

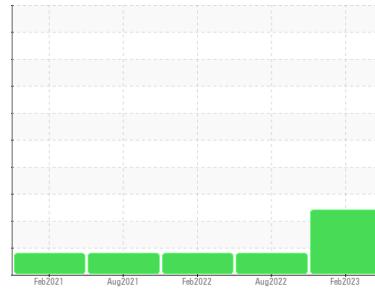
PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

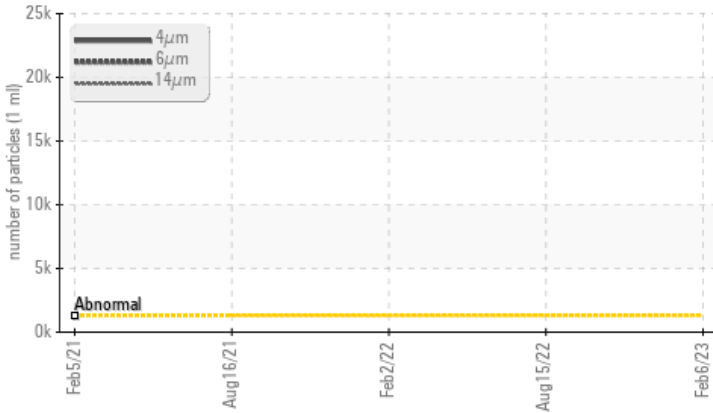


Machine Id
SHREDDER HPU
Component
Hydraulic System
Fluid
SHELL TELLUS 32 (35 GAL)

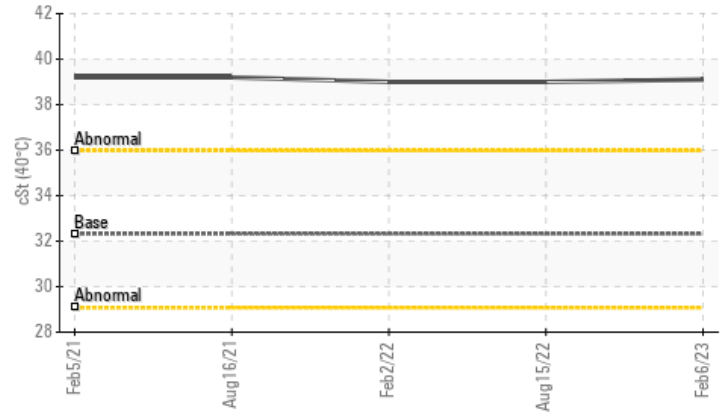


COMPONENT CONDITION SUMMARY

▲ Particle Trend



▲ Viscosity @ 40°C



RECOMMENDATION

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
Particles >4µm	ASTM D7647	>1300	▲ 22090	---	---
Particles >6µm	ASTM D7647	>320	▲ 5566	---	---
Particles >14µm	ASTM D7647	>40	▲ 242	---	---
Particles >21µm	ASTM D7647	>10	▲ 61	---	---
Oil Cleanliness	ISO 4406 (c)	>17/15/12	▲ 22/20/15	---	---
Visc @ 40°C	cSt	ASTM D445 32.32	▲ 39.1	▲ 39.0	▲ 39.0

Customer Id: TAPFRA
Sample No.: RP0021661
Lab Number: 05765830
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@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.

HISTORICAL DIAGNOSIS

15 Aug 2022 Diag: Don Baldrige

VISCOSITY



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. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

[view report](#)



02 Feb 2022 Diag: Doug Bogart

VISCOSITY



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. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

[view report](#)



16 Aug 2021 Diag: Jonathan Hester

VISCOSITY



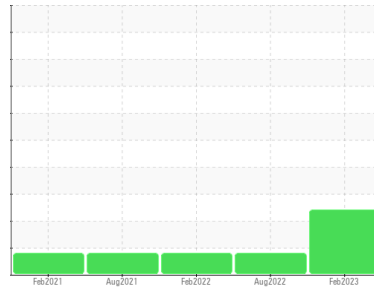
We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

[view report](#)



OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
SHREDDER HPU
Component
Hydraulic System
Fluid
SHELL TELLUS 32 (35 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

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	RP0021661	RP0029328	RP0016261
Sample Date	Client Info	06 Feb 2023	15 Aug 2022	02 Feb 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	2	4	2
Chromium	ppm	ASTM D5185m >20	<1	0	<1
Nickel	ppm	ASTM D5185m >20	0	0	0
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m	0	7	0
Aluminum	ppm	ASTM D5185m >20	0	<1	<1
Lead	ppm	ASTM D5185m >20	2	2	2
Copper	ppm	ASTM D5185m >20	1	2	<1
Tin	ppm	ASTM D5185m >20	<1	<1	1
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	2	<1

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	30	36	32
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	<1	<1	<1
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 11	6	6	6
Calcium	ppm	ASTM D5185m 35	1008	916	1031
Phosphorus	ppm	ASTM D5185m 259	513	483	530
Zinc	ppm	ASTM D5185m 277	651	606	641

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	1	1	1
Sodium	ppm	ASTM D5185m	0	<1	2
Potassium	ppm	ASTM D5185m >20	1	0	0
Water	%	ASTM D6304 >0.05	0.013	0.012	0.014
ppm Water	ppm	ASTM D6304 >500	137.4	123.7	142.8

FLUID CLEANLINESS

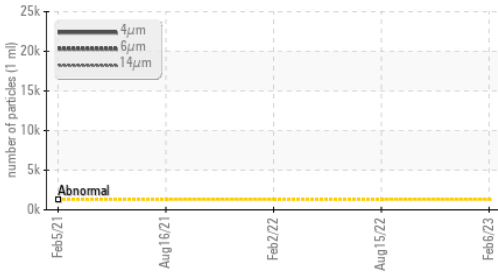
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >1300	▲ 22090	---	---
Particles >6µm	ASTM D7647 >320	▲ 5566	---	---
Particles >14µm	ASTM D7647 >40	▲ 242	---	---
Particles >21µm	ASTM D7647 >10	▲ 61	---	---
Particles >38µm	ASTM D7647 >3	1	---	---
Particles >71µm	ASTM D7647 >3	0	---	---
Oil Cleanliness	ISO 4406 (c) >17/15/12	▲ 22/20/15	---	---

FLUID DEGRADATION

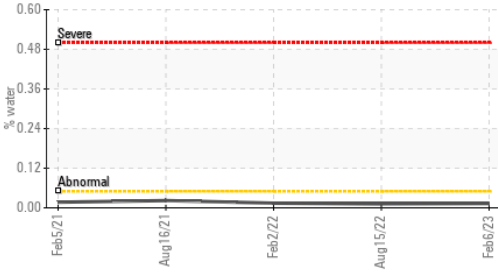
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.32	0.40	0.41	0.37

