



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

Machine Id  
**4697M**  
 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>GFL0116875</b>	GFL0116945	GFL0107081
Sample Date		Client Info		<b>15 Apr 2024</b>	26 Mar 2024	20 Dec 2023
Machine Age	hrs	Client Info		<b>14633</b>	14424	14234
Oil Age	hrs	Client Info		<b>600</b>	600	600
Filter Age	hrs	Client Info		<b>600</b>	600	600
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>2</b>	12	8
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>0</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	2	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**

There is no indication of any contamination in the oil.

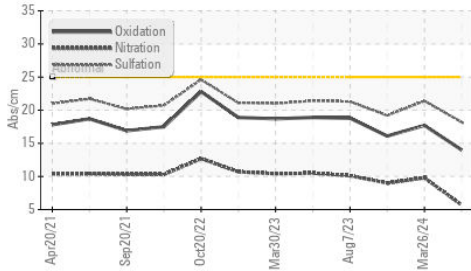
Silicon	ppm	ASTM D5185m	>25	<b>2</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.7</b>	9.8	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.2</b>	21.4	19.2
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**

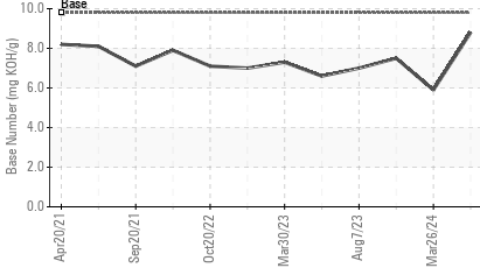
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	5	3
Boron	ppm	ASTM D5185m	0	<b>1</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>59</b>	58	57
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>908</b>	957	889
Calcium	ppm	ASTM D5185m	1070	<b>1119</b>	1075	1046
Phosphorus	ppm	ASTM D5185m	1150	<b>1124</b>	965	1009
Zinc	ppm	ASTM D5185m	1270	<b>1253</b>	1234	1188
Sulfur	ppm	ASTM D5185m	2060	<b>3110</b>	3137	3301
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.0</b>	17.7	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.8</b>	5.9	7.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.0</b>	14.1	13.5

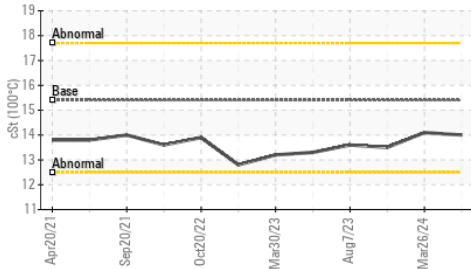
**FT-IR (Direct Trend)**



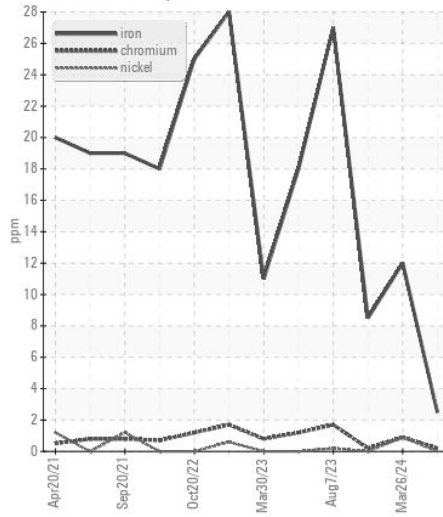
**Base Number**



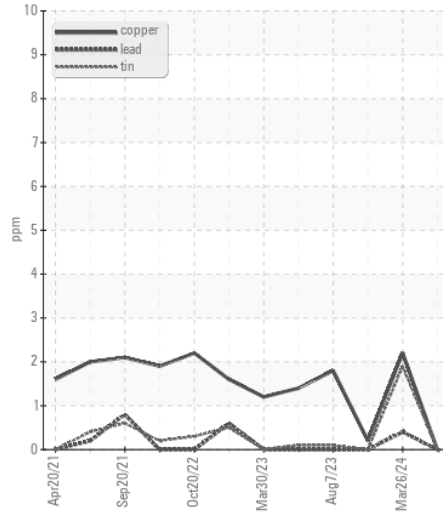
**Viscosity @ 100°C**



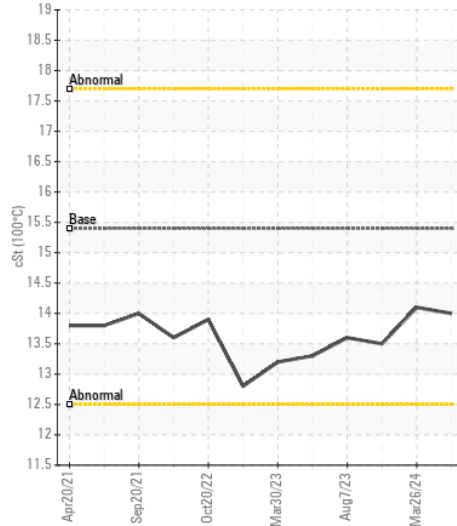
**Ferrous Alloys**



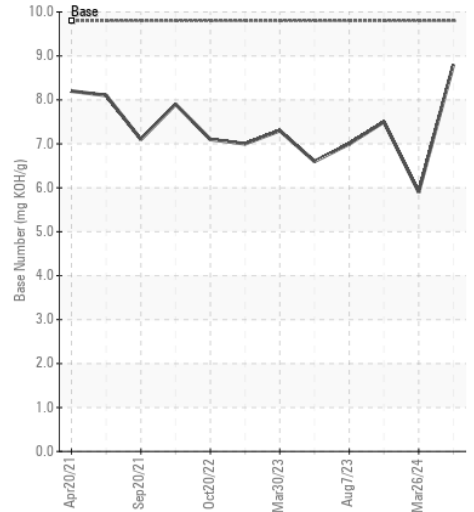
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116875 **Received** : 17 Apr 2024  
**Lab Number** : 06151803 **Tested** : 18 Apr 2024  
**Unique Number** : 10981881 **Diagnosed** : 18 Apr 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 465 - Pontiac**  
 888 Baldwin  
 Pontiac, MI  
 US 48340

Contact: Ricky Matthews  
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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)