

OIL ANALYSIS REPORT

Sample Rating Trend



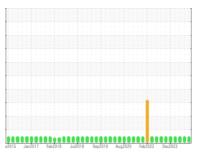


OKLAHOMA/115/EG - LOADER 48.83L [OKLAHOMA^115^EG - LOADER]

Component

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

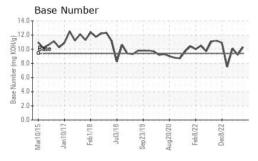
Fluid Condition

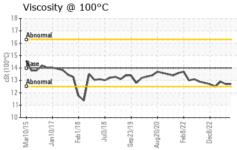
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number Client Info WC0886934 WC0778379 WC0778379 WC0778379 Sample Date Client Info 24 Jan 2024 24 Aug 2023 17 Apr 202 17 Apr 202 10 Aug 2023 17 Apr 202 18 Aug 2023 17 Apr 202 18 Aug 2023 18 Au							
Client Info 24 Jan 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 11071 10809 10346 Oil Age hrs Client Info 250 19800 19800 Oil Changed Client Info Changed Changed Changed Changed NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG	Sample Number		Client Info		WC0886934	WC0778379	WC0738503
Oil Age hrs Client Info 250 19800 19800 Oil Changed Client Info Changed Chan	Sample Date		Client Info		24 Jan 2024	24 Aug 2023	17 Apr 2023
Client Info Changed Changed NORMAL NISTORY NEG	Machine Age	hrs	Client Info		11071	10809	10346
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history1 history1 water WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	Oil Age	hrs	Client Info		250	19800	19800
CONTAMINATION method limit/base current history1 history1 Fuel WC Method >5 <1.0	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG ACT NEG NEG NEG NEG <t< td=""><td>CONTAMINATION</td><td>٧</td><td>method</td><td>limit/base</td><th>current</th><td>history1</td><td>history2</td></t<>	CONTAMINATION	٧	method	limit/base	current	history1	history2
WEAR METALS method Iminit/base current history1 history1 Iron ppm ASTM D5185m >100 10 23 4 Chromium ppm ASTM D5185m >6 0 <1 0 Nickel ppm ASTM D5185m >4 <1 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >150 2 2 2 1 Lead ppm ASTM D5185m >10 0 0 0 0 Copper ppm ASTM D5185m >4 <1 <1 0 0 Cadadium ppm ASTM D5185m 0 0 0 0 0	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >6 0 <1 0 Nickel ppm ASTM D5185m >4 <1 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >30 2 2 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >150 2 5 2 Tin ppm ASTM D5185m >4 <1 <1 0 Vanadium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 0 56 44 53 Barium ppm ASTM D5185m 0 0 0 0 0 Barium ppm ASTM D5185m 0 39	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	10	23	4
Description	Chromium	ppm	ASTM D5185m	>6	0	<1	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >30 2 2 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >150 2 5 2 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 56 44 53 Boron ppm ASTM D5185m 0 56 44 53 Barium ppm ASTM D5185m 0 39 40 38 Manganesium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 1615 1661 1452	Nickel	ppm	ASTM D5185m	>4	<1	0	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >30 2 2 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >150 2 5 2 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 56 44 53 Boron ppm ASTM D5185m 0 56 44 53 Barium ppm ASTM D5185m 0 39 40 38 Manganesium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 1615 1661 1452	Titanium	ppm	ASTM D5185m	>2	0	0	0
Aluminum	Silver				0	0	0
Lead	Aluminum	ppm	ASTM D5185m	>30	2	2	<1
Copper ppm ASTM D5185m >150 2 5 2 Tin ppm ASTM D5185m >4 <1	Lead				0		0
Tin	Copper		ASTM D5185m	>150	2	5	2
Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 56 44 53 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 39 40 38 Manganese ppm ASTM D5185m <1 <1 <1 <1 Magnesium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 1615 1661 1452 Phosphorus ppm ASTM D5185m 782 735 653 Zinc ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history1	• •				<1	<1	0
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 56 44 53 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 39 40 38 Manganese ppm ASTM D5185m <1	Vanadium		ASTM D5185m		0	0	0
Boron	Cadmium		ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 39 40 38 Manganese ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 39 40 38 Manganese ppm ASTM D5185m <1 <1 <1 <1 Magnesium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 1615 1661 1452 Phosphorus ppm ASTM D5185m 782 735 653 Zinc ppm ASTM D5185m 890 880 787 Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m >20 7 4 3 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history	Boron	ppm	ASTM D5185m	0	56	44	53
Manganese ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>0</th> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 0 497 510 439 Calcium ppm ASTM D5185m 1615 1661 1452 Phosphorus ppm ASTM D5185m 782 735 653 Zinc ppm ASTM D5185m 890 880 787 Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m >20 2 -1 0 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.8 0.3 Nitration Abs/.1mm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0	Molybdenum	ppm	ASTM D5185m	0	39	40	38
Calcium ppm ASTM D5185m 1615 1661 1452 Phosphorus ppm ASTM D5185m 782 735 653 Zinc ppm ASTM D5185m 890 880 787 Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 782 735 653 Zinc ppm ASTM D5185m 890 880 787 Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1	Magnesium	ppm	ASTM D5185m	0	497	510	439
Zinc ppm ASTM D5185m 890 880 787 Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1	Calcium		ASTM D5185m		1615	1661	1452
Zinc ppm ASTM D5185m 890 880 787 Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1	Phosphorus		ASTM D5185m		782	735	653
Sulfur ppm ASTM D5185m 2512 2879 2369 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1			ASTM D5185m		890	880	787
Silicon ppm ASTM D5185m >20 7 4 3 Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7	Sulfur		ASTM D5185m		2512	2879	2369
Sodium ppm ASTM D5185m 3 3 5 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7	Silicon	ppm	ASTM D5185m	>20	7	4	3
Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7	Sodium	ppm	ASTM D5185m		3	3	5
Soot % % *ASTM D7844 >3 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7	Potassium	ppm	ASTM D5185m	>20	2	<1	0
Nitration Abs/cm *ASTM D7624 >20 6.4 7.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.7	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7	Soot %	%	*ASTM D7844	>3	0.4	0.8	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.4 22.0 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7		Abs/cm					
Oxidation Abs/.1mm *ASTM D7414 >25 19.5 19.5 19.7							
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	19.5	19.7
Dago Italinot (DIV) IIIgholig Actividedd J.T IU.J J.Z IU.	Base Number (BN)	mg KOH/g	ASTM D2896	9.4	10.3	9.2	10.1



OIL ANALYSIS REPORT

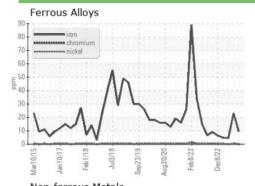


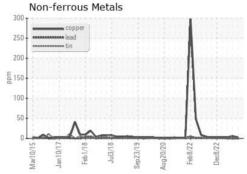


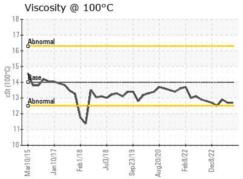
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

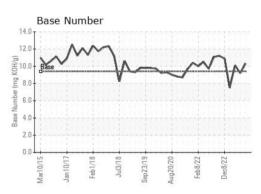
FLUID PROPER	TIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14	12.7	12.7	12.9

GRAPHS













Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0886934 Lab Number : 06098105

Unique Number : 10896335 Test Package : CONST (Additional Tests: TBN)

Received **Tested** Diagnosed

: 23 Feb 2024 : 25 Feb 2024

: 25 Feb 2024 - Wes Davis

SHERWOOD CONSTRUCTION CO INC 3219 WEST MAY ST WICHITA, KS US 67213

Contact: DOUG KING doug.king@sherwood.net T: (316)617-3161

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)

F: x: