MOB II

HIGH PERFORMANCE LUBRICANTS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 9770 COMBINE 1
Component
Diesel Engine
Fluid
HIGH PERFORMANCE LUBRICANTS HDMO 15W40 (31 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

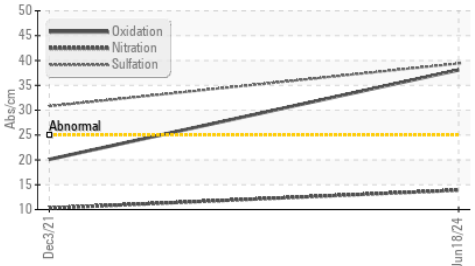
There is no indication of any contamination in the oil.

FLUID CONDITION

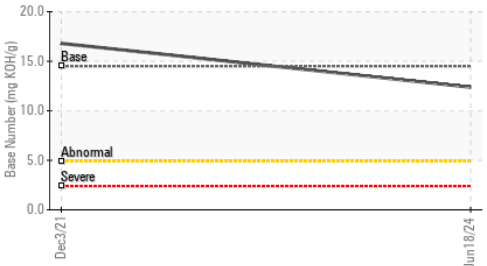
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0002484	HPL007847	---
Sample Date		Client Info		18 Jun 2024	03 Dec 2021	---
Machine Age	mls	Client Info		4525	3942	---
Oil Age	mls	Client Info		1016	433	---
Filter Age	mls	Client Info		330	433	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				NORMAL	NORMAL	---
Iron	ppm	ASTM D5185m	>51	65	56	---
Chromium	ppm	ASTM D5185m	>11	2	2	---
Nickel	ppm	ASTM D5185m	>5	2	2	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>31	6	3	---
Lead	ppm	ASTM D5185m	>26	3	2	---
Copper	ppm	ASTM D5185m	>26	3	2	---
Tin	ppm	ASTM D5185m	>4	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>22	10	11	---
Potassium	ppm	ASTM D5185m	>20	4	2	---
Fuel		WC Method	>2.1	<1.0	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.7	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	13.9	10.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	39.4	30.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG	---
Sodium	ppm	ASTM D5185m	>31	4	3	---
Boron	ppm	ASTM D5185m	200	33	176	---
Barium	ppm	ASTM D5185m		1	0	---
Molybdenum	ppm	ASTM D5185m	85	636	741	---
Manganese	ppm	ASTM D5185m		2	<1	---
Magnesium	ppm	ASTM D5185m	525	911	533	---
Calcium	ppm	ASTM D5185m	4300	3463	4273	---
Phosphorus	ppm	ASTM D5185m	1000	1122	919	---
Zinc	ppm	ASTM D5185m	1100	1377	1088	---
Sulfur	ppm	ASTM D5185m	20200	12697	15526	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	38.1	20.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	14.5	12.38	16.8	---
Visc @ 100°C	cSt	ASTM D445	14.5	15.7	15.7	---

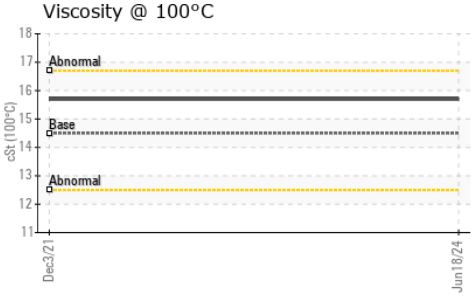
FT-IR (Direct Trend)



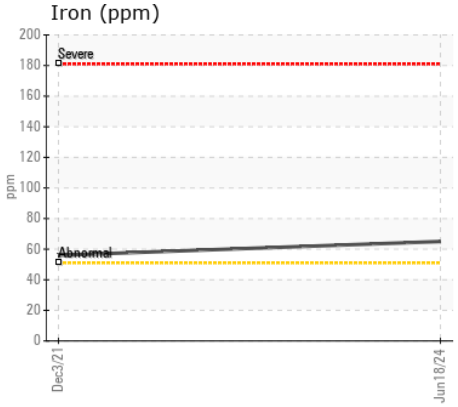
Base Number



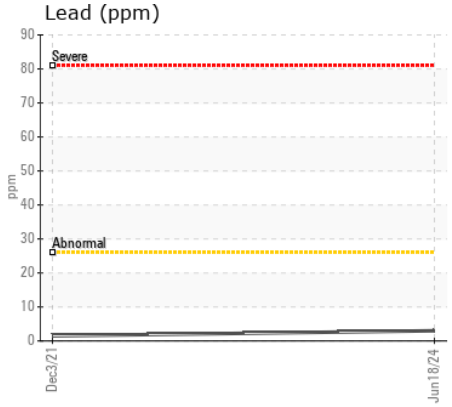
Viscosity @ 100°C



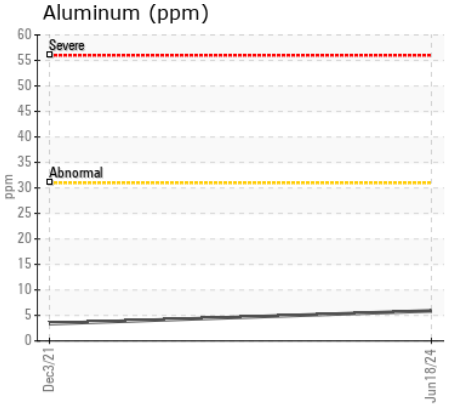
Iron (ppm)



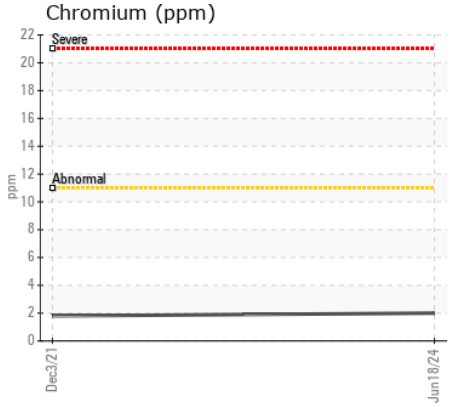
Lead (ppm)



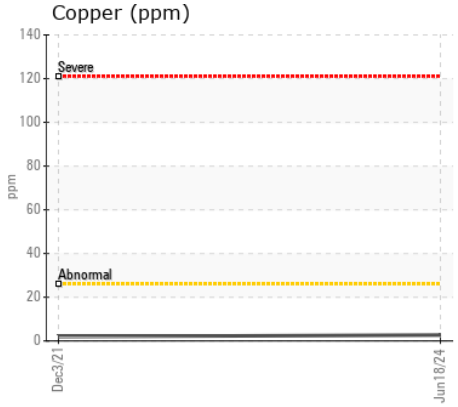
Aluminum (ppm)



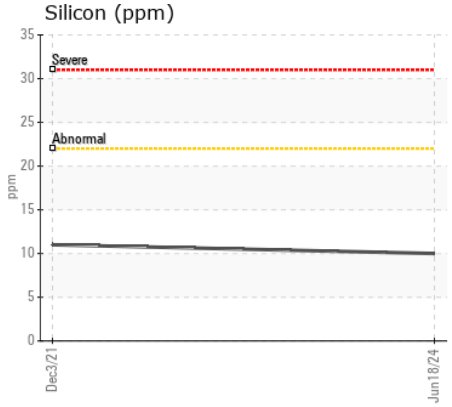
Chromium (ppm)



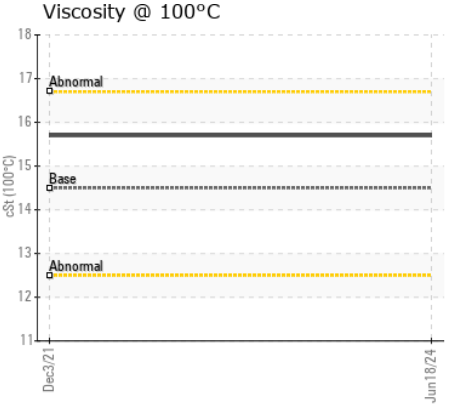
Copper (ppm)



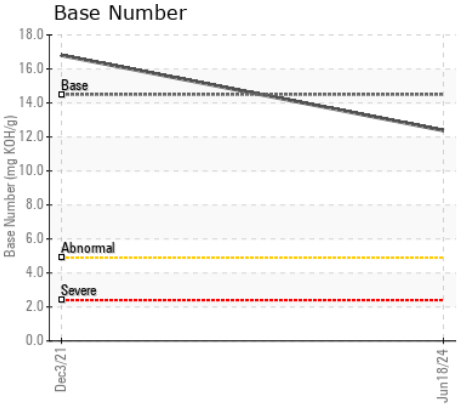
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0002484
Lab Number : 06218418
Unique Number : 11096615
Test Package : MOB 2

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Sean Felton

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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