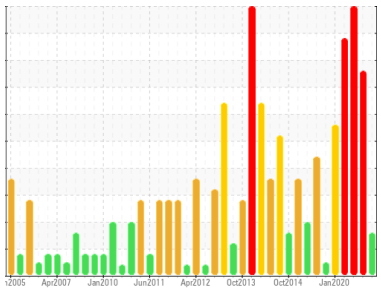
PROBLEM SUMMARY

Sample Rating Trend

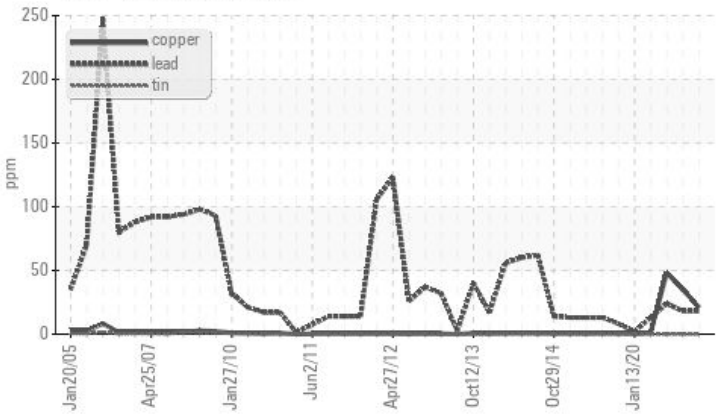


WEAR

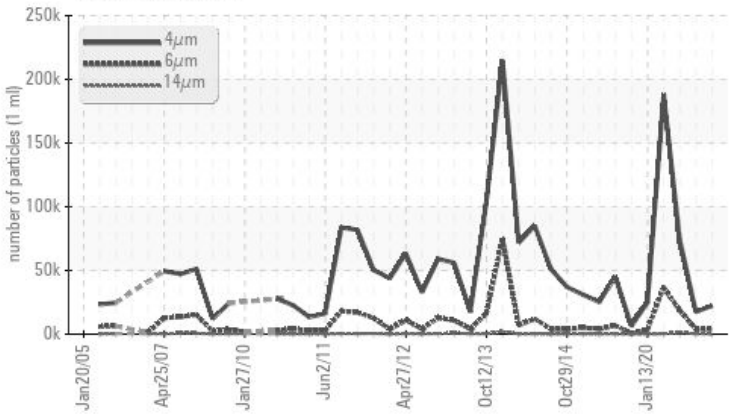
Area
[199036]
Machine Id
HCP G1 TUBR
Component
Turbine
Fluid
MOBIL DTE OIL HVY MEDIUM (27 LTR)

COMPONENT CONDITION SUMMARY

Non-ferrous Metals



Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	SEVERE	SEVERE
Copper	ppm	ASTM D5185(m)	>5	▲ **21**	⬢ 35	⬢ 48
Particles >6µm		ASTM D7647	>640	▲ **3588**	▲ 3843	⬢ 18464
Oil Cleanliness		ISO 4406 (c)	>--/16/13	▲ **22/19/13**	▲ 21/19/15	⬢ 23/21/17

Customer Id: NEWSTJ
Sample No.: WC0455583
Lab Number: 02563216
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
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 Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

27 May 2022 Diag: Kevin Marson

WEAR

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

21 Oct 2021 Diag: Kevin Marson

WEAR

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

27 Feb 2020 Diag: Kevin Marson

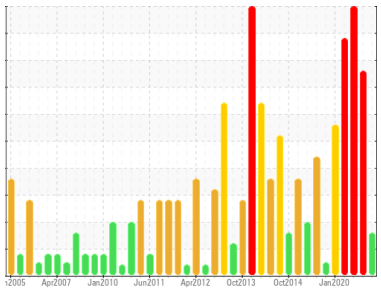
WATER

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. We advise that you follow the water drain-off procedure for this component. 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 that you change the oil. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.All component wear rates are normal. Water Water and ppm water contamination levels are severe. Particles >6µm are severely high. Particles >6µm are severely high.. Particles >14µm are abnormally high. Particles >21µm are notably high. There is a high concentration of water present in the oil. Free water present. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The white residue present in the sample is oil additive precipitate. 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

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
[199036]
Machine Id
HCP G1 TUBR
Component
Turbine
Fluid
MOBIL DTE OIL HVY MEDIUM (27 LTR)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear
Copper ppm levels are abnormal.

Contamination
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.

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		**WC0455583**	WC0445386	WC0445210
Sample Date		Client Info		**04 May 2023**	27 May 2022	21 Oct 2021
Machine Age	hrs	Client Info		**80**	80	0
Oil Age	hrs	Client Info		**80**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>15	**2**	1	1
Chromium	ppm	ASTM D5185(m)	>4	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	0	<1
Lead	ppm	ASTM D5185(m)		**18**	18	▲ 24
Copper	ppm	ASTM D5185(m)	>5	▲ **21**	⬢ 35	⬢ 48
Tin	ppm	ASTM D5185(m)	>5	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**<1**	<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

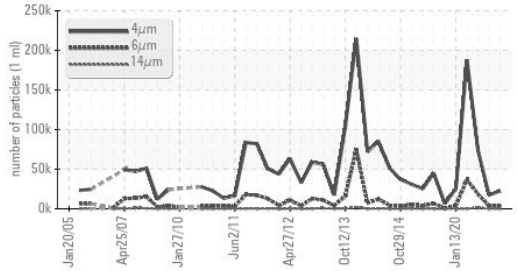
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	0	<1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**0**	0	0
Calcium	ppm	ASTM D5185(m)		**0**	0	<1
Phosphorus	ppm	ASTM D5185(m)		**138**	134	129
Zinc	ppm	ASTM D5185(m)		**42**	40	35
Sulfur	ppm	ASTM D5185(m)		**1623**	649	1821
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**1**	<1	2
Sodium	ppm	ASTM D5185(m)		**<1**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Water	%	ASTM D6304*	>0.03	**0.026**	0.001	0.001
ppm Water	ppm	ASTM D6304*	>300	**260.9**	14.1	14.3

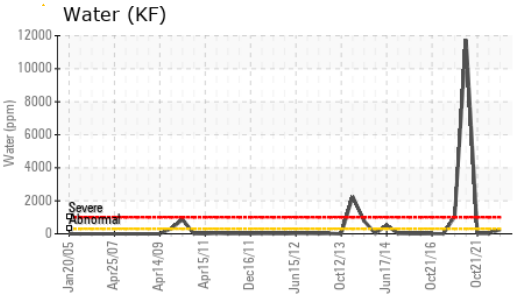
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**22347**	17409	74063
Particles >6µm		ASTM D7647	>640	▲ **3588**	▲ 3843	⬢ 18464
Particles >14µm		ASTM D7647	>80	**50**	▲ 231	⬢ 1126
Particles >21µm		ASTM D7647	>20	**10**	▲ 61	⬢ 267
Particles >38µm		ASTM D7647	>4	**1**	2	▲ 15
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/16/13	▲ **22/19/13**	▲ 21/19/15	⬢ 23/21/17

OIL ANALYSIS REPORT

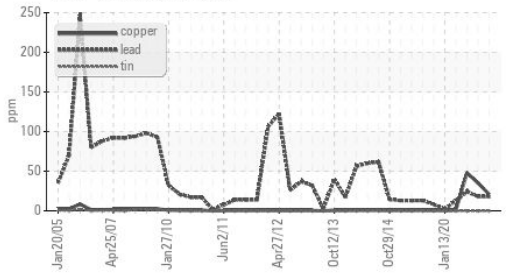
Particle Trend



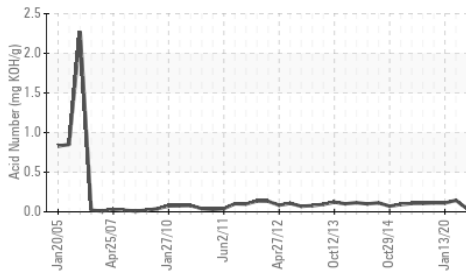
Water (KF)



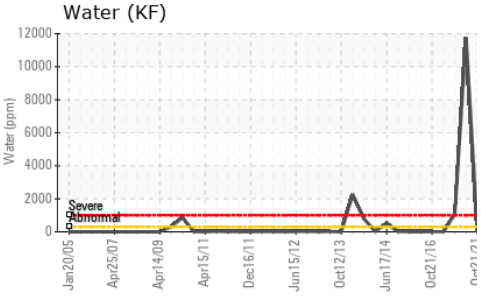
Non-ferrous Metals



Acid Number



Water (KF)

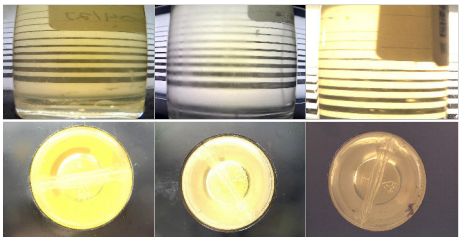


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.05**	0.08	0.04

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	VLITE
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	**.2%**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

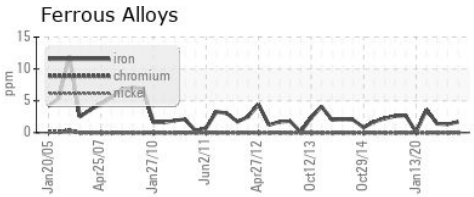
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	65.1	**65.0**	67.3	65.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

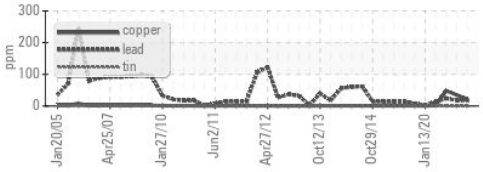


GRAPHS

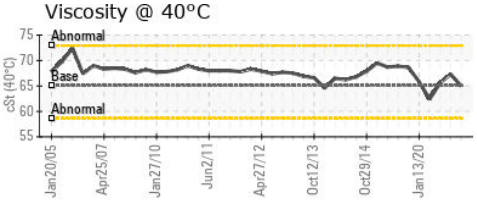
Ferrous Alloys



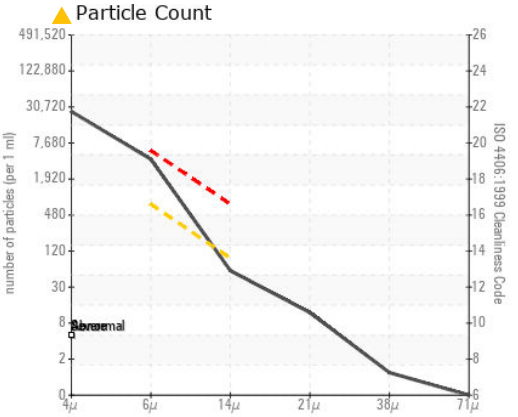
Non-ferrous Metals



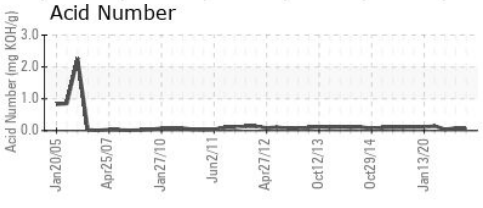
Viscosity @ 40°C



Particle Count



Acid Number



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0455583
Lab Number : 02563216
Unique Number : 5592257
Test Package : IND 2

Received : 09 Jun 2023
Diagnosed : 12 Jun 2023
Diagnostician : Kevin Marson

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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