

# **OIL ANALYSIS REPORT**

## **Sample Rating Trend**

# x/020 Nov/020 Apr/021 Nex/021 Max/022 Sop/022 Jan/023 Jan/023 Oc/0203

NORMAL



# IROCK RVS-20 ARTESIA CRUSHER

Component

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 40 (--- GAL)** 

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. 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.

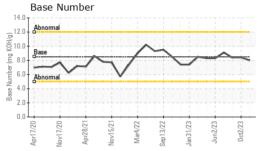
### **Fluid Condition**

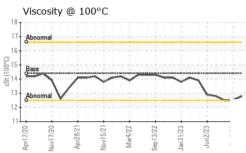
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

				lar2022 Sep2022 Jan2023 Jun20		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KL0013259	KL0013241	KL0011642
Sample Date		Client Info		06 Nov 2023	02 Oct 2023	23 Aug 2023
Machine Age	hrs	Client Info		45160	4182	45160
Oil Age	hrs	Client Info		45160	0	0
Oil Changed		Client Info		N/A	N/A	N/A
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	7	8	4
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	<1
Lead	ppm	ASTM D5185m	>40	0	1	<1
Copper	ppm	ASTM D5185m	>330	0	1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 334	history1 290	history2 339
	ppm					
Boron		ASTM D5185m	250	334	290	339
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	334 0	290	339
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	334 0 95	290 0 99	339 0 104
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	334 0 95 <1	290 0 99 <1	339 0 104 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	334 0 95 <1 437	290 0 99 <1 455	339 0 104 <1 462
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 1150	334 0 95 <1 437 1453	290 0 99 <1 455 1504	339 0 104 <1 462 1665
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	250 10 100 450 3000 1150	334 0 95 <1 437 1453 912	290 0 99 <1 455 1504 883	339 0 104 <1 462 1665 865
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	334 0 95 <1 437 1453 912 1090 2984 current	290 0 99 <1 455 1504 883 1059 3106 history1	339 0 104 <1 462 1665 865 1047 3718 history2
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	334 0 95 <1 437 1453 912 1090 2984 current	290 0 99 <1 455 1504 883 1059 3106 history1	339 0 104 <1 462 1665 865 1047 3718 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 >216	334 0 95 <1 437 1453 912 1090 2984 current 5	290 0 99 <1 455 1504 883 1059 3106 history1 8 2	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1
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	334 0 95 <1 437 1453 912 1090 2984 current	290 0 99 <1 455 1504 883 1059 3106 history1	339 0 104 <1 462 1665 865 1047 3718 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 >216	334 0 95 <1 437 1453 912 1090 2984 current 5	290 0 99 <1 455 1504 883 1059 3106 history1 8 2	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1
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 >216 >20	334 0 95 <1 437 1453 912 1090 2984 current 5 0	290 0 99 <1 455 1504 883 1059 3106 history1 8 2 2	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1 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 >216 >20 limit/base >3	334 0 95 <1 437 1453 912 1090 2984 current 5 0 0	290 0 99 <1 455 1504 883 1059 3106 history1 8 2 2	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1 2 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 ppm	ASTM D5185m  Method  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3	334 0 95 <1 437 1453 912 1090 2984 current 5 0 0	290 0 99 <1 455 1504 883 1059 3106 history1 8 2 2 history1 0.3	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1 2 history2 0.2
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	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	334 0 95 <1 437 1453 912 1090 2984  current 5 0 current 0.4 7.9	290 0 99 <1 455 1504 883 1059 3106 history1 8 2 2 history1 0.3 7.0	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1 2 history2 0.2 6.6
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  Method  ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30	334 0 95 <1 437 1453 912 1090 2984 current 5 0 0 current 0.4 7.9 22.1	290 0 99 <1 455 1504 883 1059 3106 history1 8 2 2 history1 0.3 7.0 20.9	339 0 104 <1 462 1665 865 1047 3718 history2 5 <1 2 history2 0.2 6.6 20.2



# **OIL ANALYSIS REPORT**

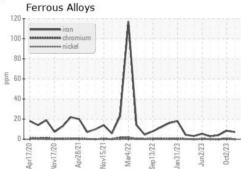


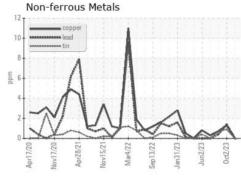


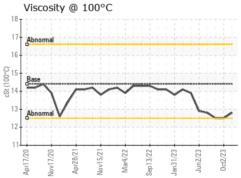
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

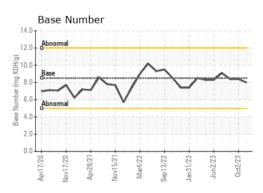
FLUID PROPERTIES		method	iimivbase		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14.4	12.8	12.5	12.5

# **GRAPHS**













Certificate L2367

Laboratory Sample No.

Lab Number Unique Number : 10749254 Test Package : FLEET

: KL0013259 : 06010110

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Nov 2023

Diagnosed : 17 Nov 2023 Diagnostician : Wes Davis

**RAMIREZ & SONS** 3404 N ENTERPRISE DR HOBBS, NM US 88240

Contact: Rick Davidson rickdavidson.rsi@gmail.com

T: F:

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)