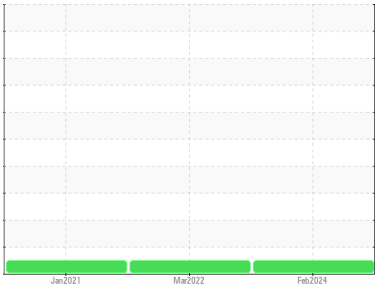
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
OE1025
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W40 (--- GAL)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0082220**	PC0058977	PC0042238
Sample Date		Client Info		**23 Feb 2024**	24 Mar 2022	13 Jan 2021
Machine Age	hrs	Client Info		**1506**	1211	715
Oil Age	hrs	Client Info		**0**	500	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	1.1	0.4
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**4**	6	15
Chromium	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**3**	3	5
Lead	ppm	ASTM D5185(m)	>40	**0**	0	<1
Copper	ppm	ASTM D5185(m)	>330	**<1**	<1	4
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	<1	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	<1
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	65	**373**	305	43
Barium	ppm	ASTM D5185(m)	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	65	**83**	105	75
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	**406**	606	104
Calcium	ppm	ASTM D5185(m)	820	**1322**	1357	1985
Phosphorus	ppm	ASTM D5185(m)	1160	**1039**	894	973
Zinc	ppm	ASTM D5185(m)	1260	**1149**	1009	1157
Sulfur	ppm	ASTM D5185(m)	3000	**2938**	2560	3290
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**8**	8	7
Sodium	ppm	ASTM D5185(m)		**1**	2	4
Potassium	ppm	ASTM D5185(m)	>20	**1**	2	8

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**5.0**	7.4	9.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.3**	22.3	18.8

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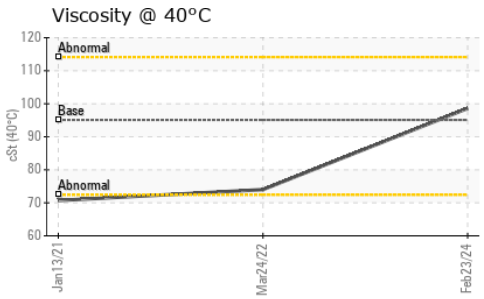
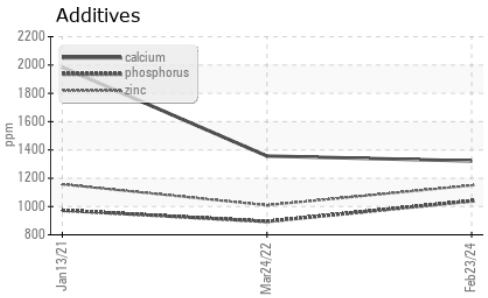
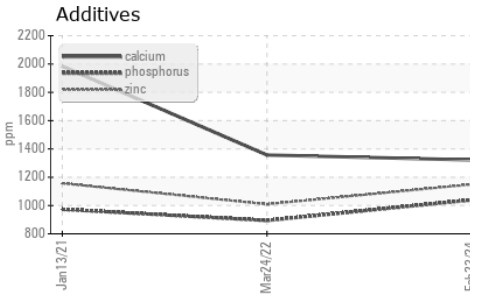




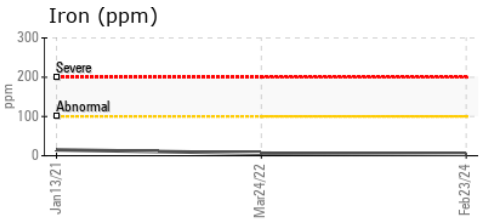


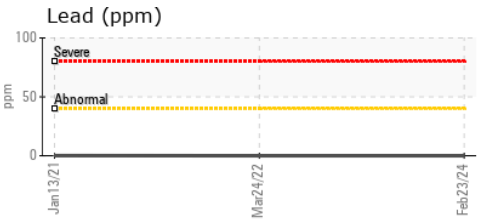
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**13.7**	16.6	14.6

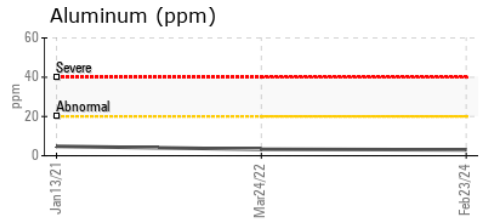
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar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

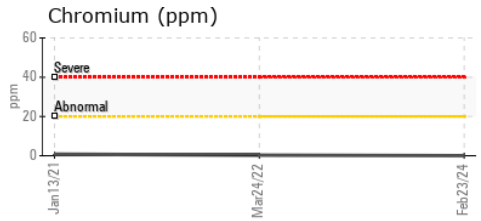
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	**98.6**	74.0	70.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	**13.8**	11.5	10.5
Viscosity Index (VI)	Scale	ASTM D2270*	169	**141**	148	135

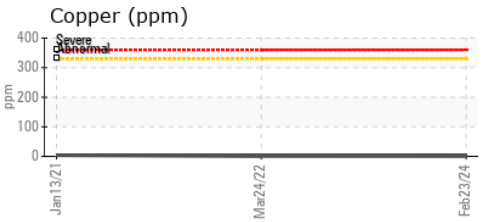
GRAPHS

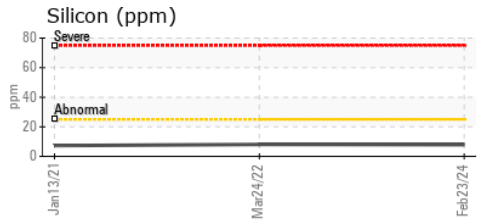


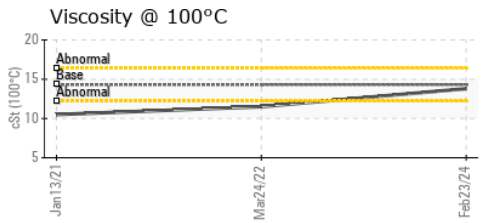


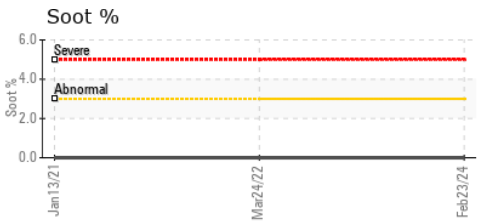












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0082220
Lab Number : 02619151
Unique Number : 5736261
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

Received : 01 Mar 2024
Tested : 01 Mar 2024
Diagnosed : 01 Mar 2024 - Wes Davis

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
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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.