

OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend

VISCOSITY

history1

[W49955]

JOHN DEERE 844K 1DW844KAJJF693325

Component

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 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

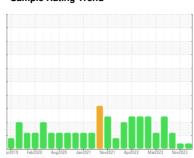
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

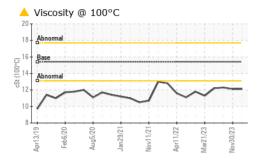


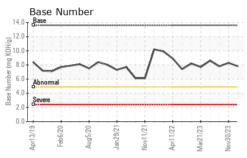
Sample Number		Client Info		JR0200459	JR0179514	JR0180830
Sample Date		Client Info		20 Feb 2024	30 Nov 2023	06 Sep 2023
Machine Age	hrs	Client Info		13465	12982	12496
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0	4.7	△ 5.7
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	13	8	12
Chromium	ppm	ASTM D5185m	>11	1	0	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	2
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	8	6	9
Lead	ppm	ASTM D5185m	>26	2	<1	3
Copper	ppm	ASTM D5185m	>26	3	4	4
Tin	ppm	ASTM D5185m	>4	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 218	history1 189	history2 184
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	218	189	184
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	218 2	189	184
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	218 2 264	189 0 231	184 0 240
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	218 2 264 <1	189 0 231	184 0 240
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	218 2 264 <1 766	189 0 231 0 684	184 0 240 1 859
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	218 2 264 <1 766 1289	189 0 231 0 684 1231	184 0 240 1 859 1427
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	218 2 264 <1 766 1289 833	189 0 231 0 684 1231 772	184 0 240 1 859 1427 854
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 ASTM D5185m	limit/base	218 2 264 <1 766 1289 833 1042	189 0 231 0 684 1231 772 949	184 0 240 1 859 1427 854 1097
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 ASTM D5185m	limit/base	218 2 264 <1 766 1289 833 1042 3120	189 0 231 0 684 1231 772 949 2912	184 0 240 1 859 1427 854 1097 3855
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	limit/base	218 2 264 <1 766 1289 833 1042 3120 current	189 0 231 0 684 1231 772 949 2912 history1	184 0 240 1 859 1427 854 1097 3855 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >22	218 2 264 <1 766 1289 833 1042 3120 current	189 0 231 0 684 1231 772 949 2912 history1 6	184 0 240 1 859 1427 854 1097 3855 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >22 >31	218 2 264 <1 766 1289 833 1042 3120 current 10 4	189 0 231 0 684 1231 772 949 2912 history1 6 <1	184 0 240 1 859 1427 854 1097 3855 history2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >22 >31 >20	218 2 264 <1 766 1289 833 1042 3120 current 10 4	189 0 231 0 684 1231 772 949 2912 history1 6 <1	184 0 240 1 859 1427 854 1097 3855 history2 7 5
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	limit/base >22 >31 >20 limit/base	218 2 264 <1 766 1289 833 1042 3120 current 10 4 4 current	189 0 231 0 684 1231 772 949 2912 history1 6 <1 3	184 0 240 1 859 1427 854 1097 3855 history2 7 5 4
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 method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >22 >31 >20 limit/base >3	218 2 264 <1 766 1289 833 1042 3120 current 10 4 4 current 0.3	189 0 231 0 684 1231 772 949 2912 history1 6 <1 3 history1 0.3	184 0 240 1 859 1427 854 1097 3855 history2 7 5 4 history2 0.3
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 method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >22 >31 >20 limit/base >3 >20	218 2 264 <1 766 1289 833 1042 3120 current 10 4 current 0.3 8.3	189 0 231 0 684 1231 772 949 2912 history1 6 <1 3 history1 0.3 8.2	184 0 240 1 859 1427 854 1097 3855 history2 7 5 4 history2 0.3 9.0
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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >22 >31 >20 limit/base >3 >20 >31	218 2 264 <1 766 1289 833 1042 3120 current 10 4 4 current 0.3 8.3 21.5 current	189 0 231 0 684 1231 772 949 2912 history1 6 <1 3 history1 0.3 8.2 21.6 history1	184 0 240 1 859 1427 854 1097 3855 history2 7 5 4 history2 0.3 9.0 20.2
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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base >22 >31 >20 limit/base >3 >20 >30 limit/base	218 2 264 <1 766 1289 833 1042 3120 current 10 4 4 current 0.3 8.3 21.5	189 0 231 0 684 1231 772 949 2912 history1 6 <1 3 history1 0.3 8.2 21.6	184 0 240 1 859 1427 854 1097 3855 history2 7 5 4 history2 0.3 9.0 20.2 history2

Contact/Location: DAVID ZIEG - JAMASH



OIL ANALYSIS REPORT

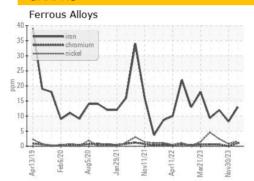


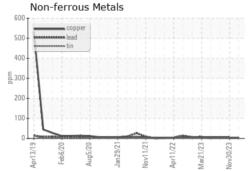


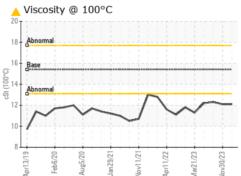
Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE	istory2
Precipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONE	ONE
Silt scalar *Visual NONE NONE NONE NONE	ONE
	ONE
Debris scalar *Visual NONE NONE NONE NONE	ONE
	ONE
Sand/Dirt scalar *Visual NONE NONE NONE NONE	ONE
Appearance scalar *Visual NORML NORML NORML NORML	DRML
Odor scalar *Visual NORML NORML NORML NORML	DRML
Emulsified Water scalar *Visual >0.21 NEG NEG NE	G
Free Water scalar *Visual NEG NEG NE	G

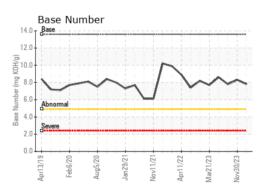
1 LOID I HOI LITTILO		method	IIIIII basc	Current	History	History	
Visc @ 100°C	cSt	ASTM D445	15.4	<u> </u>	<u>12.1</u>	12.3	

GRAPHS











Laboratory Sample No. Lab Number : 06101453 Unique Number : 10899683

: JR0200459

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

Diagnosed

: 27 Feb 2024 : 28 Feb 2024

: 28 Feb 2024 - Don Baldridge

JRE - ASHLAND 11047 LEADBETTER RD ASHLAND, VA US 23005

Contact: DAVID ZIEG dzieg@jamesriverequipment.com

T: (804)798-6001 F: (804)798-0292

Contact/Location: DAVID ZIEG - JAMASH

Test Package : CONST (Additional Tests: TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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