

# **OIL ANALYSIS REPORT**

Sample Rating Trend

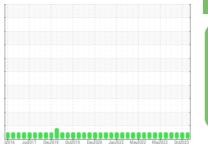
### NORMAL



# KEMP QUARRIES / RIVER VALLEY OZARK WL112

Component Front Right Final Drive

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



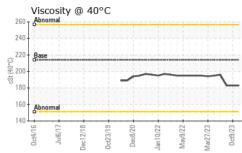


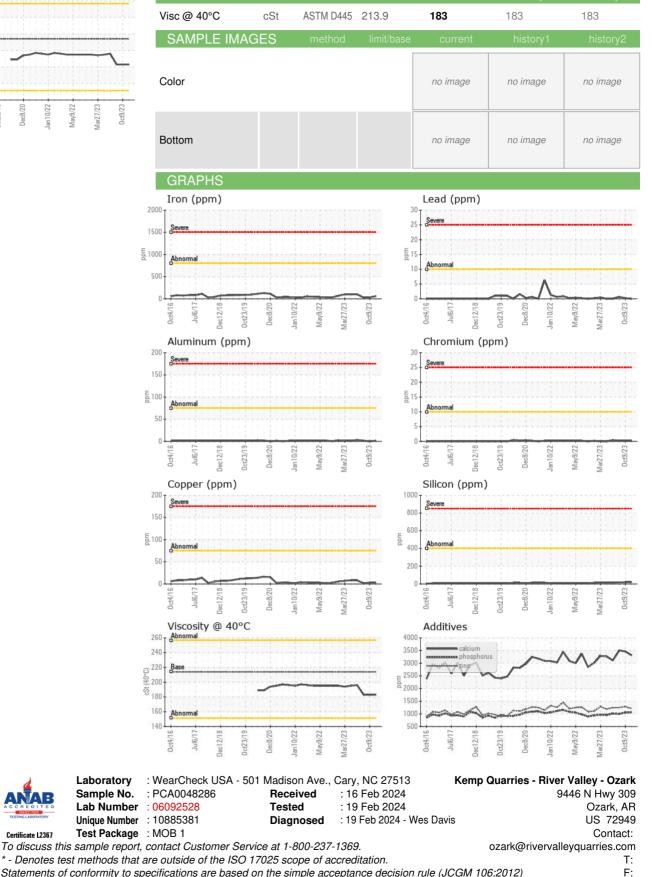
DIAGNOSIS							
	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		PCA0048286	PCA0069678	PCA0069729
Resample at the next service interval to monitor.	Sample Date		Client Info		09 Feb 2024	09 Oct 2023	25 Aug 2023
Vear	Machine Age	hrs	Client Info		35658	34927	34674
All component wear rates are normal.	Oil Age	hrs	Client Info		31552	31552	31552
Contamination	Oil Changed		Client Info		N/A	N/A	N/A
here is no indication of any contamination in the	Sample Status				NORMAL	NORMAL	NORMAL
	CONTAMINA	TION	method	limit/base	current	history1	history2
luid Condition he condition of the oil is acceptable for the time in	Water		WC Method	>0.2	NEG	NEG	NEG
service.	WEAR META	LS	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>800	60	32	28
	Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
	Nickel	ppm	ASTM D5185m	>5	0	<1	0
	Titanium	ppm	ASTM D5185m	>15	0	<1	<1
	Silver	ppm	ASTM D5185m	>2	0	0	0
	Aluminum	ppm	ASTM D5185m	>75	2	0	2
	Lead	ppm	ASTM D5185m	>10	0	<1	<1
	Copper	ppm	ASTM D5185m	>75	3	3	2
	Tin	ppm	ASTM D5185m	>8	0	<1	1
	Vanadium	ppm	ASTM D5185m		0	0	<1
	Cadmium	ppm	ASTM D5185m		0	0	<1
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	2	<1	4	<1
	Barium	ppm	ASTM D5185m	0	0	2	0
	Molybdenum	ppm	ASTM D5185m	0	<1	<1	<1
	Manganese	ppm	ASTM D5185m	0	0	<1	<1
	Magnesium	ppm	ASTM D5185m	9	14	15	21
	Calcium	ppm	ASTM D5185m	3114	3309	3466	3498
	Phosphorus	ppm	ASTM D5185m	1099	1064	1047	995
	Zinc	ppm	ASTM D5185m	1245	1208	1283	1247
	Sulfur	ppm	ASTM D5185m	7096	4882	5115	5140
		ppm		7066	4002	5115	0110
	CONTAMINA		method	limit/base	current	history1	history2
	CONTAMINA Silicon			limit/base			
		NTS	method	limit/base	current	history1	history2
	Silicon	NTS ppm	method ASTM D5185m	limit/base >400	current 20	history1 19	history2 18
	Silicon Sodium	NTS ppm ppm	method ASTM D5185m ASTM D5185m	limit/base >400	current 20 0 2	history1 19 0	history2 18 2 0
	Silicon Sodium Potassium	NTS ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >400 >20	current 20 0 2	history1 19 0 2	history2 18 2 0
	Silicon Sodium Potassium VISUAL	NTS ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base >400 >20 limit/base	current 20 0 2 current	history1 19 0 2 history1	history2 18 2 0 history2
	Silicon Sodium Potassium VISUAL White Metal	NTS ppm ppm ppm scalar	method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	limit/base >400 >20 limit/base NONE	current 20 0 2 current MODER	history1 19 0 2 history1 NONE	history2 18 2 0 history2 NONE
	Silicon Sodium Potassium VISUAL White Metal Yellow Metal	NTS ppm ppm ppm scalar scalar	method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual	limit/base >400 >20 limit/base NONE NONE	current 20 0 2 current MODER NONE	history1 19 0 2 history1 NONE NONE	history2 18 2 0 history2 NONE NONE
	Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	NTS ppm ppm ppm ppm scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D5185m Method *Visual *Visual *Visual	limit/base >400 >20 limit/base NONE NONE NONE	current 20 0 2 current MODER NONE NONE	history1 19 0 2 history1 NONE NONE NONE	history2 18 2 0 history2 NONE NONE NONE
	Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	NTS ppm ppm ppm scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual	limit/base >400 >20 limit/base NONE NONE NONE NONE	current 20 0 2 current MODER NONE NONE NONE	history1 19 0 2 history1 NONE NONE NONE NONE	history2 18 2 0 history2 NONE NONE NONE NONE
	Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	NTS ppm ppm ppm scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	limit/base >400 >20 limit/base NONE NONE NONE NONE NONE	current 20 0 2 current MODER NONE NONE NONE NONE	history1 19 0 2 history1 NONE NONE NONE NONE NONE	history2 18 2 0 history2 NONE NONE NONE NONE NONE
	Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	NTS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual	limit/base >400 >20 limit/base NONE NONE NONE NONE NONE NONE	current 20 0 2 current MODER NONE NONE NONE NONE NONE	history1 19 0 2 history1 NONE NONE NONE NONE NONE NONE	history2 18 2 0 history2 NONE NONE NONE NONE NONE NONE
	Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	NTS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	limit/base >400 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	current 20 0 2 current MODER NONE NONE NONE NONE NONE NONE NONE	history1 19 0 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	history2 18 2 0 history2 NONE NONE NONE NONE NONE NONE NONE NON



# **OIL ANALYSIS REPORT**

FLUID PROPERTIES





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

Certificate L2367