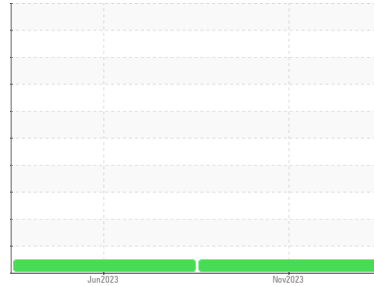




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
WC-9220-0103-5 Chiller #3
 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			WC0836497	WC0784801	---
Sample Date	Client Info			13 Nov 2023	19 Jun 2023	---
Machine Age	hrs	Client Info		18710	17407	---
Oil Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	---
Barium	ppm	ASTM D5185m	0	0	<1	---
Molybdenum	ppm	ASTM D5185m	0	0	0	---
Manganese	ppm	ASTM D5185m	0	0	0	---
Magnesium	ppm	ASTM D5185m	0	0	0	---
Calcium	ppm	ASTM D5185m	0	0	0	---
Phosphorus	ppm	ASTM D5185m	5	1	0	---
Zinc	ppm	ASTM D5185m	0	0	0	---
Sulfur	ppm	ASTM D5185m	10	14	0	---

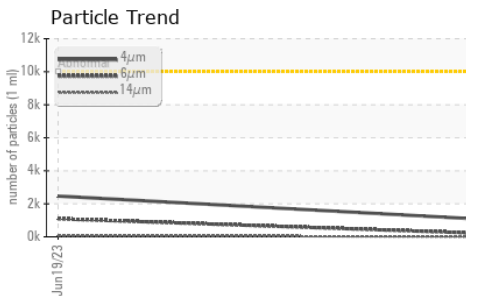
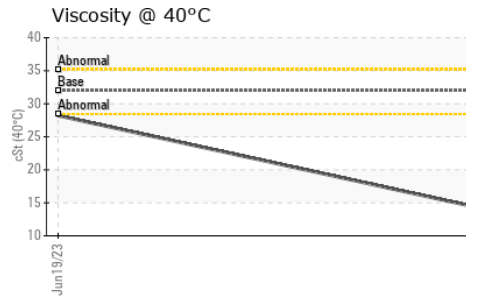
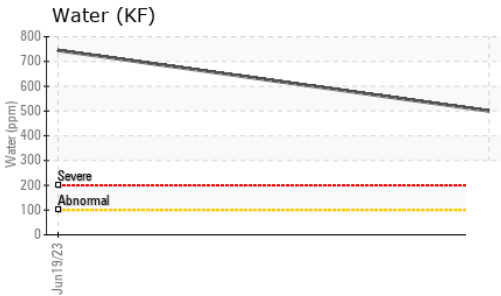
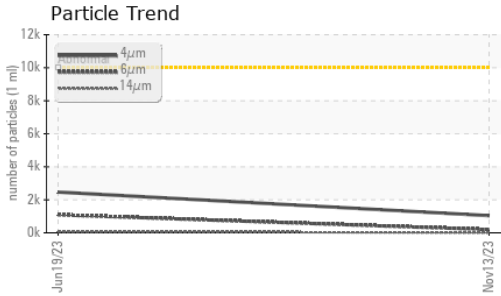
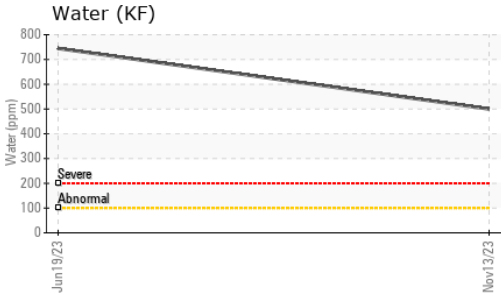
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	7	8	---
Sodium	ppm	ASTM D5185m		0	0	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Water	%	ASTM D6304	>0.01	0.049	0.074	---
ppm Water	ppm	ASTM D6304	>100	499.9	744.7	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	1039	2470	---
Particles >6µm		ASTM D7647	>2500	195	1091	---
Particles >14µm		ASTM D7647	>320	10	68	---
Particles >21µm		ASTM D7647	>80	3	12	---
Particles >38µm		ASTM D7647	>20	1	0	---
Particles >71µm		ASTM D7647	>4	0	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	17/15/10	18/17/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.03	0.012	0.03	---



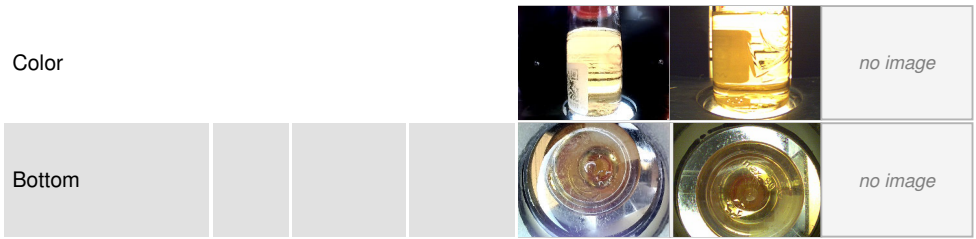
OIL ANALYSIS REPORT



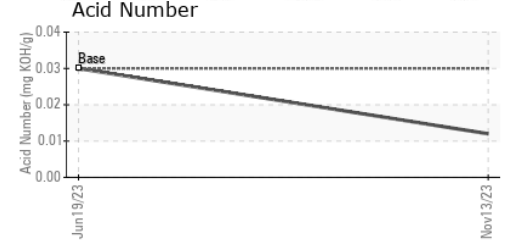
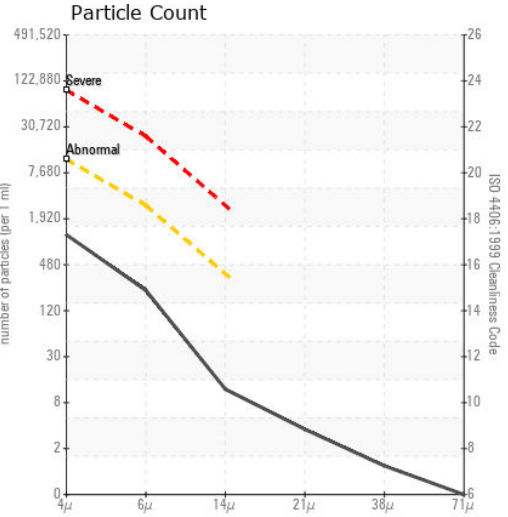
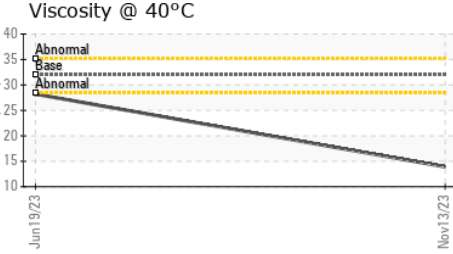
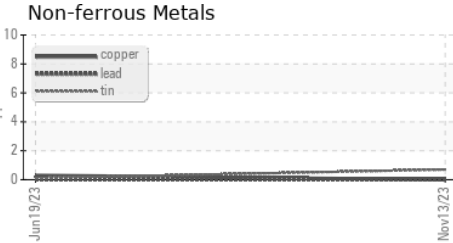
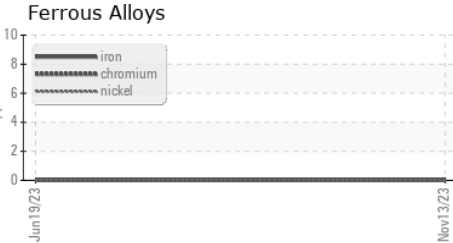
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	13.9	28.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0836497 **Received** : 17 Nov 2023
Lab Number : 06010957 **Diagnosed** : 04 Dec 2023
Unique Number : 10750101 **Diagnostician** : Doug Bogart
Test Package : PLANT

Chugach Consolidated Solutions - NSA
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 Annapolis Junction, MD
 US 20701
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 susan.nord@chugachgov.com
 T: (301)688-6363
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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)