

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area Oakdale Machine Id JOHN DEERE 524K 1DW524KZCJF686939 Component Diesel Engine

PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS Recommendation

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.

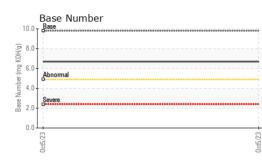
Fluid Condition

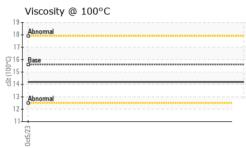
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method				history2
Sample Number		Client Info		PCA0096413		
Sample Date		Client Info		05 Oct 2023		
Machine Age	hrs	Client Info		7876		
Oil Age	hrs	Client Info		1200		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185m	>51	22		
Chromium	ppm		>11	1		
Nickel	ppm	ASTM D5185m	>5	10		
Titanium	ppm		20	0		
Silver	ppm	ASTM D5185m	. 2			
	ppm	ASTM D5185m	>3	0		
Aluminum	ppm		>31 >26	0 7		
Lead	ppm	ASTM D5185m		-		
Copper	ppm		>26	4		
Tin	ppm	ASTM D5185m	>4	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 36	history1	history2
	ppm ppm		limit/base		history1 	
Boron		ASTM D5185m	limit/base	36		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	36 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	36 0 189		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	36 0 189 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	36 0 189 <1 859		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	36 0 189 <1 859 1263	 	
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	limit/base	36 0 189 <1 859 1263 908	 	
Boron Barium 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 ASTM D5185m	limit/base	36 0 189 <1 859 1263 908 1121		
Boron Barium 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 ASTM D5185m ASTM D5185m	limit/base	36 0 189 <1 859 1263 908 1121 2958		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	36 0 189 <1 859 1263 908 1121 2958 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	36 0 189 <1 859 1263 908 1121 2958 current 7		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >22 >31	36 0 189 <1 859 1263 908 1121 2958 <u>current</u> 7 1		 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >22 >31 >20	36 0 189 <1 859 1263 908 1121 2958 current 7 1 3	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >22 >31 >20 limit/base	36 0 189 <1 859 1263 908 1121 2958 current 7 1 3 3 current	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >22 >31 >20 limit/base >3	36 0 189 <1 859 1263 908 1121 2958 current 7 1 3 current 0.4	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >22 >31 >20 limit/base >3 >20	36 0 189 <1 859 1263 908 1121 2958 current 7 1 3 current 0.4 9.4	 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >22 >31 >20 limit/base >3 >20 >3 >20 >30	36 0 189 <1 859 1263 908 1121 2958 current 7 1 3 current 0.4 9.4 25.0 current	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >22 >31 >20 limit/base >3 >20 >30 >30	36 0 189 <1 859 1263 908 1121 2958 current 7 1 3 current 0.4 9.4 25.0	 history1 history1 history1	 history2 history2 history2 history2

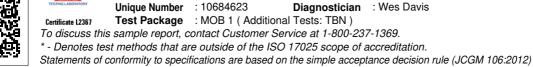


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor		*Visual	NORML	NORML		
Emulsified Water	scalar		>0.21	NEG		
Free Water	scalar scalar	*Visual *Visual	>0.21	NEG		
			line it /le e e e			
FLUID PROPI		method	limit/base	current	history1	history2
/isc @ 100°C	cSt	ASTM D445	15.6	14.2		
GRAPHS				Lead (ppm)		
Iron (ppm)			10			
			8	30 - Severe		
			E C	50 <mark>-</mark>		
Abnormal			10 A	Abnormal		
- 0			2	20 -		
				0		
0ct5/23			0ct5/23	0ct5/23		0ct5/23
Aluminum (ppm))			Chromium (p	nm)	
Severe	,		2	²⁵ T :	рпт у	
			2	20 - Severe		
Abnormal			ε	5-		
-				Abnormal		
				5		
				0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
0ct5/23			0ct5/23 -	0ct5/23		0ct5/23
Copper (ppm)				Silicon (ppm)		
T			4			
Severe			3	Severe		
•			E 2	Abnormal		
Abnormal			·····	10 -		
53			23	0 S		
0ct5/23			0ct5/23	0ct5/23		0.045/23
Viscosity @ 100°	С			Base Number		
Abnormal			(B) (B)	.0 Base		
- Base			Base Number (mg K0H(g) 8 8 9 8			
			19 19 19 10	Abhormai		
Abnormal			unv es 2	Severe		
0ct5/23			0ct5/23	0ct5/23		0.d5//3 .
0ct			Octl	Oct		040
WearCheck USA - PCA0096413 05972673	Receive Diagnos	d :090 ed :110	Oct 2023 Oct 2023	3	5707	LANGWORTH OAKDALE, CA
10684623 MOB 1 (Additiona	Diagnos	BN)	s Davis		Contac	US 9536 t: S MCHENR
	10313.11				Contac	



Laboratory Sample No. Lab Number ppm

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