OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE JOHN DEERE 200 KW
Component
Auxiliary Engine
Fluid
MOBIL 15W40 (10 GAL)

RECOMMENDATION

(Customer Sample Comment:
Top Up Amount: 1 GAL)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013533	KL0013586	KL0011796
Sample Date		Client Info		09 Jul 2024	17 Jun 2024	28 Mar 2024
Machine Age	hrs	Client Info		5035	4785	3980
Oil Age	hrs	Client Info		250	750	2500
Filter Age	hrs	Client Info		250	250	2500
Oil Changed		Client Info		Oil Added	Oil Added	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Test	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>100	7	6	16
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	1	<1	2
Lead	ppm	ASTM D5185m	>40	0	<1	2
Copper	ppm	ASTM D5185m	>330	1	1	4
Tin	ppm	ASTM D5185m	>15	0	0	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

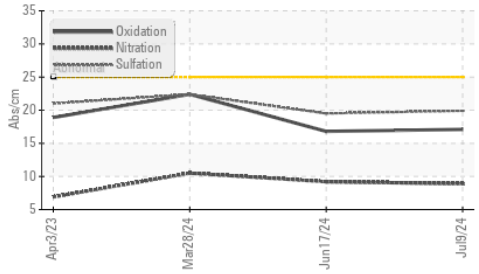
CONTAMINATION

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>25	4	3	6
Potassium	ppm	ASTM D5185m	>20	2	<1	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.2	0.6
Nitration	Abs/cm	*ASTM D7624	>20	8.9	9.2	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	19.5	22.4
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	>0.1	NEG	NEG	NEG

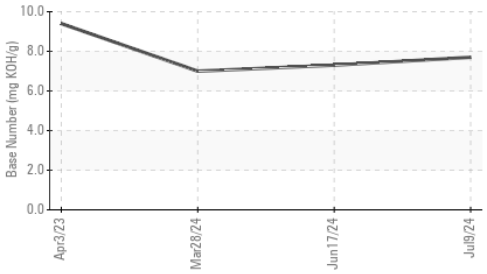
FLUID CONDITION

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185m	>118	1	1	<1
Boron	ppm	ASTM D5185m		53	52	41
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		11	11	33
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		575	553	461
Calcium	ppm	ASTM D5185m		1817	1755	1804
Phosphorus	ppm	ASTM D5185m		892	829	770
Zinc	ppm	ASTM D5185m		968	942	955
Sulfur	ppm	ASTM D5185m		3889	3616	3012
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	16.8	22.4
Base Number (BN)	mg KOH/g	ASTM D2896		7.7	7.3	7.0
Visc @ 100°C	cSt	ASTM D445		13.1	13.2	13.4

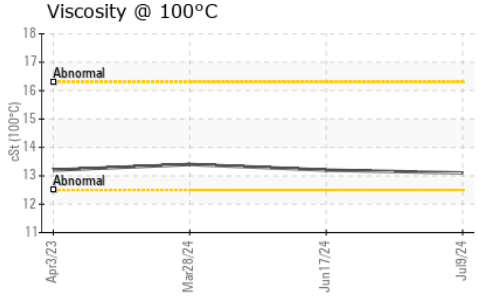
FT-IR (Direct Trend)



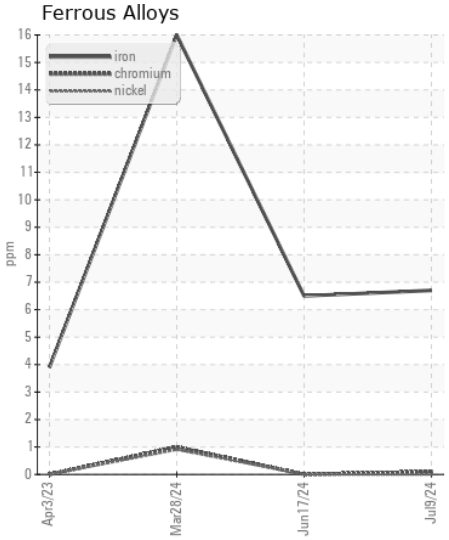
Base Number



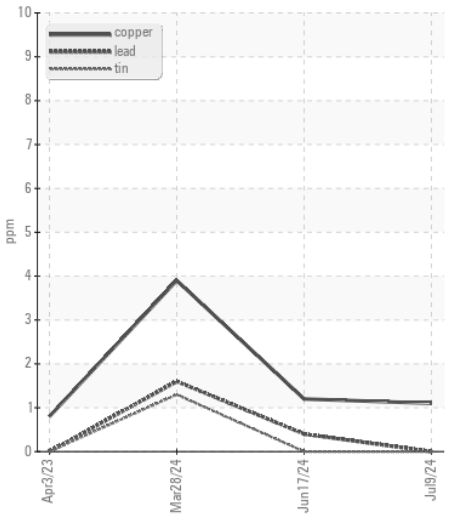
Viscosity @ 100°C



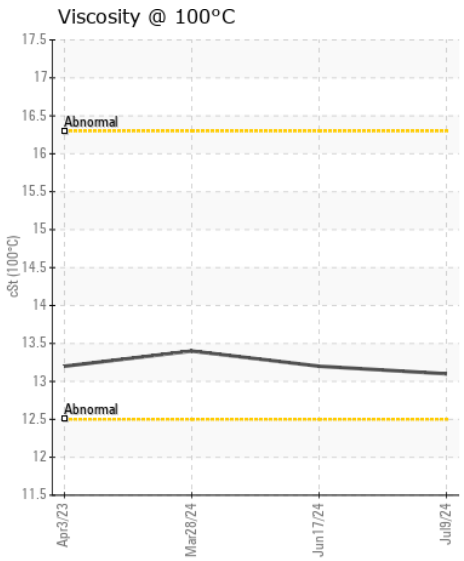
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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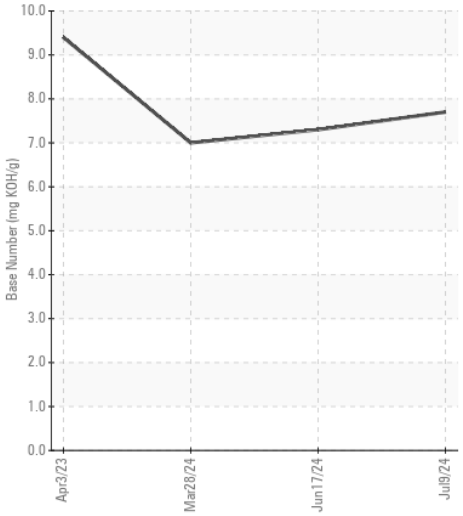

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013533
Lab Number : 06237443
Unique Number : 11126277
Test Package : FLEET

Received : 15 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 18 Jul 2024 - Jonathan Hester

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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