



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

Area

**(16KM0A)**

Machine Id

**429049-402451**

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>GFL0120145</b>	GFL0117231	GFL0117155
Sample Date		Client Info		<b>28 May 2024</b>	13 May 2024	22 Apr 2024
Machine Age	hrs	Client Info		<b>16396</b>	16235	16050
Oil Age	hrs	Client Info		<b>0</b>	600	600
Filter Age	hrs	Client Info		<b>0</b>	600	600
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	<b>&lt;1</b>	3	6
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>0</b>	2	1
Lead	ppm	ASTM D5185m	>150	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>90	<b>0</b>	0	2
Tin	ppm	ASTM D5185m	>5	<b>0</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.

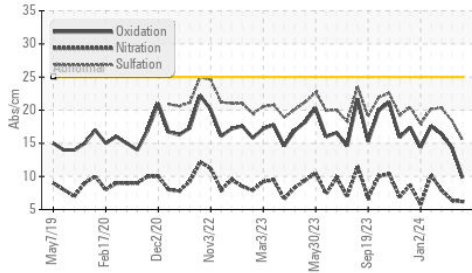
Silicon	ppm	ASTM D5185m	>35	<b>10</b>	14	▲ 49
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	<b>0.5</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	6.4	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>15.5</b>	18.4	20.3
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**

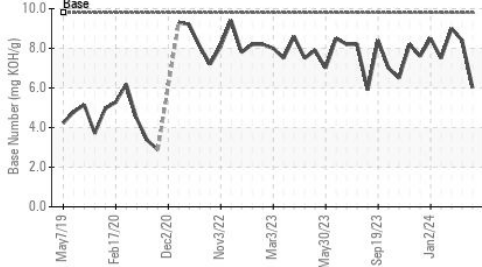
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	3	2
Boron	ppm	ASTM D5185m	0	<b>3</b>	2	1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>55</b>	59	66
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>909</b>	969	1017
Calcium	ppm	ASTM D5185m	1070	<b>1038</b>	1091	1126
Phosphorus	ppm	ASTM D5185m	1150	<b>975</b>	1090	1076
Zinc	ppm	ASTM D5185m	1270	<b>1175</b>	1284	1295
Sulfur	ppm	ASTM D5185m	2060	<b>3321</b>	3716	3551
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>9.8</b>	14.3	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.0</b>	8.4	9.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	14.1	12.9

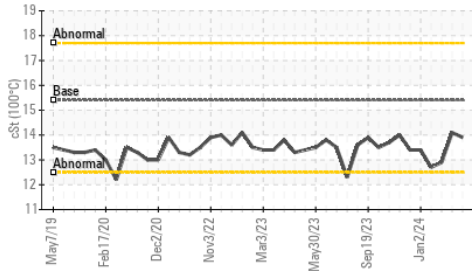
**FT-IR (Direct Trend)**



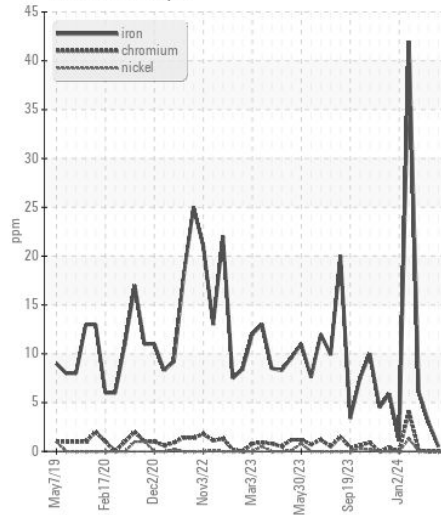
**Base Number**



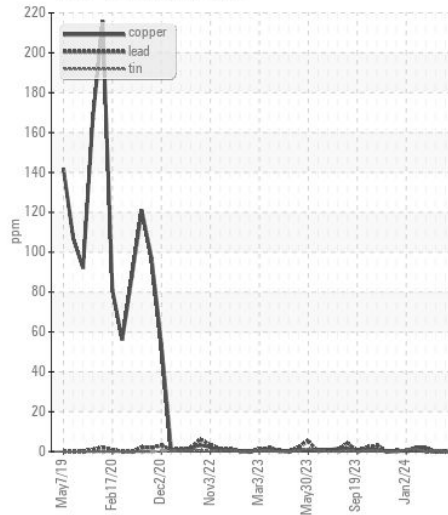
**Viscosity @ 100°C**



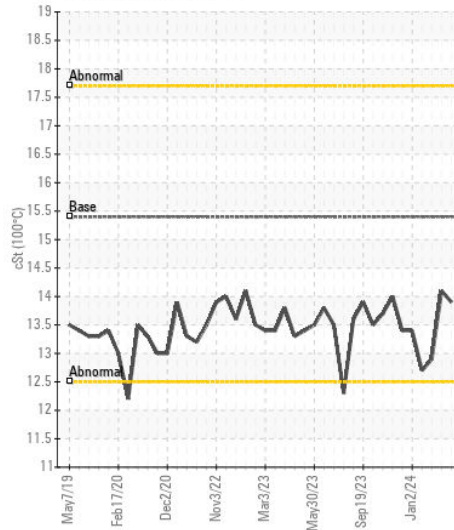
**Ferrous Alloys**



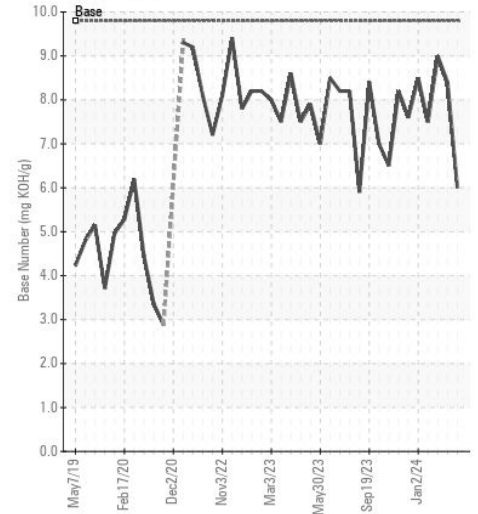
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0120145  
**Lab Number** : 06195249  
**Unique Number** : 11057372  
**Test Package** : FLEET

**Received** : 30 May 2024  
**Tested** : 31 May 2024  
**Diagnosed** : 31 May 2024 - Wes Davis

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Loyce Stewart  
 loyce.stewart@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)

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F: