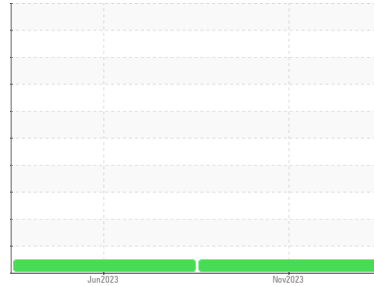




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**WC-9259-0104-5 Chiller #4**  
 Component  
**Chiller**  
 Fluid  
**YORK TYPE K (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Insufficient sample was received to confirm all the routine laboratory tests.

### 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>WC0836493</b>	WC0784798	---
Sample Date	Client Info			<b>13 Nov 2023</b>	19 Jun 2023	---
Machine Age	hrs	Client Info		<b>13959</b>	13090	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	<b>0</b>	<1	---
Chromium	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m		<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Lead	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>8	<b>0</b>	<1	---
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	---
Barium	ppm	ASTM D5185m	0	<b>0</b>	<1	---
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	---
Manganese	ppm	ASTM D5185m	0	<b>0</b>	0	---
Magnesium	ppm	ASTM D5185m	0	<b>0</b>	0	---
Calcium	ppm	ASTM D5185m	0	<b>0</b>	0	---
Phosphorus	ppm	ASTM D5185m	5	<b>1</b>	0	---
Zinc	ppm	ASTM D5185m	0	<b>0</b>	0	---
Sulfur	ppm	ASTM D5185m	10	<b>8</b>	0	---

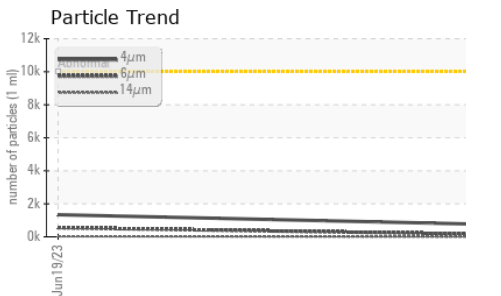
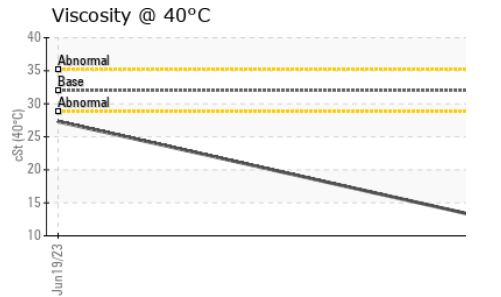
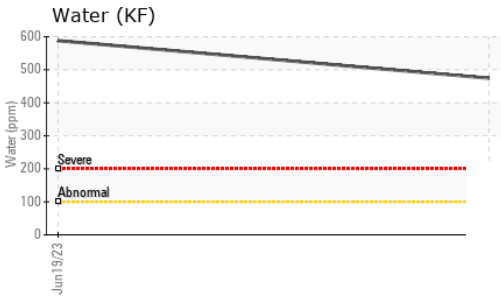
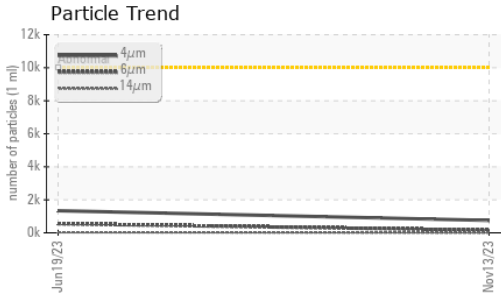
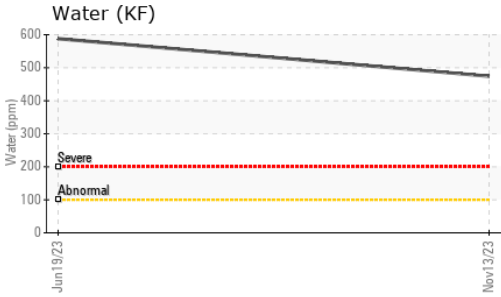
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>3</b>	4	---
Sodium	ppm	ASTM D5185m		<b>0</b>	0	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Water	%	ASTM D6304	>0.01	<b>0.047</b>	0.058	---
ppm Water	ppm	ASTM D6304	>100	<b>474.2</b>	588.0	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	<b>750</b>	1340	---
Particles >6µm		ASTM D7647	>2500	<b>152</b>	548	---
Particles >14µm		ASTM D7647	>320	<b>5</b>	33	---
Particles >21µm		ASTM D7647	>80	<b>2</b>	4	---
Particles >38µm		ASTM D7647	>20	<b>0</b>	0	---
Particles >71µm		ASTM D7647	>4	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>17/14/10</b>	18/16/12	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.03	<b>0.015</b>	0.045	---



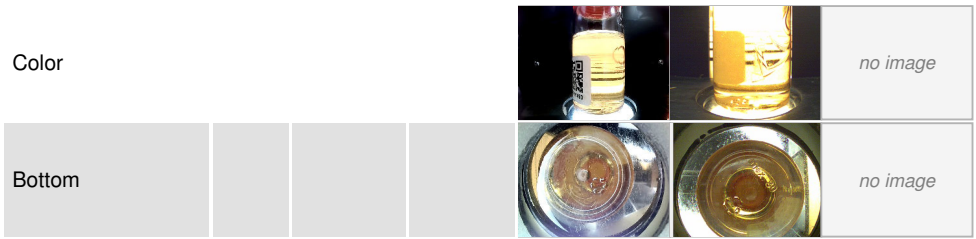
# OIL ANALYSIS REPORT



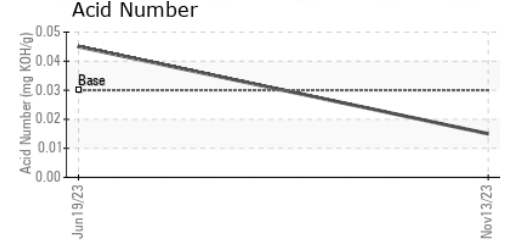
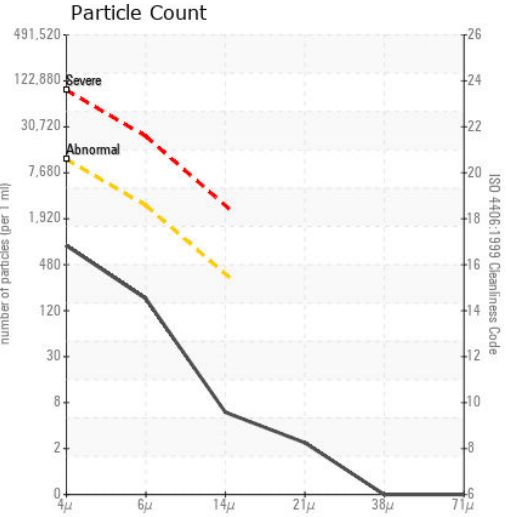
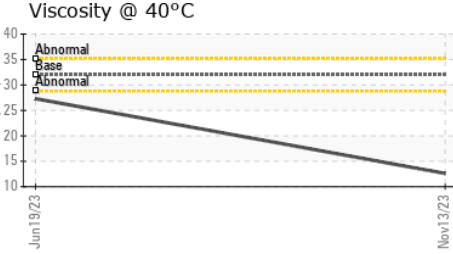
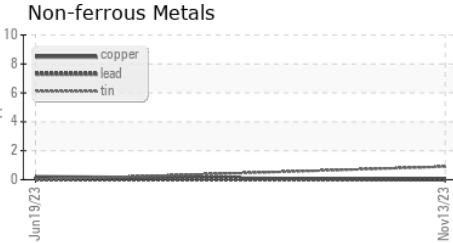
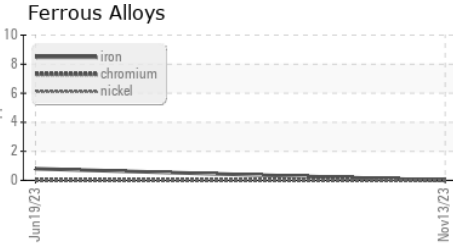
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.01	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.0	12.6	27.3

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0836493 **Received** : 17 Nov 2023  
**Lab Number** : 06010955 **Diagnosed** : 04 Dec 2023  
**Unique Number** : 10750099 **Diagnostician** : Doug Bogart  
**Test Package** : PLANT

**Chugach Consolidated Solutions - NSA**  
 10840 Guilford Road, Suites 406-407  
 Annapolis Junction, MD  
 US 20701  
 Contact: Susan Nord  
 susan.nord@chugachgov.com  
 T: (301)688-6363  
 F: (443)479-5666

Certificate L2367  
 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)