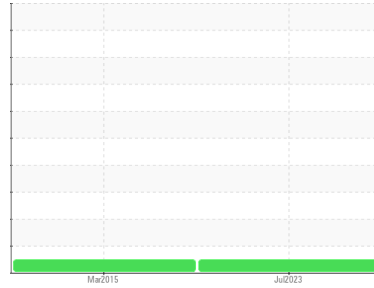




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
KENWORTH W900L 167404

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (44 QTS)

DIAGNOSIS

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. The amount and size of particulates present in the system are acceptable.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KL0005460	KLMFA13343	---
Sample Date	Client Info		11 Jul 2023	18 Mar 2015	---
Machine Age	mls	Client Info	0	600000	---
Oil Age	mls	Client Info	5512	6000	---
Oil Changed	Client Info		Not Chngd	Changed	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >165	4	14	---
Chromium	ppm	ASTM D5185m >5	<1	1	---
Nickel	ppm	ASTM D5185m >4	0	0	---
Titanium	ppm	ASTM D5185m >2	<1	63	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >20	<1	4	---
Lead	ppm	ASTM D5185m >150	<1	1	---
Copper	ppm	ASTM D5185m >90	<1	5	---
Tin	ppm	ASTM D5185m >5	0	0	---
Antimony	ppm	ASTM D5185m	---	0	---
Vanadium	ppm	ASTM D5185m	<1	<1	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	21	66	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	79	20	---
Manganese	ppm	ASTM D5185m	<1	0	---
Magnesium	ppm	ASTM D5185m	1036	270	---
Calcium	ppm	ASTM D5185m	1157	1879	---
Phosphorus	ppm	ASTM D5185m	1062	1031	---
Zinc	ppm	ASTM D5185m	1326	1199	---
Sulfur	ppm	ASTM D5185m	3934	1242	---

CONTAMINANTS

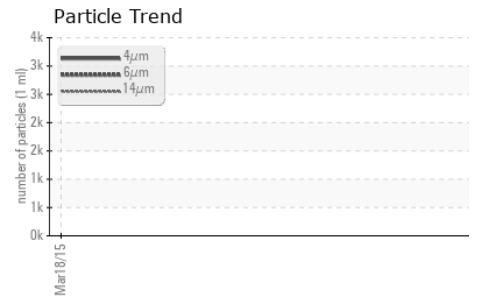
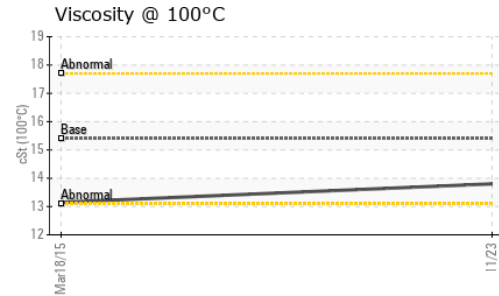
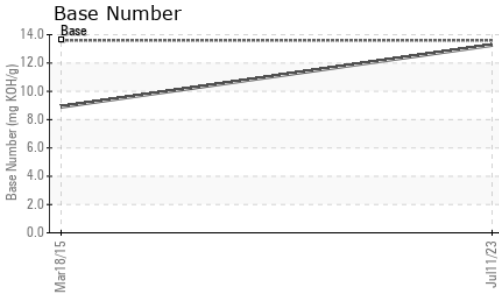
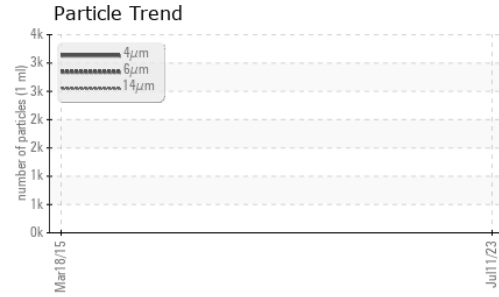
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	4	4	---
Sodium	ppm	ASTM D5185m	15	6	---
Potassium	ppm	ASTM D5185m >20	<1	7	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	0.2	0.4	---
Nitration	Abs/cm	*ASTM D7624 >20	7.3	8.	---
Sulfation	Abs./1mm	*ASTM D7415 >30	19.8	20.	---



OIL ANALYSIS REPORT



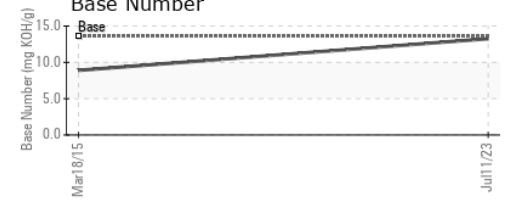
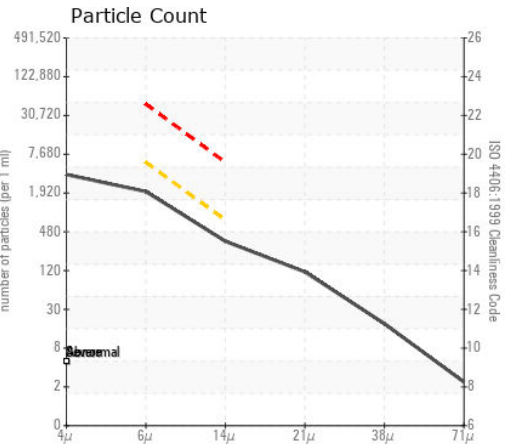
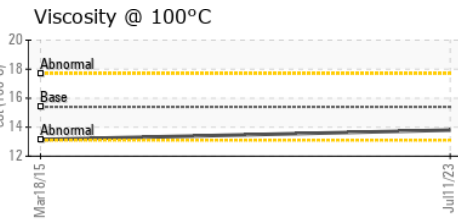
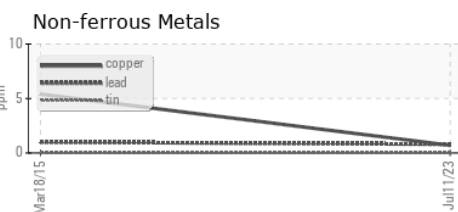
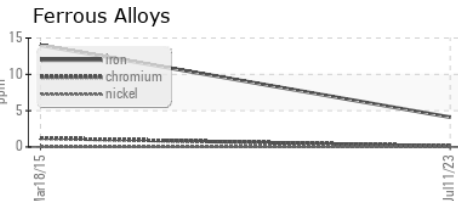
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		3245	---	---
Particles >6µm	ASTM D7647	>5000	1768	---	---
Particles >14µm	ASTM D7647	>640	301	---	---
Particles >21µm	ASTM D7647	>160	101	---	---
Particles >38µm	ASTM D7647	>40	16	---	---
Particles >71µm	ASTM D7647	>10	2	---	---
Oil Cleanliness	ISO 4406 (c)	>19/16	18/15	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm *ASTM D7414	>25	15.7	15.	---
Base Number (BN)	mg KOH/g ASTM D2896	13.6	13.26	8.90	---

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar *Visual	NONE	NONE	NONE	---
Yellow Metal	scalar *Visual	NONE	NONE	NONE	---
Precipitate	scalar *Visual	NONE	NONE	NONE	---
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	>0.2	NEG	NEG	---
Free Water	scalar *Visual		NEG	NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445	15.4	13.8	13.15	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0005460 **Received** : 17 Jul 2023
Lab Number : **05900157** **Diagnosed** : 19 Jul 2023
Unique Number : 10561513 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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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)