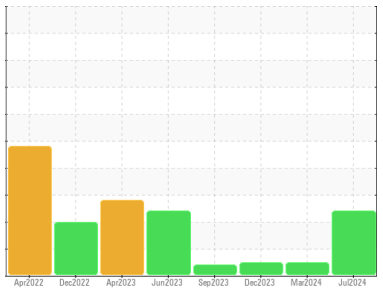
OIL ANALYSIS REPORT

Sample Rating Trend



ADDITIVES

Machine Id
PELLET MILL 1 (S/N 309281)
Component
Gearbox
Fluid
USPI FG GEAR 220 (15 GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. 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
Additive levels indicate the addition of a different brand or type of oil. Confirmed. 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		**USP219787**	USPM36908	USPM31891
Sample Date		Client Info		**15 Jul 2024**	25 Mar 2024	07 Dec 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	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**8**	<1	12
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	**<1**	<1	1
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**	<1	0
Molybdenum	ppm	ASTM D5185m		**0**	<1	0
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m		**3**	0	2
Calcium	ppm	ASTM D5185m		**387**	4	7
Phosphorus	ppm	ASTM D5185m		**615**	546	557
Zinc	ppm	ASTM D5185m		**0**	<1	0
Sulfur	ppm	ASTM D5185m		**817**	643	605

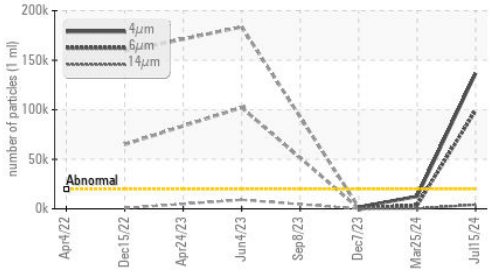
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**8**	4	6
Sodium	ppm	ASTM D5185m		**<1**	0	1
Potassium	ppm	ASTM D5185m	>20	**0**	<1	<1
Water	%	ASTM D6304	>0.2	**0.001**	0.002	0.016
ppm Water	ppm	ASTM D6304	>2000	**13**	19	169

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**136817**	12566	1630
Particles >6µm		ASTM D7647	>5000	**99423**	3713	425
Particles >14µm		ASTM D7647	>640	**4158**	271	50
Particles >21µm		ASTM D7647	>160	**168**	49	14
Particles >38µm		ASTM D7647	>40	**2**	1	0
Particles >71µm		ASTM D7647	>10	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**24/24/19**	21/19/15	18/16/13

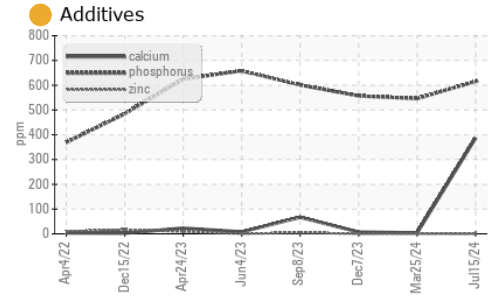
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.31**	0.37	0.46

OIL ANALYSIS REPORT

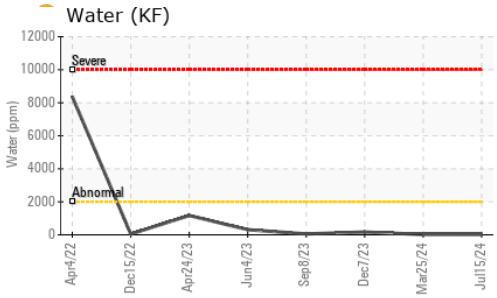
Particle Trend



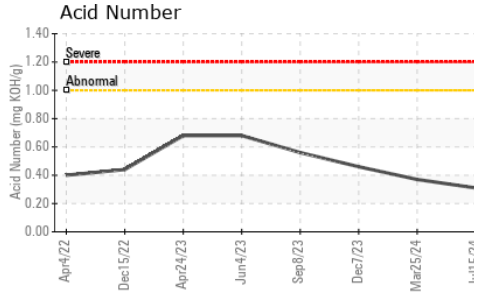
Additives



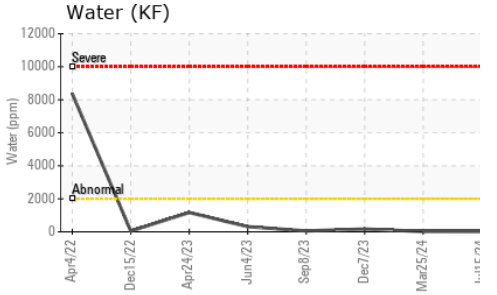
Water (KF)



Acid Number

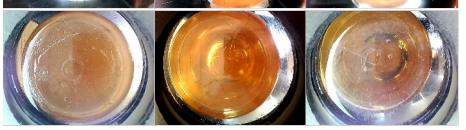


Water (KF)



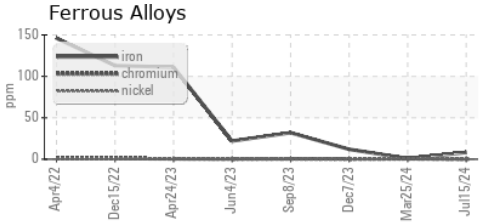
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	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		**210**	211	212

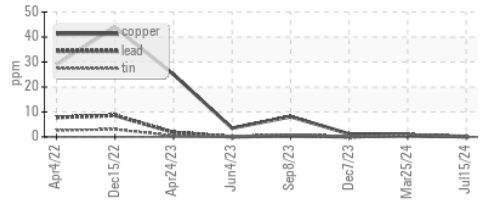
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

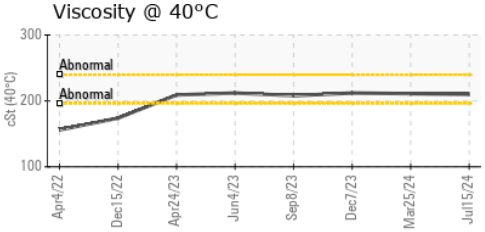
Ferrous Alloys



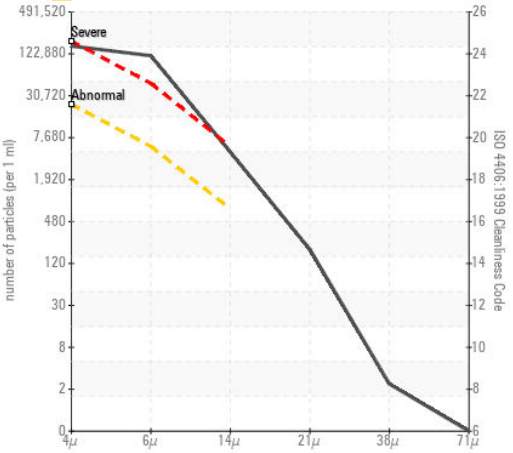
Non-ferrous Metals



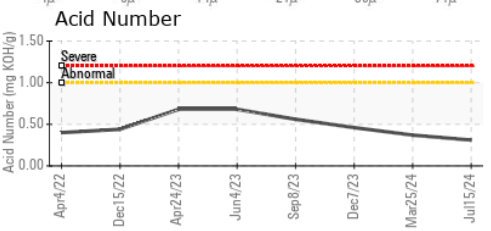
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP219787
Lab Number : 06237808
Unique Number : 11126642
Test Package : IND 2

Received : 16 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 2024 - Doug Bogart

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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