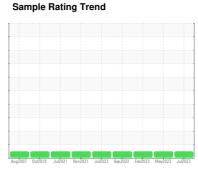


OIL ANALYSIS REPORT



OKLAHOMA/102/EG - OTHER SERVICE 78.65 [OKLAHOMA^102^EG - OTHER SERVICE]
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

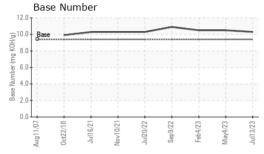
Fluid Condition

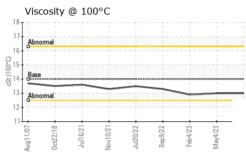
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

`			2018 Jul2021 Nov2021	Jul2022 Sep2022 Feb2023 May20		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0821783	WC0792505	WC0603277
Sample Date		Client Info		13 Jul 2023	04 May 2023	04 Feb 2023
Machine Age	hrs	Client Info		19257	19047	18805
Oil Age	hrs	Client Info		263	247	17734
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	8	8	9
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	1	1	1
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	3	1	1
Tin	ppm	ASTM D5185m	>15	0	<1	<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		limit/base	current 58	history1	history2
	ppm		0			
Boron		ASTM D5185m	0	58	67	60
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	58 2	67	60
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	58 2 43	67 2 39	60 0 36
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	58 2 43 <1	67 2 39 <1	60 0 36 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	58 2 43 <1 479	67 2 39 <1 513	60 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	58 2 43 <1 479 1872	67 2 39 <1 513 1739	60 0 36 <1 506 1689
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	0 0 0	58 2 43 <1 479 1872 780	67 2 39 <1 513 1739 775	60 0 36 <1 506 1689 718
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0	58 2 43 <1 479 1872 780 964	67 2 39 <1 513 1739 775 926	60 0 36 <1 506 1689 718 891
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0	58 2 43 <1 479 1872 780 964 3038	67 2 39 <1 513 1739 775 926 2682	60 0 36 <1 506 1689 718 891 2944
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 limit/base	58 2 43 <1 479 1872 780 964 3038 current	67 2 39 <1 513 1739 775 926 2682 history1	60 0 36 <1 506 1689 718 891 2944 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 limit/base	58 2 43 <1 479 1872 780 964 3038 current	67 2 39 <1 513 1739 775 926 2682 history1	60 0 36 <1 506 1689 718 891 2944 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 limit/base >25	58 2 43 <1 479 1872 780 964 3038 current 3 0 <1	67 2 39 <1 513 1739 775 926 2682 history1 4 1 1 history1	60 0 36 <1 506 1689 718 891 2944 history2 4 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20	58 2 43 <1 479 1872 780 964 3038 current 3 0 <1	67 2 39 <1 513 1739 775 926 2682 history1 4 1	60 0 36 <1 506 1689 718 891 2944 history2 4 <1
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	0 0 0 0 0 limit/base >25 >20 limit/base >3	58 2 43 <1 479 1872 780 964 3038 current 3 0 <1	67 2 39 <1 513 1739 775 926 2682 history1 4 1 1 history1	60 0 36 <1 506 1689 718 891 2944 history2 4 <1 0
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 method *ASTM D7844	0 0 0 0 0 limit/base >25 >20 limit/base >3	58 2 43 <1 479 1872 780 964 3038 current 3 0 <1 current 0.3	67 2 39 <1 513 1739 775 926 2682 history1 4 1 1 history1 0.2	60 0 36 <1 506 1689 718 891 2944 history2 4 <1 0 history2 0.2
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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20	58 2 43 <1 479 1872 780 964 3038 current 3 0 <1 current 0.3 6.5	67 2 39 <1 513 1739 775 926 2682 history1 4 1 1 history1 0.2 6.5	60 0 36 <1 506 1689 718 891 2944 history2 4 <1 0 history2 0.2 6.7
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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20 >30	58 2 43 <1 479 1872 780 964 3038 current 3 0 <1 current 0.3 6.5 22.2	67 2 39 <1 513 1739 775 926 2682 history1 4 1 1 0.2 6.5 22.3	60 0 36 <1 506 1689 718 891 2944 history2 4 <1 0 history2 0.2 6.7 21.8



OIL ANALYSIS REPORT

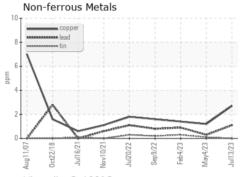


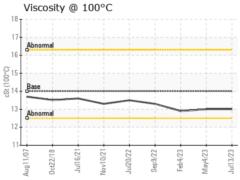


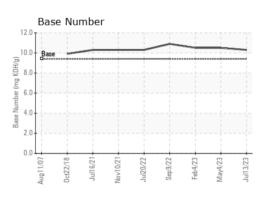
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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			history1	history2
Visc @ 100°C	cSt	ASTM D445	14	13.0	13.0	12.9

Ferrous Alloys











Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10603103

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05923156

: WC0821783

Test Package : CONST (Additional Tests: TBN)

Received : 14 Aug 2023 Diagnosed Diagnostician : Wes Davis

: 14 Aug 2023

3219 WEST MAY ST WICHITA, KS US 67213

SHERWOOD CONSTRUCTION CO INC

Contact: BRYAN ENGLISH bryan.english@sherwood.net T:

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: