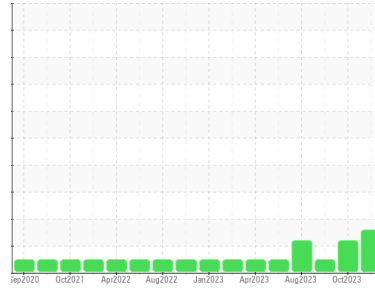




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**829027-1078**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elemental level of silicon (Si) above normal.

### 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>GFL0103829</b>	GFL0097381	GFL0089522
Sample Date	Client Info	<b>29 Dec 2023</b>	24 Oct 2023	07 Aug 2023
Machine Age	hrs	<b>12230</b>	79963	79963
Oil Age	hrs	<b>482</b>	79963	607
Oil Changed	Client Info	<b>N/A</b>	N/A	Changed
Sample Status		<b>ABNORMAL</b>	ABNORMAL	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 >110	<b>11</b>	6	4
Chromium	ppm ASTM D5185m >4	<b>2</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm ASTM D5185m >25	<b>2</b>	2	2
Lead	ppm ASTM D5185m >45	<b>2</b>	<1	<1
Copper	ppm ASTM D5185m >85	<b>3</b>	1	<1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</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>7</b>	7	9
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	63	63
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>918</b>	917	1012
Calcium	ppm ASTM D5185m 1070	<b>1055</b>	994	1112
Phosphorus	ppm ASTM D5185m 1150	<b>1030</b>	1020	1136
Zinc	ppm ASTM D5185m 1270	<b>1251</b>	1208	1363
Sulfur	ppm ASTM D5185m 2060	<b>3134</b>	2997	4216

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>▲ 32</b>	7	4
Sodium	ppm ASTM D5185m	<b>4</b>	11	4
Potassium	ppm ASTM D5185m >20	<b>10</b>	<b>▲ 68</b>	22

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.4	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>4.9</b>	7.0	5.0
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.7</b>	19.0	17.8

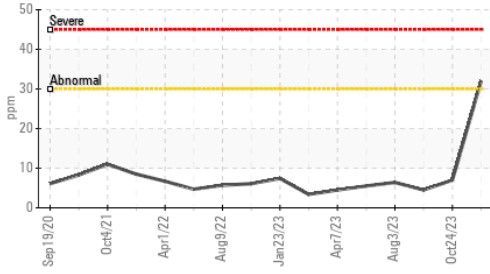
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>12.8</b>	14.3	13.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.3</b>	7.6	9.2

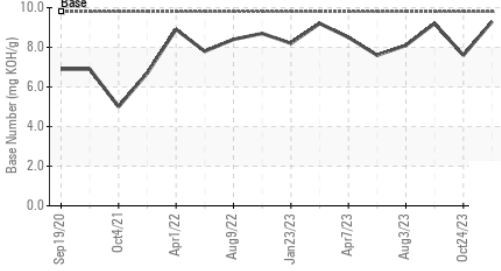


# OIL ANALYSIS REPORT

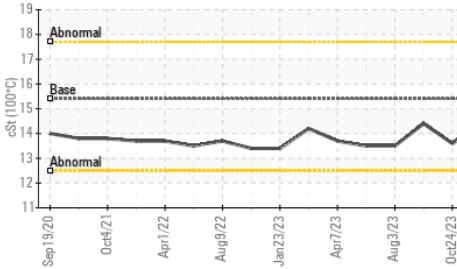
▲ Silicon (ppm)



Base Number



Viscosity @ 100°C

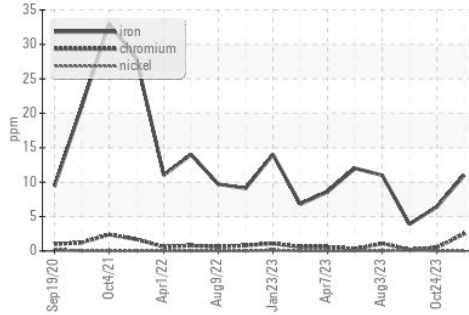


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

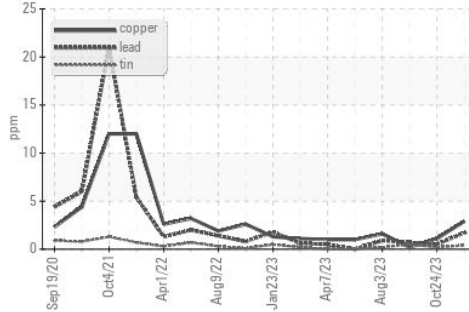
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	13.6

## GRAPHS

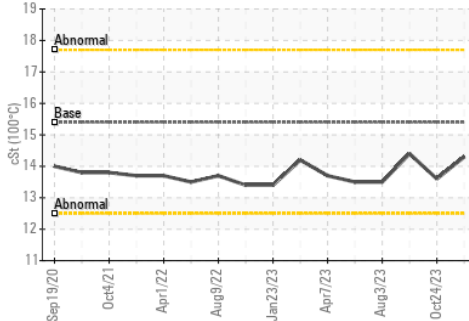
Ferrous Alloys



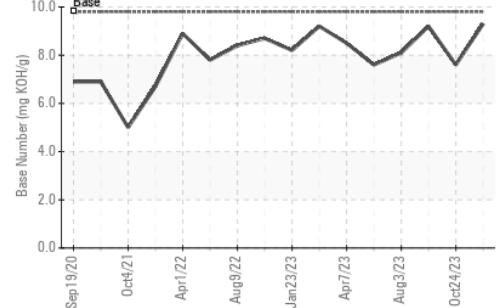
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0103829  
 Lab Number : 06051390  
 Unique Number : 10817339  
 Test Package : FLEET

GFL Environmental - 654S - Midlothian  
 12230 Deergrove Road  
 Midlothian, VA  
 US 23112  
 Contact: Corbin Umphlet  
 cumphlet@gflenv.com

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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F: