



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

Machine Id  
**2587**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**

**RECOMMENDATION**

Oil and filter change at the time of sampling has been noted. 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>GFL0099758</b>	GFL0073277	GFL0045990
Sample Date		Client Info		<b>27 Feb 2024</b>	02 Jun 2023	28 Mar 2023
Machine Age	hrs	Client Info		<b>600</b>	600	600
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	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>27</b>	44	90
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<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>5</b>	10	33
Lead	ppm	ASTM D5185m	>40	<b>2</b>	5	16
Copper	ppm	ASTM D5185m	>330	<b>1</b>	3	10
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
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**

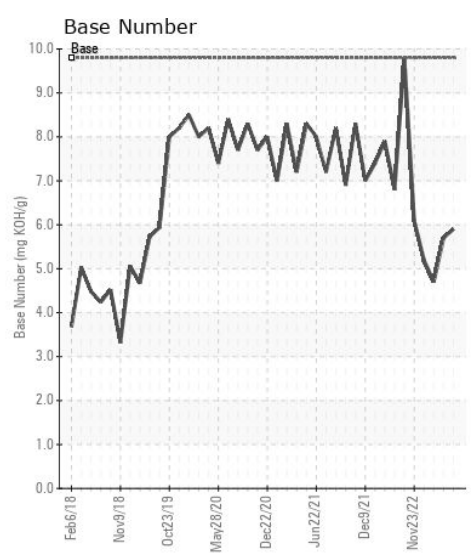
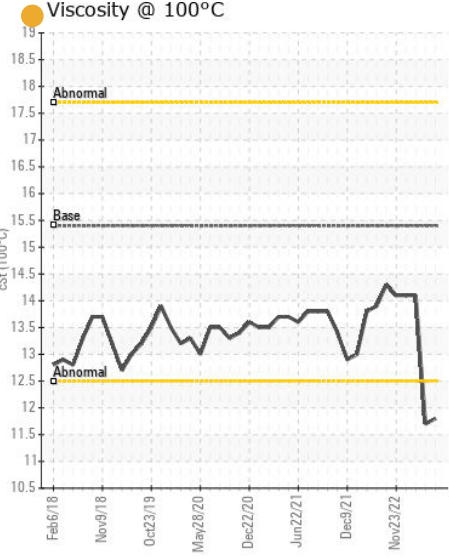
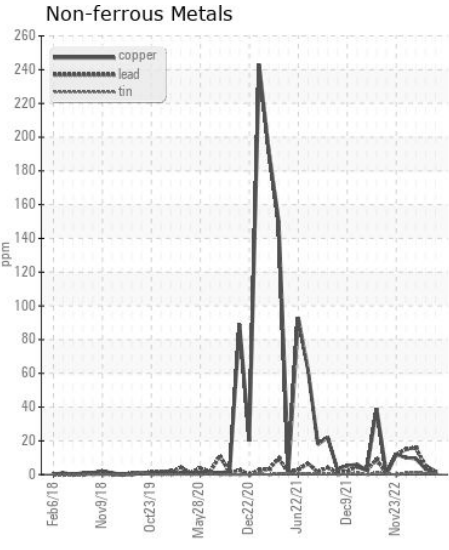
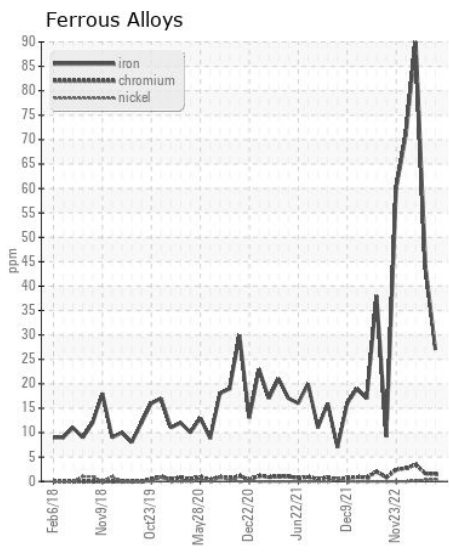
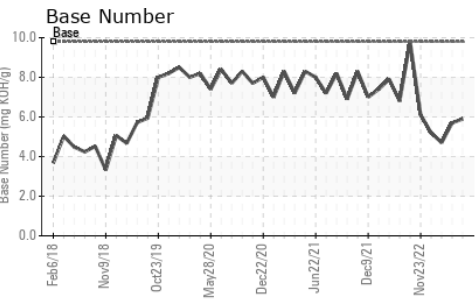
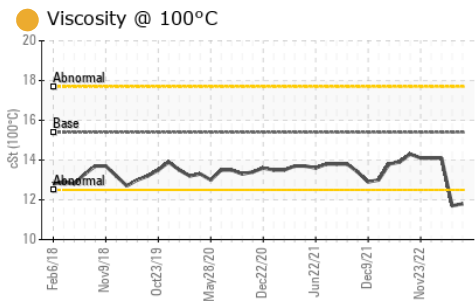
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	10	14
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	24	79
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	0.4	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	0.0
Soot %	%	*ASTM D7844	>6	<b>0.6</b>	0.7	1.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.8</b>	11.7	15.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	23.9	30.0
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>4</b>	5	12
Boron	ppm	ASTM D5185m	0	<b>10</b>	16	15
Barium	ppm	ASTM D5185m	0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	60	<b>79</b>	110	73
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	1010	<b>809</b>	712	890
Calcium	ppm	ASTM D5185m	1070	<b>1008</b>	1349	1269
Phosphorus	ppm	ASTM D5185m	1150	<b>943</b>	985	1053
Zinc	ppm	ASTM D5185m	1270	<b>1165</b>	1173	1296
Sulfur	ppm	ASTM D5185m	2060	<b>3025</b>	3478	2881
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	20.9	30.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.9</b>	5.7	4.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>11.8</b>	11.7	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0099758  
**Lab Number** : 06104029  
**Unique Number** : 10902259  
**Test Package** : FLEET  
**Received** : 29 Feb 2024  
**Tested** : 29 Feb 2024  
**Diagnosed** : 02 Mar 2024 - Don Baldrige

**GFL Environmental - 102 - Morristown TN**  
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 US 37813  
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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)