

Machine Id  
**FREIGHTLINER 159**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 10W30 (18 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0083438</b>	PC0081953	PC0071668
Sample Date		Client Info		<b>10 May 2024</b>	30 Nov 2023	13 Jun 2023
Machine Age	kms	Client Info		<b>79880</b>	55071	26158
Oil Age	kms	Client Info		<b>24809</b>	28913	26158
Filter Age	kms	Client Info		<b>24809</b>	28913	26158
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>74</b>	81	99
Chromium	ppm	ASTM D5185(m)	>5	<b>3</b>	3	3
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>8</b>	7	14
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>150	<b>2</b>	5	34
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

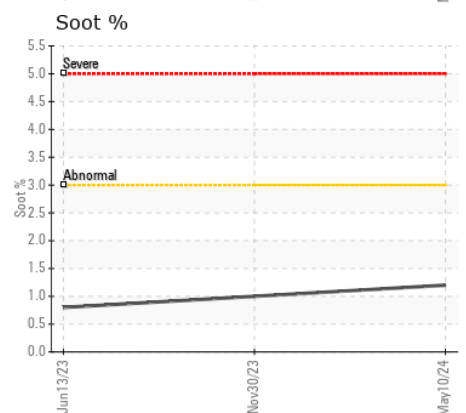
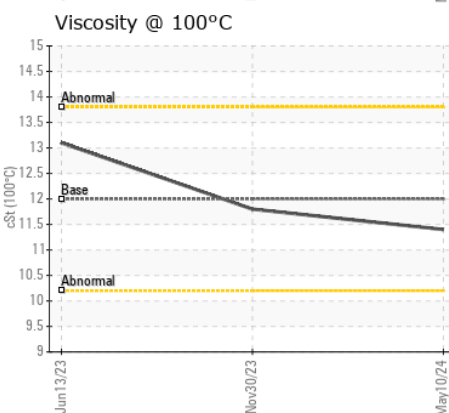
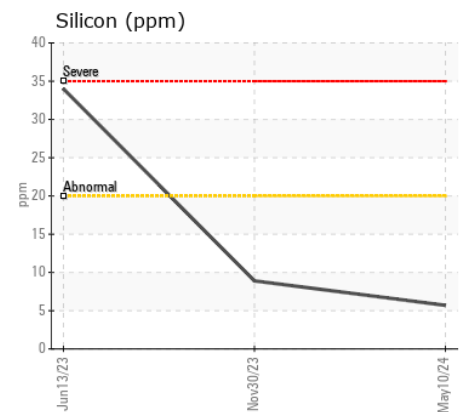
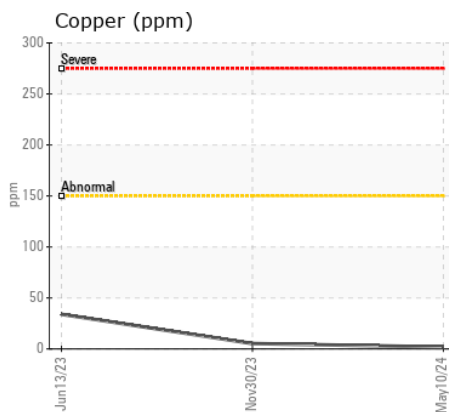
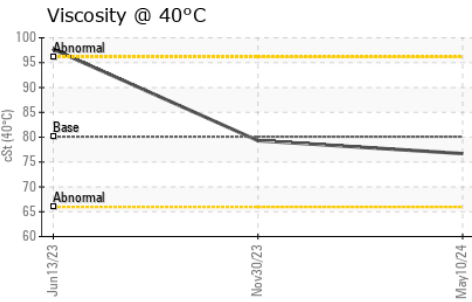
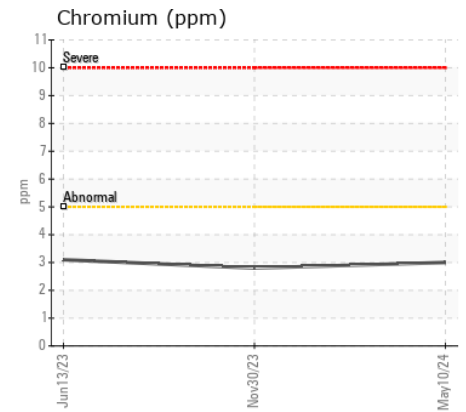
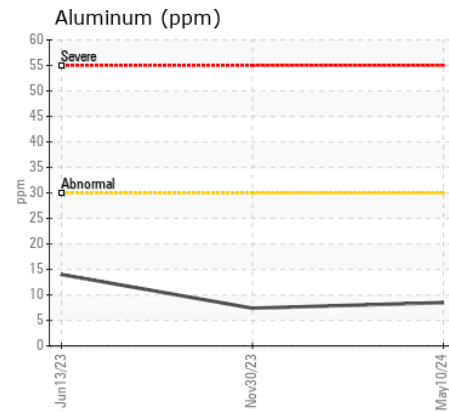
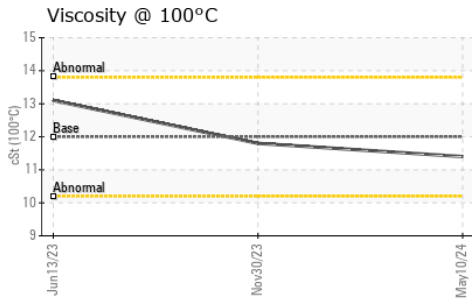
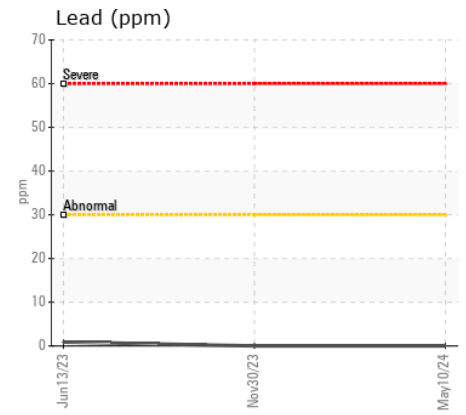
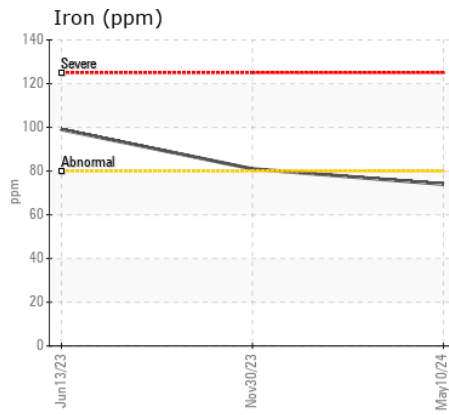
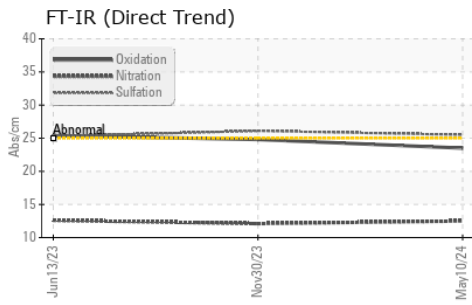
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>6</b>	9	34
Potassium	ppm	ASTM D5185(m)	>20	<b>20</b>	16	23
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>1.2</b>	1	0.8
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.5</b>	12.1	12.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>25.5</b>	26.1	25.3
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	4	7
Boron	ppm	ASTM D5185(m)	2	<b>4</b>	3	44
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	5
Molybdenum	ppm	ASTM D5185(m)	50	<b>61</b>	62	103
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	7
Magnesium	ppm	ASTM D5185(m)	950	<b>977</b>	942	672
Calcium	ppm	ASTM D5185(m)	1050	<b>1107</b>	1090	1375
Phosphorus	ppm	ASTM D5185(m)	995	<b>976</b>	950	749
Zinc	ppm	ASTM D5185(m)	1180	<b>1206</b>	1174	840
Sulfur	ppm	ASTM D5185(m)	2600	<b>2310</b>	2467	2307
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>23.5</b>	24.8	25.4
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	<b>76.7</b>	79.3	97.7
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	<b>11.4</b>	11.8	13.1
Viscosity Index (VI)	Scale	ASTM D2270*	144	<b>140</b>	142	131



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0083438  
**Lab Number** : 02635463  
**Unique Number** : 5776616  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

**ROSS TOWING & TRANSPORTATION SERVICES INC**  
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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.*