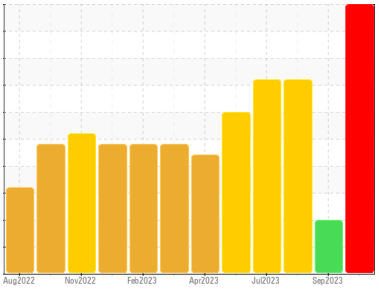
PROBLEM SUMMARY

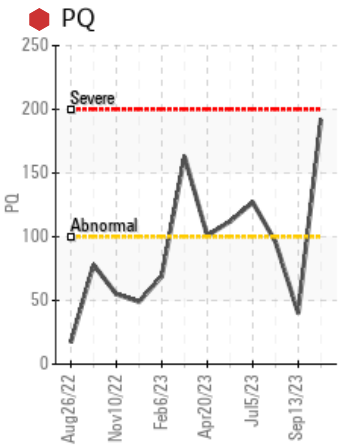
Sample Rating Trend

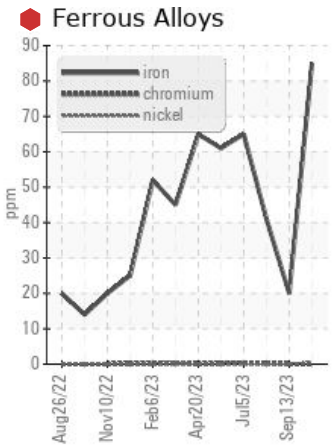


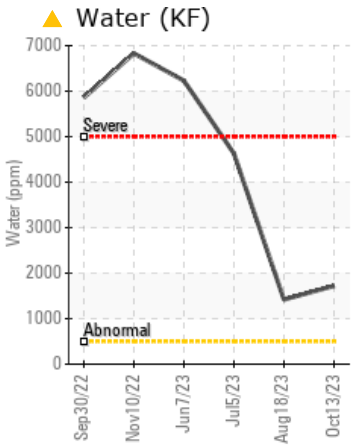
WEAR

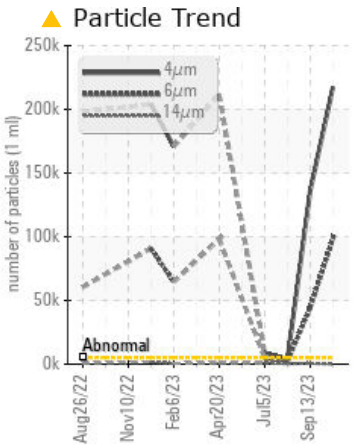
Area
Shredder
Machine Id
ORU (Oil Recirculate Unit)-Shredder
Component
Hydraulic Power Pack
Fluid
SHELL HYDRAULIC S1 M 68 (--- GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. (Customer Sample Comment: Oil sample is very dark. Looks dirty.)

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
PQ		ASTM D8184		**192**	40	96
Iron	ppm	ASTM D5185m	>20	**85**	20	41
Water	%	ASTM D6304	>0.05	**0.172**	---	0.142
ppm Water	ppm	ASTM D6304	>500	**1720**	---	1420
Particles >4µm		ASTM D7647	>5000	**217509**	136332	3967
Particles >6µm		ASTM D7647	>1300	**98686**	44401	2161
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/24/14**	24/23/16	19/18/16
Appearance	scalar	*Visual	NORML	**HAZY**	NORML	HAZY

Customer Id: SEASEAUS
Sample No.: PE0000616
Lab Number: 05980330
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
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

13 Sep 2023 Diag: Don Baldridge

ISO

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The water content is negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

18 Aug 2023 Diag: Jonathan Hester

WEAR

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.The iron level has decreased, but is still abnormal. 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. The AN level is acceptable for this fluid.

view report

05 Jul 2023 Diag: Doug Bogart

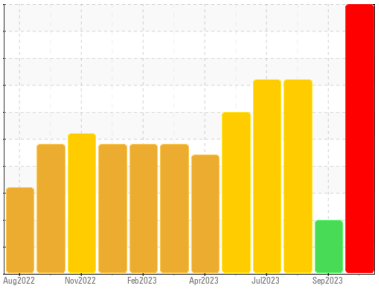
WEAR

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

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 inspect for the source(s) of wear. We recommend an early resample to monitor this condition. (Customer Sample Comment: Oil sample is very dark. Looks dirty.)

Wear
The iron level is severe. The chromium level is severe.

Contamination
There is a high amount of silt (particulates < 14 microns in size) present in the oil. Appearance is hazy. 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		**PE0000616**	PE0000620	PE0001435
Sample Date		Client Info		**13 Oct 2023**	13 Sep 2023	18 Aug 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				**SEVERE**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**192**	40	96
Iron	ppm	ASTM D5185m	>20	**85**	20	41
Chromium	ppm	ASTM D5185m	>20	**0**	0	<1
Nickel	ppm	ASTM D5185m	>20	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	0
Lead	ppm	ASTM D5185m	>20	**0**	0	<1
Copper	ppm	ASTM D5185m	>20	**3**	1	3
Tin	ppm	ASTM D5185m	>20	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	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		**0**	0	<1
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m		**6**	11	6
Calcium	ppm	ASTM D5185m		**47**	39	27
Phosphorus	ppm	ASTM D5185m		**209**	138	253
Zinc	ppm	ASTM D5185m		**286**	273	272
Sulfur	ppm	ASTM D5185m		**647**	757	625

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**1**	<1	2
Sodium	ppm	ASTM D5185m		**3**	<1	2
Potassium	ppm	ASTM D5185m	>20	**2**	0	0
Water	%	ASTM D6304	>0.05	**0.172**	---	0.142
ppm Water	ppm	ASTM D6304	>500	**1720**	---	1420

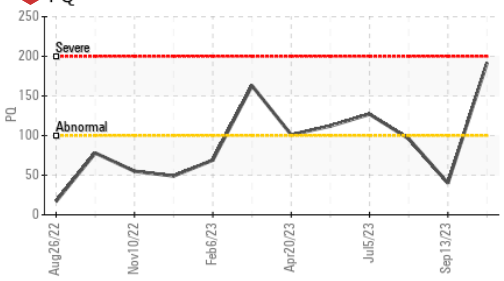
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**217509**	136332	3967
Particles >6µm		ASTM D7647	>1300	**98686**	44401	2161
Particles >14µm		ASTM D7647	>160	**127**	628	368
Particles >21µm		ASTM D7647	>40	**2**	54	124
Particles >38µm		ASTM D7647	>10	**0**	0	19
Particles >71µm		ASTM D7647	>3	**0**	0	2
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/24/14**	24/23/16	19/18/16

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.30**	0.29	0.30

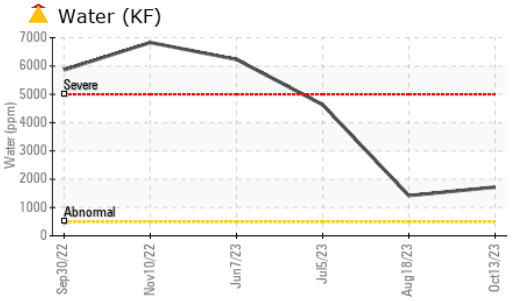
OIL ANALYSIS REPORT

PetroCard MORE THAN JUST FUEL.

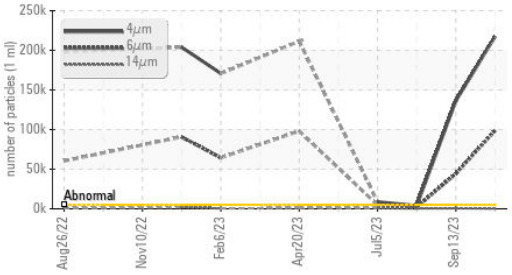
PQ



Water (KF)



Particle Trend



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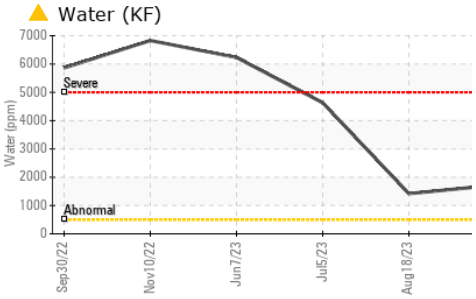
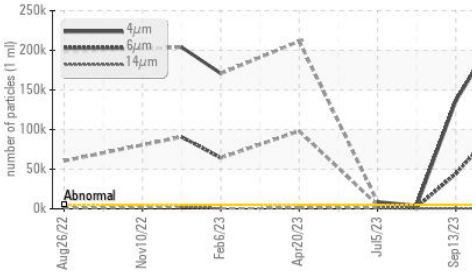


Particle Trend



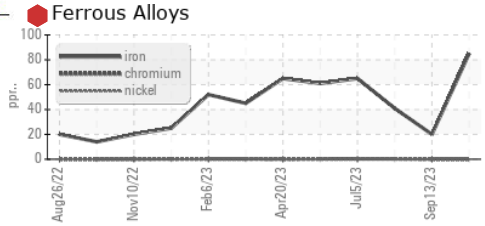
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	**68.8**	68.7	66.3

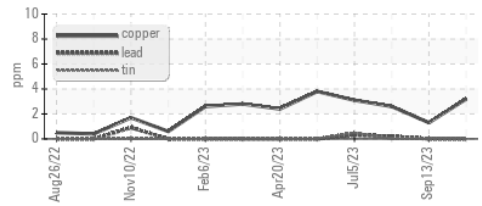
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

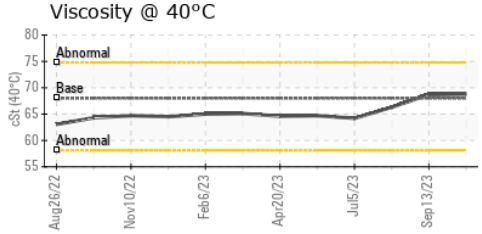
Ferrous Alloys



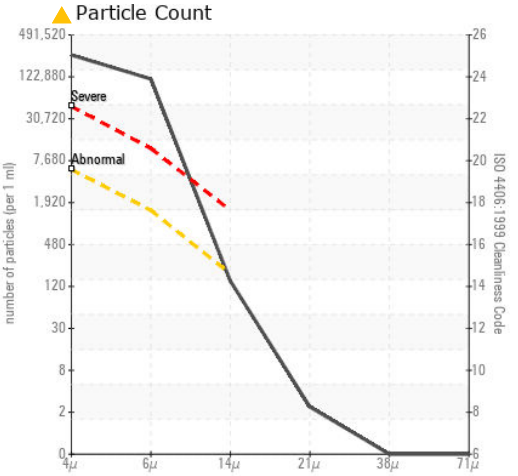
Non-ferrous Metals



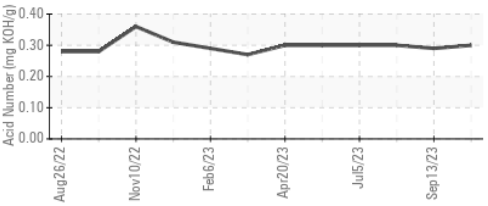
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0000616 **Received** : 16 Oct 2023
Lab Number : 05980330 **Diagnosed** : 19 Oct 2023
Unique Number : 10697625 **Diagnostician** : Jonathan Hester
Test Package : PLANT (Additional Tests: ICP, KF, KV40, PQ, PrtCount, SCREEN)

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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Report Id: SEASEAUS [WUSCAR] 05980330 (Generated: 10/27/2023 07:03:31) Rev: 1

Submitted By: DUANE DENOTTA