MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LGS00180
Component
Middle Biogas Engine
Fluid
CITGO PACEMAKER GAS ENGINE LFG LA 40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

WEAR

The nickel level is abnormal. All other component wear rates are normal.

CONTAMINATION

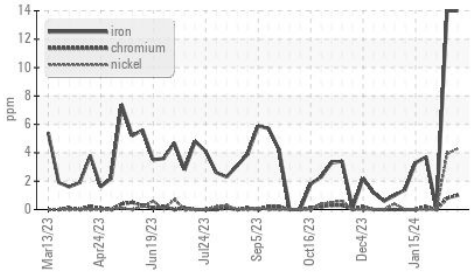
There is no indication of any contamination in the oil.

FLUID CONDITION

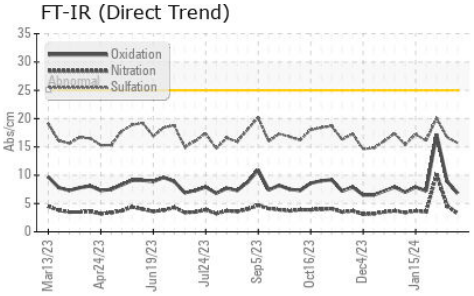
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0803466**	WC0803465	WC0803454
Sample Date		Client Info		**24 May 2024**	20 May 2024	05 Feb 2024
Machine Age	hrs	Client Info		**61569**	61477	61379
Oil Age	hrs	Client Info		**190**	98	247
Filter Age	hrs	Client Info		**190**	98	698
Oil Changed		Client Info		**N/A**	N/A	N/A
Filter Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>45	**14**	14	0
Chromium	ppm	ASTM D5185m	>2	**1**	<1	0
Nickel	ppm	ASTM D5185m	>2	▲ **4**	▲ 4	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m	>5	**1**	<1	0
Aluminum	ppm	ASTM D5185m	>10	**2**	2	<1
Lead	ppm	ASTM D5185m	>5	**<1**	<1	1
Copper	ppm	ASTM D5185m	>14	**2**	2	<1
Tin	ppm	ASTM D5185m	>13	**4**	3	1
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>200	**155**	116	78
Potassium	ppm	ASTM D5185m	>20	**2**	2	<1
Fuel		WC Method	>4.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.1	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844		**0.1**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**3.2**	4.6	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**15.7**	16.7	20.1
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	>0.1	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185m		**<1**	0	<1
Boron	ppm	ASTM D5185m		**0**	2	2
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**4**	4	2
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**31**	35	20
Calcium	ppm	ASTM D5185m		**1328**	1402	1308
Phosphorus	ppm	ASTM D5185m		**284**	313	232
Zinc	ppm	ASTM D5185m		**337**	375	333
Sulfur	ppm	ASTM D5185m		**3340**	3307	2598
Oxidation	Abs/.1mm	*ASTM D7414	>25	**6.8**	8.9	17.2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.16	**0.92**	0.85	0.69
Base Number (BN)	mg KOH/g	ASTM D2896	5	**3.61**	3.83	3.33
Visc @ 100°C	cSt	ASTM D445	13.5	**12.5**	12.6	12.8

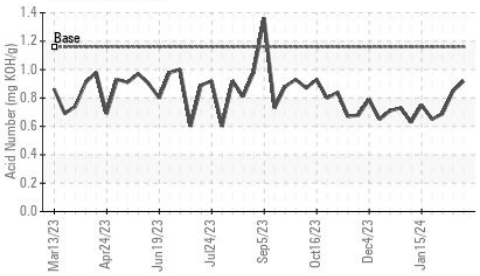
Ferrous Alloys



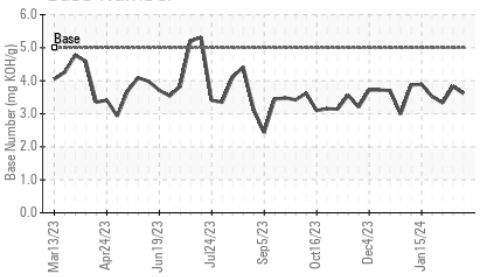
FT-IR (Direct Trend)



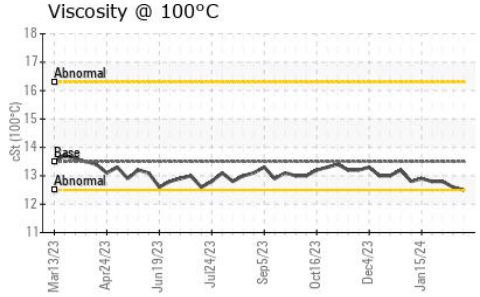
Acid Number



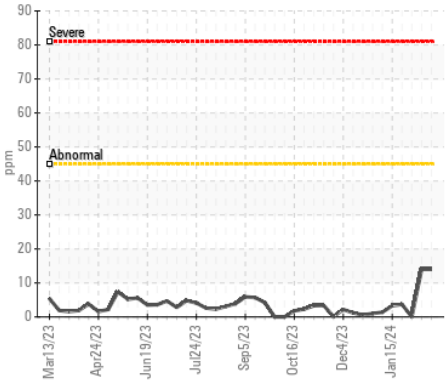
Base Number



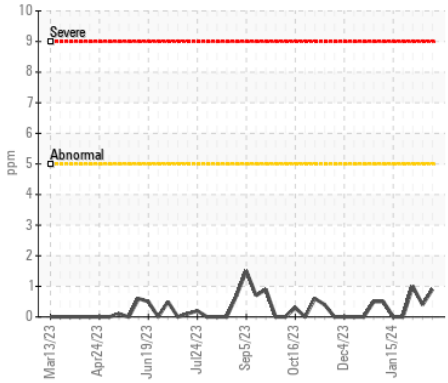
Viscosity @ 100°C



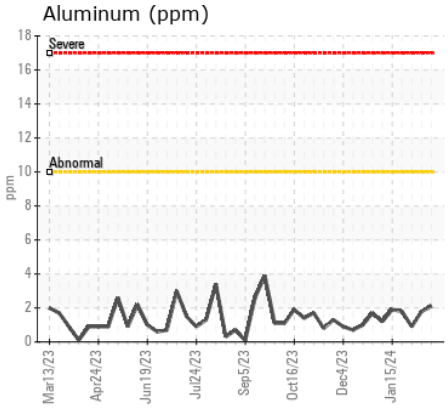
Iron (ppm)



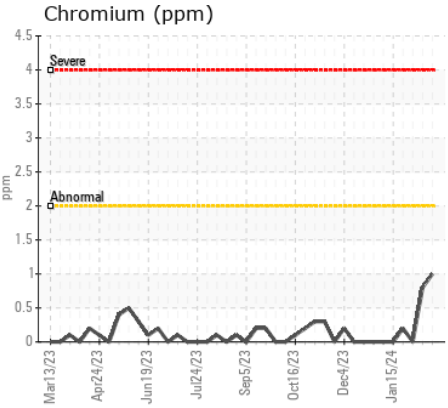
Lead (ppm)



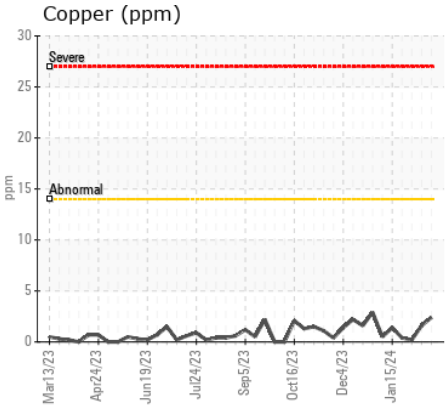
Aluminum (ppm)



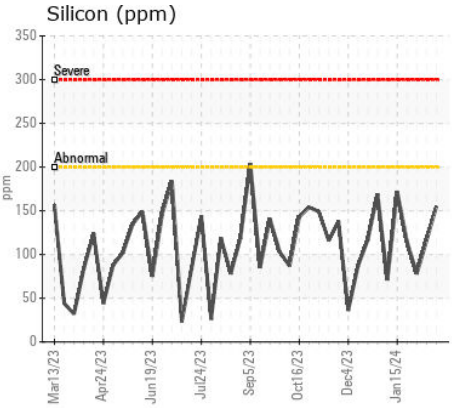
Chromium (ppm)



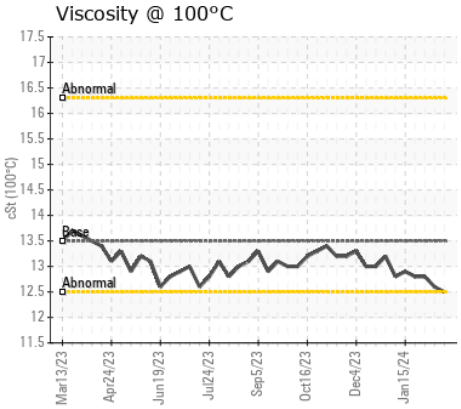
Copper (ppm)



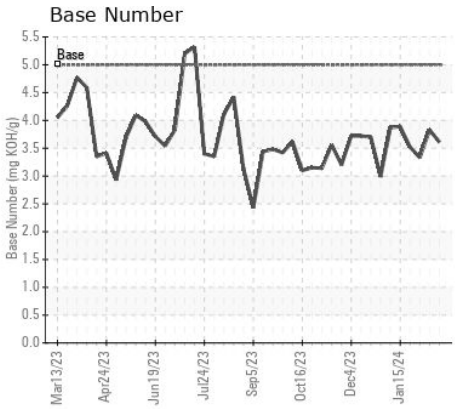
Silicon (ppm)



Viscosity @ 100°C



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: WC0803466	**Received**	: 29 May 2024
Lab Number	: 06194228	**Tested**	: 30 May 2024
Unique Number	: 11056351	**Diagnosed**	: 31 May 2024 - Angela Borella
Test Package	: MOB 2		

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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