



**OIL ANALYSIS REPORT**

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>MARGINAL</b>

Machine Id  
**BOBCAT S590 SKID 22**  
Component  
**Diesel Engine**  
Fluid  
**TRC MOLY XL PRO-SPEC IV XP 15W40 (3 GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06031822</b>	TR05957171	TR05957168
Sample Date		Client Info		<b>04 Dec 2023</b>	13 Sep 2023	23 Jun 2023
Machine Age	hrs	Client Info		<b>1400</b>	1150	925
Oil Age	hrs	Client Info		<b>1150</b>	900	500
Filter Age	hrs	Client Info		<b>1150</b>	900	500
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>MARGINAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>89</b>	70	50
Chromium	ppm	ASTM D5185m	>20	<b>4</b>	3	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>11</b>	6	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>31</b>	23	13
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

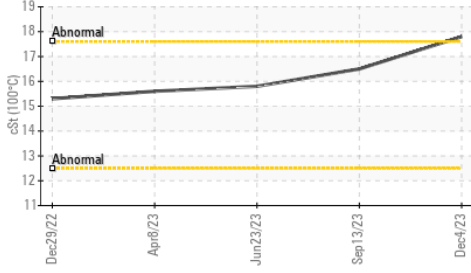
Silicon	ppm	ASTM D5185m	>25	<b>10</b>	9	8
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	5	5
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.9</b>	19.0	15.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.1</b>	38.3	33.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

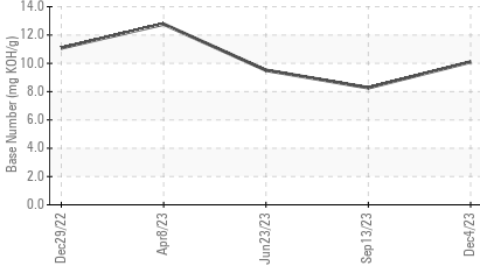
The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>4</b>	5	4
Boron	ppm	ASTM D5185m		<b>4</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>143</b>	143	135
Manganese	ppm	ASTM D5185m		<b>2</b>	2	1
Magnesium	ppm	ASTM D5185m		<b>126</b>	124	115
Calcium	ppm	ASTM D5185m		<b>5160</b>	5224	4884
Phosphorus	ppm	ASTM D5185m		<b>1183</b>	1155	1099
Zinc	ppm	ASTM D5185m		<b>1431</b>	1395	1313
Sulfur	ppm	ASTM D5185m		<b>4883</b>	5549	5334
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	28.2	22.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.10</b>	8.27	9.51
Visc @ 100°C	cSt	ASTM D445		<b>▲ 17.8</b>	16.5	15.8

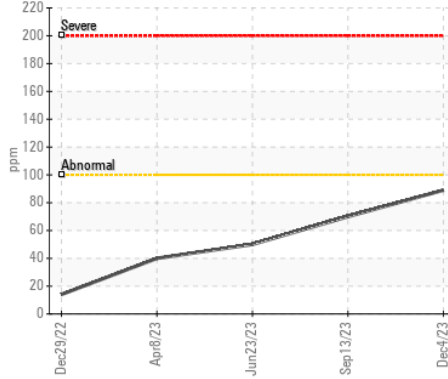
▲ Viscosity @ 100°C



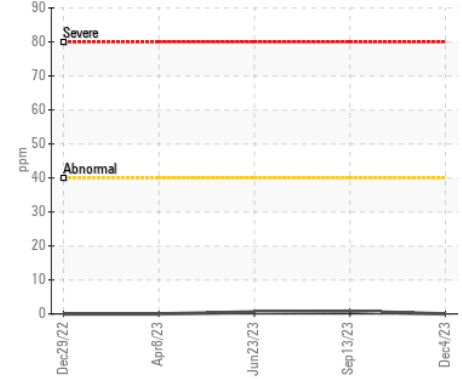
Base Number



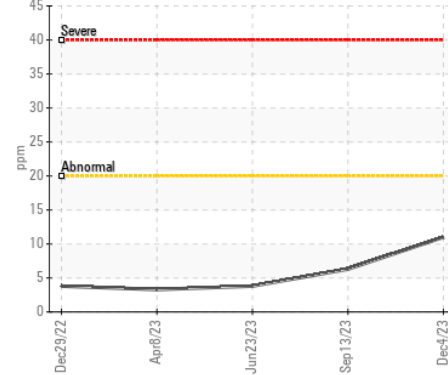
Iron (ppm)



