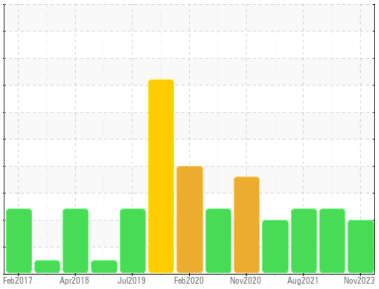
PROBLEM SUMMARY

Sample Rating Trend

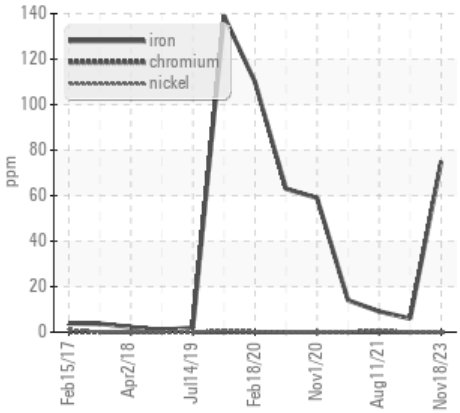


WEAR

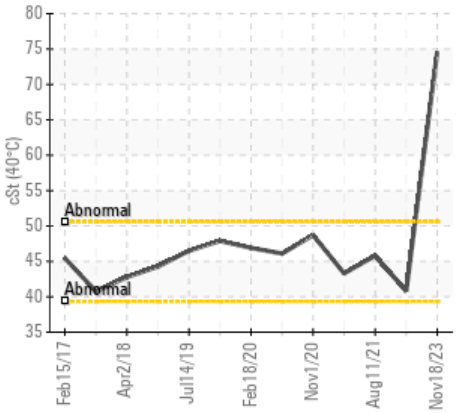
Machine Id
NORTHWEST 4 (S/N 003-118845)
Component
Compressor
Fluid
{not provided} (--- GAL)

COMPONENT CONDITION SUMMARY

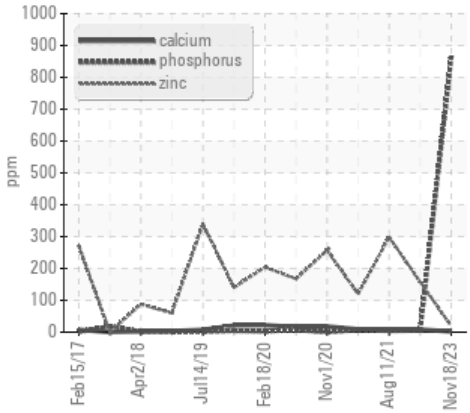
Ferrous Alloys



Viscosity @ 40°C



Additives



RECOMMENDATION

We advise an early resample to confirm this situation.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>50	▲ **75**	6	9
Phosphorus	ppm	ASTM D5185m		▲ **860**	5	4
Zinc	ppm	ASTM D5185m		▲ **19**	158	298
Visc @ 40°C	cSt	ASTM D445		▲ **74.56**	40.8	45.8

Customer Id: JBSBEA
Sample No.: USPM31311
Lab Number: 06010886
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We advise an early resample to confirm this situation.

HISTORICAL DIAGNOSIS

13 Jul 2023 Diag: Doug Bogart

WATER

We recommend you service the filters on this component. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 Aug 2021 Diag: Doug Bogart

WATER

We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

05 May 2021 Diag: Doug Bogart

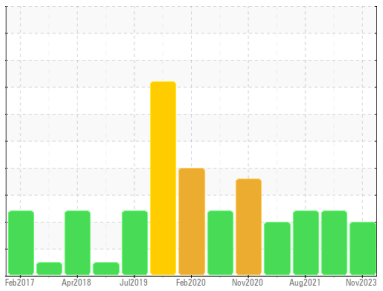
WATER

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
NORTHWEST 4 (S/N 003-118845)
Component
Compressor
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
We advise an early resample to confirm this situation.

Wear
The iron level is abnormal.

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 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		**USPM31311**	USPM27402	USPM18846
Sample Date		Client Info		**18 Nov 2023**	13 Jul 2023	11 Aug 2021
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**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	▲ **75**	6	9
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m		**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	<1	<1
Lead	ppm	ASTM D5185m	>25	**0**	1	1
Copper	ppm	ASTM D5185m	>50	**<1**	▲ 138	▲ 51
Tin	ppm	ASTM D5185m	>15	**<1**	<1	0
Antimony	ppm	ASTM D5185m		**---**	---	1
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	4
Barium	ppm	ASTM D5185m		**0**	547	463
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**<1**	3	<1
Calcium	ppm	ASTM D5185m		**2**	8	8
Phosphorus	ppm	ASTM D5185m		▲ **860**	5	4
Zinc	ppm	ASTM D5185m		▲ **19**	158	298
Sulfur	ppm	ASTM D5185m		**639**	583	430

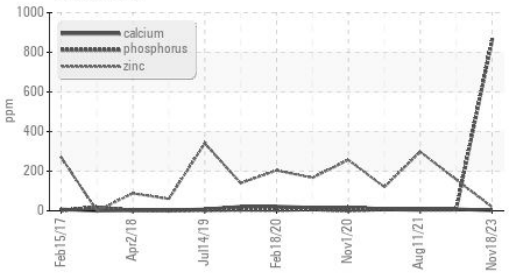
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**3**	<1	<1
Sodium	ppm	ASTM D5185m		**8**	19	23
Potassium	ppm	ASTM D5185m	>20	**0**	4	0
Water	%	ASTM D6304	>0.1	**0.025**	▲ 0.535	▲ 0.519
ppm Water	ppm	ASTM D6304	>1000	**254.9**	▲ 5353.9	▲ 5191.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**2532**	8282	521
Particles >6µm		ASTM D7647	>2500	**854**	2060	99
Particles >14µm		ASTM D7647	>320	**65**	99	3
Particles >21µm		ASTM D7647	>80	**10**	19	0
Particles >38µm		ASTM D7647	>20	**0**	0	0
Particles >71µm		ASTM D7647	>4	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**19/17/13**	20/18/14	16/14/9

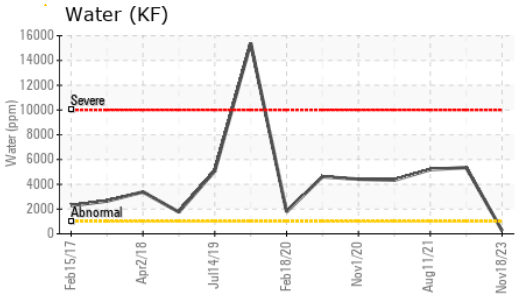
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.30**	0.48	0.777

OIL ANALYSIS REPORT

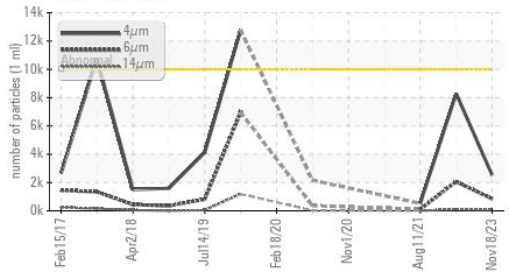
Additives



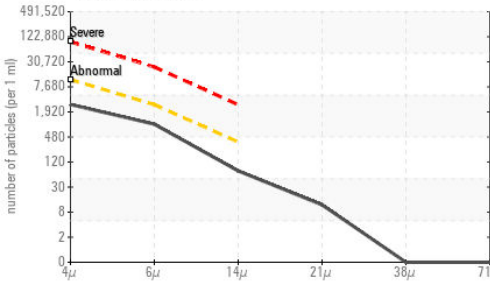
Water (KF)



Particle Trend



Particle Count



Acid Number

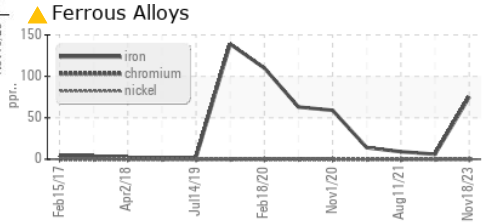
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		▲ **74.56**	40.8	45.8

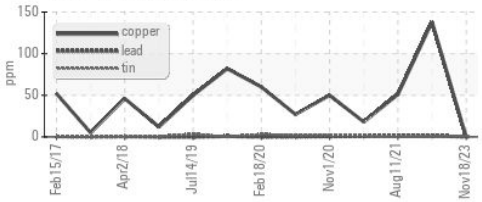
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

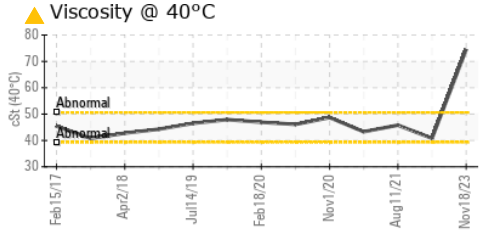
Ferrous Alloys



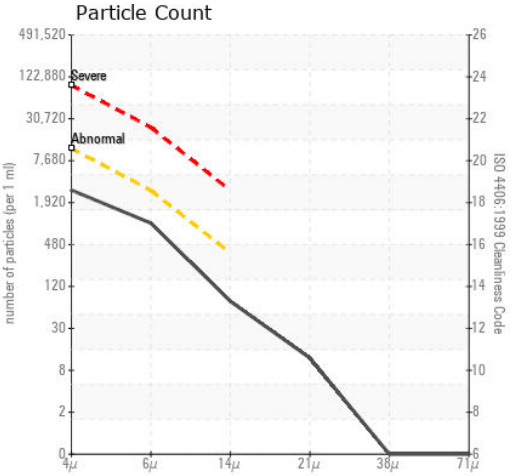
Non-ferrous Metals



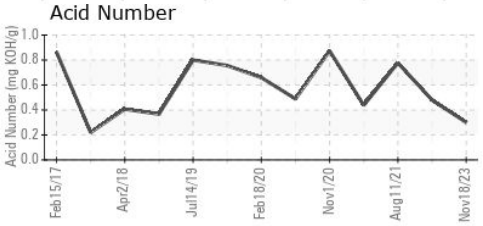
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM31311
Lab Number : 06010886
Unique Number : 10750030
Test Package : IND 2

Received : 17 Nov 2023
Diagnosed : 22 Nov 2023
Diagnostician : Doug Bogart

Certificate L2367

JBS - BEARDSTOWN
8295 ARENZVILLE RD
BEARDSTOWN, IL
US 62618
Contact:
T:
F:

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)