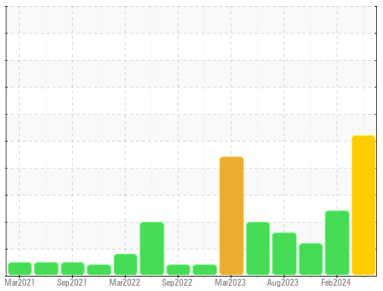
OIL ANALYSIS REPORT

Sample Rating Trend



CONTAMINANT

Area
PELLET MILL MEZENINE
Machine Id
P0315 PELLET MILL (S/N 1997-00763A11)
Component
Gearbox
Fluid
USPI FG GEAR 220 (30 GAL)

DIAGNOSIS

Recommendation
We advise an early resample to confirm this situation.

Wear
All component wear rates are normal.

Contamination
Appearance is hazy. There is a high amount of particulates present in the oil.

Fluid Condition
The oil viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand or type of oil. Confirmed. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**USPM36327**	USPM27617	USPM27616
Sample Date		Client Info		**30 May 2024**	29 Feb 2024	27 Nov 2023
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**6**	0	<1
Chromium	ppm	ASTM D5185m	>15	**0**	0	<1
Nickel	ppm	ASTM D5185m	>15	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**2**	0	2
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**<1**	0	<1
Tin	ppm	ASTM D5185m	>25	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	<1
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m		**18**	0	<1
Calcium	ppm	ASTM D5185m		**4125**	2	3
Phosphorus	ppm	ASTM D5185m		**988**	572	511
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m		**1653**	686	656

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**7**	<1	<1
Sodium	ppm	ASTM D5185m		**2**	0	0
Potassium	ppm	ASTM D5185m	>20	**4**	0	1
Water	%	ASTM D6304	>0.2	**0.016**	0.001	0.004
ppm Water	ppm	ASTM D6304	>2000	**168**	11	49

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**404802**	25739	8962
Particles >6µm		ASTM D7647	>5000	**329665**	18849	4160
Particles >14µm		ASTM D7647	>640	**49006**	8825	1122
Particles >21µm		ASTM D7647	>160	**2783**	3127	295
Particles >38µm		ASTM D7647	>40	**53**	72	11
Particles >71µm		ASTM D7647	>10	**1**	6	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**26/26/23**	22/21/20	20/19/17

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.40**	0.34	0.31

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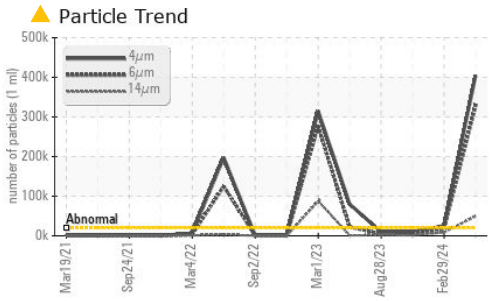
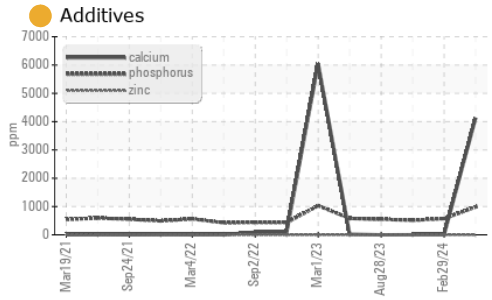
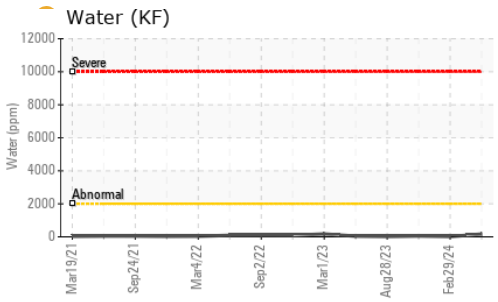
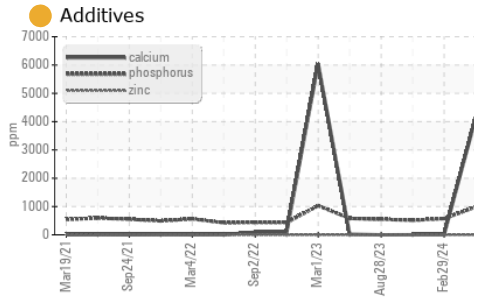
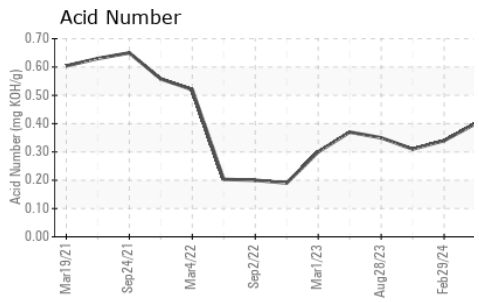








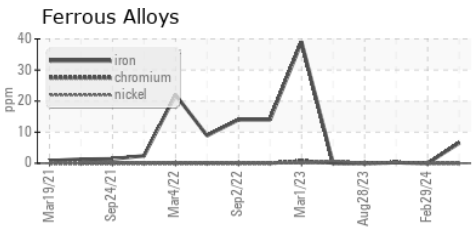


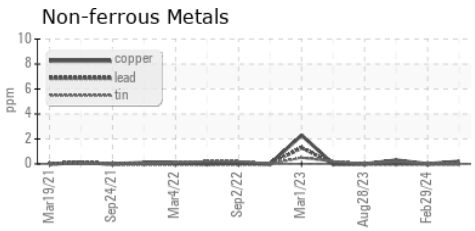
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

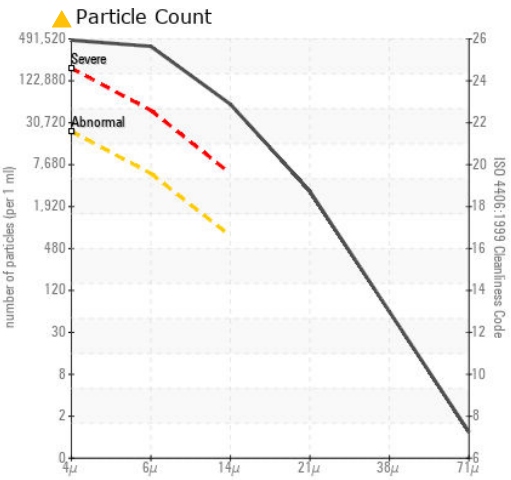
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**274**	207	206

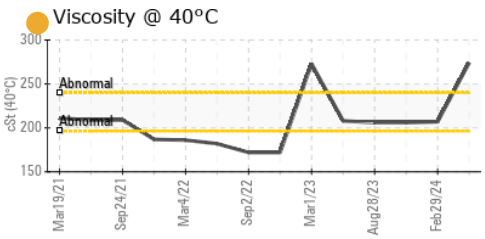
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

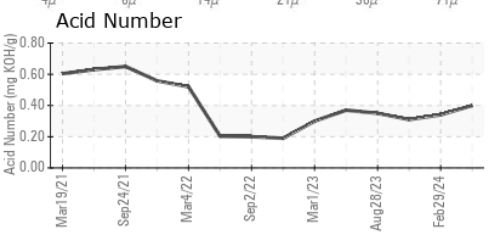
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM36327
Lab Number : 06197709
Unique Number : 11059832
Test Package : IND 2

Received : 03 Jun 2024
Tested : 10 Jun 2024
Diagnosed : 10 Jun 2024 - Doug Bogart

Certificate L2367

CARGILL CFN
70 AGWAY LN
WINFIELD, PA
US 17889
Contact: Service Manager

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)

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F: