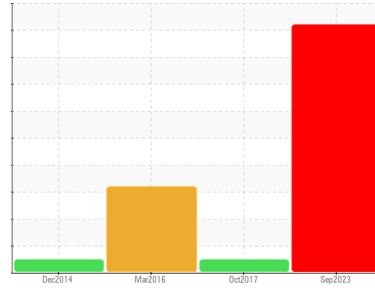




# PROBLEM SUMMARY

Sample Rating Trend



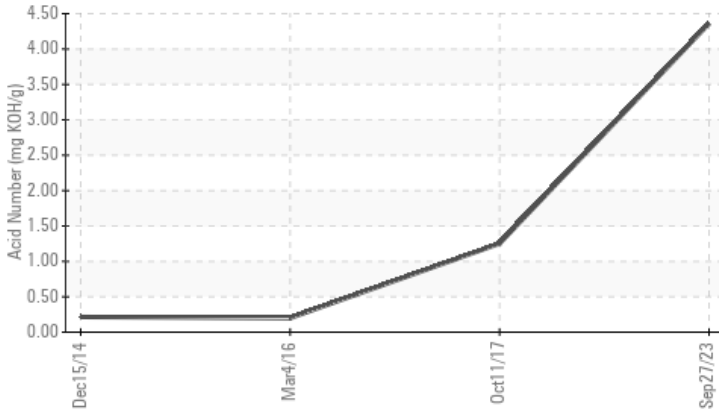
WEAR



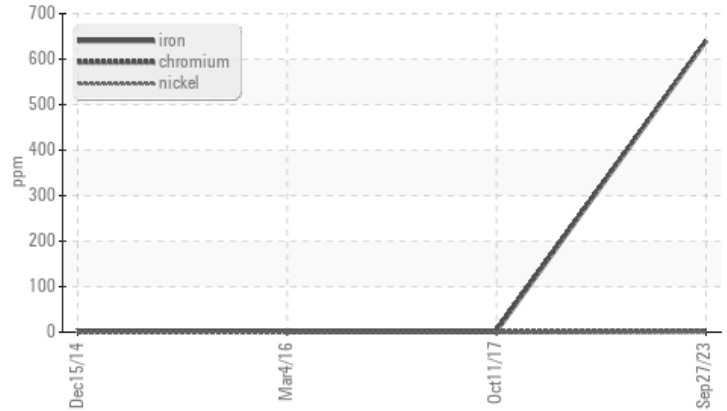
Machine Id  
**PELLET MILL**  
 Component  
**Gearbox**  
 Fluid  
**EP 460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### Acid Number



### Ferrous Alloys



## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status		SEVERE	NORMAL	SEVERE
Iron	ppm ASTM D5185m >200	<b>640</b>	2	3
Acid Number (AN)	mg KOH/g ASTM D8045	<b>4.36</b>	1.252	0.198

Customer Id: ERNMEA  
 Sample No.: WC0862228  
 Lab Number: 05967914  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

## HISTORICAL DIAGNOSIS

### 11 Oct 2017 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 04 Mar 2016 Diag: Don Baldrige

WATER



We advise that you check for the source of water entry. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report



### 15 Dec 2014 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

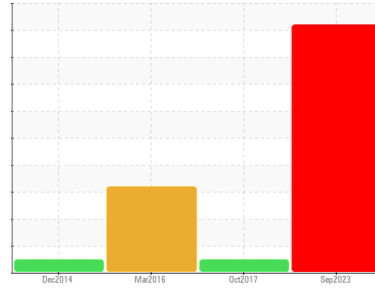
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id  
**PELLET MILL**  
 Component  
**Gearbox**  
 Fluid  
**EP 460 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### Wear

Gear wear is indicated.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The AN level is above the recommended limit. The oil is no longer serviceable.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0862228</b>	WCI2324377	WCI2280189
Sample Date	Client Info		<b>27 Sep 2023</b>	11 Oct 2017	04 Mar 2016
Machine Age	hrs	Client Info	<b>11000</b>	6126	0
Oil Age	hrs	Client Info	<b>0</b>	1000	4970
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	NORMAL	SEVERE

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>640</b>	2	3
Chromium	ppm	ASTM D5185m	>15	<b>2</b>	0	0
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>6</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>8</b>	1	0
Lead	ppm	ASTM D5185m	>100	<b>2</b>	0	<1
Copper	ppm	ASTM D5185m	>200	<b>29</b>	<1	1
Tin	ppm	ASTM D5185m	>25	<b>2</b>	0	0
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>11</b>	1	0
Barium	ppm	ASTM D5185m		<b>2</b>	3	<1
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>14</b>	3	0
Magnesium	ppm	ASTM D5185m		<b>6</b>	0	0
Calcium	ppm	ASTM D5185m		<b>51</b>	2	<1
Phosphorus	ppm	ASTM D5185m		<b>1775</b>	170	191
Zinc	ppm	ASTM D5185m		<b>66</b>	1	<1
Sulfur	ppm	ASTM D5185m		<b>3974</b>	8	61

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>9</b>	1	2
Sodium	ppm	ASTM D5185m		<b>9</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	0	0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>4.36</b>	1.252	0.198

