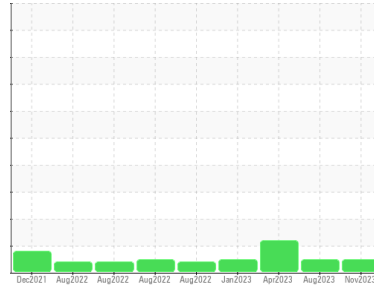




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**PELLET MILL 4 (S/N PM4 - PM816)**

Component  
**Gearbox**

Fluid  
**USPI FG GEAR 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. 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>USPM31284</b>	USPM28777	USPM28778
Sample Date	Client Info	<b>08 Nov 2023</b>	07 Aug 2023	21 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	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >200	<b>16</b>	12	10
Chromium	ppm ASTM D5185m >15	<b>0</b>	0	0
Nickel	ppm ASTM D5185m >15	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m	<b>0</b>	<1	0
Aluminum	ppm ASTM D5185m >25	<b>0</b>	0	0
Lead	ppm ASTM D5185m >100	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >200	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >25	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</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>0</b>	0	<1
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m	<b>1</b>	0	<1
Calcium	ppm ASTM D5185m	<b>&lt;1</b>	0	2
Phosphorus	ppm ASTM D5185m	<b>639</b>	611	583
Zinc	ppm ASTM D5185m	<b>17</b>	0	8
Sulfur	ppm ASTM D5185m	<b>571</b>	499	519

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	<b>2</b>	9	3
Sodium	ppm ASTM D5185m	<b>1</b>	0	0
Potassium	ppm ASTM D5185m >20	<b>2</b>	<1	<1
Water	% ASTM D6304 >0.2	<b>0.006</b>	0.004	0.004
ppm Water	ppm ASTM D6304 >2000	<b>68.3</b>	45.2	45.4

## FLUID CLEANLINESS

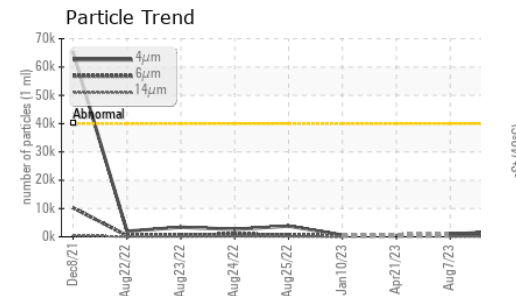
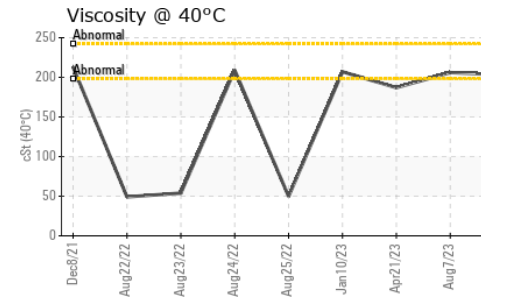
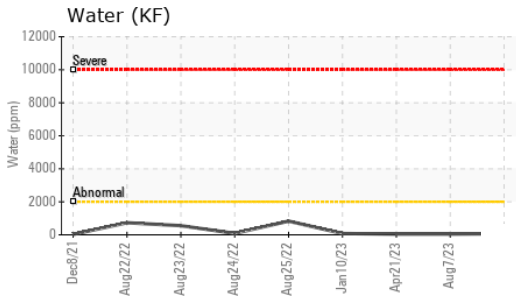
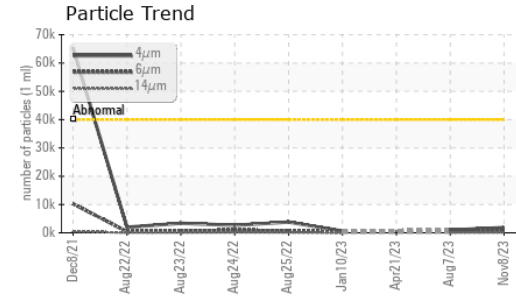
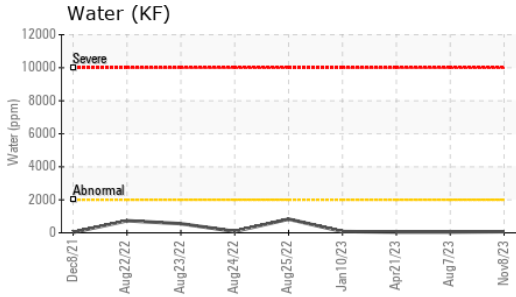
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >40000	<b>1846</b>	984	---
Particles >6µm	ASTM D7647 >10000	<b>710</b>	360	---
Particles >14µm	ASTM D7647 >2500	<b>107</b>	70	---
Particles >21µm	ASTM D7647 >640	<b>41</b>	31	---
Particles >38µm	ASTM D7647 >160	<b>2</b>	2	---
Particles >71µm	ASTM D7647 >40	<b>0</b>	1	---
Oil Cleanliness	ISO 4406 (c) >22/20/18	<b>18/17/14</b>	17/16/13	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	<b>0.59</b>	0.72	0.71



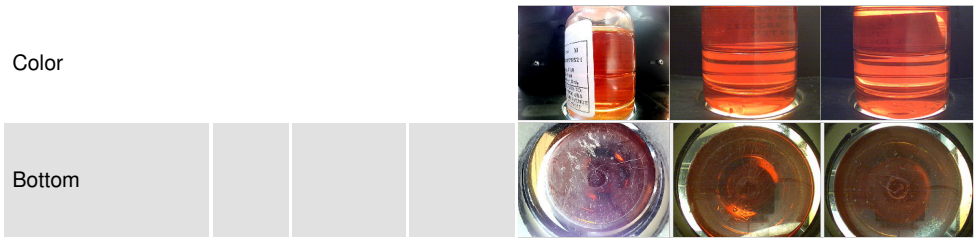
# OIL ANALYSIS REPORT



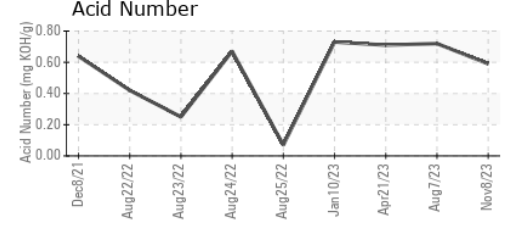
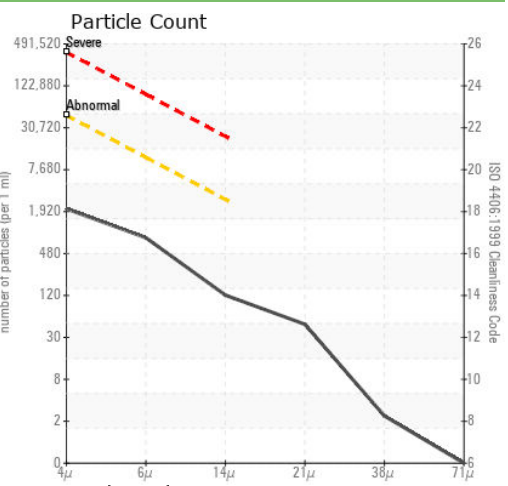
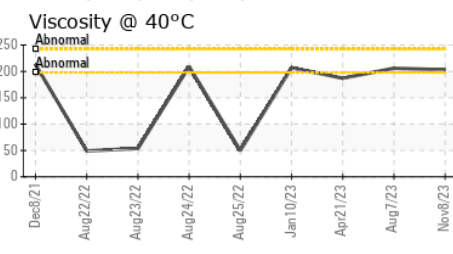
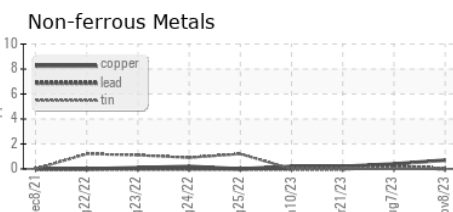
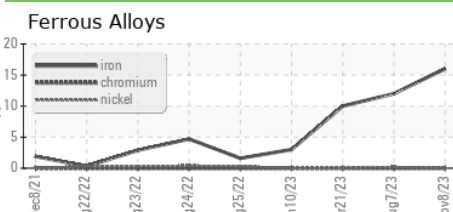
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT ▲ MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	203	206	187

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USPM31284 **Received** : 15 Nov 2023  
**Lab Number** : 06008347 **Diagnosed** : 16 Nov 2023  
**Unique Number** : 10742109 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**CARGILL FEED & NUTRITION**  
 251 BERGER RD  
 TEMPLE, TX  
 US 76501  
 Contact: JOHN HAMRICK  
 john\_hamrick@cargill.com  
 T:  
 F:

Certificate L2367  
 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)