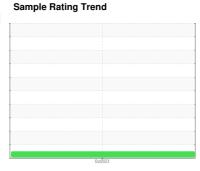


OIL ANALYSIS REPORT

2T



NORMAL



Machine Id MCI 87 Component Diesel Engine Fluid NOT GIVEN (--- 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

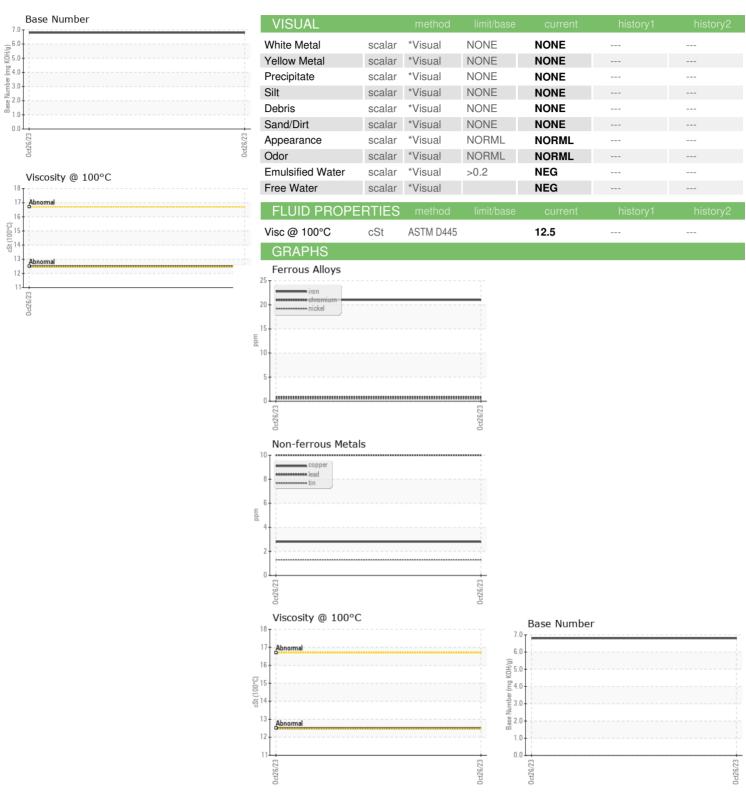
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2							
Sample Number Client Info PCA0082956					Oct2023		
Sample Date Client Info 26 Oct 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 0	Sample Number		Client Info		PCA0082956		
Oil Age mls Client Info N/A Oil Changed Client Info N/A Sample Status NORMAL CONTAMINATION method limit/base current history2 Fuel WC Method NEG Glycol WC Method Imit/base current history1 history2 Iron ppm ASTM D5185m >100 21 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 21 Chromium ppm ASTM D5185m >20 <1 Silver ppm ASTM D5185m >3 0 Silver ppm ASTM D5185m >40 10 Caper ppm ASTM D5185m >330 3<			Client Info		26 Oct 2023		
Contamped Client Info N/A NORMAL Sample Status More Normal More More	Machine Age	mls	Client Info		0		
Cilient Info N/A NORMAL NORMAL	Oil Age	mls	Client Info		0		
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 21 Chromium ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >4 <1 Silver ppm ASTM D5185m >4 <1 Silver ppm ASTM D5185m >40 10 Aluminum ppm ASTM D5185m >40 10 Copper ppm ASTM D5185m >33 3 Tin ppm ASTM D5185m 0 <td< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>N/A</th><th></th><th></th></td<>	Oil Changed		Client Info		N/A		
Fuel WC Method S	Sample Status				NORMAL		
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 21 Chromium ppm ASTM D5185m >20 <1	Fuel		WC Method	>5	<1.0		
Iron	Glycol		WC Method		NEG		
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >4 <1	Iron	maa	ASTM D5185m	>100	21		
Nickel	Chromium		ASTM D5185m	>20	<1		
Titanium	Nickel		ASTM D5185m	>4	<1		
Silver	Titanium		ASTM D5185m				
Aluminum	Silver		ASTM D5185m	>3	0		
Lead	Aluminum		ASTM D5185m	>20	2		
Copper ppm ASTM D5185m >330 3 Tin ppm ASTM D5185m >15 1 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 60 Manganese ppm ASTM D5185m 41 Magnesium ppm ASTM D5185m 1006 Calcium ppm ASTM D5185m 1034 Phosphorus ppm ASTM D5185m 2726 Sulfur ppm ASTM D5185m 275	Lead		ASTM D5185m	>40	10		
Tin	Copper		ASTM D5185m	>330	3		
Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 60 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 1006 Calcium ppm ASTM D5185m 1034 Phosphorus ppm ASTM D5185m 1176 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 </td <td></td> <td></td> <td></td> <td></td> <th>1</th> <td></td> <td></td>					1		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 60 Manganese ppm ASTM D5185m 41 Magnesium ppm ASTM D5185m 1006 Calcium ppm ASTM D5185m 1034 Phosphorus ppm ASTM D5185m 1176 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 Sodium ppm ASTM D5185m >20 </td <td>Vanadium</td> <td></td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td></td> <td></td>	Vanadium		ASTM D5185m		0		
Boron	Cadmium				-		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 873 Calcium ppm ASTM D5185m 1006 Phosphorus ppm ASTM D5185m 1034 Zinc ppm ASTM D5185m 2726 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D784	Boron	ppm	ASTM D5185m		5		
Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 873 Calcium ppm ASTM D5185m 1006 Phosphorus ppm ASTM D5185m 1176 Zinc ppm ASTM D5185m 2726 Sulfur ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7845 >30 20.6	Barium	ppm	ASTM D5185m		0		
Magnesium ppm ASTM D5185m 873 Calcium ppm ASTM D5185m 1006 Phosphorus ppm ASTM D5185m 1034 Zinc ppm ASTM D5185m 1176 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7415 >30 20.6 Sulfation Abs/.1mm	Molybdenum	ppm	ASTM D5185m		60		
Calcium ppm ASTM D5185m 1006 Phosphorus ppm ASTM D5185m 1034 Zinc ppm ASTM D5185m 1176 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEG	Manganese	ppm	ASTM D5185m		<1		
Phosphorus ppm ASTM D5185m 1034 Zinc ppm ASTM D5185m 1176 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185m		873		
Zinc ppm ASTM D5185m 1176 Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 <th< td=""><td>Calcium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>1006</th><td></td><td></td></th<>	Calcium	ppm	ASTM D5185m		1006		
Sulfur ppm ASTM D5185m 2726 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Phosphorus	ppm	ASTM D5185m		1034		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Zinc	ppm	ASTM D5185m		1176		
Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Sulfur	ppm	ASTM D5185m		2726		
Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Silicon	ppm	ASTM D5185m	>25	6		
INFRA-RED	Sodium	ppm	ASTM D5185m		6		
Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Potassium	ppm	ASTM D5185m	>20	2		
Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Soot %	%	*ASTM D7844	>3	0.6		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1	Nitration	Abs/cm	*ASTM D7624	>20	9.2		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6		
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1		

Contact/Location: DISPATCH ? - NOREAG



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number Unique Number

: PCA0082956 : 05995288 : 10723648 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 01 Nov 2023 Diagnosed : 02 Nov 2023

: Wes Davis Diagnostician

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) **NORTHFIELD LINES** 1034 GEMINI RD EAGAN, MN US 55121 Contact: DISPATCH

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Contact/Location: DISPATCH ? - NOREAG