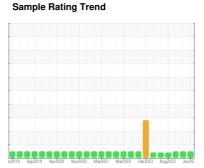


OIL ANALYSIS REPORT



OKLAHOMA/3/EG - TRUCK-OFF-HWY-HEAVY HAUL Machine Id
69.11 OKLAHOMA^3^EG - TRUCK-OFF-HWY-HEAVY HAUL
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

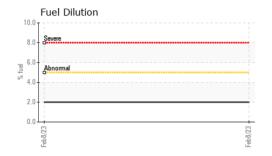
Fluid Condition

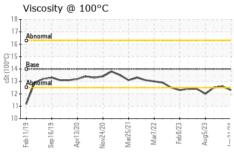
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

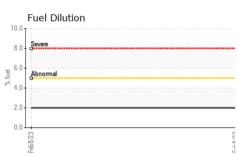
SAMPLE INFORM	//ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0874012	WC0873928	WC0848963
Sample Date		Client Info		31 Jan 2024	17 Nov 2023	14 Sep 2023
Machine Age	hrs	Client Info		10325	9940	9670
Oil Age	hrs	Client Info		9940	9670	281
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
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	>100	2	<1	1
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	<1	0
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	3	<1	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
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 53	history1 57	history2 57
	ppm	ASTM D5185m				
Boron		ASTM D5185m	0	53	57	57
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	53 0	57 0	57 0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	53 0 38	57 0 38	57 0 36
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	53 0 38 <1	57 0 38 0	57 0 36 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	53 0 38 <1 493	57 0 38 0 506	57 0 36 <1 506
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	53 0 38 <1 493 1621	57 0 38 0 506 1720	57 0 36 <1 506 1699
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	53 0 38 <1 493 1621 760	57 0 38 0 506 1720 809	57 0 36 <1 506 1699 751
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	0 0 0	53 0 38 <1 493 1621 760 883	57 0 38 0 506 1720 809 981	57 0 36 <1 506 1699 751 907
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	53 0 38 <1 493 1621 760 883 2474	57 0 38 0 506 1720 809 981 2629	57 0 36 <1 506 1699 751 907 3114
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	53 0 38 <1 493 1621 760 883 2474 current	57 0 38 0 506 1720 809 981 2629 history1	57 0 36 <1 506 1699 751 907 3114 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0	53 0 38 <1 493 1621 760 883 2474 current	57 0 38 0 506 1720 809 981 2629 history1	57 0 36 <1 506 1699 751 907 3114 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 	53 0 38 <1 493 1621 760 883 2474 current 4	57 0 38 0 506 1720 809 981 2629 history1 3	57 0 36 <1 506 1699 751 907 3114 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20	53 0 38 <1 493 1621 760 883 2474 current 4 3 <1	57 0 38 0 506 1720 809 981 2629 history1 3 2	57 0 36 <1 506 1699 751 907 3114 history2 4 2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20 >5	53 0 38 <1 493 1621 760 883 2474 current 4 3 <1 <1.0	57 0 38 0 506 1720 809 981 2629 history1 3 2 0 <1.0	57 0 36 <1 506 1699 751 907 3114 history2 4 2 <1 <1.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20 >5	53 0 38 <1 493 1621 760 883 2474 current 4 3 <1 <1.0	57 0 38 0 506 1720 809 981 2629 history1 3 2 0 <1.0	57 0 36 <1 506 1699 751 907 3114 history2 4 2 <1 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20 >5 limit/base >3	53 0 38 <1 493 1621 760 883 2474 current 4 3 <1 <1.0 current 0.1	57 0 38 0 506 1720 809 981 2629 history1 3 2 0 <1.0 history1 0.1	57 0 36 <1 506 1699 751 907 3114 history2 4 2 <1 <1.0 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 0 0 limit/base >25 >20 >5 limit/base >3 >20	53 0 38 <1 493 1621 760 883 2474 current 4 3 <1 <1.0 current 0.1 6.5	57 0 38 0 506 1720 809 981 2629 history1 3 2 0 <1.0 history1 0.1 5.6	57 0 36 <1 506 1699 751 907 3114 history2 4 2 <1 <1.0 history2 0.1 6.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 0 0 0 limit/base >25 >20 >5 limit/base >3 >20 >30	53 0 38 <1 493 1621 760 883 2474 current 4 3 <1 <1.0 current 0.1 6.5 21.6	57 0 38 0 506 1720 809 981 2629 history1 3 2 0 <1.0 history1 0.1 5.6 21.4	57 0 36 <1 506 1699 751 907 3114 history2 4 2 <1 <1.0 history2 0.1 6.0 21.3



OIL ANALYSIS REPORT



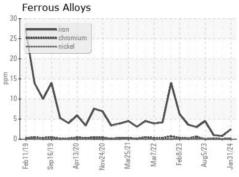


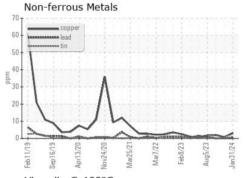


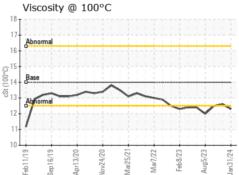
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

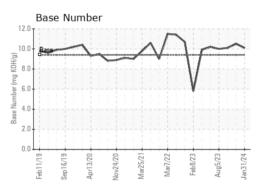
FLUID PROPERTIES		metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14	12.3	12.6	12.5

GRAPHS













Laboratory Sample No. Lab Number : 06098119

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0874012

Unique Number: 10896349

Received : 23 Feb 2024 **Tested** Diagnosed

: 27 Feb 2024 : 27 Feb 2024 - Jonathan Hester Test Package: CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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)

SHERWOOD CONSTRUCTION CO INC

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