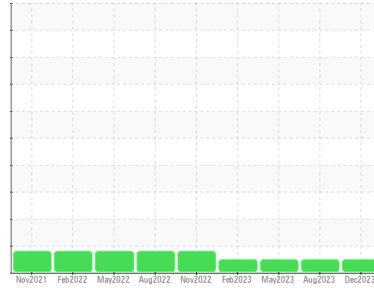


# OIL ANALYSIS REPORT

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	<b>PCA0107684</b>	PCA0101466	PCA0095447
Sample Date	Client Info	<b>26 Dec 2023</b>	14 Aug 2023	01 May 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	Not Changd
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>20	<b>0</b>	<1	0
Chromium ppm ASTM D5185m	>20	<b>0</b>	0	0
Nickel ppm ASTM D5185m	>20	<b>0</b>	0	0
Titanium ppm ASTM D5185m		<b>0</b>	0	<1
Silver ppm ASTM D5185m		<b>0</b>	0	0
Aluminum ppm ASTM D5185m	>20	<b>0</b>	0	<1
Lead ppm ASTM D5185m	>20	<b>0</b>	0	0
Copper ppm ASTM D5185m	>20	<b>16</b>	21	23
Tin ppm ASTM D5185m	>20	<b>0</b>	0	0
Vanadium ppm ASTM D5185m		<b>0</b>	0	0
Cadmium ppm ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m	0	<b>0</b>	0	0
Barium ppm ASTM D5185m	0	<b>0</b>	0	0
Molybdenum ppm ASTM D5185m	0	<b>0</b>	0	0
Manganese ppm ASTM D5185m	0	<b>0</b>	0	0
Magnesium ppm ASTM D5185m	0	<b>1</b>	4	6
Calcium ppm ASTM D5185m	50	<b>55</b>	55	49
Phosphorus ppm ASTM D5185m	330	<b>322</b>	325	301
Zinc ppm ASTM D5185m	430	<b>415</b>	391	362
Sulfur ppm ASTM D5185m	760	<b>1759</b>	2444	2605

## CONTAMINANTS

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

## FLUID CLEANLINESS

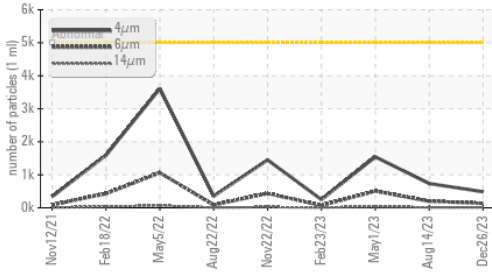
method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	<b>487</b>	736	1543
Particles >6µm ASTM D7647	>1300	<b>132</b>	200	510
Particles >14µm ASTM D7647	>160	<b>11</b>	11	34
Particles >21µm ASTM D7647	>40	<b>3</b>	2	6
Particles >38µm ASTM D7647	>10	<b>0</b>	0	0
Particles >71µm ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness ISO 4406 (c)	>19/17/14	<b>16/14/11</b>	17/15/11	18/16/12

## FLUID DEGRADATION

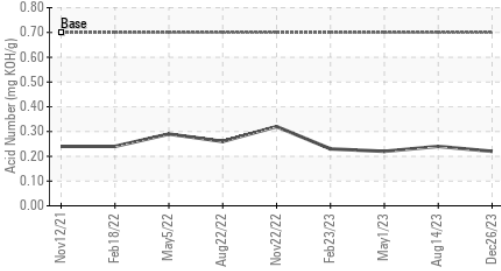
method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045	0.70	<b>0.22</b>	0.24	0.22

# OIL ANALYSIS REPORT

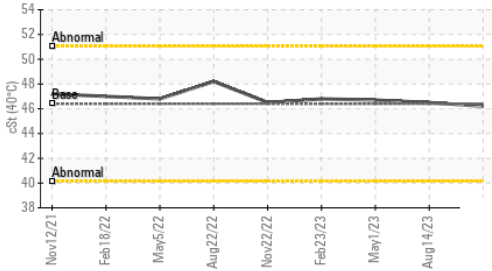
**Particle Trend**



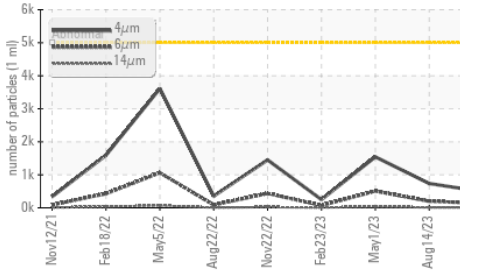
**Acid Number**



**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	<b>46.2</b>	46.5	46.7

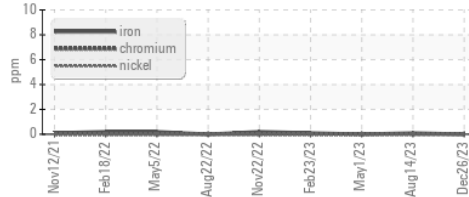
SAMPLE IMAGES	method	limit/base	current	history1	history2
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**Color**

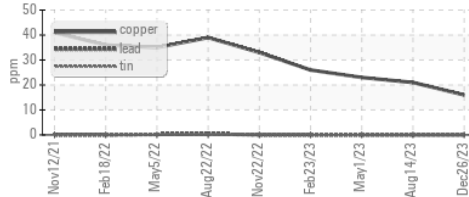


## GRAPHS

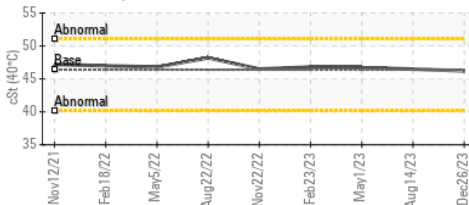
**Ferrous Alloys**



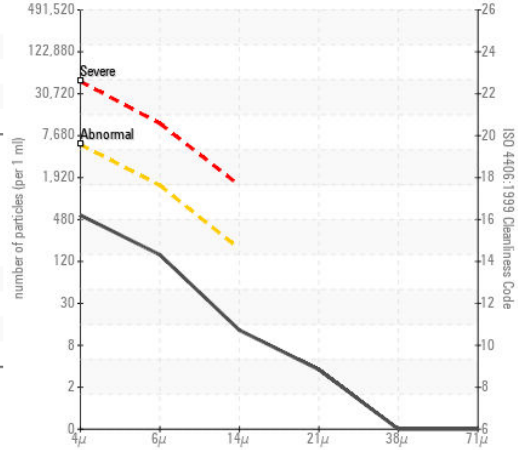
**Non-ferrous Metals**



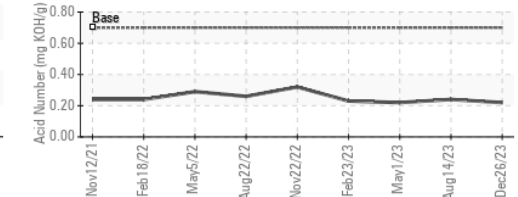
**Viscosity @ 40°C**



**Particle Count**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0107684 **Received** : 27 Dec 2023  
**Lab Number** : 06046123 **Diagnosed** : 29 Dec 2023  
**Unique Number** : 10806731 **Diagnostician** : Jonathan Hester  
**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: