

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

HOBBS CRUSHER 1

Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- GAL)

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

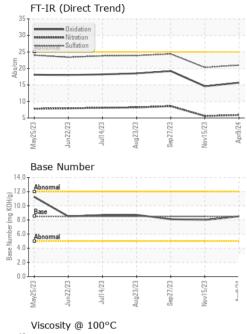
Fluid Condition

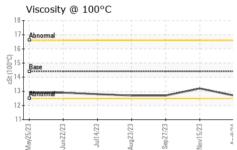
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		KL0013571	KL0013262	KL0013255
Sample Date		Client Info		09 Apr 2024	15 Nov 2023	27 Sep 2023
Machine Age	hrs	Client Info		8324	7680	7435
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3	2	30
Chromium	ppm	ASTM D5185m		0	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		3	2	4
Lead	ppm	ASTM D5185m	>40	3	0	2
Copper	ppm	ASTM D5185m		37	3	- 11
Tin	ppm	ASTM D5185m		<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base 250	current 540	history1 416	history2 299
	ppm ppm		250			
Boron Barium	ppm	ASTM D5185m	250	540	416	299
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	250 10	540 0	416 0	299 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	540 0 86	416 0 85	299 0 108
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	540 0 86 0	416 0 85 <1	299 0 108 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	540 0 86 0 426	416 0 85 <1 420	299 0 108 0 529
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	540 0 86 0 426 1355	416 0 85 <1 420 1372	299 0 108 0 529 1582
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	250 10 100 450 3000 1150 1350	540 0 86 0 426 1355 1042	416 0 85 <1 420 1372 944	299 0 108 0 529 1582 762
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	250 10 100 450 3000 1150 1350	540 0 86 0 426 1355 1042 1225	416 0 85 <1 420 1372 944 1117	299 0 108 0 529 1582 762 994
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	250 10 100 450 3000 1150 1350 4250	540 0 86 0 426 1355 1042 1225 3806	416 0 85 <1 420 1372 944 1117 3086	299 0 108 0 529 1582 762 994 2894
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	250 10 100 450 3000 1150 1350 4250 limit/base	540 0 86 0 426 1355 1042 1225 3806 current	416 0 85 <1 420 1372 944 1117 3086 history1	299 0 108 0 529 1582 762 994 2894 kistory2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	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 limit/base >25 >216	540 0 86 0 426 1355 1042 1225 3806 current 6	416 0 85 <1 420 1372 944 1117 3086 history1 4	299 0 108 0 529 1582 762 994 2894 kistory2 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216	540 0 86 0 426 1355 1042 1225 3806 current 6 <	416 0 85 <1 420 1372 944 1117 3086 history1 4 0	299 0 108 0 529 1582 762 994 2894 2894 history2 11 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20	540 0 86 0 426 1355 1042 1225 3806 <u>current</u> 6 <1 2	416 0 85 <1 420 1372 944 1117 3086 history1 4 0 <1	299 0 108 0 529 1582 762 994 2894 history2 11 0 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	540 0 86 0 426 1355 1042 1225 3806 current 6 <1 2 2	416 0 85 <1 420 1372 944 1117 3086 history1 4 0 <1 kistory1	299 0 108 0 529 1582 762 994 2894 history2 11 0 3 history2
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	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 kimit/base >25 >216 >216 >20 kimit/base >3 >20	540 0 86 0 426 1355 1042 1225 3806 current 6 <1 2 2 current	416 0 85 <1 420 1372 944 1117 3086 history1 4 0 <1 history1 0.1	299 0 108 0 529 1582 762 994 2894 history2 11 0 3 <u>history2</u> 0.6
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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 kimit/base >25 >216 >216 >20 kimit/base >3 >20	540 0 86 0 426 1355 1042 1225 3806 <i>current</i> 6 <1 2 <i>current</i> 0.2 5.9	416 0 85 <1 420 1372 944 1117 3086 history1 4 0 <1 + history1 0.1 5.6	299 0 108 0 529 1582 762 994 2894 history2 11 0 3 <u>history2</u> 0.6 8.6
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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >25 >216 >20 imit/base >3 >20	540 0 86 0 426 1355 1042 1225 3806 current 6 <1 2 current 0.2 5.9 21.0	416 0 85 <1 420 1372 944 1117 3086 history1 4 0 <1 4 0 <1 history1 0.1 5.6 20.3	299 0 108 0 529 1582 762 994 2894 history2 11 0 3 history2 0.6 8.6 24.4
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 ASTM D7844 *ASTM D7844 *ASTM D7844	250 10 100 450 3000 1150 1350 4250 216 >25 >216 >216 >20 limit/base >3 >20 >30	540 0 86 0 426 1355 1042 1225 3806 current 6 <1 2 current 0.2 5.9 21.0 current	416 0 85 <1 420 1372 944 1117 3086 history1 4 0 <1 4 0 <1 history1 0.1 5.6 20.3 history1	299 0 108 0 529 1582 762 994 2894 history2 11 0 3 history2 0.6 8.6 24.4 history2

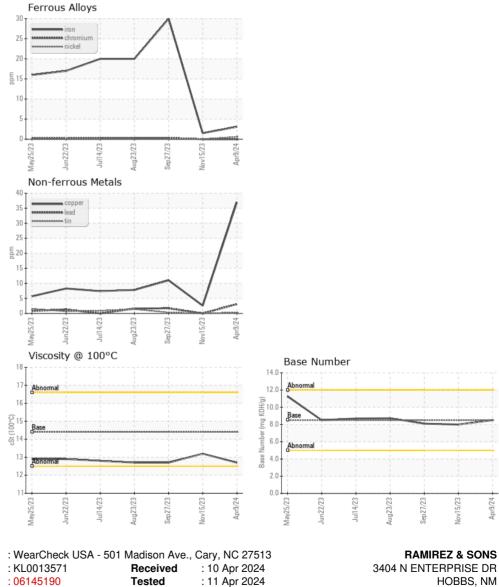


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPER	ΓIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.7	13.2	12.7
GRAPHS						





Lab Number : 06145190 Tested : 11 Apr 2024 Unique Number : 10969998 Diagnosed : 11 Apr 2024 - Wes Davis Test Package : FLEET Contact: Rick Davidson Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rickdavidson.rsi@gmail.com * - 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)

Report Id: RAMHOB [WUSCAR] 06145190 (Generated: 04/11/2024 17:55:45) Rev: 1

Laboratory

Sample No.

Contact/Location: Rick Davidson - RAMHOB

US 88240

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