

OIL ANALYSIS REPORT

Ma/2019 Jan/2020 Jan/2021 Oct/022 Jan/2024 Ma/2024

Sample Rating Trend



53.137L [OKLAHOMA^102^EG - SKID STEER] Diesel Engine

OKLAHOMA/102/EG - SKID STEER

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

SAMPLE INFORMATION method

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Area

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 Number		Client Info		WC0935194	WC0914447	WC0873967
Sample Date		Client Info		12 May 2024	17 Apr 2024	24 Jan 2024
Machine Age	hrs	Client Info		6739	6654	6396
Oil Age	hrs	Client Info		6654	149	6085
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	۷	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>100	6	9	3
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m		2	1	2
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES						
ADDITIVES		method	limit/base	current	history1	history2
Boron	maa	method ASTM D5185m	limit/base		history1 49	history2 37
	ppm pom	ASTM D5185m		current 65 0		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	65 0	49 0	37 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	65 0 39	49 0 43	37 0 38
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	65 0 39 0	49 0 43 0	37 0 38 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	65 0 39 0 478	49 0 43 0 562	37 0 38 0 453
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	65 0 39 0 478 1670	49 0 43 0 562 1901	37 0 38 0 453 1551
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	0 0 0	65 0 39 0 478 1670 832	49 0 43 0 562 1901 799	37 0 38 0 453 1551 704
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	65 0 39 0 478 1670 832 921	49 0 43 0 562 1901 799 1001	37 0 38 0 453 1551 704 848
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 ASTM D5185m	0 0 0 0 0 0	65 0 39 0 478 1670 832 921 2846	49 0 43 0 562 1901 799 1001 3043	37 0 38 0 453 1551 704 848 2327
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	0 0 0 0 Init/base	65 0 39 0 478 1670 832 921 2846 current	49 0 43 0 562 1901 799 1001 3043 history1	37 0 38 0 453 1551 704 848 2327 history2
Boron Barium Molybdenum Manganese 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 0 0	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6	49 0 43 0 562 1901 799 1001 3043 history1 5	37 0 38 0 453 1551 704 848 2327 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6 4	49 0 43 0 562 1901 799 1001 3043 history1 5 6	37 0 38 0 453 1551 704 848 2327 history2 3 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 current 6 4 2	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0	37 0 38 0 453 1551 704 848 2327 history2 3 1 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6 4 2 2	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 yhistory2
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	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6 4 2 2 <u>current</u> 0.2	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0 history1 0.2	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 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 ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 <i>current</i> 6 4 2 2 <i>current</i> 0.2 7.6	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0 history1 0.2 7.5	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 2 history2 0.2 7.9
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	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6 4 2 2 <u>current</u> 0.2	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0 history1 0.2	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 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 ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6 4 2 2 <u>current</u> 0.2 7.6 21.7	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0 history1 0.2 7.5	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 2 history2 0.2 7.9
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	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	65 0 39 0 478 1670 832 921 2846 <u>current</u> 6 4 2 2 <u>current</u> 0.2 7.6 21.7	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0 history1 0.2 7.5 22.4	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 5 <i>history2</i> 0.2 7.9 22.5
Boron Barium 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 ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	65 0 39 0 478 1670 832 921 2846 Current 6 4 2 2 Current 0.2 7.6 21.7 Current	49 0 43 0 562 1901 799 1001 3043 history1 5 6 0 0 history1 0.2 7.5 22.4 history1	37 0 38 0 453 1551 704 848 2327 history2 3 1 2 2 history2 0.2 7.9 22.5 history2



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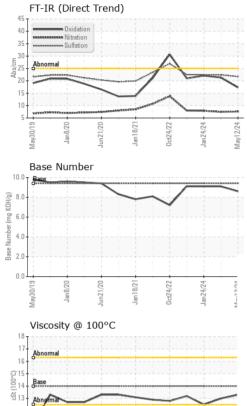
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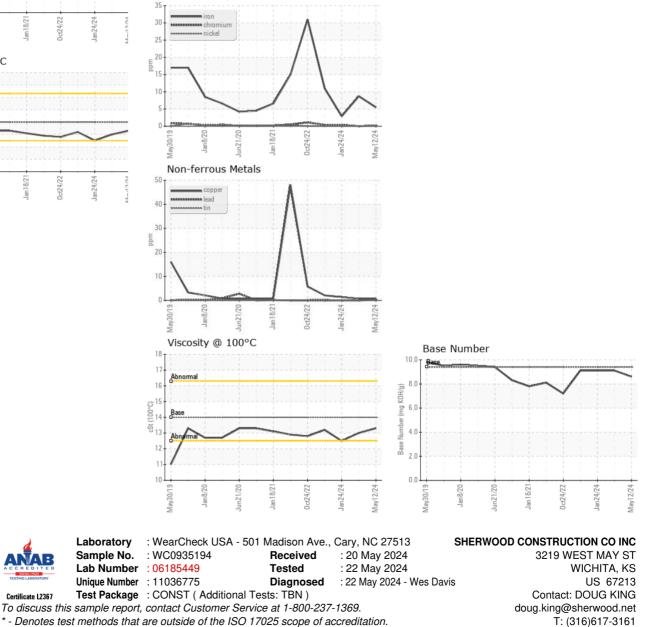
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OIL ANALYSIS REPORT



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 PROPERT		method	limit/base	current	history1	history2
FLUID FNUFENI	IE0	methou	IIIIII/Dase	current	TIISTOLA	TIIStoryz
Visc @ 100°C	cSt	ASTM D445	14	13.3	13.0	12.5
GRAPHS						

Ferrous Alloys



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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