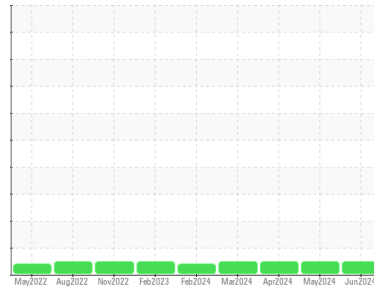




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**812034**  
 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>GFL0117927</b>	GFL0117949	GFL0111944
Sample Date	Client Info			<b>13 Jun 2024</b>	21 May 2024	04 Apr 2024
Machine Age	hrs	Client Info		<b>3787</b>	3657	3509
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	Not Changd	Not Changd
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	>110	<b>16</b>	21	10
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>5</b>	9	7
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>25	<b>6</b>	9	5
Lead	ppm	ASTM D5185m	>45	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>85	<b>2</b>	1	0
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>11</b>	12	13
Barium	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	60	<b>59</b>	71	53
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>885</b>	1172	892
Calcium	ppm	ASTM D5185m	1070	<b>1135</b>	1496	1153
Phosphorus	ppm	ASTM D5185m	1150	<b>825</b>	1494	1097
Zinc	ppm	ASTM D5185m	1270	<b>1140</b>	1717	1276
Sulfur	ppm	ASTM D5185m	2060	<b>2894</b>	4804	3834

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	<b>13</b>	7	5
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	2	1
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	6	3

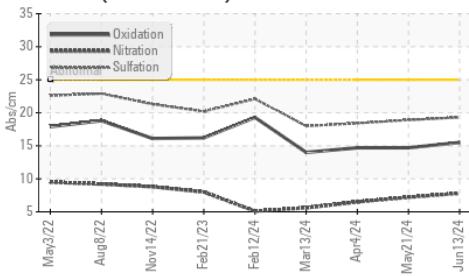
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	7.2	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.3</b>	18.9	18.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	14.7	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.0</b>	8.5	8.8

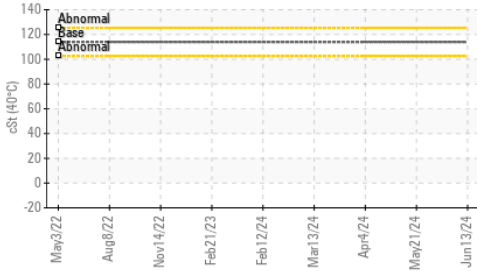


# OIL ANALYSIS REPORT

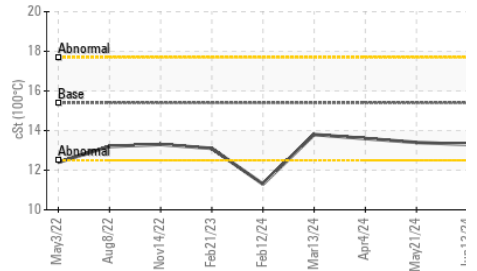
FT-IR (Direct Trend)



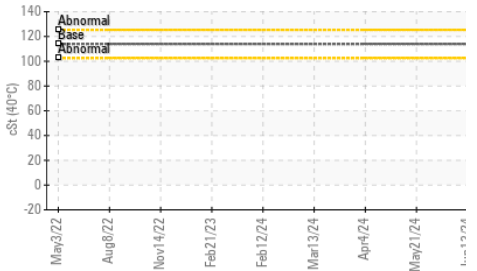
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

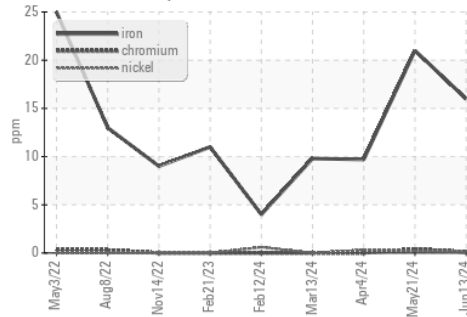


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

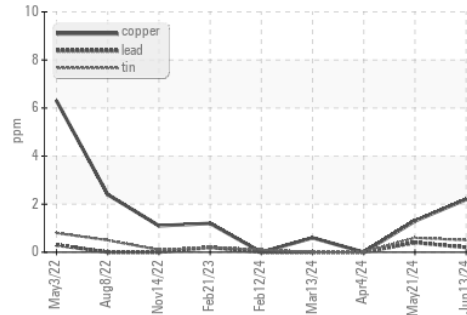
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.4

## GRAPHS

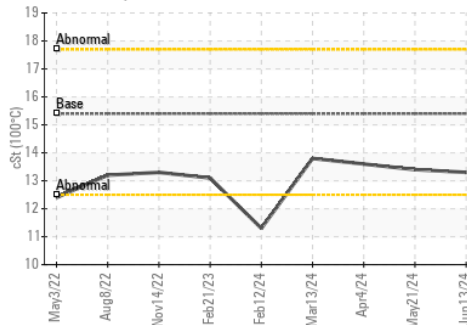
Ferrous Alloys



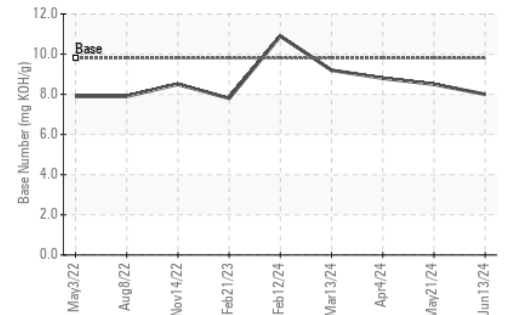
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0117927

Lab Number : 06209854

Unique Number : 11082718

Test Package : FLEET ( Additional Tests: KV40 )

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)

Received : 14 Jun 2024

Tested : 17 Jun 2024

Diagnosed : 17 Jun 2024 - Angela Borella

GFL Environmental - 892 - Pauls Valley Hauling

1910 S CHICKASAW STREET

Pauls Valley, OK

US 73075

Contact: Tony Graham

tgraham2@wcamerica.com

T:

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