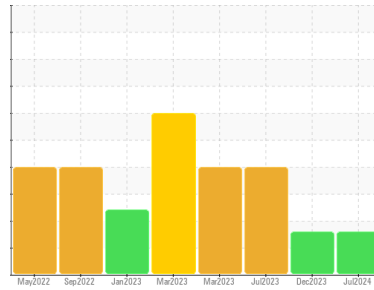




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

## HOTLINE/170 REVERSING MILL

Machine Id

## 170 SCREWDOWN LUBE RESV 1411-001-4150

Component

### Gearbox

Fluid

### CITGO COMPOUND EP 460 (800 GAL)

#### DIAGNOSIS

##### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

##### Wear

All component wear rates are normal.

##### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

##### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

#### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>KFS0004506</b>	KFS0003108	KFS0003773
Sample Date	Client Info	<b>12 Jul 2024</b>	20 Dec 2023	03 Jul 2023
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	SEVERE

#### CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

#### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >200	<b>17</b>	11	13
Chromium	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m >15	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	2	3
Lead	ppm	ASTM D5185m >100	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >200	<b>18</b>	10	19
Tin	ppm	ASTM D5185m >25	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

#### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>1</b>	0	1
Magnesium	ppm	ASTM D5185m	<b>5</b>	5	<1
Calcium	ppm	ASTM D5185m	<b>0</b>	4	1
Phosphorus	ppm	ASTM D5185m	<b>110</b>	138	122
Zinc	ppm	ASTM D5185m	<b>1</b>	0	<1
Sulfur	ppm	ASTM D5185m	<b>6729</b>	5779	6307

#### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	<b>&lt;1</b>	2	<1
Sodium	ppm	ASTM D5185m	<b>2</b>	4	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	<1

#### FLUID CLEANLINESS

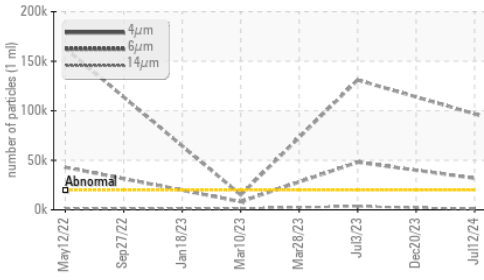
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	<b>▲ 96879</b>	---	▲ 131014
Particles >6µm	ASTM D7647 >5000	<b>▲ 31876</b>	---	▲ 48084
Particles >14µm	ASTM D7647 >640	<b>● 780</b>	---	▲ 3454
Particles >21µm	ASTM D7647 >160	<b>76</b>	---	▲ 815
Particles >38µm	ASTM D7647 >40	<b>0</b>	---	16
Particles >71µm	ASTM D7647 >10	<b>0</b>	---	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	<b>▲ 24/22/17</b>	---	▲ 24/23/19

#### FLUID DEGRADATION

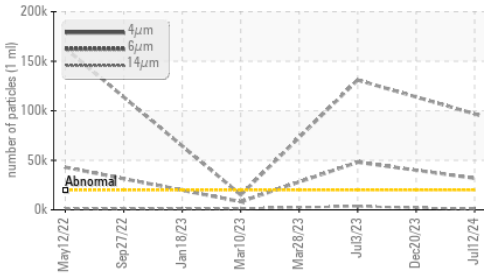
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.34</b>	0.42	0.43

# OIL ANALYSIS REPORT

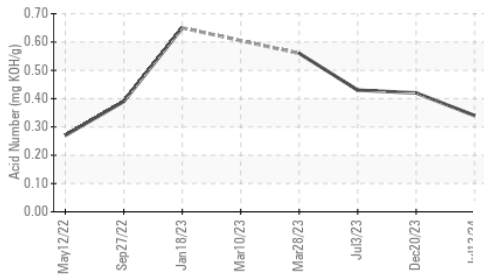
## ▲ Particle Trend



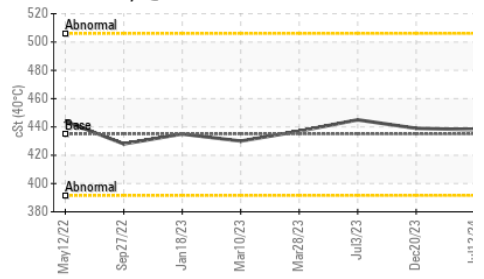
## ▲ Particle Trend



## Acid Number



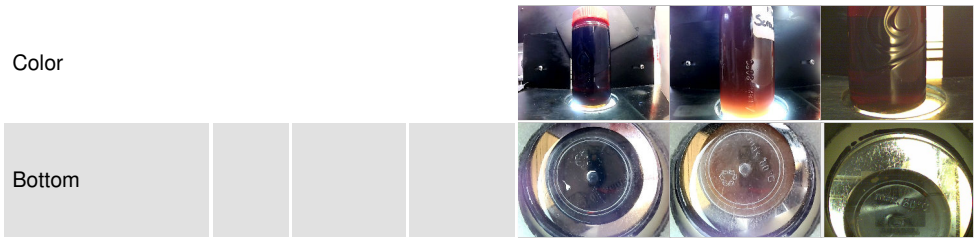
## Viscosity @ 40°C



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	▲ MODER	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	● HAZY	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	0.2%
Free Water	scalar	*Visual		NEG	NEG

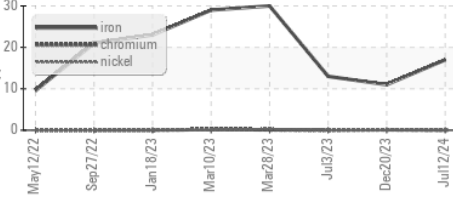
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	435	438	439

SAMPLE IMAGES	method	limit/base	current	history1	history2
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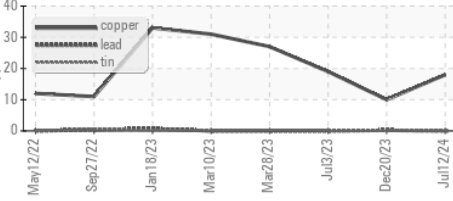


## GRAPHS

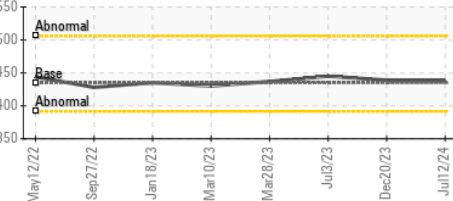
### Ferrous Alloys



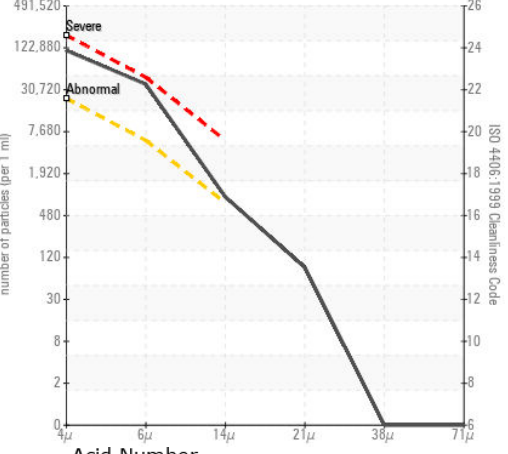
### Non-ferrous Metals



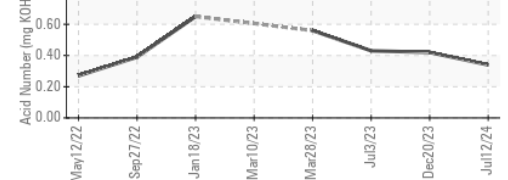
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KFS0004506 **Received** : 16 Jul 2024  
**Lab Number** : 06237750 **Tested** : 17 Jul 2024  
**Unique Number** : 11126584 **Diagnosed** : 17 Jul 2024 - Wes Davis  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**CONSTELLIUM**  
 4805 SECOND STREET  
 MUSCLE SHOALS, AL  
 US 35661  
 Contact: Randy Nichols  
 randall.nichols@constellium.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)

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