



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

Area  
**(YA115731)**  
Machine Id  
**10425**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (8 GAL)**

**RECOMMENDATION**

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0115991</b>	GFL0099794	GFL0080536
Sample Date		Client Info		<b>02 Jul 2024</b>	20 Nov 2023	04 Oct 2023
Machine Age	hrs	Client Info		<b>22803</b>	22803	39110
Oil Age	hrs	Client Info		<b>0</b>	39110	39110
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ATTENTION	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>57</b>	6	10
Chromium	ppm	ASTM D5185m	>5	<b>3</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	>15	<b>5</b>	<1	1
Lead	ppm	ASTM D5185m	>25	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>100	<b>2</b>	0	<1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

Sodium and/or potassium levels are high. Test for glycol is negative.

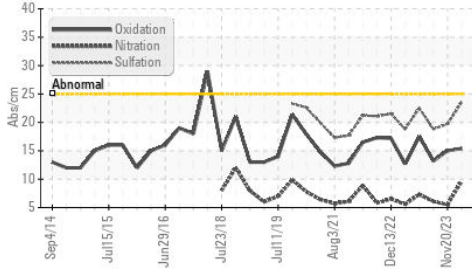
Silicon	ppm	ASTM D5185m	>25	<b>21</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>68</b>	29	89
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	2.8	3.4
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	0.0
Soot %	%	*ASTM D7844	>6	<b>2.5</b>	0.4	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.6</b>	5.5	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.5</b>	19.7	18.8
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**

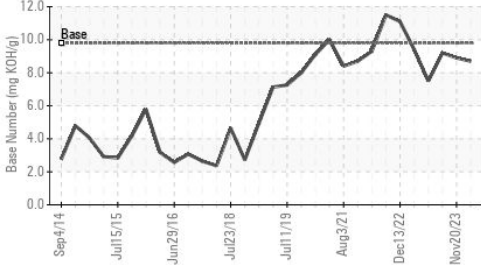
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>22</b>	4	24
Boron	ppm	ASTM D5185m	0	<b>8</b>	130	11
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>59</b>	16	57
Manganese	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>850</b>	259	832
Calcium	ppm	ASTM D5185m	1070	<b>1116</b>	1867	1060
Phosphorus	ppm	ASTM D5185m	1150	<b>1002</b>	1007	959
Zinc	ppm	ASTM D5185m	1270	<b>1233</b>	1192	1129
Sulfur	ppm	ASTM D5185m	2060	<b>2794</b>	3417	2907
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	15.0	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.7</b>	8.9	9.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.9</b>	13.8	13.4

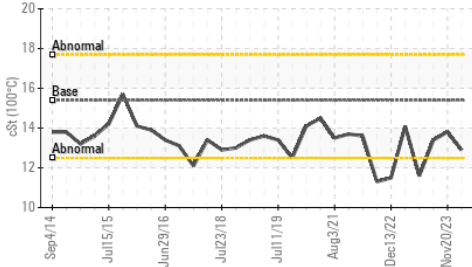
**FT-IR (Direct Trend)**



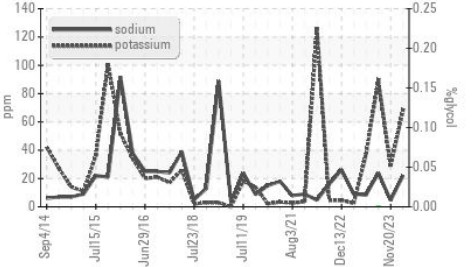
**Base Number**



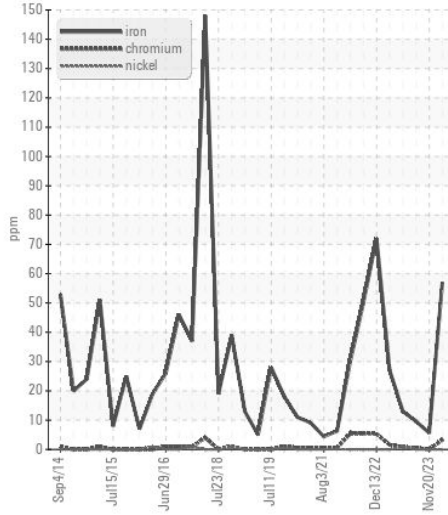
**Viscosity @ 100°C**



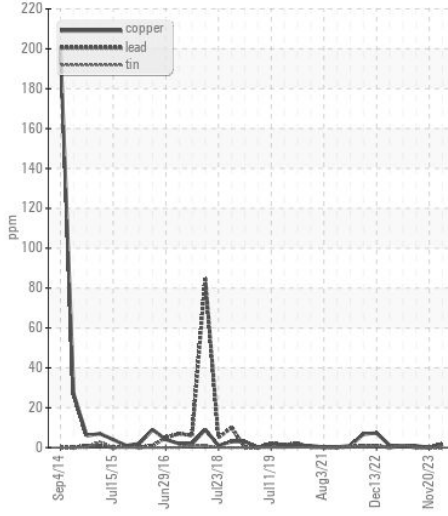
**Glycol Contamination**



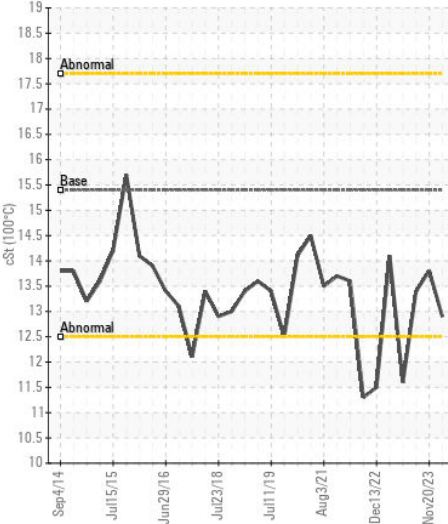
**Ferrous Alloys**



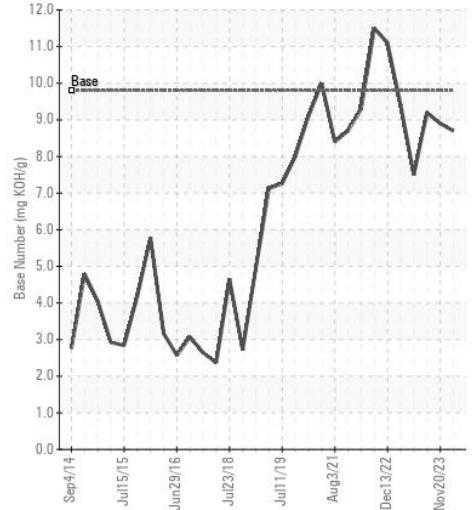
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0115991 **Received** : 03 Jul 2024  
**Lab Number** : 06227108 **Tested** : 08 Jul 2024  
**Unique Number** : 11110601 **Diagnosed** : 08 Jul 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 018 - Fayetteville**  
 4621 Marracco Drive  
 Hope Mills, NC  
 US 28348  
 Contact: Robert Carter  
 robert.carter@gflenv.com  
 T: (910)596-1170  
 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)