

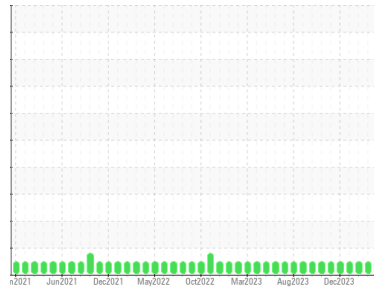


OIL ANALYSIS REPORT



Area
Ohio Valley
Machine Id
[Ohio Valley] Oil - Port Main Engine
Component
Port Main Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (150 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0846014	WC0846058	WC0846001
Sample Date	Client Info		11 Apr 2024	16 Mar 2024	16 Feb 2024
Machine Age	hrs	Client Info	63772	63257	62711
Oil Age	hrs	Client Info	8904	8390	7843
Oil Changed	Client Info		Not Chngd	N/A	Not Chngd
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >75	12	16	13
Chromium	ppm	ASTM D5185m >8	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m >3	0	<1	<1
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >15	1	2	1
Lead	ppm	ASTM D5185m >18	<1	2	1
Copper	ppm	ASTM D5185m >80	0	1	4
Tin	ppm	ASTM D5185m >14	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	37	37	37
Barium	ppm	ASTM D5185m 10	0	0	0
Molybdenum	ppm	ASTM D5185m 100	30	32	29
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 450	964	970	973
Calcium	ppm	ASTM D5185m 3000	1456	1529	1546
Phosphorus	ppm	ASTM D5185m 1150	820	864	757
Zinc	ppm	ASTM D5185m 1350	958	1007	954
Sulfur	ppm	ASTM D5185m 4250	3488	3442	3167

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	3	4	3
Sodium	ppm	ASTM D5185m >158	2	2	2
Potassium	ppm	ASTM D5185m >20	2	3	2
Water	%	ASTM D6304 >0.1	NEG	NEG	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	2.6	2.7	2.5
Nitration	Abs/cm	*ASTM D7624 >20	11.5	11.6	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	26.3	25.7	25.4

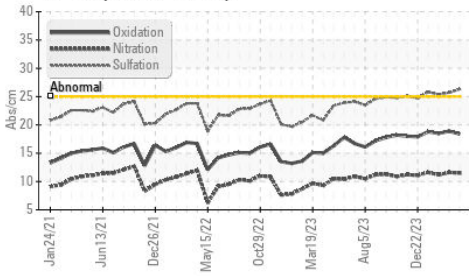
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.4	18.9	18.5
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	9.81	10.29	9.37

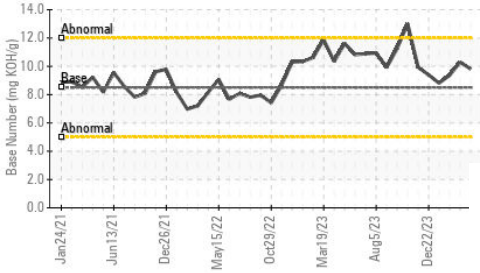


OIL ANALYSIS REPORT

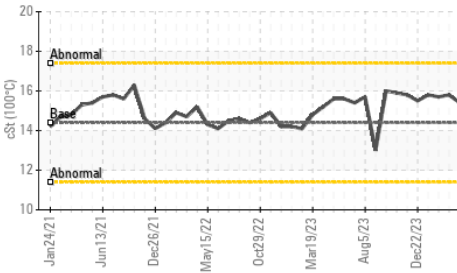
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

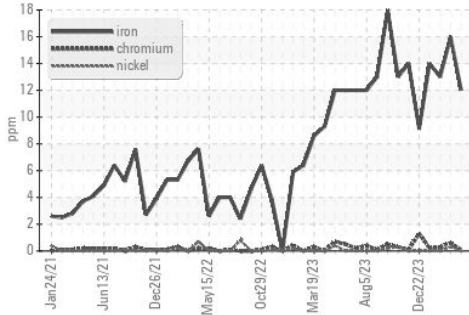


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

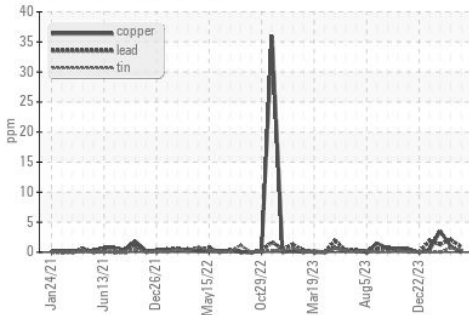
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	15.4	15.8	15.7

GRAPHS

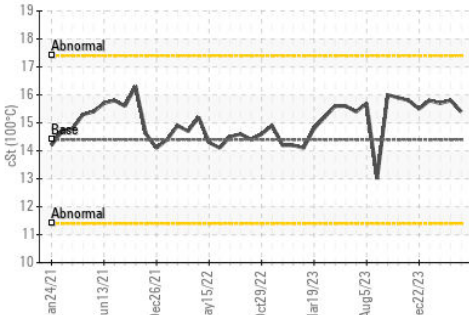
Ferrous Alloys



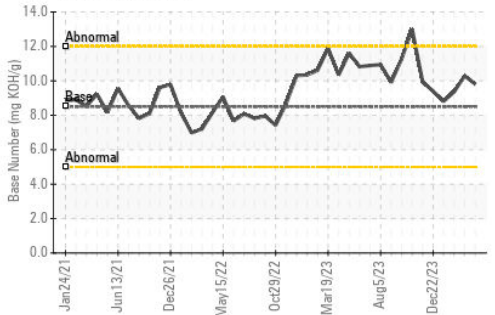
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0846014

Lab Number : 06157882

Unique Number : 10993305

Test Package : IND 2 (Additional Tests: KF)

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)

Received : 23 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 25 Apr 2024 - Sean Felton

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