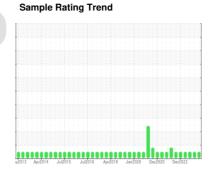


OIL ANALYSIS REPORT



KEMP QUARRIES / HULBERT **OHT047**

Diesel Engine





MOBIL DELVAC 1300 SUPER15W40 (--- GAL) DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

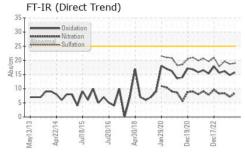
Fluid Condition

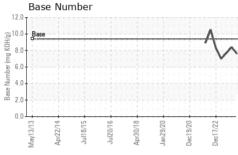
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

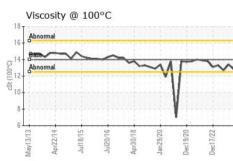
SAMPLE INFORM	MOLTAN	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0085949	PCA0109294	PCA0086853
Sample Date		Client Info		07 Jun 2024	06 Jan 2024	15 Sep 2023
Machine Age	hrs	Client Info		37981	37484	37028
Oil Age	hrs	Client Info		500	0	0
Oil Changed	1110	Client Info		Changed	Changed	Changed
Sample Status		Chorte hillo		NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	15	33
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	2	4
Lead	ppm	ASTM D5185m	>40	6	4	16
Copper	ppm	ASTM D5185m	>330	3	2	4
Tin	ppm	ASTM D5185m	>15	<1	1	2
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	0	3	<1	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	53	51	54
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	0	854	868	846
Calcium	ppm	ASTM D5185m		968	979	959
Phosphorus	ppm	ASTM D5185m		1028	975	918
Zinc	ppm	ASTM D5185m		1199	1118	1118
Sulfur	ppm	ASTM D5185m		3385	2830	2696
=				3303		
CONTAMINAN [*]	TS	method	limit/base	current	history1	history2
	TS ppm	method ASTM D5185m				history2
CONTAMINAN [*]				current	history1	
CONTAMINAN [®] Silicon	ppm	ASTM D5185m		current 3	history1	9
CONTAMINAN ^T Silicon Sodium	ppm	ASTM D5185m ASTM D5185m	>25	current 3 18	history1 4 8	9
CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>25	current 3 18 4	history1 4 8 2	9 9 3
CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	>25 >20 limit/base	current 3 18 4 current	history1 4 8 2 history1	9 9 9 3 history2
CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	>25 >20 limit/base >3	current 3 18 4 current 0.4	history1 4 8 2 history1 0.3	9 9 3 history2
CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624	>25 >20 limit/base >3 >20	current 3 18 4 current 0.4 8.5	history1 4 8 2 history1 0.3 7.1	9 9 3 history2 0.6 8.4
CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 limit/base >3 >20 >30	current 3 18 4 current 0.4 8.5 19.0	history1 4 8 2 history1 0.3 7.1 18.7	9 9 3 history2 0.6 8.4 19.6



OIL ANALYSIS REPORT







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	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
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPI	ERHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	14	12.8	13.4	12.7

V 130	w 10	0 0		COL	710	-ט וווו	170 17			2.0		10	,.T		12.	1
	RAPI															
Iro	n (pp	m)						- 10	Lea	ad (pp	m)					
Sev	ere							- 8	Cons	ere						
0 - Abr								mdd 4								1
1100	normal					-		4		ormal	-					A -
0		~		1	_	~	~~	2	0				1	_	~~	h
May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18 -	Jan29/20	Dec19/20	Dec17/22 -		May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan29/20	Dec19/20	Dec17/22 -
				Apr	Jan	Dec	Dec				35		Apr	Jan	Dec	Dec
Alu ⊤∷⊤	ıminu	m (pr	om)	nnng m				- 5		romiu	m (p	pm)				
Sev	ere							4	Seve	ere		1111				
Abr	normal		11111					ш <u>а</u> 2	Abo	ormal						
								1	1							
ظاه			1	-	^^	-			سلاه			1111				
May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan 29/20	Dec19/20	Dec17/22		May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan 29/20	Dec19/20	Dec17/22
	pper			A		0	О			con (7	⋖	7	0	
)	ere normal	(FF			11777			- 8								
)								- 6								
1								Edd 4	Abn	ormal						
)								- 2	0 - 1					٨		
/33±10	714	115	116	18	/20	/Z0 =	722	-	3 0	14	/15	116	18	, So =	120 -	722
May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan29/20	Dec19/20	Dec17/22		May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan29/20	Dec19/20	Dec17/22
Vis	cosity	@ 10	00°C					**		se Nu	mber					
Abr	normal							月2. 第10.	Bas	e						Δ
Abr	normal	<u> </u>	_	~	~\/\		~~	Base Number (mg KOH/g)	0							1
Abr						V		nampea 4.	0							
-						1		- 88 2. - 0.	0							
May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan29/20 +	Dec19/20 -	Dec17/22 -	- 0.	May13/13	Apr22/14	Jul18/15	Jul20/16	Apr30/18	Jan29/20	Dec19/20	Dec17/22 +
May1	Apr2	Jul	Jul	Apr3	Jan2	Decl	Decl		May1	Apr2	JEL	Jul	Apr3	Jan2	Decl	Decl





Certificate 12367

Sample No.

Lab Number : 06211270 Unique Number : 11084134

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

: PCA0085949

Received **Tested**

: 17 Jun 2024 : 18 Jun 2024 Diagnosed

: 18 Jun 2024 - Angela Borella

Kemp Quarries - Kemp Stone - Hulbert 17801 Hwy 80 Hulbert, OK

US 74441 Contact:

hulbert@kempstone.com

Test Package : MOB 1 (Additional Tests: TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369.

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

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Report Id: KEMHUL [WUSCAR] 06211270 (Generated: 06/22/2024 00:05:50) Rev: 1

Submitted By:

T:

F: