



**LEAHY-WOLF**  
Lubricating specialists since 1946

OIL ANALYSIS REPORT

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

Machine Id  
**CCC 4000**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LW0008627</b>	LW0007257	LW0007884
Sample Date		Client Info		<b>27 Jan 2024</b>	06 Nov 2023	14 Sep 2023
Machine Age	mls	Client Info		<b>0</b>	0	0
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	SEVERE	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>13</b>	13	12
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>4</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

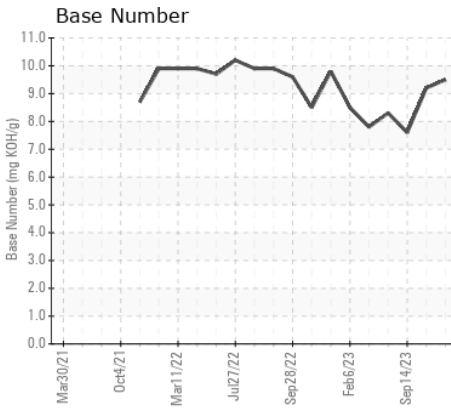
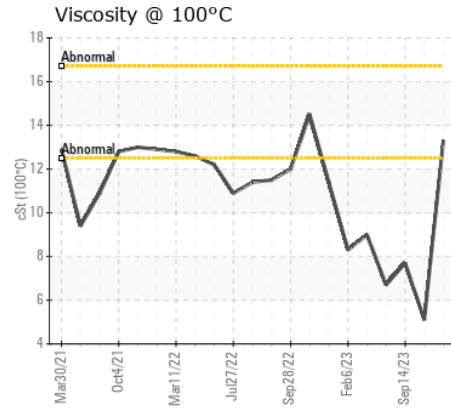
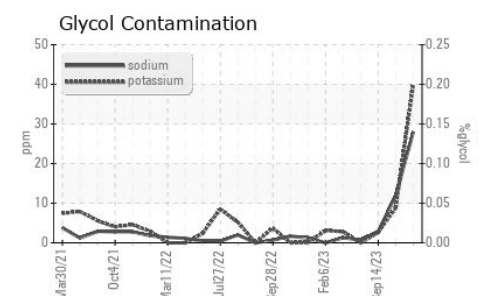
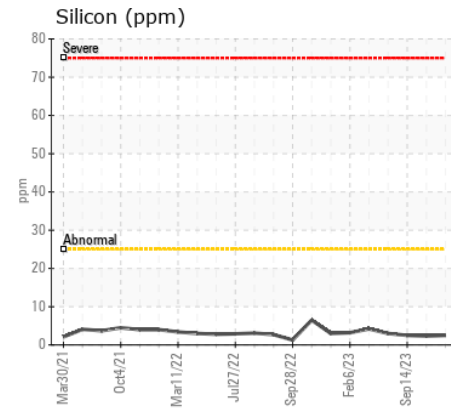
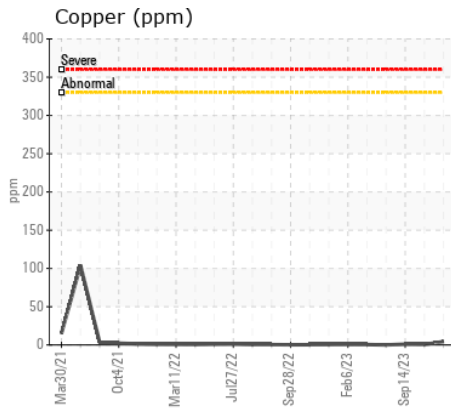
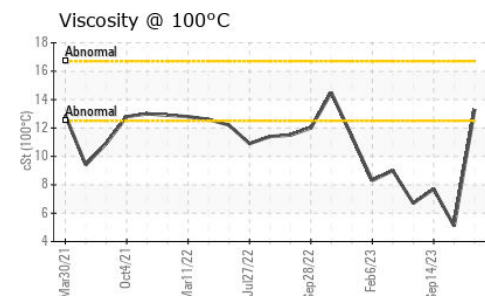
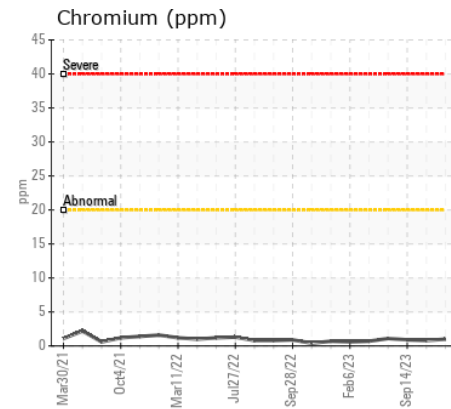
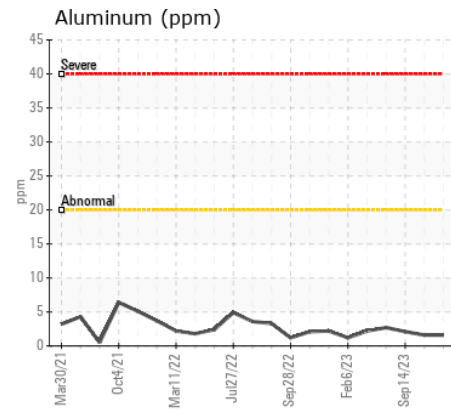
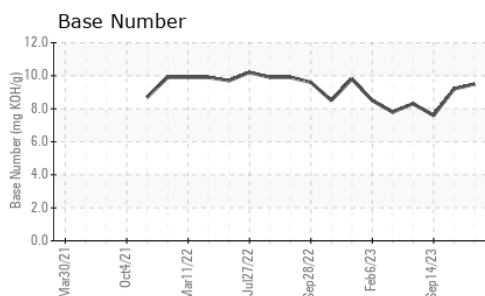
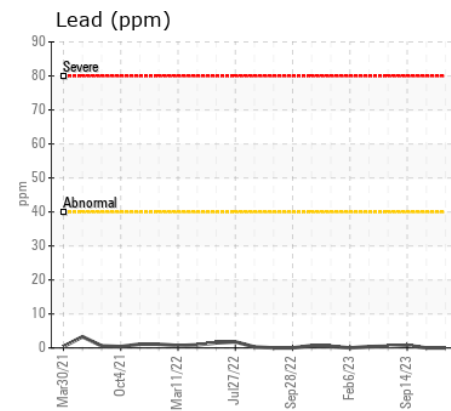
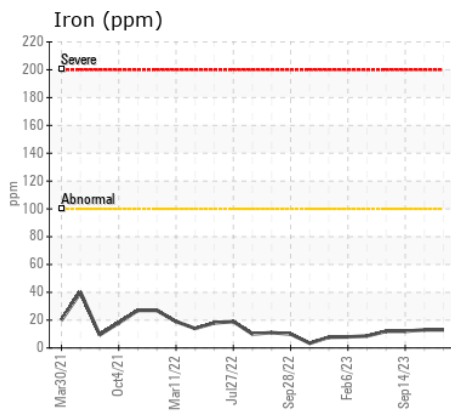
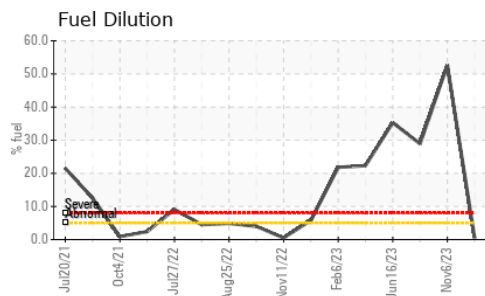
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>40</b>	9	3
Fuel	%	ASTM D3524	>5	<b>0.5</b>	52.6	28.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.1</b>	9.0	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.0</b>	16.1	17.2
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>28</b>	12	3
Boron	ppm	ASTM D5185m		<b>2</b>	0	3
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>65</b>	34	45
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>900</b>	514	788
Calcium	ppm	ASTM D5185m		<b>1022</b>	572	901
Phosphorus	ppm	ASTM D5185m		<b>1017</b>	566	832
Zinc	ppm	ASTM D5185m		<b>1164</b>	695	1010
Sulfur	ppm	ASTM D5185m		<b>3309</b>	1635	2987
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	11.3	11.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.5</b>	9.2	7.6
Visc @ 100°C	cSt	ASTM D445		<b>13.3</b>	5.1	7.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LW0008627  
**Lab Number** : 06076737  
**Unique Number** : 10858828  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PercentFuel, TBN )  
**Received** : 01 Feb 2024  
**Tested** : 05 Feb 2024  
**Diagnosed** : 05 Feb 2024 - Jonathan Hester

**LRS - NILES**  
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 US 49120  
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 josepha@michianarecyclinganddisposal.com  
 T: (269)845-3153  
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Certificate L2367  
 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)