

**NORMAL**



Machine Id  
**IMM #27 (S/N H43A0400020)**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX AW 46 (1000 LTR)**

**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>PC0087481</b>	PC0080865	PC0076978
Sample Date	Client Info			<b>20 Jun 2024</b>	15 Jan 2024	11 Jul 2023
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>Not Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	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)	>20	<b>3</b>	1	<1
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	0	0
Nickel	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
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)	>20	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>20	<b>5</b>	<1	1
Tin	ppm	ASTM D5185(m)	>20	<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

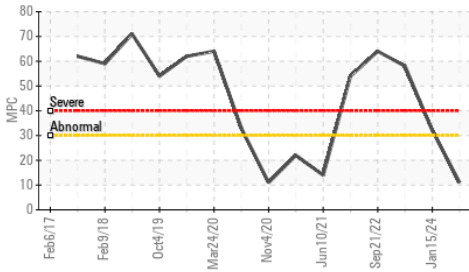
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>2</b>	<1	1
Calcium	ppm	ASTM D5185(m)	50	<b>63</b>	33	19
Phosphorus	ppm	ASTM D5185(m)	330	<b>334</b>	328	334
Zinc	ppm	ASTM D5185(m)	430	<b>422</b>	316	259
Sulfur	ppm	ASTM D5185(m)	760	<b>780</b>	742	612
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	0	<1
Sodium	ppm	ASTM D5185(m)		<b>2</b>	0	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	<1

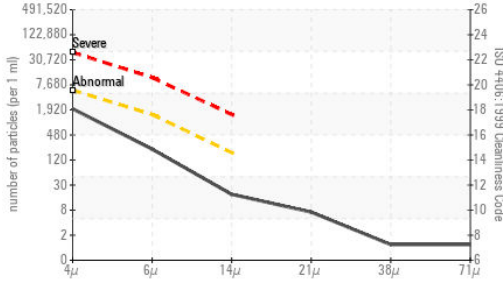
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>1784</b>	7440	6714
Particles >6µm		ASTM D7647	>1300	<b>193</b>	1031	1070
Particles >14µm		ASTM D7647	>160	<b>16</b>	30	57
Particles >21µm		ASTM D7647	>40	<b>6</b>	7	12
Particles >38µm		ASTM D7647	>10	<b>1</b>	1	1
Particles >71µm		ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>18/15/11</b>	20/17/12	20/17/13

# OIL ANALYSIS REPORT

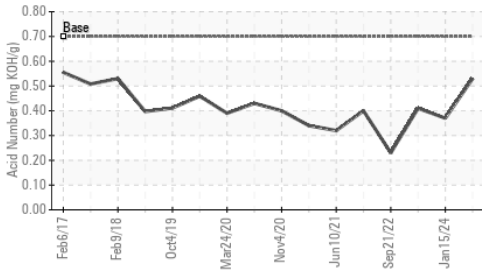
Varnish Potential



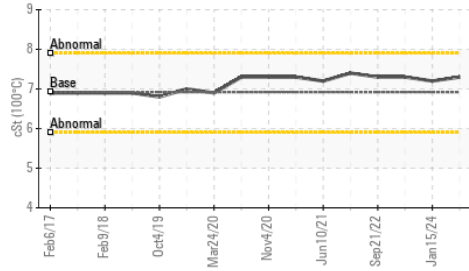
Particle Count



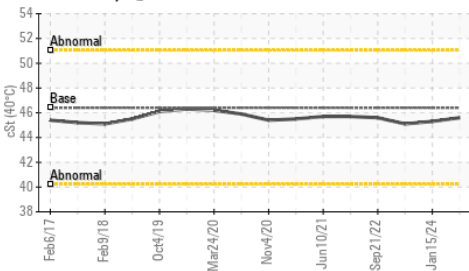
Acid Number



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>0.53</b>	0.37	0.41
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	<b>11</b>	▲ 32	▲ 58

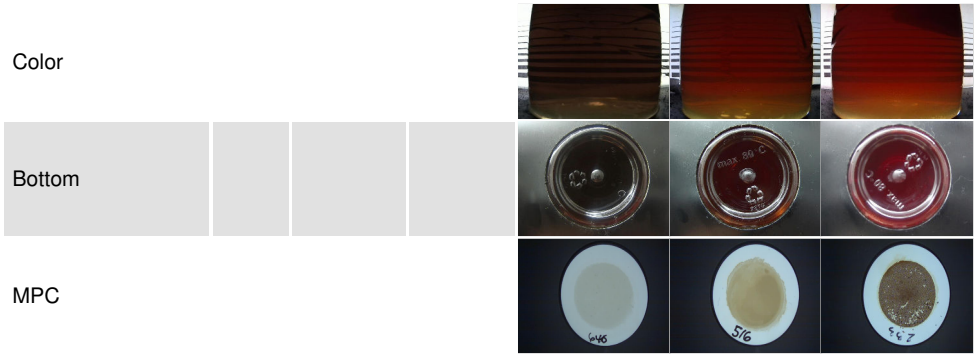
**VISUAL** method limit/base current history1 history2

White Metal	scalar	Visual*	NONE	<b>VLITE</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>45.6</b>	45.3	45.1
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	<b>7.3</b>	7.2	7.3
Viscosity Index (VI)	Scale	ASTM D2270*	104	<b>122</b>	119	124

**SAMPLE IMAGES** method limit/base current history1 history2

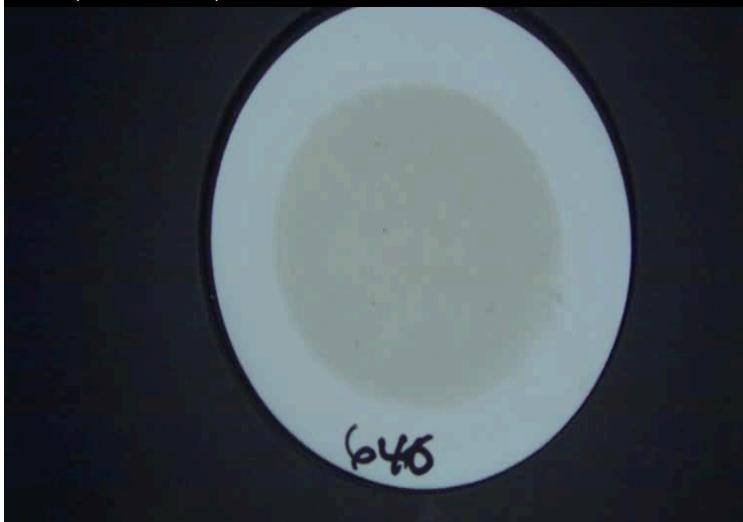


**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0087481  
**Lab Number** : 02647646  
**Unique Number** : 5813198  
**Test Package** : IND 2 ( Additional Tests: Bottom, KV100, MPC, TAN Man, VI )  
**Received** : 12 Jul 2024  
**Tested** : 15 Jul 2024  
**Diagnosed** : 16 Jul 2024 - Kevin Marson

**ROPAK PACKAGING CANADA**  
 2240 WYECROFT RD  
 OAKVILLE, ON  
 CA L6L 6M1  
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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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