James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
FORD F250 V78
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- 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

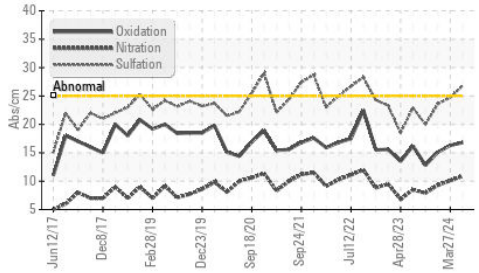
There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

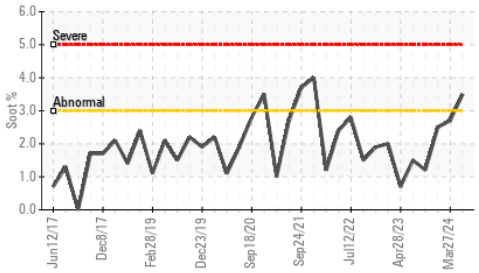
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0219621	JR0206778	JR0144759
Sample Date		Client Info		27 Jun 2024	27 Mar 2024	24 Oct 2023
Machine Age	hrs	Client Info		7586	7245	0
Oil Age	hrs	Client Info		1438	1097	293
Filter Age	hrs	Client Info		341	516	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	44	36	28
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	6	6	4
Lead	ppm	ASTM D5185m	>40	8	5	0
Copper	ppm	ASTM D5185m	>330	6	5	2
Tin	ppm	ASTM D5185m	>15	<1	<1	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	>25	9	8	9
Potassium	ppm	ASTM D5185m	>20	3	1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ 3.5	2.7	2.5
Nitration	Abs/cm	*ASTM D7624	>20	10.9	10.1	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.8	24.7	23.6
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
Sodium	ppm	ASTM D5185m		2	3	4
Boron	ppm	ASTM D5185m		150	182	203
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		249	231	236
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		747	767	805
Calcium	ppm	ASTM D5185m		1337	1319	1319
Phosphorus	ppm	ASTM D5185m		784	849	707
Zinc	ppm	ASTM D5185m		984	1015	1017
Sulfur	ppm	ASTM D5185m		2498	3255	2825
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	16.3	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.7	7.8	8.6
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.3	13.6

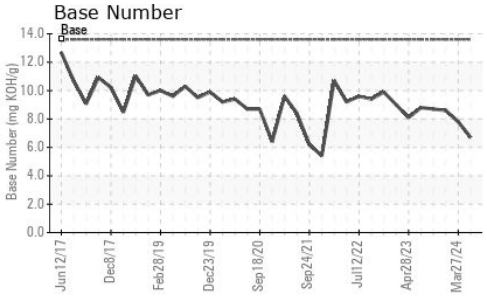
FT-IR (Direct Trend)



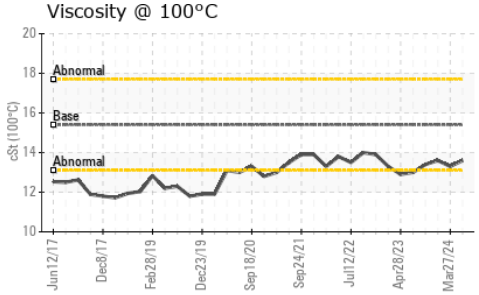
Soot %



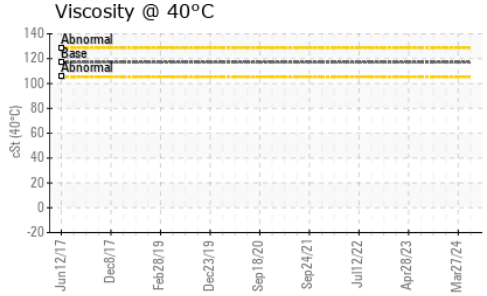
Base Number



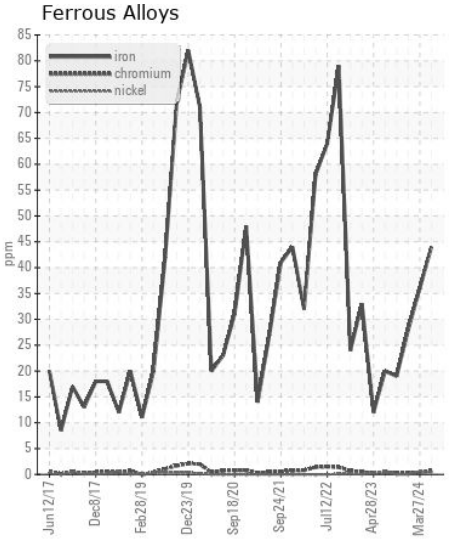
Viscosity @ 100°C



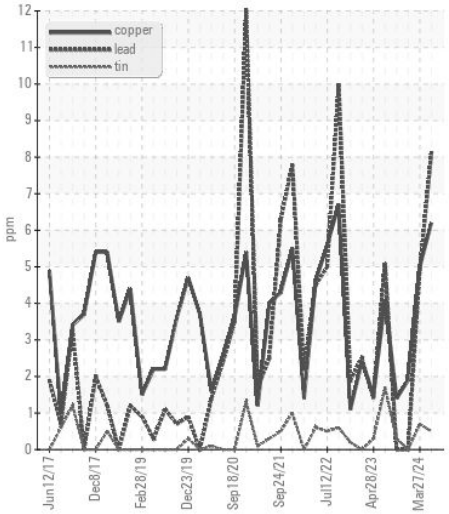
Viscosity @ 40°C



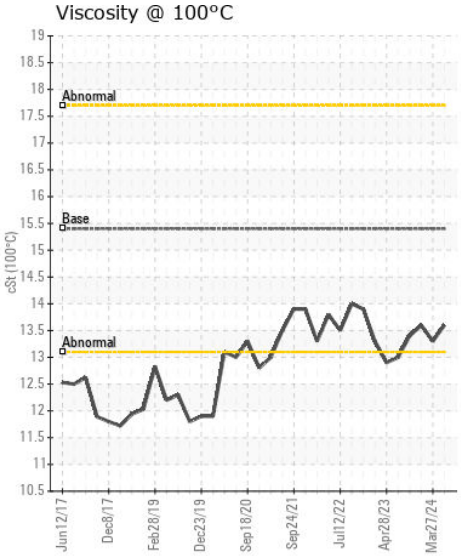
Ferrous Alloys



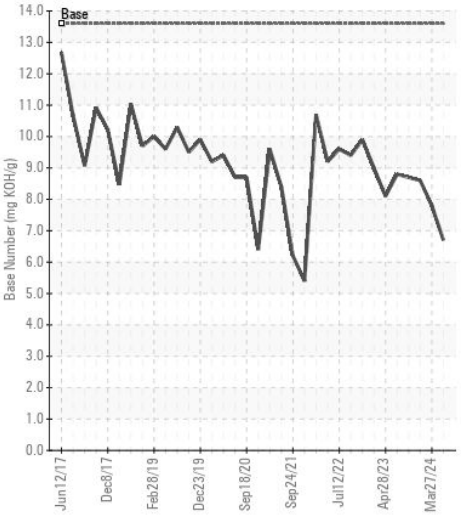
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0219621
Lab Number : 06225821
Unique Number : 11109314
Test Package : CONST (Additional Tests: KV40, TBN)

Received : 02 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 2024 - Jonathan Hester

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)

MATTHEWS CONSTRUCTION
127 GRAYSON RD
ROCK HILL, SC
US 29732
Contact: Tad Clinton
tclinton@matthewsconstructionco.com
T: (803)207-5607
F: