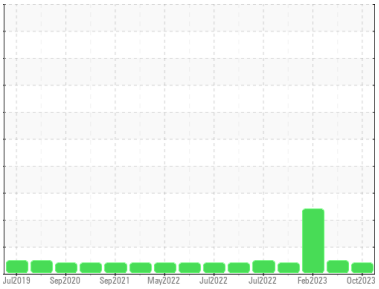
PROBLEM SUMMARY

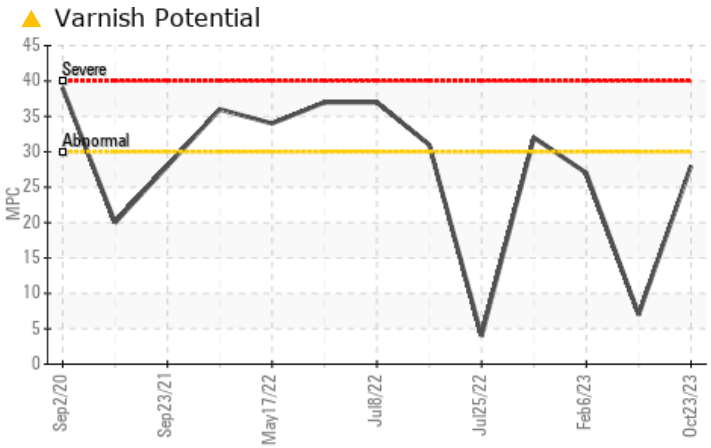
Sample Rating Trend



INSOLUBLES

Machine Id
P2-OHIO (S/N 2011019501)
Component
Hydraulic System
Fluid
PETRO CANADA PURITY FG HYDRAULIC AW 68 (800 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. The oil filtration at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				MARGINAL	NORMAL	MARGINAL
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ 28	7	▲ 27

Customer Id: IMLCAN
Sample No.: WC0699219
Lab Number: 05997956
Test Package: AOM 1

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

26 May 2023 Diag: Doug Bogart

NORMAL

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. MPC (Membrane Patch Colorimetry) test indicates acceptable levels of varnish present. 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. Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present in the oil. The condition of the oil is suitable for further service.

view report

06 Feb 2023 Diag: Doug Bogart

DEGRADATION

No corrective action is recommended at this time. The filter service at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. MPC (Membrane Patch Colorimetry) test indicates a moderate concentration of varnish present. The amount and size of particulates present in the system are acceptable. Linear Sweep Voltammetry (RULER– ASTM D6971) testing indicates a low amount of one of the anti-oxidants present in the oil, however, the other anti-oxidant(s) are still performing adequately. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

30 Jan 2023 Diag: Doug Bogart

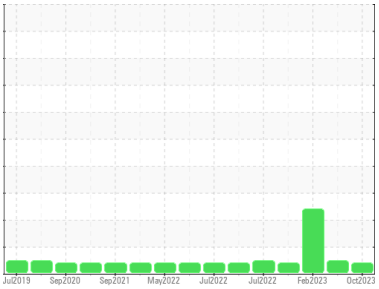
INSOLUBLES

No corrective action is recommended at this time. The filter service at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. MPC (Membrane Patch Colorimetry) test indicates a moderate concentration of varnish present. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



INSOLUBLES

Machine Id
P2-OHIO (S/N 2011019501)
Component
Hydraulic System
Fluid
PETRO CANADA PURITY FG HYDRAULIC AW 68 (800 LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. The oil filtration at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
MPC (Membrane Patch Colorimetry) test indicates a light concentration of varnish present. The amount and size of particulates present in the system are acceptable.

