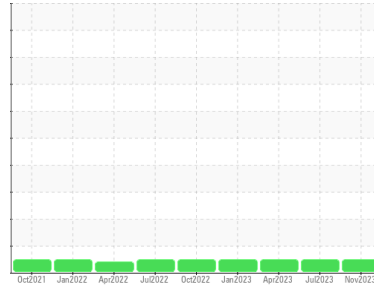


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**Reversing Mill**  
 Machine Id  
**[Reversing Mill] 115140-N TEN REEL:DRV END MTR BRG WST**  
 Component  
**Drive End Circulating System**  
 Fluid  
**SHELL TURBO T ISO 68 (--- 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. The amount and size of particulates present in the system are acceptable.

### 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>PCA0101616</b>	PCA0095413	PCA0095391
Sample Date	Client Info	<b>21 Nov 2023</b>	01 Jul 2023	01 Apr 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>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m		<b>6</b>	6	6
Chromium ppm ASTM D5185m		<b>&lt;1</b>	0	0
Nickel ppm ASTM D5185m		<b>0</b>	0	0
Titanium ppm ASTM D5185m		<b>&lt;1</b>	0	0
Silver ppm ASTM D5185m		<b>0</b>	0	0
Aluminum ppm ASTM D5185m		<b>2</b>	0	<1
Lead ppm ASTM D5185m		<b>0</b>	0	0
Copper ppm ASTM D5185m		<b>&lt;1</b>	0	0
Tin ppm ASTM D5185m		<b>0</b>	0	0
Vanadium ppm ASTM D5185m		<b>0</b>	<1	0
Cadmium ppm ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m		<b>0</b>	0	0
Barium ppm ASTM D5185m		<b>0</b>	0	0
Molybdenum ppm ASTM D5185m		<b>&lt;1</b>	0	0
Manganese ppm ASTM D5185m		<b>0</b>	0	<1
Magnesium ppm ASTM D5185m		<b>&lt;1</b>	0	1
Calcium ppm ASTM D5185m		<b>&lt;1</b>	0	0
Phosphorus ppm ASTM D5185m		<b>2</b>	0	3
Zinc ppm ASTM D5185m		<b>0</b>	0	0
Sulfur ppm ASTM D5185m		<b>0</b>	0	0

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m		<b>1</b>	<1	<1
Sodium ppm ASTM D5185m		<b>0</b>	<1	<1
Potassium ppm ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Water % ASTM D6304		<b>NEG</b>	NEG	NEG

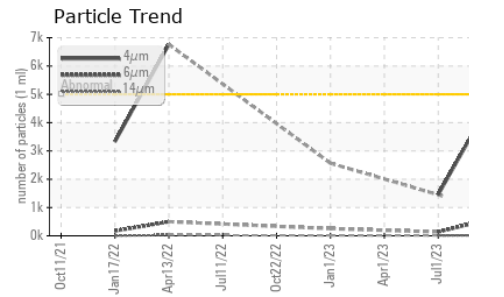
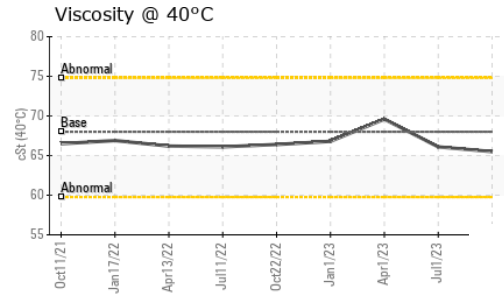
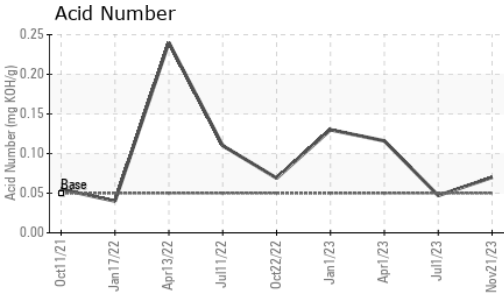
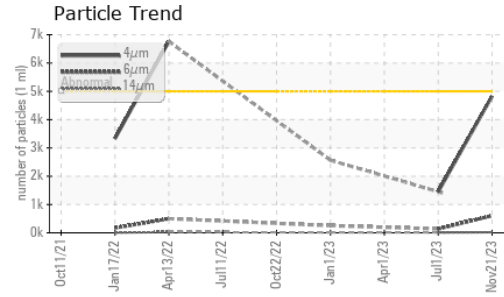
## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	<b>4824</b>	1451	---
Particles >6µm ASTM D7647	>1300	<b>607</b>	138	---
Particles >14µm ASTM D7647	>160	<b>20</b>	10	---
Particles >21µm ASTM D7647	>40	<b>6</b>	3	---
Particles >38µm ASTM D7647	>10	<b>0</b>	0	---
Particles >71µm ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness ISO 4406 (c)	>19/17/14	<b>19/16/11</b>	18/14/10	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045	.05	<b>0.07</b>	0.047	0.116

# OIL ANALYSIS REPORT



PARAMETER	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	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 68	65.5	66.1	69.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

### GRAPHS

Date	Iron (ppm)	Chromium (ppm)	Nickel (ppm)
Oct11/21	6	0.5	0.5
Jan17/22	6	0.5	0.5
Apr13/22	6	0.5	0.5
Jul11/22	6	0.5	0.5
Oct22/22	6	0.5	0.5
Jan1/23	6	0.5	0.5
Apr1/23	6	0.5	0.5
Jul1/23	6	0.5	0.5
Nov21/23	6	0.5	0.5

Date	Copper (ppm)	Lead (ppm)	Tin (ppm)
Oct11/21	1	0.5	0.5
Jan17/22	1	0.5	0.5
Apr13/22	1	0.5	0.5
Jul11/22	1	0.5	0.5
Oct22/22	1	0.5	0.5
Jan1/23	1	0.5	0.5
Apr1/23	1	0.5	0.5
Jul1/23	1	0.5	0.5
Nov21/23	1	0.5	0.5

Date	Number of particles (per 1 ml)	ISO 4406:1999 Cleanliness Code
Oct11/21	7,680	20
Jan17/22	4,800	18
Apr13/22	1,920	14
Jul11/22	300	10
Oct22/22	80	8
Jan1/23	20	6
Apr1/23	5	6
Jul1/23	2	6
Nov21/23	1	6

Date	Acid Number (mg KOH/g)
Oct11/21	0.05
Jan17/22	0.04
Apr13/22	0.23
Jul11/22	0.11
Oct22/22	0.07
Jan1/23	0.13
Apr1/23	0.11
Jul1/23	0.05
Nov21/23	0.07



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0101616 **Received** : 22 Nov 2023  
**Lab Number** : 06015029 **Diagnosed** : 26 Nov 2023  
**Unique Number** : 10754173 **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  
 T:  
 F:

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)