

## **OIL ANALYSIS REPORT**

Sample Rating Trend

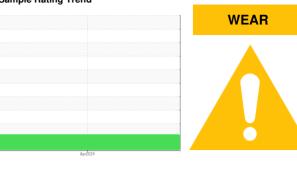
limit/base



### Store 8 - Pikeville [148877] JOHN DEERE 410P 1DW410PAKPFA07464 **Diesel Engine**

Fluid JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (11 GAL)

SAMPLE INFORMATION method



history1

history2

current

### 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.

#### A Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

#### Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

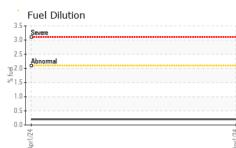
#### Fluid Condition

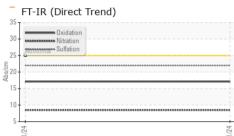
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

	ATION	method	IIIIII/Dase	current	Thistory I	TIISTOLAS
Sample Number		Client Info		LEC0046458		
Sample Date		Client Info		01 Apr 2024		
Machine Age	hrs	Client Info		511		
Oil Age	hrs	Client Info		511		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
-						
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.21	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	33		
Chromium	ppm	ASTM D5185m	>11	<1		
Nickel	ppm	ASTM D5185m	>5	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m		4		
Lead	ppm	ASTM D5185m	>26	- <del>-</del> 18		
Copper	ppm	ASTM D5185m	>26	▲ 540		
Tin		ASTM D5185m	>20	10		
	ppm		>4	-		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		224		
Barium	ppm	ASTM D5185m		2		
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		2 249		
Molybdenum	ppm	ASTM D5185m		249		
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m		249 12		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		249 12 816		
Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		249 12 816 1467 905		
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		249 12 816 1467 905 1126		
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		249 12 816 1467 905 1126 3572	  	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	249 12 816 1467 905 1126	  	   
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	limit/base >!20	249 12 816 1467 905 1126 3572	  	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	>!20	249 12 816 1467 905 1126 3572 current	     history1	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	>!20	249 12 816 1467 905 1126 3572 current 13	    history1	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	>!20 >31 >20	249 12 816 1467 905 1126 3572 current 13 7	    history1	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur Sulfur Silicon Sodium Potassium	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 D5185m ASTM D5185m	>!20 >31 >20	249 12 816 1467 905 1126 3572 <u>current</u> 13 7 3	    history1 	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m	>!20 >31 >20	249 12 816 1467 905 1126 3572 <u>current</u> 13 7 3 0.2	    history1  	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D3524 *ASTM D2982	>!20 >31 >20 >2.1	249 12 816 1467 905 1126 3572 current 13 7 3 0.2 NEG current	    history1   	   history2  
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm % %	ASTM D5185m ASTM D5284 *ASTM D3524 *ASTM D7844	>!20 >31 >20 >2.1 limit/base >3	249 12 816 1467 905 1126 3572 current 13 7 3 0.2 NEG current 0.2	    history1     history1	     history2    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D3524 *ASTM D2982	>!20 >31 >20 >2.1	249 12 816 1467 905 1126 3572 current 13 7 3 0.2 NEG current	     history1    history1	   history2      history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm % % %	ASTM D5185m ASTM D5282 *ASTM D2982 method *ASTM D7844 *ASTM D7844	>!20 >31 >20 >2.1 limit/base >3 >20	249 12 816 1467 905 1126 3572 current 13 7 3 0.2 NEG current 0.2 8.5	    history1    history1  	   history2    history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm % % % Abs/cm Abs/cm	ASTM D5185m ASTM D3524 *ASTM D2982 <b>method</b> *ASTM D7844 *ASTM D7624 *ASTM D7615	>l20 >31 >20 >2.1 iimit/base >3 >20 >30 iimit/base	249 12 816 1467 905 1126 3572 current 13 7 3 0.2 NEG 0.2 NEG 0.2 8.5 22.0 current	        	     history2   history2  history2  history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm % % %	ASTM D5185m ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7844	>!20 >31 >20 >2.1 !imit/base >3 >20 >30	249 12 816 1467 905 1126 3572 current 13 7 3 0.2 NEG current 0.2 8.5 22.0	     history1     history1   	     history2    history2  history2



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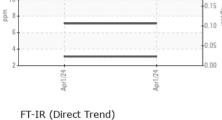


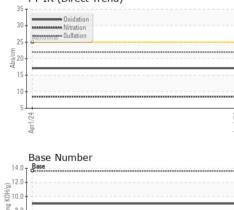
0.25

0.20

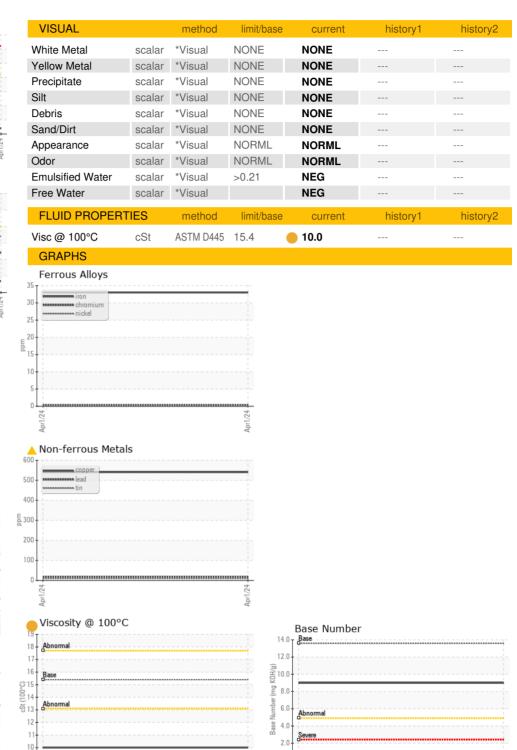
Apr1/24











0.0

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Submitted By: STORE 8 - PIKEVILLE - MICHELLE LITTLE