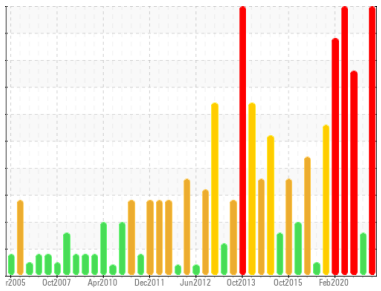
PROBLEM SUMMARY

Sample Rating Trend

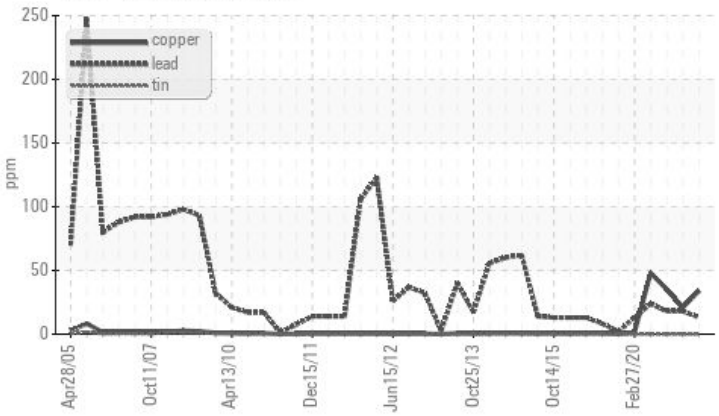


WEAR

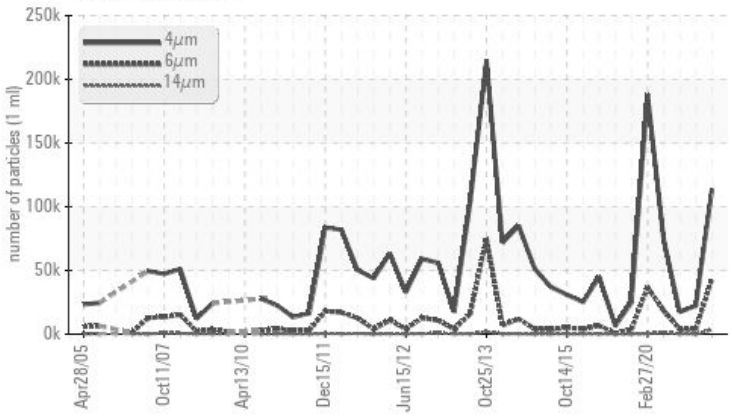
Machine Id
HCP G1 TUBR
Component
Turbine
Fluid
MOBIL DTE OIL HVY MEDIUM (27 LTR)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Particle Trend



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We recommend that you drain the oil from the component if this has not already been done. 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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	SEVERE
Copper	ppm	ASTM D5185(m)	>5	▲ **34**	▲ 21	▲ 35
Particles >6µm		ASTM D7647	>640	▲ **43262**	▲ 3588	▲ 3843
Particles >14µm		ASTM D7647	>80	▲ **3326**	50	▲ 231
Particles >21µm		ASTM D7647	>20	▲ **819**	10	▲ 61
Particles >38µm		ASTM D7647	>4	▲ **66**	1	2
Oil Cleanliness		ISO 4406 (c)	>--/16/13	▲ **24/23/19**	▲ 22/19/13	▲ 21/19/15

Customer Id: NEWSTJ
Sample No.: WC0706095
Lab Number: 02642924
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
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Kevin.Marson@wearcheck.com

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 Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
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.

HISTORICAL DIAGNOSIS

WEAR

04 May 2023 Diag: Kevin Marson

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.Copper ppm levels are abnormal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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

WEAR

27 May 2022 Diag: Kevin Marson

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.Copper ppm levels are severe. Particles >14µm are abnormally high. Particles >21µm are abnormally high. Particles >6µm and oil cleanliness are abnormally high. The water content is negligible. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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

WEAR

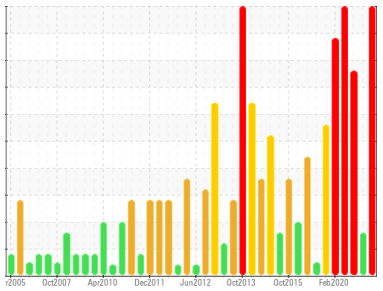
21 Oct 2021 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. We recommend that you drain the oil from the component if this has not already been done. 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. Resample in 30-45 days to monitor this situation.Copper ppm levels are severe. Lead ppm levels are abnormal. A sharp increase in the copper level is noted. An increase in the lead level is noted. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Particles >38µm are abnormally high. The water content is negligible. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. 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

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
HCP G1 TUBR
Component
Turbine
Fluid
MOBIL DTE OIL HVY MEDIUM (27 LTR)

DIAGNOSIS

Recommendation
We advise that you check all areas where contaminants can enter the system. We recommend that you drain the oil from the component if this has not already been done. 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.

Wear
Copper ppm levels are severe.

Contamination
There is a high amount of particulates (2 to 100 microns in size) present in the oil. The water content is negligible. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition
The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0706095**	WC0455583	WC0445386
Sample Date		Client Info		**16 Apr 2024**	04 May 2023	27 May 2022
Machine Age	hrs	Client Info		**0**	80	80
Oil Age	hrs	Client Info		**0**	80	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>15	**2**	2	1
Chromium	ppm	ASTM D5185(m)	>4	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**<1**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	<1	0
Lead	ppm	ASTM D5185(m)		**13**	18	18
Copper	ppm	ASTM D5185(m)	>5	▲ **34**	▲ 21	▲ 35
Tin	ppm	ASTM D5185(m)	>5	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

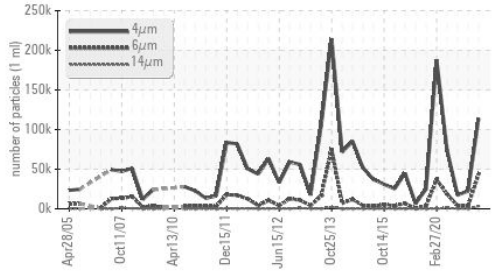
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	<1	0
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**<1**	0	0
Calcium	ppm	ASTM D5185(m)		**1**	0	0
Phosphorus	ppm	ASTM D5185(m)		**118**	138	134
Zinc	ppm	ASTM D5185(m)		**29**	42	40
Sulfur	ppm	ASTM D5185(m)		**1327**	1623	649
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**1**	1	<1
Sodium	ppm	ASTM D5185(m)		**2**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Water	%	ASTM D6304*	>0.03	**0.001**	0.026	0.001
ppm Water	ppm	ASTM D6304*	>300	**5**	260.9	14.1

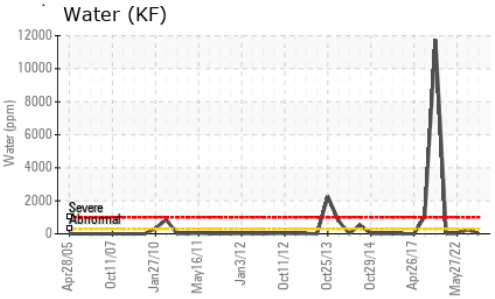
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**113857**	22347	17409
Particles >6µm		ASTM D7647	>640	▲ **43262**	▲ 3588	▲ 3843
Particles >14µm		ASTM D7647	>80	▲ **3326**	50	▲ 231
Particles >21µm		ASTM D7647	>20	▲ **819**	10	▲ 61
Particles >38µm		ASTM D7647	>4	▲ **66**	1	2
Particles >71µm		ASTM D7647	>3	**5**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/16/13	▲ **24/23/19**	▲ 22/19/13	▲ 21/19/15

OIL ANALYSIS REPORT

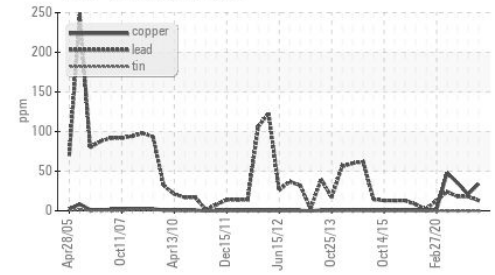
Particle Trend



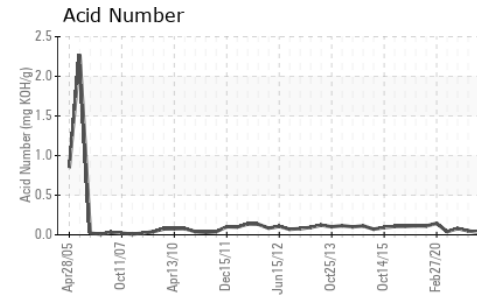
Water (KF)



