



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

Machine Id  
**10662**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (6 GAL)**

**RECOMMENDATION**

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0104073</b>	GFL0068126	GFL0068151
Sample Date		Client Info		<b>11 Apr 2024</b>	02 Nov 2023	17 May 2023
Machine Age	hrs	Client Info		<b>1492</b>	1188	862
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>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>47</b>	17	29
Chromium	ppm	ASTM D5185m	>5	<b>3</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>15	<b>4</b>	4	4
Lead	ppm	ASTM D5185m	>25	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>100	<b>0</b>	1	7
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

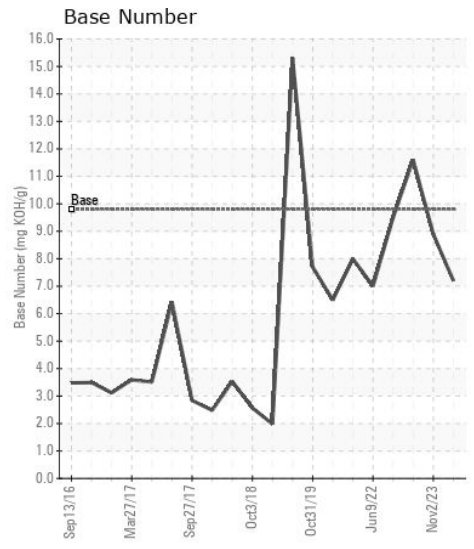
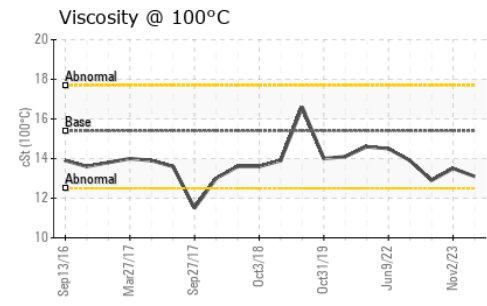
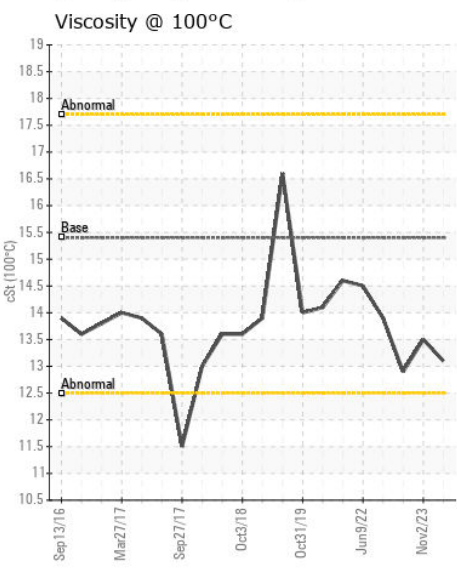
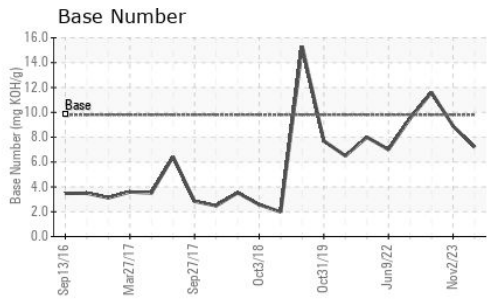
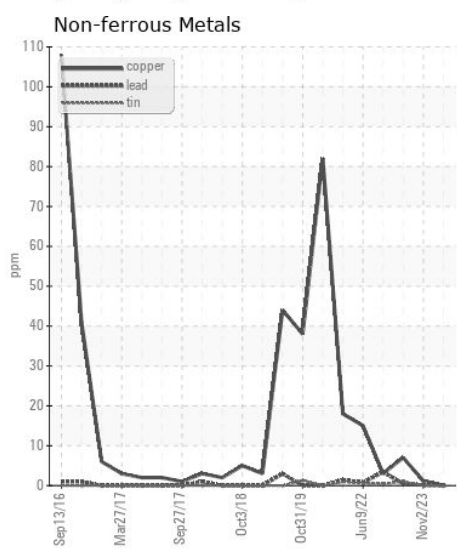
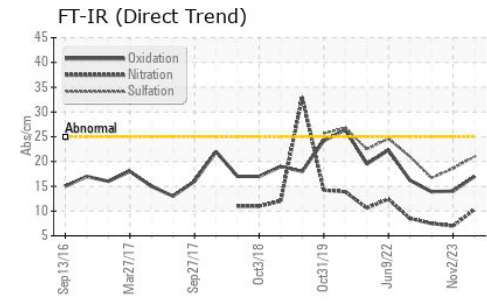
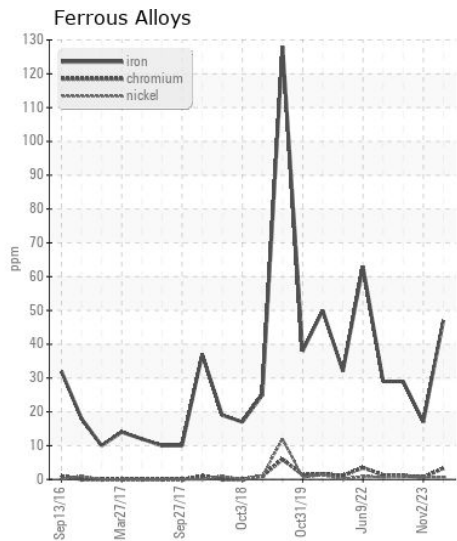
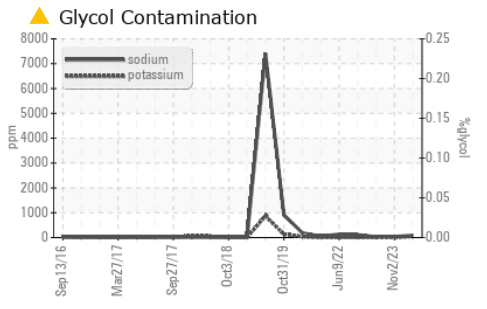
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	7	8
Potassium	ppm	ASTM D5185m	>20	<b>▲ 47</b>	5	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>0.8</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.3</b>	7.0	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	18.6	16.7
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>▲ 93</b>	38	32
Boron	ppm	ASTM D5185m	0	<b>5</b>	7	15
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	62	64
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>876</b>	947	973
Calcium	ppm	ASTM D5185m	1070	<b>1071</b>	1068	1153
Phosphorus	ppm	ASTM D5185m	1150	<b>960</b>	1014	1083
Zinc	ppm	ASTM D5185m	1270	<b>1145</b>	1225	1350
Sulfur	ppm	ASTM D5185m	2060	<b>3006</b>	3051	3971
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.0</b>	14.0	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.2</b>	8.9	11.6
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	13.5	12.9



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0104073  
**Lab Number** : 06148288  
**Unique Number** : 10978366  
**Test Package** : FLEET  
**Received** : 15 Apr 2024  
**Tested** : 15 Apr 2024  
**Diagnosed** : 17 Apr 2024 - Jonathan Hester

**GFL Environmental - 028 - Weldon**  
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 T: (252)532-3344  
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Certificate L2367  
 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)