



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



Area  
**(QB18889)**  
Machine Id  
**913022**  
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>GFL0116137</b>	GFL0104557	GFL0092615
Sample Date		Client Info		<b>22 Apr 2024</b>	05 Feb 2024	06 Nov 2023
Machine Age	hrs	Client Info		<b>3603</b>	3032	2423
Oil Age	hrs	Client Info		<b>571</b>	610	605
Filter Age	hrs	Client Info		<b>571</b>	610	605
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>14</b>	14	18
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>3</b>	3	2
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	2	1
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>6</b>	14	30
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

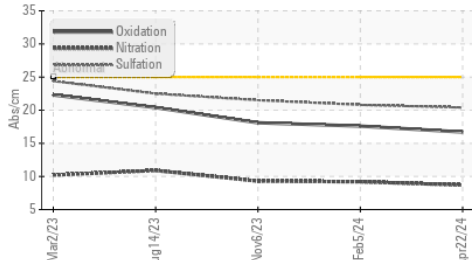
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.8</b>	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	9.2	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.4</b>	20.8	21.5
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**

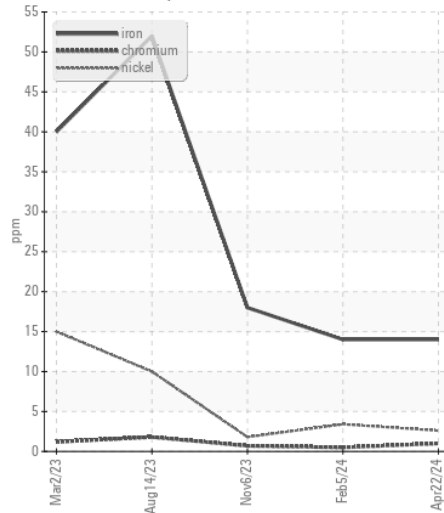
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	4	4
Boron	ppm	ASTM D5185m	0	<b>&lt;1</b>	3	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>61</b>	61	60
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>1025</b>	997	951
Calcium	ppm	ASTM D5185m	1070	<b>1096</b>	1071	1059
Phosphorus	ppm	ASTM D5185m	1150	<b>1175</b>	1072	947
Zinc	ppm	ASTM D5185m	1270	<b>1313</b>	1335	1273
Sulfur	ppm	ASTM D5185m	2060	<b>3491</b>	2798	2398
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.7</b>	17.6	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.3</b>	6.9	7.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	13.9	14.0

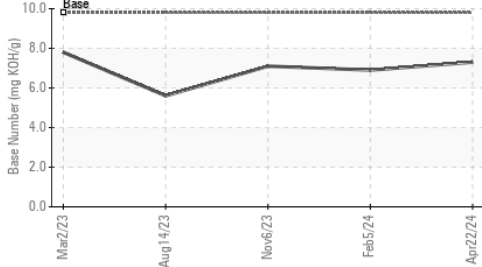
**FT-IR (Direct Trend)**



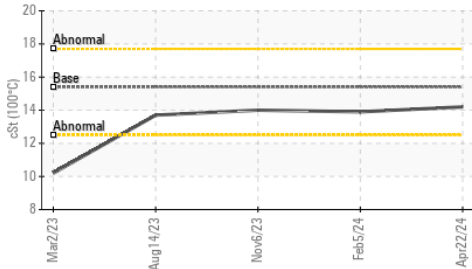
**Ferrous Alloys**



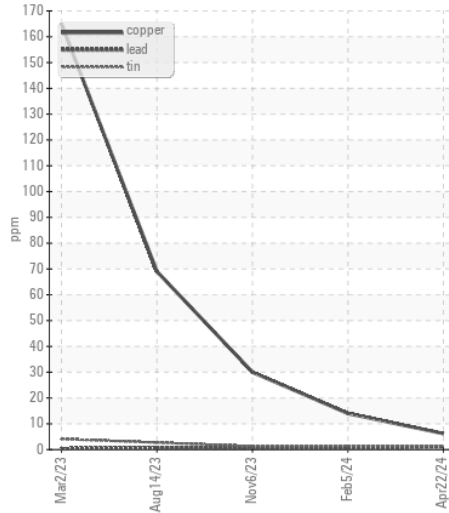
**Base Number**



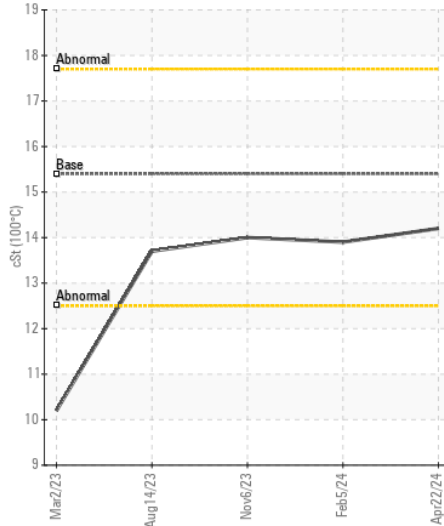
**Viscosity @ 100°C**



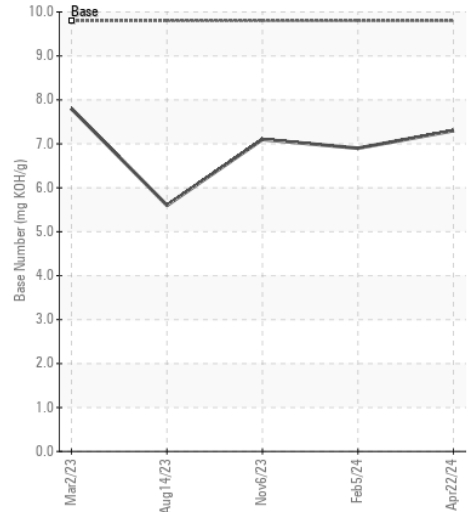
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116137  
**Lab Number** : 06161074  
**Unique Number** : 10996497  
**Test Package** : FLEET

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

**GFL Environmental - 947 - WB Horicon HC**  
 N7296 County Rd V  
 Horicon, WI  
 US 53032  
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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)