



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**TULSA [22921]**  
 Machine Id  
**80-257**  
 Component  
**Hydraulic System**  
 Fluid  
**{not provided} (--- GAL)**

## DIAGNOSIS

### Recommendation

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0923315</b>	---	---
Sample Date	Client Info		<b>16 May 2024</b>	---	---
Machine Age	hrs	Client Info	<b>5477</b>	---	---
Oil Age	hrs	Client Info	<b>2000</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	---	---

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>1</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>0</b>	---	---
Nickel	ppm	ASTM D5185m >10	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >10	<b>0</b>	---	---
Lead	ppm	ASTM D5185m >10	<b>0</b>	---	---
Copper	ppm	ASTM D5185m >75	<b>2</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>1</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>3</b>	---	---
Manganese	ppm	ASTM D5185m	<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>15</b>	---	---
Calcium	ppm	ASTM D5185m	<b>481</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>389</b>	---	---
Zinc	ppm	ASTM D5185m	<b>442</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>1304</b>	---	---

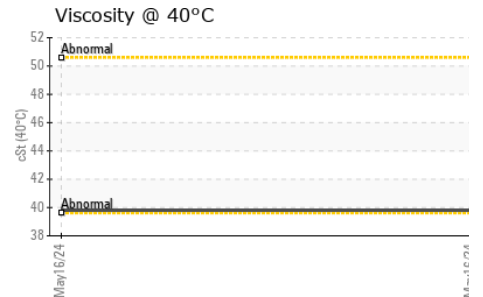
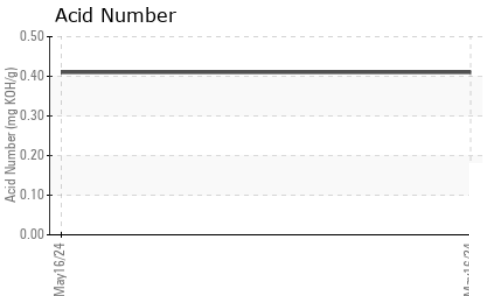
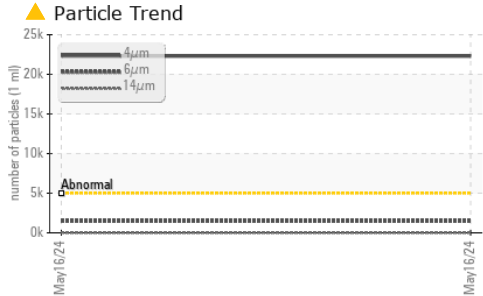
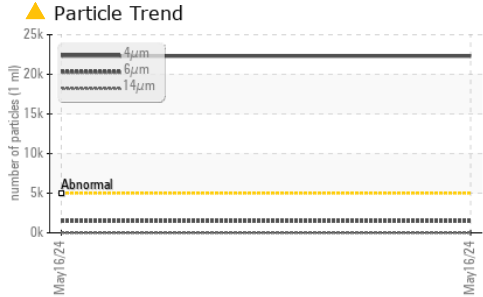
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>1</b>	---	---
Sodium	ppm	ASTM D5185m	<b>1</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	---	---

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 22299</b>	---	---
Particles >6µm	ASTM D7647	>1300	<b>● 1481</b>	---	---
Particles >14µm	ASTM D7647	>160	<b>10</b>	---	---
Particles >21µm	ASTM D7647	>40	<b>2</b>	---	---
Particles >38µm	ASTM D7647	>10	<b>0</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 22/18/10</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.41</b>	---	---



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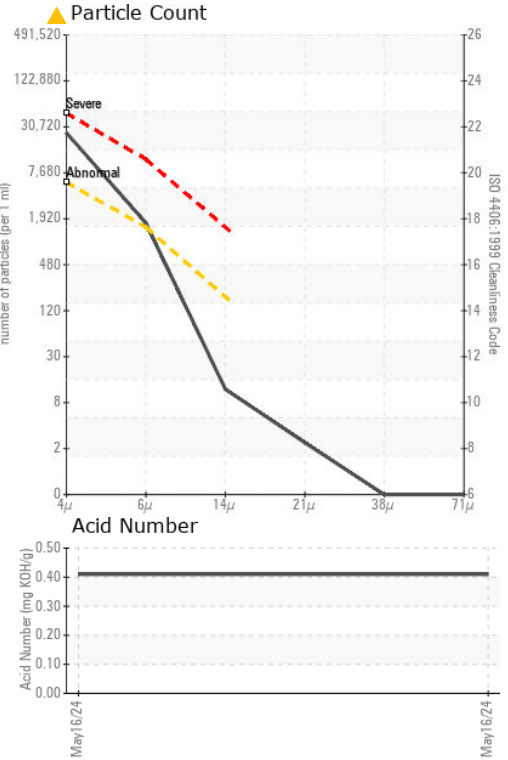
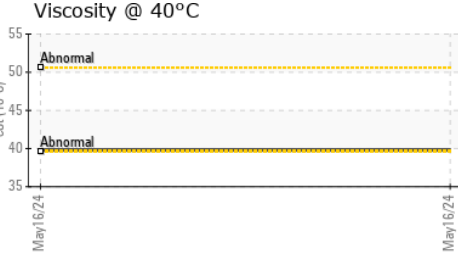
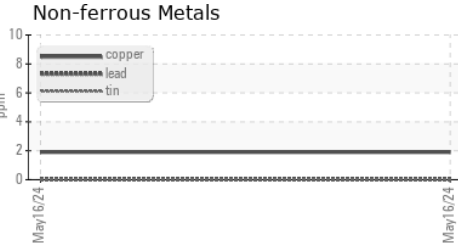
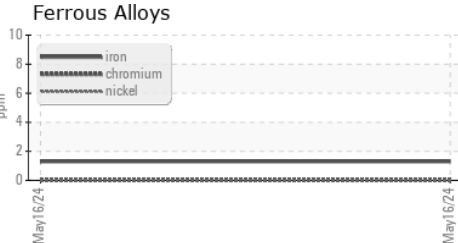
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	39.8	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color		no image	no image
Bottom		no image	no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0923315      **Received** : 11 Jun 2024  
**Lab Number** : 06207061      **Tested** : 13 Jun 2024  
**Unique Number** : 11074522      **Diagnosed** : 13 Jun 2024 - Wes Davis  
**Test Package** : CONST

**MANHATTAN ROAD AND BRIDGE**  
 5601 S 122ND E AVE  
 TULSA, OK  
 US 74146  
 Contact: JAMES STEELMON  
 james.steelmon@manhattanrb.com

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)