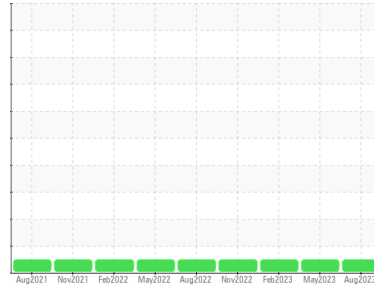


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**Pickle Line**  
 Machine Id  
**[Pickle Line] 585035-EXIT LOOPER WINCH-DELIVERY**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA ENDURATEX EP 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

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>PCA0101453</b>	PCA0095469	PCA0089504
Sample Date	Client Info			<b>22 Aug 2023</b>	23 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>	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		<b>13</b>	15	16
Iron	ppm	ASTM D5185m	>200	<b>5</b>	30	30
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

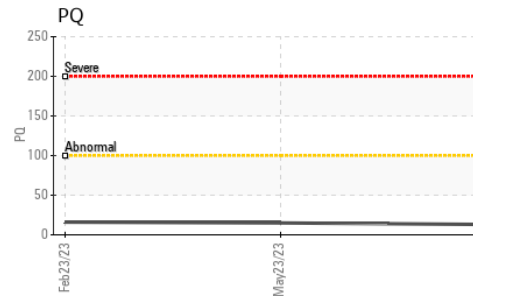
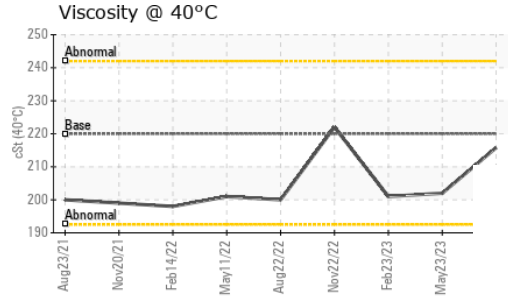
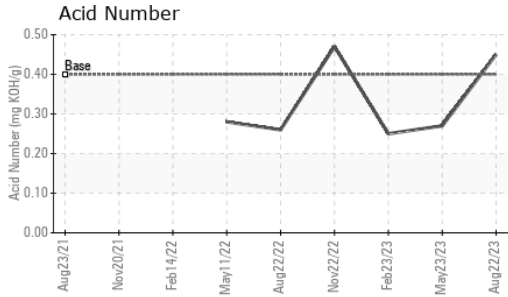
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	60	<b>72</b>	4	7
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	<1
Calcium	ppm	ASTM D5185m	0	<b>2</b>	2	4
Phosphorus	ppm	ASTM D5185m	270	<b>279</b>	128	116
Zinc	ppm	ASTM D5185m	0	<b>0</b>	2	9
Sulfur	ppm	ASTM D5185m	11200	<b>8049</b>	8036	7365

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>5</b>	6	7
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	<1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	<b>0.45</b>	0.27	0.25

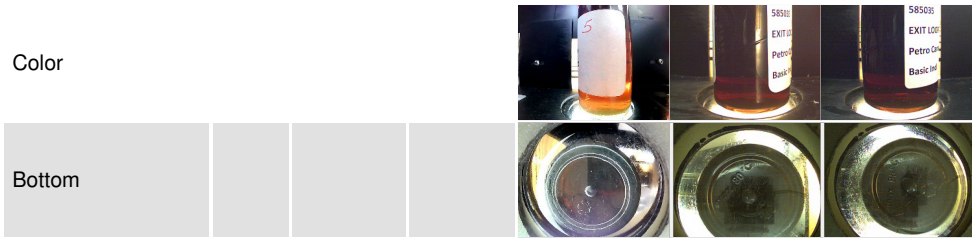
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

# OIL ANALYSIS REPORT

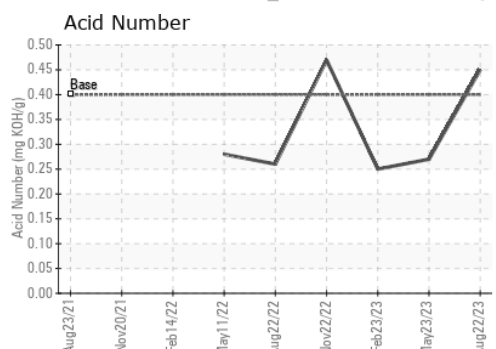
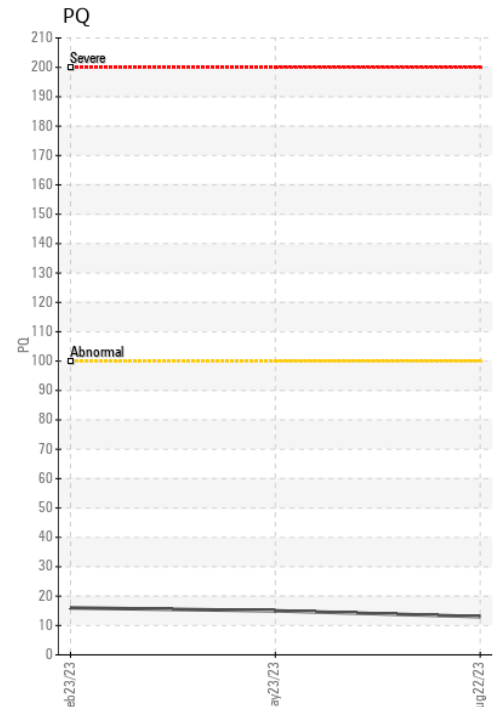
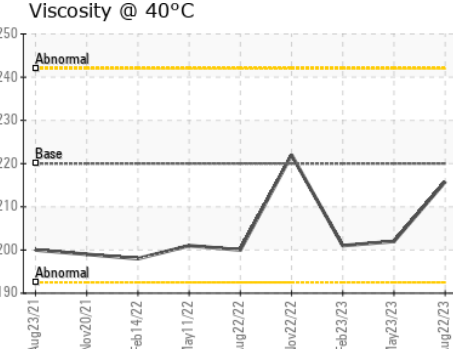
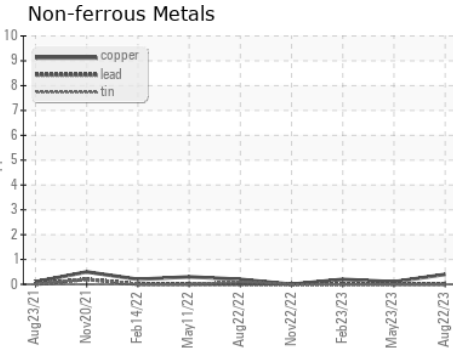
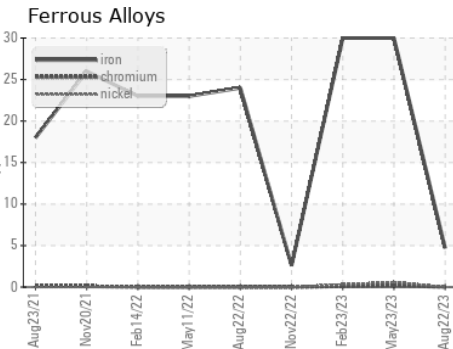


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	<b>215.8</b>	202	201

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0101453  
**Lab Number** : 05932891  
**Unique Number** : 10618162  
**Test Package** : PLANT  
**Received** : 23 Aug 2023  
**Diagnosed** : 28 Aug 2023  
**Diagnostician** : Wes Davis

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

Certificate L2367  
 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)