



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



Area  
**(ML7045)**  
Machine Id  
**413029**  
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>GFL0104062</b>	GFL0104083	GFL0068104
Sample Date		Client Info		<b>11 Jun 2024</b>	26 Feb 2024	02 Nov 2023
Machine Age	hrs	Client Info		<b>2950</b>	2614	1934
Oil Age	hrs	Client Info		<b>600</b>	600	600
Filter Age	hrs	Client Info		<b>0</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	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>5</b>	14	5
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	1	0
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	5	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	4	3
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	7	39
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	2	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

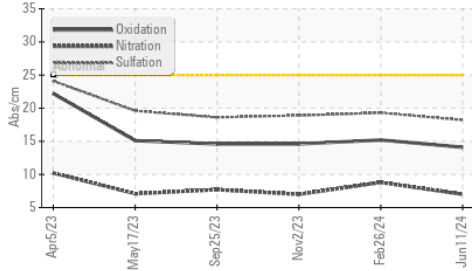
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	5
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	8	7
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.2</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	8.8	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.2</b>	19.3	18.9
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**

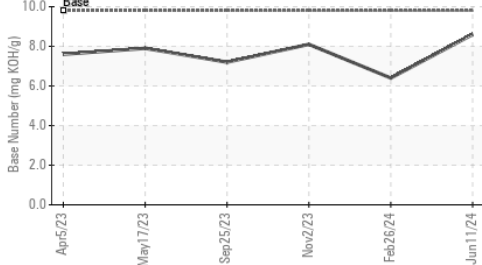
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	2	3
Boron	ppm	ASTM D5185m	0	<b>8</b>	4	5
Barium	ppm	ASTM D5185m	0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	60	<b>56</b>	62	61
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>946</b>	832	965
Calcium	ppm	ASTM D5185m	1070	<b>1067</b>	941	1088
Phosphorus	ppm	ASTM D5185m	1150	<b>1045</b>	870	1021
Zinc	ppm	ASTM D5185m	1270	<b>1237</b>	1096	1236
Sulfur	ppm	ASTM D5185m	2060	<b>3574</b>	2762	2981
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.1</b>	15.2	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.6</b>	6.4	8.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	13.2	13.2

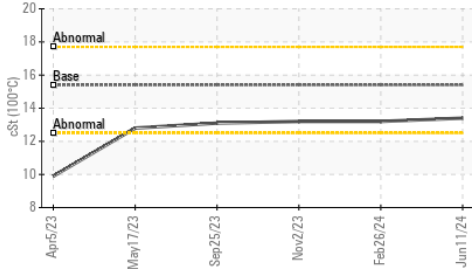
**FT-IR (Direct Trend)**



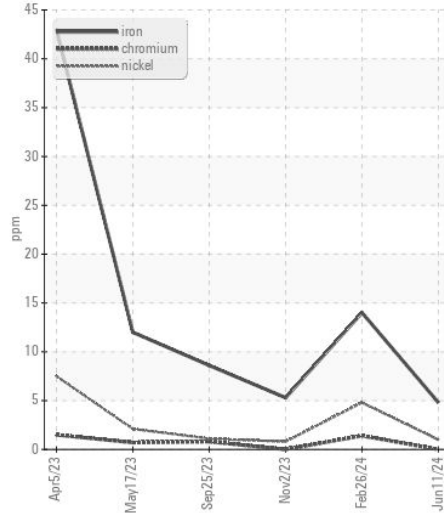
**Base Number**



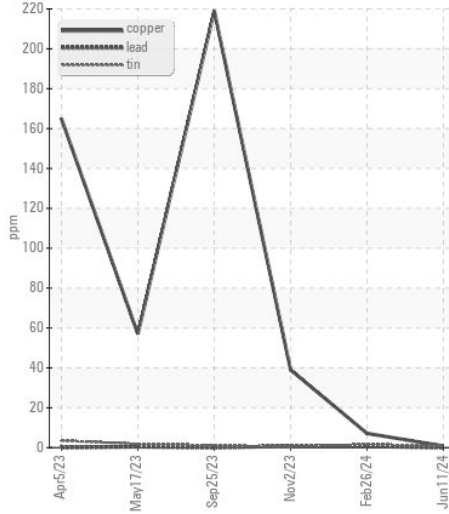
**Viscosity @ 100°C**



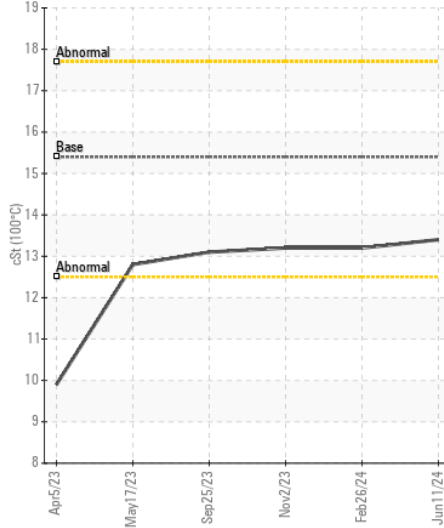
**Ferrous Alloys**



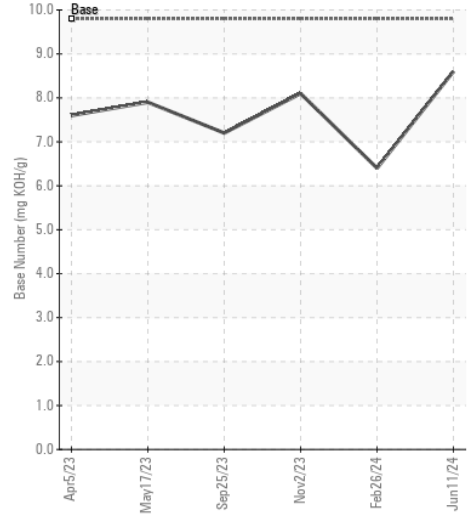
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0104062  
**Lab Number** : 06214425  
**Unique Number** : 11087289  
**Test Package** : FLEET

**Received** : 19 Jun 2024  
**Tested** : 20 Jun 2024  
**Diagnosed** : 20 Jun 2024 - Wes Davis

**GFL Environmental - 028 - Weldon**  
 2211 US Highway 301  
 Halifax, NC  
 US 27839

Contact: TRAVIS PORCH  
 tporch@gflenv.com

T: (252)532-3344

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)

F: