



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



Area  
**(SB14366)**  
Machine Id  
**412001**  
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>GFL0069959</b>	GFL0069979	GFL0059588
Sample Date		Client Info		<b>04 May 2024</b>	18 Oct 2023	09 Apr 2023
Machine Age	hrs	Client Info		<b>6778</b>	5359	3919
Oil Age	hrs	Client Info		<b>600</b>	5359	3919
Filter Age	hrs	Client Info		<b>600</b>	5359	3919
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	>120	<b>9</b>	16	16
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	2	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	4
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.

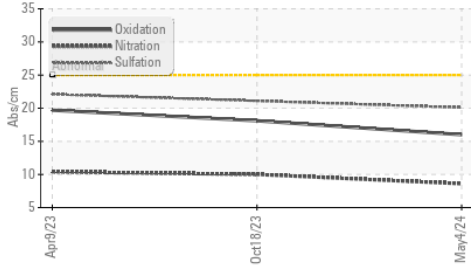
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	3	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.8</b>	0.7	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	10.0	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	21.1	22.1
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**

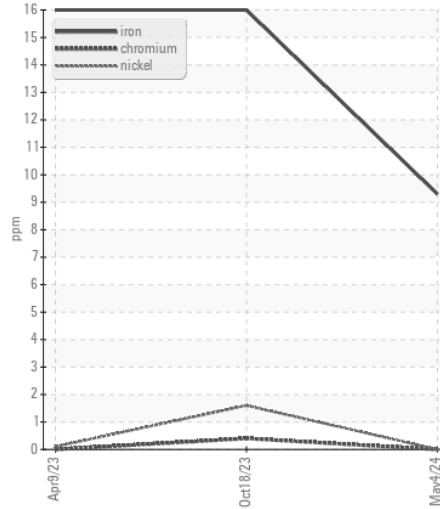
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	5	4
Boron	ppm	ASTM D5185m	0	<b>2</b>	4	6
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>63</b>	61	49
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>996</b>	955	709
Calcium	ppm	ASTM D5185m	1070	<b>1065</b>	1089	1176
Phosphorus	ppm	ASTM D5185m	1150	<b>1015</b>	979	752
Zinc	ppm	ASTM D5185m	1270	<b>1263</b>	1248	931
Sulfur	ppm	ASTM D5185m	2060	<b>3180</b>	2374	1965
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.0</b>	18.1	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.9</b>	6.4	6.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	14.1	13.5

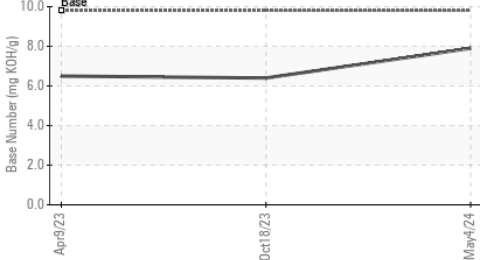
FT-IR (Direct Trend)



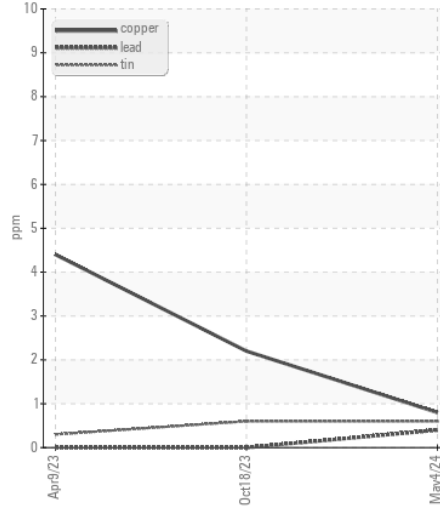
Ferrous Alloys



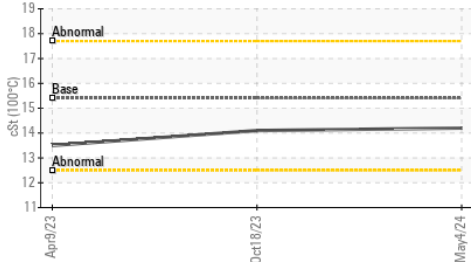
Base Number



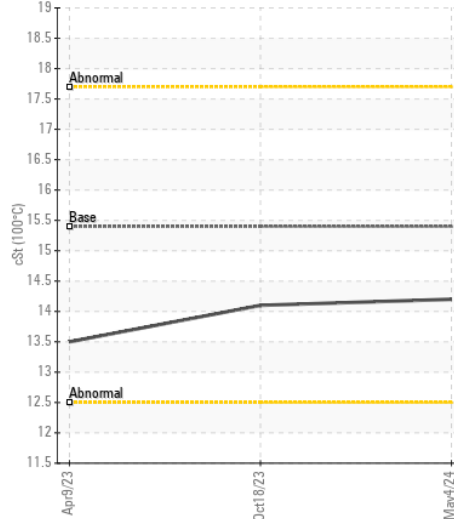
Non-ferrous Metals



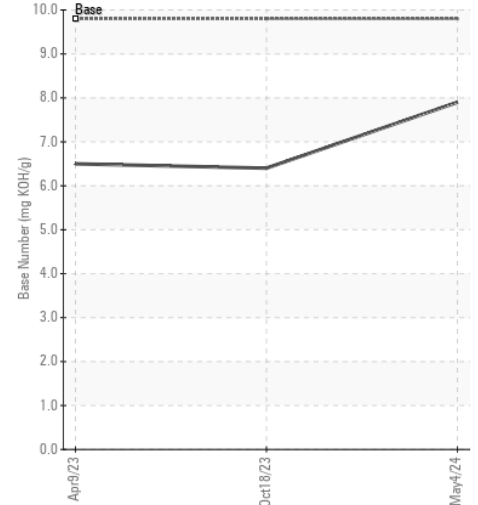
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0069959  
 Lab Number : 06188945  
 Unique Number : 11045697  
 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

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: (920)374-1404

F: