



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
BOBCAT A0W113899

Component
Diesel Engine

Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (8 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02632507	TR02612310	TR02498000
Sample Date		Client Info		18 Apr 2024	08 Jan 2024	23 Jun 2022
Machine Age	hrs	Client Info		1305	994	9742
Oil Age	hrs	Client Info		312	393	331
Filter Age	hrs	Client Info		312	393	331
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	16	25	18
Chromium	ppm	ASTM D5185(m)	>20	<1	2	2
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	4	8	5
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	<1	1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

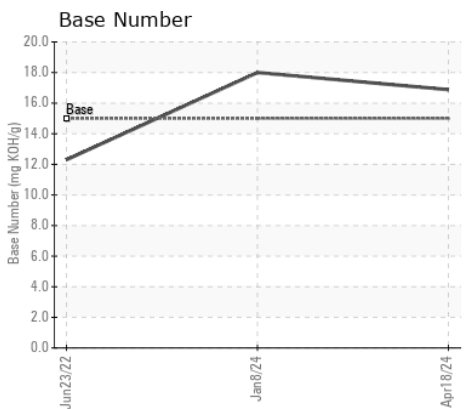
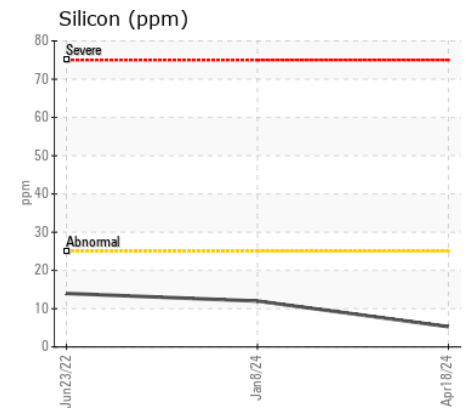
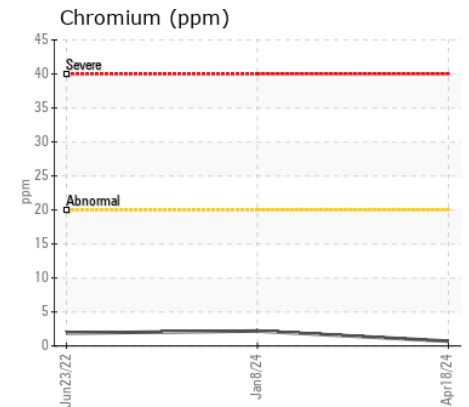
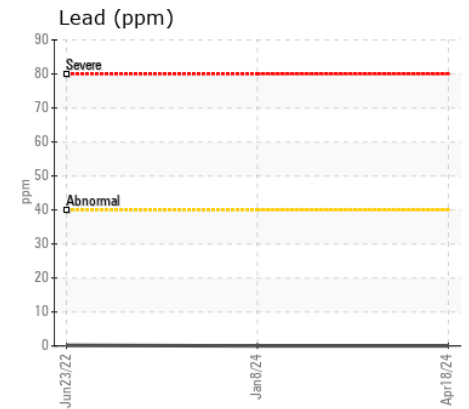
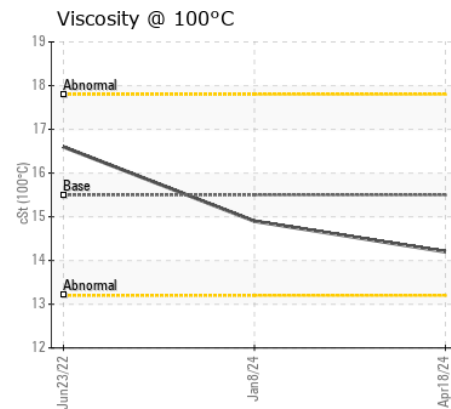
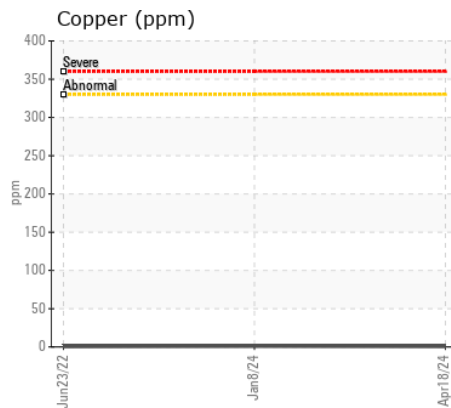
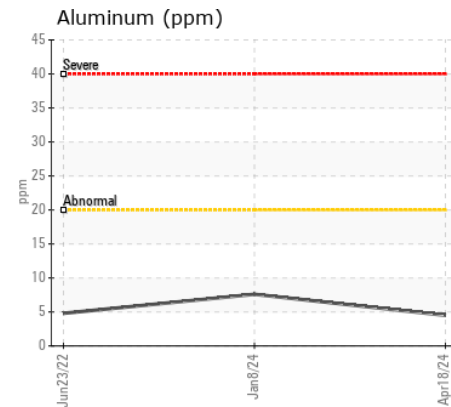
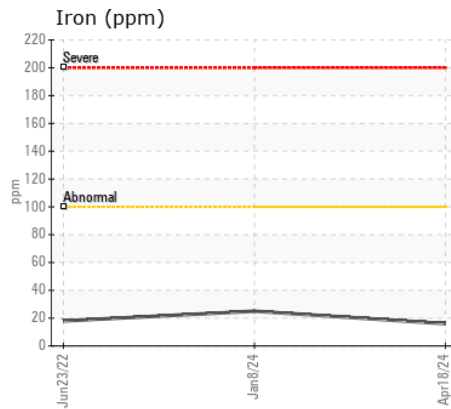
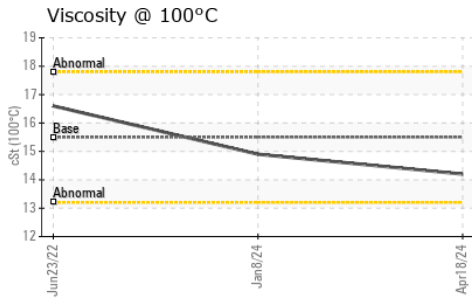
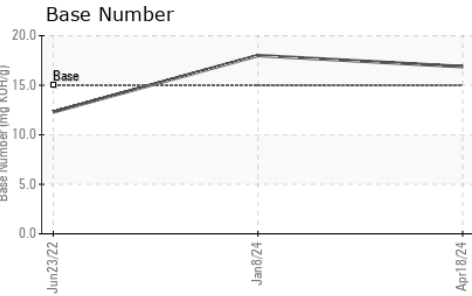
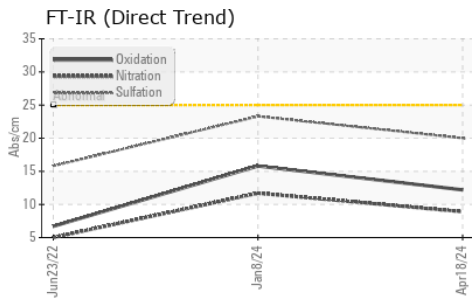
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	5	12	14
Potassium	ppm	ASTM D5185(m)	>20	2	2	9
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.1	0.4	0
Nitration	Abs/cm	ASTM D7624*	>20	8.9	11.7	5.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.0	23.3	15.8
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 D5185(m)		3	3	5
Boron	ppm	ASTM D5185(m)		3	1	15
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	3	<1
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)		22	26	18
Calcium	ppm	ASTM D5185(m)	4500	5669	6465	4481
Phosphorus	ppm	ASTM D5185(m)		994	1094	1049
Zinc	ppm	ASTM D5185(m)	1400	1152	1296	1263
Sulfur	ppm	ASTM D5185(m)		3585	4174	3630
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.2	15.8	6.7
Base Number (BN)	mg KOH/g	ASTM D2896*	15	16.88	18.00	12.30
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	14.2	14.9	▲ 16.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02632507 **Received** : 01 May 2024
Lab Number : **02632507** **Tested** : 02 May 2024
Unique Number : 5773660 **Diagnosed** : 02 May 2024 - Wes Davis
Test Package : MOB 2

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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)