



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
[16W16539]
 Machine Id
JOHN DEERE 1050K 1T01050KJMF395819
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (11 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: 16W16539)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0217295	JR0183269	JR0185347
Sample Date		Client Info		27 Jun 2024	23 Jan 2024	27 Sep 2023
Machine Age	hrs	Client Info		5450	5017	4579
Oil Age	hrs	Client Info		433	438	542
Filter Age	hrs	Client Info		433	438	542
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Valve wear is indicated.

Iron	ppm	ASTM D5185m	>51	23	21	38
Chromium	ppm	ASTM D5185m	>11	1	1	1
Nickel	ppm	ASTM D5185m	>5	▲ 26	▲ 20	17
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	10	17	● 17
Lead	ppm	ASTM D5185m	>26	6	8	16
Copper	ppm	ASTM D5185m	>26	8	7	11
Tin	ppm	ASTM D5185m	>4	1	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

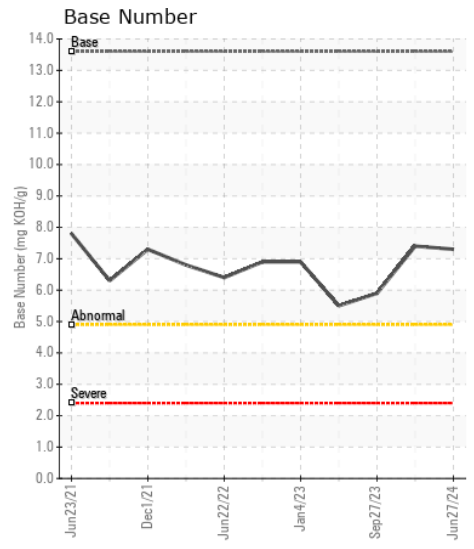
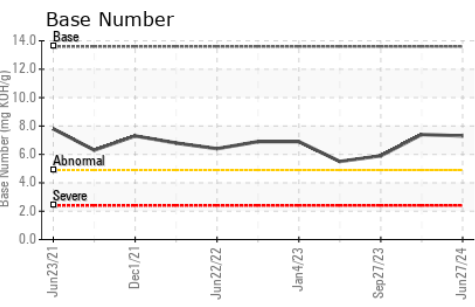
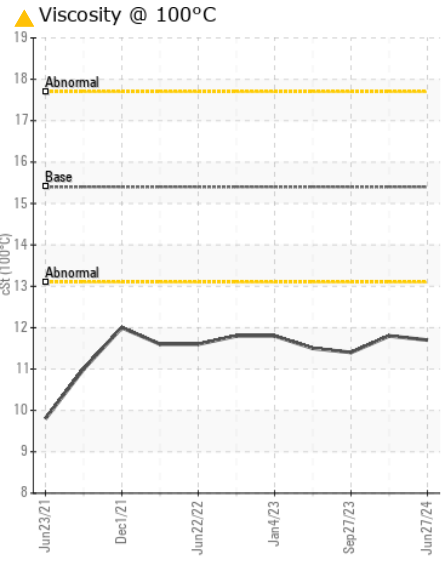
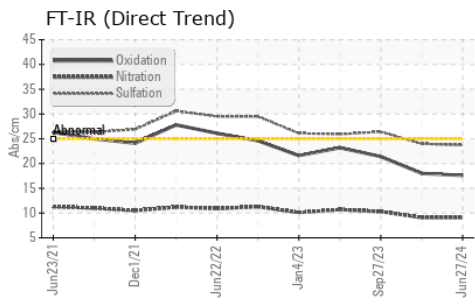
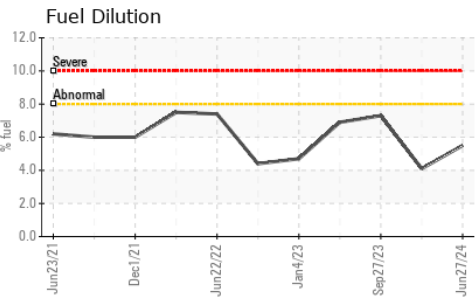
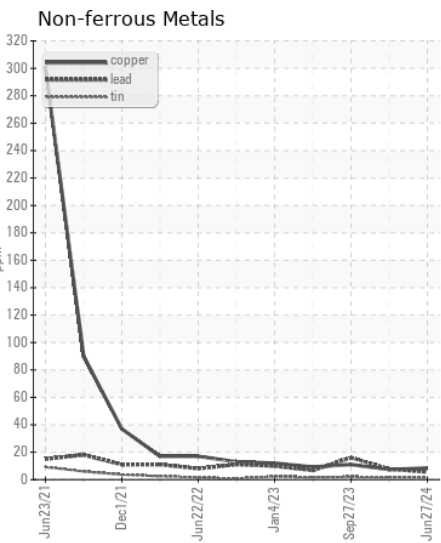
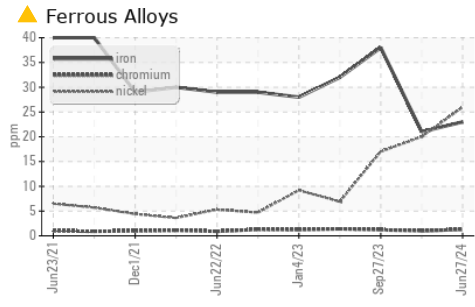
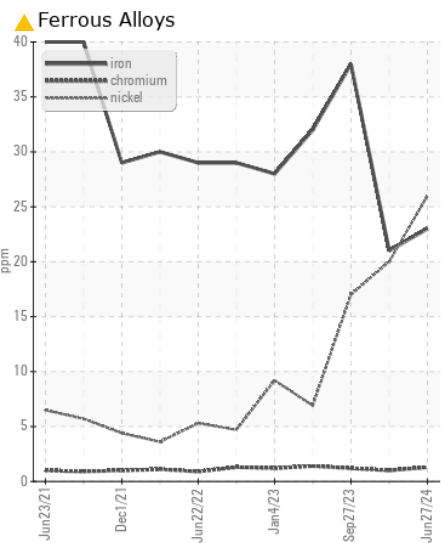
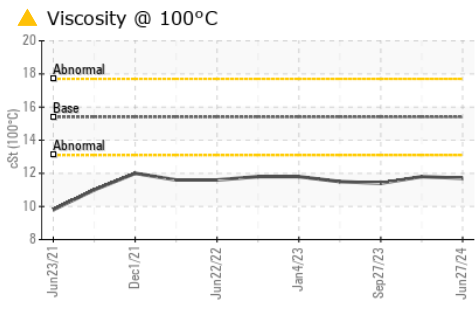
Sodium and/or potassium levels remain high. Fuel content negligible. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>22	17	20	▲ 35
Potassium	ppm	ASTM D5185m	>20	5	21	▲ 76
Fuel	%	ASTM D3524	>8.0	5.5	4.1	7.3
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.1	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.7	24.0	26.4
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	>0.21	NEG	NEG	NEG

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	● 53	● 196	▲ 690
Boron	ppm	ASTM D5185m		79	90	19
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		241	220	270
Manganese	ppm	ASTM D5185m		1	1	2
Magnesium	ppm	ASTM D5185m		855	823	710
Calcium	ppm	ASTM D5185m		1521	1406	1296
Phosphorus	ppm	ASTM D5185m		905	854	707
Zinc	ppm	ASTM D5185m		1092	905	951
Sulfur	ppm	ASTM D5185m		3689	2752	3327
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	18.0	21.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.3	7.4	5.9
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.7	▲ 11.8	▲ 11.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0217295 **Received** : 01 Jul 2024
Lab Number : 06224313 **Tested** : 03 Jul 2024
Unique Number : 11102510 **Diagnosed** : 03 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FUELDILUTION, Glycol, PercentFuel, TBN)

JRE - CASTLE HAYNE
 113 CROWATAN ROAD
 CASTLE HAYNE, NC
 US 28429-5819
 Contact: WILMINGTON SHOP
 todd.simmons@jamesvarequipment.com; canastasio@wearcheck.com; canastasio@we

Certificate L2367
 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)