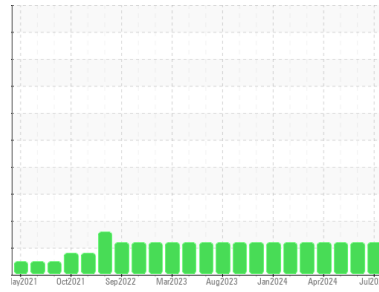




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

**COLD MILL/CM-3STD-1S**

Machine Id

**SOUTH 3-STAND PINION LUBE 1526-007-8020**

Component

**Gearbox**

Fluid

**CITGO COMPOUND EP 320 (3000 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) 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			<b>KFS0004851</b>	KFS0004440	KFS0004442
Sample Date	Client Info			<b>12 Jul 2024</b>	13 Jun 2024	16 May 2024
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

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>15</b>	13	11
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	2	0
Lead	ppm	ASTM D5185m	>100	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>200	<b>0</b>	<1	0
Tin	ppm	ASTM D5185m	>25	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

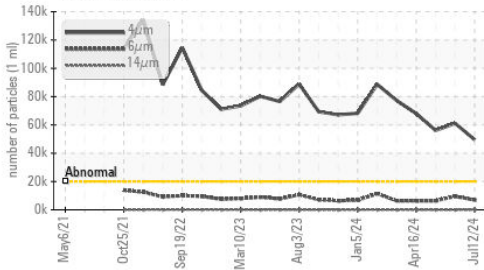
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	8	5
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>1</b>	<1	1
Calcium	ppm	ASTM D5185m		<b>0</b>	0	1
Phosphorus	ppm	ASTM D5185m		<b>161</b>	140	147
Zinc	ppm	ASTM D5185m		<b>0</b>	4	4
Sulfur	ppm	ASTM D5185m		<b>6720</b>	5621	6578

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

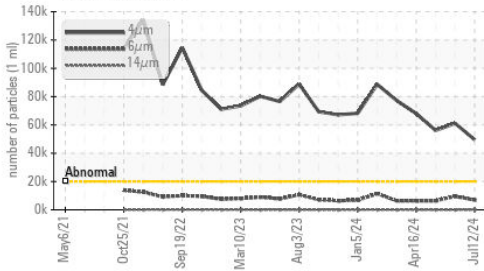
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	<b>▲ 49575</b>	▲ 61133	▲ 56091
Particles >6µm		ASTM D7647	>5000	<b>● 6961</b>	● 9550	● 6365
Particles >14µm		ASTM D7647	>640	<b>35</b>	60	47
Particles >21µm		ASTM D7647	>160	<b>4</b>	9	7
Particles >38µm		ASTM D7647	>40	<b>0</b>	1	0
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>▲ 23/20/12</b>	▲ 23/20/13	▲ 23/20/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.54</b>	0.56	0.56

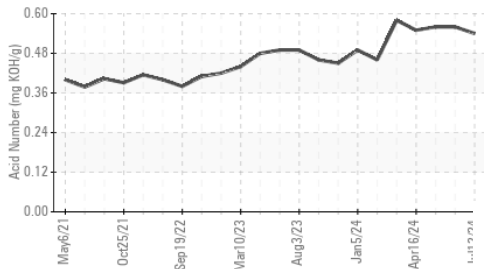
### ▲ Particle Trend



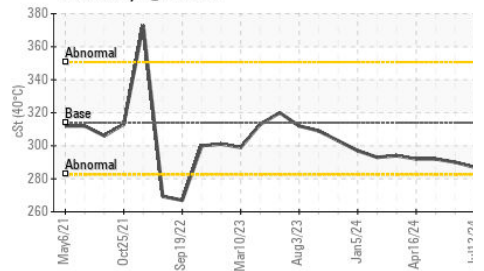
### ▲ Particle Trend



### 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	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	314	287	290

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

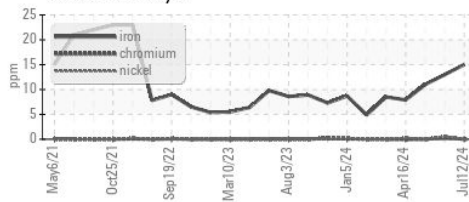


Bottom

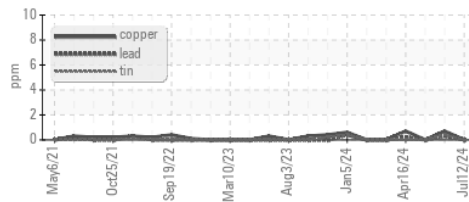


### GRAPHS

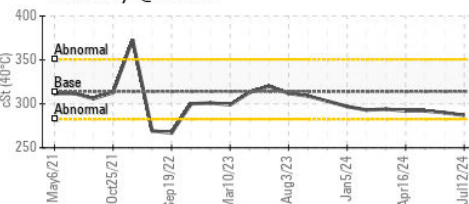
#### Ferrous Alloys



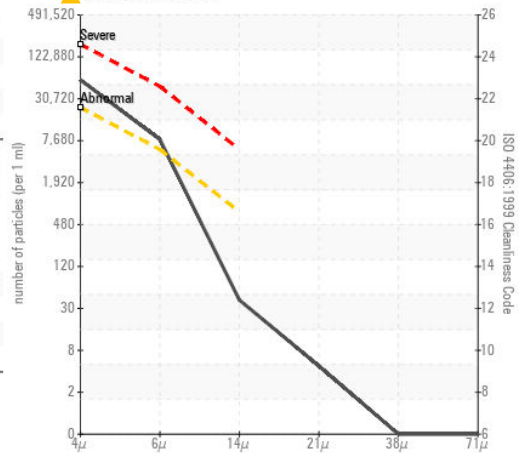
#### Non-ferrous Metals



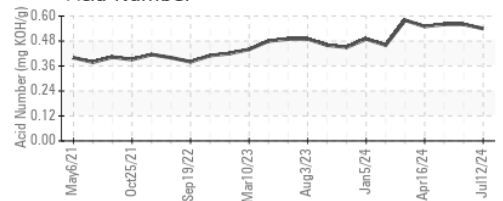
#### Viscosity @ 40°C



#### ▲ Particle Count



#### Acid Number



Certificate L2367

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

Sample No. : KFS0004851

Lab Number : 06237754

Unique Number : 11126588

Test Package : IND 2 ( Additional Tests: PrtCount )

Received : 16 Jul 2024

Tested : 17 Jul 2024

Diagnosed : 18 Jul 2024 - Jonathan Hester

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)