



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

Area  
**(14KM2A)**  
Machine Id  
**927082-260335**  
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>GFL0121546</b>	GFL0108153	GFL0087721
Sample Date		Client Info		<b>20 Jun 2024</b>	18 Jan 2024	22 Aug 2023
Machine Age	hrs	Client Info		<b>27344</b>	13405	12324
Oil Age	hrs	Client Info		<b>150</b>	0	0
Filter Age	hrs	Client Info		<b>150</b>	0	0
Oil Changed		Client Info		<b>Not Chngd</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	>75	<b>37</b>	11	49
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>12</b>	3	7
Lead	ppm	ASTM D5185m	>25	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m	>100	<b>41</b>	<1	8
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

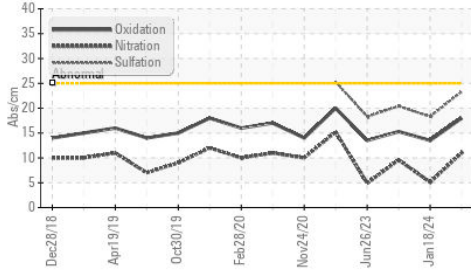
Silicon	ppm	ASTM D5185m	>25	<b>9</b>	7	9
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>1.5</b>	0.2	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.0</b>	5.1	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.3</b>	18.3	20.4
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**

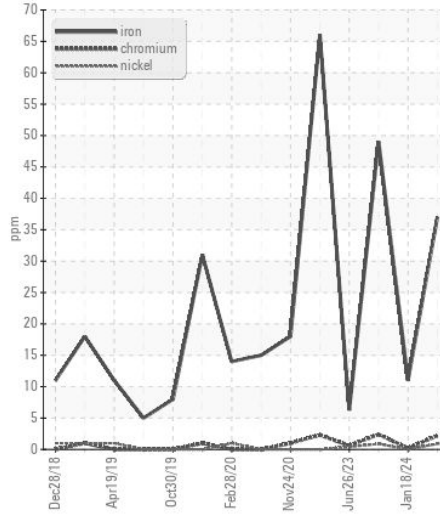
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>28</b>	4	32
Boron	ppm	ASTM D5185m	0	<b>2</b>	3	9
Barium	ppm	ASTM D5185m	0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>64</b>	56	63
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>969</b>	946	1004
Calcium	ppm	ASTM D5185m	1070	<b>1120</b>	1017	1131
Phosphorus	ppm	ASTM D5185m	1150	<b>1141</b>	959	1057
Zinc	ppm	ASTM D5185m	1270	<b>1300</b>	1142	1296
Sulfur	ppm	ASTM D5185m	2060	<b>3186</b>	2978	3554
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.0</b>	13.5	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.4</b>	9.5	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.5</b>	14.2	14.6

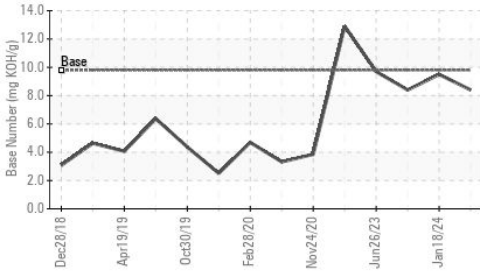
**FT-IR (Direct Trend)**



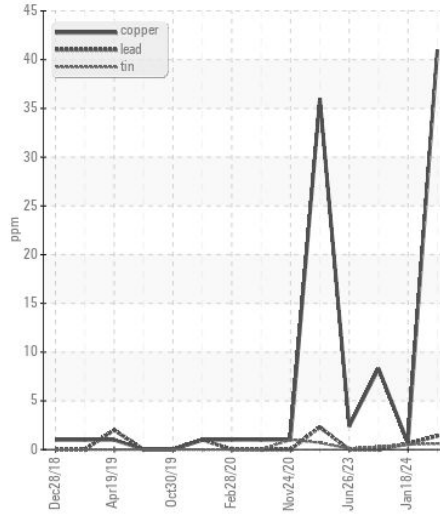
**Ferrous Alloys**



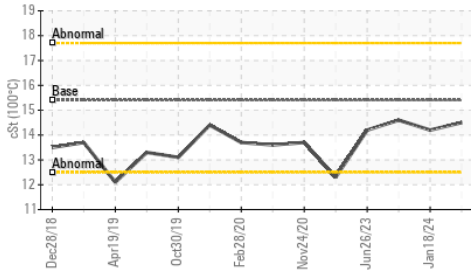
**Base Number**



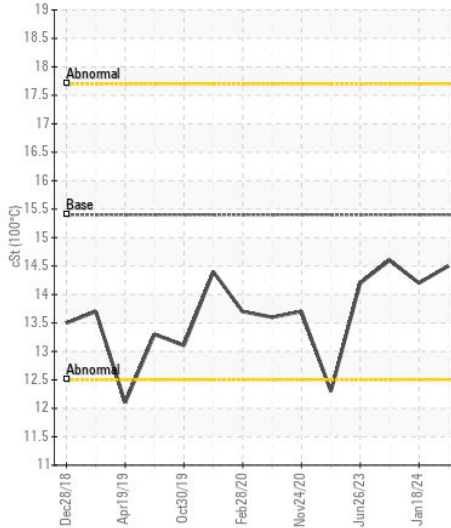
**Non-ferrous Metals**



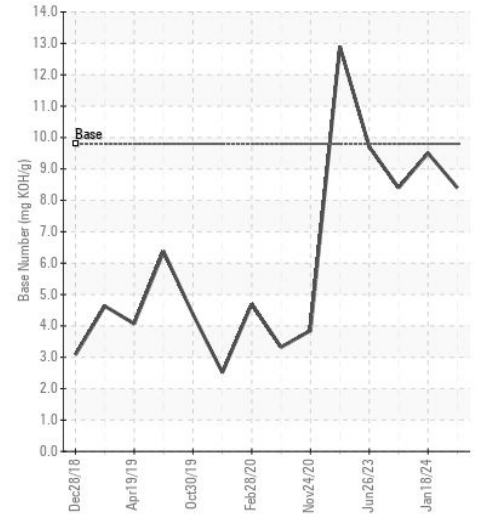
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0121546  
**Lab Number** : 06219284  
**Unique Number** : 11097481  
**Test Package** : FLEET

**GFL Environmental - 821 - Ozarks Hauling**  
 33924 Olath Drive  
 Lebanon, MO  
 US 65536  
 Contact: Landen Johnson  
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 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)