



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



Machine Id  
**727152**  
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>GFL011197</b>	GFL0111244	GFL0087960
Sample Date		Client Info		<b>19 Jun 2024</b>	18 Mar 2024	30 Oct 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>600</b>	600	600
Filter Age	hrs	Client Info		<b>600</b>	600	600
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>45</b>	6	▲ 86
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	<1	▲ 9
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	2
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	2	▲ 13
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>1</b>	0	2
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	<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.

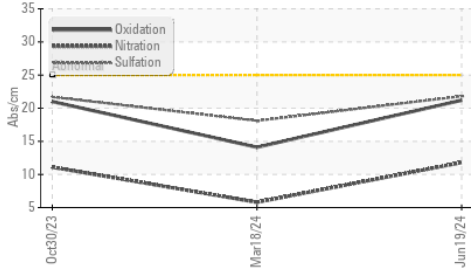
Silicon	ppm	ASTM D5185m	>20	<b>11</b>	3	17
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	23
Fuel		WC Method	>5	<b>&lt;1.0</b>	1.6	▲ 10.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.2	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.8</b>	5.8	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.8</b>	18.1	21.7
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**

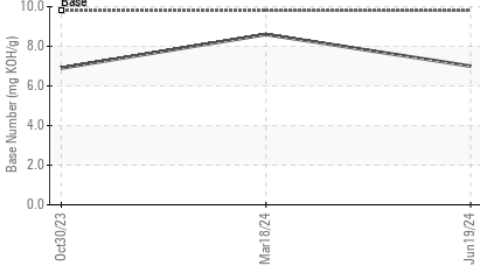
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	2	7
Boron	ppm	ASTM D5185m	0	<b>2</b>	3	6
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>53</b>	51	51
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>957</b>	919	882
Calcium	ppm	ASTM D5185m	1070	<b>1091</b>	975	1005
Phosphorus	ppm	ASTM D5185m	1150	<b>1007</b>	973	944
Zinc	ppm	ASTM D5185m	1270	<b>1270</b>	1197	1154
Sulfur	ppm	ASTM D5185m	2060	<b>3455</b>	3410	2745
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.2</b>	14.1	21.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.0</b>	8.6	6.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.7</b>	14.11	▲ 12.3

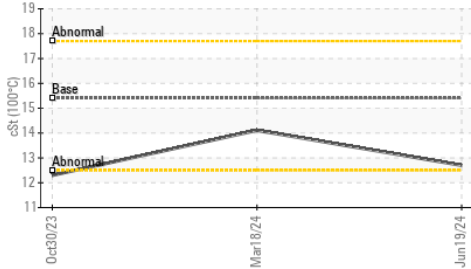
**FT-IR (Direct Trend)**



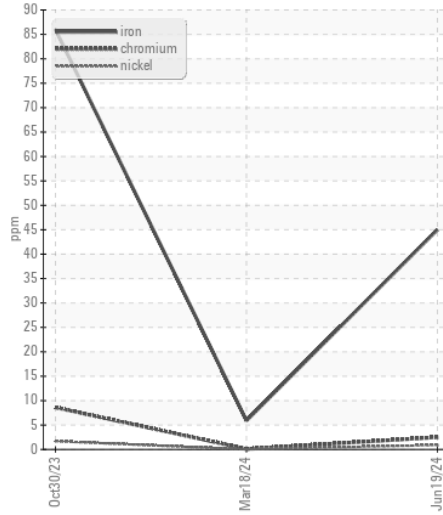
**Base Number**



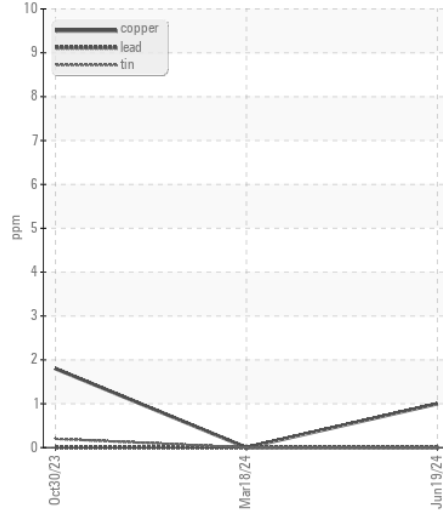
**Viscosity @ 100°C**



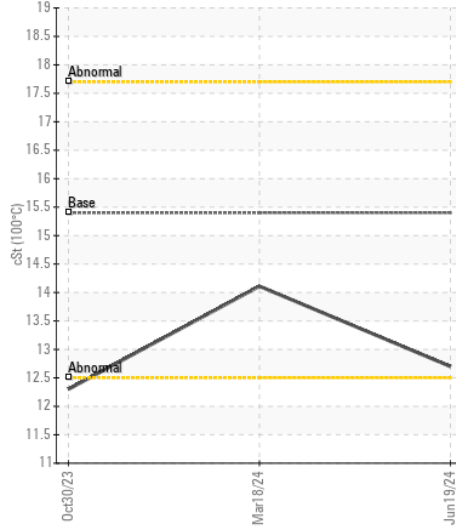
**Ferrous Alloys**



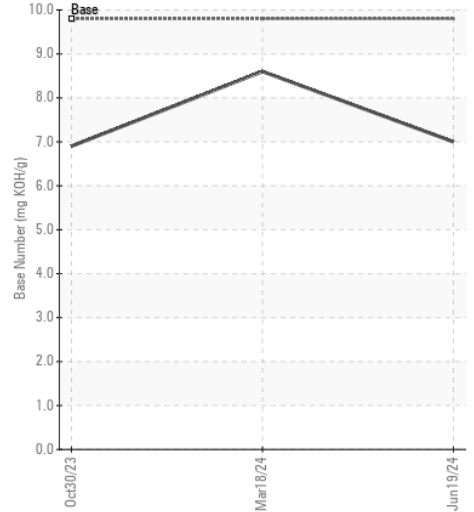
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0111197  
**Lab Number** : 06224303  
**Unique Number** : 11102500  
**Test Package** : FLEET

**Received** : 01 Jul 2024  
**Tested** : 02 Jul 2024  
**Diagnosed** : 02 Jul 2024 - Jonathan Hester

**GFL Environmental - 960B - Pittsfield HC**  
 1335 W. Washington  
 Pittsfield, IL  
 US 62363

Contact: David Bradshaw  
 david.bradshaw@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: