



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



Machine Id  
**CATERPILLAR 223-1507**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0072408</b>	PC0073063	PC0072418
Sample Date		Client Info		<b>16 Feb 2024</b>	21 Sep 2023	17 Mar 2023
Machine Age	hrs	Client Info		<b>20487</b>	19858	19353
Oil Age	hrs	Client Info		<b>500</b>	500	500
Filter Age	hrs	Client Info		<b>500</b>	500	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	MARGINAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>18</b>	24	55
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	3	3
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	1	4
Copper	ppm	ASTM D5185(m)	>330	<b>6</b>	9	11
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

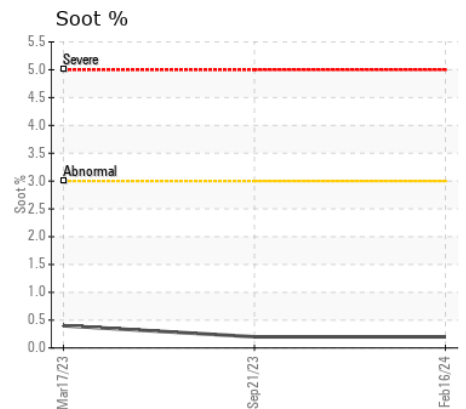
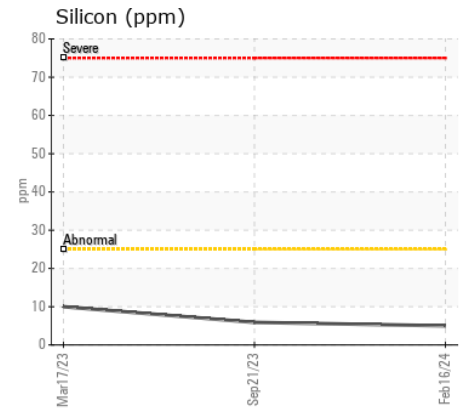
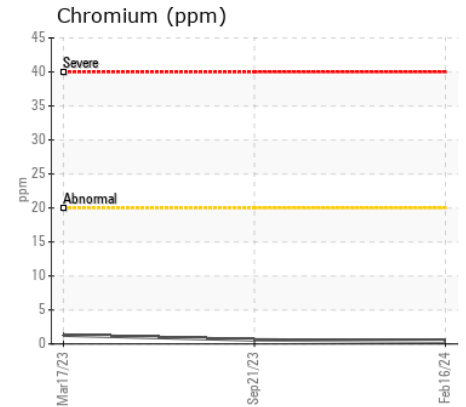
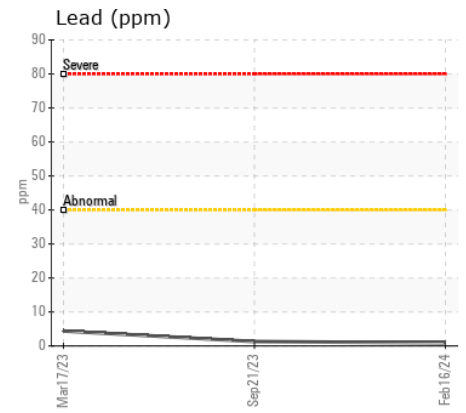
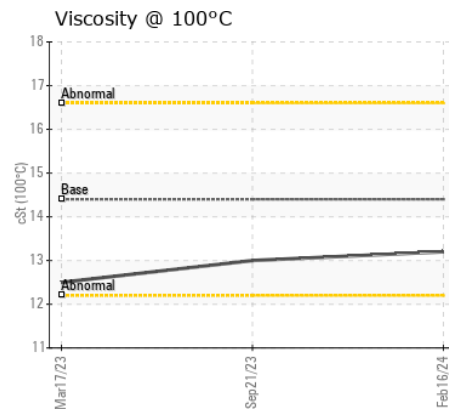
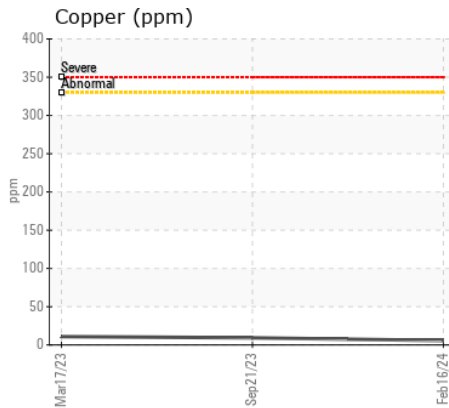
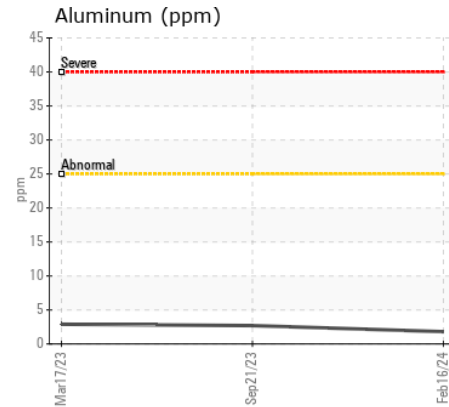
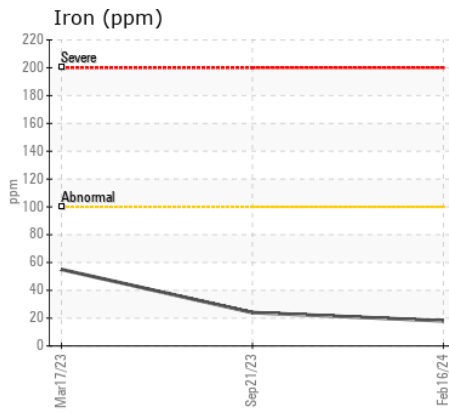
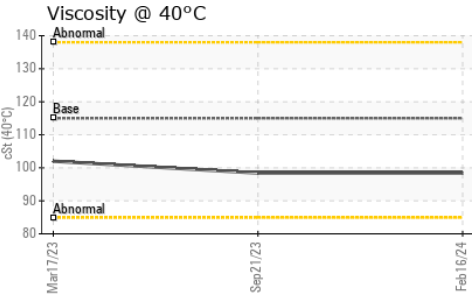
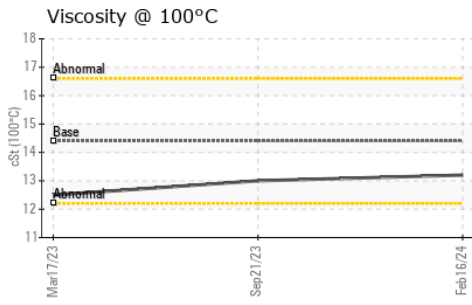
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	6	10
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	1	1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	▲ 2
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	0.4
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.5</b>	9.8	14.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.5</b>	21.8	31.0
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)	>158	<b>4</b>	4	7
Boron	ppm	ASTM D5185(m)	250	<b>10</b>	3	13
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>54</b>	43	25
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>622</b>	658	218
Calcium	ppm	ASTM D5185(m)	3000	<b>1644</b>	1844	2861
Phosphorus	ppm	ASTM D5185(m)	1150	<b>981</b>	982	1053
Zinc	ppm	ASTM D5185(m)	1350	<b>1147</b>	1165	1171
Sulfur	ppm	ASTM D5185(m)	4250	<b>2862</b>	2813	5407
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.6</b>	17.4	24.9
Visc @ 40°C	cSt	ASTM D7279(m)	115	<b>98.4</b>	98.4	102
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>13.2</b>	13.0	12.5
Viscosity Index (VI)	Scale	ASTM D2270*	126	<b>132</b>	129	115



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0072408 **Received** : 28 Feb 2024  
**Lab Number** : 02618636 **Tested** : 28 Feb 2024  
**Unique Number** : 5735746 **Diagnosed** : 28 Feb 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

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.

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