James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	MARGINAL

Area
[MARTIN MARIETTA-PINE]
Machine Id
JOHN DEERE 844K 1DW844KXHCD643325
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

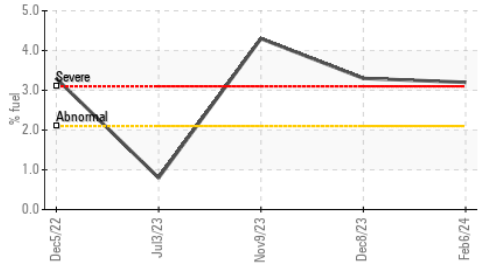
Light fuel dilution occurring.

FLUID CONDITION

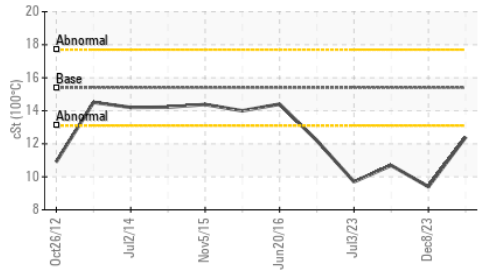
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0195611	JR0184599	JR0184523
Sample Date		Client Info		06 Feb 2024	08 Dec 2023	09 Nov 2023
Machine Age	hrs	Client Info		19472	19280	664
Oil Age	hrs	Client Info		0	0	664
Filter Age	hrs	Client Info		0	0	664
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				MARGINAL	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>51	31	16	▲ 166
Chromium	ppm	ASTM D5185m	>11	2	<1	5
Nickel	ppm	ASTM D5185m	>5	<1	<1	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	4	3
Lead	ppm	ASTM D5185m	>26	7	8	▲ 69
Copper	ppm	ASTM D5185m	>26	38	▲ 41	⬢ 208
Tin	ppm	ASTM D5185m	>4	6	▲ 6	▲ 15
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	16	17	26
Potassium	ppm	ASTM D5185m	>20	3	4	4
Fuel	%	ASTM D3524	>2.1	▲ 3.2	▲ 3.3	▲ 4.3
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.2	2
Nitration	Abs/cm	*ASTM D7624	>20	7.8	6.6	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	19.9	26.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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
Sodium	ppm	ASTM D5185m	>31	2	17	15
Boron	ppm	ASTM D5185m		275	261	152
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		254	234	222
Manganese	ppm	ASTM D5185m		2	9	9
Magnesium	ppm	ASTM D5185m		812	773	848
Calcium	ppm	ASTM D5185m		1340	1280	1306
Phosphorus	ppm	ASTM D5185m		869	867	895
Zinc	ppm	ASTM D5185m		1067	1027	1096
Sulfur	ppm	ASTM D5185m		2944	3019	2626
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	14.2	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	9.6	7.4
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.4	▲ 9.4	10.69

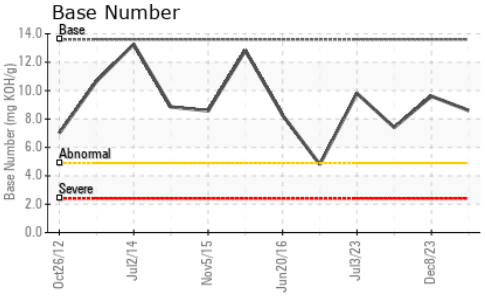
Fuel Dilution



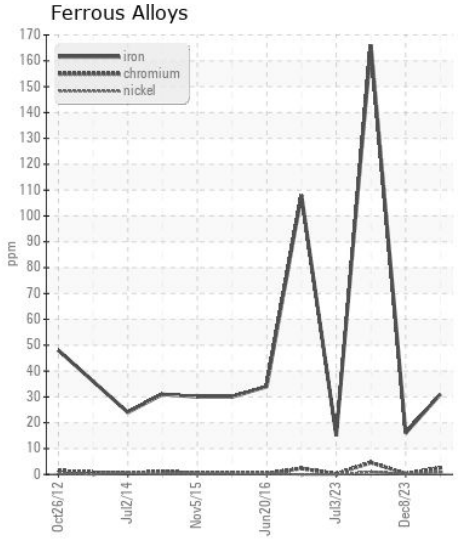
Viscosity @ 100°C



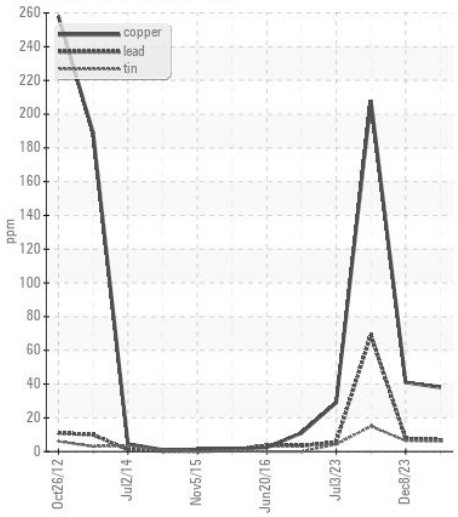
Base Number



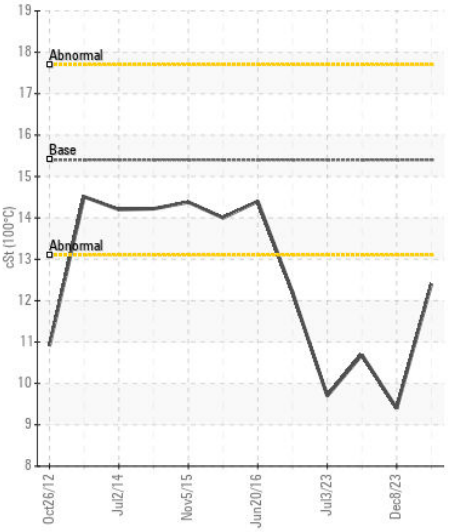
Ferrous Alloys



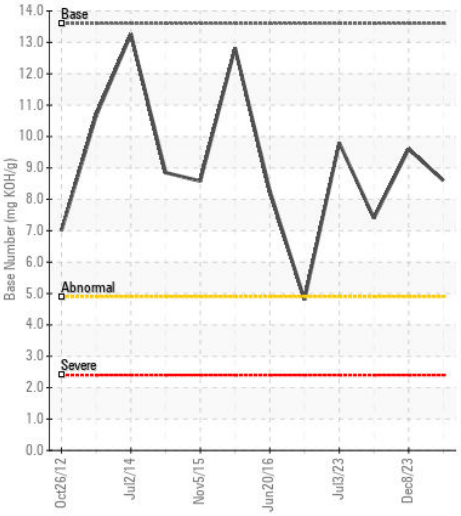
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0195611
Lab Number : 06085318
Unique Number : 10872763
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)
Received : 09 Feb 2024
Tested : 13 Feb 2024
Diagnosed : 13 Feb 2024 - Jonathan Hester

Certificate L2367

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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)