WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

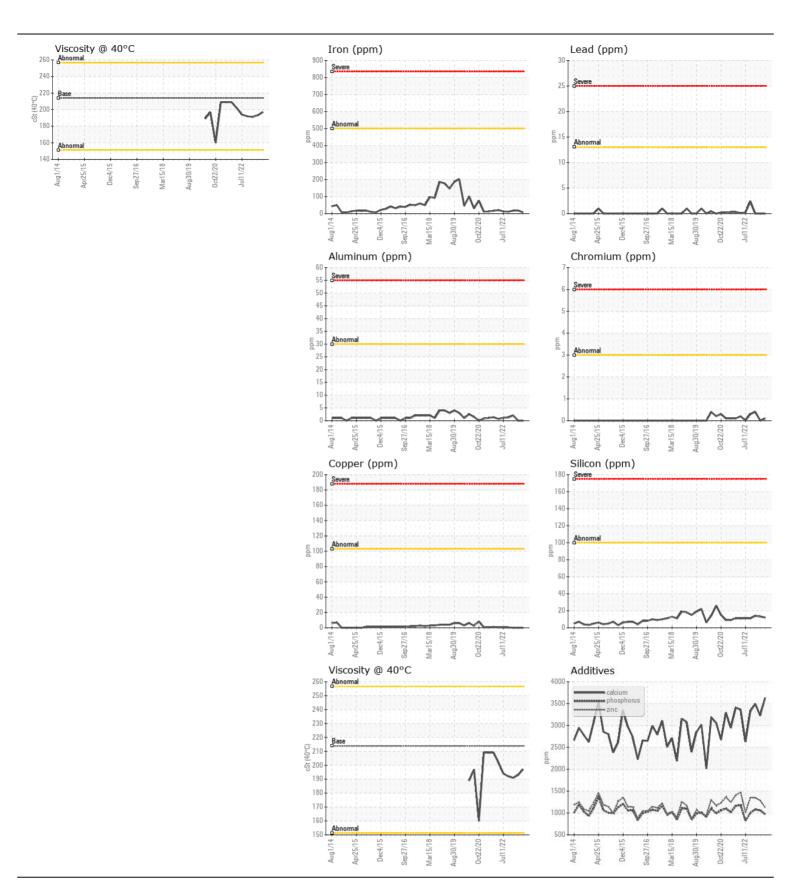


KEMP QUARRIES / RVM-BUTTERFIELD [68553]

