



LEAHY-WOLF
Lubricating specialists since 1946

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
MACK 3001
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		LW0009029	LW0008621	LW0007892
Sample Date		Client Info		14 Mar 2024	27 Jan 2024	10 Oct 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	38	31	42
Chromium	ppm	ASTM D5185m	>20	2	<1	1
Nickel	ppm	ASTM D5185m	>5	3	3	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	9	5	0
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	1	2
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

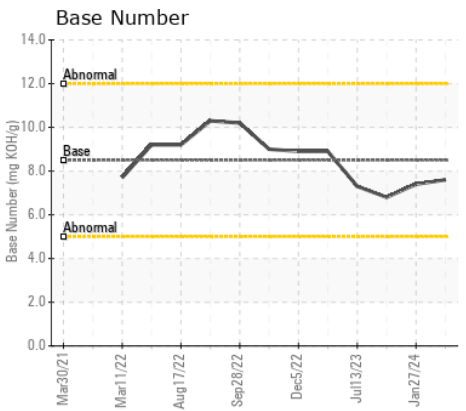
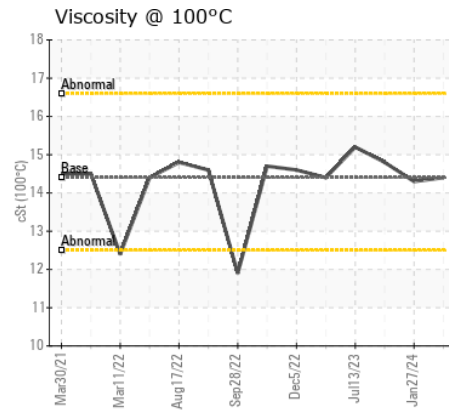
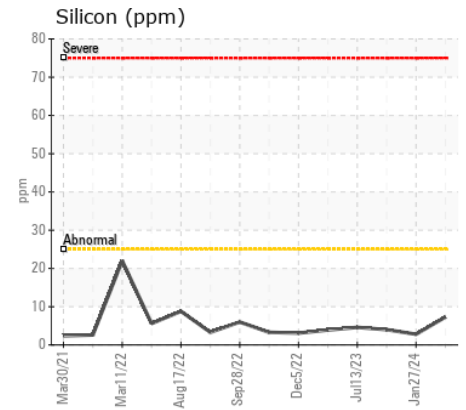
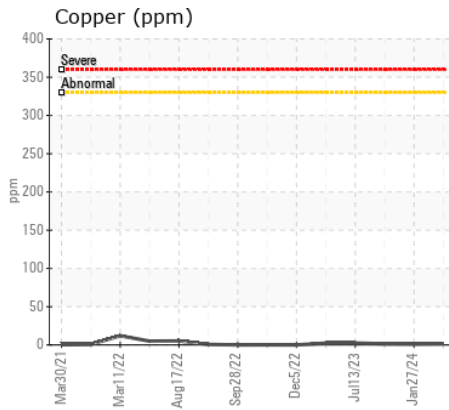
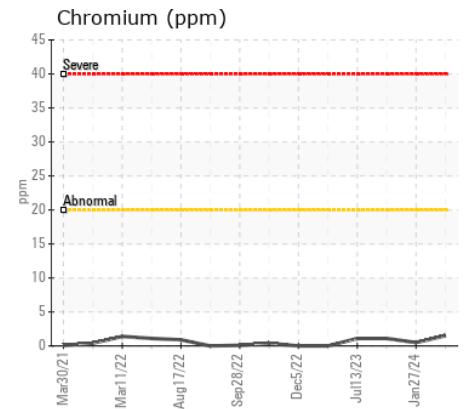
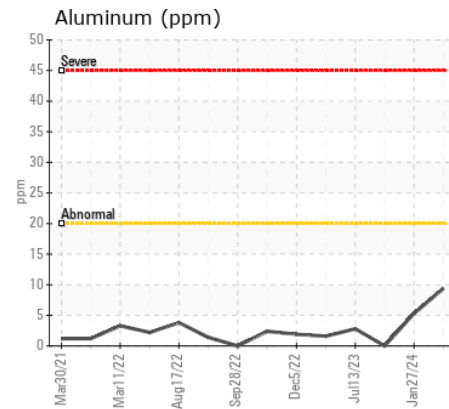
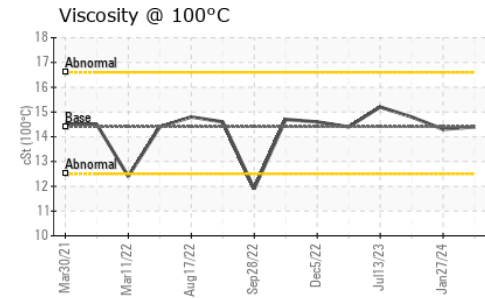
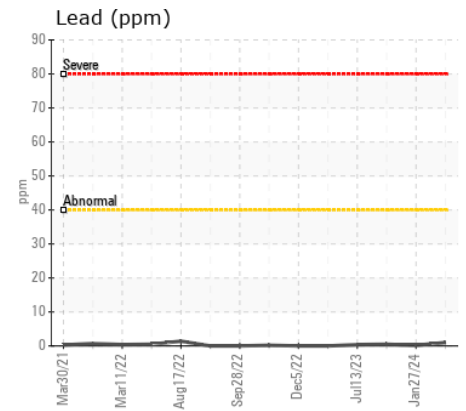
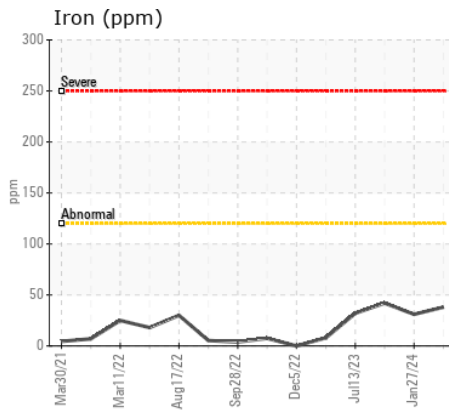
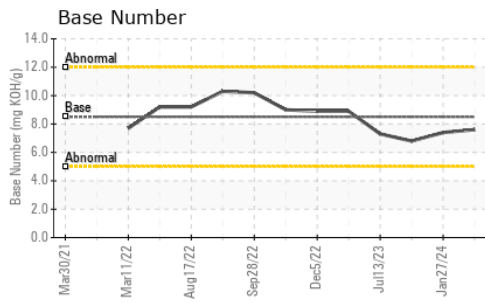
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	3	4
Potassium	ppm	ASTM D5185m	>20	5	5	6
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	1.7	2	2.7
Nitration	Abs/cm	*ASTM D7624	>20	9.4	9.7	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	22.2	24.7
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	6	<1	4
Boron	ppm	ASTM D5185m	250	1	1	3
Barium	ppm	ASTM D5185m	10	0	<1	1
Molybdenum	ppm	ASTM D5185m	100	67	62	57
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	1065	917	885
Calcium	ppm	ASTM D5185m	3000	1186	1038	1060
Phosphorus	ppm	ASTM D5185m	1150	1269	947	952
Zinc	ppm	ASTM D5185m	1350	1397	1186	1192
Sulfur	ppm	ASTM D5185m	4250	3533	2639	2672
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	15.9	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.6	7.4	6.8
Visc @ 100°C	cSt	ASTM D445	14.4	14.4	14.3	14.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0009029
Lab Number : 06125462
Unique Number : 10939613
Test Package : MOB 1 (Additional Tests: TBN)

Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 22 Mar 2024 - Wes Davis

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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