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 recommend that you drain the oil from the component if this has not already been done. 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

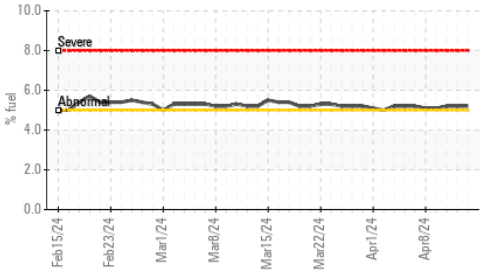
There is a moderate amount of fuel present in the oil. There is a trace of moisture present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

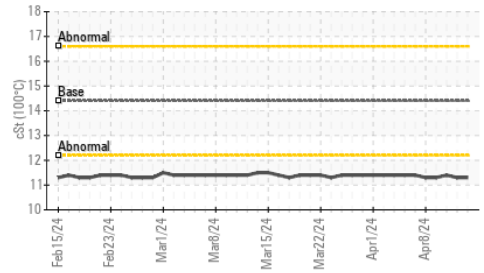
The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0925440	WC0925439	WC0925438
Sample Date		Client Info		12 Apr 2024	11 Apr 2024	10 Apr 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	20	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)		3	3	3
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	4	4	4
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	9	9	9
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>25	6	6	6
Potassium	ppm	ASTM D5185(m)	>20	▲ 14	▲ 17	▲ 18
Fuel	%	ASTM D7593*	>5	▲ 5.2	▲ 5.2	▲ 5.2
Water	%	ASTM D6304*	>0.2	▲ 0.197	▲ 0.284	▲ 0.282
ppm Water	ppm	ASTM D6304*	>2000	▲ 1978	▲ 2842	▲ 2826
Glycol	%	ASTM D7922*		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.3	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	9.9	10.2	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.9	20.4	20.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	▲ .2%
Sodium	ppm	ASTM D5185(m)	>216	● 60	● 77	● 77
Boron	ppm	ASTM D5185(m)	250	33	37	41
Barium	ppm	ASTM D5185(m)	10	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)	100	47	47	48
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	623	617	627
Calcium	ppm	ASTM D5185(m)	3000	1494	1473	1467
Phosphorus	ppm	ASTM D5185(m)	1150	853	852	863
Zinc	ppm	ASTM D5185(m)	1350	1019	1009	1026
Sulfur	ppm	ASTM D5185(m)	4250	2602	2526	2614
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.2	16.4	16.5
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	8.53	8.61	8.74
Visc @ 40°C	cSt	ASTM D7279(m)	138	▲ 75.3	▲ 75.8	▲ 75.6
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 11.3	▲ 11.3	▲ 11.4
Viscosity Index (VI)	Scale	ASTM D2270*	102	141	140	142

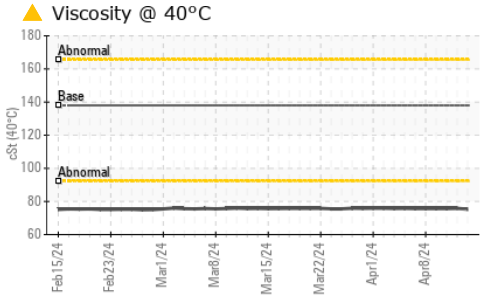
Fuel Dilution



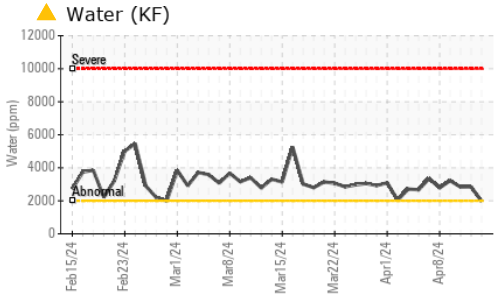
Viscosity @ 100°C



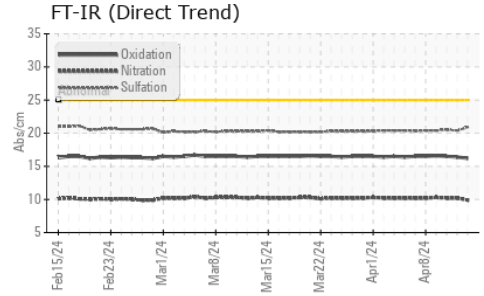
Viscosity @ 40°C



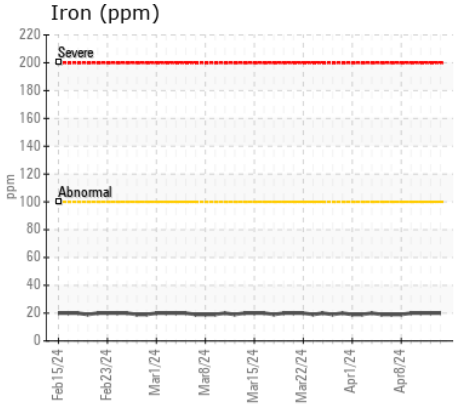
Water (KF)



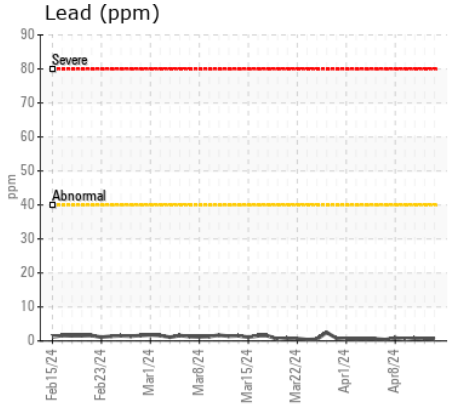
FT-IR (Direct Trend)



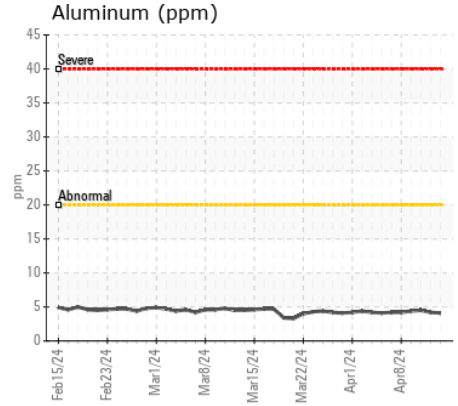
Iron (ppm)



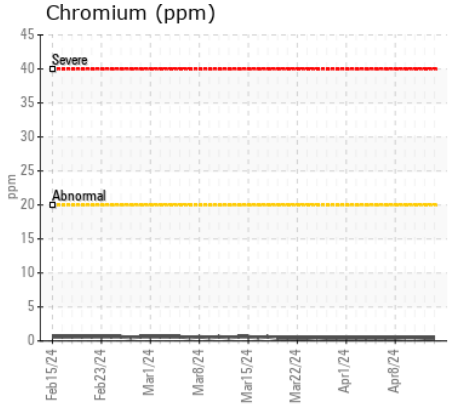
Lead (ppm)



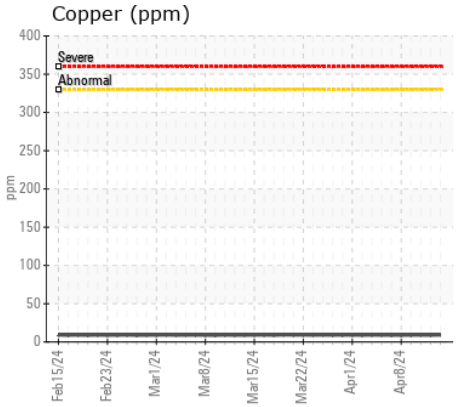
Aluminum (ppm)



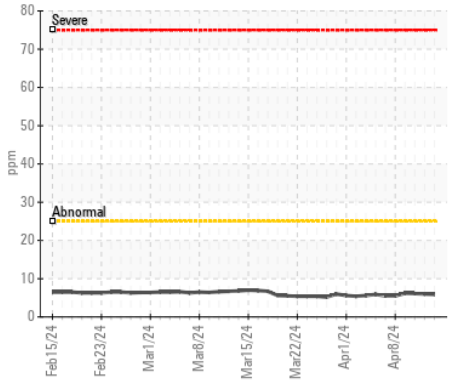
Chromium (ppm)



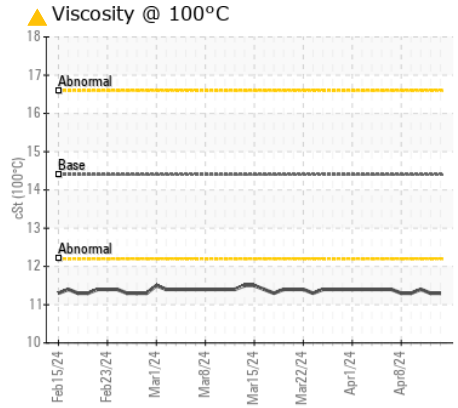
Copper (ppm)



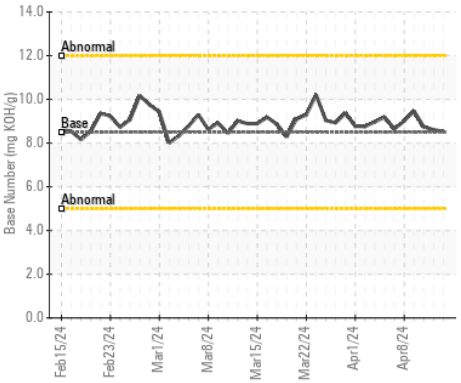
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0925440
Lab Number : 02628390
Unique Number : 5761522
Test Package : MOB 2 (Additional Tests: Glycol, KF, KV40, PercentFuel, VI)

Received : 12 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 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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