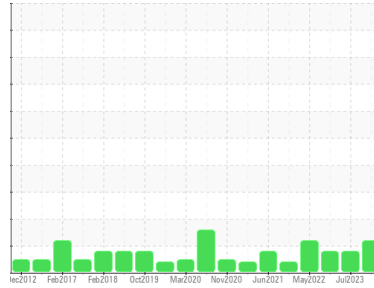




Machine Id
IMM #2 (S/N 6259457)

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX AW 46 (2000 LTR)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. 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

There is a light amount of silt (particulates < 14 microns in size) present in the oil. 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	PC0076979	PC0076952	PC0062455
Sample Date	Client Info	14 Jan 2024	11 Jul 2023	21 Sep 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	60
Oil Changed	Client Info	N/A	N/A	Changed
Sample Status		ATTENTION	SEVERE	SEVERE

CONTAMINATION method limit/base current history1 history2

Water	WC Method	>0.05	NEG	NEG	NEG
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WEAR METALS method limit/base current history1 history2

Iron	ppm	ASTM D5185(m)	>20	0	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	0	0
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	<1	1	<1
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185(m)	0	0	0	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	0
Calcium	ppm	ASTM D5185(m)	50	41	19	21
Phosphorus	ppm	ASTM D5185(m)	330	341	335	421
Zinc	ppm	ASTM D5185(m)	430	394	279	223
Sulfur	ppm	ASTM D5185(m)	760	772	638	884
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

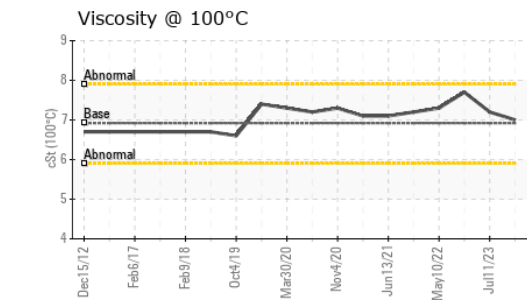
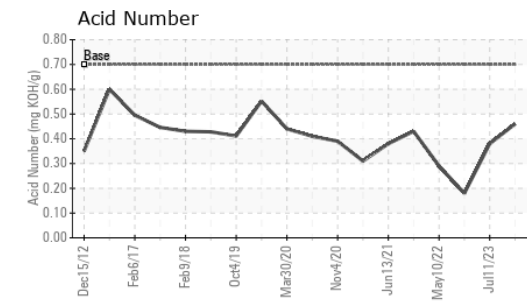
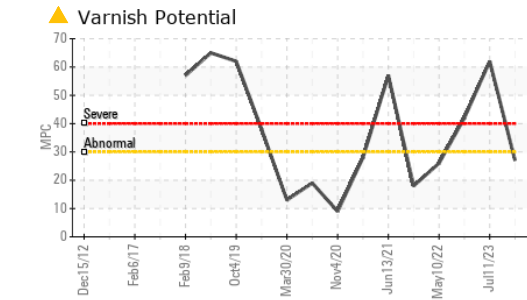
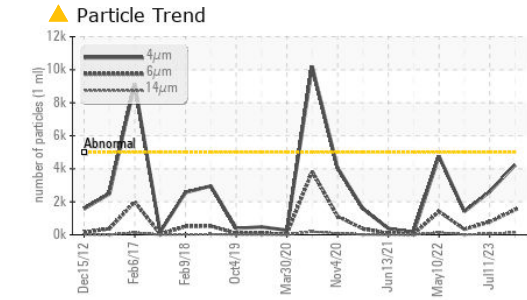
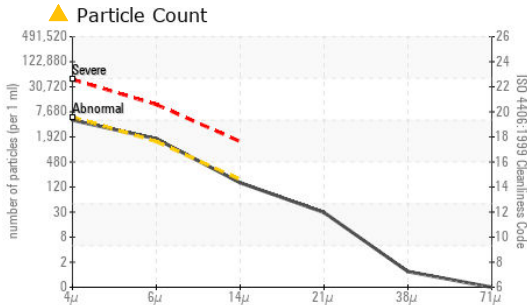
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m)	>15	0	<1	<1
Sodium	ppm	ASTM D5185(m)		0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

FLUID CLEANLINESS method limit/base current history1 history2

Particles >4µm	ASTM D7647	>5000	4226	2616	1412
Particles >6µm	ASTM D7647	>1300	▲ 1511	785	332
Particles >14µm	ASTM D7647	>160	134	58	16
Particles >21µm	ASTM D7647	>40	26	11	2
Particles >38µm	ASTM D7647	>10	1	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 19/18/14	19/17/13	18/16/11

OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.46	0.38	0.18
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	27	62	42

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 D7279(m)	46.4	44.0	45.0	50.2
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	7	7.2	7.7
Viscosity Index (VI)	Scale	ASTM D2270*	104	117	120	118

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076979 **Received** : 26 Jan 2024
Lab Number : **02611513** **Diagnosed** : 29 Jan 2024
Unique Number : 5720608 **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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