

OIL ANALYSIS REPORT

Sample Rating Trend







KEMP QUARRIES / RIVER VALLEY BACKBONE WL135

Component **Front Differential**

PETRO CANADA PRODURO TO-4 SAE 50 (--- 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

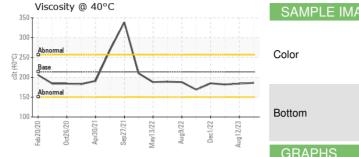
Fluid Condition

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

SAMPLE INFOR	AOLTAM		limit/base	May2022 Aug2022 Dec2022 CUrrent	Aug ²⁰²³ history1	history2
Sample Number		Client Info		PCA0084853	PCA0084840	PCA0037135
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	1110	Client Info		Not Changd	Not Changd	Not Changd
Sample Status		Oliciti IIIIO		NORMAL	NORMAL	NORMAL
	0	and the set	Parel Maria			
WEAR METAL		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	203	225	116
Chromium	ppm	ASTM D5185m		1	1	<1
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	7	6
Lead	ppm	ASTM D5185m	>13	0	<1	<1
Copper	ppm	ASTM D5185m	>103	12	14	6
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2	<1	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	1	1	2
Manganese	ppm	ASTM D5185m	0	2	2	1
Magnesium	ppm	ASTM D5185m	9	26	32	27
Calcium	ppm	ASTM D5185m	3114	2900	2949	3132
Phosphorus	ppm	ASTM D5185m	1099	912	936	1003
Zinc	ppm	ASTM D5185m	1245	1181	1176	1216
Sulfur	ppm	ASTM D5185m	7086	6397	7936	7765
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	57	73	40
Sodium	ppm	ASTM D5185m		2	1	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
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	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	213.9	186	184	182



OIL ANALYSIS REPORT



SAMPLE IMAGES	method limit/bas		current	history1	history2	
Color			no image	no image	no image	
Bottom			no image	no image	no image	

GRAPHS							<u>'</u>				
Iron (ppm)					Lead	d (ppm)					
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Feb20/20 Oct26/20 Apr30/21	Sep27/21	ndy13/22 Aug9/22	Dec1/22	Aug12/23	Feb 20/20	Oct26/20 Apr30/21	Sep27/21	May13/22	Aug9/22	Dec1/22	A12/22
Copper (ppm					Silico	on (ppm))	_			
100 T	THE		TT		6000						
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100	1				2000	/	\				
200 Severe Abnormal	+++			-	1000	/					
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Feb20/20 Oct26/20 Apr30/21	Sep27/21	Aug9/22	Dec1/22	Aug12/23	Feb 20/20	Oct26/20 Apr30/21	Sep27/21	May13/22	Aug9/22	Dec1/22	Aug 12/23
Viscosity @ 4		_				itives		_			
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Abnormal	/ \				3000	V					
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Abnormal			<u> </u>				~ 	A description	A STORY	Managa Tri	(Whiteham)
800 Base	Sep27/21	Aug9/22	Dec1/22	Aug12/23	1500	Oct26/20 - Apr30/21 -	Sep27/21	May13/22	Aug9/22	Dec1/22	Aun12/23



Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10728416 Test Package : MOB 1

: PCA0084853 : 06000056

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

Received Diagnosed Diagnostician : Wes Davis

: 06 Nov 2023 : 07 Nov 2023

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)