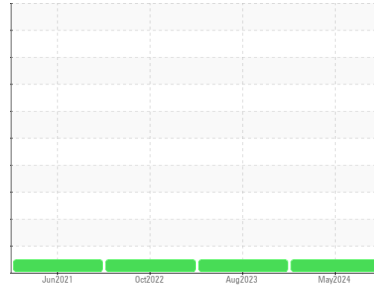


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

WL0228

Component

Diesel Engine

Fluid

PETRO CANADA DURON UHP 5W40 (22 LTR)

DIAGNOSIS

Recommendation

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

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0088284	PC0078250	PC0056630
Sample Date	Client Info			23 May 2024	05 Aug 2023	27 Oct 2022
Machine Age	hrs	Client Info		0	3918	3380
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	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

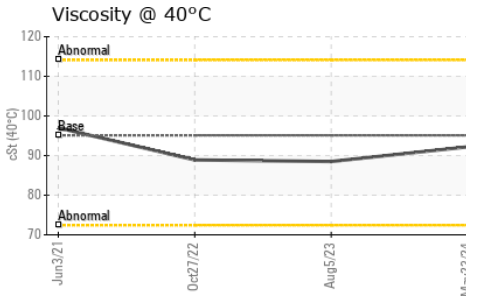
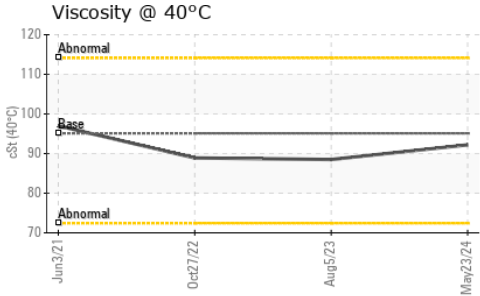
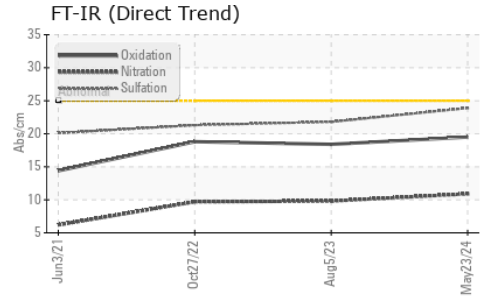
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	33	32	47
Chromium	ppm	ASTM D5185(m)	>20	<1	1	1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	3	4
Lead	ppm	ASTM D5185(m)	>40	2	0	<1
Copper	ppm	ASTM D5185(m)	>330	1	13	12
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
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	36	34	48
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	65	62	58	59
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	1138	1124	1054
Calcium	ppm	ASTM D5185(m)	820	872	835	924
Phosphorus	ppm	ASTM D5185(m)	1160	1006	1065	1113
Zinc	ppm	ASTM D5185(m)	1260	1213	1212	1249
Sulfur	ppm	ASTM D5185(m)	3000	2680	2781	2883
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4	5	5
Sodium	ppm	ASTM D5185(m)		4	5	4
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	1.5	0.3	0.1
Nitration	Abs/cm	ASTM D7624*	>20	10.9	9.8	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.9	21.8	21.3

OIL ANALYSIS REPORT

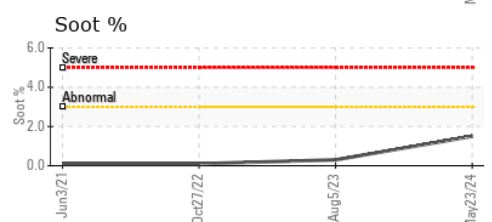
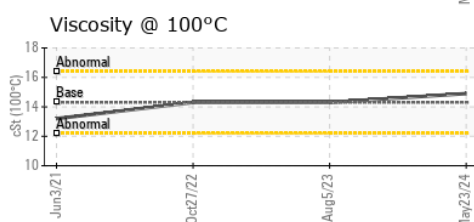
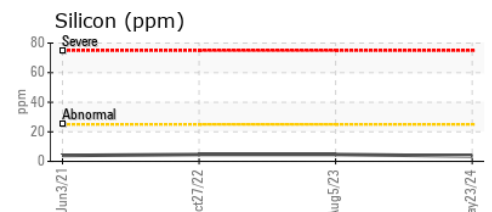
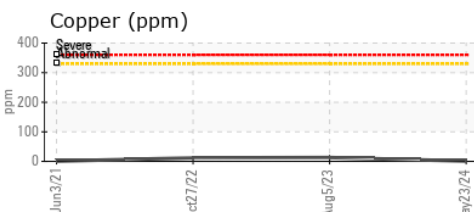
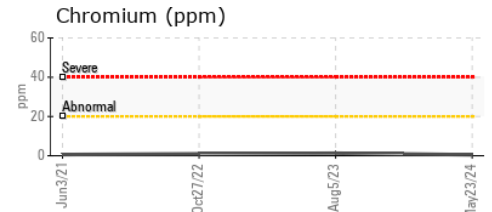
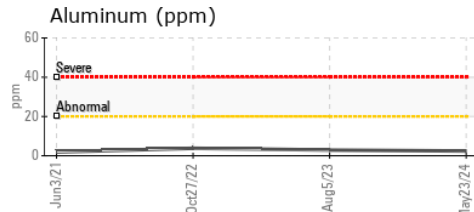
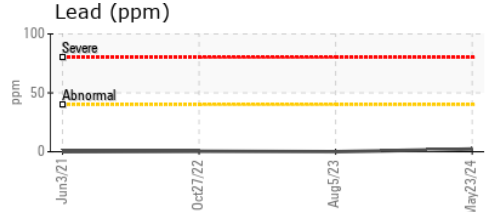
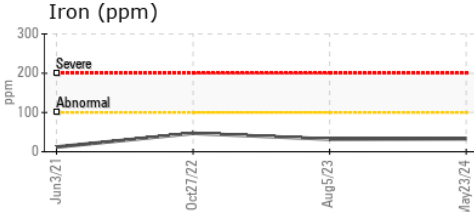


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	19.5	18.4	18.8

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	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 @ 40°C	cSt	ASTM D7279(m)	95.1	92.2	88.5	88.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	14.9	14.3	14.3
Viscosity Index (VI)	Scale	ASTM D2270*	169	169	167	166

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0088284
Lab Number : 02637900
Unique Number : 5787062
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)
Received : 28 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - Wes Davis

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
 151 Ram Forest Rd,
 Stouffville, ON
 CA L4A 2G8
 Contact: Shannon Abbott
 sabbott@gipi.com
 T: (905)750-5900
 F:

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.