



LEAHY-WOLF
Lubricating specialists since 1946

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK 3018
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LW0007905	---	---
Sample Date		Client Info		23 Apr 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

Valve wear is indicated.

Iron	ppm	ASTM D5185m	>120	50	---	---
Chromium	ppm	ASTM D5185m	>20	2	---	---
Nickel	ppm	ASTM D5185m	>5	▲ 9	---	---
Titanium	ppm	ASTM D5185m	>2	<1	---	---
Silver	ppm	ASTM D5185m	>2	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	7	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	225	---	---
Tin	ppm	ASTM D5185m	>15	4	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of seal material. Tests indicate that there is no fuel present in the oil.

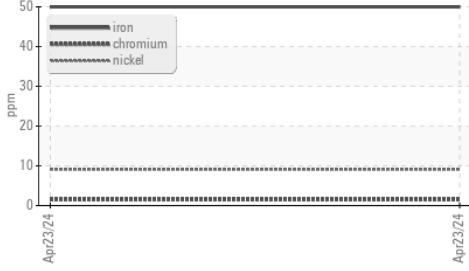
Silicon	ppm	ASTM D5185m	>25	▲ 68	---	---
Potassium	ppm	ASTM D5185m	>20	12	---	---
Fuel	%	ASTM D3524	>3.0	0.4	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>4	0.7	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.0	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

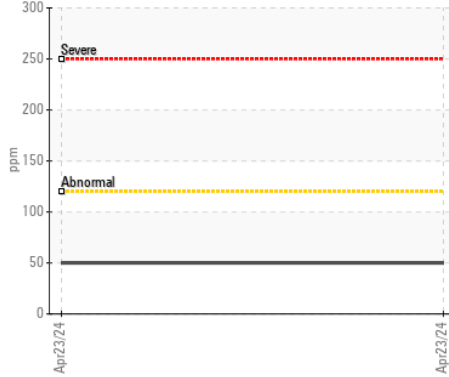
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		0	---	---
Boron	ppm	ASTM D5185m		214	---	---
Barium	ppm	ASTM D5185m		2	---	---
Molybdenum	ppm	ASTM D5185m		120	---	---
Manganese	ppm	ASTM D5185m		5	---	---
Magnesium	ppm	ASTM D5185m		711	---	---
Calcium	ppm	ASTM D5185m		1373	---	---
Phosphorus	ppm	ASTM D5185m		772	---	---
Zinc	ppm	ASTM D5185m		852	---	---
Sulfur	ppm	ASTM D5185m		2510	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		8.0	---	---
Visc @ 100°C	cSt	ASTM D445		10.5	---	---

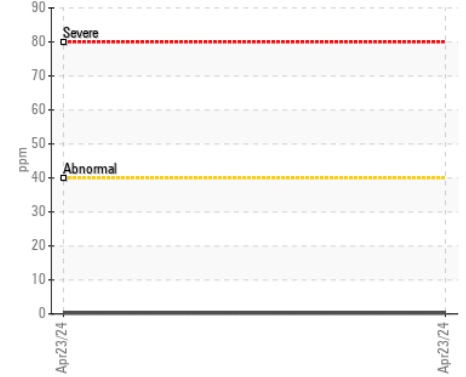
▲ Ferrous Alloys



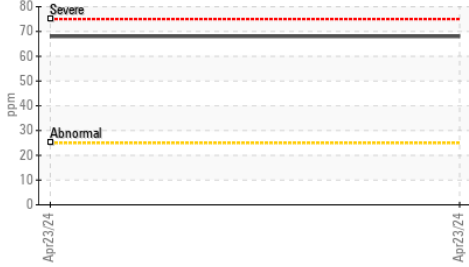
Iron (ppm)



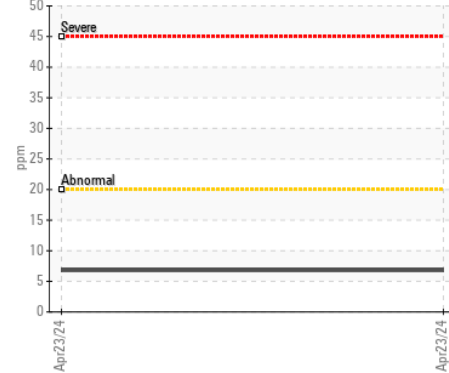
Lead (ppm)



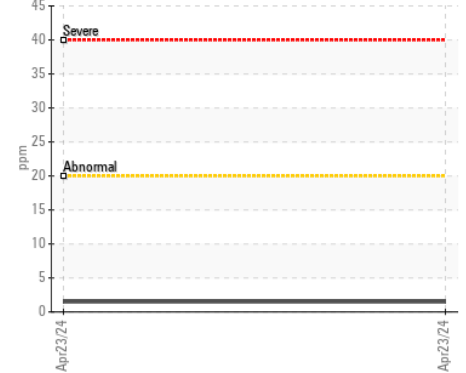
▲ Silicon (ppm)



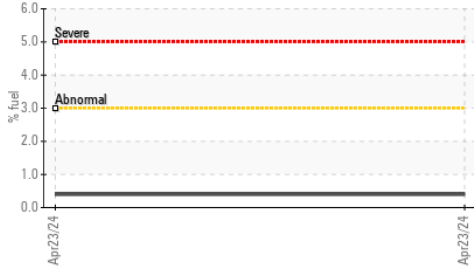
Aluminum (ppm)



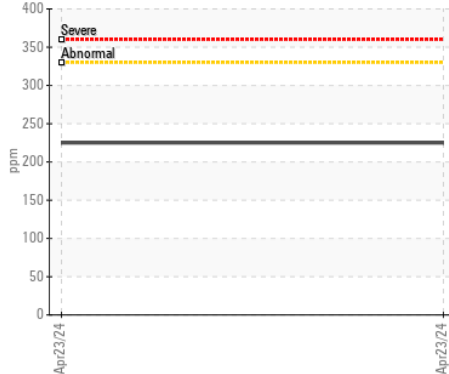
Chromium (ppm)



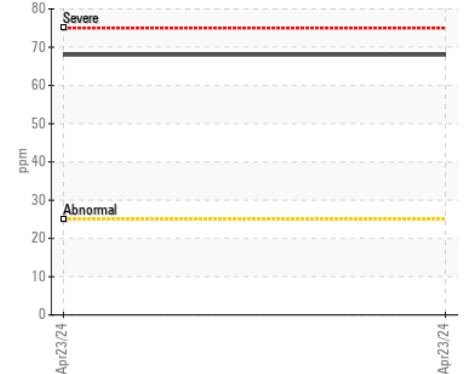
Fuel Dilution



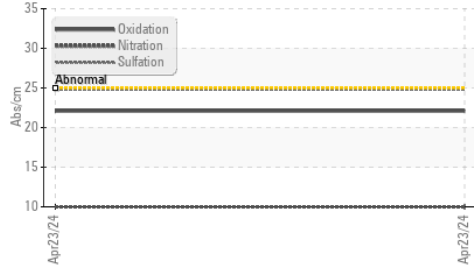
Copper (ppm)



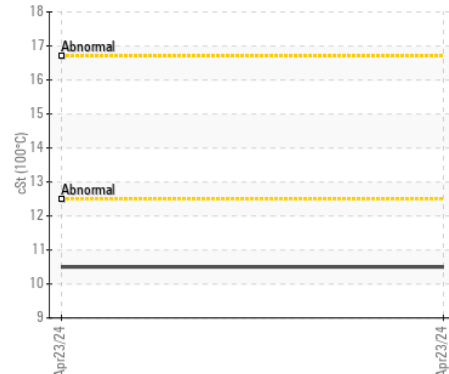
▲ Silicon (ppm)



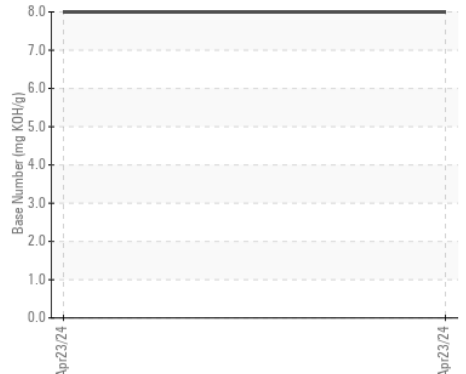
FT-IR (Direct Trend)



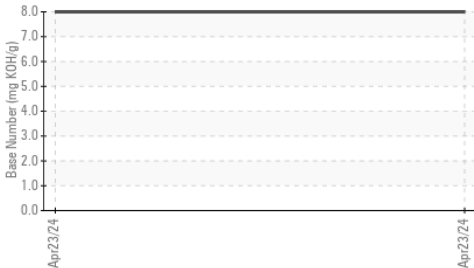
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0007905 **Received** : 10 May 2024
Lab Number : 06176489 **Tested** : 15 May 2024
Unique Number : 11022542 **Diagnosed** : 15 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

LRS - NILES
 33541 REUM RD
 NILES, MI
 US 49120

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Contact: JOHN HUGHES
 johnh@michianarecyclinganddisposal.com

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T: (269)684-0900 X:124

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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