

## **OIL ANALYSIS REPORT**

### OKLAHOMA/105/EG - TRUCK-ON-HWY-HEAVY DUTY 08.101 [OKLAHOMA^105^EG - TRUCK-ON-HWY-HEAVY DUTY] Component

**Diesel Engine** 

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

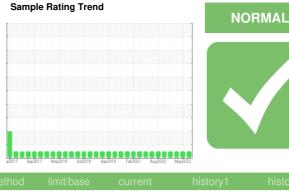
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

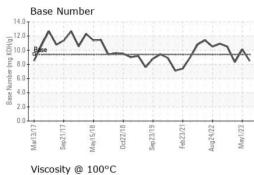
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

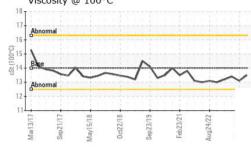


SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0834003	WC0792408	WC0800737
Sample Date		Client Info		17 Aug 2023	01 May 2023	27 Mar 2023
Machine Age	hrs	Client Info		12978	12419	12288
Oil Age	hrs	Client Info		559	131	556
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	11	6	18
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	0	3
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	1	<1	3
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	ASTM D5185m	limit/base 0	41	53	history2 41
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	41 0 44	53	41
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 0	41 0	53 0	41 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	41 0 44	53 0 41 <1 515	41 0 43 <1 549
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	41 0 44 <1 543 1919	53 0 41 <1	41 0 43 <1 549 1801
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	41 0 44 <1 543 1919 798	53 0 41 <1 515 1669 766	41 0 43 <1 549 1801 774
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	41 0 44 <1 543 1919 798 990	53 0 41 <1 515 1669 766 933	41 0 43 <1 549 1801 774 970
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	41 0 44 <1 543 1919 798	53 0 41 <1 515 1669 766	41 0 43 <1 549 1801 774
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	0 0 0	41 0 44 <1 543 1919 798 990	53 0 41 <1 515 1669 766 933	41 0 43 <1 549 1801 774 970
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	0 0 0 0 0	41 0 44 <1 543 1919 798 990 3056	53 0 41 <1 515 1669 766 933 3140	41 0 43 <1 549 1801 774 970 2981
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	41 0 44 <1 543 1919 798 990 3056 current	53 0 41 <1 515 1669 766 933 3140 history1	41 0 43 <1 549 1801 774 970 2981 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>	0 0 0 0 Imit/base	41 0 44 <1 543 1919 798 990 3056 current 6	53 0 41 <1 515 1669 766 933 3140 history1 5	41 0 43 <1 549 1801 774 970 2981 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	41 0 44 <1 543 1919 798 990 3056 <u>current</u> 6 4	53 0 41 <1 515 1669 766 933 3140 history1 5 3	41 0 43 <1 549 1801 774 970 2981 history2 6 3
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 1 0 1 1 1 1 1 1 1 1 1 1 2 5 2 5 2 0	41 0 44 <1 543 1919 798 990 3056 current 6 4 5	53 0 41 <1 515 1669 766 933 3140 history1 5 3 3 3	41 0 43 <1 549 1801 774 970 2981 history2 6 3 3
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	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	41 0 44 <1 543 1919 798 990 3056 current 6 4 5 5	53 0 41 <1 515 1669 766 933 3140 history1 5 3 3 3 }	41 0 43 <1 549 1801 774 970 2981 history2 6 3 3 3
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	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >6	41 0 44 <1 543 1919 798 990 3056 <u>current</u> 6 4 5 <u>current</u> 0.6	53 0 41 <1 515 1669 766 933 3140 history1 5 3 3 3 4 0.2	41 0 43 <1 549 1801 774 970 2981 history2 6 3 3 3 history2 0.7
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 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	41 0 44 <1 543 1919 798 990 3056 current 6 4 5 current 0.6 9.9	53 0 41 <1 515 1669 766 933 3140 history1 5 3 3 3 4 0.2 6.9	41 0 43 <1 549 1801 774 970 2981 history2 6 3 3 history2 0.7 11.9
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	41 0 44 <1 543 1919 798 990 3056 current 6 4 5 current 0.6 9.9 23.3	53 0 41 <1 515 1669 766 933 3140 history1 5 3 3 3 <b>history1</b> 0.2 6.9 22.4	41 0 43 <1 549 1801 774 970 2981 history2 6 3 3 history2 0.7 11.9 24.5

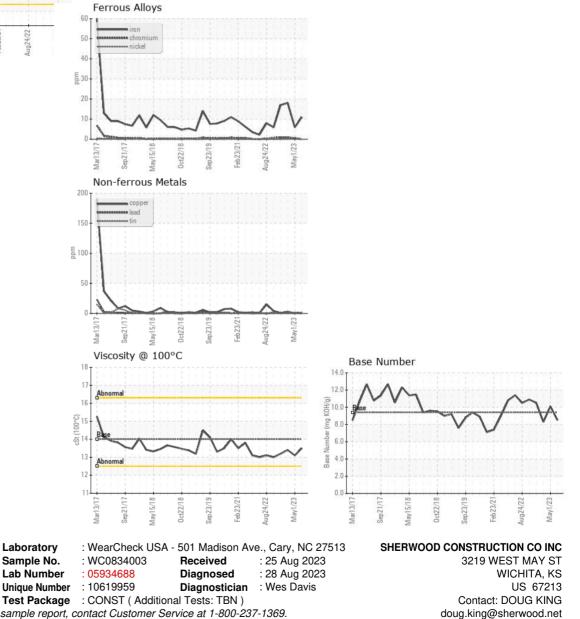


# **OIL ANALYSIS REPORT**





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	13.5	13.1	13.4
GRAPHS						



Certificate 12367 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)

F: x:

T: (316)617-3161