CONST

James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Machine Id
4022
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

WEAR

All component wear rates are normal.

CONTAMINATION

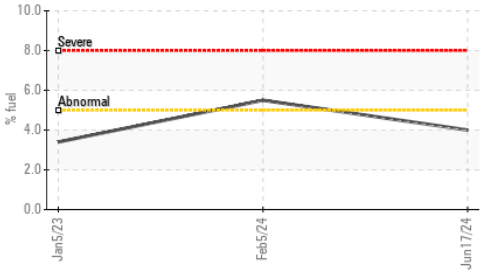
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

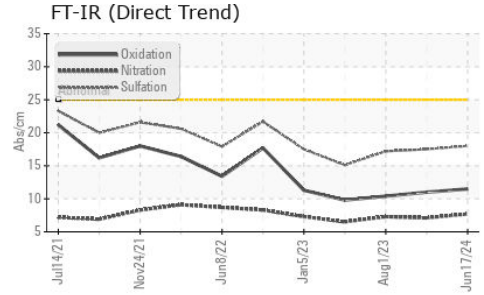
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**JR0221878**	JR0195456	JR0169433
Sample Date		Client Info		**17 Jun 2024**	05 Feb 2024	01 Aug 2023
Machine Age	hrs	Client Info		**5858**	5112	5112
Oil Age	hrs	Client Info		**500**	250	2000
Filter Age	hrs	Client Info		**500**	250	2000
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**6**	6	6
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>25	**3**	1	1
Lead	ppm	ASTM D5185m	>40	**0**	<1	0
Copper	ppm	ASTM D5185m	>330	**2**	2	<1
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	**4**	4	3
Potassium	ppm	ASTM D5185m	>20	**3**	0	<1
Fuel	%	ASTM D3524	>5	▲ **4.0**	▲ 5.5	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**0.2**	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**7.7**	7.1	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.0**	17.5	17.2
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**	<1	0
Boron	ppm	ASTM D5185m	316	**4**	12	6
Barium	ppm	ASTM D5185m	0.0	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	1.2	**3**	8	1
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m	24	**46**	48	46
Calcium	ppm	ASTM D5185m	2292	**2234**	1980	2541
Phosphorus	ppm	ASTM D5185m	1064	**838**	789	1019
Zinc	ppm	ASTM D5185m	1160	**1016**	959	1263
Sulfur	ppm	ASTM D5185m	4996	**3158**	3244	5220
Oxidation	Abs/.1mm	*ASTM D7414	>25	**11.5**	11.0	10.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	**6.4**	6.6	6.7
Visc @ 100°C	cSt	ASTM D445	15.7	**12.9**	▲ 12.3	13.4

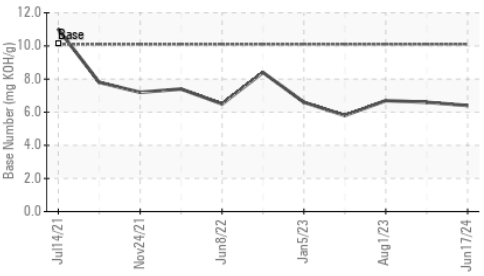
Fuel Dilution



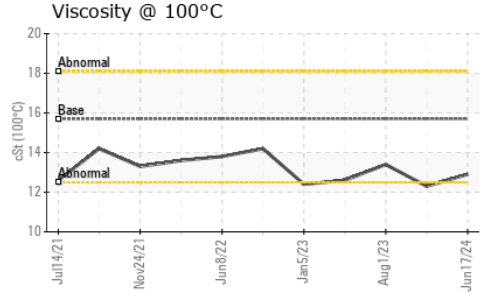
FT-IR (Direct Trend)



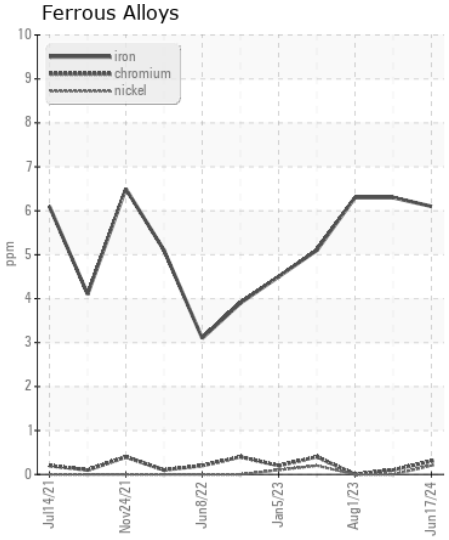
Base Number



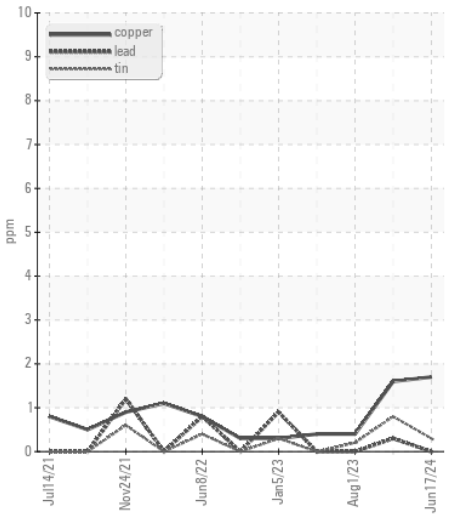
Viscosity @ 100°C



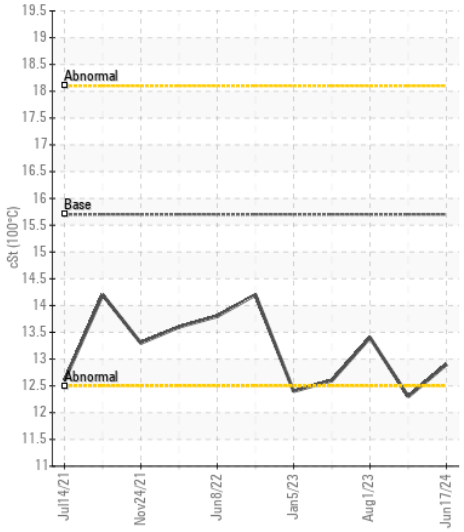
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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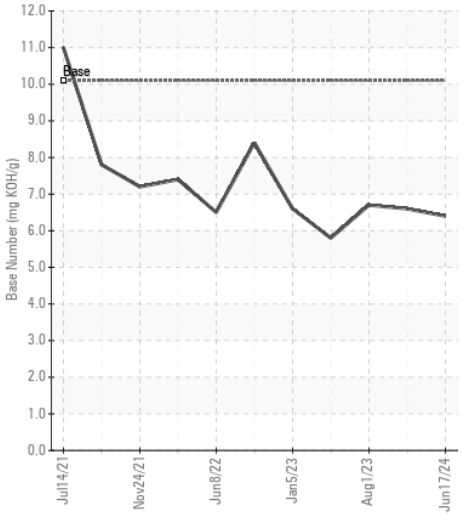

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0221878 **Received** : 02 Jul 2024
Lab Number : 06225952 **Tested** : 03 Jul 2024
Unique Number : 11109445 **Diagnosed** : 03 Jul 2024 - Wes Davis
Test Package : CONST (Additional Tests: 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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