Fluid Condition
Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0699219**	WC0699216	WC0699212
Sample Date		Client Info		**23 Oct 2023**	26 May 2023	06 Feb 2023
Machine Age	hrs	Client Info		**1670**	0	0
Oil Age	hrs	Client Info		**1670**	370	5200
Oil Changed		Client Info		**Filtered**	Changed	Filtered
Sample Status				**MARGINAL**	NORMAL	MARGINAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**0**	0	0
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	0
Lead	ppm	ASTM D5185m	>20	**<1**	0	0
Copper	ppm	ASTM D5185m	>20	**0**	0	0
Tin	ppm	ASTM D5185m	>20	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

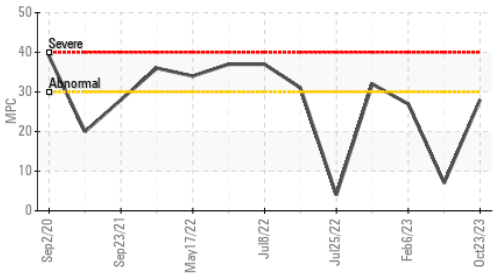
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**0**	<1	<1
Calcium	ppm	ASTM D5185m		**1**	<1	1
Phosphorus	ppm	ASTM D5185m		**433**	504	439
Zinc	ppm	ASTM D5185m		**2**	0	2
Sulfur	ppm	ASTM D5185m		**541**	691	662

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	2	2
Sodium	ppm	ASTM D5185m		**0**	<1	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	<1
Water	%	ASTM D6304	>0.05	**0.002**	0.001	---
ppm Water	ppm	ASTM D6304	>500	**17.0**	0.00	---

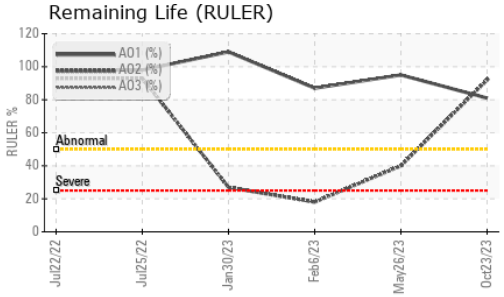
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	**138**	77	115
Particles >6µm	ASTM D7647	>1300	**61**	36	35
Particles >14µm	ASTM D7647	>160	**10**	4	4
Particles >21µm	ASTM D7647	>40	**3**	1	1
Particles >38µm	ASTM D7647	>10	**0**	0	0
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	**14/13/10**	13/12/9	14/12/9

OIL ANALYSIS REPORT

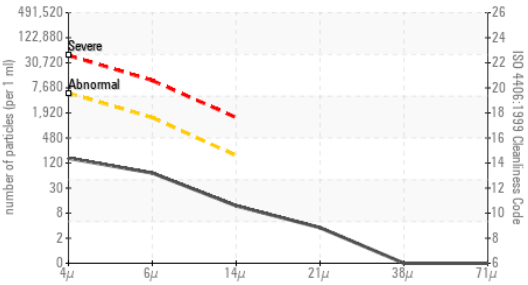
Varnish Potential



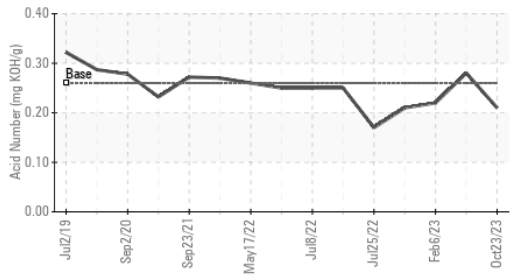
Remaining Life (RULER)



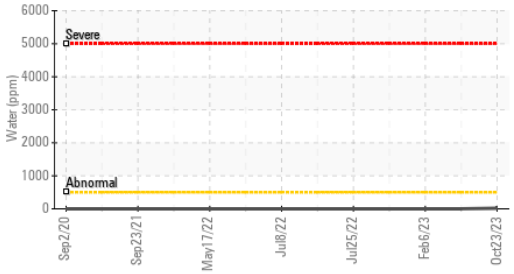
Particle Count



Acid Number



Water (KF)

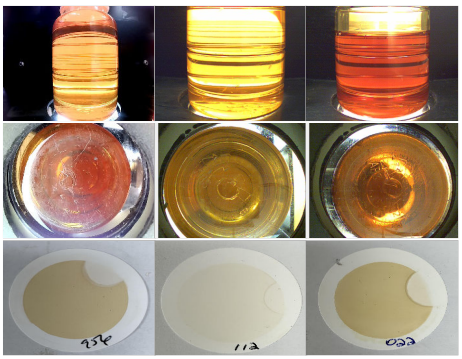


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	**0.21**	0.28	0.22
Anti-Oxidant 1	%	ASTM D6971	<25	**81**	95	87
Anti-Oxidant 2	%	ASTM D6971	<25	**92**	40	▲ 18
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ **28**	7	▲ 27

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	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	63.34	**66.9**	66.0	65.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC					



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0699219 **Received** : 03 Nov 2023
Lab Number : 05997956 **Diagnosed** : 14 Nov 2023
Unique Number : 10726316 **Diagnostician** : Doug Bogart
Test Package : AOM 1 (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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CANTON, OH
US 44721
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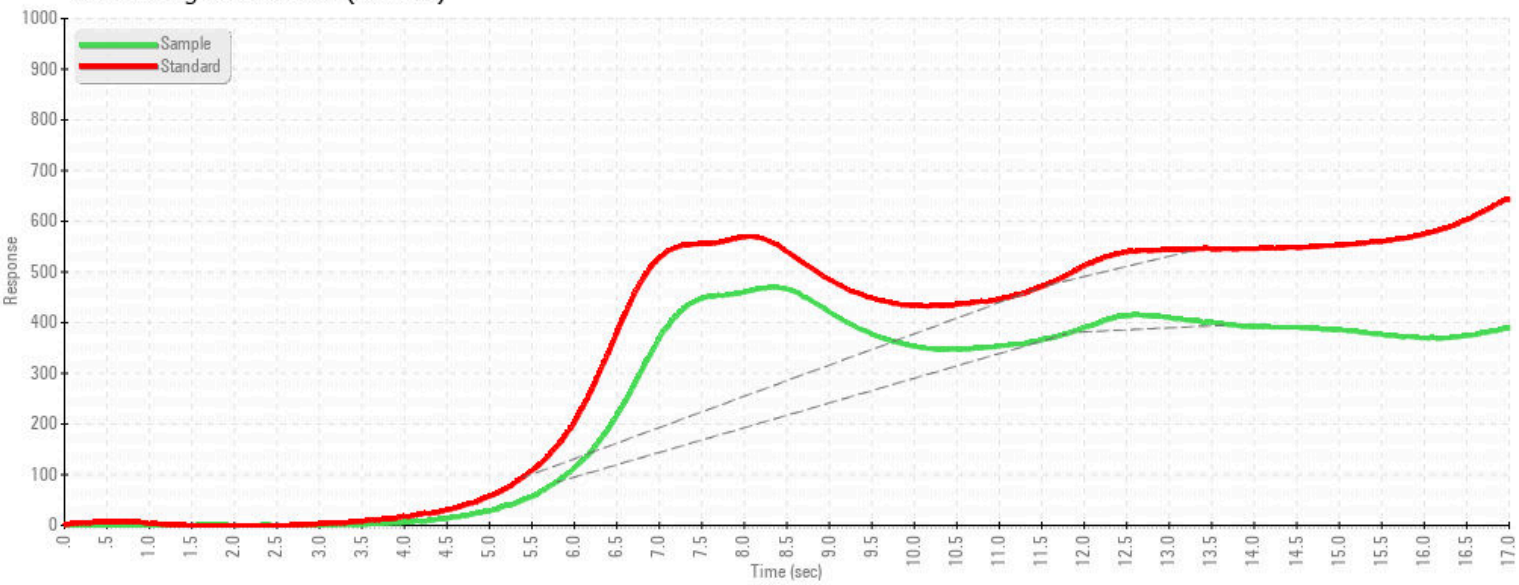
T: (330)754-1066
F:

Remaining Useful Life (RULER)



MPC (Varnish Test)

Sample Color & Clarity

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