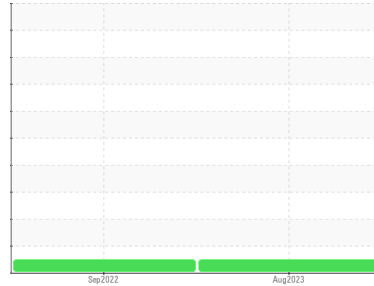


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CRANE 5

Component
Main Hoist

Fluid
PETRO CANADA ENDURATEX EP 220 (--- 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.

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			PCA0101521	PCA0080316	---
Sample Date	Client Info			23 Aug 2023	22 Sep 2022	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		0	0	---
Oil Changed	Client Info			N/A	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		12	3	---
Iron	ppm	ASTM D5185m	>20	2	1	---
Chromium	ppm	ASTM D5185m	>20	0	0	---
Nickel	ppm	ASTM D5185m	>20	<1	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>20	0	0	---
Lead	ppm	ASTM D5185m	>20	<1	0	---
Copper	ppm	ASTM D5185m	>20	0	0	---
Tin	ppm	ASTM D5185m	>20	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

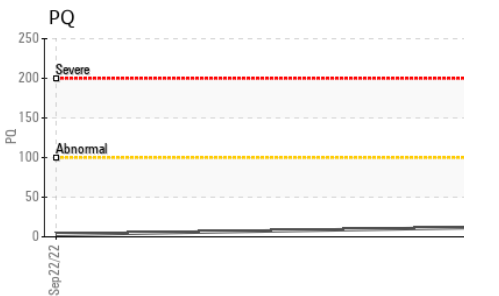
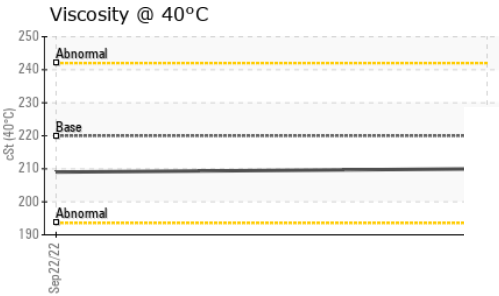
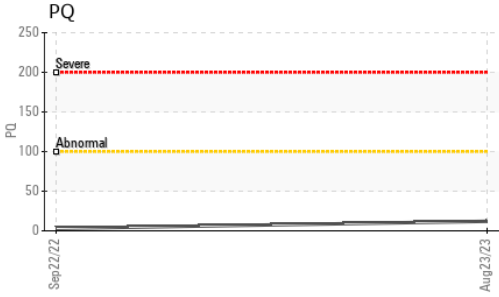
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	60	3	2	---
Barium	ppm	ASTM D5185m	0	4	2	---
Molybdenum	ppm	ASTM D5185m	0	0	0	---
Manganese	ppm	ASTM D5185m	0	0	0	---
Magnesium	ppm	ASTM D5185m	0	<1	0	---
Calcium	ppm	ASTM D5185m	0	13	11	---
Phosphorus	ppm	ASTM D5185m	270	299	289	---
Zinc	ppm	ASTM D5185m	0	12	9	---
Sulfur	ppm	ASTM D5185m	11200	11474	11654	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	8	5	---
Sodium	ppm	ASTM D5185m		0	0	---
Potassium	ppm	ASTM D5185m	>20	<1	0	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	0.46	0.47	---

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	LIGHT	---
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	---	---



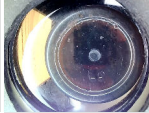

OIL ANALYSIS REPORT



FLUID PROPERTIES

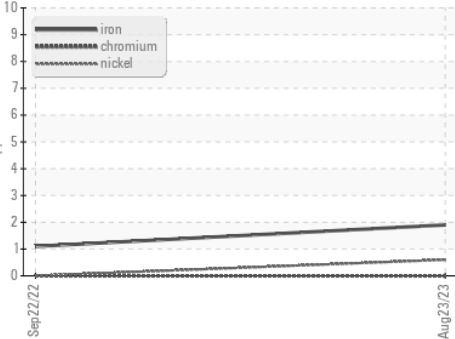
method	limit/base	current	history1	history2	
Visc @ 40°C	cSt ASTM D445	220	210	209	---

SAMPLE IMAGES

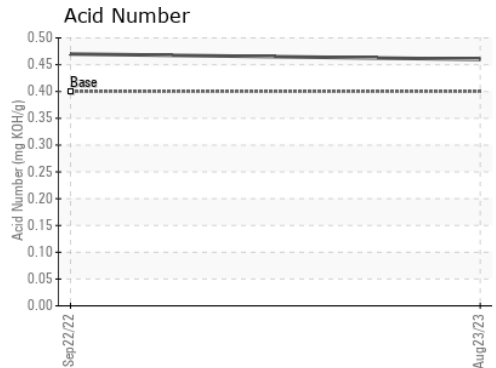
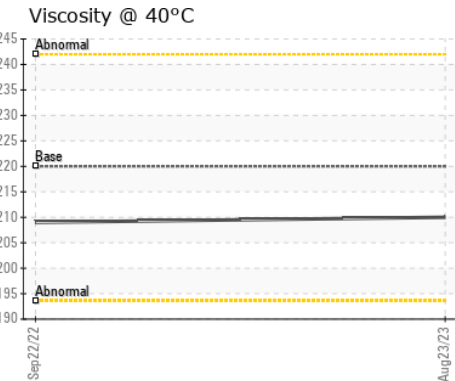
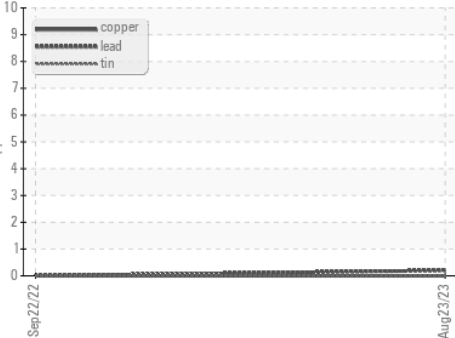
method	limit/base	current	history1	history2
Color				no image
Bottom				no image

GRAPHS

Ferrous Alloys



Non-ferrous Metals



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0101521 **Received** : 29 Aug 2023
Lab Number : **05937379** **Diagnosed** : 30 Aug 2023
Unique Number : 10622650 **Diagnostician** : Don Baldrige
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: