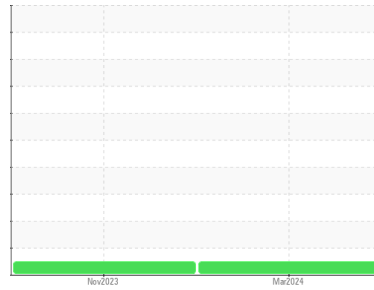




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**RRHP Turbine Pit 699 Elevation**  
 Machine Id  
**029-100-418 Unit 1 TGB**  
 Component  
**Guide Bearing**  
 Fluid  
**MOBIL DTE 26 (36 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. The amount and size of particulates present in the system are acceptable.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0927625</b>	WC0879263	---
Sample Date	Client Info		<b>01 Mar 2024</b>	30 Nov 2023	---
Machine Age	hrs	Client Info	<b>11055</b>	9975	---
Oil Age	hrs	Client Info	<b>11055</b>	9975	---
Oil Changed		Client Info	<b>Not Chngd</b>	Filtered	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>1</b>	0	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	---
Nickel	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>1</b>	0	---
Lead	ppm	ASTM D5185m >20	<b>1</b>	0	---
Copper	ppm	ASTM D5185m >20	<b>1</b>	<1	---
Tin	ppm	ASTM D5185m >20	<b>1</b>	0	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	---
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Calcium	ppm	ASTM D5185m	<b>120</b>	120	---
Phosphorus	ppm	ASTM D5185m	<b>518</b>	460	---
Zinc	ppm	ASTM D5185m	<b>699</b>	655	---
Sulfur	ppm	ASTM D5185m	<b>8990</b>	7743	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>1</b>	1	---
Sodium	ppm	ASTM D5185m	<b>1</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	---
Water	%	ASTM D6304 >2	<b>0.003</b>	0.014	---
ppm Water	ppm	ASTM D6304	<b>39</b>	141	---

## FLUID CLEANLINESS

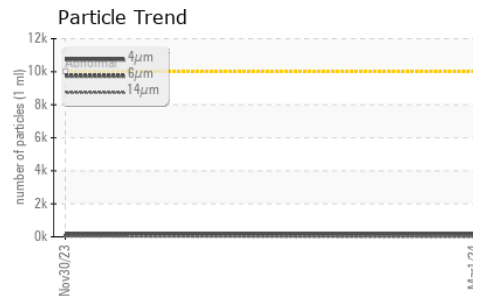
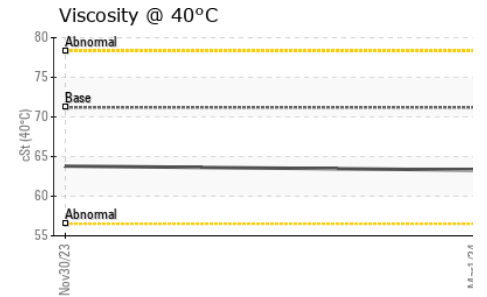
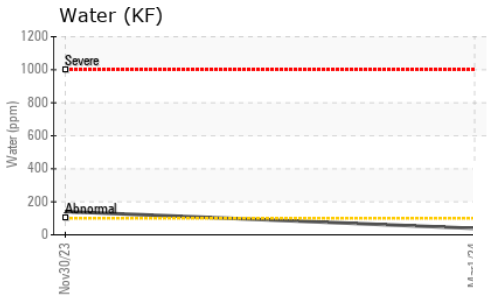
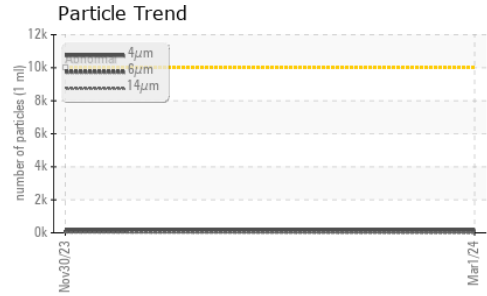
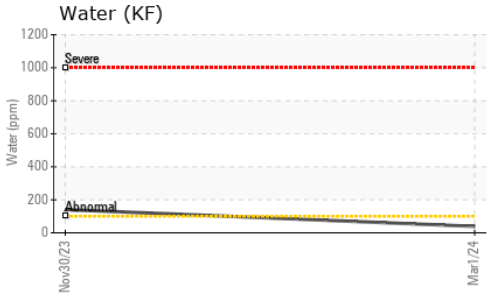
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>160</b>	191	---
Particles >6µm	ASTM D7647	>2500	<b>52</b>	74	---
Particles >14µm	ASTM D7647	>160	<b>10</b>	24	---
Particles >21µm	ASTM D7647	>40	<b>3</b>	10	---
Particles >38µm	ASTM D7647	>10	<b>0</b>	1	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>14/13/10</b>	15/13/12	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.603</b>	0.77	---



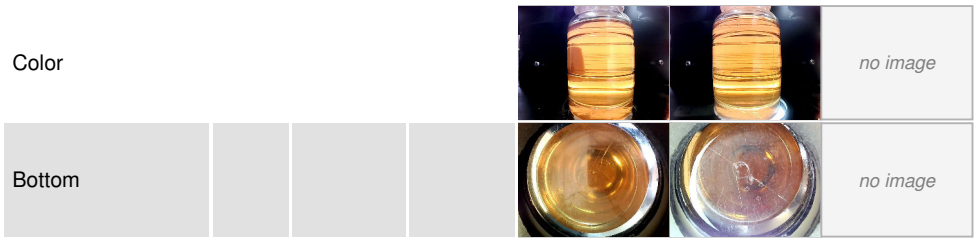
# OIL ANALYSIS REPORT



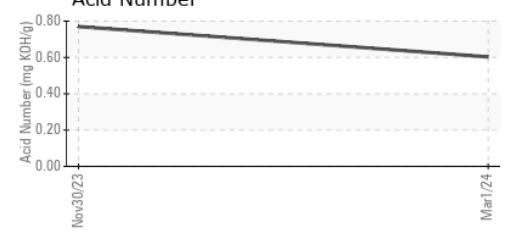
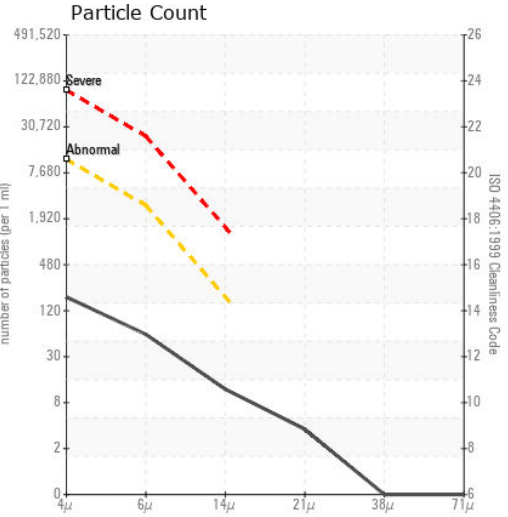
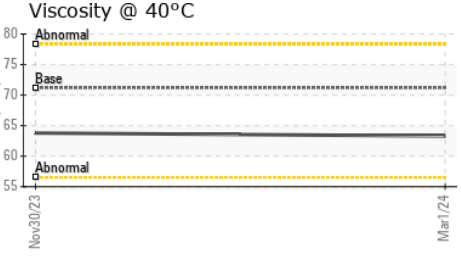
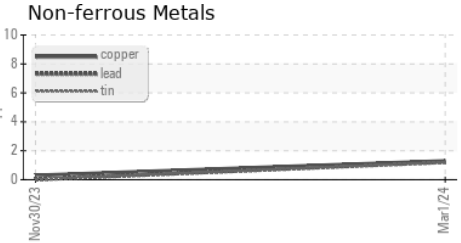
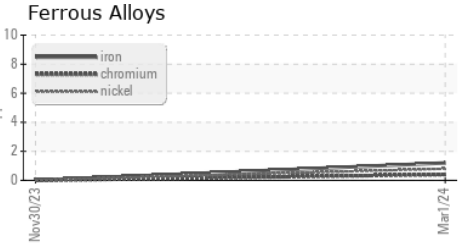
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	71.2	63.3	63.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0927625      **Received** : 12 Apr 2024  
**Lab Number** : **06147336**      **Tested** : 15 Apr 2024  
**Unique Number** : 10977414      **Diagnosed** : 16 Apr 2024 - Don Baldrige  
**Test Package** : PLANT

**Missouri River Energy Services - Red Rock Hydro**  
 1004 216th Place  
 Pella, IA  
 CA 50219

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)