

# **OIL ANALYSIS REPORT**

Sample Rating Trend



KEMP QUARRIES / KEMP STONE - FAIRLAND [67475] **WL086** Fluid

Component **Rear Left Final Drive** 

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

RO TO-4 SAE 50 (-	,	b2015 Dec2	015 May2017 002010	3602020 Mai2022 D662022	0002023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0086240	PCA0084820	PCA008456
Sample Date		Client Info		06 Dec 2023	18 Sep 2023	18 Jul 2023
Machine Age	hrs	Client Info		55193	54650	54189
Oil Age	hrs	Client Info		55193	45650	54189
Oil Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>800	9	8	13
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>15	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>75	1	2	2
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	0	<1	<1
Tin	ppm	ASTM D5185m	>8	0	0	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	<1	1	9
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	<1	1
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	9	15	13	16
Calcium	ppm	ASTM D5185m	3114	3406	3206	2937
Phosphorus	ppm	ASTM D5185m	1099	1045	1005	1011
Zinc	ppm	ASTM D5185m	1245	1278	1218	1200
Sulfur	ppm	ASTM D5185m	7086	5526	4951	5675
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon				ourrent	Thistory I	
Onicon	ppm	ASTM D5185m	>400	13	12	18
Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>400			18 0
				13	12	
Sodium	ppm	ASTM D5185m		13 0	12 0	0 2
Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	>20	13 0 2	12 0 1	0
Sodium Potassium VISUAL	ppm ppm	ASTM D5185m ASTM D5185m method	>20 limit/base	13 0 2 current	12 0 1 history1	0 2 history2
Sodium Potassium VISUAL White Metal	ppm ppm scalar	ASTM D5185m ASTM D5185m method *Visual	>20 limit/base NONE	13 0 2 current NONE	12 0 1 history1 NONE	0 2 history2 NONE
Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m method *Visual *Visual	>20 limit/base NONE NONE	13 0 2 current NONE NONE	12 0 1 history1 NONE NONE	0 2 history2 NONE NONE
Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual	>20 limit/base NONE NONE NONE	13 0 2 current NONE NONE NONE	12 0 1 history1 NONE NONE NONE	0 2 history2 NONE NONE NONE
Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE	13 0 2 current NONE NONE NONE NONE	12 0 1 history1 NONE NONE NONE NONE	0 2 NONE NONE NONE NONE
Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE NONE	13 0 2 current NONE NONE NONE NONE NONE	12 0 1 <u>history1</u> NONE NONE NONE NONE	0 2 NONE NONE NONE NONE NONE
Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE NONE	13 0 2 current NONE NONE NONE NONE NONE	12 0 1 history1 NONE NONE NONE NONE NONE	0 2 NONE NONE NONE NONE NONE NONE
Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE NONE NONE NORML	13 0 2 current NONE NONE NONE NONE NONE NONE NORML	12 0 1 NONE NONE NONE NONE NONE NONE NONE NO	0 2 NONE NONE NONE NONE NONE NONE NONE

DIAGNOSIS Recommendation

Wear

All component wear rates are normal.

### Contamination

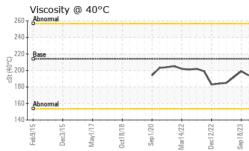
There is no indication of any contamination in the oil.

### Fluid Condition

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



## **OIL ANALYSIS REPORT**



	FLUID F	PROPE	RTIES	meth	nod	limit/base	(	curren	t	his	story1		histo	ory2
	Visc @ 40°	С	cSt	ASTM	D445	213.9	19	4		199			192	
	SAMPL	e imag	ES	meth	nod	limit/base	(	curren	t	his	story1		histo	ory2
	Color						no	image		no ir	nage		no ima	age
Dec12/22 Sep18/23	Bottom				no image			no image		no image				
	GRAPH	IS												
2	Iron (ppm) Lead (ppm)													
	500 - Severe						5 - Seven	e						
						2 E								
u 1	•	٨				특기 1	Abno	rmal						
1	500	$\sqrt{1}$	~				5 -							
	Feb9/15 0	1/17	Sep 1/20	4/22	2/22	8/23	Feb9/15	Dec3/15	May1/17	0ct18/18	Sep1/20	4/22	2/22	8/23
	Feb 6	May1/17	Sep	Mar14/22	Dec12/22	Sep18/23					Sep	Mar14/22	Dec12/22	Sep 18/23
	Aluminum (ppm) Chromium (ppm)													
	Severe					2	5 - Seven	e		****		****		
	100 - Abaamal					2 톱 1								
dd	Abitorinia						Abno	rmal						
	50						5							
	Feb9/15	May1/17.	Sep 1/20	Mar14/22	Dec12/22	Sep 18/23	Feb9/15 0	Dec3/15	May1/17	0ct18/18	Sep 1/20	Mar14/22	Dec12/22	Sep18/23
			Sep	Marl	Dec1	Sep 1				0ct1	Sep	Marl	Dec1	Sep1
;	Copper (	ppm)				100	<sup>0</sup> т ::	on (pj	om)					
	Severe					80	0 - Sever	e						
udo	100 - Abnormal					60 E	Abro							
	Abnormal 50 -					40		Imai						
	0					20								
2	Feb9/15	May1/17	Sep 1/20.	Mar14/22 -	Dec12/22	Sep 18/23 -	Feb9/15 -	Dec3/15	May1/17.	0ct18/18 -	Sep1/20.	Mar14/22 -	Dec12/22	Sep18/23.
	ت م Viscosity		3 00	Ma	Dei	Sei		itives	Σ	00	ő	Ma	Dei	Ser
	Abnormal	@ +0 C				350	<sup>0</sup> T							/
	240 - 220 - Base					250	ALAAAA.	calc pho zinc	sphorus	Λ,	M	~	$\sim$	/
cSt (40°C)	200 -		-		1	<u>لَمْ الْحَمْ</u>		V	V					
	00				-	150	1	51		A.	-		-	
	140						0 NAME	V	-	CAR WAS			C.	
	Feb9/15 Dec3/15	May1/17	Sep 1/20	Mar14/22	Dec12/22	Sep 18/23	Feb9/15	Dec3/15	May1/17	0ct18/18	Sep1/20	Mar14/22	Dec12/22	Sep 18/23
ooratory nple No. Number que Number tt Package	: WearChec : PCA00862 : 06034214 : 10789443 : MOB 1 pontact Custol	240     	Recieveo Diagnoso Diagnost	son Ave d ed tician	: 13 [ : 18 [ : Sea	ry, NC 2751 Dec 2023 Dec 2023 n Felton	3	Ker	np Qu	arries	- Kem	<b>p Stor</b> 1835 F	i0 S 59 airlan US 7 Cor	90 Ro d, Oł 7434: ntact:
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