



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

Machine Id  
**413001**  
 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>GFL0093467</b>	GFL0093445	GFL0093508
Sample Date		Client Info		<b>20 Jun 2024</b>	30 May 2024	24 May 2024
Machine Age	hrs	Client Info		<b>4235</b>	4116	4038
Oil Age	hrs	Client Info		<b>119</b>	602	524
Filter Age	hrs	Client Info		<b>119</b>	602	524
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>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>3</b>	9	9
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	1
Titanium	ppm	ASTM D5185m		<b>7</b>	8	8
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	5	5
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</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.

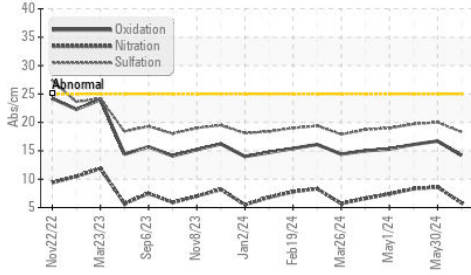
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	8	10
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.8</b>	8.6	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.3</b>	20.0	19.7
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**

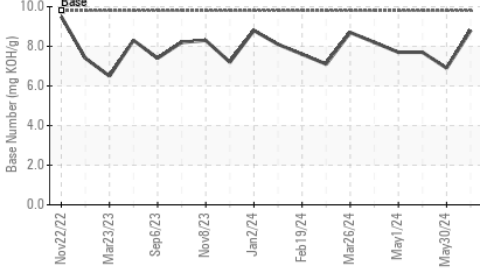
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	4	4
Boron	ppm	ASTM D5185m	0	<b>8</b>	7	7
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>55</b>	54	55
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>992</b>	934	926
Calcium	ppm	ASTM D5185m	1070	<b>1220</b>	1120	1142
Phosphorus	ppm	ASTM D5185m	1150	<b>1096</b>	1032	1049
Zinc	ppm	ASTM D5185m	1270	<b>1367</b>	1258	1261
Sulfur	ppm	ASTM D5185m	2060	<b>3883</b>	3313	3424
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.2</b>	16.7	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.8</b>	6.9	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	13.7	13.9

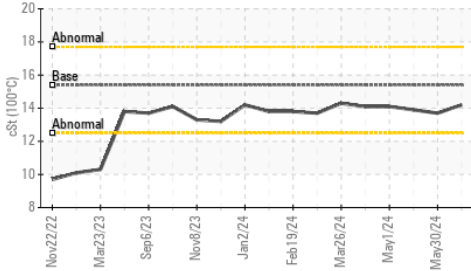
**FT-IR (Direct Trend)**



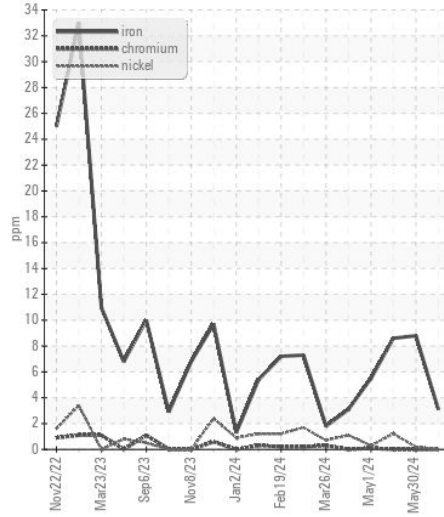
**Base Number**



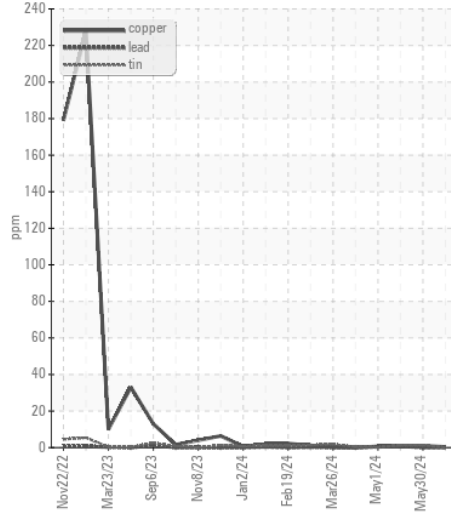
**Viscosity @ 100°C**



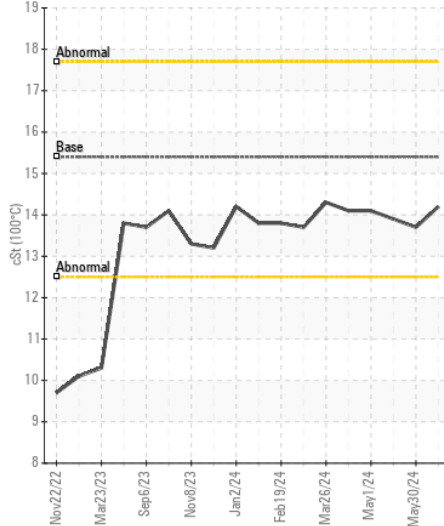
**Ferrous Alloys**



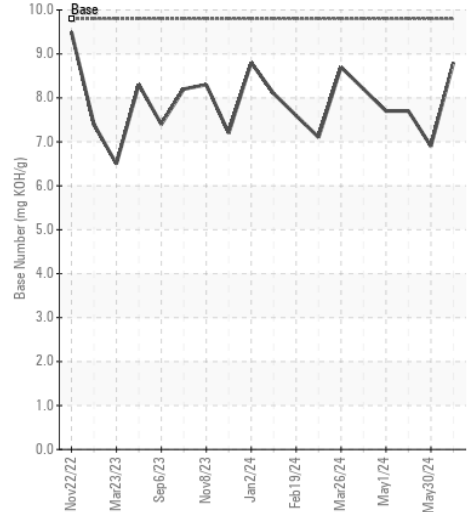
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0093467  
**Lab Number** : 06217977  
**Unique Number** : 11096174  
**Test Package** : FLEET

**Received** : 24 Jun 2024  
**Tested** : 25 Jun 2024  
**Diagnosed** : 25 Jun 2024 - Wes Davis

**GFL Environmental - 891 - Oklahoma City Hauling**  
 1001 South Rockwell  
 Oklahoma City, OK  
 US 73128  
 Contact: Andy Smith  
 andrew.smith@gflenv.com  
 T: (405)306-1651  
 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)