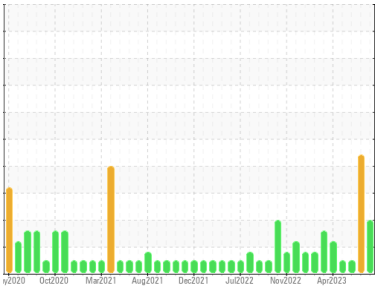
PROBLEM SUMMARY

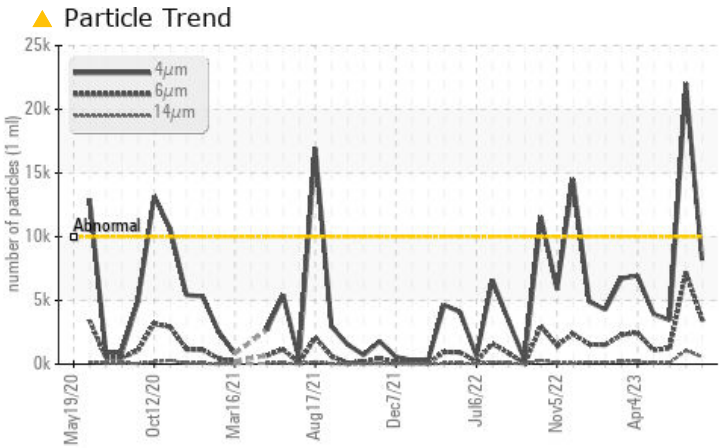
Sample Rating Trend



ISO

Area
HPP [10023390319]
Machine Id
VESSEL 3 PUMP 1 (S/N B44045)
Component
Hydraulic System
Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 46 (90 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Particles >6µm		ASTM D7647	>1300	▲ **3561**	▲ 7221	1241
Particles >14µm		ASTM D7647	>160	▲ **584**	▲ 1071	117
Particles >21µm		ASTM D7647	>40	▲ **228**	▲ 459	25
Particles >38µm		ASTM D7647	>10	▲ **21**	▲ 53	3
Oil Cleanliness		ISO 4406 (c)	>20/17/14	▲ **20/19/16**	▲ 22/20/17	19/17/14

Customer Id: OSCOSC
Sample No.: WC0840980
Lab Number: 05922204
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	---	---	?	We recommend an early resample to monitor this condition.
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

03 Jul 2023 Diag: Jonathan Hester

WATER

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. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

29 May 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

03 May 2023 Diag: Don Baldridge

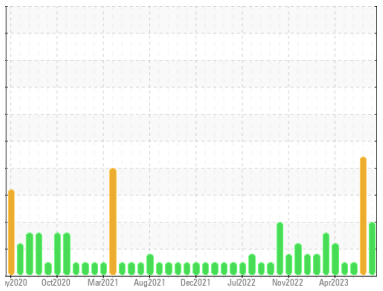
NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. 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

Area
HPP [10023390319]
Machine Id
VESSEL 3 PUMP 1 (S/N B44045)
Component
Hydraulic System
Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 46 (90 GAL)

DIAGNOSIS

Recommendation

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.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. 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 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		**WC0840980**	WC0833491	WC0810603
Sample Date		Client Info		**03 Aug 2023**	03 Jul 2023	29 May 2023
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	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**<1**	6	0
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**1**	1	<1
Lead	ppm	ASTM D5185m	>20	**0**	<1	0
Copper	ppm	ASTM D5185m	>20	**<1**	0	0
Tin	ppm	ASTM D5185m	>20	**0**	<1	0
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		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**0**	0	0
Calcium	ppm	ASTM D5185m		**0**	0	0
Phosphorus	ppm	ASTM D5185m		**458**	502	488
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m		**650**	661	560

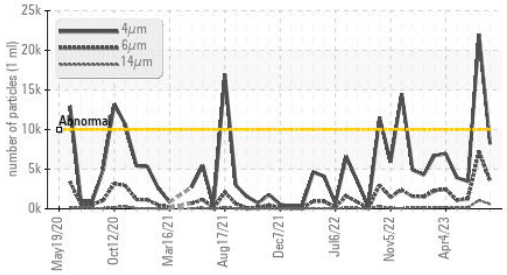
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	3	3
Sodium	ppm	ASTM D5185m		**<1**	0	0
Potassium	ppm	ASTM D5185m	>20	**0**	1	0
Water	%	ASTM D6304	>0.05	**0.001**	▲ 0.092	0.00
ppm Water	ppm	ASTM D6304	>500	**5.2**	▲ 923.6	0.00

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**8193**	▲ 22031	3456
Particles >6µm		ASTM D7647	>1300	▲ **3561**	▲ 7221	1241
Particles >14µm		ASTM D7647	>160	▲ **584**	▲ 1071	117
Particles >21µm		ASTM D7647	>40	▲ **228**	▲ 459	25
Particles >38µm		ASTM D7647	>10	▲ **21**	▲ 53	3
Particles >71µm		ASTM D7647	>3	**1**	▲ 5	0
Oil Cleanliness		ISO 4406 (c)	>20/17/14	▲ **20/19/16**	▲ 22/20/17	19/17/14