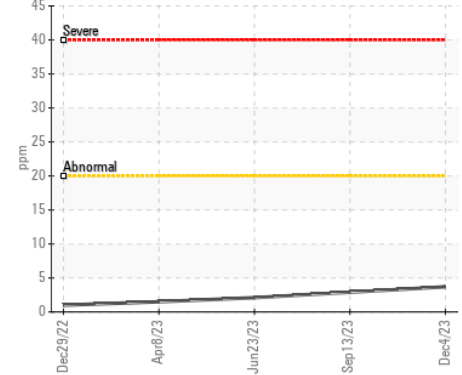
Lead (ppm)



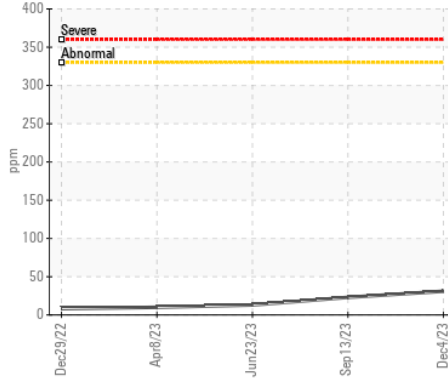
Aluminum (ppm)



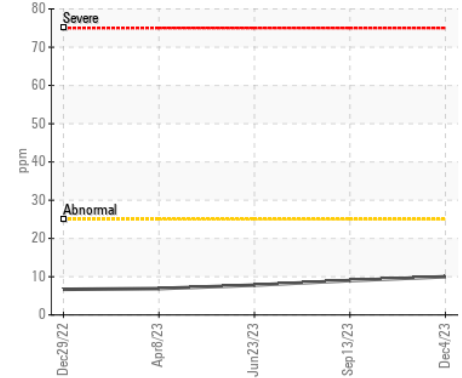
Chromium (ppm)



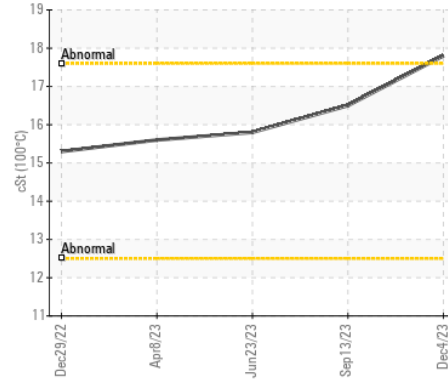
Copper (ppm)



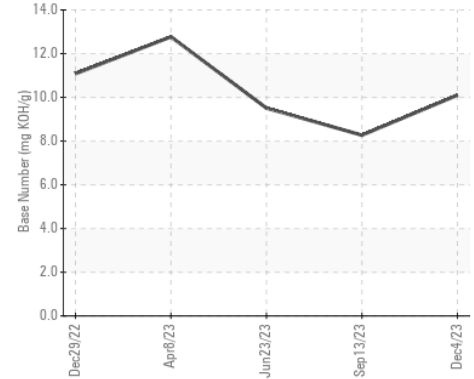
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TR06031822

Lab Number : 06031822

Unique Number : 10781613

Test Package : MOB 2

Received : 11 Dec 2023

Tested : 15 Dec 2023

Diagnosed : 15 Dec 2023 - Jonathan Hester

SPRAGUE RANCH

6907 ROUTE 14

BROOKFIELD, VT

US 05036

Contact: SCOTT BURRELL

To discuss this sample report, contact Customer Service at 1-800-827-0711.

\* - 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)

T:

F: