James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 650K 1T0650KKPHF306809
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The lead level is abnormal. All other component wear rates are normal.

CONTAMINATION

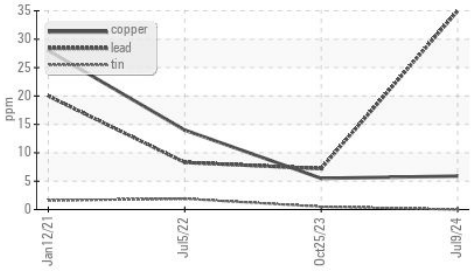
There is no indication of any contamination in the oil.

FLUID CONDITION

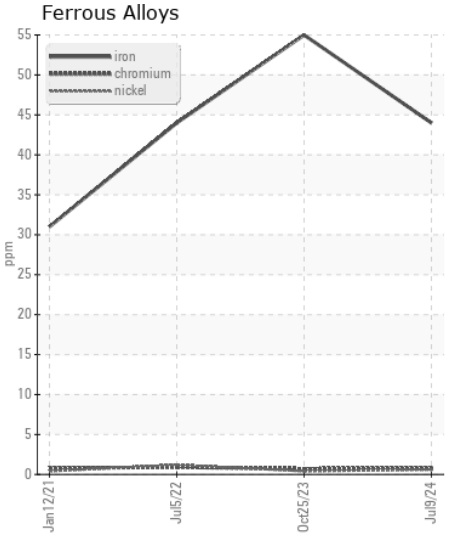
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218468	JR0190256	JR0125602
Sample Date		Client Info		09 Jul 2024	25 Oct 2023	05 Jul 2022
Machine Age	hrs	Client Info		2968	2413	1932
Oil Age	hrs	Client Info		555	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	44	▲ 55	44
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	8	10	9
Lead	ppm	ASTM D5185m	>26	▲ 35	7	8
Copper	ppm	ASTM D5185m	>26	6	6	14
Tin	ppm	ASTM D5185m	>4	0	<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
Silicon	ppm	ASTM D5185m	>22	8	9	8
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	10.0	10.6	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.1	24.8	26.0
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	>0.21	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>31	4	4	2
Boron	ppm	ASTM D5185m		124	126	124
Barium	ppm	ASTM D5185m		0	4	0
Molybdenum	ppm	ASTM D5185m		229	241	228
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		781	763	748
Calcium	ppm	ASTM D5185m		1996	1283	1464
Phosphorus	ppm	ASTM D5185m		957	858	769
Zinc	ppm	ASTM D5185m		1169	971	963
Sulfur	ppm	ASTM D5185m		3552	2531	3188
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	19.2	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.2	7.6	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.8	13.8

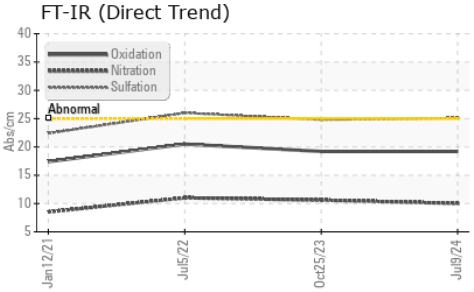
Non-ferrous Metals



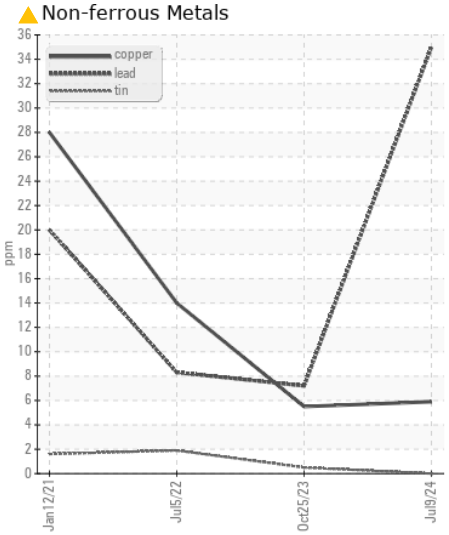
Ferrous Alloys



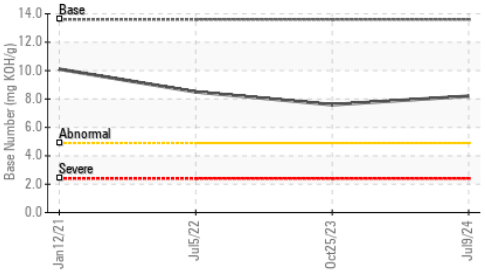
FT-IR (Direct Trend)



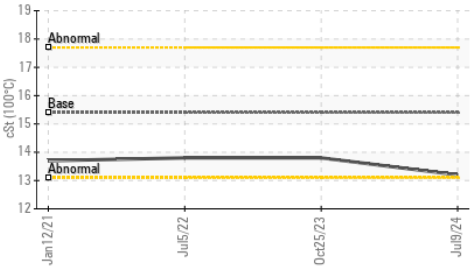
Non-ferrous Metals



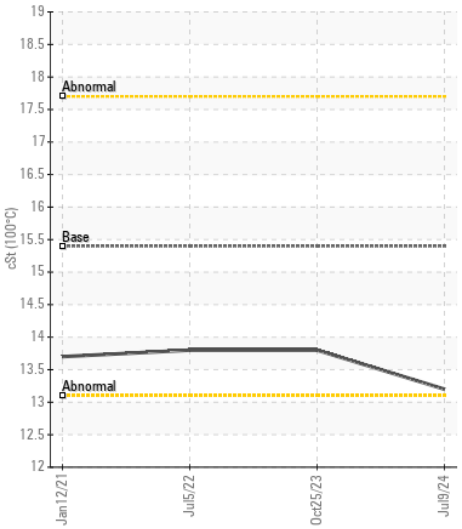
Base Number



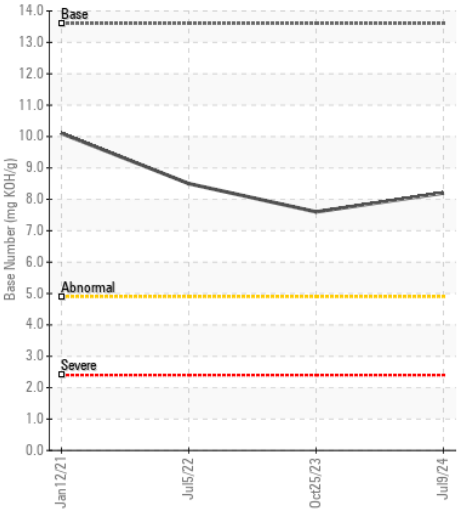
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218468
Lab Number : 06233098
Unique Number : 11116591
Test Package : CONST (Additional Tests: TBN)

Received : 11 Jul 2024
Tested : 12 Jul 2024
Diagnosed : 12 Jul 2024 - Don Baldridge

R.J. SMITH
1711 REYMET RD
RICHMOND, VA
US 23237
Contact: KIRBY MAITLAND

T: (804)283-6426
F: (804)513-2148

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)