



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

Machine Id  
**413105**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

**RECOMMENDATION**

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0117313</b>	GFL0099602	GFL0091555
Sample Date		Client Info		<b>12 Apr 2024</b>	19 Dec 2023	03 Oct 2023
Machine Age	kms	Client Info		<b>92444</b>	65004	0
Oil Age	kms	Client Info		<b>0</b>	0	46601
Filter Age	kms	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>80	<b>25</b>	20	20
Chromium	ppm	ASTM D5185(m)	>5	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	<b>7</b>	12	10
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>150	<b>1</b>	<1	1
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

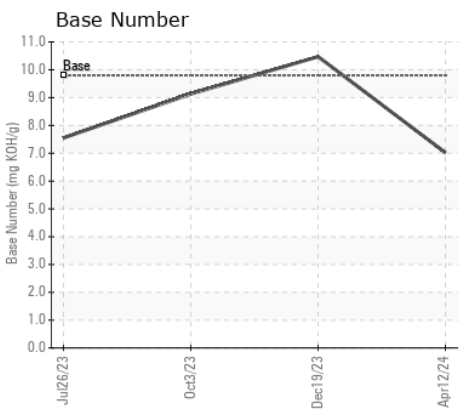
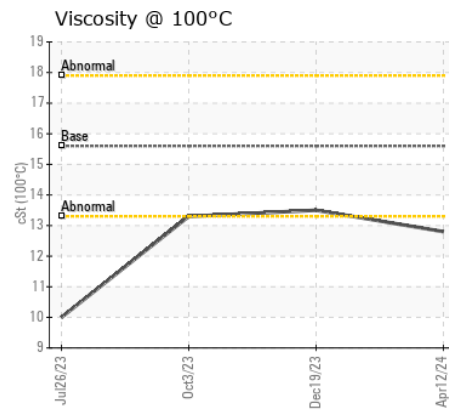
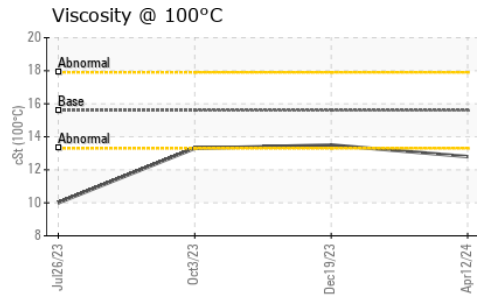
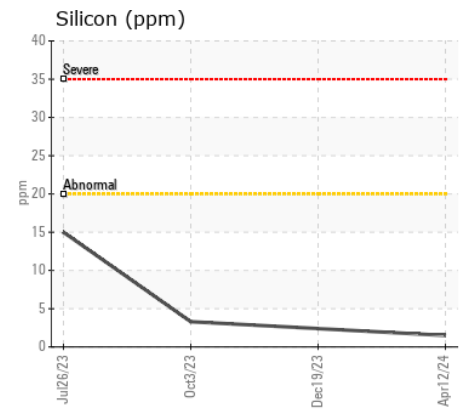
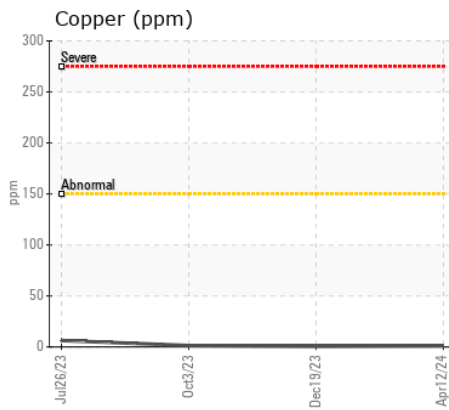
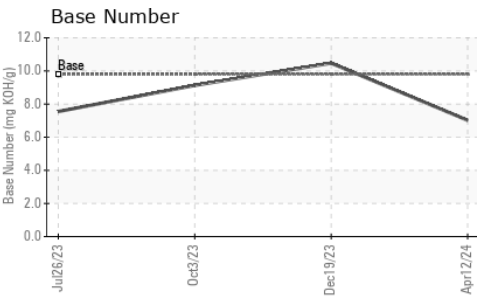
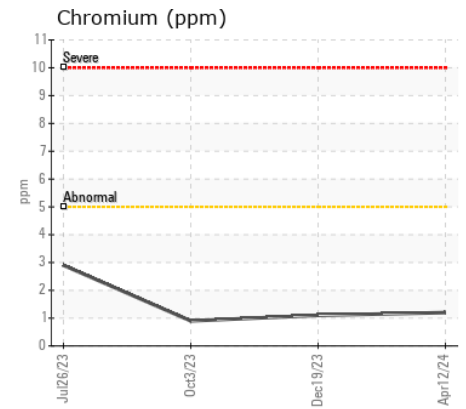
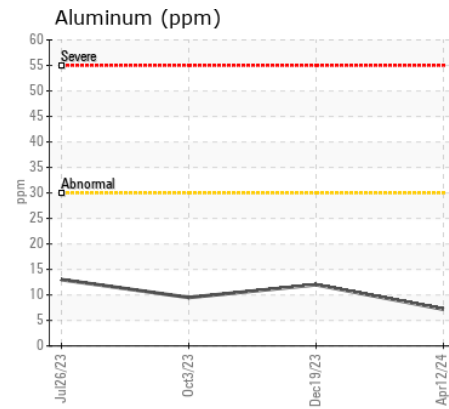
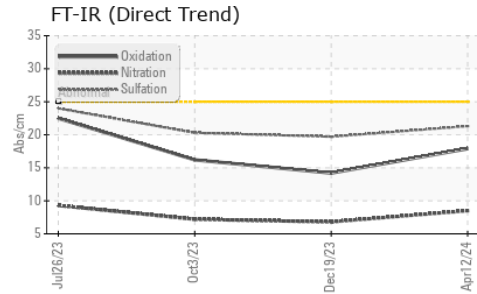
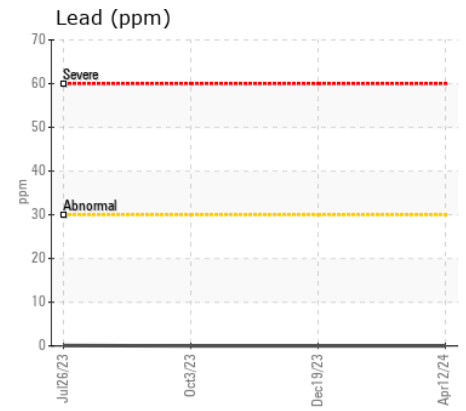
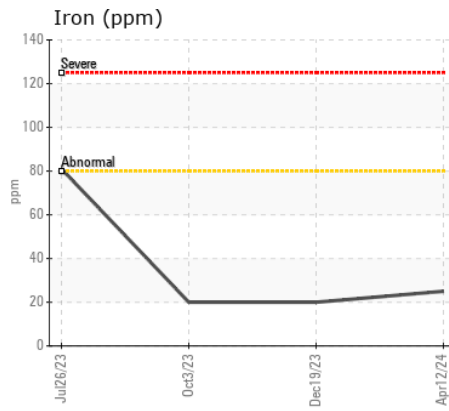
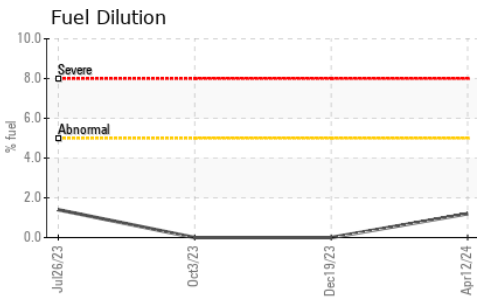
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>2</b>	2	3
Potassium	ppm	ASTM D5185(m)	>20	<b>10</b>	18	20
Fuel	%	ASTM D7593*	>5	<b>1.2</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>0.5</b>	0.5	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.5</b>	6.8	7.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.3</b>	19.7	20.3
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 D5185(m)		<b>5</b>	3	4
Boron	ppm	ASTM D5185(m)	0	<b>3</b>	3	4
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	<b>55</b>	56	57
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>931</b>	908	896
Calcium	ppm	ASTM D5185(m)	1070	<b>1032</b>	1026	1060
Phosphorus	ppm	ASTM D5185(m)	1150	<b>913</b>	952	954
Zinc	ppm	ASTM D5185(m)	1270	<b>1062</b>	1117	1148
Sulfur	ppm	ASTM D5185(m)	2060	<b>2006</b>	2506	2425
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.9</b>	14.2	16.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>7.02</b>	10.47	9.13
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>12.8</b>	13.5	13.3



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0117313 **Received** : 23 Apr 2024  
**Lab Number** : 02630891 **Tested** : 24 Apr 2024  
**Unique Number** : 5772044 **Diagnosed** : 24 Apr 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 550 - Rocky View County**  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.