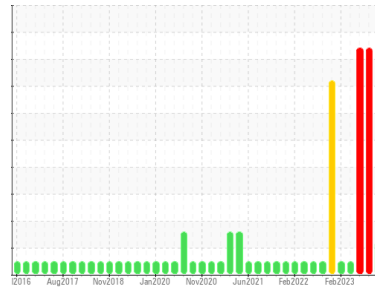




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Area  
**(MM8746)**

Machine Id  
**2528**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (40 QTS)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels remain elevated. Test for glycol is negative.

### 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>GFL0116438</b>	GFL0116462	GFL0102286
Sample Date	Client Info	<b>01 Apr 2024</b>	22 Mar 2024	27 Nov 2023
Machine Age	hrs	Client Info	96121	96121
Oil Age	hrs	Client Info	600	600
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Changed
Sample Status		<b>ATTENTION</b>	SEVERE	SEVERE

## 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

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >165	<b>5</b>	26	18
Chromium	ppm ASTM D5185m >5	<b>0</b>	1	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>&lt;1</b>	3	2
Lead	ppm ASTM D5185m >150	<b>&lt;1</b>	6	2
Copper	ppm ASTM D5185m >90	<b>0</b>	<1	<1
Tin	ppm ASTM D5185m >5	<b>0</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>&lt;1</b>	4	3
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	68	65
Manganese	ppm ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>973</b>	942	969
Calcium	ppm ASTM D5185m 1070	<b>1186</b>	1237	1170
Phosphorus	ppm ASTM D5185m 1150	<b>1102</b>	1077	1111
Zinc	ppm ASTM D5185m 1270	<b>1350</b>	1308	1319
Sulfur	ppm ASTM D5185m 2060	<b>4025</b>	3766	3122

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	<b>3</b>	10	15
Sodium	ppm ASTM D5185m	<b>11</b>	54	46
Potassium	ppm ASTM D5185m >20	<b>61</b>	381	230
Glycol	% *ASTM D2982	<b>NEG</b>	0.10	0.06

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >7.5	<b>0.2</b>	1.1	1
Nitration	Abs/cm *ASTM D7624 >20	<b>5.8</b>	12.9	11.5
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.4</b>	25.7	22.9

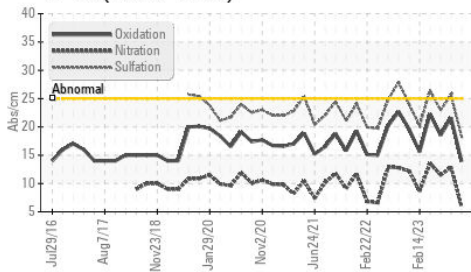
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.9</b>	21.6	18.5
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.6</b>	5.7	7.9

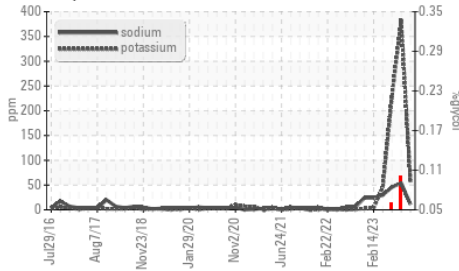


# OIL ANALYSIS REPORT

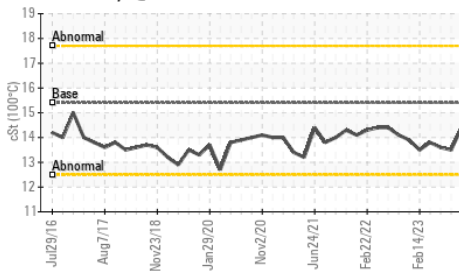
FT-IR (Direct Trend)



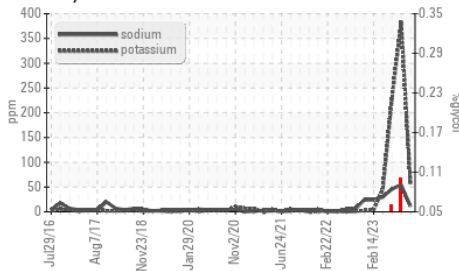
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

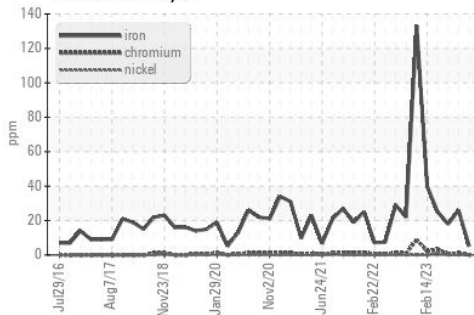


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

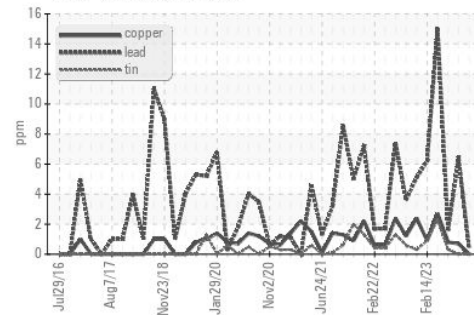
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	13.5

### GRAPHS

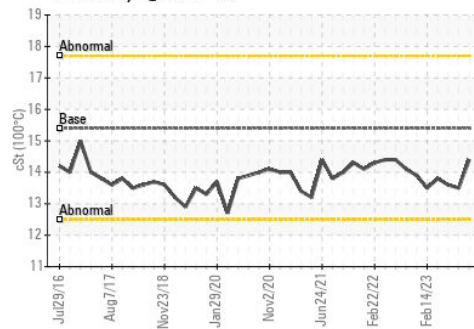
Ferrous Alloys



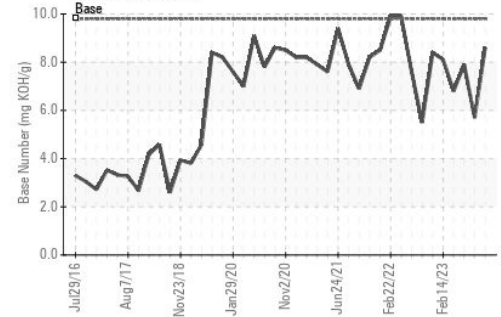
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116438  
**Lab Number** : 06137234  
**Unique Number** : 10956699  
**Test Package** : FLEET

**Received** : 03 Apr 2024  
**Tested** : 05 Apr 2024  
**Diagnosed** : 05 Apr 2024 - Jonathan Hester

**GFL Environmental - 035 - Greensboro**  
 1236 Elon Place  
 High Point, NC  
 US 27263  
 Contact: JORGE COSTA  
 jorge.costa@gflenv.com  
 T: (336)668-3712  
 F:

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)