

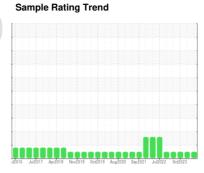
OIL ANALYSIS REPORT



KEMP QUARRIES / NEOSHO [69885] WL111

Component **Hydraulic System**

PETRO CANADA HYDREX AW 68 (





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: PM-2 changed filters)

All component wear rates are normal.

Contamination

There is no indication of any contamination in the fluid.

Fluid Condition

The condition of the fluid is acceptable for the time

Company Comp	REX AW 68 (C	GAL)	al2016 Jul201	7 Apr2018 Nov2018 Oct	019 Aug2020 Sep2021 Jul2022	Oct2023	
Sample Date Client Info 21 May 2024 06 Feb 2024 10 Oct 20 Machine Age hrs Client Info 30720 30222 29750 Oil Age hrs Client Info 30720 30222 29750 Oil Age hrs Client Info 30720 30222 29750 Oil Changed Client Info N/A N/A N/A Changed NORMAL	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 30720 30222 29750 Dil Age hrs Client Info 30720 30222 29750 Dil Age hrs Client Info 30720 30222 29750 Dil Changed Client Info N/A N/A N/A Changed Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NOR	Sample Number		Client Info		PCA0108725	PCA0086529	PCA0084709
Dil Age	Sample Date		Client Info		21 May 2024	06 Feb 2024	10 Oct 2023
Contamper Cont	Machine Age	hrs	Client Info		30720	30222	29750
NORMAL N	Oil Age	hrs	Client Info		30720	30222	29750
CONTAMINATION method limit/base current history1 history1 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Chromium ppm ASTM D5185m >20 6 6 3 Chromium ppm ASTM D5185m >10 <1	Oil Changed		Client Info		N/A	N/A	Changed
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >20 6 6 3 Chromium ppm ASTM D5185m >10 <1 <1 <1 Nickel ppm ASTM D5185m >10 <1 <1 <1 Silver ppm ASTM D5185m 0 0 0 <1 Aluminum ppm ASTM D5185m >10 <1 0 <1 Aluminum ppm ASTM D5185m >10 <1 0 <1 Lead ppm ASTM D5185m >10 <1 0 <1 Capper ppm ASTM D5185m >10 <1 0 <1 Vanadium ppm ASTM D5185m 0 <1 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1<	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >20 6 6 3 Chromium ppm ASTM D5185m >10 <1	CONTAMINATI	ION	method	limit/base	current	history1	history2
Chromium	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium	WEAR METALS	S	method	limit/base	current	history1	history2
ASTM D5185m D	ron	ppm	ASTM D5185m	>20	6	6	3
Nicke ppm	Chromium		ASTM D5185m	>10	<1	<1	<1
Description	Nickel		ASTM D5185m	>10	<1	<1	<1
Saliver	Titanium		ASTM D5185m		0	0	<1
Aluminum							
Lead	Aluminum		ASTM D5185m	>10	2	1	2
Copper					<1	0	<1
Proceedings Process				>75			
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 <1 ADDITIVES method limit/base current history1 history1 ADDITIVES method limit/base current history1 history1 ADDITIVES method limit/base current history1 history1 Barium ppm ASTM D5185m 0 0 0 9 Molybdenum ppm ASTM D5185m 0 16 15 20 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 0 247 246 266 Calcium ppm ASTM D5185m 50 546 529 606 Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 </td <td>• •</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	• •						
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Boron							
Description	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 16 15 20 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 0 247 246 266 Calcium ppm ASTM D5185m 50 546 529 606 Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 CONTAMINANTS method limit/base current history1 history1 CONTAMINANTS method limit/base current history1 history1 Solit ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m	Boron	ppm	ASTM D5185m	0	2	3	4
Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 0 247 246 266 Calcium ppm ASTM D5185m 50 546 529 606 Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m >20 2 1 0 Potassium ppm ASTM D5185m >20 2 0 2 VISUAL method limit/base current history1 history1 White Metal scalar *Visual NO	Barium	ppm	ASTM D5185m	0	0	0	9
Magnesium ppm ASTM D5185m 0 247 246 266 Calcium ppm ASTM D5185m 50 546 529 606 Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m 2 1 0 Potassium ppm ASTM D5185m >20 2 0 2 VISUAL method limit/base current history1 history1 history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <td>16</td> <td>15</td> <td>20</td>	Molybdenum	ppm	ASTM D5185m	0	16	15	20
Calcium ppm ASTM D5185m 50 546 529 606 Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m >20 2 1 0 Potassium ppm ASTM D5185m >20 2 0 2 VISUAL method limit/base current history1 history1 history1 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE	Manganese	ppm	ASTM D5185m	0	<1	0	0
Calcium ppm ASTM D5185m 50 546 529 606 Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 Sodium ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m >20 2 1 0 Potassium ppm ASTM D5185m >20 2 1 0 Potassium ppm ASTM D5185m >20 2 0 2 VISUAL method limit/base current history1 history1 White Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visua	Magnesium	ppm	ASTM D5185m	0	247	246	266
Phosphorus ppm ASTM D5185m 330 586 596 600 Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 history1 Sodium ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m >20 2 1 0 Potassium ppm ASTM D5185m >20 2 1 0 Potassium ppm ASTM D5185m >20 2 0 2 VISUAL method limit/base current history1 history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE NONE	<u> </u>		ASTM D5185m	50	546	529	606
Zinc ppm ASTM D5185m 430 693 726 726 Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m 2 1 0 0 Potassium ppm ASTM D5185m >20 2 0 2 VISUAL method limit/base current history1 history1 White Metal scalar *Visual 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 </td <td>Phosphorus</td> <td></td> <td></td> <td>330</td> <td></td> <td>596</td> <td>600</td>	Phosphorus			330		596	600
Sulfur ppm ASTM D5185m 760 2295 2096 2349 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 7 7 Sodium ppm ASTM D5185m 2 1 0 Potassium ppm ASTM D5185m 20 2 0 2 VISUAL method limit/base current history1 history2 2 0 2 2 0 2			ASTM D5185m	430		726	726
Soliticon	Sulfur			760	2295	2096	2349
Sodium ppm ASTM D5185m 2 1 0 Potassium ppm ASTM D5185m >20 2 1 0 VISUAL method limit/base current history1 history1 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 NOR NORM NORM NORML	CONTAMINAN	TS	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 2 1 0 Potassium ppm ASTM D5185m >20 2 1 0 VISUAL method limit/base current history1 history1 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 NOR NORM NORM NORML	Silicon	ppm	ASTM D5185m	>20	8	7	7
Potassium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history1 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 NORM NORML NORML<						1	
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Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NORML NORM	VISUAL		method	limit/base	current	history1	history2
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Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORML		scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML	Debris	scalar		NONE		NONE	NONE
Appearance scalar *Visual NORML	Sand/Dirt	scalar		NONE	NONE	NONE	NONE
Odor scalar *Visual NORML NORML NORML NORML							NORML
	• •						NORML
LITUISITION VVAICE SCAIAT VISUAL 20.1 INCH INCH INCH	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

NEG

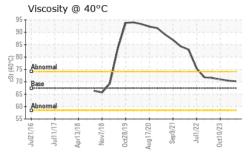
NEG

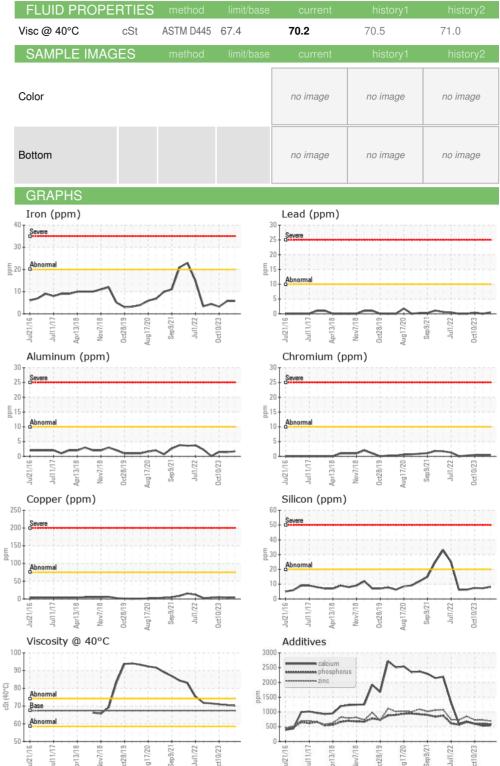
scalar *Visual

NEG



OIL ANALYSIS REPORT









Sample No. Lab Number : 06193180 Unique Number : 11049932

: PCA0108725

Test Package : MOB 1

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received : 28 May 2024 **Tested** : 30 May 2024 Diagnosed : 30 May 2024 - Sean Felton

19148 Ingersol Lane Neosho, MO

neosho@kempstone.com

Kemp Quarries - Kemp Stone - Neosho

US 64850 Contact:

Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

Submitted By:

T:

F: