



Machine Id  
**ZAMPERLA WIND UP**

Component  
**Hydraulic System**

Fluid  
**CHEVRON HYDRAULIC OIL AW ISO 46 (--- GAL)**

**DIAGNOSIS**

**Recommendation**  
Resample at the next service interval to monitor.

**Wear**  
All component wear rates are normal.

**Contamination**  
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

**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>TO60001523</b>	---	---
Sample Date	Client Info		<b>16 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>Not Chngd</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

**WEAR METALS**    method    limit/base    current    history1    history2

Iron	ppm	ASTM D5185m	>20	<b>4</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---	---
Silver	ppm	ASTM D5185m		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	---	---
Lead	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Copper	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Tin	ppm	ASTM D5185m	>20	<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>0</b>	---	---
Barium	ppm	ASTM D5185m		<b>3</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	---	---
Manganese	ppm	ASTM D5185m		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>0</b>	---	---
Calcium	ppm	ASTM D5185m		<b>44</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>347</b>	---	---
Zinc	ppm	ASTM D5185m		<b>345</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>1055</b>	---	---

**CONTAMINANTS**    method    limit/base    current    history1    history2

Silicon	ppm	ASTM D5185m	>15	<b>0</b>	---	---
Sodium	ppm	ASTM D5185m		<b>0</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Water	%	ASTM D6304	>0.05	<b>0.003</b>	---	---
ppm Water	ppm	ASTM D6304	>500	<b>29</b>	---	---

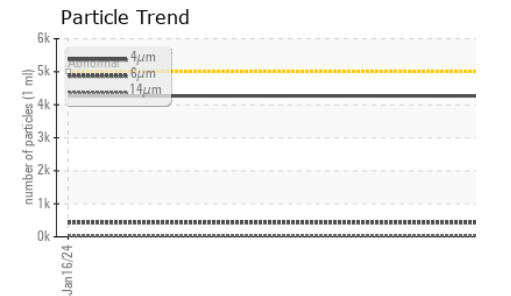
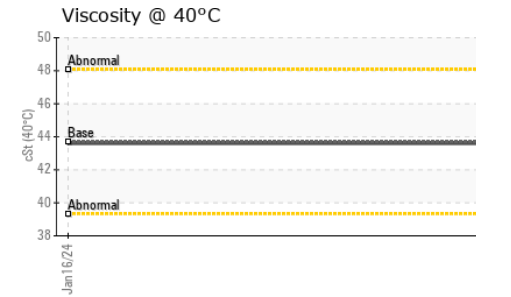
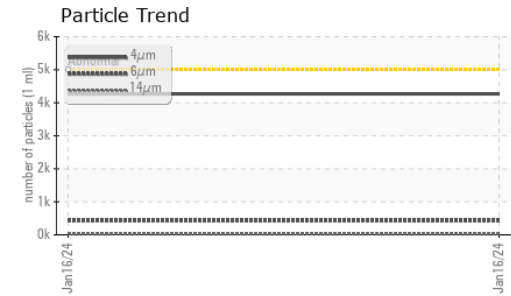
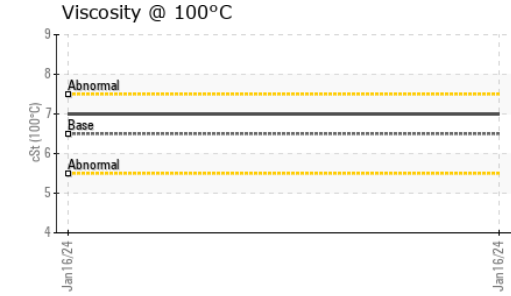
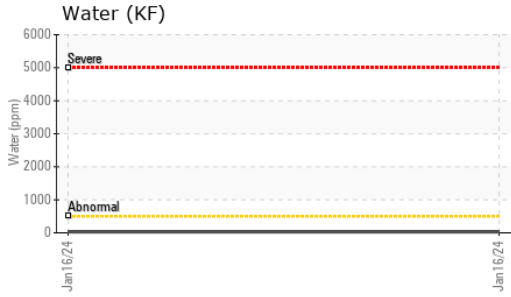
**FLUID CLEANLINESS**    method    limit/base    current    history1    history2

Particles >4µm		ASTM D7647	>5000	<b>4268</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>430</b>	---	---
Particles >14µm		ASTM D7647	>160	<b>25</b>	---	---
Particles >21µm		ASTM D7647	>40	<b>4</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>19/16/12</b>	---	---

**FLUID DEGRADATION**    method    limit/base    current    history1    history2

Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.09</b>	---	---
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# OIL ANALYSIS REPORT



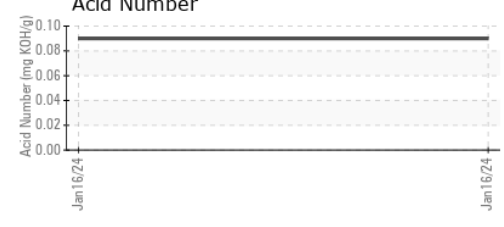
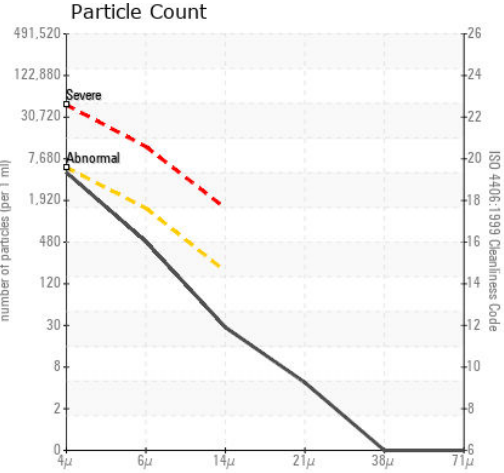
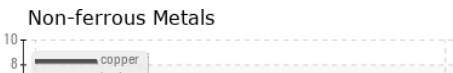
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	43.7	<b>43.6</b>	---
Visc @ 100°C	cSt	ASTM D445	6.5	<b>7</b>	---
Viscosity Index (VI)	Scale	ASTM D2270	98	<b>119</b>	---

### SAMPLE IMAGES

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

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO60001523 **Received** : 17 Jan 2024  
**Lab Number** : 06063571 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834953 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, VI )

**KINGS DOMINION**  
 16000 THEME PARK DR, I-95 AT STATE RD 30  
 DOSWELL, VA  
 US  
 Contact: RICHARD GREER  
 richard.greer@kingsdominion.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)