

## **OIL ANALYSIS REPORT**

## Area **KEMP** QUARRIES / BCS - STILLWELL [68279] WL144

Front Differential

PETRO CANADA HYDREX AW 68 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment:  $\mbox{PM-2}$  sampled fluid )

#### Wear

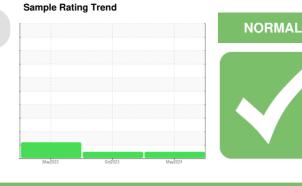
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### **Fluid Condition**

The condition of the oil is acceptable for the time in service.



SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0109093	PCA0086991	PCA0085708
Sample Date		Client Info		20 May 2024	17 Oct 2023	05 May 2023
Machine Age	hrs	Client Info		23340	22822	22358
Oil Age	hrs	Client Info		23340	22822	22358
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	223	274	<b>5</b> 17
Chromium	ppm	ASTM D5185m	>10	2	1	3
Nickel	ppm	ASTM D5185m	>10	2	3	5
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		1	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	2	1
Lead	ppm	ASTM D5185m	>25	3	3	8
Copper	ppm	ASTM D5185m	>100	9	10	23
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	6	8	29
Barium	ppm	ASTM D5185m	0	0	9	0
Molybdenum	ppm	ASTM D5185m	0	13	8	17
Manganese	ppm	ASTM D5185m	0	2	2	4
Magnesium	ppm	ASTM D5185m	0	137	51	84
Calcium	ppm	ASTM D5185m	50	766	818	3046
Phosphorus	ppm	ASTM D5185m	330	491	508	874
Zinc	ppm	ASTM D5185m	430	599	600	1055
Sulfur	ppm	ASTM D5185m	760	1592	1707	3327
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	10	11	15
Sodium	ppm	ASTM D5185m		<1	0	0
Potassium	ppm	ASTM D5185m	>20	1	1	2
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
		*Visual	NORML		NORML	NORML

>.2

NEG

NEG

NEG

NEG

**Emulsified Water** 

scalar

scalar \*Visual

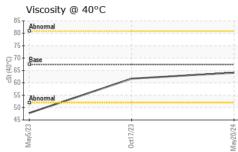
\*Visual

NEG

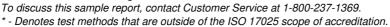
NEG



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	FLUID PR	OPERTIES	method	limit/base	current	history1	history			
	Visc @ 40°C	cSt	ASTM D445	67.4	64.1	61.7	47.8			
	SAMPLE	IMAGES	method	limit/base	current	history1	history			
	Color				no image	no image	no image			
	Bottom				no image	no image	no image			
	GRAPHS									
	Iron (ppm)			120	Lead (ppm)					
	1500 Severe			100	Severe					
	1000-4			80 E 00						
bpi	1000 - Abnormal			& 60 40	1					
	500 - Abnormal			20	Abnormal					
	0	/23 -				/23				
	May5/23	0ct17/23		May20/24	May5/23	0ct17/23				
	Aluminum (	ppm)		Chromium (ppm)						
	120 100 Severe			25	Courses.					
	80			20	)					
000 00 00	60			<sup>Ed</sup> 15	Abaamaal					
	40 20 20	1		10						
	0									
	May5/23	0ct17/23		May20/24	May5/23	0ct17/23				
	Copper (ppr	n)		250	Silicon (ppm)					
	200 - Severe			200	Severe					
5	150-			e <sup>150</sup>	)-					
0000	100 - Abnormal			100	Abnormal					
	50-			50	ų.					
	53 0	23		24	53	23				
	May5/23	0ct17/23		May20/24	May5/23	0ct17/23				
	Viscosity @ 40°C Additives									
	80 Abnormal	1		3500	calcium					
				2500	LIIIC	15				
	ට 70 - <b>Base</b> ਉ ਲੋ 60 -			2000 E 1500						
	50 Abnormal			1000	and the state of t					
	40	0ct17/23 +		0	, <b></b>					
	May5/23			May20/24	May5/23	0ct17/23				



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

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Certificate L2367

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