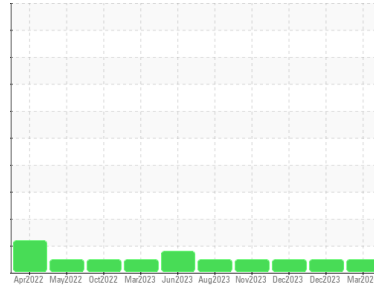




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(BC60905)**  
 Machine Id  
**411016-1387**

Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sampled oil )

### 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>GFL0110294</b>	GFL0103052	GFL0102809
Sample Date	Client Info	<b>04 Mar 2024</b>	21 Dec 2023	01 Dec 2023
Machine Age	hrs	<b>4033</b>	3966	3901
Oil Age	hrs	<b>67</b>	130	3836
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<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 D5185m >90	<b>7</b>	15	9
Chromium	ppm ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>7</b>	11	9
Lead	ppm ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm ASTM D5185m >330	<b>7</b>	1	0
Tin	ppm ASTM D5185m >15	<b>0</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</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>0</b>	6	8
Barium	ppm ASTM D5185m 0	<b>0</b>	9	0
Molybdenum	ppm ASTM D5185m 60	<b>56</b>	64	60
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>880</b>	922	925
Calcium	ppm ASTM D5185m 1070	<b>1033</b>	1118	1070
Phosphorus	ppm ASTM D5185m 1150	<b>1001</b>	1003	1090
Zinc	ppm ASTM D5185m 1270	<b>1169</b>	1217	1298
Sulfur	ppm ASTM D5185m 2060	<b>2860</b>	3020	3267

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>3</b>	4	3
Sodium	ppm ASTM D5185m	<b>0</b>	0	<1
Potassium	ppm ASTM D5185m >20	<b>1</b>	12	8

## INFRA-RED

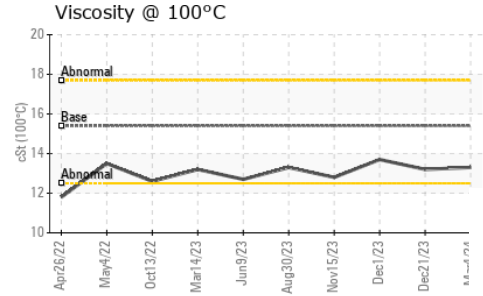
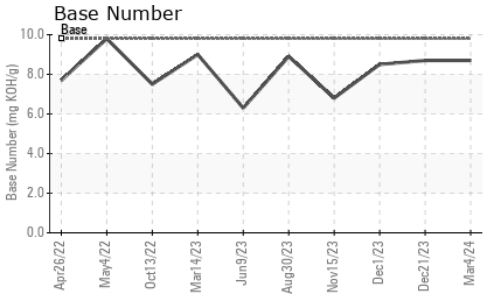
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>0.1</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>5.5</b>	6.8	5.9
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>16.8</b>	18.0	17.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.3</b>	14.3	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.7</b>	8.7	8.5



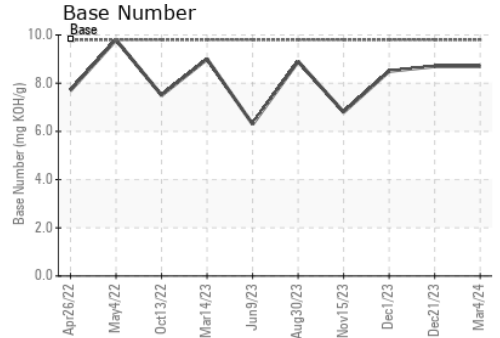
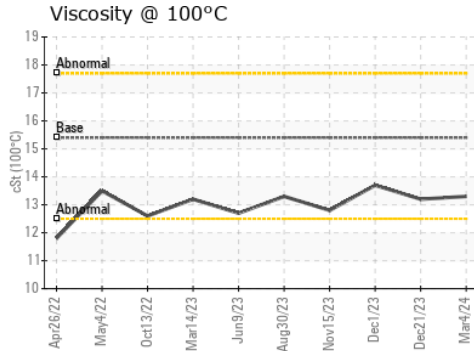
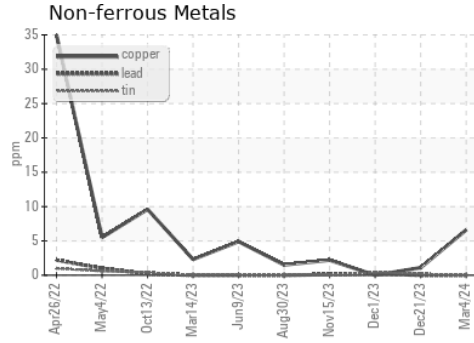
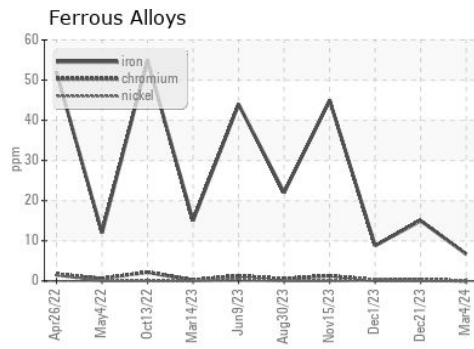
# OIL ANALYSIS REPORT



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>13.3</b>	13.2	13.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110294  
**Lab Number** : 06112019  
**Unique Number** : 10915516  
**Test Package** : FLEET  
**Received** : 07 Mar 2024  
**Tested** : 08 Mar 2024  
**Diagnosed** : 10 Mar 2024 - Don Baldrige

**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)

T:  
F: