



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 303.5 MINI EX2123 (S/N 0CR502472)**  
Component  
**Diesel Engine**  
Fluid  
**DURALENE Dura-Max Xtreme 15W40 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0031326</b>	DC0028889	DC0027527
Sample Date		Client Info		<b>11 Jul 2024</b>	07 Nov 2023	20 Sep 2023
Machine Age	hrs	Client Info		<b>4530</b>	4160	4050
Oil Age	hrs	Client Info		<b>0</b>	110	500
Filter Age	hrs	Client Info		<b>0</b>	110	500
Oil Changed		Client Info		<b>N/A</b>	Not Changd	Changed
Filter Changed		Client Info		<b>N/A</b>	Not Changed	Changed
Sample Status				<b>MARGINAL</b>	SEVERE	SEVERE

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>8</b>	2	27
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	1	5
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	0	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

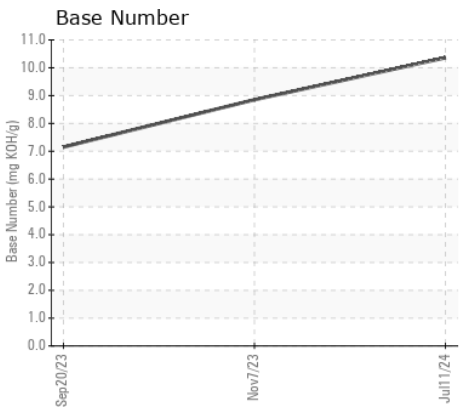
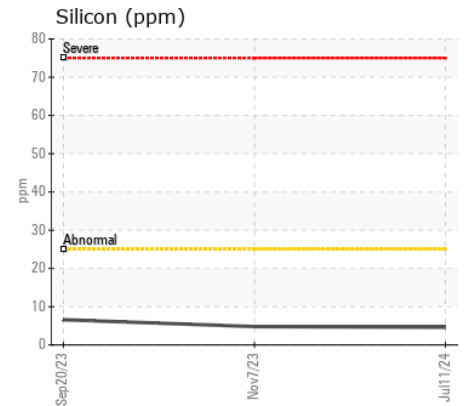
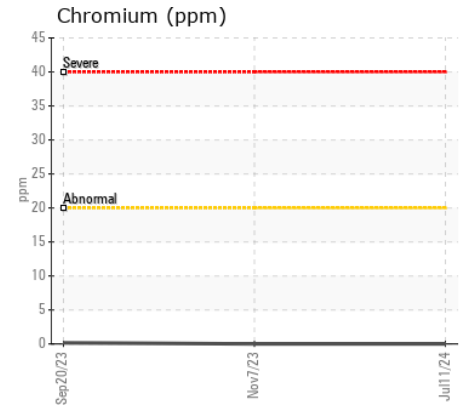
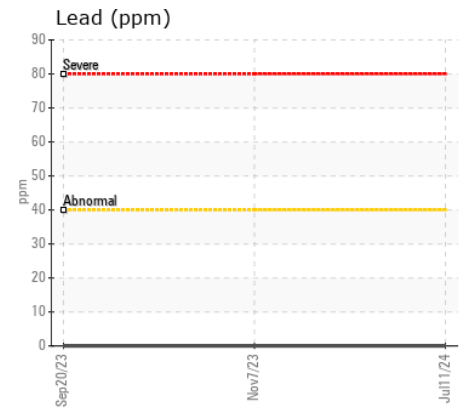
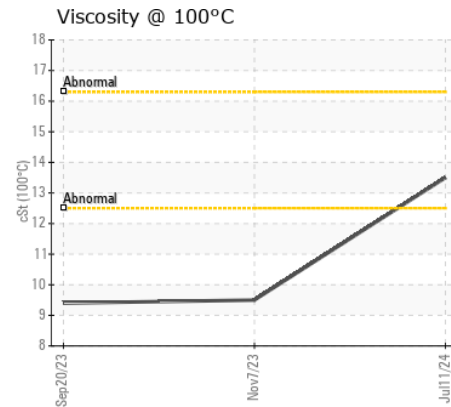
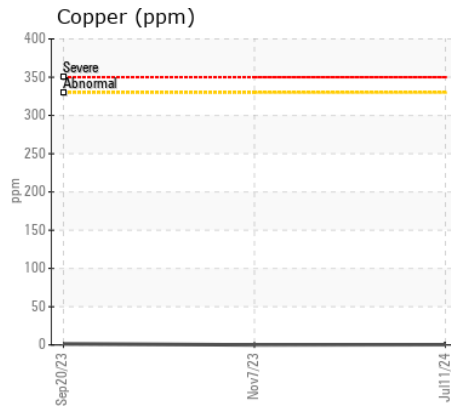
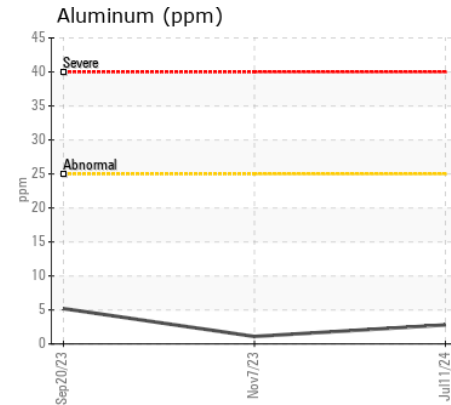
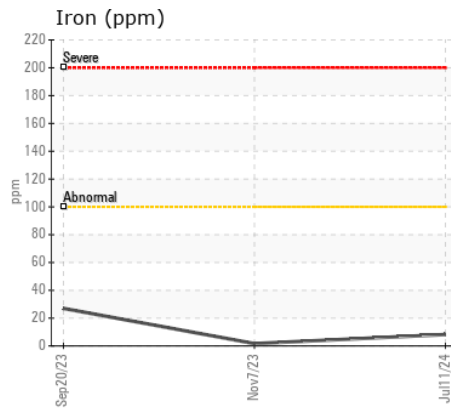
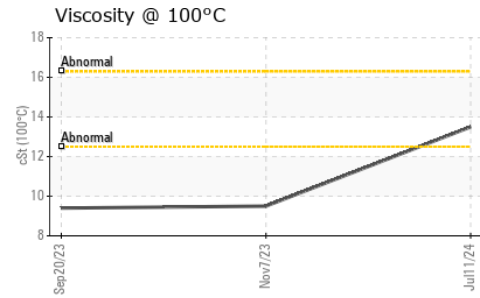
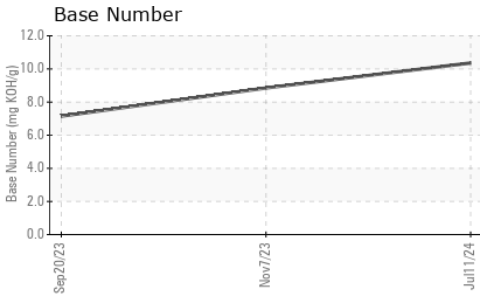
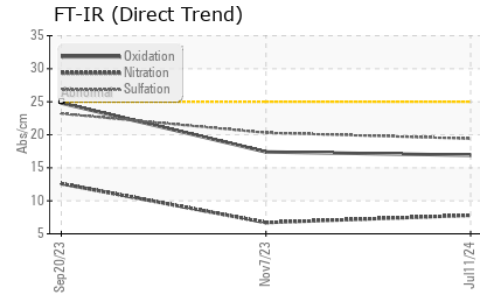
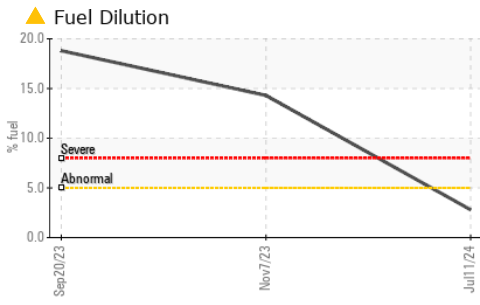
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	7
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Fuel	%	ASTM D3524	>5	<b>▲ 2.8</b>	▲ 14.3	▲ 18.8
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>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	6.7	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.4</b>	20.3	23.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
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 condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	1	3
Boron	ppm	ASTM D5185m		<b>19</b>	59	38
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>58</b>	45	48
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>855</b>	404	479
Calcium	ppm	ASTM D5185m		<b>1387</b>	1467	1659
Phosphorus	ppm	ASTM D5185m		<b>1114</b>	683	836
Zinc	ppm	ASTM D5185m		<b>1352</b>	921	1071
Sulfur	ppm	ASTM D5185m		<b>4015</b>	2642	2662
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	17.4	24.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.36</b>	8.85	7.15
Visc @ 100°C	cSt	ASTM D445		<b>13.5</b>	▲ 9.5	▲ 9.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0031326 **Received** : 12 Jul 2024  
**Lab Number** : 06235134 **Tested** : 16 Jul 2024  
**Unique Number** : 11123968 **Diagnosed** : 16 Jul 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: PercentFuel )

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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