



Area
[W8864]
Machine Id
Bobcat Sand hills veteran cemetery (S/N B2vy13208)
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 PNT)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: W8864)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0196998	---	---
Sample Date		Client Info		24 May 2024	---	---
Machine Age	hrs	Client Info		2190	---	---
Oil Age	hrs	Client Info		2190	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	59	---	---
Chromium	ppm	ASTM D5185m	>20	2	---	---
Nickel	ppm	ASTM D5185m	>4	2	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	1	---	---
Aluminum	ppm	ASTM D5185m	>20	15	---	---
Lead	ppm	ASTM D5185m	>40	10	---	---
Copper	ppm	ASTM D5185m	>330	18	---	---
Tin	ppm	ASTM D5185m	>15	8	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

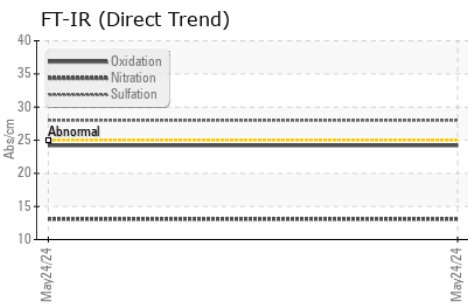
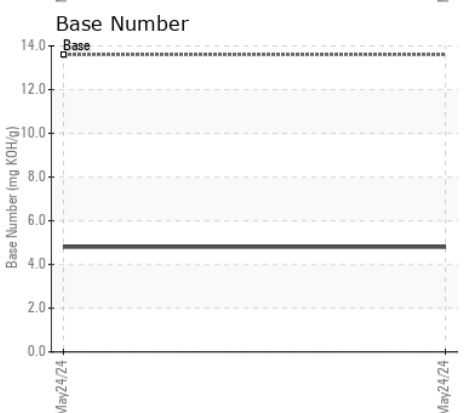
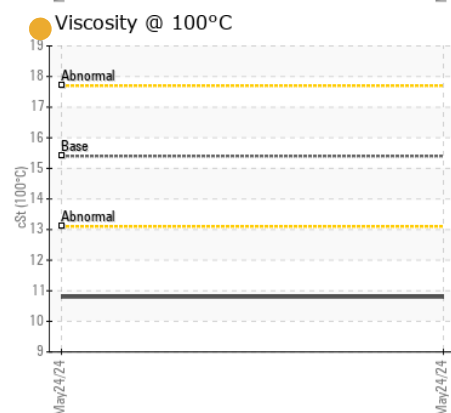
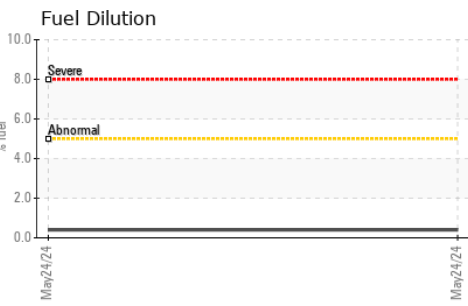
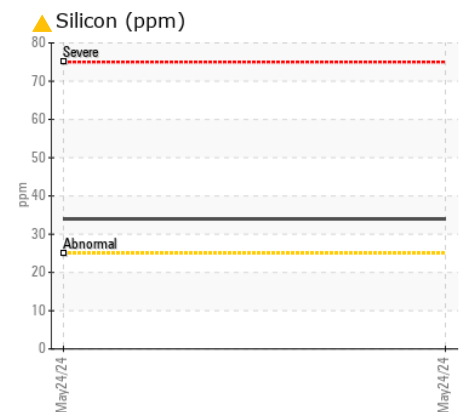
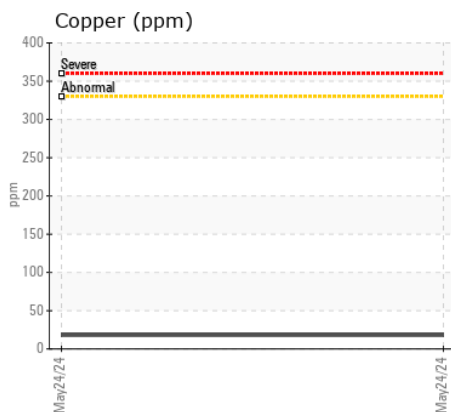
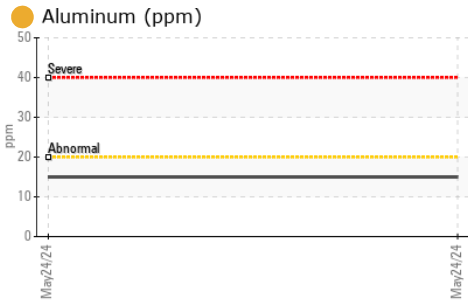
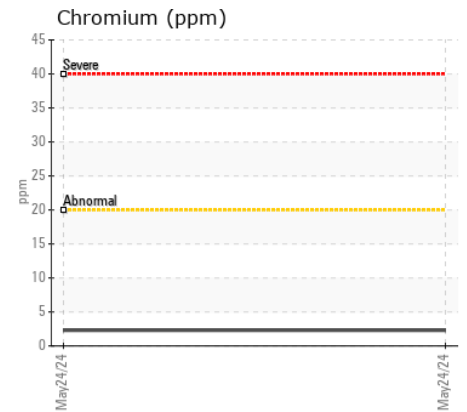
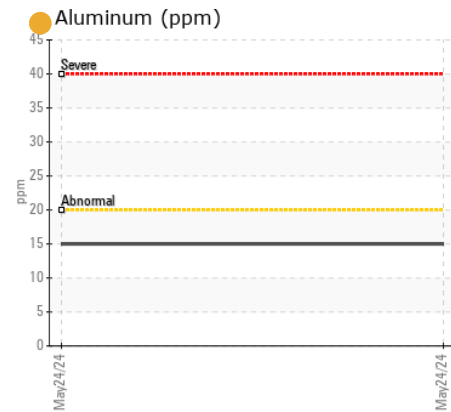
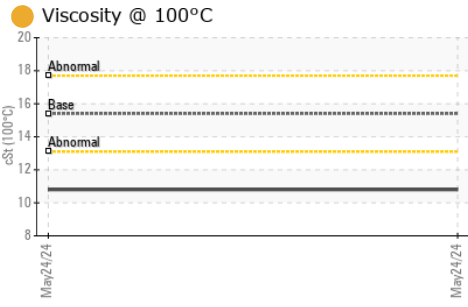
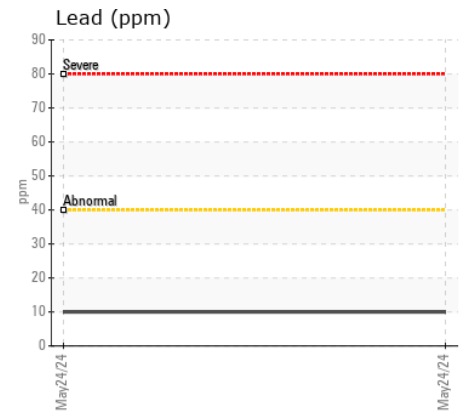
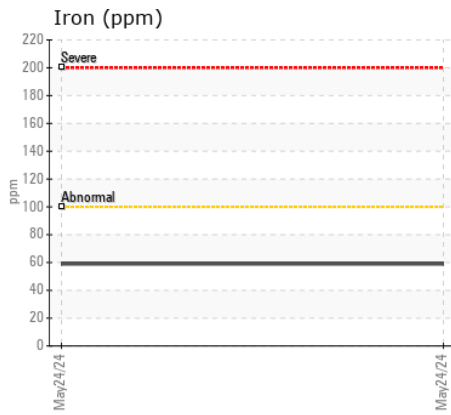
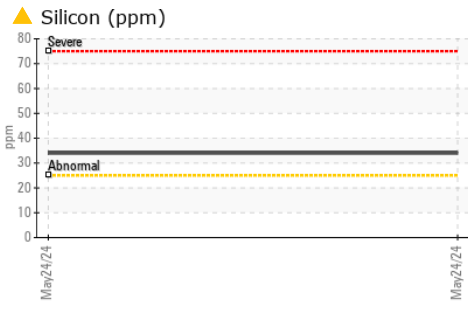
