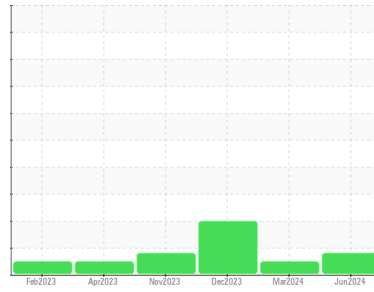




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**913075**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

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

### Wear

The aluminum level is abnormal. All other 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>GFL0122392</b>	GFL0108884	GFL0105585
Sample Date	Client Info		<b>12 Jun 2024</b>	19 Mar 2024	08 Dec 2023
Machine Age	hrs	Client Info	<b>5213</b>	4479	3504
Oil Age	hrs	Client Info	<b>1894</b>	1894	3504
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

## 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 >90	<b>15</b>	6	52
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	2
Nickel	ppm	ASTM D5185m >2	<b>3</b>	0	4
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>▲ 20</b>	2	▲ 31
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>1</b>	<1	7
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	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>2</b>	0	13
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>57</b>	58	75
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	1
Magnesium	ppm	ASTM D5185m 1010	<b>975</b>	1000	959
Calcium	ppm	ASTM D5185m 1070	<b>1072</b>	1125	1077
Phosphorus	ppm	ASTM D5185m 1150	<b>1026</b>	1062	1058
Zinc	ppm	ASTM D5185m 1270	<b>1294</b>	1349	1329
Sulfur	ppm	ASTM D5185m 2060	<b>3282</b>	3606	2633

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	2	17
Sodium	ppm	ASTM D5185m	<b>5</b>	1	▲ 446
Potassium	ppm	ASTM D5185m >20	<b>3</b>	<1	6

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.9</b>	0.5	1.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.5</b>	7.0	12.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.7</b>	18.6	24.5

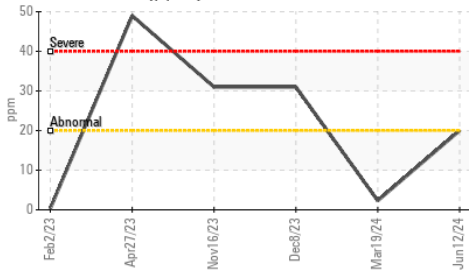
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.6</b>	14.3	20.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.1</b>	8.5	6.9

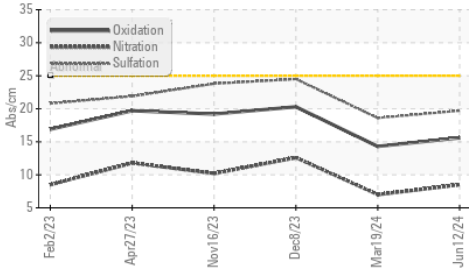


# OIL ANALYSIS REPORT

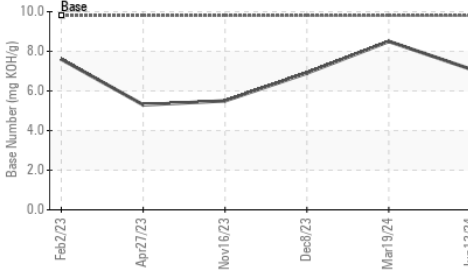
▲ Aluminum (ppm)



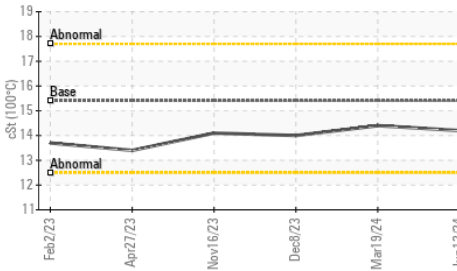
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

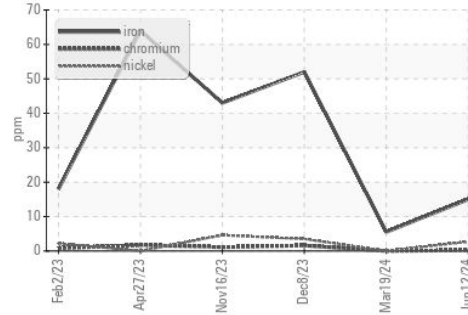


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

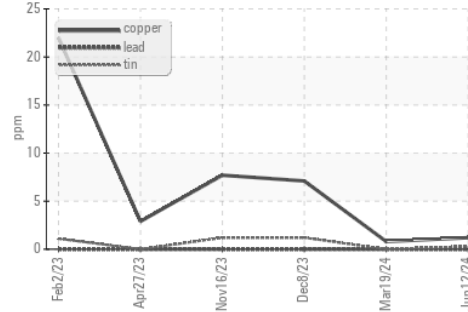
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	14.4	14.0

## GRAPHS

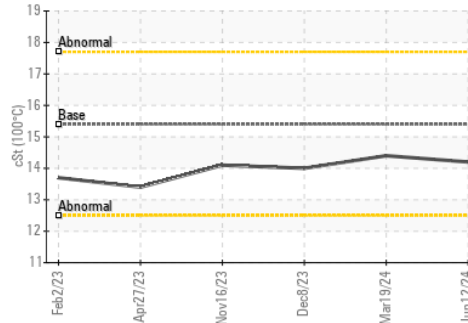
Ferrous Alloys



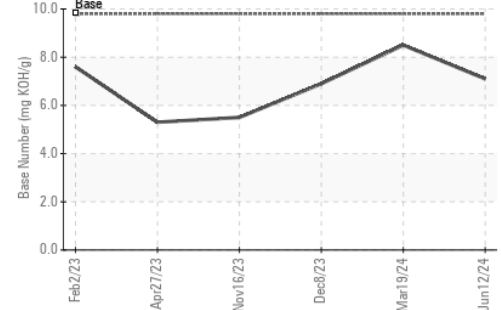
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0122392  
**Lab Number** : 06215351  
**Unique Number** : 11088215  
**Test Package** : FLEET

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
 fwolak@gflenv.com  
 T: (586)825-9514  
 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)