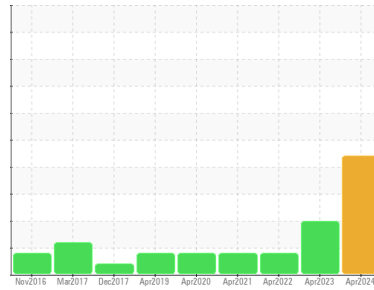


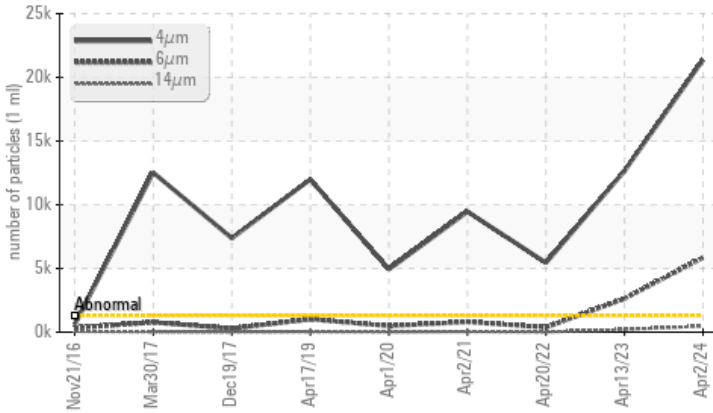


Machine Id
TB-4 REDUCER
Component
Gearbox
Fluid
CHEVRON MEROPA 220 (20 GAL)



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>1300	▲ 21367	▲ 12658	▲ 5447
Particles >6µm	ASTM D7647	>320	▲ 5849	▲ 2630	● 378
Particles >14µm	ASTM D7647	>80	▲ 477	▲ 203	16
Particles >21µm	ASTM D7647	>20	▲ 115	▲ 44	4
Oil Cleanliness	ISO 4406 (c)	>17/15/13	▲ 22/20/16	▲ 21/19/15	▲ 20/16/11

Customer Id: HYDBELFL
Sample No.: ST46853
Lab Number: 06143048
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca


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 advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
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.
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

ISO




13 Apr 2023 Diag: Jonathan Hester
 We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please note that this is a corrected copy for diagnostic comment updates. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report




ISO




20 Apr 2022 Diag: Wes Davis
 We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm are notably 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 condition of the oil is suitable for further service.

view report




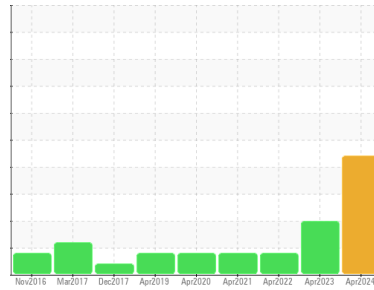
ISO



02 Apr 2021 Diag: Wes Davis
 We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm 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 condition of the oil is suitable for further service.

view report





Machine Id
TB-4 REDUCER
 Component
Gearbox
 Fluid
CHEVRON MEROPA 220 (20 GAL)

DIAGNOSIS

Recommendation
 We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.

Wear
 All component wear rates are normal.

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 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		ST46853	ST44814	ST42840
Sample Date	Client Info		02 Apr 2024	13 Apr 2023	20 Apr 2022
Machine Age	mths	Client Info	0	0	0
Oil Age	mths	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	52	64	54
Chromium	ppm	ASTM D5185m >15	0	<1	0
Nickel	ppm	ASTM D5185m >15	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	0	<1
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	9	10	7
Tin	ppm	ASTM D5185m >25	0	0	<1
Antimony	ppm	ASTM D5185m >5	---	---	---
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 40	0	0	<1
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	<1
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	0	<1	0
Calcium	ppm	ASTM D5185m	1	<1	0
Phosphorus	ppm	ASTM D5185m 270	148	167	171
Zinc	ppm	ASTM D5185m	<1	3	0
Sulfur	ppm	ASTM D5185m 8600	14127	15509	11166

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	3	3	4
Sodium	ppm	ASTM D5185m	1	1	0
Potassium	ppm	ASTM D5185m >20	0	<1	1
Water	%	ASTM D6304 >0.2	0.011	0.014	0.00
ppm Water	ppm	ASTM D6304 >2000	115	140.9	0.00

FLUID CLEANLINESS

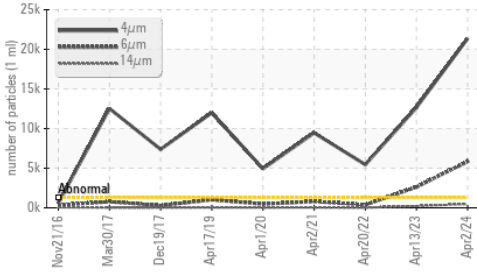
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>1300	▲ 21367	▲ 12658	▲ 5447
Particles >6µm	ASTM D7647	>320	▲ 5849	▲ 2630	● 378
Particles >14µm	ASTM D7647	>80	▲ 477	▲ 203	16
Particles >21µm	ASTM D7647	>20	▲ 115	▲ 44	4
Particles >38µm	ASTM D7647	>4	5	3	0
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>17/15/13	▲ 22/20/16	▲ 21/19/15	▲ 20/16/11

FLUID DEGRADATION

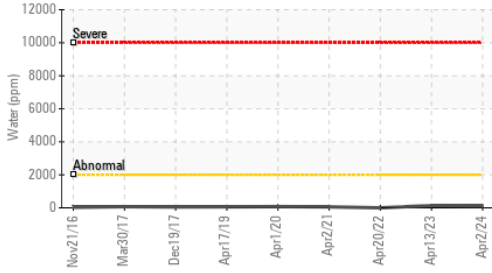
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.64	0.97	0.672	0.90

OIL ANALYSIS REPORT

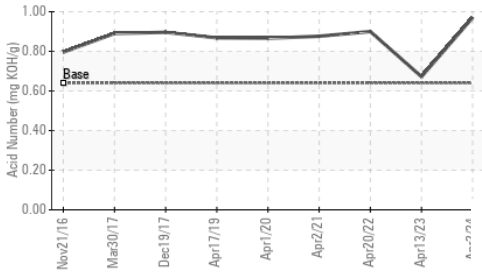
▲ Particle Trend



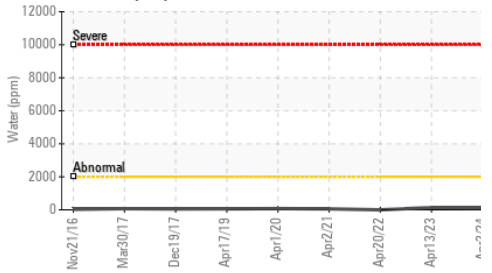
Water (KF)



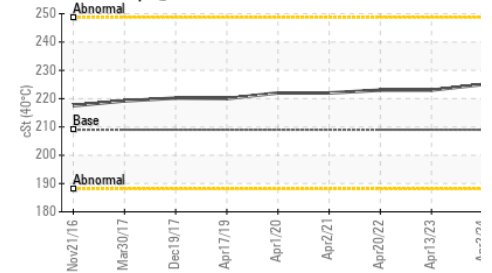
Acid Number



Water (KF)



Viscosity @ 40°C

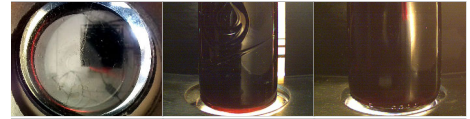


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	209	225	223

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

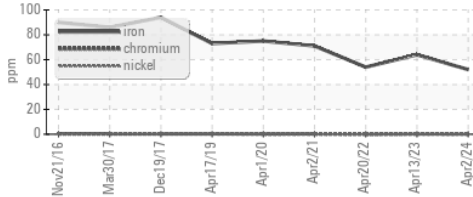


Bottom

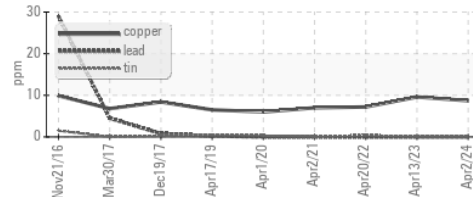


GRAPHS

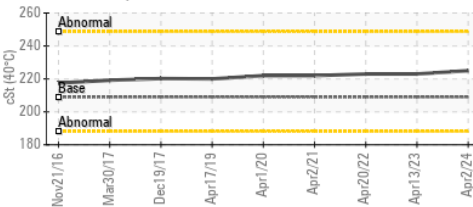
Ferrous Alloys



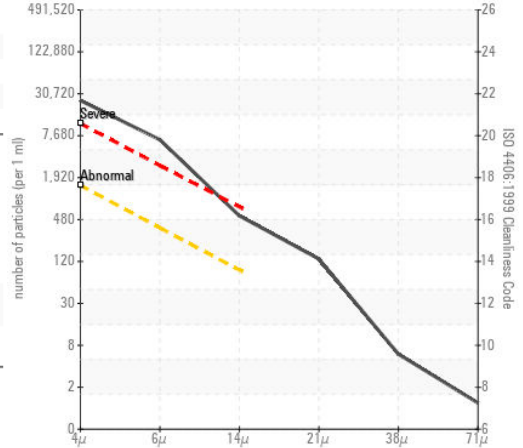
Non-ferrous Metals



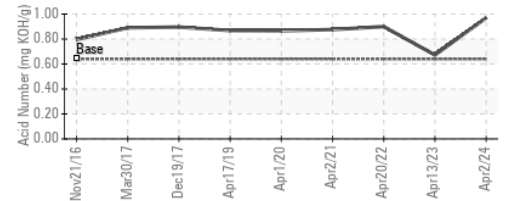
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : ST46853

Lab Number : 06143048

Unique Number : 10967856

Test Package : IND 2 (Additional Tests: KF, PrtCount)

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)

Received : 09 Apr 2024

Tested : 10 Apr 2024

Diagnosed : 10 Apr 2024 - Wes Davis

HYDRAULIC SUPPLY COMPANY

326 SE 1ST ST

BELLE GLADE, FL

US 33430

Contact: ROBERT RETALEATO

r.retaeato@hydraulic-supply.com; rrsr@hydraulic-supply.com

T: (561)996-4431

F: (561)996-8531