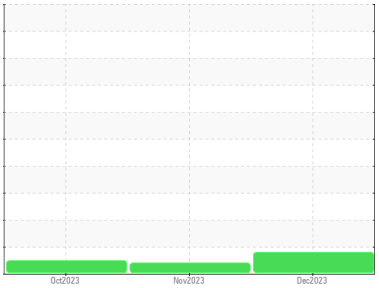
OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
JOHN DEERE 744P LDR016
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. The fluid was specified as JOHN DEERE ENGINE OIL PLUS 50 II 15W40, however, a fluid match indicates that this fluid is SAE 20 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 20 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0879668**	WC0865481	WC0861383
Sample Date		Client Info		**18 Dec 2023**	18 Nov 2023	14 Oct 2023
Machine Age	hrs	Client Info		**2513**	1873	1195
Oil Age	hrs	Client Info		**500**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.21	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>51	**24**	29	37
Chromium	ppm	ASTM D5185(m)	>11	**0**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**0**	2	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>31	**<1**	2	4
Lead	ppm	ASTM D5185(m)	>26	**<1**	1	2
Copper	ppm	ASTM D5185(m)	>26	**5**	4	22
Tin	ppm	ASTM D5185(m)	>4	**0**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**4**	35	164
Barium	ppm	ASTM D5185(m)		**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)		**<1**	68	267
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**94**	618	789
Calcium	ppm	ASTM D5185(m)		**3396**	1608	1430
Phosphorus	ppm	ASTM D5185(m)		**1008**	818	820
Zinc	ppm	ASTM D5185(m)		**1194**	974	995
Sulfur	ppm	ASTM D5185(m)		**3180**	2285	2484
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>22	**3**	4	8
Sodium	ppm	ASTM D5185(m)	>31	**2**	2	3
Potassium	ppm	ASTM D5185(m)	>20	**2**	0	1
Fuel	%	ASTM D7593*	>2.1	**1.2**	<1.0	1.5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**2.7**	7.9	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.6**	21.9	23.5

OIL ANALYSIS REPORT

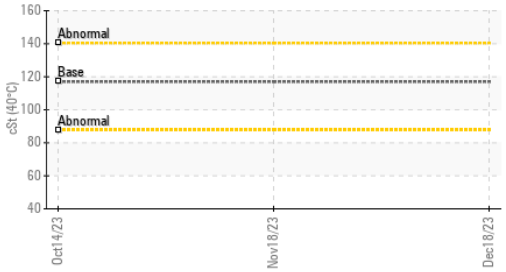
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**12.5**	20.1	18.0

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.21	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

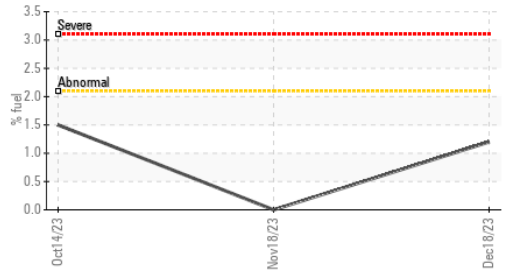
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	117	▲ **51.1**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ **7.8**	▲ 12.9	12.6
Viscosity Index (VI)	Scale	ASTM D2270*	139	**119**	---	---

GRAPHS

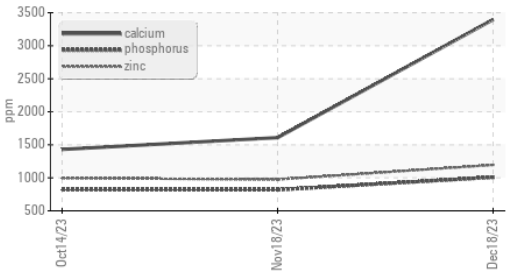
▲ Viscosity @ 40°C



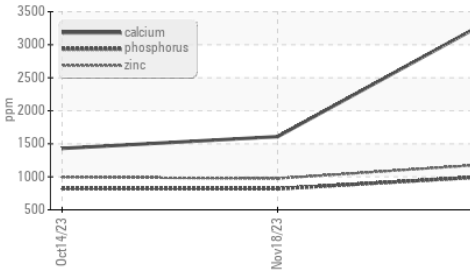
Fuel Dilution



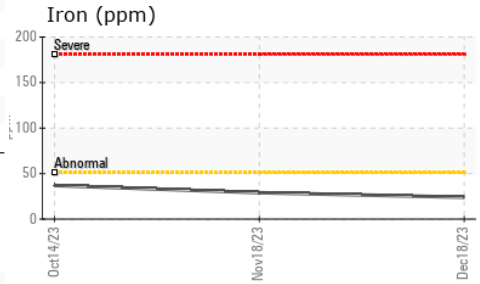
Additives



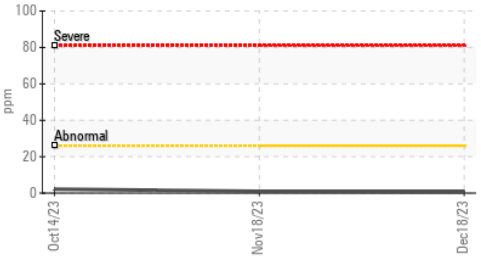
Additives



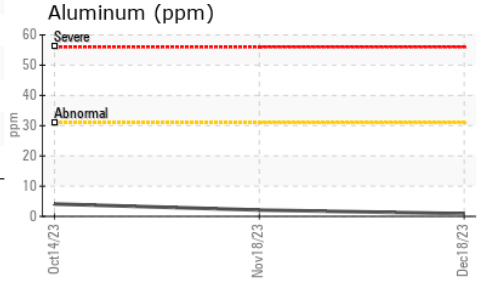
Iron (ppm)



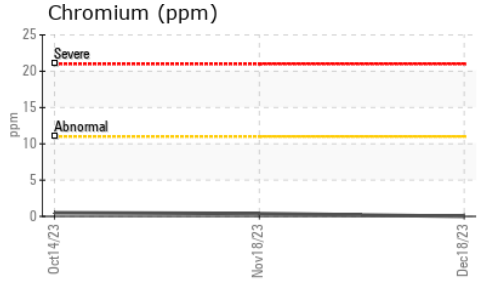
Lead (ppm)



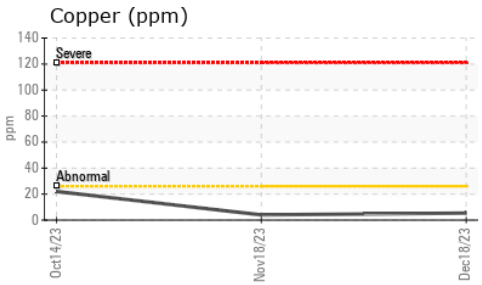
Aluminum (ppm)



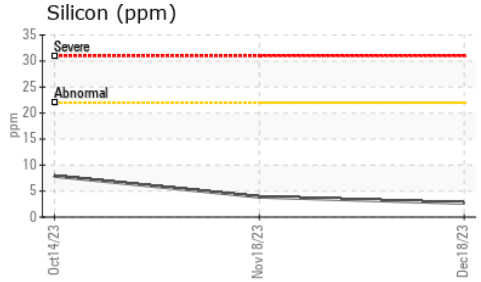
Chromium (ppm)



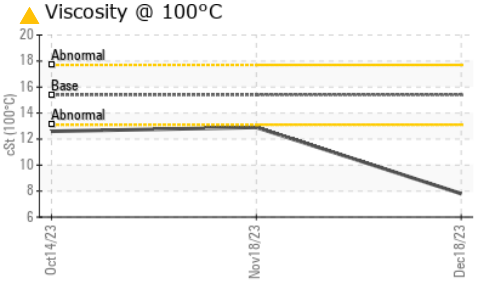
Copper (ppm)



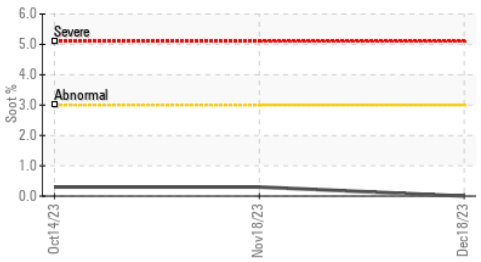
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0879668 **Recieved** : 27 Dec 2023
Lab Number : 02605374 **Diagnosed** : 02 Jan 2024
Unique Number : 5698459 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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