MOB II LUBE PLUS+

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ATTENTION

Area
EXCAVATOR
Machine Id
HITACHI 05-02010-058
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

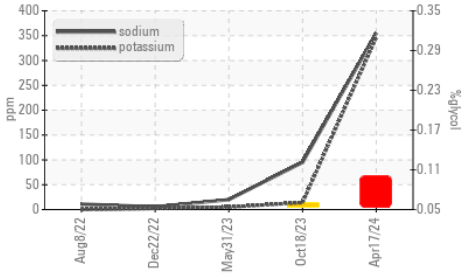
Test for glycol is positive. There is a high concentration of glycol present in the oil. There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

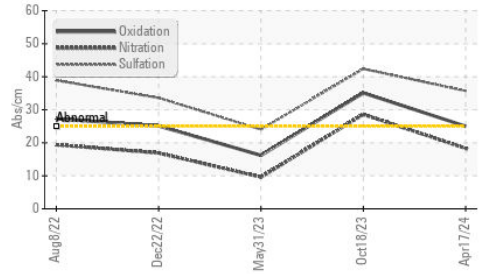
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**LP0000301**	LP0000150	WC0721574
Sample Date		Client Info		**17 Apr 2024**	18 Oct 2023	31 May 2023
Machine Age	hrs	Client Info		**1711**	1001	326
Oil Age	hrs	Client Info		**0**	0	326
Filter Age	hrs	Client Info		**0**	0	326
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Filter Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>100	**55**	44	44
Chromium	ppm	ASTM D5185m	>20	**3**	6	3
Nickel	ppm	ASTM D5185m	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**13**	13	11
Lead	ppm	ASTM D5185m	>40	**12**	10	<1
Copper	ppm	ASTM D5185m	>330	**9**	9	2
Tin	ppm	ASTM D5185m	>15	**2**	2	1
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**20**	11	14
Potassium	ppm	ASTM D5185m	>20	▲ **346**	▲ 14	5
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		▲ **0.10**	▲ 0.06	NEG
Soot %	%	*ASTM D7844	>3	▲ **6.1**	▲ 8.6	1.8
Nitration	Abs/cm	*ASTM D7624	>20	**18.3**	28.6	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**35.7**	42.4	24.0
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		● **355**	● 95	20
Boron	ppm	ASTM D5185m		**18**	13	198
Barium	ppm	ASTM D5185m		**<1**	0	0
Molybdenum	ppm	ASTM D5185m		**119**	81	223
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**1049**	1064	924
Calcium	ppm	ASTM D5185m		**1189**	1243	1425
Phosphorus	ppm	ASTM D5185m		**1130**	1176	967
Zinc	ppm	ASTM D5185m		**1391**	1450	1164
Sulfur	ppm	ASTM D5185m		**3236**	2952	3595
Oxidation	Abs/.1mm	*ASTM D7414	>25	**25.0**	35.1	16.2
Base Number (BN)	mg KOH/g	ASTM D2896		**9.61**	7.33	12.20
Visc @ 100°C	cSt	ASTM D445		**16.6**	▲ 18.5	14.8

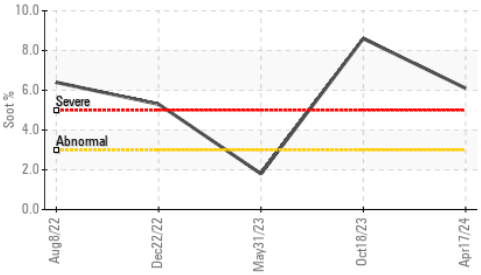
Glycol Contamination



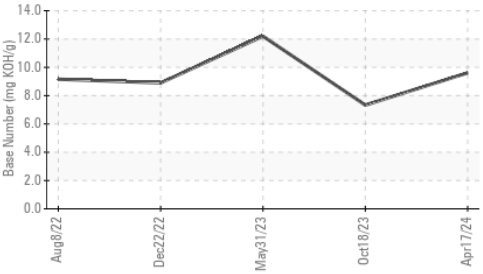
FT-IR (Direct Trend)



