

Machine Id  
**KENWORTH 2048**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SAE 10W30 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0083177</b>	PC0083168	PC0046908
Sample Date		Client Info		<b>05 Mar 2024</b>	31 Jan 2024	11 Jul 2023
Machine Age	kms	Client Info		<b>56338</b>	53090	122377
Oil Age	kms	Client Info		<b>35000</b>	30835	22000
Filter Age	kms	Client Info		<b>35000</b>	30835	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	N/A
Filter Changed		Client Info		<b>Changed</b>	Not Changd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	<b>30</b>	28	33
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>12</b>	12	11
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>5</b>	5	14
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

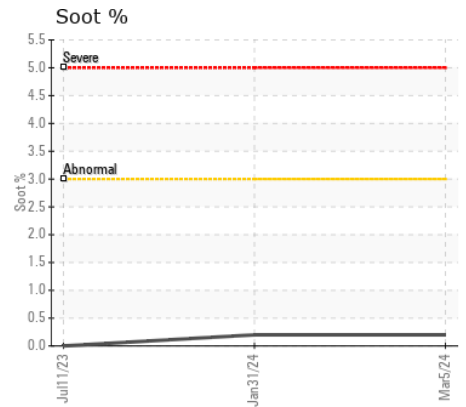
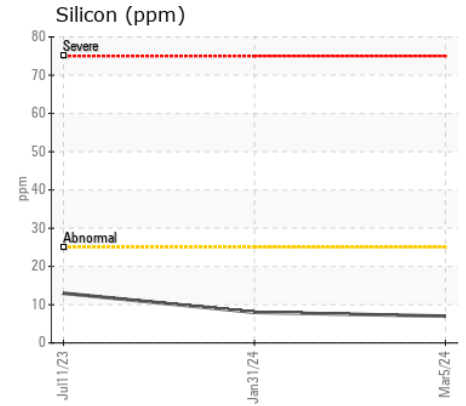
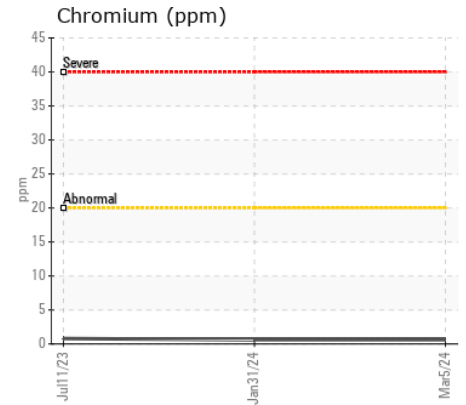
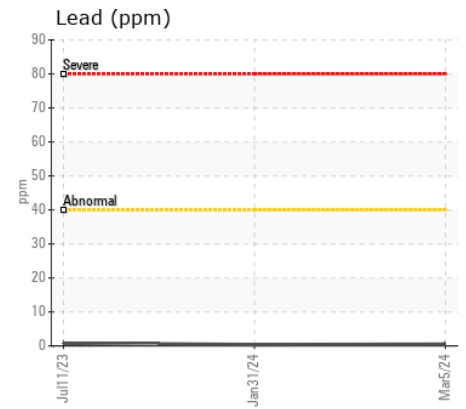
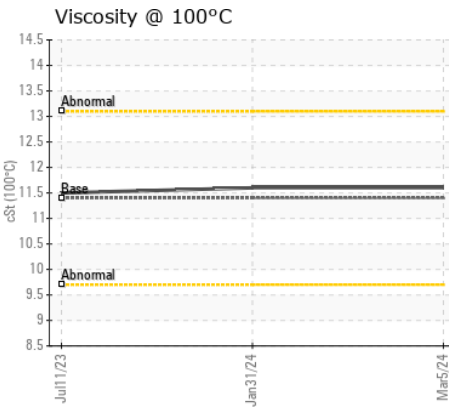
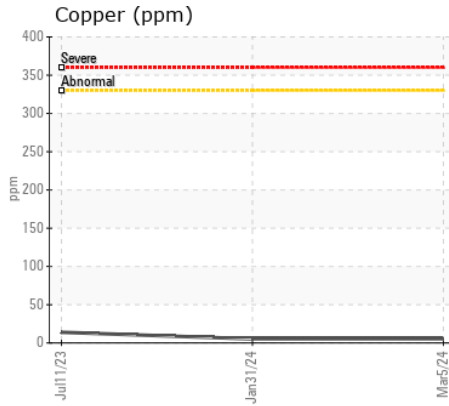
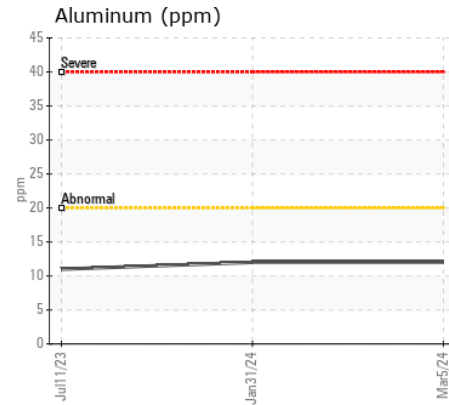
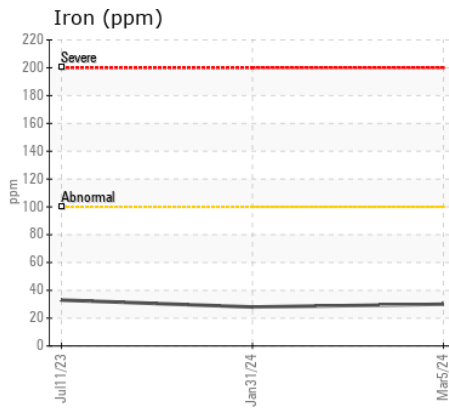
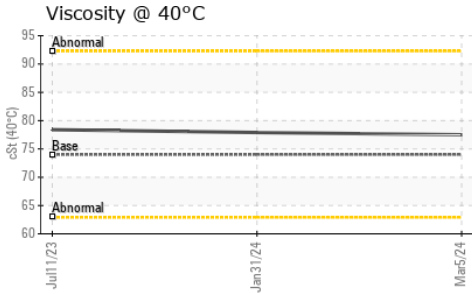
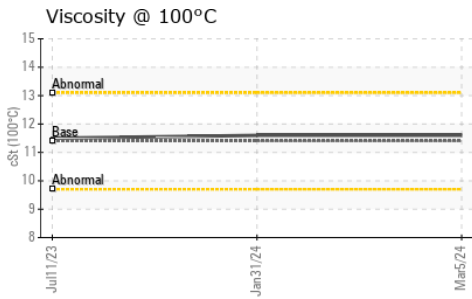
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	8	13
Potassium	ppm	ASTM D5185(m)	>20	<b>32</b>	30	34
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>0.2</b>	0.2	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.1</b>	10.0	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.0</b>	21.7	21.1
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>2</b>	2	4
Boron	ppm	ASTM D5185(m)	1	<b>4</b>	4	39
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185(m)	1	<b>56</b>	55	17
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185(m)	10	<b>934</b>	928	820
Calcium	ppm	ASTM D5185(m)	2942	<b>1192</b>	1188	1358
Phosphorus	ppm	ASTM D5185(m)	1102	<b>1012</b>	1023	861
Zinc	ppm	ASTM D5185(m)	1351	<b>1191</b>	1195	931
Sulfur	ppm	ASTM D5185(m)	3903	<b>2584</b>	2640	2642
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.1</b>	17.5	15.9
Visc @ 40°C	cSt	ASTM D7279(m)	74.0	<b>77.5</b>	77.9	78.4
Visc @ 100°C	cSt	ASTM D7279(m)	11.4	<b>11.6</b>	11.6	11.5
Viscosity Index (VI)	Scale	ASTM D2270*	146	<b>142</b>	141	138



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0083177 **Received** : 08 Mar 2024  
**Lab Number** : 02620750 **Tested** : 08 Mar 2024  
**Unique Number** : 5737860 **Diagnosed** : 08 Mar 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

**B FREGEAU & FILS INC**  
 402 RUE ST DENIS  
 ST ALEXANDRE, QC  
 CA J0J 1S0  
 Contact: Steve M.  
 stevem@bfregeau.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: