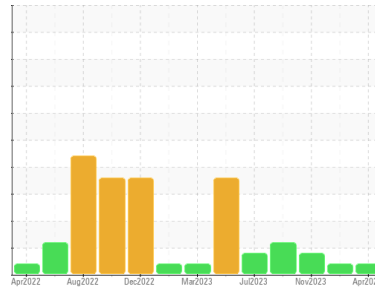




OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id

LEROI BIG VRU 1 (S/N 5329X3021)

Component

Compressor

Fluid

SHELL MORLINA S4 B 460 (--- QTS)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

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	WC0837922	WC0837886	WC0837895
Sample Date	Client Info	25 Apr 2024	01 Jan 2024	17 Nov 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	6	3	6
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m	0	0	<1
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	0	0
Lead	ppm	ASTM D5185m >25	0	0	0
Copper	ppm	ASTM D5185m >50	0	<1	0
Tin	ppm	ASTM D5185m >15	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m	0	0	<1
Calcium	ppm	ASTM D5185m	0	0	2
Phosphorus	ppm	ASTM D5185m	0	27	15
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	44	145	64

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	0	0	0
Sodium	ppm	ASTM D5185m	3	<1	2
Potassium	ppm	ASTM D5185m >20	0	0	1

FLUID CLEANLINESS

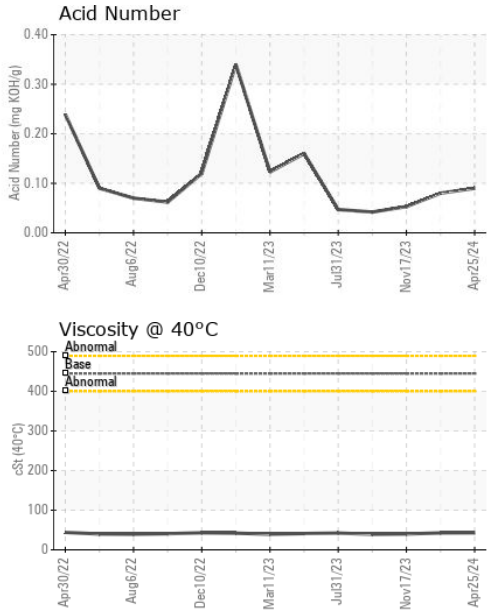
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	---	---	---
Particles >6µm	ASTM D7647 >2500	---	---	---
Particles >14µm	ASTM D7647 >320	---	---	---
Particles >21µm	ASTM D7647 >80	---	---	---
Particles >38µm	ASTM D7647 >20	---	---	---
Particles >71µm	ASTM D7647 >4	---	---	---
Oil Cleanliness	ISO 4406 (c) >20/18/15	---	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.09	0.08	0.053



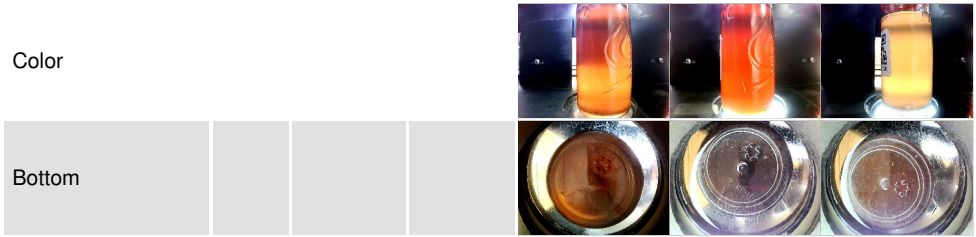
OIL ANALYSIS REPORT



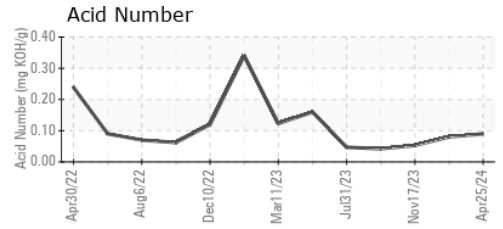
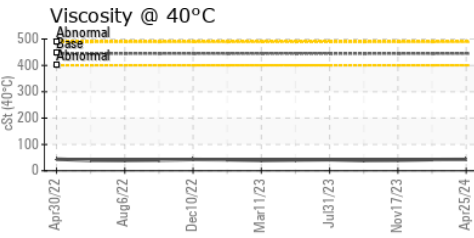
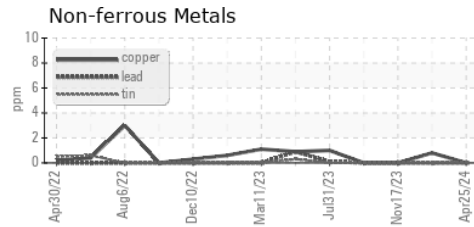
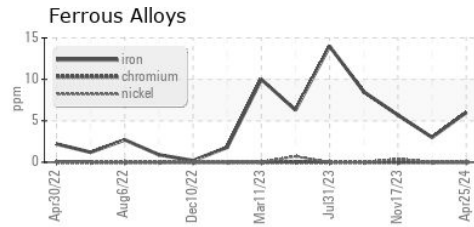
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	LIGHT	▲ MODER
Debris	scalar	*Visual	NONE	▲ MODER	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	445	43.0	42.7	40.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0837922 **Received** : 26 Apr 2024
Lab Number : **06161422** **Tested** : 30 Apr 2024
Unique Number : 10996845 **Diagnosed** : 30 Apr 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: PrtCount)

HILCORP ENERGY - VANDERBILT
 1421 MOBIL OIL ROAD
 VANDERBILT, TX
 US 77991
 Contact: DEREK HARGRAVE
 dhargrave@hilcorp.com

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)