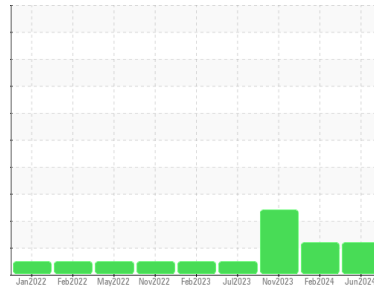




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
PELLET MILL
 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 a moderate amount of particulates present 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		USPM37756	USPM30139	USPM27611
Sample Date	Client Info		06 Jun 2024	15 Feb 2024	12 Nov 2023
Machine Age	hrs	Client Info	0	0	3
Oil Age	hrs	Client Info	0	0	3
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS

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

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		<1	1	0
Calcium	ppm	ASTM D5185m		3	3	<1
Phosphorus	ppm	ASTM D5185m		576	598	563
Zinc	ppm	ASTM D5185m		5	0	0
Sulfur	ppm	ASTM D5185m		615	485	553

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	17	12	7
Sodium	ppm	ASTM D5185m		1	0	<1
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Water	%	ASTM D6304	>0.2	0.003	0.001	0.003
ppm Water	ppm	ASTM D6304	>2000	26	8	25.2

FLUID CLEANLINESS

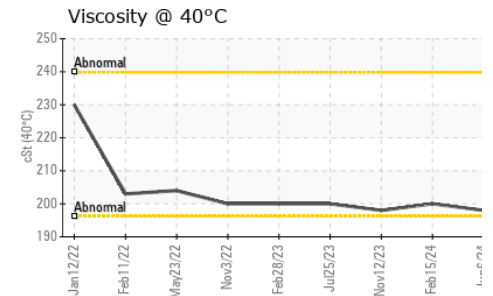
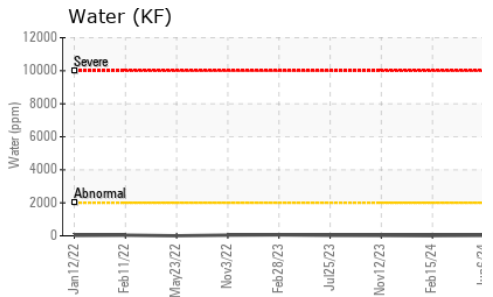
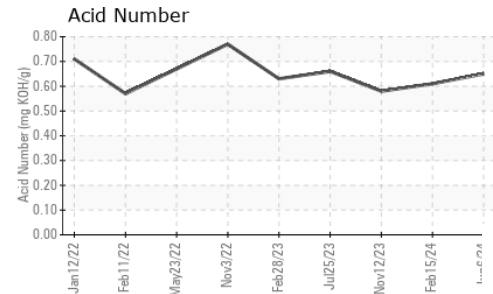
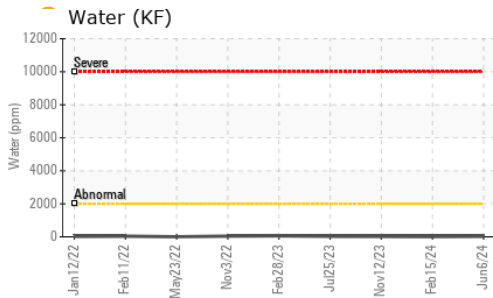
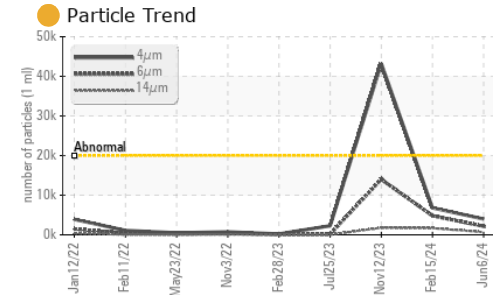
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	3990	6806	▲ 43220
Particles >6µm	ASTM D7647	>5000	2161	4821	▲ 13994
Particles >14µm	ASTM D7647	>640	● 666	▲ 1671	▲ 1778
Particles >21µm	ASTM D7647	>160	● 217	▲ 349	▲ 454
Particles >38µm	ASTM D7647	>40	15	10	▲ 49
Particles >71µm	ASTM D7647	>10	0	1	4
Oil Cleanliness	ISO 4406 (c)	>21/19/16	● 19/18/17	▲ 20/19/18	▲ 23/21/18

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.65	0.61	0.58



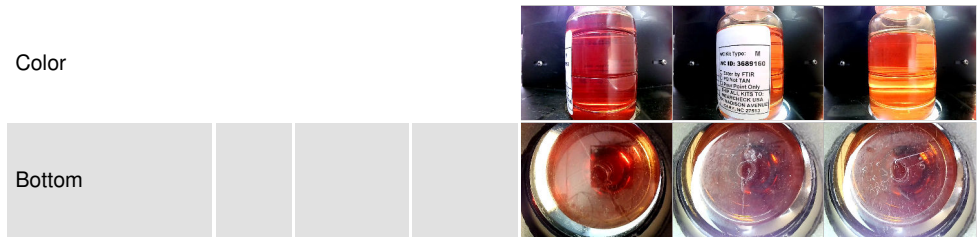
OIL ANALYSIS REPORT



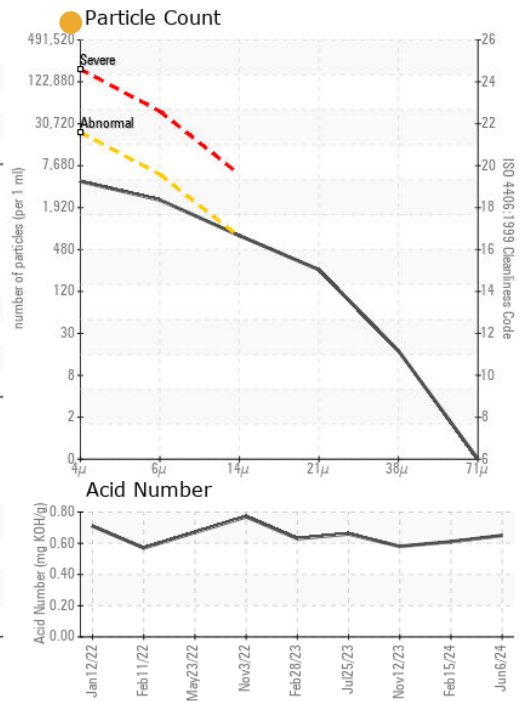
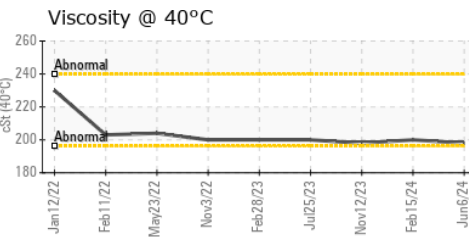
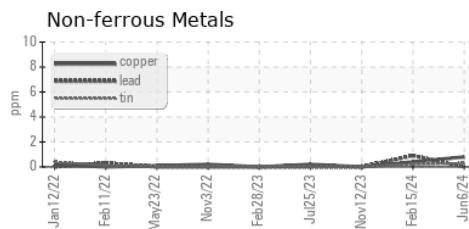
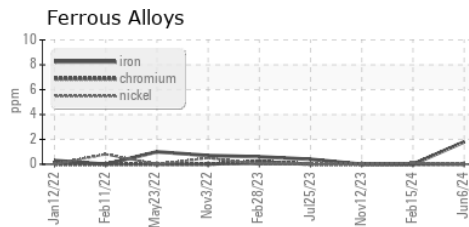
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	198	200	198

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : USPM37756
 Lab Number : 06212480
 Unique Number : 11085344
 Test Package : IND 2

CARGILL FEED & NUTRITION - NEW RICHLAND
 21295 ST HWY 13
 NEW RICHLAND, MN
 US 56072
 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)

T:
 F: (507)465-3257