MOB II LUBE PLUS+

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ATTENTION

Machine Id
CATERPILLAR END DUMP ED-4
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

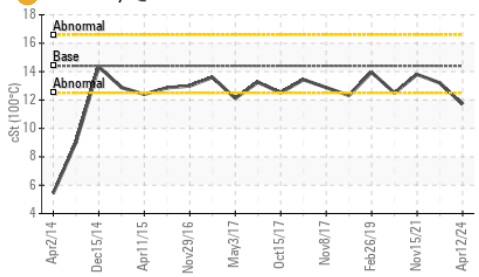
Light fuel dilution occurring.

FLUID CONDITION

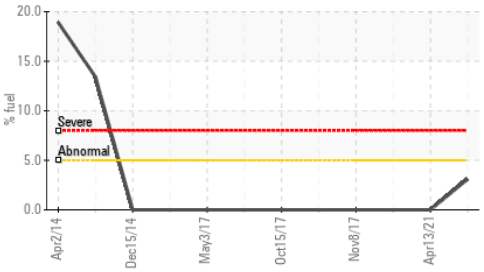
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LP0001049	LP0000032	WC0570280
Sample Date		Client Info		12 Apr 2024	09 May 2023	15 Nov 2021
Machine Age	hrs	Client Info		44282	44282	44282
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		500	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	44	85	9
Chromium	ppm	ASTM D5185m	>20	<1	2	<1
Nickel	ppm	ASTM D5185m	>2	0	2	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	<1	<1
Lead	ppm	ASTM D5185m	>40	<1	3	<1
Copper	ppm	ASTM D5185m	>330	50	50	24
Tin	ppm	ASTM D5185m	>15	1	2	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	7	3
Potassium	ppm	ASTM D5185m	>20	24	11	1
Fuel	%	ASTM D3524	>5	▲ 3.1	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.6	11.5	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	24.3	18.7
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
Sodium	ppm	ASTM D5185m	>158	20	8	2
Boron	ppm	ASTM D5185m	250	12	9	10
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	75	57
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	659	1055	874
Calcium	ppm	ASTM D5185m	3000	1109	1211	1090
Phosphorus	ppm	ASTM D5185m	1150	895	1087	1020
Zinc	ppm	ASTM D5185m	1350	1061	1404	1050
Sulfur	ppm	ASTM D5185m	4250	3060	3413	2772
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	24.7	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.94	7.82	10.1
Visc @ 100°C	cSt	ASTM D445	14.4	● 11.7	13.2	13.8

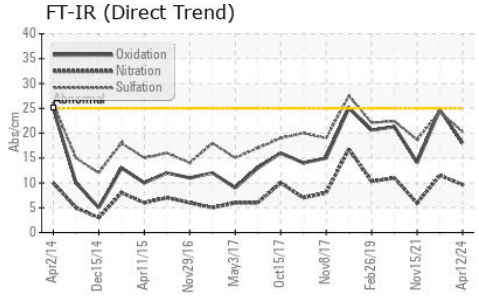
Viscosity @ 100°C



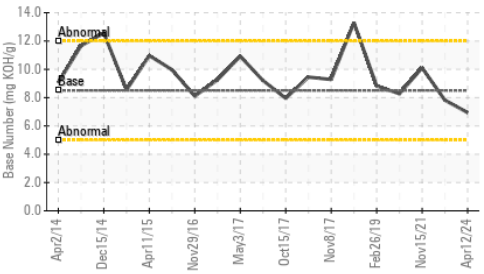
Fuel Dilution



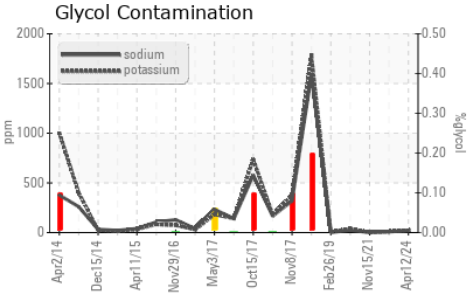
FT-IR (Direct Trend)



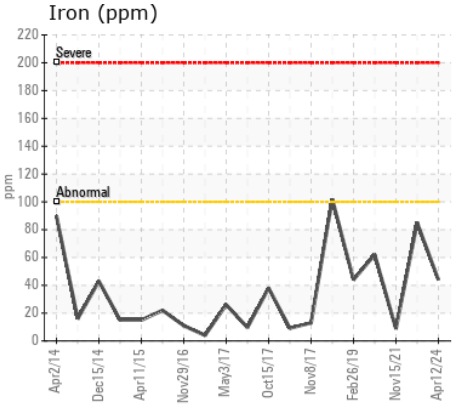
Base Number



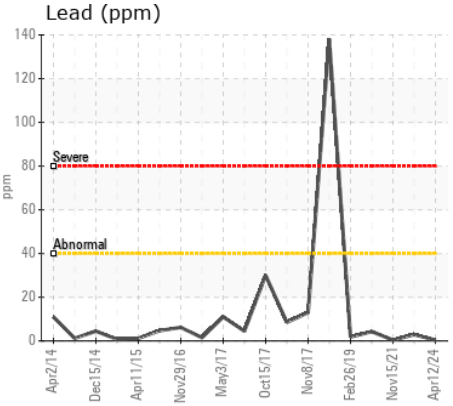
Glycol Contamination



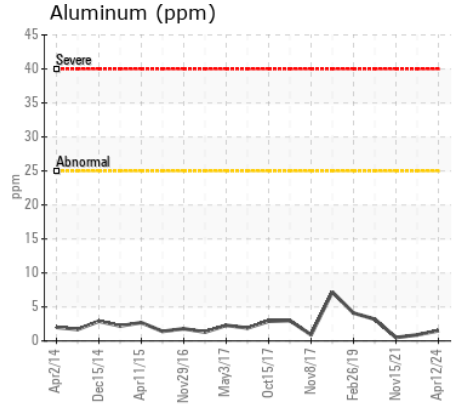
Iron (ppm)



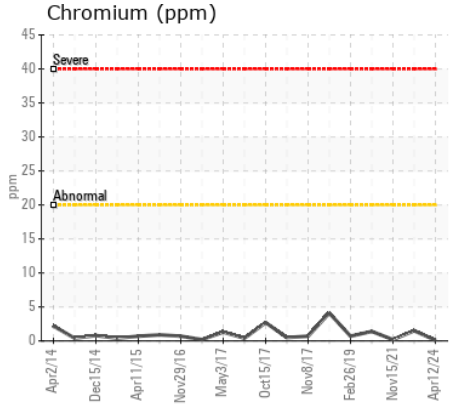
Lead (ppm)



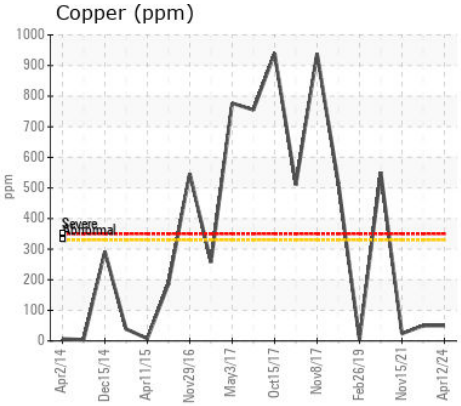
Aluminum (ppm)



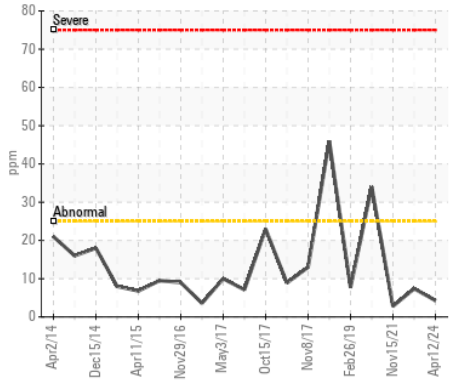
Chromium (ppm)



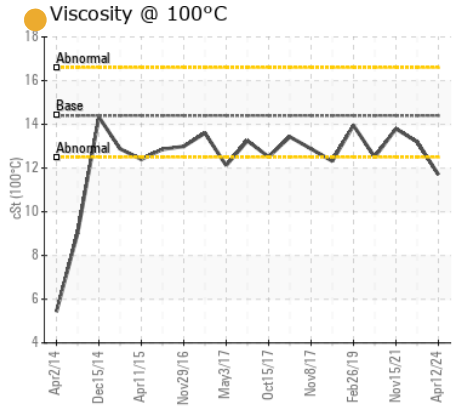
Copper (ppm)



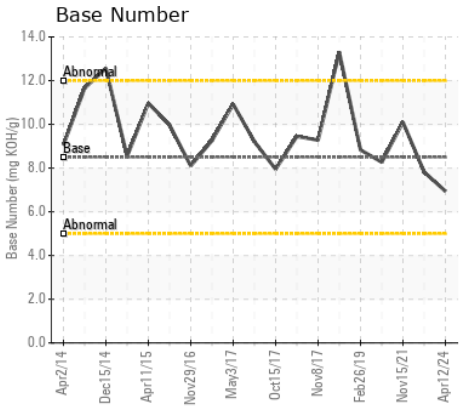
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LP0001049
Lab Number : 06157108
Unique Number : 10992531
Test Package : MOB 2 (Additional Tests: FuelDilution, Glycol, PercentFuel)

Received : 22 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 25 Apr 2024 - Jonathan Hester

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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Report Id: TREMILMA [WUSCAR] 06157108 (Generated: 04/25/2024 16:51:57) Rev: 1

Submitted By: JOHN HATZISTEFANOU