



LEAHY-WOLF
Lubricating specialists since 1946

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
MACK 4006
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		LW0009032	LW0007895	LW0005558
Sample Date		Client Info		14 Mar 2024	10 Oct 2023	06 Jan 2023
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	17	13	6
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	0	4
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

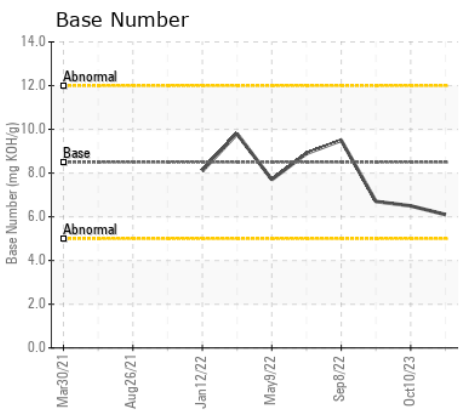
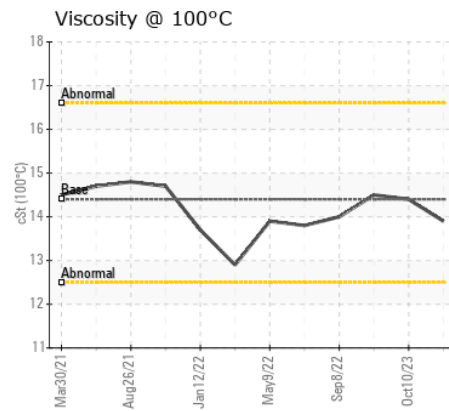
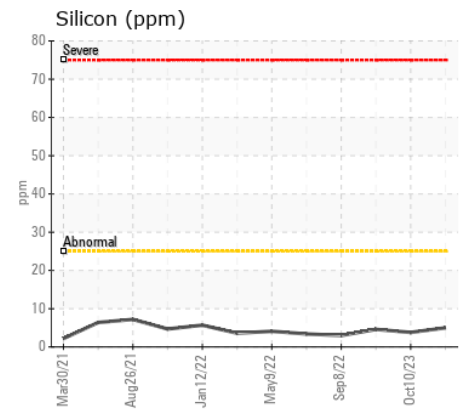
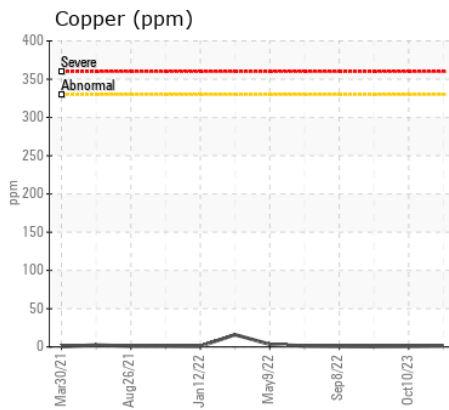
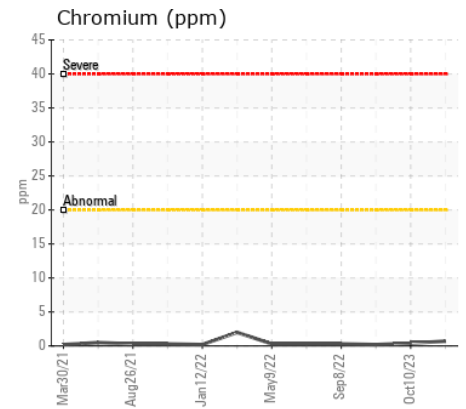
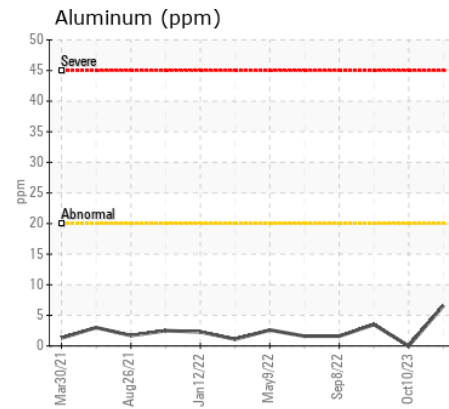
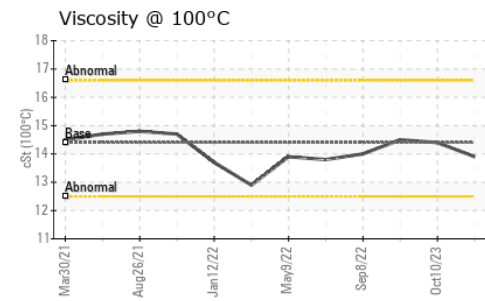
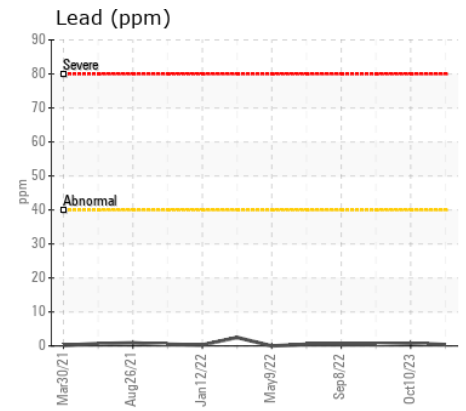
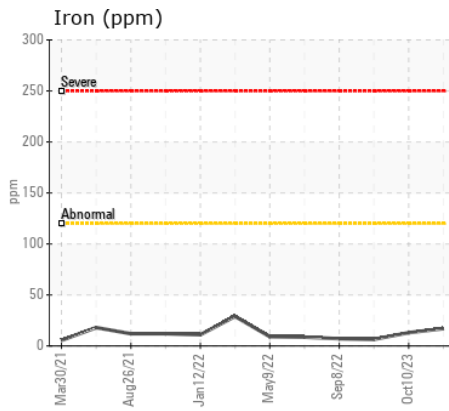
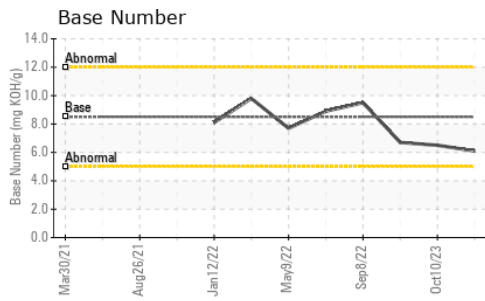
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	5
Potassium	ppm	ASTM D5185m	>20	2	3	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	1	1.1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.7	8.8	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	22.2	21.1
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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	4	2	3
Boron	ppm	ASTM D5185m	250	1	3	28
Barium	ppm	ASTM D5185m	10	0	2	0
Molybdenum	ppm	ASTM D5185m	100	61	57	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	950	892	333
Calcium	ppm	ASTM D5185m	3000	1104	1079	1843
Phosphorus	ppm	ASTM D5185m	1150	1058	968	963
Zinc	ppm	ASTM D5185m	1350	1260	1226	1226
Sulfur	ppm	ASTM D5185m	4250	2825	2959	3645
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	16.6	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.1	6.5	6.7
Visc @ 100°C	cSt	ASTM D445	14.4	13.9	14.4	14.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : LW0009032

Lab Number : 06125469

Unique Number : 10939620

Test Package : MOB 1 (Additional Tests: TBN)

Received : 21 Mar 2024

Tested : 22 Mar 2024

Diagnosed : 22 Mar 2024 - Wes Davis

LRs - NILES

33541 REUM RD

NILES, MI

US 49120

Contact: JOHN HUGHES

johnh@michianarecyclinganddisposal.com

T: (269)684-0900 X:124

F:

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)