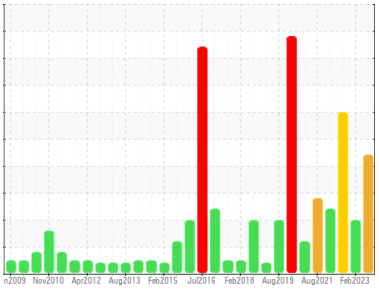
PROBLEM SUMMARY

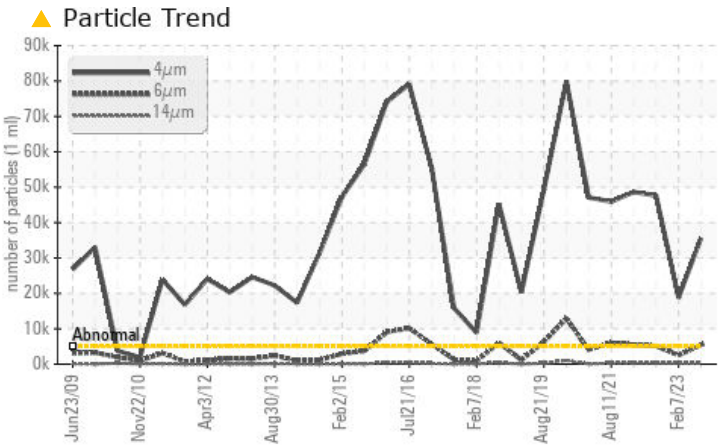
Sample Rating Trend



WATER

Area
TV/2000 SAW
Machine Id
102258 Main
Component
Hydraulic System
Fluid
ESSO NUTO H ISO 68 (120 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. 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. We advise that you follow the water drain-off procedure for this component. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	SEVERE
Particles >4µm		ASTM D7647	>5000	▲ **35581**	▲ 18774	⬢ 47618
Particles >6µm		ASTM D7647	>1300	▲ **5463**	▲ 2533	▲ 5107
Particles >14µm		ASTM D7647	>160	▲ **282**	▲ 216	▲ 294
Particles >21µm		ASTM D7647	>40	▲ **66**	▲ 69	▲ 60
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/15**	▲ 21/19/15	⬢ 23/20/15
Appearance	scalar	Visual*	NORML	▲ **WGOIL**	NORML	▲ WGOIL
Free Water	scalar	Visual*		▲ **1%**	NEG	▲ 5%

Customer Id: MITWAT
Sample No.: WC0799514
Lab Number: 02576734
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
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To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Water Drain-off	---	---	?	We advise that you follow the water drain-off procedure for this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.
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 Water Access	---	---	?	We advise that you check for the source of water entry.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.
Filter Fluid	---	---	?	We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil.

HISTORICAL DIAGNOSIS

07 Feb 2023 Diag: Kevin Marson

ISO

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Oil Cleanliness are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >14µm are notably high. Particles >21µm are notably high. The water content is negligible. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

03 Aug 2022 Diag: Kevin Marson

WATER

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. 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. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.Aluminum ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated. Oil Cleanliness are severely high. Particles >4µm are severely high. Particles >4µm are severely high.. Particles >4µm are severely high... Particles >6µm are abnormally high. Particles >14µm are notably high. Particles >21µm are notably high. Free water present. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

09 Feb 2022 Diag: Kevin Marson

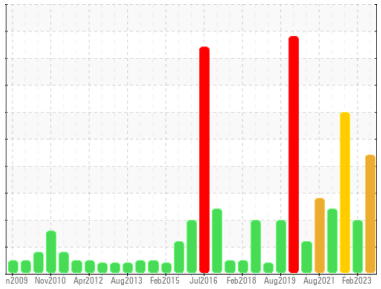
WEAR

Check seals and/or filters for points of contaminant entry. 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. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.Aluminum ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated. Particles >4µm are severely high. Particles >6µm are abnormally high. Particles >14µm are notably high. The AN level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
TV/2000 SAW
Machine Id
102258 Main
Component
Hydraulic System
Fluid
ESSO NUTO H ISO 68 (120 LTR)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. 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. We advise that you follow the water drain-off procedure for this component. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Free water present.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0799514**	WC0763666	WC0688600
Sample Date		Client Info		**25 Jul 2023**	07 Feb 2023	03 Aug 2022
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	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>30	**6**	5	8
Chromium	ppm	ASTM D5185(m)	>2	**<1**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**0**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>2	**2**	2	▲ 5
Lead	ppm	ASTM D5185(m)	>10	**<1**	<1	2
Copper	ppm	ASTM D5185(m)	>25	**1**	<1	2
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	<1

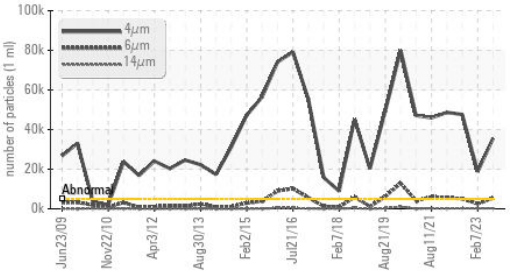
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**0**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	5	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	50	**37**	43	34
Phosphorus	ppm	ASTM D5185(m)	330	**359**	364	332
Zinc	ppm	ASTM D5185(m)	420	**435**	426	421
Sulfur	ppm	ASTM D5185(m)	3100	**6613**	6523	5573
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	6	13
Sodium	ppm	ASTM D5185(m)		**1**	<1	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Water	%	ASTM D6304*	>0.05	**0.006**	0.005	---
ppm Water	ppm	ASTM D6304*	>500	**60.5**	59.1	---

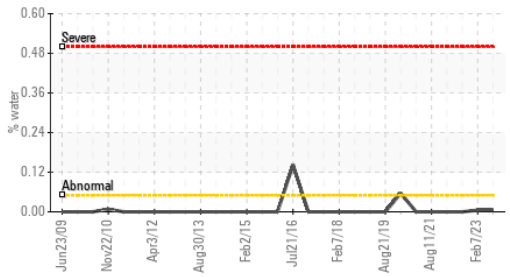
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **35581**	▲ 18774	⬢ 47618
Particles >6µm		ASTM D7647	>1300	▲ **5463**	▲ 2533	▲ 5107
Particles >14µm		ASTM D7647	>160	▲ **282**	▲ 216	▲ 294
Particles >21µm		ASTM D7647	>40	▲ **66**	▲ 69	▲ 60
Particles >38µm		ASTM D7647	>10	**4**	4	4
Particles >71µm		ASTM D7647	>3	**0**	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/15**	▲ 21/19/15	⬢ 23/20/15

OIL ANALYSIS REPORT

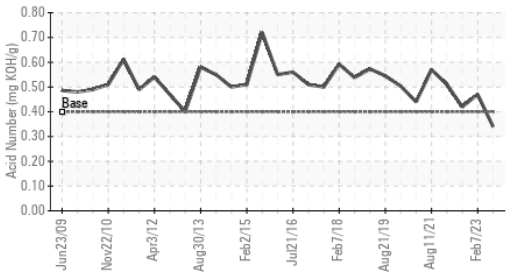
Particle Trend



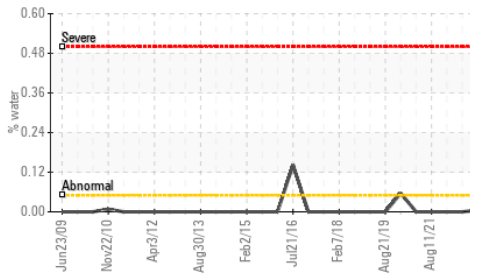
Water



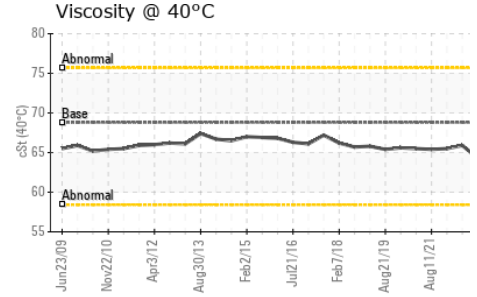
Acid Number



Water



Viscosity @ 40°C

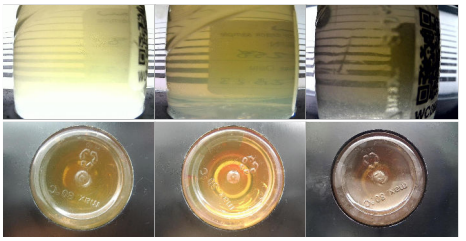


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.40	**0.34**	0.47	0.42

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	**VLITE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ **WGOIL**	NORML	▲ WGOIL
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	**.2%**	.2%	.5%
Free Water	scalar	Visual*		▲ **1%**	NEG	▲ 5%

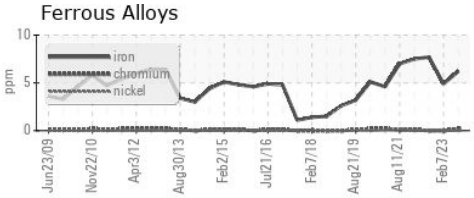
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68.8	**64.6**	64.3	65.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

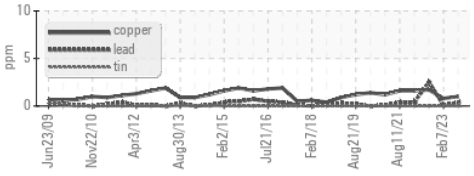


GRAPHS

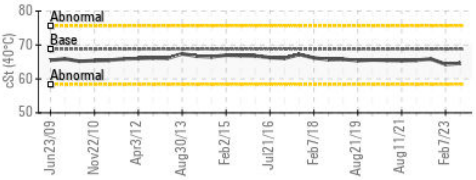
Ferrous Alloys



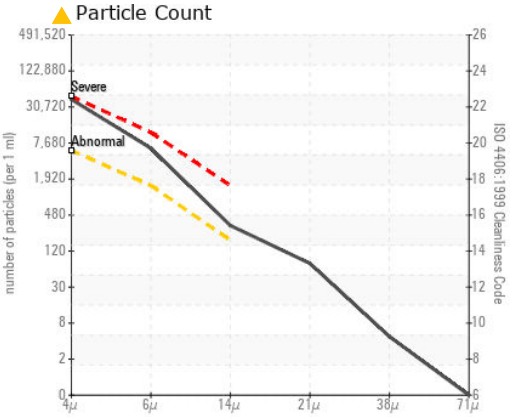
Non-ferrous Metals



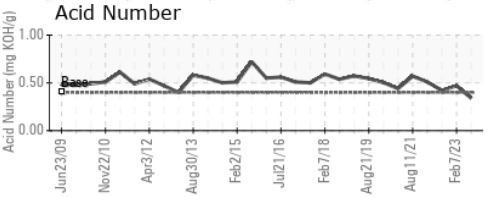
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0799514 **Received** : 18 Aug 2023
Lab Number : 02576734 **Diagnosed** : 23 Aug 2023
Unique Number : 5629794 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KF, TAN Man)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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