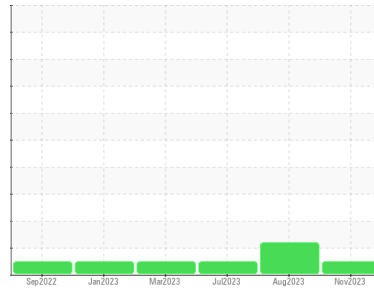




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**HOTLINE/PUSHER FURNACES**  
 Machine Id  
**PRE FILTER HYD @ PUSHER 1406-P00-0090**

Component  
**Hydraulic System**  
 Fluid  
**BENZ OIL ULTRA GUARD 552 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is 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			<b>KFS0004829</b>	KFS0003812	KFS0003774
Sample Date	Client Info			<b>10 Nov 2023</b>	01 Aug 2023	03 Jul 2023
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>NORMAL</b>	ATTENTION	NORMAL

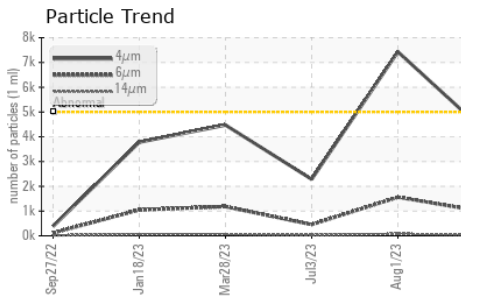
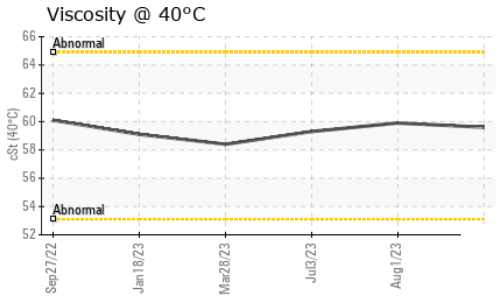
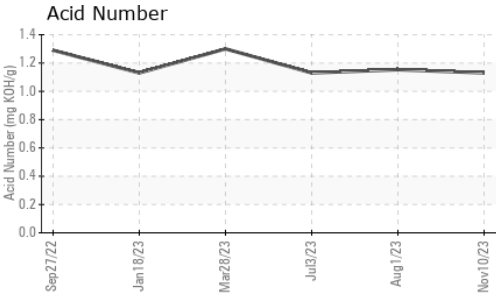
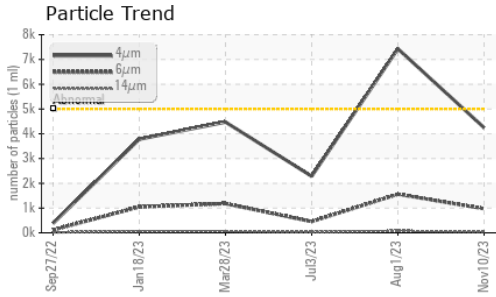
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Tin	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>2</b>	8	<1
Calcium	ppm	ASTM D5185m		<b>&lt;1</b>	1	0
Phosphorus	ppm	ASTM D5185m		<b>335</b>	315	337
Zinc	ppm	ASTM D5185m		<b>6</b>	21	0
Sulfur	ppm	ASTM D5185m		<b>1139</b>	1140	1244

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>1</b>	1	1
Sodium	ppm	ASTM D5185m		<b>0</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>4246</b>	▲ 7431	2284
Particles >6µm		ASTM D7647	>1300	<b>974</b>	▲ 1559	455
Particles >14µm		ASTM D7647	>160	<b>43</b>	77	29
Particles >21µm		ASTM D7647	>40	<b>11</b>	17	8
Particles >38µm		ASTM D7647	>10	<b>1</b>	1	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	1	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/17/13</b>	▲ 20/18/13	18/16/12

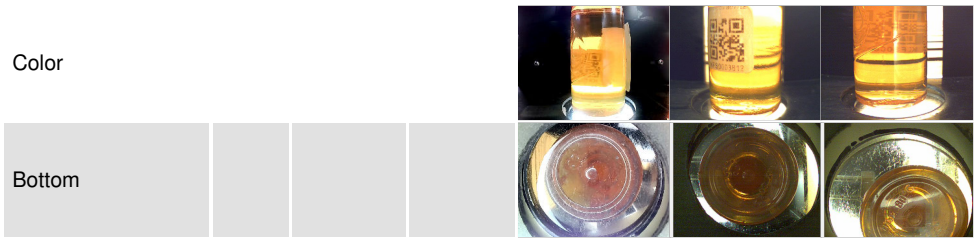
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.13</b>	1.153	1.13



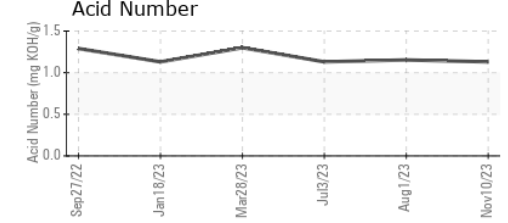
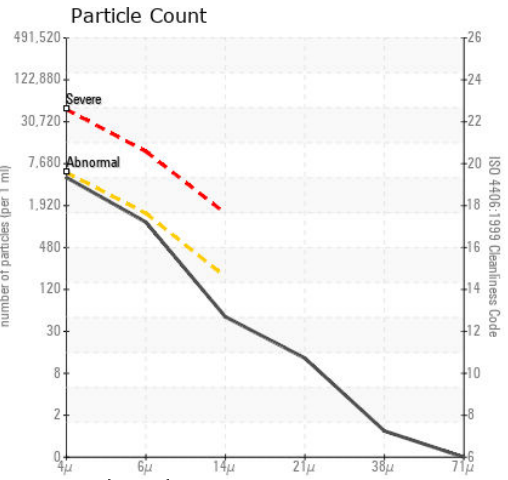
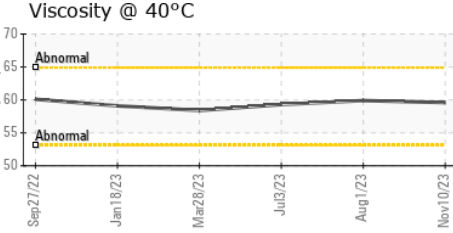
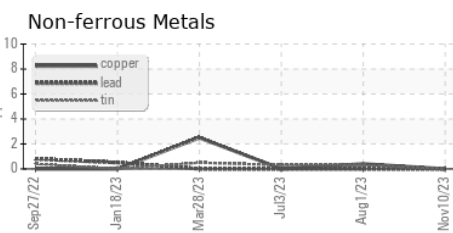
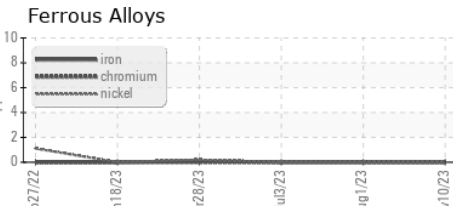
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	59.6	59.9	59.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KFS0004829 **Received** : 14 Nov 2023  
**Lab Number** : 06007644 **Diagnosed** : 15 Nov 2023  
**Unique Number** : 10741406 **Diagnostician** : Wes Davis  
**Test Package** : IND 2

**CONSTELLIUM**  
 4805 SECOND STREET  
 MUSCLE SHOALS, AL  
 US 35661  
 Contact: Joel Even  
 joel.even@constellium.com  
 T: (256)740-7490  
 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)