I POWER GENERATION PRODUCTS OIL ANALYSIS REPORT

19 SIMCOE ST. BARRIE, WELL #114 CITY OF BARRIE 4ZR07401

Right Diesel Engine

ESSO XD-3 EXTRA 15W40 (20 LTR)

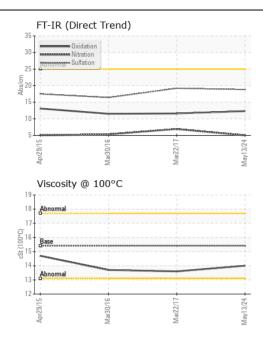
ESSU XD-3 EXIRA 15W40 (20 LIR)					.,		
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		PN0006173	PN990760	PN957747
	Sample Date		Client Info		13 May 2024	22 Mar 2017	30 Mar 2016
	Machine Age	hrs	Client Info		630	407	386
	Oil Age	hrs	Client Info		0	21	28
	Filter Age	hrs	Client Info		0	21	28
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185(m)	>86	3	3	3
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185(m)	>3	0	0	0
	Nickel	ppm	ASTM D5185(m)	>3	0	<1	0
	Titanium	ppm	ASTM D5185(m)	>2	0	0	0
	Silver	ppm	ASTM D5185(m)	>2	0	0	0
	Aluminum	ppm	ASTM D5185(m)	>15	1	1	1
	Lead	ppm	ASTM D5185(m)	>16	0	<1	<1
	Copper	ppm	ASTM D5185(m)	>250	4	<1	1
	Tin	ppm	ASTM D5185(m)	>2	0	<1	<1
	Vanadium	ppm	ASTM D5185(m)		0	0	0
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>35	14	5	2
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)		<1	<1	<1
	Fuel		WC Method		<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	ASTM D7844*	>3	0	0	0
	Nitration	Abs/cm	ASTM D7624*	>20	5.0	6.9	5.3
	Sulfation	Abs/.1mm	ASTM D7415*	>30	18.8	19.2	16.4
	Silt	scalar	Visual*	NONE	VLITE		
	Debris	scalar	Visual*	NONE	VLITE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)	>192	2	2	2
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		331	8	12
	Barium	ppm	ASTM D5185(m)		0	0	0
	Molybdenum	ppm	ASTM D5185(m)		63	13	33
	Manganese	ppm	ASTM D5185(m)		0	<1	<1
	Magnesium	ppm	ASTM D5185(m)		279	236	643
	Calcium	ppm	ASTM D5185(m)	3780	1604	2017	1478
	Phosphorus	ppm	ASTM D5185(m)		984	948	1045
	Zinc	ppm	ASTM D5185(m)	1500	1135	1108	1230
	Sulfur	ppm	ASTM D5185(m)	3800	2784	2801	3085
	Oxidation	Abs/.1mm	ASTM D7414*	>25	12.3	11.6	11.5
	Vina @ 100°C	a C+	ACTM D7070/m)	15 /	14.0	10.0	107

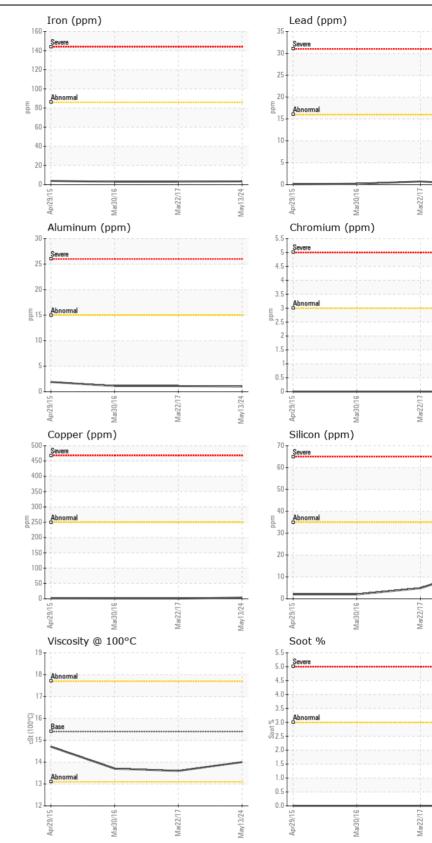
Visc @ 100°C cSt ASTM D7279(m) 15.4

13.6

13.7

14.0





Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. Received : PN0006173 : 21 May 2024 Lab Number : 02636571 Tested : 22 May 2024 ISO 17025:2017 Accredited Unique Number : 5785733 : 22 May 2024 - Wes Davis Diagnosed Laboratory Test Package : MOB 1 (Additional Tests: Visual) To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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Contact/Location: Brett Kinkley - POWMIS Page 2 of 2