



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

Machine Id  
**422028-402313**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0120190</b>	GFL0114053	GFL0109768
Sample Date		Client Info		<b>22 May 2024</b>	05 Apr 2024	30 Jan 2024
Machine Age	hrs	Client Info		<b>26504</b>	26375	26237
Oil Age	hrs	Client Info		<b>0</b>	0	600
Filter Age	hrs	Client Info		<b>0</b>	0	600
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>28</b>	24	52
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	3
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	4	5
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	4	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

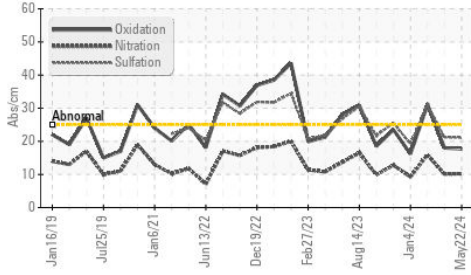
Silicon	ppm	ASTM D5185m	>25	<b>11</b>	8	13
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.9	2.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.2</b>	10.1	15.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	21.2	30.9
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**

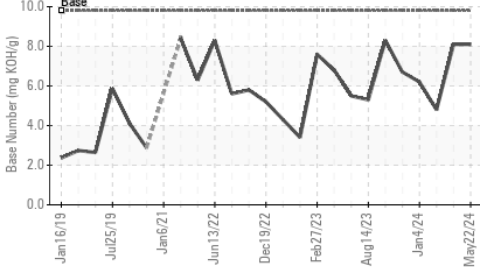
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	6	8
Boron	ppm	ASTM D5185m	0	<b>6</b>	3	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	63	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>941</b>	979	876
Calcium	ppm	ASTM D5185m	1070	<b>1100</b>	1207	953
Phosphorus	ppm	ASTM D5185m	1150	<b>991</b>	1080	928
Zinc	ppm	ASTM D5185m	1270	<b>1263</b>	1305	1115
Sulfur	ppm	ASTM D5185m	2060	<b>3385</b>	3418	2487
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.7</b>	18.0	31.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.1</b>	8.1	4.8
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.5</b>	13.3	12.8

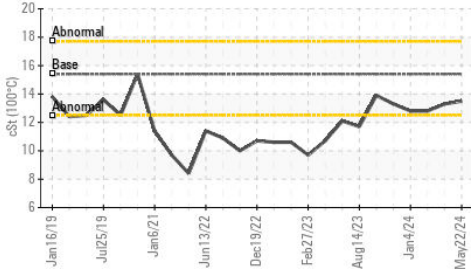
**FT-IR (Direct Trend)**



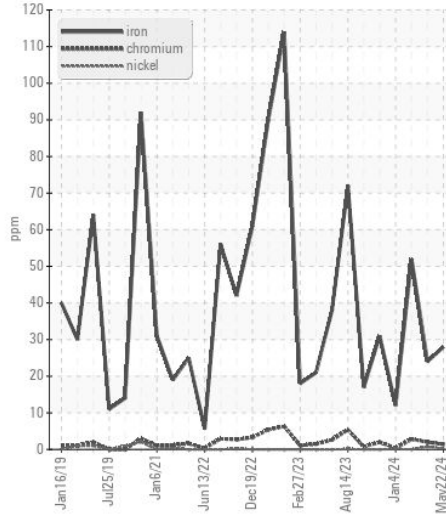
**Base Number**



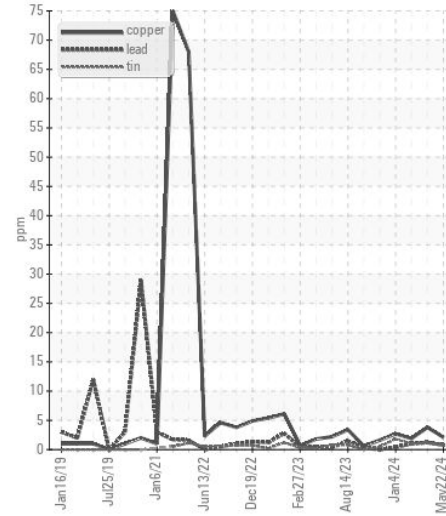
**Viscosity @ 100°C**



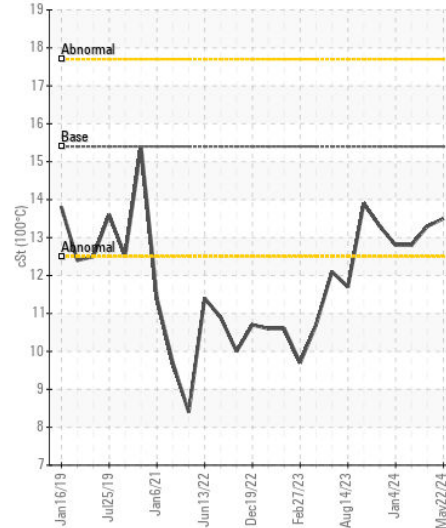
**Ferrous Alloys**



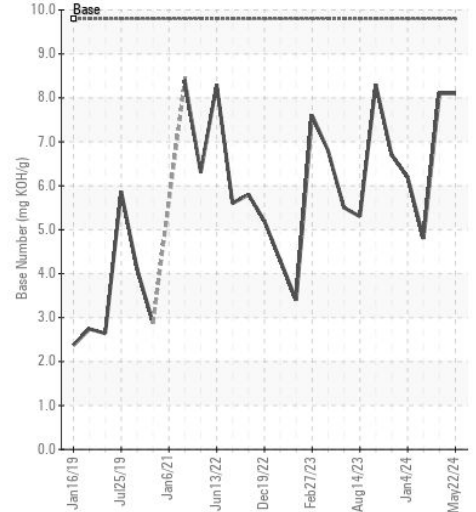
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0120190  
**Lab Number** : 06190236  
**Unique Number** : 11046988  
**Test Package** : FLEET

**Received** : 24 May 2024  
**Tested** : 28 May 2024  
**Diagnosed** : 28 May 2024 - Wes Davis

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Loyce Stewart  
 loyce.stewart@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: