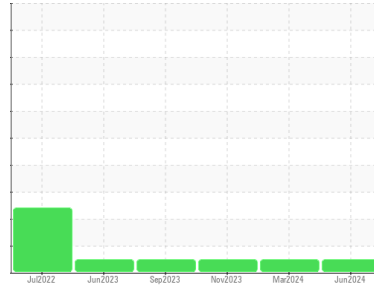




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**EX0200**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>GFL0116039</b>	GFL0097495	GFL0097467
Sample Date	Client Info		<b>11 Jun 2024</b>	07 Mar 2024	27 Nov 2023
Machine Age	hrs	Client Info	<b>111</b>	111	111
Oil Age	hrs	Client Info	<b>111</b>	111	111
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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 >100	<b>24</b>	20	17
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>6</b>	6	6
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	3	3
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>108</b>	117	154
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>9</b>	10	6
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m 1010	<b>691</b>	624	668
Calcium	ppm	ASTM D5185m 1070	<b>1298</b>	1191	1256
Phosphorus	ppm	ASTM D5185m 1150	<b>1014</b>	937	992
Zinc	ppm	ASTM D5185m 1270	<b>1182</b>	1067	1177
Sulfur	ppm	ASTM D5185m 2060	<b>4051</b>	3476	3570

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	7	6
Sodium	ppm	ASTM D5185m	<b>9</b>	6	8
Potassium	ppm	ASTM D5185m >20	<b>14</b>	14	12

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.6</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.8</b>	7.4	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.5</b>	18.4	18.3

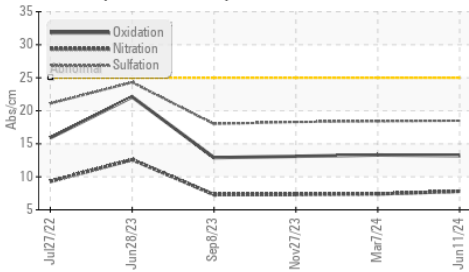
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.2</b>	13.3	13.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.0</b>	8.1	8.4

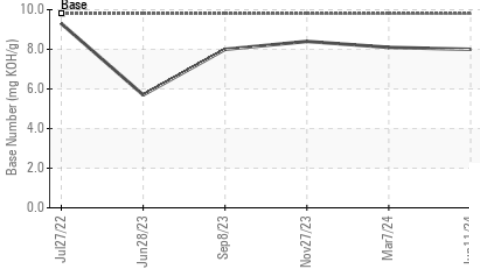


# OIL ANALYSIS REPORT

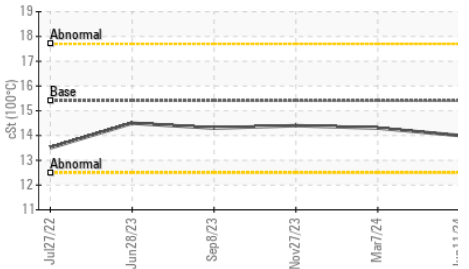
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

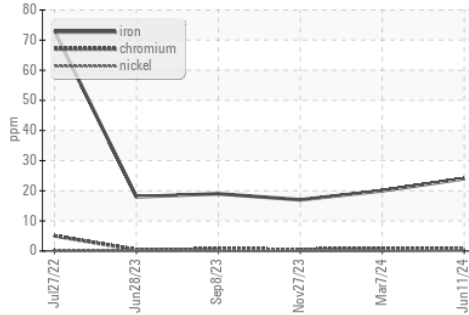


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

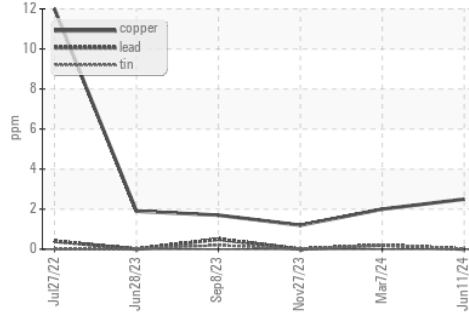
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	14.3

## GRAPHS

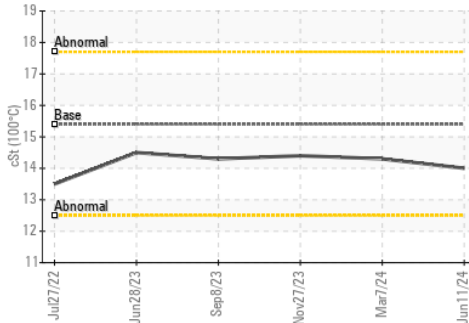
Ferrous Alloys



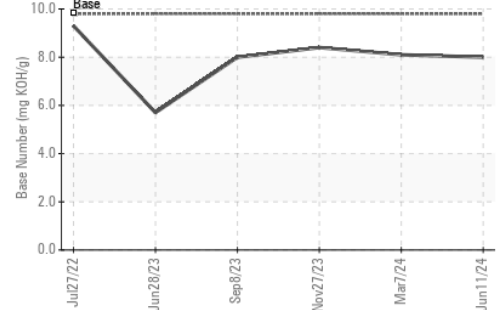
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0116039  
 Lab Number : 06211345  
 Unique Number : 11084209  
 Test Package : FLEET

Received : 17 Jun 2024  
 Tested : 19 Jun 2024  
 Diagnosed : 19 Jun 2024 - Wes Davis

GFL Environmental - 641 - Alpena  
 1241 KING SETTLEMENT RD  
 ALPENA, MI  
 US 49707

Contact: DYLAN TOLAN  
 dylan.tolan@gflenv.com  
 T: (989)854-7203

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)