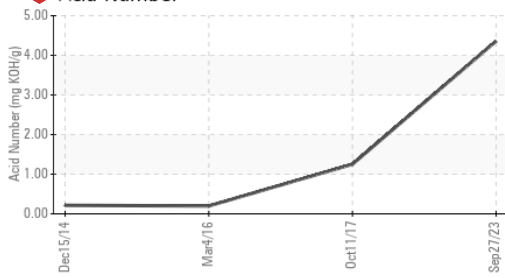
## VISUAL

	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>MODER</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	<b>1.0%</b>
Free Water	scalar	*Visual		<b>NEG</b>	NEG	<b>1.0%</b>

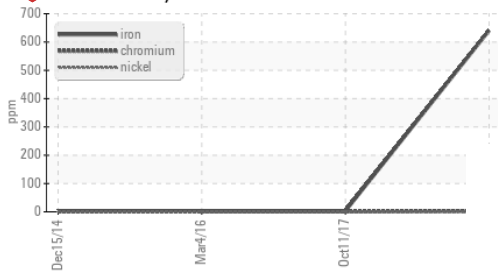


# OIL ANALYSIS REPORT

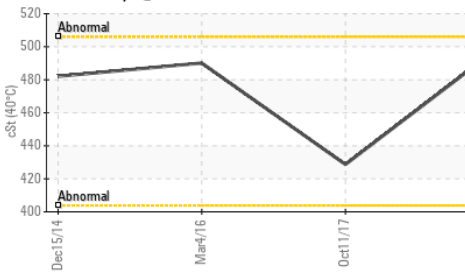
## Acid Number



## Ferrous Alloys



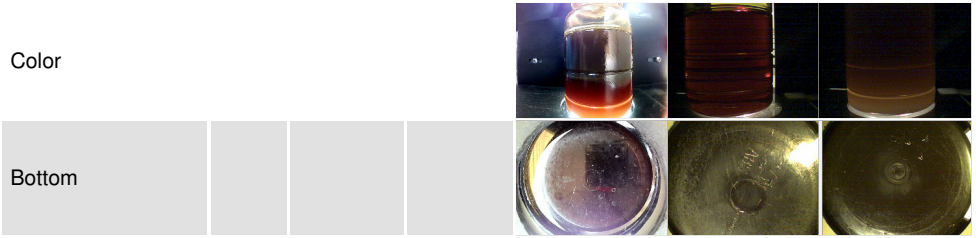
## Viscosity @ 40°C



## FLUID PROPERTIES

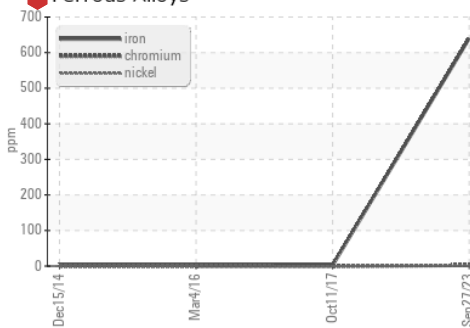
method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	495	428.7	490.1

## SAMPLE IMAGES

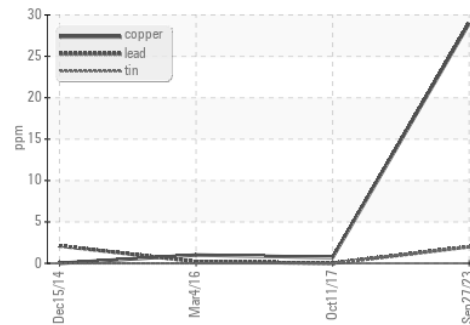


## GRAPHS

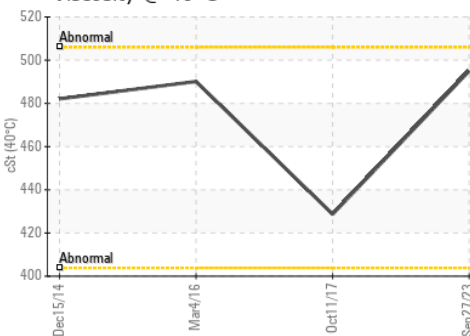
### Ferrous Alloys



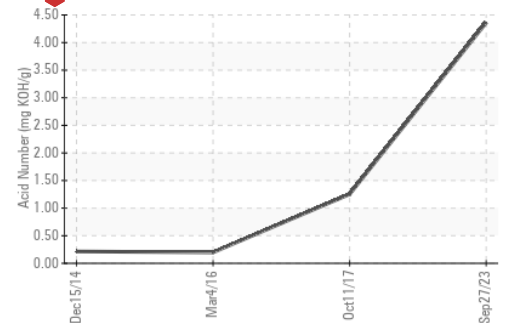
### Non-ferrous Metals



### Viscosity @ 40°C



### Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0862228 Received : 03 Oct 2023  
 Lab Number : 05967914 Diagnosed : 05 Oct 2023  
 Unique Number : 10674465 Diagnostician : Don Baldrige  
 Test Package : IND 2

**ERNST BIOMASS**  
 8884 MERCER PIKE  
 MEADVILLE, PA  
 US 16335  
 Contact: DAN ARNETT  
 dan@ernstseed.com  
 T: (814)720-6233  
 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)