OIL ANALYSIS REPORT

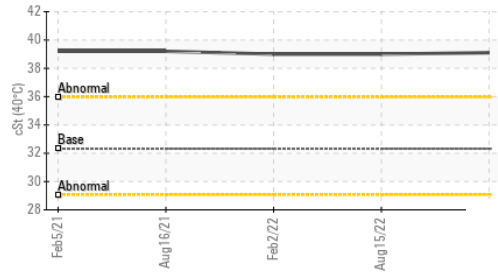
▲ Particle Trend



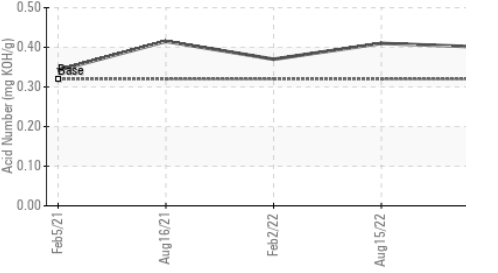
Water



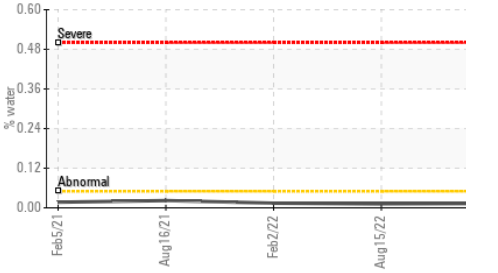
▲ Viscosity @ 40°C



Acid Number



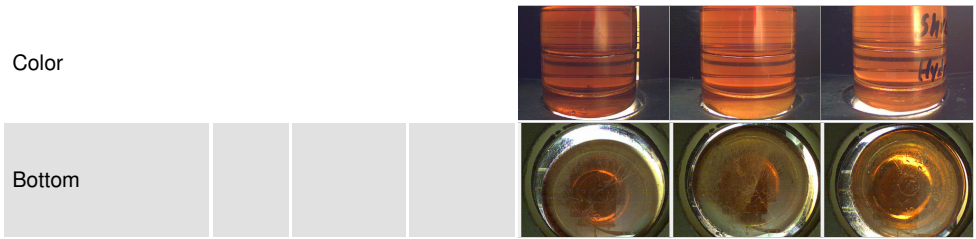
Water



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

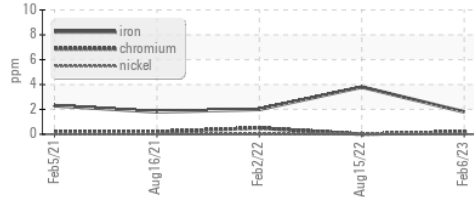
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.32	▲ 39.1	▲ 39.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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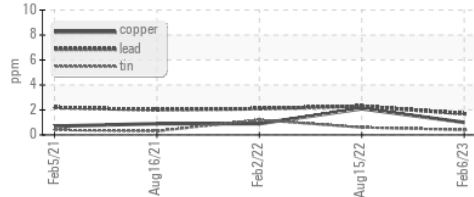


GRAPHS

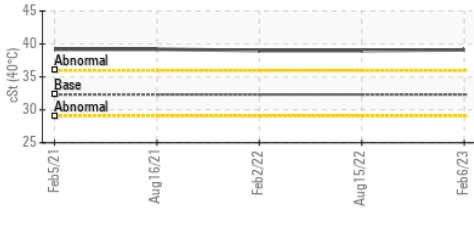
Ferrous Alloys



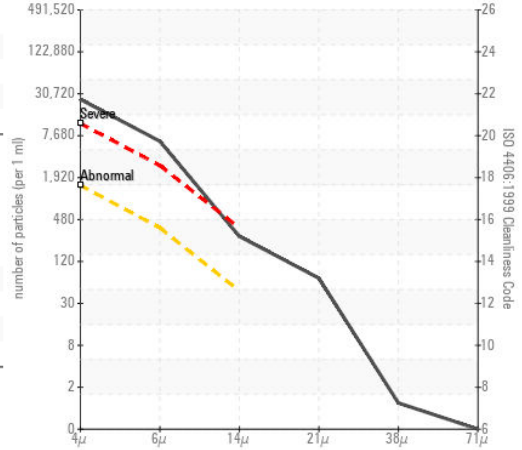
Non-ferrous Metals



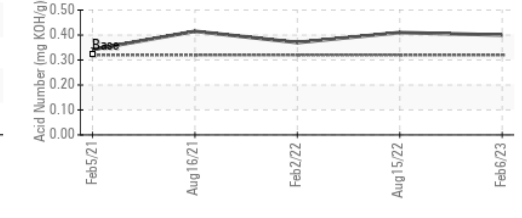
▲ Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0021661 **Received** : 13 Feb 2023
Lab Number : 05765830 **Diagnosed** : 15 Feb 2023
Unique Number : 10335438 **Diagnostician** : Angela Borella
Test Package : IND 2

WESTLAKE CHEMICAL - FRANKLIN
 200 SHOTWELL DR
 FRANKLIN, OH
 US 45005
 Contact: Bill Eisaman
 bill.eisaman@westlake.net
 T: (419)788-9155
 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)