



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



Machine Id  
**4584M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (36 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0104182</b>	GFL0104320	GFL0059313
Sample Date		Client Info		<b>05 Jan 2024</b>	27 Dec 2023	30 Nov 2023
Machine Age	hrs	Client Info		<b>22671</b>	22556	22392
Oil Age	hrs	Client Info		<b>21672</b>	21721	21718
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	>75	<b>26</b>	32	26
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	6
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>25	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>100	<b>1</b>	1	10
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	3
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

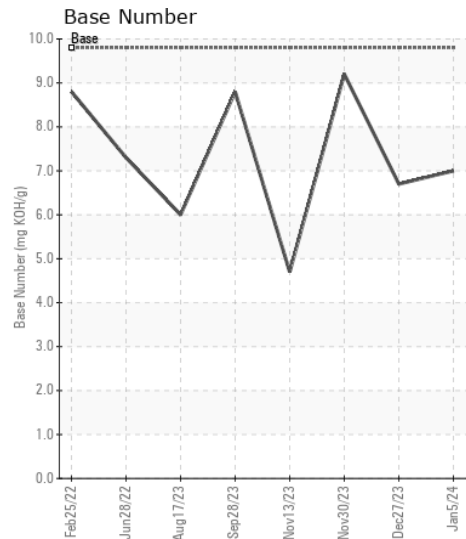
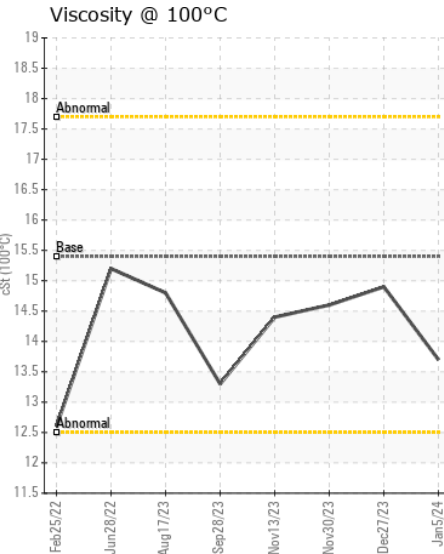
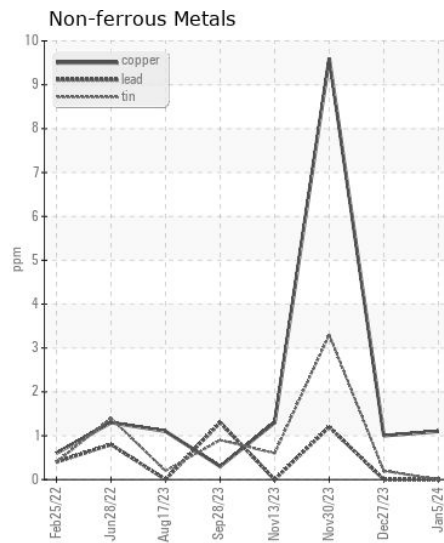
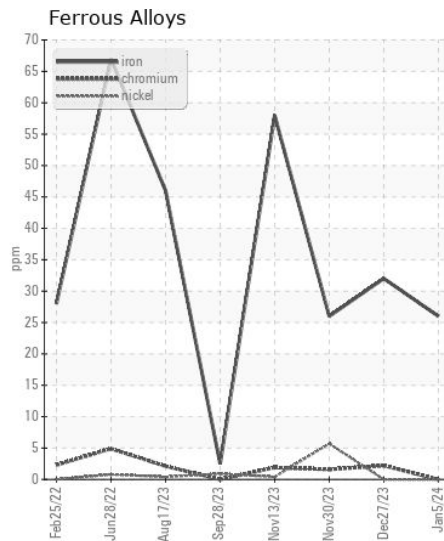
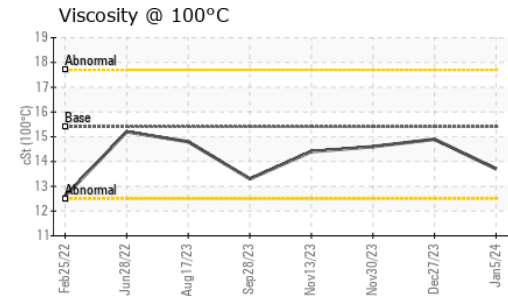
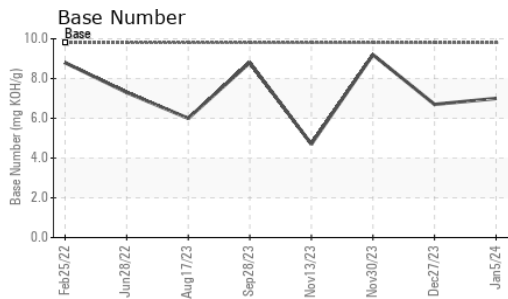
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	11	17
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	5
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>0.3</b>	0.7	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	13.5	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	23.0	17.6
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>	6	<1
Boron	ppm	ASTM D5185m	0	<b>&lt;1</b>	2	5
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>55</b>	60	32
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	3
Magnesium	ppm	ASTM D5185m	1010	<b>938</b>	949	211
Calcium	ppm	ASTM D5185m	1070	<b>1033</b>	1091	2446
Phosphorus	ppm	ASTM D5185m	1150	<b>898</b>	971	1088
Zinc	ppm	ASTM D5185m	1270	<b>1259</b>	1249	1250
Sulfur	ppm	ASTM D5185m	2060	<b>2638</b>	3002	4489
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	21.9	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.0</b>	6.7	9.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.7</b>	14.9	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0104182 **Received** : 11 Jan 2024  
**Lab Number** : 06057766 **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10829148 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 410 - Michigan West**  
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 Wayne, MI  
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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)