WL081

Rear Differential

Resample at the next service interval to monitor. (Customer Sample Comment. PM-1 sampled fluid.) Sample Date Sample Date Cilent Info	PETRO CANADA PRODURO T	O-4 SAE 50	(G	AL)				
Resample at the next service interval to monitor. (Customer Sample Comment. PM-1 sampled fluid.) Sample Date Sample Date Cilent Info	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Date Cilent Into 07 May 2024 08 May 2022 01 Jul 2022 Machino Age Intro 07 May 2024 08 May 2022 01 Jul 2022 07 Jul	Resample at the next service interval to monitor. (Customer Sample Comment: PM-1 sampled fluid)	Sample Number		Client Info		PCA0108662	PCA0087074	PCA0085777
Oii Age hrs Client Info 0 0 0 0 0 0 0 0 0		Sample Date		Client Info		07 May 2024	08 Nov 2023	01 Jun 2023
Filter Age		Machine Age	hrs	Client Info		42798	42315	41808
Dil Changed Client Info NA Changed N/A		Oil Age	hrs	Client Info		42798	42315	41808
Filter Changed Client Info N/A		Filter Age	hrs	Client Info		0	0	0
Iron		Oil Changed		Client Info		N/A	Changed	N/A
Iron		Filter Changed		Client Info		N/A	N/A	N/A
Chromium ppm		Sample Status				NORMAL	NORMAL	NORMAL
Nickel ppm ASTM D5185m >3 0 0 0 0	WEAR	Iron	ppm	ASTM D5185m	>500	8	18	17
Nickel ppm ASTM D5185m 32 0 0 0 0 0	All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>3	<1	0	<1
Silver ppm ASTM D5185m >2 0 0 0 0 0 0 1 1 1 1		Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum		Titanium	ppm	ASTM D5185m	>2	0	0	0
Lead		Silver	ppm	ASTM D5185m	>2	0	0	0
Copper		Aluminum	ppm	ASTM D5185m	>30	0	0	2
Tin		Lead	ppm	ASTM D5185m	>13	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 0 0 0		Copper	ppm	ASTM D5185m	>103	0	0	0
White Metal Scalar Visual NONE NON		Tin	ppm	ASTM D5185m	>5	<1	0	<1
Yellow Metal scalar "Visual NONE N		Vanadium	ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m > 100 12 13 14		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 0 0 1		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Water WC Method S.2 NEG NEG NEG NEG	CONTAMINATION	Silicon	ppm	ASTM D5185m	>100	12	13	14
Water	There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	0	0	1
Debris Scalar *Visual NONE NORML NO		Water		WC Method	>.2	NEG	NEG	NEG
Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML N		Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance Scalar *Visual NORML		Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odor		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >.2 NEG NEG NEG		Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium ppm ASTM D5185m C D C		Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Boron ppm ASTM D5185m 2 0 0 0 0		Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
Barium ppm ASTM D5185m 0 1 0 0 Molybdenum ppm ASTM D5185m 0 0 0 1 Manganese ppm ASTM D5185m 0 0 0 1 Magnesium ppm ASTM D5185m 9 19 20 24 Calcium ppm ASTM D5185m 3114 3634 3225 3493 Phosphorus ppm ASTM D5185m 1099 973 1058 1080 Zinc ppm ASTM D5185m 1245 1125 1287 1344 Sulfur ppm ASTM D5185m 7086 4793 4363 5720 Visc @ 40°C cSt ASTM D445 213.9 197 193 191	FLUID CONDITION	Sodium	ppm	ASTM D5185m		<1	2	2
Barium ppm ASTM D5185m 0 1 0 0 Molybdenum ppm ASTM D5185m 0 0 0 1 Manganese ppm ASTM D5185m 0 <1	The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m	2	0	0	<1
Manganese ppm ASTM D5185m 0 <1		Barium	ppm	ASTM D5185m	0	1	0	0
Magnesium ppm ASTM D5185m 9 19 20 24 Calcium ppm ASTM D5185m 3114 3634 3225 3493 Phosphorus ppm ASTM D5185m 1099 973 1058 1080 Zinc ppm ASTM D5185m 1245 1125 1287 1344 Sulfur ppm ASTM D5185m 7086 4793 4363 5720 Visc @ 40°C cSt ASTM D445 213.9 197 193 191		Molybdenum	ppm	ASTM D5185m	0	0	0	1
Calcium ppm ASTM D5185m 3114 3634 3225 3493 Phosphorus ppm ASTM D5185m 1099 973 1058 1080 Zinc ppm ASTM D5185m 1245 1125 1287 1344 Sulfur ppm ASTM D5185m 7086 4793 4363 5720 Visc @ 40°C cSt ASTM D445 213.9 197 193 191		Manganese	ppm	ASTM D5185m	0	<1	0	<1
Phosphorus ppm ASTM D5185m 1099 973 1058 1080 Zinc ppm ASTM D5185m 1245 1125 1287 1344 Sulfur ppm ASTM D5185m 7086 4793 4363 5720 Visc @ 40°C cSt ASTM D445 213.9 197 193 191		Magnesium	ppm	ASTM D5185m	9	19	20	24
Zinc ppm ASTM D5185m 1245 1125 1287 1344 Sulfur ppm ASTM D5185m 7086 4793 4363 5720 Visc @ 40°C cSt ASTM D445 213.9 197 193 191		Calcium	ppm				3225	
Sulfur ppm ASTM D5185m 7086 4793 4363 5720 Visc @ 40°C cSt ASTM D445 213.9 197 193 191		Phosphorus	ppm			973		
Visc @ 40°C cSt ASTM D445 213.9 197 193 191			ppm					
Janest M. M. M. H. D. H.	Report Id: KEMPLIR (WLISCAR) 06177983 (Generated: 05/15/2024 16:13:46) Rev. 1	Visc @ 40°C	cSt	ASTM D445	213.9	197		191 hmitted Bv







Certificate L2367

Laboratory Sample No.

Lab Number : 06177983 Unique Number : 11029309 Test Package : MOB 1

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0108662 Received **Tested**

Diagnosed

Kemp Quarries - RVM-Butterfield

8651 Farm Rd 2115 Purdy, MO US 65734

Contact: LEE DUCHANOIS Iduchanois@kempquarries.com

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)

: 13 May 2024

: 14 May 2024

: 15 May 2024 - Sean Felton

Report Id: KEMPUR [WUSCAR] 06177983 (Generated: 05/15/2024 16:13:57) Rev: 1

T: F: