

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

2B SHREVEPORT

Diesel Engine

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

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

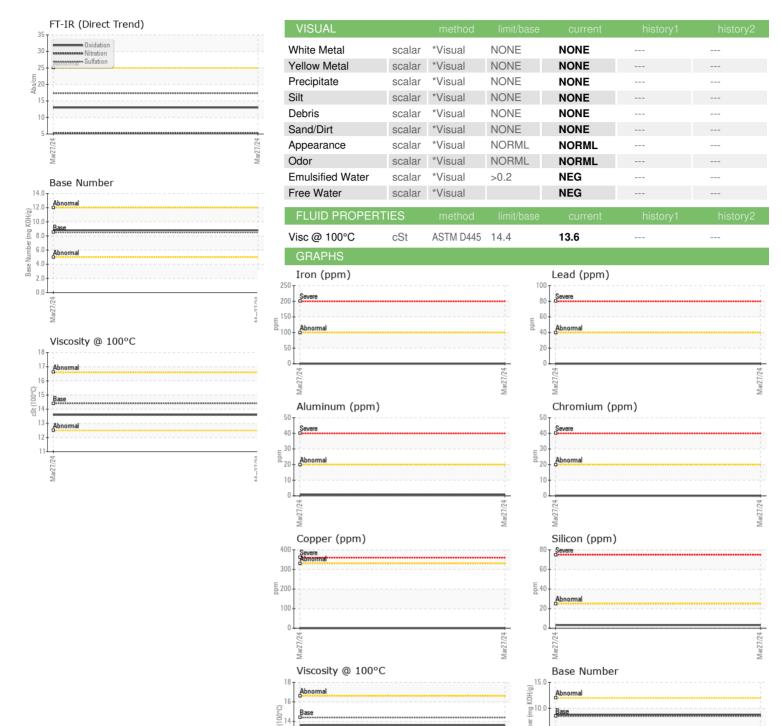
Fluid Condition

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

SAMPLE INFORMATION method limit/base current history1 history2					Mar2024		
Sample Number Client Info WC0911360					MOLULI		
Sample Date Client Info 27 Mar 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0	Sample Number		Client Info		WC0911360		
Oil Changed Oil Changed Client Info Not Changed NoT CONTAMINATION Image: Contamination of Changed NoT Cha	Sample Date		Client Info		27 Mar 2024		
Contamed Client Info Not Changd Contamination Contam	Machine Age	hrs	Client Info		0		
CONTAMINATION	Oil Age	hrs	Client Info		0		
CONTAMINATION	Oil Changed		Client Info		Not Changd		
Fuel WC Method S5 C1.0 C1.0	Sample Status				NORMAL		
Water WC Method So.2 NEG So.2 NEG So.3 Ne	CONTAMINATION	١	method	limit/base	current	history1	history2
WEAR METALS method Imitibase current history1 history2 Iron ppm ASTM D5185m >100 0 Chromium ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >20 <1 Lead ppm ASTM D5185m >40 0 Copper ppm ASTM D5185m >40 0 Vanadium ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium <	Fuel		WC Method	>5	<1.0		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 0 Chromium ppm ASTM D5185m 220 0 Nickel ppm ASTM D5185m 20 Titanium ppm ASTM D5185m 3 0	Water		WC Method	>0.2	NEG		
Iron	Glycol		WC Method		NEG		
Chromium ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >4 0 Titanium ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >20 <1 Aluminum ppm ASTM D5185m >20 <1 Lead ppm ASTM D5185m >40 0 Copper ppm ASTM D5185m >330 0 Tin ppm ASTM D5185m >15 <1 Vanadium ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 ASTM D5185m 0 45 Boron ppm ASTM D5185m 10	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	0		
Titanium	Chromium	ppm	ASTM D5185m	>20	0		
Silver	Nickel	ppm	ASTM D5185m	>4	0		
Aluminum ppm ASTM D5185m >20 <1 Lead ppm ASTM D5185m >40 0 Copper ppm ASTM D5185m >330 0 Tin ppm ASTM D5185m >15 <1		ppm	ASTM D5185m		0		
Lead	Silver	ppm	ASTM D5185m	>3	0		
Copper ppm ASTM D5185m >330 0 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	<1		
Tin	Lead	ppm	ASTM D5185m		0		
Vanadium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 45 Barium ppm ASTM D5185m 10 0 Molybdenum ppm ASTM D5185m 100 69 Manganese ppm ASTM D5185m 100 69 Magnesium ppm ASTM D5185m 450 789 Calcium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1350 1045 Zinc ppm ASTM D5185m 4250 3469 Sulfur ppm ASTM D5185m >25 3 CONTAMINANTS method limit/base current	Copper	ppm		>330	0		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 45 Barium ppm ASTM D5185m 10 0 Molybdenum ppm ASTM D5185m 100 69 Manganese ppm ASTM D5185m 100 69 Magnesium ppm ASTM D5185m 450 789 Magnesium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1350 1045 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 25 3 CONTAMINANTS method limit/base current		ppm	ASTM D5185m	>15	<1		
ADDITIVES	Vanadium	ppm			-		
Boron	Cadmium	ppm	ASTM D5185m		0		
Barium ppm ASTM D5185m 10 0 Molybdenum ppm ASTM D5185m 100 69 Manganese ppm ASTM D5185m 450 789 Magnesium ppm ASTM D5185m 3000 1176 Calcium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1150 907 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >158 <1 Sodium ppm ASTM D5185m >20 0 Potassium ppm ASTM D5185	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 100 69 Manganese ppm ASTM D5185m 450 789 Calcium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1150 907 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >25 3 Potassium ppm ASTM D5185m >20 0 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7624 >20	Boron	ppm	ASTM D5185m	250	45		
Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 450 789 Calcium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1150 907 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1	Barium	ppm	ASTM D5185m	10	0		
Magnesium ppm ASTM D5185m 450 789 Calcium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1150 907 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1	Molybdenum	ppm	ASTM D5185m	100	69		
Calcium ppm ASTM D5185m 3000 1176 Phosphorus ppm ASTM D5185m 1150 907 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1	Manganese	ppm	ASTM D5185m		<1		
Phosphorus ppm ASTM D5185m 1150 907 Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1 Potassium ppm ASTM D5185m >20 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844 >3 0 Nitration Abs/cm *ASTM D7624 >20 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION *ASTM D7414 >2	Magnesium	ppm		450	789		
Zinc ppm ASTM D5185m 1350 1045 Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1	Calcium	ppm	ASTM D5185m	3000	1176		
Sulfur ppm ASTM D5185m 4250 3469 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1 Potassium ppm ASTM D5185m >20 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0 Nitration Abs/.1mm *ASTM D7624 >20 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	Phosphorus	ppm	ASTM D5185m	1150	907		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1	Zinc	ppm			1045		
Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m >158 <1 Potassium ppm ASTM D5185m >20 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0 Nitration Abs/cm *ASTM D7624 >20 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	Sulfur	ppm	ASTM D5185m	4250	3469		
Sodium ppm ASTM D5185m >158 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0 Nitration Abs/cm *ASTM D7624 >20 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	Silicon	ppm	ASTM D5185m	>25	3		
INFRA-RED		ppm	ASTM D5185m	>158	<1		
Soot % % *ASTM D7844 >3 0 Nitration Abs/cm *ASTM D7624 >20 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	Potassium	ppm	ASTM D5185m	>20	0		
Nitration Abs/cm *ASTM D7624 >20 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 17.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	Soot %	%	*ASTM D7844	>3	0		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.0	Nitration	Abs/cm	*ASTM D7624	>20	5.2		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	17.3		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.5 8.8	Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0		
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.8		



OIL ANALYSIS REPORT







Certificate 12367

Sample No.

: WC0911360 Lab Number : 06143878 Unique Number : 10968686

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 10 Apr 2024 **Tested** : 11 Apr 2024 Diagnosed : 11 Apr 2024 - 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.

Contact: BRANDON RICE brandon.rice@natpow.com

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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) Report Id: NATRAL [WUSCAR] 06143878 (Generated: 04/11/2024 04:49:02) Rev: 1

Contact/Location: BRANDON RICE - NATRAL