



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



Machine Id  
**422033-402481**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0114635</b>	GFL0092585	GFL0092578
Sample Date		Client Info		<b>23 Apr 2024</b>	03 Jan 2024	13 Sep 2023
Machine Age	hrs	Client Info		<b>23287</b>	22948	22358
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>	Oil Added	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>9</b>	4	2
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>0</b>	<1	0
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	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.

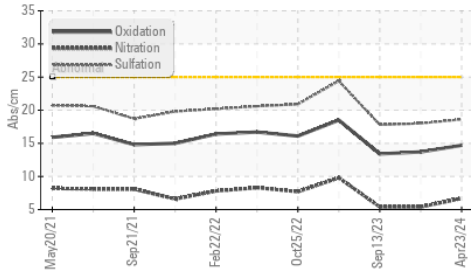
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	3	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.5
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.4</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	5.4	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.6</b>	18.0	17.8
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**

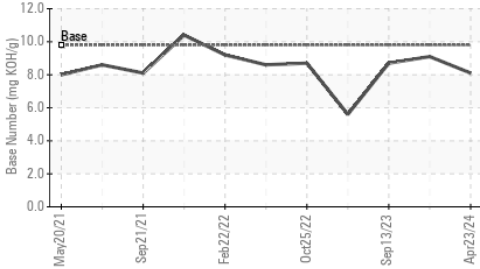
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	3	2
Boron	ppm	ASTM D5185m	0	<b>4</b>	5	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	58	58
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>932</b>	894	935
Calcium	ppm	ASTM D5185m	1070	<b>1142</b>	1065	1176
Phosphorus	ppm	ASTM D5185m	1150	<b>1093</b>	1023	1030
Zinc	ppm	ASTM D5185m	1270	<b>1268</b>	1236	1275
Sulfur	ppm	ASTM D5185m	2060	<b>3435</b>	3084	3710
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	13.7	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.1</b>	9.1	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.5</b>	14.1	9.52

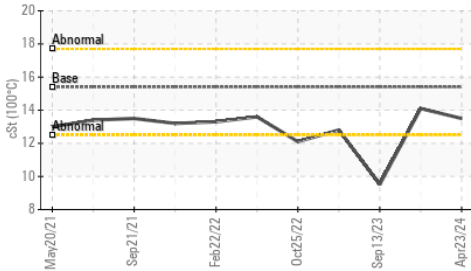
**FT-IR (Direct Trend)**



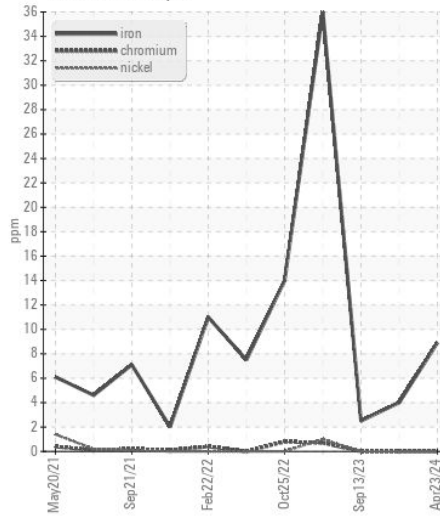
**Base Number**



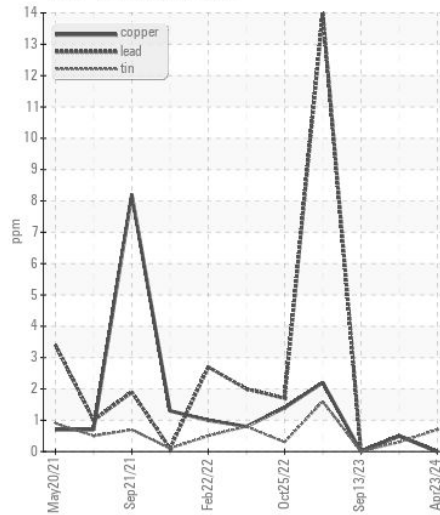
**Viscosity @ 100°C**



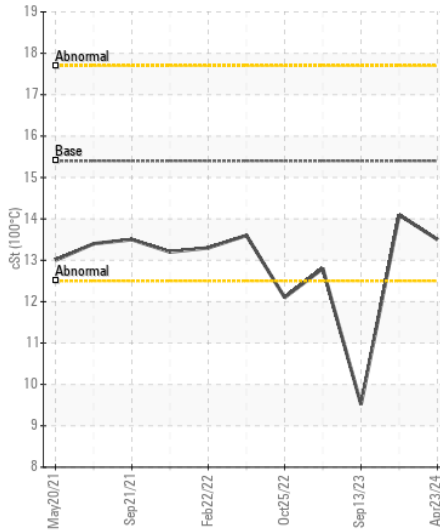
**Ferrous Alloys**



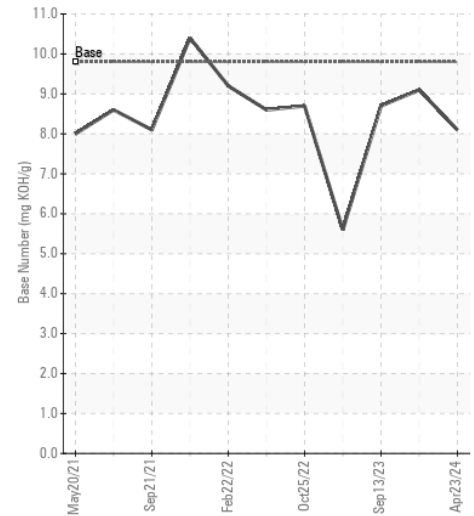
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0114635  
**Lab Number** : 06160164  
**Unique Number** : 10995587  
**Test Package** : FLEET

**Received** : 25 Apr 2024  
**Tested** : 26 Apr 2024  
**Diagnosed** : 26 Apr 2024 - Wes Davis

**GFL Environmental - 885 - Orlando**  
 1263 W Landstreet Rd  
 Orlando, FL  
 US 32824  
 Contact: DAWN WALLACE

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: