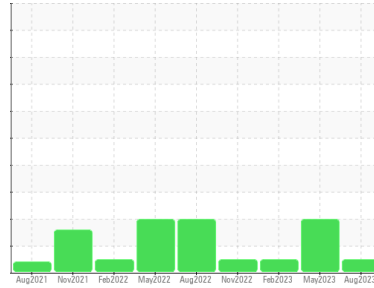


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**Pickle Line**  
 Machine Id  
**[Pickle Line] 585270-EXIT COIL CAR**  
 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	history1	history2
Sample Number	Client Info		<b>PCA0101442</b>	PCA0095478	PCA0089477
Sample Date	Client Info		<b>22 Aug 2023</b>	01 May 2023	23 Feb 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>	Not Changd	Not Changd
Sample Status			<b>NORMAL</b>	ABNORMAL	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	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >20	<b>0</b>	5	0
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</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	<1
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m 0	<b>&lt;1</b>	6	1
Calcium	ppm	ASTM D5185m 50	<b>54</b>	46	57
Phosphorus	ppm	ASTM D5185m 330	<b>337</b>	300	318
Zinc	ppm	ASTM D5185m 430	<b>438</b>	365	411
Sulfur	ppm	ASTM D5185m 760	<b>963</b>	1740	1095

## CONTAMINANTS

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

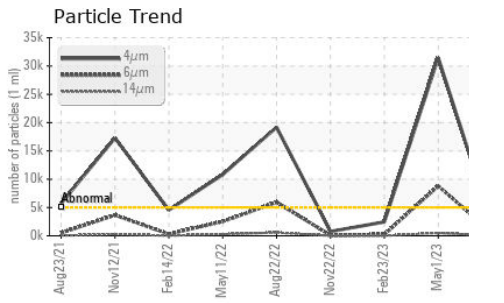
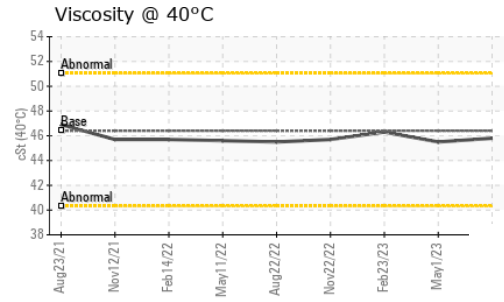
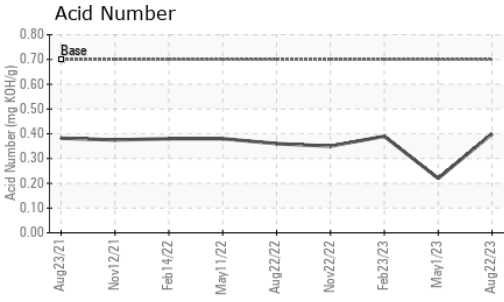
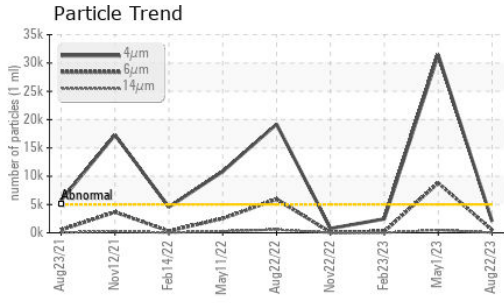
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>2033</b>	▲ 31466	2455
Particles >6µm	ASTM D7647	>1300	<b>497</b>	▲ 8810	250
Particles >14µm	ASTM D7647	>160	<b>29</b>	▲ 490	10
Particles >21µm	ASTM D7647	>40	<b>5</b>	▲ 89	2
Particles >38µm	ASTM D7647	>10	<b>0</b>	2	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	1
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>18/16/12</b>	▲ 22/20/16	18/15/10

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.70	<b>0.40</b>	0.22	0.39

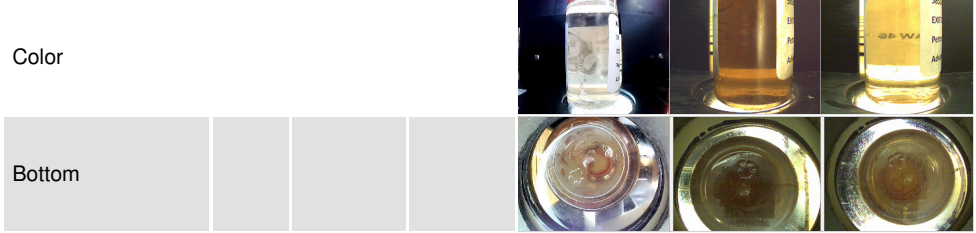
# OIL ANALYSIS REPORT



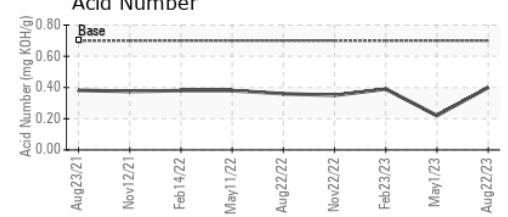
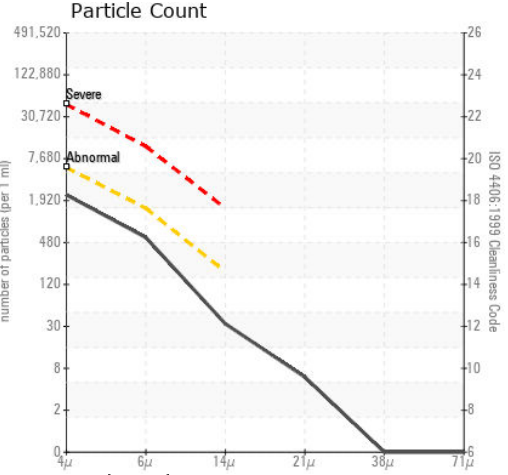
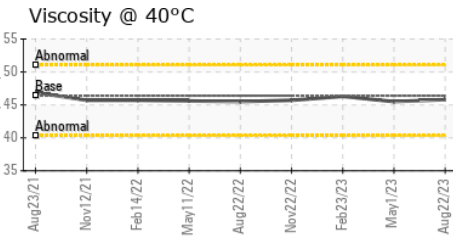
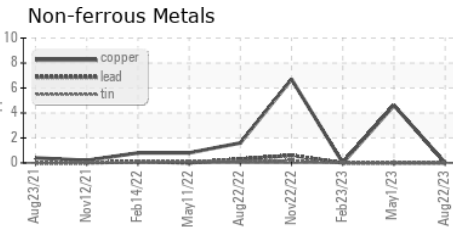
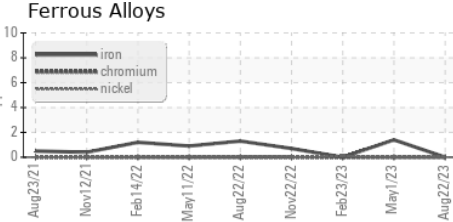
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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>45.8</b>	45.5	46.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0101442 **Received** : 23 Aug 2023  
**Lab Number** : **05932742** **Diagnosed** : 25 Aug 2023  
**Unique Number** : 10618013 **Diagnostician** : Angela Borella  
**Test Package** : PLANT

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

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)