



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**414062**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (12 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0118702</b>	GFL0118649	GFL0118721
Sample Date		Client Info		<b>29 May 2024</b>	14 May 2024	19 Apr 2024
Machine Age	hrs	Client Info		<b>1852</b>	1766	10133
Oil Age	hrs	Client Info		<b>1200</b>	150	400
Filter Age	hrs	Client Info		<b>1200</b>	150	400
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>6</b>	13	4
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	3	0
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	4	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	2	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	3	<1
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	7	3
Lead	ppm	ASTM D5185m	>40	<b>0</b>	3	0
Copper	ppm	ASTM D5185m	>330	<b>75</b>	67	51
Tin	ppm	ASTM D5185m	>15	<b>0</b>	3	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	2	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

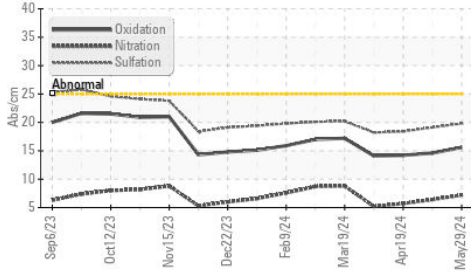
Silicon	ppm	ASTM D5185m	>25	<b>2</b>	8	4
Potassium	ppm	ASTM D5185m	>20	<b>14</b>	16	6
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.3</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	6.4	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	19.1	18.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

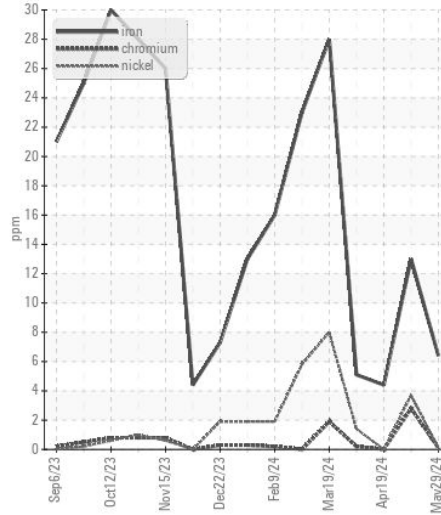
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>13</b>	12	6
Boron	ppm	ASTM D5185m	0	<b>0</b>	2	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	62	62
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	3	<1
Magnesium	ppm	ASTM D5185m	1010	<b>987</b>	952	1030
Calcium	ppm	ASTM D5185m	1070	<b>1122</b>	1096	1121
Phosphorus	ppm	ASTM D5185m	1150	<b>1052</b>	1015	1087
Zinc	ppm	ASTM D5185m	1270	<b>1246</b>	1197	1304
Sulfur	ppm	ASTM D5185m	2060	<b>3189</b>	3153	3572
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	14.6	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.7</b>	8.1	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	13.5	13.8

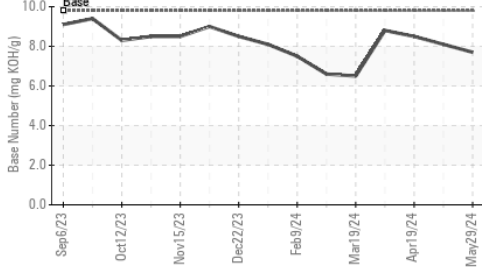
**FT-IR (Direct Trend)**



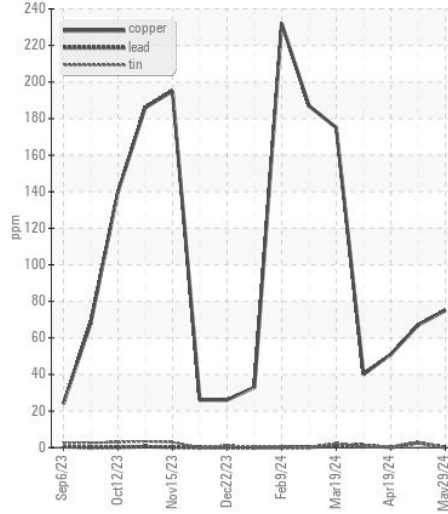
**Ferrous Alloys**



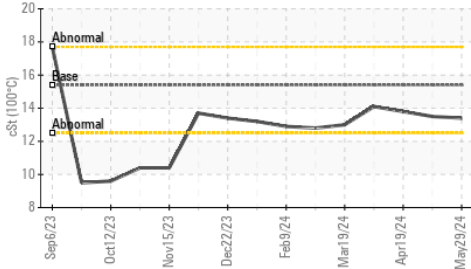
**Base Number**



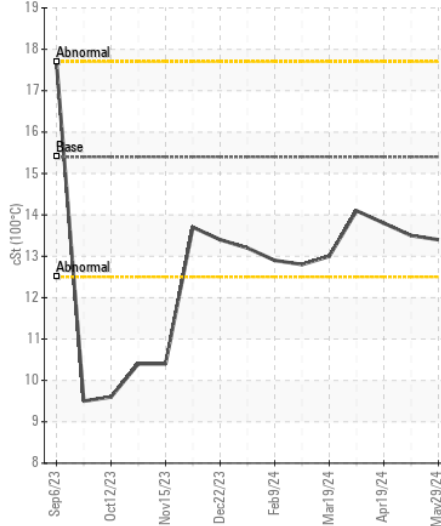
**Non-ferrous Metals**



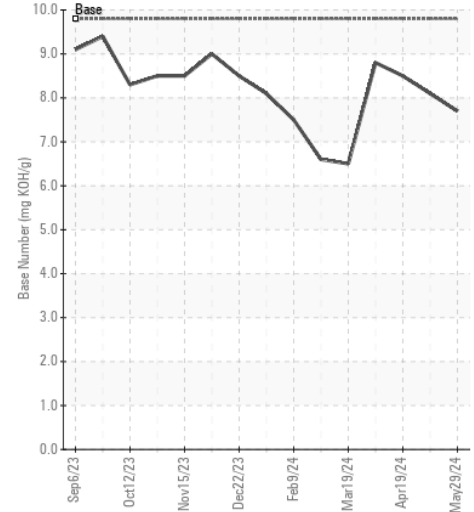
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0118702  
**Lab Number** : 06197310  
**Unique Number** : 11059433  
**Test Package** : FLEET

**Received** : 03 Jun 2024  
**Tested** : 03 Jun 2024  
**Diagnosed** : 03 Jun 2024 - Wes Davis

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: EDWARD CASHMAN  
 ecashman@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: