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01-7201590-583350-00

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TEST REPORT

Tampa Armature Works

Serial#: G-858660

Mfr: GENERAL **ELECTRIC** Control#: 7201590

kV: 67

LAKELAND, FL 33810 US

Equipment: TRANSFORMER

Location: CITY OF WAUCHULA

Order#: 583350 Account: 614

ATTN: CHRISTINA TABARETTI

Compartment: MAIN(BOTTOM)

kVA: 5000 Year Mf'd:

Breathing: SEAL

Svringe ID: 98000085

Received: 12/05/2018

PO#: 40408513-1 Project ID: 40310985 Bank: Phase: 1

Bottle ID:

Reported: 12/18/2018

Customer ID: SPARE

Fluid: MIN USGal: 920

Sampled By: GREG BYRD

	ARE		
	Lab Co	ntrol Number:	7201590
	· .	Date Sampled:	11/28/2018
		Order Number:	583350
		Oil Temp:	38
Dissolved Gas Ar	nalysis (DGA) Hydrog	en (H2) (µL/L):	4
ASTM	Methan	e (CH4) (µL/L):	4
D-36121	Ethane	(C2H6) (µL/L):	2
	Ethylene	(C2H4) (µL/L):	22
	Acetylene	(C2H2) (µL/L):	<1
	Carbon Monoxi	de (CO) (μL/L):	188
	Carbon Dioxid	e (CO2) (μL/L):	2083
	Nitrog	en (N2) (µL/L):	66112
	Oxyg	en (O2) (µL/L):	15976
	Total Dissolved Ga	s (TDG) (µL/L):	84391
Tota	I Dissolved Combustible Gas	197 5007.1 2	201 96001
		alent TCG (%):	0.1942
DO4	DCA Kova Coa / Intern	rativa Mathad:	Hydrogen within condition 1 limits (100 μL/L).
DGA	E		Methane within condition 1 limits (120 μL/L).
Diagnostics			Ethane within condition 1 limits (65 μL/L).
	(mosi	recent sample)	Ethylene within condition 1 limits (50 µL/L).
			Acetylene within condition 1 limits (30 µL/L).
			Carbon Monoxide within condition 1 limits (350 μL/L).
			Carbon Dioxide within condition 1 limits (2500 μL/L).
		***************************************	TDCG within condition 1 limits (720 μL/L).
	DGA TDCG Rate Interp	retive Method:	
		oretive Method: E C57.104-2008	TDCG within condition 1 limits (720 µL/L). No previous sample available.
	PER IEEI (two most	E C57.104-2008 t recent sample)	TDCG within condition 1 limits (720 µL/L). No previous sample available.
	PER IEEI (two most	E C57.104-2008 t recent sample)	TDCG within condition 1 limits (720 µL/L). No previous sample available.
	PER IEEI (two most	C57.104-2008 t recent sample) per) Insulation:	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500.
	PER IEEI (two most DGA Cellulose (Pa) WDS DGA C	E C57.104-2008 t recent sample) per) Insulation: ondition Code:	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL
Comment:	PER IEEI (two most DGA Cellulose (Pa) WDS DGA C	E C57.104-2008 t recent sample) per) Insulation: ondition Code:	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500.
Comment:	PER IEEI (two most DGA Cellulose (Pa WDS DGA C WDS Recomn	E C57.104-2008 t recent sample) per) Insulation: ondition Code:	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL
Comment: General Oil Quali ASTM D-1533 ¹	PER IEEI (two most DGA Cellulose (Pa WDS DGA C WDS Recomn	E C57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action:	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year.
General Oil Qual ASTM D-1533 ¹	PER IEEI (two most DGA Cellulose (Pa) WDS DGA C WDS Recomn ity (GOQ)	E C57.104-2008 t recent sample) per) Insulation: ondition Code:	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year.
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomm ity (GOQ) Moisture in Oil	t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year.
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomm ity (GOQ) Moisture in Oil Interfacial Tension	c C57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹ ASTM D-1500 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomm ity (GOQ) Moisture in Oil Interfacial Tension Acid Number	c C57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g): (ASTM):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041 L2.5
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomm ity (GOQ) Moisture in Oil Interfacial Tension Acid Number Color Number	c C57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041 L2.5 PASS
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹ ASTM D-1500 ¹ ASTM D-1524 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomm ity (GOQ) Moisture in Oil Interfacial Tension Acid Number Color Number Visual Exam.	c C57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g): (ASTM):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041 L2.5 PASS CLR&BRIGHT
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹ ASTM D-1500 ¹ ASTM D-1524 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomm ity (GOQ) Moisture in Oil Interfacial Tension Acid Number Color Number	cc57.104-2008 trecent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g): (ASTM): (Relative):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041 L2.5 PASS CLR&BRIGHT TRACE
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹ ASTM D-1500 ¹ ASTM D-1524 ¹ ASTM D-1524 ¹ ASTM D-877 ¹	PER IEEI (two most (two most DGA Cellulose (Pa) WDS DGA C WDS Recomn ity (GOQ) Moisture in Oil Interfacial Tension Acid Number Color Number Visual Exam. Sediment Exam. Dielectric Breakdown	cc57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g): (ASTM): (Relative): (Relative):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041 L2.5 PASS CLR&BRIGHT TRACE 48
General Oil Quali ASTM D-1533 ¹ ASTM D-971 ¹ ASTM D-974 ¹ ASTM D-1500 ¹ ASTM D-1524 ¹	PER IEEI (two most (two most DGA Cellulose (Paramondal Paramondal	cc57.104-2008 t recent sample) per) Insulation: ondition Code: nended Action: (mg/kg): (mN/m): (mg KOH/g): (ASTM): (Relative): (Relative):	TDCG within condition 1 limits (720 µL/L). No previous sample available. CO2/CO Ratio is only applicable when CO2 greater than 5000 and CO greater than 500. NORMAL Continue normal operation. Resample for testing within one year. 6 29.09 0.041 L2.5 PASS CLR&BRIGHT TRACE 48 0.121

