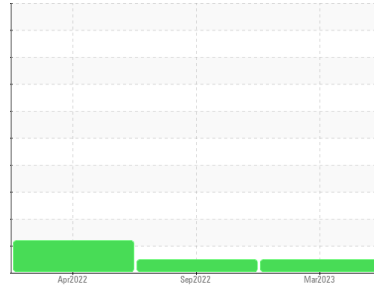




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**429019-967**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (44 GAL)**

## 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0071393</b>	GFL0058384	GFL0030926
Sample Date	Client Info	<b>10 Mar 2023</b>	22 Sep 2022	01 Apr 2022
Machine Age	hrs	<b>22202</b>	22202	22216
Oil Age	hrs	<b>600</b>	486	431
Oil Changed	Client Info	<b>Changed</b>	N/A	Changed
Sample Status		<b>NORMAL</b>	NORMAL	ATTENTION

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	▲ 3.1
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>8</b>	17	42
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	<1
Aluminum	ppm ASTM D5185m >25	<b>4</b>	8	14
Lead	ppm ASTM D5185m >40	<b>1</b>	2	2
Copper	ppm ASTM D5185m >330	<b>6</b>	15	3
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>7</b>	9	25
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>60</b>	58	64
Manganese	ppm ASTM D5185m 0	<b>1</b>	1	1
Magnesium	ppm ASTM D5185m 1010	<b>858</b>	826	881
Calcium	ppm ASTM D5185m 1070	<b>1108</b>	1101	1186
Phosphorus	ppm ASTM D5185m 1150	<b>957</b>	957	1032
Zinc	ppm ASTM D5185m 1270	<b>1211</b>	1144	1245
Sulfur	ppm ASTM D5185m 2060	<b>3334</b>	3484	2641

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	3	7
Sodium	ppm ASTM D5185m	<b>1</b>	2	2
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	4

## INFRA-RED

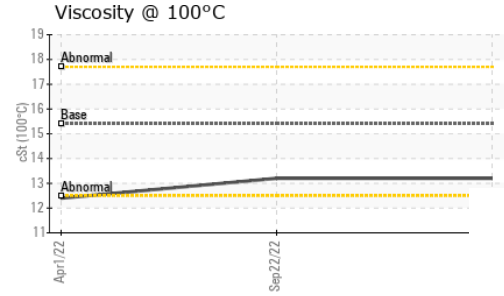
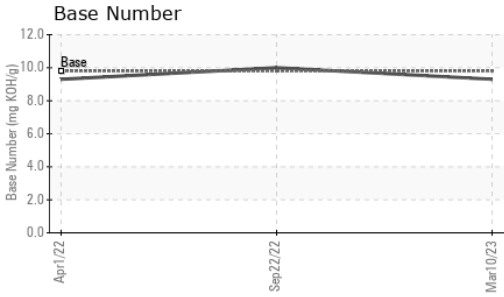
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.2	0.7
Nitration	Abs/cm *ASTM D7624 >20	<b>5.5</b>	6.5	9.0
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.5</b>	18.6	20.3

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.0</b>	14.0	15.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.3</b>	10.0	9.3



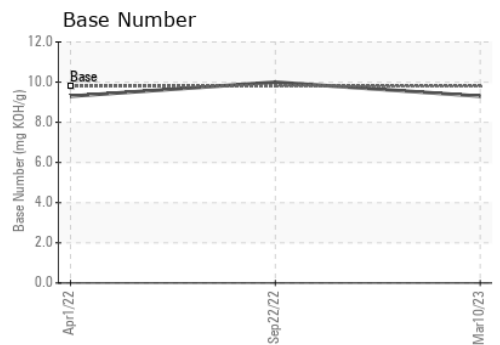
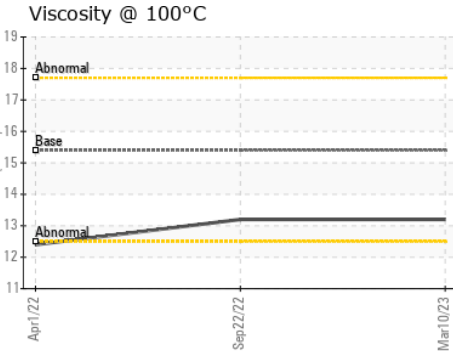
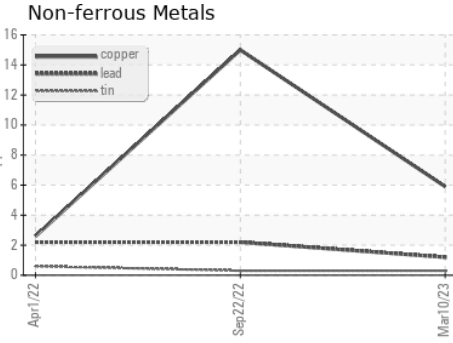
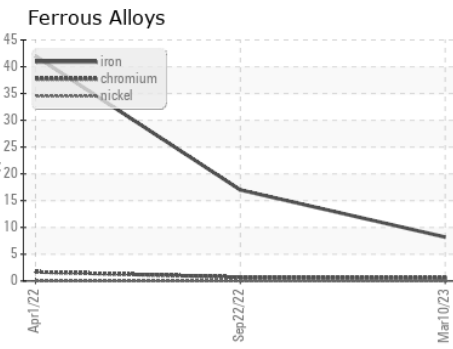
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	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 @ 100°C	cSt	ASTM D445	15.4	<b>13.2</b>	13.2 ▲ 12.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0071393 **Received** : 16 Mar 2023  
**Lab Number** : **05793188** **Diagnosed** : 17 Mar 2023  
**Unique Number** : 10377859 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 622 - Traverse City Hauling**  
 160 Hughes Dr  
 Traverse City, MI  
 US 49686  
 Contact: GARY BREWER

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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