James River Equipment

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Area
[US MINING]
Machine Id
JOHN DEERE 470 P 1FF470PAHNF000151
Component
Right Final Drive
Fluid
JOHN DEERE GL-5 80W90 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. (possible final drive failure).

WEAR

Moderate concentration of visible metal present. Gear wear is indicated.

CONTAMINATION

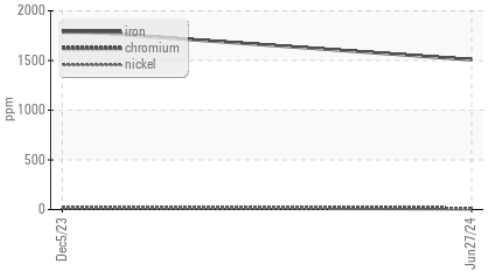
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

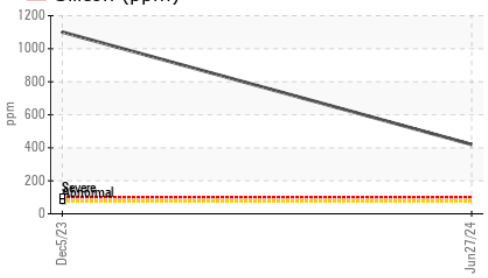
The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0211594	JR0181048	---
Sample Date		Client Info		27 Jun 2024	05 Dec 2023	---
Machine Age	hrs	Client Info		3030	1996	---
Oil Age	hrs	Client Info		0	1996	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				SEVERE	SEVERE	---
PQ		ASTM D8184	>1250	81	614	---
Iron	ppm	ASTM D5185m	>750	▲ 1508	1804	---
Chromium	ppm	ASTM D5185m	>9	▲ 11	23	---
Nickel	ppm	ASTM D5185m	>10	3	11	---
Titanium	ppm	ASTM D5185m		7	16	---
Silver	ppm	ASTM D5185m		<1	0	---
Aluminum	ppm	ASTM D5185m	>40	● 96	● 250	---
Lead	ppm	ASTM D5185m	>15	<1	<1	---
Copper	ppm	ASTM D5185m	>40	2	2	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	MODER	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>75	▲ 420	▲ 1101	---
Potassium	ppm	ASTM D5185m	>20	33	79	---
Water		WC Method	>0.075	NEG	NEG	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.075	NEG	NEG	---
Sodium	ppm	ASTM D5185m	>51	5	13	---
Boron	ppm	ASTM D5185m		21	62	---
Barium	ppm	ASTM D5185m		3	0	---
Molybdenum	ppm	ASTM D5185m		10	1	---
Manganese	ppm	ASTM D5185m		13	27	---
Magnesium	ppm	ASTM D5185m		43	4	---
Calcium	ppm	ASTM D5185m		62	16	---
Phosphorus	ppm	ASTM D5185m		1601	583	---
Zinc	ppm	ASTM D5185m		50	6	---
Sulfur	ppm	ASTM D5185m		24256	17078	---
Visc @ 40°C	cSt	ASTM D445		176	193	---

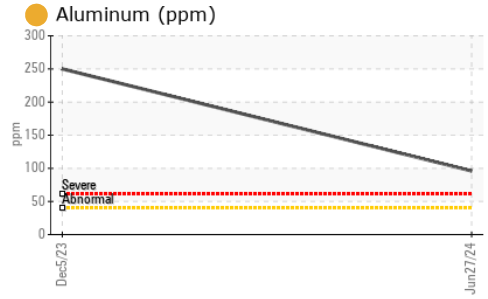
Ferrous Alloys



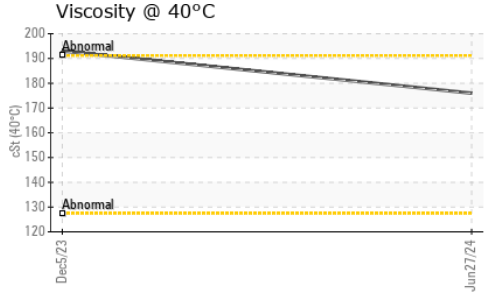
Silicon (ppm)



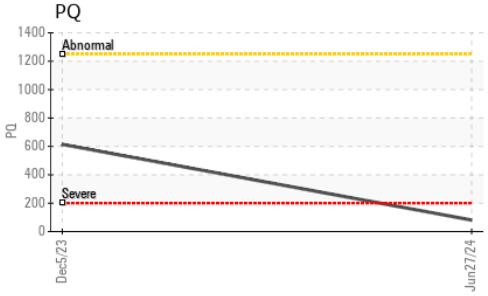
Aluminum (ppm)



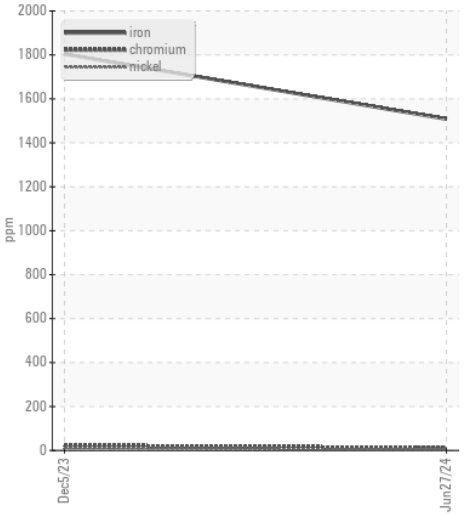
Viscosity @ 40°C



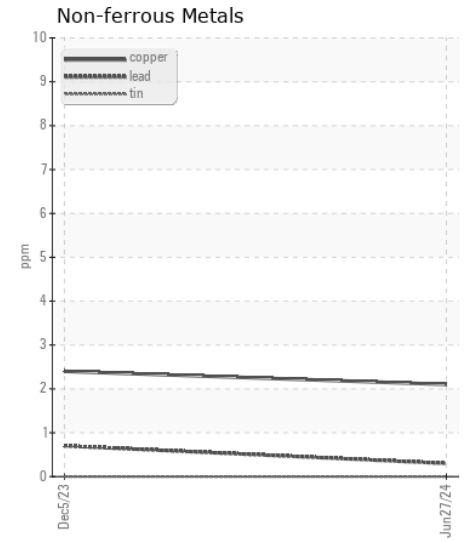
PQ



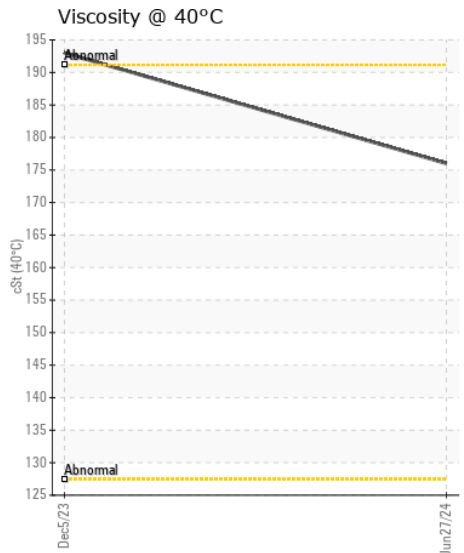
Ferrous Alloys



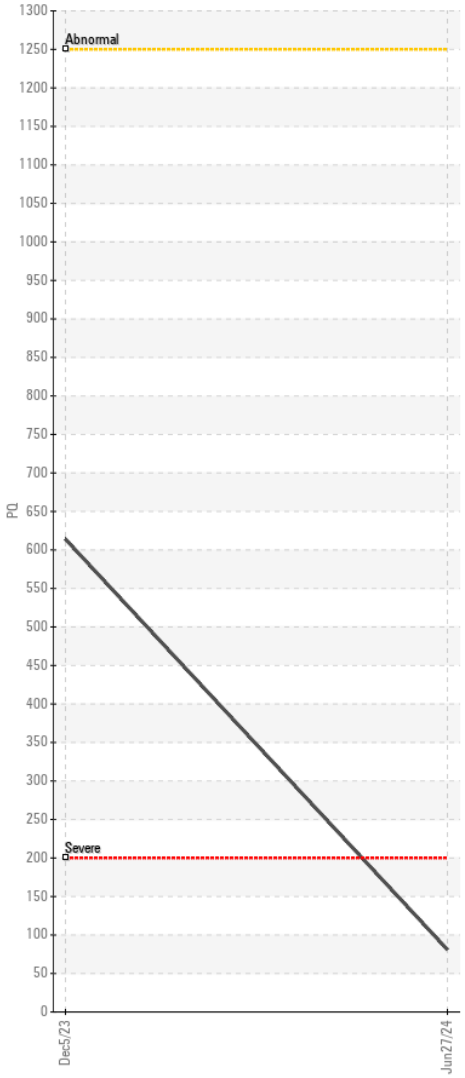
Non-ferrous Metals



Viscosity @ 40°C



PQ



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211594
Lab Number : 06224815
Unique Number : 11103012
Test Package : CONST (Additional Tests: PQ)

Received : 01 Jul 2024
Tested : 02 Jul 2024
Diagnosed : 02 Jul 2024 - Don Baldridge

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)

JRE - ASHLAND
11047 LEADBETTER RD
ASHLAND, VA
US 23005
Contact: DAVID ZIEG
dzieg@jamesriverequipment.com
T: (804)798-6001
F: (804)798-0292