



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

Machine Id  
**426145-4623**  
 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>GFL0125247</b>	GFL0103969	GFL0100484
Sample Date		Client Info		<b>20 Jun 2024</b>	07 Feb 2024	16 Nov 2023
Machine Age	hrs	Client Info		<b>18970</b>	18633	18320
Oil Age	hrs	Client Info		<b>0</b>	0	18320
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>8</b>	67	17
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	8	6
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>76</b>	111	32
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
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.

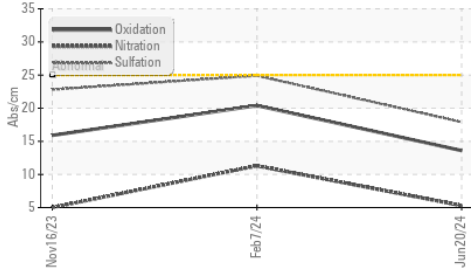
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	▲ 25	19
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	22	18
Fuel		WC Method	>5	<b>&lt;1.0</b>	▲ 3.8	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.8	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.3</b>	11.3	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	24.9	22.8
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**

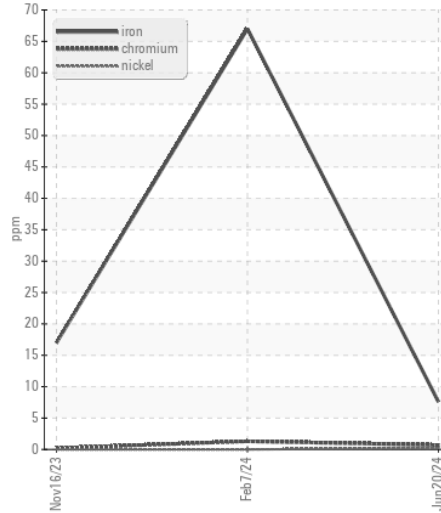
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	13	11
Boron	ppm	ASTM D5185m	0	<b>6</b>	234	397
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	19	2
Molybdenum	ppm	ASTM D5185m	60	<b>59</b>	127	128
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	9	5
Magnesium	ppm	ASTM D5185m	1010	<b>951</b>	660	723
Calcium	ppm	ASTM D5185m	1070	<b>1080</b>	1550	1555
Phosphorus	ppm	ASTM D5185m	1150	<b>1132</b>	677	738
Zinc	ppm	ASTM D5185m	1270	<b>1235</b>	850	901
Sulfur	ppm	ASTM D5185m	2060	<b>3181</b>	2333	2716
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.6</b>	20.4	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.3</b>	7.8	10.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	▲ 12.3	13.5

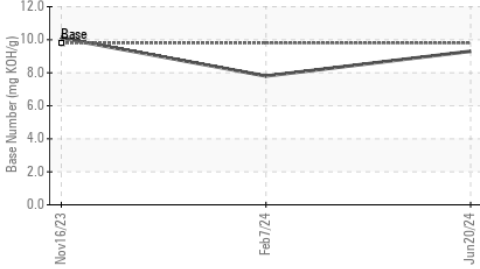
**FT-IR (Direct Trend)**



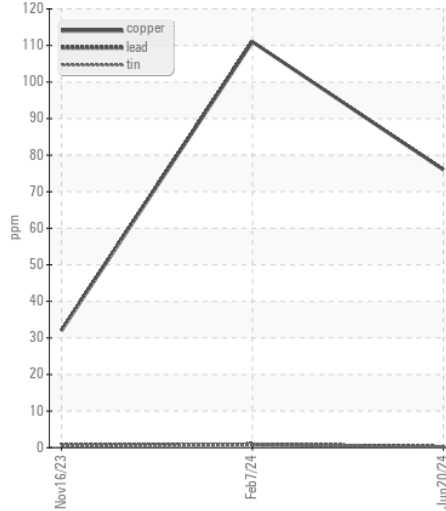
**Ferrous Alloys**



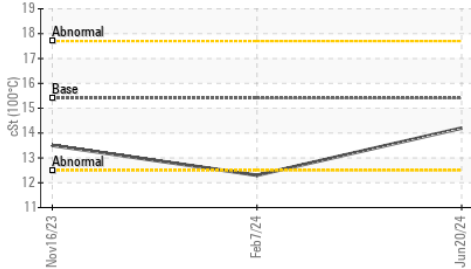
**Base Number**



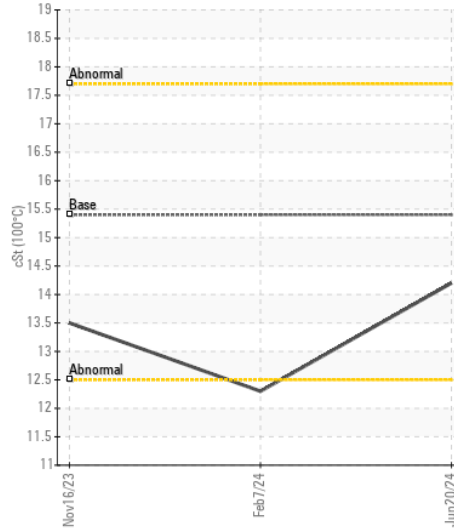
**Non-ferrous Metals**



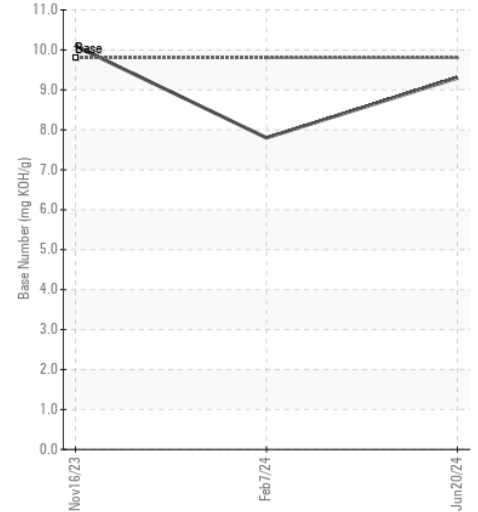
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0125247  
**Lab Number** : 06224232  
**Unique Number** : 11102429  
**Test Package** : FLEET

**Received** : 28 Jun 2024  
**Tested** : 01 Jul 2024  
**Diagnosed** : 01 Jul 2024 - Wes Davis

**GFL Environmental - 865 - East Mount Hauling**  
 7213 East Mount Houston Road  
 Houston, TX  
 US 77050  
 Contact: Saul Castillo  
 saul.castillo@gflenv.com

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: