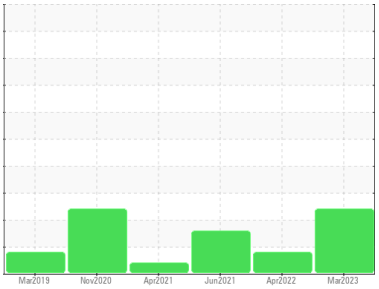
PROBLEM SUMMARY

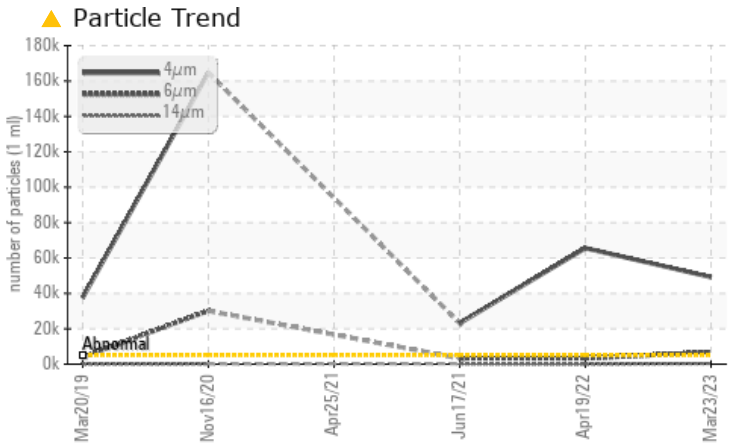
Sample Rating Trend



ISO

Machine Id
LINE 4 (S/N 3030)
Component
Hydraulic System
Fluid
SAFETY-KLEEN PERFORMANCE PLUS HYDRAULIC AW 46 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data update for fuel dilution.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm		ASTM D7647	>5000	▲ **49169**	▲ 65569	▲ 23157
Particles >6µm		ASTM D7647	>1300	▲ **6745**	▲ 3297	▲ 3283
Particles >14µm		ASTM D7647	>160	▲ **334**	29	▲ 209
Particles >21µm		ASTM D7647	>40	▲ **121**	5	▲ 56
Particles >38µm		ASTM D7647	>10	▲ **14**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/20/16**	▲ 23/19/12	▲ 22/19/15

Customer Id: CONTRA
Sample No.: WC0801297
Lab Number: 05818166
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
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

19 Apr 2022 Diag: Jonathan Hester

ISO

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Fuel content negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

17 Jun 2021 Diag: Jonathan Hester

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. Tests indicate that there is no fuel present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

25 Apr 2021 Diag: Jonathan Hester

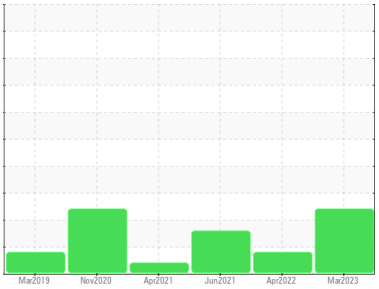
VIS DEBRIS

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. Tests indicate that there is no fuel 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



ISO

Machine Id
LINE 4 (S/N 3030)
Component
Hydraulic System
Fluid
SAFETY-KLEEN PERFORMANCE PLUS HYDRAULIC AW 46 (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data update for fuel dilution.

Wear
All component wear rates are normal.

Contamination
There is a high amount of particulates present in the oil. Tests indicate that there is no fuel present in the oil.

Fluid Condition
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		**WC0801297**	WC0574564	WC0449555
Sample Date		Client Info		**23 Mar 2023**	19 Apr 2022	17 Jun 2021
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**2**	9	8
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	0
Lead	ppm	ASTM D5185m	>20	**0**	<1	<1
Copper	ppm	ASTM D5185m	>20	**0**	1	<1
Tin	ppm	ASTM D5185m	>20	**0**	0	<1
Antimony	ppm	ASTM D5185m		**---**	---	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	<1	1
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m		**4**	0	<1
Calcium	ppm	ASTM D5185m	48	**51**	45	45
Phosphorus	ppm	ASTM D5185m	340	**350**	380	333
Zinc	ppm	ASTM D5185m	430	**446**	404	407
Sulfur	ppm	ASTM D5185m		**696**	833	773

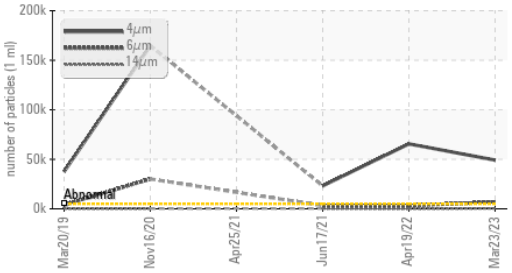
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**0**	<1	<1
Sodium	ppm	ASTM D5185m		**0**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**0**	0	<1
Fuel	%	ASTM D3524		**0.8**	0.6	0.5

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ **49169**	▲ 65569	▲ 23157
Particles >6µm	ASTM D7647	>1300	▲ **6745**	▲ 3297	▲ 3283
Particles >14µm	ASTM D7647	>160	▲ **334**	29	▲ 209
Particles >21µm	ASTM D7647	>40	▲ **121**	5	▲ 56
Particles >38µm	ASTM D7647	>10	▲ **14**	0	0
Particles >71µm	ASTM D7647	>3	**2**	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ **23/20/16**	▲ 23/19/12	▲ 22/19/15

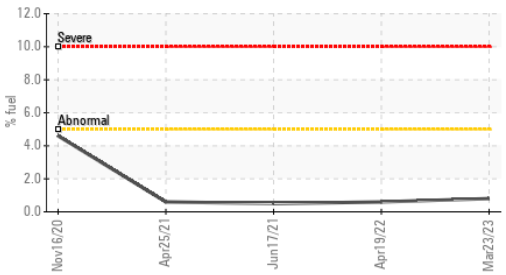
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.34**	0.33	0.330

OIL ANALYSIS REPORT

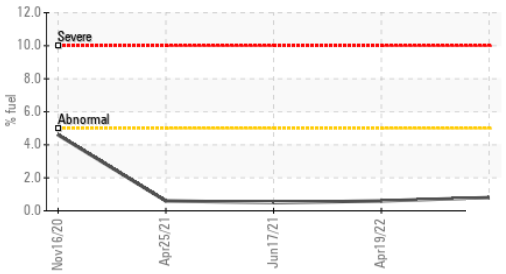
Particle Trend



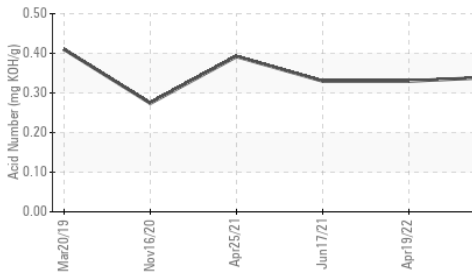
Fuel Dilution



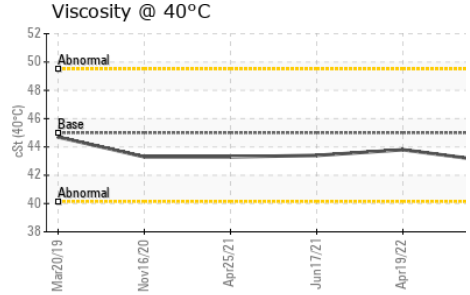
Fuel Dilution



Acid Number



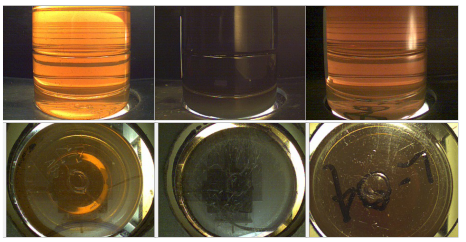
Viscosity @ 40°C



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	**LIGHT**	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	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

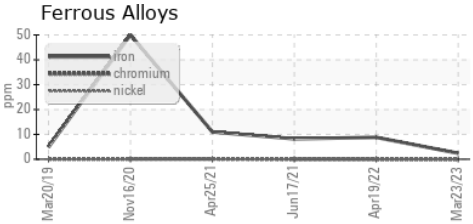
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.0	**43.0**	43.8	43.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

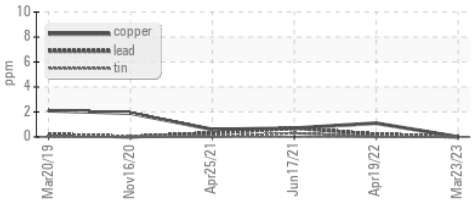


GRAPHS

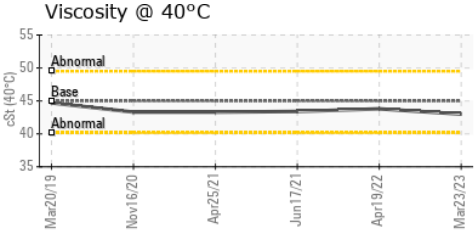
Ferrous Alloys



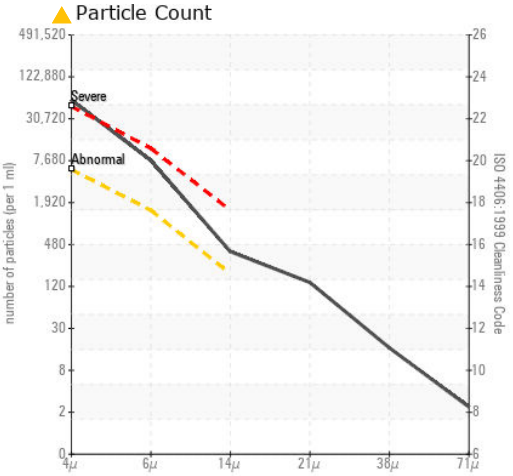
Non-ferrous Metals



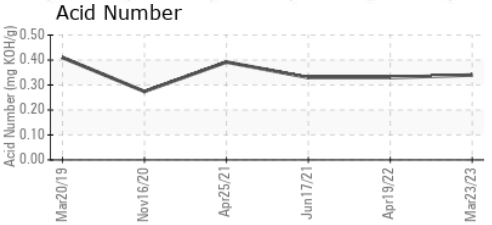
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0801297 **Received** : 12 Apr 2023
Lab Number : 05818166 **Diagnosed** : 19 Apr 2023
Unique Number : 10426249 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: FuelDilution, PERCENTFUEL)

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)

Altium Packaging - TRACY - Plant 1308A
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TRACY, CA
US 95376
Contact: Rojie Sarmiento
rojie.sarmiento@altiumpkg.com
T: (209)831-2908
F: (209)820-1735

Report Id: CONTRA [WUSCAR] 05818166 (Generated: 11/01/2023 00:49:47) Rev: 2

Submitted By: Rojie Sarmiento