

OIL ANALYSIS REPORT

OKLAHOMA/102/CR - MOBILE EQUIPMENT 20.302L [OKLAHOMA^102^CR - MOBILE EQUIPMENT] Component

Hydraulic System

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)



ISO

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		method	mmbase	Current	matory	matoryz
Sample Number		Client Info		WC0886936	WC0746319	WC0642960
Sample Date		Client Info		28 Jan 2024	23 Nov 2022	03 Mar 2022
Machine Age	hrs	Client Info		5473	15909	15909
Oil Age	hrs	Client Info		500	1080	2000
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ATTENTION	ATTENTION	NORMAL
	NI	and the set	11.0011/000000		Liste and	le'stern O
CONTAMINATIO	IN	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	6	6	5
Chromium	ppm	ASTM D5185m	>10	1	<1	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	2	3
Lead	ppm	ASTM D5185m	>10	1	<1	<1
Copper	ppm	ASTM D5185m	>75	1	<1	<1
Tin	ppm	ASTM D5185m	>10	<1	0	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	31	29	33
	ppm ppm	ASTM D5185m ASTM D5185m	0	31 5	29 0	33 0
Boron				-		
Boron Barium	ppm	ASTM D5185m	0	5	0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0	5 3	0 2	0 1
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	5 3 <1	0 2 0	0 1 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	5 3 <1 30	0 2 0 31	0 1 <1 18
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	5 3 <1 30 2692	0 2 0 31 3052	0 1 <1 18 3226
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	0	5 3 <1 30 2692 899	0 2 0 31 3052 1000	0 1 <1 18 3226 1098
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	5 3 <1 30 2692 899 1139	0 2 0 31 3052 1000 1228	0 1 <1 18 3226 1098 1357
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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 0	5 3 <1 30 2692 899 1139 4584	0 2 0 31 3052 1000 1228 5427	0 1 <1 18 3226 1098 1357 4703
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm 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 limit/base	5 3 <1 30 2692 899 1139 4584 current	0 2 0 31 3052 1000 1228 5427 history1	0 1 <1 18 3226 1098 1357 4703 history2
Boron Barium Molybdenum Maganese 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 method ASTM D5185m	0 0 0 0 limit/base >20	5 3 <1 30 2692 899 1139 4584 current 9	0 2 0 31 3052 1000 1228 5427 history1 8	0 1 <1 18 3226 1098 1357 4703 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >20	5 3 <1 30 2692 899 1139 4584 current 9 0	0 2 0 31 3052 1000 1228 5427 history1 8 <	0 1 <1 18 3226 1098 1357 4703 history2 6 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1	5 3 <1 30 2692 899 1139 4584 <u>current</u> 9 0 2	0 2 0 31 3052 1000 1228 5427 history1 8 < <1 2	0 1 <1 18 3226 1098 1357 4703 history2 6 0 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1	5 3 <1 30 2692 899 1139 4584 <i>current</i> 9 0 2 2 <i>current</i>	0 2 0 31 3052 1000 1228 5427 history1 8 < 1 2 history1	0 1 <1 18 3226 1098 1357 4703 history2 6 0 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Sodium Potassium FLUID CLEANLIS Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 3 <1 30 2692 899 1139 4584 <i>current</i> 9 0 2 2 <i>current</i> 52438	0 2 0 31 3052 1000 1228 5427 history1 8 < <1 2 history1 36776	0 1 <1 18 3226 1098 1357 4703 history2 6 0 2 2 history2 27247
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIS Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 3 <1 30 2692 899 1139 4584 <u>current</u> 9 0 2 <u>current</u> 52438 ▲ 4146	0 2 0 31 3052 1000 1228 5427 history1 8 <1 2 history1 36776 ▲ 2664	0 1 <1 18 3226 1098 1357 4703 history2 6 0 2 history2 27247 1169
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1	5 3 <1 30 2692 899 1139 4584 <u>current</u> 9 0 2 2 <u>current</u> 52438 ▲ 4146 157	0 2 0 31 3052 1000 1228 5427 history1 8 <1 2 history1 36776 ▲ 2664 105	0 1 <1 18 3226 1098 1357 4703 history2 6 0 2 history2 27247 1169 41
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	5 3 <1 30 2692 899 1139 4584 0 9 0 2 52438 ▲ 1146 157 36	0 2 0 31 3052 1000 1228 5427 history1 8 < <1 2 history1 36776 36776 2664 105 22	0 1 <1 18 3226 1098 1357 4703 history2 6 0 2 history2 27247 1169 41 8

ISO 4406 (c) >--/18/16 **A 23/19/14**

Oil Cleanliness

22/17/13

▲ 22/19/14

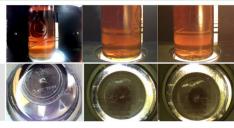


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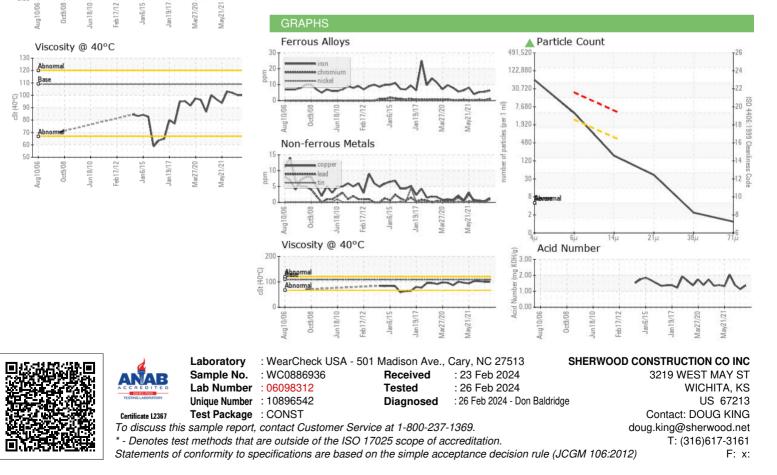
OIL ANALYSIS REPORT

A Particle Trend	FLUID
Ē 100k +6μm	Acid Num
8 80k14μm	VISUAI
Aug 10,06 Jun 18/10 Jan 19/17 Maz 12/12 May 21/21 May 21/21	White Me Yellow M Precipitat Silt Debris
🔺 Particle Trend	Sand/Dirt
120k	Appearar
€ ^{100k}	Odor
2 80k	Emulsifie
OF 60k-	Free Wat
E 100k μm 14μm 14μm 14μm 14μm 14μm 14μm	FLUID
	Visc @ 4
Aug 10/06 - Jun 18/10 - Jun 18/10 - Jun 18/10 - Jan 19/17 - Jan 19/17 - May21/20 - May21/21 - May21	SAMPL
Acid Number	Color
	D

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		1.36	1.13	1.39
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	109	100	100	102
SAMPLE IMAGES		method	limit/base	current	history1	history2



Bottom



Submitted By: PATRICIA BIBLE