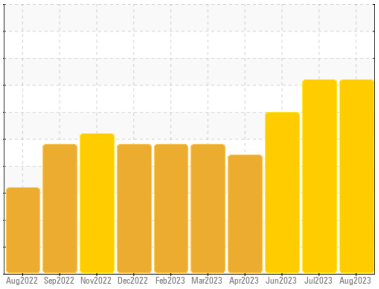
PROBLEM SUMMARY

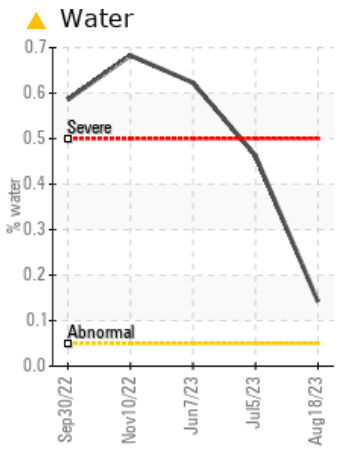
Sample Rating Trend

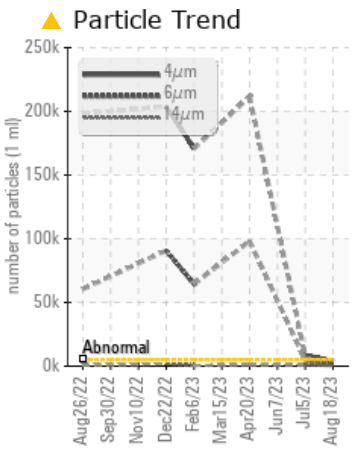


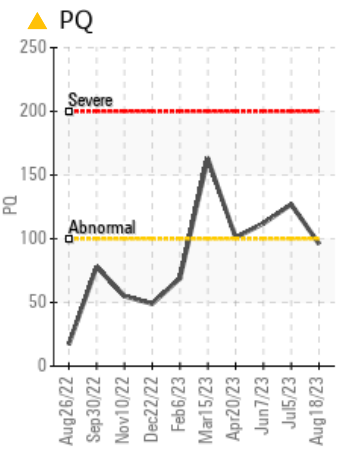
WEAR

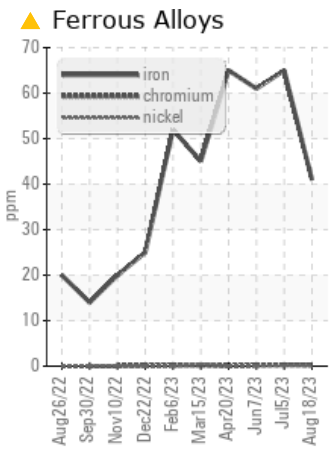
Area
Shredder
Machine Id
ORU (Oil Recirculate Unit)-Shredder
Component
Hydraulic Power Pack
Fluid
SHELL HYDRAULIC S1 M 68 (--- GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check for the source of water entry. We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
PQ		ASTM D8184		▲ **96**	▲ 127	▲ 112
Iron	ppm	ASTM D5185m	>20	▲ **41**	▲ 65	▲ 61
Water	%	ASTM D6304	>0.05	▲ **0.142**	▲ 0.463	▲ 0.623
ppm Water	ppm	ASTM D6304	>500	▲ **1420**	▲ 4630	▲ 6230
Particles >6µm		ASTM D7647	>1300	▲ **2161**	▲ 4768	---
Particles >14µm		ASTM D7647	>160	▲ **368**	▲ 811	---
Particles >21µm		ASTM D7647	>40	▲ **124**	▲ 273	---
Particles >38µm		ASTM D7647	>10	▲ **19**	▲ 42	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **19/18/16**	▲ 20/19/17	---
Appearance	scalar	*Visual	NORML	▲ **HAZY**	NORML	▲ MILKY

Customer Id: SEASEAUS
Sample No.: PE0001435
Lab Number: 05930278
Test Package: PLANT

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@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
Change Filter	---	---	?	We recommend you service the filters on this component.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

05 Jul 2023 Diag: Doug Bogart

WEAR

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.The iron level is abnormal. The high ferrous density (PQ) index indicates that abnormal wear is occurring. There is a high amount of particulates 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 acceptable for the time in service.

view report

07 Jun 2023 Diag: Doug Bogart

WEAR

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.The iron level is abnormal. Appearance is milky. There is a moderate concentration of water present in the oil. There is a moderate amount of visible silt present in the sample. The AN level is acceptable for this fluid.

