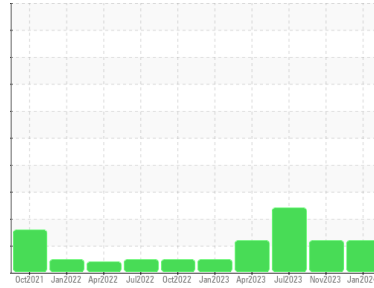


Area  
**Reversing Mill**  
 Machine Id  
**[Reversing Mill] 135245-SOUTH UPENDER HYDRAULIC**  
 Component  
**Hydraulic System**  
 Fluid  
**PETRO CANADA HYDREX AW 46 (--- GAL)**



## DIAGNOSIS

**Recommendation**  
 We recommend you service the filters on this component. Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 There is a high amount of silt (particulates < 14 microns in size) present in the oil.

**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>PCA0112929</b>	PCA0107709	PCA0101571
Sample Date	Client Info		<b>17 Jan 2024</b>	21 Nov 2023	01 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>ABNORMAL</b>	ATTENTION	ABNORMAL

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>2</b>	1	1
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	2	0
Lead	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >20	<b>7</b>	7	6
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 0	<b>4</b>	5	<1
Calcium	ppm	ASTM D5185m 50	<b>110</b>	115	107
Phosphorus	ppm	ASTM D5185m 330	<b>375</b>	362	338
Zinc	ppm	ASTM D5185m 430	<b>392</b>	439	422
Sulfur	ppm	ASTM D5185m 760	<b>2596</b>	2461	2739

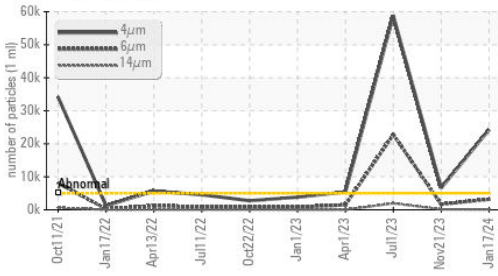
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>0</b>	<1	<1
Sodium	ppm	ASTM D5185m	<b>0</b>	0	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Water	%	ASTM D6304 >0.05	<b>NEG</b>	NEG	NEG

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 24271</b>	▲ 6638	▲ 58768
Particles >6µm	ASTM D7647	>1300	<b>▲ 3183</b>	▲ 1667	▲ 22787
Particles >14µm	ASTM D7647	>160	<b>97</b>	135	▲ 1952
Particles >21µm	ASTM D7647	>40	<b>25</b>	38	▲ 568
Particles >38µm	ASTM D7647	>10	<b>1</b>	1	▲ 32
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	2
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 22/19/14</b>	▲ 20/18/14	▲ 23/22/18

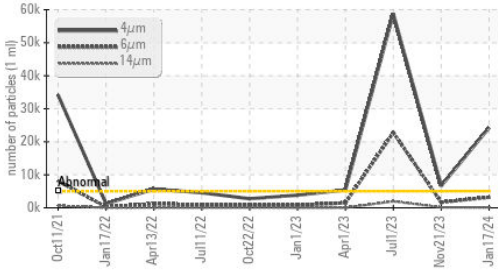
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.70	<b>0.32</b>	0.32	0.45

# OIL ANALYSIS REPORT

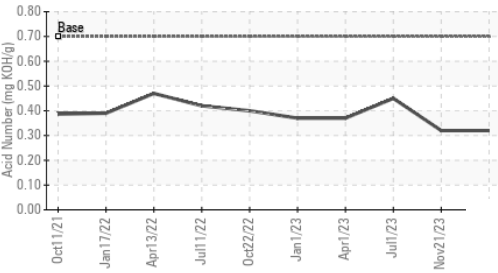
## ▲ Particle Trend



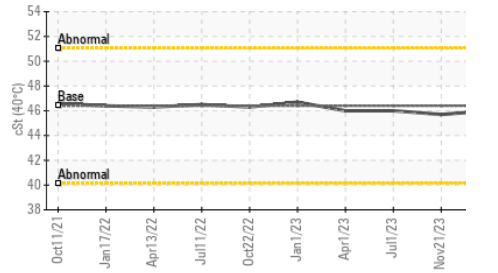
## ▲ Particle Trend



## Acid Number



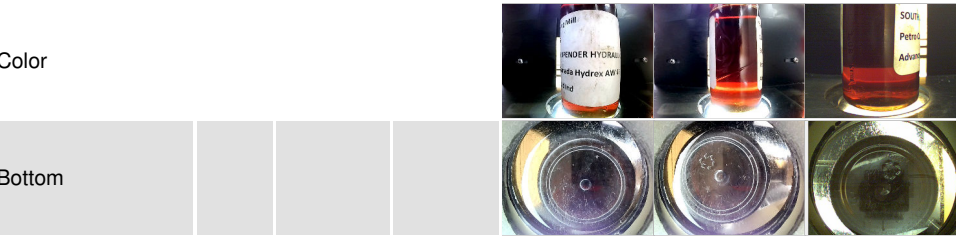
## Viscosity @ 40°C



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

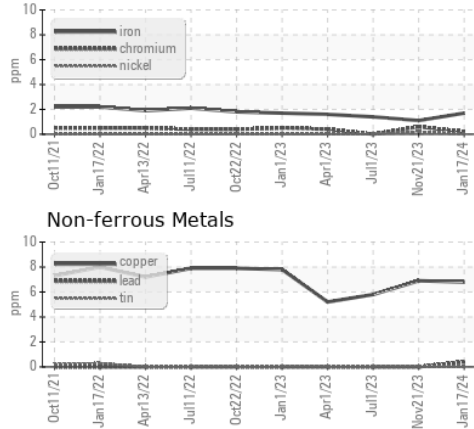
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.4	46.0	45.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
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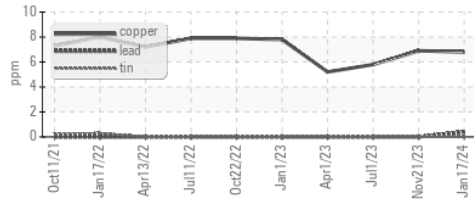


## GRAPHS

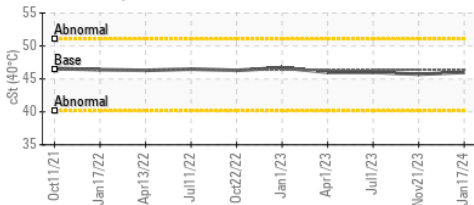
### Ferrous Alloys



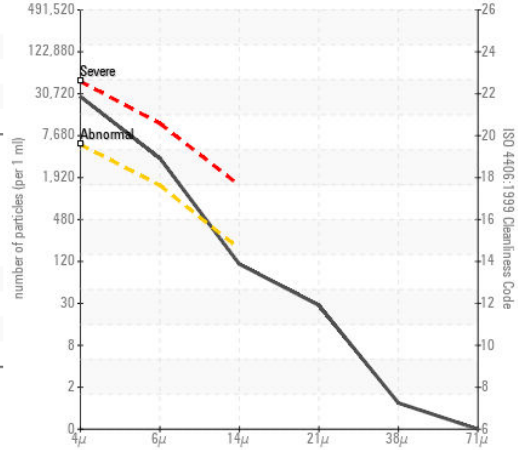
### Non-ferrous Metals



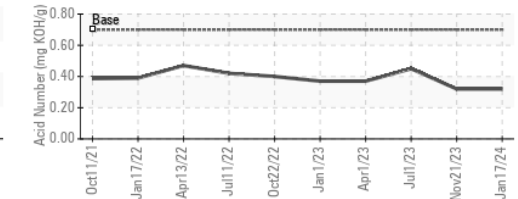
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : PCA0112929  
 Lab Number : 06065002  
 Unique Number : 10836384  
 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: