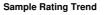


OIL ANALYSIS REPORT



DEGRADATION

JOHN DEERE E-CAB OT-68 (S/N 22321)

Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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 no indication of any contamination in the oil.

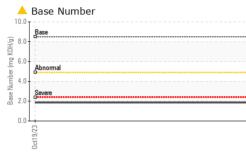
Fluid Condition

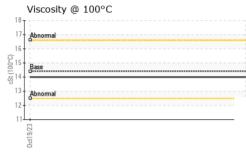
The BN level is low.

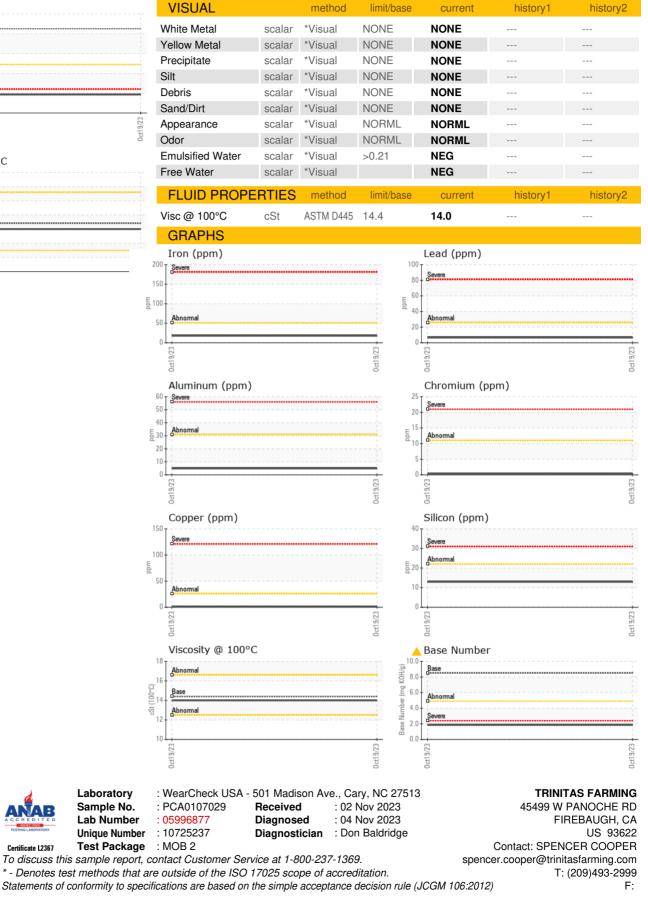
				0ct2023		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0107029		
Sample Date		Client Info		19 Oct 2023		
Machine Age	hrs	Client Info		6190		
Oil Age	hrs	Client Info		240		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINATIO	NC	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0		
Glycol		WC Method		NEG		
WEAR METALS	;	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	18		
	ppm	ASTM D5185m	>11	<1		
	ppm	ASTM D5185m	>5	0		
	ppm	ASTM D5185m		0		
	ppm	ASTM D5185m	>3	0		
	ppm	ASTM D5185m	>31	5		
	ppm	ASTM D5185m	>26	7		
Copper	ppm	ASTM D5185m	>26	2		
Tin	ppm	ASTM D5185m	>4	<1		
				•		
vanadium	ppm	ASTM D5185m		0		
	ppm ppm	ASTM D5185m ASTM D5185m		0		
			limit/base	-		
Cadmium ADDITIVES		ASTM D5185m	limit/base 250	0		
Cadmium ADDITIVES Boron	ppm	ASTM D5185m method		0 current	 history1	 history2
Cadmium ADDITIVES Boron Barium	ppm ppm	ASTM D5185m method ASTM D5185m	250	0 current <1	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	250 10	0 current <1 0	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	250 10	0 current <1 0 55	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	0 current <1 0 55 0	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	0 current <1 0 55 0 970	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	0 current <1 0 55 0 970 1161	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	0 current <1 0 55 0 970 1161 975	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	0 current <1 0 55 0 970 1161 975 1311	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	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	250 10 100 450 3000 1150 1350 4250	0 current <1 0 55 0 970 1161 975 1311 2977	 history1 	 history2 -
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	0 current <1 0 55 0 970 1161 975 1311 2977 current	 history1 history1	 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	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 Method	250 10 100 450 3000 1150 1350 4250 Iimit/base >22	0 current <1 0 55 0 970 1161 975 1311 2977 current 13	 history1 history1 	 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	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	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158	0 current <1 0 55 0 970 1161 975 1311 2977 current 13 <1	 history1 history1 	 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED	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	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20	0 current <1 0 55 0 970 1161 975 1311 2977 current 13 <1 1	 history1 history1 	 history2 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base	0 current <1 0 55 0 970 1161 975 1311 2977 current 13 <1 1 current	 history1 history1 history1	 history2 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base >3	0 current <1 0 55 0 970 1161 975 1311 2977 current 13 <1 1 1 current 0.2	 history1 history1 history1	 history2 history2 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >22 >158 >20 Imit/base >3 >20	0 current <1 0 55 0 970 1161 975 1311 2977 current 13 <1 1 0.2 7.4	 history1 history1 history1	history2 history2 history2 history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD/	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base >3 >20 >3 >20	0 current <1 0 55 0 970 1161 975 1311 2977 current 13 <1 1 current 0.2 7.4 18.5	 history1 history1 history1	 history2 history2 history2 history2



OIL ANALYSIS REPORT







Certificate L2367