view report

20 Apr 2023 Diag: Jonathan Hester

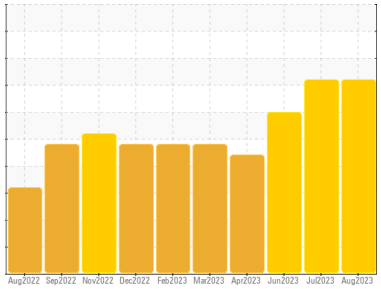
WEAR

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.The iron level is abnormal. The high ferrous density (PQ) index indicates that abnormal wear is occurring. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
Shredder
Machine Id
ORU (Oil Recirculate Unit)-Shredder
Component
Hydraulic Power Pack
Fluid
SHELL HYDRAULIC S1 M 68 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear
The iron level has decreased, but is still abnormal.

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

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PE0001435**	PE0000648	PE0001403
Sample Date		Client Info		**18 Aug 2023**	05 Jul 2023	07 Jun 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**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		▲ **96**	▲ 127	▲ 112
Iron	ppm	ASTM D5185m	>20	▲ **41**	▲ 65	▲ 61
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	2	0
Lead	ppm	ASTM D5185m	>20	**<1**	<1	0
Copper	ppm	ASTM D5185m	>20	**3**	3	4
Tin	ppm	ASTM D5185m	>20	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	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		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	1	1
Magnesium	ppm	ASTM D5185m		**6**	8	9
Calcium	ppm	ASTM D5185m		**27**	26	33
Phosphorus	ppm	ASTM D5185m		**253**	268	266
Zinc	ppm	ASTM D5185m		**272**	273	268
Sulfur	ppm	ASTM D5185m		**625**	855	780

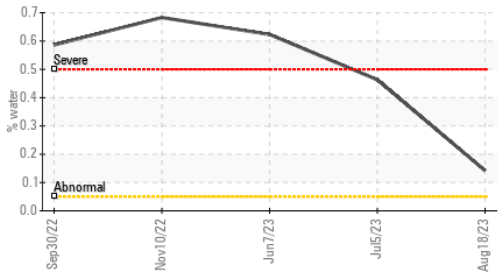
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	1	<1
Sodium	ppm	ASTM D5185m		**2**	1	2
Potassium	ppm	ASTM D5185m	>20	**0**	2	<1
Water	%	ASTM D6304	>0.05	▲ **0.142**	▲ 0.463	▲ 0.623
ppm Water	ppm	ASTM D6304	>500	▲ **1420**	▲ 4630	▲ 6230

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**3967**	▲ 8752	---
Particles >6µm		ASTM D7647	>1300	▲ **2161**	▲ 4768	---
Particles >14µm		ASTM D7647	>160	▲ **368**	▲ 811	---
Particles >21µm		ASTM D7647	>40	▲ **124**	▲ 273	---
Particles >38µm		ASTM D7647	>10	▲ **19**	▲ 42	---
Particles >71µm		ASTM D7647	>3	**2**	▲ 4	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **19/18/16**	▲ 20/19/17	---

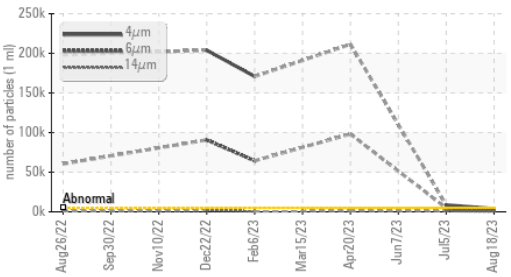
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.30**	0.30	0.30

OIL ANALYSIS REPORT

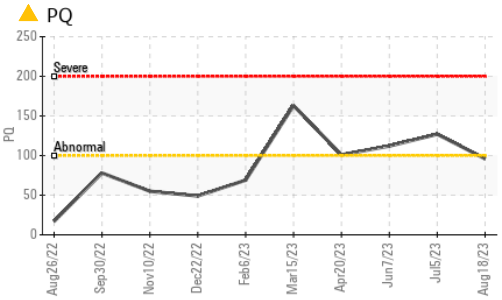
Water



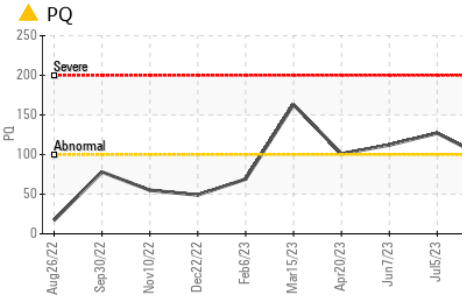
Particle Trend



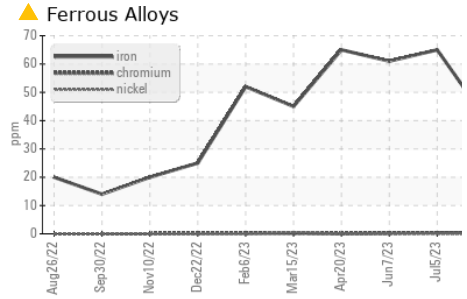
PQ



PQ

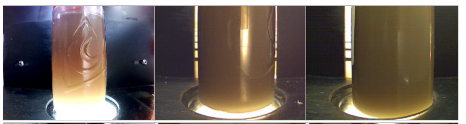
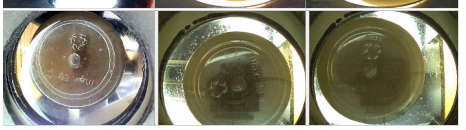


Ferrous Alloys



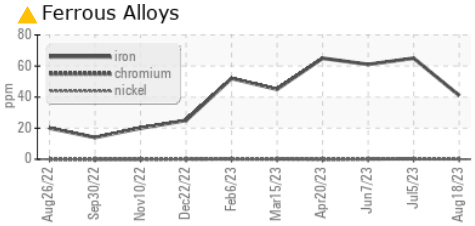
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	▲ **HAZY**	NORML	▲ MILKY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	**0.2%**	0.2%	▲ 0.2%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	**66.3**	64.2	64.7

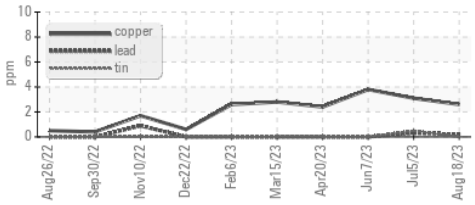
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

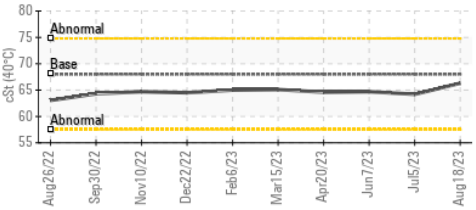
Ferrous Alloys



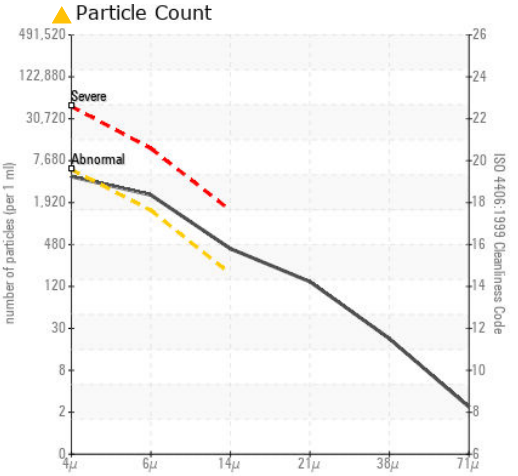
Non-ferrous Metals



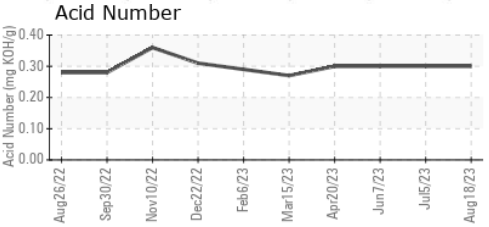
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0001435 **Received** : 21 Aug 2023
Lab Number : 05930278 **Diagnosed** : 24 Aug 2023
Unique Number : 10615549 **Diagnostician** : Jonathan Hester
Test Package : PLANT (Additional Tests: ICP, KF, KV40, PQ, PrtCount, SCREEN)

Certificate L2367

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)

Seattle Iron and Metals
601 S MYRTLE ST
SEATTLE, WA
US 98108
Contact: ADAM THOMAS
athomas@seairon.com
T: (206)682-0040
F:

Report Id: SEASEAUS [WUSCAR] 05930278 (Generated: 08/24/2023 16:16:56) Rev: 1

Submitted By: DUANE DENOTTA