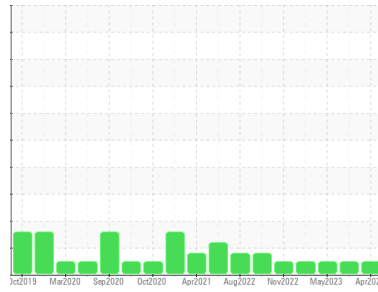


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**DR180**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON UHP 5W40 (40 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			<b>PC0089310</b>	PC0078249	PC0075670
Sample Date	Client Info			<b>10 Apr 2024</b>	05 Aug 2023	08 May 2023
Machine Age	hrs	Client Info		<b>9021</b>	8667	8460
Oil Age	hrs	Client Info		<b>0</b>	250	250
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

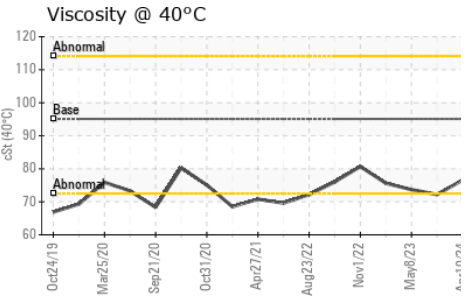
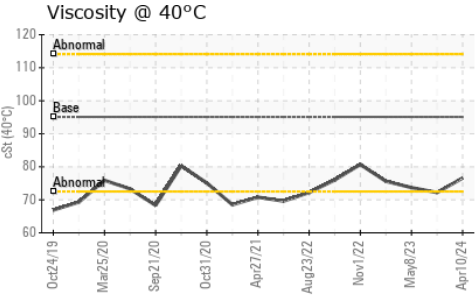
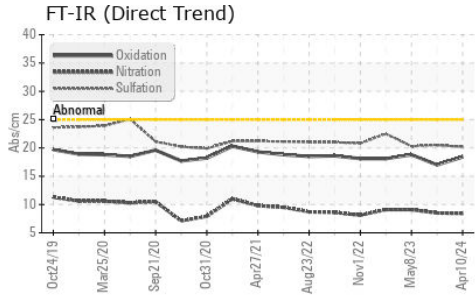
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	<b>18</b>	11	13
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>5</b>	4	4
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>8</b>	2	2
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	65	<b>37</b>	27	32
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>54</b>	53	61
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	<b>1054</b>	1031	1088
Calcium	ppm	ASTM D5185(m)	820	<b>786</b>	777	858
Phosphorus	ppm	ASTM D5185(m)	1160	<b>941</b>	979	1039
Zinc	ppm	ASTM D5185(m)	1260	<b>1112</b>	1109	1132
Sulfur	ppm	ASTM D5185(m)	3000	<b>2603</b>	2602	2808
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	3	4
Sodium	ppm	ASTM D5185(m)		<b>4</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	4	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.4</b>	8.5	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.2</b>	20.5	20.3

# OIL ANALYSIS REPORT



## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	17.0	18.8

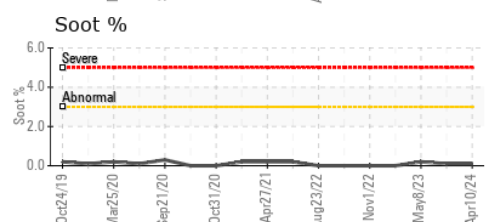
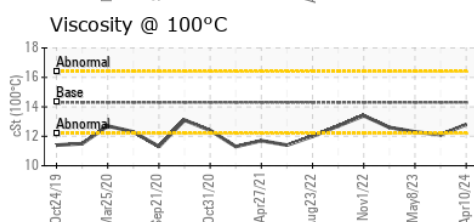
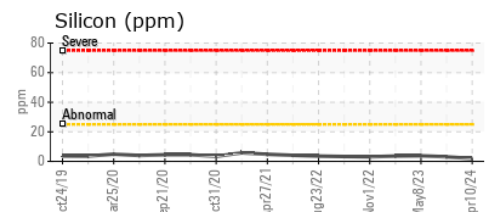
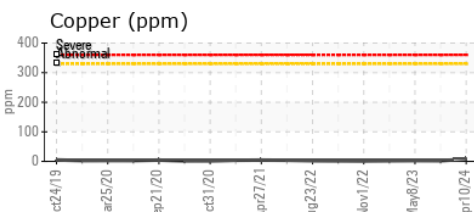
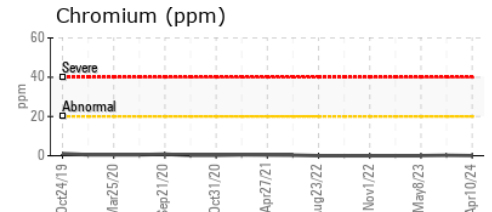
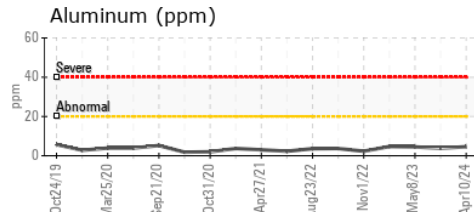
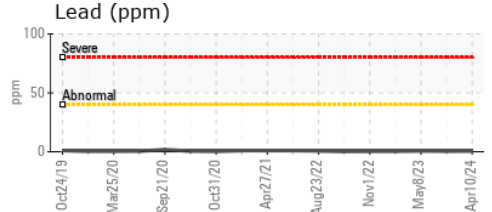
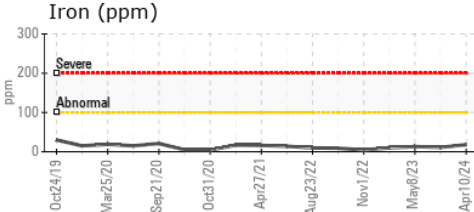
## VISUAL

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

## FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	95.1	76.6	72.2
Visc @ 100°C	cSt ASTM D7279(m)	14.3	12.8	12.1
Viscosity Index (VI)	Scale ASTM D2270*	169	167	165

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0089310  
**Lab Number** : 02631265  
**Unique Number** : 5772418  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )  
**Received** : 25 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 25 Apr 2024 - Kevin Marson

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