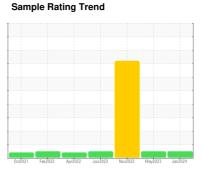


OIL ANALYSIS REPORT

OKLAHOMA/105 Machine Id 08.505 [OKLAHOMA^105]

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

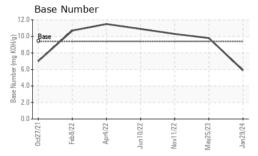
Fluid Condition

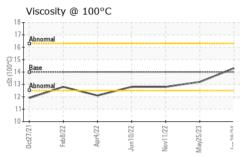
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0886950	WC0807919	WC0746347
Sample Date		Client Info		29 Jan 2024	25 May 2023	11 Nov 2022
Machine Age	hrs	Client Info		4645	3485	2610
Oil Age	hrs	Client Info		1160	875	980
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	SEVERE
CONTAMINATION	٧	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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	>90	58	17	<u> </u>
Chromium	ppm	ASTM D5185m	>20	4	2	<u>^</u> 24
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	2
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	3	▲ 28
Lead	ppm	ASTM D5185m	>40	0	1	0
Copper	ppm	ASTM D5185m	>330	1	0	3
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	23	39	34
	ρρ					
Barium	ppm	ASTM D5185m	0	<1	0	0
Barium Molybdenum	• •		0	<1 44	0 45	0 42
	ppm	ASTM D5185m				
Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		44	45	42
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	44 1	45 1	42
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	44 1 540	45 1 563	42 3 509
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	44 1 540 1756	45 1 563 1726	42 3 509 1979
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	44 1 540 1756 774	45 1 563 1726 815	42 3 509 1979 782
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	44 1 540 1756 774 960	45 1 563 1726 815 1006	42 3 509 1979 782 912
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0	44 1 540 1756 774 960 2289	45 1 563 1726 815 1006 3037 history1	42 3 509 1979 782 912 2951
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 limit/base >25	44 1 540 1756 774 960 2289	45 1 563 1726 815 1006 3037 history1 8	42 3 509 1979 782 912 2951 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 limit/base	44 1 540 1756 774 960 2289 current	45 1 563 1726 815 1006 3037 history1	42 3 509 1979 782 912 2951 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 limit/base >25	44 1 540 1756 774 960 2289 current 17	45 1 563 1726 815 1006 3037 history1 8	42 3 509 1979 782 912 2951 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 limit/base >25 >20	44 1 540 1756 774 960 2289 current 17 2	45 1 563 1726 815 1006 3037 history1 8 3	42 3 509 1979 782 912 2951 history2 101 6 4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 limit/base >25 >20 limit/base	44 1 540 1756 774 960 2289 current 17 2 <1	45 1 563 1726 815 1006 3037 history1 8 3 2	42 3 509 1979 782 912 2951 history2 101 6 4
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 method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 limit/base >25 >20 limit/base >6	44 1 540 1756 774 960 2289 current 17 2 <1 current	45 1 563 1726 815 1006 3037 history1 8 3 2 history1 0.3	42 3 509 1979 782 912 2951 history2 101 6 4 history2 0.4
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 method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 limit/base >25 >20 limit/base >6 >20	44 1 540 1756 774 960 2289 current 17 2 <1 current 0.7 14.7	45 1 563 1726 815 1006 3037 history1 8 3 2 history1 0.3 8.6	42 3 509 1979 782 912 2951 history2 101 6 4 history2 0.4 10.3
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 Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 limit/base >25 >20 limit/base >6 >20 >30	44 1 540 1756 774 960 2289 current 17 2 <1 current 0.7 14.7 26.8	45 1 563 1726 815 1006 3037 history1 8 3 2 history1 0.3 8.6 23.2	42 3 509 1979 782 912 2951 history2 101 6 4 history2 0.4 10.3 24.6
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method	0 limit/base >25 >20 limit/base >6 >20 >30 limit/base	44 1 540 1756 774 960 2289 current 17 2 <1 current 0.7 14.7 26.8 current	45 1 563 1726 815 1006 3037 history1 8 3 2 history1 0.3 8.6 23.2 history1	42 3 509 1979 782 912 2951 history2 101 6 4 history2 0.4 10.3 24.6 history2



OIL ANALYSIS REPORT

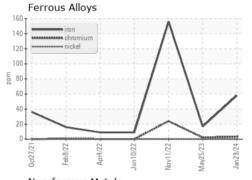


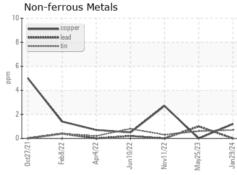


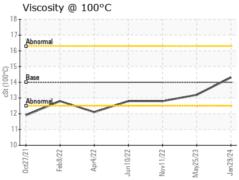
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

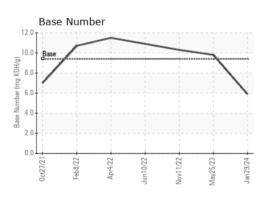
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	14	14.3	13.2	12.8

GRAPHS













Laboratory Sample No.

: WC0886950 Lab Number : 06076659

Unique Number : 10858750

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 01 Feb 2024

Tested Diagnosed Test Package : CONST (Additional Tests: TBN)

:01 Feb 2024

: 02 Feb 2024 - Don Baldridge

SHERWOOD CONSTRUCTION CO INC 3219 WEST MAY ST

WICHITA, KS US 67213

Contact: SHAWN SOUTH shawn.south@sherwood.net

T: x:

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)

Report Id: SHEWIC [WUSCAR] 06076659 (Generated: 02/08/2024 11:50:02) Rev: 1

Submitted By: SHAWN SOUTH

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