CONST

James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE

Machine Id
4020
Component
Diesel Engine
Fluid
SHELL ROTELLA T 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.

WEAR

All component wear rates are normal.

CONTAMINATION

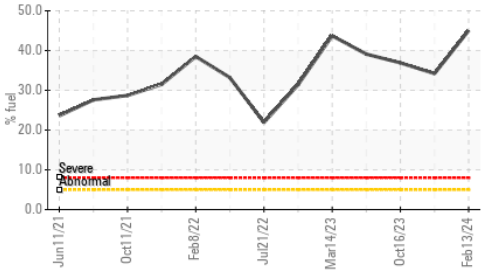
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

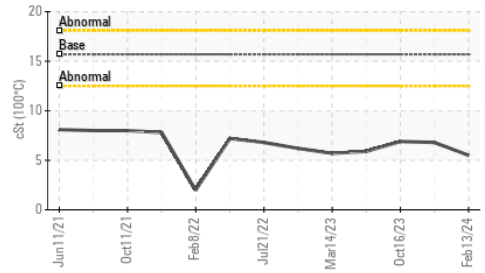
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**JR0195528**	JR0184580	JR0184252
Sample Date		Client Info		**13 Feb 2024**	07 Nov 2023	16 Oct 2023
Machine Age	hrs	Client Info		**10541**	10203	9527
Oil Age	hrs	Client Info		**1000**	750	500
Filter Age	hrs	Client Info		**1000**	750	500
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>100	**6**	6	17
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	1
Nickel	ppm	ASTM D5185m	>2	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	2	2
Lead	ppm	ASTM D5185m	>40	**<1**	1	4
Copper	ppm	ASTM D5185m	>330	**<1**	1	2
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
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	**3**	4	4
Potassium	ppm	ASTM D5185m	>20	**0**	2	2
Fuel	%	ASTM D3524	>5	**45.0**	34.2	36.9
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**0.3**	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	**7.8**	7.4	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**16.6**	16.5	19.8
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		**<1**	0	1
Boron	ppm	ASTM D5185m	316	**<1**	▲ <1	▲ 2
Barium	ppm	ASTM D5185m	0.0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	1.2	**1**	2	2
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m	24	**12**	30	26
Calcium	ppm	ASTM D5185m	2292	**1160**	1528	1442
Phosphorus	ppm	ASTM D5185m	1064	**447**	▲ 581	▲ 517
Zinc	ppm	ASTM D5185m	1160	**526**	▲ 696	▲ 675
Sulfur	ppm	ASTM D5185m	4996	**1818**	▲ 2495	▲ 2368
Oxidation	Abs/.1mm	*ASTM D7414	>25	**10.0**	9.7	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	**4.4**	5.0	3.4
Visc @ 100°C	cSt	ASTM D445	15.7	**5.5**	6.8	6.9

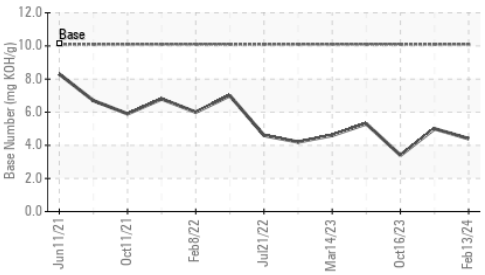
Fuel Dilution



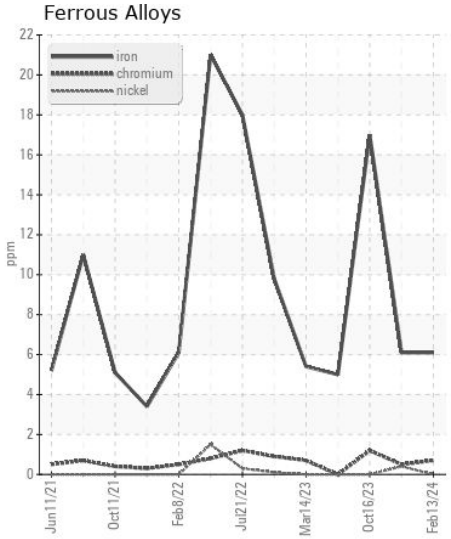
Viscosity @ 100°C



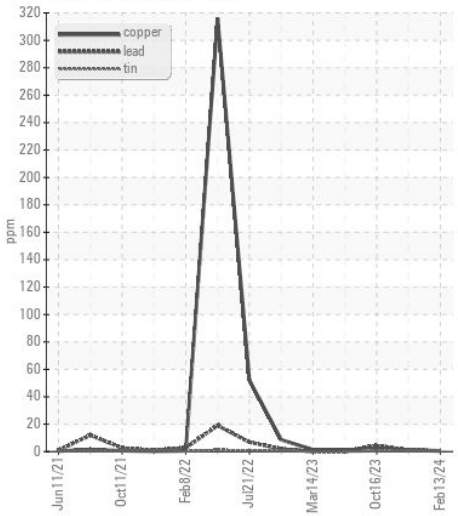
Base Number



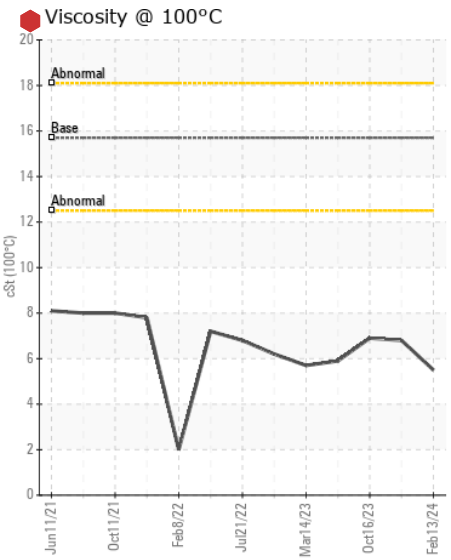
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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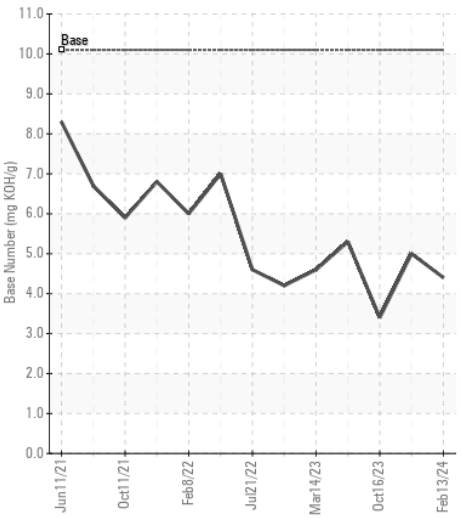

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0195528
Lab Number : 06097396
Unique Number : 10890249
Test Package : CONST (Additional Tests: PercentFuel, TBN)

Received : 22 Feb 2024
Tested : 25 Feb 2024
Diagnosed : 25 Feb 2024 - Wes Davis

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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