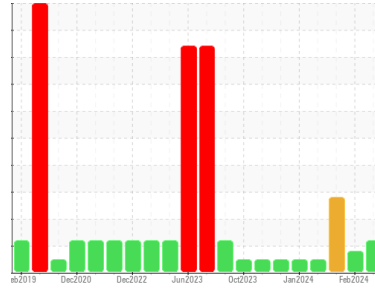




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**727105-310043**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

### 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>GFL0105192</b>	GFL0105309	GFL0105263	
Sample Date	Client Info	<b>19 Mar 2024</b>	26 Feb 2024	14 Feb 2024	
Machine Age	hrs	Client Info	<b>18636</b>	18466	2323
Oil Age	hrs	Client Info	<b>600</b>	200	600
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Changed	
Sample Status		<b>ATTENTION</b>	MARGINAL	SEVERE	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	▲ 2.8	▲ 18.4
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >110	<b>41</b>	20	41
Chromium	ppm ASTM D5185m >4	<b>2</b>	1	2
Nickel	ppm ASTM D5185m >2	<b>1</b>	<1	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>9</b>	4	6
Lead	ppm ASTM D5185m >45	<b>&lt;1</b>	<1	2
Copper	ppm ASTM D5185m >85	<b>1</b>	<1	3
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</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>&lt;1</b>	<1	2
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>94</b>	64	44
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1368</b>	1156	707
Calcium	ppm ASTM D5185m 1070	<b>1500</b>	1261	748
Phosphorus	ppm ASTM D5185m 1150	<b>1436</b>	1177	738
Zinc	ppm ASTM D5185m 1270	<b>1789</b>	1535	923
Sulfur	ppm ASTM D5185m 2060	<b>4110</b>	3632	2142

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>12</b>	5	8
Sodium	ppm ASTM D5185m	<b>96</b>	47	6
Potassium	ppm ASTM D5185m >20	<b>11</b>	5	5
Glycol	% *ASTM D2982	<b>NEG</b>	NEG	NEG

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1</b>	0.8	1.6
Nitration	Abs/cm *ASTM D7624 >20	<b>10.5</b>	9.7	13.7
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>21.6</b>	20.4	23.6

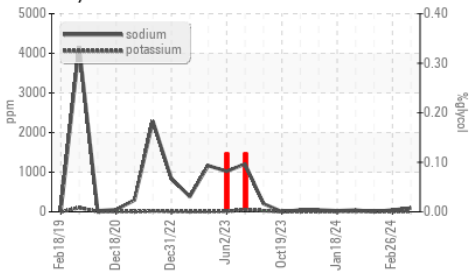
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>18.2</b>	17.0	23.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.1</b>	8.7	6.5

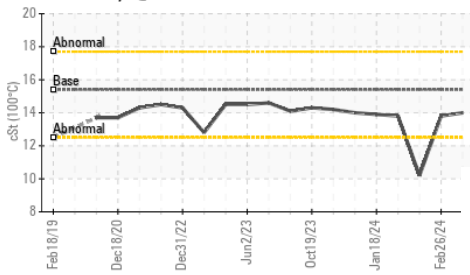


# OIL ANALYSIS REPORT

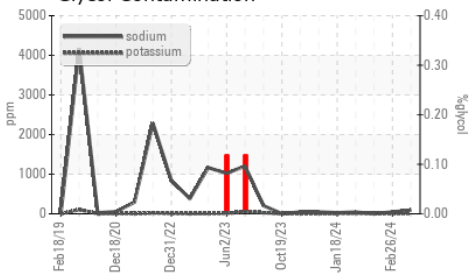
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

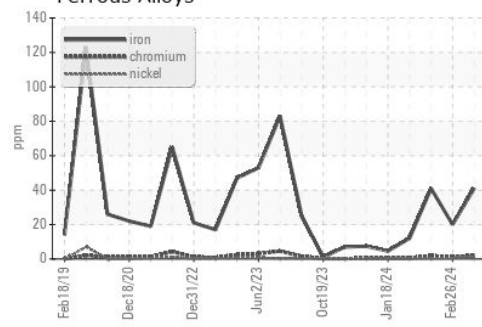


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

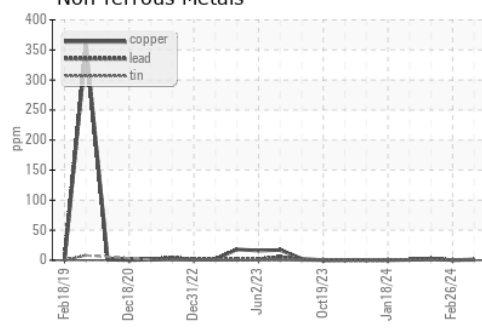
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.8 ▲ 10.2

## GRAPHS

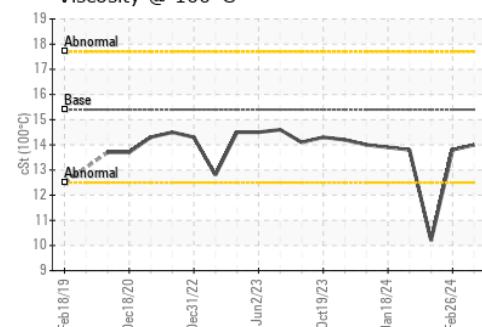
Ferrous Alloys



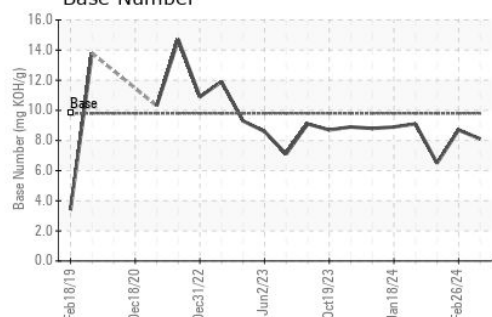
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0105192 Received : 22 Mar 2024  
 Lab Number : 06126151 Tested : 26 Mar 2024  
 Unique Number : 10940302 Diagnosed : 26 Mar 2024 - Jonathan Hester  
 Test Package : FLEET ( Additional Tests: Glycol )

GFL Environmental - 821 - Ozarks Hauling  
 33924 Olath Drive  
 Lebanon, MO  
 US 65536  
 Contact: Landen Johnson  
 landen.johnson@gflenv.com  
 T: (417)664-0010  
 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)