MOB I

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
1409
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil is near the end of it's useful service life, recommend schedule an oil change. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

CONTAMINATION

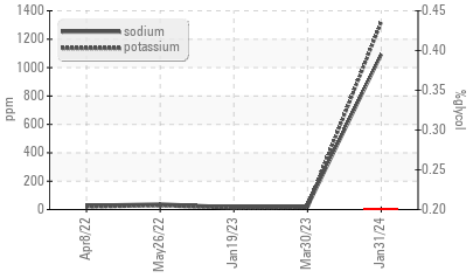
Test for glycol is positive. There is a high concentration of glycol present in the oil.

FLUID CONDITION

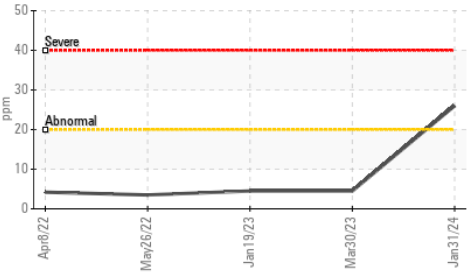
Molybdenum ppm levels are abnormally high. Sodium ppm levels are notably high. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0870854**	WC0792873	WC0773029
Sample Date		Client Info		**31 Jan 2024**	30 Mar 2023	19 Jan 2023
Machine Age	mls	Client Info		**199137**	189167	184112
Oil Age	mls	Client Info		**0**	0	0
Filter Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Filter Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**SEVERE**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**80**	23	17
Chromium	ppm	ASTM D5185m	>20	**2**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ **26**	4	4
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	**3**	<1	<1
Tin	ppm	ASTM D5185m	>15	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**11**	5	4
Potassium	ppm	ASTM D5185m	>20	▲ **1320**	16	12
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**1.1**	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**15.3**	10.3	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.1**	22.0	19.6
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	● **1093**	22	17
Boron	ppm	ASTM D5185m	250	**12**	31	34
Barium	ppm	ASTM D5185m	10	**0**	0	1
Molybdenum	ppm	ASTM D5185m	100	▲ **311**	82	76
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**102**	49	44
Calcium	ppm	ASTM D5185m	3000	**1885**	2217	2077
Phosphorus	ppm	ASTM D5185m	1150	**991**	995	969
Zinc	ppm	ASTM D5185m	1350	**1144**	1285	1193
Sulfur	ppm	ASTM D5185m	4250	**3866**	4241	4177
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.4**	17.1	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**10.9**	5.7	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	**12.9**	12.8	13.4

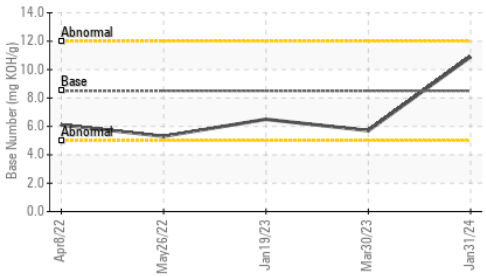
Glycol Contamination



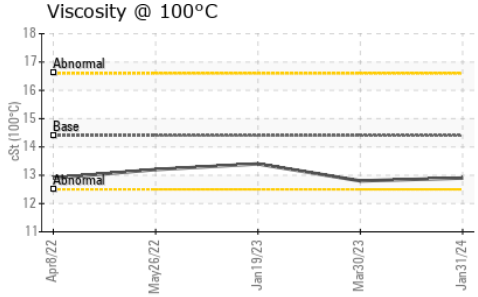
Aluminum (ppm)



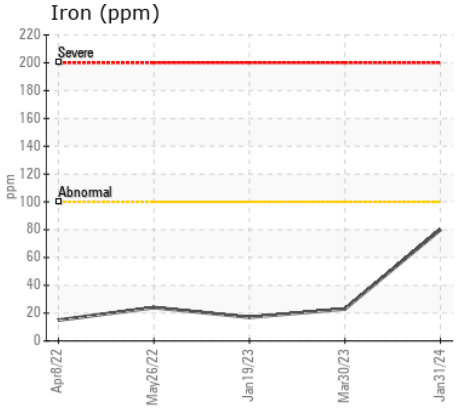
Base Number



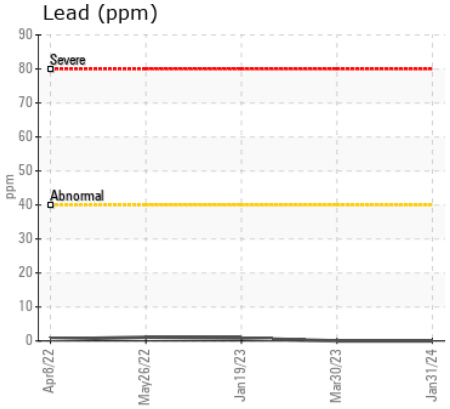
Viscosity @ 100°C



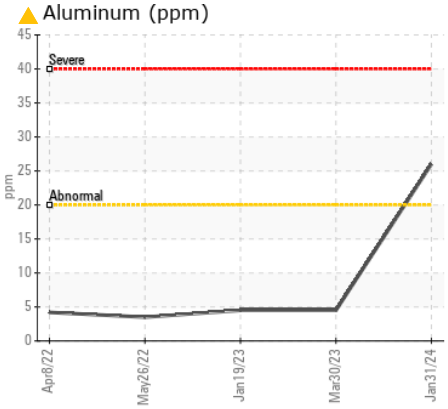
Iron (ppm)



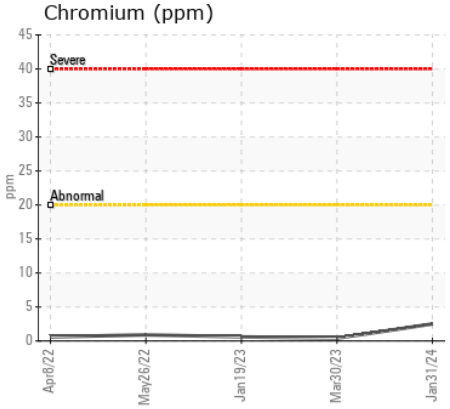
Lead (ppm)



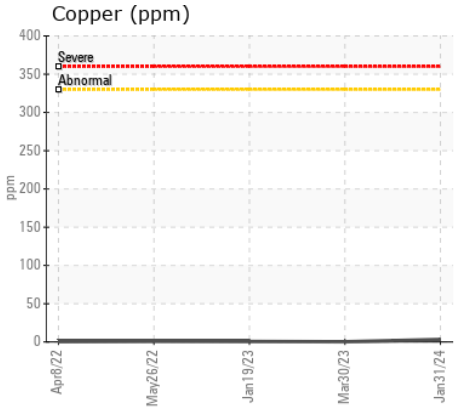
Aluminum (ppm)



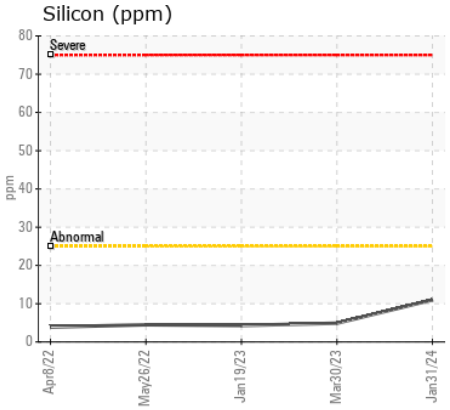
Chromium (ppm)



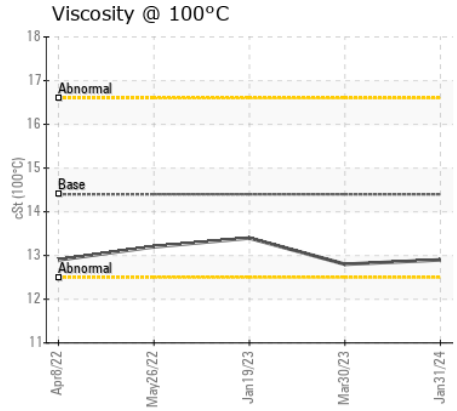
Copper (ppm)



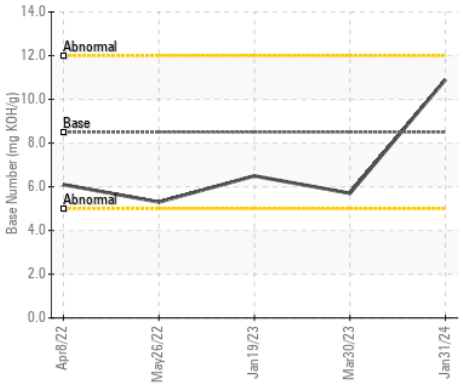
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870854
Lab Number : 06104848
Unique Number : 10903078
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

Received : 29 Feb 2024
Tested : 05 Mar 2024
Diagnosed : 05 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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