



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

Machine Id  
**414119**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- QTS)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0117946</b>	GFL0117957	GFL011950
Sample Date		Client Info		<b>22 May 2024</b>	02 May 2024	11 Apr 2024
Machine Age	hrs	Client Info		<b>1393</b>	1274	1152
Oil Age	hrs	Client Info		<b>373</b>	254	0
Filter Age	hrs	Client Info		<b>373</b>	254	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	<b>17</b>	10	15
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>16</b>	10	26
Lead	ppm	ASTM D5185m	>45	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>85	<b>1</b>	0	8
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
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.

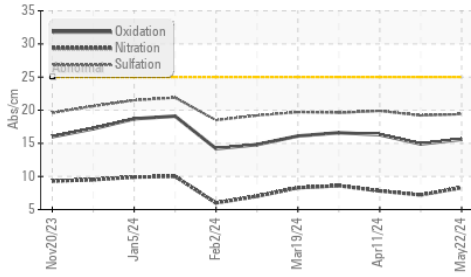
Silicon	ppm	ASTM D5185m	>30	<b>7</b>	4	15
Potassium	ppm	ASTM D5185m	>20	<b>38</b>	22	65
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	7.2	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.4</b>	19.2	19.9
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**

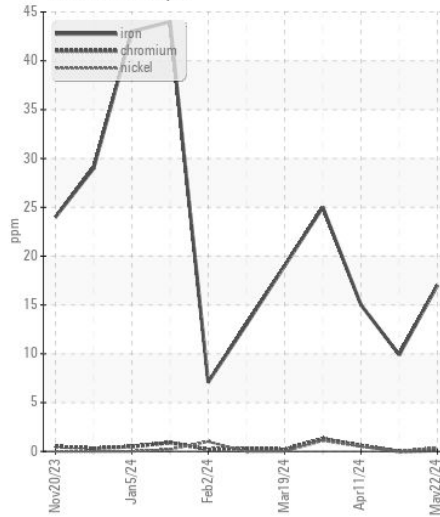
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	2	4
Boron	ppm	ASTM D5185m	0	<b>11</b>	4	26
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	60	42
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	2
Magnesium	ppm	ASTM D5185m	1010	<b>1014</b>	1024	960
Calcium	ppm	ASTM D5185m	1070	<b>1112</b>	1198	1325
Phosphorus	ppm	ASTM D5185m	1150	<b>1050</b>	1127	1000
Zinc	ppm	ASTM D5185m	1270	<b>1326</b>	1385	1149
Sulfur	ppm	ASTM D5185m	2060	<b>3583</b>	3944	3441
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	14.9	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.1</b>	8.6	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.3</b>	13.5	12.6

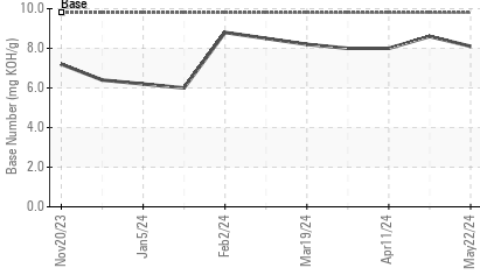
**FT-IR (Direct Trend)**



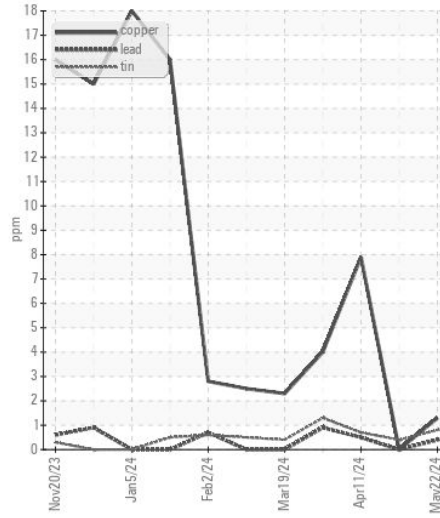
**Ferrous Alloys**



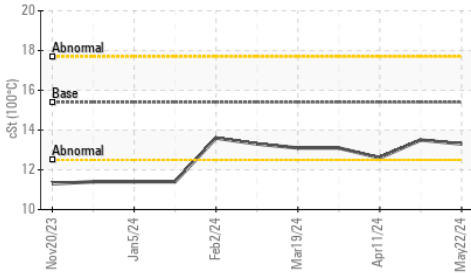
**Base Number**



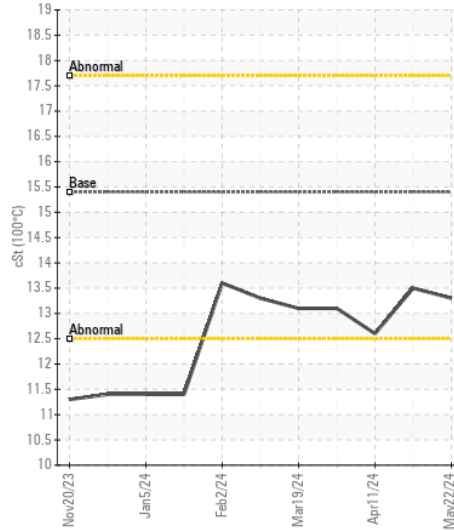
**Non-ferrous Metals**



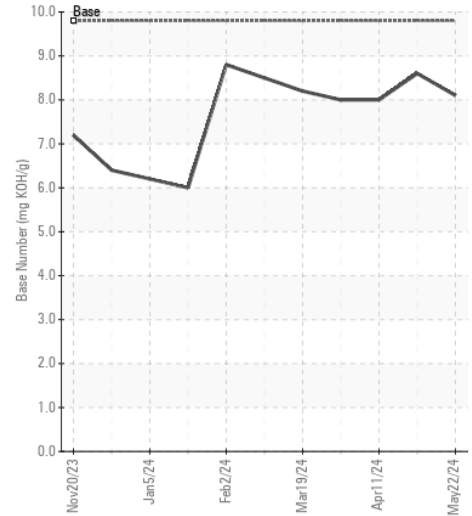
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0117946  
**Lab Number** : 06190135  
**Unique Number** : 11046887  
**Test Package** : FLEET

**Received** : 23 May 2024  
**Tested** : 28 May 2024  
**Diagnosed** : 28 May 2024 - Wes Davis

**GFL Environmental - 892 - Pauls Valley Hauling**  
 1910 S CHICKASAW STREET  
 Pauls Valley, OK  
 US 73075  
 Contact: Tony Graham  
 tgraham2@wcamerica.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: