



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

Machine Id  
**812045**  
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>GFL0069995</b>	GFL0069919	GFL0059581
Sample Date		Client Info		<b>10 May 2024</b>	04 Mar 2024	19 Dec 2022
Machine Age	hrs	Client Info		<b>5336</b>	4844	24877
Oil Age	hrs	Client Info		<b>600</b>	600	1272
Filter Age	hrs	Client Info		<b>0</b>	0	1272
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	>100	<b>11</b>	17	36
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	4	0
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	2
Copper	ppm	ASTM D5185m	>330	<b>0</b>	2	122
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
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.

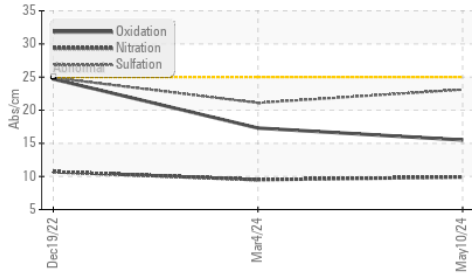
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	5	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>2.4</b>	0.9	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.9</b>	9.5	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.1</b>	21.1	24.9
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**

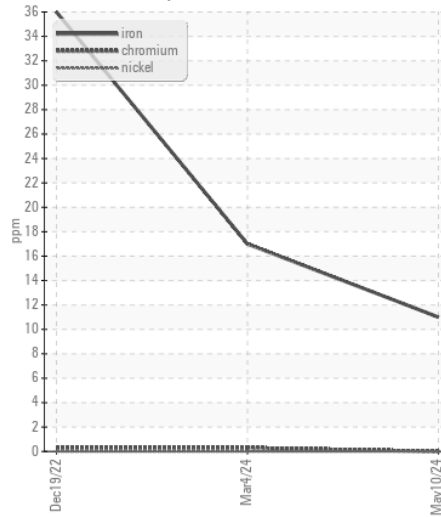
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Boron	ppm	ASTM D5185m	0	<b>3</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>66</b>	68	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>1022</b>	1069	862
Calcium	ppm	ASTM D5185m	1070	<b>1093</b>	1204	1011
Phosphorus	ppm	ASTM D5185m	1150	<b>1056</b>	1201	960
Zinc	ppm	ASTM D5185m	1270	<b>1311</b>	1409	1166
Sulfur	ppm	ASTM D5185m	2060	<b>3429</b>	3106	2516
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	17.3	24.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.9</b>	6.8	6.6
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	13.8	13.6

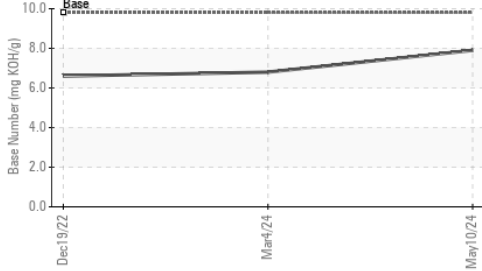
**FT-IR (Direct Trend)**



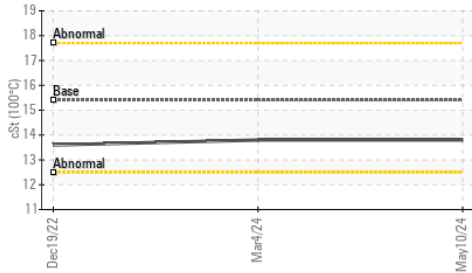
**Ferrous Alloys**



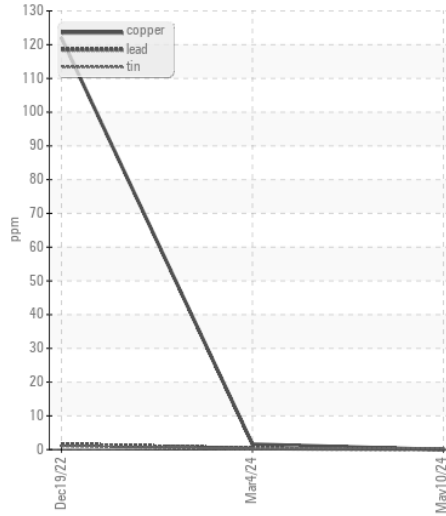
**Base Number**



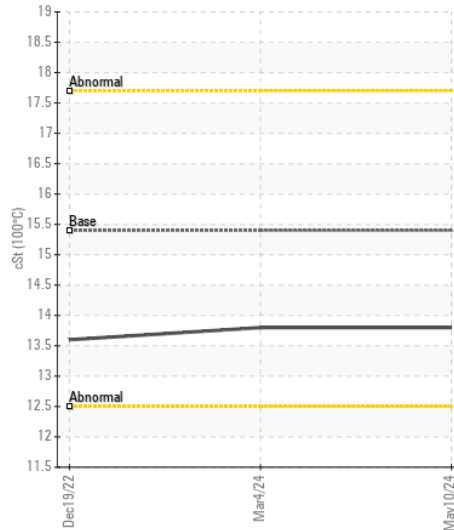
**Viscosity @ 100°C**



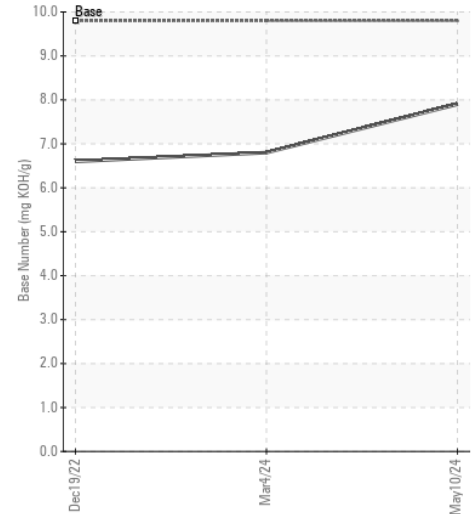
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0069995  
**Lab Number** : 06188942  
**Unique Number** : 11045694  
**Test Package** : FLEET

**Received** : 23 May 2024  
**Tested** : 24 May 2024  
**Diagnosed** : 24 May 2024 - Wes Davis

**GFL Environmental - 902 - Chilton HC**  
 428 High St  
 Chilton, WI  
 US 53014

Contact: Keith Mueller  
 keith.mueller@gflenv.com

T: (920)374-1404

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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