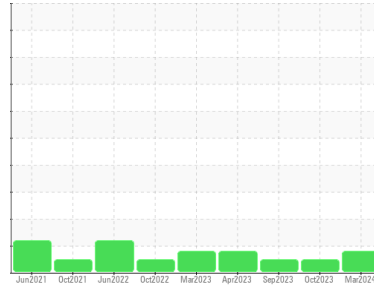




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**411015**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: Sample only )

### Wear

The aluminum level is abnormal. All other 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>GFL0101654</b>	GFL0088298	GFL0088270
Sample Date	Client Info	<b>13 Mar 2024</b>	23 Oct 2023	11 Sep 2023
Machine Age	hrs	Client Info	4430	4245
Oil Age	hrs	Client Info	182	554
Oil Changed	Client Info	<b>Not Chngd</b>	Changed	Not Chngd
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >2.0	<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 >100	<b>33</b>	12	28
Chromium	ppm ASTM D5185m >20	<b>2</b>	<1	2
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185m	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>▲ 27</b>	6	16
Lead	ppm ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm ASTM D5185m >330	<b>6</b>	<1	1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>3</b>	3	3
Barium	ppm ASTM D5185m 0	<b>0</b>	3	0
Molybdenum	ppm ASTM D5185m 60	<b>63</b>	63	64
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>979</b>	900	965
Calcium	ppm ASTM D5185m 1070	<b>1134</b>	1075	1107
Phosphorus	ppm ASTM D5185m 1150	<b>1148</b>	973	981
Zinc	ppm ASTM D5185m 1270	<b>1302</b>	1214	1250
Sulfur	ppm ASTM D5185m 2060	<b>3481</b>	3243	3337

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>6</b>	3	5
Sodium	ppm ASTM D5185m	<b>3</b>	0	2
Potassium	ppm ASTM D5185m >20	<b>16</b>	9	24

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.7</b>	0.2	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>10.6</b>	7.4	11.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.6</b>	18.5	21.5

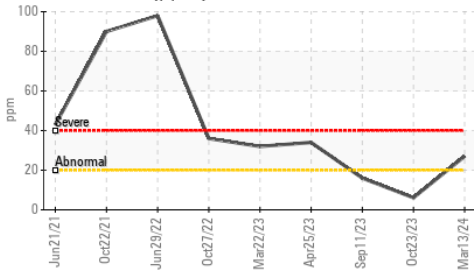
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>17.2</b>	14.8	18.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.5</b>	8.2	6.3

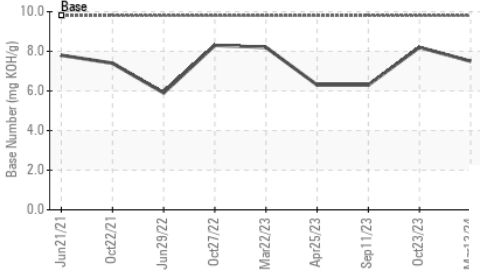


# OIL ANALYSIS REPORT

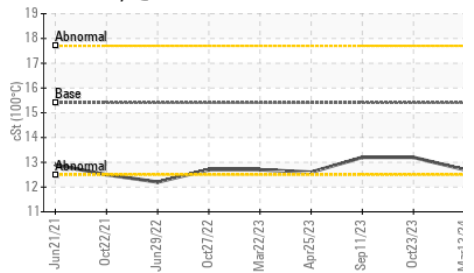
▲ Aluminum (ppm)



Base Number



Viscosity @ 100°C

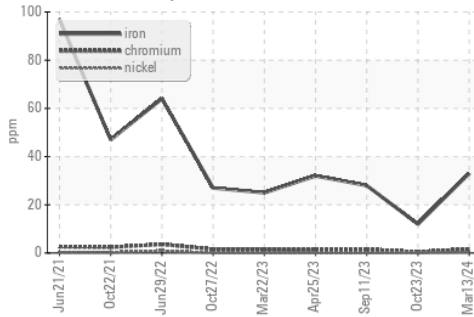


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

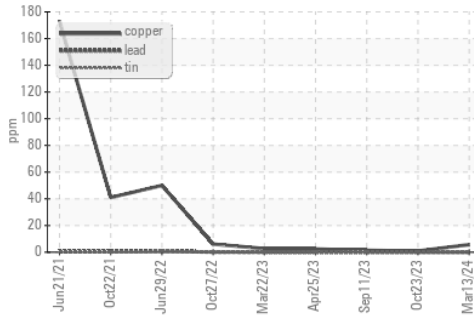
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	13.2

## GRAPHS

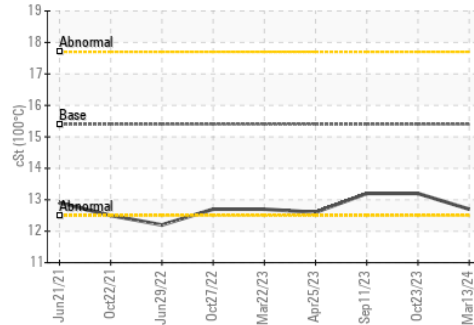
Ferrous Alloys



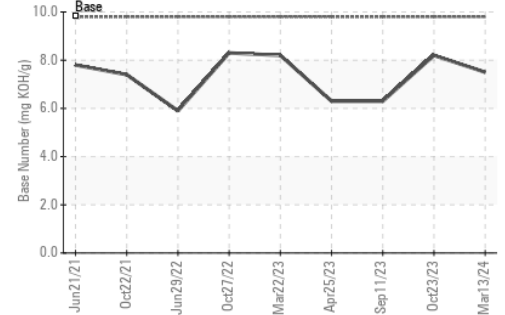
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0101654  
 Lab Number : 06121507  
 Unique Number : 10930340  
 Test Package : FLEET

Received : 18 Mar 2024  
 Tested : 19 Mar 2024  
 Diagnosed : 21 Mar 2024 - Jonathan Hester

GFL Environmental - 625 - Harrison Hauling  
 4102 Industrial Pkwy  
 Harrison, MI  
 US 48625  
 Contact: Glenda Standen  
 gstanden@gflenv.com

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: