

Machine Id **IROCK RVS-20 ARTESIA CRUSHER** Compone **Diesel Engine** DIESEL ENGINE OIL SAE 40 (--- GAL)

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		KL0013573	KL0013285	KL0013250
	Sample Date		Client Info		09 Apr 2024	26 Jan 2024	27 Dec 2023
	Machine Age	hrs	Client Info		0	0	45272
	Oil Age	hrs	Client Info		0	0	0
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		N/A	N/A	N/A
	Filter Changed		Client Info		N/A	N/A	N/A
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	10	3	4
	Chromium	ppm	ASTM D5185m	>20	0	<1	0
All component wear rates are normal.	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	>20	3	2	2
	Lead	ppm	ASTM D5185m	>40	<1	0	<1
	Copper	ppm	ASTM D5185m	>330	0	0	<1
	Tin	ppm	ASTM D5185m	>15	<1	<1	<1
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	<u>~25</u>	6	4	4
CONTAMINATION	Potassium	ppm	ASTM D5185m		2	0	<1
There is no indication of any contamination in the oil.	Fuel	ppm	WC Method		- <1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method	/ 0.1	NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.3	0.2	0.1
	Nitration	Abs/cm	*ASTM D7624	>20	7.5	6.7	5.7
	Sulfation	Abs/.1mm	*ASTM D7415		21.8	20.9	20.3
	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
FLUID CONDITION	Sodium	ppm	ASTM D5185m	<u>\216</u>	2	<1	3
I LOID CONDITION	Boron	ppm	ASTM D5185m		438	397	403
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		88	85	88
	Manganese	ppm	ASTM D5185m		<1	0	<1
	Magnesium	ppm	ASTM D5185m	450	434	415	449
	Calcium	ppm	ASTM D5185m		1328	1231	1385
	Phosphorus	ppm	ASTM D5185m		965	950	1033
	Zinc	ppm	ASTM D5185m		1124	1102	1242
	Sulfur	ppm	ASTM D5185m		3756	3096	3638
	O deletion	Alex/dec	****	05	10.0	45.5	110

Oxidation

Visc @ 100°C cSt

15.5

7.7

13.1

14.6 8.0

13.3

16.9

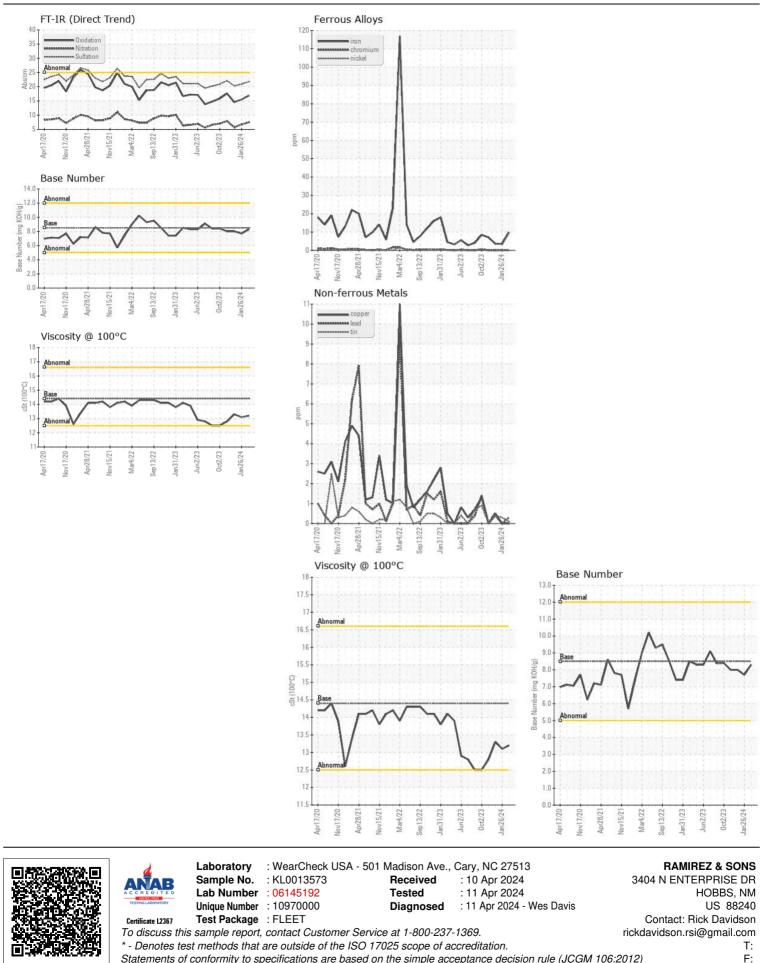
8.3

13.2

Abs/.1mm *ASTM D7414 >25

ASTM D445 14.4

Base Number (BN) mg KOH/g ASTM D2896 8.5



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

Submitted By: Mike Richardson Page 2 of 2