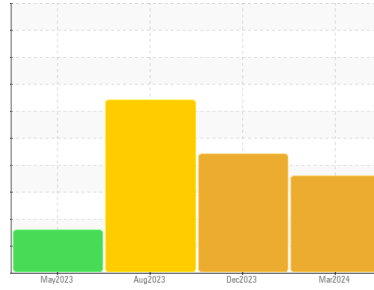




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area

ROLL SHOP

Machine Id

36 Landis Waylube 8100-010-0001

Component

Gearbox

Fluid

CITGO COMPOUND EP 220 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil. There is a moderate concentration of water 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	KFS0004791	KFS0002632	KFS0003613
Sample Date	Client Info	26 Mar 2024	19 Dec 2023	30 Aug 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	SEVERE	SEVERE

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>200	96	26	▲ 340
Chromium	ppm	ASTM D5185m	>15	<1	<1	1
Nickel	ppm	ASTM D5185m	>15	1	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	6
Lead	ppm	ASTM D5185m	>100	0	0	4
Copper	ppm	ASTM D5185m	>200	8	2	46
Tin	ppm	ASTM D5185m	>25	1	0	3
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m		0	<1	19
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		1	0	4
Magnesium	ppm	ASTM D5185m		2	<1	8
Calcium	ppm	ASTM D5185m		4	1	60
Phosphorus	ppm	ASTM D5185m		0	49	103
Zinc	ppm	ASTM D5185m		8	0	106
Sulfur	ppm	ASTM D5185m		3262	3348	2926

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>50	4	4	8
Sodium	ppm	ASTM D5185m		583	21	554
Potassium	ppm	ASTM D5185m	>20	6	<1	14
Water	%	ASTM D6304	>0.2	▲ 0.439	▲ 1.90	▲ 3.92
ppm Water	ppm	ASTM D6304	>2000	▲ 4390	▲ 19000	▲ 39200

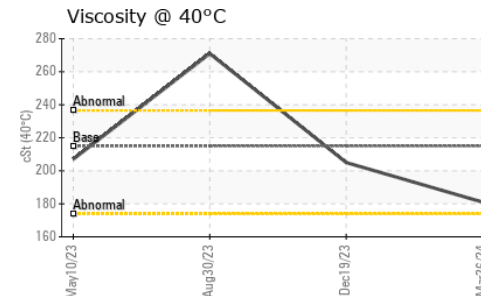
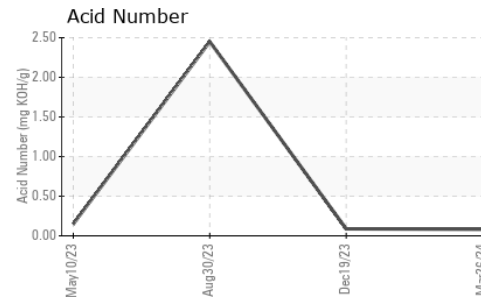
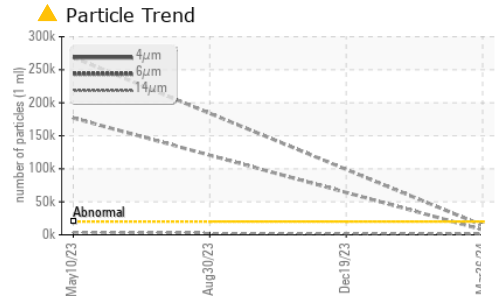
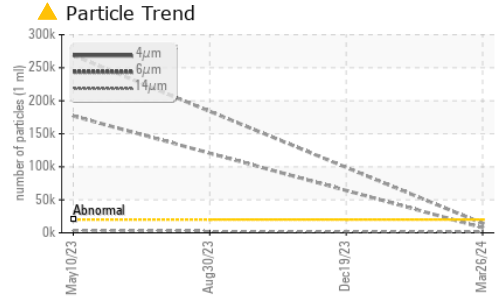
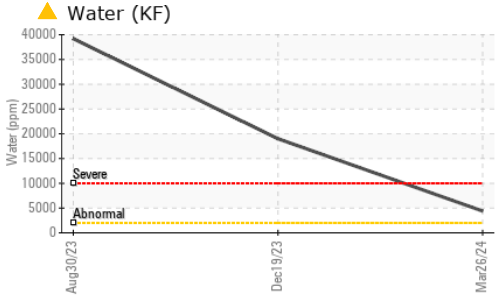
FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>20000	14189	---	---
Particles >6µm	ASTM D7647	>5000	▲ 7730	---	---
Particles >14µm	ASTM D7647	>640	▲ 1315	---	---
Particles >21µm	ASTM D7647	>160	▲ 443	---	---
Particles >38µm	ASTM D7647	>40	▲ 68	---	---
Particles >71µm	ASTM D7647	>10	7	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 21/20/18	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D8045		0.082	0.088	● 2.45

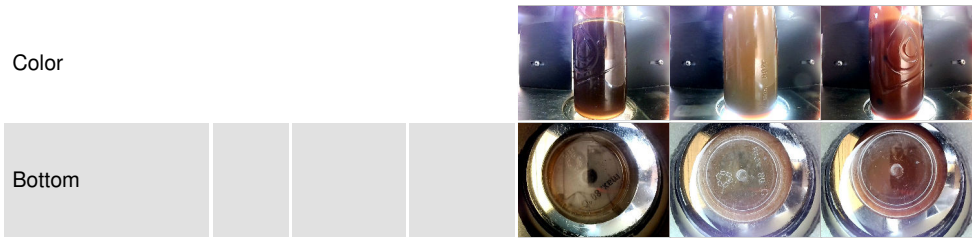
OIL ANALYSIS REPORT



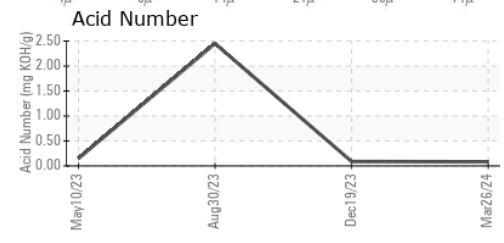
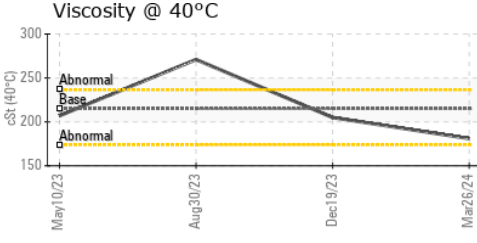
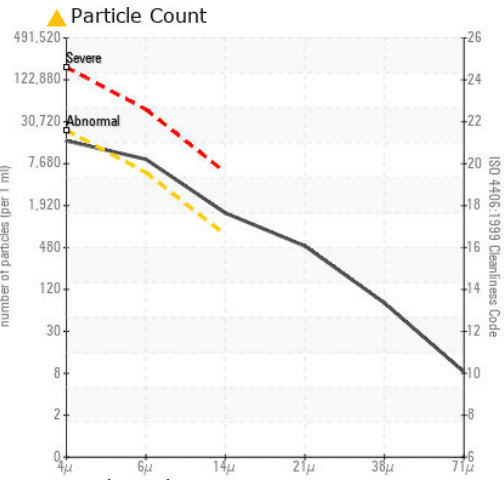
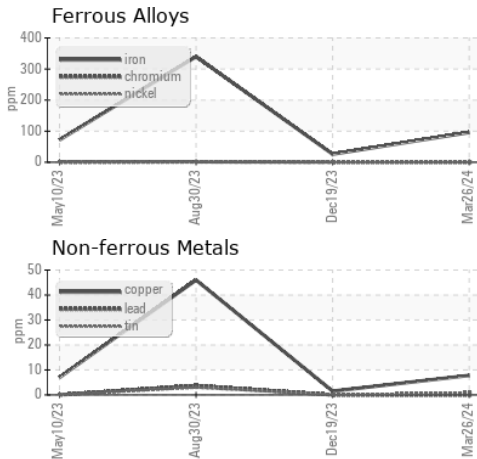
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	▲ MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	MODER
Debris	scalar	*Visual	NONE	LIGHT	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	● MILKY
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	▲ 0.2%	▲ 0.2%
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	215	181	205	● 271

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004791 **Received** : 28 Mar 2024
Lab Number : 06131991 **Tested** : 04 Apr 2024
Unique Number : 10951456 **Diagnosed** : 04 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

CONSTELLIUM
 4805 SECOND STREET
 MUSCLE SHOALS, AL
 US 35661
 Contact: Randy Nichols
 randall.nichols@constellium.com
 T: (256)386-6956
 F:

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)