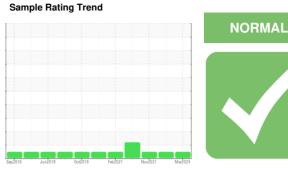


# **OIL ANALYSIS REPORT**

Area KANSAS/44/EG - ROLLER/COMPACTOR 64.27L [KANSAS^44^EG - ROLLER/COMPACTOR] **Diesel Engine** Fluid

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

SAMPLE INFORMATION method





### 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.

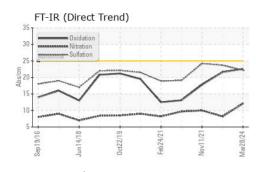
				current		
Sample Number		Client Info		WC0901187	WC0697688	WC0630302
Sample Date		Client Info		28 Mar 2024	08 Sep 2022	11 Nov 2021
Machine Age	hrs	Client Info		4335	4335	2483
Oil Age	hrs	Client Info		0	1852	1925
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
				-		
CONTAMINATION	J	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		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	59	29	28
Chromium	ppm	ASTM D5185m	>20	2	<1	<1
Nickel		ASTM D5185m	>2	- <1	0	0
Titanium	ppm ppm	ASTM D5185m	>2	<1	0	<1
Silver		ASTM D5185m	>2	<1	0	< 1
	ppm			5	3	1
Aluminum	ppm	ASTM D5185m	>20 >40	-	0	0
Lead	ppm	ASTM D5185m		<1		
Copper	ppm	ASTM D5185m	>30	3	<1	2
Tin	ppm	ASTM D5185m	>15	2	0	<1
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 23	history1 19	history2 56
	ppm ppm	ASTM D5185m				
Boron Barium	ppm	ASTM D5185m	0	23	19	56
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	23 0	19 0	56 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m	0	23 0 50	19 0 45	56 0 40
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 50 <1 517	19 0 45 <1 525	56 0 40 <1 526
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 50 <1 517 1740	19 0 45 <1 525 1700	56 0 40 <1 526 1688
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 50 <1 517 1740 716	19 0 45 <1 525 1700 765	56 0 40 <1 526 1688 769
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	23 0 50 <1 517 1740	19 0 45 <1 525 1700	56 0 40 <1 526 1688
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 50 <1 517 1740 716 918 2608	19 0 45 <1 525 1700 765 891 2545	56 0 40 <1 526 1688 769 865 2211
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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 0 Imit/base	23 0 50 <1 517 1740 716 918 2608 current	19 0 45 <1 525 1700 765 891 2545 history1	56 0 40 <1 526 1688 769 865 2211 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 0 0 0 0	23 0 50 <1 517 1740 716 918 2608 <u>current</u> 15	19 0 45 <1 525 1700 765 891 2545 history1 7	56 0 40 <1 526 1688 769 865 2211 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 0 0 0 limit/base >25	23 0 50 <1 517 1740 716 918 2608 <u>current</u> 15 53	19 0 45 <1 525 1700 765 891 2545 history1 7 36	56 0 40 <1 526 1688 769 865 2211 history2 6 41
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20	23 0 50 <1 517 1740 716 918 2608 <u>current</u> 15 53 10	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	23 0 50 <1 517 1740 716 918 2608 <u>current</u> 15 53 10 <u>current</u>	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 2 history1	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3	23 0 50 <1 517 1740 716 918 2608 <u>current</u> 15 53 10 <u>current</u> 0.6	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 2 history1 0.2	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 history2 0.8
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 ASTM D5185m	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	23 0 50 <1 517 1740 716 918 2608 <i>current</i> 15 53 10 <i>current</i> 0.6 12.1	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 2 history1 0.2 8.2	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 history2 0.8 10
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3	23 0 50 <1 517 1740 716 918 2608 <u>current</u> 15 53 10 <u>current</u> 0.6	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 2 history1 0.2	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 history2 0.8
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 ASTM D5185m	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	23 0 50 <1 517 1740 716 918 2608 <i>current</i> 15 53 10 <i>current</i> 0.6 12.1	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 2 history1 0.2 8.2	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 history2 0.8 10
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 ASTM D5185m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	23 0 50 <1 517 1740 716 918 2608 <i>current</i> 15 53 10 <i>current</i> 0.6 12.1 22.2	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 <u>history1</u> 0.2 8.2 2.3.7	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 <b>history2</b> 0.8 10 24.2
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 ASTM D7844 *ASTM D7624 *ASTM D7414	0 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	23 0 50 <1 517 1740 716 918 2608 Current 15 53 10 Current 0.6 12.1 22.2 Current	19 0 45 <1 525 1700 765 891 2545 history1 7 36 2 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	56 0 40 <1 526 1688 769 865 2211 history2 6 41 7 history2 0.8 10 24.2 history2

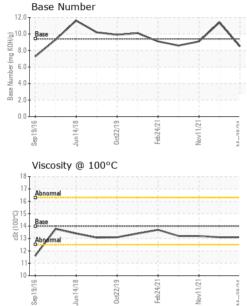
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Submitted By: JAMES MOORE



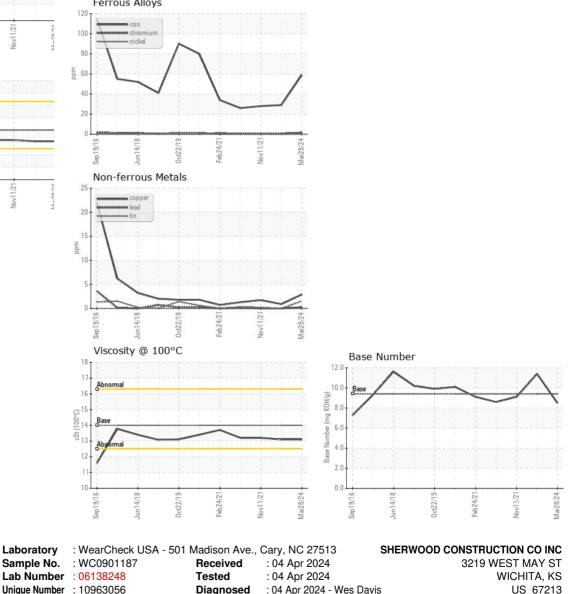
## **OIL ANALYSIS REPORT**





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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	13.1	13.1	13.2

GRAPHS Ferrous Alloys





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