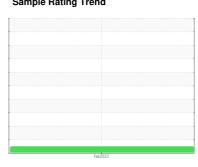


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 418

Component **Diesel Engine**

DIESEL ENGINE OIL SAE 40 (--- GAL)

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

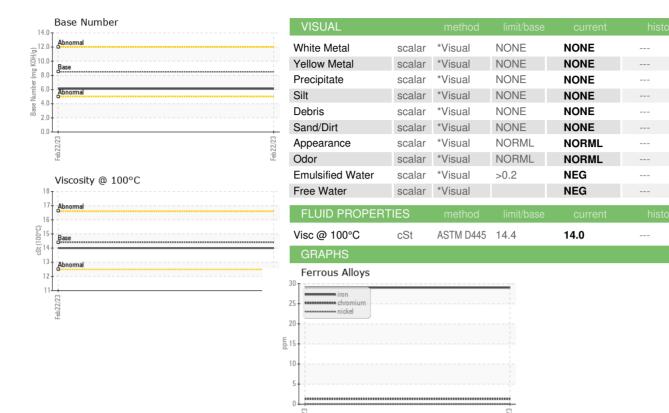
Fluid Condition

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

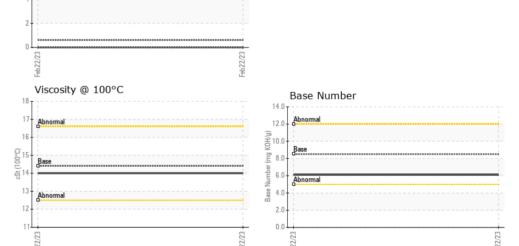
SAMPLE INFORMATION method limit/base current history1 history2							
Sample Number Client Info WC05828238					Feb2023	<u> </u>	
Sample Date Client Info 22 Feb 2023	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 442633 Oil Age mls Client Info 29487 Oil Changed Client Info Not Changd Sample Status method limit/base current history1 history2 Fuel WC Method >5 <1.0	Sample Number		Client Info		WC05828238		
Oil Age mls Client Info 29487 Oil Changed Client Info Not Changd Sample Status method limit/base current history1 history2 CONTAMINATION method limit/base current history1 history2 Fuel WC Method NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 29 Nickel ppm ASTM D5185m >20 1 Nickel ppm ASTM D5185m >3 0 Silver ppm ASTM D5185m >40 0 Aluminum ppm ASTM D5185m >40 0 Vanadium ppm ASTM D5185m >15	Sample Date		Client Info		22 Feb 2023		
Oil Age mls Client Info 29487 Oil Changed Client Info Not Changd Sample Status method limit/base current history1 history2 CONTAMINATION method limit/base current history1 history2 Fuel WC Method NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 29 Nickel ppm ASTM D5185m >20 1 Nickel ppm ASTM D5185m >3 0 Silver ppm ASTM D5185m >40 0 Aluminum ppm ASTM D5185m >40 0 Vanadium ppm ASTM D5185m >15	Machine Age	mls	Client Info		442633		
CONTAMINATION	-	mls	Client Info		29487		
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Oil Changed		Client Info		Not Changd		
Fuel	Sample Status				NORMAL		
WEAR METALS	CONTAMINATION	١	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 29	Fuel		WC Method	>5	<1.0		
Pron	Glycol		WC Method		NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	29		
Nickel	Chromium		ASTM D5185m	>20	1		
Titanium	Nickel		ASTM D5185m	>4	0		
Silver	Titanium		ASTM D5185m		1		
Aluminum	Silver		ASTM D5185m	>3	0		
Copper ppm ASTM D5185m >330 7 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	10		
Tin	Lead	ppm	ASTM D5185m	>40	0		
Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 9 Barium ppm ASTM D5185m 10 0 Molybdenum ppm ASTM D5185m 100 68 Manganese ppm ASTM D5185m 100 68 Magnesium ppm ASTM D5185m 450 444 Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1350 1341 Sulfur ppm ASTM D5185m 4250 3168 CONTAMINANTS method limit/base current	Copper	ppm	ASTM D5185m	>330	7		
Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 9 Barium ppm ASTM D5185m 10 0 Molybdenum ppm ASTM D5185m 100 68 Manganese ppm ASTM D5185m 100 68 Magnesium ppm ASTM D5185m 100 68 Manganese ppm ASTM D5185m 450 444 Manganesium ppm ASTM D5185m 3000 1831 Calcium ppm ASTM D5185m 1350 1341 Sulfur ppm ASTM D5185m 4250 3168			ASTM D5185m	>15	<1		
ADDITIVES	Vanadium		ASTM D5185m		<1		
Boron	Cadmium		ASTM D5185m		0		
Boron	ADDITIVES		method	limit/base	current	historv1	historv2
Barium		nnm		250		,	
Molybdenum ppm ASTM D5185m 100 68 Manganese ppm ASTM D5185m < 1 Magnesium ppm ASTM D5185m 450 444 Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1150 1033 Zinc ppm ASTM D5185m 1350 1341 Sulfur ppm ASTM D5185m 4250 3168 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >20 4 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
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Magnesium ppm ASTM D5185m 450 444 Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1150 1033 Zinc ppm ASTM D5185m 1350 1341 Sulfur ppm ASTM D5185m 4250 3168 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844 >3 0.8 Nitration Abs/:mm *ASTM D7415 >30	-			100			
Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1150 1033 Zinc ppm ASTM D5185m 1350 1341 Sulfur ppm ASTM D5185m 4250 3168 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/.1mm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D	J .			450			
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Zinc ppm ASTM D5185m 1350 1341 Sulfur ppm ASTM D5185m 4250 3168 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *AS							
Sulfur ppm ASTM D5185m 4250 3168 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6							
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6	-				-		
Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6					3100		
Sodium ppm ASTM D5185m >216 3 Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6	CONTAMINANTS			limit/base		history1	history2
Potassium ppm ASTM D5185m >20 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6							
INFRA-RED							
Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6	Potassium	ppm	ASTM D5185m	>20	4		
Nitration Abs/cm *ASTM D7624 >20 10.0 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6	Soot %	%	*ASTM D7844	>3	8.0		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.6	Nitration	Abs/cm	*ASTM D7624	>20	10.0		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6		
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.1		



OIL ANALYSIS REPORT



Non-ferrous Metals







Certificate L2367

Laboratory Sample No. Lab Number Unique Number Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05828238

: WC05828238 : 10441731

Received : 24 Apr 2023 Diagnosed Diagnostician

: 25 Apr 2023 : Wes Davis

LONNIE SONGER 1820 SHELTON MISSION RD GREENEVILLE, TN

US 37743

Contact: LONNIE SONGER

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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F: