

OIL ANALYSIS REPORT

Sample Rating Trend



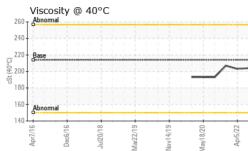
KEMP QUARRIES / SELIGMAN [67979] Machine Id CATERPILLAR 980G CATERPILLAR WL102 Component **Rear Left Final Drive** Fluid

PETRO CANADA PRODU	JRO TO-4 SAE 50 (GAL)	pr2016 De	c2016 Jul2018 M	#2019 Nov2019 May2020	Apr2022	
DIAGNOSIS	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		PCA0084369	PCA0033856	PCA0025166
Resample at the next service interval to monitor. (Sample Date		Client Info		09 Nov 2023	05 Apr 2022	25 Oct 2021
Customer Sample Comment: PM-4 changed fluid)	Machine Age	hrs	Client Info		39985	39907	38950
Vear	Oil Age	hrs	Client Info		39985	39907	0
Il component wear rates are normal.	Oil Changed		Client Info		Changed	Not Changd	Oil Added
Contamination	Sample Status				NORMAL	NORMAL	NORMAL
here is no indication of any contamination in the vil.	CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
luid Condition	Water		WC Method	>0.2	NEG	NEG	NEG
he condition of the oil is acceptable for the time in ervice.	WEAR METAI	_S	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>800	45	34	25
	Chromium	ppm	ASTM D5185m	>10	0	0	<1
	Nickel	ppm	ASTM D5185m	>5	0	0	0
	Titanium	ppm	ASTM D5185m	>15	0	0	<1
	Silver	ppm	ASTM D5185m	>2	0	0	<1
	Aluminum	ppm	ASTM D5185m	>75	0	<1	1
	Lead	ppm	ASTM D5185m	>10	0	<1	<1
	Copper	ppm	ASTM D5185m	>75	0	<1	1
	Tin	ppm	ASTM D5185m		0	0	<1
	Antimony	ppm	ASTM D5185m				0
	Vanadium	ppm	ASTM D5185m	200	0	0	0
	Cadmium	ppm	ASTM D5185m		0	0	0
	ADDITIVES	ppm	method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m		0	2	11
	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		۰ <1	2	2
	Manganese		ASTM D5185m		0	<1	<1
	•	ppm	ASTM D5185m		29	27	29
	Magnesium Calcium	ppm				3207	
		ppm	ASTM D5185m		2989		3150
	Phosphorus	ppm		1099	1067	1087	1057
	Zinc	ppm	ASTM D5185m	1245	1319	1346	1222
	Sulfur	ppm	ASTM D5185m		6427	5580	5525
	CONTAMINA		method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185m	>400	15	11	11
	Sodium	ppm	ASTM D5185m		1	0	1
	Potassium	ppm	ASTM D5185m		0	2	0
	VISUAL		method	limit/base		history1	history2
	White Metal	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
	Yellow Metal		*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	>0.2	NEG	NEG	NEG
eport Id: KEMSEL [WUSCAR] 06013566 (Generated: 11/22/2023 1		scalar	*Visual		NEG	NEG	Subjected B

Report Id: KEMSEL [WUSCAR] 06013566 (Generated: 11/22/2023 11 Free Water scalar *Visual



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Mar2219	May18/20	E	risc @ 4 SAMI Color Bottom GRAI Iron (p	PLE	IMAC	cSt GES		M D445	213.9 limit/l	oase		urrent		203 histor	y1	207 his	tory2
Maz2/19	2	E 2000-	Color Sottom GRAI		IMAC	GES	m	ethod	limit/ł	base				histor	y1	his	tory2
Mariazona - Provinsional - Provinsio	2	E 2000-	ottom GRAI								no i	200					
Mar22 Nov14	2	2000 -	GRA	DLIC-								no image		no image		no image	
		2000-		рце-							no i	mage		no imag	е	no in	iage
		2000-	Iron (r														
	s s s s s s s s s s s s s s s s s s s			opm)						30		(ppm)					
			Severe							25	Severe						
		특 1000 ·	Abnormal							20 ਸ਼ੁਰੂ 15							
		500-		Λ						10	Abnorm	al					
		0.	~	$\overline{\nabla}$		6	6		2	0	9	9		6	5	÷	2
			Apr7/16	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22		Apr7/16	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22
		200-	Alumir	num (p	opm)					30	Chro	mium ((ppm)				
		150.	Severe							25	Severe						
		표 100 ·								20 톱 15							
		50-	Abnormal			+				10	Abnorm	al					
		0.	9	9		6	6		2	5	9			6	6		2
			Apr7/16	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22		Apr7/16	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22
	200-	Coppe	r (ppr	n)					1000		n (ppm	1)					
		150	Severe							800	Severe						
		표 100 ·								600 udd 400							
		50.	Abnormal			+				400	Abnorm	al					
		0.		~						200 0							
			Apr7/16 -	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22		Apr7/16 -	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22
		Viscosi		40°C	~	~	2			Addit	ives		~	~	2		
	260 - 240 -	Abnormal							5000 4000	$ \rightarrow $	calcium						
	(220 · €) 200 · \$ 180 ·	Base							8000	-	zinc		_	_	~	-	
		ें 180-								2000			-				
		160 · 140 ·	Abnormal							1000		BERRENE	Hangestein	Tangenging	Constant Street	It gate weeks	1. C I I I I I I I I I I I I I I I I I I
			Apr7/16	Dec6/16	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22		Apr7/16.	Dec6/16 -	Jul20/18	Mar22/19	Nov14/19	May18/20	Apr5/22
CREDITED LA	aboratory ample No. ab Number Inique Number est Package	: \ : F : (r : 1		neck U 34369 <mark>66</mark>	SA -		idison / /ed osed	Ave., Ca : 20 : 22	ary, NC 2 Nov 202 Nov 202 an Felto	23 23		Ke	emp G	⊇ Quarrie	s - BC 8261	S - Sel Farm r Seligma US	l igmaı d 2299 an, MC 65749
discuss this sa Denotes test m		cont	tact Cus											anastas			