

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

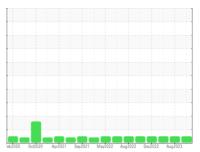


KEMP QUARRIES / RIVER VALLEY BACKBONE WL135

Component

Transmission (Manual)

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





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the fluid.

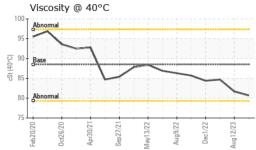
Fluid Condition

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

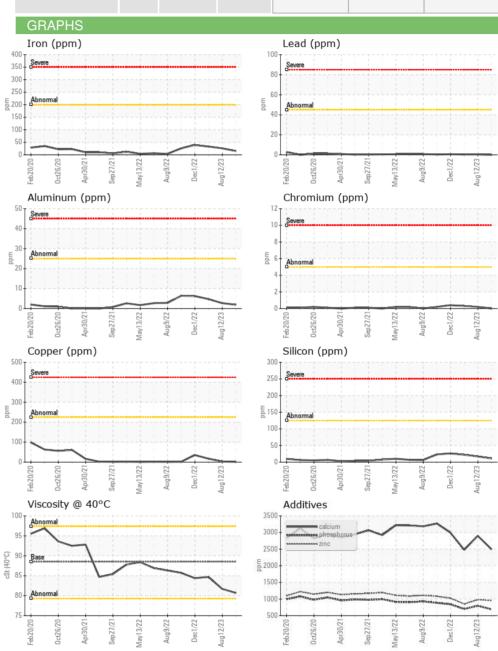
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0084859	PCA0084834	PCA0037136
Sample Date		Client Info		25 Oct 2023	12 Aug 2023	13 Jan 2023
Machine Age	hrs	Client Info		52934	52602	52005
Oil Age	hrs	Client Info		900	900	900
Oil Changed	0	Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	15	26	33
Chromium	ppm	ASTM D5185m	>5	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>7	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	3	5
		ASTM D5185m	>45	0	<1	<1
Lead	ppm			2	3	17
Copper Tin	ppm	ASTM D5185m ASTM D5185m	>225 >10	_	<1	
	ppm		>10	0		<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m	11	0	0	0
ADDITIVES Boron	10.10.100	method ASTM D5185m	limit/base	current 2	history1	history2 0
	ppm			0		
Barium	ppm	ASTM D5185m		-	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	0	2
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	1	14	16	20
Calcium	ppm	ASTM D5185m	3131	2495	2897	2479
Phosphorus	ppm	ASTM D5185m	1194	689	796	701
Zinc						
	ppm	ASTM D5185m	1281	954	979	851
Sulfur	ppm	ASTM D5185m ASTM D5185m	3811	954 2930	979 3666	851 2952
CONTAMINAN	ppm TS	ASTM D5185m method	3811 limit/base	2930 current	3666 history1	2952 history2
CONTAMINAN Silicon	ppm TS ppm	ASTM D5185m method ASTM D5185m	3811	2930 current 11	3666 history1	2952 history2 22
CONTAMINAN Silicon Sodium	ppm TS	ASTM D5185m method ASTM D5185m ASTM D5185m	3811 limit/base >125	2930 current 11 2	3666 history1 17 <1	2952 history2 22 <1
CONTAMINAN Silicon	ppm TS ppm	ASTM D5185m method ASTM D5185m	3811 limit/base	2930 current 11	3666 history1	2952 history2 22
CONTAMINAN Silicon Sodium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	3811 limit/base >125	2930 current 11 2	3666 history1 17 <1 0 history1	2952 history2 22 <1
CONTAMINANT Silicon Sodium Potassium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	3811 limit/base >125 >20	2930 current 11 2 0	3666 history1 17 <1 0 history1 NONE	2952 history2 22 <1 0 history2 NONE
CONTAMINAN Silicon Sodium Potassium VISUAL	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	3811 limit/base >125 >20 limit/base	2930 current 11 2 0 current	3666 history1 17 <1 0 history1	2952 history2 22 <1 0 history2
CONTAMINANT Silicon Sodium Potassium VISUAL White Metal	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	3811 limit/base >125 >20 limit/base NONE	2930 current 11 2 0 current NONE	3666 history1 17 <1 0 history1 NONE	2952 history2 22 <1 0 history2 NONE
CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	3811 limit/base >125 >20 limit/base NONE NONE	2930 current 11 2 0 current NONE NONE	3666 history1 17 <1 0 history1 NONE NONE	2952 history2 22 <1 0 history2 NONE NONE
CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm TS ppm ppm ppm scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE	2930 current 11 2 0 current NONE NONE NONE	3666 history1 17 <1 0 history1 NONE NONE NONE	2952 history2 22 <1 0 history2 NONE NONE NONE
CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm TS ppm ppm ppm scalar scalar scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE NONE	2930 current 11 2 0 current NONE NONE NONE NONE	3666 history1 17 <1 0 history1 NONE NONE NONE NONE NONE	2952 history2 22 <1 0 history2 NONE NONE NONE NONE NONE
CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm TS ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m wethod *Visual *Visual *Visual *Visual *Visual *Visual *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE NONE NONE NONE	2930 current 11 2 0 current NONE NONE NONE NONE NONE NONE NONE	3666 history1 17 <1 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	2952 history2 22 <1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	2930 current 11 2 0 current NONE NONE NONE NONE NONE NONE NONE NONE NONE	3666 history1 17 <1 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	2952 history2 22 <1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	2930 current 11 2 0 current NONE NONE	3666 history1 17 <1 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	2952 history2 22 <1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	2930 current 11 2 0 current NONE NONE NONE NONE NONE NONE NONE NO	3666 history1 17 <1 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	2952 history2 22 <1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm TS ppm ppm ppm scalar	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual	3811 limit/base >125 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	2930 current 11 2 0 current NONE NONE NONE NONE NONE NONE NONE NON	3666 history1 17 <1 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	2952 history2 22 <1 0 history2 NONE NONE NONE NONE NONE NONE NONE NON



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Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 1

: 06000151

: PCA0084859 : 10728511

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

: 06 Nov 2023 : 07 Nov 2023 : Wes Davis

Kemp Quarries - River Valley - Backbone

5600 S Hwy 253 Huntington, AR US 72940

Contact: backbone@rivervalleyquarries.com

T:

F:

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)