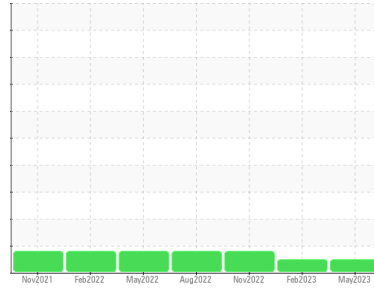


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Temper Mill
 Machine Id
[Temper Mill] 235005-AUXILARY HPU
 Component
Hydraulic System
 Fluid
PETRO CANADA HYDREX AW 46 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are 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	history 1	history 2
Sample Number	Client Info	PCA0095447	PCA0089526	PCA0081728
Sample Date	Client Info	01 May 2023	23 Feb 2023	22 Nov 2022
Machine Age	hrs Client Info	0	0	0
Oil Age	hrs Client Info	0	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		NORMAL	NORMAL	ATTENTION

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >20	0	<1	<1
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	<1
Aluminum	ppm ASTM D5185m >20	<1	0	0
Lead	ppm ASTM D5185m >20	0	0	0
Copper	ppm ASTM D5185m >20	23	26	▲ 33
Tin	ppm ASTM D5185m >20	0	0	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m 0	0	0	<1
Barium	ppm ASTM D5185m 0	0	0	1
Molybdenum	ppm ASTM D5185m 0	0	0	<1
Manganese	ppm ASTM D5185m 0	0	0	0
Magnesium	ppm ASTM D5185m 0	6	6	6
Calcium	ppm ASTM D5185m 50	49	57	59
Phosphorus	ppm ASTM D5185m 330	301	316	303
Zinc	ppm ASTM D5185m 430	362	381	380
Sulfur	ppm ASTM D5185m 760	2605	3084	3118

CONTAMINANTS

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

FLUID CLEANLINESS

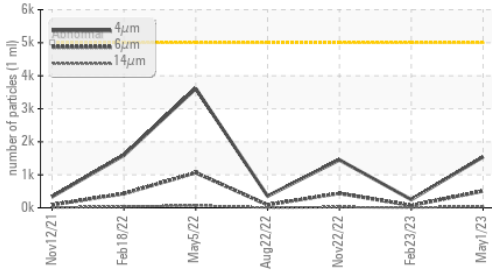
method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647 >5000	1543	249	1451
Particles >6µm	ASTM D7647 >1300	510	71	437
Particles >14µm	ASTM D7647 >160	34	8	21
Particles >21µm	ASTM D7647 >40	6	3	2
Particles >38µm	ASTM D7647 >10	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	18/16/12	15/13/10	18/16/12

FLUID DEGRADATION

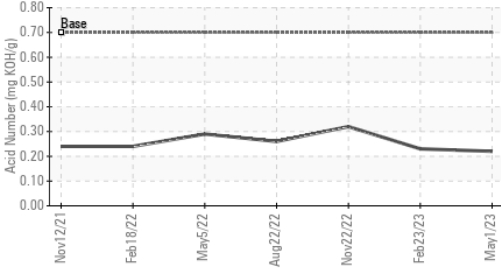
method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g ASTM D8045 0.70	0.22	0.23	0.32

OIL ANALYSIS REPORT

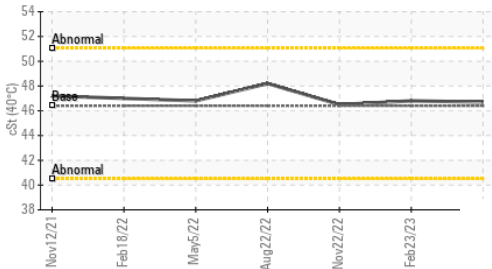
Particle Trend



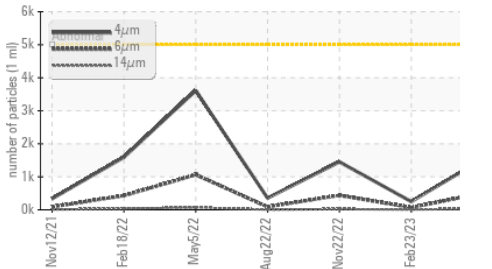
Acid Number



Viscosity @ 40°C



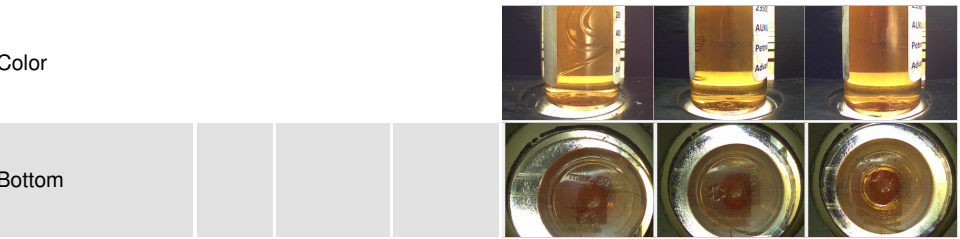
Particle Trend



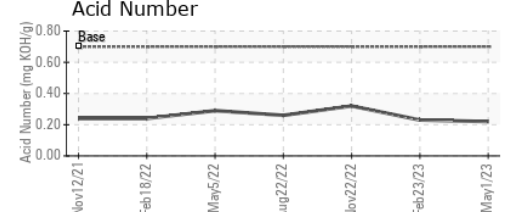
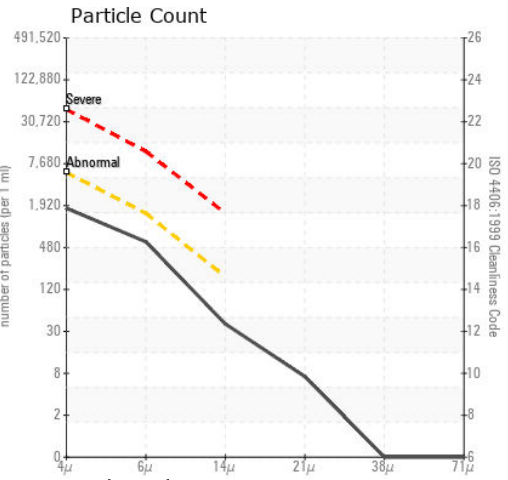
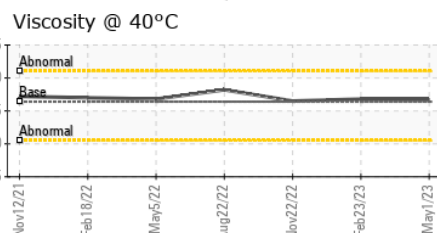
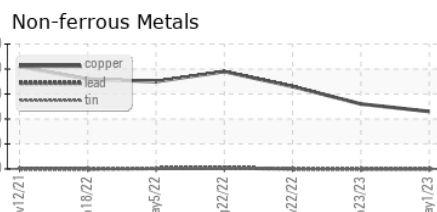
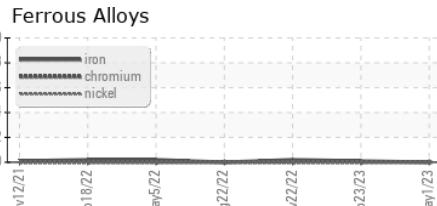
PARAMETER	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

PARAMETER	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	46.4	46.7	46.8

PARAMETER	method	limit/base	current	history 1	history 2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0095447
Lab Number : 05894374
Unique Number : 10550184
Test Package : PLANT

SDI - Steel Dynamics Inc. - Heartland
 455 West Industrial Drive
 Terre Haute, IN
 US 47802
 Contact: BRAD ELLIS
 brad.ellis@steeldynamics.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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F: