



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

Area  
**(YA163849)**  
Machine Id  
**3862**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (11 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0109529</b>	GFL0058870	GFL0048091
Sample Date		Client Info		<b>08 Jul 2024</b>	01 Dec 2023	19 Sep 2022
Machine Age	hrs	Client Info		<b>8479</b>	8479	8479
Oil Age	hrs	Client Info		<b>5550</b>	5550	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	<b>18</b>	11	9
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	2	0
Lead	ppm	ASTM D5185m	>150	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>90	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	0
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.

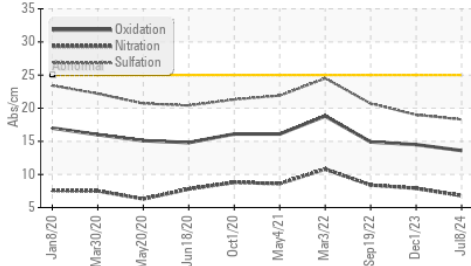
Silicon	ppm	ASTM D5185m	>35	<b>2</b>	2	1
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	4	2
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	<b>0.4</b>	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	7.9	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.3</b>	19.0	20.7
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**

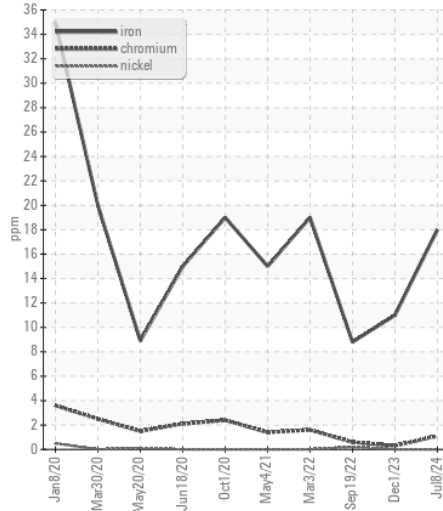
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	6
Boron	ppm	ASTM D5185m	0	<b>5</b>	6	6
Barium	ppm	ASTM D5185m	0	<b>0</b>	5	2
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	62	56
Manganese	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>903</b>	864	866
Calcium	ppm	ASTM D5185m	1070	<b>1105</b>	1054	1054
Phosphorus	ppm	ASTM D5185m	1150	<b>987</b>	1008	928
Zinc	ppm	ASTM D5185m	1270	<b>1172</b>	1127	1153
Sulfur	ppm	ASTM D5185m	2060	<b>2661</b>	2609	3475
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.6</b>	14.5	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.5</b>	8.3	8.8
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	13.6	14.0

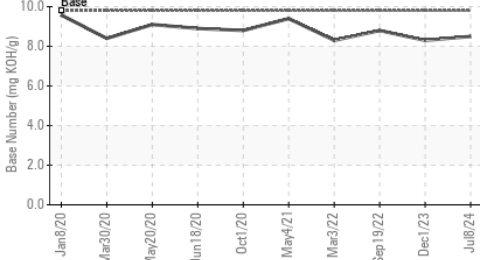
**FT-IR (Direct Trend)**



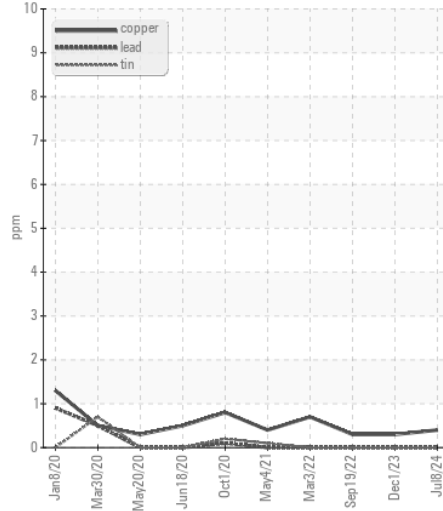
**Ferrous Alloys**



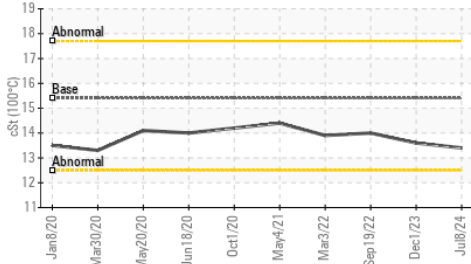
**Base Number**



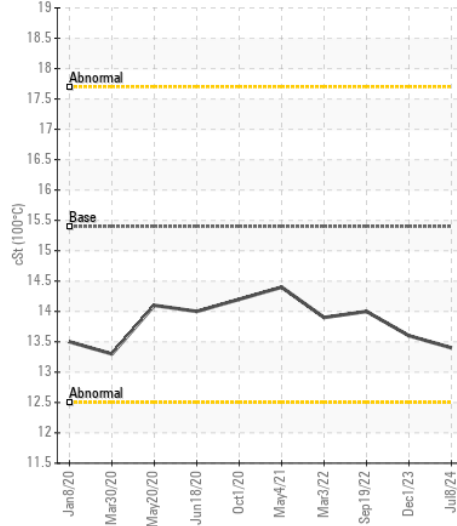
**Non-ferrous Metals**



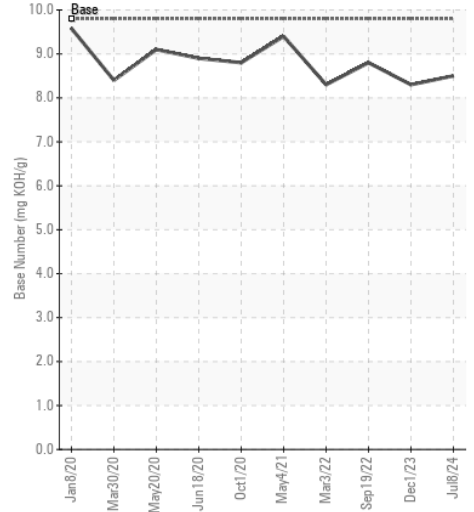
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0109529  
**Lab Number** : 06234613  
**Unique Number** : 11123447  
**Test Package** : FLEET

**Received** : 12 Jul 2024  
**Tested** : 15 Jul 2024  
**Diagnosed** : 15 Jul 2024 - Wes Davis

**GFL Environmental - 119 - Williamston Hauling/TriEast**  
 1805 West Main Street  
 Williamston, NC  
 US 27892

Contact: Spencer Ligon  
 spencer.ligon@gflenv.com  
 T: (800)207-6618

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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