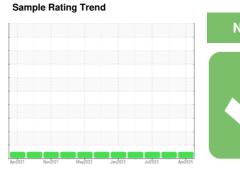


# **OIL ANALYSIS REPORT**





## KEMP QUARRIES / PRYOR STONE [67741] WL139 Component Transmission (Manual)

PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

## DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Pm2 performed. All oil samples taken. Engine oil, transmission oil, and all filters changed. )

Area

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the fluid.

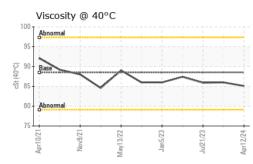
#### Fluid Condition

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

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0086658	PCA0086222	PCA0084051
Sample Date		Client Info		12 Apr 2024	07 Oct 2023	21 Jul 2023
Machine Age	hrs	Client Info		35426	34794	34308
Oil Age	hrs	Client Info		1118	486	1035
Oil Changed		Client Info		Changed	Oil Added	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	3	4	4
Chromium	ppm	ASTM D5185m	>5	<1	3	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>7	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	2	2
Lead	ppm	ASTM D5185m	>45	<1	0	0
Copper	ppm	ASTM D5185m	>225	<1	1	1
Tin	ppm	ASTM D5185m	>10	1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2	1	0
Barium	ppm	ASTM D5185m	0	0	0	0
	1-1-					
Molybdenum	ppm	ASTM D5185m	0	<1	2	<1
Molybdenum Manganese			0 9	<1 <1	2 0	<1 <1
-	ppm	ASTM D5185m				
Manganese	ppm ppm	ASTM D5185m ASTM D5185m	9	<1	0	<1
Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	9 1	<1 19	0 14	<1 23
Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 1 3131	<1 19 3424	0 14 3378	<1 23 3271
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 1 3131 1194	<1 19 3424 907	0 14 3378 828	<1 23 3271 891
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 1 3131 1194 1281	<1 19 3424 907 1094	0 14 3378 828 1102	<1 23 3271 891 1095
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 1 3131 1194 1281 3811 limit/base	<1 19 3424 907 1094 3815	0 14 3378 828 1102 3753	<1 23 3271 891 1095 4058
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	9 1 3131 1194 1281 3811 limit/base	<1 19 3424 907 1094 3815 current	0 14 3378 828 1102 3753 history1	<1 23 3271 891 1095 4058 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	9 1 3131 1194 1281 3811 Limit/base >125	<1 19 3424 907 1094 3815 current 8	0 14 3378 828 1102 3753 history1 9	<1 23 3271 891 1095 4058 history2 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	9 1 3131 1194 1281 3811 Limit/base >125	<1 19 3424 907 1094 3815 <u>current</u> 8 1	0 14 3378 828 1102 3753 history1 9 0	<1 23 3271 891 1095 4058 history2 7 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 ASTM D5185m	9 1 3131 1194 1281 3811 <i>limit/base</i> >125 >20	<1 19 3424 907 1094 3815 current 8 1 <1	0 14 3378 828 1102 3753 history1 9 0 2	<1 23 3271 891 1095 4058 history2 7 1 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ypm ypm ppm	ASTM D5185m ASTM D5185m	9 1 3131 1194 1281 3811 iimit/base >125 >20 iimit/base	<1 19 3424 907 1094 3815 <u>current</u> 8 1 <1 <1	0 14 3378 828 1102 3753 history1 9 0 2 2 history1	<1 23 3271 891 1095 4058 history2 7 1 0 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ypm ypm ppm p	ASTM D5185m ASTM D5185m	9 1 3131 1194 1281 3811 imit/base >125 >20 imit/base NONE	<1 19 3424 907 1094 3815 current 8 1 <1 <1 current NONE	0 14 3378 828 1102 3753 history1 9 0 2 2 history1 NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm VTS	ASTM D5185m ASTM D5185m XW Sual	9 1 3131 1194 1281 3811 <i>limit/base</i> >125 	<1 19 3424 907 1094 3815 current 8 1 <1 <1 current NONE NONE NONE	0 14 3378 828 1102 3753 history1 9 0 2 2 history1 NONE NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ypm ypm ppm p	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Yuisual *Visual	9 1 3131 1194 1281 3811 <i>limit/base</i> >125 	<1 19 3424 907 1094 3815 current 8 1 <1 <1 current NONE NONE NONE NONE	0 14 3378 828 1102 3753 history1 9 0 2 2 history1 NONE NONE NONE NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE NONE
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual	9 1 3131 1194 1281 3811 <i>limit/base</i> >125 	<1 19 3424 907 1094 3815 current 8 1 <1 <1 current NONE NONE NONE NONE NONE NONE NONE	0 14 3378 828 1102 3753 history1 9 0 2 2 history1 NONE NONE NONE NONE NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE NONE NONE NONE NONE
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual	9 1 3131 1194 1281 3811 <b>limit/base</b> >125 <b>limit/base</b> NONE NONE NONE NONE NONE NONE	<1 19 3424 907 1094 3815 current 8 1 <1	0 14 3378 828 1102 3753 history1 9 0 2 2 history1 NONE NONE NONE NONE NONE NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m XaSTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	9 1 3131 1194 1281 3811 <b>limit/base</b> >125 <b>limit/base</b> NONE NONE NONE NONE NONE NONE NONE	<1 19 3424 907 1094 3815 current 8 1 <1 current NONE NONE NONE NONE NONE NONE NONE NON	0 14 3378 828 1102 3753 history1 9 0 2 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm 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 ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	9 1 3131 1194 1281 3811 <b>limit/base</b> >125 >20 <b>limit/base</b> NONE NONE NONE NONE NONE NONE NONE NONE NONE	<1 19 3424 907 1094 3815 current 8 1 <1 <1 current NONE NONE NONE NONE NONE NONE NONE NON	0 14 3378 828 1102 3753 history1 9 0 2 history1 NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm 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 ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	9 1 3131 1194 1281 3811 <b>imit/base</b> >125 <b>imit/base</b> >20 <b>imit/base</b> NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE	<1 19 3424 907 1094 3815 current 8 1 <1 <1 current NONE NONE NONE NONE NONE NONE NONE NON	0 14 3378 828 1102 3753 history1 9 0 2 history1 NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE	<1 23 3271 891 1095 4058 history2 7 1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON



## **OIL ANALYSIS REPORT**



	FLUID PRC	PERTIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	88.5	85.1	86.0	85.9
	SAMPLE IN	IAGES	method	limit/base	current	history1	history2
6 4	Color				no image	no image	no image
Jul21/23 Apr12/24	Bottom				no image	no image	no image
	GRAPHS						
	Iron (ppm)			Lead (ppm)			
	Severe				Severe		
	and the second s			E C	Abnormal		
	100			4	10 - <b>1</b>		
		3			0	3 2	60 <del>4</del>
	Apr10/21 Nov9/21	May13/22	Jul21/23	Apr12/24	Apr10/21 Nov9/21	May13/22 Jan5/23	Jul21/23 Apr12/24
	Aluminum (pp				Chromium (p		
	40 - Severe				0 Severe		
	Abnormal			mqq	8		
				d	<sup>6</sup> Abnormal		
	10				2		$ \land $
	Apr10/21	May13/22 Jan5/23	Jul21/23	Apr12/24	Apr10/21	May13/22 Jan5/23	Jul21/23 Apr12/24
	Copper (ppm)	≥	~	A	Silicon (ppm)	$\geq$	r 4
	500 400			30			
	300			20	10 -		
	Abnormal			툍 15 10			
	100-			5	0-		
	Apr10/21	May13/22 -	Jul21/23	Apr12/24	Apr10/21	May13/22 Jan5/23 -	Jul21/23 -
	ĕ ≥ Viscosity @ 40	2	յոլ	Apr	a Additives	Mav	Jul
	<sup>100</sup> Abnormal			500			1
	95 -			400	10 + phosphor	us	
	()-090 Base 정 85		<u> </u>	300 E			
	80 - Abnormal			100	0-	Manager and the state of the second division	ANIAL CONTRACTOR OF THE REAL PROPERTY OF THE REAL P
	75 120 120	/22	/23	/24	3/21	/22	/23
	Apr10/21 Nov9/21	May13/22	Jul21/23 -	Apr12/24	Apr10/21 Nov9/21	May13/22 Jan5/23	Jul21/23 Apr12/24
Laboratory Sample No. Lab Number Unique Number Test Package		Rece Teste	ived : 22 d : 23	, NC 27513 2 Apr 2024 3 Apr 2024 Apr 2024 - Jona	-	Quarries - Pryo	r Stone - Pryor 1050 E 520 Rd Pryor, OK US 74361 Contact:

- 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)

Report Id: KEMPRY [WUSCAR] 06156471 (Generated: 04/24/2024 16:29:52) Rev: 1

Certificate L2367

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