



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE



Machine Id
CATERPILLAR 908M C237144 (S/N CAT0908MLH8801142)
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218693	JR0191337	JR0168274
Sample Date		Client Info		04 Jun 2024	07 Dec 2023	17 May 2023
Machine Age	hrs	Client Info		5333	4885	4383
Oil Age	hrs	Client Info		448	502	475
Filter Age	hrs	Client Info		448	502	475
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	8	5	6
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	4	<1
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	2	1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

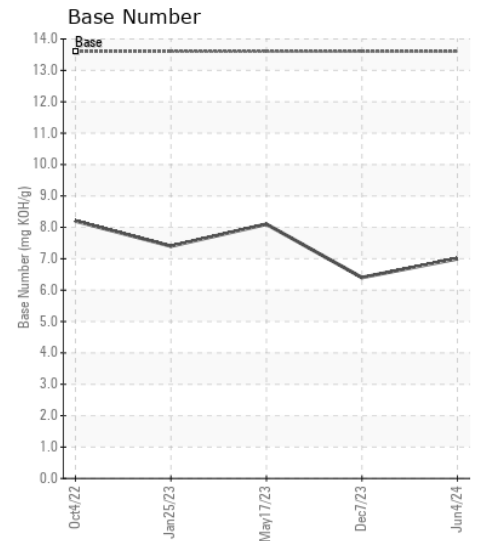
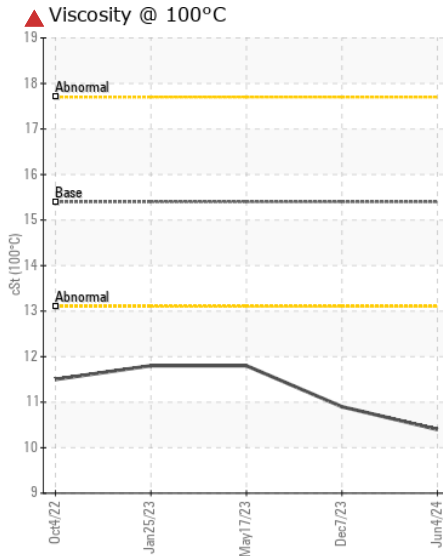
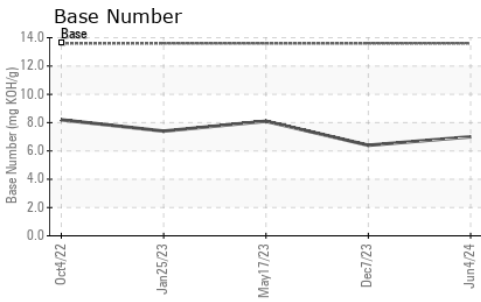
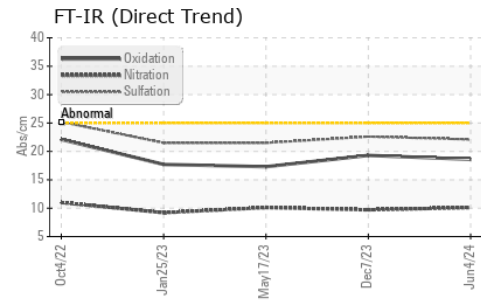
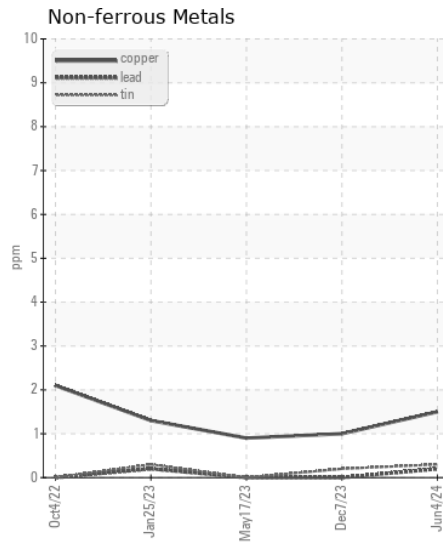
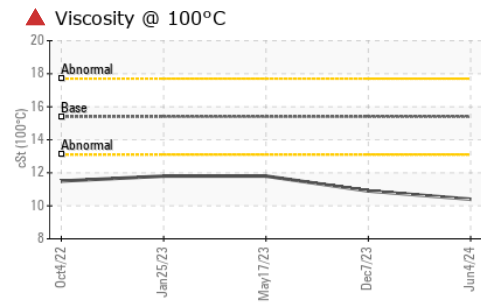
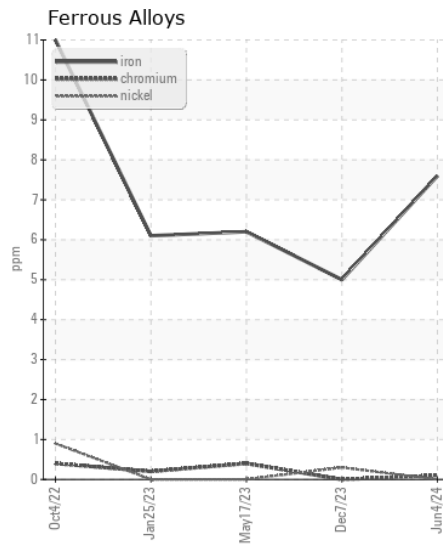
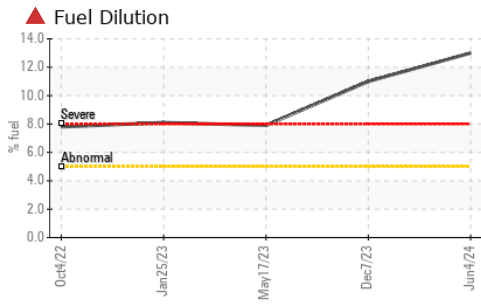
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	8	7	8
Potassium	ppm	ASTM D5185m	>20	2	2	2
Fuel	%	ASTM D3524	>5	▲ 13.0	▲ 11.0	▲ 7.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.1	9.7	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	22.6	21.5
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<1	1	1
Boron	ppm	ASTM D5185m		145	160	209
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		203	219	225
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		611	734	780
Calcium	ppm	ASTM D5185m		1323	1229	1362
Phosphorus	ppm	ASTM D5185m		656	712	798
Zinc	ppm	ASTM D5185m		875	867	987
Sulfur	ppm	ASTM D5185m		2868	2585	3298
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	19.3	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.0	6.4	8.1
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 10.4	▲ 10.9	▲ 11.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218693 **Received** : 14 Jun 2024
Lab Number : 06209920 **Tested** : 19 Jun 2024
Unique Number : 11082784 **Diagnosed** : 19 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

JRE - ASHEVILLE
 101 BRUCE DRIVE
 ASHEVILLE, NC
 US 28806

Contact: Randy Warren
 randy.warren@jamesriverequipment.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

T: (528)667-0176

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

F: (828)667-4865

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)