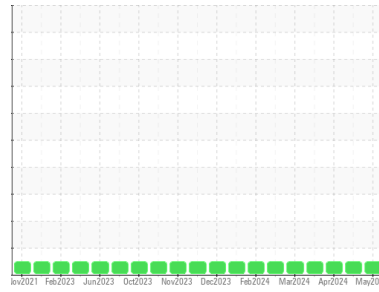




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**411026-411026**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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>GFL0123155</b>	GFL0104970	GFL0104870
Sample Date	Client Info	<b>27 May 2024</b>	07 May 2024	19 Apr 2024
Machine Age	hrs	<b>7748</b>	7599	7481
Oil Age	hrs	<b>0</b>	7005	7156
Oil Changed	Client Info	<b>N/A</b>	Changed	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<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>4</b>	14	13
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	1	2
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm ASTM D5185m >20	<b>2</b>	8	9
Lead	ppm ASTM D5185m >40	<b>0</b>	0	2
Copper	ppm ASTM D5185m >330	<b>0</b>	<1	<1
Tin	ppm ASTM D5185m >15	<b>0</b>	0	1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>56</b>	54	60
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>929</b>	868	962
Calcium	ppm ASTM D5185m 1070	<b>1071</b>	950	1066
Phosphorus	ppm ASTM D5185m 1150	<b>1049</b>	944	1098
Zinc	ppm ASTM D5185m 1270	<b>1219</b>	1141	1227
Sulfur	ppm ASTM D5185m 2060	<b>3531</b>	3172	3072

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>0</b>	2	5
Sodium	ppm ASTM D5185m	<b>2</b>	3	3
Potassium	ppm ASTM D5185m >20	<b>3</b>	12	16

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	1.4	1.2
Nitration	Abs/cm *ASTM D7624 >20	<b>10.0</b>	8.3	7.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>21.6</b>	20.6	19.6

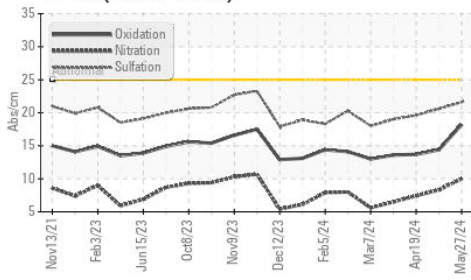
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>18.2</b>	14.4	13.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.4</b>	8.4	8.3

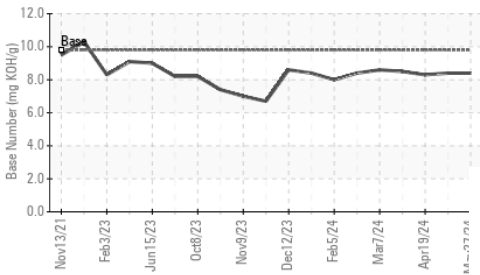


# OIL ANALYSIS REPORT

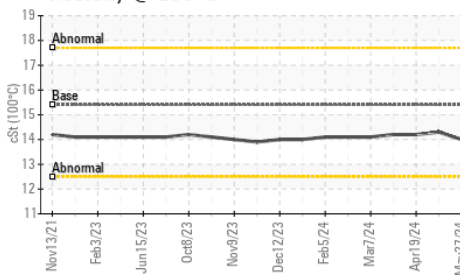
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

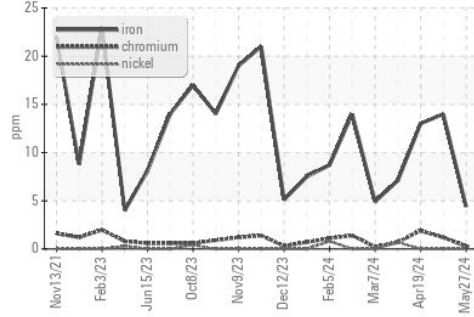


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

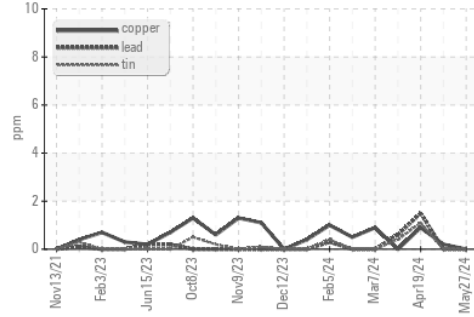
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.0</b>	14.3	14.2

## GRAPHS

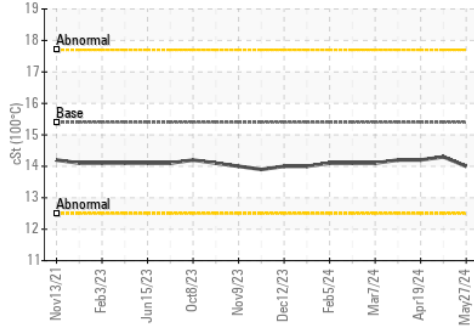
Ferrous Alloys



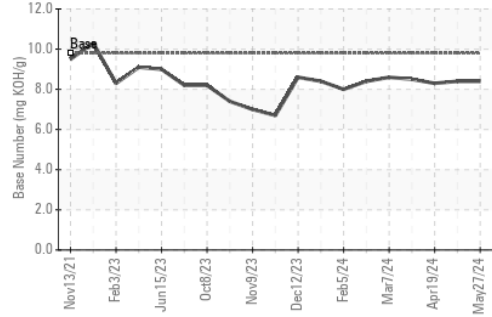
Non-ferrous Metals



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0123155      **Received** : 04 Jun 2024  
**Lab Number** : **06198825**      **Tested** : 05 Jun 2024  
**Unique Number** : 11060948      **Diagnosed** : 05 Jun 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 820 - Joplin Hauling**  
 3700 West 7th Street  
 Joplin, MO  
 US 64801  
 Contact: James Jarrett  
 jjarrett@gflenv.com  
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 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)