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3430 PROGRESS DRIVE, UNIT B + BENSALEM, PA + 19020

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TEST REPORT 01-7201591-583350-00

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			VVVVV.VVEIDIVIAININ-EI	LECTRICAL.COM	100 Sec. 15 15
Tampa Armature Wo	rks	Serial#:	2-39Y2285A	Mfr: WESTINGHOUSE	Control#: 7201591
			CITY OF WAUCHULA	kV: 69	Order#: 583350
V 0	LE CONTRACTOR NO	Equipment:	OCB	kVA:	Account: 614
LAKELAND, FL 3381		Compartment:	OCB	Year Mf'd: 1969	Received: 12/05/201
ATTN: CHRISTINA T	ABARETTI	Breathing:	FB	Syringe ID: 53005814	Reported: 12/18/201
PO#: 40408513-1		Bank:	Phase: 1	Bottle ID:	
Project ID: 4031098	5	Fluid: MIN	USGal: 550	Sampled By: DOC	
Customer ID: CB250	00 A PHASE	1	Model:	200 0	
	Lab (Control Number	7201591		
		Date Sampled	11/28/2018		
		Order Number	583350		
		Oil Temp			
Dissolved Gas Anal		gen (H2) (µL/L)			
ASTM		ne (CH4) (µL/L)			
D-3612 ¹		e (C2H6) (µL/L)			
		e (C2H4) (µL/L)			
		e (C2H2) (µL/L)			
		cide (CO) (μL/L)			
		de (CO2) (μL/L)			
		gen (N2) (µL/L)			
		gen (O2) (µL/L)			
	Total Dissolved G	as (TDG) (µL/L)	: 88479		
Total Di	issolved Combustible Ga	s (TDCG) (μL/L)	: 21		
	Equi	valent TCG (%)	0.0189	Annual Control of the	
DGA		Ratio Analysis	: Heating to arcing gas	ratios within normal limits	
Diagnostics					
Comment:					
General Oil Quality ((GOQ)	=		Constitution of the Consti	
ASTM D-15331	Moisture in Oil	(mg/kg)	31		
ASTM D-9711	Interfacial Tension	(mN/m)	23.47		
ASTM D-9741	Acid Number	(mg KOH/g)	0.066		
ASTM D-15001	Color Number	(ASTM)	L2.0		
ASTM D-15241	Visual Exam.	(Relative)	PASS		
			CLR&BRIGHT		
ASTM D-15241	Sediment Exam.	(Relative)	TRACE		
ASTM D-8771	Dielectric Breakdown	(kV)	42		
ASTM D-9241 P	ower Factor @ 25°C (Rou	tine) (%)	0.049		
ACTM D 40501	Density @15°C	(g/mL)	200 00		
431W D-4052		Charles and the second		ble	
		Moisture in Oil:	Diagnostic not applica	DIO.	
GOQ Diagnostics					
GOQ Diagnostics PER IEEE C57.106-2		rfacial Tension	Diagnostic not applica Below limit for in-servi Diagnostic not applica	ce oil (25 mN/m min).	
GOQ Diagnostics PER IEEE C57.106-2	006 Inte	rfacial Tension Acid Number	Below limit for in-servi	ce oil (25 mN/m min). ble.	in-service oil (CARRON)
GOQ Diagnostics PER IEEE C57.106-2	006 Inte	rfacial Tension Acid Number ber and Visual	Below limit for in-servi Diagnostic not applica Color acceptable for in	ce oil (25 mN/m min). ble. n-service oil (2.0 max). Visual acceptable for	r in-service oil (CARBON).
ASTM D-4052 ¹ GOQ Diagnostics PER IEEE C57.106-2(most recent sample)	006 Inte Color Num Dielectric Breakdow	rfacial Tension: Acid Number: ber and Visual: n ASTM D-877:	Below limit for in-servi	ce oil (25 mN/m min). ble. n-service oil (2.0 max). Visual acceptable foi ice oil (25 kV min).	r in-service oil (CARBON).

End of Test Report

Authorized By:

ERIC MCANANY CHEMIST

Notations: 1. Analysis is ISO/IEC 17025:2005 accredited, L-A-B Accredited Certificate Number L2303.02 2. This test is conducted by a subcontracted laboratory. 3. Subcontracted laboratory has received ISO Standard 17025 accreditation for this test. 5. Imported Sample: WEIDMANN Electrical Technology accepts no responsibility for these results; accreditation status does not apply to these results. 8. Imported Equipment 10. mg/kg, µg/m, µL/L = ppm, µg/L = ppb, mN/m = dynes/cm, mm²/s = cSt

Accreditation applies to current analysis only. The analyses, opinions or interpretations contained in this report material and information supplied by the client. WEIDMANN Electrical Technology does not imply that the contents of the sample received by this laboratory are the same as all such material in the environment from which the sample was taken. Our test results relate only to the sample or samples tested. Any interpretations or opinions expressed represent the best judgment of which this report may be used or relied upon for any reason whatsoever. This test report shall not be reproduced except in full, without written approval of the laboratory.

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Tampa Armature Works		2-39Y2285B	Mfr: WESTI	NGHOUSE Control#: 7201592
	Location:	CITY OF WAUCHULA	kV: 69	Order#: 583350
	Equipment:	OCB	kVA:	Account: 614
LAKELAND, FL 33810 US	Compartment:	OCB	Year Mf'd: 1969	Received: 12/05/2018
ATTN: CHRISTINA TABAR	RETTI Breathing:	FB	Syringe ID: 530024	
PO#: 40408513-1	Bank:	Phase: 1	Bottle ID:	- WOOD - WASHINGTON - WARRY 11- TO A TO
Project ID: 40310985	Fluid: MIN	USGal: 550	Sampled By: DOC	
Customer ID: CB2500 B F	PHASE	Model:		
E	Lab Control Number	7201592		
	Date Sample	1: 11/28/2018		
	Order Number	583350		
	Oil Temp	30		
Dissolved Gas Analysis	(DGA) Hydrogen (H2) (μL/L	3		
ASTM	Methane (CH4) (μL/L): 1		
D-36121	Ethane (C2H6) (µL/L)	: <1		
	Ethylene (C2H4) (µL/L	: <1		
	Acetylene (C2H2) (μL/L	: <1		
	Carbon Monoxide (CO) (µL/L)	16		
	Carbon Dioxide (CO2) (µL/L	570		
	Nitrogen (N2) (μL/L)	: 66188		
	Oxygen (O2) (µL/L)	30078		
	Total Dissolved Gas (TDG) (µL/L)			
Total Dissolv	ved Combustible Gas (TDCG) (μL/L)	20		
	Equivalent TCG (%	0.0207		
DGA	Ratio Analysis	: Heating to arcing gas	ratios within normal limits	
Diagnostics	•		Table William Herman IIII.	
Comment:	, and a second s			
General Oil Quality (GOQ	1)			
ASTM D-15331	Moisture in Oil (mg/kg)	: 29		
ASTM D-971 ¹ In	nterfacial Tension (mN/m)	: 23.77		
ASTM D-9741	Acid Number (mg KOH/g)	0.068		
ASTM D-15001	Color Number (ASTM)	: L2.0		
ASTM D-15241	Visual Exam. (Relative)	: PASS		
		CLR&BRIGHT		
ASTM D-15241	Sediment Exam. (Relative)	LIGHT		
ASTM D-877 ¹ Die	electric Breakdown (kV)	: 41		
ASTM D-924 ¹ Power	Factor @ 25°C (Routine) (%)	0.044		
ASTM D-40521	Density @15°C (g/mL)	0.8879		
GOQ Diagnostics	Moisture in Oil	: Diagnostic not applica	ble.	
PER IEEE C57.106-2006	Interfacial Tension	: Below limit for in-servi	ce oil (25 mN/m min).	
(most recent sample)	Acid Number	: Diagnostic not applica	ble.	
	Color Number and Visual	: Color acceptable for ir	n-service oil (2.0 max). Visual a	cceptable for in-service oil (CARBON).
	Dielectric Breakdown ASTM D-877	: Acceptable for in-serv	ice oil (25 kV min).	(2.1.2014).
	Power Factor @ 25°C (Routine)			
	. chair addor (as 20 o fitodaline)	. Troceptable for ill-serv	ice oii (170 max).	

End of Test Report

Authorized By:

ERIC MCANANY CHEMIST

Notations: 1. Analysis is ISO/IEC 17025:2005 accredited, L-A-B Accredited Certificate Number L2303.02 2. This test is conducted by a subcontracted laboratory. 3. Subcontracted laboratory has received ISO Standard 17025 accreditation for this test. 5. Imported Sample: WEIDMANN Electrical Technology accepts no responsibility for these results; accreditation status does not apply to these results. 8. Imported Equipment 10. mg/kg, µg/g, µg/mL, µL/L = ppm, µg/L = ppb, mN/m = dynes/cm, mm²/s = cSt

Accreditation applies to current analysis only. The analyses, opinions or interpretations contained in this report are based upon material and information supplied by the client. WEIDMANN Electrical Technology does not imply that the contents of the sample received by this laboratory are the same as all such material in the environment from which the sample was taken. Our test results relate only to the sample or samples tested. Any interpretations or opinions expressed represent the best judgment of WEIDMANN Electrical Technology. WEIDMANN Electrical Technology assumes no responsibility and makes no warranty or representation, expressed or implied as to the condition, productivity or proper operation of any equipment or other property for which this report may be used or relied upon for any reason whatsoever. This test report shall not be reproduced except in full, without written approval of the laboratory.

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Location: CITY OF WAUCHULA KW : 68	Tampa Armature W	orks	Seria	l#: 2-	39Y2285C	Mf	: WESTINGHOUSE	Control#: 7201593
Equipment: OCB			Locatio	n: Cl	ITY OF WAUCHUL	.A k\	' : 69	
ATTN: CHRISTINA TABARETTI			Equipme	nt: 00	CB	kVA	:	
ATTN: CHRISTINA TABARETTI Breathing: FB Syringe ID: 53005623 Reported: 12/18/2018 Project ID: 40310985 Fluid: MIN USGal: 550 Sampled By: DOC Oustomer ID: C92500 C PHASE Model: 72/01593	and the second s		Compartme	nt: 00	CB	Year Mf'o	l: 1969	
Pose Pase	ATTN: CHRISTINA	TABARETTI	Breathir	g: FE	3			
Project Dr. 40310985	PO#: 40408513-1		Bar	ık: Ph	nase: 1			110ported: 12/10/2010
Customer ID: CB2500 C PHASE	Project ID: 4031098	85	Fluid: N	IIN US	SGal: 550			
Date Sampled: Order Number: 0335050 Dissolved Gas Analysis (DGA)	Customer ID: CB25	500 C PHASE		Mo	odel:			
Order Number: Oil Temp: 30			Lab Control Num	ber:	7201593			
Oil Temp: 30			Date Samp	oled:	11/28/2018			
Dissolved Gas Analysis (DGA)			Order Num	ber:	583350			
ASTM Methane (CH4) (µL/L): 1 D3612¹ Ethane (C2H4) (µL/L): -1 Ethylene (C2H4) (µL/L): -1 Ethylene (C2H4) (µL/L): -1 Acetylene (C2H2) (µL/L): -1 Acetylene (C2H2) (µL/L): -1 BETHYLENE (C2H4) (µL/L): -1 Carbon Monoxide (CO) (µL/L): -19 Carbon Dioxide (CO2) (µL/L): -609 Nitrogen (N2) (µL/L): -62314 Oxygen (O2) (µL/L): -62314 Oxygen (O2) (µL/L): -28209 Total Dissolved Combustible Gas (TDC6) (µL/L): -23 Equivalent TCG (%): -32 Equivalent TCG			Oil Te	mp:	30			
D-3612 ¹ Ethane (C2H4) (µL/L): <1 Ethylene (C2H4) (µL/L): <1 Acetylene (C2H4) (µL/L): <1 Acetylene (C2H4) (µL/L): <1 Acetylene (C2H4) (µL/L): <1 Acetylene (C2H4) (µL/L): <1 Beauty (C2H4) (µL/L): <1 Acetylene (C2H4) (µL/L): <1 Beauty (C2H4) (µL/L	Dissolved Gas Ana	alysis (DGA)	Hydrogen (H2) (µI	L/L):	3			
D-3612 ¹ Ethane (C2H6) (µL/L): <1 Ethylene (C2H4) (µL/L): <1 Acetylene (C2H2) (µL/L): <1 Carbon Monoxide (CO) (µL/L): 609 Nitrogen (N2) (µL/L): 60314 Oxygen (O2) (µL/L): 91155 Total Dissolved Gas (TDG) (µL/L): 91155 Total Dissolved Combustible Gas (TDG) (µL/L): 91155 Total Dissolved Combustible Gas (TDG) (µL/L): 91155 Total Dissolved Combustible Gas (TDG) (µL/L): 91155 DOGA Ratio Analysis: Equivalent TCG (%): 0.0248 DOGA Ratio Analysis: Heating to arcing gas ratios within normal limits DOGA Ratio Analysis: Heating to arcing gas ratios within normal limits DOGA Ratio Analysis: Heating to arcing gas ratios within normal limits DOGA Ratio Analysis: Heating to arcing gas ratios within normal limits DOGA Ratio Analysis: Heating to arcing gas ratios within normal limits DOGA Ratio Analysis: Heating to arcing gas ratios within normal limits DISSON D-1523 ¹ Moisture in Oil (mg/kg): 32 ASTM D-971 ¹ Interfacial Tension (mN/m): 23.41 ASTM D-971 ¹ Acid Number (mg KOH/g): 0.071 ASTM D-1524 ¹ Visual Exam. (Relative): PASS CLR&BRIGHT ASTM D-1524 ¹ Visual Exam. (Relative): NASTM D-1524 ¹ Visual Exam. (Relative): TRACE ASTM D-977 ¹ Dielectric Breakdown (KV): 43 ASTM D-977 ¹ Dielectric Breakdown (KV): 43 ASTM D-9052 ¹ Power Factor @ 25°C (Routine): Diagnostic not applicable. PREIEEE CF,106-2006 Interfacial Tension: Bolow limit for in-service oil (25 mN/m min). Dielectric Breakdown ASTM D-877: Acceptable for in-service oil (20 max). Visual acceptable for in-service oil (CARBON). Acceptable for in-service oil (25 kV min).	ASTM		Methane (CH4) (µI	L/L):	1			
Ethylene (C2H4) (µL/L):	D-36121				<1			
Acetylene (C2H2) (µL/L):					<1			
Carbon Monoxide (CO) (µL/L): Carbon Dioxide (CO2) (µL/L): Nitrogen (N2) (µL/L): Oxygen (O2) (µL/L): 28209 Total Dissolved Gas (TDG) (µL/L): Equivalent TCG (%): 23 DGA Ratio Analysis: Ratio Analysis: Heating to arcing gas ratios within normal limits DGA ASTM D-1533¹ Moisture in Oil (mg/kg): ASTM D-97¹ Interfacial Tension (mN/m): ASTM D-97¹ Acid Number (mg KOH/g): ASTM D-1500¹ Color Number (ASTM): L2.0 ASTM D-1524¹ Sediment Exam. (Relative): ASTM D-1524¹ Sediment Exam. (Relative): ASTM D-97¹ Dielectric Breakdown (kV): ASTM D-98² Power Factor @ 25°C (Routine) (%): DGQ Diagnostics Moisture in Oil: Below limit for in-service oil (25 mN/m min). Diagnostic not applicable. Color acceptable for in-service oil (25 max). Visual acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Power Factor @ 2					<1			
Carbon Dioxide (CO2) (µL/L): Nitrogen (N2) (µL/L): Oxygen (O2) (µL/L): Total Dissolved Gas (TDG) (µL/L): Equivalent TCG (%): O.0248		Ca			19			
Nitrogen (N2) (µL/L): Oxygen (O2) (µL/L): 1					609			
Oxygen (O2) (µL/L): Total Dissolved Gas (TDG) (µL/L): Partial Dissolved Combustible Gas (TDG) (µL/L): Equivalent TCG (%): OCA Ratio Analysis: Diagnostics Comment: General Oil Quality (GOQ) ASTM D-1533¹ Moisture in Oil (mg/kg): ASTM D-971¹ Interfacial Tension (ml/m): ASTM D-974¹ Acid Number (mg KOH/g): ASTM D-1524¹ Visual Exam. (Relative): ASTM D-1524¹ Visual Exam. (Relative): ASTM D-1524¹ Sediment Exam. (Relative): ASTM D-874¹ Dielectric Breakdown (kV): ASTM D-974¹ Power Factor @ 25°C (Routine) (%): DOMAD STORE Dielectric Breakdown (kV): ASTM D-1524¹ Power Factor William (Relative): Dielectric Breakdown (kV): ASTM D-924¹ Power Factor William (Relative): Dielectric Breakdown (kV): ASTM D-924¹ Power Factor William (Relative): Dielectric Breakdown (kV): Dielectric Breakdown (kV): ASTM D-924¹ Power Factor William (Relative): Dielectric Breakdown (kV): Dielectric Breakdown (kV): Acid Number (Color Number and Visual: Dielectric Breakdown ASTM D-877; Color acceptable for in-service oil (25 mN/m min). Diagnostic not applicable. Dielectric Breakdown ASTM D-877; Color acceptable for in-service oil (25 kV min). Power Factor William (Name) Acceptable for in-service oil (1% max).								
Total Dissolved Gas (TDG) (µL/L):					28209			
Total Dissolved Combustible Gas (TDCG) (µL/L): Equivalent TCG (%): 0.0248 Diagnostics Ratio Analysis: Heating to arcing gas ratios within normal limits 1		Total I			91155			
Equivalent TCG (%): OGA Ratio Analysis: Heating to arcing gas ratios within normal limits 132 32 334 345 345 357 357 357 357 357	Total D	Dissolved Com	bustible Gas (TDCG) (μL	_/L):	23			
Diagnostics Comment: General Oil Quality (GOQ) ASTM D-971 Interfacial Tension (mN/m): 23.41 ASTM D-9741 ACID Number (mg KOH/g): 0.071 ASTM D-15241 ASTM D-15241 ASTM D-15241 ASTM D-15241 ASTM D-15241 Sediment Exam. (Relative): PASS CLR&BRIGHT ASTM D-8771 Dielectric Breakdown (kV): 43 ASTM D-9741 Power Factor @ 25°C (Routine) (%): 0.8878 Diagnostics Moisture in Oil: Diagnostic not applicable. Below limit for in-service oil (25 mN/m min). Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (19% max).					0.0248			
Diagnostics Comment: General Oil Quality (GOQ) ASTM D-1533¹ Moisture in Oil (mg/kg): ASTM D-971¹ Interfacial Tension (mN/m): ASTM D-974¹ Acid Number (mg KOH/g): ASTM D-1500¹ Color Number (ASTM): ASTM D-1524¹ Visual Exam. (Relative): ASTM D-1524¹ Sediment Exam. (Relative): ASTM D-877¹ Dielectric Breakdown (kV): ASTM D-924¹ Power Factor @ 25°C (Routine) (%): ASTM D-924¹ Power Factor @ 25°C (Routine) ASTM D-924¹ Density @15°C (g/mL): Below limit for in-service oil (25 mN/m min). Diagnostics Dielectric Breakdown ASTM D-877: Color Number and Visual: Dielectric Breakdown ASTM D-877. Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	DGA		Ratio Analy	sis. F	leating to arcing g	as ratios within normal li	mita	
General Oil Quality (GOQ) ASTM D-1533 ¹ Moisture in Oil (mg/kg): 32 ASTM D-971 ¹ Interfacial Tension (mN/m): 23.41 ASTM D-974 ¹ Acid Number (mg KOH/g): 0.071 ASTM D-1500 ¹ Color Number (ASTM): L2.0 ASTM D-1524 ¹ Visual Exam. (Relative): PASS ASTM D-1524 ¹ Sediment Exam. (Relative): TRACE ASTM D-974 ¹ Dielectric Breakdown (kV): 43 ASTM D-974 ¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): 0.8878 BOQ Diagnostics Moisture in Oil: Diagnostic not applicable. PER IEEE C57.106-2006 Interfacial Tension: Below limit for in-service oil (25 mN/m min). Diagnostic not applicable. Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): CRRBON). Acceptable for in-service oil (25 kV min). Acceptable for in-service oil (1% max).	Diagnostics		,		realing to droning go	as ratios within normal in	mits	
ASTM D-1533 ¹ Moisture in Oil (mg/kg): 32 ASTM D-971 ¹ Interfacial Tension (mN/m): 23.41 ASTM D-974 ¹ Acid Number (mg KOH/g): 0.071 ASTM D-1500 ¹ Color Number (ASTM): L2.0 ASTM D-1524 ¹ Visual Exam. (Relative): PASS ASTM D-1524 ¹ Sediment Exam. (Relative): TRACE ASTM D-877 ¹ Dielectric Breakdown (kV): 43 ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-4052 ¹ Density @15°C (g/mL): Density @15°C (g/mL): Density @15°C (g/mL): Diagnostics of the policy of	Comment:	and the same of th			To describe the second of the			
ASTM D-971 ¹ Interfacial Tension (mN/m): 23.41 ASTM D-974 ¹ Acid Number (mg KOH/g): 0.071 ASTM D-1500 ¹ Color Number (ASTM): L2.0 ASTM D-1524 ¹ Visual Exam. (Relative): PASS CLR&BRIGHT ASTM D-977 ¹ Dielectric Breakdown (kV): 43 ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-4052 ¹ Density @15°C (g/mL): 0.8878 BOQ Diagnostics PER IEEE C57.106-2006 Interfacial Tension: Most recent sample) Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	General Oil Quality	(GOQ)						
ASTM D-9711 Interfacial Tension (mN/m): 23.41 ASTM D-9741 Acid Number (mg KOH/g): 0.071 ASTM D-15001 Color Number (ASTM): L2.0 ASTM D-15241 Visual Exam. (Relative): PASS CLR&BRIGHT ASTM D-8771 Dielectric Breakdown (kV): 43 ASTM D-9241 Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-40521 Density @15°C (g/mL): 0.8878 GOQ Diagnostics Moisture in Oil: Diagnostic not applicable. PER IEEE C57.106-2006 Interfacial Tension: Moisture and Visual: Dielectric Breakdown ASTM D-877: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	ASTM D-15331	Moisture	e in Oil (mg/	kg):	32			
ASTM D-974¹ Acid Number (mg KOH/g): 0.071 ASTM D-1500¹ Color Number (ASTM): L2.0 ASTM D-1524¹ Visual Exam. (Relative): PASS CLR&BRIGHT ASTM D-877¹ Dielectric Breakdown (kV): 43 ASTM D-924¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-4052¹ Density @15°C (g/mL): 0.8878 GOQ Diagnostics Moisture in Oil: PER IEEE C57.106-2006 Interfacial Tension: Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Color acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	ASTM D-9711	Interfacial						
ASTM D-1500¹ Color Number (ASTM): L2.0 ASTM D-1524¹ Visual Exam. (Relative): PASS CLR&BRIGHT ASTM D-877¹ Dielectric Breakdown (kV): 43 ASTM D-924¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-4052¹ Density @15°C (g/mL): 0.8878 GOQ Diagnostics PER IEEE C57.106-2006 Interfacial Tension: Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Color acceptable for in-service oil (25 kV min). Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	ASTM D-9741	Acid No	87 C TACK					
ASTM D-1524¹ Visual Exam. (Relative): PASS CLR&BRIGHT ASTM D-1524¹ Sediment Exam. (Relative): TRACE ASTM D-877¹ Dielectric Breakdown (kV): 43 ASTM D-924¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-4052¹ Density @15°C (g/mL): 0.8878 BOQ Diagnostics Moisture in Oil: Diagnostic not applicable. PER IEEE C57.106-2006 Interfacial Tension: Below limit for in-service oil (25 mN/m min). Diagnostic not applicable. Color Number and Visual: Diagnostic not applicable. Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Acceptable for in-service oil (1% max).	ASTM D-15001	Color N	H (2)					
CLR&BRIGHT ASTM D-1524 ¹ Sediment Exam. (Relative): ASTM D-877 ¹ Dielectric Breakdown (kV): ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): ASTM D-4052 ¹ Density @15°C (g/mL): BOQ Diagnostics Moisture in Oil: COlor Number in Oil: Most recent sample) Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (25 kV min). Acceptable for in-service oil (1% max).	ASTM D-15241	Visual I	E					
ASTM D-1524 ¹ Sediment Exam. (Relative): TRACE ASTM D-877 ¹ Dielectric Breakdown (kV): 43 ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): 0.042 ASTM D-4052 ¹ Density @15°C (g/mL): 0.8878 BOQ Diagnostics Moisture in Oil: Diagnostic not applicable. PER IEEE C57.106-2006 Interfacial Tension: Below limit for in-service oil (25 mN/m min). Color Number and Visual: Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).			•					
ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): ASTM D-4052 ¹ Density @15°C (g/mL): Density @15°C (g/mL): Diagnostics Moisture in Oil: Interfacial Tension: Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	ASTM D-15241	Sedimen	t Exam. (Relati	ve):				
ASTM D-924 ¹ Power Factor @ 25°C (Routine) (%): ASTM D-4052 ¹ Density @15°C (g/mL): O.042 O.0878 Diagnostics Moisture in Oil: Diagnostic not applicable. Below limit for in-service oil (25 mN/m min). Diagnostic not applicable. Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	ASTM D-8771	Dielectric B						
ASTM D-4052 ¹ Density @15°C (g/mL): 0.8878 BOQ Diagnostics PER IEEE C57.106-2006 Interfacial Tension: Most recent sample) Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): 0.8878 Diagnostic not applicable. Below limit for in-service oil (25 mN/m min). Diagnostic not applicable. Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Acceptable for in-service oil (1% max).	ASTM D-9241	Power Factor @						
Moisture in Oil: Diagnostics Moisture in Oil: Diagnostic not applicable. PER IEEE C57.106-2006 Interfacial Tension: Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max). Diagnostic not applicable. Diagnostic not applicable. Color acceptable for in-service oil (25 mN/m min). Diagnostic not applicable. Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Acceptable for in-service oil (1% max).	ASTM D-40521		- · · · · ·					
PER IEEE C57.106-2006 most recent sample) Acid Number: Color Number and Visual: Dielectric Breakdown ASTM D-877: Power Factor @ 25°C (Routine): Interfacial Tension: Below limit for in-service oil (25 mN/m min). Diagnostic not applicable. Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Acceptable for in-service oil (1% max).	GOQ Diagnostics		Moisture in	Oil: D	Diagnostic not appli	cable.		
most recent sample) Acid Number: Diagnostic not applicable. Color Number and Visual: Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Dielectric Breakdown ASTM D-877: Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	PER IEEE C57.106-	2006						
Color Number and Visual: Color acceptable for in-service oil (2.0 max). Visual acceptable for in-service oil (CARBON). Dielectric Breakdown ASTM D-877: Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).	(most recent sample)						
Dielectric Breakdown ASTM D-877: Acceptable for in-service oil (25 kV min). Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).							Visual accentable to	r in contino oil (CADDON)
Power Factor @ 25°C (Routine): Acceptable for in-service oil (1% max).		Dielectri	ic Breakdown ASTM D-8	77: A	cceptable for in-se	rvice oil (25 kV min)	. Visual acceptable 10	i iii-service oii (CARBON).
Comment: MOISTURE RESULT WAS VERIFIED BY REANALYSIS		Powe	er Factor @ 25°C (Routin	ne): A	cceptable for in-se	rvice oil (1% max)		
	Comment: MOISTUR	E RESULT WAS VFF	RIFIED BY REANALYSIS	-1-1-3		THOS ON (170 Max).		

End of Test Report

Authorized By:

ERIC MCANANY CHEMIST

Notations: 1. Analysis is ISO/IEC 17025:2005 accredited, L-A-B Accredited Certificate Number L2303.02 2. This test is conducted by a subcontracted laboratory. 3. Subcontracted laboratory has received ISO Standard 17025 accreditation for this test. 5. Imported Sample: WEIDMANN Electrical Technology accepts no responsibility for these results, p. Imported Sample: WEIDMANN Electrical Technology accepts no responsibility for these results.

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