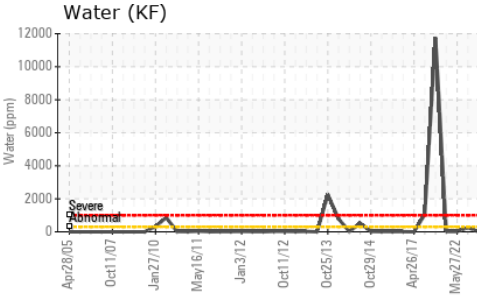
Non-ferrous Metals



Acid Number



Water (KF)

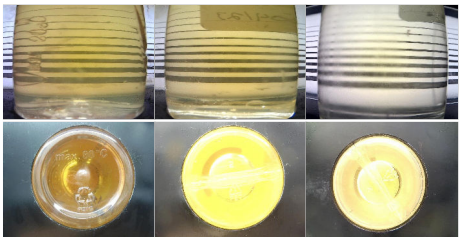


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.03**	0.05	0.08

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	**VLITE**	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	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.03	**NEG**	.2%	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

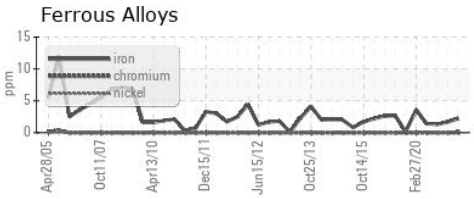
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	65.1	**63.7**	65.0	67.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

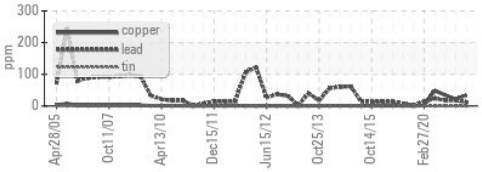


GRAPHS

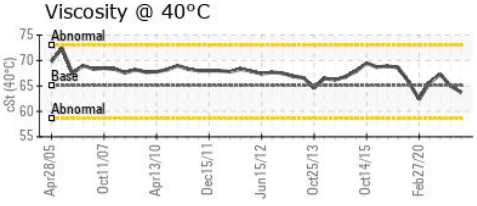
Ferrous Alloys



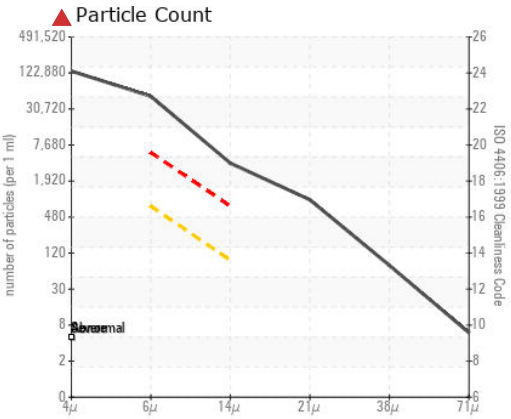
Non-ferrous Metals



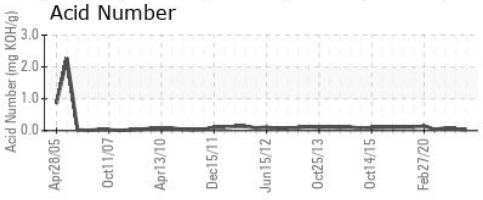
Viscosity @ 40°C



Particle Count



Acid Number



CALA
ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0706095 **Received** : 19 Jun 2024
Lab Number : 02642924 **Tested** : 20 Jun 2024
Unique Number : 5800463 **Diagnosed** : 20 Jun 2024 - Kevin Marson
Test Package : IND 2 (Additional Tests: TAN Auto)

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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