

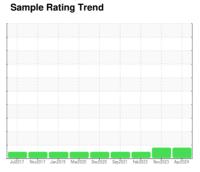




OKLAHOMA/102/EG - BACKHOE LOADER 53.514L [OKLAHOMA^102^EG - BACKHOE LOADER]

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)





DIAGNOSIS

Recommendation

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

Wear

The copper level is abnormal. Elemental level of copper (Cu) probably due to leaching of copper from copper components (i.e. cooling core) by the oil additives. All other component wear rates are

Contamination

There is no indication of any contamination in the oil.

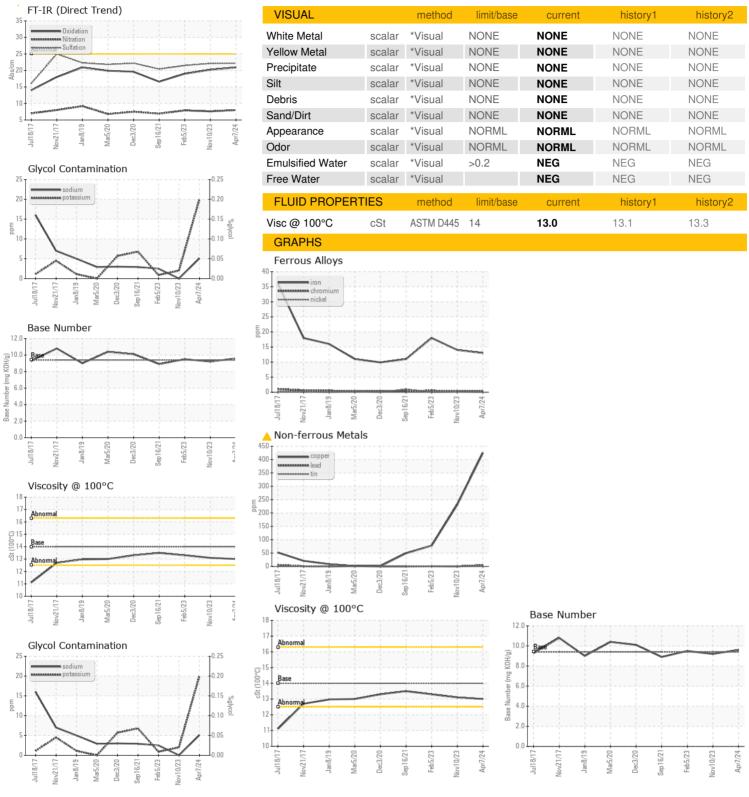
Fluid Condition

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

Sample Number Client Info WC0886860 WC085755 WC0768755 Machine Age Institute Client Info W7 Apr 2024 10 Nov 2023 05 Feb 2023 Machine Age Ins Client Info 2254 2310 2062 2010 Client Info 244 248 265 Client Info Changed Changed Changed Changed Changed Changed Changed ABNORMAL ATTENTION NORMAL ATTENTION NORMAL ATTENTION NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method 5.5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1							
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Oil Age Oil Changed Oil Changed Sample Status Nrs Client Info Changed Changed Changed Changed Changed Changed Changed Changed Changed NoRMAL ATTENTION NORMAL NORMAL Changed Changed Changed Changed Changed Changed Changed Normal NoRMAL Control Changed Change	Sample Date		Client Info		07 Apr 2024	10 Nov 2023	05 Feb 2023
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Lead ppm ASTM D5185m >40 4 0 <1 Copper ppm ASTM D5185m >330 ▲ 425 ≥31 78 Tin ppm ASTM D5185m >15 <1 0 <1 Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 52 54 54 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 39 43 33 Manganese ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Silver	ppm	ASTM D5185m	>2	0	0	0
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Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.6 7.9 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 22.1 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.9 20.2 19.0	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 ASTM D5185m	0 0 0 0	52 0 39 <1 485 1715 792 856 2859 current	54 0 43 <1 519 1723 769 940 2710 history1	54 0 33 <1 572 1701 760 966 3243 history2
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Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.6 7.9 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 22.1 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.9 20.2 19.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25	52 0 39 <1 485 1715 792 856 2859 current 7 5	54 0 43 <1 519 1723 769 940 2710 history1 8 0	54 0 33 <1 572 1701 760 966 3243 history2 8 2
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FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.9 20.2 19.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982 *Method	0 0 0 0 limit/base >25 >20	52 0 39 <1 485 1715 792 856 2859 current 7 5 20 NEG	54 0 43 <1 519 1723 769 940 2710 history1 8 0 2 NEG history1	54 0 33 <1 572 1701 760 966 3243 history2 8 2 <1 NEG
Oxidation Abs/.1mm *ASTM D7414 >25 20.9 20.2 19.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982 method *ASTM D7844	0 0 0 0 	52 0 39 <1 485 1715 792 856 2859 current 7 5 20 NEG current 0.1	54 0 43 <1 519 1723 769 940 2710 history1 8 0 2 NEG history1 0.1	54 0 33 <1 572 1701 760 966 3243 history2 8 2 <1 NEG history2 0.1
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m *ASTM D7844 *ASTM D7844	0 0 0 0 	52 0 39 <1 485 1715 792 856 2859 current 7 5 20 NEG current 0.1 8.0	54 0 43 <1 519 1723 769 940 2710 history1 8 0 2 NEG history1 0.1 7.6	54 0 33 <1 572 1701 760 966 3243 history2 8 2 <1 NEG history2 0.1 7.9
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20 >30	52 0 39 <1 485 1715 792 856 2859 current 7 5 20 NEG current 0.1 8.0 22.2	54 0 43 <1 519 1723 769 940 2710 history1 8 0 2 NEG history1 0.1 7.6 22.1	54 0 33 <1 572 1701 760 966 3243 history2 8 2 <1 NEG history2 0.1 7.9 21.5
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415 method	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20 >30 limit/base	52 0 39 <1 485 1715 792 856 2859 current 7 5 20 NEG current 0.1 8.0 22.2 current	54 0 43 <1 519 1723 769 940 2710 history1 8 0 2 NEG history1 0.1 7.6 22.1 history1	54 0 33 <1 572 1701 760 966 3243 history2 8 2 <1 NEG history2 0.1 7.9 21.5 history2



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0886860 Lab Number : 06150893

Unique Number : 10980971

Received : 16 Apr 2024 **Tested**

: 19 Apr 2024 Diagnosed

: 19 Apr 2024 - Don Baldridge

Test Package : CONST (Additional Tests: Glycol, TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369. st - 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)

SHERWOOD CONSTRUCTION CO INC

3219 WEST MAY ST

Contact: DOUG KING

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