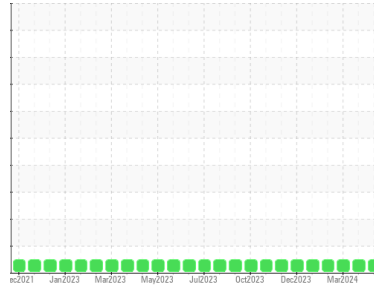




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**429032-402478**  
 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>GFL0123029</b>	GFL0119414	GFL0115375
Sample Date	Client Info		<b>31 May 2024</b>	01 May 2024	28 Mar 2024
Machine Age	hrs	Client Info	<b>13561</b>	13392	13237
Oil Age	hrs	Client Info	<b>169</b>	155	178
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	<b>2</b>	7	5
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	1	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	3	1
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	2	0
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	3	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	2	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	2	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>12</b>	2	5
Barium	ppm	ASTM D5185m 0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>64</b>	57	62
Manganese	ppm	ASTM D5185m 0	<b>0</b>	1	0
Magnesium	ppm	ASTM D5185m 1010	<b>950</b>	1034	1024
Calcium	ppm	ASTM D5185m 1070	<b>1108</b>	1155	1171
Phosphorus	ppm	ASTM D5185m 1150	<b>1004</b>	1088	1030
Zinc	ppm	ASTM D5185m 1270	<b>1242</b>	1314	1258
Sulfur	ppm	ASTM D5185m 2060	<b>3346</b>	3421	3436

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	5	4
Sodium	ppm	ASTM D5185m	<b>0</b>	5	3
Potassium	ppm	ASTM D5185m >20	<b>2</b>	3	<1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.3</b>	8.7	8.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.8</b>	19.7	19.3

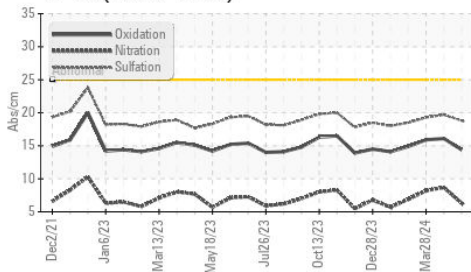
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.4</b>	16.1	15.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.4</b>	6.3	7.3

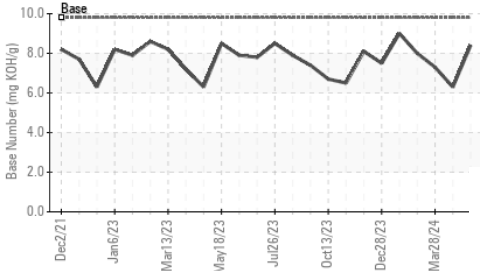


# OIL ANALYSIS REPORT

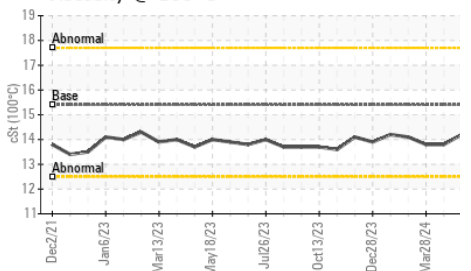
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



## VISUAL

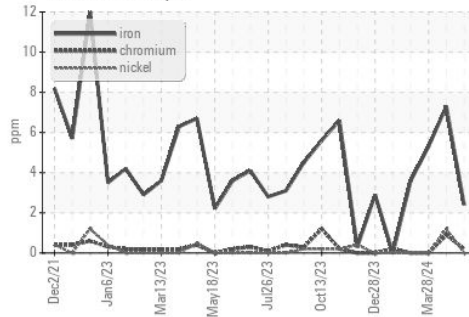
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

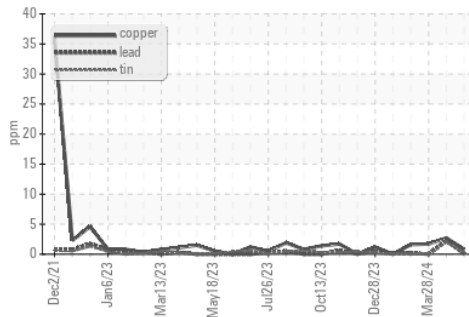
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	13.8

## GRAPHS

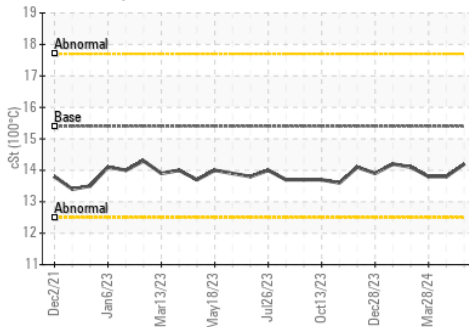
Ferrous Alloys



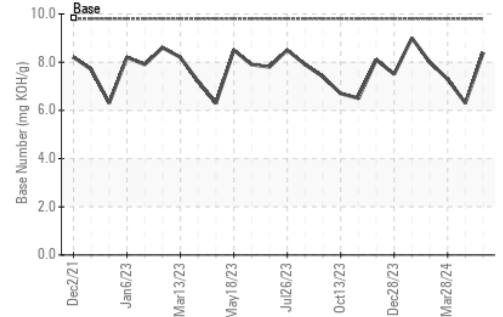
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0123029  
 Lab Number : 06201078  
 Unique Number : 11063201  
 Test Package : FLEET

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

GFL Environmental - 814 - Little Rock Hauling  
 4005 Hwy 161 N.  
 Little Rock, AR  
 US 72117

Contact: Brad Koenig  
 bkoenig@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)

T:  
 F: