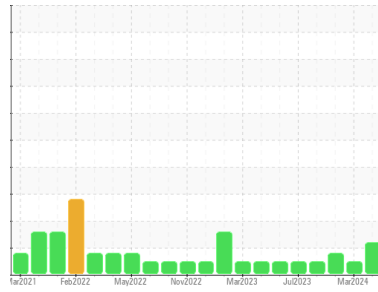




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
RIG 8
 Machine Id
R8-G-002
 Component
Diesel Engine
 Fluid
 DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates present in the oil.

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 INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			KL0014425	KL0013930	KL0013845
Sample Date	Client Info			17 May 2024	29 Mar 2024	28 Feb 2024
Machine Age	days	Client Info		45419	45371	0
Oil Age	days	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	MARGINAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	▲ 2.1
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	28	27	31
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	3
Lead	ppm	ASTM D5185m	>40	8	6	8
Copper	ppm	ASTM D5185m	>330	18	21	20
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

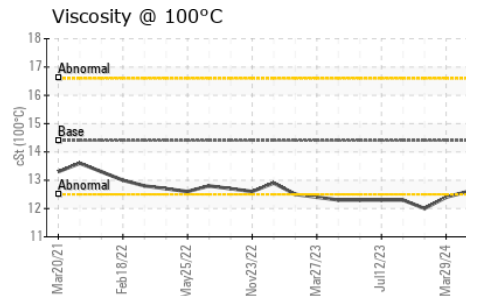
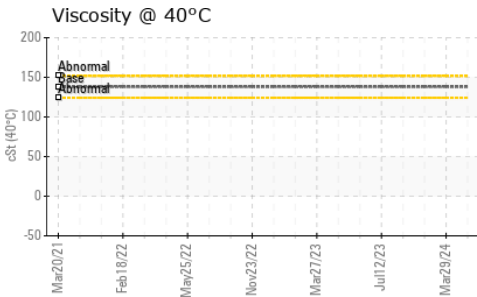
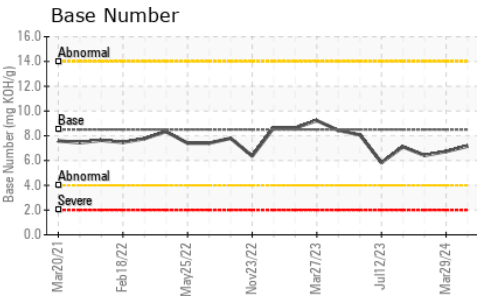
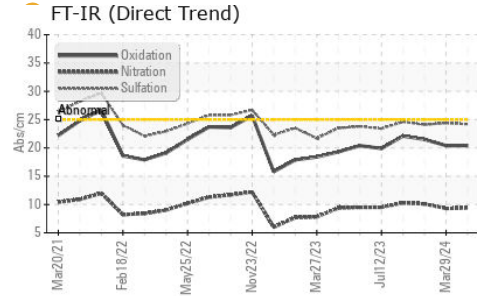
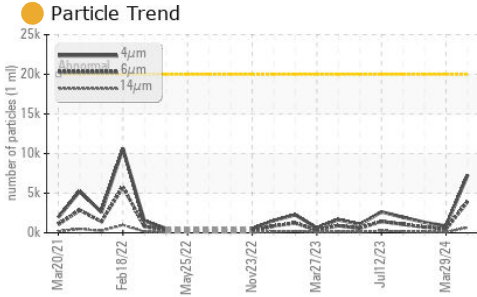
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	195	200	114
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	119	109	106
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	738	615	665
Calcium	ppm	ASTM D5185m	3000	1744	1450	1414
Phosphorus	ppm	ASTM D5185m	1150	848	832	771
Zinc	ppm	ASTM D5185m	1350	1014	895	944
Sulfur	ppm	ASTM D5185m	4250	3494	2963	2775

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	4	5
Sodium	ppm	ASTM D5185m	>216	3	2	4
Potassium	ppm	ASTM D5185m	>20	2	2	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.4	9.3	10.1
Sulfation	Abs.1mm	*ASTM D7415	>30	24.2	24.4	24.1



OIL ANALYSIS REPORT



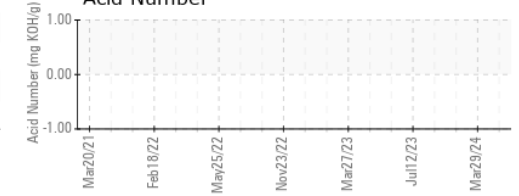
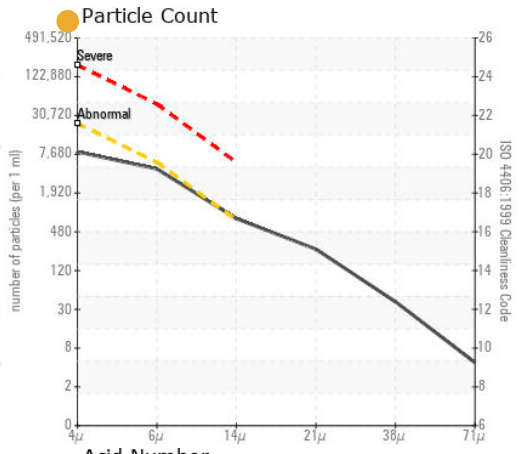
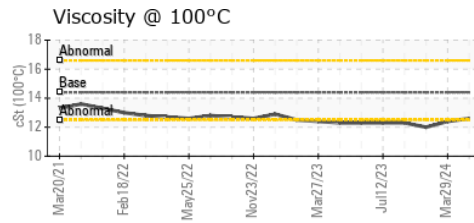
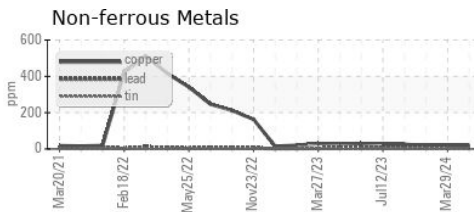
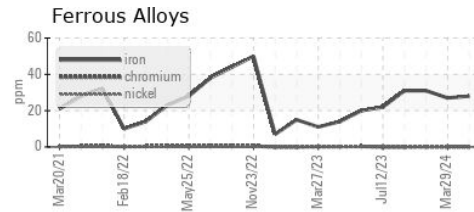
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	7282	861	1322
Particles >6µm	ASTM D7647	>5000	3967	469	720
Particles >14µm	ASTM D7647	>640	675	80	123
Particles >21µm	ASTM D7647	>160	227	27	41
Particles >38µm	ASTM D7647	>40	35	4	6
Particles >71µm	ASTM D7647	>10	4	0	1
Oil Cleanliness	ISO 4406 (c)	>21/19/16	20/19/17	17/16/13	18/17/14

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	*ASTM D7414	>25	20.4	20.4	21.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.16	6.73	6.41

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	12.6	12.4	12.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014425 **Received** : 12 Jun 2024
Lab Number : **06208010** **Tested** : 15 Jun 2024
Unique Number : 11075471 **Diagnosed** : 15 Jun 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: KV40, PrtCount, TAN Man)

MCVAY DRILLING
 401 E BENDER BLVD
 HOBBS, NM
 US 88241

Contact: DOMINIK MENDOZA
 dominik4819@yahoo.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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

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

T: (575)393-8969
 F: (575)393-7455