James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HAMM H12i HZ840112
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

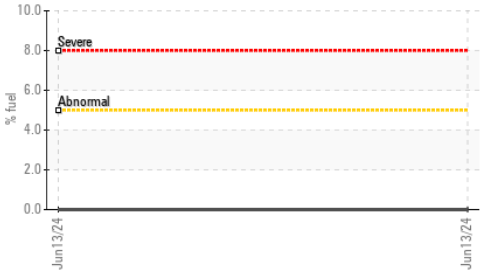
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

FLUID CONDITION

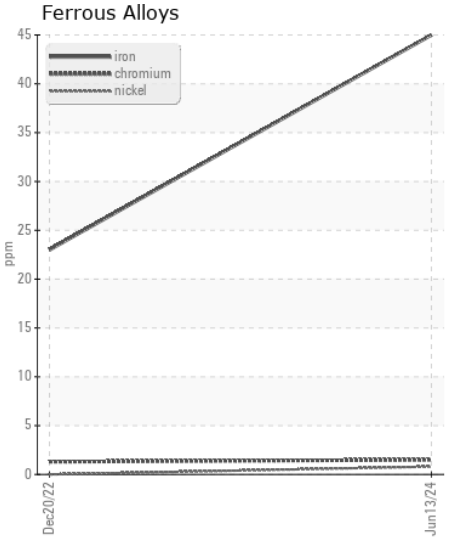
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0214735	JR0153507	---
Sample Date		Client Info		13 Jun 2024	20 Dec 2022	---
Machine Age	hrs	Client Info		1311	452	---
Oil Age	hrs	Client Info		0	452	---
Filter Age	hrs	Client Info		0	452	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---
Iron	ppm	ASTM D5185m	>100	45	23	---
Chromium	ppm	ASTM D5185m	>20	2	1	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	6	3	---
Lead	ppm	ASTM D5185m	>40	4	2	---
Copper	ppm	ASTM D5185m	>330	9	13	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>25	21	28	---
Potassium	ppm	ASTM D5185m	>20	4	0	---
Fuel	%	ASTM D3524	>5	0.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.5	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.7	20.8	---
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	>0.2	NEG	NEG	---
Sodium	ppm	ASTM D5185m	>158	4	3	---
Boron	ppm	ASTM D5185m	250	103	104	---
Barium	ppm	ASTM D5185m	10	<1	6	---
Molybdenum	ppm	ASTM D5185m	100	210	80	---
Manganese	ppm	ASTM D5185m		1	1	---
Magnesium	ppm	ASTM D5185m	450	726	148	---
Calcium	ppm	ASTM D5185m	3000	1563	2111	---
Phosphorus	ppm	ASTM D5185m	1150	909	990	---
Zinc	ppm	ASTM D5185m	1350	1121	1161	---
Sulfur	ppm	ASTM D5185m	4250	3503	4465	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.9	16.0	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.2	7.3	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.2	12.6	---

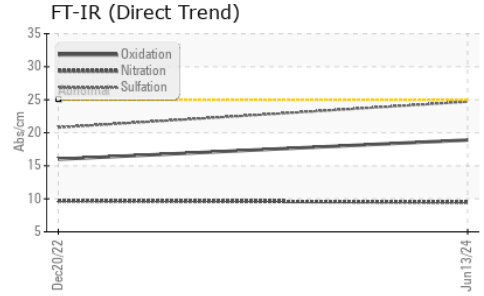
Fuel Dilution



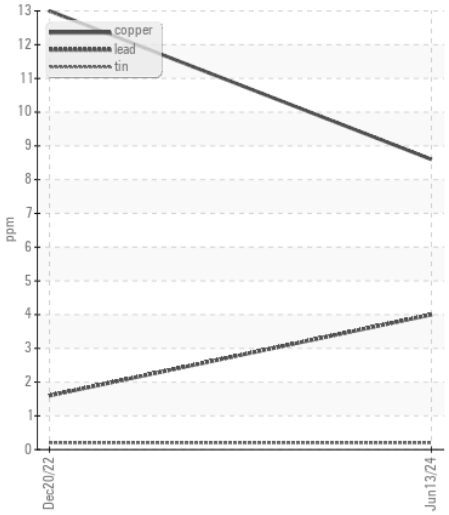
Ferrous Alloys



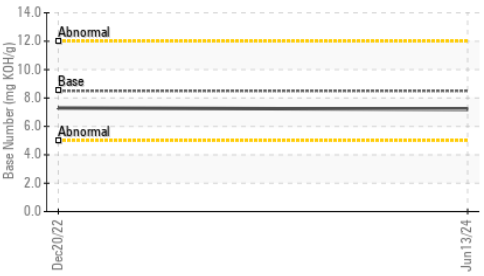
FT-IR (Direct Trend)



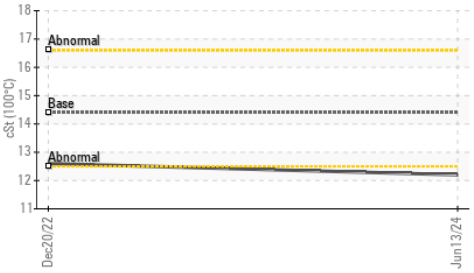
Non-ferrous Metals



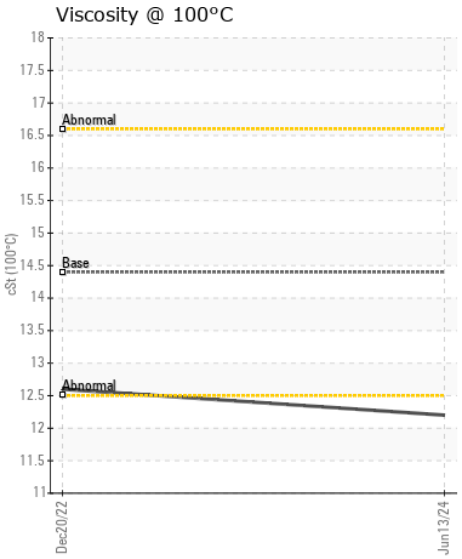
Base Number



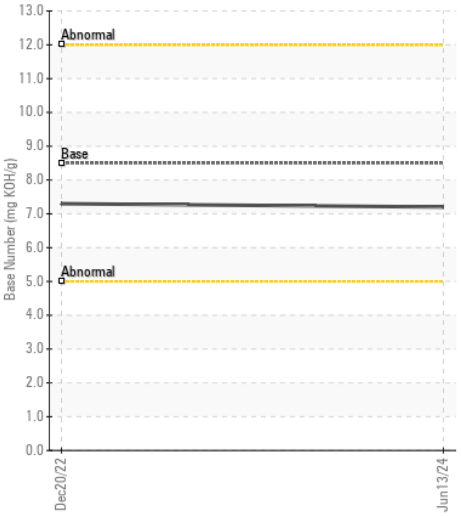
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0214735 **Received** : 17 Jun 2024
Lab Number : 06211424 **Tested** : 20 Jun 2024
Unique Number : 11084288 **Diagnosed** : 20 Jun 2024 - Wes Davis
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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