

Machine Id  
**930020**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0117262</b>	GFL0117351	GFL0084300
Sample Date		Client Info		<b>11 Jun 2024</b>	07 May 2024	04 Jan 2024
Machine Age	hrs	Client Info		<b>6765</b>	6473	5499
Oil Age	hrs	Client Info		<b>299</b>	967	1010
Filter Age	hrs	Client Info		<b>299</b>	967	1010
Filter 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**

All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>100	<b>31</b>	58	17
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	3	1
Nickel	ppm	ASTM D5185(m)	>4	<b>1</b>	2	<1
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>3</b>	6	2
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

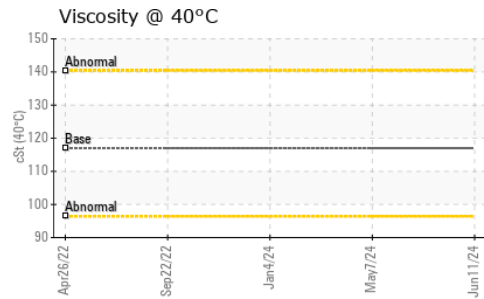
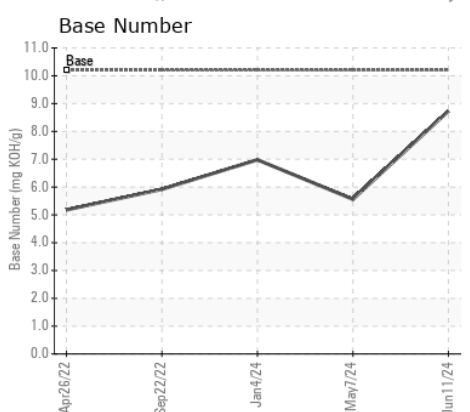
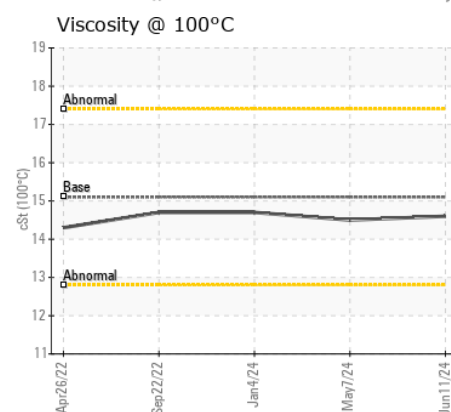
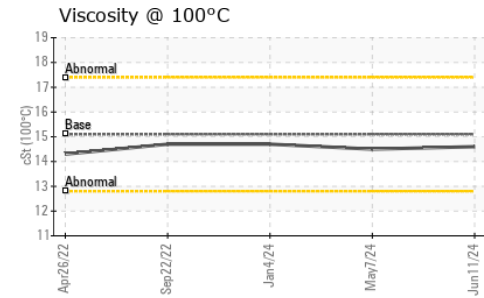
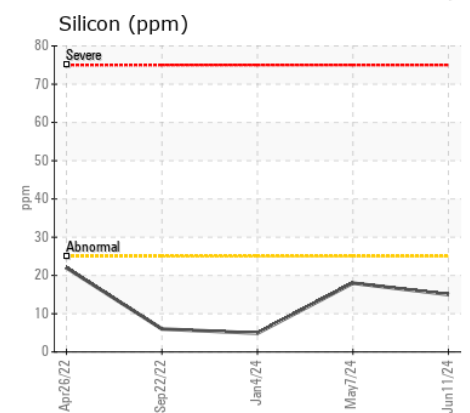
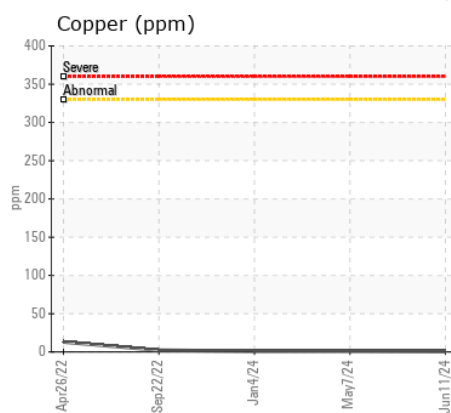
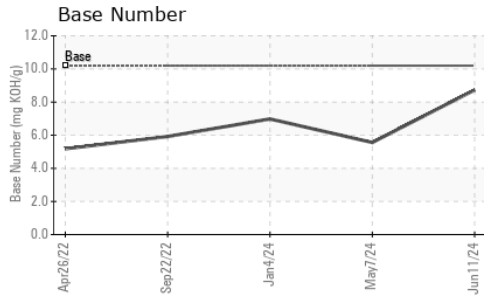
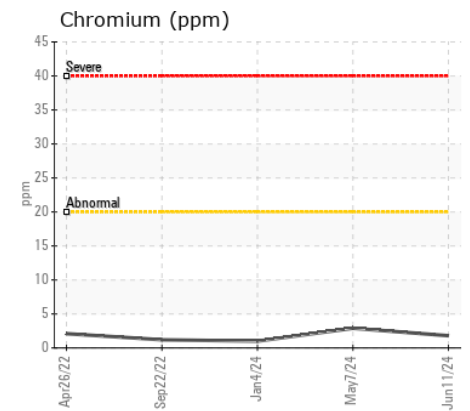
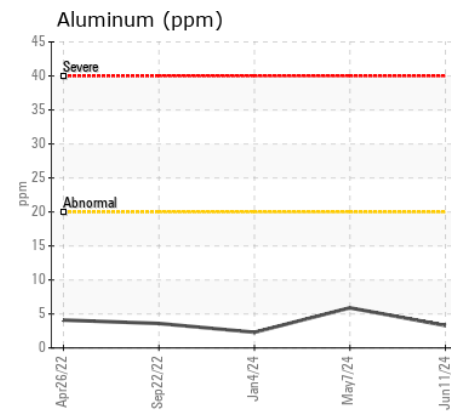
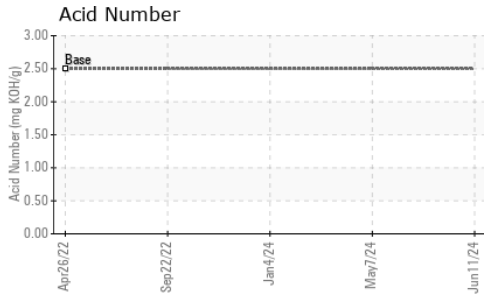
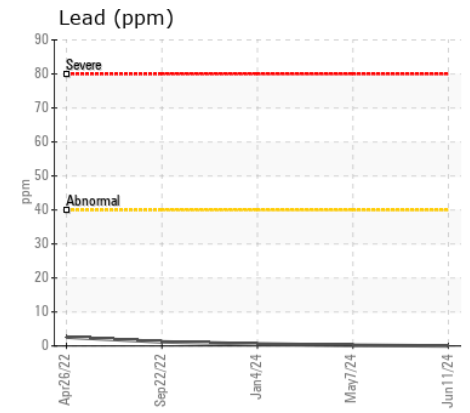
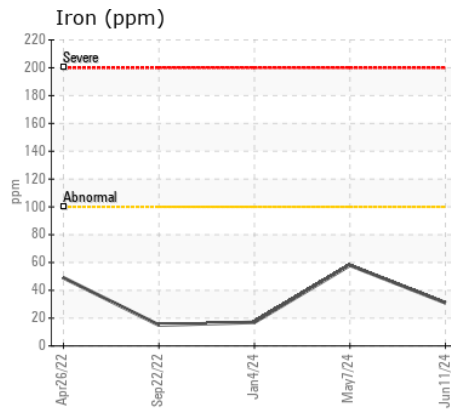
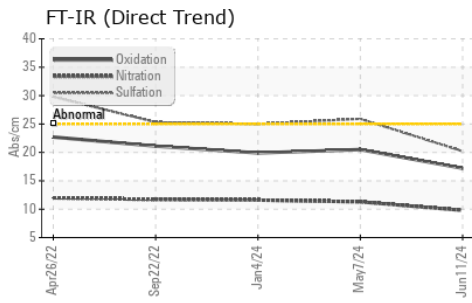
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>15</b>	18	5
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	<1
Fuel		WC Method	>5	<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*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.8</b>	11.3	11.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.2</b>	25.9	25.0
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>7</b>	12	7
Boron	ppm	ASTM D5185(m)	50	<b>14</b>	8	12
Barium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>50</b>	61	55
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185(m)	560	<b>521</b>	551	571
Calcium	ppm	ASTM D5185(m)	1510	<b>1522</b>	1657	1672
Phosphorus	ppm	ASTM D5185(m)	780	<b>706</b>	706	715
Zinc	ppm	ASTM D5185(m)	870	<b>860</b>	904	921
Sulfur	ppm	ASTM D5185(m)	2040	<b>1932</b>	1936	2055
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.2</b>	20.5	19.9
Acid Number (AN)	mg KOH/g	ASTM D974*	2.5	<b>2.22</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	<b>8.73</b>	5.56	6.98
Visc @ 40°C	cSt	ASTM D7279(m)	117.0	<b>114</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	<b>14.6</b>	14.5	14.7
Viscosity Index (VI)	Scale	ASTM D2270*	134	<b>130</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0117262  
**Lab Number** : 02642366  
**Unique Number** : 5799905  
**Test Package** : MOB 2 ( Additional Tests: KV40, PQ, TAN Auto, TAN Man, VI, Visual )

**GFL Environmental - 550 - Rocky View County**  
 220 Carmek Blvd  
 Rocky View County, AB  
 CA T1X 1X1  
 Contact: GFL Calgary  
 calgarymaintenance@gflenv.com

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.

T:  
 F: (403)369-6163