MOB II

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
2
Component
Port Main Engine
Fluid
KIRKLAND 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

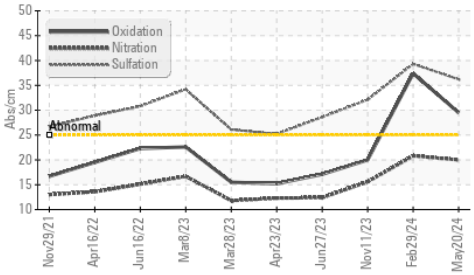
Sodium and/or potassium levels are high.

FLUID CONDITION

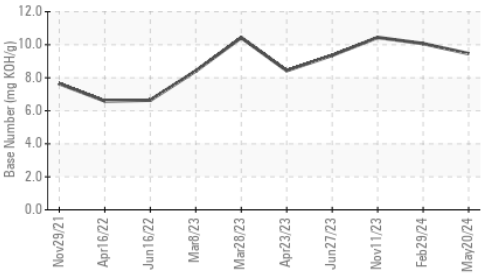
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0764161**	WC0764167	WC0626548
Sample Date		Client Info		**20 May 2024**	29 Feb 2024	11 Nov 2023
Machine Age	hrs	Client Info		**18177**	17823	17425
Oil Age	hrs	Client Info		**354**	398	258
Filter Age	hrs	Client Info		**354**	398	258
Oil Changed		Client Info		**N/A**	N/A	Changed
Filter Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	**56**	53	38
Chromium	ppm	ASTM D5185m	>8	**4**	2	1
Nickel	ppm	ASTM D5185m	>2	**1**	0	0
Titanium	ppm	ASTM D5185m	>3	**<1**	0	<1
Silver	ppm	ASTM D5185m	>2	**1**	0	0
Aluminum	ppm	ASTM D5185m	>15	**2**	<1	2
Lead	ppm	ASTM D5185m	>18	**16**	7	5
Copper	ppm	ASTM D5185m	>80	**47**	26	4
Tin	ppm	ASTM D5185m	>14	**2**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	**6**	3	3
Potassium	ppm	ASTM D5185m	>20	▲ **403**	▲ 196	26
Fuel		WC Method	>4.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.1	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844		**7.2**	6.6	6
Nitration	Abs/cm	*ASTM D7624	>20	**20.0**	20.8	15.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**36.2**	39.3	32.1
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	>75	▲ **38**	▲ 20	6
Boron	ppm	ASTM D5185m		**4**	2	2
Barium	ppm	ASTM D5185m		**1**	0	0
Molybdenum	ppm	ASTM D5185m		**64**	56	56
Manganese	ppm	ASTM D5185m		**2**	<1	<1
Magnesium	ppm	ASTM D5185m		**974**	872	980
Calcium	ppm	ASTM D5185m		**1150**	966	1091
Phosphorus	ppm	ASTM D5185m		**1014**	943	1094
Zinc	ppm	ASTM D5185m		**1323**	1091	1341
Sulfur	ppm	ASTM D5185m		**3106**	3082	3199
Oxidation	Abs/.1mm	*ASTM D7414	>25	**29.5**	37.4	20.0
Base Number (BN)	mg KOH/g	ASTM D2896		**9.46**	10.07	10.44
Visc @ 100°C	cSt	ASTM D445		**15.7**	15.1	15.2

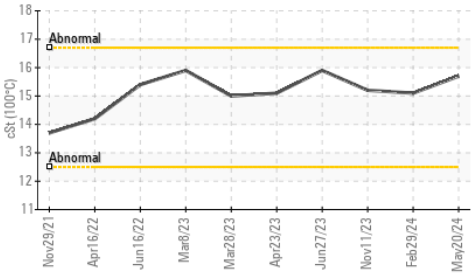
FT-IR (Direct Trend)



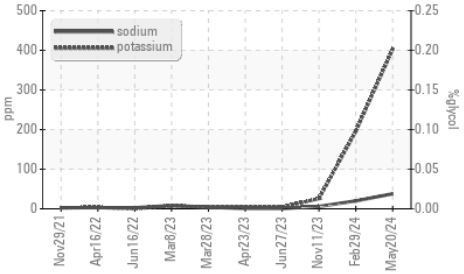
Base Number



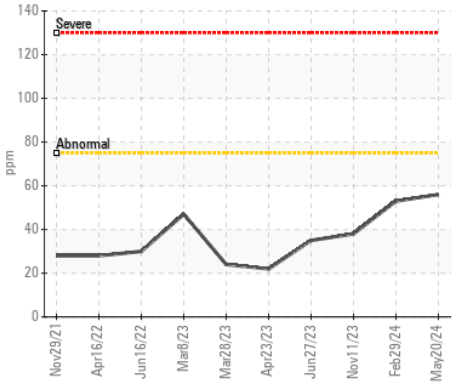
Viscosity @ 100°C



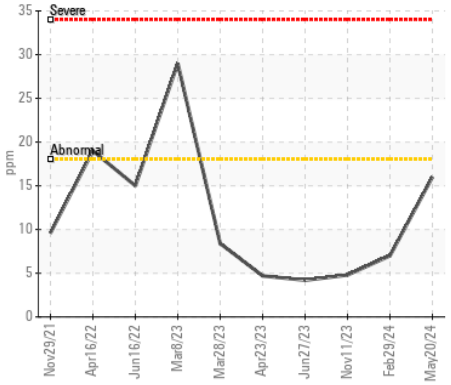
Glycol Contamination



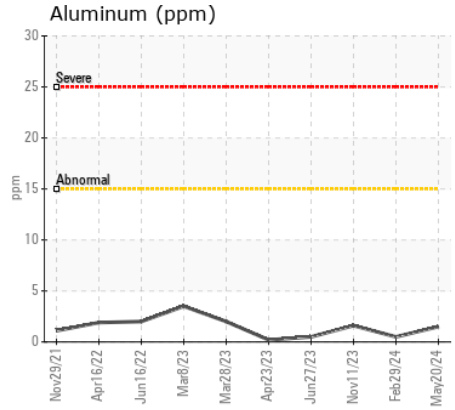
Iron (ppm)



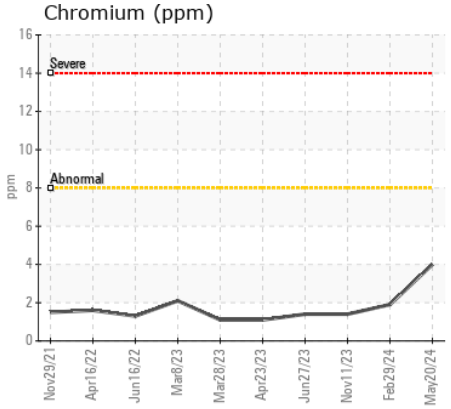
Lead (ppm)



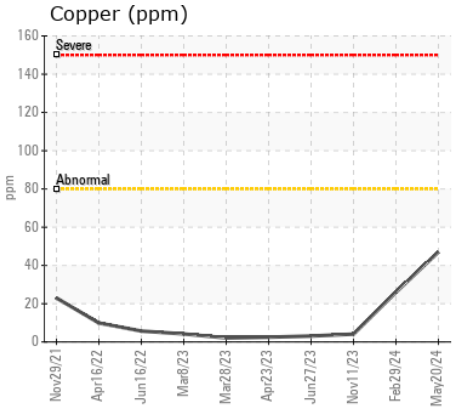
Aluminum (ppm)



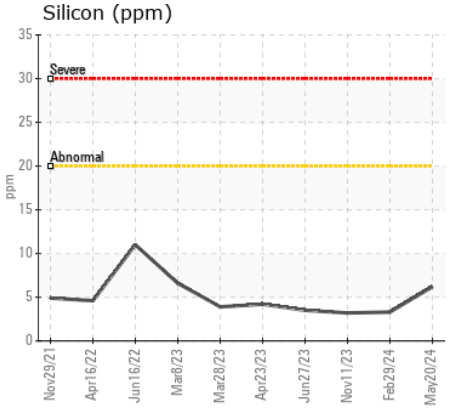
Chromium (ppm)



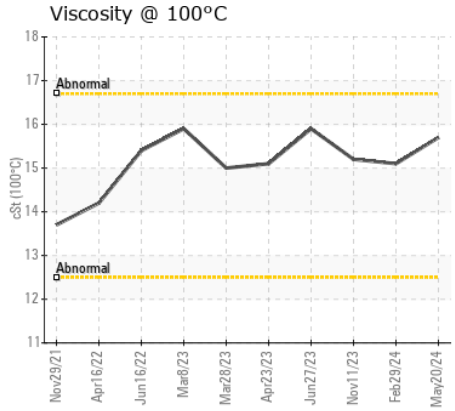
Copper (ppm)



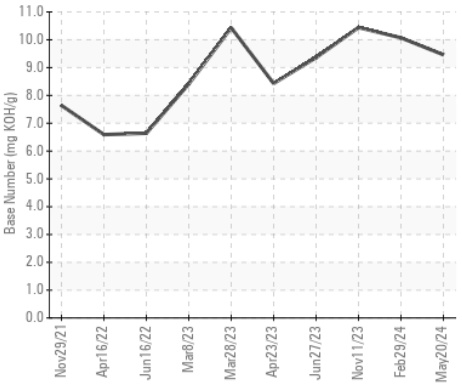
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0764161
Lab Number : 06191227
Unique Number : 11047979
Test Package : MOB 2 (Additional Tests: Glycol)

Received : 24 May 2024
Tested : 13 Jun 2024
Diagnosed : 13 Jun 2024 - Jonathan Hester

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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