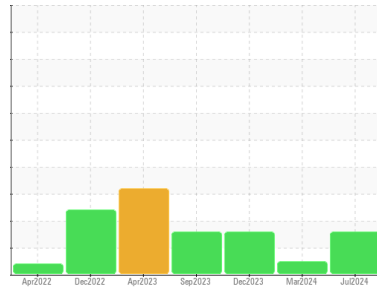




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
PELLET MILL 2 (S/N NH398328)
 Component
Gearbox
 Fluid
USPI FG GEAR 220 (17 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high 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	USP219790	USPM36906	USPM31893
Sample Date	Client Info	15 Jul 2024	25 Mar 2024	07 Dec 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	NORMAL	ATTENTION

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >200	14	10	1
Chromium	ppm	ASTM D5185m >15	0	<1	<1
Nickel	ppm	ASTM D5185m >15	0	<1	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	1	<1
Lead	ppm	ASTM D5185m >100	0	<1	0
Copper	ppm	ASTM D5185m >200	2	2	0
Tin	ppm	ASTM D5185m >25	0	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	<1	0

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	<1	0
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	1	0	0
Calcium	ppm	ASTM D5185m	15	11	2
Phosphorus	ppm	ASTM D5185m	454	624	539
Zinc	ppm	ASTM D5185m	0	2	0
Sulfur	ppm	ASTM D5185m	328	569	716

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	9	7	7
Sodium	ppm	ASTM D5185m	1	0	<1
Potassium	ppm	ASTM D5185m >20	0	2	<1
Water	%	ASTM D6304 >0.2	0.002	0.001	0.015
ppm Water	ppm	ASTM D6304 >2000	18	6	153

FLUID CLEANLINESS

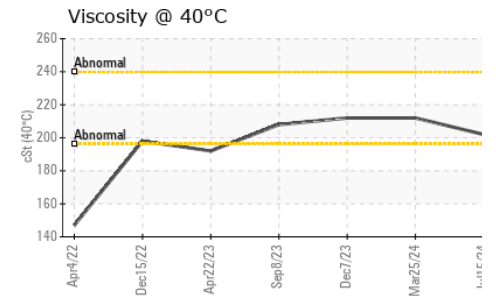
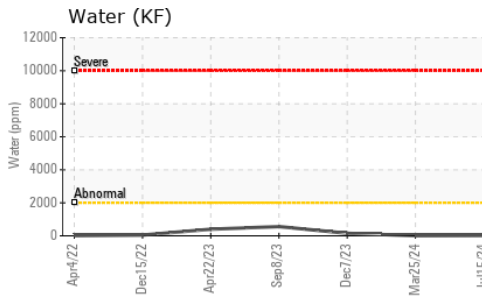
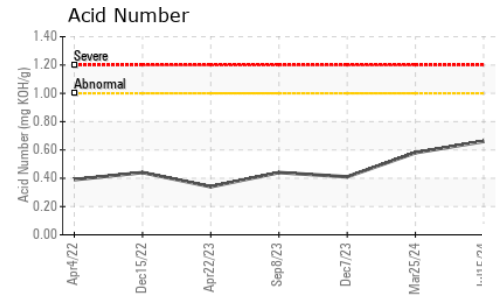
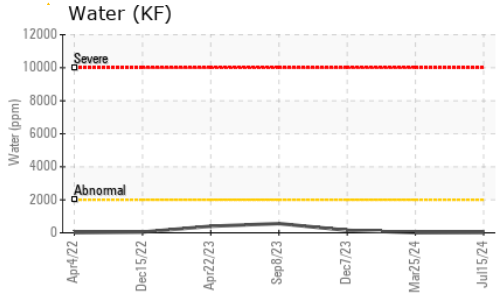
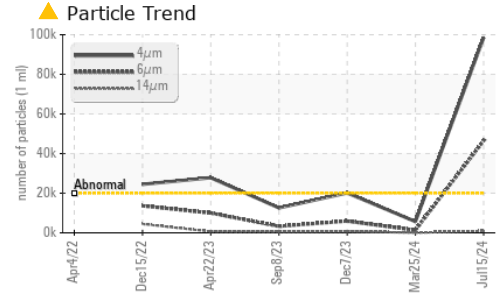
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	▲ 98531	5682	● 20149
Particles >6µm	ASTM D7647 >5000	▲ 46484	1361	● 5940
Particles >14µm	ASTM D7647 >640	▲ 975	59	● 692
Particles >21µm	ASTM D7647 >160	73	14	152
Particles >38µm	ASTM D7647 >40	3	1	3
Particles >71µm	ASTM D7647 >10	0	0	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 24/23/17	20/18/13	● 22/20/17

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.66	0.58	0.41



OIL ANALYSIS REPORT



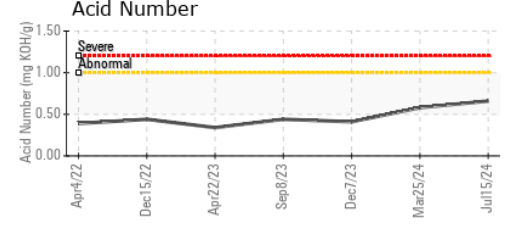
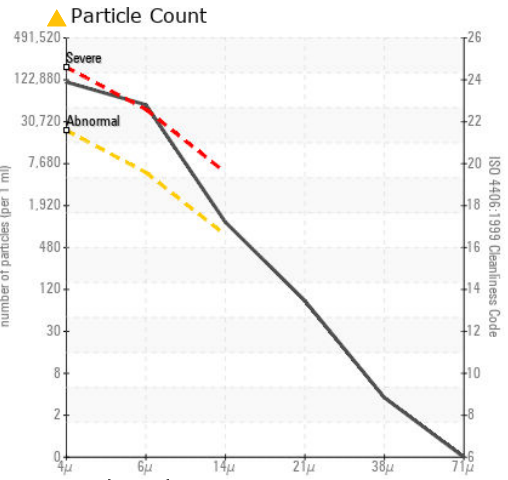
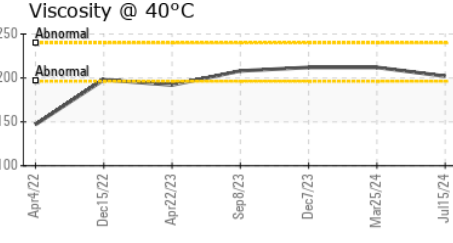
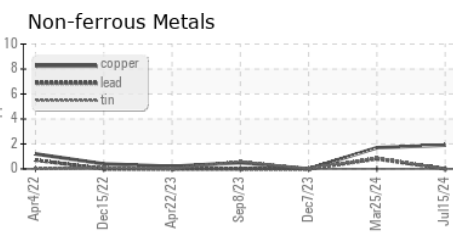
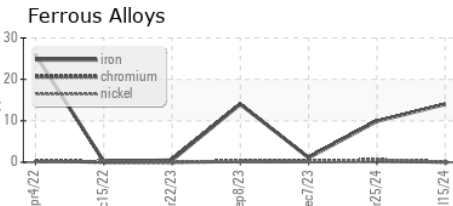
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	202	212	212

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP219790 **Received** : 16 Jul 2024
Lab Number : 06237809 **Tested** : 17 Jul 2024
Unique Number : 11126643 **Diagnosed** : 18 Jul 2024 - Doug Bogart
Test Package : IND 2

CARGILL FEED & NUTRITION - STERLING
 219 RIGHT OF WAY RD
 STERLING, CO
 US 80751
 Contact: Matt Sadler
 matthew_sadler@cargill.com

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)