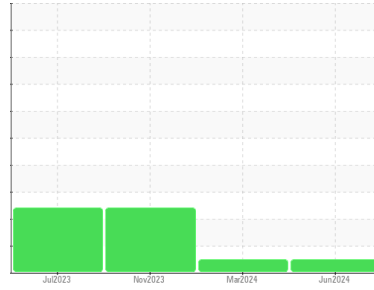




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**SS0156**

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>GFL0116232</b>	GFL0116270	GFL0094863
Sample Date	Client Info		<b>10 Jun 2024</b>	14 Mar 2024	08 Nov 2023
Machine Age	hrs	Client Info	<b>3177</b>	3148	3124
Oil Age	hrs	Client Info	<b>29</b>	67	43
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## 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>	19	21
Chromium	ppm	ASTM D5185m >20	<b>10</b>	10	10
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>1</b>	1	1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>8</b>	7	8
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
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>13</b>	11	16
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>47</b>	48	46
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>743</b>	719	687
Calcium	ppm	ASTM D5185m 1070	<b>1338</b>	1339	1384
Phosphorus	ppm	ASTM D5185m 1150	<b>1027</b>	972	1009
Zinc	ppm	ASTM D5185m 1270	<b>1171</b>	1147	1206
Sulfur	ppm	ASTM D5185m 2060	<b>3701</b>	3716	3308

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>24</b>	22	26
Sodium	ppm	ASTM D5185m	<b>3</b>	3	4
Potassium	ppm	ASTM D5185m >20	<b>4</b>	2	5

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.1	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.8</b>	6.4	10.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>16.9</b>	17.1	25.9

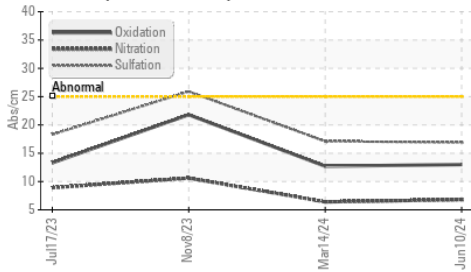
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.0</b>	12.7	21.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.6</b>	8.5	4.6

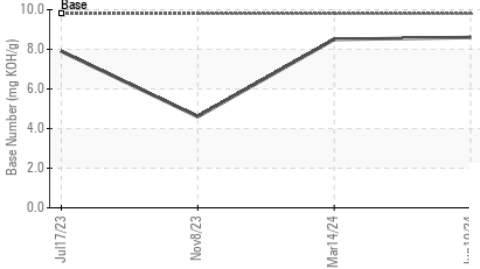


# OIL ANALYSIS REPORT

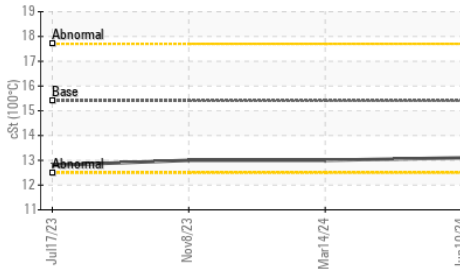
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

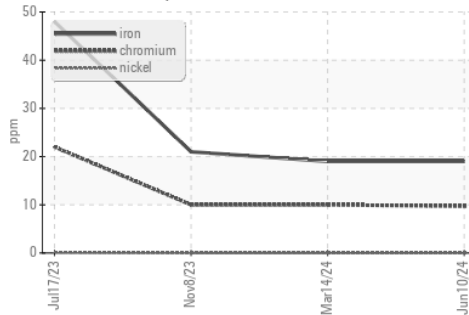


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

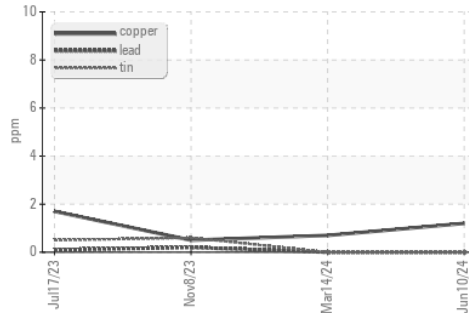
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.0

## GRAPHS

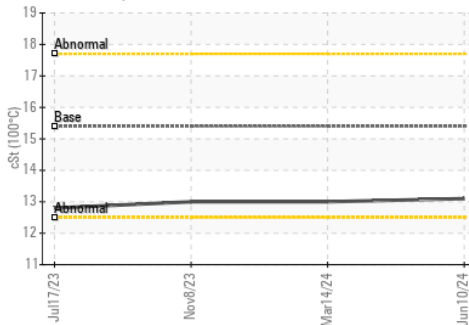
Ferrous Alloys



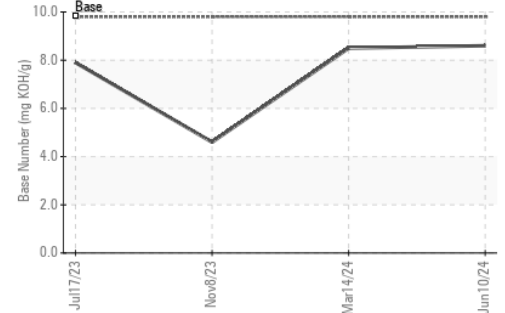
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0116232  
 Lab Number : 06211332  
 Unique Number : 11084196  
 Test Package : FLEET

GFL Environmental - 625 - Harrison Hauling  
 2480 S Clare Ave  
 Clare, MI  
 US 48617

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)

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