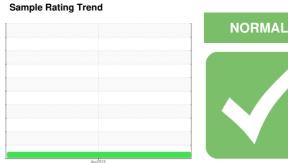


OIL ANALYSIS REPORT

TA Machines TA884 SY215 SY021ECCP7058

Diesel Engine

CITGO 15W40 (--- GAL)



DIAGNOSIS

Recommendation

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

Metal levels are typical for a components first oil change.

Contamination

There is no indication of any contamination in the

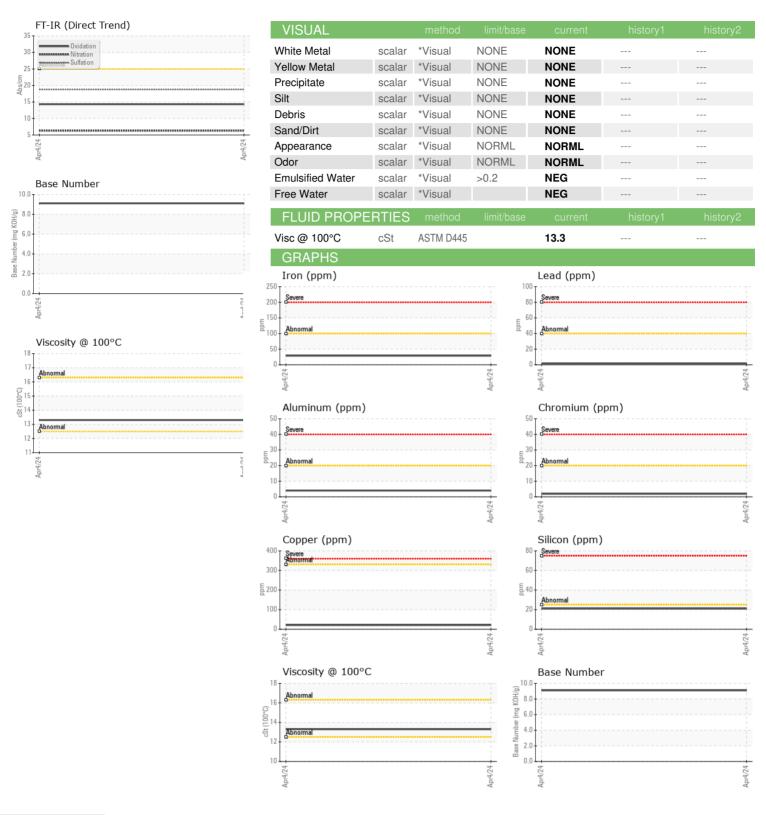
Fluid Condition

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					Apr2024		
Sample Date Client Info 04 Apr 2024	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Date	Sample Number		Client Info		PCA0115511		
Machine Age			Client Info		04 Apr 2024		
Oil Age hrs Client Info 306 Oil Changed Client Info Not Changd Sample Status NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 Water WC Method NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 29 Obromium ppm ASTM D5185m >20 2 Ukel ppm ASTM D5185m >4 1 Ukel ppm ASTM D5185m >20 2 Intraction ppm ASTM D5185m >20 4	•	hrs			•		
Oil Changed Client Info Not Changd NORMAL CONTAMINATION method limit/base current history1 history2 Fuel	•	hrs	Client Info				
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Not Changd		
Fuel WC Method S5 C1.0 ST C1.0 Water WC Method S0.2 NEG ST C1.0 ST ST ST ST ST ST ST S							
Water WC Method >0.2 NEG Glycol WC Method Imilibase current history1 history2 WEAR METALS method limilibase current history1 history2 Iron ppm ASTM D5185m >10.0 29 Chromitim ppm ASTM D5185m >20 2 Nickel ppm ASTM D5185m >4 1 Silver ppm ASTM D5185m >4 1 Silver ppm ASTM D5185m >40 2 Silver ppm ASTM D5185m >40 2 Lead ppm ASTM D5185m >40 2 Copper ppm ASTM D5185m >15 2 Vanadium ppm ASTM D5185m 1	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0		
WEAR METALS	Water		WC Method	>0.2	NEG		
Common	Glycol		WC Method		NEG		
Chromium ppm ASTM D5185m >20 2 Nickel ppm ASTM D5185m >4 1 Titanium ppm ASTM D5185m >3 <1 Sliver ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 4 Lead ppm ASTM D5185m >40 2 Copper ppm ASTM D5185m >15 2 Tin ppm ASTM D5185m >15 2 Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m <21 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 3	WEAR METAL	S	method	limit/base	current	history1	history2
Chromium	Iron	nnm	ASTM D5185m	>100	29		
Nickel	_						
Titanium					_		
Silver							
Aluminum ppm ASTM D5185m >20 4 Lead ppm ASTM D5185m >40 2 Copper ppm ASTM D5185m >330 21 Tin ppm ASTM D5185m >15 2 Vanadium ppm ASTM D5185m 1 Cadmium ppm ASTM D5185m 1 Cadmium ppm ASTM D5185m 21 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 3 Barium ppm ASTM D5185m 3 Molybdenum ppm ASTM D5185m 4 Magnesium ppm ASTM D5185m 810 Calcium ppm ASTM D5185m<				>3			
Lead							
Copper ppm ASTM D5185m >330 21 Tin ppm ASTM D5185m >15 2 Vanadium ppm ASTM D5185m <1	Lead		ASTM D5185m	>40	2		
Tin	Copper		ASTM D5185m	>330	21		
Cadmium ppm ASTM D5185m 1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 21 Barium ppm ASTM D5185m 3 Molybdenum ppm ASTM D5185m 53 Manganese ppm ASTM D5185m 4 Magnesium ppm ASTM D5185m 810 Calcium ppm ASTM D5185m 985 Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 2953 Zinc ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >20 3	• •		ASTM D5185m	>15	2		
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1		
Boron	Cadmium	ppm	ASTM D5185m		1		
