

## **OIL ANALYSIS REPORT**

Sample Rating Trend

## NORMAL



Fluic

# KEMP QUARRIES / HULBERT WL131 Component Front Differential



### ui2019 Dec2019 Apr2020 Aug2020 Jan2021 Jun2021 Dec20171 Jun2027 Sectors

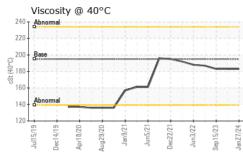
	,			19 Aprž020 Augž020 Janž	021 Jun2021 Dec2021 Jun2022 Se	p2023 Jan202	
DIAGNOSIS	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		PCA0109161	PCA0109237	PCA0086860
Resample at the next service interval to monitor.	Sample Date		Client Info		27 Jan 2024	03 Nov 2023	15 Sep 2023
Wear	Machine Age	hrs	Client Info		10805	10240	9868
All component wear rates are normal.	Oil Age	hrs	Client Info		0	0	0
Contamination	Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
There is no indication of any contamination in the	Sample Status				NORMAL	NORMAL	NORMAL
oil.	CONTAMINA		mathad	limit/booo	ourropt	biotoryd	biotom/0
Fluid Condition	Water		method WC Method	limit/base	current	history1 NEG	history2 NEG
The condition of the oil is acceptable for the time in							
service.	WEAR META	LS	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>500	282	167	66
	Chromium	ppm	ASTM D5185m	>3	<1	0	0
	Nickel	ppm	ASTM D5185m	>3	0	0	0
	Titanium	ppm	ASTM D5185m		0	0	0
	Silver	ppm	ASTM D5185m	>2	0	0	0
	Aluminum	ppm	ASTM D5185m	>30	2	1	<1
	Lead	ppm	ASTM D5185m	>13	0	0	<1
	Copper	ppm	ASTM D5185m	>103	3	3	2
	Tin	ppm	ASTM D5185m	>5	0	0	<1
	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		5	6	5
	Barium	ppm	ASTM D5185m		5	0	0
	Molybdenum	ppm	ASTM D5185m		<1	<1	2
	Manganese	ppm	ASTM D5185m		1	<1	<1
	Magnesium	ppm	ASTM D5185m		32	33	33
	Calcium	ppm	ASTM D5185m		3238	3180	3146
	Phosphorus	ppm	ASTM D5185m		1016	1027	985
	Zinc	ppm	ASTM D5185m		1233	1229	1213
	Sulfur	ppm	ASTM D5185m		4698	4603	4438
	CONTAMINA	NTS	method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185m	>100	34	27	19
	Sodium	ppm	ASTM D5185m		0	2	1
	Potassium	ppm	ASTM D5185m	>20	2	0	0
	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	MODER	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		*Visual		NEG	NEG	NEG
							0.1

Report Id: KEMHUL [WUSCAR] 06080952 (Generated: 02/07/2024 10:51:21) Rev: 1



## **OIL ANALYSIS REPORT**

FLUID PROPERTIES method limit/base



	∞@40°C AMPLE IN	cSt	ASTM D44		183	183	183
- S.	ANIPLE IN	IAGES	method	limit/b	ase current	history1	history2
Cole	or				no image	no image	no image
Sep 15/23 Bot1 2/24 Bot1	om				no image	no image	no image
G	RAPHS						
Ir 1000 T : -	on (ppm)				Lead (ppm)	)	
800 - Se	vere				25 - Severe		
600 AL	normal				20- E 15- Abnormal		
200				1	10- 5-		
0	719	/20 /21 /21	22	123	0	/21	/21 /22 /23
Jul15/19		Aug 29/20 Jan 9/21 Jun 5/21	Dec22/21 Jun3/22	Sep 15/23 Jan 27/24	Jul15/19 Dec14/19 Apr18/20	Aug29/20 Jan9/21 Jun5/21	Dec22/21 Jun3/22 Sep15/23
0.0	uminum (pp <sup>vere</sup>	m)	1		Chromium	(ppm)	
50 40					6 - Severe 5 -		
8 30 - At	normal				a Abnormal		
20-					2		
0 Lils/19	8/20	Jan 9/21	Jun3/22	5/23	Jul15/19	ug 29,20	Jec22/21
		A	Dec22/21 Jun3/22	Sep 15/23 Jan 27/24		A	Dec22/21 Jun3/22 Sep15/23
200 Se	opper (ppm) vere				Silicon (ppr 200	n)	
150-					150		
8.100 - A	inormal				Abnormal		
50		$\sim$			50		
01-61/Stint	Dec14/19 Apr18/20	Jan9/21	Dec22/21	Sep 15/23	Jul15/19	Aug29/20 Jan9/21- Jun5/21-	Dec22/21 - Jun3/22 -
	scosity @ 40		Jui	Sep	Additives	Aug J₀ Ju	Ju
240 AL					3500 3000 alcium		~~~
	ise				2500 - zinc	horus	
(200 - 8 (+) (+) (+) (+) (+) (+) (+) (+) (+) (+)					E 2000 - 1500 - 10000 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000		
140 - At	inormal	_			500		
120 + 61/2 Unit	Dec14/19	Aug 29/20 - Jan 9/21 - Jun 5/21 -	Dec22/21-	Sep15/23	Jul15/19	Aug29/20 - Jan9/21 - Jun5/21 -	Dec22/21- Jun3/22 - Sep15/23 -
ooratory : We mple No. : PC o Number : 060	arCheck US A0109161 <mark>80952</mark> 363043		ison Ave., C d : 05 sed : 06		7513 <b>Kem</b> j 4	a o Quarries - Ken	