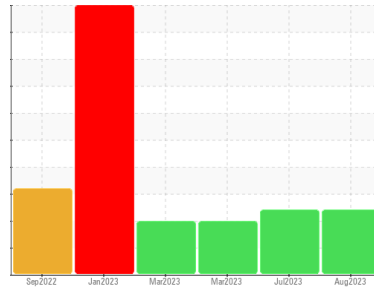




PROBLEM SUMMARY

Area
HOTLINE/PUSHER FURNACES
 Machine Id
#1 PUSHER MAIN HYD SYS 1406-A10-0190
 Component
Hydraulic System
 Fluid
BENZ OIL ULTRA GUARD 552 (--- GAL)

Sample Rating Trend

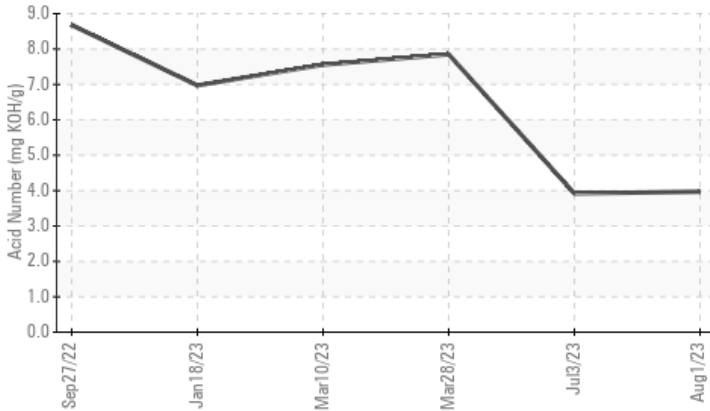


DEGRADATION

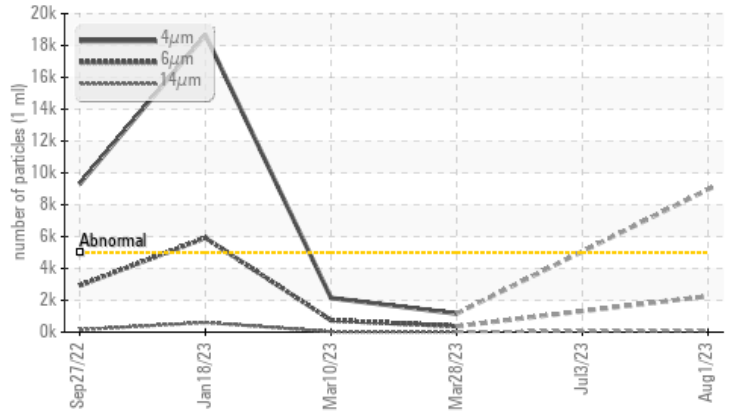


COMPONENT CONDITION SUMMARY

▲ Acid Number



▲ Particle Trend



RECOMMENDATION

Resample at the next service interval to monitor.
 Please submit a sample of the new (unused) oil to establish a baseline.

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	ABNORMAL	ATTENTION
Particles >4µm	ASTM D7647	>5000	▲ 8959	---	1164
Particles >6µm	ASTM D7647	>1300	▲ 2255	---	374
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 20/18/14	---	17/16/12
Acid Number (AN)	mg KOH/g	ASTM D8045	▲ 3.97	▲ 3.92	▲ 7.85

Customer Id: CONMUSAL
 Sample No.: KFS0003809
 Lab Number: 05923427
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	Please submit a sample of the new (unused) oil to establish a baseline.

HISTORICAL DIAGNOSIS

03 Jul 2023 Diag: Doug Bogart

VISUAL METAL



We recommend you service the filters on this component. We advise that you inspect for the source(s) of metal. Resample at the next service interval to monitor. Please submit a sample of the new (unused) oil to establish a baseline. We were unable to perform a particle count due to metal particles present in this sample. Moderate concentration of visible metal present. All component wear rates are normal. No other contaminants were detected in the oil. The AN level is above the recommended limit.

view report



28 Mar 2023 Diag: Doug Bogart

DEGRADATION



Resample at the next service interval to monitor. Please submit a sample of the new (unused) oil to establish a baseline. The tin level has decreased, but is still abnormal. All other component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is above the recommended limit.

view report



10 Mar 2023 Diag: Don Baldrige

DEGRADATION



Resample at the next service interval to monitor. The tin level has decreased, but is still abnormal. All other component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is above the recommended limit.

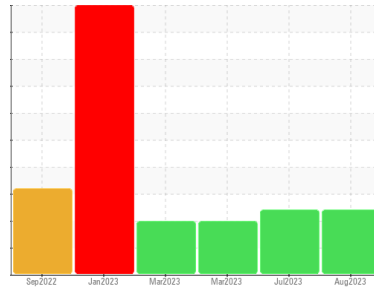
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Area
HOTLINE/PUSHER FURNACES
 Machine Id
#1 PUSHER MAIN HYD SYS 1406-A10-0190
 Component
Hydraulic System
 Fluid
BENZ OIL ULTRA GUARD 552 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please submit a sample of the new (unused) oil to establish a baseline.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The AN level is above the recommended limit.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			KFS0003809	KFS0003777	KFS0003715
Sample Date	Client Info			01 Aug 2023	03 Jul 2023	28 Mar 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ATTENTION	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	0	<1
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>20	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	0	<1
Lead	ppm	ASTM D5185m	>20	0	0	<1
Copper	ppm	ASTM D5185m	>20	<1	<1	<1
Tin	ppm	ASTM D5185m	>20	15	14	▲ 45
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		<1	0	<1
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		8	1	2
Calcium	ppm	ASTM D5185m		<1	0	<1
Phosphorus	ppm	ASTM D5185m		326	329	262
Zinc	ppm	ASTM D5185m		22	<1	13
Sulfur	ppm	ASTM D5185m		1182	1316	1170

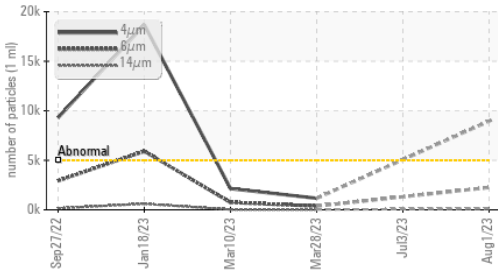
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<1	1	2
Sodium	ppm	ASTM D5185m		<1	0	0
Potassium	ppm	ASTM D5185m	>20	2	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ 8959	---	1164
Particles >6µm		ASTM D7647	>1300	▲ 2255	---	374
Particles >14µm		ASTM D7647	>160	107	---	28
Particles >21µm		ASTM D7647	>40	31	---	7
Particles >38µm		ASTM D7647	>10	4	---	0
Particles >71µm		ASTM D7647	>3	1	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/18/14	---	17/16/12

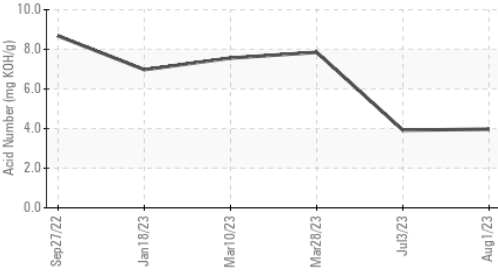
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ 3.97	▲ 3.92	▲ 7.85

OIL ANALYSIS REPORT

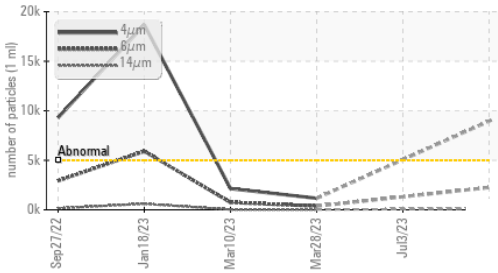
▲ Particle Trend



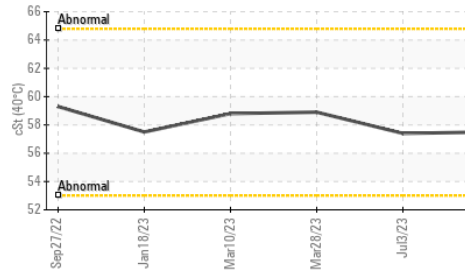
▲ Acid Number



▲ Particle Trend



Viscosity @ 40°C



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	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

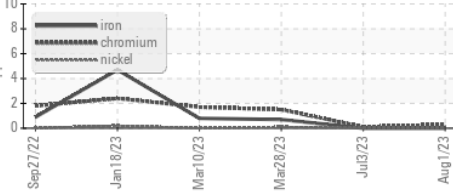
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	57.5	57.4	58.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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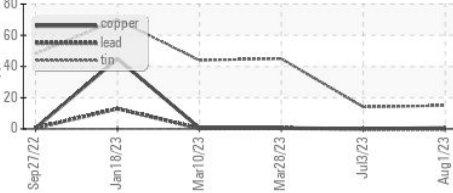


GRAPHS

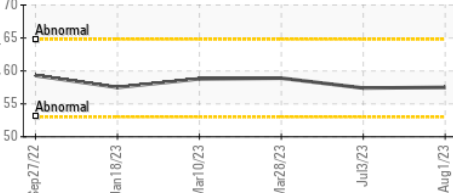
Ferrous Alloys



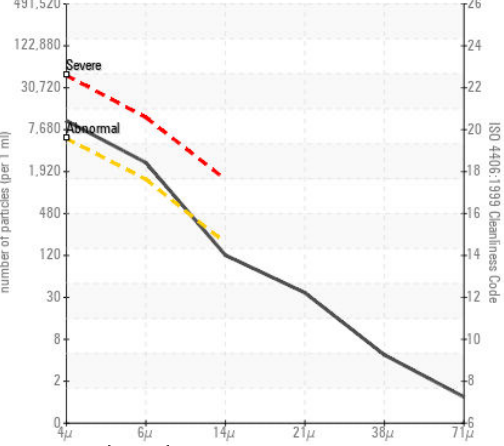
Non-ferrous Metals



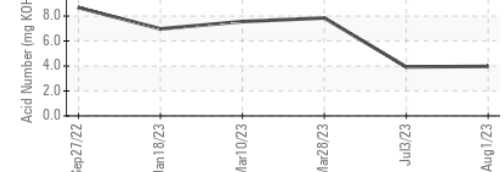
Viscosity @ 40°C



▲ Particle Count



▲ Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0003809 **Received** : 14 Aug 2023
Lab Number : 05923427 **Diagnosed** : 15 Aug 2023
Unique Number : 10603374 **Diagnostician** : Angela Borella
Test Package : IND 2 (Additional Tests: KF)

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)