



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



Machine Id  
**382M**  
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>GFL0117566</b>	GFL0108828	GFL0101544
Sample Date		Client Info		<b>07 May 2024</b>	29 Jan 2024	17 Nov 2023
Machine Age	hrs	Client Info		<b>17593</b>	16748	15958
Oil Age	hrs	Client Info		<b>16748</b>	600	11918
Filter Age	hrs	Client Info		<b>0</b>	600	0
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>7</b>	10	6
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185m	>330	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
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.

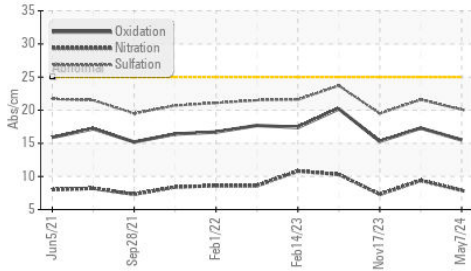
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.7</b>	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	9.4	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	21.6	19.5
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**

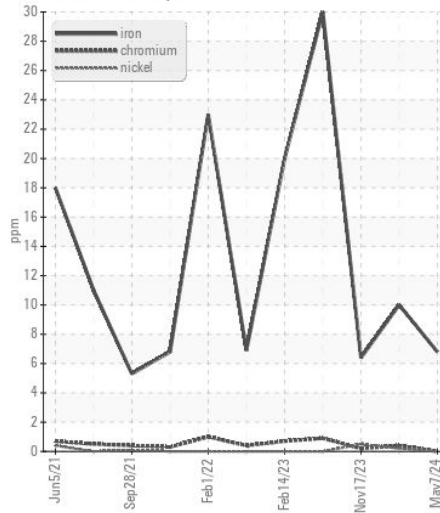
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	3	<1
Boron	ppm	ASTM D5185m	0	<b>1</b>	2	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	<1	9
Molybdenum	ppm	ASTM D5185m	60	<b>59</b>	58	62
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>931</b>	926	893
Calcium	ppm	ASTM D5185m	1070	<b>1061</b>	1011	1106
Phosphorus	ppm	ASTM D5185m	1150	<b>1024</b>	941	974
Zinc	ppm	ASTM D5185m	1270	<b>1223</b>	1219	1190
Sulfur	ppm	ASTM D5185m	2060	<b>3048</b>	2363	2881
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	17.3	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.5</b>	6.0	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.1</b>	14.0	13.7

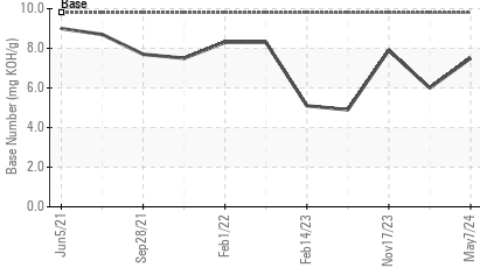
**FT-IR (Direct Trend)**



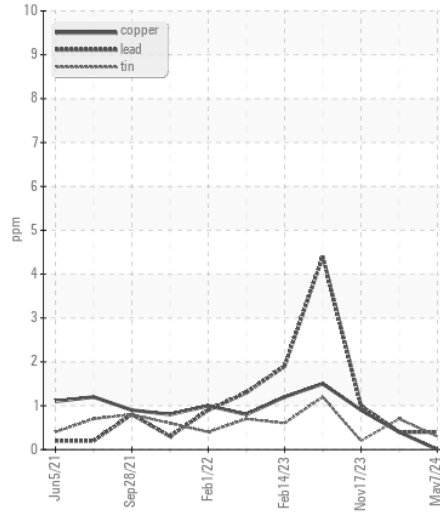
**Ferrous Alloys**



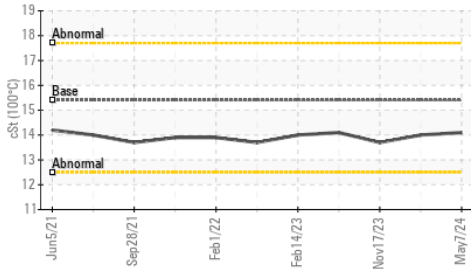
**Base Number**



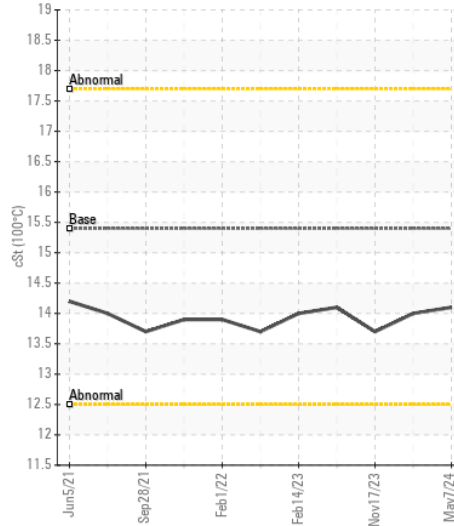
**Non-ferrous Metals**



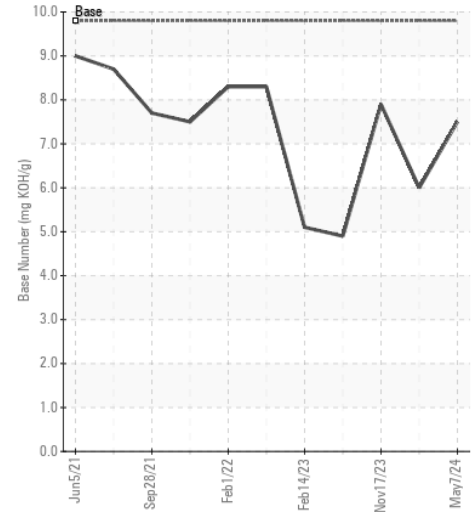
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0117566  
**Lab Number** : 06175193  
**Unique Number** : 11021246  
**Test Package** : FLEET

**Received** : 10 May 2024  
**Tested** : 11 May 2024  
**Diagnosed** : 11 May 2024 - Wes Davis

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
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 T: (586)825-9514  
 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)