Barium ppm ASTM D5185m 3 Molybdenum ppm ASTM D5185m 53 Manganese ppm ASTM D5185m 4 Magnesium ppm ASTM D5185m 810 Calcium ppm ASTM D5185m 1080 Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 1066 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m >20 3 Potassium ppm ASTM D7844 >3 0.1 INFRA-RED method limit	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 53 Manganese ppm ASTM D5185m 4 Magnesium ppm ASTM D5185m 810 Calcium ppm ASTM D5185m 1080 Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 2953 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 25 21 Sodium ppm ASTM D5185m 20 3 Potassium ppm ASTM D5185m 20 3 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>21</th> <td></td> <td></td>	Boron	ppm	ASTM D5185m		21		
Manganese ppm ASTM D5185m 4 Magnesium ppm ASTM D5185m 810 Calcium ppm ASTM D5185m 1080 Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 2953 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/:nm	Barium	ppm	ASTM D5185m		3		
Magnesium ppm ASTM D5185m 810 Calcium ppm ASTM D5185m 1080 Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 1066 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m 20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8	Molybdenum	ppm	ASTM D5185m		53		
Calcium ppm ASTM D5185m 1080 Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 1066 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 2 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGR	Manganese	ppm	ASTM D5185m		4		
Phosphorus ppm ASTM D5185m 985 Zinc ppm ASTM D5185m 1066 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1	Magnesium	ppm	ASTM D5185m		810		
Zinc ppm ASTM D5185m 1066 Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 <t< td=""><td>Calcium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>1080</th><td></td><td></td></t<>	Calcium	ppm	ASTM D5185m		1080		
Sulfur ppm ASTM D5185m 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/.mm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Phosphorus	ppm	ASTM D5185m		985		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Zinc	ppm	ASTM D5185m		1066		
Silicon ppm ASTM D5185m >25 21 Sodium ppm ASTM D5185m 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3			ASTM D5185m		2953		
Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3		ITS				history1	history2
Potassium ppm ASTM D5185m >20 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3				>25			
INFRA-RED							
Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Potassium	ppm	ASTM D5185m	>20	3		
Nitration Abs/cm *ASTM D7624 >20 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3		%		>3	0.1		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Nitration	Abs/cm	*ASTM D7624	>20	6.3		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8		
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.1	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3		
	Base Number (BN)	mg KOH/g	ASTM D2896		9.1		



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

Lab Number : 06146868

: PCA0115511 Unique Number : 10976946

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

: 12 Apr 2024 : 15 Apr 2024

: 15 Apr 2024 - Wes Davis

US 60411-7728 Contact: Mike Korbelik mike@chicagomachineryinc.com

 st - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Test Package : MOB 1 (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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

Report Id: THOLYN [WUSCAR] 06146868 (Generated: 04/15/2024 09:59:51) Rev: 1

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