

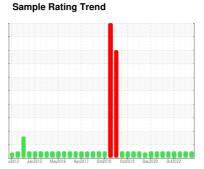
OIL ANALYSIS REPORT



OKLAHOMA/102/EG - EXCAVATOR 20.113L [OKLAHOMA^102^EG - EXCAVATOR]

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

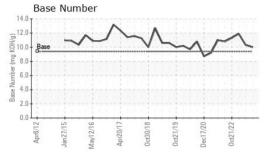
Fluid Condition

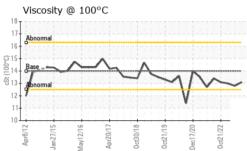
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0808069	WC0800906	WC0746225
Sample Date		Client Info		02 Aug 2023	14 Apr 2023	23 Nov 2022
Machine Age	hrs	Client Info		10442	10400	8885
Oil Age	hrs	Client Info		257	10442	235
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	5	2	22
Chromium	ppm	ASTM D5185m	>20	0	0	2
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	<1	3
Lead	ppm	ASTM D5185m	>40	1	0	4
Copper	ppm	ASTM D5185m	>330	<1	0	1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
		ACTM DE10E		•	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	method	limit/base	current	0 history1	history2
	ppm		limit/base			
ADDITIVES		method ASTM D5185m		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 51	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m	0	current 51 2	history1 50	history2 6 2
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0	current 51 2 46	history1 50 0 36	history2 6 2 64
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 51 2 46 <1	history1 50 0 36 <1	history2 6 2 64 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 51 2 46 <1 506	history1 50 0 36 <1 443	history2 6 2 64 <1 962
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 51 2 46 <1 506 1823	history1 50 0 36 <1 443 1472	history2 6 2 64 <1 962 1117
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0	current 51 2 46 <1 506 1823 781	history1 50 0 36 <1 443 1472 656	history2 6 2 64 <1 962 1117 992
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0	current 51 2 46 <1 506 1823 781 942	history1 50 0 36 <1 443 1472 656 796	history2 6 2 64 <1 962 1117 992 1276
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 0	current 51 2 46 <1 506 1823 781 942 2820	history1 50 0 36 <1 443 1472 656 796 2326	history2 6 2 64 <1 962 1117 992 1276 3345
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 0	current 51 2 46 <1 506 1823 781 942 2820 current	history1 50 0 36 <1 443 1472 656 796 2326 history1	history2 6 2 64 <1 962 1117 992 1276 3345 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 0 Iimit/base	current 51 2 46 <1 506 1823 781 942 2820 current 3	history1 50 0 36 <1 443 1472 656 796 2326 history1 3	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 0 Iimit/base	current 51 2 46 <1 506 1823 781 942 2820 current 3	history1 50 0 36 <1 443 1472 656 796 2326 history1 3 <1	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 0 limit/base >25 >20	current 51 2 46 <1 506 1823 781 942 2820 current 3 0 <1	history1 50 0 36 <1 443 1472 656 796 2326 history1 3 <1 0	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 0 0 limit/base >25 >20 limit/base >3	current 51 2 46 <1 506 1823 781 942 2820 current 3 0 <1	history1 50 0 36 <1 443 1472 656 796 2326 history1 3 <1 0 history1	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4 <1 4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 limit/base >25 >20 limit/base >3	current 51 2 46 <1 506 1823 781 942 2820 current 3 0 <1 current 0.3	history1 50 0 36 <1 443 1472 656 796 2326 history1 3 <1 0 history1 0.2	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4 <1 4 history2 0.1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3 >20	current 51 2 46 <1 506 1823 781 942 2820 current 3 0 <1 current 0.3 6.5	history1 50 0 36 <1 443 1472 656 796 2326 history1 3 <1 0 history1 0.2 6.1	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4 <1 4 history2 0.1 5.8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20 >30	current 51 2 46 <1 506 1823 781 942 2820 current 3 0 <1 current 0.3 6.5 21.9	history1 50 0 36 <1 443 1472 656 796 2326 history1 3 <1 0 history1 0.2 6.1 21.6	history2 6 2 64 <1 962 1117 992 1276 3345 history2 4 <1 4 history2 0.1 5.8 23.1



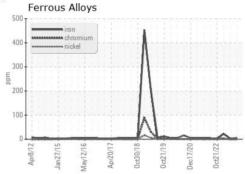
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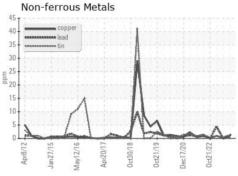


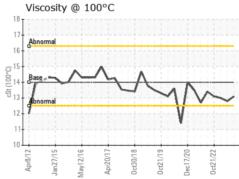


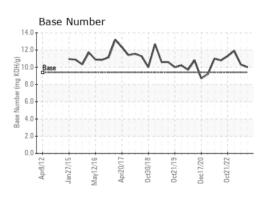
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	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 PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	14	13.1	12.8	13.0	













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10603113

: WC0808069 : 05923166

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 Aug 2023 Diagnosed

: 14 Aug 2023 Diagnostician : Wes Davis

Test Package : CONST (Additional Tests: TBN)

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)

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