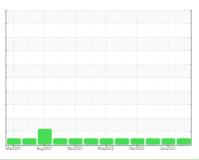


OIL ANALYSIS REPORT

OKLAHOMA/102 Machine Id 05.58 [OKLAHOMA^102]

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (5 GAL)



Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

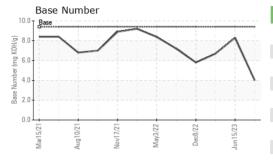
Fluid Condition

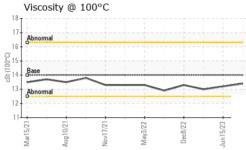
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0857419	WC0821698	WC0792503
Sample Date		Client Info		25 Oct 2023	15 Jun 2023	28 Mar 2023
Machine Age	hrs	Client Info		10968	9945	9353
Oil Age	hrs	Client Info		396	320	437
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	٧	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	37	20	29
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	3	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	2	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 23	history1 35	history2 40
	ppm					
Boron	• •	ASTM D5185m	0	23	35	40
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	23 0	35 0	40 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	23 0 43	35 0 42	40 0 41
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 43 0	35 0 42 <1	40 0 41 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 43 0 500 1635 755	35 0 42 <1 460	40 0 41 <1 463
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 43 0 500 1635 755 915	35 0 42 <1 460 1685 730 882	40 0 41 <1 463 1607 669 812
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 43 0 500 1635 755	35 0 42 <1 460 1685 730	40 0 41 <1 463 1607 669
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 43 0 500 1635 755 915	35 0 42 <1 460 1685 730 882	40 0 41 <1 463 1607 669 812
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	23 0 43 0 500 1635 755 915 2666	35 0 42 <1 460 1685 730 882 2506	40 0 41 <1 463 1607 669 812 2299
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0	23 0 43 0 500 1635 755 915 2666	35 0 42 <1 460 1685 730 882 2506 history1	40 0 41 <1 463 1607 669 812 2299
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0	23 0 43 0 500 1635 755 915 2666 current	35 0 42 <1 460 1685 730 882 2506 history1	40 0 41 <1 463 1607 669 812 2299 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25	23 0 43 0 500 1635 755 915 2666 current 9 4 13	35 0 42 <1 460 1685 730 882 2506 history1 7 0 7	40 0 41 <1 463 1607 669 812 2299 history2 11 5 6 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20	23 0 43 0 500 1635 755 915 2666 current 9 4 13	35 0 42 <1 460 1685 730 882 2506 history1 7	40 0 41 <1 463 1607 669 812 2299 history2 11 5 6
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	ASTM D5185m Method *ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base	23 0 43 0 500 1635 755 915 2666 current 9 4 13	35 0 42 <1 460 1685 730 882 2506 history1 7 0 7	40 0 41 <1 463 1607 669 812 2299 history2 11 5 6 history2
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	ASTM D5185m method *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	23 0 43 0 500 1635 755 915 2666 current 9 4 13 current	35 0 42 <1 460 1685 730 882 2506 history1 7 0 7	40 0 41 <1 463 1607 669 812 2299 history2 11 5 6 history2 0.4
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	ASTM D5185m Method *ASTM D5185m ASTM D5185m	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20	23 0 43 0 500 1635 755 915 2666 current 9 4 13 current 0.6 13.2	35 0 42 <1 460 1685 730 882 2506 history1 7 0 7 history1 0.4 12.2	40 0 41 <1 463 1607 669 812 2299 history2 11 5 6 history2 0.4 12.2
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	ASTM D5185m Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76185m	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20 >30	23 0 43 0 500 1635 755 915 2666 current 9 4 13 current 0.6 13.2 23.9	35 0 42 <1 460 1685 730 882 2506 history1 7 0 7 history1 0.4 12.2 23.5	40 0 41 <1 463 1607 669 812 2299 history2 11 5 6 history2 0.4 12.2 25.3



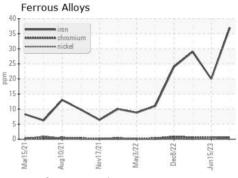
OIL ANALYSIS REPORT

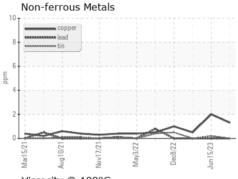


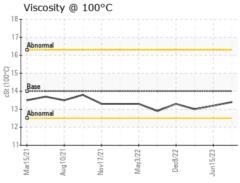


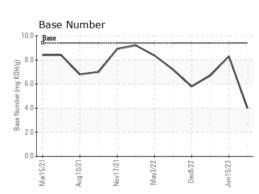
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPER	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14	13.4	13.2	13.0













Laboratory Sample No. Lab Number **Unique Number**

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0857419 : 06000992

Received : 10729352

Diagnosed

: 07 Nov 2023 : 09 Nov 2023

Diagnostician : Doug Bogart

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)

SHERWOOD CONSTRUCTION CO INC

3219 WEST MAY ST WICHITA, KS

US 67213 Contact: DOUG KING Doug.King@sherwood.net

T:

F: