel ☒	Cast ☐ Cast Top Bot.
	Stud Pri Sec	Oblong ☐	Straight ☐	Round ☒ Corregated ☐ Fins ☐

Ht. top of H. V.: 54"
Tank & Fittings:
Ht. No. H. V. Bush: 44"
C & C Wt:
Dia: Wide: 44"
Oil Wt:
Deep: 33"
Total Wt: 1580
Oil Level Gauge ☐
Thermometer ☐
Tap Changer: External ☒ Internal ☐

NEW USER:

REBUILT USER:

DEALER:

REMARKS:

A-50.092 L-G-15 MEGG OHMS 500 TUNEL SCALE
B-48.892 H-G-8000-1000V.
C-47.688-100% H-L-6000-1000V.
D-46.522 OIL DI-ELECTRIC, CLEAR AND CLEAN
E-45.323 30 KV AVERAGE.

		4%	LABOR
INT. STATE			EXEMPT
AMT. TAXABLE			
AMT. OF TAX			

TRANSFORMER TEST

Continuity ☐	Lead Clearances ☐	Exciting Current _____ At _____ Volts	Core Loss _____ At _____ Volts
Oil N R	Oil Level ☐	500 Cycles ☐ At _____ L Volts	High Pot. ☐ High To Grd. _____ K. V.
Grd Terminals 1 2	Surge Tested ☐	Radio Interference OK ☐ Polprity A S	Low To Grd _____ K. V.
Oil Leaks ☐	Anti Siphon Joints ☐	Impeadence Calculated _____ At _____ Volts	High To Low _____ K.V.
Pri. Grd. Connected Y N	Sec. Grd. Connected Y N	Number Taps _____ What % _____	Up ☐ Down ☐

SECONDARY BREAKER	Position	% Tap	Connect	Pot. Difference	T.T.R. Ratio	Calculated Ratio
Breaker No.						
Trip and Reset ☐ Oil Temp °C						
Factory Trip Allowable To Secs.						
Factory Trip Current At °C						
Shop Trip Current At °C						
Shop Trip Time Right Side Secs.						
Shop Trip Time Left Side Secs.						

INSULATION POWER FACTOR			OIL TEST		INCOMING ☐	OUTGOING ☐
High to Grd.	I.P.F.	M.F.	SHOT A	SHOT B	Color	
High to Low	I.P.F.	M.F.	No. 1 K. V.	No. 1 K. V.	Nevt. No.	
Low to Grd.	I.P.F.	M.F.	No. 2 K. V.	No. 2 K. V.	I. F. T.	
Megger High to Grd.	In	Out	No. 3 K. V.	No. 3 K. V.	Power Factor	
Megger Low to Grd	In	Out	No. 4 K. V.	No. 4 K. V.	Oxidation %	Time
Megger High to Low	In	Out	No. 5 K. V.	No. 5 K. V.	Oxidation %	Time
			TOTAL K. V.	TOTAL K. V.	Average K. V.	

Fuse No.	Good ☐ Bad ☐	GRD. Clamps	☐ OUT	Approved: YES
Hangers	IN OUT	Pri. Bushing Good	☐ OUT	Date Tested:
Arrestors	IN OUT	Sec. Bushing Good	☐ OUT	Tested
Paint	OUT	Sec. Breaker	IN OUT	By:

REMARKS:

3

RC

INVENTORY 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95

Ward Transformer Co., Inc.

TRANSFORMER DEPT.

№ 2297

Received From: Texas Gulf

Town: Fairmont State N.C.

Received Via: Date: 7-16-87

Card Made: Jack Tapp P. O. No:

Sold To:

Original Cost:
Shop Cost:
Incoming Freight:
Date Billed:
Our R No:
Cust. Order No:

EQUIPMENT: Pole Mount Transformer

Serial No. N-16738

Make: Pole Star	K.V.A. 167	Imp. 4.6	Phase: 1	Style No.
H. Volts: 22900	Type: AS	Form:	Cycles: 60	Cat. No.
L. Volts: 240/480	Gals Oil:	Pol: Swt	N. P. No. 65°C	Spec. No.
No. Taps 4 2½ Taps	Up 8 Down 9	YEAR BUILT:		
	Pocket Pri Sec	Top Pri Sec	Steel ☒ Cast ☐	Cast Top Bot.
	Stud Pri Sec	Oblong ☐ Straight ☐	Round ☒ Corregated ☐	Tube ☐

Ht. top of H. V.:
Tank & Fittings:
Ht. No. H. V. Bush:
C & C Wt:
Dia: Wide:
Oil Wt:
Deep:
Total Wt:
Oil Level Gauge ☐ Thermometer ☐
Tap Changer: External ☐ Internal ☐
NEW USER:
REBUILT USER:
DEALER:

REMARKS:

A- 50.092 L-G ~~5000~~ 8000-1000V Scale
B- 48.887 H-G 10,000-1000V Scale
C- 47.692 H-L 10,000-1000V Scale
D- 46.523
E- 45.326
Oil Di-Electric Clear, Clean
30KV 30KV 30KV

1% ___ 4% ___ LABOR
INL. STATE ___ EXEMPT
AMT. TAXABLE
AMT. OF TAX

TRANSFORMER TEST

tinuity ☐	Lead Clearances ☐	Exciting Current _____ At _____ Volts	Core Loss _____ At _____ Volts
N R	Oil Level ☐	500 Cycles ☐ At _____ L. Volts	High Pot. ☐ High To Grd. _____ K. V.
d erminals 1 2	Surge Tested ☐	Radio Interference OK ☐ Polprity A S	Low To Grd _____ K. V.
il eaks ☐	Anti Siphon Joints ☐	Impeadence Calculated _____ At _____ Volts	High To Low _____ K.V.
ri. Grd. onnected Y N	Sec. Grd. Connected Y N	Number Taps _____ What %	Up ☐ Down ☐

SECONDARY BREAKER			Position	% Tap	Connect	Pot. Difference	T.T.R. Ratio	Calculated Ratio
Breaker No.								
Trip and Reset ☐	Oil Temp	°C						
Factory Trip Allowable	To	Secs.						
Factory Trip Current	At	°C						
Shop Trip Current	At	°C						
Shop Trip, Time Right Side		Secs.						
Shop Trip Time Left Side		Secs.						

INSULATION POWER FACTOR			OIL TEST		INCOMING ☐	OUTGOING ☐
High to Grd.	I.P.F.	M.F.	SHOT A	SHOT B	Color	
High to Low	I.P.F.	M.F.	No. 1 K. V.	No. 1 K. V.	Nevt No.	
Low to Grd.	I.P.F.	M.F.	No. 2 K. V.	No. 2 K. V.	I. F. T.	
Megger High to Grd.	In	Out	No. 3 K. V.	No. 3 K. V.	Power Factor	
Megger Low to Grd	In	Out	No. 4 K. V.	No. 4 K. V.	Oxidation %	Time
Megger High to Low	In	Out	No. 5 K. V.	No. 5 K. V.	Oxidation %	Time
			TOTAL K. V.	TOTAL K. V.	Average K. V.	

Fuse No.	Good ☐ Bad ☐	GRD. Clamps ☐ OUT	Approved: YES
Hangers	IN OUT	Pri. Bushing Good ☐ OUT	Date Tested:
Arrestors	IN OUT	Sec. Bushing Good ☐ OUT	Tested
Paint	OUT	Sec. Breaker IN OUT	By:

REMARKS:

Texasgulf Shipping Record

0193

PHOSPHATE OPERATIONS
P. O. BOX 48
AURORA, N.C. 27806
PHONE (919) 322-4111

SHIP TO	DATE
Ward Transformer Raleigh, N.C. 27622	July 14, 1987
	SHIPPED BY
	Expressco / Vendor
PURCHASE ORDER NO.	CHARGE
D97-14342	W.O. 150491
REQUISITION NO.	B/L NO.
CM4-54683	
REASON FOR SHIPMENT	
Repair	

QUANTITY	UNIT	DESCRIPTION OF ITEMS SHIPPED
3	EA	Transformers, 167KVA, 22900-240/480
		S/N's N16736
		N16737
		N16738
		Units are rusty and leaking at seams.
		Vendor is to provide repair cost and
		replacement cost to Robert Wetherington
		prior to making repairs
		John Wiban

Clyde Boyd 7/15/87
WAREHOUSEMAN

Note: All Billing MUST Have Customer PO # !

ORDER SHEET

WARD TRANSFORMER CO., INC.

1 ☐ MFG. EQUIPMENT	8 ☐ PARTS	☒ OIL
2 ☐ USED EQUIPMENT	9 ☐ EXIDE ELECTRONICS	☐ DRY
3 ☒ REPAIR	10 ☐ EXIDE CORP.	☐ SWITCHGEAR
4 ☐ RENTAL	11 ☐ OEM	☐ OTHER
5 ☐ BROKER SALE - USED	12 ☐ ROC PAD MOUNT	
6 ☐ BROKER SALE - NEW	13 ☐ ROC SPECIAL	
7 ☐ CONSIGNMENT EQUIPMENT	14 ☐ MISCELLANEOUS	

OUR ORDER NUMBER: 3-36259
DATE SOLD: 7-9-87
CREDIT OK:
CUSTOMER NUMBER:
SALESMAN: 25
SALES TERRITORY:
TERMS: Net 30

SOLD TO: Texasgulf Chemicals
CUSTOMER P.O. NO.: D97-14342
ADDRESS: PO Box 48
ATTENTION: Robert Weatherington
CITY, STATE, ZIP CODE: Aurora, N.C. 27806
TELEPHONE NO.: 1 322 4111

SHIP TO: Texasgulf Chemicals
REFERENCE NO.:
STREET ADDRESS:
ATTENTION:
CITY, STATE ZIP CODE: Aurora, N.C. 27806
TELEPHONE NO.:

DATE PROMISED:
INSTRUCTIONS:
ROUTE VIA: WARD
☐ COLLECT ☐ PREPAID ☐ PREPAID & ADD

QUAN.	DESCRIPTION	UNIT COST	TOTAL
3	Repair of Pole Mount Transformers		
	167 KVA, 1Φ, 60HZ, 65°C		
	High Voltage 22,900		
	Low Voltage 240/480		
	Serials N16736, N16737, N16738		
	Note units are leaking at seam & rusty.		
	Determine cost B-4 repair. If cost approaches 60% of replacement then		
	Our Contact: Robert Weatherington.		