

Machine Id
IMM #22 (S/N 6364927)
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (2000 LTR)

DIAGNOSIS

Recommendation

We advise that you check for visible metal particles in the oil. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

Copper ppm levels are abnormal. Iron ppm levels are noted. Lead ppm levels are marginal. Light concentration of visible metal present. Oil cooler core leaching or motor piston wear is indicated.

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.

Particle Filter (Magn: 100 x)



SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0087486	PC0080868	PC0076924
Sample Date	Client Info			20 Jun 2024	15 Jan 2024	11 Jul 2023
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Oil Changed	Client Info			Not Chngd	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ABNORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	3	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	<1	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	0
Lead	ppm	ASTM D5185(m)	>20	6	0	0
Copper	ppm	ASTM D5185(m)	>20	39	<1	2
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

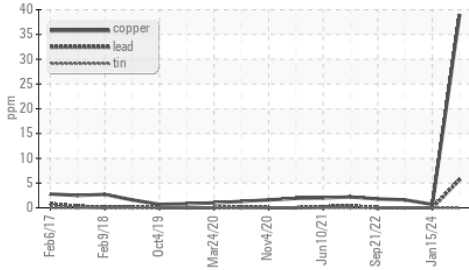
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	2	0	<1
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	0	2	<1	<1
Calcium	ppm	ASTM D5185(m)	50	69	39	15
Phosphorus	ppm	ASTM D5185(m)	330	318	335	319
Zinc	ppm	ASTM D5185(m)	430	382	377	248
Sulfur	ppm	ASTM D5185(m)	760	734	744	596
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	1	<1	<1
Sodium	ppm	ASTM D5185(m)		3	0	<1
Potassium	ppm	ASTM D5185(m)	>20	2	<1	<1

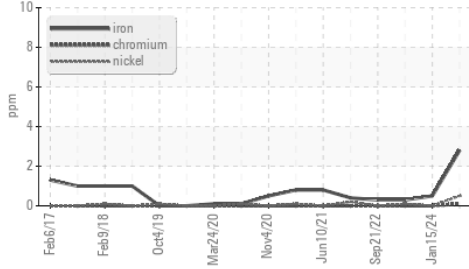
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	607	▲ 56625	1146	
Particles >6µm	ASTM D7647	>1300	134	▲ 12391	255	
Particles >14µm	ASTM D7647	>160	12	155	20	
Particles >21µm	ASTM D7647	>40	3	13	6	
Particles >38µm	ASTM D7647	>10	1	0	0	
Particles >71µm	ASTM D7647	>3	0	0	0	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	16/14/11	▲ 23/21/14	17/15/11	

OIL ANALYSIS REPORT

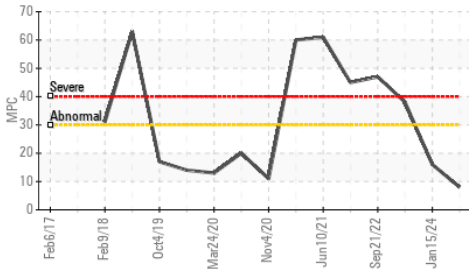
▲ Non-ferrous Metals



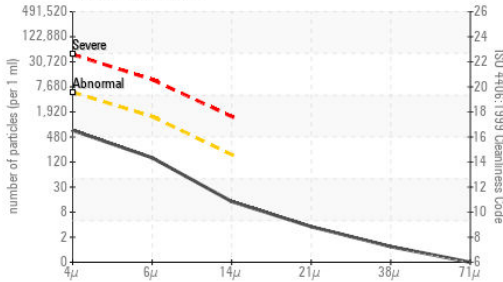
● Ferrous Alloys



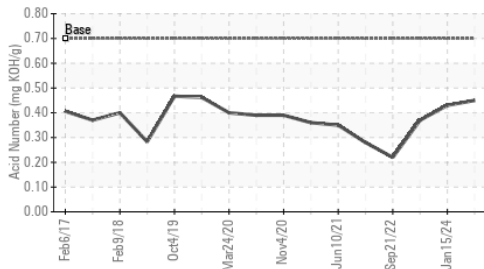
Varnish Potential



Particle Count



Acid Number

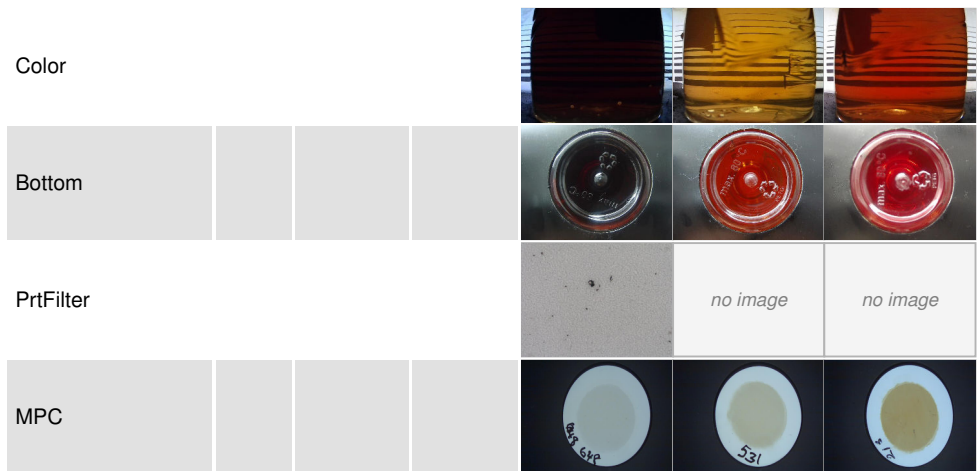


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.45	0.43	0.37
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	8	▲ 16	▲ 38

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ VLITE	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	VLITE	NONE	VLITE
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	46.1	45.3	44.7
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	7.4	7.3	7.1
Viscosity Index (VI)	Scale	ASTM D2270*	104	123	123	118

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0087486
Lab Number : **02647648**
Unique Number : 5813200
Test Package : IND 2 (Additional Tests: Bottom, BottomAnalysis, FILTERPATCH, KV100, MPC, PrtFilter, TAN Man, WContact: Frank Maio

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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