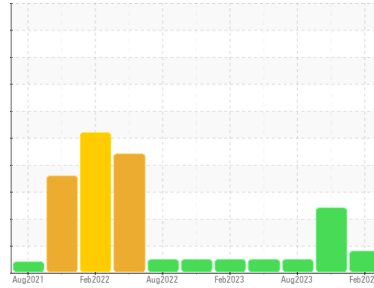


OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
Pickle Line
 Machine Id
[Pickle Line] 580045-CHOPPER KNIFE GB - OPER. SIDE
 Component
Non-Drive End Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 220 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0113007	PCA0107673	PCA0101455
Sample Date	Client Info	13 Feb 2024	26 Nov 2023	22 Aug 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184	158	---	12
Iron	ppm ASTM D5185m >200	102	66	5
Chromium	ppm ASTM D5185m >15	4	1	0
Nickel	ppm ASTM D5185m >15	2	1	0
Titanium	ppm ASTM D5185m	1	1	0
Silver	ppm ASTM D5185m	0	0	0
Aluminum	ppm ASTM D5185m >25	22	▲ 15	<1
Lead	ppm ASTM D5185m >100	1	2	0
Copper	ppm ASTM D5185m >200	4	6	<1
Tin	ppm ASTM D5185m >25	0	<1	0
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	<1	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 60	36	30	73
Barium	ppm ASTM D5185m 0	0	<1	0
Molybdenum	ppm ASTM D5185m 0	0	<1	0
Manganese	ppm ASTM D5185m 0	1	1	<1
Magnesium	ppm ASTM D5185m 0	<1	1	<1
Calcium	ppm ASTM D5185m 0	99	104	2
Phosphorus	ppm ASTM D5185m 270	374	352	282
Zinc	ppm ASTM D5185m 0	137	121	0
Sulfur	ppm ASTM D5185m 11200	6442	6875	8170

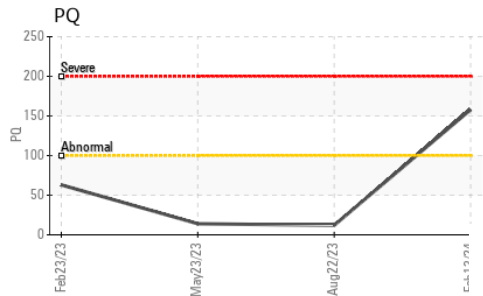
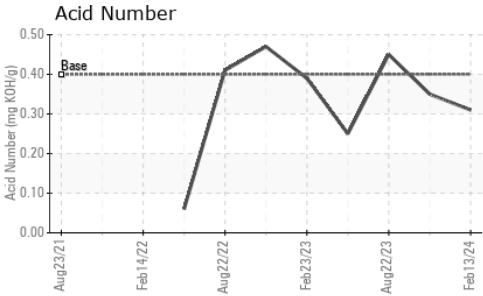
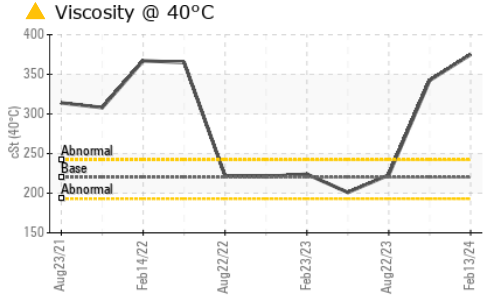
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	45	41	5
Sodium	ppm ASTM D5185m	1	0	<1
Potassium	ppm ASTM D5185m >20	<1	1	1

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045 0.40	0.31	0.35	0.45

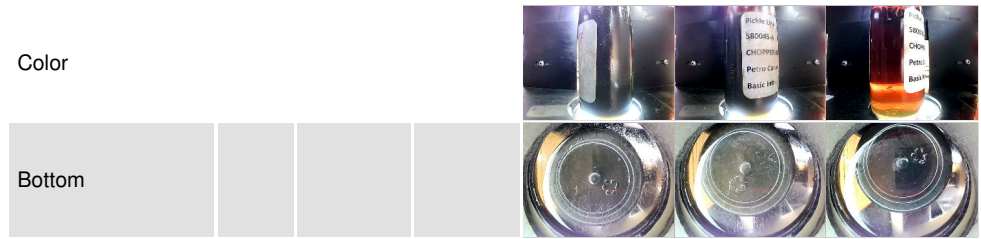
OIL ANALYSIS REPORT



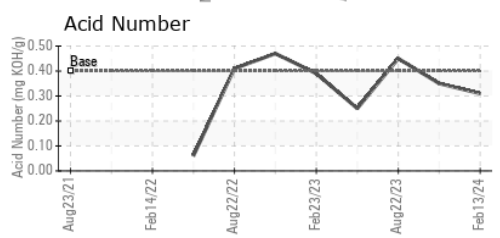
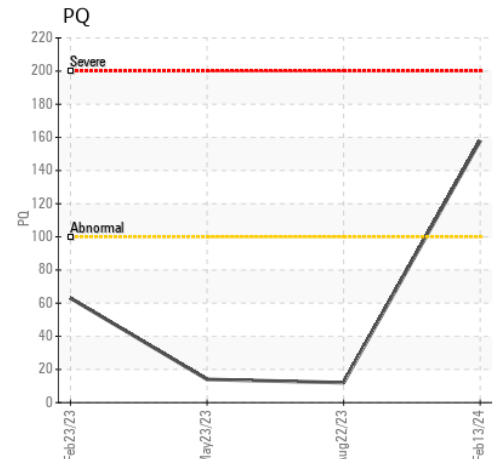
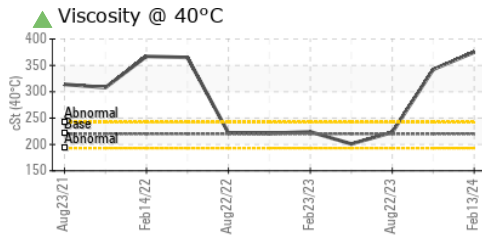
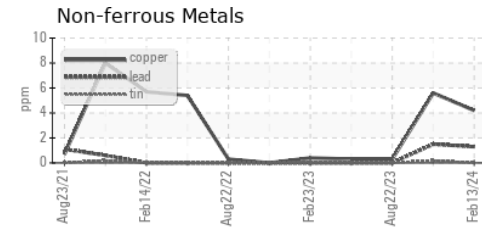
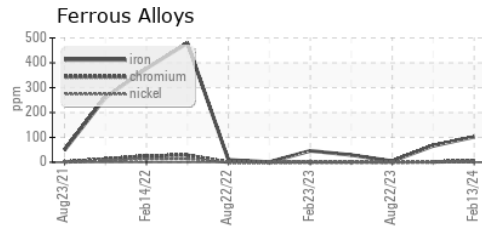
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	▲ HEAVY	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220 ▲ 375	▲ 342.4	223

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0113007 **Received** : 13 Feb 2024
Lab Number : **06088308** **Tested** : 14 Feb 2024
Unique Number : 10875753 **Diagnosed** : 15 Feb 2024 - 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)