

OIL ANALYSIS REPORT

Planer Mill/Package Maker 2 [Planer Mill^Package Maker 2] PACKAGE MAKER 2 HPU Component

Hydraulic System

PETRO CANADA HYDREX AW 68 (126 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

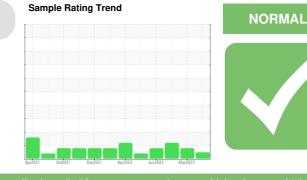
All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. 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.



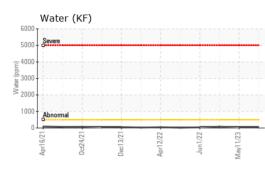
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0111696	PCA0079483	PCA0079414
Sample Date		Client Info		13 Nov 2023	11 May 2023	14 Feb 2023
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Filtered
Sample Status				NORMAL	ATTENTION	ATTENTION
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	0	<1
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	1	0
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	<1	<1	<1
Tin	ppm	ASTM D5185m	>20	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	0	0	0 0 <1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 0	0 6	0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0	0 6 0 0 2	0 0 0 <1	0 0 <1 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 50	0 6 0 2 51	0 0 0 <1 57	0 0 <1 0 <1 55
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330	0 6 0 2 51 314	0 0 0 <1 57 346	0 0 <1 0 <1 55 321
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 50 330 430	0 6 0 2 51 314 403	0 0 0 <1 57 346 419	0 0 <1 0 <1 55 321 399
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330	0 6 0 2 51 314	0 0 0 <1 57 346	0 0 <1 0 <1 55 321
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 50 330 430	0 6 0 2 51 314 403	0 0 0 <1 57 346 419	0 0 <1 0 <1 55 321 399
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330 430 760	0 6 0 2 51 314 403 796	0 0 0 <1 57 346 419 663	0 0 <1 0 <1 55 321 399 707
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330 430 760	0 6 0 2 51 314 403 796 current	0 0 0 <1 57 346 419 663 history1	0 0 <1 0 <1 55 321 399 707 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ypm ypm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 0 0 50 330 430 760	0 6 0 2 51 314 403 796 current	0 0 0 <1 57 346 419 663 history1 1 0 0	0 0 <1 0 <1 55 321 399 707 history2 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAM Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ypm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 0 50 330 430 760 limit/base >15	0 6 0 2 51 314 403 796 current <1 0 <1 0.005	0 0 0 <1 57 346 419 663 history1 1 0	0 0 <1 0 <1 55 321 399 707 history2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ypm ypm	ASTM D5185m ASTM D5185m	0 0 0 50 330 430 760 limit/base >15	0 6 0 2 51 314 403 796 current <1 0 <1	0 0 0 <1 57 346 419 663 history1 1 0 0	0 0 <1 0 <1 55 321 399 707 history2 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAM Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ypm ypm	ASTM D5185m ASTM D6304 ASTM D6304	0 0 0 0 50 330 430 760 binit/base >15 >20 >0.05	0 6 0 2 51 314 403 796 current <1 0 <1 0.005	0 0 0 1 57 346 419 663 history1 1 0 0 0 0.004	0 0 <1 55 321 399 707 history2 <1 <1 0 0.007
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ypm ypm	ASTM D5185m ASTM D6304 ASTM D6304	0 0 0 0 50 330 430 760 Iimit/base >15 >20 >0.05 >500 Iimit/base	0 6 0 2 51 314 403 796 current <1 0 <1 0.005 52.2	0 0 0 -1 57 346 419 663 history1 1 0 0 0.004 41.5	0 0 <1 0 <1 55 321 399 707 history2 <1 <1 <1 0 0.007 79.9

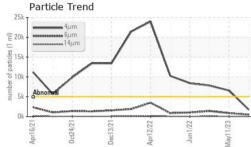
Particles >4µm	ASTM D7647	>5000	1741	6573	▲ 7804
Particles >6µm	ASTM D7647	>1300	481	871	1 396
Particles >14µm	ASTM D7647	>160	39	42	101
Particles >21µm	ASTM D7647	>40	10	12	28
Particles >38µm	ASTM D7647	>10	1	1	4
Particles >71µm	ASTM D7647	>3	0	0	1
Oil Cleanliness	ISO 4406 (c)	>19/17/14	18/16/12	▲ 20/17/13	2 0/18/14
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D8045	0.60	0.29	0.29	0.32

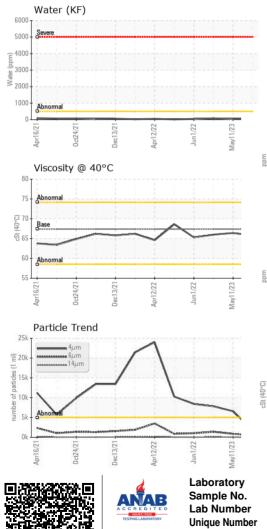
mg KOH/g ASTM D8045 0.60



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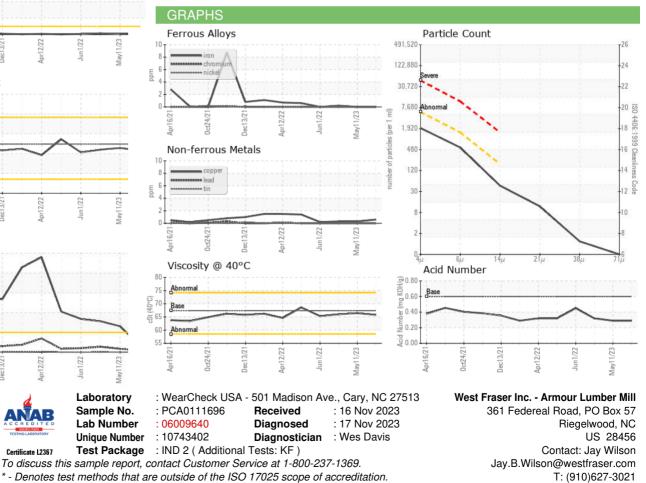






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	67.4	65.8	66.4	66.0
SAMPLE IMAG	iES	method	limit/base	current	history1	history2
Color				P Michael	PCA007943	

Bottom



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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