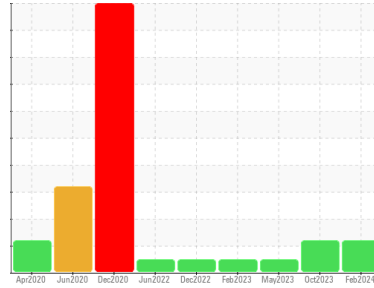




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Area  
**(02KJOA)**  
Machine Id  
**421027-402310**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### 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>GFL0109841</b>	GFL0093695	GFL0070365
Sample Date	Client Info	<b>16 Feb 2024</b>	13 Oct 2023	10 May 2023
Machine Age	hrs	<b>11712</b>	11738	11712
Oil Age	hrs	<b>600</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ATTENTION</b>	ATTENTION	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	<b>&gt;0.2</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	<b>17</b>	12	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	3	3
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	4	3
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m	>15	<b>0</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>39</b>	45	4
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>56</b>	53	65
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>571</b>	617	998
Calcium	ppm	ASTM D5185m	1070	<b>1338</b>	1477	1084
Phosphorus	ppm	ASTM D5185m	1150	<b>763</b>	834	1090
Zinc	ppm	ASTM D5185m	1270	<b>897</b>	985	1371
Sulfur	ppm	ASTM D5185m	2060	<b>2469</b>	2592	4360

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	4
Sodium	ppm	ASTM D5185m		<b>▲ 172</b>	▲ 97	56
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	5	4
Fuel	%	ASTM D3524	>2.0	<b>0.7</b>	<1.0	1.1
Glycol	%	*ASTM D2982		<b>0.0</b>	NEG	NEG

## INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	6.2	5.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.7</b>	18.5	17.7

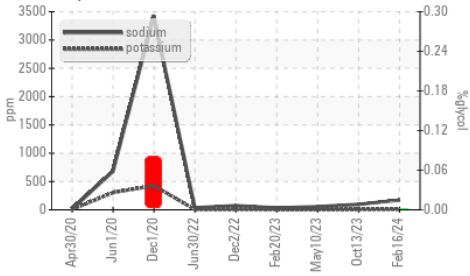
## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.3</b>	15.0	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.5</b>	9.4	10.0

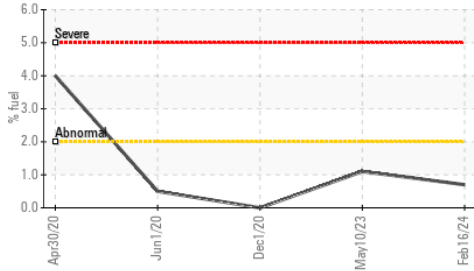


# OIL ANALYSIS REPORT

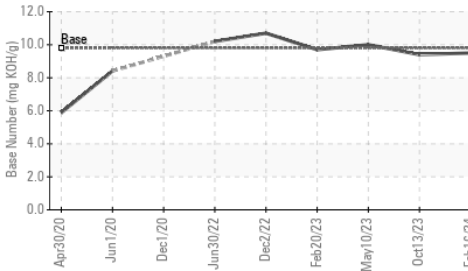
Glycol Contamination



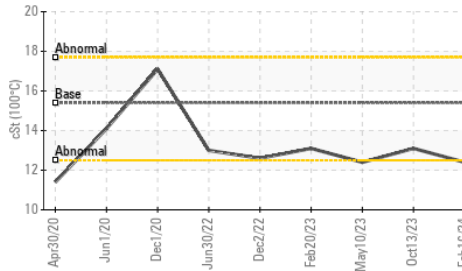
Fuel Dilution



Base Number



Viscosity @ 100°C

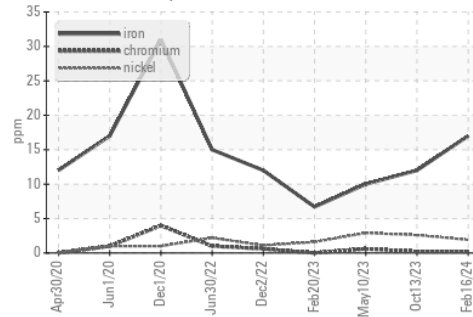


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

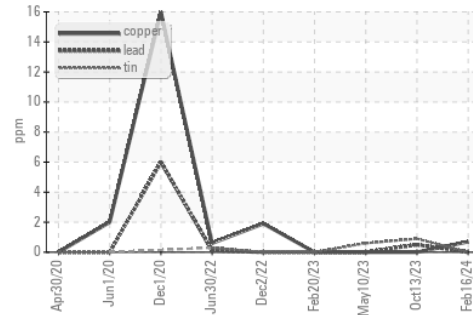
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.4	13.1

## GRAPHS

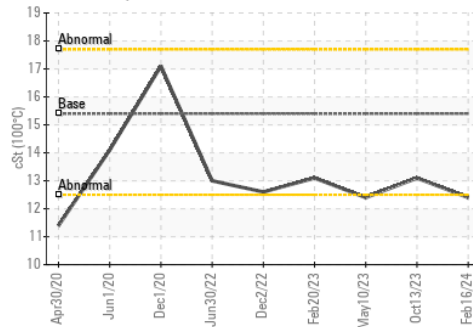
Ferrous Alloys



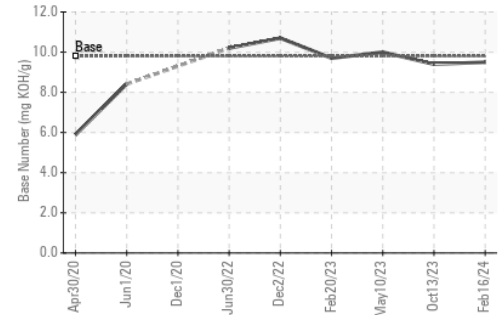
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0109841  
 Lab Number : 06095314  
 Unique Number : 10888167  
 Test Package : FLEET ( Additional Tests: FuelDilution, Glycol, PercentFuel )

GFL Environmental - 836 - Kansas City Hauling  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Loyce Stewart  
 loyce.stewart@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: