



# OIL ANALYSIS REPORT

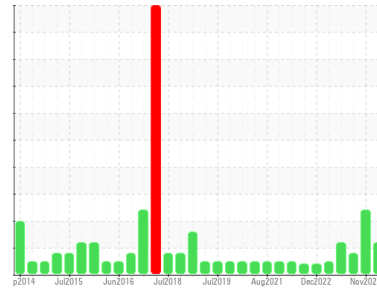
Area  
(YA115731)

Machine Id  
**10425**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (8 GAL)**

Sample Rating Trend



**GLYCOL**



## DIAGNOSIS

### ▲ Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### ▲ Contamination

Sodium and/or potassium levels are high. 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 acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0115991</b>	GFL0099794	GFL0080536
Sample Date	Client Info	<b>02 Jul 2024</b>	20 Nov 2023	04 Oct 2023
Machine Age	hrs	<b>22803</b>	22803	39110
Oil Age	hrs	<b>0</b>	39110	39110
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	ATTENTION	ABNORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	▲ 2.8	▲ 3.4
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >75	<b>57</b>	6	10
Chromium	ppm ASTM D5185m >5	<b>3</b>	0	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >15	<b>5</b>	<1	1
Lead	ppm ASTM D5185m >25	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >100	<b>2</b>	0	<1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>8</b>	● 130	11
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	● 16	57
Manganese	ppm ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>850</b>	● 259	832
Calcium	ppm ASTM D5185m 1070	<b>1116</b>	● 1867	1060
Phosphorus	ppm ASTM D5185m 1150	<b>1002</b>	1007	959
Zinc	ppm ASTM D5185m 1270	<b>1233</b>	1192	1129
Sulfur	ppm ASTM D5185m 2060	<b>2794</b>	3417	2907

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>21</b>	6	5
Sodium	ppm ASTM D5185m	<b>22</b>	4	24
Potassium	ppm ASTM D5185m >20	▲ <b>68</b>	29	89
Glycol	% *ASTM D2982	<b>NEG</b>	NEG	0.0

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>2.5</b>	0.4	0.7
Nitration	Abs/cm *ASTM D7624 >20	<b>9.6</b>	5.5	6.1
Sulfation	Abs.1mm *ASTM D7415 >30	<b>23.5</b>	19.7	18.8

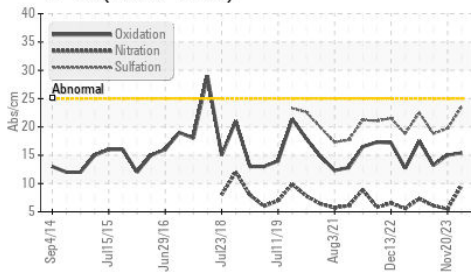
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs.1mm *ASTM D7414 >25	<b>15.4</b>	15.0	13.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.7</b>	8.9	9.2

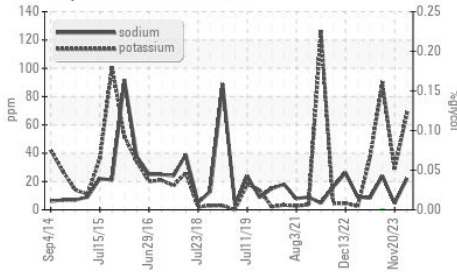


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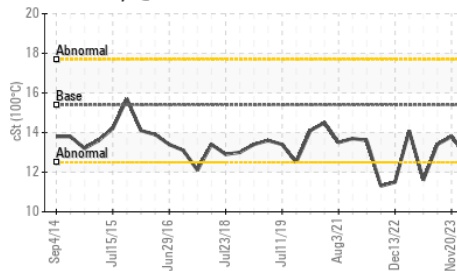
FT-IR (Direct Trend)



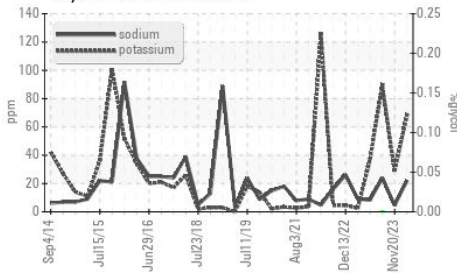
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

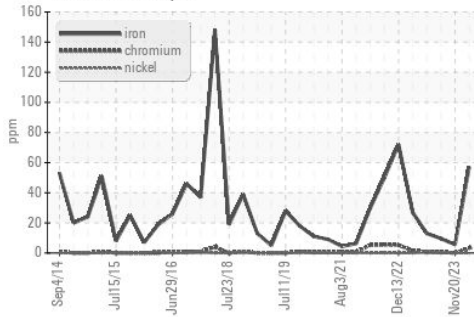


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

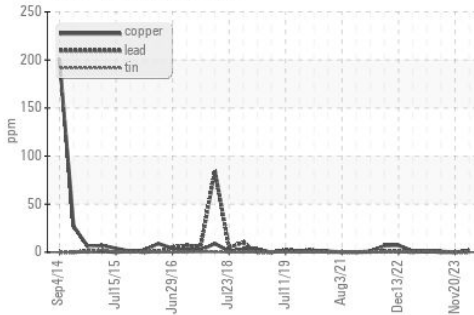
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.9	13.8

## GRAPHS

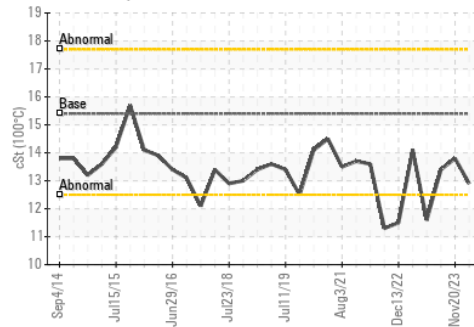
Ferrous Alloys



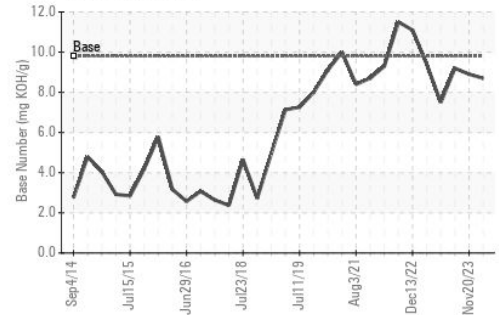
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0115991

Lab Number : 06227108

Unique Number : 11110601

Test Package : FLEET ( Additional Tests: Glycol )

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)

Received : 03 Jul 2024

Tested : 08 Jul 2024

Diagnosed : 08 Jul 2024 - Jonathan Hester

GFL Environmental - 018 - Fayetteville

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US 28348

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