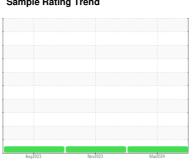


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



REFINER - SWING

Component

Bearing

TOTAL CIRKAN RO 68 (45 GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition

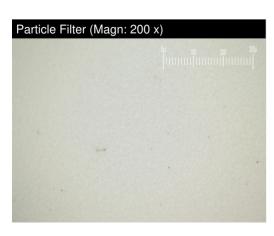
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		PH0002644	PH0001458	PH0001168
Sample Date		Client Info		19 Mar 2024	09 Nov 2023	01 Aug 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION		method	limit/base	current	history1	history2

Water		WC Method	>2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	3	2	2
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	0	<1
Lead	ppm	ASTM D5185m	>20	11	10	11
Copper	ppm	ASTM D5185m	>20	1	<1	<1
Tin	ppm	ASTM D5185m	>20	3	2	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	<1
ADDITIVES		method	limit/base	current	history1	history2

ADDITIVES		method	iimivbase		nistory i	nistoryz
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		0	0	6
Calcium	ppm	ASTM D5185m		<1	0	2
Phosphorus	ppm	ASTM D5185m		7	0	9
Zinc	ppm	ASTM D5185m		0	0	16
Sulfur	ppm	ASTM D5185m		5361	4691	4529
CONTAMINANTO						

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<1	<1	<1
Sodium	ppm	ASTM D5185m		2	1	3
Potassium	ppm	ASTM D5185m	>20	0	2	0
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	490	557	361
Particles >6µm		ASTM D7647	>1300	184	200	81
Particles >14µm		ASTM D7647	>320	26	23	8
Particles >21µm		ASTM D7647	>80	8	7	4
Particles >38µm		ASTM D7647	>20	1	0	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/15	16/15/12	16/15/12	16/14/10
FLUID DEGRADA	TION	method	limit/base	current	history1	history2



Acid Number (AN)

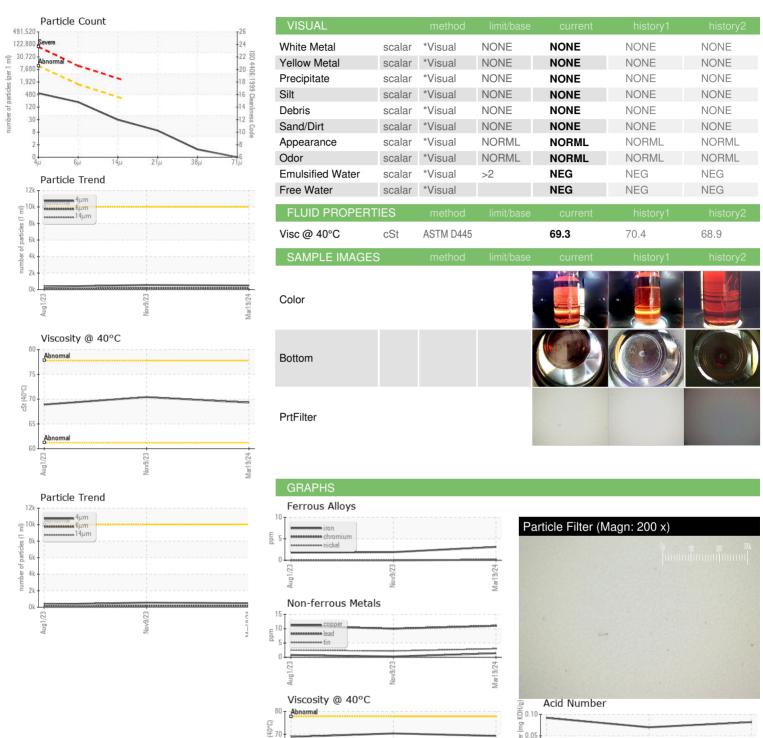
mg KOH/g ASTM D8045

0.082

0.092



OIL ANALYSIS REPORT







Certificate L2367

Laboratory

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Lab Number

: PH0002644 : 06124894 Unique Number: 10939045

Received **Tested** Diagnosed : 21 Mar 2024

: 27 Mar 2024

: 27 Mar 2024 - Jonathan Hester

Test Package: PLANT (Additional Tests: PrtFilter) 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.

LANGBOARD MDF

548 LANGBOARD RD WILLACOOCHEE, GA US 31650

Contact: DAVID COURSON dcourson@langboard.com

T: (912)534-5959 F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)