Fuel content negligible. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>25	34	---	---
Potassium	ppm	ASTM D5185m	>20	16	---	---
Fuel	%	ASTM D3524	>5	0.4	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	13.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.0	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		7	---	---
Boron	ppm	ASTM D5185m		8	---	---
Barium	ppm	ASTM D5185m		6	---	---
Molybdenum	ppm	ASTM D5185m		51	---	---
Manganese	ppm	ASTM D5185m		3	---	---
Magnesium	ppm	ASTM D5185m		713	---	---
Calcium	ppm	ASTM D5185m		1490	---	---
Phosphorus	ppm	ASTM D5185m		789	---	---
Zinc	ppm	ASTM D5185m		1074	---	---
Sulfur	ppm	ASTM D5185m		3502	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	4.8	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	10.8	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0196998 **Received** : 29 May 2024
Lab Number : 06193610 **Tested** : 31 May 2024
Unique Number : 11050362 **Diagnosed** : 31 May 2024 - Don Baldrige
Test Package : MOBCE (Additional Tests: FuelDilution, PercentFuel, TBN)

JRE - HOPE MILLS/FAYETTEVILLE
 5039 HWY 301 SOUTH
 HOPE MILLS, NC
 US 28348
 Contact: FAYETTEVILLE SHOP
 stephen.mullis@jamesriverequipment.com; canastasio@wearcheck.com

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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F: