



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

Machine Id  
**220028**  
 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>GFL0095337</b>	GFL0095366	GFL0076928
Sample Date		Client Info		<b>29 Jun 2024</b>	12 Jan 2024	24 Jul 2023
Machine Age	hrs	Client Info		<b>6556</b>	6161	5756
Oil Age	hrs	Client Info		<b>395</b>	412	238
Filter Age	hrs	Client Info		<b>395</b>	412	238
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	>110	<b>39</b>	32	15
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>11</b>	7	5
Lead	ppm	ASTM D5185m	>45	<b>2</b>	1	<1
Copper	ppm	ASTM D5185m	>85	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<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.

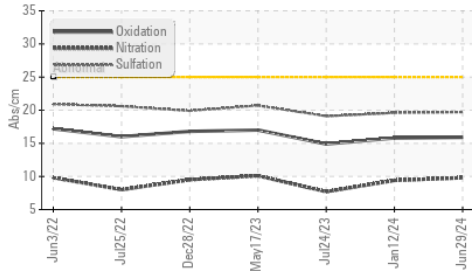
Silicon	ppm	ASTM D5185m	>30	<b>7</b>	9	5
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	8	4
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.8</b>	9.4	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.7</b>	19.6	19.1
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**

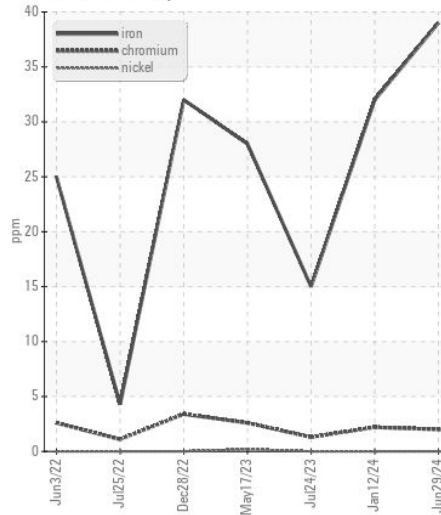
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	4	3
Boron	ppm	ASTM D5185m	0	<b>8</b>	11	8
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	59	60
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>1024</b>	923	905
Calcium	ppm	ASTM D5185m	1070	<b>1220</b>	1147	1117
Phosphorus	ppm	ASTM D5185m	1150	<b>1110</b>	1014	993
Zinc	ppm	ASTM D5185m	1270	<b>1325</b>	1237	1208
Sulfur	ppm	ASTM D5185m	2060	<b>3638</b>	2987	3239
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	15.8	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.5</b>	7.2	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	13.1	13.7

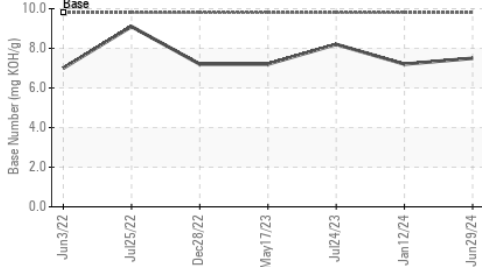
**FT-IR (Direct Trend)**



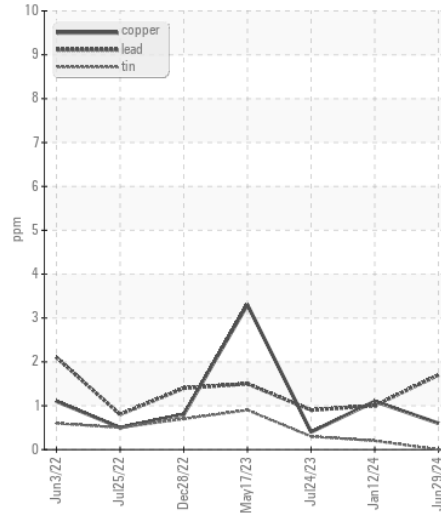
**Ferrous Alloys**



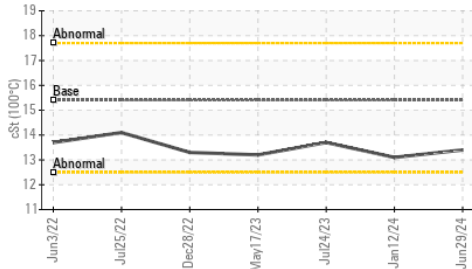
**Base Number**



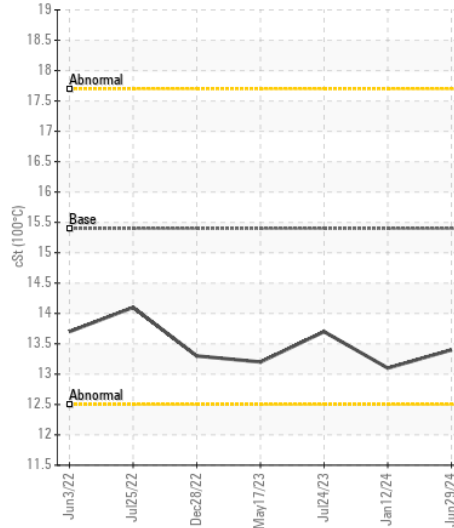
**Non-ferrous Metals**



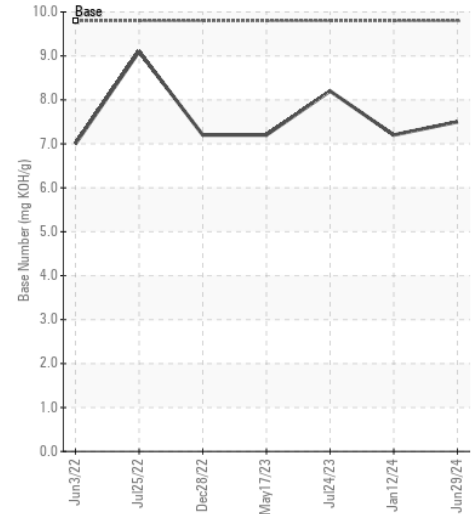
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0095337  
**Lab Number** : 06231114  
**Unique Number** : 11114607  
**Test Package** : FLEET

**Received** : 08 Jul 2024  
**Tested** : 10 Jul 2024  
**Diagnosed** : 10 Jul 2024 - Wes Davis

**GFL Environmental - 930 - Mosinee HC**  
 1372 State Highway 34  
 MOSINEE, WI  
 US 54455  
 Contact: Kirk Koss

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: (715)571-2784

F: