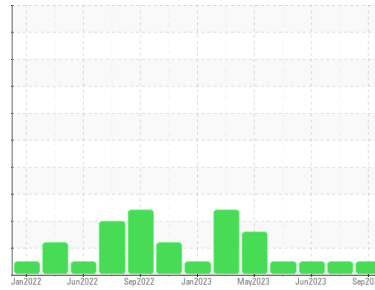




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
COLD MILL/CM-5-STAND
Machine Id
CENTERGUIDE HPU 1710-005-3041
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (250 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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	KFS0003361	KFS0003788	KFS0002184
Sample Date	Client Info	11 Sep 2023	03 Jul 2023	28 Jun 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		NORMAL	NORMAL	NORMAL

WEAR METALS

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

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	0	0	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m 0	<1	0	0
Magnesium	ppm	ASTM D5185m 0	0	0	0
Calcium	ppm	ASTM D5185m 50	50	50	53
Phosphorus	ppm	ASTM D5185m 330	351	353	359
Zinc	ppm	ASTM D5185m 430	447	429	467
Sulfur	ppm	ASTM D5185m 760	852	1106	1068

CONTAMINANTS

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

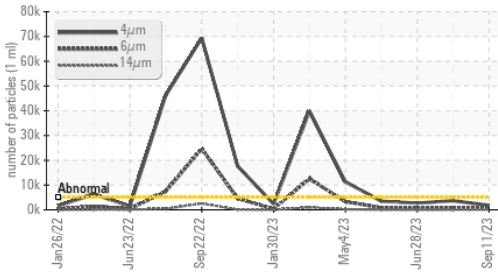
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	1826	3672	2698
Particles >6µm	ASTM D7647 >1300	683	802	499
Particles >14µm	ASTM D7647 >160	45	32	14
Particles >21µm	ASTM D7647 >40	8	6	4
Particles >38µm	ASTM D7647 >10	1	0	0
Particles >71µm	ASTM D7647 >3	1	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	18/17/13	19/17/12	19/16/11

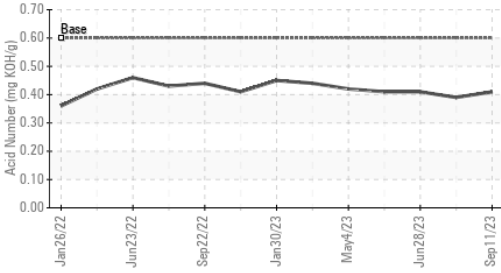
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.60	0.41	0.39	0.41

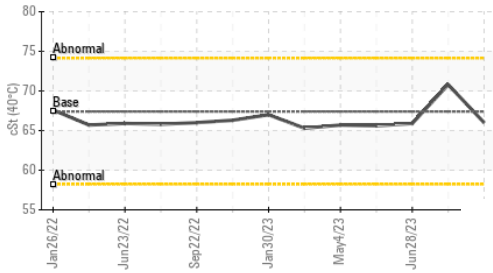
Particle Trend



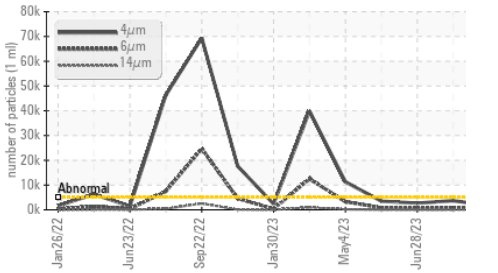
Acid Number



Viscosity @ 40°C



Particle Trend

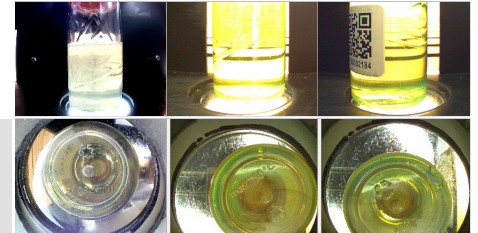


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	67.4	66.0	70.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

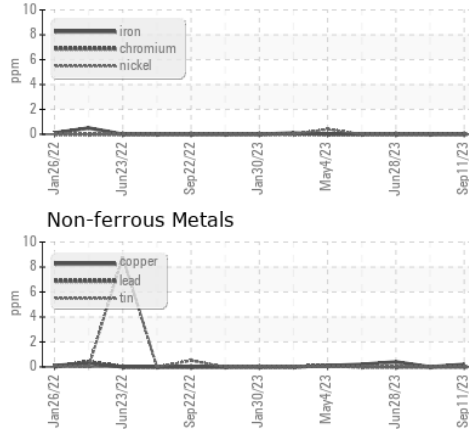
Color



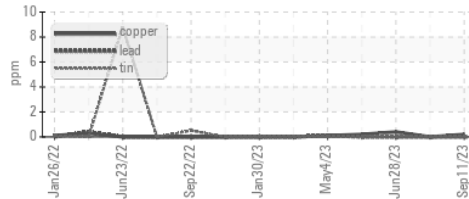
Bottom

GRAPHS

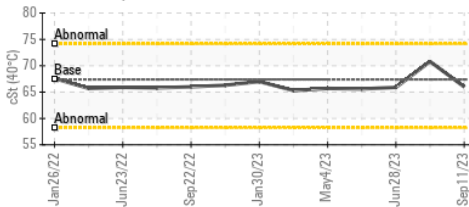
Ferrous Alloys



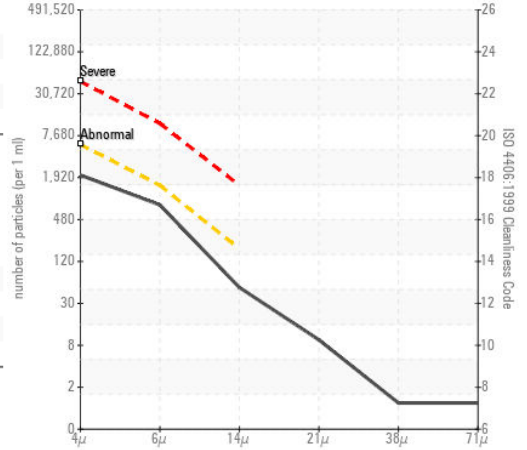
Non-ferrous Metals



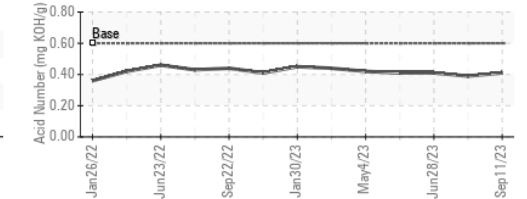
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0003361 **Received** : 27 Sep 2023
Lab Number : 05962866 **Diagnosed** : 28 Sep 2023
Unique Number : 10669417 **Diagnostician** : Don Baldrige
Test Package : IND 2

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)

CONSTELLIUM
 4805 SECOND STREET
 MUSCLE SHOALS, AL
 US 35661

Contact: Randy Nichols
 randall.nichols@constellium.com

T: (256)386-6956

F: