MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
QC Engine
Machine Id
QC230725MOB2
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

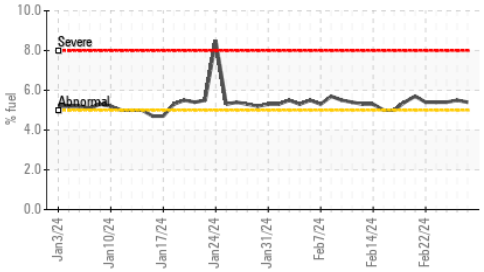
There is a moderate amount of fuel present in the oil. There is a light concentration of water present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

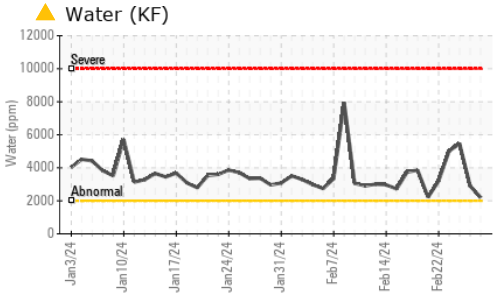
The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0902253**	WC0902252	WC0902251
Sample Date		Client Info		**28 Feb 2024**	27 Feb 2024	26 Feb 2024
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Filter Age	hrs	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				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>100	**19**	20	20
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**2**	2	2
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**4**	5	5
Lead	ppm	ASTM D5185(m)	>40	**1**	2	1
Copper	ppm	ASTM D5185(m)	>330	**9**	9	9
Tin	ppm	ASTM D5185(m)	>15	**<1**	<1	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Silicon	ppm	ASTM D5185(m)	>25	**6**	6	6
Potassium	ppm	ASTM D5185(m)	>20	▲ **14**	▲ 15	▲ 15
Fuel	%	ASTM D7593*	>5	▲ **5.4**	▲ 5.5	▲ 5.4
Water	%	ASTM D6304*	>0.2	▲ **0.220**	▲ 0.289	▲ 0.545
ppm Water	ppm	ASTM D6304*	>2000	▲ **2201**	▲ 2900	▲ 5458
Glycol	%	ASTM D7922*		**NEG**	NEG	NEG
Soot %	%	ASTM D7844*	>3	**0.3**	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**9.9**	10.0	10.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.6**	20.6	20.6
Emulsified Water	scalar	Visual*	>0.2	▲ **.2%**	▲ .2%	▲ .2%
Sodium	ppm	ASTM D5185(m)	>216	● **61**	● 65	● 65
Boron	ppm	ASTM D5185(m)	250	**27**	29	28
Barium	ppm	ASTM D5185(m)	10	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**46**	47	47
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	450	**607**	619	616
Calcium	ppm	ASTM D5185(m)	3000	**1466**	1499	1487
Phosphorus	ppm	ASTM D5185(m)	1150	**848**	864	877
Zinc	ppm	ASTM D5185(m)	1350	**993**	1009	1007
Sulfur	ppm	ASTM D5185(m)	4250	**2702**	2757	2766
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.3**	16.3	16.4
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	**10.17**	9.07	8.73
Visc @ 40°C	cSt	ASTM D7279(m)	138	▲ **75.0**	▲ 75.3	▲ 75.3
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **11.3**	▲ 11.3	▲ 11.4
Viscosity Index (VI)	Scale	ASTM D2270*	102	**142**	141	143

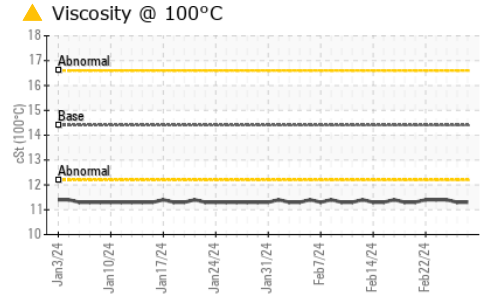
Fuel Dilution



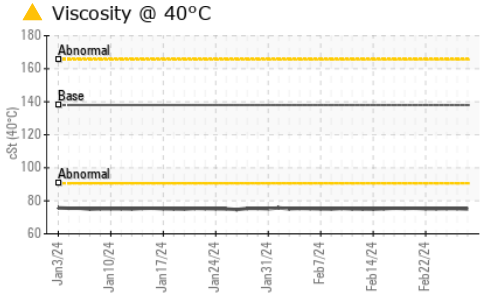
Water (KF)



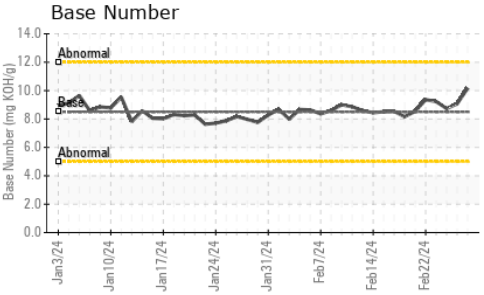
Viscosity @ 100°C



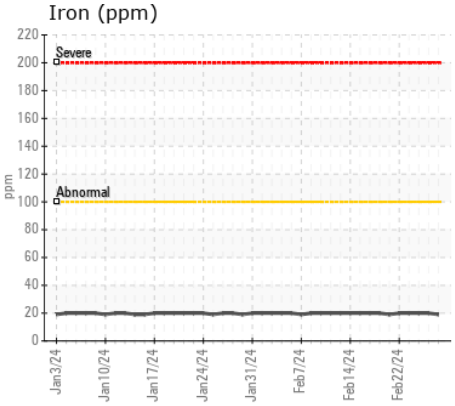
Viscosity @ 40°C



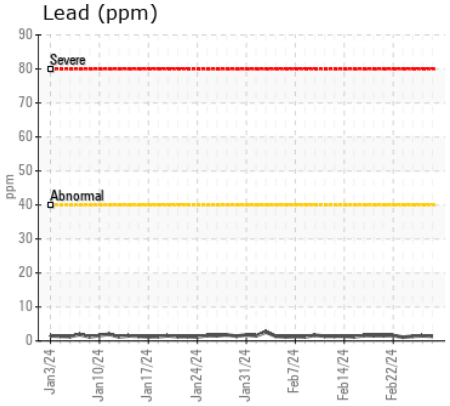
Base Number



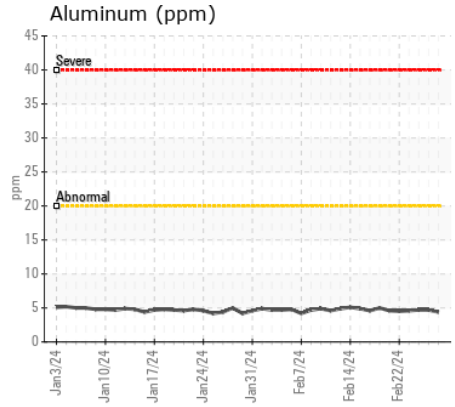
Iron (ppm)



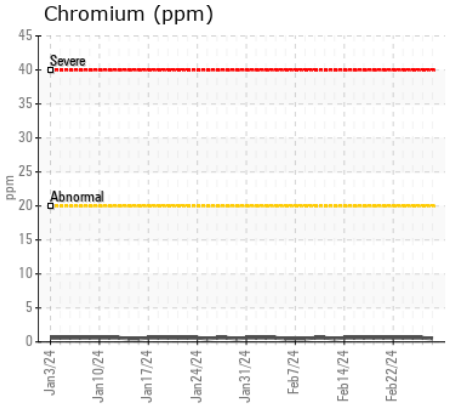
Lead (ppm)



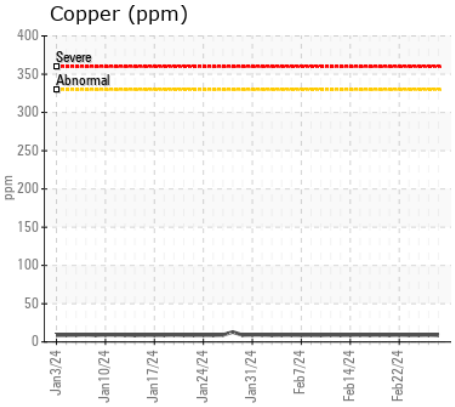
Aluminum (ppm)



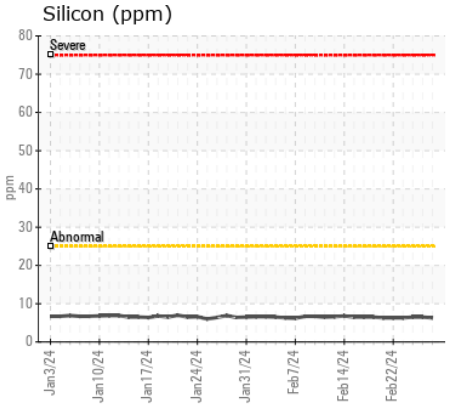
Chromium (ppm)



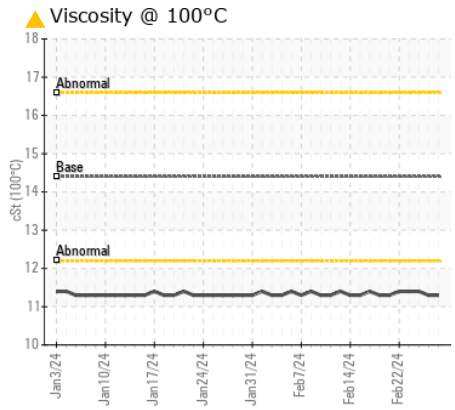
Copper (ppm)



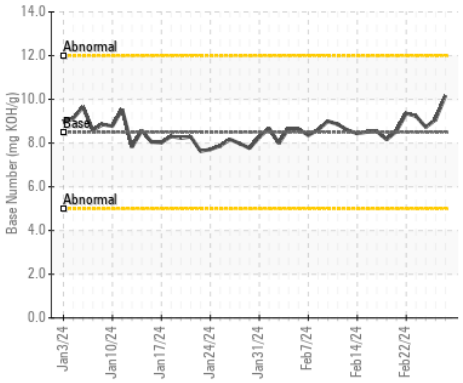
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0902253
Lab Number : 02618608
Unique Number : 5735718
Test Package : MOB 2 (Additional Tests: Glycol, KF, KV40, PercentFuel, VI)

Received : 28 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

WearCheck Quality Control Sample Results

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