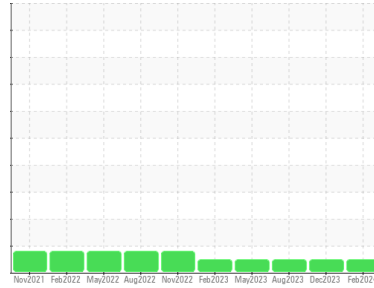


OIL ANALYSIS REPORT

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 fluid. 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 fluid is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0112946	PCA0107684	PCA0101466
Sample Date	Client Info	26 Feb 2024	26 Dec 2023	14 Aug 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		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >20	0	0	<1
Chromium	ppm ASTM D5185m >20	0	0	0
Nickel	ppm ASTM D5185m >20	0	0	0
Titanium	ppm ASTM D5185m	0	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	16	21
Tin	ppm ASTM D5185m >20	0	0	0
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<1	0	0
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 0	0	0	0
Manganese	ppm ASTM D5185m 0	0	0	0
Magnesium	ppm ASTM D5185m 0	2	1	4
Calcium	ppm ASTM D5185m 50	62	55	55
Phosphorus	ppm ASTM D5185m 330	340	322	325
Zinc	ppm ASTM D5185m 430	418	415	391
Sulfur	ppm ASTM D5185m 760	1182	1759	2444

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	<1	0	0
Sodium	ppm ASTM D5185m	0	<1	1
Potassium	ppm ASTM D5185m >20	0	0	0
Water	% ASTM D6304 >0.05	NEG	NEG	NEG

FLUID CLEANLINESS

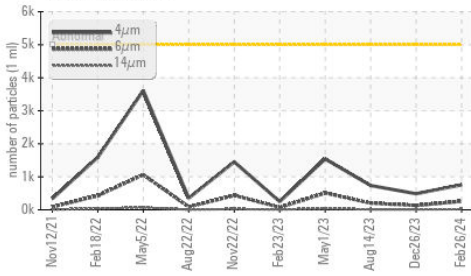
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	757	487	736
Particles >6µm	ASTM D7647 >1300	261	132	200
Particles >14µm	ASTM D7647 >160	18	11	11
Particles >21µm	ASTM D7647 >40	4	3	2
Particles >38µm	ASTM D7647 >10	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	17/15/11	16/14/11	17/15/11

FLUID DEGRADATION

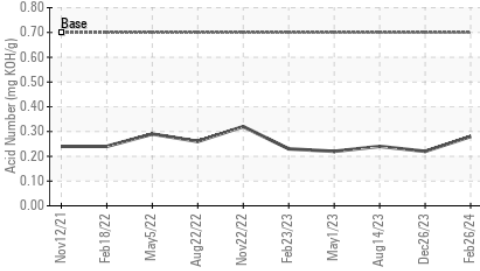
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045 0.70	0.28	0.22	0.24

OIL ANALYSIS REPORT

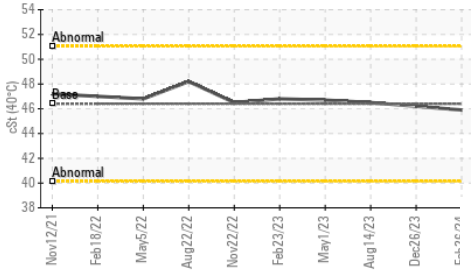
Particle Trend



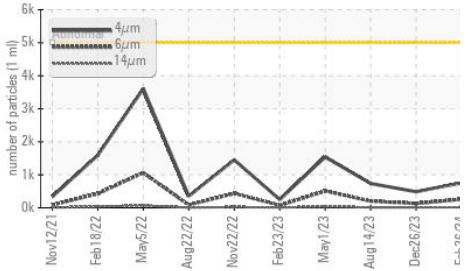
Acid Number



Viscosity @ 40°C



Particle Trend



PARAMETER	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

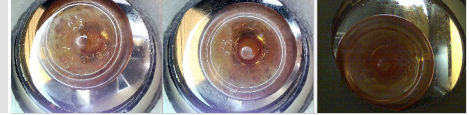
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.4	45.9	46.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

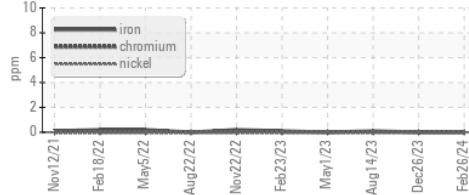


Bottom

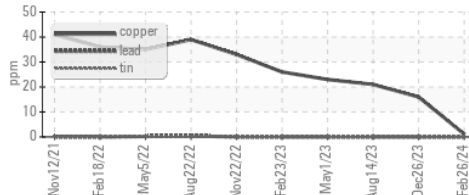


GRAPHS

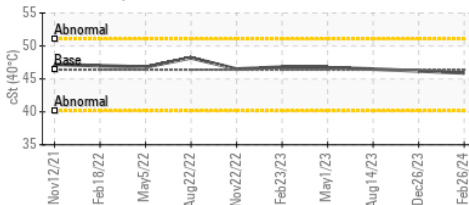
Ferrous Alloys



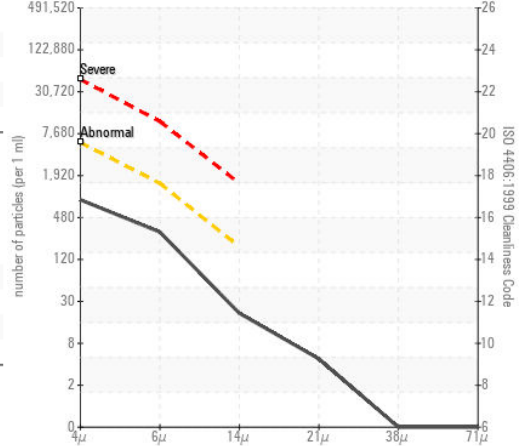
Non-ferrous Metals



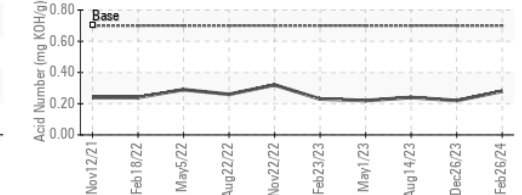
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0112946
Lab Number : 06102445
Unique Number : 10900675
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)

T:
F: