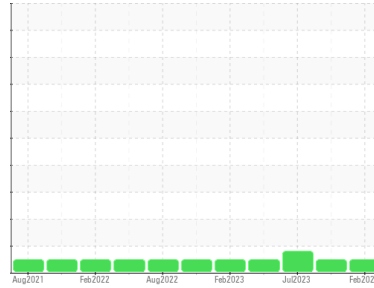


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**Galv Line**  
 Machine Id  
**[Galv Line] 670040-TEMPER MILL 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

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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>PCA0112969</b>	PCA0107700	PCA0101429
Sample Date	Client Info	<b>12 Feb 2024</b>	20 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>NORMAL</b>	NORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>20	<b>0</b>	<1	<1
Chromium ppm ASTM D5185m	>20	<b>0</b>	<1	0
Nickel ppm ASTM D5185m	>20	<b>0</b>	<1	<1
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>0</b>	2	0
Lead ppm ASTM D5185m	>20	<b>0</b>	0	<1
Copper ppm ASTM D5185m	>20	<b>2</b>	3	2
Tin ppm ASTM D5185m	>20	<b>0</b>	<1	0
Vanadium ppm ASTM D5185m		<b>0</b>	0	0
Cadmium ppm ASTM D5185m		<b>0</b>	<1	<1

## 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>	4	0
Molybdenum ppm ASTM D5185m	0	<b>0</b>	<1	<1
Manganese ppm ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium ppm ASTM D5185m	0	<b>&lt;1</b>	3	3
Calcium ppm ASTM D5185m	50	<b>46</b>	54	50
Phosphorus ppm ASTM D5185m	330	<b>283</b>	399	327
Zinc ppm ASTM D5185m	430	<b>419</b>	485	429
Sulfur ppm ASTM D5185m	760	<b>835</b>	1076	985

## CONTAMINANTS

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

## FLUID CLEANLINESS

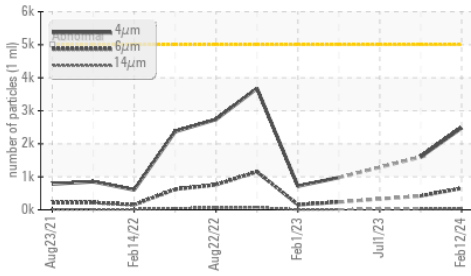
method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	<b>2478</b>	1598	---
Particles >6µm ASTM D7647	>1300	<b>650</b>	419	---
Particles >14µm ASTM D7647	>160	<b>31</b>	27	---
Particles >21µm ASTM D7647	>40	<b>6</b>	7	---
Particles >38µm ASTM D7647	>10	<b>0</b>	0	---
Particles >71µm ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness ISO 4406 (c)	>19/17/14	<b>18/17/12</b>	18/16/12	---

## FLUID DEGRADATION

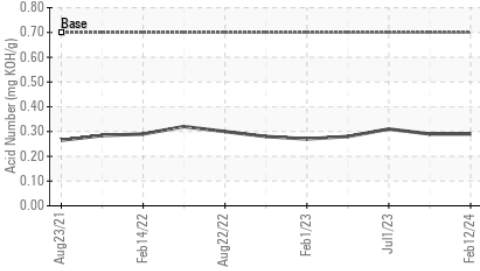
method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045	0.70	<b>0.29</b>	0.29	0.31

# OIL ANALYSIS REPORT

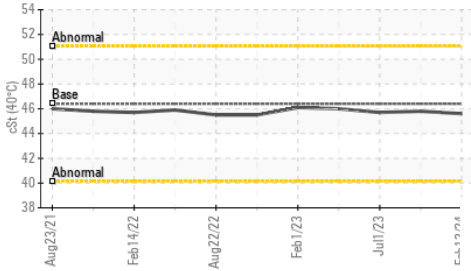
**Particle Trend**



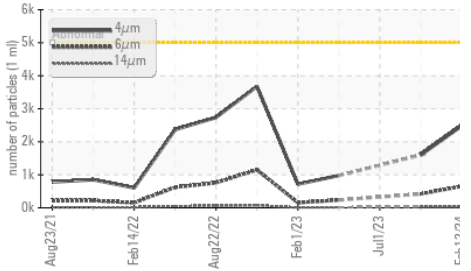
**Acid Number**



**Viscosity @ 40°C**



**Particle Trend**

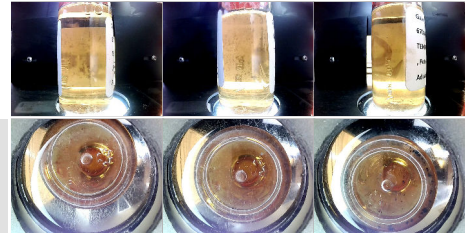


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	▲ MODER
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	45.6	45.8

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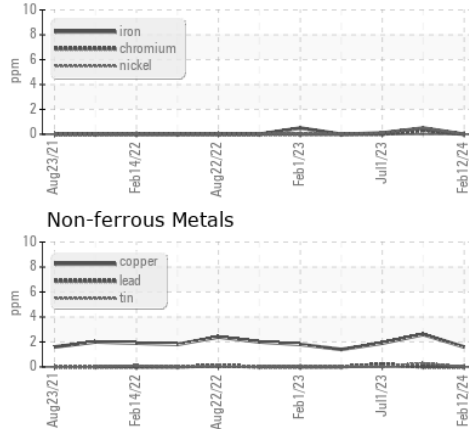
**Color**



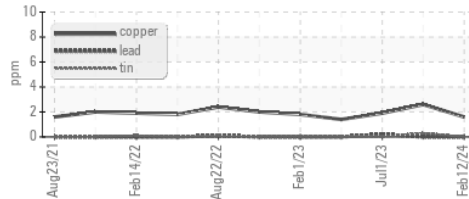
**Bottom**

## GRAPHS

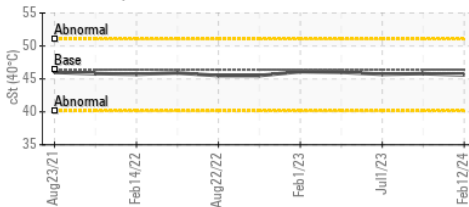
**Ferrous Alloys**



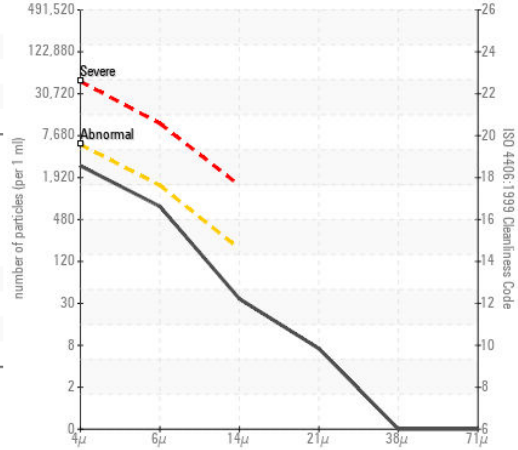
**Non-ferrous Metals**



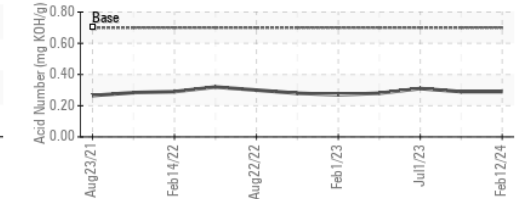
**Viscosity @ 40°C**



**Particle Count**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0112969  
**Lab Number** : 06088145  
**Unique Number** : 10875590  
**Test Package** : PLANT

**Received** : 13 Feb 2024  
**Tested** : 15 Feb 2024  
**Diagnosed** : 15 Feb 2024 - Don Baldrige

**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: