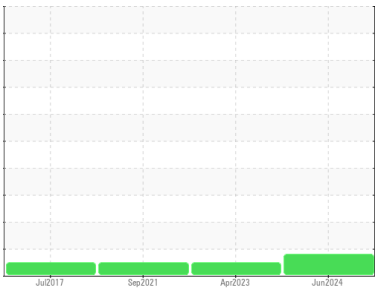
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
JOHN DEERE 7830 740833 (S/N RW7830A004615)
Component
Diesel Engine
Fluid
CASTROL 15W40 (7 GAL)

DIAGNOSIS

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
Cylinder, crank, or cam shaft wear is indicated. 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0101002**	PCA0091972	PCA0054492
Sample Date		Client Info		**13 Jun 2024**	04 Apr 2023	15 Sep 2021
Machine Age	hrs	Client Info		**11730**	10616	9962
Oil Age	hrs	Client Info		**114**	369	419
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	▲ **72**	22	32
Chromium	ppm	ASTM D5185m	>11	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**3**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>31	**4**	<1	<1
Lead	ppm	ASTM D5185m	>26	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>26	**2**	<1	<1
Tin	ppm	ASTM D5185m	>4	**<1**	0	<1
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**120**	271	14
Barium	ppm	ASTM D5185m		**0**	2	0
Molybdenum	ppm	ASTM D5185m		**73**	235	58
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**1054**	751	915
Calcium	ppm	ASTM D5185m		**1008**	1364	1146
Phosphorus	ppm	ASTM D5185m		**996**	845	1039
Zinc	ppm	ASTM D5185m		**1207**	1033	1194
Sulfur	ppm	ASTM D5185m		**3162**	3049	2786

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	**6**	8	3
Sodium	ppm	ASTM D5185m	>406	**2**	0	3
Potassium	ppm	ASTM D5185m	>20	**7**	4	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**7.7**	7.0	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.7**	18.3	18.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.5**	14.2	14.1
Base Number (BN)	mg KOH/g	ASTM D2896		**9.8**	8.3	---

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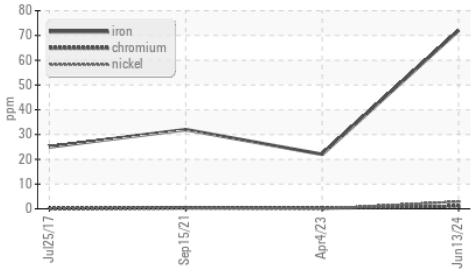
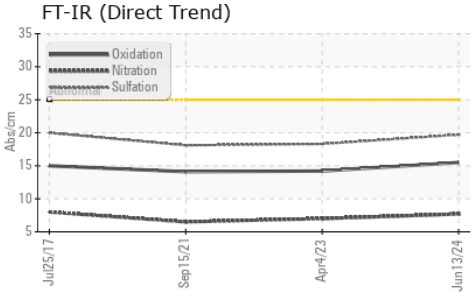
OIL ANALYSIS REPORT

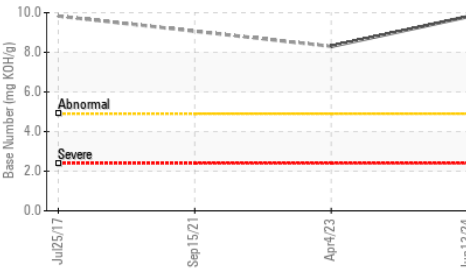
Ferrous Alloys



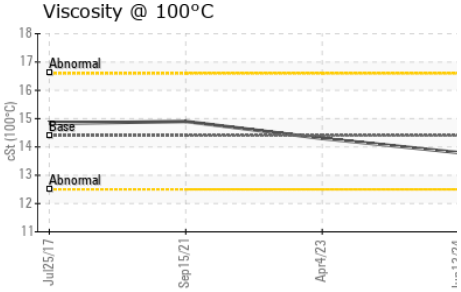
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

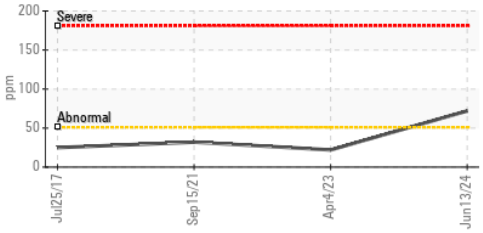


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

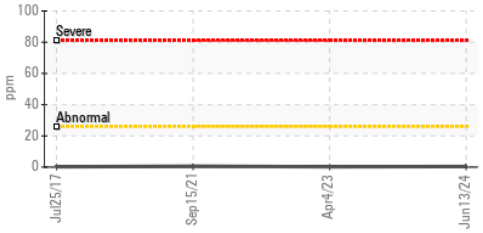
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**13.8**	14.3	14.9

GRAPHS

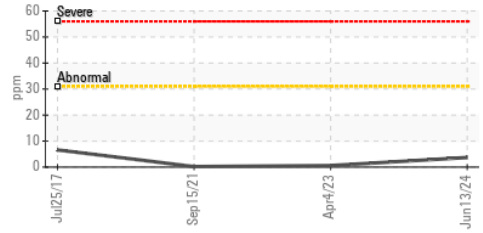
Iron (ppm)



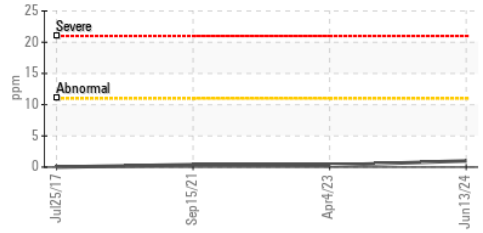
Lead (ppm)



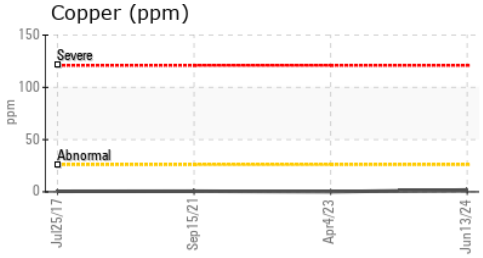
Aluminum (ppm)



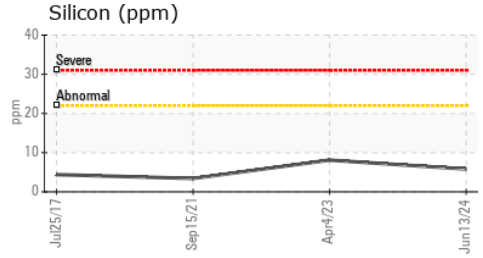
Chromium (ppm)



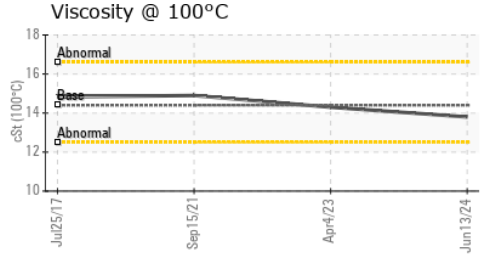
Copper (ppm)



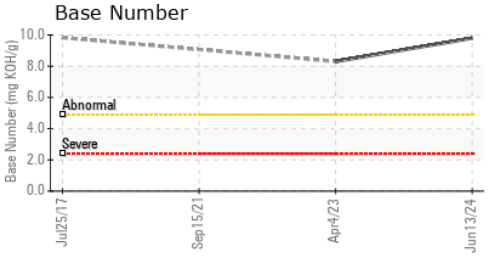
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0101002 **Received** : 10 Jul 2024
Lab Number : 06232000 **Tested** : 10 Jul 2024
Unique Number : 11115493 **Diagnosed** : 11 Jul 2024 - Don Baldridge
Test Package : MOB 1 (Additional Tests: TBN)

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)

SYNAGRO
284 BOGER RD
MOCKSVILLE, NC
US 27028
Contact: ROGER AMICK
ramick@synagro.com
T: (336)998-7150
F: (336)998-2155

Report Id: SYNMOC [WUSCAR] 06232000 (Generated: 07/15/2024 16:20:57) Rev: 1

Contact/Location: ROGER AMICK - SYNMOC