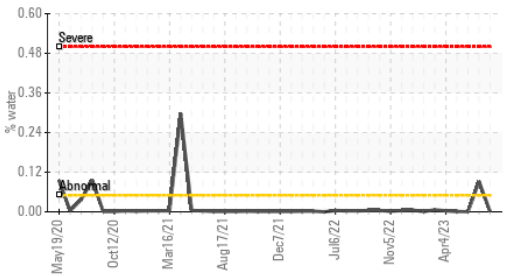
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	**0.25**	0.24	0.25

OIL ANALYSIS REPORT

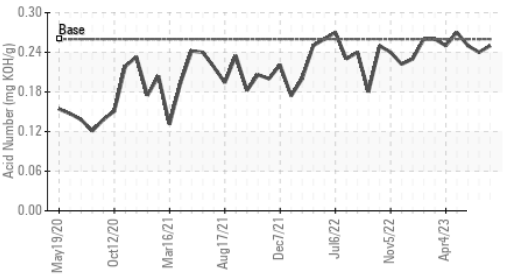
Particle Trend



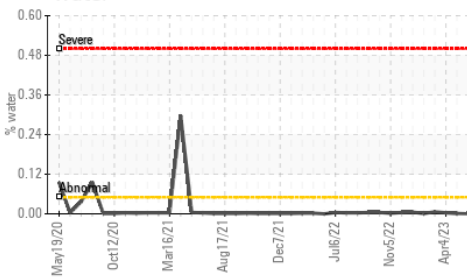
Water



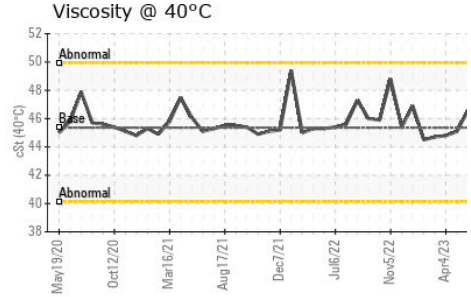
Acid Number



Water



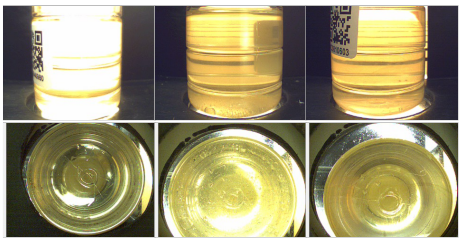
Viscosity @ 40°C



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**	LIGHT	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

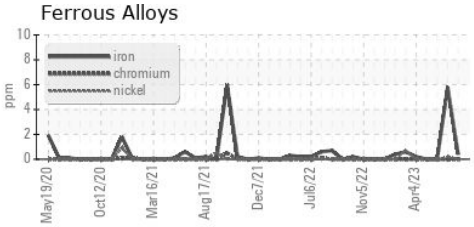
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.36	**44.8**	44.3	46.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

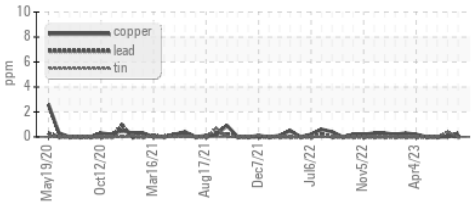


GRAPHS

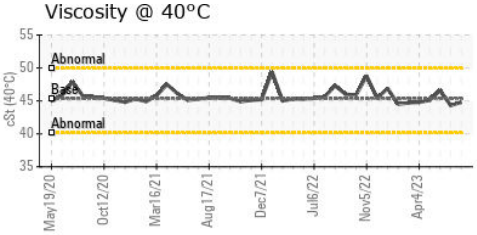
Ferrous Alloys



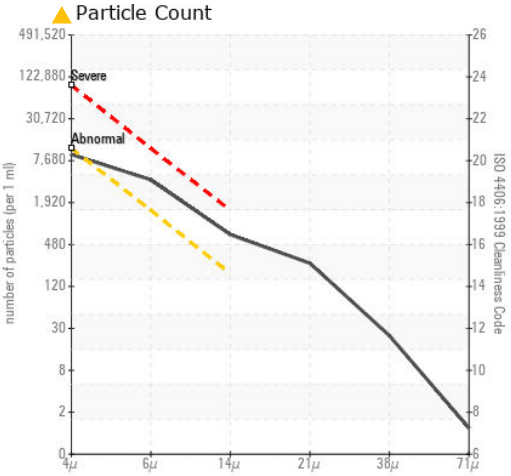
Non-ferrous Metals



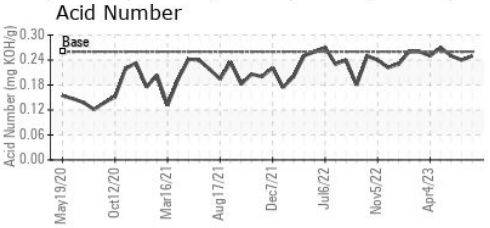
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0840980 **Received** : 11 Aug 2023
Lab Number : 05922204 **Diagnosed** : 14 Aug 2023
Unique Number : 10602151 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: KF)

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)

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