



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



Machine Id  
**631M**  
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>GFL0117671</b>	GFL0108881	GFL0101518
Sample Date		Client Info		<b>11 Apr 2024</b>	19 Mar 2024	01 Dec 2023
Machine Age	hrs	Client Info		<b>13852</b>	13804	13186
Oil Age	hrs	Client Info		<b>13186</b>	13804	13029
Filter Age	hrs	Client Info		<b>13186</b>	0	13029
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>17</b>	5	16
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>12</b>	2	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>4</b>	<1	5
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	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.

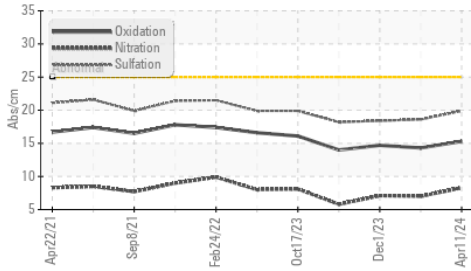
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.5</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	7.0	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.9</b>	18.6	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**

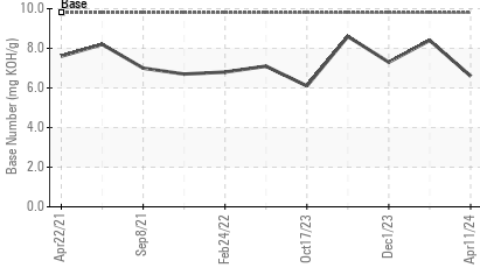
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	1	2
Boron	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	57	56
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	1010	<b>956</b>	972	953
Calcium	ppm	ASTM D5185m	1070	<b>1165</b>	1071	1130
Phosphorus	ppm	ASTM D5185m	1150	<b>1072</b>	1034	831
Zinc	ppm	ASTM D5185m	1270	<b>1247</b>	1237	1217
Sulfur	ppm	ASTM D5185m	2060	<b>3200</b>	3442	2784
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.3</b>	14.3	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.6</b>	8.4	7.3
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	14.3	14.0

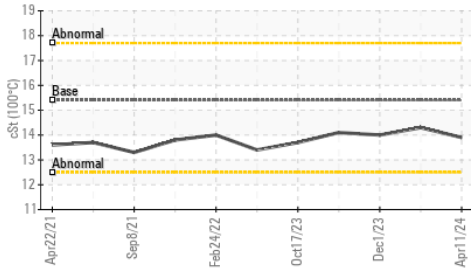
**FT-IR (Direct Trend)**



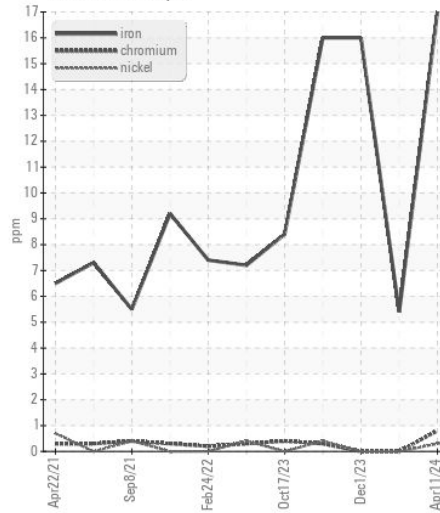
**Base Number**



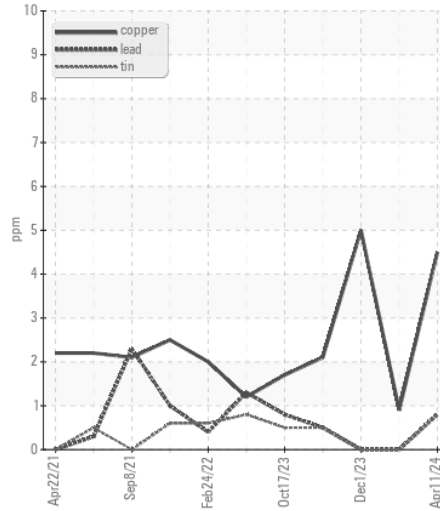
**Viscosity @ 100°C**



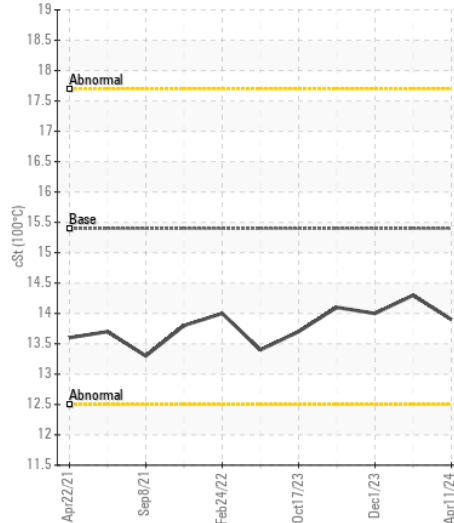
**Ferrous Alloys**



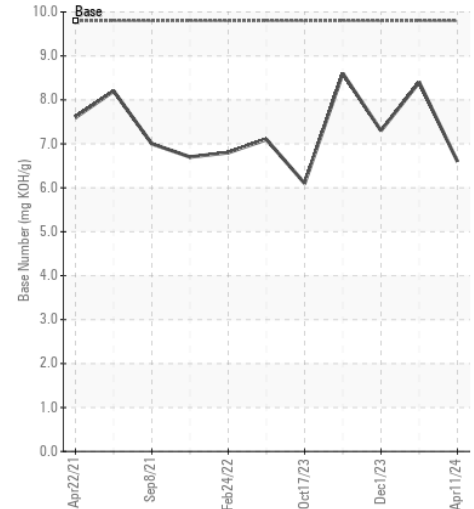
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : GFL0117671

**Lab Number** : 06148400

**Unique Number** : 10978478

**Test Package** : FLEET

**Received** : 15 Apr 2024

**Tested** : 16 Apr 2024

**Diagnosed** : 17 Apr 2024 - Sean Felton

**GFL Environmental - 415 - Michigan East**

6200 Elmridge

Sterling Heights, MI

US 48313

Contact: Frank Wolak

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F:

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)