



Machine Id  
**CATERPILLAR MACK**  
Component  
**Diesel Engine**  
Fluid  
**CO-OP D-MO SAE 15W40 (--- GAL)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0061283</b>	---	---
Sample Date		Client Info		<b>15 Dec 2023</b>	---	---
Machine Age	hrs	Client Info		<b>21110</b>	---	---
Oil Age	hrs	Client Info		<b>142</b>	---	---
Filter Age	hrs	Client Info		<b>142</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>SEVERE</b>	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>86	<b>7</b>	---	---
Chromium	ppm	ASTM D5185(m)	>3	<b>0</b>	---	---
Nickel	ppm	ASTM D5185(m)	>3	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>15	<b>5</b>	---	---
Lead	ppm	ASTM D5185(m)	>16	<b>3</b>	---	---
Copper	ppm	ASTM D5185(m)	>250	<b>85</b>	---	---
Tin	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---

**CONTAMINATION**

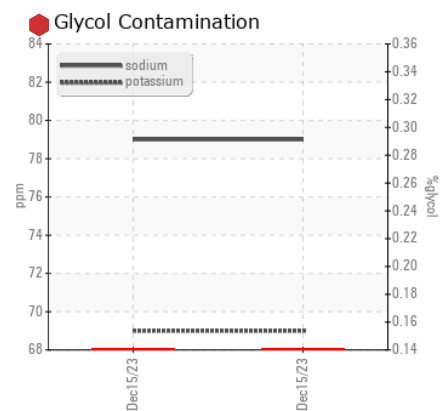
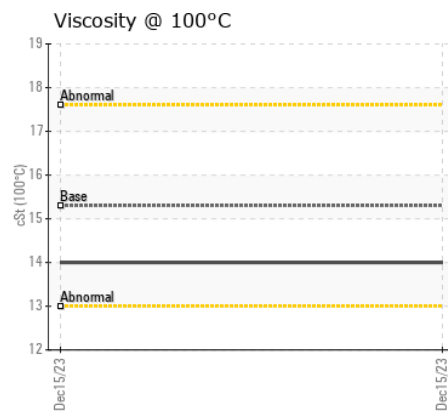
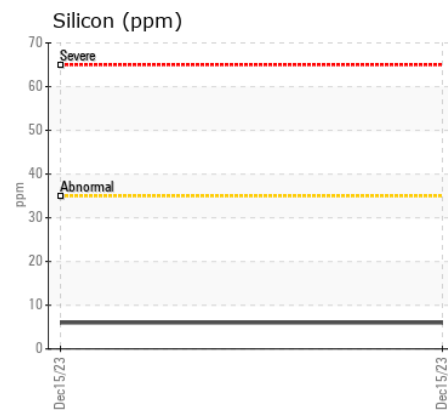
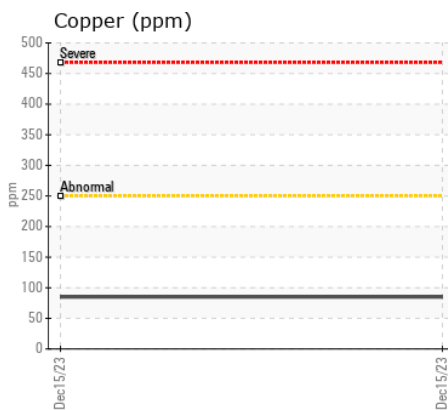
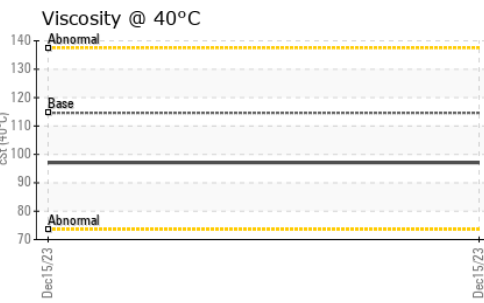
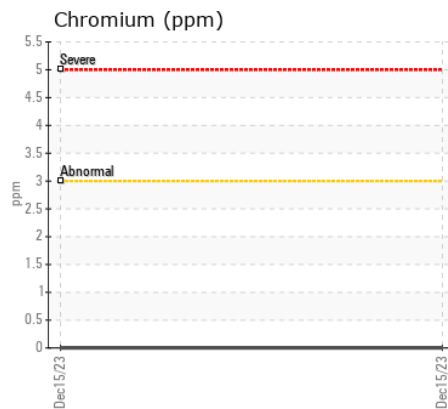
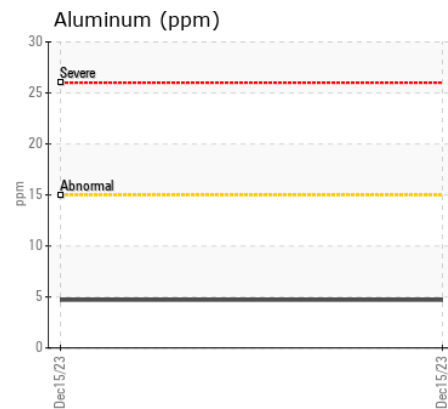
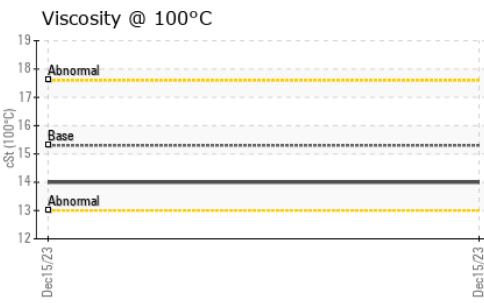
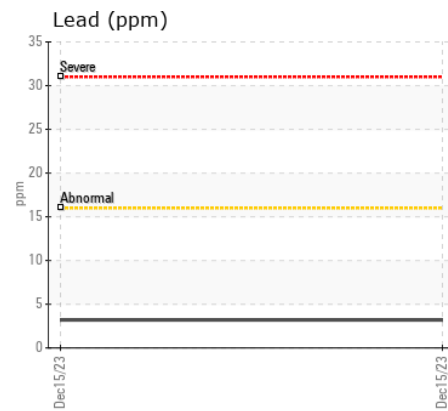
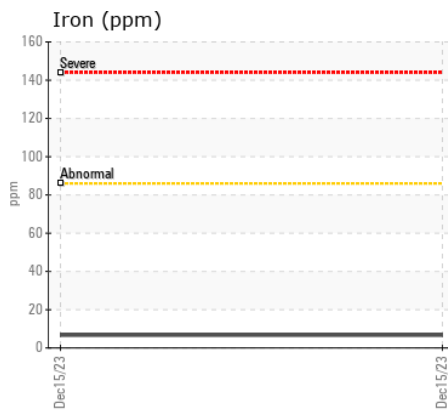
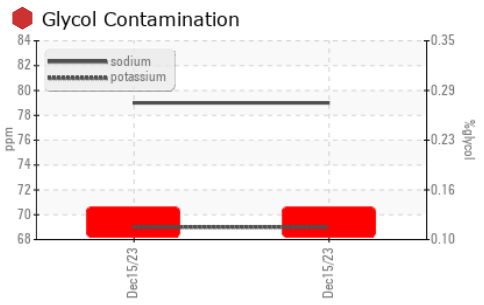
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185(m)	>35	<b>6</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>69</b>	---	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol	%	ASTM D7922*		<b>0.14</b>	---	---
Soot %	%	ASTM D7844*	>3	<b>0</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.6</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>18.5</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

**FLUID CONDITION**

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>79</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>32</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>96</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>19</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>2123</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>1008</b>	---	---
Zinc	ppm	ASTM D5185(m)	1420	<b>1156</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>3362</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>14.3</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	114.6	<b>97.1</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.3	<b>14.0</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	140	<b>147</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0061283 **Received** : 05 Jan 2024  
**Lab Number** : 02606732 **Diagnosed** : 05 Jan 2024  
**Unique Number** : 5707818 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KV40, VI )

**AJ MECHANICAL**  
 BOX 83  
 SWIFT CURRENT, SK  
 CA S9H 3V5  
 Contact: Alex Dmyterko  
 ajmechanical@sasktel.net  
 T: (306)741-9755  
 F: (306)773-7040

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.