James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE CP690 1N0C690PHK4075724 - 4WD
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

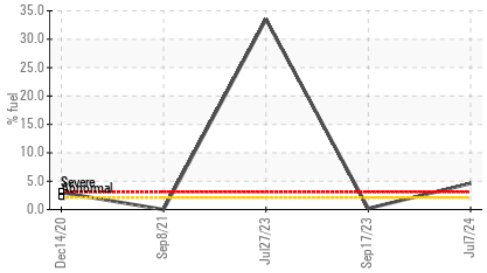
There is a moderate amount of fuel present in the oil.

FLUID CONDITION

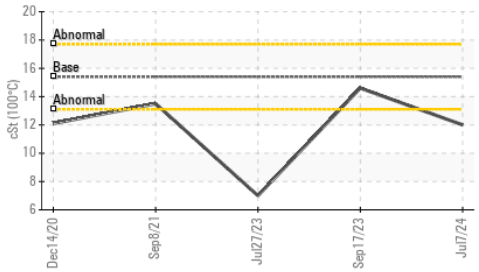
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0216807	JR0172201	JR0172635
Sample Date		Client Info		07 Jul 2024	17 Sep 2023	27 Jul 2023
Machine Age	hrs	Client Info		1264	0	1058
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	SEVERE
Iron	ppm	ASTM D5185m	>51	20	4	21
Chromium	ppm	ASTM D5185m	>11	<1	<1	2
Nickel	ppm	ASTM D5185m	>5	1	1	<1
Titanium	ppm	ASTM D5185m		1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	6	3	2
Lead	ppm	ASTM D5185m	>26	3	0	0
Copper	ppm	ASTM D5185m	>26	15	<1	<1
Tin	ppm	ASTM D5185m	>4	2	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	8	8	5
Potassium	ppm	ASTM D5185m	>20	3	2	0
Fuel	%	ASTM D3524	>2.1	▲ 4.6	0.2	▲ 33.5
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	1.2
Nitration	Abs/cm	*ASTM D7624	>20	9.2	5.4	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	19.0	19.3
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
Sodium	ppm	ASTM D5185m	>31	4	2	1
Boron	ppm	ASTM D5185m		193	289	143
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		251	265	54
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		855	809	320
Calcium	ppm	ASTM D5185m		1409	1419	880
Phosphorus	ppm	ASTM D5185m		949	918	673
Zinc	ppm	ASTM D5185m		1148	1119	823
Sulfur	ppm	ASTM D5185m		3042	3297	2560
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	13.2	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.0	9.5	7.2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.0	14.6	▲ 7

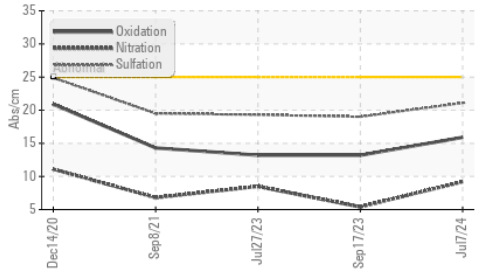
Fuel Dilution



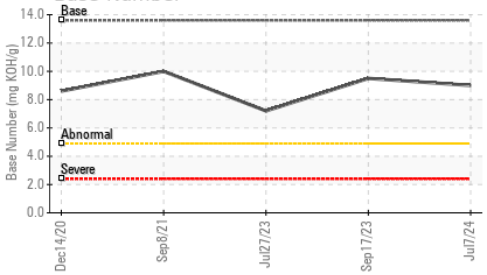
Viscosity @ 100°C



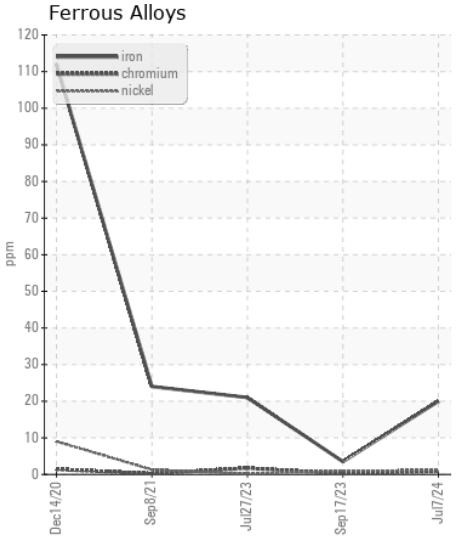
FT-IR (Direct Trend)



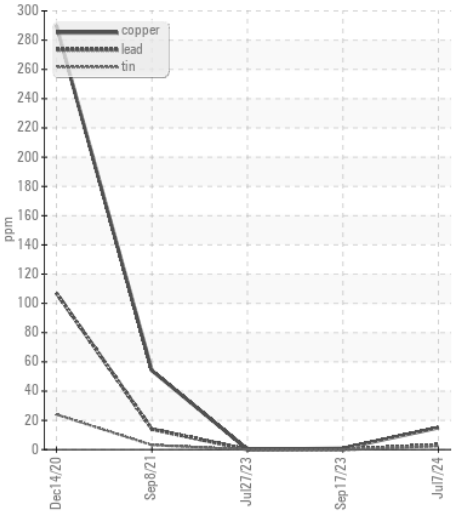
Base Number



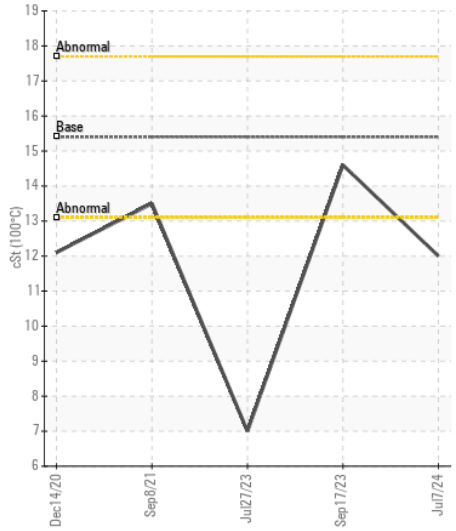
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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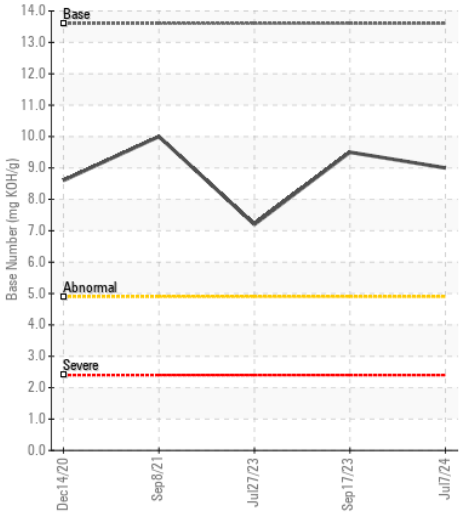

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0216807 **Received** : 08 Jul 2024
Lab Number : 06229958 **Tested** : 11 Jul 2024
Unique Number : 11113451 **Diagnosed** : 11 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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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