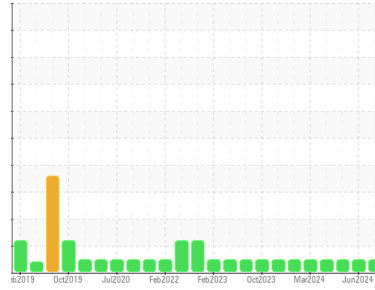




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**928067-205259**

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>GFL0118475</b>	GFL0118477	GFL0118476	
Sample Date	Client Info	<b>19 Jun 2024</b>	04 Jun 2024	15 Apr 2024	
Machine Age	hrs	Client Info	<b>16197</b>	16056	0
Oil Age	hrs	Client Info	<b>0</b>	650	0
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not 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>5</b>	14	40
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	3	22
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	1	1
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>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>2</b>	<1	1
Barium	ppm	ASTM D5185m 0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>61</b>	67	67
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m 1010	<b>908</b>	923	980
Calcium	ppm	ASTM D5185m 1070	<b>1049</b>	1106	1172
Phosphorus	ppm	ASTM D5185m 1150	<b>910</b>	1093	1184
Zinc	ppm	ASTM D5185m 1270	<b>1198</b>	1226	1338
Sulfur	ppm	ASTM D5185m 2060	<b>2912</b>	3088	3031

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>3</b>	5	6
Sodium	ppm	ASTM D5185m	<b>1</b>	5	13
Potassium	ppm	ASTM D5185m >20	<b>5</b>	13	45

## INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.4	1.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.5</b>	7.4	9.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.9</b>	19.3	21.1

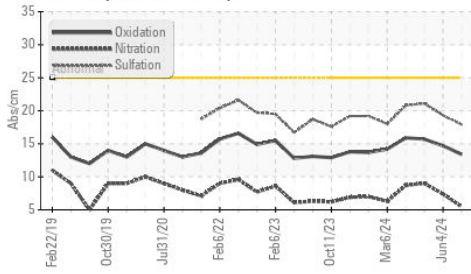
## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.4</b>	14.7	15.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.9</b>	8.6	8.8

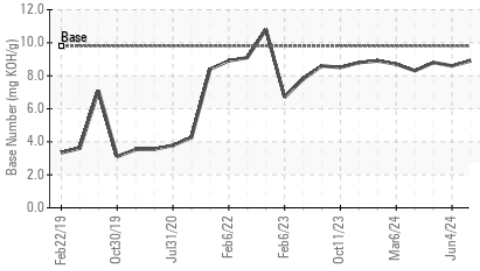


# OIL ANALYSIS REPORT

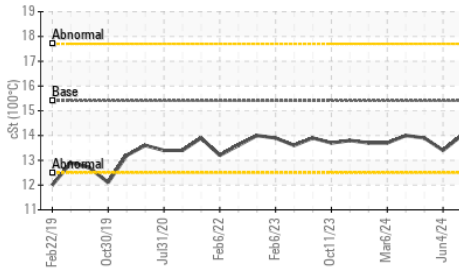
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

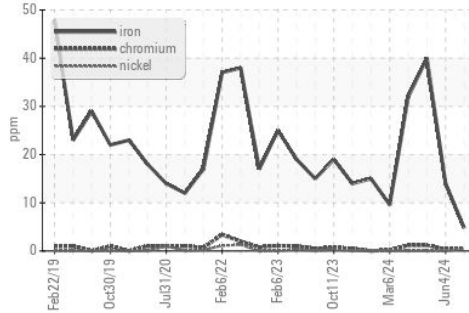


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

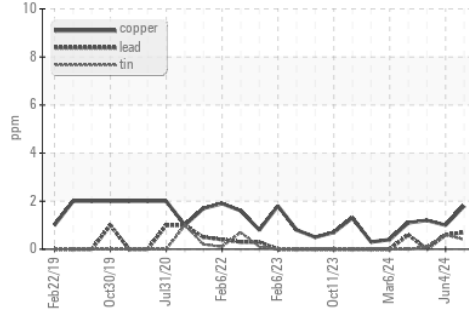
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.4

## GRAPHS

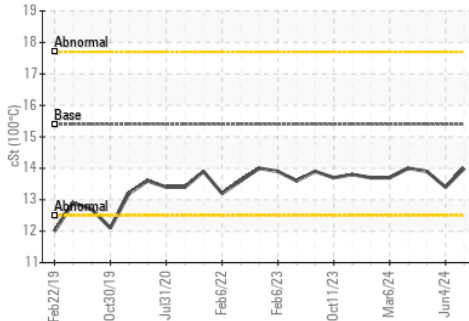
Ferrous Alloys



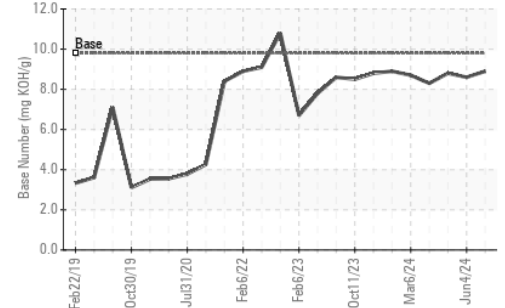
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0118475  
 Lab Number : 06219548  
 Unique Number : 11097745  
 Test Package : FLEET

Received : 25 Jun 2024  
 Tested : 26 Jun 2024  
 Diagnosed : 26 Jun 2024 - Wes Davis

GFL Environmental - 893 - OK East Hauling  
 2100 Lilly Street  
 Seminole, OK  
 US 74868

Contact: Roger Barlow  
 rbarlow@gflenv.com  
 T: (405)204-6183

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)

F: