



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 335FL EX78 (S/N KNE00487)**  
Component  
**Diesel Engine**  
Fluid  
**DURALENE Dura-Max 15W40 (--- QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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>DC0034512</b>	DC0026626	DCM1036769
Sample Date		Client Info		<b>22 Jan 2024</b>	27 Mar 2023	19 Jul 2022
Machine Age	hrs	Client Info		<b>6260</b>	5694	5258
Oil Age	hrs	Client Info		<b>500</b>	500	0
Filter Age	hrs	Client Info		<b>500</b>	500	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>50</b>	33	11
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>▲ 28</b>	10	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>6</b>	19	10
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

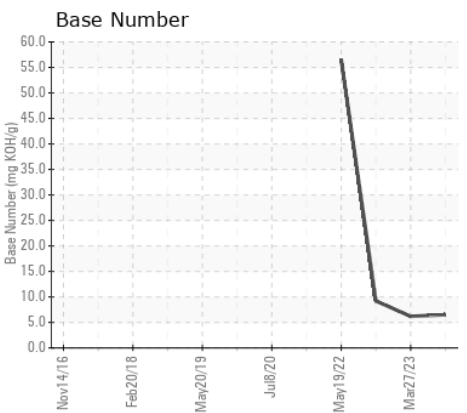
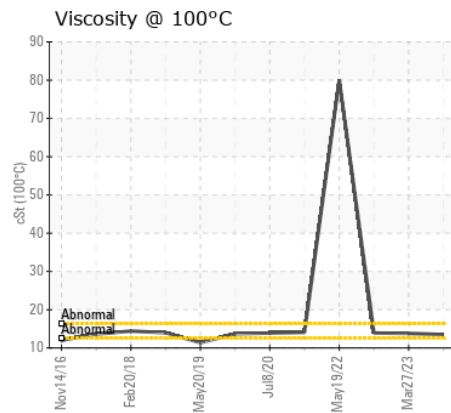
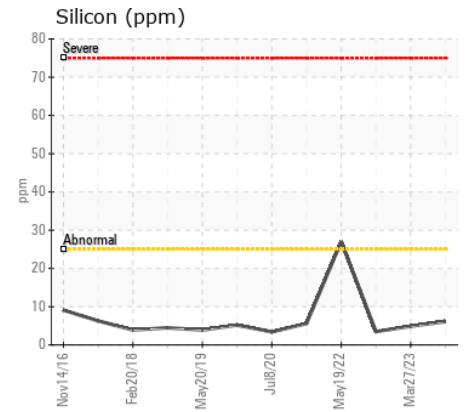
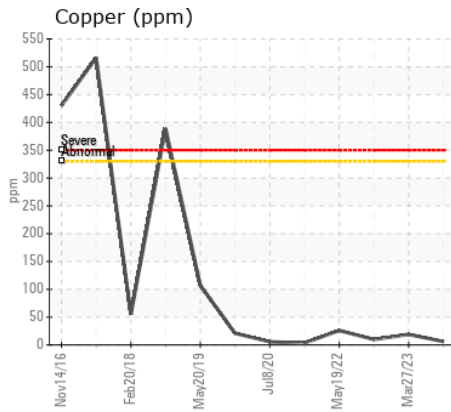
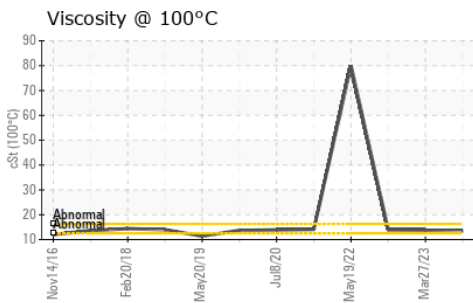
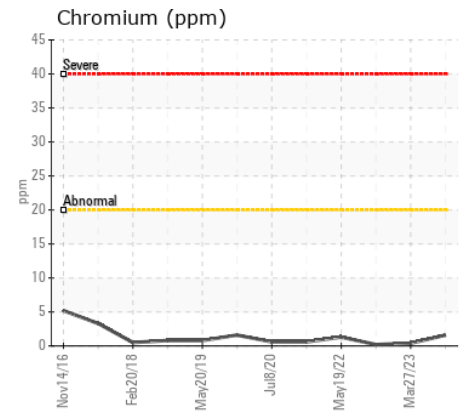
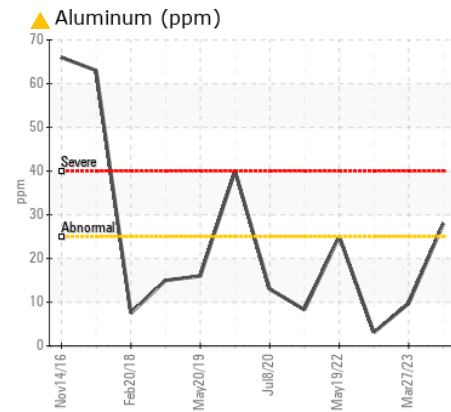
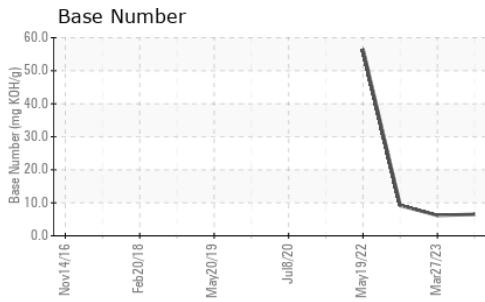
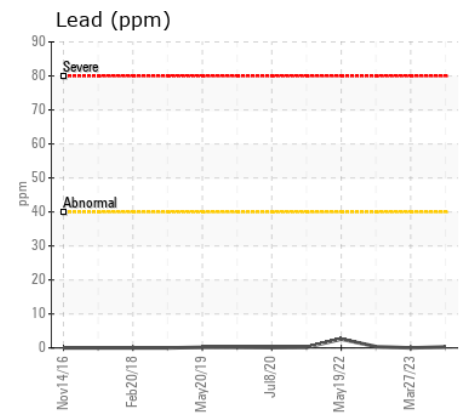
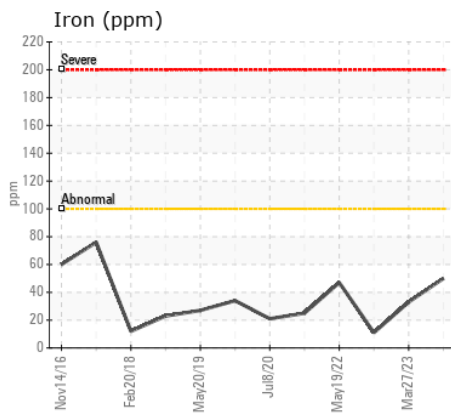
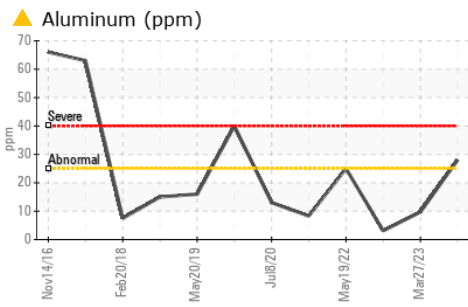
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	5	2
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>	0.0	0.0
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	7.3	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.3</b>	17.0	17.6
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>16</b>	92	76
Boron	ppm	ASTM D5185m		<b>3</b>	2	7
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>5</b>	7	7
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>52</b>	45	39
Calcium	ppm	ASTM D5185m		<b>2443</b>	2337	2331
Phosphorus	ppm	ASTM D5185m		<b>904</b>	850	875
Zinc	ppm	ASTM D5185m		<b>1173</b>	1031	1038
Sulfur	ppm	ASTM D5185m		<b>3732</b>	3878	4294
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.7</b>	10.1	9.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.5</b>	6.2	9.2
Visc @ 100°C	cSt	ASTM D445		<b>13.5</b>	13.8	13.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0034512 **Received** : 09 Feb 2024  
**Lab Number** : 06085204 **Tested** : 12 Feb 2024  
**Unique Number** : 10872649 **Diagnosed** : 12 Feb 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**ROSS CONTRACTING INC.**  
 1007 RISING RIDGE ROAD  
 MOUNT AIRY, MD  
 US 21771

Contact: JONATHAN KUENTZ  
 jonathank@rosscontracting.com

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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