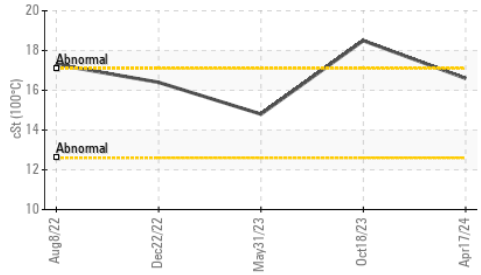
Soot %



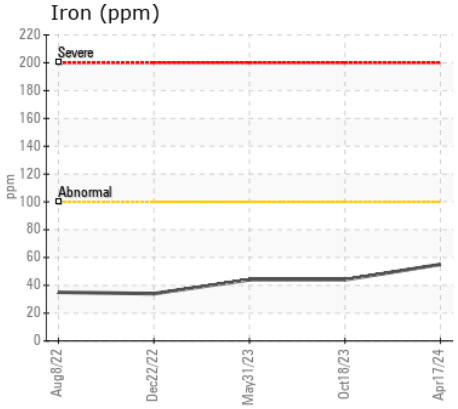
Base Number



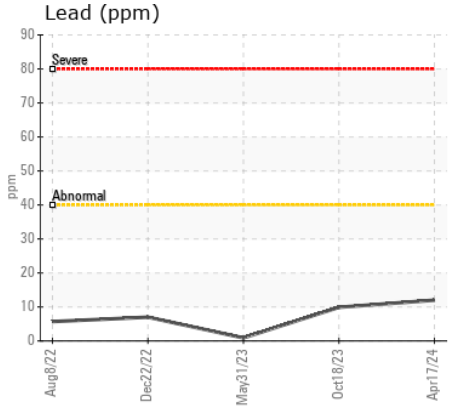
Viscosity @ 100°C



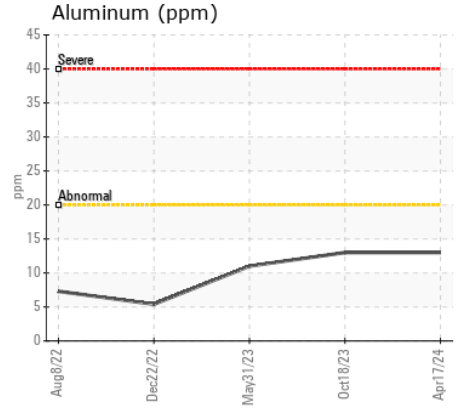
Iron (ppm)



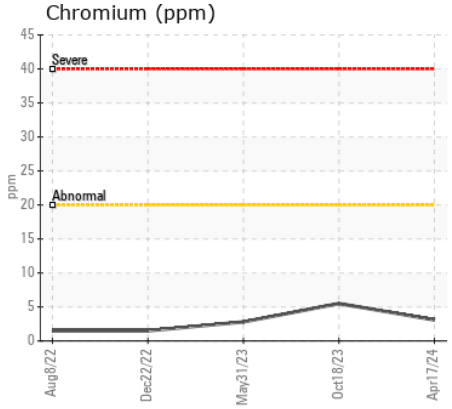
Lead (ppm)



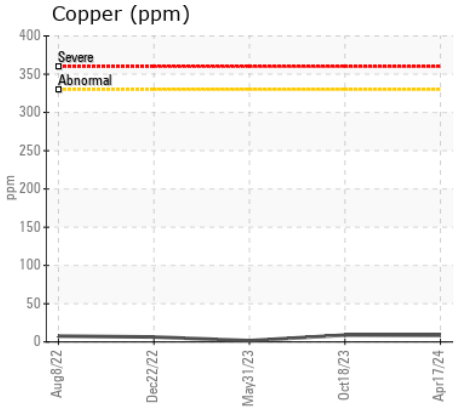
Aluminum (ppm)



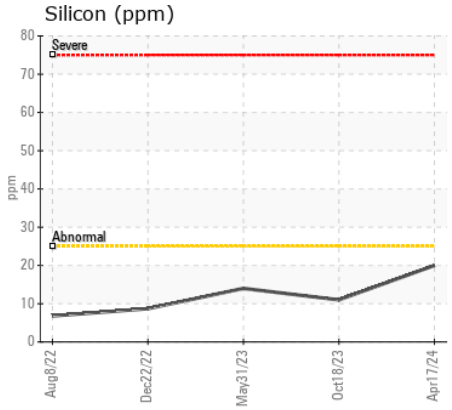
Chromium (ppm)



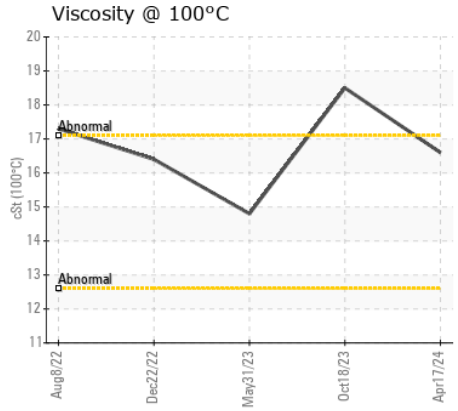
Copper (ppm)



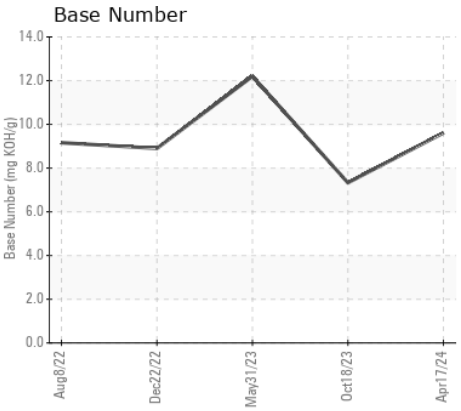
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LP0000301
Lab Number : 06176230
Unique Number : 11022283
Test Package : MOB 2

Received : 10 May 2024
Tested : 16 May 2024
Diagnosed : 16 May 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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