MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 470G 687 (S/N 1FF470GXLKF236264)
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

The iron level is abnormal.

CONTAMINATION

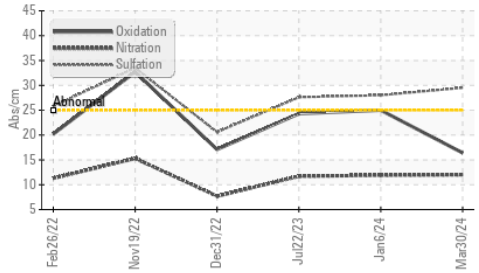
There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

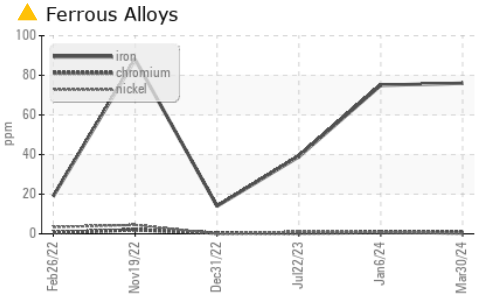
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RO06157113	RO06070105	RO05934549
Sample Date		Client Info		30 Mar 2024	06 Jan 2024	22 Jul 2023
Machine Age	hrs	Client Info		5031	4540	3735
Oil Age	hrs	Client Info		456	805	700
Filter Age	hrs	Client Info		456	805	700
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	▲ 76	75	39
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	6	5	4
Lead	ppm	ASTM D5185m	>26	<1	33	▲ 54
Copper	ppm	ASTM D5185m	>26	0	20	21
Tin	ppm	ASTM D5185m	>4	<1	4	3
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	20	25	13
Potassium	ppm	ASTM D5185m	>20	4	13	4
Fuel	%	ASTM D3524	>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	▲ 4.9	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.0	11.9	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.5	28.0	27.6
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	2	14	14
Boron	ppm	ASTM D5185m		71	24	25
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		25	24	240
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		173	86	801
Calcium	ppm	ASTM D5185m		2118	2185	1681
Phosphorus	ppm	ASTM D5185m		1065	882	900
Zinc	ppm	ASTM D5185m		1212	1153	1135
Sulfur	ppm	ASTM D5185m		3795	3785	3244
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	25.0	24.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.98	4.65	6.70
Visc @ 100°C	cSt	ASTM D445	15.4	15.2	13.0	14.3

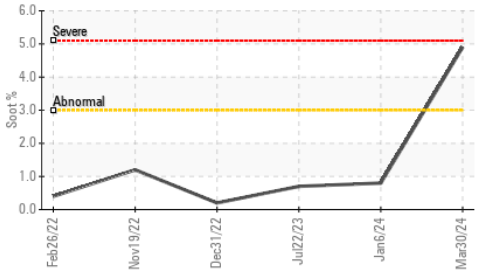
FT-IR (Direct Trend)



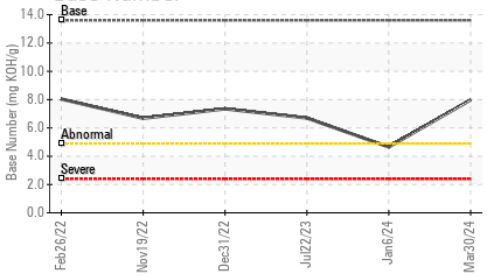
Ferrous Alloys



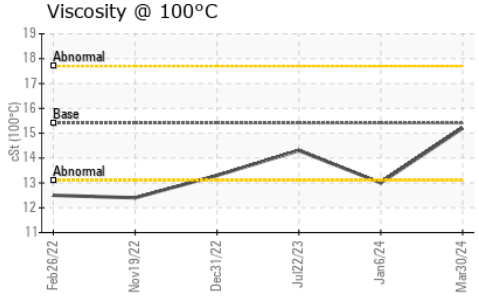
Soot %



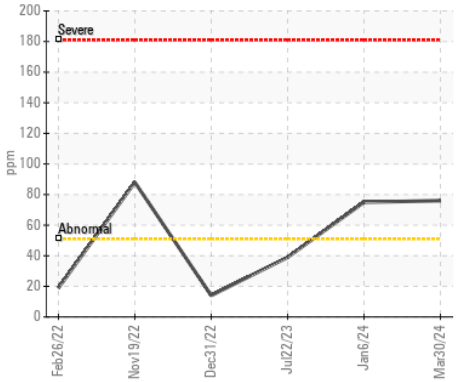
Base Number



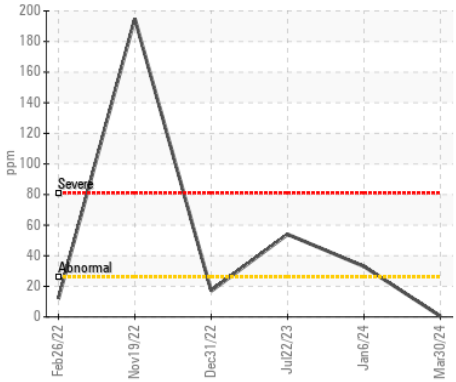
Viscosity @ 100°C



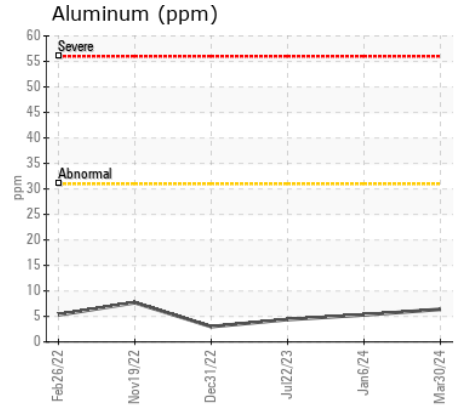
Iron (ppm)



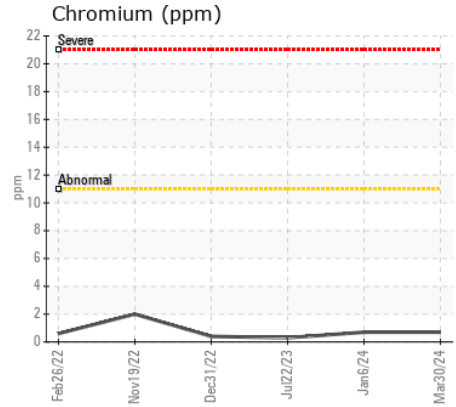
Lead (ppm)



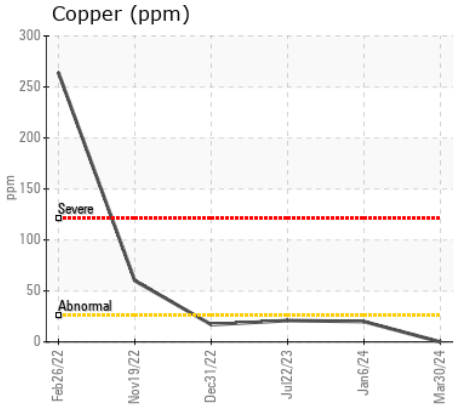
Aluminum (ppm)



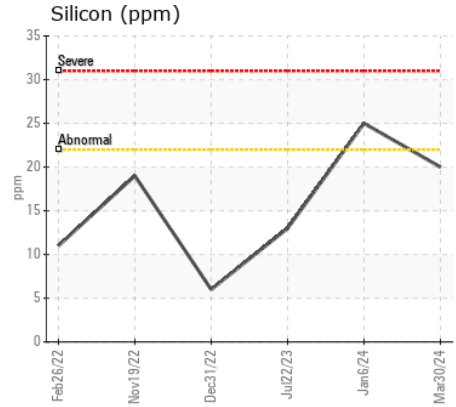
Chromium (ppm)



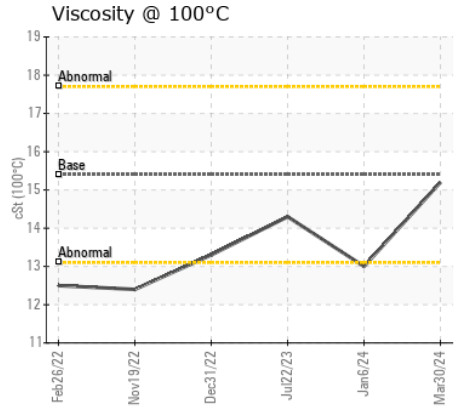
Copper (ppm)



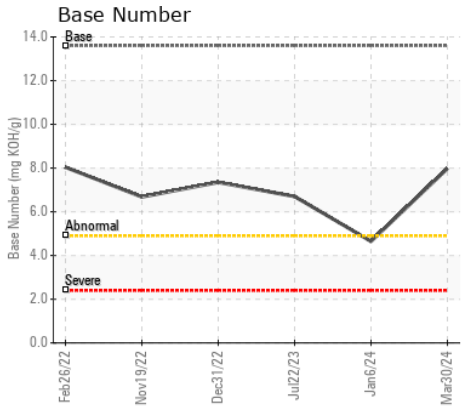
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RO06157113 **Received** : 22 Apr 2024
Lab Number : 06157113 **Tested** : 25 Apr 2024
Unique Number : 10992536 **Diagnosed** : 25 Apr 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution)

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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