



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

Machine Id  
**427182-SW4722**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: Engine )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0112060</b>	GFL0112070	GFL0112117
Sample Date		Client Info		<b>06 May 2024</b>	08 Mar 2024	28 Feb 2024
Machine Age	mls	Client Info		<b>357480</b>	329878	348358
Oil Age	mls	Client Info		<b>357480</b>	329878	348358
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>6</b>	13	3
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	4	2
Copper	ppm	ASTM D5185m	>330	<b>3</b>	2	<1
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.

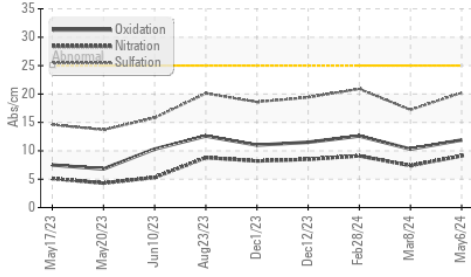
Silicon	ppm	ASTM D5185m	>25	<b>9</b>	▲ 28	9
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	7.4	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.2</b>	17.2	20.9
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**

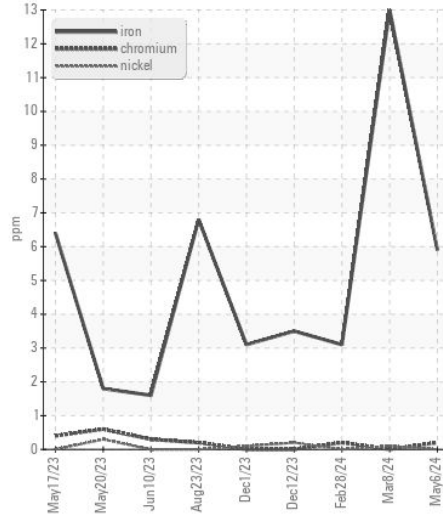
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>3</b>	4	4
Boron	ppm	ASTM D5185m	0	<b>0</b>	1	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>53</b>	56	63
Manganese	ppm	ASTM D5185m	0	<b>1</b>	2	0
Magnesium	ppm	ASTM D5185m	1010	<b>7</b>	30	22
Calcium	ppm	ASTM D5185m	1070	<b>2610</b>	2706	2646
Phosphorus	ppm	ASTM D5185m	1150	<b>1149</b>	1150	1088
Zinc	ppm	ASTM D5185m	1270	<b>1355</b>	1369	1384
Sulfur	ppm	ASTM D5185m	2060	<b>3677</b>	3840	3227
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.9</b>	10.3	12.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.1</b>	8.3	6.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	12.5	13.2

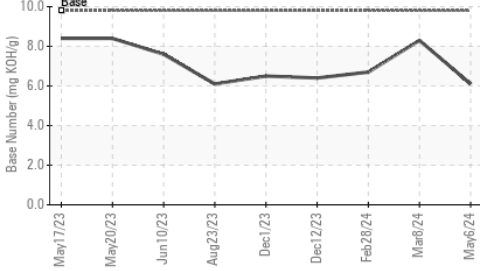
**FT-IR (Direct Trend)**



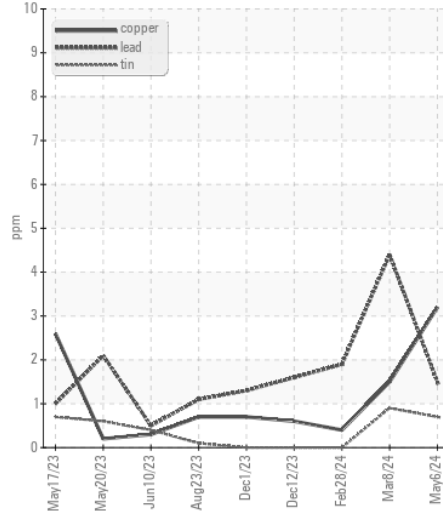
**Ferrous Alloys**



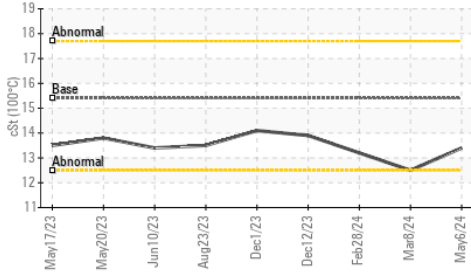
**Base Number**



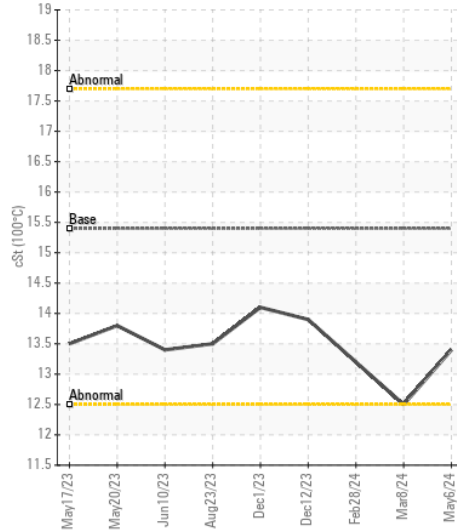
**Non-ferrous Metals**



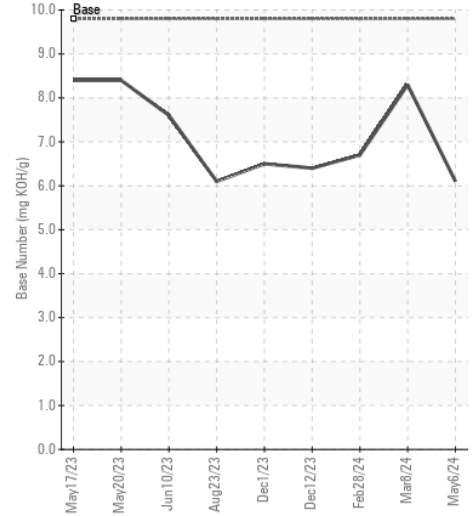
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0112060 **Received** : 13 May 2024  
**Lab Number** : 06176724 **Tested** : 14 May 2024  
**Unique Number** : 11022777 **Diagnosed** : 14 May 2024 - Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 983 - Sugar Land Hauling**  
 16011 West Belfort Street  
 Sugar Land, TX  
 US 77498  
 Contact: Adrian Martinez  
 adrianmartinez@gflenv.com  
 T:  
 F:

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)