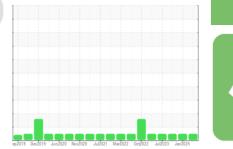


OIL ANALYSIS REPORT

Area OKLAHOMA/102/EG - MOTOR GRADER 78.256 [OKLAHOMA^102^EG - MOTOR GRADER] Component Diesel Engine Fluid MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

SAMPLE INFORMATION method



Sample Rating Trend

NORMAL

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.

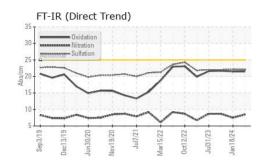
Fluid Condition

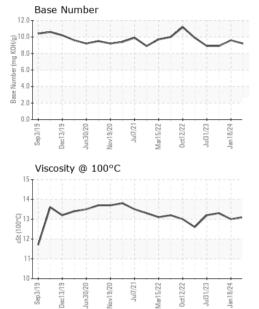
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		WC0935198	WC0873899	WC0857406
Sample Date		Client Info		08 May 2024	18 Jan 2024	13 Oct 2023
Machine Age	hrs	Client Info		8775	7727	7485
Oil Age	hrs	Client Info		345	250	310
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
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CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method		<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		6	2	8
Chromium	ppm	ASTM D5185m		0	<1	<1
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		1	2	2
Lead	ppm	ASTM D5185m		<1	1	5
Copper	ppm	ASTM D5185m		0	<1	<1
Tin	ppm	ASTM D5185m		0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method				history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1 47	history2 35
	ppm ppm		limit/base			
Boron Barium	ppm	ASTM D5185m	limit/base	42	47	35
Boron		ASTM D5185m ASTM D5185m	limit/base	42 0	47 <1	35 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	42 0 41	47 <1 39	35 0 44
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	42 0 41 <1	47 <1 39 0	35 0 44 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	42 0 41 <1 517	47 <1 39 0 461	35 0 44 0 494
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	42 0 41 <1 517 1804	47 <1 39 0 461 1590	35 0 44 0 494 1720
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	limit/base	42 0 41 <1 517 1804 784	47 <1 39 0 461 1590 774	35 0 44 0 494 1720 815
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	limit/base	42 0 41 <1 517 1804 784 959	47 <1 39 0 461 1590 774 856	35 0 44 0 494 1720 815 950
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		42 0 41 <1 517 1804 784 959 2974	47 <1 39 0 461 1590 774 856 2655	35 0 44 0 494 1720 815 950 3132
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		42 0 41 <1 517 1804 784 959 2974 current	47 <1 39 0 461 1590 774 856 2655 history1	35 0 44 0 494 1720 815 950 3132 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	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		42 0 41 <1 517 1804 784 959 2974 2974 current 4	47 <1 39 0 461 1590 774 856 2655 history1 3	35 0 44 0 494 1720 815 950 3132 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m		42 0 41 <1 517 1804 784 959 2974 2974 current 4 2	47 <1 39 0 461 1590 774 856 2655 history1 3 0	35 0 44 0 494 1720 815 950 3132 history2 6 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	limit/base	42 0 41 <1 517 1804 784 959 2974 current 4 2 0	47 <1 39 0 461 1590 774 856 2655 history1 3 0 1	35 0 44 0 494 1720 815 950 3132 history2 6 0 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base	42 0 41 <1 517 1804 784 959 2974 current 4 2 0 current 0.2	47 <1 39 0 461 1590 774 856 2655 history1 3 0 1 1 history1	35 0 44 0 494 1720 815 950 3132 history2 6 0 2 2 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 ASTM D5185m	limit/base	42 0 41 <1 517 1804 784 959 2974 current 4 2 2 0 0 current	47 <1 39 0 461 1590 774 856 2655 history1 3 0 1 1 history1 0.2	35 0 44 0 494 1720 815 950 3132 history2 6 0 2 history2 0.3
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	limit/base	42 0 41 <1 517 1804 784 959 2974 <i>current</i> 4 2 0 <i>current</i> 0.2 8.5	47 <1 39 0 461 1590 774 856 2655 history1 3 0 1 3 0 1 2 6 5 5 history1 3 0 1 0 1 0.2 7.5	35 0 44 0 494 1720 815 950 3132 history2 6 0 2 history2 0.3 8.7
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 D7844 *ASTM D7844	limit/base	42 0 41 <1 517 1804 784 959 2974 <i>current</i> 4 2 0 <i>current</i> 0.2 8.5 22.1	47 <1 39 0 461 1590 774 856 2655 history1 3 0 1 history1 0.2 7.5 22.2 history1	35 0 44 0 494 1720 815 950 3132 history2 6 0 2 history2 0.3 8.7 22.0 history2
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	limit/base	42 0 41 <1 517 1804 784 959 2974 current 4 2 9 0 current 0.2 8.5 22.1	47 <1 39 0 461 1590 774 856 2655 history1 3 0 1 1 history1 0.2 7.5 22.2	35 0 44 0 494 1720 815 950 3132 history2 6 0 2 <u>history2</u> 0.3 8.7 22.0



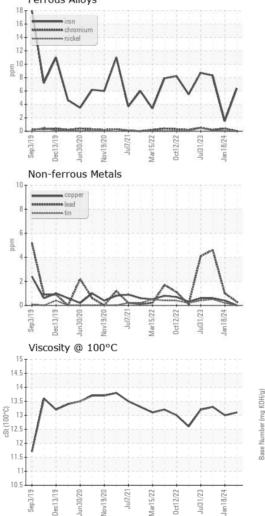
OIL ANALYSIS REPORT

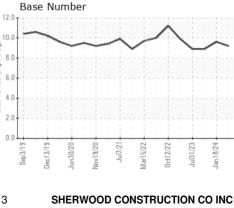




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		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		13.1	13.0	13.3
GRAPHS						

Ferrous Alloys





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 SHERWOOD CONSTRUCTION CO INC Sample No. : WC0935198 : 05 Jun 2024 Received 3219 WEST MAY ST Lab Number : 06199961 Tested : 06 Jun 2024 WICHITA, KS Unique Number : 11062084 Diagnosed : 06 Jun 2024 - Wes Davis US 67213 Test Package : CONST (Additional Tests: TBN) Contact: DOUG KING Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. doug.king@sherwood.net * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (316)617-3161 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Report Id: SHEWIC [WUSCAR] 06199961 (Generated: 06/07/2024 04:24:16) Rev: 1

Submitted By: BOBBY JONES

Page 2 of 2