MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
CATERPILLAR 140M 623 (S/N D9G01125)
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (8 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

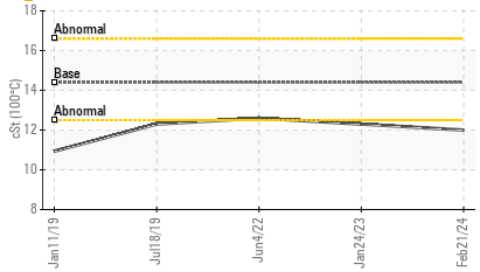
There is no indication of any contamination in the oil.

FLUID CONDITION

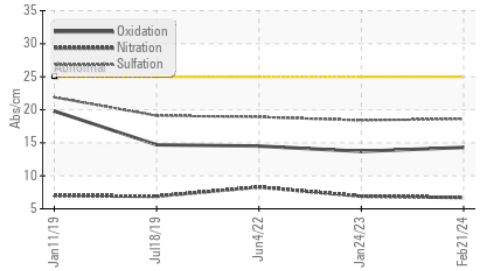
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0005009	RW0004330	RW0003705
Sample Date		Client Info		21 Feb 2024	24 Jan 2023	04 Jun 2022
Machine Age	hrs	Client Info		6877	6657	6415
Oil Age	hrs	Client Info		220	242	253
Filter Age	hrs	Client Info		220	242	253
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>100	9	8	10
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	<1	<1	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	0	<1	2
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	2	3	5
Potassium	ppm	ASTM D5185m	>20	<1	2	1
Fuel	%	ASTM D3524	>5	<1.0	0.7	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.7	6.9	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	18.4	18.9
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	5	0	<1
Boron	ppm	ASTM D5185m	250	10	20	93
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	65	81
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	967	698	199
Calcium	ppm	ASTM D5185m	3000	1294	1328	2084
Phosphorus	ppm	ASTM D5185m	1150	1151	1048	1068
Zinc	ppm	ASTM D5185m	1350	1321	1170	1219
Sulfur	ppm	ASTM D5185m	4250	4039	2992	4146
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	13.7	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.84	11.37	7.56
Visc @ 100°C	cSt	ASTM D445	14.4	12.0	12.3	12.6

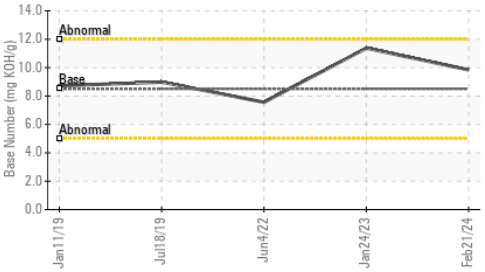
Viscosity @ 100°C



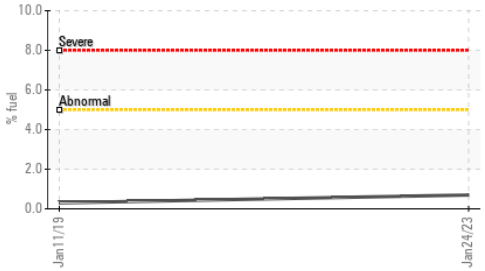
FT-IR (Direct Trend)



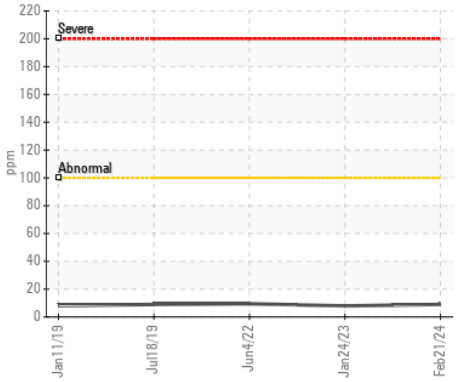
Base Number



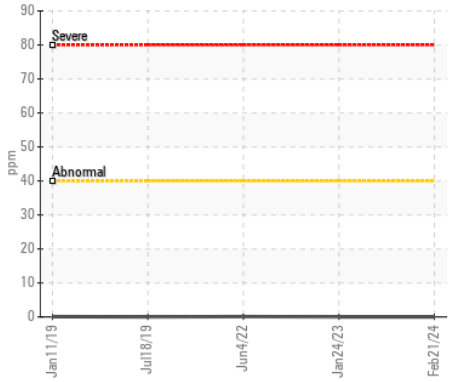
Fuel Dilution



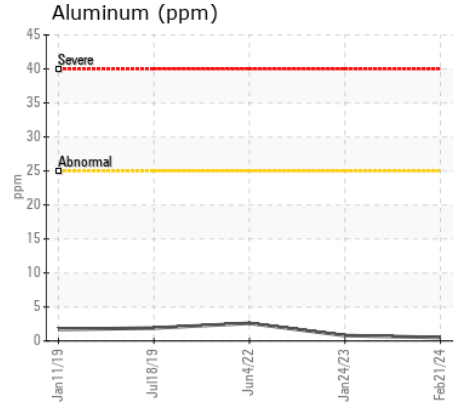
Iron (ppm)



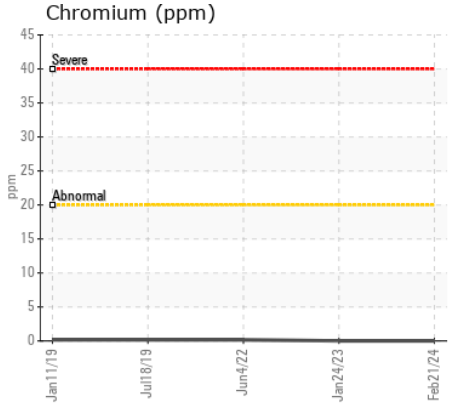
Lead (ppm)



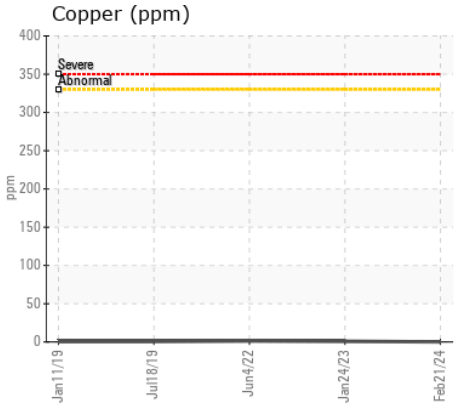
Aluminum (ppm)



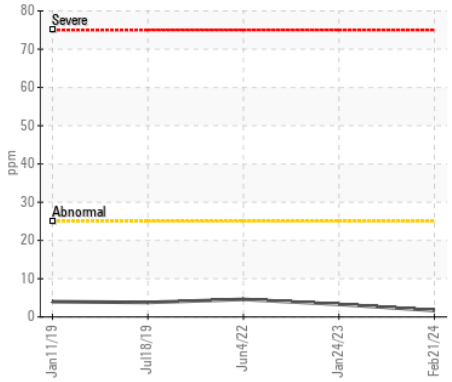
Chromium (ppm)



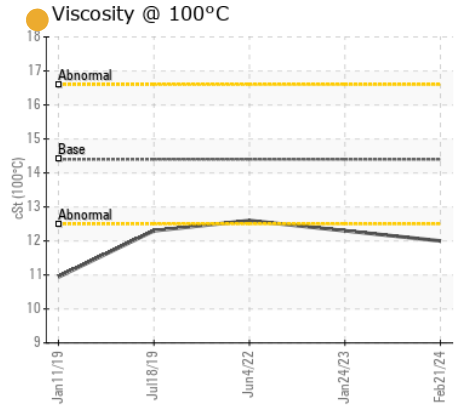
Copper (ppm)



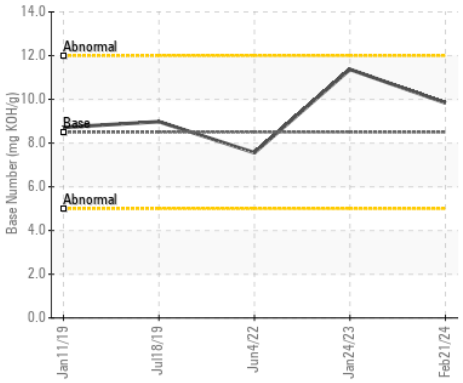
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0005009
Lab Number : 06146739
Unique Number : 10976817
Test Package : MOB 2 (Additional Tests: FuelDilution)

Received : 11 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Sean Felton

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)

HALLACK CONTRACTING, INC.
4223 W POLK
HART, MI
US 49420
Contact: DAN HALLACK KARL BUTCHER
shop@hallackcontracting.com
T: (231)873-5081
F: (231)873-2889