

OIL ANALYSIS REPORT

Area [W116487] **GENERAC RALEIGH BURWELL 250**

Diesel Engine

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

Sample Rating Trend



Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

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	/ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0812698	WC0812713	WC0770482
Sample Date		Client Info		11 Sep 2023	09 Jun 2023	14 Mar 2023
Machine Age	hrs	Client Info		214	212	210
Oil Age	hrs	Client Info		0	0	0
Oil Changed	0	Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	1	1	2
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		17	24	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	<1	1
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1	history2 95
	ppm ppm					
Boron		ASTM D5185m	250	119	130	95
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	119 0	130 0	95 0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	119 0 46	130 0 60	95 0 13
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	119 0 46 0	130 0 60 <1	95 0 13 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	119 0 46 0 341	130 0 60 <1 279	95 0 13 <1 586
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	119 0 46 0 341 1834	130 0 60 <1 279 2140	95 0 13 <1 586 1581
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	250 10 100 450 3000 1150	119 0 46 0 341 1834 1020	130 0 60 <1 279 2140 1080	95 0 13 <1 586 1581 1063
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	119 0 46 0 341 1834 1020	130 0 60 <1 279 2140 1080 1328 5130 history1	95 0 13 <1 586 1581 1063 1268
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	119 0 46 0 341 1834 1020 1223 4160 current	130 0 60 <1 279 2140 1080 1328 5130 history1	95 0 13 <1 586 1581 1063 1268 4820 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	119 0 46 0 341 1834 1020 1223 4160 current 4	130 0 60 <1 279 2140 1080 1328 5130 history1 5	95 0 13 <1 586 1581 1063 1268 4820 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	119 0 46 0 341 1834 1020 1223 4160 current	130 0 60 <1 279 2140 1080 1328 5130 history1	95 0 13 <1 586 1581 1063 1268 4820 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	119 0 46 0 341 1834 1020 1223 4160 current 4	130 0 60 <1 279 2140 1080 1328 5130 history1 5	95 0 13 <1 586 1581 1063 1268 4820 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	119 0 46 0 341 1834 1020 1223 4160 current 4 1	130 0 60 <1 279 2140 1080 1328 5130 history1 5 2	95 0 13 <1 586 1581 1063 1268 4820 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	119 0 46 0 341 1834 1020 1223 4160 current 4 1 2 current	130 0 60 <1 279 2140 1080 1328 5130 history1 5 2 2	95 0 13 <1 586 1581 1063 1268 4820 history2 4 2 3
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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	119 0 46 0 341 1834 1020 1223 4160 current 4 1 2 current	130 0 60 <1 279 2140 1080 1328 5130 history1 5 2 2 history1 0.1	95 0 13 <1 586 1581 1063 1268 4820 history2 4 2 3 history2 0.1
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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base	119 0 46 0 341 1834 1020 1223 4160 current 4 1 2 current 0 6.1	130 0 60 <1 279 2140 1080 1328 5130 history1 5 2 2 history1 0.1 6.0	95 0 13 <1 586 1581 1063 1268 4820 history2 4 2 3 history2 0.1 6.0
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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >30	119 0 46 0 341 1834 1020 1223 4160 current 4 1 2 current 0 6.1 17.4	130 0 60 <1 279 2140 1080 1328 5130 history1 5 2 2 history1 0.1 6.0 17.8	95 0 13 <1 586 1581 1063 1268 4820 history2 4 2 3 history2 0.1 6.0 18.2

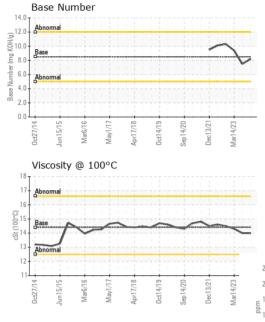


OIL ANALYSIS REPORT

cSt

ASTM D445 14.4

Visc @ 100°C



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 PROPERTIES		method	limit/base	current	history1	history2

14.0

14.0

14.3

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12-	Abnormal								Num es	10.0 + Bas 5.0 + Abn	ormal							
10-	+ 5		7	- 0		-	1	3	Bas	0.0	10		1					3
	t27/14	ar6/16	ay1/17	r17/18	t14/19	14/20	c13/21	r14/23		t27/14	115/15	ar6/16	ay1/17	r17/18	t14/19	14/20	c13/21	r14/23





Laboratory Sample No.

Lab Number

Unique Number : 10668510

: 05961959

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0812698 Received : 27 Sep 2023 Diagnosed

: 28 Sep 2023 Diagnostician : Wes Davis

Test Package : MOB 1 (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)

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