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. This test is conducted by Weidmann Laboratory other than Primary Lab. 6. Weidmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. 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, pg/s, µg/hl., µJ/L = pph, m/l/m = q/msel/m, µm/s = cSt

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TEST REPORT

Tampa Armature Works

Serial#: G-858660

Mfr: GENERAL **ELECTRIC** Control#: 7201590

Location: CITY OF WAUCHULA

kV: 67

LAKELAND, FL 33810 US

Equipment: TRANSFORMER

Order#: 583350 kVA: 5000

ATTN: CHRISTINA TABARETTI

Compartment: MAIN(BOTTOM) Breathing: SEAL

Year Mf'd:

Account: 614

Syringe ID: 98000085

Received: 12/05/2018

PO#: 40408513-1

Bank: Phase: 1

Bottle ID:

Reported: 12/18/2018

Project ID: 40310985 Customer ID: SPARE Fluid: MIN USGal: 920

Sampled By: GREG BYRD

7201590 Lab Control Number: 11/28/2018 Date Sampled: 583350 Order Number:

38

PER IEEE C57.106-2015

Oil Temp:

Interfacial Tension: Acceptable for in-service oil (25 mN/m min).

(most recent sample)

Acid Number: Acceptable for in-service oil (0.2 mg KOH/g max).

Color Number and Visual: Diagnostic not applicable. Diagnostic not applicable.

Dielectric Breakdown ASTM D-877:

Diagnostic not applicable. Power Factor @ 25°C (Routine): Acceptable for in-service oil (0.5% max)

Comment:

End of Test Report

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Reported: 12/18/2018

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TEST REPORT

Tampa Armature Works	Serial#:	G-858660D	Mfr	GENERAL ELECTRIC	Control#:	7201588
	Location:	CITY OF WAUCHULA	kV	67	Order#:	583350
	Equipment:	TRANSFORMER	kVA	: 5000	Account:	614
LAKELAND, FL 33810 US	Compartment:	MAIN(BOTTOM)	Year Mf'd	:	Received:	12/05/2018
ATTN: CHRISTINA TABARETTI	Breathing:	SEAL	Syringe ID	53004504	Reported:	12/18/2018

PO#: 40408513-1 Bank: Phase: 1 Bottle ID: Project ID: 40310985 Fluid: MIN USGal: 920 Customer ID. DANIK C

Sampled By: GREG BYRD

Syringe ID: 53004504

Customer ID: BA	NK C	
	Lab Control Number	r: 7201588
	Date Sampled	1: 11/28/2018
	Order Number	r: 583350
	Oil Temp	o: 38
Dissolved Gas A	nalysis (DGA) Hydrogen (H2) (μL/L)): 34
ASTM	Methane (CH4) (µL/L)	
D-36121	Ethane (C2H6) (μL/L)): 10
	Ethylene (C2H4) (µL/L)	
	Acetylene (C2H2) (μL/L)): <1
	Carbon Monoxide (CO) (µL/L)	590
	Carbon Dioxide (CO2) (µL/L)	
	Nitrogen (N2) (μL/L)	70607
	Oxygen (O2) (μL/L)): 8028
	Total Dissolved Gas (TDG) (μL/L)	
Tota	I Dissolved Combustible Gas (TDCG) (μL/L)	
	Equivalent TCG (%)	10127-004864
DGA	DGA Keys Gas / Interpretive Methos	l: Hydrogen within condition 1 limits (100 µL/L).
Diagnostics	그는 그 하나 하나 나를 모든 구름이다. 그리고 살아보고 있는 사람들이 얼마나를 하는데 모든 사람들이 살아보고 있다면 살아보고 있다.	8 Methane within condition 1 limits (120 µL/L).
Diagnoone		Ethane within condition 1 limits (65 µL/L).
	(most recent cample	Ethylene within condition 1 limits (50 μL/L).
		Acetylene within condition 1 limits (1 µL/L).
		Carbon Monoxide: Condition 3 Indications of significantly overheated cellulose insulation (57)
		μL/L).
		Carbon Dioxide: Condition 3 Significant Indications of overheated cellulose insulation (4000
		μL/L).
		TDCG within condition 1 limits (720 µL/L).
	DOI 7000 D / 1 / / / W //	
	DGA TDCG Rate Interpretive Method	
	PER IEEE C57.104-200	
	(two most recent sample	
2	DGA Cellulose (Paper) Insulation	: CO2/CO >= 10: Indication of thermal decomposition of cellulose insulation.
	WDS DGA Condition Code	: CAUTION
	WDS Recommended Action	Resample at earliest opportunity to establish gas generation rate.
Comment:		
General Oil Quali	ity (GOQ)	
ASTM D-15331	Moisture in Oil (mg/kg)	7
ASTM D-9711	Interfacial Tension (mN/m)	
ASTM D-9741	Acid Number (mg KOH/g)	0.019
ASTM D-15001	Color Number (ASTM)	
ASTM D-15241	Visual Exam. (Relative)	PASS
		CLR&BRIGHT
ASTM D-15241	Sediment Exam. (Relative)	TRACE
ASTM D-8771	Dielectric Breakdown (kV)	55
ASTM D-9241	Power Factor @ 25°C (Routine) (%)	0.037

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. This test is conducted by Weidmann Laboratory other than Primary Lab. 6. Weidmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. 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, mm*/s = cSt

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TEST REPORT

Tampa Armature Works

Serial#: G-858660D

Mfr: GENERAL **ELECTRIC** Control#: 7201588

Location: CITY OF WAUCHULA

kV: 67

Order#: 583350

LAKELAND, FL 33810 US

Equipment: TRANSFORMER

kVA: 5000

Account: 614

ATTN: CHRISTINA TABARETTI

Compartment: MAIN(BOTTOM)

Year Mf'd:

Received: 12/05/2018

PO#: 40408513-1

Breathing: SEAL

Syringe ID: 53004504

Project ID: 40310985

Bank: Phase: 1

Bottle ID:

Reported: 12/18/2018

Customer ID: BANK C

Fluid: MIN USGal: 920

Sampled By: GREG BYRD

# 9		Date Sampled:	11/28/2018	
		Order Number:	583350	
		Oil Temp:	38	
ASTM D-40521	Density @15°C	(g/mL):	0.8878	

GOQ Diagnostics

Lab Control Number:

7201588

PER IEEE C57.106-2015

Moisture in Oil: Acceptable for in-service oil (35 mg/kg max). Interfacial Tension: Acceptable for in-service oil (25 mN/m min).

(most recent sample)

Acid Number: Acceptable for in-service oil (0.2 mg KOH/g max).

Color Number and Visual: Diagnostic not applicable. Diagnostic not applicable.

Dielectric Breakdown ASTM D-877: Diagnostic not applicable.

Power Factor @ 25°C (Routine): Acceptable for in-service oil (0.5% max).

Comment:

End of Test Report

Authorized By:

ERIC MCANANY CHEMIST

WEIDMANN ELECTRICAL TECHNOLOGY

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01-7201596-583350-00

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TEST REPORT

WWW.WEIDMANN-ELECTRICAL.COM Serial#: G-858660B

Mfr: GENERAL **ELECTRIC** Control#: 7201596

Location: CITY OF WAUCHULA

kV: 67 kVA: 5000

Order#: 583350 Account: 614

LAKELAND, FL 33810 US

Equipment: TRANSFORMER Compartment: MAIN(BOTTOM)

Year Mf'd: Syringe ID: 53003011 Received: 12/05/2018

ATTN: CHRISTINA TABARETTI

Breathing: SEAL Bank: Phase: 1

Bottle ID:

Reported: 12/18/2018

PO#: 40408513-1

ASTM D-15241

ASTM D-8771

ASTM D-9241

Sediment Exam.

Dielectric Breakdown

Power Factor @ 25°C (Routine)

Project ID: 40310985

Fluid: MIN USGal: 920

Sampled By: GREG BYRD

Customer ID: BANK B

Tampa Armature Works

Oustonier ib. Dri	MICD		
	Lab (Control Number:	7201596
		Date Sampled:	11/28/2018
Order Number:			583350
		Oil Temp:	38
Dissolved Gas A	nalysis (DGA) Hydro	ogen (H2) (µL/L):	15
ASTM	Metha	ne (CH4) (μL/L):	35
D-36121	Ethar	ne (C2H6) (µL/L):	21
	Ethyler	ne (C2H4) (µL/L):	27
	Acetyler	ne (C2H2) (µL/L):	<1
	Carbon Mono	xide (CO) (μL/L):	633
	Carbon Diox	ide (CO2) (μL/L):	9376
	Nitro	ogen (N2) (µL/L):	: 75204
	Oxy	/gen (O2) (μL/L):	3202
	Total Dissolved G	as (TDG) (µL/L):	88513
Tota	l Dissolved Combustible Ga	s (TDCG) (µL/L):	731
	Equ	ivalent TCG (%):	0.6346
DGA	DGA Keys Gas / Inte	rnretive Method:	Hydrogen within condition 1 limits (100 μL/L).
Diagnostics			Methane within condition 1 limits (120 μL/L).
Diagnoonee			Ethane within condition 1 limits (65 μL/L).
	(,	Ethylene within condition 1 limits (50 µL/L).
			Acetylene within condition 1 limits (1 µL/L).
			Carbon Monoxide: Condition 3 Indications of significantly overheated cellulose insulation (57)
			μL/L).
			Carbon Dioxide: Condition 3 Significant Indications of overheated cellulose insulation (4000
			μ L/L).
			TDCG: Condition 2 Levels exceed normal concentrations. Fault may be present (720 µL/L).
	DGA TDCG Rate Interpretive Method:		
		EE C57.104-2008	
		ost recent sample)	
	DGA Cellulose (Paper) Insulation:		: CO2/CO >= 10: Indication of thermal decomposition of cellulose insulation.
	WDS DGA	Condition Code:	: CAUTION
	WDS Recon	nmended Action:	Resample at earliest opportunity to establish gas generation rate.
Comment:			
General Oil Qual	ity (GOQ)		
ASTM D-15331	Moisture in Oil	(mg/kg):	: 6
ASTM D-9711	Interfacial Tension	(mN/m):	: 35.76
ASTM D-9741	Acid Number	(mg KOH/g):	: 0.022
ASTM D-15001	Color Number	(ASTM):	: L1.5
ASTM D-15241	Visual Exam.	(Relative):	: PASS
1		8 8	1

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. This test is conducted by Weidmann Laboratory other than Primary Lab. 6. Weidmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. 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, 1, jugly, jug/ml., jull_v = ppm, jugl_v = ppb, ml/lim = q/nesicm, mm/ys = cSt

LIGHT

0.019

37

CLR&BRIGHT

(Relative):

(kV):

(%):

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TEST REPORT

Tampa Armature Works

Serial#: G-858660B

Mfr: GENERAL **ELECTRIC** Control#: 7201596

Location: CITY OF WAUCHULA

kV: 67

Order#: 583350

LAKELAND, FL 33810 US

Equipment: TRANSFORMER

kVA: 5000

Account: 614

Compartment: MAIN(BOTTOM)

Year Mf'd:

ATTN: CHRISTINA TABARETTI

Breathing: SEAL

Syringe ID: 53003011

Received: 12/05/2018

PO#: 40408513-1

Bank: Phase: 1

Reported: 12/18/2018

Project ID: 40310985

Fluid: MIN USGal: 920

Bottle ID:

Customer ID: BANK B

7201596 **Lab Control Number:** Date Sampled: 11/28/2018 583350 Order Number:

Sampled By: GREG BYRD

ASTM D-40521

Density @15°C

Oil Temp: (g/mL): 38

GOQ Diagnostics

(most recent sample)

PER IEEE C57.106-2015

0.8888

Moisture in Oil: Acceptable for in-service oil (35 mg/kg max).

Interfacial Tension:

Acceptable for in-service oil (25 mN/m min). Acid Number: Acceptable for in-service oil (0.2 mg KOH/g max).

Color Number and Visual: Diagnostic not applicable. Diagnostic not applicable.

Dielectric Breakdown ASTM D-877: Diagnostic not applicable.

Power Factor @ 25°C (Routine): Acceptable for in-service oil (0.5% max).

Comment:

End of Test Report

Authorized By:

ERIC MCANANY CHEMIST

WEIDMANN ELECTRICAL TECHNOLOGY

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

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TEST REPORT

Tampa Armature Works

Serial#: G-858660A

Mfr: GENERAL **ELECTRIC** Control#: 7201589

Location: CITY OF WAUCHULA

Order#: 583350

LAKELAND, FL 33810 US

Equipment: TRANSFORMER

kV: 67 Account: 614

ATTN: CHRISTINA TABARETTI

Compartment: MAIN(BOTTOM) Breathing: SEAL

kVA: 5000 Received: 12/05/2018 Year Mf'd:

PO# 40408513-1

Bank: Phase: 1

Syringe ID: 53005048 Bottle ID:

Reported: 12/18/2018

Fluid: MIN USGal: 920

Sampled By: GREG BYRD

Project ID: 40310985 Customer ID: BANK A

ASTM D-15241

ASTM D-15241

ASTM D-8771

ASTM D-9241

ASTM D-40521

Oustomer ib. Dimiti			
	Lab Co	ntrol Number:	7201589
	ī	Date Sampled:	11/28/2018
		Order Number:	583350
		Oil Temp:	38
Dissolved Gas Analys	is (DGA) Hydrog	en (H2) (µL/L):	13
ASTM	Methan	e (CH4) (μL/L):	34
D-36121	Ethane	(C2H6) (µL/L):	25
	Ethylene	(C2H4) (µL/L):	28
	Acetylene	(C2H2) (µL/L):	<1
	Carbon Monoxi	de (CO) (μL/L):	545
	Carbon Dioxid	e (CO2) (µL/L):	7293
	Nitrog	jen (N2) (μL/L):	74418
	Охуд	en (O2) (μL/L):	4859
*	Total Dissolved Ga	s (TDG) (µL/L):	87215
Total Dis	solved Combustible Gas	(TDCG) (µL/L):	645
	Equiv	alent TCG (%):	0.5492
DGA	DGA Keys Gas / Interp	retive Method:	Hydrogen within condition 1 limits (100 μL/L).
Diagnostics			Methane within condition 1 limits (120 μL/L).
	(mosi	t recent sample)	Ethane within condition 1 limits (65 µL/L).
			Ethylene within condition 1 limits (50 μL/L).
			Acetylene within condition 1 limits (1 µL/L).
			Carbon Monoxide: Condition 2 Indications of overheated cellulose insulation (350 µL/L).
			Carbon Dioxide: Condition 3 Significant Indications of overheated cellulose insulation (400
			μL/L).
			TDCG within condition 1 limits (720 µL/L).
	DCA TDCC Pate Interv	protive Method:	: No previous sample available.
		E C57.104-2008	
		t recent sample)	
			: CO2/CO >= 10: Indication of thermal decomposition of cellulose insulation.
		ondition Code:	2
			: Resample at earliest opportunity to establish gas generation rate.
Comment:			
General Oil Quality (GOQ)	and the second s	
ASTM D-15331	Moisture in Oil	(mg/kg):	: 8
ASTM D-9711	Interfacial Tension	(mN/m):	
ASTM D-9741	Acid Number	(mg KOH/g):	
ASTM D-15001	Color Number	(ASTM):	Professional Control of the Control
M31M D-1000	Joiot Munibel	(rio i iii).	"

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. This test is conducted by Weldmann Laboratory other than Primary Lab. 6. Weldmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. 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

PASS

44

0.024

0.8878

CLR&BRIGHT TRACE

(Relative):

(Relative):

(kV):

(%):

(g/mL):

Visual Exam.

Sediment Exam.

Dielectric Breakdown

Density @15°C

Power Factor @ 25°C (Routine)

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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01-7201589-583350-00

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TEST REPORT

Tampa Armature Works

Serial#: G-858660A

Mfr: GENERAL **ELECTRIC** Control#: 7201589

Location: CITY OF WAUCHULA

kV: 67

Order#: 583350

LAKELAND, FL 33810 US

Equipment: TRANSFORMER

kVA: 5000

Account: 614

ATTN: CHRISTINA TABARETTI

Compartment: MAIN(BOTTOM) Breathing: SEAL

Year Mf'd:

Received: 12/05/2018

PO#: 40408513-1

Bank: Phase: 1

Syringe ID: 53005048

Reported: 12/18/2018

Project ID: 40310985

Bottle ID:

Fluid: MIN USGal: 920

Sampled By: GREG BYRD

Customer ID: BANK A

7201589 Lab Control Number: Date Sampled: 11/28/2018 583350 Order Number: 38

GOQ Diagnostics

PER IEEE C57.106-2015 (most recent sample)

Oil Temp:

Moisture in Oil: Acceptable for in-service oil (35 mg/kg max). Interfacial Tension: Acceptable for in-service oil (25 mN/m min).

Color Number and Visual: Diagnostic not applicable. Diagnostic not applicable.

Acceptable for in-service oil (0.2 mg KOH/g max).

Dielectric Breakdown ASTM D-877: Diagnostic not applicable.

Power Factor @ 25°C (Routine): Acceptable for in-service oil (0.5% max).

Comment:

End of Test Report

Authorized By:

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. This test is conducted by Weidmann Laboratory other than Primary Lab. 6. Weidmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. 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, pg/gm, µg/mL, µg/L = ppm, µg/L = ppb, ml/l/m = q/msic/m, mm/y = cSt