

Machine Id  
**IMM #13 (S/N 2118314)**

Component  
**Hydraulic System**

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

**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

**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>PC0080841</b>	PC0076915	PC0062451
Sample Date	Client Info			<b>15 Jan 2024</b>	11 Jul 2023	21 Sep 2022
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	4
Oil Changed	Client Info			<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ATTENTION

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>&lt;1</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>	0	0
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>60	<b>1</b>	1	2
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

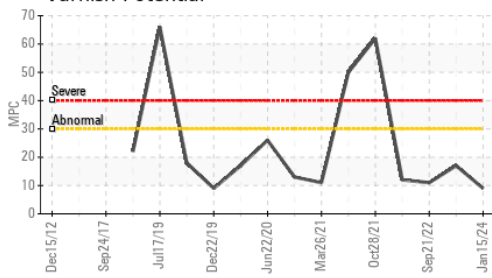
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>2</b>	2	0
Calcium	ppm	ASTM D5185(m)	50	<b>17</b>	31	32
Phosphorus	ppm	ASTM D5185(m)	330	<b>429</b>	365	351
Zinc	ppm	ASTM D5185(m)	430	<b>230</b>	365	354
Sulfur	ppm	ASTM D5185(m)	760	<b>997</b>	744	768
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>	<1	<1
Sodium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0

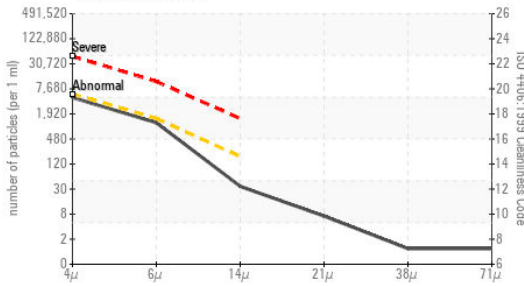
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>4138</b>	▲ 10537	▲ 5906
Particles >6µm		ASTM D7647	>1300	<b>1034</b>	▲ 2527	▲ 1985
Particles >14µm		ASTM D7647	>160	<b>31</b>	76	109
Particles >21µm		ASTM D7647	>40	<b>6</b>	21	31
Particles >38µm		ASTM D7647	>10	<b>1</b>	3	2
Particles >71µm		ASTM D7647	>3	<b>1</b>	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/17/12</b>	▲ 21/19/13	▲ 20/18/14

# OIL ANALYSIS REPORT

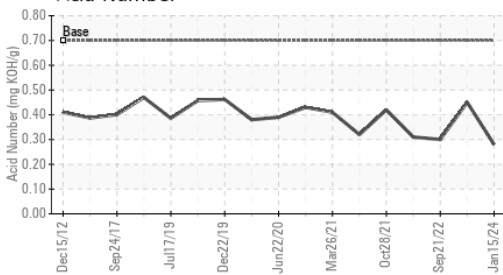
Varnish Potential



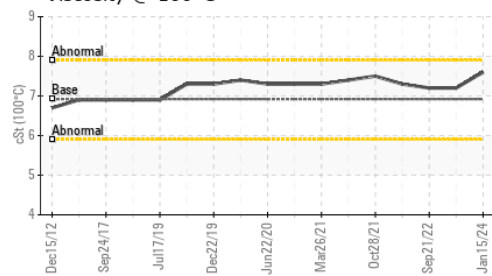
Particle Count



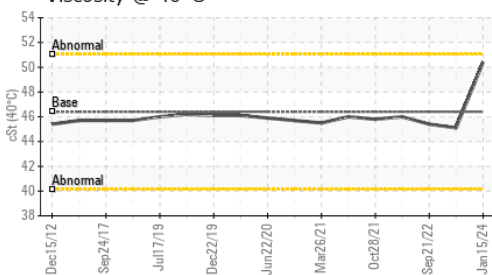
Acid Number



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>0.28</b>	0.45	0.30
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	<b>9</b>	▲ 17	11

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	▲ LIGHT	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>	VLITE	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>50.4</b>	45.1	45.4
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	<b>7.6</b>	7.2	7.2
Viscosity Index (VI)	Scale	ASTM D2270*	104	<b>114</b>	120	119

SAMPLE IMAGES

	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter				no image	no image
MPC					



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080841 **Received** : 26 Jan 2024  
**Lab Number** : **02611520** **Diagnosed** : 29 Jan 2024  
**Unique Number** : 5720615 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KV100, MPC, VI )

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.

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

MPC (Varnish Test)



Sample Color & Clarity



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