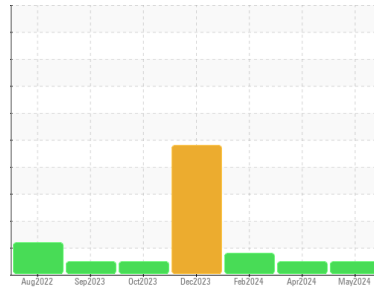




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**923028-260204.1**

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>GFL0123158</b>	GFL0104873	GFL0104786
Sample Date	Client Info		<b>28 May 2024</b>	25 Apr 2024	22 Feb 2024
Machine Age	hrs	Client Info	<b>0</b>	12857	4928
Oil Age	hrs	Client Info	<b>0</b>	12857	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	MARGINAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	▲ 2.8
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>24</b>	13	28
Chromium	ppm	ASTM D5185m >20	<b>2</b>	1	2
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	2	8
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>1</b>	0	8
Barium	ppm	ASTM D5185m 0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	55	60
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>877</b>	908	856
Calcium	ppm	ASTM D5185m 1070	<b>1075</b>	1042	940
Phosphorus	ppm	ASTM D5185m 1150	<b>992</b>	998	945
Zinc	ppm	ASTM D5185m 1270	<b>1209</b>	1172	1120
Sulfur	ppm	ASTM D5185m 2060	<b>3224</b>	3466	2725

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	3	6
Sodium	ppm	ASTM D5185m	<b>1</b>	3	6
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1</b>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.6</b>	6.8	6.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.2</b>	19.1	20.0

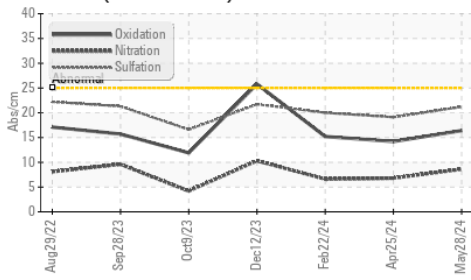
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.4</b>	14.2	15.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.0</b>	8.5	7.9

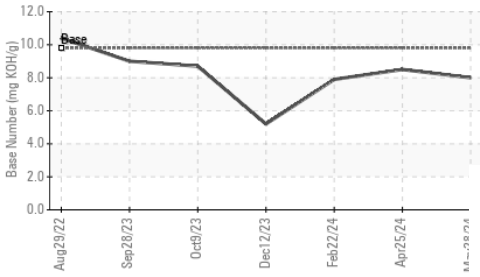


# OIL ANALYSIS REPORT

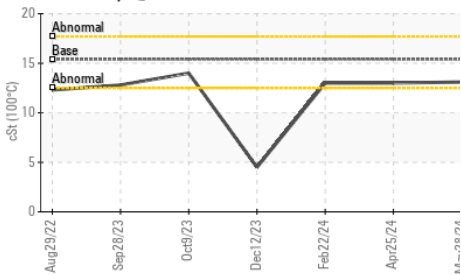
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

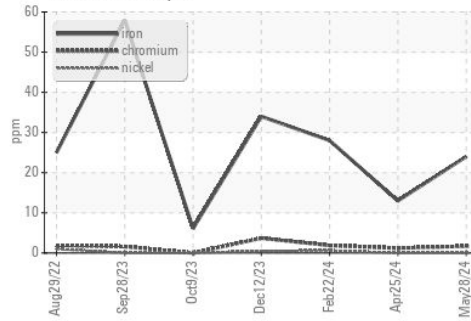


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

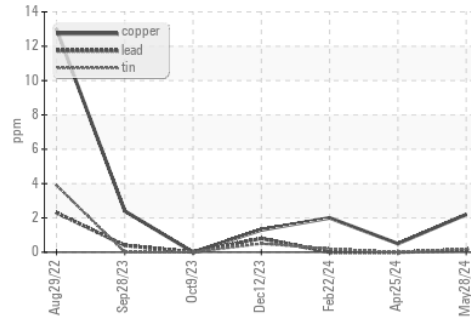
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.0

## GRAPHS

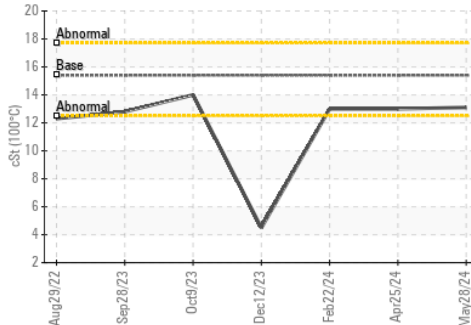
Ferrous Alloys



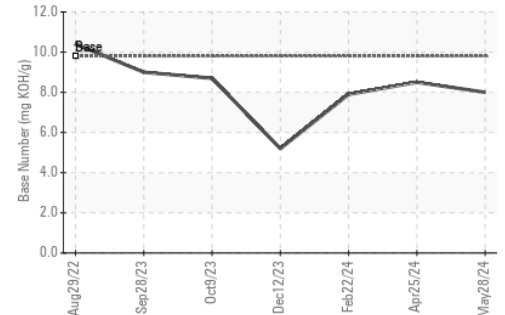
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0123158  
 Lab Number : 06201058  
 Unique Number : 11063181  
 Test Package : FLEET

Received : 05 Jun 2024  
 Tested : 06 Jun 2024  
 Diagnosed : 06 Jun 2024 - Wes Davis

GFL Environmental - 820 - Joplin Hauling  
 3700 West 7th Street  
 Joplin, MO  
 US 64801

Contact: James Jarrett  
 jjarrett@gflenv.com  
 T: (417)310-2802

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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