



**LEAHY-WOLF**  
Lubricating specialists since 1946

**OIL ANALYSIS REPORT**

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



Machine Id  
**MACK 4007**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LW0009379</b>	LW0009038	LW0005164
Sample Date		Client Info		<b>08 Jul 2024</b>	24 Jun 2024	23 Apr 2024
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>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>12</b>	9	14
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	<1
Copper	ppm	ASTM D5185m	>330	<b>0</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

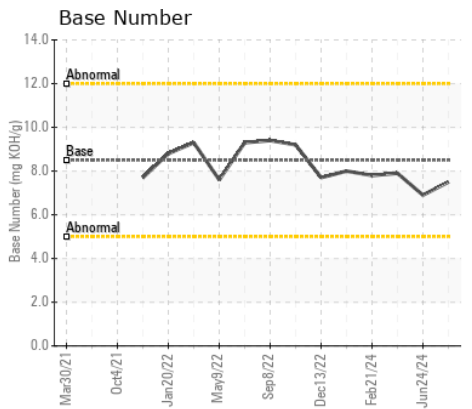
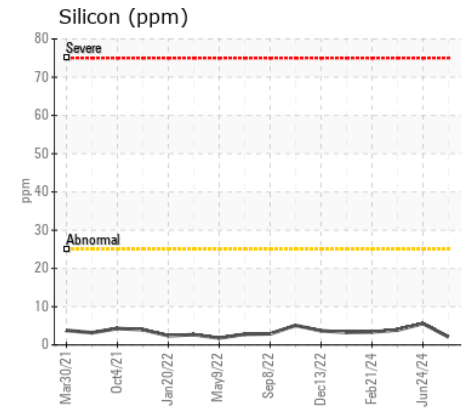
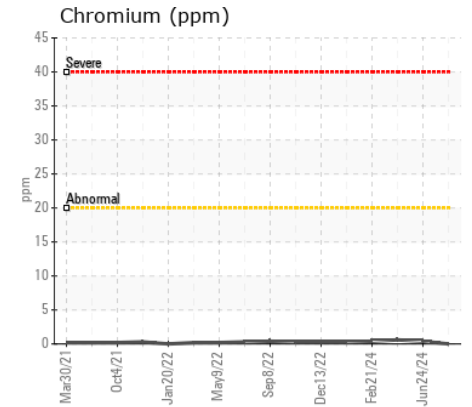
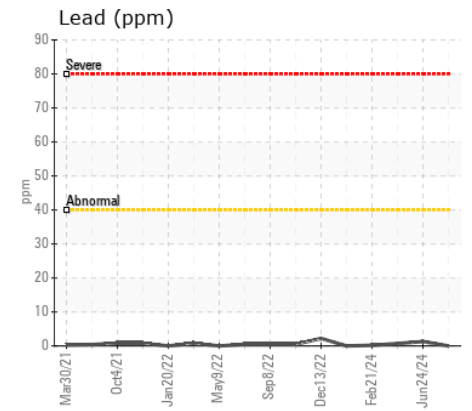
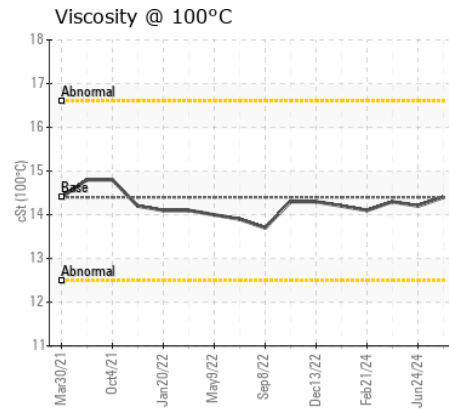
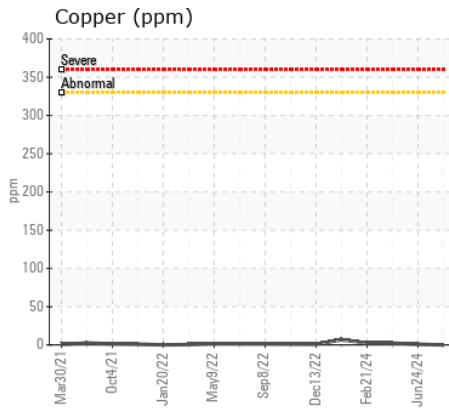
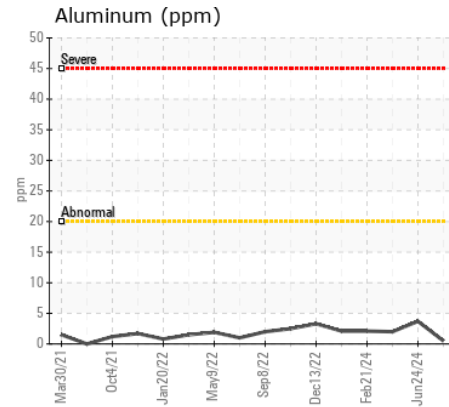
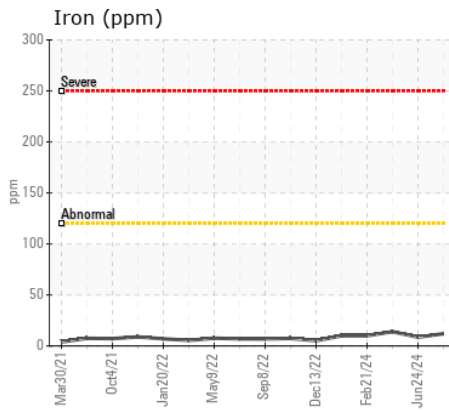
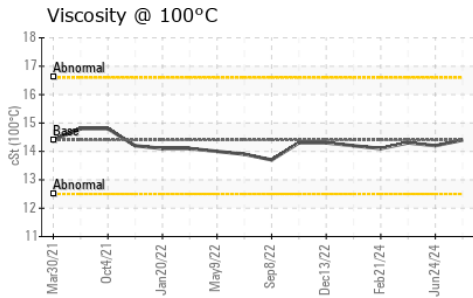
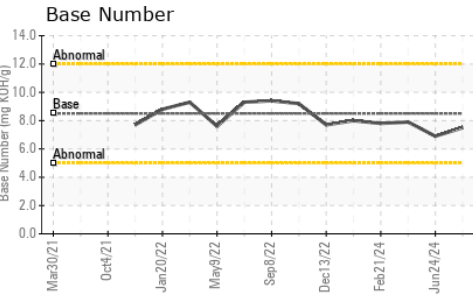
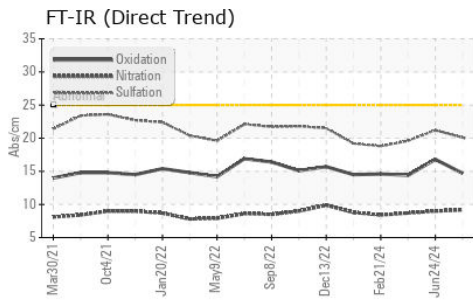
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>2</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	3	3
Fuel		WC Method	>3.0	<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>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>1.3</b>	0.8	1.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	9.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	21.2	19.6
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 suitable for further service.

Sodium	ppm	ASTM D5185m	>216	<b>2</b>	8	<1
Boron	ppm	ASTM D5185m	250	<b>3</b>	2	<1
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m	100	<b>56</b>	63	64
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>997</b>	1037	903
Calcium	ppm	ASTM D5185m	3000	<b>1079</b>	1109	1056
Phosphorus	ppm	ASTM D5185m	1150	<b>1116</b>	1003	1019
Zinc	ppm	ASTM D5185m	1350	<b>1362</b>	1347	1161
Sulfur	ppm	ASTM D5185m	4250	<b>3859</b>	2876	3070
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	16.8	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.5</b>	6.9	7.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.4</b>	14.2	14.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LW0009379  
**Lab Number** : 06232926  
**Unique Number** : 11116419  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 11 Jul 2024  
**Tested** : 11 Jul 2024  
**Diagnosed** : 11 Jul 2024 - Wes Davis

**LRs - NILES**  
 33541 REUM RD  
 NILES, MI  
 US 49120

Contact: JOHN HUGHES  
 johnh@michianarecyclinganddisposal.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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F: