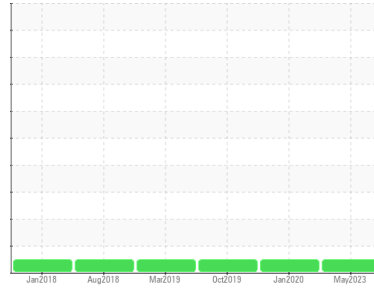




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**YANMAR EX-010**

Component  
**Diesel Engine**

Fluid  
**CITGO CITGARD 700 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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			<b>WC0705203</b>	WC04898642	WC04836226
Sample Date	Client Info			<b>02 May 2023</b>	27 Jan 2020	30 Oct 2019
Machine Age	hrs	Client Info		<b>3189</b>	0	0
Oil Age	hrs	Client Info		<b>500</b>	0	0
Oil Changed	Client Info			<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	<b>31</b>	9	15
Chromium	ppm	ASTM D5185m	>6	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	1	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	3	5
Lead	ppm	ASTM D5185m	>95	<b>0</b>	1	<1
Copper	ppm	ASTM D5185m	>85	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>9	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m		<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	20	<b>0</b>	61	40
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	59	<b>67</b>	12	40
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	783	<b>913</b>	652	475
Calcium	ppm	ASTM D5185m	1238	<b>1315</b>	1569	1880
Phosphorus	ppm	ASTM D5185m	949	<b>1086</b>	724	646
Zinc	ppm	ASTM D5185m	1116	<b>1350</b>	833	926
Sulfur	ppm	ASTM D5185m	2909	<b>3946</b>	2575	2524

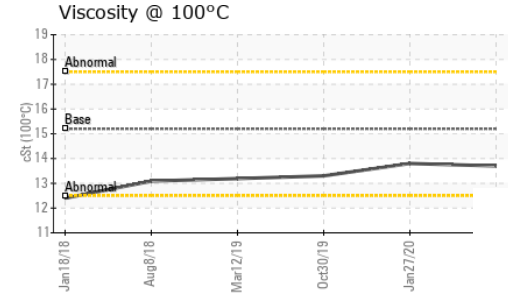
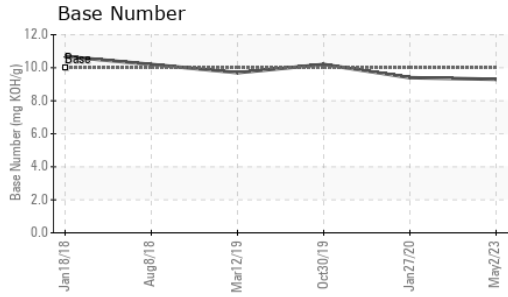
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>9</b>	7	10
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	3	1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		<b>0.9</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	8.2	7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.3</b>	19.4	21.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	14.9	19.8
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.3</b>	9.4	10.2



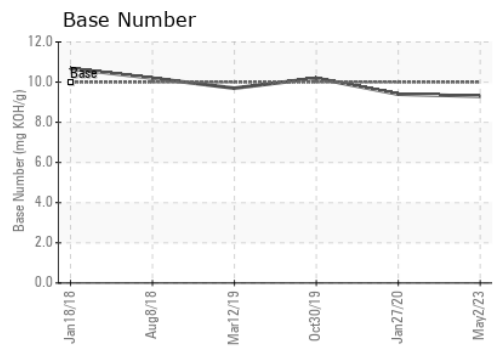
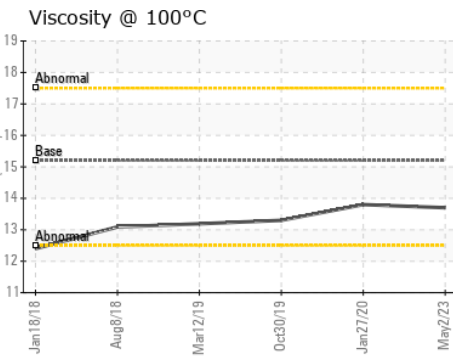
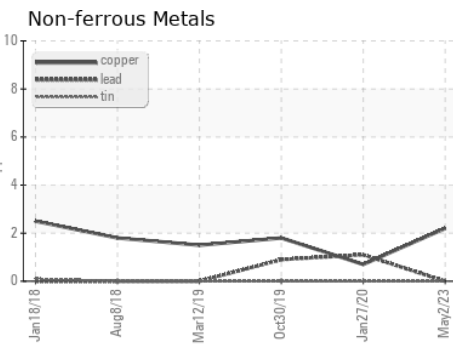
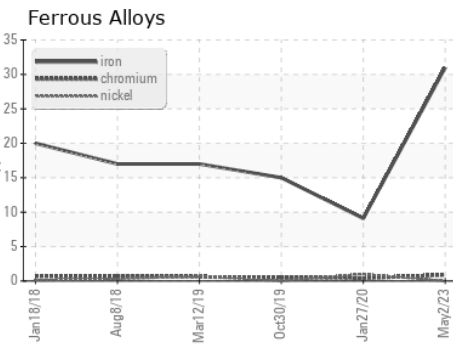
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.2	<b>13.7</b>	13.8	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0705203 **Received** : 18 Jul 2023  
**Lab Number** : **05901009** **Diagnosed** : 19 Jul 2023  
**Unique Number** : 10562365 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: PrtCount )

**E.C. PACE CO.**  
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Certificate L2367  
 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)