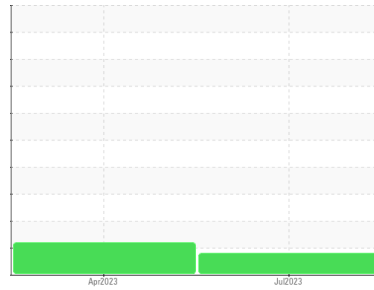


# PROBLEM SUMMARY

Sample Rating Trend



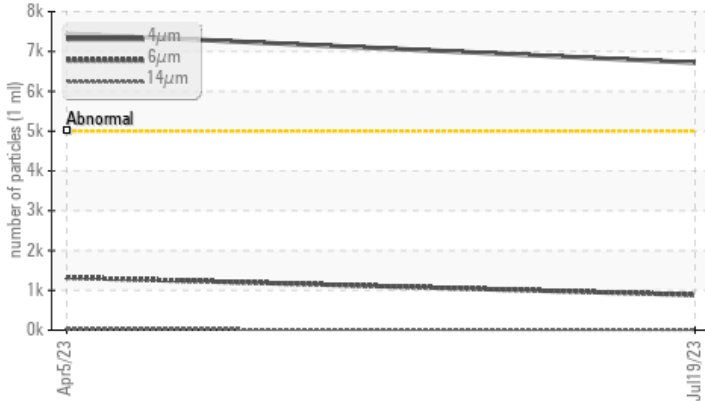
ISO



Area  
**CDW**  
 Machine Id  
**[CDW] CDW-Z-U0001 - ROYAL PURPLE 100 NO DYE**  
 Component  
**New (Unused) Oil**  
 Fluid  
**{not provided} (--- QTS)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

This is a baseline read-out on the submitted sample.

## PROBLEMATIC TEST RESULTS

Sample Status		ATTENTION	ATTENTION	---
Particles >4µm	ASTM D7647 >5000	▲ 6718	▲ 7445	---
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 20/17/11	▲ 20/18/12	---

Customer Id: CALSHR  
 Sample No.: RP0034820  
 Lab Number: 05904715  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

**05 Apr 2023 Diag: Jonathan Hester**

ISO



This is a baseline read-out on the submitted sample. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

view report

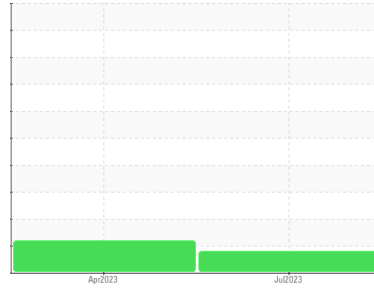




# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**CDW**  
 Machine Id  
**[CDW] CDW-Z-U0001 - ROYAL PURPLE 100 NO DYE**  
 Component  
**New (Unused) Oil**  
 Fluid  
**{not provided} (--- QTS)**

## DIAGNOSIS

### ▲ Recommendation

This is a baseline read-out on the submitted sample.

### ▲ Contamination

There is a moderate amount of silt (particulates < 6 microns in size) present in the oil.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>RP0034820</b>	RP0031617	---
Sample Date	Client Info		<b>19 Jul 2023</b>	05 Apr 2023	---
Machine Age	hrs	Client Info	<b>0</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	0	---
Oil Changed	Client Info		<b>Not Chngd</b>	N/A	---
Sample Status			<b>ATTENTION</b>	ATTENTION	---

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >5	<b>0</b>	0	---
Chromium	ppm	ASTM D5185m >5	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >5	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	---
Lead	ppm	ASTM D5185m >5	<b>1</b>	0	---
Copper	ppm	ASTM D5185m >5	<b>2</b>	<1	---
Tin	ppm	ASTM D5185m >5	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>12</b>	0	---
Barium	ppm	ASTM D5185m	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	<b>8</b>	<1	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	<b>140</b>	95	---
Calcium	ppm	ASTM D5185m	<b>164</b>	3	---
Phosphorus	ppm	ASTM D5185m	<b>92</b>	0	---
Zinc	ppm	ASTM D5185m	<b>101</b>	0	---

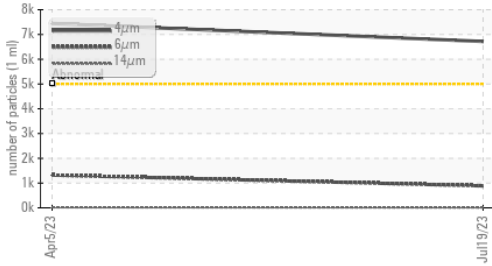
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>3</b>	3	---
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	---
Water	%	ASTM D6304	<b>0.016</b>	0.024	---
ppm Water	ppm	ASTM D6304	<b>161.5</b>	244.8	---

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ <b>6718</b>	▲ 7445	---
Particles >6µm	ASTM D7647	>1300	<b>886</b>	▲ 1322	---
Particles >14µm	ASTM D7647	>160	<b>14</b>	21	---
Particles >21µm	ASTM D7647	>40	<b>3</b>	4	---
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	0	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ <b>20/17/11</b>	▲ 20/18/12	---

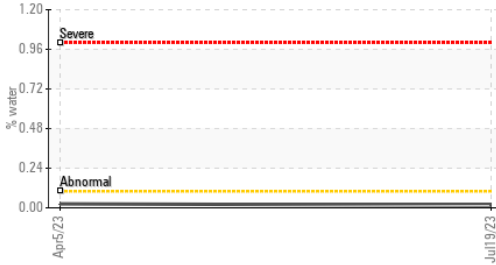
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.41</b>	0.41	---

# OIL ANALYSIS REPORT

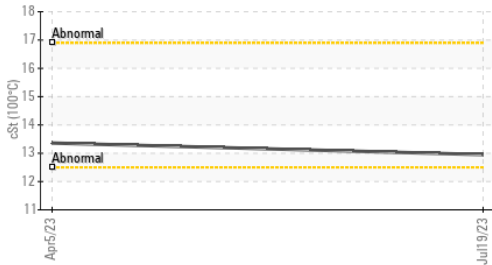
## Particle Trend



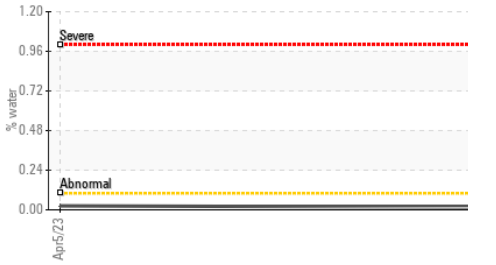
## Water



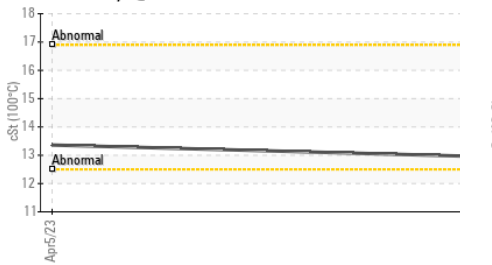
## Viscosity @ 100°C



## Water



## Viscosity @ 100°C



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	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	NEG	NEG	---
Free Water	scalar	*Visual	NEG	NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	95.43	100.5	---
Visc @ 100°C	cSt	ASTM D445	12.95	13.36	---
Viscosity Index (VI)	Scale	ASTM D2270	133	131	---

## SAMPLE IMAGES

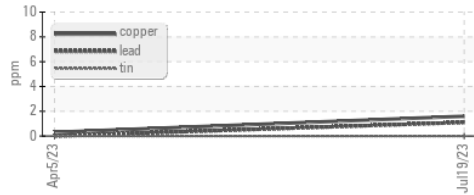


## GRAPHS

### Ferrous Alloys



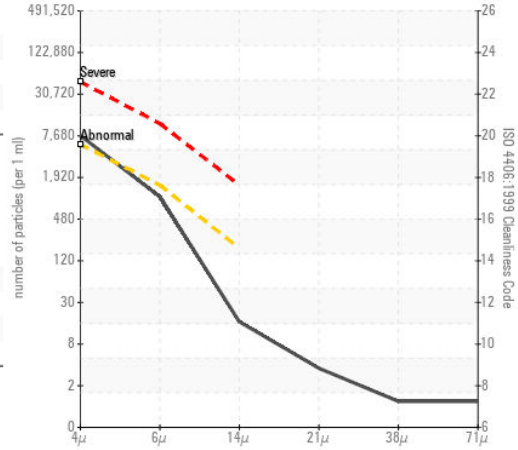
### Non-ferrous Metals



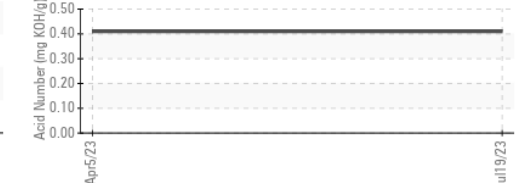
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0034820 **Received** : 21 Jul 2023  
**Lab Number** : 05904715 **Diagnosed** : 02 Aug 2023  
**Unique Number** : 10566071 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: FT-IR, KV100, PrtCount, VI )

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)

**CALUMET**  
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 US 71109  
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