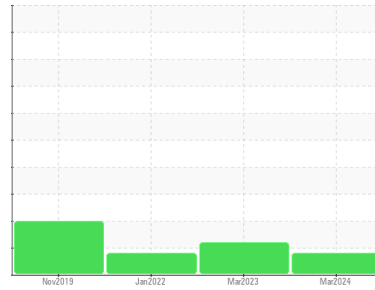




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**10686221 - UNITED RENTAL**

Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 32 (--- 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>WC0839797</b>	WC0695566	WC0517022
Sample Date	Client Info			<b>15 Mar 2024</b>	24 Mar 2023	25 Jan 2022
Machine Age	hrs	Client Info		<b>1838</b>	1688	1315
Oil Age	hrs	Client Info		<b>1838</b>	0	1315
Oil Changed	Client Info			<b>N/A</b>	Not Changd	Not Changd
Sample Status				<b>ABNORMAL</b>	ATTENTION	ATTENTION

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>3</b>	2	3
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>75	<b>2</b>	1	1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185m		<b>---</b>	---	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

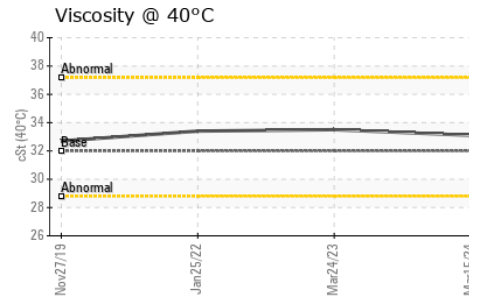
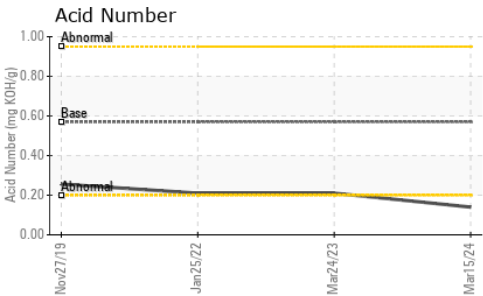
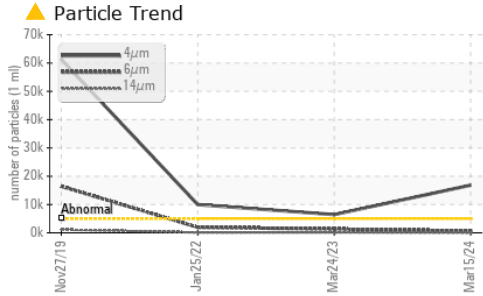
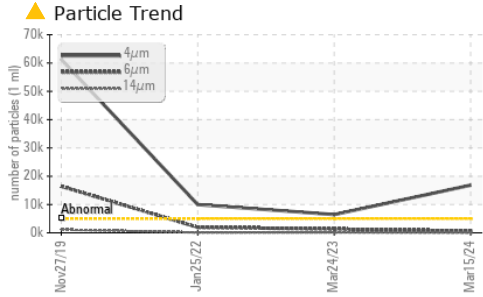
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	<1
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>&lt;1</b>	1	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	25	<b>4</b>	4	4
Calcium	ppm	ASTM D5185m	200	<b>60</b>	60	59
Phosphorus	ppm	ASTM D5185m	300	<b>258</b>	269	252
Zinc	ppm	ASTM D5185m	370	<b>326</b>	352	314
Sulfur	ppm	ASTM D5185m	2500	<b>924</b>	878	729

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

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>▲ 16836</b>	● 6445	● 9972
Particles >6µm		ASTM D7647	>1300	<b>623</b>	● 1315	● 1937
Particles >14µm		ASTM D7647	>160	<b>16</b>	133	93
Particles >21µm		ASTM D7647	>40	<b>4</b>	32	15
Particles >38µm		ASTM D7647	>10	<b>0</b>	2	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 21/16/11</b>	● 20/18/14	● 20/18/14



# OIL ANALYSIS REPORT

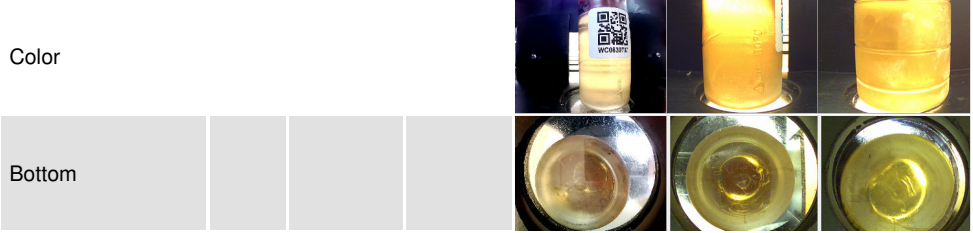


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.14</b>	0.21	0.21

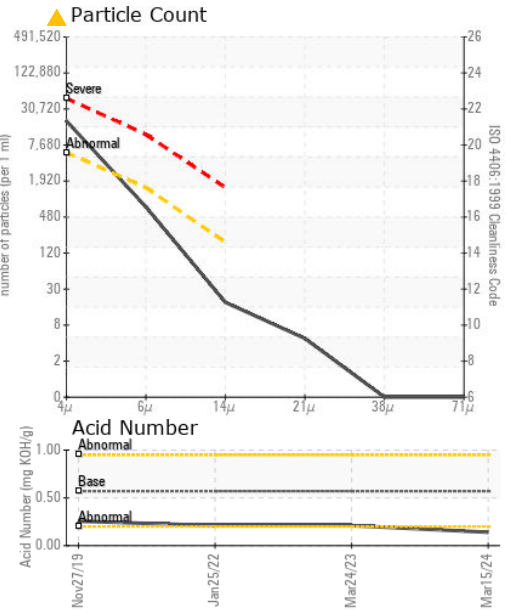
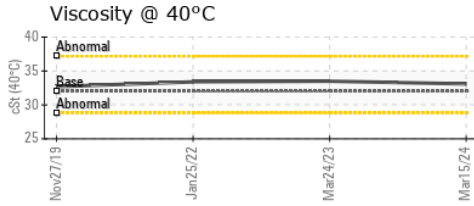
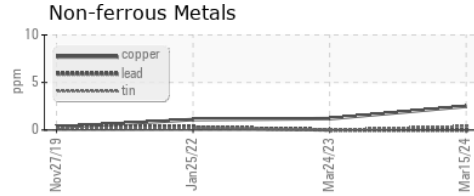
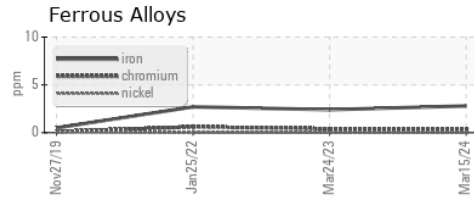
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	<b>33.1</b>	33.5	33.4

SAMPLE IMAGES		method	limit/base	current	history1	history2
---------------	--	--------	------------	---------	----------	----------



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0839797      **Received** : 20 May 2024  
**Lab Number** : **06184946**      **Tested** : 22 May 2024  
**Unique Number** : 11036272      **Diagnosed** : 22 May 2024 - Wes Davis  
**Test Package** : CONST

**PALFINGER - BRANCH 440**  
 2376 CASSENS DR  
 FENTON, MO  
 US 63026  
 Contact: RYAN REED  
 r.reed@palfinger.com  
 T: (314)413-4616  
 F:

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)