



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id  
**4664M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0108848</b>	GFL0101478	GFL0093173
Sample Date		Client Info		<b>12 Jan 2024</b>	01 Dec 2023	17 Oct 2023
Machine Age	hrs	Client Info		<b>15536</b>	15228	14859
Oil Age	hrs	Client Info		<b>15228</b>	14859	14338
Filter Age	hrs	Client Info		<b>15228</b>	14859	14338
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	SEVERE	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>9</b>	24	31
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	5
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	6	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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**

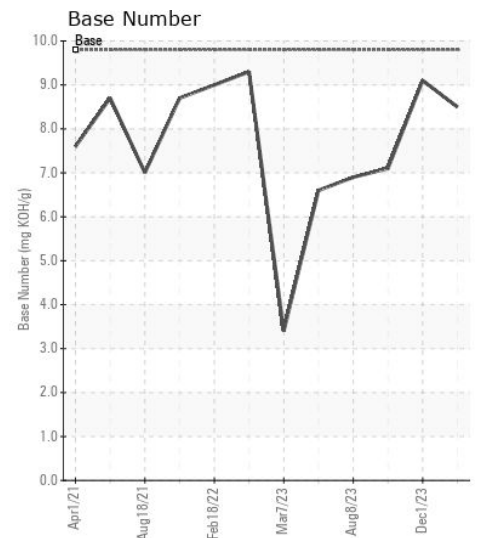
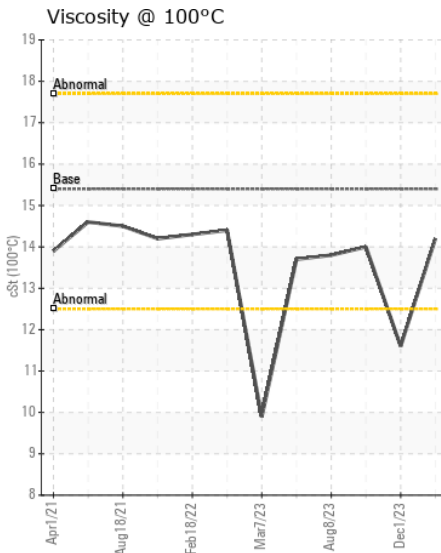
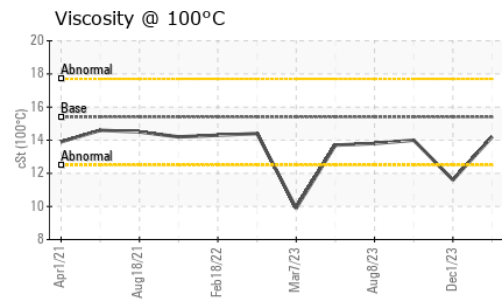
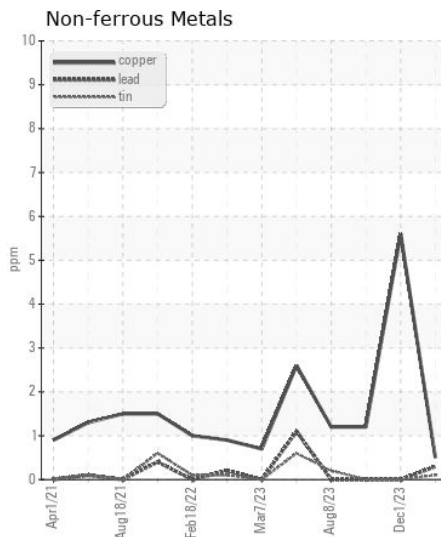
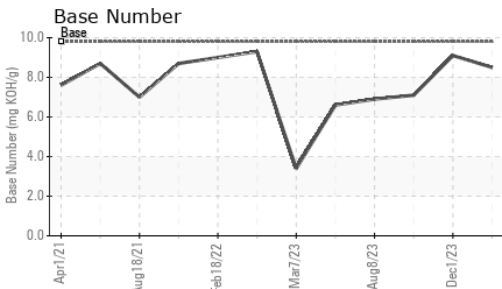
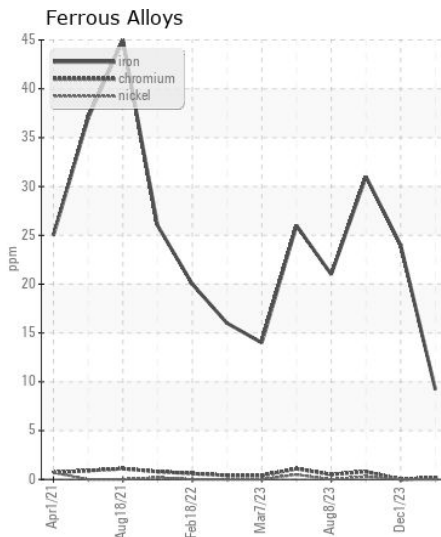
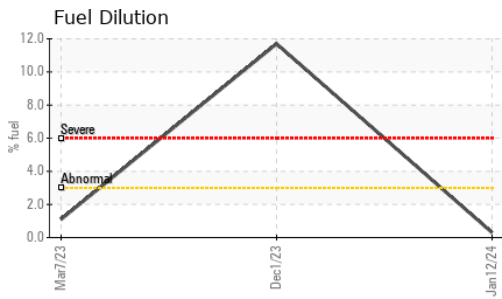
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	7	14
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	6
Fuel	%	ASTM D3524	>3.0	<b>0.3</b>	11.7	<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>0.2</b>	0.2	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.5</b>	9.3	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.3</b>	20.0	20.3
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>3</b>	3	7
Boron	ppm	ASTM D5185m	0	<b>1</b>	25	1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	46	62
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	2	0
Magnesium	ppm	ASTM D5185m	1010	<b>1021</b>	600	945
Calcium	ppm	ASTM D5185m	1070	<b>1053</b>	1246	1096
Phosphorus	ppm	ASTM D5185m	1150	<b>1105</b>	955	1014
Zinc	ppm	ASTM D5185m	1270	<b>1325</b>	1132	1259
Sulfur	ppm	ASTM D5185m	2060	<b>3207</b>	2762	3047
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.4</b>	18.5	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.5</b>	9.1	7.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	11.6	14.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108848 **Received** : 18 Jan 2024  
**Lab Number** : 06064832 **Diagnosed** : 23 Jan 2024  
**Unique Number** : 10836214 **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
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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)