



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MELROE BOBCAT 610

Component
Gasoline Engine

Fluid
TRC MOLY XL PRO-SPEC IV 10W30 (4 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05647347	TR05441599	TR04825634
Sample Date		Client Info		22 Jul 2022	27 Jul 2021	24 Sep 2019
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		1	2	2
Filter Age	mths	Client Info		1	2	2
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	14	25	55
Chromium	ppm	ASTM D5185m	>20	<1	2	3
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	2	<1
Aluminum	ppm	ASTM D5185m	>40	3	4	7
Lead	ppm	ASTM D5185m	>50	2	3	6
Copper	ppm	ASTM D5185m	>155	5	13	21
Tin	ppm	ASTM D5185m	>10	<1	<1	2
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

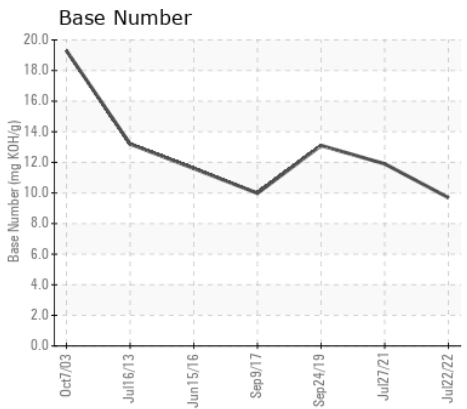
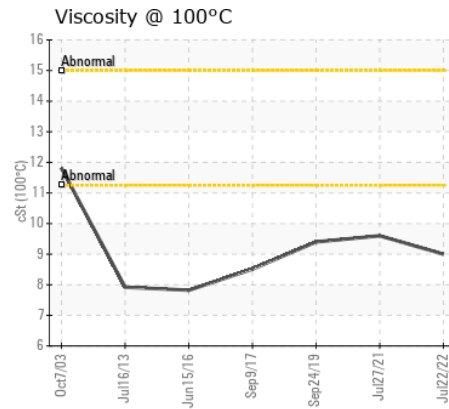
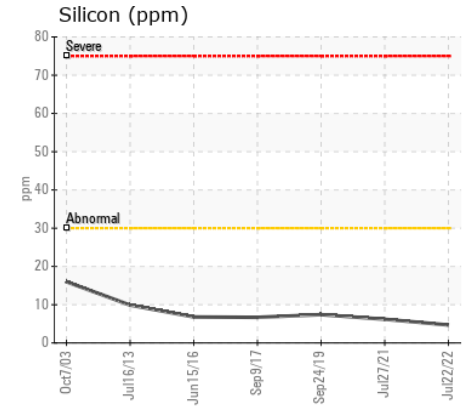
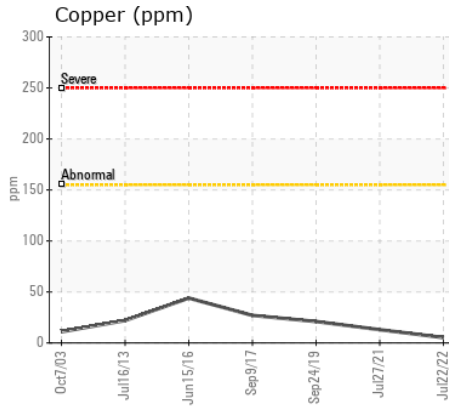
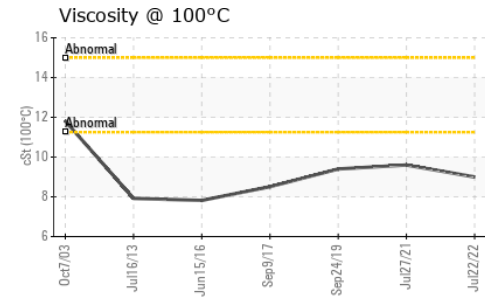
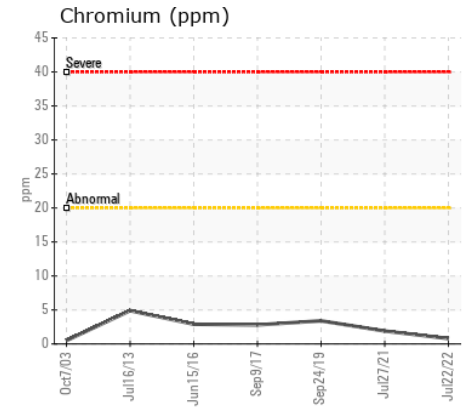
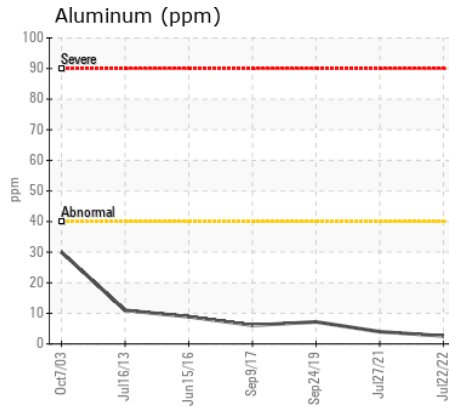
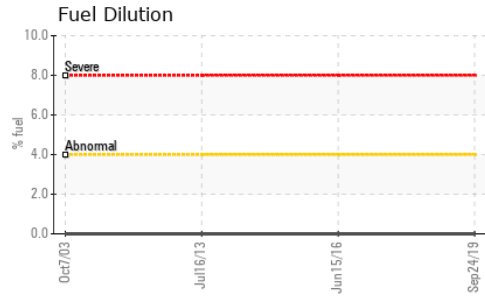
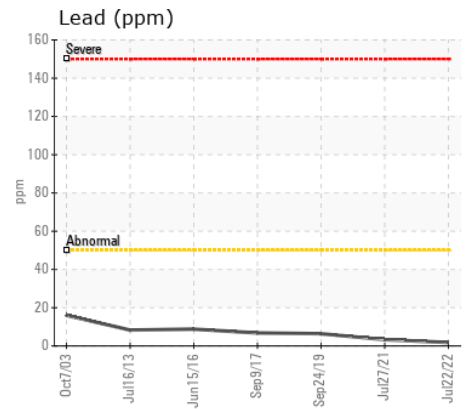
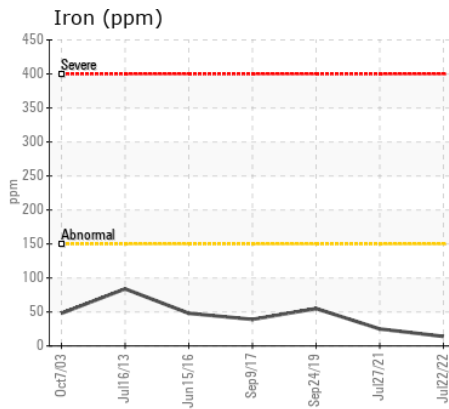
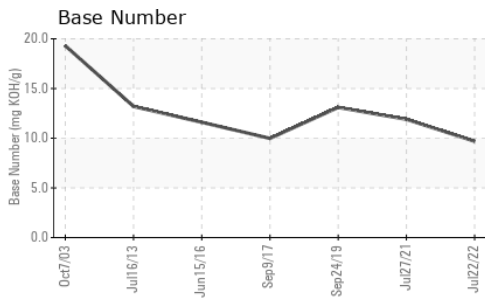
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	5	6	7
Potassium	ppm	ASTM D5185m	>20	52	53	63
Fuel	%	ASTM D3524	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.9	10	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.4	17.7	18.5
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

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>400	1	1	3
Boron	ppm	ASTM D5185m		4	0	6
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		166	168	174
Manganese	ppm	ASTM D5185m		<1	1	2
Magnesium	ppm	ASTM D5185m		648	603	706
Calcium	ppm	ASTM D5185m		1677	1976	1555
Phosphorus	ppm	ASTM D5185m		976	1067	995
Zinc	ppm	ASTM D5185m		1210	1320	1138
Sulfur	ppm	ASTM D5185m		4332	4066	1798
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	14.5	16.3
Base Number (BN)	mg KOH/g	ASTM D2896		9.69	11.9	13.1
Visc @ 100°C	cSt	ASTM D445		9	9.6	9.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05647347 **Received** : 21 Sep 2022
Lab Number : 05647347 **Tested** : 23 Sep 2022
Unique Number : 10141886 **Diagnosed** : 23 Sep 2022 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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)

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