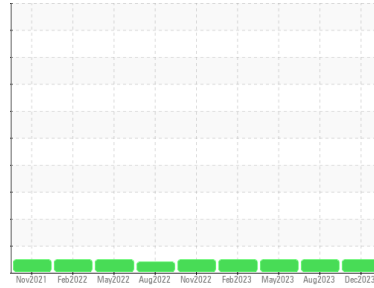


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Temper Mill
 Machine Id
[Temper Mill] 220075-SPINDLE DRIVE
 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	PCA0107730	PCA0101482	PCA0095453
Sample Date	Client Info	27 Dec 2023	01 Aug 2023	23 May 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	Not Changd
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184	29	28	22	
Iron	ppm	ASTM D5185m	>200	26	31
Chromium	ppm	ASTM D5185m	>15	3	3
Nickel	ppm	ASTM D5185m	>15	0	0
Titanium	ppm	ASTM D5185m		0	<1
Silver	ppm	ASTM D5185m		0	0
Aluminum	ppm	ASTM D5185m	>25	2	2
Lead	ppm	ASTM D5185m	>100	0	<1
Copper	ppm	ASTM D5185m	>200	15	16
Tin	ppm	ASTM D5185m	>25	0	0
Vanadium	ppm	ASTM D5185m		0	<1
Cadmium	ppm	ASTM D5185m		0	<1

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	60	3	1
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	0	0	1
Calcium	ppm	ASTM D5185m	0	7	<1
Phosphorus	ppm	ASTM D5185m	270	197	250
Zinc	ppm	ASTM D5185m	0	19	21
Sulfur	ppm	ASTM D5185m	11200	11017	14274

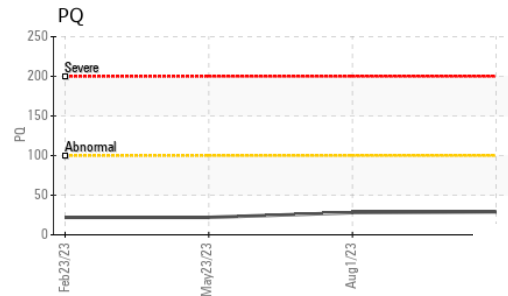
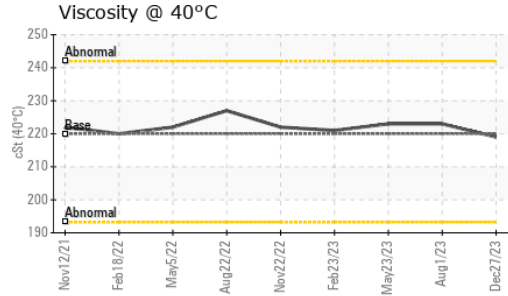
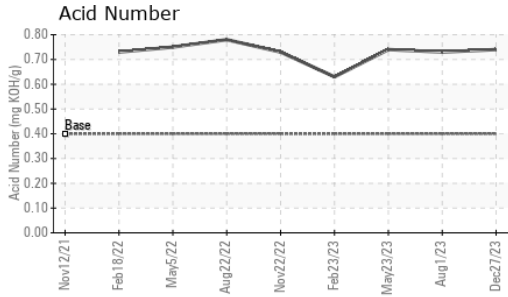
CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	14	15
Sodium	ppm	ASTM D5185m		1	2
Potassium	ppm	ASTM D5185m	>20	2	3

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	0.74	0.73

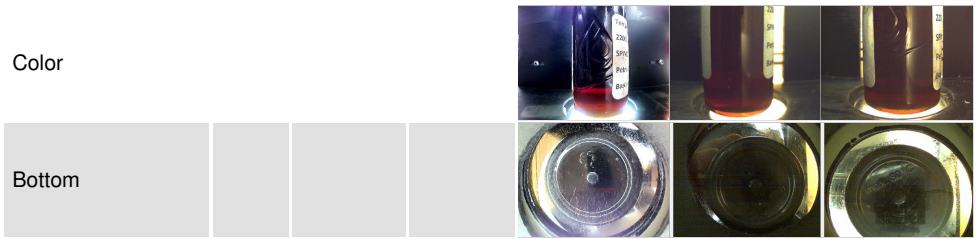
OIL ANALYSIS REPORT



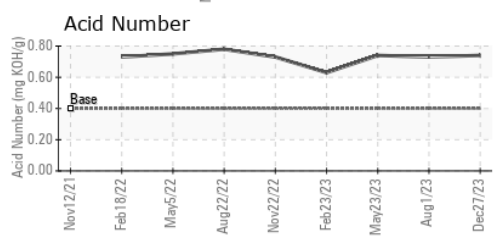
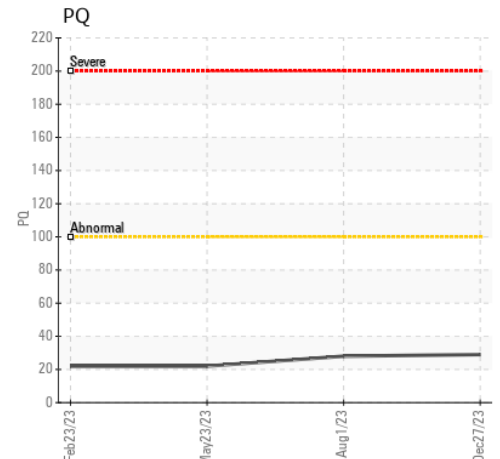
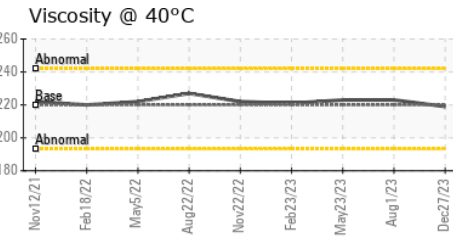
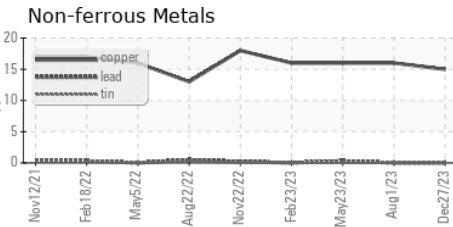
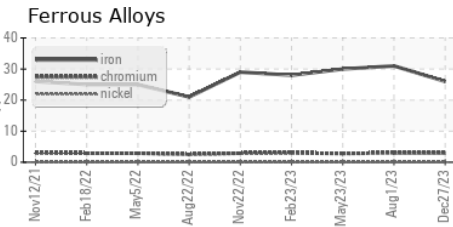
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	219	223

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0107730 **Received** : 27 Dec 2023
Lab Number : 06046311 **Diagnosed** : 29 Dec 2023
Unique Number : 10806919 **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

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)