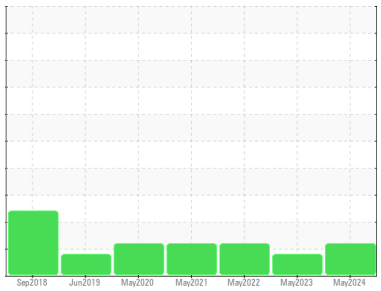
OIL ANALYSIS REPORT

Area
(EQ4307) N
Machine Id
SWTP Cat 1500kW generator #1 SWTP (S/N EBG01081)
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W40 (83 GAL)

Sample Rating Trend



FUEL

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of fuel present in the oil.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0934063**	WC0810881	WC0696102
Sample Date		Client Info		**08 May 2024**	18 May 2023	11 May 2022
Machine Age	hrs	Client Info		**111**	109	108
Oil Age	hrs	Client Info		**111**	107	108
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	MARGINAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**2**	2	4
Chromium	ppm	ASTM D5185m	>20	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	2	<1
Lead	ppm	ASTM D5185m	>40	**<1**	<1	1
Copper	ppm	ASTM D5185m	>330	**4**	3	14
Tin	ppm	ASTM D5185m	>15	**0**	1	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	65	**63**	66	64
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	65	**55**	53	53
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1160	**997**	1068	998
Calcium	ppm	ASTM D5185m	820	**837**	823	917
Phosphorus	ppm	ASTM D5185m	1160	**987**	1017	976
Zinc	ppm	ASTM D5185m	1260	**1178**	1268	1114
Sulfur	ppm	ASTM D5185m	3000	**3689**	4045	2881

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	6	5
Sodium	ppm	ASTM D5185m		**3**	2	3
Potassium	ppm	ASTM D5185m	>20	**<1**	2	0
Fuel	%	ASTM D3524	>5	▲ **5.9**	▲ 3.8	▲ 9.3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.2**	6.1	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**17.9**	18.7	17.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.1**	15.5	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	**8.9**	9.5	8.6

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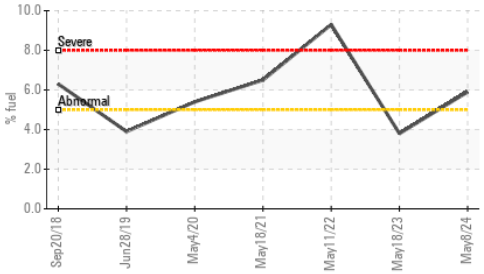
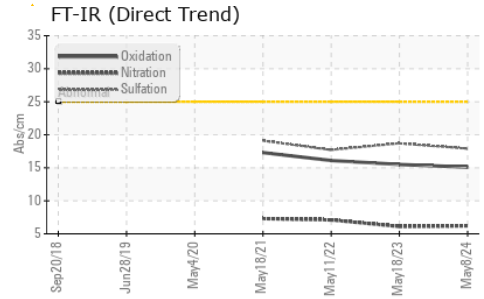
Fuel Dilution



FT-IR (Direct Trend)



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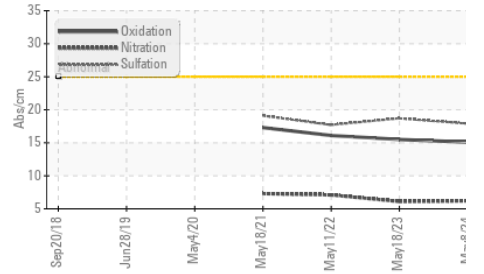
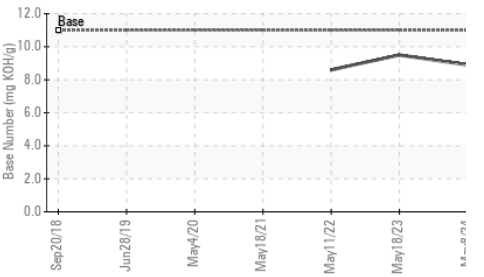


Base Number

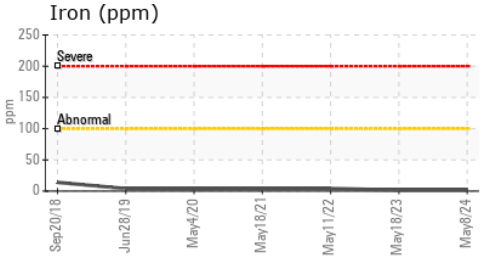


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

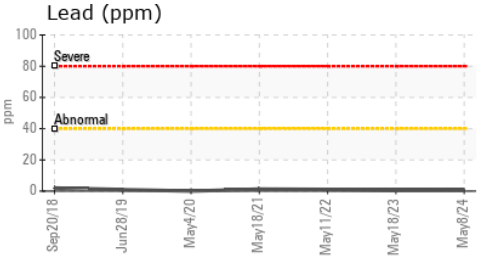
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.3	▲ **12.5**	13.5	▲ 11.7

GRAPHS

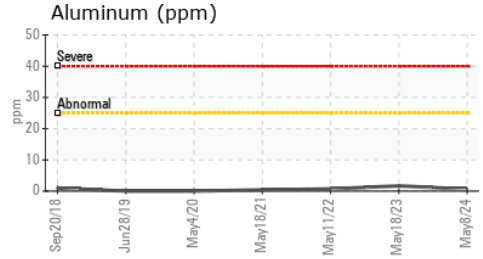
Iron (ppm)



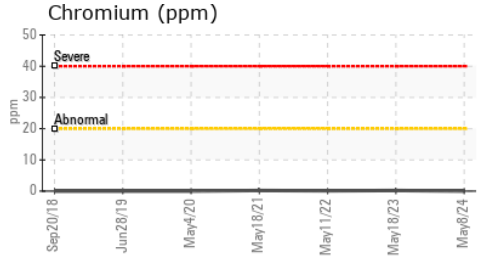
Lead (ppm)



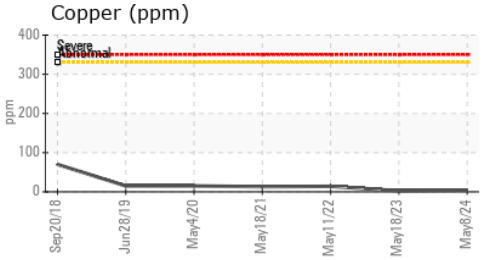
Aluminum (ppm)



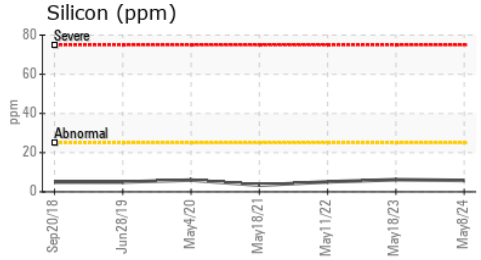
Chromium (ppm)



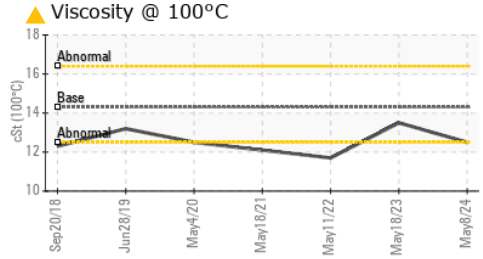
Copper (ppm)



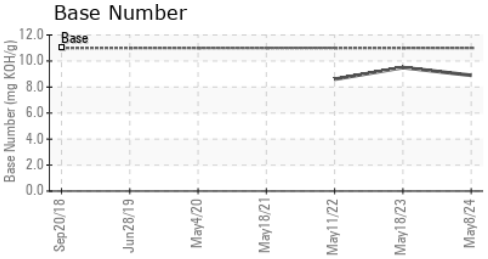
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



ANAB ACCREDITED TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0934063
Lab Number : 06176915
Unique Number : 11022968
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel, TBN)
Received : 13 May 2024
Tested : 17 May 2024
Diagnosed : 17 May 2024 - Jonathan Hester

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Report Id: MONROCNY [WUSCAR] 06176915 (Generated: 05/17/2024 08:10:40) Rev: 1

Submitted By: SCOTT TRAIL