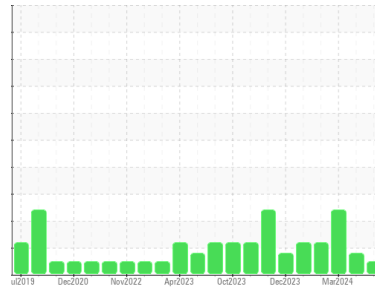




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**429042-402342**

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>GFL0118216</b>	GFL0118192	GFL0109124
Sample Date	Client Info		<b>10 Jun 2024</b>	15 May 2024	28 Mar 2024
Machine Age	hrs	Client Info	<b>17362</b>	17192	16916
Oil Age	hrs	Client Info	<b>700</b>	700	600
Oil Changed	Client Info		<b>Not Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	MARGINAL	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	▲ 2.2	▲ 8.3
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>6</b>	8	15
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	2	2
Lead	ppm	ASTM D5185m >45	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	<1	2
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>1</b>	0	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>57</b>	59	56
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1027</b>	904	911
Calcium	ppm	ASTM D5185m 1070	<b>1183</b>	1050	999
Phosphorus	ppm	ASTM D5185m 1150	<b>1079</b>	988	1001
Zinc	ppm	ASTM D5185m 1270	<b>1361</b>	1183	1213
Sulfur	ppm	ASTM D5185m 2060	<b>3622</b>	2927	3203

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>3</b>	4	4
Sodium	ppm	ASTM D5185m	<b>3</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	0

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.3	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.1</b>	10.9	9.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.0</b>	22.8	20.0

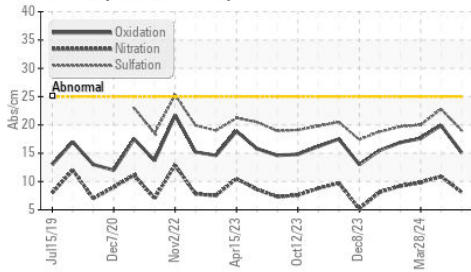
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.1</b>	19.9	17.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.2</b>	5.9	7.0

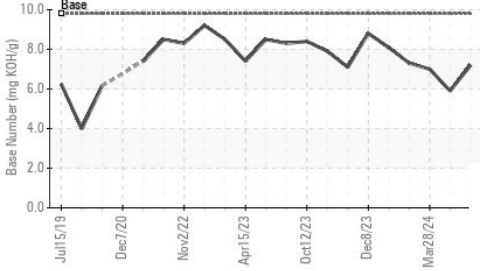


# OIL ANALYSIS REPORT

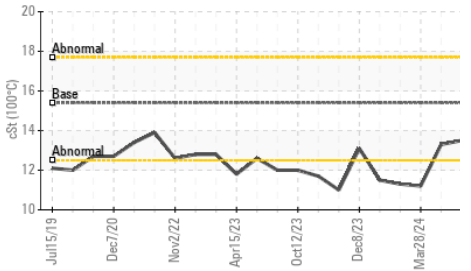
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

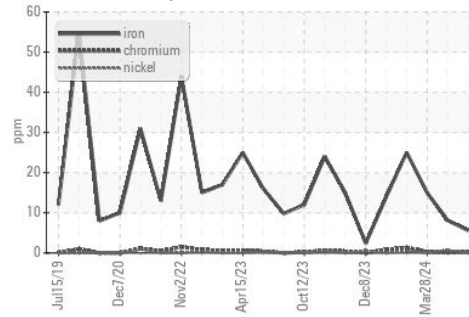


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

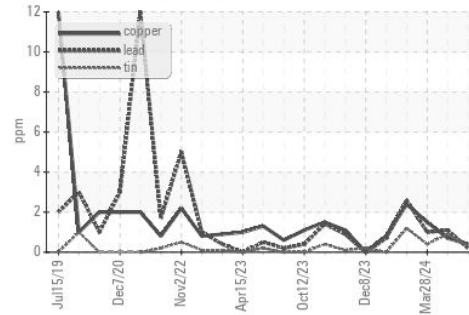
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.3 ▲ 11.2

## GRAPHS

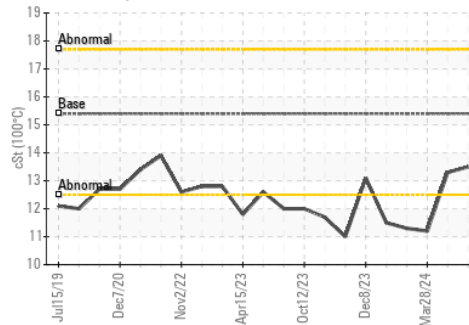
Ferrous Alloys



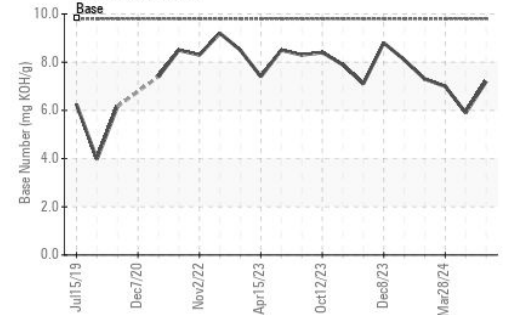
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0118216  
 Lab Number : 06224337  
 Unique Number : 11102534  
 Test Package : FLEET

Received : 01 Jul 2024  
 Tested : 02 Jul 2024  
 Diagnosed : 02 Jul 2024 - Wes Davis

GFL Environmental - 822 - Springfield Hauling  
 2120 West Bennett Street  
 Springfield, MO  
 US 65807

Contact: Dennis Moore  
 dennis.moore@gflenv.com  
 T: (417)403-3641

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)