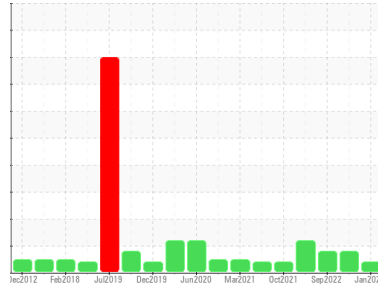


Machine Id  
**IMM #9 (S/N 61022222)**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX AW 46 (2000 LTR)**



**DIAGNOSIS**

**Recommendation**  
We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

**Wear**  
All component wear rates are normal.

**Contamination**  
MPC (Membrane Patch Colorimetry) test indicates a light concentration of varnish present.

**Fluid Condition**  
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			<b>PC0080846</b>	PC0076959	PC0062456
Sample Date	Client Info			<b>25 Jan 2024</b>	11 Jul 2023	21 Sep 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	60
Oil Changed	Client Info			<b>N/A</b>	N/A	Changed
Sample Status				<b>MARGINAL</b>	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Chromium	ppm	ASTM D5185(m)	>4	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185(m)	>60	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

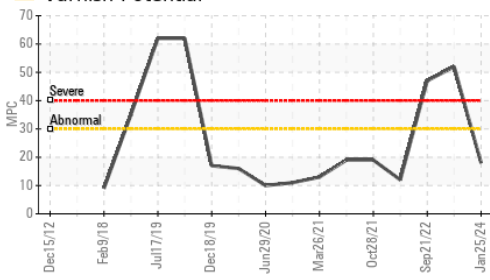
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185(m)	50	<b>33</b>	27	30
Phosphorus	ppm	ASTM D5185(m)	330	<b>334</b>	346	345
Zinc	ppm	ASTM D5185(m)	430	<b>343</b>	315	325
Sulfur	ppm	ASTM D5185(m)	760	<b>752</b>	679	700
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Sodium	ppm	ASTM D5185(m)		<b>0</b>	3	0
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	0

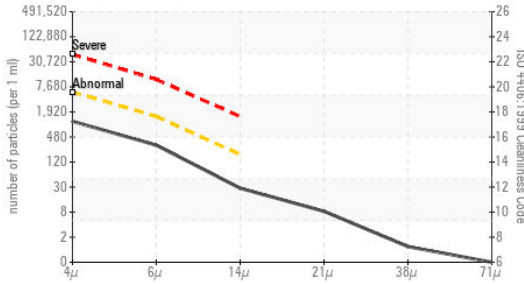
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>1002</b>	195	1866	
Particles >6µm	ASTM D7647	>1300	<b>268</b>	31	412	
Particles >14µm	ASTM D7647	>160	<b>25</b>	2	30	
Particles >21µm	ASTM D7647	>40	<b>7</b>	1	8	
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	0	
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>17/15/12</b>	15/12/9	18/16/12	

# OIL ANALYSIS REPORT

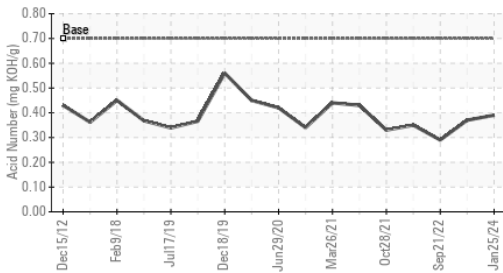
## ▲ Varnish Potential



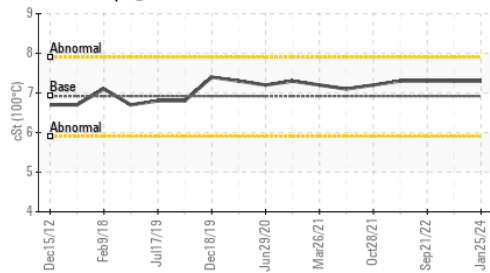
## Particle Count



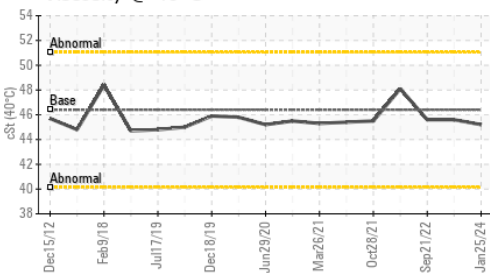
## Acid Number



## Viscosity @ 100°C



## Viscosity @ 40°C



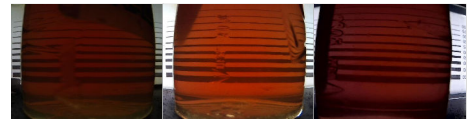
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	<b>0.39</b>	0.37	0.29
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	<b>▲ 18</b>	52	47

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	<b>45.2</b>	45.6	45.6
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	<b>7.3</b>	7.3	7.3
Viscosity Index (VI)	Scale	ASTM D2270*	104	<b>123</b>	122	122

## SAMPLE IMAGES

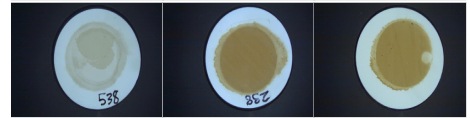
Color



Bottom



MPC



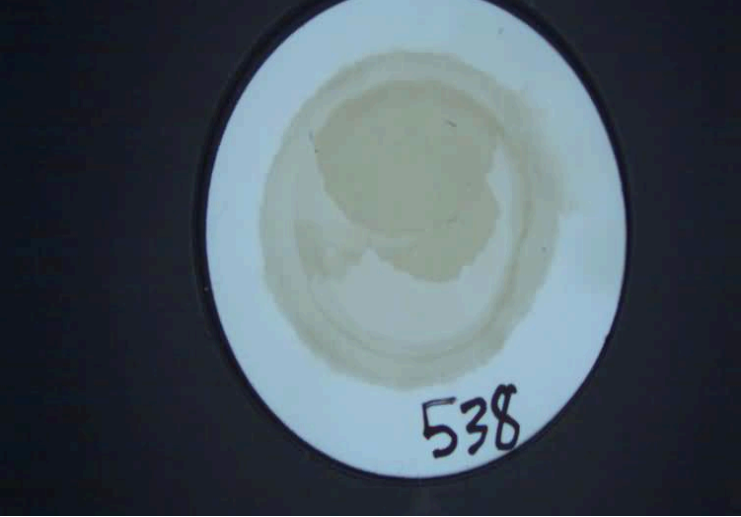
ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080846 **Received** : 26 Jan 2024  
**Lab Number** : **02611538** **Diagnosed** : 30 Jan 2024  
**Unique Number** : 5720633 **Diagnostician** : Bill Quesnel  
**Test Package** : IND 2 ( Additional Tests: KV100, MPC, VI )

**ROPAK PACKAGING CANADA**  
 2240 WYECROFT RD  
 OAKVILLE, ON  
 CA L6L 6M1  
 Contact: Frank Maio  
 Frank.Maio@mauserpackaging.com  
 T: (905)465-9019  
 F:

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.

MPC (Varnish Test)



Sample Color & Clarity



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