



Machine Id  
**CRANE 3 TROLLEY**

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>PCA0101515</b>	PCA0079666	---
Sample Date	Client Info	<b>28 Aug 2023</b>	22 Sep 2022	---
Machine Age	hrs	Client Info	<b>0</b>	0
Oil Age	hrs	Client Info	<b>0</b>	0
Oil Changed	Client Info	<b>N/A</b>	Not Changd	---
Sample Status		<b>NORMAL</b>	NORMAL	---

**WEAR METALS** method limit/base current history1 history2

PQ	ASTM D8184		<b>24</b>	18	---
Iron	ppm	ASTM D5185m	>200	<b>102</b>	87
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0
Silver	ppm	ASTM D5185m		<b>0</b>	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	<1
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	0
Copper	ppm	ASTM D5185m	>200	<b>3</b>	3
Tin	ppm	ASTM D5185m	>25	<b>0</b>	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0

**ADDITIVES** method limit/base current history1 history2

Boron	ppm	ASTM D5185m	60	<b>3</b>	4
Barium	ppm	ASTM D5185m	0	<b>24</b>	6
Molybdenum	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1
Manganese	ppm	ASTM D5185m	0	<b>1</b>	1
Magnesium	ppm	ASTM D5185m	0	<b>2</b>	1
Calcium	ppm	ASTM D5185m	0	<b>10</b>	9
Phosphorus	ppm	ASTM D5185m	270	<b>216</b>	205
Zinc	ppm	ASTM D5185m	0	<b>27</b>	19
Sulfur	ppm	ASTM D5185m	11200	<b>12474</b>	12125

**CONTAMINANTS** method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>50	<b>27</b>	23
Sodium	ppm	ASTM D5185m		<b>0</b>	0
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1

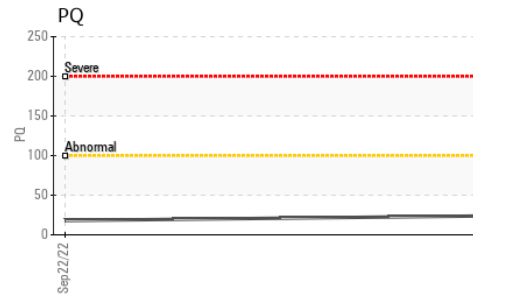
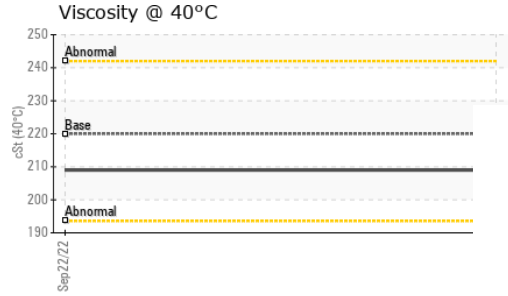
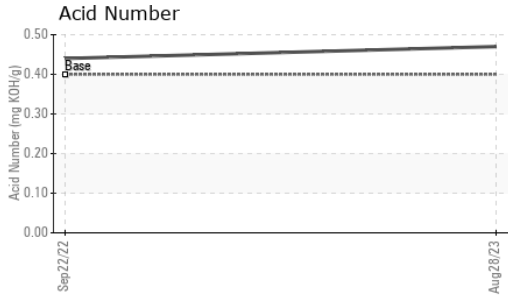
**FLUID DEGRADATION** method limit/base current history1 history2

Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	<b>0.47</b>	0.44
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**VISUAL** method limit/base current history1 history2

White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG
Free Water	scalar	*Visual		<b>NEG</b>	---

# OIL ANALYSIS REPORT



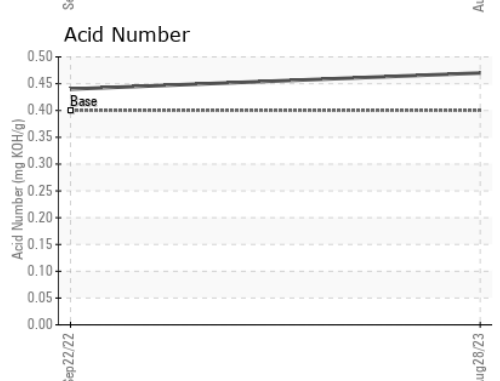
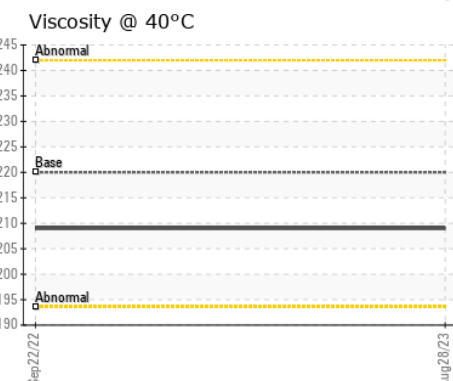
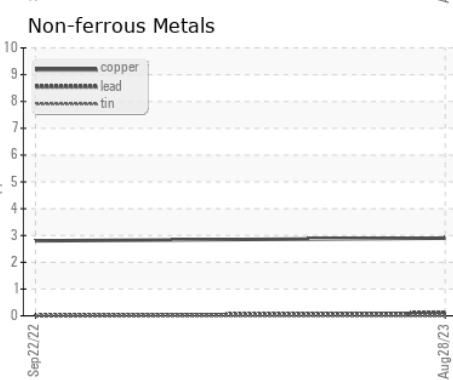
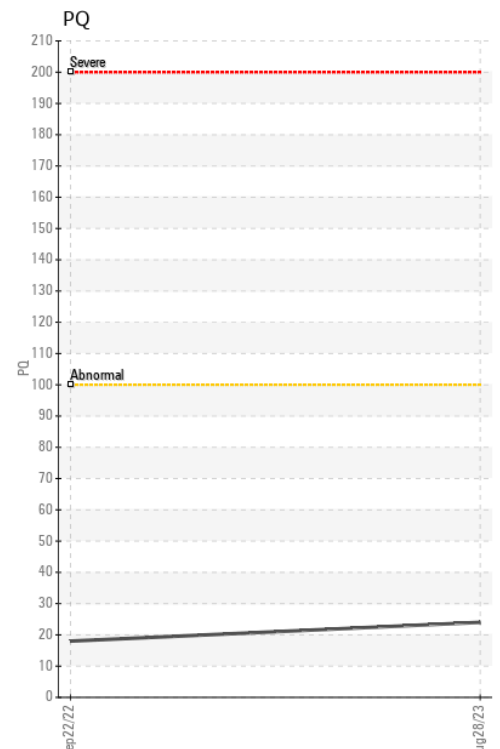
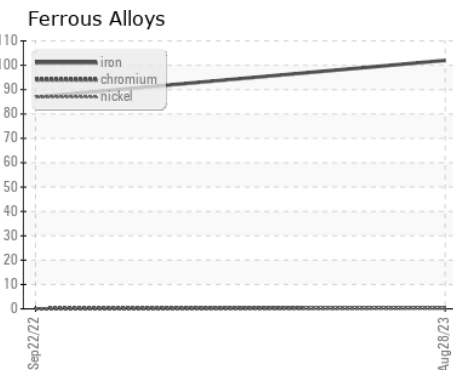
### FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D445 220	209	209	---

### SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				no image
Bottom				no image

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0101515 **Received** : 29 Aug 2023  
**Lab Number** : 05937360 **Diagnosed** : 30 Aug 2023  
**Unique Number** : 10622631 **Diagnostician** : Wes Davis  
**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:

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)