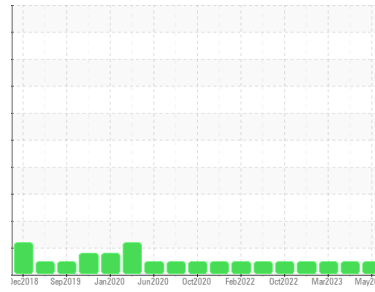




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**728060-362002**

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>GFL0103627</b>	GFL0046114	GFL0039530
Sample Date	Client Info	<b>15 May 2024</b>	13 Sep 2023	09 Mar 2023
Machine Age	hrs	Client Info	600	450
Oil Age	hrs	Client Info	0	450
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Changed
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>19</b>	59	38
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	3	1
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>3</b>	7	9
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	0	0
Copper	ppm ASTM D5185m >330	<b>5</b>	2	2
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</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>2</b>	4	3
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>60</b>	67	69
Manganese	ppm ASTM D5185m 0	<b>0</b>	1	<1
Magnesium	ppm ASTM D5185m 1010	<b>883</b>	926	831
Calcium	ppm ASTM D5185m 1070	<b>1073</b>	1254	1248
Phosphorus	ppm ASTM D5185m 1150	<b>1090</b>	1038	1035
Zinc	ppm ASTM D5185m 1270	<b>1173</b>	1331	1274
Sulfur	ppm ASTM D5185m 2060	<b>3140</b>	3711	2952

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>5</b>	6	6
Sodium	ppm ASTM D5185m	<b>3</b>	7	4
Potassium	ppm ASTM D5185m >20	<b>3</b>	<1	2

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.3</b>	1.2	1.4
Nitration	Abs/cm *ASTM D7624 >20	<b>7.0</b>	11.6	11.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.7</b>	23.9	22.7

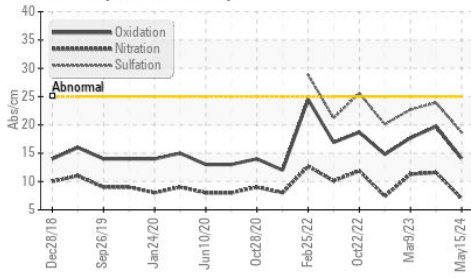
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.1</b>	19.7	17.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.6</b>	6.6	7.5

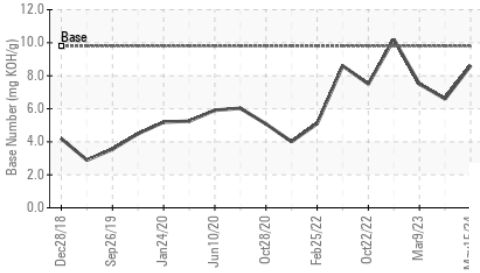


# OIL ANALYSIS REPORT

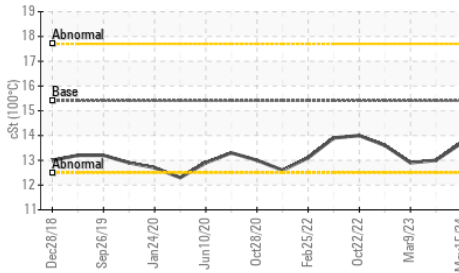
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

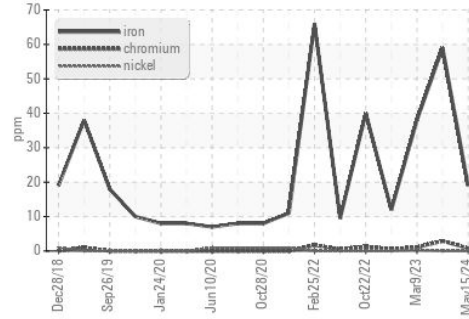


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

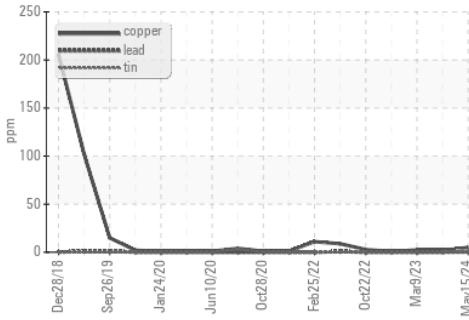
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	13.0

## GRAPHS

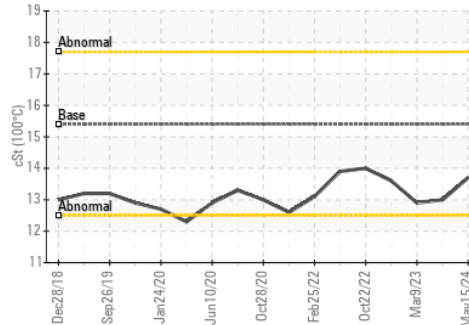
Ferrous Alloys



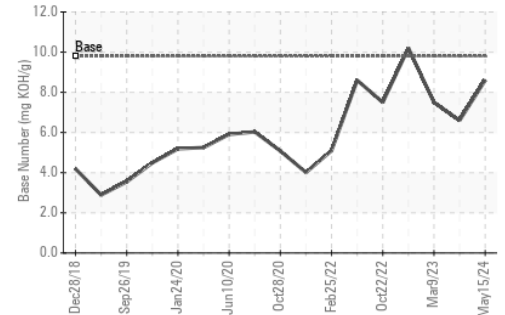
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0103627  
**Lab Number** : 06185888  
**Unique Number** : 11042640  
**Test Package** : FLEET

**Received** : 21 May 2024  
**Tested** : 22 May 2024  
**Diagnosed** : 22 May 2024 - Wes Davis

**GFL Environmental - 834 - Chillicothe Hauling**  
 201 Mitchell Road  
 Chillicothe, MO  
 US 64601

Contact: Terry McKiddy  
 tmckiddy@gflenv.com  
 T: (816)225-6699

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)